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Dear Gov. and Speaker:

Pursuant to P.L. 31-233, attached are copies of all CCU WORK SESSION packets for GPA & GWA from Jan - Sept 2018.

My apology that this is coming to you in bulk. I was mistaken to think that CCU WORK SESSIONS were not official meetings (since no CCU action takes place at work sessions - just discussion) and thus did not provide the materials as mandated by P.L. 31-233. I recently asked clarification from our Legal Counsel who confirmed that "work sessions still appear to be "meetings" as referenced in the legislation" and materials should be provided.

FYI - Work Session is venue where the Commission reviews / discusses items to be brought up for approval at the official CCU meeting which follows the work sessions. FYI no Minutes are taken for GPA/GWA work

2400

sessions just audio recordings. Effective immediately meeting materials will be provide for all GPA & GWA Work Sessions.

Please look for other transmittals forthcoming for:
GPA / GWA WORK SESSIONS
2013 - 2017

Respectfully,
B. Lou Sablan
Board Secretary

Download link

17 files

GWAWS 9.18.18.pdf
GWAWS 4.10.18.pdf
GPAWS 4.19.18.pdf
GPAWS 2.22.13.pdf
GPAWS 8.23.18.pdf
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CONSOLIDATED
COMMISSION ON UTILITIES
Guam Power Authority • Guam Waterworks Authority
P.O.BOX 2977 • Agana,Guam 96932

GUAM POWER AUTHORITY WORK SESSION

CCU Conference Room

4:30 p.m., January 18, 2018

AGENDA

1. **ISSUES FOR DECISION**
   - 1.1 Power Purchase Agreement Phase II Renewables / Resolution 2018-01
   - 1.2 Bond Refinancing Savings Utilization / Resolution 2018-02
   - 1.3 Piti Substation 115kV GIS Major Maintenance / Resolution 2018-03
2. **GM REPORT**
   - 2.1 Updates
3. **ISSUES FOR DISCUSSION**
   - 3.1 CY2018 Major Project Updates
   - 3.2 CY2018 Outage Reduction Program
4. **DIVISION REPORTS**
   - 4.1 Administration: Customer Service, HR, Procurement
   - 4.2 Engineering & Technical: Engineering, IT, Planning & Regulatory, SPORD
   - 4.3 Finance Reports
   - 4.4 Operations: Facilities, Generation, PSCC, T&D, Transportation
   - 4.5 Public Information Office
5. **ANNOUNCEMENTS**
   - 5.1 Next Meeting: CCU Meeting – January 23
6. **ADJOURNMENT**

Approval of Power Purchase Agreement

KEPCO-LG-CNS Mangilao Solar, LLC

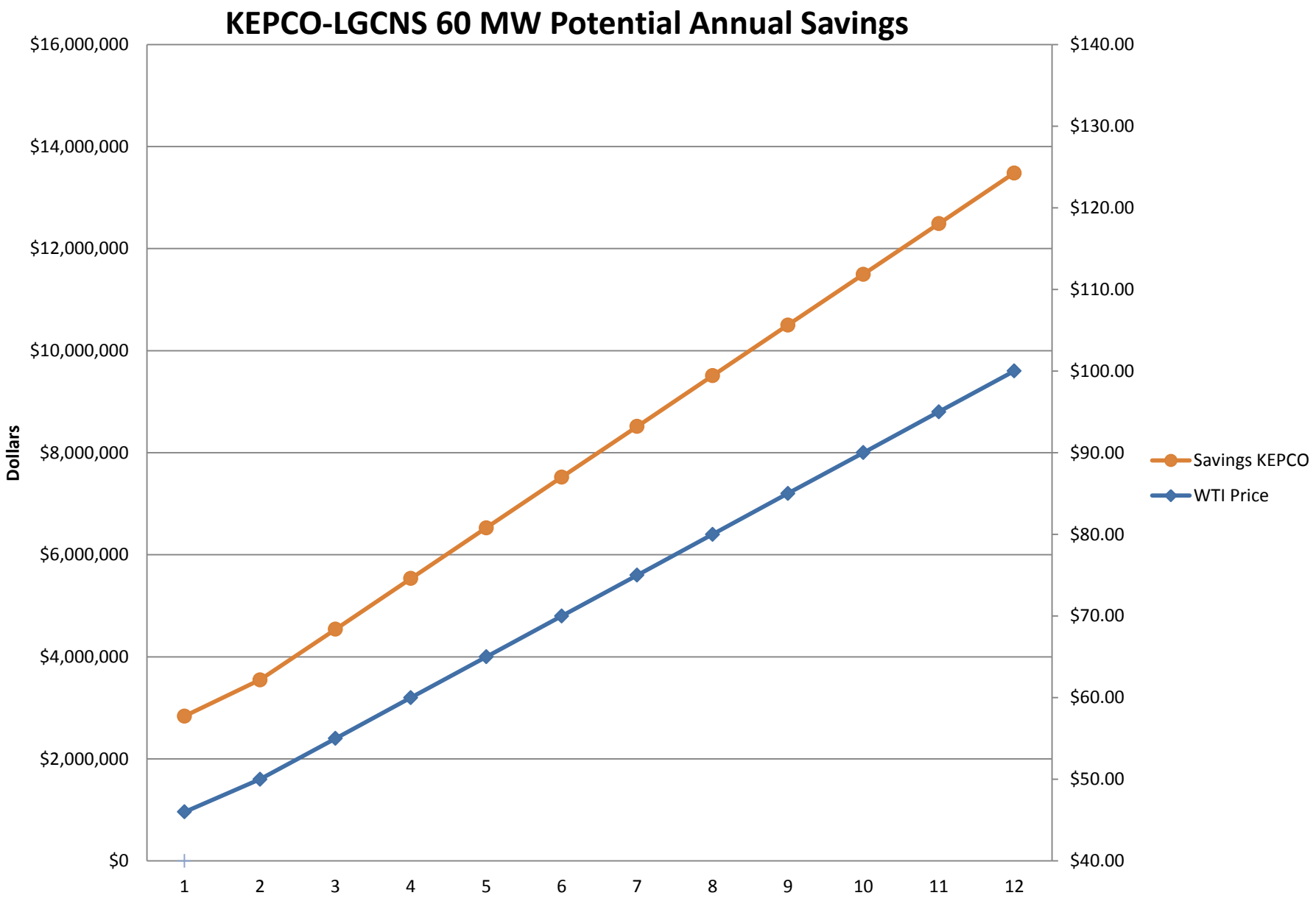
January 18, 2017

Requesting Approval - KEPCO-LG-CNS Mangilao Solar, LLC contract

- Award 60MW Power Purchase Agreement to KEPCO-LG-CNS Mangilao Solar, LLC which includes:
  - Two 30MW Solar Plants at Sasajyan
  - Install 32MW/32MWH ESS for Ramp Rate Control
  - Install 34.5 KV Underground Transmission Lines from Sasajyan (New Solar Plants) to Pagat Substation and Overhead Transmission Lines between Pagat and Macheche Substations
  - Install Differential Relays at GPA Substations as per System Impact Study (SIS) recommendation for system stability
  - Other Requirements Identified by Final SIS

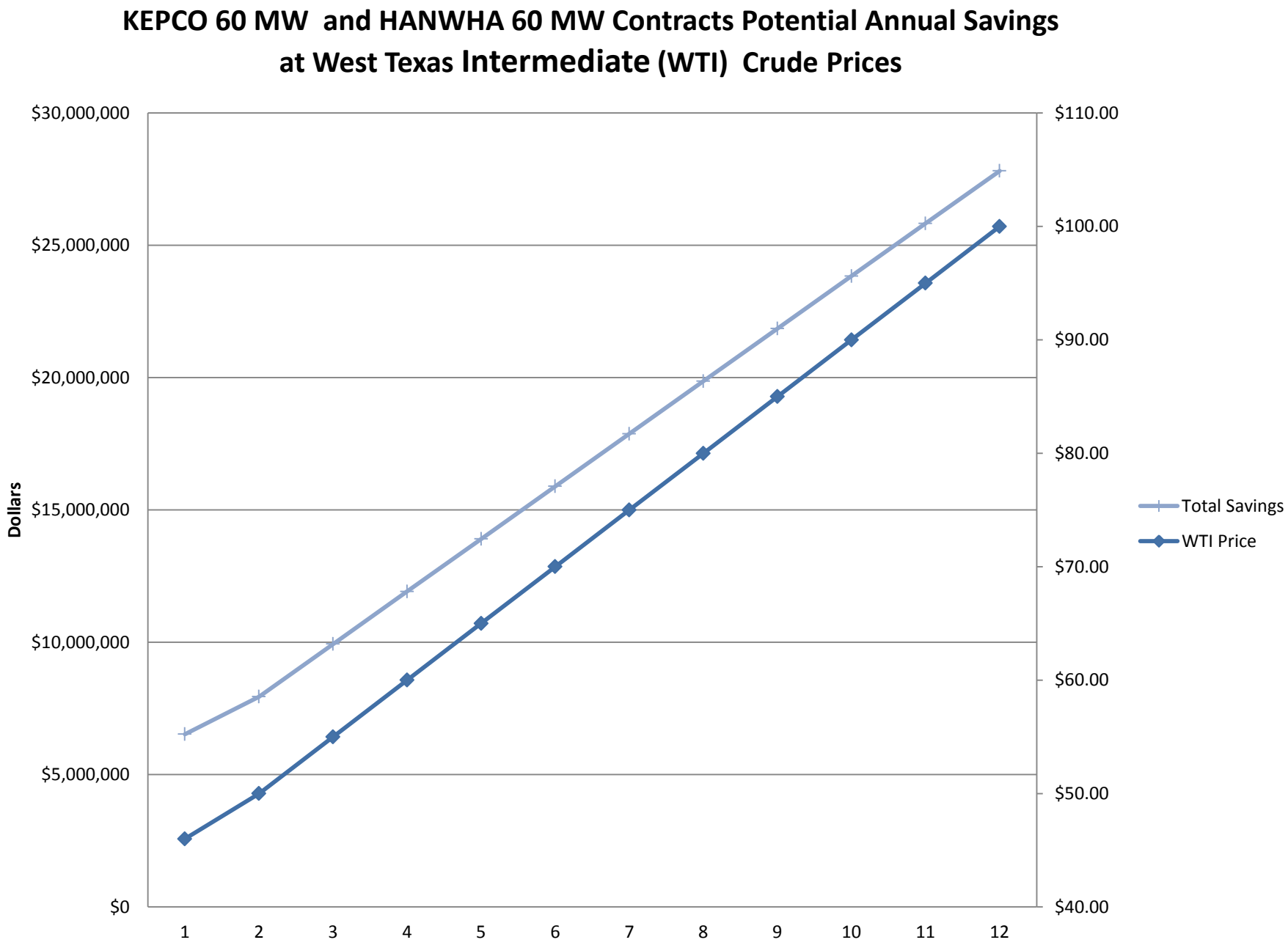
Power Purchase Agreement (PPA)

- Power Purchase agreement for KEPCO-LG-CNS Mangilao Solar, LLC for 60 MW of Solar PV
- 25 Year contract at starting price of $0.0855/KWH with an annual escalator of 1 %.
- With West Texas Crude at $65/ Barrel, savings estimated at about $6.5M annually
- Commercial Operation: Estimated Date April 2020
- Subject to PUC approval

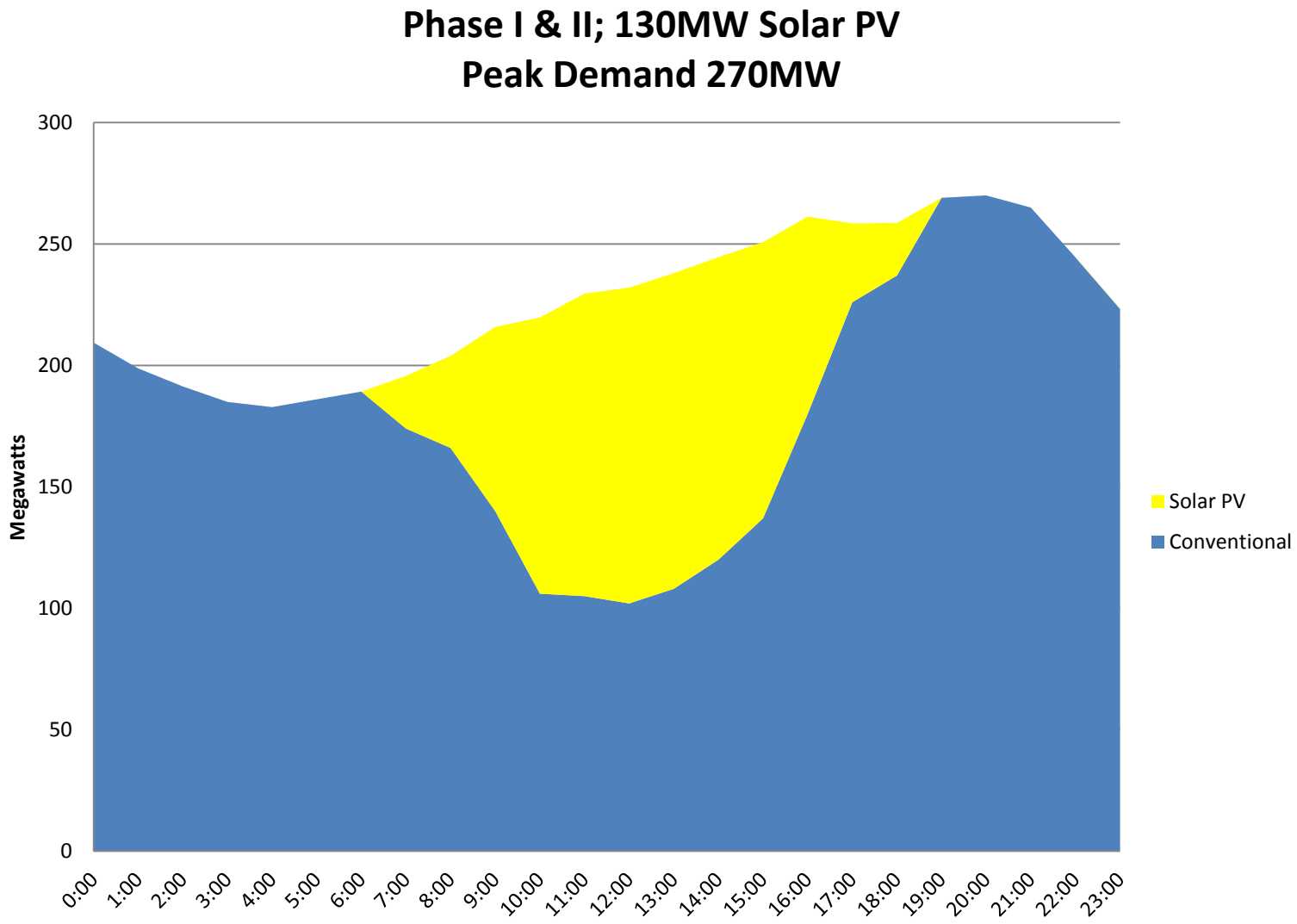

KEPCO-LGCNS 60 MW Potential Annual Savings
Dollars
$16,000,000
$14,000,000
$12,000,000
$10,000,000
$8,000,000
$6,000,000
$4,000,000
$2,000,000
$0
$140.00
$130.00
$120.00
$110.00
$100.00
$90.00
$80.00
$70.00
$60.00
$50.00
$40.00
1
2
3
4
5
6
7
8
9
10
11
12
Savings KEPCO
WTI Price

HANWHA 60 MW PPA Contract

- For CCU approval in February
- 60 MW contract at Dandan Site
- 25 Year Power Purchase Agreement
- 115 KV lines from Dandan to Apra Heights Substation to Piti Substation
- PPA nearing completion
- Annual savings with WTI at $65/Bbl. is about $7M


KEPCO 60 MW and HANWHA 60 MW Contracts Potential Annual Savings
at West Texas Intermediate (WTI) Crude Prices
Dollars
$30,000,000
$25,000,000
$20,000,000
$15,000,000
$10,000,000
$5,000,000
$0
$110.00
$100.00
$90.00
$80.00
$70.00
$60.00
$50.00
$40.00
1
2
3
4
5
6
7
8
9
10
11
12
Total Savings
WTI Price

Hourly System Dispatch



GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

Issues for Decision

Resolution No. 2018-01:

RELATIVE TO APPROVAL OF THE PHASE II RENEWABLE ENERGY ACQUISITION POWER PURCHASED AGREEMENT FOR KEPCO-LG CNS MANGILAO SOLAR, LLC

What is the project's objective? Is it necessary and urgent?

GPA intends to meet its 2008 IRP goals and comply with Public Law 29-62 which sets renewable goals under the Renewable Portfolio Standards (RPS) with the Phase II projects. In January 2017 GPA obtained the price bids for GPA Multi-Step Bid No: GPA-070-16 for 60MW of Renewable Energy Resource capacity with ESS for ramp control. KEPCO-LG CNS Mangilao Solar, LLC., is one of the two (2) lowest responsive bidders (Hanwha Energy Corporation is the other one) with having two proposals for 30MW solar PV projects totaling 60 MW of solar PV capacity with ESS for ramp control. GPA and KEPCO-LG CNS Mangilao Solar, LLC have completed and agreed to commercial terms and conditions of the Power Purchase Agreements (PPA). GPA seeks approval to submit KEPCO-LG CNS Mangilao Solar, LLC's PPA to the PUC for their approval.

Where is the location?

The KEPCO_LGCNS 2x30MW solar projects are located at Sasajyan, Mangilao.

How much will it cost?

Please see attached table.

When will it be completed?

The Agreement is for 25 year term.

What is its funding source?

Funding source is LEAC.

KEPCO_LGCNS Price Proposal

Site A

Contract Year	Annual Price ($/MWH)	Guaranteed Net Annual Generation (MWH/YR)	Annual Price ($)
1	85.50	74,542.29	6,373,301.30
2	86.35	73,974.68	6,388,018.45
3	87.22	73,604.26	6,419,591.74
4	88.09	73,233.84	6,451,157.70
5	88.97	73,058.88	6,500,102.43
6	89.86	72,493.01	6,514,254.33
7	90.76	72,122.59	6,545,778.20
8	91.67	71,752.18	6,577,281.12
9	92.58	71,573.23	6,626,486.53
10	93.51	71,011.34	6,640,209.75
11	94.44	70,640.93	6,671,628.12
12	95.39	70,270.51	6,703,010.83
13	96.34	70,087.58	6,752,417.40
14	97.31	69,529.68	6,765,653.80
15	98.28	69,159.26	6,796,906.12

Contract Year	Annual Price ($/MWH)	Guaranteed Net Annual Generation (MWH/YR)	Annual Price ($)
16	99.26	68,788.84	6,828,106.93
17	100.25	68,601.94	6,877,649.88
18	101.26	68,048.01	6,890,337.29
19	102.27	67,677.59	6,921,358.30
20	103.29	67,307.18	6,952,310.69
21	104.33	67,116.29	7,001,919.62
22	105.37	66,566.34	7,013,991.65
23	106.42	66,195.92	7,044,711.02
24	107.49	65,825.51	7,075,343.38
25	108.56	65,630.64	7,124,941.98

Site B

Contract Year	Annual Price ($/MWH)	Guaranteed Net Annual Generation (MWH/YR)	Annual Price ($)
1	85.50	74,542.29	6,373,301.30
2	86.35	73,974.68	6,388,018.45
3	87.22	73,604.26	6,419,591.74
4	88.09	73,233.84	6,451,157.70
5	88.97	73,058.88	6,500,102.43
6	89.86	72,493.01	6,514,254.33
7	90.76	72,122.59	6,545,778.20
8	91.67	71,752.18	6,577,281.12
9	92.58	71,573.23	6,626,486.53
10	93.51	71,011.34	6,640,209.75
11	94.44	70,640.93	6,671,628.12
12	95.39	70,270.51	6,703,010.83
13	96.34	70,087.58	6,752,417.40
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20	103.29	67,307.18	6,952,310.69
21	104.33	67,116.29	7,001,919.62
22	105.37	66,566.34	7,013,991.65
23	106.42	66,195.92	7,044,711.02
24	107.49	65,825.51	7,075,343.38
25	108.56	65,630.64	7,124,941.98

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671) 648-3002 | guamccu.org

RESOLUTION NO. 2018-01

RESOLUTION RELATIVE TO APPROVAL OF THE PHASE II RENEWABLE ENERGY ACQUISITION AWARD TO KEPCO-LG CNS MANGILAO SOLAR, LLC., FOR 60 MW OF RENEWABLE ENERGY CAPACITY

WHEREAS, in May 2016 GPA announced GPA Multi-Step Bid No: GPA- 070-16 for 60MW of Renewable Energy Resource capacity with ESS for ramp control; and

WHEREAS, in January 2017 GPA obtained the price bids and KEPCO-LG CNS Mangilao Solar, LLC., is one of the two (2) lowest responsive bidders (Hanwha Energy Corporation is the other bidder) providing two proposals for 30MW solar PV projects totaling 60 MW of solar PV capacity with ESS for ramp control; and

WHEREAS, the responsive bidders provided price proposals for the energy and ramp controls to include interconnection costs of each 30MW proposal. **Exhibit A** provides a summary of the energy price proposals which shows the first year price for KEPCO-LG CNS Mangilao Solar, LLC is $85.50/$/MWH; and

WHEREAS, GPA evaluates bidder's price proposal against GPA's variable operating costs primarily made up of fuel costs; and

WHEREAS, GPA has determined that KEPCO-LG CNS Mangilao Solar, LLC proposals would provide substantial savings to GPA over the term of the contracts based on current and projected LEAC rates; and

WHEREAS, the table below represents the projected savings of potential award case **Exhibit B** contains case summaries; and

CASE	Description	Project Size	5 Year Projected Savings On Current LEAC ($115/MWH)	5 Year Projected Savings on Projected LEAC	Present Value Utility Cost Savings thru Contract Term
1	KEPCO Proposal 1&2 (60MW)	60 MW	$ 20,470,866	$43,331,390	$90,301,058

RESOLUTION NO: 2018-01

WHEREAS, GPA considers renewable energy as an effective hedge against rising fuel oil prices; and

WHEREAS, the bid prices proposed are an excellent fuel hedge as the bidders' energy prices are fixed with escalations no more than 1% annually for all proposals. **Exhibit C** summarizes GPA historical LEAC; and

WHEREAS, renewable energy is sustainable energy and good for the island; and

WHEREAS, Public Law 29-62 sets renewable goals under the Renewable Portfolio Standards (RPS); and

WHEREAS, the award of 120MW contracts including Hanwha Energy Corporation 60 MW project is projected to increase GPA's ratio of renewable energy to sales up to 26% by 2020. **Exhibit D** is a projected RPS outlook; and

WHEREAS, KEPCO-LG CNS Mangilao Solar, LLC has concurred with GPA recommendations from the system impact study which is incorporated in the contract documents; and

WHEREAS, GPA would like to proceed with an approval to award KEPCO-LG CNS Mangilao Solar, LLC a total of 60MW of renewable energy capacity contract subject to PUC approval.

NOW, THEREFORE, BE IT RESOLVED, by the CONSOLIDATED COMMISSION ON UTILITIES, the GOVERNING BODY of the GUAM POWER AUTHORITY as FOLLOWS:

1. The CCU authorizes GPA to petition the PUC for approval to award Phase II Renewable Acquisition Bid of two 30MW proposals totaling 60MW to KEPCO-LG CNS Mangilao Solar, LLC as required under the PUC Procurement Protocol.
2. The CCU authorizes GPA to contract KEPCO-LG CNS Mangilao Solar, LLC for renewable energy subject to PUC approval.

RESOLVED, that the Chairman certifies and the Board Secretary attests to the adoption of this Resolution.

RESOLUTION NO: 2018-01

DULY AND REGULARLY ADOPTED AND APPROVED THIS 23RD DAY OF JANUARY 2018.

Certified by:	Attested by:
_____	_____
JOSEPH T. DUENAS	**J. GEORGE BAMBA**
Chairperson	Secretary
Consolidated Commission on Utilities	Consolidated Commission on Utilities

I, J. George Bamba, Secretary for the Consolidated Commission on Utilities (CCU), as evidenced by my signature above do certify as follows:

The foregoing is a full, true, and accurate copy of the resolution duly adopted at a regular meeting of the members of Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

Ayes: _____

Nays: _____

Absent: _____

Abstain: _____

EXHIBIT A

Summary of Bid Proposals

Contract Year	Proposal 1		Proposal 2	
	Annual Price ($/MWH)	Guaranteed Net Annual Generation (MWH/YR)	Annual Price ($/MWH)	Guaranteed Net Annual Generation (MWH/YR)
1	$ 85.50	74,542.29	$ 85.50	74,542.29
2	$ 86.35	73,974.68	$ 86.35	73,974.68
3	$ 87.22	73,604.26	$ 87.22	73,604.26
4	$ 88.09	73,233.84	$ 88.09	73,233.84
5	$ 88.97	73,058.88	$ 88.97	73,058.88
6	$ 89.86	72,493.01	$ 89.86	72,493.01
7	$ 90.76	72,122.59	$ 90.76	72,122.59
8	$ 91.67	71,752.18	$ 91.67	71,752.18
9	$ 92.58	71,573.23	$ 92.58	71,573.23
10	$ 93.51	71,011.34	$ 93.51	71,011.34
11	$ 94.44	70,640.93	$ 94.44	70,640.93
12	$ 95.39	70,270.51	$ 95.39	70,270.51
13	$ 96.34	70,087.58	$ 96.34	70,087.58
14	$ 97.31	69,529.68	$ 97.31	69,529.68
15	$ 98.28	69,159.26	$ 98.28	69,159.26
16	$ 99.26	68,788.84	$ 99.26	68,788.84
17	$ 100.25	68,601.94	$ 100.25	68,601.94
18	$ 101.26	68,048.01	$ 101.26	68,048.01
19	$ 102.27	67,677.59	$ 102.27	67,677.59
20	$ 103.29	67,307.18	$ 103.29	67,307.18
21	$ 104.33	67,116.29	$ 104.33	67,116.29
22	$ 105.37	66,566.34	$ 105.37	66,566.34
23	$ 106.42	66,195.92	$ 106.42	66,195.92
24	$ 107.49	65,825.51	$ 107.49	65,825.51
25	$ 108.56	65,630.64	$ 108.56	65,630.64

EXHIBIT B

Proposal Evaluation Summary

CASE	Description	Project Size	5 Year Projected Savings On Current LEAC ($115/MWH)	5 Year Projected Savings on Projected LEAC	Present Value Utility Cost Savings* thru Contract Term
1	KEPCO Proposal 1&2 (60MW)	60 MW	$ 20,470,866	$ 43,331,390	$ 90,301,058

CASE 1 - KEPCO Proposal 1&2 (60MW)

5 Year Sample Calculation of Project Costs & Savings

	Contract Year	Year 1	Year 2	Year 3	Year 4	Year 5	TOTALS
1	KEPCO Proposal 1 Energy Rate ($/MWH)	85.50	86.35	87.22	88.09	88.97	
2	Energy Guarantee (MWH)	74,542.29	73,974.68	73,604.26	73,233.84	73,058.88	
3	KEPCO Proposal 2 Energy Rate ($/MWH)	85.50	86.35	87.22	88.09	88.97	
4	Energy Guarantee (MWH)	74,542.29	73,974.68	73,604.26	73,233.84	73,058.88	
5	Phase II Energy Costs (60MW)	$12,746,603	$12,776,037	$12,839,183	$12,902,315	$13,000,205	**$ 64,264,343**
6	Current LEAC Rate[1] ($/MWH)	115	115	115	115	115	
7	Current Energy Costs	$17,144,727	$17,014,176	$16,928,980	$16,843,784	$16,803,542	$ 84,735,209
8	Proposed Savings	**$ 4,398,125**	**$ 4,238,139**	**$ 4,089,797**	**$ 3,941,469**	**$ 3,803,337**	**$ 20,470,866**
9							
10	Year	2019	2020	2021	2022	2023	TOTALS
	Projected LEAC Rate[2] ($/MWH)	122.27	140.02	154.63	154.03	159.65	
	Projected Energy Costs	$18,228,695	$20,716,064	$22,762,713	$22,560,701	$23,327,561	$ 107,595,733
11	Proposed Savings	**$ 5,482,092**	**$ 7,940,027**	**$ 9,923,529**	**$ 9,658,385**	**$10,327,356**	**$ 43,331,390**
12							
13							

STRATEGIST CASE SUMMARY

	Base Case (No Phase II)	Case 1 (60MW)	SAVINGS
Present Value Utility Cost[3] ($000)	6,896,417	6,806,116	90,301

Notes:

1. The Currrent LEAC is used in this case evaluation to demonstrate minimum savings potential with $115/MWH LEAC rate presently proposed for next LEAC period.

2. Projected LEAC is based on STRATEGIST software output that analyzes genernation costs for various generation resources and its operating characteristics. This LEAC is based on load and fuel forecasts done by LEIDOS in 2016.

3. Present Value Utility Cost is an evaluation of generation operating costs in the STRATEGIST software. This is used to determine cost impact of generation resources and their operation variables (efficiency, fuel costs, capacity, etc.) based on energy requirements.

EXHIBIT C
Historical LEAC Summary

EFFECTIVE DATES	FUEL RECOVERY RATE ($ per Kwh)
10/01/00	0.053613
04/01/01	0.053613
10/01/01	0.048625
04/01/02	0.042901
10/01/02	0.048831
04/01/03	0.048831
10/01/03	0.062333
04/01/04	0.059753
10/01/04	0.059753
01/01/00	0.073010
01/01/00	0.088918
01/01/00	0.098589
02/01/07	0.108893
08/13/07	0.123957
03/01/08	0.150467
06/01/08	0.170440
10/01/08	0.187750
12/01/08	0.171050
02/01/09	0.157630
05/01/09	0.136450
08/01/09	0.129670
02/01/10	0.150460
08/31/10	0.124650
02/01/11	0.161530
08/01/11	0.192220
02/01/12	0.191980
04/01/12	0.192310
02/01/13	0.209271
08/01/13	0.182054
02/01/14	0.172986
08/01/14	0.176441
11/01/14	0.146666
02/01/15	0.102054
08/01/15	0.104871
02/01/16	0.086613
08/01/16	0.086613
02/01/17	0.105051
08/01/17*	0.115725

**Proposed LEAC Rate*

EXHIBIT D

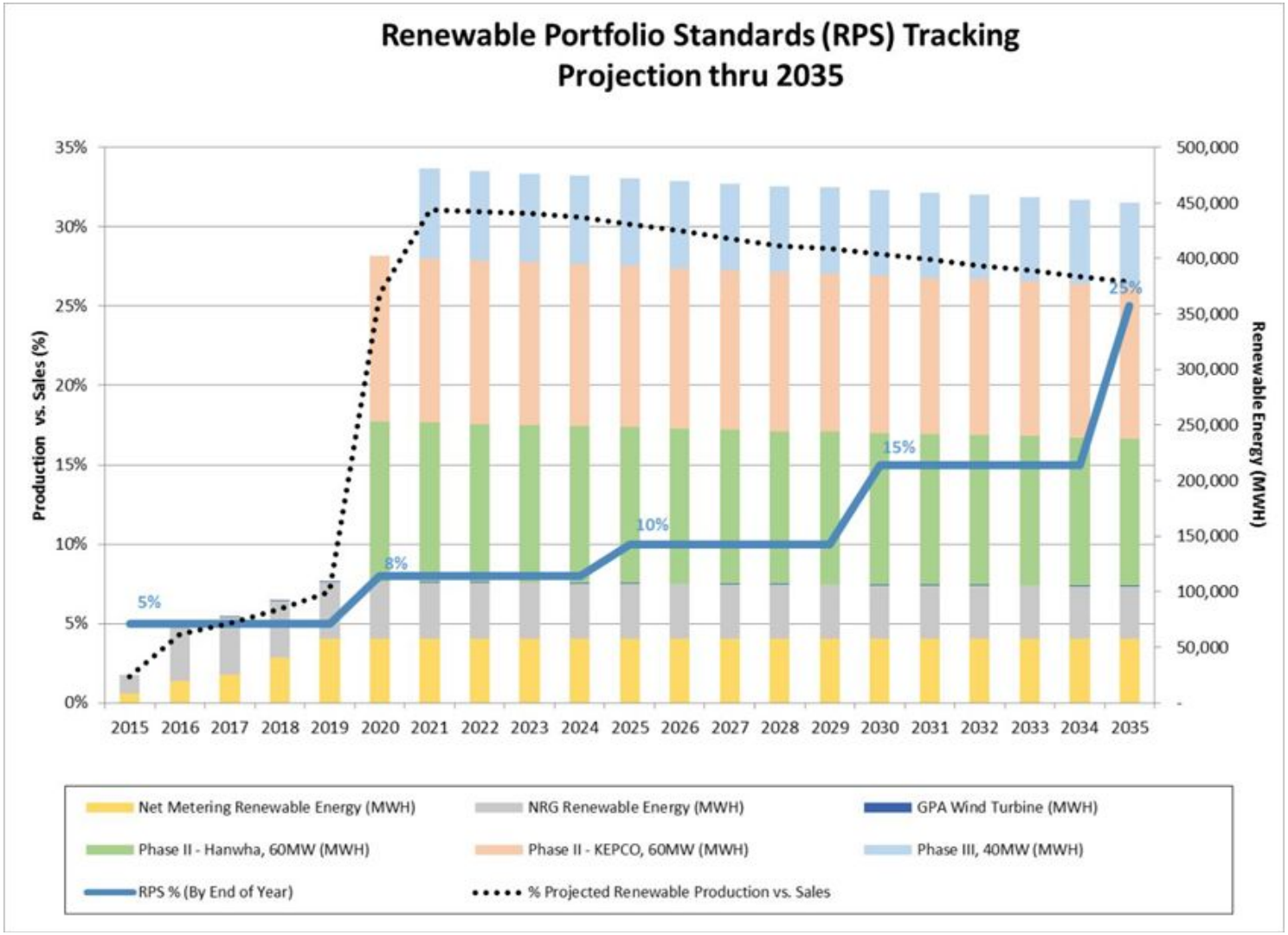
Projected Renewable Energy & Renewable Portfolio Standards (RPS) for 120 MW Phase II Award

	Net Metering Renewable Energy (MWH)	NRG Renewable Energy (MWH)	GPA Wind Turbine (MWH)	Phase II - Hanwha, 60MW (MWH)	Phase II - KEPCO, 60MW (MWH)	Phase III, 40MW (MWH)	Total Renewable Production (MWH)	GPA Total Sales (MWH)	% Projected Renewable Production vs. Sales	RPS % (By End of Year)
2015	8,034	17,597					25,630	1,536,927	2%	5%
2016	19,559	48,221	474				68,253	1,584,685	4%	5%
2017	25,271	51,627	482				77,380	1,546,044	5%	5%
2018	40,393	51,412	482				92,287	1,554,108	6%	5%
2019	57,629	51,133	482				109,244	1,557,331	7%	5%
2020	*57,629*	50,992	482	144,010	149,085		402,198	1,558,272	26%	8%
2021	*57,629*	50,601	482	143,662	147,949	80,510	480,834	1,547,800	31%	8%
2022	*57,629*	50,393	482	142,490	147,209	80,175	478,377	1,544,574	31%	8%
2023	*57,629*	50,083	482	141,730	146,468	79,740	476,131	1,544,540	31%	8%
2024	*57,629*	49,781	482	140,970	146,118	79,520	474,499	1,550,854	31%	8%
2025	*57,629*	49,599	482	140,612	144,986	78,911	472,219	1,566,472	30%	10%
2026	*57,629*	49,391	482	139,448	144,245	78,585	469,780	1,577,646	30%	10%
2027	*57,629*	49,122	482	138,688	143,504	78,102	467,527	1,597,005	29%	10%
2028	*57,629*	48,987	482	137,386	143,146	77,631	465,262	1,614,448	29%	10%
2029	*57,629*	48,612	482	137,560	142,023	77,348	463,654	1,620,517	29%	10%
2030	*57,629*	48,411	482	136,404	141,282	77,023	461,230	1,631,977	28%	15%
2031	*57,629*	48,147	482	135,642	140,541	76,604	459,045	1,644,069	28%	15%
2032	*57,629*	48,017	482	134,880	140,175	76,393	457,577	1,661,486	28%	15%
2033	*57,629*	47,649	482	134,504	139,059	75,808	455,131	1,670,464	27%	15%
2034	*57,629*	47,451	482	133,356	138,319	75,495	452,731	1,684,195	27%	15%
2035	*57,629*	47,191	482	132,592	137,578	75,083	450,555	1,698,373	27%	25%

Notes:

1. Sales is from 2016 forecast for 2017-2035 (LEIDOS Jan. 2016 Forecast)
2. Net Metering projection is from LEIDOS Forecast for 2017 thru 2019 and fixed thereafter
3. NRG (Phase I) production is based on contract guarantees from 2017 thru 2035
4. Phase II is based on Project Guarantees **for 120MW**. Phase III renewable projections are based NRG contract guarantees.
5. GPA wind turbine assumes average capacity factor since commissioning (20%) from 2017 thru 2035
6. DSM values are not included.

EXHIBIT E


Renewable Portfolio Standards (RPS) Tracking
Projection thru 2035
Production vs. Sales (%)
Renewable Energy (MWH)
35%
30%
25%
20%
15%
10%
5%
0%
500,000
450,000
400,000
350,000
300,000
250,000
200,000
150,000
100,000
50,000
-
5%
8%
10%
15%
25%
2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035
Net Metering Renewable Energy (MWH)
NRG Renewable Energy (MWH)
GPA Wind Turbine (MWH)
Phase II - Hanwha, 60MW (MWH)
Phase II - KEPCO, 60MW (MWH)
Phase III, 40MW (MWH)
RPS % (By End of Year)
% Projected Renewable Production vs. Sales

Bond Refinancing

PL 34-69

- Section 2(h) – GPA shall notify I Liheslatura within sixty (days) of refinancing of it intent and plan regarding the savings achieved from refinancing.

Summary of Savings:

- Final Par Amount of Refunding: $148,670,000
- Final Par Amount of Refunded: $150,440,000
- Total Cash Flow Savings: $11,528,439
- Annual Cash Savings: $501,236
- NPV Savings: 5.17%
- All-In True Interest Cost: 4.12

Bond Refinancing - Continued

- Reduction in debt services from 2018 to 2021: $1,482,326
- Reduction from 2022 on to be use to offset annual cost of new power plant.

Recommendations for $1,482,326 Savings:

- DSM – Replenish Existing Rebate Program
- DSM – Revolving Short Term Reimbursement Fund-Zero Interest charged
  - Reduces consumption
  - Maintain quality of life
  - Part of money saved to be used to reimburse GPA revolving fund

Example of Reimbursement Program

Residential Customers Demographics:

Assume FY 2918 Average Cost = $0.25/Kwh

KWH RANGE	Residential	Min. Monthly $	Max Monthly. $
Below 0	884	-	-
0-350	7,403	-	$87.50
351-500	4,291	$87.75	$125.00
501-750	7,681	$125.25	$187.50
751-1000	7,221	$187.75	$250.00
1001-2000	13,887	$250.25	$500.00
2001-3000	2,215	$500.25	$750.00

Targeted Assets:	
1. LED Lighting	
2. High Efficiency Air Conditioning Units	
3. Other High Savings Initiatives	

Customer Average Monthly Kwh:	**1000**
Investment Required:	$1,000
24 Month Payments	$42

Current Bill:	**$250**
Monthly Estimated Savings:	$68
Estimated Billing with new A/C	$182
Add Investment Re-payment	$42
Approximate New Bill Monthly	**$224**

1st 24 Months Savings:	**$632**
Annual Savings Thereafter	**$816**

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

Issues for Decision

Resolution No. 2018-03:

Relative to <u>Authorize Expenditures for the Piti 115KV GIS Major Maintenance</u>

What is the project's objective and is it necessary and urgent?
To perform an overdue detailed 12-year maintenance and inspection for the Piti 115KV Gas Insulated Switchgear (GIS). The maintenance work is necessary for compliance with the manufacturer's recommendations. The insulating medium for the switchgear is SF6 gas, and under certain conditions such as breaker operations (trip/close), sulfuric acid may be produced which may lead to severe deterioration of internal parts.

The GIS The Piti 115 kV GIS is a critical substation interconnecting the MEC Plant Units 8 and 9 to the power grid.

Where is it at?
Piti

How much will it cost?
The required services will cost $2,507,300.

Basic Bid

A1	Mobilization / Demobilization	436,800
A2	GIS - Initial Testing, Assessing, and Reporting	381,000
A3	GIS - Inspection, Servicing, Replace, Maintenance, Gauge Calibration	1,061,000
A4	Reuse and Recycling of Removed SF6 Gas	21,000
A5	Crane Repair	13,000
A6	Training Course - Operation and Maintenance	72,000
A7	Final Testing, Commissioning, Reporting, and Re-Certification	212,000
	Total Basic Bid Cost	$ 2,196,800

Additive Bid

B1	New SF6 Gas	39,000
B2	Disposal of Removed SF6 Gas	12,500
B3	GIS OEM Spare Parts, Consumables, and Special Tools	165,000
B5	New Fixed Cage Ladder and Landing Platform	94,000
	Total Additive Bid Cost	$ 310,500

Total Bid Cost **$ 2,507,300**

Construction Management Cost/ T&D Support	$	130,000
Total Requested Cost	**$**	**2,637,300**

When will it be completed?
Time delivery to complete work is 10 months upon receipt of PO.

What is its funding source?
GPA 2014 Revenue-Bonds fund.

The RFP/BID responses:
AYM International Inc., the only bidder, submitted quote for GPA's consideration under Multi-Step Re-Bid Invitation No. GPA-027-17. The initial bid had no bidders.

AYM International was determined to be a technically qualified and responsive bidder.

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671) 648-3002 | guamccu.org

Resolution No. 2018-03
AUTHORIZING THE GUAM POWER AUTHORITY TO PETITION PUC FOR APPROVAL OF PITI SUBSTATION 115 KV GIS MAINTENANCE PROJECT AND TO CONTRACT REQUIRED SERVICES

WHEREAS, the Piti Substation 115 kV Gas Insulated Switchgear (GIS) was commissioned in 1999; and

WHEREAS, the insulating medium of the 115 kV Substation is SF6 gas, which under certain conditions may produce sulfuric acid, leading to severe deterioration of internal parts; and

WHEREAS, maintenance of the GIS equipment is critical to ensure functionality to allow MEC Plant Units 8 and 9, GPA's most efficient generating units, to connect to the IWPS; and

WHEREAS, the project will overhaul the Piti 115 Kv GIS Maintenance project as part of the 12-year maintenance schedule; and

WHEREAS, the Procurement Office has provided adequate public announcement for the required services for the Piti 115 Kv GIS Major Maintenance through a Multi-Step Re-Bid Invitation No. GPA-027-17 providing the project specifications and information required of each offeror; and

WHEREAS, due to the highly specialized nature of the work and limited local resources, only one vendor AYM International, Inc. submitted a proposal during the re-bid process for GPA's consideration; and

WHEREAS, GPA's Evaluation Committee has determined AYM International Inc. to be technically qualified based on meeting the Step One- Technical Proposal Evaluation criteria and whose bid on Step Two – Price Proposal Evaluation submitted a basic bid totaling $2,196,800 for GPA's consideration and additive bids totaling $2,507,300; and

WHEREAS, the 2014 GPA Revenue Bonds initially allocated funding of $700,000, and GPA has reallocated 2014 Bond Funds to fund an additional $1,937,300 for additional required items for the project;

NOW, THEREFORE, BE IT RESOLVED, by the Consolidated Commission on Utilities as follows:

1. After careful consideration, the Consolidated Commission on Utilities finds the procurement of the required services for the Piti 115 Kv GIS Major Maintenance project to be reasonable and prudent.

2. The General Manager of GPA is hereby authorized to petition the PUC to reallocate 2014 Revenue Bonds for the Piti 115 kV GIS Major Maintenance project and for the award of the contract.

2. Upon PUC's approval, the General Manager of the GPA is hereby authorized an increase in obligating authority up to $2,507,300 for the purpose of procuring the required services from AYM International, Inc.

RESOLVED, that the Chairman of the Commission certifies and the Secretary of the Commission attests the adoption of this Resolution.

DULY and REGULARLY ADOPTED AND APPROVED THIS 23rd DAY OF JANUARY, 2018.

Certified by:	**Attested by:**
_____	_____
JOSEPH T. DUENAS	**J. GEORGE BAMBA**
Chairman	**CCU Board Secretary**

I, J. George Bamba, Secretary for the Consolidated Commission on Utilities (CCU) as evidenced by my signature above do certify as follows:

The foregoing is a full, true, and accurate copy of the resolution duly adopted at a regular meeting of the members of Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

Ayes: _____

Nays: _____

Absent: _____

Abstain: _____

Number of Invitations Issued: 1
Number of Bids Received: 1

*PHASE II *

PURCHASES & STORES DIVISION
GUAM POWER AUTHORITY
ABSTRACT OF BIDS

Invitation Number: RFBID GPA-027-17
Opening Date: 11/29/17 Opening Time: 2:00 PM

Description of Supplies or Services: PITI 115KV GIS MAJOR MAINTENANCE

	BIDDER	Acceptance Time (Days)	DISCOUNT	ITEM NO. / QTY / UNIT / DELIVERY / MFG							
1/	AVAN International Inc.		Basic		2,197,300.00						
			additive		1,285,500.00						

I hereby certify that all bids received in response to this invitation were opened under my personal supervision, and that the names of all bidders have been entered hereon.

(Signature)

Tabulated By: Janet J

Date: 11/29/17

Sajeran

APPROVAL OF AWARD(S) (Bidder(s) and Price(s) circled above)

BASIS FOR AWARD

- ☐ Lowest Responsive Bidder
- ☐ Tie Bid
- ☐ Only Bid
- ☐ Other Than Lowest Responsive Bidder (See explanation on reverse hereof or attached)

Number of Awards (Contracts)

NAMES OF PERSONS PRESENT AT THE BID OPENING AND WHOM THEY REPRESENT
(It is not necessary to fill in this portion if data is recorded elsewhere)

JOHNNY QUINTO GPA ENGINEERING EXT. 3024

JOHN U. PABUHAN GPA ENGINEERING EXT. 3006

MOMTA Co AYM International

ADMINISTRATIVE STATEMENT ***(When applicable)***

DAWN F.

GUAM POWER AUTHORITY
ATURIDAT ILEKTRESEDAT GUAHAN
P O BOX 2977, HAGATNA, GUAM 96932-2977

GUAM POWER AUTHORITY RECEIVED BY: TIME: 10:04 AM NOV 06 2017 EXECUTIVE OFFICE POWER TO SERVE

November 1, 2017

TO: Supply Management Administrator

FROM: Bid Evaluation Committee

SUBJECT: **Step One – Technical Proposal Evaluation Recommendation**
Re: Multi-Step Re-Bid GPA-027-17
Piti 115kV GIS Major Maintenance

The bid evaluation committee has completed reviewing vendor's proposal for Step One – Technical Proposal Evaluation of the Multi-Step Re-Bid GPA-027-17. Only one (1) vendor submitted its bid, which is AYM International Inc. The committee evaluated the proposal using a scoring and evaluation criteria form below.

QUALITATIVE PROPOSAL SCORING WORKSHEET

ITEM	DESCRIPTION	WEIGHTED SCORE (%)
1	Scoring Worksheet 1	97
2	Scoring Worksheet 2	80
3	Scoring Worksheet 3	98
4	Scoring Worksheet 4	90
5	Scoring Worksheet 5	92
	AVERAGE	**91.4 (Acceptable)**

- Proposals that scored greater than or equal to 80 percent are deemed acceptable.
- Proposals that scored between 75 and 79 percent are deemed potentially acceptable.
- Proposals scoring below 75 percent are deemed unacceptable.

Based on the scoring worksheet, vendor's proposal is deemed acceptable (See attachment for specifics). The Committee, hereby, recommends that GPA proceed with Step Two – Evaluation of Priced Proposal for the ***Acceptable Proposal***.

JOHNNY QUINTO
Special Projects Engineer

JERALD TAITANO
Supervisor, T&D

JOHN PABUNAN
Special Projects Engineer

IRWIN LOYOLA, P.E.
Supervisor, Engineering

VINCENT PANGELINAN, P.E.
Superintendent, T&D

Concurred by:

JOHN J. CRUZ, JR., P.E
AGMETS

11-3-2017
Date

[✓] Approved [ ] Disapproved

JOHN M. BENAVENTE, P.E.
General Manager

11/6/17
Date

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

TO: **Consolidated Commission on Utilities**

FROM: **General Manager**

DATE: **January 18, 2018**

SUBJECT: **General Manager's Report**

1. **Generation System Update:**

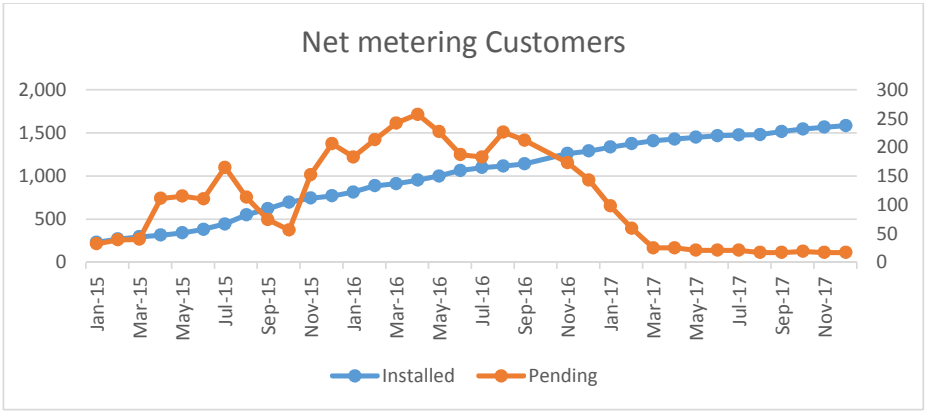
- The following summarizes the expected situation for January 2018. The peak demand in January 2018 has been 240MW compared to the highest peak demand in January 2017 of 232MW. This increase seems to indicate the system peak demand and therefore its energy sales will continue to increase in 2018.

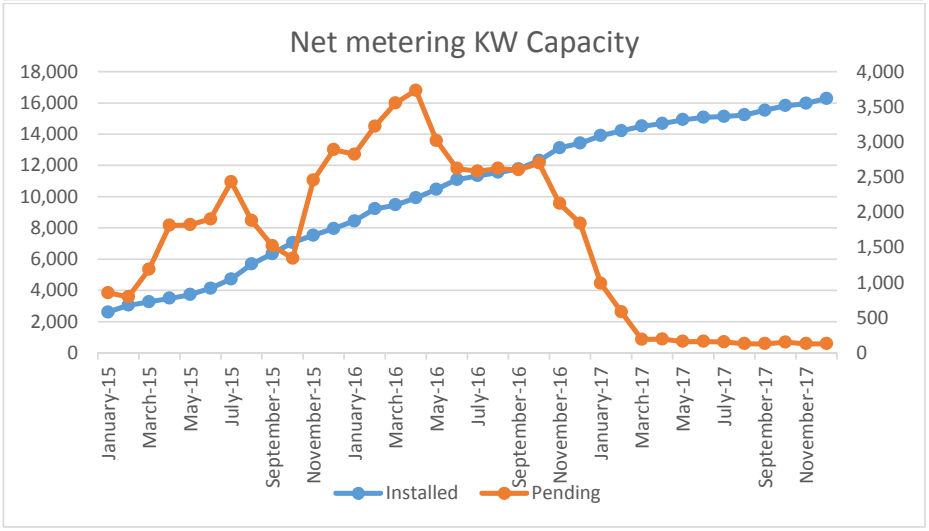
▪ **January 2018 Capacity Available:**	**384 MW**
▪ **January 2018 Projected Demand**	**242 MW**
▪ **Available Reserve Margin**	**142 MW**
▪ **Two Largest Units Capacity**	**117 MW**
▪ **Reserve less two largest units**	**25 MW**

This table is provided to show that without a new power plant, GPA will not be able to meet load growth by 2022. Furthermore, as shown, because we lack adequate base load capacity, GPA's fuel related cost to provide additional energy to new customers will continue to drive its total energy cost higher because energy production would come from costlier less efficient standby units. The lack of new units which could work with intermittent renewables will result in limited solar PV additions into the grid thereby limiting cost saving opportunities.

Summary of System Generating Capacity With No New Baseload:					**With New 180MW**
Description	**FY 2015**	**FY2017**	**FY2018**	**FY2021**	**FY2022**
Baseload MW Capacity	299	208	208	208	268
Emergency/Standby Capacity	120	200	200	200	200
Total MW Capacity	**419**	**408**	**408**	**408**	**468**
Peak MW Demand	249	261	266	283	283
Reserve Margin	170	147	142	125	185
Total Two Largest Units	132	120	120	120	88
Reserve Less Two Largest Units	**38**	**27**	**22**	**5**	**97**
% Baseload Capacity	**71.4%**	**51.0%**	**51.0%**	**51.0%**	**57.3%**
% Energy from Baseload	98.0%	80.0%	62.2%	62.2%	72.6%
% Energy from Renewables	0.0%	3.5%	3.5%	26.4%	26.4%
% Energy from Emergency/Peaker	**2.0%**	**16.5%**	**16.5%**	**11.4%**	**1.0%**

2. Net metering Summary Ending December 2017:





Estimated Net Metering Impact FY2009 to FY2017:

Fiscal Year	Amount
FY 2009	$1,657
FY 2010	$8,483
FY 2011	$18,177
FY 2012	$58,546
FY 2013	$278,025
FY 2014	$352,157
FY 2015	$856,921
FY 2016	$2,200,795
FY 2017	$2,828,835
Total:	**$6,603,596**

The continued growth in sales from non-net metering customers has mitigated revenue decline due to net metering customers

3. Renewable Energy Production Summary Thru December 2017:

Energy Production Source:	Kwh Production	Oil Barrels Avoided	Fuel Cost Avoided
NRG Total Production beginning Oct 2015	107,114,628	179,097	$9,850,362
Net Metering Estimated Production beginning Jan 2015	50,302,831	84,107	$4,625,896
Wind Power Production beginning Jan 2016	790,121	1,321	$72,660
Renewables Total:	**158,207,580**	**264,526**	**$14,548,918**
System Heat Rate Kwh/Gal	14.2		
System Fuel $/Bbl	$55.00		

4. Demand Side Management (DSM) Program Expenses Thru December 31, 2017:

All Expenses – Fiscal Year

Description	FY16	FY17	FY18 as of December'17	Total to Date
Regular/OT Pay	$11,348.80	$22,256.00	$4,690.09	$38,294.89
Other Contractual	$28,278.50	$73,010.05	0.0	$101,288.55
Paid Rebates-Split AC	$154,700.00	$557,275.00	$336,025.00	$1,048,000.00
Paid Rebates-Central AC	$3,400.00	$8,200.00	$800.00	$12,400.00
Paid Rebates-Washer/Dryer	$2,800.00	$7,425.00	$1,800.00	$12,025.00
Total Expenses	200,527.30	$668,166.05	$343,315.09	$1,212,008.44

2

5. **Phase II Renewables:** The OPA has upheld GPA's decision for the award of 120MW of solar PV to KEPCO and Hanwha. A subsequent protest filed in the Superior Court of Guam was subsequently withdrawn. GPA can now proceed obtaining CCU and PUC approvals for the two 60 MW contracts. I ask the CCU and the PUC to expedite their awards in consideration of the substantial delays that have occurred. These two renewable contracts will provide substantial savings to the ratepayers through LEAC.

6. **Phase III Renewables Bid**: The bid has been issued. The bid request is for about 40MW of solar PV renewables to be constructed on Navy leased land. The energy produced would be stored in batteries during the day and released at nighttime to meet peak time load. The bid price opening date for acceptable proposals is set for April 17, 2018.

7. **USEPA Consent Decree:** We met with the USEPA Region 9 Acting Administrator on December 18th. The meeting was an opportunity for us to update the administrator on progress made towards compliance. Work continues towards a consent decree which may be completed within the next six months.

8. **2010 Bonds Re-financed:** The 2010 bonds were successfully re-financed in December and has resulted in an annual debt service payment reduction of $501,236.00. We would like to thank everyone for their work in achieving the savings for our ratepayers. GPA would like to inform the Legislature of the intended use of the debt service reduction within 60 days after refinancing.

   Final Par Amount of Refunding Bonds: $148,670,000
   Final Par Amount of Refunded Bonds: $150,440,000 (i.e., all outstanding)
   Total Cash Flow Savings: $11,528,439
   Average Annual Cash Flow Savings: $501,236 (PUC minimum: $300,000)
   Net Present Value Savings: $7,777,917
   NPV Savings / Refunded Par Amount: 5.17% (Legislative minimum: 2%)
   All-In True Interest Cost: 4.12% (PUC maximum 4.32%)
   All thresholds required by the various approvals of the various agencies have been met.

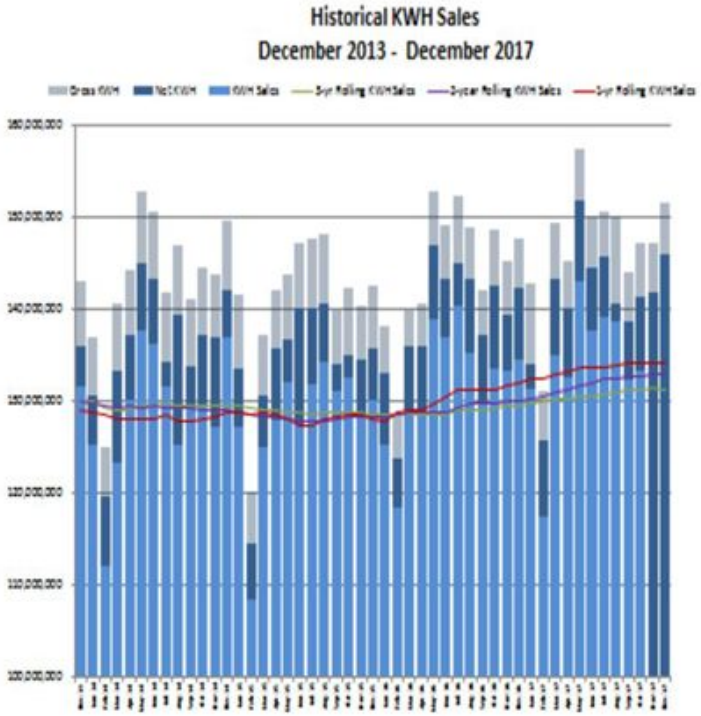
9. **January 2018 PUC Agenda:**
   - GPA Docket, LEAC adjustment for February 2018 thru July 2018 period

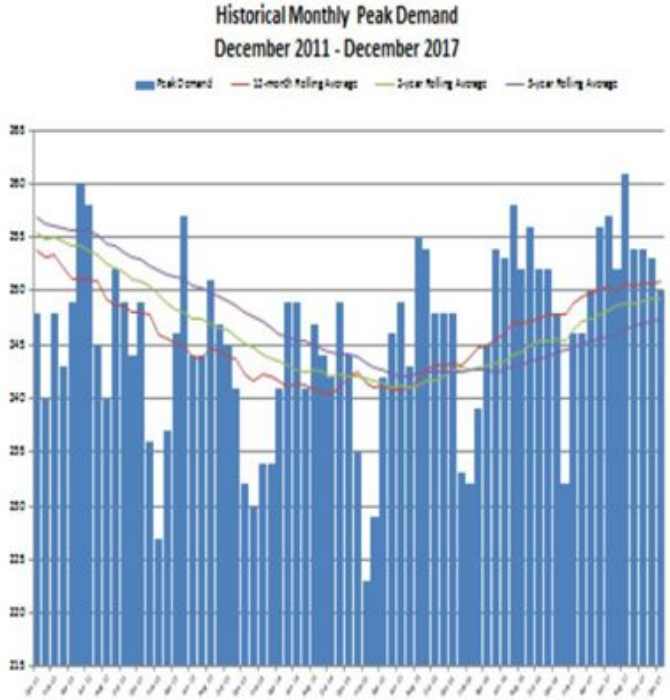
10. **New Power Plant Procurement:**
    a. GPA has issued the multi-step bid for the new power plant. GPA plans to have a short list of qualified bidders by early April. The successful short list will then be provided the technical specifications of the new plant for them to submit their proposal and price by this summer.

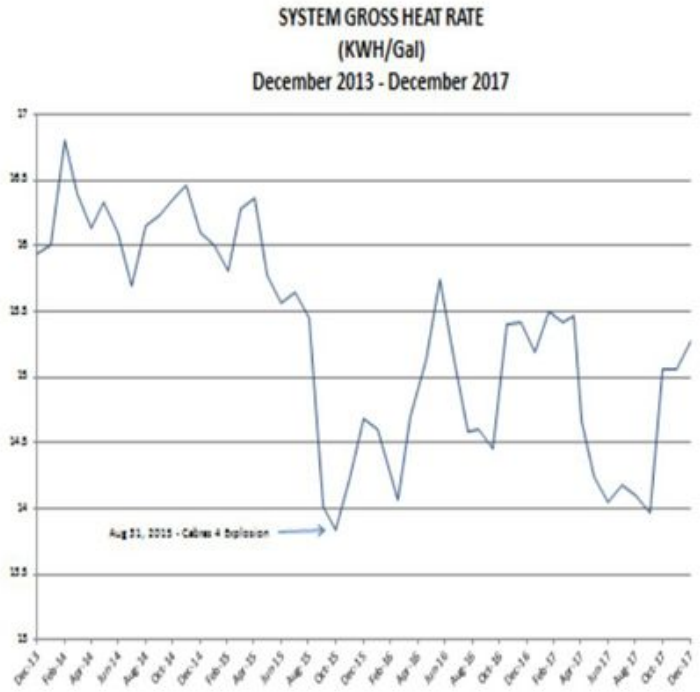
    b. The rezoning efforts for the land for the new power plant will continue. Senator Ada has introduced Bill-223-34 for this re-zoning which may have a public hearing at the end of January. GPA held a public meeting on January 5th at the Astumbo Senior Citizen Center and received some input from landowners in the vicinity of the proposed plant. The latest public meeting held was at 6:00pm on January 17, 2018 at the Tamuning Senior Center.

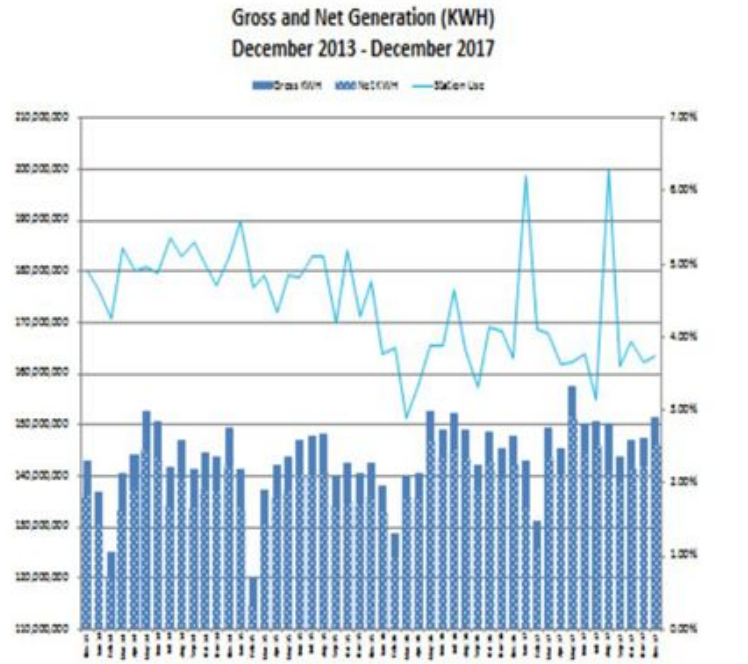
11. **Key Performance Indicators:** The following pages provide updated information thru December 2017.

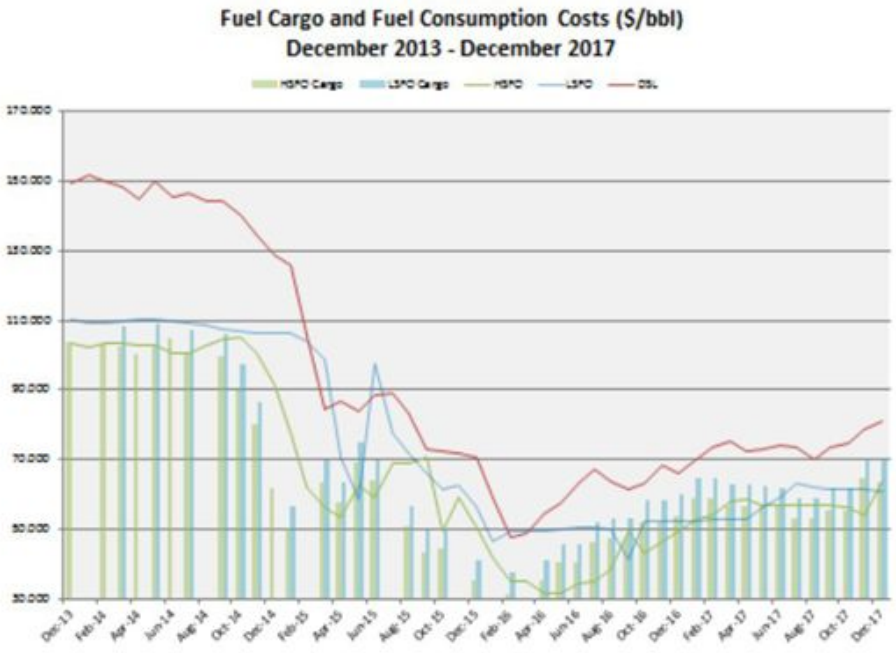
John M. Benavente, P.E.


Historical KWH Sales
December 2013 - December 2017


Historical Monthly Peak Demand
December 2011 - December 2017


SYSTEM GROSS HEAT RATE
(KWH/Gal)
December 2013 - December 2017
Aug 31, 2015 - Cabras 4 Explosion


Gross and Net Generation (KWH)
December 2013 - December 2017


Fuel Cargo and Fuel Consumption Costs ($/bbl)
December 2013 - December 2017
HSFO Cargo
LSFO Cargo
HSFO
LSFO
DSL
170.000
150.000
130.000
110.000
90.000
70.000
50.000
30.000
Dec-13
Feb-14
Apr-14
Jun-14
Aug-14
Oct-14
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Dec-16
Feb-17
Apr-17
Jun-17
Aug-17
Oct-17
Dec-17

Updates on Major CY 2018 Projects

January 18, 2018

New 180 MW Power Plant

DESCRIPTION	TIMELINE
• **Bid announcement:**	January 16, 2018
• **Qualified Bidders List:**	April 7, 2018
• **Technical Bid Issue:**	TBD (~ May 2018)
• **Notification of Intend to award**:	TBD
• **CCU / PUC Approval:**	TBD
• **Commercial Operations:**	30 months after contract signing (~ Dec 2021)

40 MW Energy Storage System

- **Awarded:** May 2017
- **Completion date:** August 31, 2018
- To mitigate generator trip related outages which resulted in Under Frequency Load Shedding activations to avoid blackouts
- Mitigates net power fluctuations by NRG 25MW plant and 1,500 net metering customers
- **Construction Cost:** ~$35M

SCADA Project

- Provides state of art Supervisory Control and Data Acquisition (SCADA) capability for GPWA
- **Awarded:** December 14, 2016
- **Completion Date:** October 1, 2018
- **Project cost:** $2,319,605.07 (GPA/GWA Combined)
- Provides real time monitoring and control of power system
- One control center for both GPA and GWA located here in Fadian. Shelters System Control Centers from natural disasters
- First SCADA system for GWA Water and Wastewater Systems

Phase III Renewables
40 MW on Leased Navy Land

- **Purpose:** Decrease/Stabilize LEAC Rates
- **Bid Issued:** Nov. 16, 2017
- **Bid Milestones:**
  - Phase I: Technical proposal due:
    - March 6, 2018
  - Phase II: Bid Opening (price):
    - April 17, 2018
  - Notification of Intent to award:
    - May 2, 2018
- CCU/PUC Approval: TBD

Renewables Integration Study

- **Task Order Awarded:**
  - January 9, 2017
- **Completion Date:**
  - TBD - 2018
- **Project Amount:**
  - $ 895,377.00

- This study will determine what capacity of renewables could be accommodated within the grid including system upgrades necessary for a stable and reliable grid.
- Study would provide information needed to plan for additional renewables and infrastructure upgrades necessary.
  - Phase II System Impact Study
  - Long Range Transmission Plan
  - Phase III ESS recommendations
  - New Generation operating characteristics requirements

Residual Fuel Oil Contract

- Current contract expires August 2018
- Provides low and high sulfur fuel
- Last residual fuel oil contract after over 60 years burning this fuel for energy production
- 2-year contract with three one year options

  (MS GPA-009-18)
- **Bid opening date:**
  - February 2018
- **CCU/PUC Approval:**
  - TBD (~ May 2018)

Ultra Low Sulfur Diesel

- Contract for about 1M Barrels
- One contract for bulk fuel delivery to GPA Leased Tristar Tanks (MS GPA-008-18)
- One contract for truck deliveries to various power stations (MS GPA-006-18)
- **Opening date:**
  - February 2018
- **CCU/PUC Approval:**
  - TBD (~ June 2018)

Outage Improvement Programs

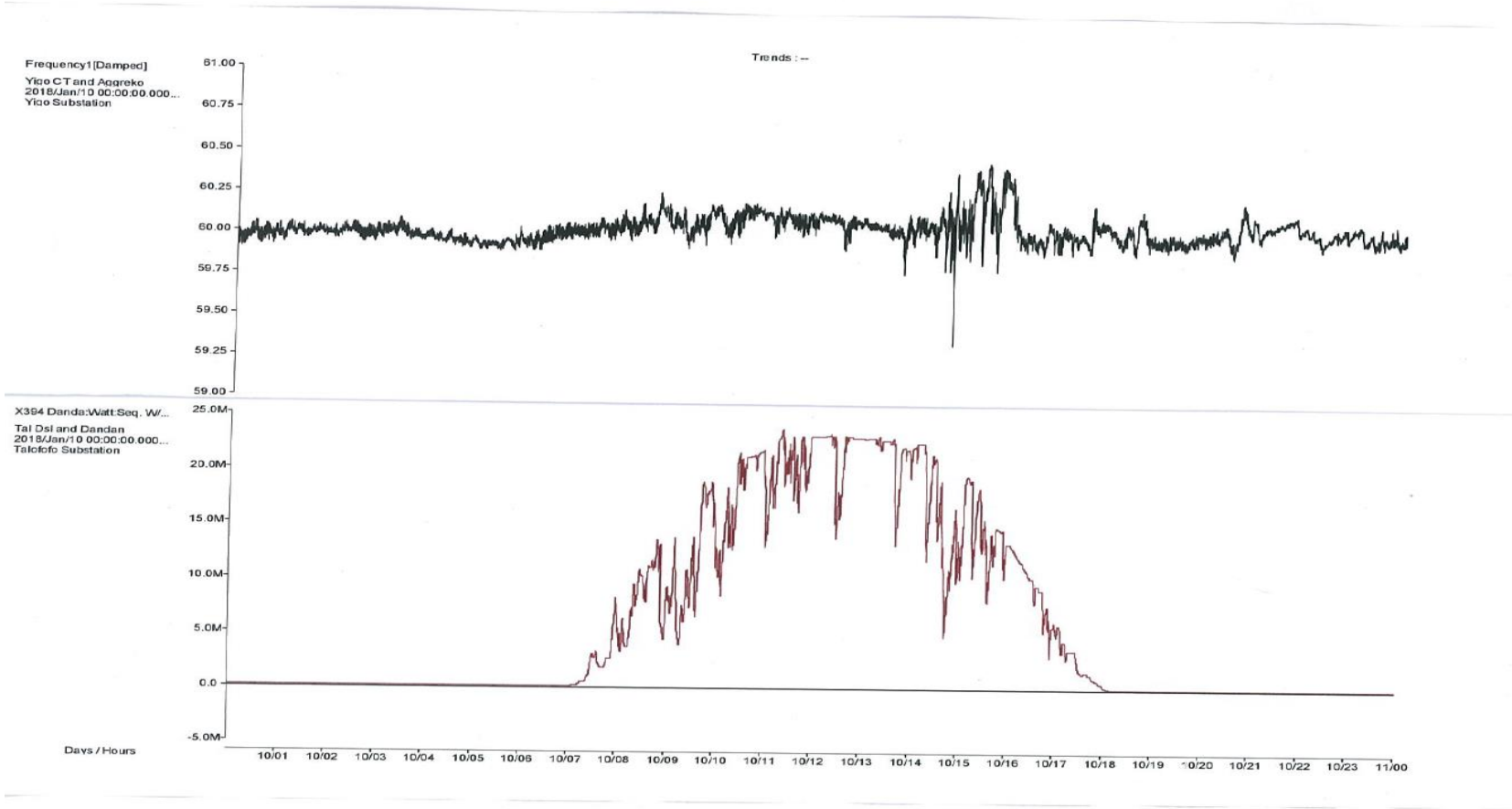
January 18, 2018

Energy Storage System Program

Generations/Transmission UFLS

- Under Frequency Load Shedding (UFLS) Relays dumps load from the system whenever system frequency decays to 59.3 Hz.
- The dumping of load is necessary in order to avoid overloading the generators on line which would consequently result in an island-wide blackout. Duration of UFLS outages typically between 5 to 30 minutes.
- The last Island-wide Blackout was on July 11, 2013. There were four additional blackouts between November 2010 and the last one. The recovery from an island-wide power outage would take five plus hours.
- The existing base load units are slow reacting to frequency decays and past attempts to mitigate outages by increasing on line spinning reserves were unsuccessful.
- The 40 MW Energy Storage System (ESS) consist of one 24 MW unit at the Hagatna Substation and one 16 MW unit at the Talofofo Substation. It is anticipated that these ESS would reduce over 70% of future UFLS outages due to generator trips and solar PV intermittencies.
- The project cost is $35M which is being funded by 2014 bond funds. Commissioning is programmed for August 2018.

Jan 10, 2018 Stage 1-1
UFLS activated at 59.3 Hz due to NRG drop in load from 17MW to 4MW resulting in five feeders losing power



CY 2016 UFLS Summary

2016	# of Feeder Trips	# of UFLS Events	Transmission	Duration (min)	Generation	AGGREKO	Cabras 1	Cabras 2	Dededo CT 1	Dededo CT 2	Dededo Diesel #2	Machche CT	NRG SOLAR	Piti 7 CT (TEM)	Piti 8 (MEC)	Piti 9 (MEC)	Pulantat Diesels #1	Talofofo Diesels #2	Tenjo Diesels #5	Yigo CT
Jan-16	28	3	1	111	2	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0
Feb-16	75	9	0	209	9	2	0	0	0	0	0	1	0	0	1	5	0	0	0	0
Mar-16	84	11	2	149	9	0	0	0	0	0	0	0	0	1	1	7	0	0	0	0
Apr-16	85	13	1	222	12	2	1	1	0	0	0	2	0	1	2	3	0	0	0	0
May-16	23	2	0	95	2	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
Jun-16	40	7	4	114	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
Jul-16	27	7	1	46	6	2	0	0	0	0	0	0	0	0	1	0	0	0	0	3
Aug-16	5	2	1	10	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Sep-16	40	10	0	633	10	1	2	2	0	0	0	0	0	1	1	3	0	0	0	0
Oct-16	91	7	4	68	3	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0
Nov-16	77	7	0	73	7	2	0	1	0	0	0	0	0	0	0	4	0	0	0	0
Dec-16	33	1	0	33	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
2016 Totals	608	79	14	1,763	65	9	4	9	0	0	0	3	0	3	10	24	0	0	0	3

CY 2017 UFLS Summary

2017	# of Feeder Trips	# of UFLS Events	Transmission	Duration (min)	Generation	AGGREKO	Cabras 1	Cabras 2	Dededo CT 1	Dededo CT 2	Dededo Diesel #2	Machche CT	NRG SOLAR	Piti 7 CT (TEM)	Piti 8 (MEC)	Piti 9 (MEC)	Pulantat Diesels #1	Talofofo Diesels #2	Tenjo Diesels #5	Yigo CT
Jan-17	63	7	0	71	7	0	0	1	0	0	0	0	0	0	1	3	0	0	1	1
Feb-17	35	2	0	38	2	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
Mar-17	39	7	1	1,489	6	1	2	0	0	0	0	1	1	0	0	0	1	0	0	0
Apr-17	72	7	0	118	7	0	2	1	1	0	1	0	2	0	0	0	0	0	0	0
May-17	23	2	0	24	2	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0
Jun-17	14	4	1	17	3	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Jul-17	39	7	1	78	6	0	0	1	0	0	0	0	1	1	0	0	0	0	0	3
Aug-17	45	5	0	81	5	0	0	2	0	1	0	0	0	1	1	0	0	0	0	0
Sep-17	19	2	0	15	2	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0
Oct-17	32	4	1	38	3	0	0	1	0	0	0	0	1	0	1	0	0	0	0	0
Nov-17	54	5	0	51	5	0	0	0	0	0	0	1	2	0	2	0	0	0	0	0
Dec-17	25	5	2	25	3	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0
2017 Totals	460	57	6	2,045	51	2	6	8	1	1	1	2	10	2	6	4	1	1	1	5

CY 2016 & CY 2017 Summary

2016	# of Feeder Trips	# of UFLS Events	Transmission	Duration (min)	Generation	Avg. Duration (Mins)	Avg. Feeders/Trip	Avg. Duration/Feeder
2016 Totals	608	79	14	1763	65	22	8	3
2017 Totals	460	57	6	2,045	51	36	8	4
TOTALS	**1,068**	**136**	**20**	**3,808**	**116**	**28**	**8**	**4**

ESS Economics

UFLS Outages Cost Summary:

2016	# of Feeder Trips	# of UFLS Events	Duration (min)	Unserved Kwh	Revenue Loss
Est. CY 016 Totals	608	79	1,763	1,159,000	$127,453
Est. CY 2017 Totals	460	57	2,045	1,364,200	$150,062

ESS Annual Summary:

Project Cost		$35,000,000
Debt Service		$2,808,490
O&M		$250,000
Total Cost:		$3,058,490
GPA Annual Kwh Sales		1,500,000,000
ESS Annual $/Kwh Cost		**$0.002**

Vegetation Management Program

Current Vegetation Management

- Contracts issued for North, Central and South sectors
- Crews assigned to trim critical areas on weekly basis
- Limited number of linemen available; adequate manpower unavailable to sustain trimming needs especially during rainy periods when vegetation growth compounds
- Vegetation trimming requires linemen when vegetation is very close to lines; can limit to tree trimmers if vegetation kept low lying
- Most work accomplished with chain saws and machetes
- Debris collected un-mulched; difficult to handle/dispose
- Overhaul of current program planned last year

Vegetation Management Northern Sector

Northern Sector			
Feeder	Esitmated Distance (LF)	Distance Trimmed (LF)	% Completion
P332	6830	11278	165%
P322	7265	4800	66%
P330	2635	13366	507%
P087	4245	4200	99%
P046	1245		
P321	4045		
P088	3310		
P089	670		
P331	1925		
P323	2810		
P271	50		
P270	300		
P245	1660		
P272	150		
P111	500		
P244	920		
P240	430		
P242	290		
Total	39280	33644	86%

Vegetation Management Central Sector

Central Sector			
Feeder	Estimated Distance (LF)	Distance Trimmed (LF)	% Completion
P250	33290	5070	15%
P212	17560		
P253	15240		
P283	2230	4620	207%
P210	10120		
P280	1675		
P311	1360		
P007	778		
P211	6050		
P202	420		
P251	280		
P213	3500		
P252	1520	4586	302%
P201	100		
P203	370		
P282	525		
P310	370		
P205	350		
P206	140		
P204	530		
P312	200		
P281	525		
P400	150		
Total	97283	14276	15%

Vegetation Management Southern Sector

Southern Sector			
Feeder	Estimated Distance (LF)	Distance Trimmed (LF)	% Completion
P294	9430	22801	242%
P261	4930	5389	109%
P340	13240	13755	104%
P262	5185		
P221	1570	150	10%
P223	2500	855	34%
P341	880		
P301	19915	1675	8%
P005	990		
P220	1250		
P260	12630		
Total	72520	44625	62%

Sustainable Vegetation Management

- Dedicated team for three sectors of the Island
- Teams consist of:
  - Two Lineman/Bucket Truck (as required)
  - Two operators; operates mower/dump truck/mulcher
  - Three Tree Trimmers to gather and mulch vegetation
- Clear trees and vegetation under and within right of ways
- Trees outside of ROW must also be cut with owner permission
- Continue Tree Trimming Contracts to assist with backlogs
- Work with Mayors on under the line mowing maintenance and the painting of poles with traffic yellow

Vegetation Mowers with Extended Booms



Heavy Duty Cutter Mowers



Heavy Duty Mulchers
To be Pulled by Dump Truck





Predictive & Preventive Maintenance

Predictive Based Maintenance

- Performed by America's Best Electricmart, Inc.
- GPA Purchase Order Number 24304
- $214,000 total Cost
- Started October 30, 2017 and completed on December 28, 2017 (59 Days)

Predictive Based Maintenance

- **Predictive Based Maintenance Technology Utilizes Radio Frequency, Proprietary Analytics, and Ultrasonic Acoustic Technology**
- **Predictive Based Maintenance Pinpoints Locations where Arcing, Leaking, and Electrical Tracking are Present to Identify Failing Parts**
- **Line Inspection Work Involved 10 Worst Performing Transmission Circuits**
- **Line Inspection Work Involved 10 Worst Performing Distribution Circuits**
- **296 Miles of GPA T&D Lines were Surveyed**
- **Worst Performing Circuits were determined in terms of Outages not including UFLS or Generation related outages**

Predictive Based Maintenance

- **50 Specific Locations Associated with a Transmission or Distribution Circuit along with Location Maps and Photos where a Particular Hardware, Insulator, or Line Appurtenance is Failing were Identified**
- **The Final Report Outlining the 50 Locations was Forwarded to T&D for Prioritized Scheduling to Avoid Extended Outages**
- **Total Estimated Cost to Survey entire GPA Transmission and Distribution System is $856,400**

Potential Fuse Cutout Failure







Potential 34.5 KV Insulator Failure







Potential Fuse Cutout Failure







GUAM POWER AUTHORITY
HUMAN RESOURCES DIVISION
STAFFING REPORT (FY 2018)
AS OF NOVEMBER 30, 2017

DIVISION	B1 ACTIVE EMP	B2 LAST EMP	C PROMOTE /TRANS	D PROM. RECLASS	E NEW HIRES	F RESIGN/ TERM	G RETIRE	H CURR VAC	I LAST VAC	(B1+H=K) TOTAL STAFFING
INTERNAL AUDIT/REVENUE PROTECTION	3	3	0	0	0	0	0	1	1	4
BOARD(10200)	2	2	0	0	0	0	0	0	0	2
GENERAL MANAGER (CUS) [10100]	0	0	0	0	0	0	0	0	0	0
GENERAL MANAGER (20500)	4	4	0	0	0	0	0	0	0	4
PUBLIC INFORMATION OFFICE	2	2	0	0	0	0	0	0	0	2
ASSIST GM-ENG/TECH SVCS (30500)	1	1	0	0	0	0	0	0	0	1
ASSISTANT GENERAL MGR (30800)	1	1	0	0	0	0	0	1	1	2
ASSISTANT GENERAL MGR (AGMO) 50900	2	2	0	0	0	0	0	0	0	2
STRAT PLANN & OPTNS RESEARCH DIV	10	10	0	0	0	0	0	1	1	11
FACILITIES	9	9	0	0	0	0	0	0	0	9
HUMAN RESOURCES	10	10	0	0	0	0	0	0	0	10
CUSTOMER SERVICES	34	34	0	0	0	0	0	3	3	37
INFORMATION TECHNOLOGY	16	15	0	0	1	0	0	0	1	16
FINANCE	42	42	0	0	0	0	0	4	4	46
PROCUREMENT	21	21	0	0	0	0	0	1	1	22
TRANSPORTATION	9	9	0	0	0	0	0	2	2	11
SAFETY	6	6	0	0	0	0	0	1	1	7
PLANNING & REG	8	8	0	0	0	0	0	0	0	8
ENGINEERING	37	37	0	0	0	0	0	2	2	39
GENERATION	138	139	0	0	0	0	0	7	6	145
TRANSMISSION/DISTRIBUTION	98	98	1	0	0	0	0	9	9	107
POWER SYSTEM CONTROL CENTER	22	22	0	0	0	0	0	3	3	25
	475	475	1	0	1	0	0	35	35	510
JOBS/SCSEP/GETP PARTICIPANTS	1	1								1
APPRENTICESHIP PROGRAM	0	1								0
SUMMER ENGINEERING INTERNS	0	0								0
TEMPORARY (P.L. 34-32)	1	1								1
GRAND TOTAL WORKFORCE:	477	478	1	0	1	0	0	35	35	512

FTE Count per FY18 FMP: 510

Current vacancies adjusted to reflect FTE of 510

** JOBS = Job Opportunities and Basic Skills (individuals under the Public Health assistance program)

** GETP = Guam Employment & Training Program (individuals under the Public Health assistance program)

** SCSEP = Senior Community Service Employment Program

** APPRENTICESHIP TRAINING PROGRAM - Generation, PSCC and T&D combined total

** JOBS/SCSEP/GETP and Apprentice program participants are not included in the total annual budgeted FTE (Full-Time Employee) count.

** P.L. 34-32 -Temporary employee(s)

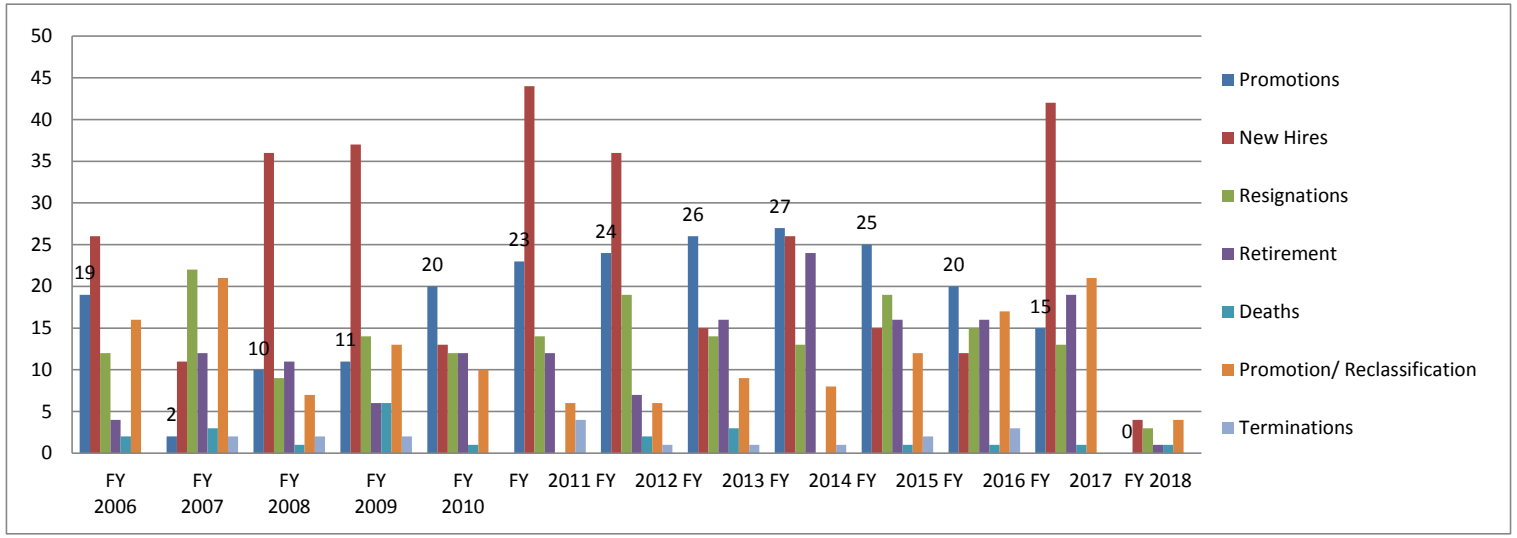
Staffing Report as of November 30, 2017 - PREPARED BY: J.Aguigui

RECRUITMENT ANALYSIS

Fiscal Year	Promotions	New Hires	Resignations	Retirement	Deaths	Promotion/ Reclassifi-cation	Termina-tions	Total Author-ized FTE	Attrition Rate	Total Filled FTE at end of Fiscal Year	Percentage of Filled FTE at end of Fiscal Year
2006	19	26	12	4	2	16	0	584	3.3%	536	91.8%
2007	2	11	22	12	3	21	2	584	7.2%	510	87.3%
2008	10	36	9	11	1	7	2	592	4.5%	525	88.7%
2009	11	37	14	6	6	13	2	592	5.3%	534	90.2%
2010	20	13	12	12	1	10	0	592	4.7%	522	88.2%
2011	23	44	14	12	0	6	4	592	5.7%	536	90.5%
2012	24	36	19	7	2	6	1	568	5.4%	543	95.6%
2013	26	15	14	16	3	9	1	568	6.3%	524	92.3%
2014	27	26	13	24	0	8	1	568	7.3%	512	90.1%
2015	25	15	19	16	1	12	2	539	7.4%	489	90.7%
2016	20	12	15	16	1	17	3	510	7.2%	466	91.4%
2017	15	42	13	19	1	21	0	510	7.1%	476	93.3%
2018	0	4	3	1	1	4	0	510	1.1%	475	93.1%

Recruitment Analysis (FY 2018) ..1 of 2

as of 11/30/17

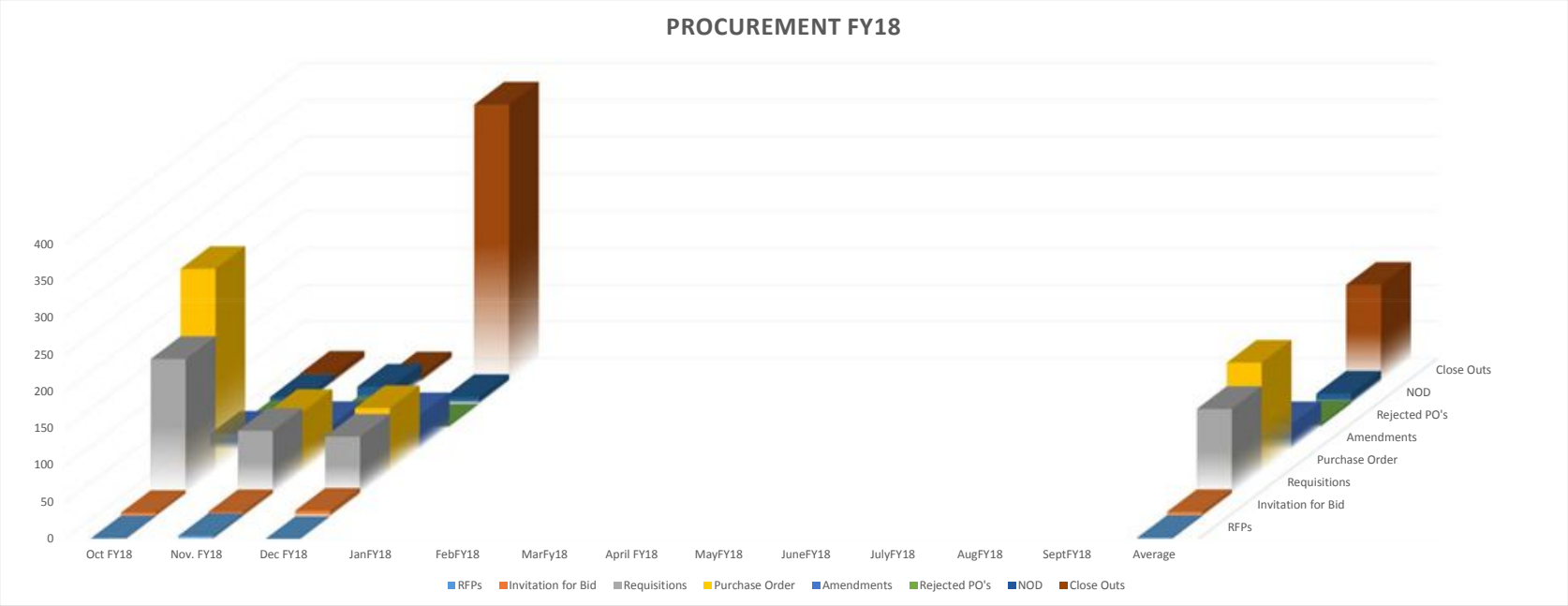


	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Promotions	19	2	10	11	20	23	24	26	27	25	20	15	0
New Hires	26	11	36	37	13	44	36	15	26	15	12	42	4
Resignations	12	22	9	14	12	14	19	14	13	19	15	13	3
Retirement	4	12	11	6	12	12	7	16	24	16	16	19	1
Deaths	2	3	1	6	1	0	2	3	0	1	1	1	1
Promotion/ Reclassification	16	21	7	13	10	6	6	9	8	12	17	21	4
Terminations	0	2	2	2	0	4	1	1	1	2	3	0	0

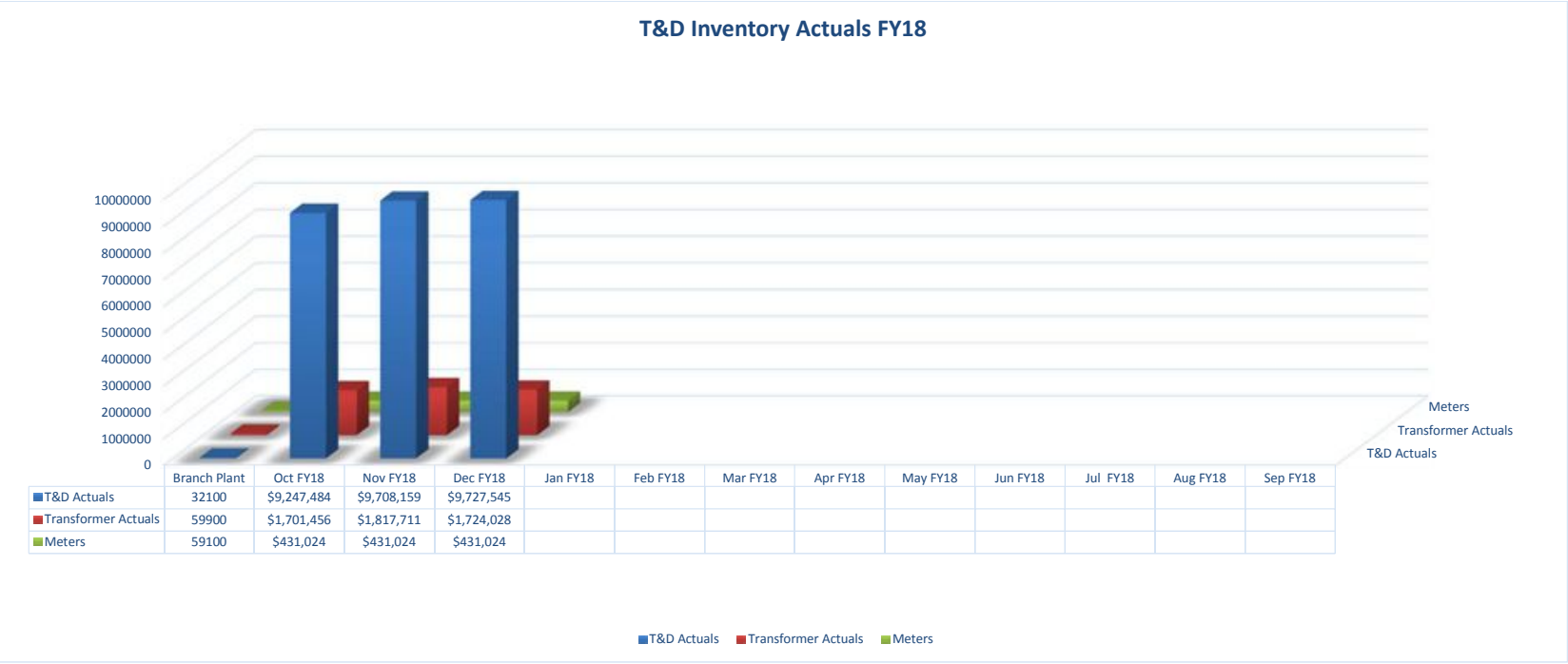
TOTAL NO. OF EMPLOYEES	**536**	**510**	**525**	**534**	**522**	**536**	**543**	**524**	**512**	**489**	**466**	**476**	**475**

Recruitment Analysis (FY 2018) .. 2 of 2

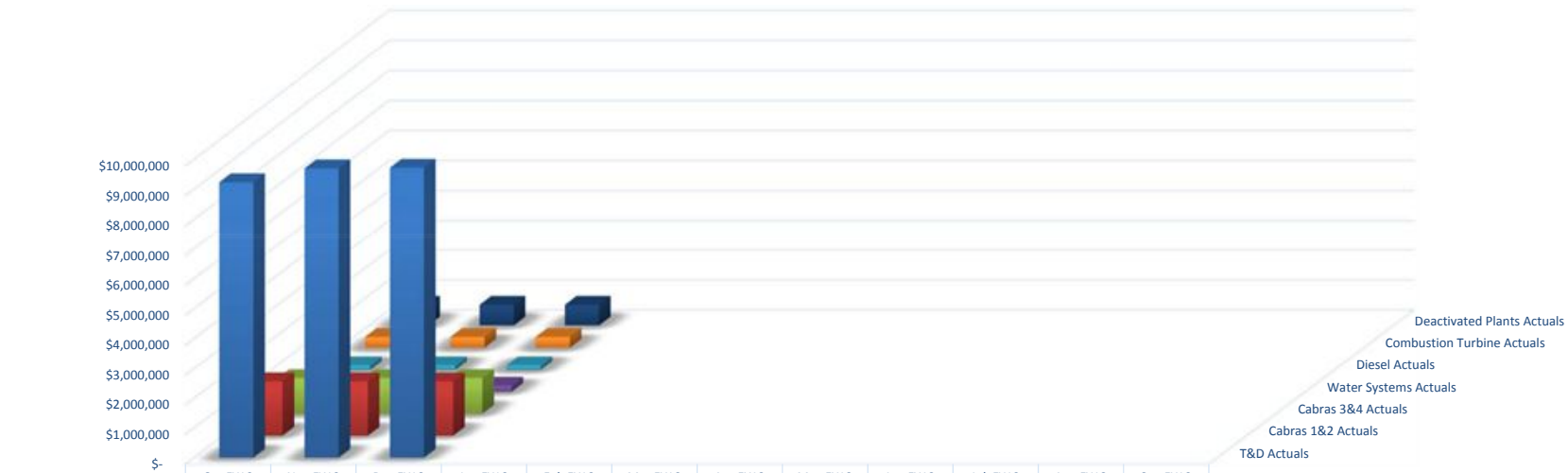
as of 11/30/17



	Oct FY18	Nov. FY18	Dec FY18	JanFY18	FebFY18	MarFy18	April FY18	MayFY18	JuneFY18	JulyFY18	AugFY18	SeptFY18	Average
RFPs	1	4	0										1.66666667
Invitation for Bid	5	6	8										6.33333333
Requisitions	183	86	78										115.666667
Purchase Order	275	81	86										147.333333
Amendments	**21**	**34**	**46**										33.6666667
Rejected PO's	4	9	0										4.33333333
NOD	9	23	9										13.6666667
Close Outs	10	9	374										131



	Branch Plant	Oct FY18	Nov FY18	Dec FY18	Jan FY18	Feb FY18	Mar FY18	Apr FY18	May FY18	Jun FY18	Jul FY18	Aug FY18	Sep FY18
T&D Actuals	32100	$9,247,484	$9,708,159	$9,727,545									
Transformer Actuals	59900	$1,701,456	$1,817,711	$1,724,028									
Meters	59100	$431,024	$431,024	$431,024									



	Oct FY18	Nov FY18	Dec FY18	Jan FY18	Feb FY18	Mar FY18	Apr FY18	May FY18	Jun FY18	Jul FY18	Aug FY18	Sep FY18
T&D Actuals	$9,247,484	$9,708,159	$9,727,545									
Cabras 1&2 Actuals	$1,838,876	$1,836,965	$1,834,553									
Cabras 3&4 Actuals	$1,206,713	$1,206,713	$1,206,713									
Water Systems Actuals	$207,668	$209,651	$208,493									
Diesel Actuals	$150,427	$150,427	$150,427									
Combustion Turbine Actuals	$365,514	$365,514	$365,514									
Deactivated Plants Actuals	$687,989	$687,989	$687,989									

GUAM POWER AUTHORITY
GOVERNMENT ACCOUNTS RECEIVABLE
BILLING UP TO 12/31/2017 and Payment Applied as of 01/16/2018

Current (12/17 Billing due 01/31/18
30 days Arrears (11/17 due 12/15/17)
60 days and over Arrears (10/17 billing due 11/15/17)

NEW ACCT NUMBER		DEPARTMENT	ARREARS BALANCE 11/30/2017	CURRENT BILL FOR 12/31/2017 BILL DATE 01/08/2018	BILLING ADJUSTMENT 1/8/2018	PAYMENTS AS OF 1/8/2018	BILLING BALANCE 1/8/2018	
		Line Agencies						
124378	0237100000	Dept. of Corrections	$ 73,878.77	$ 71,876.65	$ -	$ (73,878.77)	$ 71,876.65	
124401	0437100000	Dept. of Parks & Rec.	$ 19,224.80	$ 19,338.89	$ 75.00	$ (19,224.80)	$ 19,413.89	
124415	0537100000	Guam Fire Department	$ 17,346.11	$ 16,633.04	$ -	$ (17,346.11)	$ 16,633.04	
108818	6995000000	DOA-Supply Management	$ 1,426.99	$ 1,471.82	$ -	$ (1,426.99)	$ 1,471.82	
108799	7895000000	Dept. of Administration	$ 3,617.32	$ 3,445.86	$ -	$ (3,617.32)	$ 3,445.86	
124392	1337100000	Nieves Flores Library	$ 10,735.83	$ 9,587.42	$ -	$ (10,735.83)	$ 9,587.42	
140297	2206200000	General Services Agency	$ 244.69	$ 248.89	$ -	$ (244.69)	$ 248.89	
124380	2237100000	DOA-Data Processing	$ 7,693.05	$ 7,231.40	$ -	$ (7,693.05)	$ 7,231.40	
124393	2337100000	Dept. of PH&SS	$ 65,809.99	$ 64,757.94	$ -	$ (65,809.99)	$ 64,757.94	
124381	3237100000	Dept. of Education	$ 1,062,027.62	$ 989,306.83	$ 349.78	$ (1,062,027.62)	$ 989,656.61	
124394	3337100000	Guam Police Department	$ 34,895.99	$ 33,545.23	$ -	$ (34,895.99)	$ 33,545.23	
128478	3569100000	Dept of Youth Affairs (Federal)	$ 903.05	$ 957.52	$ -	$ (903.05)	$ 957.52	
124407	4437100000	Dept. of Youth Affair* (Local)	$ 13,821.99	$ 13,199.62	$ 25.00	$ (13,821.99)	$ 13,224.62	
124445	4737100000	Guam Environmental Protect	$ 5,847.97	$ 5,690.97	$ -	$ (5,847.97)	$ 5,690.97	
124408	5437100000	Mental Health/Subst.	$ 42,415.83	$ 39,421.05	$ -	$ (42,415.83)	$ 39,421.05	
148823	7200300000	Veteran Affairs	$ 936.78	$ 908.97	$ -	$ (936.78)	$ 908.97	
124412	7437100000	Civil Defense (Military Affairs)	$ 33,182.05	$ 10,856.02	$ -	$ (33,182.05)	$ 10,856.02	
158935	7463300000	Pacific Energy Resource Center	$ 521.13	$ 573.20	$ -	$ (521.13)	$ 573.20	
124374	8137100000	Dept. of Agriculture	$ 9,741.10	$ 8,871.44	$ -	$ (9,741.10)	$ 8,871.44	
124399	8337100000	DPW-FAC Adm Account	$ 25,431.16	$ 24,651.28	$ -	$ (25,431.16)	$ 24,651.28	
	8437100000	Guam Visitors Bureau	$ 4,365.53	$ 4,024.78	$ (501.22)	$ (3,864.31)	$ 4,024.78	
166560	8446300000	Yona Senior Citizen Center	$ 772.51	$ 711.15	$ -	$ (772.51)	$ 711.15	
124414	9437100000	Chamorro Village	$ 4,026.16	$ 3,912.71	$ -	$ (4,026.16)	$ 3,912.71	
292266	5247210000	Mayors Council	$ 5,089.60	$ 2,225.31	$ -	$ (5,089.60)	$ 2,225.31	
309494	6293410000	Office of the Governor	$ 23,092.87	$ 22,051.44	$ -	$ (23,092.87)	$ 22,051.44	
	8555858369	Dept of Chamorro Affairs (Guam Museum)	$ 17,788.85	$ 17,351.60	$ -	$ (17,788.85)	$ 17,351.60	
		Sub Total	**$ 1,484,837.74**	**$ 1,372,851.03**	**$ (51.44)**	**$ (1,484,336.52)**	**$ 1,373,300.81**	
		MAYORS						
124427	0637100000	Santa Rita Mayor	$ 3,438.80	$ 3,620.20	$ -	$ (3,438.80)	$ 3,620.20	
124437	0737100000	Ordot/Chalan Pago Mayor	$ 1,228.99	$ 1,792.03		$ (1,228.99)	$ 1,792.03	
124417	1537100000	Agana Mun Planning Council	$ 1,143.02	$ 1,391.16	$ -	$ (1,143.02)	$ 1,391.16	
124428	1637100000	Piti Mayor	$ 766.39	$ 1,285.78	$ 403.19	$ (1,169.58)	$ 1,285.78	
124438	1737100000	Mongmong/Toto/Maite Mayor	$ 2,279.14	$ 1,146.00	$ -	$ (2,279.14)	$ 1,146.00	
124429	2637100000	Asan/Maina/Adelup Mayor	$ 909.92	$ 855.75	$ -	$ (909.92)	$ 855.75	
124439	2737100000	Sinajana Mayor	$ 3,898.72	$ 3,938.58	$ -	$ (3,898.72)	$ 3,938.58	
124430	3637100000	Dededo Mayor	$ 5,704.83	$ 5,982.48	$ -	$ (5,704.83)	$ 5,982.48	
124431	4637100000	Yigo Mayor	$ 3,875.76	$ 4,280.88	$ -	$ (3,875.76)	$ 4,280.88	
124432	5637100000	Umatac Mayor	$ 1,358.98	$ 1,391.80	$ -	$ (1,358.98)	$ 1,391.80	
124423	6537100000	Agana Hts. Mayor	$ 4,960.46	$ 5,180.17	$ -	$ (4,960.46)	$ 5,180.17	
124433	6637100000	Merizo Mayor	$ 1,357.48	$ 1,293.33	$ -	$ (1,357.48)	$ 1,293.33	
124453	6737100000	Barrigada Mayors Office	$ 1,997.90	$ 2,146.49	$ -	$ (1,997.90)	$ 2,146.49	
124424	7537100000	Agat Mayor	$ 4,373.18	$ 2,300.79	$ -	$ (4,373.18)	$ 2,300.79	
124434	7637100000	Inarajan Mayor	$ 1,539.30	$ 1,300.34	$ -	$ (1,539.30)	$ 1,300.34	
124425	8537100000	Tamuning Mayor	$ 5,597.41	$ 5,662.85	$ -	$ (5,597.41)	$ 5,662.85	
124435	8637100000	Talofofo Mayor	$ 2,015.36	$ 2,271.58	$ -	$ (2,015.36)	$ 2,271.58	
124426	9537100000	Mangilao Mayor	$ 4,406.08	$ 4,643.74	$ -	$ (4,406.08)	$ 4,643.74	
124436	9637100000	Yona Mayor	$ 873.44	$ 823.62	$ 25.00	$ (873.44)	$ 848.62	
		Sub Total	**$ 51,725.16**	**$ 51,307.57**	**$ 428.19**	**$ (52,128.35)**	**$ 51,332.57**	
		DPW ACCOUNTS						
124395	4337100000	DPW-Village St. Lights	$ 335,305.22	$ 317,920.81	$ 0.46	$ (335,305.22)	$ 317,921.27	
124396	5337100000	DPW- Primary St. Lights	$ 78,290.15	$ 79,622.70	$ 0.88	$ (78,290.15)	$ 79,623.58	
124397	6337100000	DPW-Sec/Coll St. Lights	$ 23,977.23	$ 24,425.52	$ -	$ (23,977.23)	$ 24,425.52	
124398	7337100000	DPW-Signal Lights	$ 10,289.39	$ 9,714.34	$ 0.16	$ (10,289.39)	$ 9,714.50	
		Sub Total	**$ 447,861.99**	**$ 431,683.37**	**$ 1.50**	**$ (447,861.99)**	**$ 431,684.87**	
		(B) AUTONOMOUS/PUBLIC CORP						
124402	1437100000	Retirement Fund	$ 5,502.94	$ 5,293.74	$ -	$ (5,502.94)	$ 5,293.74	
208988	1915500000	Guam Housing Corp Rental Division	$ 2,224.69	$ 1,417.07	$ 50.51	$ (1,676.35)	$ 2,015.92	
124403	2437100000	University of Guam	$ 172,632.57	$ 160,245.34	$ -	$ (332,877.91)	$ -	
124383	4237100000	Guam Airport Authority	$ 483,565.38	$ 494,492.11	$ -	$ (483,565.38)	$ 494,492.11	
	5357510000	University of Guam (NET METERED)	$ 77,263.29	$ 73,638.59	$ -	$ (150,901.88)	$ -	
124387	6237100000	G H U R A	$ 11,151.82	$ 22,150.63	$ -	$ (22,843.67)	$ 10,458.78	
124409	6437100000	Guam Community College	$ 47,351.83	$ 42,596.41	$ -	$ (47,351.83)	$ 42,596.41	
124388	7237100000	Guam Memorial Hospital	$ 335,332.37	$ 155,289.92	$ 1,220.96	$ (172,538.01)	$ 319,305.24	1
124377	9137100000	Port Authority of Guam	$ 93,426.24	$ 94,045.20	$ (10,358.37)	$ (177,063.07)	$ 50.00	
	9157510000	Guam Community College (NET METERED)	$ 37,463.18	$ 33,659.31	$ -	$ (37,463.18)	$ 33,659.31	
288441	9173210000	Guam Solid Waste Authority	$ 4,730.10	$ 5,165.63	$ -	$ (4,730.10)	$ 5,165.63	
124400	9337100000	Guam Waterworks Authority	$ 1,126,757.49	$ 1,092,191.15	$ 572.37	$ (1,126,757.49)	$ 1,092,763.52	
		Sub Total	**$ 2,397,401.90**	**$ 2,180,185.10**	**$ (8,514.53)**	**$ (2,563,271.81)**	**$ 2,005,800.66**	
		(C) OTHERS						
124391	0337100000	Guam Legislature	$ 297.26	$ 219.53		$ (297.26)	$ 219.53	
	9503154359	Guam Legislature (NET METER)	$ 6,056.34	$ 5,819.82		$ (6,056.34)	$ 5,819.82	
124379	1237100000	Superior Court of Guam	$ 68,120.29	$ 67,185.92		$ (68,120.29)	$ 67,185.92	
124418	2537100000	Agana Post Office	$ 5,483.63	$ 5,466.68		$ (10,950.31)	$ -	
130431	2570200000	Customs & Quarantine Agency	$ 961.08	$ 871.76		$ (961.08)	$ 871.76	
124419	3537100000	U.S. Post Office	$ 38,475.21	$ 37,634.10		$ (76,109.31)	$ -	
124422	5537100000	Dept. of Military Affairs	$ 85,660.09	$ 72,035.29		$ (85,660.09)	$ 72,035.29	
	3209463043	Dept. of Military Affairs (NET METERED)	$ 6,119.39	$ 2,846.00		$ (6,119.39)	$ 2,846.00	
124446	5737100000	KGTF	$ 6,058.35	$ 6,228.23		$ (6,058.35)	$ 6,228.23	
102783	7281000000	Tamuning Post Office	$ 5,282.23	$ 5,122.85		$ (10,405.08)	$ -	
		Sub Total	**$ 222,513.87**	**$ 203,430.18**	**$ -**	**$ (270,737.50)**	**$ 155,206.55**	
		Sub Total (w/out Promissory Note)	**$ 4,604,340.66**	**$ 4,239,457.25**	**$ (8,136.28)**	**$ (4,818,336.17)**	**$ 4,017,325.46**	

SPORD CCU Report

December 2017

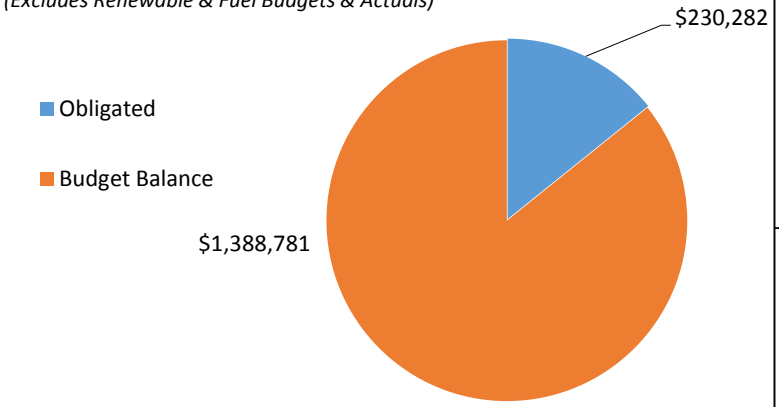
SPORD FY 2018 Budget Status

SPORD O&M:

O&M (Non-Labor) Budget Status

thru 12/31/17

(Excludes Renewable & Fuel Budgets & Actuals)

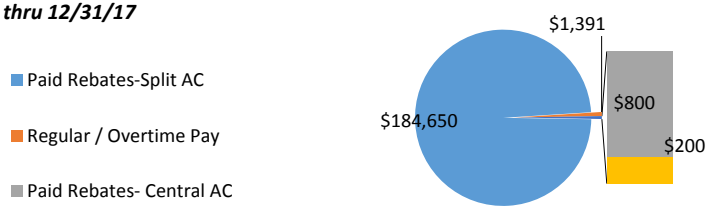


Approved Budget	$	1,619,063
Adjusted Budget	$	1,619,063
Actuals	$	106,218

DSM Expenses:

FY17 DSM Program Costs

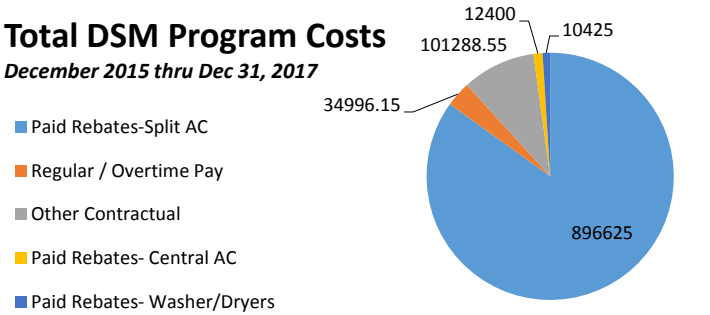
thru 12/31/17



FY 18 Total = $ 342,615

Total DSM Program Costs

December 2015 thru Dec 31, 2017



Total to Date = $1,211,308

2

Ongoing Activities

- Contract Performance Management (IPP, PMC, Agrekko)
- Generation Fuel Supply & Fuel Farm Management
- DSM Rebate Processing
- Renewables (Wind Turbine Maint & DOAg MOA, NRG Invoicing)
- Smart Grid/Network Support
- Project Management (*See Nov-Dec Project Activities*)

Project Activities

No.	Project Description	Nov/Dec Activities	Status / Est. Completion
1	Energy Storage System (Phase I)	GPA reviewing 100% design. Clearing and Grading work commenced in November 2017 and is on-going.	August 2018
2	Renewable Energy Resource Phase II	OPA denied Shanghai protest favoring GPA. Additional protest withdrawn. GPA & bidders initiated discussions to finalize bid documents for Jan. CCU Meeting.	~ Dec 2019 2 years after contract signing (Commerical Operation)
3	New Power Plant Bid (EPCM)	Review of draft IPP bid documents for new power plant. Discussion on land details and RFQ process. PUC approved RFQ in Nov 2017. Finalized RFQ.	Jan 2018 (Issue RFP Step 1 Solicitation)
4	DSM Marketing	Completed DSM Point of Sales Kits, GPA marketing signage, EV vehicle wrap (prepped for parade), various media ads, waiver form, etc.	Continuous
5	DSM Rebate Program	Processed over 500 equipment in applications for rebates totaling ~ $197K	Continuous
6	Wireless Network Expansion (LML)	Commenced Southern Expansion in collaboration with GWA: 30%	To be Updated
		Assessment of GWA Well Locations: Completed	Completed
		Assessment of Existing Tropos Units: 20%	Continuous
7	Performance Metrics Automation Project	Target Completion, Phase I: Dashboard build out	Aug 2017
		Started Phase II: Automating and consolidating data sources	Sept 2017
		Roll-out and Change Management Initiatives commenced	Sept 2017
8	Electric Grid Analysis Software	Additional training for users	Mar 2018
9	Services to Develop Business Performance Indices using iDashboards	Dashboard builds 95%	Dec 2017
10	Supervisory Control and Data Acquisition (SCADA) System	Supervisory Control and Data Acquisition (SCADA) System SCADA Systems Architecture Approved, Network Equipment approved, and Revised Schedule/Completion date submitted by Benson, Currently under GPWA review	Mar 2018

Project Activities

No.	Project Description	Nov/Dec Activities	Status / Est. Completion
11	Mobile Workforce Management System	Closing 1/5/2018 and Vendor Demostration being scheduled	Jan 2018 (Bid Award)
12	Consulting Services for Smart Grid Analytics Enabled Distribution System Planning, Technical, and Economic Feasibility Studies	RFP evaluation ongoing	Feb 2018 (RFP Award)
13	TEMES Piti # 7 ECA Expiration & Transition to GPA	Coordinating tasks under AGMETS for Transition. ECA & Technical Assessment - Data Compilation in Progress - ESA Visit completed, awaiting LEIDOS report - Technical Assessment Visit completeed, awaiting LEIDOS report Assisting Generation with Transition	Completion Date: Nov 2017
14	MEC Piti &8 and #9 - ECA Expiration	ESA & Technical Assessment pending completion of discussions with LEIDOS/BWSC. Bid Document Preparation for New IPP Procurement. Data Compilation in Progress.	Jan 2018 (Bid Docs) Mar/Apr 2018 (ESA &Tech Assessment Report)
15	Planning Software Upgrades & Training (Capacity Expansion/ Portfolio Optimization / Stochastics)	Training of 2 SPORD Engineers for PO use commenced 10/3/2017. Upcoming task: Configuration and management of database, training for - SPORD - PSCC	Start Date: Oct 2017 Completion Date: Sept 2018
16	Generation Software (GADS open software)	Installation at Generation Division completed. Database configuration in progress. Training completed on Nov. 15, 2017.	Nov 2017
17	IFB for ULSD Supply for Baseloads and Peaking Units	Solicitation in progress	Start Date: Nov 2017 Est. completion: FY2018
18	Contract for Lease of Bulk ULSD Storage	Lease procurement approved. Reviewing and finalizing lease contract.	Early 2018 (Tank Available)
19	EV Infrastructure	Developing fast charge station scope for Mangilao offices.	Sept 2018

Project Activities

No.	Project Description	Nov/Dec Activities	Status / Est. Completion
20	Consulting Support, new procurements for Piti 7,8,9	Data compilation and bid document preparation (GPA side) in progress. Awaiting LEIDOS recommendations and draft.	Start: October 2017, Announce in Jan/Feb 2018 Completion: August 2018
21	Fuel Conversion Plan	Initial discussion commenced, detailed discussions in November after submission of Assessment Report. Data Requests being addressed.	Start: October 2017 Completion: June 2018
22	Fuel Bulk Storage Facility Assessment	Consultant Site Visits for ESA and Technical Inspeciton completed. Reports due Januaryr 2018.	Start: Sept 2017 End: January 2018
23	Design and Engineering Consulting for Remote Start of GPA Plants	Engineering Project Management team reviewed scope. Dratt of assessment and implementation plan completed.	August 2018
24	Renewable Energy Resource Phase III	Bid announced in Nov. 2017. Site visits scheduled in January 2018.	(Mar 2018) Tech Proposal Due
25	Utility Energy Services Contract (UESC)	Kicked off discussions with UOG, Guam Energy Office, Dept. of Navy, and GPA team on project development and opportunities. Discusssed DSM Model House.	
26	IFB for ULSD Delivery Services for GPA Plants	Solicitation in progress	Start: November 2017 Completion: FY2018 Contract Start: TBD
27	IFB for RFO Supply to Baseload Plants	Solicitation in progress	Start: November 2017 Completion: FY2018 Contract Start: TBD
28	IFB for Petroleum Inspection Services	Solicitation in progress	Start: November 2017 Est. Completion: May 2018 Contract Start: Jun 01, 2018
29	RFO Storage Lease	Lease extension approved by CCU. For PUC review and approval	Start: November 2017 Est. Completion: Mar 2018 Contract Start: Aug 1, 2018

Planned Procurements

- Piti #7 Additional Procurements
  - Pending Technical Assessment of plant potential procurements may include Maintenance Services Contract or a Re-capitalization Contract.
- Piti #8 and #9
  - Exploring options for re-capitalization contract after expiration of ECA in 2018. Projecting solicitation early 1st Quarter 2018.
- IPP Contracts for up to 180 MW Generation Resources
  - Documents being drafted. Projecting solicitation early 1st Quarter 2018.
- ULSD Supply & Delivery to Baseload and Peaking Units
  - Solicitation in progress

Planned Procurements

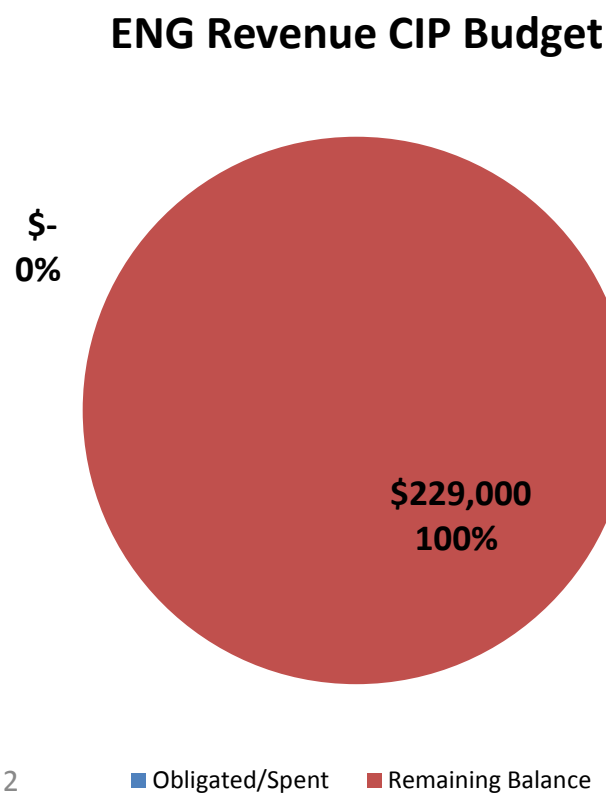
- MV90 Integration and Training Services
  - Processing Documents through PMM to be solicited in January 2018
- Engineering Analysis Trainings Services
  - Processing Documents through PMM to be solicited in February 2018

ENG Budget Execution Performance

December 31, 2017

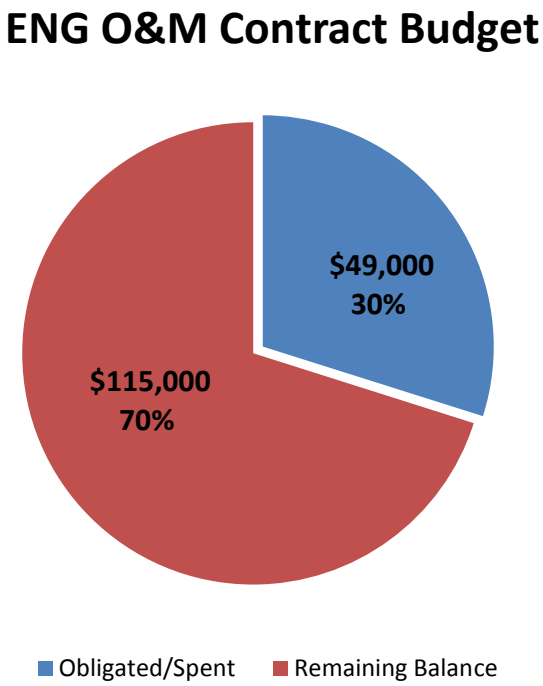
ENG Revenue CIP Budget

- Revenue Funded
- Target
  - 50% CIP Obligation by June 1, 2018
  - 100% CIP Spend by September 30, 2018



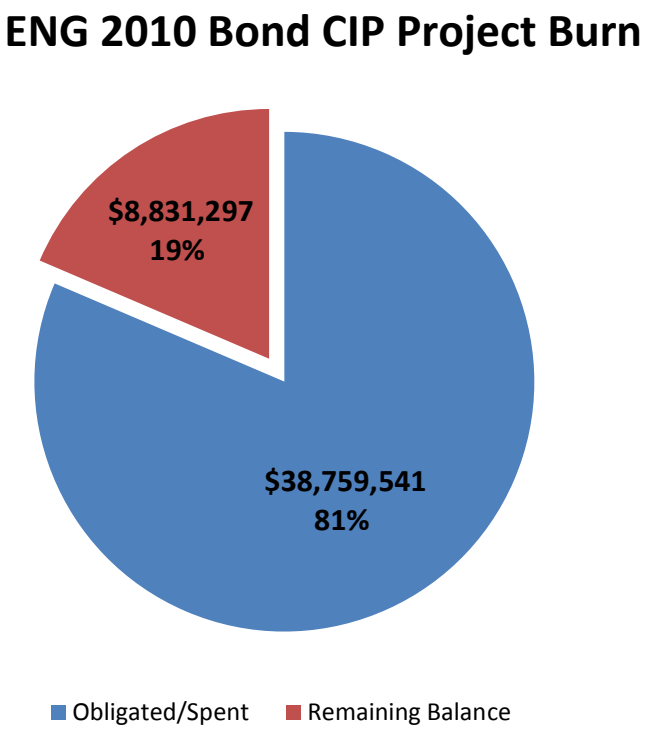
ENG O&M Contract Budget

- Revenue Funded
- Target
  - 25% CIP Obligated by April 30, 2018
  - 75% CIP Obligation by August 30, 2018
  - 100% CIP Spend by September 30, 2018



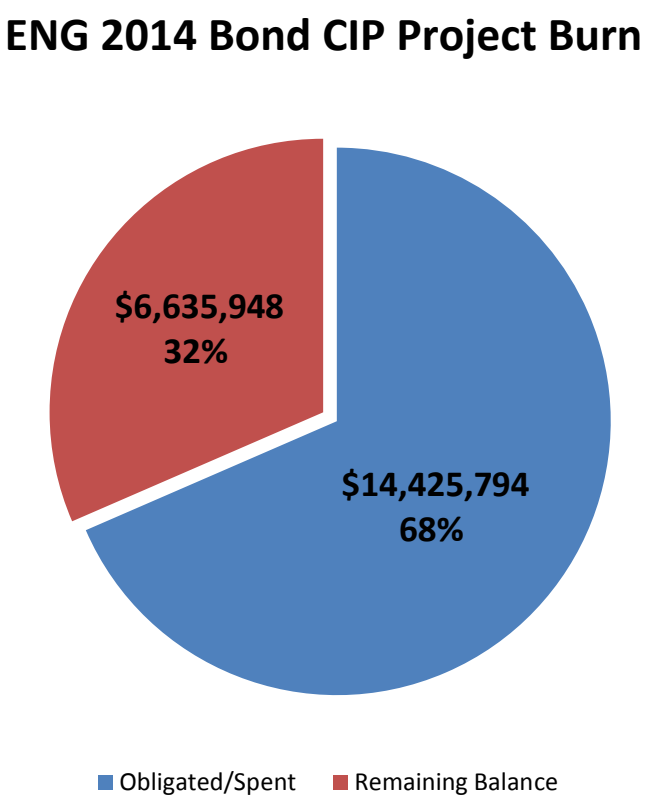
ENG 2010 Bond Series CIP Budget

- Bond Funded
- Target
  - Pending



ENG 2014 Bond Series CIP Budget

- Bond Funded
- Target
  - Pending



Engineering Work Orders

Engineeirng Work Order Summary -December 2017	
Work Orders Received from Customer Services	121
Work Orders Processed & Released to T&D	116
Work Orders Processed & Released to CSR	57
Work Orders Canceled	3
Work Orders Pending Survey	25
Pending Work Orders at Engineering	470

Engineering Large Customer and Net Metering Tracking

Date Received	Customer Name	Work Order Number(s)	Location	KVA	Meter Qty	Status
05/07/14	Port Authority of Guam	412337	Piti			Upgrades of existing facilities, includes line relocations and service conversions from overhead to underground 75% completed. Currently on hold pending Port Authorty direction for final removal.
12/20/13	CoreTech International	Multiple	Dededo	250	50	Lada Estates, 450 kVA, Phase I 100% Completed 242 units energized, Phase II 300 kVA, applications received for 93 units, Phase II 100% Completed. Phase III on hold due to Labor and Permit issues.
01/27/15	TG Engineers PC	422182-85, 90-93, 96-98	Agana Heights	100	11	11 Unit Apartment, 100 kVA, 97% Completed
06/02/15	Docomo Pacific Inc.	Multiple	Various Locations Islandwide	50		New Comm Towers and Power Supplies, 10 sites, 9 completed
05/13/15	CoreTech International Towers	426021	Tamuning	3300	104	New condominiums, 2-1500kVA and 1 300 kVA, Tower 101 100% Completed, Tower 102, 103, and 104 are 45% completed, currently on hold. Temporary power pending for Community Center, 100% Completed. First 52 Service Orders for Tower 101 is 100% completed.
05/11/16	Korando Corp (DPW Bile Pigua Bridge)	437716	Merizo			Bile and Pigua Bridge Reconstruction - 65 % Completed, Route 25/26 Road Widening, currently on hold.
12/09/16	Maeda Pacific	443952	Harmon			Route 1 and Route 3 road improvements - 85% completed, involves new underground 34.5kV and 13.8kV lines and the removal of overhead ples and lines. Pulling of wires intiated 10/9/17. Final Termination and testing Completed. Energizing of new underground 13.8kV and 34.5 kV lines completed. Pending removal of overhead lines.
Pending	New Nikko Expansion	Pending	Tumon	1500	1	New Nikko Expansion, pending submittal of work order application. Redesign of primary feed ongoing.
03/10/17	Best Housing Corp Ltd	446924-30	Mangilao	60	6	New 6-Unit Townhome, 50% completed
06/01/17	GWA Pump Stations 2 and 3	450278-9	Santa Rita	150	2	New GWA Pump Stations. 20% Completed.
06/01/17	WM Eng Office Building	450280	Tamuning	150	1	New office building. 90% Completed.
07/17/17	Keystone Pacific Realty Corp	451488	Hagatna	100	10	New apartment. 92% Completed. Pending additional applications.
07/17/17	Grand Rock Corp.	451490, 1	Santa Rita	50	4	100% Completed. Released to T&D.
08/07/17	Matsumoto, Akiyoshi	452146-49, 51, 4, 6	Tumon	60	7	New 6 Unit Apartment with Common Meter. 5% Completed.
08/17/17	Micronesian Community Corp.	Pending	Mangilao	130	13	New 13 unit subdivison, 5% completed
09/11/17	Grand Harvest Inc.	453016,19,22,24-30,32,34,35,38,40	Dededo	225	17	New 17 Unit Apartment, 85 % Completed.
10/02/17	Sumitomo Mitsui (Baza Gardens Waste water)	453369	Yona	300	1	Baza ardens Wastewater Treatment Plant Improvements, 0% Completed
Varies	Pending Net Metering Customers	Varies	Various Locations Islandwide		17	Pending Net Metering Customers
			Total	6425	244	

PLANNING & REGULATORY DIVISION REPORT

The following summarizes P&R's activities for the month of December 2017

INSPECTIONS/MONITORING

- Best Management Practices (BMP) Weekly Inspection/Report – Cabras Power Plant
- Spill Prevention, Control and Countermeasures (SPCC) Inspection/Report - Cabras, CT, Diesel, Piti 7 Power Plants and Substations
- Dededo CT operating hours and emissions monitoring
- Aggreko Emissions Monitoring – Emissions indicate that we are on track with our estimates and we can reasonably expect to be below the 250 ton/year limit at 238 tons on Jan. 8, 2018

ENVIRONMENTAL RESPONSE

- Incident at Port Authority of Guam – Responded to Crane Operators getting sick and 2 being hospitalized. Attended meetings and provided internal incite, information, and investigation

REPORTING

- New Source Performance Standards (NSPS) Monthly– Submitted reports to GEPA for Macheche CT, Yigo CT, Talofofo, Manenggon and Tenjo Diesel Plants.

WASTE DISPOSAL

- Monitoring of UNITEK and GRESCO used oil disposal to the WOF

OTHERS

- Reviewed and approved bid for laboratory analysis PO
- Prepared a monitoring station estimate for the AGMET
- Provided comments of the Leidos Draft ESA Report
- Reviewed initial report from Leidos inspection of MEC 8 & 9 in preparation for an ESA Phase I assessment of the facility. Leidos to submit Phase I ESA of MEC 8&9 on January 06, 2018.
- Additional information regarding Multi Step Bid No. GPA-017-18: Provided responses to the questions from AM Insurance for GPA Pollution Insurance MSB:
    - as to the current status of the groundwater remediation at the Tanguisson Power Plant;
    - and provided status of Guam Power in terms of USEPA air quality requirements;
    - provided details on: pollution incidents, releases and spills, violations, corrective actions, law suits, claims, complaints and regulatory notices;
    - provided details on the maintenance, leak detection and inspection program for the LSFO and HSFO tanks at the Piti Tank Farm

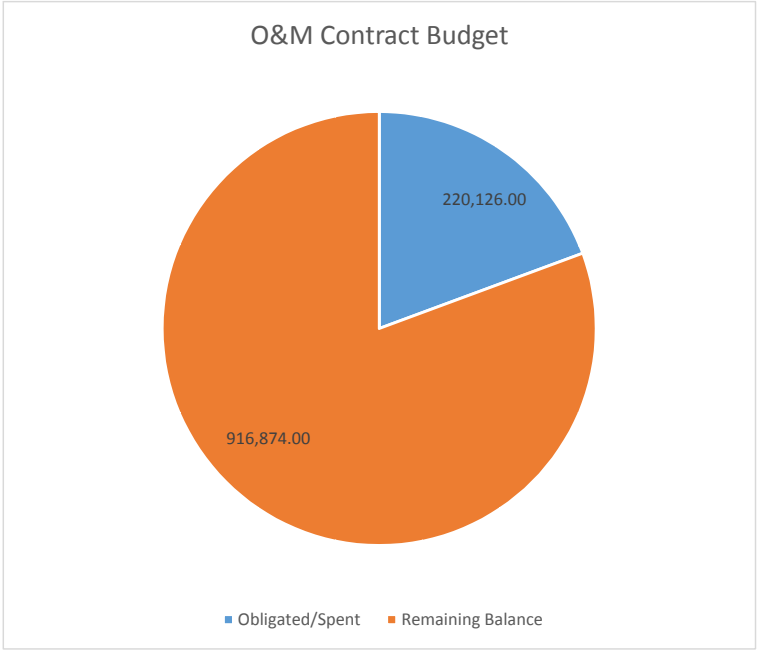
- GPA-017-18 - Broker Services & Pollution Liability Insurance - Provided data/information in response to questions from bidders
- RFP-17-005 Smart Grid - participated as a committee member
- Price Calculations – calculated the difference in price between using RFO and ULSD at the MEC 8&9 for the GM. Updated data up to 2020
- Fuel Use & Emissions for Consent Decree - Updated data to 2013 - Nov. 2017
- GM's Presentation to US EPA – updated information on ESP and Emissions in the power point presentation
- Carbon Capture – attended conference call with US EPA, Guam EPA, the Governor's Office, and the company Karbon CCs Ltd. regarding the use of Karbon's carbon capture technology for Guam source
- Energy Storage System Project (ESS) – reviewed and provided comments on Agana Sub tank and pipeline inspection report

Planning & Regulatory
CCU Report

December 31, 2017

Planning & Regulatory O&M Contract Budget

- Revenue Funded
- Target
  - 7.41% O&M Obligated by November 16, 2017
  - 19.28 O&M Obligated as of Nov. 30, 2017 (actual)
  - 19.36 O&M Obligated as of Dec. 31, 2017 (actual)
  - 30.09% O&M Obligation by February 28, 2018



2

P&R Weekly & Monthly Inspection Reports

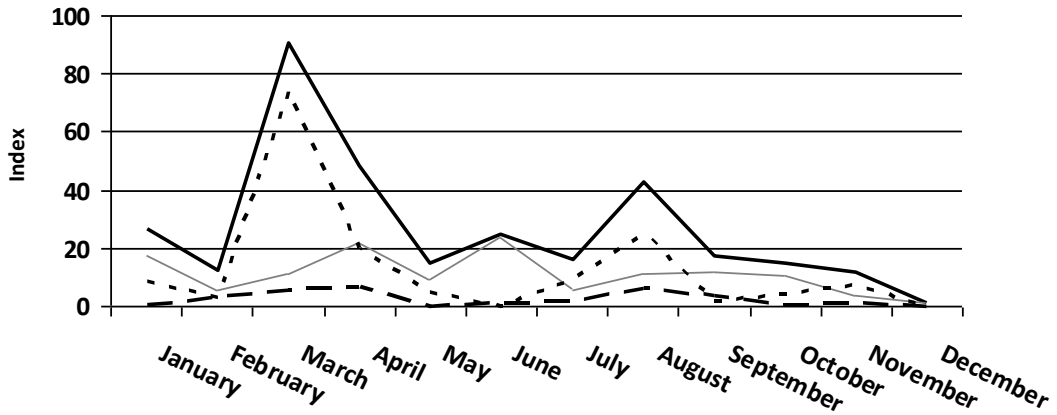
- Best Management Practices (BMP) Report Summary [Weekly]
- Generation Spill Prevention, Control, and Countermeasures (SPCC) Report Summary [Monthly]
- T&D Spill Prevention, Control, and Countermeasures (SPCC) Report Summary [Monthly]

- GPA is responsible to employees, the island environment, and the community to take all reasonable steps necessary to prevent spills from its facilities in order to protect human health and the environment

P&R Inspection Report Purpose

- The purpose of these inspections is to catch discrepancies and violations internally and correct them before inspections by Guam EPA and US EPA
- Regulatory Agencies can conduct scheduled or un-scheduled (surprise) inspections any time
- Any major discrepancies or violations cited can lead to issuance of a Notice of Violation (NOV), possible fines, and/or other enforcement action
- P&R conducts routine SPCC inspections in compliance with the requirements of 40CFR 112.7(a)(3)(ii), Discharge Prevention Measures

(Item 1.1,1.2,1.5) December 2017 SAIDI = 322.68 ↓ (345.38)



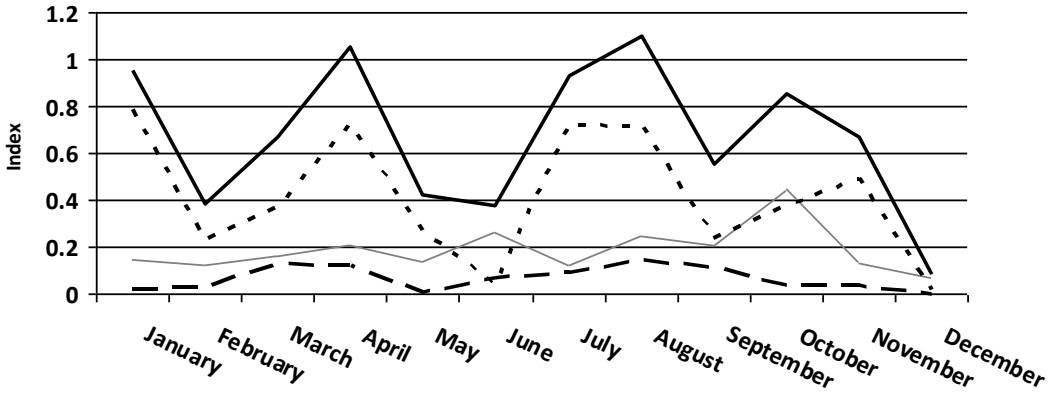
ALL

GEN=158.60 ↓ (168.36)

TRANS=30.85 (30.85) **UNC***

DIST=133.22 ↓ (146.16)

(Item 1.1,1.2,1.5) December 2017 SAIFI = 8.05 ↓ (8.89)



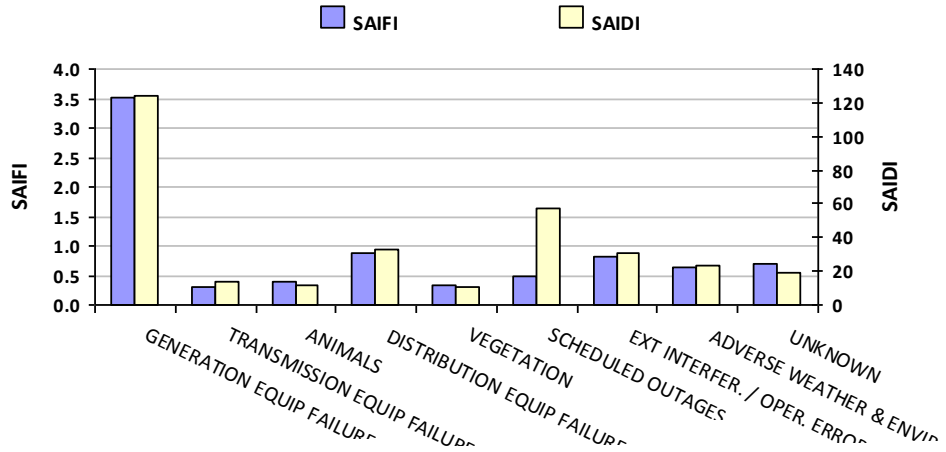
ALL

GEN=4.97 ↓ (5.67)

TRANS=0.81 (0.81) **UNC***

DIST=2.27 ↓ (2.41)

(Item 1.9) 12-Month Cause Contributions to Reliability



GENERATION EQUIP FAILURE
F:40.9% D:38.3%

TRANSMISSION EQUIP FAILURE
F:5.9% D:4.1%

ANIMALS
F:5.0% D:3.6%

DISTRIBUTION EQUIP FAILURE
F:10.7% D:10.3%

VEGETATION
F:4.6% D:3.3%

SCHEDULED OUTAGES
F:9.0% D:17.6%

EXT INTERFER. / OPER. ERROR
F:9.0% D:9.6%

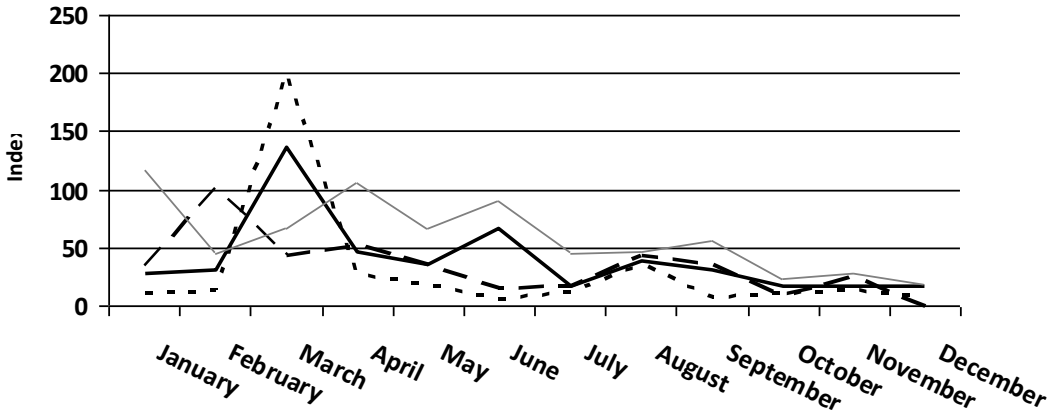
ADVERSE WEATHER & ENVIR.
F:5.9% D:7.2%

UNKNOWN
F:9.0% D:6.0%

UNC* - Unchanged

As of December 31, 2017

(Item 1.1,1.2,1.5) December 2017 CAIDI = 40.09 ↑ (38.86)



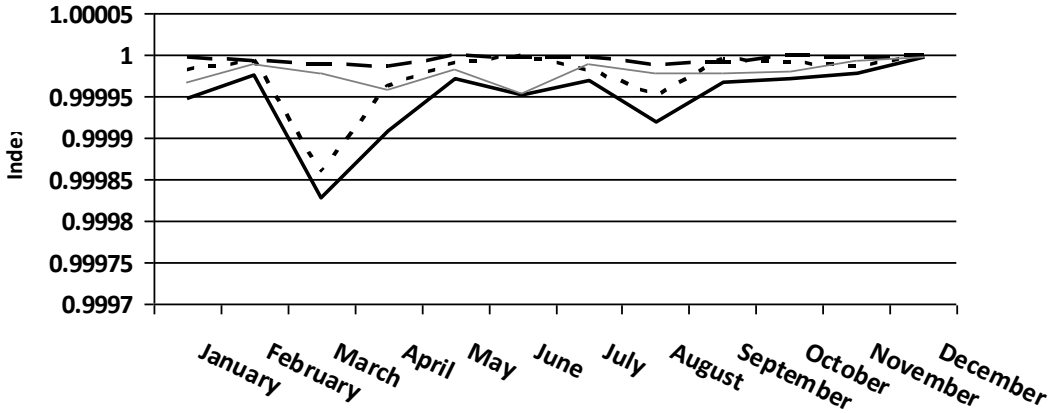
ALL

GEN=31.9 ↑ (29.69)

TRANS=38.06 UNC* (38.06)

DIST=58.77 ↓ (60.72)

(Item 1.1,1.2,1.5) December 2017 ASAI = 0.9994 ↑ (0.9993)



ALL

GEN=0.9997 UNC* (0.9997)

TRANS=0.9999 UNC* (0.9999)

DIST=0.9997 UNC* (0.9997)

(Item 1.4) Top 5 Worst Feeders Distribution Causes

#	Feeder	Outage Count
1	P340	10
2	P261	9
3	P403	7
4	P221	7
5	P332	5

(Item 1.4) Top 5 Distribution Outage Causes

#	Outage Cause	Count
1	Overhead Equipment	35
2	Underground Equipment	16
3	Vegetation	13
4	Vehicles	8
5	Snakes	6

(Item 1.3) Outage Count

TOTAL	UFLS	Non-UFLS
477	251	226

(Item 1.3) UFLS Contribution to Reliability

SAIDI	SAIFI	CAIDI
148.25	4.76	31.15

UNC* - Unchanged

As of December 31, 2017

Production Data

31-Dec-17

SYSTEM												
YEAR	MONTH	# of DAYS	GROSS GENERATION	FUEL CONSUMPTION		GROSS FUEL EFFICIENCY (Target ≥ 15.99 kWh/gal)	COST per GROSS kWh	GROSS HEAT RATE (Baseloads) PUC Target less than 9,600	GROSS HEAT RATE (Peaking) PUC Target less than 13,600	Ave. MW	Peak MW
				(gal)	(bbl)						
2015	Oct	31	142,387,859	10,285,716	244,898	13.84	$ 0.1076	9,797.11	12,360.42	191	258
	Nov	30	140,522,664	9,871,651	235,039	14.23	$ 0.1185	9,731.04	12,945.82	195	248
	Dec	31	142,668,711	9,711,263	231,221	14.69	$ 0.0951	9,538.53	12,579.77	192	239
2016	Jan	31	138,191,484	9,446,289	224,912	14.63	$ 0.0676	9,662.86	13,413.90	186	233
	Feb	29	128,816,826	8,860,399	210,962	14.54	$ 0.0706	9,692.42	12,038.19	185	232
	Mar	31	139,991,832	9,522,573	226,728	14.70	$ 0.0732	9,172.99	11,597.00	188	239
	Apr	30	140,706,546	9,301,856	221,473	15.13	$ 0.0734	9,368.24	11,041.70	195	245
	May	31	152,815,417	9,751,521	232,179	15.67	$ 0.0681	9,459.10	11,388.57	205	254
	June	30	149,191,844	9,851,575	234,561	15.14	$ 0.0805	9,666.70	11,074.48	207	253
	July	31	151,248,202	10,443,028	248,644	14.48	$ 0.0920	9,477.71	12,208.87	203	258
	Aug	31	149,051,031	10,210,429	243,105	14.60	$ 0.0935	9,431.70	11,155.10	200	252
	Sept	30	142,069,206	9,829,773	234,042	14.45	$ 0.0956	9,509.75	11,393.73	197	256
	Oct	31	148,824,965	9,660,319	230,008	15.41	$ 0.0729	9,749.38	10,738.69	200	252
	Nov	30	145,293,562	9,427,636	224,468	15.41	$ 0.0901	9,714.47	10,786.30	202	252
	Dec	31	147,753,552	9,725,521	231,560	15.19	$ 0.0934	9,661.13	10,645.44	199	248
2017	Jan	31	142,960,618	9,226,278	219,673	15.49	$ 0.0913	9,620.29	10,965.71	192	234
	Feb	28	113,499,400	7,270,830	173,115	15.61	$ 0.0900	9,609.08	11,503.12	195	246
	Mar	31	149,402,182	9,664,440	230,106	15.46	$ 0.1014	9,719.35	11,440.45	201	246
	Apr	30	145,351,026	9,913,757	236,042	14.66	$ 0.1101	9,750.73	11,392.12	202	250
	May	31	157,573,506	11,065,930	263,475	14.24	$ 0.1170	10,067.14	11,323.20	212	256
	June	30	150,240,751	10,654,196	253,671	14.10	$ 0.1101	10,209.74	11,248.62	209	257
	July	31	150,580,050	10,622,458	252,916	14.18	$ 0.1169	9,544.54	11,837.62	202	252
	Aug	31	150,084,827	10,642,044	253,382	14.10	$ 0.1177	9,206.15	11,917.58	202	261
	Sept	30	143,990,208	10,309,304	245,460	13.97	$ 0.1152	9,541.20	13,107.05	200	254
	Oct	31	147,122,071	9,774,857	232,735	15.05	$ 0.1079	9,590.71	11,375.81	198	254
	Nov	30	147,284,781	9,783,352	232,937	15.05	$ 0.1061	9,563.85	11,257.17	205	253
	Dec	31	151,600,064	9,925,003	236,310	15.27	$ 0.1122	9,607.13	11,035.82	204	250

NET METERING
December 2017

	Quantity	Connected kVA
Completed	1,584	16,272
Pending	17	129
Grand Total	1,601	16,401

Rate Class

Schedule	Count	Total kW
R - Residential	1,504	13,534.37
J - General Service Demand	31	1,546.51
K - Small Government Demand	7	157.80
L - Large Government	1	22.80
P - Large Power	3	240.70
G - General Service Non-Demand	31	690.62
S - Small Government Non-Demand	7	78.80
Grand Total	**1,584**	**16,271.60**

Rate Class and Technology

Technology	Schedule	Count	Total kW
Solar Energy	R - Residential	1,502	13,530.77
	J - Gen Service Dmd	31	1,546.51
	K - Small Gov Dmd	7	157.80
	L - Large Government	1	22.80
	P - Large Power	3	240.70
	G - Gen Serv Non-Dmd	31	690.62
	S - Sm Gov Non-Dmd	7	78.80
Wind Turbine	R - Residential	2	3.60
Grand Total		**1,584**	**16,271.60**

Projected FY 2017 Non-Fuel Revenue Loss

Customer Rate Class	Renewable Energy Capacity (kW)	Annual kWh Generated (@5.092 hours/day)*	Average Non-Fuel Yield $/kWh	Estimated Annual Revenue Loss
R	13,534.37	25,153,062.7	0.09293	$ 2,337,499.27
J	1,546.51	2,874,124.4	0.13112	$ 376,858.07
K	157.80	293,264.7	0.13932	$ 40,858.23
L	22.80	42,372.9	0.13525	$ 5,730.84
P	240.70	447,330.9	0.11539	$ 51,617.07
G	690.62	1,283,488.5	0.15084	$ 193,596.27
S	78.80	146,446.5	0.15334	$ 22,456.26
Grand Total	**16,271.60**	**30,240,090.6**		**$ 3,028,616.00**

*Estimated number of hours from NREL for Guam (13.4 degrees North and 144 degrees East).

Estimated Annual Revenue Loss

Description	Estimated kWh	*Total Estimated Cost
FY17	28,242,917	$ 2,828,834.71
FY16	21,867,383	$ 2,200,794.56
FY15	7,383,621	$ 856,921.27
FY14	3,137,212	$ 410,558.94
FY13	1,556,949	$ 178,996.00
FY12	494,672	$ 58,545.89
FY11	170,070	$ 18,177.13
FY10	98,830	$ 8,483.27
FY09	23,912	$ 1,656.87

*Source for effective yield rate from the Year End Revenue Reports (12 month Average Yield)

NET METERING

December 2017

Customer Count and Connected kW by Feeder

Status	Feeder	Net Metering Connected kW	Customer Count	% of Feeder Maximum kW	% of Feeder Minimum Daytime kW
Completed	P-005	210.27	21	12.2%	24.5%
	P-046	193.57	24	4.6%	7.0%
	P-088	603.78	67	10.0%	15.9%
	P-089	436.80	55	9.8%	23.5%
	P-111	60.00	1	1.1%	2.0%
	P-203	401.36	31	5.4%	15.2%
	P-204	118.08	15	2.5%	5.2%
	P-205	36.40	4	0.8%	1.3%
	P-210	473.46	49	9.3%	12.6%
	P-212	831.57	79	20.1%	52.0%
	P-213	295.33	11	11.3%	15.2%
	P-220	155.14	17	25.5%	80.0%
	P-221	461.34	48	10.5%	20.9%
	P-223	487.96	53	20.5%	29.3%
	P-240	58.55	2	0.9%	7.9%
	P-245	25.00	1	0.5%	1.1%
	P-250	878.19	90	13.5%	23.7%
	P-251	145.50	7	5.9%	9.0%
	P-253	453.71	49	10.1%	15.9%
	P-262	920.00	95	24.2%	57.9%
	P-270	313.67	26	6.2%	12.4%
	P-271	122.78	12	2.1%	4.4%
	P-272	221.03	16	8.6%	19.6%
	P-280	311.59	25	17.3%	32.2%
	P-281	129.70	3	4.6%	12.9%
	P-282	21.00	2	0.6%	1.7%
	P-283	485.05	46	13.4%	23.0%
	P-294	956.99	93	22.1%	43.8%
	P-301	199.26	22	14.1%	25.1%
	P-311	549.83	47	13.8%	23.6%
	P-322	803.14	86	10.6%	21.0%
	P-323	274.41	17	5.8%	18.0%
	P-330	518.62	65	9.5%	19.2%
	P-331	694.84	80	11.0%	17.8%
	P-332	384.46	46	6.8%	10.0%
	P-340	497.37	43	27.4%	60.4%
	P-087	1,032.25	112	26.3%	41.2%
	P-252	416.01	24	9.9%	20.1%
	P-321	246.63	24	4.4%	4.9%
	P-260	45.99	5	6.7%	23.0%
	P-067	68.25	10	0.8%	1.0%
	P-312	68.90	4	4.1%	4.8%
	P-206	18.33	2	1.9%	3.4%
	P-242	23.75	2	0.4%	1.1%
	P-310	181.57	8	6.6%	12.1%
	P-261	313.57	33	11.3%	19.5%
	P-201	40.00	5	1.1%	2.0%
	P-007	42.33	4	5.8%	12.5%
	P-244	18.00	1	1.0%	1.0%
	P-202	22.00	1	0.7%	1.6%
	P-341	4.30	1	0.4%	1.6%
Completed Total		**16,271.60**	**1,584**		
Pending	Pending	129.41	17	0.0%	0.0%
Pending Total		**129.41**	**17**	**0.0%**	**0.0%**
Grand Total		**16,401.01**	**1,601**		

Feeders highlighted in red indicates renewable energy capacity has exceeded 25% of minimum daytime load.

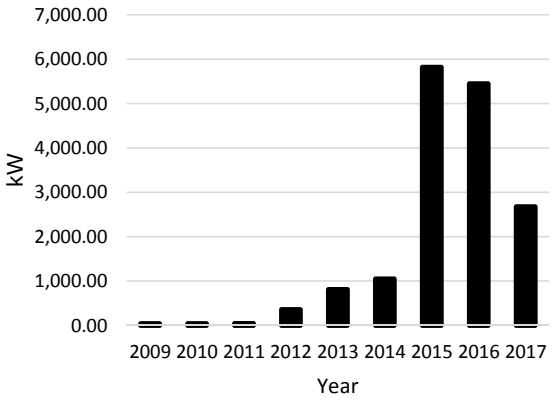
Feeders highlighted in yellow indicates renewable energy capacity has reached 15% to 24% of minimum daytime load.

NET METERING
DECEMBER 2017

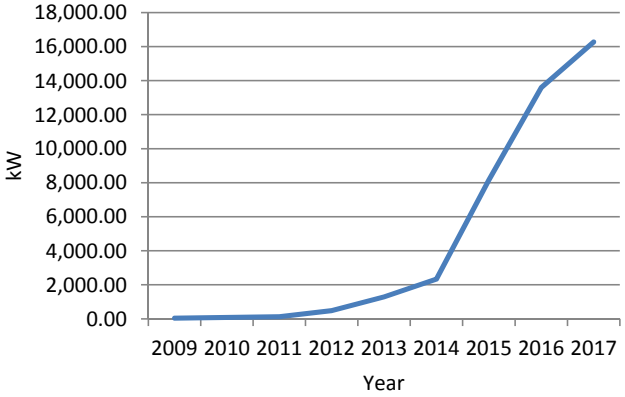
Installed kW by Year		
Year	Total	Cumulative
2009	39.46	39.46
2010	39.20	78.66
2011	43.61	122.27
2012	354.61	476.88
2013	808.45	1,285.33
2014	1,046.54	2,331.87
2015	5,818.34	8,150.21
2016	5,446.95	13,597.15
2017	2,674.45	16,271.60
Grand Total	16,271.60	

Customer Count by Year		
Year	Total	Cumulative
2009	7	7
2010	2	9
2011	7	16
2012	27	43
2013	67	110
2014	94	204
2015	561	765
2016	528	1,293
2017	291	1,584
Grand Total	1,584	

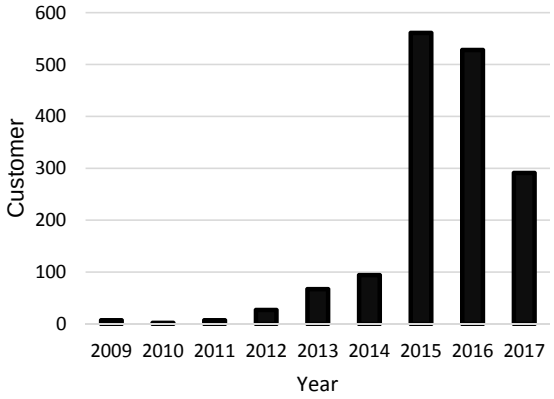
Yearly Installed kW



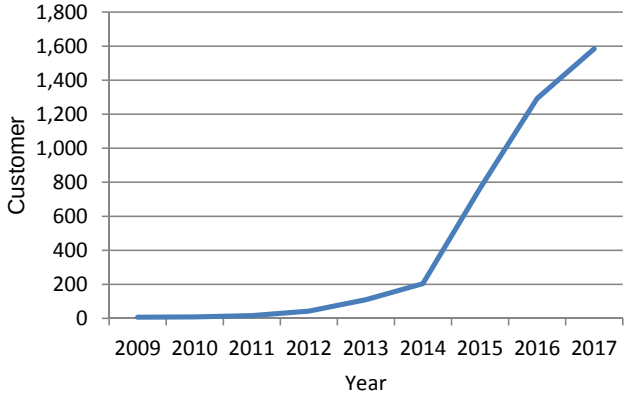
Cumulative Installed kW



Yearly Connected Customer Count



Cumulative Connected Customer Count

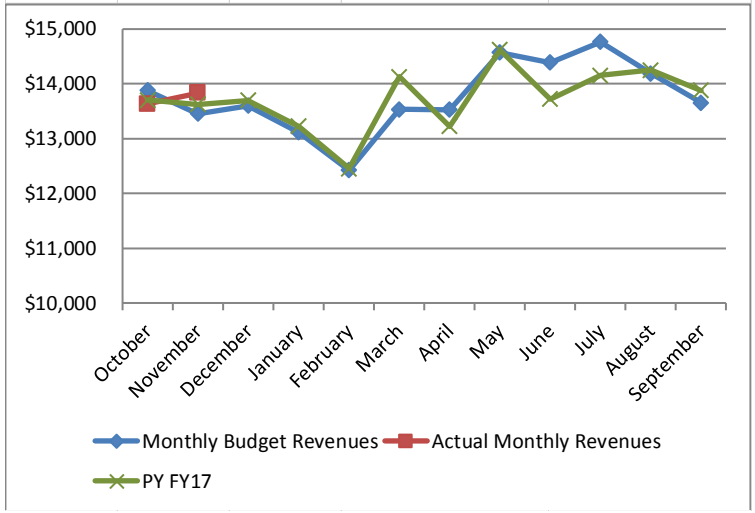


November 2017 Monthly Financial Highlight

Base Revenue Through November 30, 2017

$000	Monthly Budget Revenues	Actual Monthly Revenues	Variance		PY FY17	CY vs PY Variance	
October	$ 13,873	$ 13,625	$ (248)	↓	$ 13,702	$ (77)	↓
November	13,451	13,827	$ 376	↑	13,622	$ 205	↑
December	13,599				13,695		
January	13,114				13,220		
February	12,422				12,454		
March	13,534				14,123		
April	13,525				13,224		
May	14,568				14,617		
June	14,386				13,722		
July	14,759				14,151		
August	14,183				14,244		
September	13,651				13,874		
Total	**$ 165,064**	**$ 27,452**	**$ 128**		**$ 164,649**	**$ 128**	

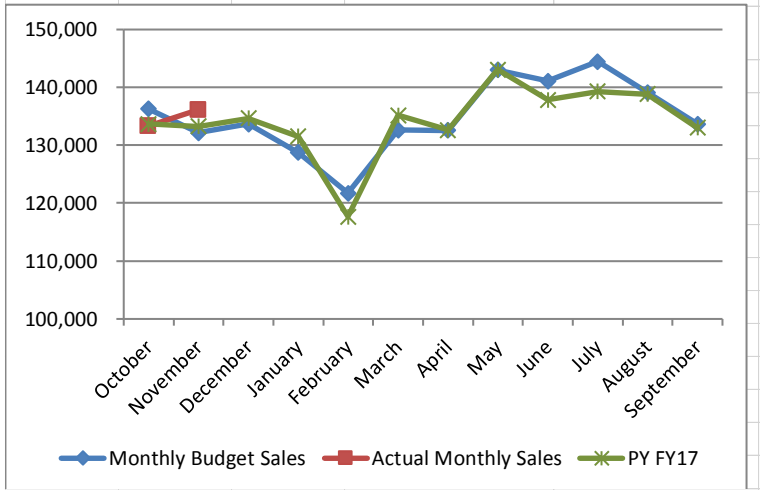
Base Rate Revenue $000



MWHSThrough November 30, 2017

mwh	Monthly Budget Sales	Actual Monthly Sales	Variance		PY FY17	CY vs PY Variance	
October	136,219	133,262	(2,957)	↓	133,620	(358)	↓
November	132,132	136,044	3,912	↑	133,235	2,809	↑
December	133,625				134,634		
January	128,711				131,461		
February	121,668				117,617		
March	132,587				135,131		
April	132,532				132,587		
May	142,956				143,013		
June	141,064				137,777		
July	144,404				139,227		
August	139,093				138,797		
September	133,658				132,993		
Total	**1,618,650**	**269,306**	**955**		**1,610,093**	**2,450**	

MWh Sales

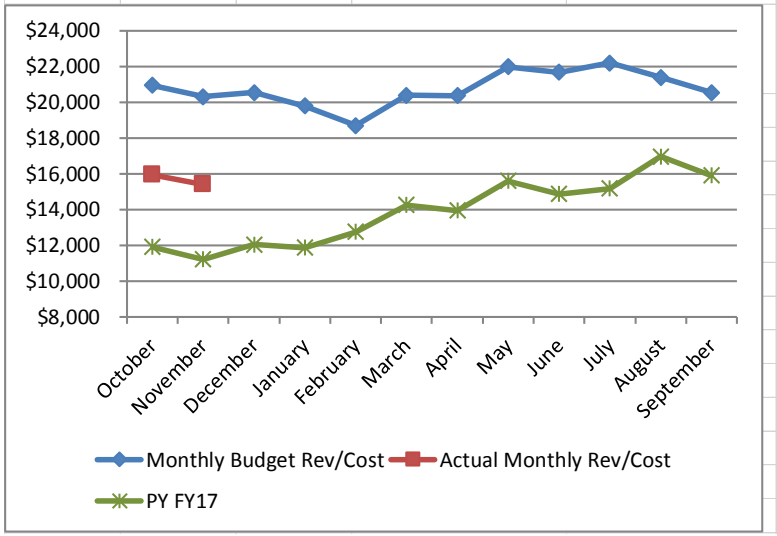


November 2017 Monthly Financial Highlight (Continued)

Fuel Revenue Through November 30, 2017

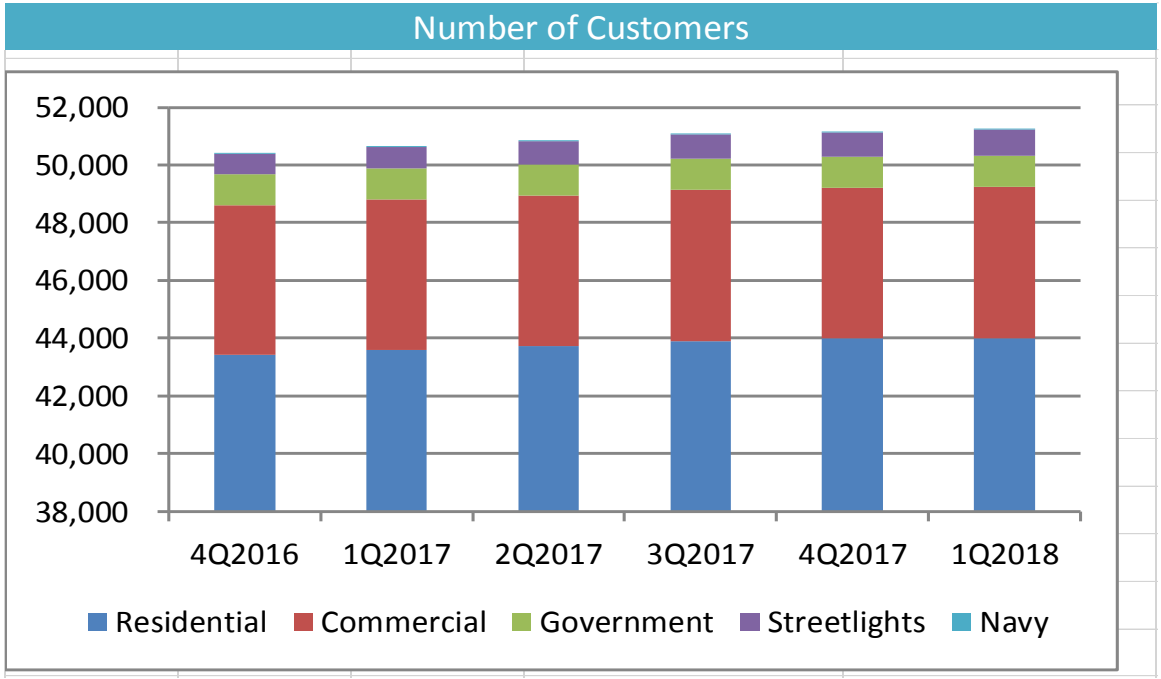
$000	Monthly Budget Rev/Cost	Actual Monthly Rev/Cost	Variance		PY FY17	CY vs PY Variance	
October	$ 20,928	$ 15,936	$ (4,992)	↓	$ 11,894	$ 4,042	↑
November	20,300	15,400	$ (4,899)	↓	11,215	$ 4,185	↑
December	20,529				12,036		
January	19,774				11,867		
February	18,692				12,751		
March	20,370				14,248		
April	20,361				13,940		
May	21,963				15,596		
June	21,672				14,859		
July	22,185				15,175		
August	21,369				16,947		
September	20,534				15,895		
Total	**$ 248,677**	**$ 31,336**	**$ (9,891)**		**$ 166,425**	**$ 8,227**	

Fuel Revenue/ Cost $000



November 2017 Monthly Financial Highlight (Continued)

Number of Customers						
	4Q2016	1Q2017	2Q2017	3Q2017	4Q2017	1Q2018
Residential	43,408	43,582	43,718	43,902	43,991	43,996
Commercial	5,198	5,235	5,236	5,252	5,226	5,233
Government	1,089	1,071	1,077	1,071	1,073	1,079
Streetlights	688	722	800	824	823	905
Navy	1	1	1	1	1	1
	50,384	50,611	50,832	51,050	51,114	51,214

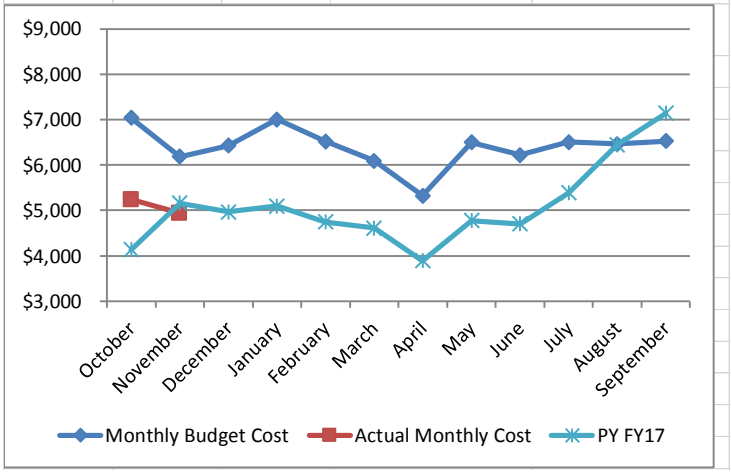


November 2017 Monthly Financial Highlight (Continued)

O&M Through November 30, 2017

$000	Monthly Budget Cost	Actual Monthly Cost	Variance		PY FY17	CY vs PY Variance	
October	$ 7,040	5,239	1,801	↑	4,135	(1,103)	↓
November	6,182	4,941	1,240	↑	5,158	217	↑
December	6,428				4,966		
January	7,001				5,092		
February	6,522				4,748		
March	6,091				4,612		
April	5,320				3,892		
May	6,495				4,772		
June	6,221				4,702		
July	6,508				5,385		
August	6,462				6,445		
September	6,526				7,138		
Total	**$ 76,796**	**$ 10,180**	**$ 3,042**		**$ 61,045**	**$ (887)**	

O&M Cost $000



- DSC greater than target of 1.75

Debt service coverage (DSC) calculation-indenture	2012	2013	2014	2015	2016	2017	YTD Nov. 2017
Senior lien coverage	2.13	3.36	3.16	3.62	3.35	2.81	2.97
Aggregate debt service coverage	1.35	1.88	1.98	2.62	3.35	2.81	2.97
Debt service coverage (DSC) calculation-IPP as O&M							
Senior lien coverage	1.29	2.16	2.25	2.56	2.52	1.95	2.03
Aggregate debt service coverage	0.82	1.21	1.41	1.85	2.52	1.95	2.03

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671) 648-3002 | guamccu.org

GUAM POWER AUTHORITY WORK SESSION

CCU Conference Room

4:30 p.m., February 22, 2018

AGENDA

1. **ISSUES FOR DECISION**
   - 1.1 Bond Refinancing Utilization / Resolution 2018-02
   - 1.2 Power Purchase Agreement Phase II Renewables - HANWHA / Resolution 2018-04
   - 1.3 Authorization Increase of Engineering, Procurement & Construction Mgmt Contract / Resolution 2018-05

2. **GM REPORT**
   - 2.1 Updates

3. **ISSUES FOR DISCUSSION**
   - 3.1 GPA's 50th Anniversary
   - 3.2 NEM Recommendation

4. **DIVISION REPORTS**
   - 4.1 Administration: Customer Service, HR, Procurement
   - 4.2 Engineering & Technical: Engineering, IT, Planning & Regulatory, SPORD
   - 4.3 Finance Reports
   - 4.4 Operations: Facilities, Generation, PSCC, T&D, Transportation
   - 4.5 Public Information Office

5. **ANNOUNCEMENTS**
   - 5.1 Next Meeting: CCU Meeting – February 27

6. **EXECUTIVE SESSION**
   - 6.2 Personnel Matter

7. **ADJOURNMENT**

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

Issues for Decision

Resolution No. 2018-02:

What is the project's objective and is it necessary and urgent?

Guam Power Authority's (GPA) Bond Refinancing Program will result in a 2018 to 2021 cumulative debt service reduction of $1,482,326 and as per Guam PL 34-69, Section 2(h), GPA must notify I Liheslatura within sixty (60) days of refinancing of its intent and plan regarding the savings achieved from refinancing. GPA desires to reserve these savings for the benefit of the community by assisting the Guam Department of Education (GDOE) with its energy goals. GPA proposes to use the Bond Refinancing Program savings towards its proposed DSM program: *Bringing Energy Savings to (BEST) Schools Program*. The BEST Schools Program goals include:

- Supporting GDOE to achieve their legislative mandate to deploy and utilize renewable energy systems;
- Incentivizing GDOE to reduce their energy use and expenditures;
- Modernizing GDOE facilities infrastructure and extending GDOE equipment life with enhanced, proactive maintenance;
- Partnering up with GDOE under the UESC Program to execute the above;
- Ensuring GDOE continues to contribute to the O&M and capital investments for the GPA Power System; and

GPA will supplement the funding of this program with federal grants. The BEST Schools Program may increase GDOE's use of renewable energy, decrease GDOE's energy consumption and GHG footprint, and improve GDOE's facilities maintenance. This proposed program benefits GDOE, GPA, renewable energy system providers, and Guam students and residents.

How much is the savings?

Average Annual Cash Savings: $501,236.00 (Strategic Investments Option)

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671) 648-3002 | guamccu.org

RESOLUTION NO. 2018-02

RESOLUTION RELATIVE TO BOND FINANCING SAVINGS UTILIZATION

WHEREAS, Guam Power Authority's (GPA) Bond Refinancing Program will result in a 2018 to 2021 cumulative debt service reduction of $1,482,326; and

WHEREAS, as per Guam PL 34-69, Section 2(h), GPA must notify I Liheslatura within sixty (60) days of refinancing of its intent and plan regarding the savings achieved from refinancing; and

WHEREAS, GPA desires to reserve these savings for the benefit of the community by making a strategic investment assisting the Guam Department of Education's (GDOE) with its Legislative mandate for renewable energy; and

WHEREAS, GPA proposes to use the Bond Refinancing Program savings towards GPA's ***Bringing Energy Savings to (BEST) Schools Program;*** and

WHEREAS, the BEST Schools Program goals include:

- Supporting GDOE to achieve their legislative mandate to deploy and utilize renewable energy systems;
- Incentivizing GDOE to reduce their energy use and expenditures;
- Modernizing GDOE facilities infrastructure and extending GDOE equipment life with enhanced, proactive maintenance;
- Partnering up with GDOE under the UESC Program to execute the above;
- Ensuring GDOE continues to contribute to the O&M and capital investments for the GPA Power System; and

WHEREAS, GPA will supplement the funding of this program with federal grants; and

RESOLUTION NO: 2018-02

WHEREAS, any installed solar PV system energy production shall offset GDOE electricity billing on a kilowatt-hour generated for kilowatt-hour consumed basis at the LEAC or below the rate; and

WHEREAS, this proposed program benefits GDOE, GPA, renewable energy system providers, and Guam students and residents; and

NOW, THEREFORE, BE IT RESOLVED, by the CONSOLIDATED COMMISSION ON UTILITIES, the GOVERNING BODY of the GUAM POWER AUTHORITY as FOLLOWS:

1. The CCU authorizes GPA to petition the PUC for approval of the BEST Schools Program
2. Upon program approval by the PUC, the CCU authorizes the GPA General Manager to implement the BEST Schools Program.

RESOLVED, that the Chairman certifies and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED AND APPROVED THIS 27th DAY OF FEBRUARY 2018.

Certified by:

_____

JOSEPH T. DUENAS
Chairperson
Consolidated Commission on Utilities

Attested by:

_____

J. GEORGE BAMBA
Secretary
Consolidated Commission on Utilities

RESOLUTION NO: 2018-02

I, J. George Bamba, Secretary for the Consolidated Commission on Utilities (CCU), as evidenced by my signature above do certify as follows:

The foregoing is a full, true, and accurate copy of the resolution duly adopted at a regular meeting of the members of Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

Ayes: _____

Nays: _____

Absent: _____

Abstain: _____

Bond Refinancing

PL 34-69

- Section 2(h) – GPA *shall* notify *I Liheslatura* within sixty (60) days of refinancing of its intent and plan regarding the savings achieved from refinancing.

Summary of Savings:

- Final Par Amount of Refunding: $148,670,000
- Final Par Amount of Refunded: $150,440,000
- Total Cash Flow Savings: $11,528,439
- Annual Cash Savings: $501,236
- NPV Savings: 5.17%
- All-In True Interest Cost: 4.12

Bond Refinancing

- Reduction in debt services from 2018 to 2021 totaling about $1,482,326 available for a program
- Reduction from 2022 on to be use to offset annual debt service cost of new 180 MW power plant.

Recommendations for Using $1,482,326 Savings

Option 1. DSM – Replenish Existing Rebate Program

Option 2. DSM – Revolving Short Term Reimbursement Fund-Zero Interest Charged

- Reduces consumption
- Maintain quality of life
- Part of money saved to be used to reimburse GPA revolving fund

- Option 3. DSM Feasibility Plan ($250,000)
  - Support GPA's goal to help GDOE achieve their legislative mandate to deploy and utilize renewable energy systems
  - Incentivize GDOE to reduce their energy use and expenditures
  - Modernize GDOE facilities infrastructure and extend GDOE equipment life with enhanced, proactive maintenance
  - Propose that GDOE partner up with GPA under the UESC Program to execute the Plan Recommendations

Example of Option 2 Program

Residential Customers Demographics:

Assume FY 2918 Average Cost = $0.25/Kwh

KWH RANGE	Residential	Min. Monthly $	Max Monthly. $
Below 0	884	-	-
0-350	7,403	-	$87.50
351-500	4,291	$87.75	$125.00
501-750	7,681	$125.25	$187.50
751-1000	7,221	$187.75	$250.00
1001-2000	13,887	$250.25	$500.00
2001-3000	2,215	$500.25	$750.00

Targeted Assets:	
1. LED Lighting	
2. High Efficiency Air Conditioning Units	
3. Other High Savings Initiatives	

Customer Average Monthly Kwh:	**1000**
Investment Required:	$1,000
24 Month Payments	$42

Current Bill:	**$250**
Monthly Estimated Savings:	$68
Estimated Billing with new A/C	$182
Add Investment Re-payment	$42
Approximate New Bill Monthly	**$224**

1st 24 Months Savings:	**$632**
Annual Savings Thereafter	**$816**

Option 3: BEST Schools Program

- Bringing Energy Savings to (BEST) Schools Program
  - Option A: Strategic Investments on Behalf of GDOE
    - Make Strategic Investment of about $1.48 M into GDOE roof top solar PV program to assist GDOE with its solar mandate (PL 32-095), 10% energy reduction goal, and improve its facilities maintenance. This would be seed funding towards eventually utilizing all GDOE school rooftops for solar PV generation as practical and economic.
    - Use Bond Refinancing Program savings from 2018 thru 2021 period towards installation, commissioning, and operations and maintenance of solar PV + energy storage systems on GDOE facilities
    - GPA evaluates solar PV production potential of all schools
    - Work with GDOE in seeking federal grants and other funding
    - Offset GDOE electric billing on a kilowatt-hour generated for kilowatt-hour consumed basis at the LEAC rate
    - Creates Multiple Win-Win scenarios for GDOE and ratepayers

Best School Program Savings

Description:	GPA BEST Program	GDOE PPA - Leased Schools
GPA Savings Investment:	$1,482,326	
Average $/Watt for Solar PV	4.5	
Total PV KW Capacity	329	
Annual Energy Production	721,399	721,399

Average GDOE Rate/Kwh	0.26
Leac Rate February 2018	0.14
Base Rate	0.12

GDOE PPA $/Kwh (80% of GPA Rate)		$0.21
GDOE Savings $/Kwh		$0.05

GDOE Savings Annually	**$100,996**	**$37,513**

Option 3: BEST Schools Program

- Bringing Energy Savings to (BEST) Schools Program
  - Option B: GPA-GDOE DSM & Renewable Plan ($250,000)
    - Solar Photovoltaic (PV) Systems – Identify and conduct preliminary sizing of solar PV array locations for each school site and the locations of existing electric meters for connection of on-site solar power generation.
    - Heating Ventilation & Air-Conditioning (HVAC) Systems – Provide a preliminary audit of existing school building HVAC systems for energy efficiency opportunities.
    - Water/Wastewater Systems – Provide a preliminary audit of existing systems for water use & operational efficiency opportunities.
    - Energy Management Systems (EMS) – Provide a preliminary audit of existing systems for energy efficiency opportunities.
    - Lighting Systems – Document existing systems and recommend opportunities for energy efficiency.
    - Operations & Maintenance (O&M) Plans – Evaluate and make recommendations to maximize equipment life and performance.
    - Propose that GDOE partner up with GPA under the UESC Program to execute the Plan Recommendations
    - Use BizConnect to help GDOE with their mandate to reduce energy consumption by 10%

Helping GDOE Meet Its 10% Energy Reduction Goal

Supporting Bond Refinance Savings Use Option 3

BizConnect

- GPA has a separate product for commercial and government customers called BizConnect
- BizConnect is especially useful for customers with multiple meters servicing their premise
- GPA has configured BizConnect for two customers: UOG and GTA.
  - GTA uses it aggressively
- Bizconnect can help GDOE School Leadership manage toGDOE's 10% energy reduction goal

BizConnect

- Offers a configurable suite of reports for C&I users to gain visibility into their usage and cost, coupled with measurement and verification to quantify the results of their conservation measures
- Presents deduct and net metering views, as well as coincident peak analysis
- Encourages behavioral savings in response to user configured threshold consumption notifications
- Empowers the large customer base to understand the impact of participating in utility programs, while working toward their own objectives of containing risk and minimizing impact on the environment

GPA Goals

- Near-Term Goals
  - Determine the top five schools for electricity (kWh) consumption per student. (Done)
  - Create Login Profiles for each of these schools
  - Create a training program on BizConnect for these schools
  - Conduct the training for the principals of these five schools
  - Provide Guidance on Using BizConnect to Manage Energy Use and help Meet GDOE's 10% Energy Reduction Mandate
- Long-Term Goals
  - Have every school on BizConnect
  - Help GDOE achieve its mandate to cut energy use by 10%
  - Become GDOE's Favored Energy Partner

Top Five Energy Consuming Schools

Rank	School Name	kWh Billed	# of Students	kWh/Student
1	Southern High School	538,389.30	1,495	360.13
2	Tamuning Elementary School	145,570.72	565	257.65
3	As Tumbo Middle School	106,398.00	581	181.26
4	Tiyan High School	223,392.00	1,260	177.30
5	Okkodo High School	302,816.24	1,762	171.86

GPA BizConnect Goals

- Increase customer satisfaction by helping them manage energy usage and cost
- Increase mindshare between GPA and its commercial, industrial, and government customers
- Improve effectiveness of GPA's DSM initiatives
- Lower burden on call centers by reducing call volume and duration
- Improve public reputation of the utility
- Improve the value we provide customers

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

Issues for Decision

Resolution No. 2018-04:

RELATIVE TO APPROVAL OF THE PHASE II RENEWABLE ENERGY ACQUISITION POWER PURCHASE AGREEMENT FOR HANWHA ENERGY CORPORATION

What is the project's objective? Is it necessary and urgent?

GPA intends to meet its 2008 IRP goals and comply with Public Law 29-62 which sets renewable goals under the Renewable Portfolio Standards (RPS) with the Phase II projects. In January 2017 GPA obtained the price bids for GPA Multi-Step Bid No: GPA-070-16 for 60MW of Renewable Energy Resource capacity with ESS for ramp control. Hanwha Energy Corporation is one of the two (2) lowest responsive bidders (KEPCO-LG CNS Mangilao Solar, LLC., is the other one) with having two proposals for 30MW solar PV projects totaling 60 MW of solar PV capacity with ESS for ramp control. GPA and Hanwha Energy Corporation have completed and agreed to commercial terms and conditions of the Power Purchase Agreements (PPA). GPA seeks approval to submit Hanwha Energy Corporation's PPA to the PUC for their approval.

Where is the location?

The Hanwha Energy Corporation 2x30MW solar projects are located at Dandan, Inarajan.

How much will it cost?

Please see attached table.

When will it be completed?

The Agreement is for 25 year term.

What is its funding source?

Funding source is LEAC.

HANWHA ENERGY CORPORATION Price Proposals

Contract Year	Proposal 1			Proposal 2		
	Annual Price ($/MWH)	Guaranteed Net Annual Generation (MWH/YR)	MicroGrid Operations Fixed Annual Fee	Annual Price ($/MWH)	Guaranteed Net Annual Generation (MWH/YR)	MicroGrid Operations Fixed Annual Fee
1	$ 62.45	72,005.00	$ 1,287,082	$ 65.99	72,005.00	$ 1,287,082
2	$ 63.08	71,831.00	$ 1,264,710	$ 66.65	71,831.00	$ 1,264,710
3	$ 63.71	71,245.00	$ 1,244,969	$ 67.32	71,245.00	$ 1,244,969
4	$ 64.35	70,865.00	$ 1,225,229	$ 67.99	70,865.00	$ 1,225,229
5	$ 64.99	70,485.00	$ 1,206,804	$ 68.67	70,485.00	$ 1,206,804
6	$ 65.64	70,306.00	$ 1,188,380	$ 69.36	70,306.00	$ 1,188,380
7	$ 66.30	69,724.00	$ 1,171,271	$ 70.05	69,724.00	$ 1,171,271
8	$ 66.96	69,344.00	$ 1,155,479	$ 70.75	69,344.00	$ 1,155,479
9	$ 67.63	68,693.00	$ 1,139,686	$ 71.46	68,693.00	$ 1,139,686
10	$ 68.31	68,780.00	$ 1,123,894	$ 72.17	68,780.00	$ 1,123,894
11	$ 68.99	68,202.00	$ 1,108,101	$ 72.89	68,202.00	$ 1,108,101
12	$ 69.68	67,821.00	$ 1,093,625	$ 73.62	67,821.00	$ 1,093,625
13	$ 70.37	67,440.00	$ 1,079,149	$ 74.36	67,440.00	$ 1,079,149
14	$ 71.08	67,252.00	$ 1,064,672	$ 75.10	67,252.00	$ 1,064,672
15	$ 71.79	66,678.00	$ 1,051,512	$ 75.85	66,678.00	$ 1,051,512
16	$ 72.51	66,296.00	$ 1,038,352	$ 76.61	66,296.00	$ 1,038,352
17	$ 73.23	65,915.00	$ 1,025,191	$ 77.38	65,915.00	$ 1,025,191
18	$ 73.96	65,722.00	$ 1,012,031	$ 78.15	65,722.00	$ 1,012,031
19	$ 74.70	65,151.00	$ 998,871	$ 78.93	65,151.00	$ 998,871
20	$ 75.45	64,770.00	$ 987,026	$ 79.72	64,770.00	$ 987,026
21	$ 76.21	64,388.00	$ 975,182	$ 80.52	64,388.00	$ 975,182
22	$ 76.97	64,190.00	$ 963,338	$ 81.33	64,190.00	$ 963,338
23	$ 77.74	63,623.00	$ 951,493	$ 82.14	63,623.00	$ 951,493
24	$ 78.52	63,241.00	$ 939,649	$ 82.96	63,241.00	$ 939,649
25	$ 79.30	62,859.00	$ 927,805	$ 83.79	62,859.00	$ 927,805

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

RESOLUTION NO. 2018 – 04

RELATIVE TO APPROVAL OF THE PHASE II RENEWABLE ENERGY ACQUISITION AWARD TO HANWHA ENERGY CORPORATION FOR 60 MW OF RENEWABLE ENERGY CAPACITY

WHEREAS, in May 2016 GPA announced GPA Multi-Step Bid No: GPA- 070-16 for 60MW of Renewable Energy Resource capacity with ESS for ramp control; and

WHEREAS, in January 2017 GPA obtained the price bids and Hanwha Energy Corporation is one of the two (2) lowest responsive bidders with having two proposals for 30MW solar PV projects totaling 60 MW of solar PV capacity with ESS for ramp control; and

WHEREAS, Hanwha Energy Corporation provided $62.45/MWH & $65.99/MWH price proposals (first year) for the energy and ramp controls to include interconnection costs. **Exhibit A** provides a summary of the energy price proposals; and

WHEREAS, GPA evaluates bidder's price proposal against GPA's variable operating costs primarily made up of fuel costs; and

WHEREAS, GPA has determined that Hanwha Energy Corporation proposals would provide substantial savings to GPA over the term of the contracts based on current and projected LEAC rates (**Exhibit B**)**;** and

WHEREAS, GPA considers renewable energy as an effective hedge against rising fuel oil prices; and

WHEREAS, the bid prices proposed are an excellent fuel hedge as the bidders' energy prices are fixed with escalations no more than 1% annually for all proposals. **Exhibit C** summarizes GPA historical LEAC; and

WHEREAS, renewable energy is sustainable energy and good for the island; and

WHEREAS, Public Law 29-62 sets renewable goals under the Renewable Portfolio Standards (RPS); and

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WHEREAS, the award of 120MW contracts including KEPCO-LG CNS Mangilao Solar, LLC 60 MW project is projected to increase GPA's ratio of renewable energy to sales up to 26% by 2020. **Exhibit D & E** is a projected RPS outlook; and

WHEREAS, Hanwha Energy Corporation has concurred with GPA recommendations from the system impact study which is incorporated in the contract documents; and

WHEREAS, GPA would like to proceed with an approval to award Hanwha Energy Corporation a total of 60MW of renewable energy capacity contract subject (the "Agreement") to PUC approval.

WHEREAS, the Agreement, in the unexecuted form attached hereto as **Exhibit F,** has been reviewed by the CCU.

WHEREAS, this (Agreement shall be effective on the Effective Date as defined therein provided that the obligations of the parties thereunder shall be subject to the satisfaction of the following conditions precedent:

(i) Receipt by GPA of a final, non-appealable approval of this Agreement by the Guam Public Utilities Commission ("PPA Approval");

(ii) Execution of the Interconnection Agreement by the Parties;

(iii) Receipt by GPA of a final, non-appealable approval of the Interconnection Agreement (ICA) by the Guam Public Utilities Commission ("ICA Approval"); and

WHEREAS, Title 12 of the Guam Code Annotated, Chapter 8, Section 8306 provides that the Guam Power Authority may enter into alternate energy agreements to develop alternate energy or to purchase alternate energy only if all of the following conditions are met:

(a) Local funds of the government of Guam or the Guam Power Authority Funds may be used to develop alternate energy sources (including power generated from windmills, solar ponds and Ocean Thermal Energy Conversion) as may be later, appropriated by the Legislature or approved by law for that specific purpose.

(b) Any power produced or sold from alternate energy sources (including power generated from windmills, solar ponds and Ocean Thermal Energy Conversion (OTEC) cannot be purchased by Guam Power Authority or the government of Guam at a cost greater than the average cost of producing power found in the Islandwide Power System (not inclusive of backup diesel generators), specifically the two Cabras Units, the two Tanguisson Units, and the Piti Power Plant.

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(c) No contract may be signed by the government of Guam or the Guam Power Authority to develop or purchase power from alternate energy sources (including power generated from windmills, solar ponds and Ocean Thermal Energy Conversion), if such contract will result in increased expenses and costs for the Guam Power Authority. No such alternate energy contract may be signed until the board of directors of the Guam Power Authority has so certified that the agreement is consistent with all bond covenants and that the price paid for electricity pursuant to the agreement does not exceed actual current avoided cost.

(d) For so long as the Navy Power Pool Agreement is in effect, neither the Guam Power Authority nor the government of Guam may contract to purchase any power generated from alternate energy source (including power generated from windmills and solar ponds and Ocean Thermal Energy Conversion) without giving the United States Navy prior written notification.

(e) Any contract to purchase alternate energy (including power generated from windmills and solar ponds and Ocean Thermal Energy Conversion) must provide that any loss or damage to the Islandwide Power System, Guam Power Authority and the U.S. Navy or to consumers as a result of or proximately caused by the negligence of alternate energy supplier or by the quality of alternate energy supplied will be borne solely by the alternate energy supplier who will hold Guam Power Authority and the government of Guam harmless.

(f) All interface facilities to provide usable alternate energy (including power generated from windmills, solar ponds and Ocean Thermal Energy Conversion) shall be installed and maintained at the expense of the supplier of alternate energy. Any such interconnections shall be at existing lines owned and operated by the Islandwide Power System, and such interfaces shall be subject to the engineering standards and approval set by the Guam Power Authority.

(g) Any contract to purchase alternate energy (including power generated from windmills, solar ponds and Ocean Thermal Energy Technology) must provide that neither the government of Guam nor the Guam Power Authority shall be obligated to purchase electrical power not needed by the Guam Power Authority.

RESOLUTION NO: 2018-xx

NOW, THEREFORE, BE IT RESOLVED, by the CONSOLIDATED COMMISSION ON UTILITIES, the GOVERNING BODY of the GUAM POWER AUTHORITY as FOLLOWS:

1. The CCU authorizes GPA to petition the PUC for approval to award Phase II Renewable Acquisition Bid of two 30MW proposals totaling 60MW to Hanwha Energy Corporation as required under the PUC Procurement Protocol.
2. The CCU authorizes GPA to contract Hanwha Energy Corporation for renewable energy subject to PUC approval.
3. The CCU certifies and confirms that the requirements of 12 GCA Section 8306 as set forth above are met and satisfied in connection with the Agreement as follows:
    a. The requirements of 12 GCA Section 8306(a) are satisfied in connection with the Agreement in that GPA, pursuant to the provisions of Public Law 30-66 (as codified in Title 12 of the Guam Code Annotated, Section 8104(n)) and other applicable laws, is authorized to enter into the Agreement, together with any other agreement to be entered into by the parties in connection therewith, and perform all the obligations imposed upon GPA as set forth therein, including, without limitation, the obligation to purchase Renewable Energy as defined in the Agreement and pay all amounts due and owing under the terms of the Agreement. No separate and specific appropriation or approval by *Liheslaturan Guahan* is required for such purpose.
    b. The requirements of 12 GCA Section 8306(b) and (c) are satisfied in connection with the Agreement in that the CCU hereby certifies that the Agreement and the purchase of Renewable Energy by GPA at the time of the execution of the Agreement pursuant to the terms therein will not result in (A) costs to GPA which exceed the average cost of producing power under the Islandwide Power System owned and operated by GPA not inclusive of energy production from any backup diesel generators or other renewable energy sources, or (B) increased expenses and costs for GPA. Further, the CCU hereby certifies that the Agreement is consistent with and does not violate any and all bond covenants applicable to and imposed upon GPA and that the price to be paid by GPA for Renewable Energy as provided therein does not exceed GPA's actual current avoided cost.
    c. The requirements of 12 GCA 8306(d) are not applicable with regard to the Agreement since GPA is not a party to a pooling agreement or any other agreement with the United States Department of Navy or any other federal agency, department or instrumentality ("Federal Government) which requires GPA to notify or obtain the approval of the Federal Government of this Agreement as contemplated.

RESOLUTION NO: 2018-xx

d. The requirements of 12 GCA Section 8306(e) are satisfied as the Agreement contemplates that the Hanwha entity executing the Agreement is obligated to indemnify and hold harmless GPA from any loss or damage to the Islandwide Power System as a result of or proximately caused by such entity or by the quality of alternate energy supplied.

e. The requirements of 12 GCA Section 8306(f) are satisfied as the Agreement and any interconnection agreements executed in connection therewith provide that all interface facilities to provide the Renewable Energy shall be installed and maintained at the expense of the Hanwha entity thereunder and that any such interconnections shall be at existing lines owned and operated by the Islandwide Power System, and such interfaces shall be subject to the engineering standards and approval set by GPA.

f. The requirements of 12 GCA Section 8306(g) are satisfied in connection with the Agreement as any and all Renewable Energy to be purchased by GPA pursuant to the terms of the Agreement constitute electrical power needed and required by GPA in connection with the operation and stability of the Islandwide Power System and in order to meet renewable energy portfolio standards which GPA is mandated to achieve and satisfy by law including without limitation, the mandates as set forth in Public Law 29-062 as codified in Title 12 of the Guam Code Annotated, Section 8311.

RESOLVED, that the Chairman certifies and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED AND APPROVED THIS 27TH DAY OF FEBRUARY 2018.

Certified by:	Attested by:
_____	_____
JOSEPH T. DUENAS	**J. GEORGE BAMBA**
Chairperson	Secretary
Consolidated Commission on Utilities	Consolidated Commission on Utilities

RESOLUTION NO: 2018-xx

I, J. George Bamba, Secretary for the Consolidated Commission on Utilities (CCU), as evidenced by my signature above do certify as follows:

The foregoing is a full, true, and accurate copy of the resolution duly adopted at a regular meeting of the members of Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

Ayes: _____

Nays: _____

Absent: _____

Abstain: _____

EXHIBIT A

Summary of Bid Proposals

Contract Year	Proposal 1			Proposal 2		
	Annual Price ($/MWH)	Guaranteed Net Annual Generation (MWH/YR)	MicroGrid Operations Fixed Annual Fee	Annual Price ($/MWH)	Guaranteed Net Annual Generation (MWH/YR)	MicroGrid Operations Fixed Annual Fee
1	$ 62.45	72,005.00	$ 1,287,082	$ 65.99	72,005.00	$ 1,287,082
2	$ 63.08	71,831.00	$ 1,264,710	$ 66.65	71,831.00	$ 1,264,710
3	$ 63.71	71,245.00	$ 1,244,969	$ 67.32	71,245.00	$ 1,244,969
4	$ 64.35	70,865.00	$ 1,225,229	$ 67.99	70,865.00	$ 1,225,229
5	$ 64.99	70,485.00	$ 1,206,804	$ 68.67	70,485.00	$ 1,206,804
6	$ 65.64	70,306.00	$ 1,188,380	$ 69.36	70,306.00	$ 1,188,380
7	$ 66.30	69,724.00	$ 1,171,271	$ 70.05	69,724.00	$ 1,171,271
8	$ 66.96	69,344.00	$ 1,155,479	$ 70.75	69,344.00	$ 1,155,479
9	$ 67.63	68,693.00	$ 1,139,686	$ 71.46	68,693.00	$ 1,139,686
10	$ 68.31	68,780.00	$ 1,123,894	$ 72.17	68,780.00	$ 1,123,894
11	$ 68.99	68,202.00	$ 1,108,101	$ 72.89	68,202.00	$ 1,108,101
12	$ 69.68	67,821.00	$ 1,093,625	$ 73.62	67,821.00	$ 1,093,625
13	$ 70.37	67,440.00	$ 1,079,149	$ 74.36	67,440.00	$ 1,079,149
14	$ 71.08	67,252.00	$ 1,064,672	$ 75.10	67,252.00	$ 1,064,672
15	$ 71.79	66,678.00	$ 1,051,512	$ 75.85	66,678.00	$ 1,051,512
16	$ 72.51	66,296.00	$ 1,038,352	$ 76.61	66,296.00	$ 1,038,352
17	$ 73.23	65,915.00	$ 1,025,191	$ 77.38	65,915.00	$ 1,025,191
18	$ 73.96	65,722.00	$ 1,012,031	$ 78.15	65,722.00	$ 1,012,031
19	$ 74.70	65,151.00	$ 998,871	$ 78.93	65,151.00	$ 998,871
20	$ 75.45	64,770.00	$ 987,026	$ 79.72	64,770.00	$ 987,026
21	$ 76.21	64,388.00	$ 975,182	$ 80.52	64,388.00	$ 975,182
22	$ 76.97	64,190.00	$ 963,338	$ 81.33	64,190.00	$ 963,338
23	$ 77.74	63,623.00	$ 951,493	$ 82.14	63,623.00	$ 951,493
24	$ 78.52	63,241.00	$ 939,649	$ 82.96	63,241.00	$ 939,649
25	$ 79.30	62,859.00	$ 927,805	$ 83.79	62,859.00	$ 927,805

EXHIBIT B

Proposal Evaluation Summary

CASE	Description	Project Size	5 Year Projected Savings On Current LEAC ($115/MWH)	5 Year Projected Savings on Projected LEAC
1	Hanwha Energy Corporation Proposal 1&2 (60MW)	60 MW	$ 22,820,053	$ 44,934,650

Contract Year	Year 1	Year 2	Year 3	Year 4	Year 5	TOTALS
Hanwha Proposal 1 Energy Rate ($/MWH)	62.45	63.08	63.71	64.35	64.99	
Energy Guarantee (MWH)	72,005	71,831	71,245	70,865	70,485	
Hanwha Proposal 2 Energy Rate ($/MWH)	65.99	66.65	67.32	67.99	68.67	
Energy Guarantee (MWH)	72,005	71,831	71,245	70,865	70,485	
Hanwha Microgrid Operations Option	$ 2,574,164	$ 2,529,420	$ 2,489,938	$ 2,450,458	$ 2,413,608	
Phase II Energy Costs	**$ 11,822,486**	**$ 11,848,056**	**$ 11,825,170**	**$ 11,828,732**	**$ 11,834,633**	**$ 59,159,077**
Current LEAC Rate ($/MWH)	115	115	115	115	115	
Current Energy Costs	$ 16,561,150	$ 16,521,130	$ 16,386,350	$ 16,298,950	$ 16,211,550	$ 81,979,130
Proposed Savings	**$ 4,738,664**	**$ 4,673,074**	**$ 4,561,180**	**$ 4,470,218**	**$ 4,376,917**	**$ 22,820,053**

Year	2019	2020	2021	2022	2023	TOTALS
Projected LEAC Rate* ($/MWH)	122.27	140.02	154.63	154.03	159.65	
Current Energy Costs	$ 17,608,221	$ 20,115,743	$ 22,033,092	$ 21,830,945	$ 22,505,726	$ 104,093,728
Proposed Savings	**$ 5,785,735**	**$ 8,267,687**	**$ 10,207,922**	**$ 10,002,213**	**$ 10,671,093**	**$ 44,934,650**

STRATEGIST CASE SUMMARY

	Base Case (No Phase II)	Case 1 (60MW)	SAVINGS
Present Value Utility Cost[3] ($000)	6,896,417	6,662,844	233,572

Notes:
1. The Currrent LEAC is used in this case evaluation to demonstrate minimum savings potential with $115/MWH LEAC rate presently proposed for next LEAC period.
2. Projected LEAC is based on STRATEGIST software output that analyzes genernation costs for various generation resources and its operating characteristics. This LEAC is based on load and fuel forecasts done by LEIDOS in 2016.
3. Present Value Utility Cost is an evaluation of generation operating costs in the STRATEGIST software. This is used to determine cost impact of generation resources and their operation variables (efficiency, fuel costs, capacity, etc.) based on energy requirements.

EXHIBIT C
Historical LEAC Summary

EFFECTIVE DATES	FUEL RECOVERY RATE ($ per Kwh)
10/01/00	0.053613
04/01/01	0.053613
10/01/01	0.048625
04/01/02	0.042901
10/01/02	0.048831
04/01/03	0.048831
10/01/03	0.062333
04/01/04	0.059753
10/01/04	0.059753
01/01/00	0.073010
01/01/00	0.088918
01/01/00	0.098589
02/01/07	0.108893
08/13/07	0.123957
03/01/08	0.150467
06/01/08	0.170440
10/01/08	0.187750
12/01/08	0.171050
02/01/09	0.157630
05/01/09	0.136450
08/01/09	0.129670
02/01/10	0.150460
08/31/10	0.124650
02/01/11	0.161530
08/01/11	0.192220
02/01/12	0.191980
04/01/12	0.192310
02/01/13	0.209271
08/01/13	0.182054
02/01/14	0.172986
08/01/14	0.176441
11/01/14	0.146666
02/01/15	0.102054
08/01/15	0.104871
02/01/16	0.086613
08/01/16	0.086613
02/01/17	0.105051
08/01/17	0.115725

EXHIBIT D

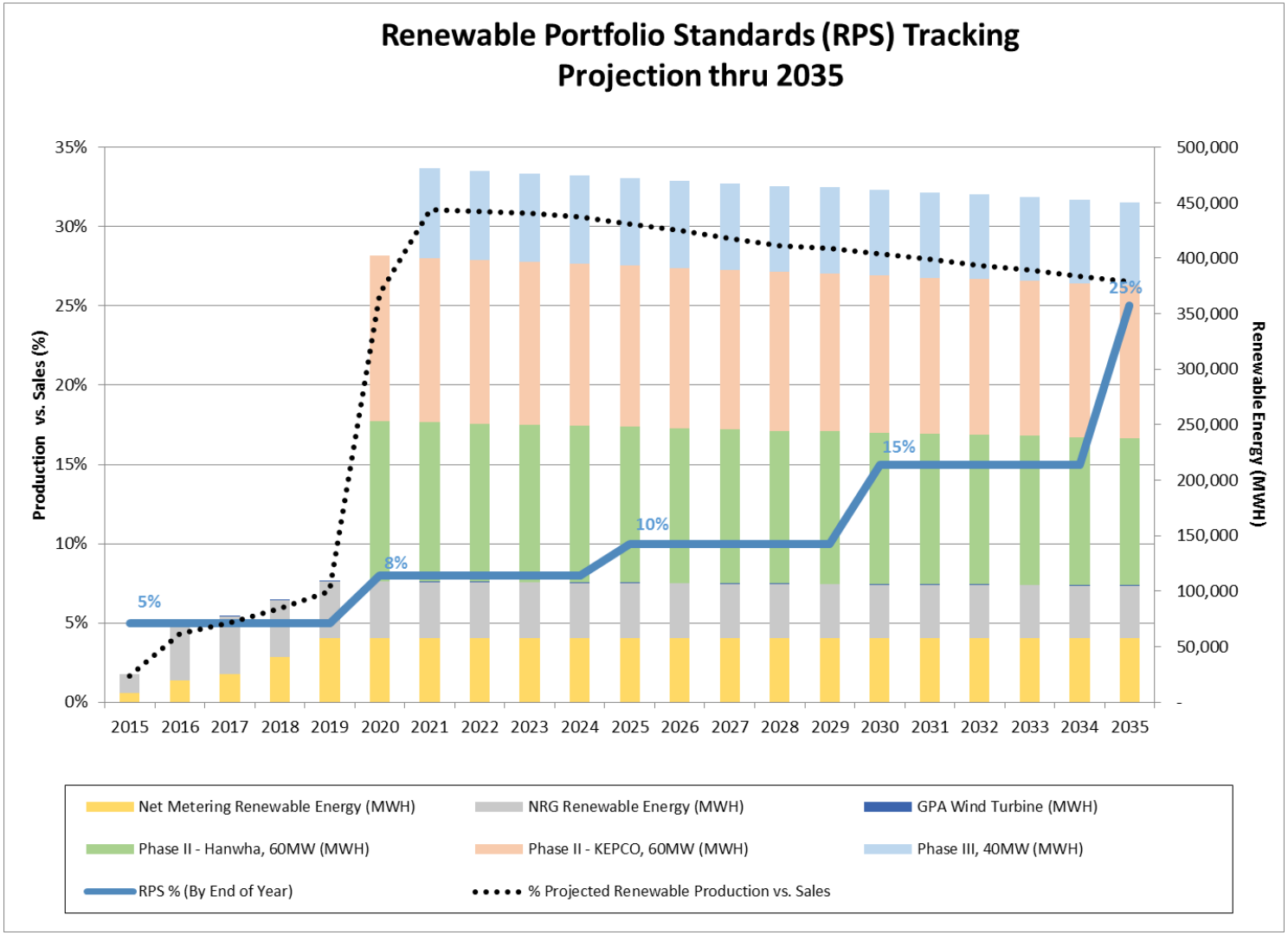
Projected Renewable Energy & Renewable Portfolio Standards (RPS) for 120 MW Phase II Award

	Net Metering Renewable Energy (MWH)	NRG Renewable Energy (MWH)	GPA Wind Turbine (MWH)	Phase II - Hanwha, 60MW (MWH)	Phase II - KEPCO, 60MW (MWH)	Phase III, 40MW (MWH)	Total Renewable Production (MWH)	GPA Total Sales (MWH)	% Projected Renewable Production vs. Sales	RPS % (By End of Year)
2015	8,034	17,597					25,630	1,536,927	2%	5%
2016	19,559	48,221	474				68,253	1,584,685	4%	5%
2017	25,271	51,627	482				77,380	1,546,044	5%	5%
2018	40,393	51,412	482				92,287	1,554,108	6%	5%
2019	57,629	51,133	482				109,244	1,557,331	7%	5%
2020	*57,629*	50,992	482	144,010	149,085		402,198	1,558,272	26%	8%
2021	*57,629*	50,601	482	143,662	147,949	80,510	480,834	1,547,800	31%	8%
2022	*57,629*	50,393	482	142,490	147,209	80,175	478,377	1,544,574	31%	8%
2023	*57,629*	50,083	482	141,730	146,468	79,740	476,131	1,544,540	31%	8%
2024	*57,629*	49,781	482	140,970	146,118	79,520	474,499	1,550,854	31%	8%
2025	*57,629*	49,599	482	140,612	144,986	78,911	472,219	1,566,472	30%	10%
2026	*57,629*	49,391	482	139,448	144,245	78,585	469,780	1,577,646	30%	10%
2027	*57,629*	49,122	482	138,688	143,504	78,102	467,527	1,597,005	29%	10%
2028	*57,629*	48,987	482	137,386	143,146	77,631	465,262	1,614,448	29%	10%
2029	*57,629*	48,612	482	137,560	142,023	77,348	463,654	1,620,517	29%	10%
2030	*57,629*	48,411	482	136,404	141,282	77,023	461,230	1,631,977	28%	15%
2031	*57,629*	48,147	482	135,642	140,541	76,604	459,045	1,644,069	28%	15%
2032	*57,629*	48,017	482	134,880	140,175	76,393	457,577	1,661,486	28%	15%
2033	*57,629*	47,649	482	134,504	139,059	75,808	455,131	1,670,464	27%	15%
2034	*57,629*	47,451	482	133,356	138,319	75,495	452,731	1,684,195	27%	15%
2035	*57,629*	47,191	482	132,592	137,578	75,083	450,555	1,698,373	27%	25%

Notes:

1. Sales is from 2016 forecast for 2017-2035 (LEIDOS Jan. 2016 Forecast)
2. Net Metering projection is from LEIDOS Forecast for 2017 thru 2019 and fixed thereafter
3. NRG (Phase I) production is based on contract guarantees from 2017 thru 2035
4. Phase II is based on Project Guarantees **for 120MW**. Phase III renewable projections are based NRG contract guarantees.
5. GPA wind turbine assumes average capacity factor since commissioning (20%) from 2017 thru 2035
6. DSM values are not included.

EXHIBIT E


Renewable Portfolio Standards (RPS) Tracking
Projection thru 2035
Production vs. Sales (%)
Renewable Energy (MWH)
35%
30%
25%
20%
15%
10%
5%
0%
500,000
450,000
400,000
350,000
300,000
250,000
200,000
150,000
100,000
50,000
-
5%
8%
10%
15%
25%
2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035
Net Metering Renewable Energy (MWH)
NRG Renewable Energy (MWH)
GPA Wind Turbine (MWH)
Phase II - Hanwha, 60MW (MWH)
Phase II - KEPCO, 60MW (MWH)
Phase III, 40MW (MWH)
RPS % (By End of Year)
% Projected Renewable Production vs. Sales

INTERCONNECTION AGREEMENT

BETWEEN

GUAM POWER AUTHORITY

AND

HANWHA ENERGY CORPORATION

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ATTACHMENTS

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Attachment 2 – Description and Costs of the Small Generating Facility, Interconnection facilities, and Metering Equipment

Attachment 3 – One-line Diagram Depicting the Small Generating Facility, Interconnection Facilities, Metering Equipment, and Network Upgrades

Attachment 4 – Milestones

Attachment 5 – Additional Operating Requirements for the Transmission System Needed to Support the Interconnection Customer's Needs

Attachment 6 – [Not Used]

Attachment 7 - Bill of Sale

INTERCONNECTION AGREEMENT

This Interconnection Agreement ("Agreement") is made and entered into this [___] day of _____, 201__ (the “Effective Date”), by Guam Power Authority ("GPA" or “Transmission Provider”), and _____("_____" or “Interconnection Customer”) each hereinafter sometimes referred to individually as "Party" or both referred to collectively as the "Parties."

Transmission Provider Information

Transmission Provider:	Guam Power Authority
Attention:	_____
Address:	_____
Physical Address:	_____
	_____
Phone:	_____
Email:	_____
Fax:	_____

Interconnection Customer Information

Interconnection Customer:	
Attention:	Mr. Seung Taek Lee_
Address:	499, Hannuridaero Sejong Si
	30102 Korea
Physical Address:	499, Hannuridaero Sejong Si
	30102 Korea
Phone:	+8244 850 3494
Email:	stlee1108@hanwha.com
Fax:	+8244 850 3519

Interconnection Customer Application No: _____

In consideration of the mutual covenants set forth herein, the Parties agree as follows:

Article 1. Scope and Limitations of Agreement

1.1 This Agreement governs the terms and conditions under which the Interconnection Customer's Small Generating Facility will interconnect with, and operate in parallel with, the Transmission System.

1.2 This Agreement does not constitute an agreement to purchase or deliver the Interconnection Customer's power. The purchase or delivery of power and other services that the Interconnection Customer may require will be covered under a separate agreement. The Interconnection Customer will be responsible for separately making all necessary arrangements (including scheduling) for delivery of electricity to GPA in accordance with GPA's standard procedures, as provided by GPA to Interconnection Customer no later than ninety (90) days prior to commencement of testing of the Small Generating Facility.

1.3 Responsibilities of the Parties

1.3.1 The Parties shall perform all obligations of this Agreement in accordance with all Applicable Laws and Regulations, Operating Requirements, and Good Utility Practice.

1.3.2 The Interconnection Customer shall construct, interconnect, operate and maintain its Small Generating Facility and construct or cause to be constructed the Interconnection Facilities in accordance with this Agreement, Good Utility Practice and the requirements of Section 1.4.4 below.

1.3.2.1 The cost of constructing, interconnecting, operating and maintaining the Small Generating Facility shall be borne entirely by Interconnection Customer.

1.3.2.2 The cost of developing, designing, procuring, constructing and installing the Interconnection Facilities shall be borne by Interconnection Customer

1.3.2.3 On or before the Commercial Operation Date (as defined in the Power Purchase Agreement), the Interconnection Customer shall transfer the Interconnection Facilities to GPA by execution and delivery of the Bill of Sale attached hereto as Attachment 7.

1.3.2.4 Interconnection Customer shall manage the overall Construction progress (Engineering, Procuring and Constructing) and bear up to $900,000.00 of the direct, verified costs of construction of such System Stability Upgrades which are referred in Section 4.2 below and in

Attachment 5, but such costs shall in no event exceed $900,000.00. Any verified costs in excess of such amount shall be reimbursed by GPA to Interconnection Customer with GPA's prior approval.

1.3.3 GPA shall operate and maintain the Transmission System, the Interconnection Facilities and the Network Upgrades in accordance with this Agreement and Good Utility Practice.

1.3.3.1 The Parties agree that Network Upgrades [will not be required] solely as a result of Interconnection Customer installing the Small Generating Facility and the Interconnection Facilities.

1.3.4 The Interconnection Customer agrees to construct the Interconnection Facilities in accordance with applicable specifications that meet or exceed those provided by the National Electrical Safety Code, the American National Standards Institute, IEEE Standards, Underwriter's Laboratory, and Operating Requirements in effect at the time of construction and other applicable national and state codes and standards. The Interconnection Customer agrees to design and install its Small Generating Facility so as to reasonably minimize the likelihood of a disturbance adversely affecting or impairing the system or equipment of GPA.

1.3.5 Interconnection Customer shall be responsible for the safe installation of the Interconnection Facilities. Following transfer by Interconnection Customer in accordance with Section 1.4.2.4, GPA shall be responsible for the safe operation, maintenance, repair, inspection and condition of the Interconnection Facilities and the Transmission System, including System Stability and Network Upgrades

1.3.6 GPA shall provide without cost to Interconnection Customer the reasonable use of labor, personnel and equipment necessary for Interconnection Customer's installation of the Small Generating Facility and the Interconnection Facilities (and the Network Upgrades if applicable), so long as GPA does not incur material out-of-pocket cost or constraint of resources as a result thereof. The foregoing includes, by way of example, (i) providing access to GPA technical information and engineering personnel as needed for questions and answers, (ii) utilizing GPA equipment and trucks as needed for GPA support, (iii) receiving and loading wire reels at the Port of Guam and bringing the same to the Small Generating Facility lay-down area, (iv) providing electricians and equipment for wire installation, splicing, terminations and testing, and (v) providing flag men for traffic control during wire installation, splicing and testing.

1.3.7 GPA shall provide Interconnection customer and its subcontractors regarding the work on the Interconnection Facilities the following items (i) the right of Access to Interconnection Facilities (ii) cover GPA's internal cost of any power shut down support during normal working hours (iii) provide sufficient land for

installing transformer and switchgear to its existing Substations as described in Attachment 2 iv) acquisiton and permitting of additional land for Apra Heights Substation

1.4 Parallel Operation Obligations

Once the Small Generating Facility has been authorized to commence parallel operation, the Interconnection Customer shall abide by all rules and procedures pertaining to the parallel operation of the Small Generating Facility in the Guam control area, including, but not limited to: 1) the rules and procedures concerning the operation of generation set forth by the Transmission Provider for the Transmission System and 2) the Operating Requirements set forth in Appendix H of the Power Purchase Agreement.

1.5 Metering

The Parties' responsibilities with respect to purchase, installation, operation, maintenance, testing, repair and replacement of metering and data acquisition equipment are specified in Section 7.4 of the Power Purchase Agreement.

1.6 Reactive Power

The Interconnection Customer shall design its Small Generating Facility to maintain a composite power delivery at continuous rated power output at the Point of Interconnection at all power factors over the range of 0.95 leading to 0.95 lagging, unless GPA has established different requirements that apply to all similarly situated generators in the control area on a comparable basis. The Small Generating Facility shall be capable of continuous dynamic operation throughout the power factor design range as measured at the Point of Interconnection.

1.7 Definitions

Capitalized terms used herein shall have the meanings specified in the Glossary of Terms in Attachment 1 or the body of this Agreement.

Article 2. Inspection, Testing, Authorization, and Right of Access

2.1 Equipment Testing and Inspection

2.1.1 The Interconnection Customer shall test and inspect its Small Generating Facility and the Interconnection Facilities prior to interconnection. The Interconnection Customer shall notify GPA of such activities no fewer than five Business Days (or as may be agreed to by the Parties) prior to such testing and inspection. The notification shall be made by submitting a test plan for GPA's approval prior to the first scheduled testing date. GPA shall provide feedback within ten (10) business days. The test plan shall include all relevant testing details including but not limited to the date and time of each test, and expected MW and MVAR output of the Small Generating Facility. Testing and inspection shall occur on a Business Day. GPA may, at its own expense, send qualified personnel to the Small Generating Facility site to inspect the interconnection and observe the testing. The Interconnection Customer shall provide GPA a written test report when such testing and inspection is completed.

2.1.2 GPA shall provide the Interconnection Customer written acknowledgment within five (5) Business Days, that it has received the Interconnection Customer's written test report. Such written acknowledgment shall not be deemed to be or construed as any representation, assurance, guarantee, or warranty by GPA of the safety, durability, suitability, or reliability of the Small Generating Facility or any associated control, protective, and safety devices owned or controlled by the Interconnection Customer or the quality of power produced by the Small Generating Facility.

2.2 Authorization Required Prior to Parallel Operation

2.2.1 GPA has listed applicable parallel operation requirements in Appendix H of the Power Purchase Agreement. Additionally, GPA shall notify the Interconnection Customer of any changes to these requirements as soon as they are known. GPA shall make Reasonable Efforts to cooperate with the Interconnection Customer in meeting requirements necessary for the Interconnection Customer to commence parallel operations by the in-service date.

2.2.2 The Interconnection Customer shall not operate its Small Generating Facility in parallel with the Transmission System without the one-time prior written authorization of GPA. GPA will provide such authorization once GPA receives notification that the Interconnection Customer has complied with all applicable parallel operation requirements set forth in Appendix H of the Power Purchase

Agreement. Such authorization shall not be unreasonably withheld, conditioned, or delayed.

2.2.3 GPA shall have control of the power transmission system including the interconnecting transmission line breaker at the point of interconnection.

2.3 Right of Access

2.3.1 Upon reasonable notice, GPA may send a qualified person to the premises of the Interconnection Customer at or immediately before the time the Small Generating Facility first produces energy to inspect the interconnection, and observe the commissioning of the Small Generating Facility (including any required testing), startup, and operation for a period of up to three (3) Business Days after initial start-up of the unit.

2.3.2 Following the initial inspection process described above, at reasonable hours, and upon reasonable notice, or at any time without written notice in the event of an emergency or hazardous condition, GPA shall have access to the Interconnection Customer's premises for any reasonable purpose in connection with the performance of the obligations imposed on it by this Agreement or if necessary to meet its legal obligation to provide service to its customers. Within forty-eight (48) hours after a GPA access due to an emergency or hazardous condition, GPA shall provide a written summary of any such access and of any work performed during such access.

2.3.3 Each Party shall be responsible for its own costs associated with following this article.

Article 3. Effective Date, Term, Termination, and Disconnection

3.1 Effective Date

This Agreement shall become effective on the Effective Date.

3.2 Term of Agreement

This Agreement shall become effective on the Effective Date and shall remain in effect for a period of twenty-five (25) years from the Commercial Operation Date (as defined in the Power Purchase Agreement), or such other longer period as the Interconnection Customer may request and shall be automatically renewed for each successive one-year

period thereafter, unless terminated earlier in accordance with Article 3.3 of this Agreement. In no event, however, shall GPA be entitled to terminate this Agreement unless and until the Power Purchase Agreement is terminated.

3.3 Termination

No termination shall become effective until the Parties have complied with all Applicable Laws and Regulations applicable to such termination.

3.3.1 The Interconnection Customer may terminate this Agreement at any time by giving GPA twenty (20) Business Days written notice.

3.3.2 Transmission Provider may terminate this Agreement if the Small Generating Facility has ceased commercial operation for three (3) consecutive years, beginning with the last date of commercial operation for the Small Generating Facility, after giving the Interconnection Customer twenty (20) Business Days advance written notice. The Small Generating Facility will not be deemed to have ceased Commercial Operation for purposes of this Article 3.3.2 if the Interconnection Customer can document that it has taken other significant steps to maintain or restore operational readiness of the Small Generating Facility for the purpose of returning the Small Generating Facility to commercial operation as soon as possible.

3.3.3 Either Party may terminate this Agreement after Default pursuant to Article 7.6.

3.3.4 Upon termination of this Agreement, the Small Generating Facility will be disconnected from the Transmission System. All costs required to effectuate such disconnection shall be borne by the terminating Party, unless such termination resulted from the non-terminating Party's Default of this Agreement or such non-terminating Party otherwise is responsible for these costs under this Agreement.

3.3.5 The termination of this Agreement shall not relieve either Party of its liabilities and obligations, owed or continuing at the time of the termination.

3.3.6 The provisions of this Article shall survive termination or expiration of this Agreement.

3.4 Temporary Disconnection

Temporary disconnection shall continue only for so long as reasonably necessary under Good Utility Practice.

3.4.1 Emergency Conditions

"Emergency Condition" shall mean a condition or situation: (1) that in the judgment of the Party making the claim is imminently likely to endanger life or property; or (2) that, in the case of GPA, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Transmission System or the Interconnection Facilities; or (3) that, in the case of the Interconnection Customer, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Small Generating Facility, or with respect to the Interconnection Facilities until transferred to GPA pursuant to this Agreement. Under Emergency Conditions, if GPA believes that the Emergency Condition may reasonably be expected to affect the Transmission System or the Interconnection Facilities, GPA may immediately suspend interconnection service and temporarily disconnect the Small Generating Facility. GPA shall notify the Interconnection Customer promptly when it becomes aware of an Emergency Condition that may reasonably be expected to affect the Interconnection Customer's operation of the Small Generating Facility. The Interconnection Customer shall notify GPA promptly when it becomes aware of an Emergency Condition that may reasonably be expected to affect the Transmission System. To the extent information is known, the notification shall describe the Emergency Condition, the extent of the damage or deficiency, the expected effect on the operation of both Parties' facilities and operations, its anticipated duration, and the necessary corrective action.

3.4.2 Routine Maintenance, Construction, and Repair

GPA may interrupt interconnection service or curtail the output of the Small Generating Facility and temporarily disconnect the Small Generating Facility from the Transmission System when necessary, according to Good Utility Practice, for routine maintenance, construction, and repairs on the Transmission System. GPA shall provide the Interconnection Customer with five Business Days notice prior to such interruption. GPA shall use Reasonable Efforts to coordinate such reduction or temporary disconnection with the Interconnection Customer. The interruption or curtailment shall continue only for so long as reasonably necessary under Good Utility Practice.

3.4.3 Forced Outages

During any forced outage, GPA may suspend interconnection service to effect immediate repairs on the Transmission System. GPA shall use Reasonable Efforts to provide the Interconnection Customer with prior notice. If prior notice is not given, GPA shall, upon request, provide the Interconnection Customer

written documentation after the fact explaining the circumstances of the disconnection.

3.4.4 Adverse Operating Effects

GPA shall notify the Interconnection Customer as soon as practicable if, based on Good Utility Practice, there is a significant probability that operation of the Small Generating Facility will cause damage to the Transmission System. Supporting documentation used to reach the decision to disconnect shall be provided to the Interconnection Customer upon request. If, after notice, the Interconnection Customer fails to remedy the adverse operating effect within a reasonable time, GPA may disconnect the Small Generating Facility. GPA shall provide the Interconnection Customer with five (5) Business Day notice of such disconnection, unless the provisions of Article 3.4.1 apply.

3.4.5 Modification of the Small Generating Facility

The Interconnection Customer must receive written authorization from GPA before making any change to the Small Generating Facility that may have a material impact on the safety or reliability of the Transmission System. Such authorization shall not be unreasonably withheld. Modifications shall be done in accordance with Good Utility Practice. If the Interconnection Customer makes such modification without GPA's prior written authorization, GPA shall have the right to temporarily disconnect the Small Generating Facility until the Interconnection Customer makes necessary changes in order for the Small Generating Facility not to have a material impact on the safety or reliability of the Transmission System.

3.4.6 Reconnection

The Parties shall cooperate with each other to restore the Small Generating Facility, Interconnection Facilities, and the Transmission System to their normal operating state as soon as reasonably practicable following a temporary disconnection.

Article 4. Cost Responsibility for Interconnection Facilities

4.1 Interconnection Facilities

The Interconnection Customer shall install and pay for the cost of the Interconnection Facilities itemized in Attachment 2 of this Agreement, and as further set forth in Section 1.4.

4.2 System Stability Upgrades

It is agreed that system operational characteristic changes or Small Generator Facility modifications shall be required to be installed by the Interconnection Customer as a result of the development, installation or operation of the Small Generating Facility or other generation installed in Guam.

Transmission system relaying to line current differential upgrade is required as further described in Attachment 5. GPA shall own and operate the System Stability Upgrades described in Attachment 5 of this Agreement, which will be installed as and to the extent required as as result of the Interconnection Customer connecting to the Interconnection Facilities. All actual costs of such required System Stability Upgrades, including overhead, shall be borne by the Interconnection Customer.

For any verified costs for the System Stability Upgrades in excess of $900,000.00, GPA shall reimburse the Interconnection Customer. The Interconnection Customer shall properly notify and obtain GPA's approval prior to exceeding the $900,000.00 cap.

Article 5. [Not Used]

Article 6. Billing, Payment, Milestones, and Financial Security

6.1 Milestones

The Parties shall agree on milestones for which each Party is responsible and list them in Attachment 4 of this Agreement. A Party's obligations under this provision may be extended by agreement. If a Party anticipates that it will be unable to meet a milestone for any reason other than a Force Majeure Event, it shall immediately notify the other Party of the reason(s) for not meeting the milestone and (1) propose the earliest reasonable alternate date by which it can attain this and future milestones, and (2) requesting appropriate amendments to Attachment 4. The Party affected by the failure to meet a milestone shall not unreasonably withhold agreement to such an amendment unless it will (1) suffer significant uncompensated economic or operational harm from the delay, (2) attainment of the same milestone has previously been delayed, or (3) it has reason to believe that the delay in meeting the milestone is intentional or unwarranted notwithstanding the circumstances explained by the Party proposing the amendment.

Article 7. Assignment, Liability, Indemnity, Force Majeure, Consequential Damages, and Default

7.1 Assignment

This Agreement may be assigned by either Party upon fifteen (15) Business Days prior written notice and opportunity to object by the other Party; provided that:

7.1.1 Either Party may assign this Agreement without the consent of the other Party to (i) any affiliate of the assigning Party with an equal or greater creditworthiness and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Agreement, provided that the assigning Party promptly notifies the other Party of any such assignment or (ii) to any person or entity succeeding to all or substantially all of the assets of such Party, and whose creditworthiness is equal to or higher than that of such Party;

7.1.2 The Interconnection Customer shall have the right to assign this Agreement, without the consent of GPA, for collateral security purposes to aid in providing financing for the Small Generating Facility, provided that the Interconnection Customer will promptly notify GPA of any such assignment.

7.1.3 Any attempted assignment that violates this Article is void and ineffective. Assignment shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. An assignee is responsible for meeting the same financial, credit, and insurance obligations as the Interconnection Customer. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

7.2 Limitation of Liability

Each Party's liability to the other Party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of this Agreement, shall be limited to the amount of direct damage actually incurred. In no event shall either Party be liable to the other Party for any indirect, special, consequential, or punitive damages, except as authorized by this Agreement.

7.3 Indemnity

7.3.1 This provision protects each Party from liability incurred to third parties as a result of carrying out the provisions of this Agreement. Liability under this provision is exempt from the general limitations on liability found in Article 7.2.

7.3.2 The Parties shall at all times indemnify, defend, and hold the other Party harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other Party's action or failure to meet its obligations under this Agreement on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnified Party.

7.3.3 If an indemnified person is entitled to indemnification under this Article as a result of a claim by a third party, and the indemnifying Party fails, after notice and reasonable opportunity to proceed under this article, to assume the defense of such claim, such indemnified person may at the expense of the indemnifying Party contest, settle or consent to the entry of any judgment with respect to, or pay in full, such claim.

7.3.4 If an indemnifying party is obligated to indemnify and hold any indemnified person harmless under this article, the amount owing to the indemnified person shall be the amount of such indemnified person's actual loss, net of any insurance or other recovery.

7.3.5 Promptly after receipt by an indemnified person of any claim or notice of the commencement of any action or administrative or legal proceeding or investigation as to which the indemnity provided for in this Article may apply, the indemnified person shall notify the indemnifying party of such fact. Any failure of or delay in such notification shall not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the indemnifying party.

7.4 Consequential Damages

Other than as expressly provided for in this Agreement, neither Party shall be liable under any provision of this Agreement for any losses, damages, costs or expenses for any special, indirect, incidental, consequential, or punitive damages, including but not limited to loss of profit or revenue, loss of the use of equipment, cost of capital, or cost of temporary equipment or services, whether based in whole or in part in contract, in tort, including negligence, strict liability, or any other theory of liability; provided, however, that damages for which a Party may be liable to the other Party under another agreement will not be considered to be special, indirect, incidental, or consequential damages hereunder.

7.5 Force Majeure

7.5.1 As used in this article, a Force Majeure Event shall mean an event or circumstance which prevents one Party from performing its obligations under this Agreement, which event or circumstance was not anticipated as of the Effective Date, which is not within the reasonable control of, or the result of the negligence of, the Affected Party, and which, by the exercise of due diligence, the Affected Party is unable to overcome or avoid or cause to be avoided. So long as the requirements of the preceding sentence are met, a Force Majeure Event shall include, without limitation, any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond a Party's control. A Force Majeure Event does not include an act of negligence or intentional wrongdoing.

7.5.2 If a Force Majeure Event prevents a Party from fulfilling any obligations under this Agreement, the Party affected by the Force Majeure Event (Affected Party) shall promptly notify the other Party, either in writing or via the telephone, of the existence of the Force Majeure Event. The notification must specify in reasonable detail the circumstances of the Force Majeure Event, its expected duration, and the steps that the Affected Party is taking to mitigate the effects of the event on its performance. The Affected Party shall keep the other Party informed on a continuing basis of developments relating to the Force Majeure Event until the event ends. The Affected Party will be entitled to suspend or modify its performance of obligations under this Agreement (other than the obligation to make payments) only to the extent that the effect of the Force Majeure Event cannot be mitigated by the use of Reasonable Efforts. The Affected Party will use Reasonable Efforts to resume its performance as soon as possible.

7.6 Default

7.6.1 No Default shall exist where such failure to discharge an obligation (other than the payment of money) is the result of a Force Majeure Event as defined in this Agreement or the result of an act or omission of the other Party. Upon a Default, the non-defaulting Party may give written notice of such Default to the defaulting Party. Except as provided in Article 7.6.2, the defaulting Party shall have sixty (60) calendar days from receipt of the Default notice within which to cure such Default; provided however, if such Default is not capable of cure within sixty (60) calendar days, the defaulting Party shall commence such cure within twenty (20) calendar days after notice and continuously and diligently complete such cure

within six months from receipt of the Default notice; and, if cured within such time, the Default specified in such notice shall cease to exist.

7.6.2 If a Default is not cured as provided in this article, or if a Default is not capable of being cured within the period provided for herein, the non-defaulting Party shall have the right to terminate this Agreement by written notice at any time until cure occurs, and be relieved of any further obligation hereunder and, whether or not that Party terminates this Agreement, to recover from the defaulting Party all amounts due hereunder, plus all other damages and remedies to which it is entitled at law or in equity. The provisions of this Article will survive termination of this Agreement.

Article 8. [Not Used]

Article 9. Confidentiality

9.1 Confidential Information shall mean any confidential and/or proprietary information provided by one Party to the other Party that is clearly marked or otherwise designated "Confidential." For purposes of this Agreement all design, operating specifications, and metering data provided by the Interconnection Customer shall be deemed Confidential Information regardless of whether it is clearly marked or otherwise designated as such.

9.2 Confidential Information does not include information previously in the public domain, required to be publicly submitted or divulged by Governmental Authorities (after notice to the other Party and after exhausting any opportunity to oppose such publication or release), or necessary to be divulged in an action to enforce this Agreement. Each Party receiving Confidential Information shall hold such information in confidence and shall not disclose it to any third party nor to the public without the prior written authorization from the Party providing that information, except to any permitted disclosee of confidential information pursuant to the Power Purchase Agreement, to fulfill obligations under this Agreement, or to fulfill legal or regulatory requirements.

9.2.1 Each Party shall employ at least the same standard of care to protect Confidential Information obtained from the other Party as it employs to protect its own Confidential Information.

9.2.2 Each Party is entitled to equitable relief, by injunction or otherwise, to enforce its rights under this provision to prevent the release of Confidential Information without bond or proof of damages, and may seek other remedies available at law or in equity for breach of this provision.

9.3 Notwithstanding anything in this Article to the contrary, if during the course of an investigation by a Governmental Authority or otherwise, a Governmental Authority requests information from one of the Parties that is otherwise required to be maintained in confidence pursuant to this Agreement, the Party receiving the request, if required under Applicable Laws and Regulations, shall provide the requested information to the Governmental Authority conducting the investigation, within the time provided for in the request for information. In providing the information, the Party may request that the information be treated as confidential and non-public by the Governmental Authority and that the information be withheld from public disclosure. The Party shall notify the other Party to this Agreement when it is notified by a Governmental Authority that a request to release Confidential Information has been received, at which time either of the Parties may respond before such information would be made public. .

Article 10. Disputes

10.1 The Parties agree to resolve all disputes arising out of this Agreement according to the provisions of the Power Purchase Agreement.

Article 11. Taxes

11.1 The Parties agree to follow all applicable Guam tax laws and regulations.

11.2 Each Party shall cooperate with the other to maintain the other Party's tax status. Nothing in this Agreement is intended to adversely affect the Transmission Provider's tax exempt status with respect to the issuance of bonds including, but not limited to, local furnishing bonds.

Article 12. Miscellaneous

12.1 Governing Law, Regulatory Authority, and Rules

The validity, interpretation and enforcement of this Agreement and each of its provisions shall be governed by the laws of the Territory of Guam (where the Point of Interconnection is located), without regard to its conflicts of law principles. This Agreement is subject to all Applicable Laws and Regulations. Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, or regulations of a Governmental Authority.

12.2 Amendment

The Parties may amend this Agreement by a written instrument duly executed by both Parties.

12.3 No Third-Party Beneficiaries

This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and where permitted, their assigns.

12.4 Waiver

12.4.1 The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

12.4.2 Any waiver at any time by either Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this Agreement. Termination or default of this Agreement for any reason by the Interconnection Customer shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from GPA. Any waiver of this Agreement shall, if requested, be provided in writing.

12.5 Entire Agreement

This Agreement, including all Attachments, constitutes the entire agreement between the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between the Parties with respect to the subject matter of this Agreement. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for or any condition to, either Party's compliance with its obligations under this Agreement.

12.6 Multiple Counterparts

This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

12.7 No Partnership

This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon either Party. Neither Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party.

12.8 Severability

If any provision or portion of this Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction or other Governmental Authority, (1) such portion or provision shall be deemed separate and independent, (2) the Parties shall negotiate in good faith to restore insofar as practicable the benefits to each Party that were affected by such ruling, and (3) the remainder of this Agreement shall remain in full force and effect.

12.9 Security Arrangements

Infrastructure security of electric system equipment and operations and control hardware and software is essential to ensure day-to-day reliability and operational security. Both Parties are expected to meet basic standards for system infrastructure and operational security, including physical, operational, and cyber-security practices.

12.10 Environmental Releases

Each Party shall notify the other Party, first orally and then in writing, of the release of any hazardous substances, any asbestos or lead abatement activities, or any type of remediation activities related to the Small Generating Facility or the Interconnection Facilities, each of which may reasonably be expected to affect the other Party. The notifying Party shall (1) provide the notice as soon as practicable, provided such Party makes a good faith effort to provide the notice no later than twenty-four (24) hours after such Party becomes aware of the occurrence, and (2) promptly furnish to the other Party copies of any publicly available reports filed with any governmental authorities addressing such events.

12.11 Subcontractors

Nothing in this Agreement shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this Agreement; provided, however, that each Party shall require its subcontractors to comply with all applicable terms and conditions of this Agreement in providing such services and each

Party shall remain primarily liable to the other Party for the performance of such subcontractor.

12.11.1 The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this Agreement. The hiring Party shall be fully responsible to the other Party for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made; provided, however, that in no event shall a Party be liable for the actions or inactions of the other Party or its subcontractors with respect to obligations of the first Party under this Agreement. Any applicable obligation imposed by this Agreement upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

12.11.2 The obligations under this Article will not be limited in any way by any limitation of subcontractor's insurance.

12.12 Waiver of Sovereign Immunity

To the extent that GPA may in any jurisdiction claim for itself or its assets or revenues immunity from suit, execution, attachment (whether in aid of execution, before judgment or otherwise) or other legal process and to the extent that in any such jurisdiction there may be attributed to GPA or its assets or revenues such immunity (whether or not claimed), GPA agrees not to claim and irrevocably waives such immunity to the full extent permitted by the laws of such jurisdiction.

Article 13. Notices

13.1 General

Unless otherwise provided in this Agreement, any written notice, demand, or request required or authorized in connection with this Agreement ("Notice") shall be deemed properly given if delivered in person, delivered by recognized national currier service, or sent by first class mail, postage prepaid, to the person specified below:

If to the Interconnection Customer:

Interconnection Customer: _____
Attention: _____
Address: _____

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_____
Physical Address: _____
_____
Phone: _____
Email: _____
Fax: _____

If to the Transmission Provider:

Guam Power Authority
Attention: _____
Address: _____
_____
Physical Address: _____
_____
Phone: _____
Email: _____
Fax: _____

13.2 Billing and Payment

Billings and payments shall be sent to the addresses set out below:

Interconnection Customer:

Interconnection Customer: _____
Attention: _____
Address: _____
_____
Physical Address: _____
_____
Phone: _____
Email: _____
Fax: _____

Transmission Provider:

Guam Power Authority
Attention: _____
Address: _____
_____
Physical Address: _____

	_____
Phone:	_____
Email:	_____
Fax:	_____

13.3 Alternative Forms of Notice

Any notice or request required or permitted to be given by either Party to the other and not required by this Agreement to be given in writing may be so given by telephone, facsimile or e-mail to the telephone numbers and e-mail addresses set out below:

If to the Interconnection Customer:

Interconnection Customer:	_____
Attention:	_____
Address:	_____
	_____
Physical Address:	_____
	_____
Phone:	_____
Email:	_____
Fax:	_____

If to the Transmission Provider:

	Guam Power Authority
Attention:	_____
Address:	_____
	_____
Physical Address:	_____
	_____
Phone:	_____
Email:	_____
Fax:	_____

13.4 Designated Operating Representative

The Parties may also designate operating representatives to conduct the communications which may be necessary or convenient for the administration of this Agreement. This person will also serve as the point of contact with respect to operations and maintenance of the Party's facilities.

Interconnection Customer's Operating Representative:

Interconnection Customer: _____
Attention: _____
Address: _____
_____
Physical Address: _____
_____
Phone: _____
Email: _____
Fax: _____

Transmission Provider's Operating Representative:

Guam Power Authority
Attention: _____
Address: _____
_____
Physical Address: _____
_____
Phone: _____
Email: _____
Fax: _____

With a copy of all notices, including notices of any defaults, sent to legal counsel of the applicable Party, as follows:

Interconnection Customer: _____
Attention: _____
Address: _____
_____
Physical Address: _____
_____
Phone: _____
Email: _____
Fax: _____

13.5 Changes to the Notice Information

Either Party may change this information by giving five Business Days written notice prior to the effective date of the change.

[Signature page follows]

Article 14. Signatures

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their respective duly authorized representatives.

For the Transmission Provider

By: _____

Name: _____

Title: _____

Date: _____

For the Interconnection Customer

By: _____

Name: _____

Title: _____

Date: _____

Attachment 1

Glossary of Terms

Applicable Laws and Regulations – All duly promulgated applicable federal, state, territorial and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority.

Business Day – Any day except a Saturday, Sunday, a Federal Reserve Bank holiday or an official Guam holiday. A Business Day shall open at 8:00 a.m. and close at 5:00 p.m. local time for the relevant Party's principal place of business.

Default – The failure of a breaching Party to cure its breach under this Agreement, within the time periods provided in Section 7.6 hereof.

Effective Date -- The date first set forth in the preamble hereto.

Good Utility Practice – Any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at the lowest reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be generally acceptable and consistently adhered to acceptable practices, methods, or acts.

Governmental Authority – Any federal, territorial or local governmental body; any governmental, quasi-governmental, regulatory or administrative agency, commission, body or other authority exercising or entitled to exercise any administrative, executive, judicial, legislative, policy, regulatory or taxing authority or power; or any court or governmental tribunal.

IEEE Standards - The standards of the Institute of Electrical and Electronics Engineers (IEEE), or its IEEE Standards Association (IEEE-SA), in effect as of the Effective Date.

Interconnection Customer – Any entity, including the Transmission Provider, the Transmission Customer or any of the affiliates or subsidiaries of either, that proposes to interconnect its Small Generating Facility with the Transmission System.

Interconnection Facilities – The Interconnection Facilities include all facilities and equipment between the Small Generating Facility and the Piti and Apra Heights Substations, including any required modification, additions or upgrades related to Interconnection that are necessary to physically and electrically interconnect the Small Generating Facility to such facilities. The Interconnection Facilities are described in more detail in Attachment 2 and Attachment 3 hereto.

Network Upgrades – Additions, modifications, and upgrades to the Transmission System required for steady state system stability to accommodate the interconnection, at the Point of Interconnection, of the Interconnection Customer's facility with the Interconnection Facilities.

Operating Requirements – Any operating and technical requirements that may be applicable and are set forth in the Power Purchase Agreement or in this Interconnection Agreement, including Attachment 5 hereto.

Party or Parties – The Transmission Provider, Interconnection Customer or any combination of the above.

Point of Interconnection – The point at the Small Generating Facility site (_____)where the Small Generating Facility connects with the Interconnection Facilities, as shown in Attachment 3.

Reasonable Efforts – With respect to an action required to be attempted or taken by a Party under the Interconnection Agreement, efforts that are timely and consistent with Good Utility Practice and are otherwise substantially equivalent to those a Party would use to protect its own interests.

Small Generating Facility – The Interconnection Customer's device for the production of electricity, but shall not include the Interconnection Facilities.

Power Purchase Agreement - (i) The Renewable Energy Purchase Agreement for the sale by Interconnection Customer and the purchase by GPA of renewable solar energy from the Small Generating Facility, dated as of _____, 201___.

System Stability Upgrades – Additions, modifications, and upgrades to the Transmission System, System Operational Characteristics or Small Generating Facility required for power system recovery as a result of faults or loss of generation events, which are not considered as Network Upgrades.

Tariff – The Transmission Provider's tariff through which open access transmission service and interconnection services are offered and as amended or supplemented from time to time, or any successor tariff.

Transmission Provider – As defined in the preamble hereto.

Transmission System – The facilities owned, controlled or operated by the Transmission Provider that connect to the Interconnection Facilities and are used to provide transmission service under the Tariff.

Attachment 2

Description of the Small Generating Facility, Interconnection Facilities and Metering Equipment

Equipment, including the Small Generating Facility, Interconnection Facilities, and metering equipment shall be itemized and identified as being owned by the Interconnection Customer or by GPA.

Interconnection Facilities:

The Interconnection Facilities and the capped amounts with respect thereto (beyond which GPA will reimburse Interconnection Customer as set forth in this Agreement) include the following:

Description of work for the Substation:

A. Interconnection Customer is responsible for the design and construction of additions at the existing _____ Piti and Apra Heights Substations. Interconnection Customer shall procure and install Facility Hardware in accordance with applicable codes and standards; plans and specifications. Interconnection Customer shall test and commission the augmented substation to provide for a complete, functional, and operational _____ modification of Piti and Apra Heights Substations. Interconnection Customer shall be responsible for the following:

    1. Development of detailed engineering and physical arrangement for the new additions at the Piti 115 kV Substation and 115 & 34.5kV for Apra Heights Substation. including, but not limited to:

        a. At Piti Substation Interconnection Customer will use the existing spare 115kV switchgear and will connect one circuit (AAAC 927MCM) to it which will come from Apra Heights Substation

        b. At Apra Heights Substation one circuit (AAAC 927MCM) will come in from Malojloj Substation and will connected to the Substation.

        c. Interconnection Customer will provide a 50MVA transformer according to the SIS report which will be installed with switchgear at Apra Heights Substation

        d. In case GPA requires a higher capacity transformer (i.e. 60MVA) due to GPA's grid condition, Interconnection Customer will provide such required transformer on the basis that GPA will provide the cost difference between the 50MVA capacity and the new capacity

2. Civil and foundation design for substation new Equipment and related modification of Existing facility. Supply and installation of structural steel to support new equipment, as required, and anchor bolts for all new equipment. Structural steel will be hot dip galvanized. For foundation design, geotechnical data of Piti and Apra Heights Substations area shall be provided by GPA if available.

3. Circuit and Raceway design for all 34.5 and 115 kV new equipment and related modification of Existing facility in accordance with applicable codes and standards and specifications.

4. Circuit and Raceway list.

5. Interconnection Customer shall prepare an energization and start-up plan and submit to GPA for approval. GPA shall provide input within 10 business days.

6. Exclusion: The Interconnection Customer's work does not include the upgrade of Existing facility's infrastructures such as software version upgrade, utility system, storm & waste water drainage system, security system, external lighting, spare part storage, landscaping and etc.; unless Interconnection Customer's work detrimentally affects function of existing facility. If so, then Interconnection Customer shall take the necessary measures to correct deficiencies.

   For modification of Existing substations, Interconnection customer is only responsible for new equipment and directly-related modification work to have equipment functional that it will provide according to this Agreement.

Description of work for the Malojloj _____ Substation:

A. Interconnection Customer is responsible for the design and construction new _____ Substation. Interconnection Customer shall procure and install Facility Hardware in accordance with applicable codes and standards and specifications. Interconnection Customer shall test and commission the substation to provide for a complete, functional, and operational _____ Substation. Interconnection Customer shall be responsible for the following:

B. GPA shall be involved in the review, inspection, testing and approval processes throughout the design, construction and commissioning, as described herein.

C. GPA reserves the right to witness standard factory testing of Malojloj Substation switchgear, relay and control panel, and similar equipment supplied as spare parts. Not less than 30 days prior to factory tests, a factory test plan shall be submitted to the Owner and GPA for approval. Each item of electrical equipment and similar equipment supplied as spare parts shall be given the manufacturer's routine factory tests and also other tests as specified, to ensure successful operation of parts of the assemblies. The factory test

equipment and the test methods used shall conform to the applicable requirements of ANSI, IEEE, UL and NEMA standards and equivalent standards as approved by GPA. Five certified copies of the reports of production tests, including complete test data shall be submitted to the Owner and GPA. Factory tests shall be witnessed by the Owner and GPA, at the discretion of the Owner and GPA. Interconnection Customer shall be responsible for cost of travel, meals, and accommodations for two (2) GPA personnel for a minimum of three (3) days, or days, required to perform and witness a comprehensive factory acceptance testing.

D. Each Plant will generate and feed a maximum output of 22.5MW to the grid directly and the remaining generated power; which could be a maximum 7.5MW for each Plant will be charged during day time into the ESS and will be discharged during night time. So the total maximum output of the two power Plants is 45 MW and the maximum charging amount is 15MW. One 50MVA Step-up transformer which specification will follow the Harmon substation's 115/34.5kV transformer specification will be installed with switchgear.

E. Description of work for the Malojloj __Substation:

1. The new _____ Substation will be housed in a concrete building. The metering switchgear proposed for the Malojloj Substation, which would be directly adjacent to the Small Generating Facility and on Interconnection Customer's property, include one meter for each project (A), (B) for Power Purchase Agreement billing purposes, and would be a unit that is rated for 34,500 volts and up to 1200 amps of power along with associated auxiliaries. A meter shall also be provided on the 115 kV of the step-up power transformer. The unit would provide protective-type circuit breakers for a currently planned 60MW solar system.

2. The Work under these plans and specifications shall include complete engineering, procurement, and construction services for the 34.5 and 115 kV substation equipment associated with the Project. The Project substation, otherwise known as the Malojloj Substation, shall include 38 kV class switchgear draw-out type breaker assembly of metal-clad vacuum circuit breakers, enclosed in a walk-in concrete structure in area that collects the solar generated ac power at 34.5 kV from the solar array field and 34.5/115 kV Step-Up Transformer with 115kV class SF6 Gas Circuit Breaker (GCB) with associated disconnect switches. .

3. The Interconnection Customer is responsible for the selection, procurement, and installation of all _____ Substation equipment. This equipment shall be GPA approved equipment and conform with GPA current specifications, unless otherwise noted and approved in writing by GPA.

4. The Work required shall consist of:

a. AC collection switchgear, relaying, and metering.

b. The specific technical scope of work under these specifications includes the 38 kV class switchgear, 38 kV class vacuum breakers, one (1) 34.5/115 kV Step-Up Transformer and one (1) 115kV class SF6 Gas Circuit Breaker.

c. Relays, metering, current transformers, and voltage or potential transformers.

d. Surge arresters, cables, and raceways.

e. Grounding and lightning protection.

f. Breaker controls.

g. SCADA system including SCADA Remoter Terminal Unit (RTU).

h. Battery bank and battery bank charger.

i. Station service pad mount transformer including AC panels, DC panels, control wiring, and all other appurtenances for a complete and operational facility in accordance with GPA standards.

j. All of the new facilities shall be Interconnection Customer furnished and installed except as noted herein.

5. The Point of Interconnection is located at the designated 115 kV side of the step-up power transformer with associated metering equipment at the Malojloj Substation at the 34.5 kV level. Interconnection Customer shall provide the substation revenue meter and associated current and potential transformers. The revenue meter shall be a Schweitzer Engineering Laboratories SEL-735 or equivalent. The current and potential transformers shall have 0.2 percent accuracy or better. Current transformers shall be window type. The Interconnection Customer is responsible for the installation of these devices.

6. All necessary mounting materials such as weatherproof enclosures, terminal blocks, shorting current transformer blocks, conduit, etc. shall be provided.

7. Interconnection Customer shall prepare an energization and start-up plan and submit to Owner and GPA for approval 30 days prior to energization. GPA shall provide input within 10 business days.

Description of work for the transmission line from Substation to Substation:

A. Interconnection Customer is responsible for the design and construction of one (1) 115 kV overhead transmission line between Malojloj Substation and Apra Heights Substation.

Interconnection Customer plans to install new steel poles for this 115 kV circuit from Malojloj Substation to Apra Heights Substation along one side of road.

B. Interconnection Customer is responsible for the design and construction of one (1) 115 kV overhead transmission line using existing 115kV steel pole between Apra Heights Substation and Piti Substation along the one side of road. Interconnection Customer is responsible for the modification of existing two (2) 34.5 kV & one (1) 13.8 kV circuits. After the modification each pole will have a one 115kV circuit, two 34.5kV circuits and one 13.8kV circuit configuration

C. The Work includes the complete construction of a 115 kV overhead transmission line from the Malojloj Substation to Piti Substation via Apra Heights Substation in accordance with the applicable codes, standards and specifications.

D. Installation of fiber optic communication lines from Dandan Substation to Apra to Piti 115 kV Substation and associated hardware.

E. Transmission lines shall be 3#927 kcmil AAAC conductors. If required, underground cable for 34.5 kV line shall be two sets 3#1000 kcmil XLPE Al. conductors. 13.8 kV overhead lines shall be 3#336.4 kcmil Al.

F. GPA reserves the right to witness standard factory testing of the power circuit breakers and Apra Heights 50 MVA power transformer, relay and control panel, and similar equipment supplied as spare parts. Not less than 30 days prior to factory tests, a factory test plan shall be submitted to the Owner and GPA for approval. Each item of electrical equipment and similar equipment supplied as spare parts shall be given the manufacturer's routine factory tests and also other tests as specified, to ensure successful operation of parts of the assemblies. The factory test equipment and the test methods used shall conform to the applicable requirements of ANSI, IEEE, UL and NEMA standards and equivalent standards as approved by GPA. Five certified copies of the reports of production tests, including complete test data shall be submitted to the Owner and GPA. Factory tests shall be witnessed by the Owner and GPA, at the discretion of the Owner and GPA. Interconnection Customer shall be responsible for cost of travel, meals, and accommodations for two (2) GPA personnel for a minimum of three (3) days, or days, required to perform and witness a comprehensive factory acceptance testing. Per diem rates shall conform with Federal GSA Schedule.

G. Interconnection Customer will replace one wooden pole with a steel pole as stated in Attachment 2 clause A. The wooden pole is located on the Apra Heights Substation-Piti Substation route at the branch into Tenjo substation. Interconnection Customer’s responsibility will be limited to replacing the wooden pole with the same circuit configuration. In the case that GPA requires additional configuration circuit changes, then GPA will provide the direct cost differences that may arise from the additional configuration changes.

Spare Parts:

The Interconnection Customer shall provide the following spare parts with proper storage;

a. For each equipment supplied, the manufacturer's recommended spare parts shall be provided in accordance with best utility practices.
b. Underground Wire: the length of the longest cable run shall be provided (1000 kcmil XLPE Al. or other approved cable size), if required.
c. Underground Splices/Termination Kits: 10% of total installed, if required.
d. Overhead Transmission Line: Steel pole shall be provided one (1) set per pole type. Spare of 115kV overhead cable is not provided, because Interconnection Customer will follow the GPA's cable standard specification.
e. Non-standard/inventory materials: Provide replacement or replacement parts.

Small Generating Facility:

The general location of the Small Generating Facility and the Malojloj Substation are noted on the attached picture. The facility is planned to be installed at the locations of Lot B-3REM14, B-3REM-R14 and B-3-R4. The Small Generating Facility will be an approximately 60 MW AC fixed tilt solar and 40MW/usable 65MWh Energy Storage System (ESS) for Ramp-rate control generating facility. The Small Generating Facility will be equipped with high efficiency solar panels generating direct current that will be converted to alternating current (AC) using approximately 2,500 to 3,000kW inverters manufactured by SMA or equivalent type. Inverter will generate approximately 60MW AC power that will be transformed by LV side of 550V to 655V to MV side of 34.5kV transformers located in close proximity to the inverter. And also, these approximately 60MW solar generators are connected with Renewable Integrated ESS which is located in ESS building. The ESS consist of approximately 40MWPCS and usable 65MWh Batteries. The PCS will generate V AC power that will be transformed by LV side of 434V to 550VV to MV side of 34.5kV transformers located in close proximity to the PCS. The onsite underground constructed 34.5kV collection grid will bring the 1% ramp rate controlled approximately 60MW solar generated electricity to the Malojloj Substation to be located on the site of the Small Generating Facility, where GPA will accept the metered power under the Power Purchase Agreements.

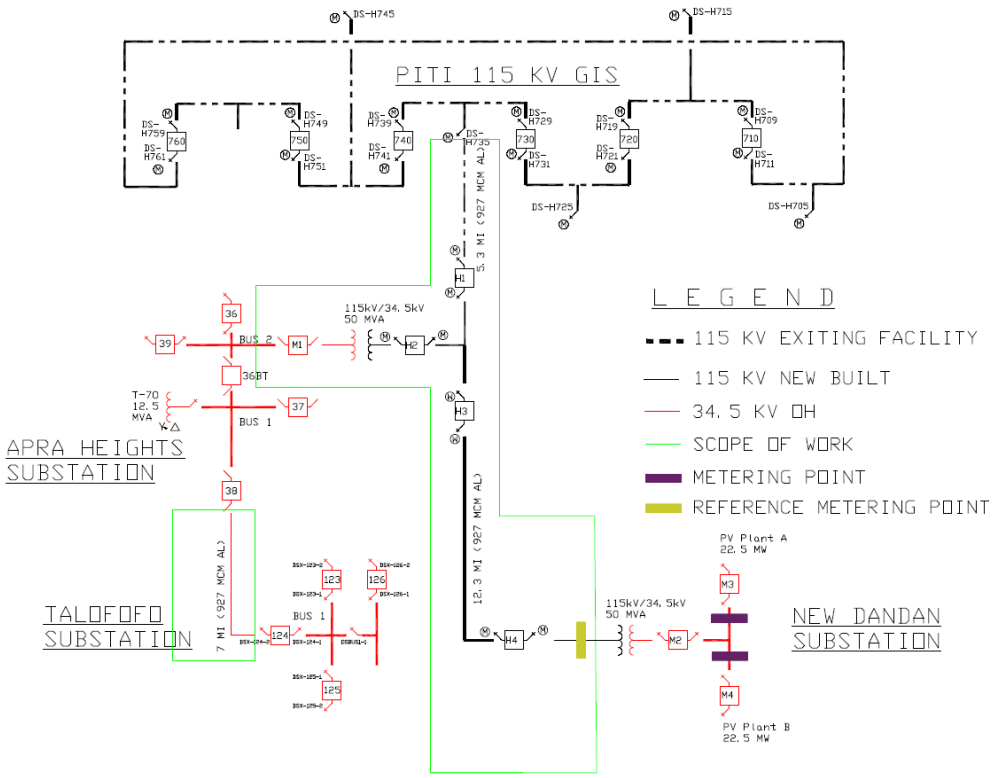
Addendum to Attachment 2 -- Project Site Picture



Project layout is subject to change as a result of archeological findings, wetlands or any other survey results

Attachment 3

One-line Diagram Depicting the Small Generating Facility, Interconnection Facilities and Metering Equipment



Provide meter at the 115 kV side of the step-up power transformer at Malojloj Substation.

Attachment 4

Milestones

In-Service Date: _____

Critical milestones and responsibility as agreed to by the Parties:

	Milestone/Date	Responsible Party
(1)	Preliminary design for Interconnection Facilities (_____/__/20_____)	Interconnection Customer
(2)	GPA approval of design basis (_____/__/20____)	GPA
(3)	Interconnection Customer to have all permits in hand for Interconnection Customer construction to start on public roads (supported by GPA engineering) (_____/__/20_____)	Interconnection Customer
(4)	Construction completion (18 month after permits are in hand)	Interconnection Customer

Agreed to by:

For the GPA (If Applicable) _____ Date_____

For the Interconnection Customer_____ Date_____

1

Attachment 5

Additional Operating Requirements for the Transmission Provider's Transmission System Needed to Accept the Interconnection Customer

The following requirements must be met by the Interconnection Customer prior to initiating parallel operation with the Transmission Provider's Transmission System:

If ramp rate is greater than 3 MW/minute and this situation lasts more than ten (10) times per day or five (5) consecutive times per day, seller shall reduce plant output to meet ramp rate is less than 3 MW/minute. If system issues remain, GPA reserves the right to restrict Seller's plant output until seller restores operation with a ramp rate less than 3 MW/minute.

(a) GPA counts the failure power is greater than 3 MW/minute.

i. If the number of failure is greater than ten (10) times per day or five (5) consecutive times per day, GPA SCADA sends the warning command to seller's EMS/PMS or inform via email.

ii. Seller's EMS/PMS double check the number of failure times, and send back to GPA SCADA to verify the exact number of failure times.

iii. Seller sends the restore documentation included analysis the data, how to fix, fix plan and expected results to GPA for confirming.

iv. When seller restores operation with a ramp rate less than 3MW/minute for full renewable power (60 MW), than seller send the restore result documentation to GPA.

v. GPA reviews the restore result documentation and allows to operate full (60MW) power of seller's renewable plant.

(b) If GPA's ESS or UFLS is activated twice during a single day, then GPA reserves the right to restrict Sellers's plant output until Seller restores operation with a ramp rate less than 3 MW/minute.

The Interconnection Customer is interconnecting into an established GPA power grid. The Interconnection Customer shall design, construct, and operate its facilities to ensure compatible operations with GPA and protect its facilities against any grid events. These measures shall comply with inverter ride-through and/or ramping requirements as stated in the System Impact Study.

The Interconnection Customer shall be responsible for the following project:

Transmission relay upgrade to line differential relays:

This project will replace existing line and overcurrent relays for 20 existing transmission lines with primary and backup SEL-311L line differential relays. Two each SEL-311L line differential relays will be installed (primary and backup) at each substation associated with a transmission line. Hence, 4 each SEL311L for each transmission line for a total of eighty (80) SEL311L relays shall be installed. The Interconnection Customer shall be responsible for materials, labor, and equipment. GPA will provide technical support in the setting of relays.

The Interconnection Customer's obligation shall be limited to provision of labor, equipment and materials at its cost up to $900,000 only in connection with differential relay replacement project for the System Stability Upgrades.

GPA shall provide the Interconnection Customer with detailed written instructions for quantity and quality of labor, equipment and materials for the differential relay replacement project prior to April 30, 2018 and the scope of work for provision of labor, equipment and materials for the differential relay replacement project shall be mutually agreed by the Interconnection Customer and GPA.

Interconnection Customer shall make best efforts in completing the Transmission Relay Upgrade prior to COD. However, GPA will not unreasonably withhold COD if the Transmission Relay Upgrade is not completed as long as Interconnection Customer complies with all other requirements for COD.

For the implementation Interconnection Customer shall provide to GPA intended construction schedule and construction method and GPA shall provide a response to these items within one (1) week. GPA shall provide Right of Access, Power shut down and all necessary matters so that Interconnection Customer can replace the existing relays at the predetermined date which was agreed on between Interconnection Customer and GPA. If due to GPA's fault the Transmission Relay Upgrade implementation is delayed beyond the intended COD of the Small Generating Facility, Interconnection Customer should be only responsible for the remaining cost up to the cap as defined in 4.2 and shall not be responsible for implementing the remaining Transmission Relay Upgrade.

Upon completion of the differential relay replacement project for the System Stability Upgrades, ownership of all assets in relation to the differential relay replacement project for System Stability Upgrades and all rights thereof shall be transferred to the GPA.

Attachment 6

[Not Used]

Attachment 7

Bill of Sale

THIS BILL OF SALE (this "Bill of Sale") is made and entered into by _____ ("Seller"), and Guam Power Authority ("Buyer", and together with Seller, the "Parties"), effective as of [_____], 20__.

RECITALS

WHEREAS, Seller in connection with the development, construction and ownership of a solar power generating station and related assets located in the Territory of Guam (the "Project") has designed, developed and constructed, and owns, certain transmission, switching and related assets described more fully on Exhibit "A" hereto, together with all ancillary rights and interests (including all manufacturers' and contractors' warranties) relating thereto and further described on Exhibit "A" hereto (the "Assets"); and

WHEREAS, Seller and Buyer entered into a Renewable Energy Purchase Agreement dated as of _____, 201____, pursuant to which Seller and Buyer have agreed to sell and purchase renewable energy generated by the Project (the "Seller Purchase Agreement"), Purchase Agreement, the "Purchase Agreement") and Seller and Buyer entered into an Small Generator Interconnection Agreement dated as of _____, 201___, pursuant to which Seller and Buyer have agreed to the installation and interconnection of the Project with Buyer's transmission system (the "SGIA"); and

WHEREAS, as contemplated by the SGIA, and in connection with the operation of the Project by Seller and the purchase and sale of renewable energy pursuant to the Purchase Agreement, Seller desires to transfer and Buyer desires to receive the Assets.

NOW, THEREFORE, BE IT KNOWN THAT:

1. Conveyance and Assignment. For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Seller does hereby **GRANT, BARGAIN, ASSIGN, TRANSFER, SET OVER, DELIVER AND CONVEY** to Buyer all of Seller's right, title and interest in and to the Assets, **TO HAVE AND TO HOLD** the Assets by Buyer and its successors and permitted assigns, forever.

2. **NO WARRANTY. THE ASSETS ARE HEREBY CONVEYED AS IS, WHERE IS, AND SELLER HEREBY GIVES NO WARRANTY OF DESIGN, MATERIALS, WORKMANSHIP OR PERFORMANCE OF THE ASSETS, EITHER EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** However, Seller covenants and agrees that the manufacturers' and contractors' warranties transferred hereby as part of the Assets shall extend for a period of at least one (1) year from the acceptance of the Assets by Seller.

3. Further Assurances. Seller for itself, its successors and assigns, hereby covenants and agrees that, at any time and from time to time upon the written request of Buyer, Seller will do, execute, acknowledge and deliver or cause to be done, executed, acknowledged and delivered, such further acts, deeds, assignments, transfers, conveyances, powers of attorney and assurances as may be reasonably required in order to assign, transfer, set over, convey, assure and confirm unto and vest in Buyer, its successors and assigns, title to the assets sold, conveyed and transferred by this Bill of Sale.

4. Counterparts. This Bill of Sale may be executed in counterparts.

5. Governing Law. This Bill of Sale shall be governed by and construed in and interpreted in accordance with the laws of the Territory of Guam.

[Signature page follows.]

IN WITNESS WHEREOF, the Parties have executed this Bill of Sale as of the date above first written.

Seller:

_____

By: _____

Name: _____

Title: _____

Buyer:

GUAM POWER AUTHORITY

By: _____

Name: _____

Title: _____

A C K N O W L E D G E M E N T S

GUAM, U.S.A.)
) **SS:**
MUNICIPALITY OF)
_____)

ON THIS ____ day of _____, 20___, before me, a notary public in and for Guam, personally appeared _____, known or identified to me to be the _____ of Guam Power Authority, an autonomous instrumentality of the government of the Territory of Guam, whose name is subscribed to the foregoing instrument, and acknowledged to me that he/she executed the same on behalf of said corporation, in such capacity, being fully authorized to do so, and for the uses and purposes therein contained.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

_____

GUAM, U.S.A.)
) **SS:**
MUNICIPALITY OF)
_____)

ON THIS ____ day of _____, 20___, before me, a notary public in and for Guam, personally appeared _____, known or identified to me to be the _____ of _____, whose name is subscribed to the foregoing instrument, and acknowledged to me that he/she executed the same on behalf of said corporation, in such capacity, being fully authorized to do so, and for the uses and purposes therein contained.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

_____

Exhibit "A"

Description of Assets

[Description of Interconnection Facilities; see § 1.4.2.4 of SGIA]

[Description of Network Upgrades; see § 5.2 of SGIA]

Exhibit F

GPA Contract No. _____

RENEWABLE ENERGY
PURCHASE AGREEMENT

BETWEEN
GUAM POWER AUTHORITY
AND

[HANWHA ENERGY CORPORATION][1]

[1] Please note that it is expected that Hanwha Energy Corporation will establish a special-purpose entity to execute the PPA

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RENEWABLE ENERGY
PURCHASE AGREEMENT
BETWEEN
GUAM POWER AUTHORITY
AND
[HANWHA ENERGY CORPORATION][2]

THIS RENEWABLE ENERGY PURCHASE AGREEMENT (the "Agreement"), effective as of last date set forth on the signature page hereto (the "Effective Date"), is entered into by and between and Guam Power Authority, ("GPA" or "Buyer") and [Hanwha Energy Corporation] [3], a _____ ("Seller"). The purpose of this Agreement is to establish the terms and conditions under which Seller shall sell and GPA shall purchase Renewable Energy and associated Renewable Energy Credits, as defined herein. In this Agreement, Seller and GPA may be individually referred to as a "Party" or collectively as "Parties."

Recitals

WHEREAS, Seller desires to sell to GPA at the Delivery Point a portion of the Renewable Energy and associated RECs from the Facility and GPA desires to buy the same from the Seller at the Delivery Point.

WHEREAS, on the date hereof, Seller and GPA have entered into a Renewable Energy Purchase Agreement as to the remaining capacity of the Facility (the "Additional PPA").

Therefore, for good and valuable consideration, including, without limitation, the covenants and agreements of the Parties contained in this Agreement, the receipt and sufficiency of which consideration is acknowledged, the Parties agree as follows:

ARTICLE ONE: DEFINITIONS

The following definitions apply to this Agreement:

1.1 "Actual Renewable Energy" means the actual output of the Facility (expressed in MWhs), measured at the Delivery Point, including all Renewable Energy and all Stored Energy, over any Production Measurement Period. Actual Renewable Energy shall be measured by the Seller Metering Equipment, and adjusted as applicable in accordance with Section 7.4.

1.2 "Affiliate" means, with respect to any party, any other party (other than an individual) that, directly or indirectly, through one or more intermediaries, controls, or is controlled by, or is under common control with, such party. For this purpose, "control" means the direct or indirect ownership of fifty percent (50%) or more of the outstanding capital stock or other equity interests having ordinary voting power.

1.3 "Annual Facility Test" has the meaning set forth in Section 4.9.

1.4 "Annual Microgrid Payment" means, as to each Contract Year, the amount set forth in Appendix A.

1.5 "Appraisal Price" means the average of three (3) appraisals of the market value of the Facility at the end of the Delivery Term, delivered by three (3) independent appraisers qualified by experience and expertise to

[2] Please note that it is expected that Hanwha Energy Corporation will establish a special-purpose entity to execute the PPA

[3] Please note that it is expected that Hanwha Energy Corporation will establish a special-purpose entity to execute the PPA

determine the arm's length market value of the Facility. If the Parties do not agree on the independent appraisers then they shall be determined by arbitration in accordance with Section 12.9.

1.6 "Bankrupt" means with respect to any entity, such entity (i) files a petition or otherwise commences, authorizes or acquiesces in the commencement of a proceeding or cause of action under any bankruptcy, insolvency, reorganization or similar law, or has any such valid petition filed or commenced against it, (ii) makes an assignment or any general arrangement for the benefit of creditors, (iii) otherwise becomes bankrupt or insolvent (however evidenced), (iv) has a liquidator, administrator, receiver, trustee, conservator or similar official appointed with respect to it or any substantial portion of its property or assets, or (v) is generally unable to pay its debts as they fall due.

1.7 "Bid Security" or "Bid Bond" means the $150,000.00, which is the amount of the security provided by Seller in connection with its initial bid to GPA for the Project.

1.8 "Business Day" means any day except a Saturday, Sunday, a Federal Reserve Bank holiday or an official Guam holiday. A Business Day shall open at 8:00 a.m. and close at 5:00 p.m. local time for the relevant Party's principal place of business. The relevant Party, in each instance unless otherwise specified, shall be the Party by whom the Notice or payment or delivery is to be received.

1.9 "Buyout Payment" means, with respect to Seller's election not to re-build the Facility pursuant to Section 12.2, an amount equal to: Minimum Production x the number of Contract Years (or portion thereof) remaining in the Delivery Period x Incremental Price

1.10 "Change Event" has the meaning set forth in Section 4.16(c).

1.11 "Charging Energy" means Renewable Energy generated by the Facility and used to charge the Microgrid Unit as contemplated in Appendix C.

1.12 "Claiming Party" has the meaning set forth in Section 4.9.

1.13 "Claims" means all claims or actions, threatened or filed and, whether groundless, false, fraudulent or otherwise, that directly or indirectly relate to the subject matter of an indemnity, and the resulting losses, damages, expenses, attorneys' fees and court costs, whether incurred by settlement or otherwise.

1.14 "COD Extension" has the meaning set forth in Section 4.2(a).

1.15 "COD Extension Payment" has the meaning set forth in Section 4.2(a).

1.16 "Commercially Reasonable" or "Commercially Reasonable Efforts" means, with respect to any purchase, sale, decision, or other action made, attempted or taken by a Party, such efforts as a reasonably prudent business would undertake for the protection of its own interest under the conditions affecting such purchase, sale, decision or other action, consistent with Good Utility Practices, including, without limitation, electric system reliability and stability or other regulatory mandates relating to renewable energy portfolio requirements, the cost of such action (including whether such cost is reasonable), the amount of notice of the need to take a particular action, the duration and type of purchase or sale or other action, and the commercial environment in which such purchase, sale, decision or other action occurs. "Commercially Reasonable" or "Commercially Reasonable Efforts" shall be reviewed and determined based upon the facts and circumstances known, or which could have been known with the exercise of reasonable efforts, at the time that a sale, purchase, or other action is taken and shall not be based upon a retroactive review of what would have been optimal at such time.

1.17 "Commercial Operation" has the meaning set forth in Section 4.1.

1.18 "Commercial Operation Date" or "COD" means the date that Commercial Operation of the Project has been achieved in accordance with Section 4.1.

1.19 "Confidential Information" means all information, whether written or oral, that is disclosed or otherwise available in connection with this Agreement or the performance by either Party of any of its duties hereunder, except any information which: (i) at the time of disclosure or thereafter is generally available to the public (other than as a result of a disclosure by any Party in violation of this Agreement); (ii) was available to any Party on a non-confidential basis from a source other than the Party hereto providing the Confidential Information, provided that such source is not bound by a confidentiality agreement that protected the Confidential Information; or (iii) has been independently acquired or developed by any Party without violating any of its obligations under this Agreement.

1.20 "Contract Price" means the price in U.S. Dollars (unless otherwise provided for) rounded to the nearest $0.01, to be paid by GPA to Seller for the purchase of the Renewable Energy, as described in Appendix A.

1.21 "Contract Year" means the annual period, beginning on the Commercial Operation Date, and renewing thereafter on each anniversary of the Commercial Operation Date.

1.22 "Conventional Energy Resource" is an energy resource that is non-renewable in nature, such as natural gas, coal, oil, and uranium, or electricity that is produced with energy resources that are not Renewable Energy resources.

1.23 "Credit Rating" means, with respect to any entity, the rating then assigned to such entity's unsecured, senior long-term debt obligations (not supported by third party credit enhancements) or if such entity does not have a rating for its senior unsecured long-term debt, then the rating then assigned to such entity as an issuer rating by S&P, Moody's or any other rating agency agreed by the Parties.

1.24 "Cure Plan" has the meaning set forth in Section 4.7.

1.25 "Daily Delay Liquidated Damages" has the meaning set forth in Section 4.2(b).

1.26 "Defaulting Party" has the meaning set forth in Section 6.1.

1.27 "Deficiency Amount" has the meaning set forth in Section 4.8

1.28 "Delivery Period" means the period of delivery under this Agreement, commencing on the Commercial Operation Date and continuing for the Term, as such period may be extended in accordance with this Agreement.

1.29 "Delivery Point" means the point at which the Renewable Energy (including Stored Energy) will be delivered and received, as specified in Section 2.1 herein, or such other delivery point as may be agreed to by the Parties in writing.

1.30 "Development Security" means the security deposit during construction of the renewable project or facility prior to Commercial Operation Date. The Development Security shall be 50% of the total projected payment for the 1st contract year based on the contractor's 1st Contract Year energy rate and the guaranteed energy production. Refer to Section 9.1 for additional requirements.

1.31 "Dispatch Down" means any curtailment is initiated by GPA for reasons other than Force Majeure or Seller Event of Default.

1.32 "Early Termination Date" has the meaning set forth in Section 6.2.

1.33 "Effective Date" means the date first set forth above.

1.34 "Eligible Renewable Energy Resources" are applications of the following defined technologies that displace Conventional Energy Resources that would otherwise be used to provide electricity to GPA's customers: biogas electricity generator, biomass electricity generator, fuel cell that use only renewable fuels, geothermal

generator, hybrid wind and solar electric generator, landfill gas generator, solar electricity resources, wind generator and such other generally accepted renewable energy resources.

1.35 "Emergency" means any abnormal interconnection or system condition (including, without limitation, equipment or transmission limitations and constraints caused by thermal limits, stability, voltage, or loop flows) that Buyer determines in accordance with Good Utility Practices): (a) requires automatic or immediate manual operation to prevent or limit loss of Buyer's system or generation supply; (b) could adversely affect the reliability of the Buyer system or generation supply; (c) could adversely affect the reliability of any interconnected electric system; or (d) could otherwise pose a threat to public safety.

1.36 "End Date" has the meaning given in Section 12.1(b).

1.37 "Environmental Attributes" means environmental characteristics that are attributable to Renewable Energy, including credits; credits towards achieving local, national or international renewable portfolio standards; green tags; Renewable Energy Credits; greenhouse gas or emissions reductions, credits, offsets, allowances or benefits; actual SO2, NOx, CO2, CO, Carbon, VOC, PM_{10}, mercury, and other emissions avoided; and any and all other green energy or other environmental benefits associated with the generation of Renewable Energy (regardless of how any present or future law or regulation attributes or allocates such characteristics). Such Environmental Attributes shall be expressed in kWh or, as applicable in the case of emissions credits, in tonne equivalent or other allowance measurement. Environmental Attributes does not include Tax Benefits, or any energy, capacity, reliability, or other power attributes used by Seller to provide electricity services.

1.38 "EPC Contractor" means the contractor(s) under the engineering, procurement and construction contract for the Project.

1.39 "Equitable Defenses" means any bankruptcy, insolvency, reorganization and other laws affecting creditors' rights generally, and with regard to equitable remedies, the discretion of the court before which proceedings to obtain same may be pending.

1.40 "Event of Default" has the meaning set forth in Section 6.1.

1.41 "Excused Hours" means the hours in the applicable Production Measurement Period (i) in which Seller has declared Force Majeure, (ii) during any Planned Outage or Forced Outage but subject to an aggregate maximum of six hours per Contract Year; (ii) in which Seller has initiated a Dispatch Down or (iii) in which Seller's delivery to GPA of Renewable Energy is adversely affected as a result of failure by GPA to perform its obligations under this Agreement or the Interconnection Agreement or in which GPA does not accept delivery of Renewable Energy for any reason.

1.42 "Facility" means all of the following: the Project, as defined in Section 2.1 of this Agreement, the purpose of which is to produce Renewable Energy including the Microgrid Unit, Seller's Interconnection Facilities and all equipment and other tangible assets, land rights and contract rights reasonably necessary for the construction, operation, and maintenance of the electric generating facility that produces the Renewable Energy being sold under this Agreement.

1.43 "Facility Capacity" has the meaning set forth in Section 2.1.

1.44 "Facility Test" has the meaning set forth in Section 4.1(e).

1.45 "Facility Debt" means the obligations of Seller or its Affiliates to any Facility lender, tax equity investor or other financing party pursuant to the Financing Documents, including without limitation, principal of, premium and interest on indebtedness, reimbursement obligations regarding letters of credit, obligations under financing leases, fees, expenses or penalties, amounts due upon acceleration, prepayment or restructuring, swap or interest rate hedging obligations and breakage costs and any claims or interest due with respect to any of the foregoing. Facility Debt does not include trade debt or obligations incurred in the ordinary course of business.

1.46 "FERC" means the Federal Energy Regulatory Commission or any successor government agency.

1.47 “Financing Documents” means the loan and credit agreements, notes, bonds, indentures, security agreements, lease financing agreements, mortgages, deeds of trust, interest rate exchanges, swap agreements and other documents relating to the development, bridge, construction and/or permanent debt financing or a tax equity investment for the Facility (including any portfolio debt financing of which the Facility is included), including any credit enhancement, credit support, working capital financing, or refinancing documents, and any and all amendments, modifications, or supplements to the foregoing that may be entered into from time to time at the discretion of Seller and/or its Affiliates in connection with development, construction, ownership, leasing, operation or maintenance of the Facility.

1.48 “Forced Outage” means the shutdown or unavailability of the Facility, or a portion thereof other than as a Planned Outage, for reasons including, but not limited to, unanticipated equipment breakdown, human error, or Emergency conditions. A Forced Outage shall not include any Outage that may be deferred consistent with Good Utility Practices and without causing safety risk damage to equipment or additional costs.

1.49 “Forced Outage Notice” has the meaning set forth in Section 4.12(b).

1.50 Force Majeure” means an event or circumstance which prevents one Party from performing its obligations under this Transaction, which event or circumstance was not anticipated as of the date the Transaction was agreed to, which is not within the reasonable control of, or the result of the negligence of, the Claiming Party, and which, by the exercise of due diligence, the Claiming Party is unable to overcome or avoid or cause to be avoided. So long as the requirements of the preceding sentence are met, a “Force Majeure” event may include, but shall not be limited to, any act of God, an act or threatened act of the public enemy, blockade, accidents of navigation or breakdown or injury of vessels, accidents to harbors, docks, canals or other assistances to, or adjuncts of, shipping or navigation, perils of the sea, air crash, shipwreck, train wrecks or other failures or delays of transportation, nuclear emergency, radioactive contamination, ionizing radiation, release of hazardous waste or materials, sabotage, invasion, riot, civil disturbance or disobedience, flood, drought, military ordinances or archaeological discoveries at the Project site, change in applicable law or interpretation or application thereof, failure or delay by any Governmental Authority in issuing or granting any required clearance, approval, arrangement, or permit, an earthquake, storm, fire, flood, tidal wave, storm, wind, explosion or any similar cataclysmic occurrence, lightning, epidemic, war (imminent, declared or otherwise), terrorism or riot. Notwithstanding the foregoing, Force Majeure shall not be based on (i) the loss of Buyer's markets; (ii) Buyer's inability economically to use or resell the Renewable Energy purchased hereunder; (iii) the loss or failure of Seller's supply, including materials or equipment, unless such loss or failure is caused by a Force Majeure event (iv) the delay in or inability of Seller to obtain financing or economic hardship of any kind; or (v) Seller's ability to sell the Renewable Energy at a price greater than the Contract Price or Buyer’s ability to purchase the Renewable Energy at a price less than the Contract Price; or (vi) strike or other labor dispute. Neither Party may raise a claim of Force Majeure based in whole or in part on curtailment by a transmission provider unless (i) such Party has contracted for firm transmission with a transmission provider for the Renewable Energy to be delivered to or received at the Delivery Point and (ii) such curtailment is due to "force majeure" or "uncontrollable force" or a similar term as defined under the transmission provider's tariff.

1.51 “Force Majeure Extension” has the meaning set forth in Section 4.2(c).

1.52 “Good Utility Practices” means any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result of the lowest reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method or act to the exclusion of all others, but rather to be generally accepted and consistently adhered to acceptable practices, methods, or acts.

1.53 “Governmental Authority” means any federal, territorial or local government body; any governmental, quasi-governmental, regulatory or administrative agency, commission, body or other authority exercising or entitled to exercise any administrative, executive, judicial, legislative, policy, regulatory or taxing authority or power; or any court or governmental tribunal.

1.54 “Governmental Charges” has the meaning set forth in Section 10.2.

1.55 “GPA Delay” means any delay by GPA in performing an obligation under this Agreement or under the Interconnection Agreement which results in a delay to Seller achieving COD. A GPA Delay is not an Event of Default unless it is otherwise so designated in this Agreement.

1.56 “Guaranteed Output” has the meaning given in Section 4.8.

1.57 “Incremental Price” means, at the time of its calculation, the LEAC Rate minus the Contract Price, provided, however, if the LEAC Rate is less than the Contract Price then the Incremental Price shall be deemed to be zero. Sample calculations of the Incremental Price are shown in Schedule III to Appendix K.

1.58 “Independent Engineer” shall mean one of the engineering firms set forth in Appendix D hereto, and any other independent engineer or engineering firm, nationally recognized in the United States and having knowledge and expertise in the United States generation industry (including specifically the design and construction of utility scale solar photovoltaic power projects), and which is mutually agreed to by the Parties.

1.59 “Interconnection Agreement” means the agreement for interconnection service relating to the Facility between GPA and Seller, executed and delivered as of the Effective Date in the form attached hereto as Appendix J.

1.60 “Interest Rate” means, for any date, the lesser of (a) the per annum rate of interest equal to the prime lending rate as may from time to time be published in The Wall Street Journal under "Money Rates" on such day (or if not published on such day on the most recent preceding day on which published), plus two percent (2%) and (b) the maximum rate permitted by applicable law.

1.61 “kWh” means kilowatt hour.

1.62 “LEAC Rate” means the “Fuel Recovery Charge” (expressed in US$/MWh) as set forth in GPA’s most recent approved tariff in effect as of any date of determination of the LEAC Rate under this Agreement.

1.63 “Letter(s) of Credit” means one or more irrevocable standby letters of credit issued by a U.S. commercial bank or a foreign bank with a U.S. branch with such bank having a Credit Rating of at least A- from S&P or A3 from Moody's, in substantially the form set forth in Appendix [F-1] hereto; provided, however that such form may be modified by the issuing bank as long as such modifications are acceptable to the beneficiary in its sole discretion. Costs of a Letter of Credit shall be borne by the applicant for such Letter of Credit.

1.64 “Merger Event” means, with respect to a Party, that such Party consolidates or amalgamates with, or merges into or with, or transfers substantially all of its assets to another entity and (i) the resulting entity fails to assume all of the obligations of such Party hereunder or (ii) the benefits of any credit support provided pursuant to this Agreement fail to extend to the performance by such resulting, surviving or transferee entity of its obligations hereunder unless such credit support is replaced by the resulting, surviving or transferee entity in accordance with this Agreement.

1.65 “Minimum Production” has the meaning set forth in Section 4.8.

1.66 “Month” means a calendar Month. The term “Monthly” shall have a meaning correlative to a Month.

1.67 “Moody's” means Moody's Investor Services, Inc. or its successor.

1.68 “MW” or “MWh” means megawatt or megawatt hour, in each case rounded to the nearest whole MW or MWh.

1.69 “NAR” means the North American Renewables Registry.

1.70 “NAR Operating Procedures” means any and all guidelines, procedures, requirements and obligations established by the NAR, including the terms of use, operating procedures, and fee schedules, as such may be amended from time to time.

1.71 “Non-Defaulting Party” has the meaning set forth in Section 6.

1.72 "Notice” has the meaning set forth in Section 12.7.

1.73 “Outage” means the period during which the Facility or a portion thereof is out of service.

1.74 “Outside Commercial Operation Date” has the meaning set forth in Section 4.2(b).

1.75 “Payment and Performance Bond” means one or more payment and performance bonds issued by an insurance company or other institution having an investment grade Credit Rating from S&P, Moody’s or Fitch, in substantially the form set forth in Appendix [F-2] hereto; provided, however that such form may be modified by the issuing entity as long as such modifications are acceptable to the beneficiary in its sole discretion.

1.76 “Planned Outage” means any Outage that is not a Forced Outage, and refers to the shutdown or unavailability of the Facility or a portion thereof for inspection or maintenance in accordance with an advance schedule.

1.77 “Production Measurement Period” has the meaning set forth in Section 4.8.

1.78 “Project” has the meaning set forth in Section 2.1.

1.79 “QRE” means the Qualified Reporting Entity as such term is defined in the NAR Operating Procedures.

1.80 “Quantity” means the actual quantity of Renewable Energy (including Stored Energy) sold by Seller and purchased by and delivered to GPA pursuant to this Agreement. The Quantity shall be measured based on the metered data from the Seller Metering Equipment at the Delivery Point.

1.81 “Renewable Energy” means energy derived from a Renewable Energy Resource.

1.82 “Renewable Energy Credit” or “REC” means the unit created to track kWh derived from an Eligible Renewable Energy Resource or kWh equivalent of Conventional Energy Resources displaced by distributed renewable energy resources if and to the extent recognized under applicable law.

1.83 “Renewable Energy Resource” means an energy resource that is replaced rapidly by a natural, ongoing process and that is not nuclear or fossil fuel.

1.84 “Replacement Price” means the price at which GPA, acting in a Commercially Reasonable Manner, purchases electricity in place of Renewable Energy.

1.85 “S&P” means the Standard & Poor's Rating Group (a division of McGraw-Hill, Inc.) or its successor.

1.86 “SCADA” means “supervisory control and data acquisition” and shall refer to that category of software application program that can be used to gather data from the Facility remotely in real time in order to monitor Facility equipment and conditions.

1.87 “Schedule,” "Scheduled” or "Scheduling” means the actions of Seller, Buyer and/or their designated representatives, of notifying, requesting and confirming to each other the quantity and type of Renewable Energy (including Stored Energy) to be delivered on any given day or days during the Delivery Period at a specified Delivery Point.

1.88 "Scheduled Commercial Operation Date" has the meaning set forth in Section 4.2(a).

1.89 "Seller Failure" has the meaning set forth in Section 5.1.

1.90 "Seller Failure Damages" has the meaning set forth in Section 5.1.

1.91 "Seller's Interconnection Facilities" means Seller's equipment as specified in the Interconnection Agreement.

1.92 "Seller Metering Equipment" means all metering equipment and data processing equipment used to measure the Quantity delivered to the Delivery Point.

1.93 "Shortfall Damages" has the meaning set forth in Section 4.8.

1.94 "Sponsor Interest" means an upstream ownership interest held by an entity that is an Affiliate of the Seller as of the Effective Date which represents a partial indirect ownership interest in Seller and which is established in connection with a tax equity financing.

1.95 "Microgrid Unit" means the energy storage unit to be installed by Seller as part of the Facility, as contemplated in Appendix C.

1.96 "Stored Energy" means Charging Energy stored in the Microgrid Unit which is later delivered to the Delivery Point as contemplated in Appendix C.

1.97 "Tax Benefits" means any and all tax benefits arising from the ownership and operation of the Facility, including without limitation Renewable Energy related tax credits or other benefits established under Section 45 and Section 48 of the Internal Revenue Code, as amended, or any similar or successor provision of the Internal Revenue Code, or any other applicable tax law, regulation, or code.

1.98 "Tax Equity Investor Interest" means an upstream ownership interest held by a financing party (including a financial institution, insurance company or other third party not affiliated with the Seller except based on the applicable tax equity investment or other similar investments or financings) as of the Effective Date which represents a partial indirect ownership interest in Seller and which is established in connection with a tax equity financing.

1.99 "Term" has the meaning set forth in Section 12.1.

1.100 "Termination Damages" has the meaning set forth in Section 4.4.

1.101 "Test Energy" means non-firm Renewable Energy generated prior to the Commercial Operation Date, subject to immediate interruption, fluctuations or reduction/increase with no prior Notice, due to unit performance.

1.102 "Transaction" means the transaction relating to the purchase or sale of Renewable Energy as contemplated in this Agreement.

1.103 "Unit Contingent" means that the Renewable Energy (excluding Charging Energy but including Stored Energy) is intended to be supplied from the Facility as it is produced.

1.104 "Weather Hours" means the total hours in any Production Measurement Period, as applicable, in which the Facility is derated as a result of cumulative weather conditions which are outside historical average conditions for any applicable Month during the Production Measurement Period in which the deration occurs, calculated in accordance with Appendix K.

ARTICLE TWO: COMMERCIAL TERMS

2.1 Commercial Terms.

The following commercial terms apply to the Transaction that is the subject of this Agreement, each as more fully described herein:

Buyer: GPA	**Seller:** Hanwha Energy Corporation
Project: Hanwha Project A	
Delivery Point: The "Point of Interconnection" as defined in the Interconnection Agreement	
Guaranteed Annual Production (MWhs): As set forth in Appendix A	**Estimated Annual Production: (MWhs):** NOT APPLICABLE
Guaranteed Availability (%): NOT APPLICABLE	**Guaranteed Capacity (MWs):** NOT APPLICABLE
Delivery Period: Twenty-five (25) years from the Commercial Operation Date	**Contract Price ($/MWh):** See Appendix A
Renewable Energy Type: Unit Contingent (solar) and associated RECs	**Development Security:** As contemplated in Section 9.1
Day(s) of week: Monday through Sunday, including NERC holidays	**Hours:** Hour Ending 0100 – Hour Ending 2400, Monday through Sunday Chamorro Standard Time (CHST), Guam time
Commercial Operation Date: No later than 36 months after Effective Date.	
Test Energy: Seller agrees to sell and Buyer agrees to purchase all Test Energy from the Facility. The test period shall be up to six (6) months. . The price of such Test Energy for the first thirty days shall be the current LEAC Rate. The price thereafter shall be the Year 1 Contract Price set out in Appendix A. Test Energy shall be delivered in accordance with the Scheduling provisions contained herein. Both Parties agree that Seller will use Commercially Reasonable Efforts to pre-schedule the Test Energy, but Buyer shall nonetheless be obligated to accept all Test Energy up to 22.5 MW per hour of Test Energy for the period set forth above. Seller shall provide to Buyer all RECs associated with the Test Energy sold hereunder in accordance with Section 4.16.	

ARTICLE THREE: REPRESENTATIONS AND WARRANTIES

3.1 Mutual Representations and Warranties.

On the Effective Date of this Agreement, each Party represents and warrants to the other Party that:

(a) It is duly organized, validly existing and in good standing under the laws of the jurisdiction of its formation;

(b) It has all regulatory authorizations necessary for it to legally perform its obligations under this Agreement (other than permits or regulatory authorizations to be obtained by Seller for the construction, operation or maintenance of the Facility, which Seller reasonably anticipates it will be able to obtain in due course);

(c) The execution, delivery and performance of this Agreement are within its powers, have been duly authorized by all necessary action and do not violate any of the terms and conditions in its governing documents, any contracts to which it is a party or any law, rule, regulation, order or the like applicable to it, and the Agreement constitutes its legally valid and binding obligation enforceable against it in accordance with its terms, subject to any Equitable Defenses.

(d) It is not Bankrupt and there are no proceedings pending or being contemplated by it or, to its knowledge, threatened against it which would result in it being or becoming Bankrupt;

(e) There is not pending or, to its knowledge, threatened against it or any of its Affiliates any legal proceedings that could materially adversely affect its ability to perform its obligations under this Agreement;

(f) No Event of Default or potential Event of Default with respect to it has occurred and is continuing and no such event or circumstance would occur as a result of its entering into or performing its obligations under this Agreement; and

(g) It is acting for its own account, has made its own independent decision to enter into this Agreement and as to whether this Agreement is appropriate or proper for it based upon its own judgment, is not relying upon the advice or recommendations of the other Party in so doing, and is capable of assessing the merits of and understanding, and understands and accepts, the terms, conditions and risks of this Agreement;

3.2 Seller Representations and Warranties.

Seller affirmatively represents and warrants to GPA that:

(a) On the Effective Date of this Agreement, or in due course as required in accordance with the Financing Arrangement Deadline (as may be extended as provided in Section 4.3), Seller has (or reasonably expects to have in due course), good defensible title, or valid and effective leasehold rights in the case of leased property, to the Facility, free and clear of all liens, charges, claims, pledges, security interests, equities and encumbrances of any nature whatsoever other than the lien of current taxes not delinquent, liens, charges, claims, pledges, security, interests, equities and encumbrances relating to Facility Debt as provided for herein, or liens that in the aggregate do not materially detract from or interfere with the ability of Seller to deliver the Quantity of the Renewable Energy;

(b) All acts necessary to the valid execution, delivery and performance of this Agreement by Seller have or will be taken and performed as required under Seller's ordinances, bylaws, or other regulations including, but not limited to (i) the valid authority of the person

executing this Agreement to bind Seller and (ii) the Term of this Agreement does not extend beyond any limitation applicable to Seller imposed by relevant governing documents and applicable law; and

(c) Seller will have at the time of sale, title to and ownership of the RECs sold hereunder.

3.3 GPA Representations and Warranties.

GPA represents and warrants that:

(a) The Commission on Consolidated Utilities has made all certifications required by the Guam Public Utilities Commission and the Guam legislature in order for the valid execution, delivery and performance of this Agreement by GPA copies of which are attached hereto as Appendix L.

(b) Each of the PPA Approval and the ICA Approval is final, non-appealable and not subject to rehearing or other proceedings challenging its validity or enforceability.

(c) No authorizations, approvals or consents of any governmental or regulatory authority or agency or any other person, and no filings or registrations with any governmental authority or agency, are necessary for the execution, delivery or performance by GPA of this Agreement, or for the validity or enforceability thereof, except for any authorizations, approvals, consents or filings which have been made or obtained prior to the date hereof and are in full force and effect and are conclusive, binding and final.

(d) During the entire Term of the Agreement, all terms and conditions set forth in this Agreement shall be valid and enforceable against GPA.

(e) All legal, statutory and regulatory requirements and conditions necessary for the validity and enforceability of this Agreement and the obligations of GPA hereunder to purchase Renewable Energy, including, without limitation, the conditions and requirements as set forth in Title 12 of the Guam Code Annotated, Section 8306, have been satisfied, and at the time of the execution of the Agreement GPA further represents and warrants specifically as to the following: **NOTE TO GPA: GPA IS TO ENSURE THE RESOLUTIONS OF THE CCU ATTEST TO THE MATTERS SET FORTH BELOW**.

(i) Pursuant to the provisions of Public Law 30-66 (as codified in Title 12 of the Guam Code Annotated, Section 8104(n)), GPA is authorized to enter into this Agreement, together with any other agreement to be entered into by GPA and Seller as provided herein, and perform all the obligations imposed upon GPA as set forth herein, including, without limitation, the obligation to purchase Renewable Energy and pay all amounts due and owing to the Seller under the terms of this Agreement, and that no separate and specific appropriation or approval by *Liheslaturan Guahan* is required for such purpose.

(ii) This Agreement and the purchase of Renewable Energy by GPA at the time of the execution of the Agreement pursuant to the terms herein will not result in (A) costs to GPA which exceed the average cost of producing power under the islandwide power system owned and operated by GPA not inclusive of energy production from any backup diesel generators or other renewable energy sources, and (B) increased expenses and costs for GPA.

(iii) As set forth in the resolutions attached hereto as Appendix L, the Consolidated Commission on Utilities has certified that this Agreement is consistent with and does not violate any and all bond covenants applicable to and imposed upon

GPA and that the price to be paid by GPA for Renewable Energy as provided herein does not exceed GPA's actual current avoided cost.

GPA is not a party to a pooling agreement or any other agreement with the United States Department of Navy or any other federal agency, department or instrumentality ("Federal Government) which requires GPA to notify or obtain the approval of the Federal Government of this Agreement.

(iv) Any and all Renewable Energy to be purchased by GPA pursuant to the terms of this Agreement constitutes electrical power needed and required by GPA in connection with the operation and stability of the islandwide power system and to meet renewable energy portfolio standards which GPA is mandated to achieve and satisfy by law including without limitation, the mandates as set forth in Public Law 29-062 as codified in Title 12 of the Guam Code Annotated, Section 8311.

ARTICLE FOUR: PERFORMANCE REQUIREMENTS

4.1 Commercial Operation.

Seller shall achieve Commercial Operation of the Project no later than the Scheduled Commercial Operation Date except to the extent such date is extended pursuant to Section 4.2, in which case Commercial Operation shall occur on or prior to the Outside Commercial Operation Date. Commercial Operation shall be achieved as of the date on which each of the following conditions precedent has been satisfied or waived in writing by the Parties, as applicable ("Commercial Operation"):

(a) Seller shall have obtained all governmental and regulatory authorizations, including any applicable permits, required for the construction, ownership, operation and maintenance of the Project and for the sale of the Renewable Energy therefrom;

(b) Seller and Buyer shall have entered into the Interconnection Agreement;

(c) Seller shall have established SCADA information and real time data feed to enable GPA to view parameters or data points that relate to Renewable Energy data and other actual resource data for the Facility;

(d) The Microgrid Unit shall be capable of charging and discharging Renewable Energy;

(e) The Project shall in all other respects be capable of delivering the Renewable Energy to GPA at the Delivery Point;

(f) Seller shall perform at its cost a capacity test in accordance with the protocol outlined in Appendix I to determine the capacity of the Project ("Facility Test"). GPA shall receive the entire Renewable Energy from the Facility during such test. Renewable Energy deliveries during testing shall be measured at the Delivery Point.

GPA shall use all available Commercially Reasonable Efforts to assist Seller in achieving the Scheduled Commercial Operation Date. Seller shall present to GPA a certificate executed by its duly executed officer, and by an Independent Engineer as to items (c), (d) and (e), verifying that each of the foregoing conditions has been satisfied or waived in writing by the Parties and Commercial Operation shall be deemed to have occurred upon the delivery of such certificate to GPA unless GPA objects to such certificate within ten (10) Business Days of delivery thereof and such objections are either agreed by Seller or resolved in favor of GPA pursuant to Section 12.9 hereof. Upon any acceptance or deemed acceptance of Seller's certificate by GPA, all conditions, set forth above shall no longer be a condition precedent to Commercial Operation of the Project. If the Commercial Operation Date does not occur on or before the Outside Commercial Operation Date, as such date may be extended in accordance with Section 4.2 herein; either Party shall have the right to terminate the Agreement upon written Notice to the other Party. In the event of such termination by either Party, GPA shall be entitled to Termination Damages set forth in Section 4.4; provided, however, that in accordance with Section 4.2(c), GPA shall not be entitled to such Termination Damages if the Outside Commercial Operation Date is not achieved due to a Force Majeure event or a GPA Delay.

4.2 Extension of Commercial Operation Date.

(a) Planned Extension. The Parties agree that the Commercial Operation Date is expected to be No later than 36 months after Effective Date. (as extended pursuant to the terms of this Agreement, the "Scheduled Commercial Operation Date"). Seller may elect to extend the Commercial Operation Date beyond such date (the "COD Extension") by paying GPA for such extension (the "COD Extension Payment"). The COD Extension Payment shall be in the amount of fifty percent (50%) of the Shortfall Damages (based on ninety percent (90%) of the Minimum Production for the first Contract Year per day for

each day (or portion thereof) after but not including the date of the COD Extension until, but not including, the date on which the Project actually achieves Commercial Operation]. To extend the Commercial Operation Date, Seller must, as early as reasonably possible, but in no event later than fourteen (14) days prior to the first day of the proposed extension, provide GPA with Notice of its election to extend the Commercial Operation Date along with an estimate of the duration of the extension. The COD Extension Payment is in addition to and not to be considered part of the Development Security, and shall be paid to GPA at the time of the Notice hereunder. Seller's request to extend the Commercial Operation Date shall not be valid unless proper Notice and payment are timely received by GPA. No Event of Default shall be deemed to have occurred with respect to Seller's extension as provided herein, and GPA shall not have the right to terminate the Agreement or to receive Termination Damages with respect to such extension so long as Seller has provided the Notice, estimation and payment as provided in this Section 4.2(a). Seller may further extend the Commercial Operation Date beyond the original COD Extension, subject to the foregoing Notice, estimation and payment terms applicable to the original COD Extension.

Seller shall be entitled to a prompt refund, without interest, of any portion of the COD Extension Payment held by GPA which exceeds the amount required to cover the number of days by which the Commercial Operation Date was actually extended. In no event may Seller extend the Commercial Operation Date by more than ninety (90) days through the payment of the COD Extension Payment, except as provided in Section 4.2(b). In the event that the Project does not achieve Commercial Operation on or before the expiration of any COD Extension period as provided herein, either Party shall have the right to terminate the Agreement upon written Notice to the other, subject to any further extension rights pursuant to Sections 4.2(b) or (c) below. In the event of such termination by either Party in accordance with this provision, GPA shall be entitled to Termination Damages as set forth in Section 4.4 as its sole and exclusive remedy, subject to Section 4.2(c).

(b) Unplanned Extension/Additional Planned Extension. In the event that (i) the Project does not achieve Commercial Operation by the Scheduled Commercial Operation Date and Seller fails to provide sufficient Notice and/or payment in order to extend the Commercial Operation Date as provided in Section 4.2(a), or (ii) the Commercial Operation Date shall not have occurred within the ninety (90) day planned extension period provided under Section 4.2(a), then Seller may further extend the Commercial Operation Date by paying GPA damages ("Daily Delay Liquidated Damages"). The Daily Delay Liquidated Damages shall be in the amount of one hundred percent (100%) of the Shortfall Damages (based on ninety percent (90%) of the Minimum Production for the first Contract Year) per day for each day (or portion thereof) after but not including the earlier of the dates set forth in sub-clauses (i) or (ii) above, or until, but not including, the date on which the Project actually achieves Commercial Operation, and shall be payable within ten (10) Business Days following receipt of an invoice from GPA for any such Daily Delay Liquidated Damages. No Event of Default shall be deemed to have occurred with respect to Seller's extension as provided herein and GPA shall not have the right to terminate the Agreement with respect to such extension or to receive Termination Damages so long as Seller has extended the Commercial Operation Date and pays the Daily Delay Liquidated Damages as provided in this Section 4.2(b).

In no event may the Commercial Operation Date be extended more than one hundred and eighty (180) days through the payment of Daily Delay Liquidated Damages, without the express written consent of GPA. In the event that the Project does not achieve Commercial Operation on or before three hundred and sixty-five (365) days from the Scheduled Commercial Operation Date (as extended pursuant to this Agreement, the "Outside Commercial Operation Date"), then either Party shall have the right to terminate the Agreement upon written Notice to the other, subject to any further extension rights

pursuant to Section 4.2(c) below. In the event of such termination by either Party in accordance with this provision, GPA shall be entitled to Termination Damages as set forth in Section 4.4 as its sole and exclusive remedy, subject to Section 4.2(c).

(c) Additional Extension. The Scheduled Commercial Operation Date and the Outside Commercial Operation Date shall also be extended, without payment or other penalty, on a day-for-day basis for each day of delay caused by reason of Force Majeure (a "Force Majeure Extension") or by reason of GPA Delay. Any Force Majeure Extension or GPA Delay shall also extend the period of any planned or unplanned extensions pursuant to Sections 4.2(a) or (b) on a day-for-day basis for each day during the Force Majeure Extension or GPA Delay, and Seller shall not be required to pay any COD Extension Payments or Daily Delay Liquidated Damages, as applicable, for any days during the Force Majeure Extension or GPA Delay. Notwithstanding any other provision in this Agreement, if, due solely to a Force Majeure Extension and/or a GPA Delay, the Project does not achieve Commercial Operation on or before the Outside Commercial Operation Date, then the Parties by mutual agreement may terminate this Agreement without penalty or further obligation to either Party, and after one hundred and eighty 180 days following the Outside Commercial Operation Date, either Party may unilaterally terminate this Agreement without penalty or further obligation to either Party. For the sake of clarityin the event of any such termination, GPA shall not be entitled to Termination Damages.

4.3 Financing Arrangement Deadline.

Seller shall make Commercially Reasonable Efforts to secure a financing sufficient for the successful completion of the Project as and when required and procure a preliminary agreement customary for such financing (such as an engagement letter) no later than one (1) year after the Effective Date as extended day-for-day for any Force Majeure Extension or GPA Delay (the "Financing Arrangement Deadline"). After the execution of the preliminary agreement, Seller shall provide GPA with a copy of such agreement within three (3) Business Days. In the event that Seller fails to procure the execution of a preliminary agreement by the Financing Arrangement Deadline, GPA may terminate the Agreement and shall be entitled to Termination Damages set forth in Section 4.4 as its sole and exclusive remedy.

4.4 Termination Damages.

Prior to the Commercial Operation Date, Seller may terminate this Agreement at any time for its convenience. GPA shall be entitled to termination damages, payable solely from the Bid Security or the Development Security established in Section 9.1 ("Termination Damages"), in the amounts set forth in the table below, if: (a) subject to the last sentence of this Section 4.4, Seller terminates the Agreement prior to the Commercial Operation Date for any reason other than: (i) a Force Majeure event or (ii) an Event of Default by GPA; [(b) GPA terminates the Agreement as a result of Seller failing to meet any Financing Arrangement Deadline after the passage of a grace period of thirty (30) days (as extended day-for-day for any Force Majeure Extension or GPA Delay);] and/or (c) GPA terminates the Agreement as a result of Seller failing to achieve the Commercial Operation Date on or prior to the Scheduled Commercial Operation Date, as the same may have been extended pursuant to Section 4.2. The Termination Damages are designed to help compensate GPA for, among other things, transactions that it did not consummate because it relied on this Agreement with Seller, and GPA's potential failure to meet its applicable renewable energy portfolio requirements and do not constitute a penalty payment. Accordingly, Seller shall pay to GPA, from the Development Security, Termination Damages in the following amounts, based upon when the termination occurs:

Prior to Posting Date of Development Security pursuant to Section 9.1:	$0.00

[Up to Financing Arrangement Deadline]	100% of the Bid Security
[Up to six months following Financing Arrangement Deadline]	50% of Development Security
[From six months to twelve months following Financing Arrangement Deadline]	75% of Development Security
[From twelve months following Financing Arrangement Deadline]	100% of Development Security

No later than five (5) Business Days following the Financing Arrangement Deadline, GPA shall return the Bid Security to Seller, to the extent GPA has not validly claimed the Bid Security in respect of Termination Damages on or prior to such date. Notwithstanding the foregoing, in the event that Seller terminates this Agreement for any reason prior to the posting date for the Development Security as set forth in Section 9.1 herein, then Seller shall owe GPA no Termination Damages and such termination shall be without penalty to Seller.

4.5 Seller's and Buyer's Obligations.

Subject to Appendix H and Appendix C, Seller shall sell and deliver, or cause to be delivered, and GPA shall purchase and receive, or cause to be received, all Renewable Energy generated by the Facility (excluding Charging Energy but including Stored Energy when delivered, in each case, as set forth in Appendix C), at the Delivery Point, and GPA shall pay Seller the Contract Price for such Quantity of Renewable Energy (including Stored Energy) as measured by the Seller's Metering Equipment at the Delivery Point; provided that for quantities of Renewable Energy (including Stored Energy) in excess of the Estimated Annual Renewable Energy Amount, as shown in the third column of Appendix A, which are not make-up quantities for delivery deficiencies in prior Production Measurement Periods, the price payable by GPA shall be the lower of the Contract Price and the LEAC Rate.

For Seller's failure to deliver Renewable Energy as required hereunder, GPA's remedies shall be as set forth in Section 4.8. For GPA's failure to purchase and receive Renewable Energy (including Stored Energy) as required hereunder, Seller shall in addition have all other remedies available at law or in equity. Seller shall be responsible for any costs or charges imposed on or associated with the Renewable Energy (including Stored Energy) or its delivery up to the Delivery Point. GPA shall be responsible for any costs or charges imposed on or associated with Renewable Energy (including Stored Energy) or its receipt at and from the Delivery Point. Title to and risk of loss of Renewable Energy (including Stored Energy) from the Facility delivered to the Delivery Point shall transfer to GPA at the Delivery Point. Seller warrants that it will deliver to Buyer Renewable Energy (including Stored Energy) free and clear of all liens, security interests, claims and encumbrances or any interest therein or thereto by any person arising prior to the Delivery Point.

4.6 Operation of Facility.

Seller shall operate and maintain the Facility in accordance with Good Utility Practices and in accordance with the Agreed Ramp Rate as set forth in Appendix C.

4.7 Not Used.

4.8 Minimum Production.

The Facility is expected to produce a minimum number of MWhs of Renewable Energy (including Stored Energy) each Contract Year as set forth in the third column of Appendix A (such annual MWh production is the "Minimum Production"). Seller during the Delivery Period shall (i) during any Contract Year, deliver to GPA at least ninety percent (90%) of the Minimum Production (which calculated amounts are set forth in the fourth column

of Appendix A), and (ii) for any consecutive six (6) Contract Years during the Delivery Period, deliver to GPA at least ninety-five percent (95%) of the aggregate Minimum Production during such period (which shall include make-up amounts generated and delivered in any years in excess of one hundred percent (100%) of the Minimum Production for such year) (any such time period a "Production Measurement Period" and each such guaranteed amount of delivered Renewable Energy during any Production Measurement Period, the "Guaranteed Output"). Any shortfall of Renewable Energy (expressed in MWhs/year) from the applicable Guaranteed Output during a Production Measurement Period shall be deemed a "Deficiency Amount." For the avoidance of doubt, (i) Stored Energy delivered to the Delivery Point shall count towards Seller's achievement of the Minimum Production during each Production Measurement Period, and (ii) Charging Energy shall not be delivered by Seller and shall not count towards any Deficiency Amount as it is used to charge the Microgrid Unit as contemplated in Appendix C.

GPA shall be entitled to receive damages for any Deficiency Amount ("Shortfall Damages") which are not due to Excused Hours or Weather Hours (except, in the case of Weather Hours, as set forth below). Shortfall Damages shall be calculated as follows on an annual basis at the end of each Contract Year (and [in accordance with the example set forth in Schedule I to Appendix K].):

Shortfall Damages = Deficiency Amount x Incremental Price.

For purposes of clarity, if Actual Renewable Energy (including Stored Energy) for any given Contract Year is less than the Minimum Production for that year (even if due to Excused Hours or Weather Hours), there shall be a "Shortfall," and Seller shall be entitled to deliver to GPA Renewable Energy in the amount of such Shortfall in subsequent time periods (even if such make-up amounts are in excess of the Minimum Production for such subsequent year), and this Agreement may be extended as necessary for a period of up to six (6) months to allow Seller to make up any Shortfalls; however, there shall be no Shortfall Damages owing to GPA for such individual Contract Year unless such Actual Renewable Energy is less than the Guaranteed Output for the applicable Production Measurement Period, and such shortfall is not due to Excused Hours or Weather Hours (except, in the case of Weather Hours, as set forth below).

In the event Shortfall Damages are due for a Production Measurement Period of six (6) rolling Contract Years, then such Shortfall Damages shall be reduced by the amount of any Shortfall Damages paid for any Contract Year during such six (6) year Production Measurement Period. Seller's payment of Shortfall Damages shall be Seller's sole liability and obligation, and GPA's sole right and remedy, with respect to Seller's failure to deliver the Guaranteed Output during any Production Measurement Period.

To the extent any Deficiency Amount is due to Weather Hours, Seller's sole liability and GPA's sole remedy shall be to deliver thereafter Renewable Energy equal to such Deficiency Amount attributable to Weather Hours, calculated in accordance with Appendix K (which includes a sample calculation for a hypothetical Production Measurement Period). If any portion of a Deficiency Amount due to Weather Hours is not made up in the five (5) Contract Years beginning in the first Contract Year following the Contract Year in which the Weather Hours Deficiency Amount occurred, then Seller shall pay Shortfall Damages for the remaining Deficiency Amount. Notwithstanding the foregoing, with respect to any Deficiency Amount that is due to Weather Hours, Seller shall have the option, at any time prior to the expiration of the five (5) Contract Year make-up period, to pay any remaining associated Shortfall Damages in their entirety. If the Deficiency Amount arising as a result of Weather Hours occurs in the last five (5) years of the Delivery Period, then unless Seller exercises its option to pay the Deficiency Amount early, the Delivery Period shall be extended as necessary, for a period of up to six (6) months, to achieve a make-up period of five (5) Contract Years as described above. The Contract Price for such Renewable Energy shall be the Contract Price in effect in the Contract Year in which the Deficiency Amount due to Weather Hours accrued.

Seller shall be entitled to sell, and GPA shall purchase, quantities of Renewable Energy for which Shortfall Damages are paid hereunder, during any remaining Production Measurement Period during the Delivery Period. The price therefore shall be the Contract Price in effect at the time the Shortfall Damages accrued. During any Contract Year, all Renewable Energy delivered by Seller to GPA in excess of the Minimum Production shall be credited against makeup of any outstanding Deficiency Amounts, with oldest Deficiency Amounts made up first.

To the extent any Deficiency Amount is due to Excused Hours, Seller shall be excused from any liability with respect thereto.

Notwithstanding the foregoing, in the event that the Delivery Point is unavailable for any reason other than due to GPA's electric system, Seller's obligation to supply and sell, and GPA's obligation to accept and purchase, Renewable Energy shall be limited to such Renewable Energy that is actually deliverable from the Facility to the Delivery Point during such period except this paragraph shall not apply in the case of Excused Hours or an Event of Default by either Party.

4.9 Facility Testing.

In addition to the Facility Test referenced in Section 4.1(e), the capacity of the Facility shall be tested during each Contract Year during the Delivery Period (the "Annual Facility Test"). Seller shall notify GPA of the specific date on which it intends to conduct the Annual Facility Test at least ten (10) Business Days in advance and shall permit GPA to be present at such test. GPA shall have the right to receive copies of the results of the Annual Facility Test, which shall be conducted in accordance with the protocol set forth in Appendix I. Any dispute regarding the results of the Annual Facility Test shall be resolved as set forth in Section 12.9 of this Agreement. GPA shall receive, in accordance with Section 4.5, the entire Renewable Energy from the Facility during any Annual Facility Test or re-test. Renewable Energy deliveries during testing shall be measured at the Delivery Point.

4.10 Scheduling.

Seller agrees to supply at the Delivery Point all Renewable Energy produced by the Project, net of Renewable Energy self-generated and consumed at the Facility, and net of any generation losses prior to the Delivery Point, up to the Facility Capacity, in accordance with the scheduling and coordination procedures set out in Appendix H. GPA agrees to take at the Delivery Point all Renewable Energy tendered by Seller in accordance with the foregoing sentence. The Schedules and estimates provided pursuant to this Section 4.10 shall be made by Seller in good faith and based on information available to it at such time, but in no event shall such Schedules be binding on Seller nor shall Seller be liable for any inaccuracies in such Schedules.

4.11 Force Majeure.

To the extent either Party is prevented by Force Majeure from carrying out, in whole or part, its obligations under this Transaction and such Party (the "Claiming Party") gives Notice and details of the Force Majeure to the other Party as soon as practicable, then the Claiming Party shall be excused from the performance of its obligations with respect to such Transaction (other than the obligation to make payments then due or becoming due hereunder). The Claiming Party shall remedy the Force Majeure with all reasonable dispatch. The non-Claiming Party shall not be required to perform or resume performance of its obligations to the Claiming Party corresponding to the obligations of the Claiming Party excused by Force Majeure.

4.12 Facility Outages and Maintenance Scheduling.

(a) Planned Outages. Seller shall provide written Notice to GPA prior to conducting any Planned Outages of the Facility. Within ninety (90) days prior to the Commercial Operation Date, as the same may be extended in accordance with the provisions of Section 4.2, and on or before the first day of each subsequent Contract Year, Seller shall provide GPA with a schedule of such proposed Planned Outages. The proposed Planned Outages schedule shall be submitted electronically to GPA, using a reasonably acceptable format provided by GPA. Such format is subject to change from time-to-time during the Term of this Agreement by agreement of the Parties, but will generally describe the nature of the Outage, the expected duration, and any other pertinent information that will assist GPA in planning for the decreased output of the Facility as a result of the Outage.

GPA shall promptly review Seller's proposed schedule and may request modifications within thirty (30) days of GPA's receipt of such schedule. Changes to the schedule may

be requested by either Party and each Party shall make Commercially Reasonable Efforts to accommodate such changes, provided further that Seller shall have no obligation to agree to GPA's proposed modifications or revisions to any Planned Outage schedule.

Notwithstanding any of the foregoing, Seller shall not commence a Planned Outage that is expected to result in an Outage of ten percent (10%) or more of the Facility without notifying GPA of the Planned Outage at least five (5) Business Days prior to the start of such Planned Outage.

(b) Forced Outages. In the event of any Forced Outage, Seller shall promptly notify GPA of the same. Seller shall immediately notify GPA verbally and shall then, within twenty-four (24) hours thereafter, provide written Notice to GPA (the "Forced Outage Notice"). The Forced Outage Notice shall be submitted electronically to GPA, using a reasonably acceptable format provided by GPA. Such format is subject to change from time-to-time during the Term of this Agreement by agreement of the Parties, but will generally describe the nature of the Outage, the expected duration, and any other pertinent information that will assist GPA in planning for the decreased output of the Facility as a result of the Outage. Seller shall return the Facility to service as soon as possible, consistent with Good Utility Practices, after the Forced Outage ceases to exist.

(c) GPA Parts Inventory. To the extent GPA maintains an inventory of parts or components that are used or useful in the Facility and provided it can prudently do so under its own ordinary course operating practices and restrictions, GPA shall cooperate with Seller in a commercially reasonable manner by making such parts or components available to Seller at its request during the period of time Seller is obtaining replacement parts or components for the Facility in order to maximize output of Renewable Energy. If Seller obtains a replacement part or component from GPA, it shall at GPA's option either replace such part or component with the new part or component ordered by Seller or return the borrowed part or component to GPA at such time as Seller obtains the replacement. Seller shall bear the installation, transportation and labor charges relating to GPA's replacement parts or components, and if the parts or components are returned to GPA then Seller shall reimburse GPA for any damage to such parts or components while in Seller's possession.

4.13 Operating Status Reports.

From the Effective Date of this Agreement, through the date of Commercial Operation, Seller shall provide GPA with Monthly reports regarding material data pertaining to the operation of the Facility. The operations data is generally identified as performance, Outage, and risk data and shall be sent electronically to GPA using a reasonably acceptable format provided by GPA. The operations data report format may be modified by agreement of the Parties from time-to-time during the Term of this Agreement.

4.14 Resource Quality Reporting: Forecasting.

Seller shall provide to GPA at its request copies of non-proprietary resource quality data that could reasonably be expected to affect, in any material manner, the operation and/or productivity of the Facility, whether produced, compiled or otherwise generated by Seller or any third party in a Commercially Reasonable manner, so that GPA can evaluate the expected performance of the Facility. Seller shall provide such data as it is produced or otherwise made available to Seller. Upon Commercial Operation of the Facility, to the extent generated or procured by Seller, Seller shall also provide to GPA Monthly and day-ahead forecasting information for the Facility. Such information shall be in a format agreed to by the Parties and include, among other things: Seller's forecasts for the performance of the Facility based on Facility specifications, weather-based forecasting, and weather-related studies. Such information, which will be used by GPA solely for evaluation, Scheduling, and other purposes related to this Agreement, shall be provided as available. In no event shall the data and/or information provided to GPA pursuant to this Section 4.14 be binding upon Seller, nor shall Seller be liable for any penalties, charges or other damages based on the inaccuracy of such data or information.

4.15 Permit Violations.

Seller shall at all times during the Term of this Agreement maintain and comply with all applicable permits for the development, ownership and maintenance of the Facility in all material respects. As soon as practicable after the occurrence of any event known to Seller that would constitute or is reasonably likely to lead to a violation of any applicable permit, but in no event more than ten (10) Business Days thereafter, Seller shall provide GPA with written Notice of the same.

4.16 Change in Technical Requirements.

The Parties agree that, from and after the Effective Date, if Seller is required at any time to comply with new or modified technical or other performance requirements for the Facility or any material portion thereof (or in the manner any such facilities are to be operated or maintained) and such addition to or change in the above standards causes an increase in Seller's actual costs to perform in excess of $25,000 in the aggregate, then the Parties shall negotiate in good faith to agree upon an adjustment to the Contract Price and/or the Annual Microgrid Payment, as applicable, to compensate Seller for such increased costs. Such a change in the technical or performance requirements may arise as a result of the scheduling protocols or the communication protocols to be established by GPA pursuant to Appendix H or any other protocols or regulations established by GPA, requirements imposed by the transmission provider or pursuant to the Interconnection Agreement, requirements imposed by GPA or another Governmental Authority pursuant to or in connection with this Agreement, among other circumstances.

Seller will deliver prompt notice of the occurrence of a change in technical or performance requirements which has or is reasonably expected to result in the additional actual costs described above. If, on the date which is forty-five (45) days following Seller's delivery of notice to GPA, the Parties are unable to agree upon an adjustment to the Contract Price and/or the Annual Microgrid Payment, as applicable, which compensates Seller for such additional costs and is otherwise mutually acceptable, then Supplier may submit such dispute for resolution pursuant to Section 12.9.

4.17 Delivery of RECs.

(a) Use of North American Renewables Registry. At least ten (10) days prior to COD, Seller shall transfer to GPA the authority to create, own and transfer all Environmental Attributes associated with the Renewable Energy produced by the Facility, by executing and delivering the form entitled "Generator Owner's Designation of Responsible Party" published by NAR, wherein Seller shall designate GPA as the "responsible party" for all matters relating to the creation, ownership, and transfer of any RECS. Thereafter, GPA shall be responsible for all obligations relating to creating and transferring RECs and Seller shall have no further obligations or liabilities with respect thereto, provided, however, that Seller shall reimburse to GPA its costs of creating and maintaining the NAR account and NAR's fees charged to transfer the RECs, up to an aggregate maximum amount of $5,000 per annum. In the event this Agreement is terminated for any reason, the Parties agree to each consent to the termination of such designation in accordance with NAR procedures.

(b) GPA Registration as a QRE. GPA shall be the QRE for the Facility as required by NAR and shall comply with any and all NAR Operating Procedures relating to the registration and operation as a QRE and the reporting of generation data from the Facility to NAR. As the QRE, each month upon receipt of an invoice and associated interval metering data from Seller in accordance with Section 7.5 herein, GPA shall report such data to NAR within three (3) Business Days following receipt of such data. The Parties shall cooperate to ensure that the Seller Metering Equipment and the resulting interval metering data meet the NAR requirements for metering equipment and generation data.

(c) Change Event. During the Term, in the event that (i) the NAR Operating Procedures are amended or changed such that it becomes impossible for the Parties to utilize NAR as the REC tracking method and/or for GPA to continue as "responsible party" for purposes of

creating, owning and transferring RECs attributable to the Facility; (ii) the fees or charges imposed by NAR on either Seller or GPA to utilize the NAR REC tracking system are materially increased such that use of the NAR REC tracking system becomes uneconomic or infeasible; or (iii) the NAR REC tracking system is eliminated (each one individually, a "Change Event"), then the Parties shall promptly negotiate in good faith to reform the terms of this Agreement in order to give effect to the original intention of the Parties to the extent reasonable under the circumstances, including utilizing an alternative method for transferring RECs to GPA, but in no case shall Seller's cost with respect thereto exceed $5,000 per annum.

4.18 Ramp Rate Control Performance.

During the Delivery Period, Seller shall cause the Microgrid Unit to comply with the performance guarantees for ramp rate control set forth [below] (the "Ramp Rate Control Performance Guarantees").] If the Microgrid Unit System fails to meet the Ramp Rate Control Performance Guarantees over the time periods set forth [below], GPA may provide written notice to Seller of the failure to meet the Ramp Rate Control Performance Guarantees and a request for Seller to take steps needed for the Energy Storage System to meet the Ramp Rate Control Performance Guarantees. In response to such a notice, Seller shall, within two (2) weeks from the date of such notice, provide GPA with a written remedial action plan that provides a detailed description of Seller's course of action and plan to meet the Ramp Rate Control Performance Guarantees and shall take steps to implement such remedial action within six (6) months of the date of such action plan; provided, however, GPA shall not be entitled to such a remedial action plan if the failure to achieve the Ramp Rate Control Performance Guarantees is due to a Force Majeure event, GPA Delay or an Event of Default by GPA. Seller's sole obligation with respect to any deficiency in the Ramp Rate Control Performance Guarantees is to follow its remedial action plan.

If ramp rate is greater than 3 MW/minute seller shall reduce plant output until ramp rate is less than 3 MW/minute. If system issues remain, GPA reserves the right to restrict Seller's plant output until seller restores operation with a ramp rate less than 3 MW/minute. The Interconnection Agreement shall define conditions for Seller's plant reduction and implementation of GPA's restrictions.

ARTICLE FIVE: SELLER FAILURE

5.1 Seller Failure.

In the event Seller fails to deliver to GPA any Quantity of Renewable Energy to which GPA is entitled in accordance with the terms of this Agreement and instead sells such Quantity of Renewable Energy to which GPA is entitled to a third party in violation of this Agreement ("Seller Failure"), then Seller shall pay to GPA the "Seller Failure Damages," which shall mean the positive difference, if any, between the Replacement Price and the Contract Price for the period of such Seller failure, times such Quantity of Renewable Energy. GPA shall calculate the Seller Failure Damages and shall provide to Seller an invoice for such amount, including a written statement explaining in reasonable detail the calculation of such amount. Seller shall pay the Seller Failure Damages not later than ten (10) days following its receipt of such an invoice from GPA. If the Replacement Price is less than the Contract Price, then the Seller Failure Damages are deemed to be zero. The Seller Failure Damages represent the sole and exclusive remedy of GPA for Seller's failure as described herein.

ARTICLE SIX: EVENTS OF DEFAULT; REMEDIES

6.1 Events of Default.

An "Event of Default" shall mean, with respect to a Party (a "Defaulting Party"), the occurrence of any of the following:

(a) The failure to make, when due, any payment required pursuant to this Agreement if such failure is not remedied within three (3) Business Days after receipt of written Notice;

(b) Any representation or warranty made by such Party herein is false or misleading in any material respect when made or when deemed made or repeated, if such failure is not remedied within thirty (30) Business Days after receipt of written Notice, or such longer time, not to exceed sixty (60) Business Days, as is reasonably required to remedy such failure, provided the Defaulting Party is employing Commercially Reasonable Efforts to achieve the remedy;

(c) The failure to perform any material covenant or obligation set forth in this Agreement (except to the extent constituting a separate Event of Default and except for such Party's obligations to deliver or receive the Renewable Energy, the remedies for which are provided in Article Five) if such failure is not remedied within thirty (30) Business Days after written Notice, or such longer time, not to exceed sixty (60) Business Days, as is reasonably required to remedy such failure, provided the Defaulting Party is employing Commercially Reasonable Efforts to achieve the remedy;

(d) Such Party becomes Bankrupt (or if the Bankruptcy is involuntary, the failure of such Party to achieve dismissal of the Bankruptcy within ninety (90) days);

(e) A Merger Event occurs with respect to such Party;

(f) If during the Term of this Agreement there have occurred three (3) or more Seller Failures as that term is used in Section 5.1;

(g) With respect to Seller, a material permit violation occurs, such violation has or is reasonably likely to result in a material adverse effect on the Seller's ability to perform its obligations under this Agreement and such violation is not remedied within fifteen (15) Business Days after Notice by either GPA or the relevant permitting authority, or such longer time, not to exceed sixty (60) Business Days, as is reasonably required to remedy such failure, provided the Defaulting Party is employing Commercially Reasonable Efforts to achieve the remedy;

(h) With respect to Seller, failure to maintain the Development Security as required pursuant to this Agreement and the failure to reinstate the same within ten (10) Business Days after Seller's receipt of written Notice thereof from GPA.

6.2 Declaration of an Early Termination Date.

If an Event of Default with respect to a Defaulting Party shall have occurred on or after the Commercial Operation Date and be continuing, the other Party (the "Non-Defaulting Party") shall have the right but not the obligation to: (i) designate a day, no earlier than the day such Notice is effective and no later than twenty (20) days after such Notice is effective, as an early termination date ("Early Termination Date") to accelerate all amounts owing between the Parties and to liquidate and terminate this Agreement between the Parties; (ii) withhold any payments due to the Defaulting Party under this Agreement as setoff against termination costs and liabilities as determined herein (and until such amounts are determined); and (iii) suspend its performance under this Agreement.

6.3 Suspension of Performance and Other Remedies.

Except as otherwise expressly provided in this Agreement, if an Event of Default shall have occurred and be continuing, the Non-Defaulting Party, upon written Notice to the Defaulting Party, shall have the right (i) to suspend performance under this Agreement; and (ii) to the extent an Event of Default shall have occurred and be continuing to exercise any remedy available at law or in equity including any specific remedies set forth in this Agreement; provided, however, that any damages shall include only the direct actual damages incurred by the Non-Defaulting Party as provided in Section 8.1.

ARTICLE SEVEN: PAYMENT AND NETTING

7.1 Billing Period.

Unless otherwise specifically agreed upon by the Parties, the calendar Month shall be the standard period for all payments under this Agreement. The Annual MicroGrid Payment shall be divided into twelve equal monthly payments each Contract Year. No later than the tenth (10^{th}) day after the end of each Month, each Party will render to the other Party an invoice (in the case of Seller, such invoice being rendered in accordance with Section 7.5) for the payment obligations of non-invoicing Party, if any, incurred hereunder during the preceding Month.

7.2 Timeliness of Payment.

Unless otherwise agreed by the Parties, all invoices under this Agreement shall be due and payable in accordance with each Party's invoice instructions on or before the later of the tenth (10th) day of each Month, or if later the tenth (10th) day after receipt of the invoice or, if such day is not a Business Day, then on the next Business Day. Each Party will make payments by electronic funds transfer, or by other mutually agreeable method(s), to the account designated by the other Party. Any amounts not paid by the due date will be deemed delinquent and will accrue interest at the Interest Rate, such interest to be calculated from and including the due date to but excluding the date the delinquent amount is paid in full.

7.3 Disputes and Adjustments of Invoices.

A Party may, in good faith, dispute the correctness of any invoice or any adjustment to an invoice, rendered under this Agreement or adjust any invoice for any arithmetic or computational error within twelve (12) Months of the date the invoice, or adjustment to an invoice, was rendered. In the event an invoice or portion thereof, or any other claim or adjustment arising hereunder, is disputed, payment of the undisputed portion of the invoice shall be required to be made when due, with Notice of the objection given to the other Party. Any invoice dispute or invoice adjustment shall be in writing and shall state the basis for the dispute or adjustment. Except as otherwise provided in this Agreement, payment of the disputed amount shall not be required until the dispute is resolved. Upon resolution of the dispute, any required payment shall be made within two (2) Business Days of such resolution along with interest accrued at the Interest Rate from and including the due date to but excluding the date paid. Inadvertent overpayments shall be returned upon request or deducted by the Party receiving such overpayment from subsequent payments, with interest accrued at the Interest Rate from and including the date of such overpayment to but excluding the date repaid or deducted by the Party receiving such overpayment. Any dispute with respect to an invoice is waived unless the other Party is notified in accordance with this Section 7.3 within twelve (12) Months after the invoice is rendered or any specific adjustment to the invoice is made. If an invoice is not rendered within twelve (12) Months after the close of the Month during which performance of a Transaction occurred, the right to payment for such performance is waived.

7.4 Metering and Other Facilities.

Seller shall be responsible, at its sole expense, for providing the Seller Metering Equipment in accordance with Good Utility Practices. In accordance with the terms of the Interconnection Agreement, the Seller may elect to have GPA provide Seller with the Seller Metering Equipment; provided, however, the cost of such meters shall be borne solely by Seller at no cost to GPA. Seller shall be solely responsible for operating, maintaining, and repairing the Seller Metering Equipment at its own expense throughout the Term of this Agreement. Seller shall inspect and test the Seller Metering Equipment upon its installation and at least once every year at Seller's expense. Seller shall give GPA reasonable advance Notice of any test, and promptly provide GPA with the results of any such test. GPA may observe the test and conduct its own tests, at GPA's expense, to verify Seller's procedures and results.

Upon an inaccurate read of the Seller Metering Equipment or if Seller knows of any material inaccuracy or defect in Seller Metering Equipment, Seller shall notify GPA in writing within forty-eight (48) hours of such defect. Seller shall be solely responsible for adjusting, repairing, replacing or recalibrating such metering device as near as practicable to a condition of zero (-0-) error, and for paying any expenses associated with such adjustment, repair,

replacement or recalibration. If a metering device fails to register or is found upon testing to be inaccurate, an adjustment will be made correcting all measurements by the inaccurate or defective metering device in the following manner:

(a) In the event that an adjustment factor cannot be reliably calculated, the Parties shall use the measurements from GPA-owned meters if they are installed, fully operational and calibrated in accordance with Good Utility Practices. If for any reason the measurements cannot be obtained from GPA owned meters, the Parties shall use data from Seller's computer monitoring system to determine the relevant measurements. If Seller's computer monitoring system is found to be inaccurate by more than two (2) percent, the Parties shall estimate the amount of the necessary adjustment using the site meteorological information for the period of the inaccuracy based upon deliveries of Renewable Energy delivered to GPA at the Delivery Point from the Facility during periods of similar operating conditions when the Seller Metering Equipment was registering accurately. The adjustment will be made for the period during which inaccurate measurements were made.

(b) If the Parties cannot agree on the actual period during which the inaccurate measurements were made, the period during which the measurements are to be adjusted will be the shorter of: (1) the last one-half of the period from the last previous test of the metering device to the test that found the metering device to be defective or inaccurate; or (2) the one hundred and eighty 180-day period immediately preceding the test that found the metering device to be defective or inaccurate.

(c) Upon determination of corrected measurements, the required payment adjustment shall be made according to the procedures set forth in Section 7.3.

7.5 Invoices.

Seller shall maintain and read the Seller Metering Equipment for measuring the Renewable Energy (including Stored Energy) delivered hereunder. For review purposes, Seller shall furnish GPA with a written invoice reflecting the Contract Price and the interval data from the Seller Metering Equipment used to calculate that invoice; and any other charges due, within ten (10) Business Days after Seller reads the Seller Metering Equipment. Seller shall furnish GPA with a written invoice reflecting the applicable portion of the Annual Microgrid Payment the tenth (10^{th}) day after the end of each Month. Such invoices may be furnished to GPA by facsimile transmission or by such other method as the Parties agree.

ARTICLE EIGHT: LIMITATIONS

8.1 Limitation of Remedies, Liability and Damages.

EXCEPT AS SET FORTH HEREIN, THERE IS NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND ANY AND ALL IMPLIED WARRANTIES ARE DISCLAIMED. THE PARTIES CONFIRM THAT THE EXPRESS REMEDIES AND MEASURES OF DAMAGES PROVIDED IN THIS AGREEMENT SATISFY THE ESSENTIAL PURPOSES HEREOF. FOR BREACH OF ANY PROVISION FOR WHICH AN EXPRESS REMEDY OR MEASURE OF DAMAGES IS PROVIDED HEREIN, SUCH EXPRESS REMEDY OR MEASURE OF DAMAGES SHALL BE THE SOLE AND EXCLUSIVE REMEDY AND THE OBLIGOR'S LIABILITY SHALL BE LIMITED AS SET FORTH IN SUCH PROVISION AND ALL OTHER REMEDIES OR DAMAGES AT LAW OR IN EQUITY ARE WAIVED. IF NO REMEDY OR MEASURE OF DAMAGES IS EXPRESSLY PROVIDED HEREIN OR IN A TRANSACTION, THE OBLIGOR'S LIABILITY SHALL BE LIMITED TO DIRECT ACTUAL DAMAGES ONLY, SUCH DIRECT ACTUAL DAMAGES SHALL BE THE SOLE AND EXCLUSIVE REMEDY AND ALL OTHER REMEDIES OR DAMAGES AT LAW OR IN EQUITY ARE WAIVED. UNLESS EXPRESSLY HEREIN PROVIDED, NEITHER PARTY SHALL BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, PUNITIVE, EXEMPLARY OR INDIRECT DAMAGES, LOST PROFITS OR OTHER BUSINESS INTERRUPTION DAMAGES, BY STATUTE, IN TORT OR CONTRACT, UNDER ANY INDEMNITY PROVISION OR OTHERWISE. IT IS THE INTENT OF THE PARTIES THAT THE LIMITATIONS HEREIN IMPOSED ON REMEDIES AND THE MEASURE OF DAMAGES BE WITHOUT REGARD TO THE CAUSE OR CAUSES RELATED THERETO, INCLUDING THE NEGLIGENCE OF ANY PARTY, WHETHER SUCH NEGLIGENCE BE SOLE, JOINT OR CONCURRENT, OR ACTIVE OR PASSIVE. TO THE EXTENT ANY DAMAGES REQUIRED TO BE PAID HEREUNDER ARE LIQUIDATED, THE PARTIES ACKNOWLEDGE THAT THE DAMAGES ARE DIFFICULT OR IMPOSSIBLE TO DETERMINE, OR OTHERWISE OBTAINING AN ADEQUATE REMEDY IS INCONVENIENT AND THE DAMAGES CALCULATED HEREUNDER CONSTITUTE A REASONABLE APPROXIMATION OF THE HARM OR LOSS.

Notwithstanding the foregoing, if GPA is the Defaulting Party, the Parties agree that the actual damages recoverable to Seller hereunder on account of an Event of Default by GPA shall include loss of Tax Benefits on a grossed up after tax basis, using the highest applicable United States marginal personal income tax rate.

Any assets transferred to GPA as required by the Interconnection Agreement shall require a one year warranty on all construction work and assignment of any manufacturer warranties from the transfer of such assets; provided, however, that the obligations and liability of Seller pursuant to such warranty and obligation to assign shall be subject to any limitations and exclusions set forth in the Interconnection Agreement.

ARTICLE NINE: CREDIT AND COLLATERAL REQUIREMENTS

9.1 Development Security.

In order to secure Seller's obligations prior to Commercial Operation of the Facility, hereunder, Seller shall post the Development Security in the form of a Letter of Credit or cash deposit in the amount of $2,375,805 The Development Security shall be held by GPA as security for Seller's obligations prior to the Commercial Operation Date including its obligation to satisfy the Financing Arrangement Deadline, but GPA may draw on the Development Security at any time only in the amounts and according to the schedule set forth in Section 4.4. Seller shall post the Development Security in accordance with the following terms and conditions:

(a) Seller shall post the Development Security within ten business (10) days following the Effective Date of this Agreement.

(b) If the Development Security is posted as a Letter of Credit, it shall be in substantially the form attached hereto as Appendix [F-1].

(c) Any Development Security posted in cash shall bear simple interest at a rate equal to the Interest Rate. The calculation and payment of any such interest shall be made in accordance with the procedure specified in Section 9.3 of this Agreement.

9.2 Forfeiture of Development Security.

In the event that the Commercial Operation Date does not occur on or before the Scheduled Commercial Operations Date, as extended pursuant to the terms of this Agreement, and to the extent Seller does not remit any COD Extension Payment or Daily Delay Liquidated Damages payment when due, then GPA shall be entitled to proceed against the Development Security in accordance with the terms thereof, to the extent of the amount(s) due and owing from time to time. Seller acknowledges and agrees that forfeiture of all or a portion of the Development Security, as provided herein, represents reasonable compensation to GPA for, among other things, transactions that it did not consummate because it relied on this Agreement with Seller, and GPA's potential failure to meet its applicable renewable energy portfolio requirements as a result of Seller's failure to achieve Commercial Operation by the Scheduled Commercial Operation Date. Notwithstanding the foregoing, if Seller terminates this Agreement prior to the Commercial Operation Date for the sole purpose of selling the Renewable Energy to a third party, GPA shall be entitled to both the Development Security and any other remedies available at law or in equity to the extent that GPA's actual damages exceed the value of the Development Security.

9.3 Return of Development Security.

At the end of the Term or upon the termination of this Agreement following the settlement and payment of any damages owed as a result of such termination, GPA shall return to Seller any remaining portion of the Development Security still held by GPA and to which GPA has no claim pursuant to the terms of this Agreement. If the Development Security was posted as a Letter of Credit, GPA shall return the Letter of Credit to Seller and Seller shall be entitled to immediately cancel such Letter of Credit. If the Development Security was posted in cash, GPA shall return to Seller the balance of the Development Security, together with daily interest at the Interest Rate, from and including the date that the Development Security was posted until, but not including, the date on which the Development Security is returned by GPA.

9.4 Performance Security.

In order to secure Seller's obligations after Commercial Operation of the Facility and during the Delivery Period hereunder, Seller shall post security in one of the forms contemplated below, each of which is deemed acceptable by GPA (the "Performance Security"):

(a) A Letter of Credit or cash in the amount of $4,751,610; or

(b) A Payment and Performance Bond in the amount of $4,751,610; or

(c) A subordinated second lien on the Sponsor Interest and Seller agrees to take such action as is reasonably required in order to perfect GPA's security interest in, and lien on, such collateral and any and all proceeds resulting therefrom; provided, that concurrently with the grant of such lien, GPA shall enter into such subordination, inter-creditor and other agreements with the senior financing parties as they as may reasonably require pursuant to which GPA shall agree that their rights and remedies pursuant to their second lien shall be subordinated in all respects to the senior first lien held by the financing parties; provided further, for the avoidance of doubt, there shall be no lien granted on the Tax Equity Investor Interest.

The Performance Security shall be held by GPA as security for Seller's obligations after the Commercial Operation Date and during the Delivery Period, but GPA may draw on the Performance Security at any time only in the amounts actually due and payable by Seller to GPA pursuant to this Agreement. Seller may (i) post the Performance Security by posting a combination or one or more of the above acceptable forms of credit support in an aggregate amount of $4,751,609.95, and (ii) at any time elect to substitute any form of one or more of the above acceptable forms of credit support for any existing Performance Security in which case GPA shall return the replaced Performance Security and reasonably cooperate with Seller in the exchange or cancellation of such credit support.

Seller shall post the Performance Security in accordance with the following terms and conditions:

(a) Seller shall post the Development Security within ten (10) business days following the Commercial Operation Date.

(b) If the Performance Security is posted as a Letter of Credit, it shall be in substantially the form attached hereto as Appendix [F-1].

(c) If the Performance Security is posted as a Payment and Performance Bond, it shall be in substantially the form attached hereto as Appendix [F-2].

(d) Any Performance Security posted in cash shall bear simple interest at a rate equal to the Interest Rate. The calculation and payment of any such interest shall be made in accordance with the procedure specified in Section 9.5 of this Agreement.

9.5 Return of Performance Security.

At the end of the Term or upon the termination of this Agreement following the settlement and payment of any damages owed as a result of such termination, GPA shall return to Seller any remaining portion of the Performance Security still held by GPA and to which GPA has no claim pursuant to the terms of this Agreement. If the Performance Security was posted as a Letter of Credit or a Payment and Performance Bond, then GPA shall return the Letter of Credit or Payment and Performance Bond to Seller and Seller shall be entitled to immediately cancel such Letter of Credit or Payment and Performance Bond. If the Performance Security was posted in cash, GPA shall return to Seller the balance of the Performance Security, together with daily interest at the Interest Rate, from and including the date that the Performance Security was posted until, but not including, the date on which the Performance Security is returned by GPA.

ARTICLE TEN: GOVERNMENTAL CHARGES

10.1 Cooperation.

Each Party shall use Commercially Reasonable Efforts to implement the provisions of and to administer this Agreement in accordance with the intent of the Parties to minimize all taxes, so long as neither Party is materially adversely affected by such efforts.

10.2 Governmental Charges.

Seller shall pay or cause to be paid all taxes imposed by any Government Authority ("Governmental Charges") on or with respect to the Renewable Energy or this Agreement arising prior to the Delivery Point. GPA shall pay or cause to be paid all Governmental Charges on or with respect to the Renewable Energy or this Agreement at and from the Delivery Point (other than ad valorem, franchise or income taxes which are related to the sale of the Renewable Energy and are, therefore, the responsibility of the Seller). In the event Seller is required by law or regulation to remit or pay Governmental Charges, which are GPA's responsibility hereunder, GPA shall promptly reimburse Seller for such Governmental Charges. If GPA is required by law or regulation to remit or pay Governmental Charges which are Seller's responsibility hereunder, GPA may deduct the amount of any such Governmental Charges from the sums due to Seller under Article Seven of this Agreement. Nothing shall obligate or cause a Party to pay or be liable to pay any Governmental Charges for which it is exempt under the law.

ARTICLE ELEVEN: ASSIGNMENT

11.1 Buyer Assignment.

Buyer may not assign this Agreement or assign or delegate its rights and obligations under this Agreement, in whole or in part, without Seller's consent, not to be unreasonably withheld.

11.2 Seller Assignment.

Seller may perform any of the following, without the consent of the Buyer (1) transfer, pledge, encumber, or assign this Agreement or the accounts, revenues, or proceeds hereof, in connection with any financing or other financial arrangements for the Facility, (2) transfer or assign this Agreement to any of its Affiliates in connection with a transfer of the Facility to such Affiliate, (3) transfer or assign this Agreement to any person or entity succeeding to all or substantially all of the assets of such Party, and (4) transfer or assign this Agreement to _____ or to any of its Affiliates; provided, that Seller provides Buyer prior notice of any such transfer or assignment and, with respect to any transfer to an such assignee of Seller, (A) such assignee posts replacement credit support in accordance with this Agreement, and (B) such Affiliate enters into an assignment and assumption agreement, in form and substance reasonably satisfactory to Buyer, pursuant to which Affiliate assumes all of Seller's obligations hereunder and otherwise agrees to be bound by the terms of this Agreement. Seller agrees that it will provide written notice to Buyer of any assignment of this Agreement by Seller within five (5) Business Days of the date of such assignment.

Except as stated above, neither this Agreement nor any of the rights, interests and obligations hereunder shall be assigned by Seller without the prior written consent of Buyer, which consent shall not be unreasonably withheld. Any assignment of this Agreement in violation of the foregoing shall be, at the option of Buyer, void.

11.3 Liability After Assignment.

A Party's assignment or transfer of rights or obligations pursuant to this Article 11 shall relieve said Party from any liability and financial responsibility for the performance thereof arising after any such transfer or assignment.

11.4 Transfers of Ownership.

Subject to any rights of first offer or refusal under this Agreement, during the Term, Seller shall not sell, transfer, assign or otherwise dispose of its interest in the Facility to any third-party absent (1) a transfer of this Agreement to such third-party and (2) Seller entering into an assignment and assumption agreement, in form and substance reasonably satisfactory to Buyer, with such third-party.

11.5 Successors and Assigns.

This Agreement and all of the provisions hereof are binding upon, and inure to the benefit of, the Parties and their respective successors and permitted assigns.

11.6 Collateral Assignment by Seller.

In the event that Seller pursuant to Section 11.2 (1) transfers, pledges, encumbers or collaterally assigns this Agreement to Seller's lenders, Seller shall provide written notice to Buyer of such transfer, pledge, encumbrance or assignment, including the address of Seller's lenders. In connection with any financing or refinancing of the Facility, Buyer at Seller's request shall negotiate in good faith with Seller and Seller's lenders to agree upon a reasonable direct agreement with respect to this Agreement, which shall be in form and substance reasonably agreed to by Buyer, Seller and Seller's lenders, and which shall, among other terms. include provisions substantially as follows:

(a) The Parties shall not amend or modify this Agreement in any material respect without the prior written consent of the Seller's lenders;

(b) Prior to exercising its right to terminate this Agreement as a result of an Event of Default by Seller, Buyer shall give notice of such Event of Default by Seller to the administrative agent of Seller's lenders, which Buyer has been provided written notice of; and

(c) Seller's lenders shall have the right, but not the obligation, to cure an Event of Default on behalf of Seller in accordance with the provisions of this Agreement, provided that Seller's lenders shall be provided an additional forty-five (45) days, from the end of the cure periods provided pursuant to Section 6.1, to effect a cure of such Event of Default.

ARTICLE TWELVE: MISCELLANEOUS

12.1 Term of Agreement; Conditions Precedent.

(a) The Term of this Agreement shall commence on the Effective Date and shall remain in effect for the duration of the Delivery Period, as set forth in Section 2.1, unless earlier terminated by either Party in accordance with this Agreement herein (the "Term"); provided, however, that such termination shall not affect or excuse the performance of either Party under any provision of this Agreement that by its terms survives any such termination.

(b) This Agreement shall be effective on the Effective Date provided that the Parties' obligations hereunder shall be subject to the satisfaction of the following conditions precedent:

(i) Receipt by GPA of a final, non-appealable approval of this Agreement by the Guam Public Utilities Commission ("PPA Approval");

(ii) Execution of the Interconnection Agreement by the Parties;

(iii) Receipt by GPA of a final, non-appealable approval of the Interconnection Agreement by the Guam Public Utilities Commission ("ICA Approval"); and

GPA shall submit this Agreement for approval by the Guam Public Utilities Commission within thirty (30) days of the Effective Date. GPA shall also submit the Interconnection Agreement for approval by the Guam Public Utilities Commission within thirty (30) days of the execution of the Interconnection Agreement. Each Party shall use Commercially Reasonable Efforts to satisfy the conditions precedent prior to the End Date; provided that neither Party shall be obligated to execute the Interconnection Agreement except on terms acceptable to such Party in its sole discretion. Seller shall have the right in its sole discretion to waive the conditions precedent set forth in section 12.1(b) above.

Either Party has the right to terminate this Agreement by Notice, which will be effective five (5) Business Days after such Notice is given, if the conditions precedent set forth above have not been satisfied (or waived in accordance herewith) within [**to be determined based on date of signing – between 60-120 days consistent with proposed project schedule**] days after the Effective Date ("End Date"). If either Party exercises its termination right pursuant to this Section 12.1(b), no Termination Damages will be due or owing by either Party and Seller will be entitled to a return of any Development Security provided to GPA.

12.2 Insurance.

At all times during the Term of this Agreement, Seller shall maintain at its own expense insurance policies for the Facility and its tangible assets in such amounts and against such risks and losses as are consistent with Good Utility Practices and those policies listed below. Such insurance policies shall be maintained only with insurers rated at least A- VII by MVI Best or comparable ratings agency.

- Commercial General Liability with limits of $1,000,000 including products, completed operations, and contractual for this Agreement. GPA shall be an additional insured. Seller shall grant a waiver of subrogation in favor of GPA.

- Commercial Auto Liability in the amount of $1,000,000 combined single limit for bodily injury and property damage. GPA shall be an additional insured. Seller shall grant a waiver of subrogation in favor of GPA.

- Excess Liability with limits of $5,000,000. GPA shall be an additional insured. Seller shall grant a waiver of subrogation in favor of GPA.

- Workers Compensation and Employers Liability with statutory limits and $1,000,000/$1,000,000/$1,000,000 respectively. Seller shall add a waiver of subrogation endorsement in favor of GPA.

- Pollution Liability, when applicable, with limits for $5,000,000. GPA is to be an additional insured. Seller shall grant a waiver of Subrogation in favor of GPA.

- Builder's Risk or Installation Floater, when applicable, is to be furnished by Contractor.

- Property insurance that will keep the premises, property, improvements, structures, and machinery and equipment on the premises insured, at a minimum, against with an all risk property policy for full replacement value as determined from time to time. Such insurance shall be issued by financially responsible insurers duly authorized to do business in Guam, and shall contain the standard form of waiver of subrogation. Nothing contained herein shall be construed as creating any liability or responsibility on the part of GPA for the adequacy of insurance coverage on the premises. As to any insurable risks of loss or damage to the premises not required to be insured hereunder, Seller shall bear the cost of the same. Seller shall be deemed to be self-insured as to the deductible or co-insurance amount applicable to such insurance coverage and shall pay any deductible or co-insurance amount applicable in the event of such loss or damage.

At all times after achieving COD, Seller may discontinue or otherwise cancel each of the aforementioned policies, except the following insurance policies, which shall be maintained with the limits set forth below:

- Commercial General Liability with limits of $1,000,000.00 including products, completed operations, and contractual for this Agreement. GPA shall be an additional insured. Seller shall grant a waiver of subrogation in favor of GPA.

- Excess Liability with limits of $3,000,000.00. GPA shall be an additional insured. Seller shall grant a waiver of subrogation in favor of GPA.

- Property insurance that will keep the premises, property, improvements, structures, and machinery and equipment on the premises insured, at a minimum, against with an all risk property policy for full replacement value as determined from time to time. Such insurance shall be issued by any financially responsible insurer duly authorized to do business in Guam, and shall contain the standard form of waiver of subrogation. Nothing contained herein shall be construed as creating any liability or responsibility on the part of GPA for the adequacy of insurance coverage on the premises. As to any insurable risks of loss or damage to the premises not required to be insured hereunder, Seller shall bear the cost of the same. Seller shall be deemed to be self-insured as to the deductible or co- insurance amount applicable to such insurance coverage and shall pay any deductible or co-insurance amount applicable in the event of such loss or damage.

- Seller is also required to carry Business Interruption and Extra Expense insurance in the amount of $1,000,000.00.

If the Facility is lost or damaged due to a casualty, then only if and to the extent Seller is not required to use available insurance proceeds to prepay any Facility Debt then outstanding, Seller shall re-build the Facility promptly and in a commercially reasonable manner if and to the extent technically feasible and commercially reasonable in

light of the available insurance proceeds and subject to the procurement by Seller of the consent of any lender or financing party pursuant to the Financing Documents if required thereunder; provided, however, (i) if the time to re-build the Facility would result in less than five (5) years remaining in the Delivery Period then (A) Seller shall have the option in lieu of re-building the Facility to pay to GPA the Buyout Payment and terminate this Agreement with no further costs or penalties provided that the Buyout Payment shall not in any case exceed the available insurance proceeds remaining following full prepayment of the Facility Debt, or (B) if Seller nevertheless elects to re-build the Facility then GPA shall reimburse Seller for any deductibles payable by Seller under its property insurance, and (ii) regardless of when the casualty event occurs, if Seller re-builds the Facility then the Delivery Period shall be extended for the greater of one (1) year or two (2) times the length of the interruption of the sale of Renewable Energy (pro rated based on the Minimum Production for partial interruptions), and the Contract Price shall be the price in effect, without escalation, at the beginning of the re-building period.

Within ten (10) Business Days after receipt of a request for the same from GPA, Seller shall deliver to GPA a certificate of insurance for any or all policies maintained in accordance with this Section 12.2, which certificate shall include at least the following information: (i) the name of the insurance company, policy number and expiration date; and (ii) the coverage and limits on coverage, including the amount of deductibles or self-insured retentions.

Seller shall furnish certificates of insurance and waiver of subrogation endorsement to GPA prior to commencement of construction of the Facility showing evidence of such coverage, including the statement to the effect that cancellation or termination of the insurance shall not be effective until at least thirty (30) days after receipt of written Notice to GPA. At all times Seller's insurance shall be primary and non-contributory to any other insurance that may be carried by GPA. The statement of limits of insurance coverage shall not be construed as in any way limiting the Seller's liability under this Agreement. GPA shall be an additional insured on all liability coverage and certificates of insurance shall clearly indicate such.

12.3 Indemnity.

To the extent permitted by law, each Party shall indemnify, defend and hold harmless the other Party from and against any Claims arising from or out of any event, circumstance, act or incident first occurring or existing during the period when control and title to the Renewable Energy is vested in such Party, unless a Claim is due to such Party's willful misconduct or gross negligence. To the extent permitted by law, each Party shall indemnify, defend and hold harmless the other Party against any Governmental Charges for which such Party is responsible under Article Ten. Notwithstanding anything to the contrary contained in this Agreement, no individual representative of either Party shall have any personal liability to the other Party as a result of the breach of any representation, warranty, covenant or agreement contained herein.

12.4 Site Access and Inspection of Records.

Seller shall provide GPA with reasonable access to the Facility site for purposes of review and inspection during regular business hours within a reasonable time after a request for the same is made by GPA. During such reviews and inspections, GPA representatives shall be permitted to review such records relating to the Facility and reasonably related to the performance of this Agreement, including Facility maintenance and operations logs. GPA shall have access to the Facility site for the limited purposes described herein, but Seller shall at all times remain responsible and liable for the control and operation of the Facility and the Facility site. GPA representatives shall follow Seller's safety procedures when accessing the Facility site and shall conduct themselves in a manner that will not interfere with the operation of the Facility. Seller will provide GPA with information about such safety procedures to enable GPA to comply with this requirement.

12.5 Audit.

Subject to Section 7.3, each Party has the right, at its sole expense and during normal working hours, to examine copies of the records of the other Party to the extent reasonably necessary to verify the accuracy of any statement, charge or computation made pursuant to this Agreement.

12.6 Confidentiality.

The Parties will make Commercially Reasonable Efforts to safeguard Confidential Information against disclosure by employing the same means to protect such Confidential Information as that Party uses to protect its own non-public, confidential or proprietary information, and otherwise in accordance with the provisions of this Section 12.6. Specifically, no receiving Party shall itself, or permit its employees, consultants and/or agents to disclose to any person, corporation or other entity the Confidential Information without the prior written consent of the Party providing the Confidential Information, except a receiving Party may distribute the Confidential Information to its and its Affiliates' board members, officers, employees, agents, consultants, actual or potential investors, actual or potential purchasers, actual or potential Facility lenders or financing parties, and others who have a need for such Confidential Information.

The Parties acknowledge, however, that a Party may need to disclose the Confidential Information in connection with its regulatory filings or to otherwise satisfy its governmental and regulatory requirements. In the event that a Party intends to disclose any of the Confidential Information to its regulatory authorities including, but not limited to, the Guam Public Utilities Commission, the FERC, or any employee, staff member, consultant, and/or agent of the foregoing, it shall give the other Party prompt prior written Notice of its intention so that the other Party may seek a protective order or other appropriate remedy. In addition, each Party specifically agrees not to use the other Party's name in connection with this Agreement or the Facility in any press releases, public meetings or hearings, or other public communications, including any release to any newswire service, without the express written consent of the other Party. The Parties anticipate that at some future time it may be in the best interests of one or both of them to disclose Confidential Information to the media and the Parties anticipate entering into a subsequent agreement that will govern the terms of such disclosure. The Parties expressly agree, however, that unless and until such subsequent agreement is executed between the Parties, the terms of this Agreement shall be binding with respect to such disclosure.

In the event that any Party receiving the Confidential Information becomes legally compelled (by deposition, interrogatory, request for documents, subpoena, civil investigative demand or similar process) to disclose any of the Confidential Information, the legally compelled Party shall give the other Party providing the Confidential Information prompt prior written Notice of such requirement so that the providing Party may seek a protective order or other appropriate remedy and/or waive compliance with the terms of this Agreement. In the event that such protective order or other remedy is not obtained, the providing Party waives compliance with the terms hereof.

Each Party acknowledges that the unauthorized disclosure of any Confidential Information may cause irreparable harm and significant injury that may be difficult to ascertain. Each Party therefore agrees that specific performance or injunctive relief, in addition to other legal and equitable relief, are appropriate remedies for any actual or threatened violation or breach of this Agreement, **although neither Party shall be entitled to any special, consequential, indirect or punitive damages as a result of a breach of this Agreement, whether a claim is based in contract, tort or otherwise**. The Parties agree that the respondent in any action for an injunction, specific performance decree or similar relief shall not allege or assert that the initiating Party has an adequate remedy at law in respect to the relief sought in the proceeding, nor shall the respondent seek the posting of a bond by the Party initiating the action. Under no circumstances will either Party's directors, management, employees, agents or consultants be individually liable for any damages resulting from the disclosure of Confidential Information in violation of the terms of this Agreement.

12.7 Notices.

All notices, requests, statements or payments ("Notices") shall be made as specified on Appendix B attached hereto and incorporated herein by reference. Notices (other than with respect to scheduling) shall, unless otherwise specified herein, be in writing and may be delivered by hand delivery, United States mail, overnight courier service or facsimile. Notice by facsimile or hand delivery shall be effective at the close of business on the day actually received, if received during business hours on a Business Day, and otherwise shall be effective at the close of business on the next Business Day. Notice by overnight United States mail or courier shall be effective on the next Business Day after it was sent. Notices relating to Facility operations and Scheduling, as required pursuant to Appendix H, may be given electronically and shall be deemed effective upon receipt; otherwise,

electronic notices shall not be effective unless affirmatively acknowledged in writing (including by reply e-mail) by the receiving Party. A Party may change its addresses by providing Notice of same in accordance herewith.

12.8 Purchase Option.

(a) Transfer During the Delivery Period. In the event that Seller desires to sell the Facility during the Delivery Period, Seller shall provide prior written Notice of the same to GPA, and agrees to engage in discussions with GPA during an exclusivity period with GPA if GPA desires to purchase the Facility. Within ninety (90) days following Seller's Notice to GPA of its intent to sell the Facility, GPA may deliver to Seller an indicative purchase price at which it would be willing to purchase the Facility. If GPA does not deliver the indicative purchase price within ninety (90) days, then Seller shall be free to transfer the Facility under any terms and conditions at any time thereafter. If GPA delivers the indicative purchase price within ninety (90) days, then the Parties shall negotiate exclusively for a period of up to sixty (60) days after GPA delivers the indicative purchase price. If no binding agreement is entered into by the Parties during such sixty (60)-day period then Seller shall be free to transfer the Facility to any person on materially comparable terms, including price, better than GPA's indicative offer, and neither Party shall have any further liability or obligation to the other Party in connection with such sale or as a result of the terminated negotiations. If Seller does not transfer the Facility on such basis within one (1) year following the end of the sixty (60)-day exclusive negotiation period, then the procedure in this paragraph shall apply to any subsequent sale of the Facility during the Term of this Agreement.

(b) Transfer or Extension of Delivery Period. GPA, by Notice delivered to Seller at least one hundred and eighty (180) days prior to the end of the Delivery Period, may either (i) extend the Term of this Agreement on a year-to-year basis, in which case the Contract Price during the extension of the Term shall be eighty percent (80%) of the LEAC Rate in effect from time to time during such extension (whereupon either Party may thereafter terminate this Agreement on one hundred and eighty (180) days' Notice prior to the end of any extension year), or (ii) purchase the Facility from Seller at eighty percent (80%) of the Appraisal Price, within thirty (30) days of the determination of the Appraisal Price. If GPA fails to send such Notice then this Agreement shall terminate in accordance with the terms hereof.

12.9 Alternative Dispute Resolution. All disputes arising under this Agreement are subject to the provisions of this Section 12.9.

(a) If a dispute, controversy or claim arises out of, relates, or is in connection with, this Agreement, or the breach, termination or validity thereof, whether sounding in contract, tort, unfair competition, equity, or other legal form, it shall be settled solely in the manner provided for in this Section 12.9. A meeting of the Parties shall be held within ten (10) Business Days after either Party gives the other Party written Notice of the dispute. The Notice shall set forth in reasonable detail the aggrieved Party's position and its proposal for resolution of the dispute. A representative of each Party who has authority to resolve the dispute shall be in attendance at all meetings. If the dispute is not resolved within thirty (30) days after the first meeting of the Parties, or such other period of time as to which the Parties agree, the dispute shall be settled by arbitration in the manner provided in this Section 12.9). A Party's failure to comply with this Section 12.9 shall entitle the other Party to recover its costs and reasonable attorney's fees in any judicial proceedings that circumvent this dispute resolution provision. Settlement discussions undertaken under this Section 12.9 shall be privileged and confidential and no position taken or communication made by a party during or in connection with said settlement discussions may be presented as evidence in the ensuing arbitration should settlement fail to achieve a negotiated result.

(a) Arbitration. Any disputes between the Parties and/or their respective representatives involving or arising under a Claim relating to the terms of this Agreement, or the breach thereof, may be submitted to binding arbitration, whether such Claims sound in contract, tort or otherwise. The arbitration shall be conducted in accordance with the Federal Arbitration Act and the then prevailing Commercial Arbitration Rules of the American Arbitration Association. The validity, construction, and interpretation of this Agreement to arbitrate and all procedural aspects of the arbitration conducted pursuant hereto shall be decided by the arbitrator(s). Submission shall be made upon the request of either Party. Within twenty (20) calendar days of the receipt by the respondent of service of the Notice of arbitration, the Parties shall select one (1) arbitrator by mutual consent. If the Parties are unable to agree upon a single arbitrator, there shall be three (3) arbitrators. Specifically, in the event the Parties cannot agree upon a single arbitrator, both the claimant and the respondent shall appoint one (1) arbitrator within ten (10) calendar days after written Notice by either Party that three (3) arbitrators shall be necessary. The two (2) arbitrators so appointed shall then select the third arbitrator within twenty (20) calendar days, who shall be the chairperson, of the tribunal. The chairperson shall be a person who has over eight (8) years of experience in energy-related transactions, and none of the arbitrators shall have been previously employed by either Party or have any direct interest in either Party or the subject matter of the arbitration, unless such conflict is expressly acknowledged and waived in writing by both Parties. The chairperson shall be bound to schedule and hear the dispute in its entirety within three (3) Months after his/her appointment and shall render the panel's decision within thirty (30) calendar days after the hearing concludes. It is agreed that the arbitration proceeding shall be conducted in Honolulu, Hawaii, or another neutral location mutually agreed to by the Parties; provided, however, either Party may provide all witnesses, deponents and other ancillary personnel by video telecast or other electronic media, it being the intent of the Parties to minimize expenses of conducting the arbitration. It is further agreed that the arbitrator(s) shall have no authority to award consequential, treble, exemplary, or punitive damages of any type or kind regardless of whether such damages may be available under any law or right, with the Parties hereby affirmatively waiving their rights, if any, to recover or claim such damages. The compensation and any costs and expenses of the arbitrators shall be borne equally by the Parties. Any arbitration proceedings, decision or award rendered hereunder and the validity, effect and interpretation of this arbitration provision shall be governed by the Federal Arbitration Act. The award shall be final and binding on the Parties and judgment upon any award may be entered in any court of competent jurisdiction. The Parties agree that all information exchanged as a result of any proceeding as described herein shall be deemed Confidential Information.

(b) Judicial Relief. Either Party may petition a court of appropriate jurisdiction, as described in Section 12.11, for non-monetary relief relating to any claim of breach of this Agreement in order to prevent undue hardship relating to any such claimed breach pending the appointment of an arbitration panel as described in this Section 12.9.

12.10 Governing Law.

THIS AGREEMENT AND THE RIGHTS AND DUTIES OF THE PARTIES HEREUNDER SHALL BE GOVERNED BY AND CONSTRUED, ENFORCED AND PERFORMED IN ACCORDANCE WITH THE LAWS OF GUAM**,** WITHOUT REGARD TO PRINCIPLES OF CONFLICTS OF LAW.

12.11 Jurisdiction and Costs.

Subject to the mandatory arbitration provisions herein, with respect to any proceeding in connection with any claim, counterclaim, demand, cause of action, dispute and controversy arising out of or relating to this Agreement, the Parties hereby consent to the exclusive jurisdiction of the local and federal courts in the Territory of Guam. Both Parties waive any right to trial by jury in such action. In the event such judicial proceedings are

instituted by either Party, the prevailing Party shall be entitled to award of its costs and reasonable attorneys' fees incurred in connection with such proceedings.

12.12 Financial Accounting Standards.

Under the latest interpretations of the Financial Accounting Standards Board's Interpretation No. 46(R) (FIN No. 46(R)), "Consolidation of Variable Interest Entities," GPA may be required to consolidate a Seller's entity for which GPA has entered into a long-term power purchase agreement. Seller agrees to provide all information needed in order for GPA to determine whether or not the special purpose entity which owns the Seller's generating facility must be consolidated by GPA under FIN No. 46(R). If it is determined that GPA needs to consolidate such special purpose entity, Seller agrees to provide all information needed to comply with the consolidation requirements of FIN 46(R) in a timely manner every calendar quarter. If GPA is required to consolidate the special purpose entity that owns the Seller's generating facility in its financial statements, Seller agrees to provide access to any needed records and personnel, as requested, so GPA's independent auditor, Deloitte & Touche LLP, can conduct financial statement audits in accordance with generally accepted auditing standards, as well as internal control audits in accordance with Section 404 of the Sarbanes-Oxley Act of 2002.

12.13 Forward Contract.

The Parties intend that in any relevant proceedings, each be regarded as a forwards trading merchant in respect of this Agreement and that each Transaction be a forwards contract for purposes of the United States Bankruptcy Code, 11 U.S.C. §§ 101 et seq., as amended from time to time.

12.14 General.

No delay of a Party in the exercise of, or the failure to exercise, any rights under this Agreement shall operate as a waiver of such rights, a waiver of any other rights under this Agreement or a release of the other Party from any of its obligations under this Agreement. Any provision declared or rendered unlawful by any applicable court of law or regulatory agency or deemed unlawful because of a statutory change will not otherwise affect the remaining lawful obligations that arise under this Agreement; and provided, further, that if such an event occurs, the Parties shall use their best efforts to reform this Agreement in order to give effect to the original intention of the Parties. The term "including" when used in this Agreement shall be by way of example only and shall not be considered in any way to be in limitation. The headings used herein are for convenience and reference purposes only. The indemnity provisions of this Agreement shall survive the termination of this Agreement for the period of the applicable statute of limitations. The audit provisions of this Agreement shall survive the termination of this Agreement for a period of twelve (12) Months. This Agreement shall be binding on each Party's successors and permitted assigns.

12.15 Entire Agreement; Amendment.

This Agreement, together with any appendices, schedules, and any written supplements hereto constitutes the entire agreement between the Parties relating to the subject matter hereof. This Agreement shall be considered for all purposes as prepared through the joint efforts of the Parties and shall not be construed against one Party or the other as a result of the preparation, substitution, submission or other event of negotiation, drafting or execution hereof. Except to the extent herein provided for, no amendment or modification to this Agreement shall be enforceable unless reduced to writing and executed by both Parties.

12.16 Appendices.

The following Appendices are included in this Agreement for all purposes:

Appendix A	Contract Price and Minimum Production
Appendix B	Notice Addresses
Appendix C	Ramp Rate Control and Microgrid

Appendix D	Independent Engineers
Appendix E	[Not Used]
Appendix F	Form of Letter of Credit
Appendix G	[Not Used]
Appendix H	Scheduling and Coordination
Appendix I	Base Conditions and Facility Test Protocol
Appendix J	Interconnection Agreement
Appendix K	Additional Terms regarding Ramps Rates and Dispatch Down
Appendix L	Resolutions of Consolidated Committee on Utilities

12.17 Special Provisions.

It is the policy of GPA not to discriminate on the basis of age, race, sex, color, national origin, or disability in its hiring and employment practices, or in admission to, access to, or operation of its programs, services, and activities. With regard to all aspects of this Agreement, Seller certifies and warrants it will comply with this policy. No person shall be excluded from participation in, be denied benefits of, be discriminated against in the admission or access to, or be discriminated against in treatment or employment in GPA's contracted programs or activities, on the grounds of such person's handicap or disability, age, race, color, religion, sex, national origin, or any other classification protected by federal or Guam law; nor shall any person be excluded from participation in, be denied benefits of, or be otherwise subjected to discrimination in performance of contracts with GPA or in the employment practices of GPA's contractors. Accordingly, all persons entering into contracts with GPA shall, upon request, be required to show proof of such nondiscrimination and to post notices of non-discrimination in conspicuous places that are available to all employees and applicants.

Seller hereby represents that Seller has not been retained or retained any persons to solicit or secure a contract from GPA upon an agreement or understanding for a contingent commission, percentage, or brokerage fee, except for retention of bona fide employees or bona fide established commercial selling agencies for the purpose of securing business. Breach of the provisions of this section is, in addition to a breach of this Agreement, a breach of ethical standards, which may result in civil or criminal sanction, debarment or suspension from being a contractor or subcontractor under any other contract with GPA and any Government Authority.

It shall be a breach of ethical standards for any person to offer, give or agree to give any employee or former employee, or for any employee or former employee to solicit, demand, accept or agree to accept from another person, a gratuity or an offer of employment in connection with any decision, approval, disapproval, recommendation, preparation of any part of a program requirement or a purchase request, influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing or in any other advisory capacity in any proceeding or application, request for ruling, determination, claim or controversy or other particular matter, pertaining to any program requirement of a contract or subcontract or to any solicitation or proposal therefor. It shall be breach of ethical standards for any payment, gratuity or offer of employment to be made by or on behalf of a subcontractor under a contract to the prime contractor or higher tier subcontractor or a person associated therewith, as an inducement for the award of a subcontractor or order. Breach of the provisions of this paragraph is, in addition to a breach of this Agreement, a breach of ethical standards, which may result in civil or criminal sanction, debarment or suspension from being a contractor or subcontractor under any other contract with GPA and any Governmental Authority.

Seller warrants that no person providing services on behalf of Seller or in its employment who has been convicted of a sex offense under the provisions of Chapter 25 of Title 9 of the Guam Code Annotated, or convicted of an offense

defined in Article 2 of Chapter 28 of Title 9 of the Guam Code Annotated regardless of the jurisdiction in which the conviction was obtained, shall provide services on behalf of Seller relative to this Agreement. If any person employed by Seller and providing services under this Agreement is convicted subsequent to the date of this Agreement, then Seller warrants that it will notify GPA of the conviction within twenty-four hours of the conviction, and will immediately remove such convicted person from providing services under this Agreement. If Seller is found to be in violation of any of the provisions of this paragraph, then GPA shall give Notice to Seller to take corrective action. Seller shall take corrective action within twenty-four hours of Notice from GPA, and Seller shall notify GPA when action has been taken. If Seller fails to take corrective steps within twenty-four hours of Notice from GPA, then GPA in its sole discretion may suspend this Agreement temporarily.

12.18 Waiver of Immunity.

To the extent that GPA may in any jurisdiction claim for itself or its assets or revenues immunity from suit, execution, attachment (whether in aid of execution, before judgment or otherwise) or other legal process and to the extent that in any such jurisdiction there may be attributed to GPA or its assets or revenues such immunity (whether or not claimed), GPA agrees not to claim and irrevocably waives such immunity to the full extent permitted by the laws of such jurisdiction.

IN WITNESS THEREOF, the Parties hereto made and executed this Agreement, signed by their duly authorized officers or individuals, as of the dates listed below.

GUAM POWER AUTHORITY **GPA or Buyer**		**HANWHA ENERGY CORPORATION Seller**	
By:	_____	By:	_____
Name:	_____	Name:	_____
Title:	_____	Title:	_____
Date:	_____	Date:	_____

[Signature Page to Renewable Energy Purchase Agreement]

APPENDICES

APPENDIX A

CONTRACT PRICE AND MINIMUM PRODUCTION

Contract Year	Annual Price ($/MWH)	Guaranteed Net Annual Generation (MWH/YR)
1	65.99	72,005
2	66.65	71,831
3	67.32	71,245
4	67.99	70,865
5	68.67	70,485
6	69.36	70,306
7	70.05	69,724
8	70.75	69,344
9	71.46	68,693
10	72.17	68,780
11	72.89	68,202
12	73.62	67,821
13	74.36	67,440
14	75.10	67,252
15	75.85	66,678

Contract Year	Annual Price ($/MWH)	Guaranteed Net Annual Generation (MWH/YR)
16	76.61	66,296
17	77.38	65,915
18	78.15	65,722
19	78.93	65,151
20	79.72	64,770
21	80.52	64,388
22	81.33	64,190
23	82.14	63,623
24	82.96	63,241
25	83.79	62,859
26		
27		
28		
29		
30		

ESS MICRO GRID

Contract Year	Micro Grid Operation Price ($)
1	1,287,082
2	1,264,710
3	1,244,969
4	1,225,229
5	1,206,804
6	1,188,380
7	1,171,271
8	1,155,479
9	1,139,686
10	1,123,894
11	1,108,101
12	1,093,625
13	1,079,149
14	1,064,672
15	1,051,512

Contract Year	Micro Grid Operation Price ($)
16	1,038,352
17	1,025,191
18	1,012,031
19	998,871
20	987,026
21	975,182
22	963,338
23	951,493
24	939,649
25	927,805

APPENDIX B

NOTICE ADDRESSES

APPENDIX C

RAMP RATE CONTROL & MICROGRID

I. Description of Storage Unit

A. Specifications. The Facility shall include the Storage Unit as more fully described in the technical specifications set forth in Schedule C-1 attached hereto ("Storage Technical Specifications").

B. Operations. The operation of the Storage Unit shall at all times be subject to the operating restrictions and limitation set forth in Schedule C-2 attached hereto ("Storage Operating Restrictions"). At no time will Seller be expected to operate the Storage Unit in a manner that is inconsistent with the Storage Operating Restrictions notwithstanding any contrary terms in this Agreement.

C. Metering. Seller will install and maintain a separate meter for the Storage Unit and the operation and maintenance of such meter shall be governed by section 7.4 of this Agreement. The Storage Unit will not serve station use and Seller shall separately meter station use.

D. Augmentation. Seller shall be entitled to determine the actions necessary to achieve the Guaranteed Storage Output (as defined below) from time to time, including without limitation, whether to augment the batteries included in the Storage Unit solely as determined by Seller in its discretion.

E. Ramp Rate Control. The Storage Unit shall be operated such that the charging and output of the Storage Unit does not exceed 1% of the Project's nameplate capacity per minute; provided that Seller shall only be obligated to achieve such ramp rate as set forth in the table below on an average basis during each Contract Year ("Agreed Ramp Rate").

Contract Year	Agreed Ramp Rate
1	98.00%
2	97.90%
3	97.80%
4	97.70%
5	97.60%
6	97.50%
7	97.40%
8	97.30%
9	97.20%
10	97.10%
11	97.00%
12	96.90%
13	96.80%
14	96.70%
15	96.60%
16	96.50%
17	96.40%
18	96.30%
19	96.20%

20	96.10%
21	96.00%
22	95.90%
23	95.80%
24	95.70%
25	95.60%

F. Ramp Rate Control Performance

Energy Storage System will control the ramping rate under 1% of the Facility Capacity (i.e. 600 kW) per minute and the control period [for the ramping rate] will be no more than 1 second. Detailed ramping control algorithm will be finalized through discussions between GPA and Seller after the final design of the Energy Storage System is put in place but no later than one (1) month before the commissioning test of the Facility will start.

Evaluation of Performance Verification:

During the Delivery Period, on an annual basis, Seller shall carry out the evaluation process for the performance verification of the Energy Storage System, including power test and 1% ramp-rate control test in the presence of GPA, once every year with annual data storage in the Facility database and GPA SCADA. [Note: specify what is to be measured and equation below.]

$$\left| \frac{\sum_{t-\Delta t}^{t} PV_i(x)}{\Delta t} - \frac{\sum_{t-2\Delta t}^{t-\Delta t} PV_i(x)}{\Delta t} \right| > P_{ramp}$$

Where:

- Δt = 60 seconds
- $PV_i(x)$: PV generation at time t
- i = 1,2,3, ….., 60 seconds
- P_{ramp}: active power considering ramp rate limit per 1min window

Ramp Rate Control shall be based on a plus or minus (±) 1% of rated power of 60MW plant ("Measured Value"). Ramp Rate Control Failure means a plus or minus (±) 2% of Measured Value.

Ramp Control Penalty:

Penalty will apply to failure to meet the 1% ramp per minute rate for both under and over power. Ramp-Control must be controlled within 1 second. The failure percentage is as below:

- Failure Percentage (FP) = (E1 – E2)

Symbol	Item	Unit	Remarks
E1	Guaranteed value of Succeed Ramp-Rate	%	Proposal (offer) shown in table below

E2	Output of Ramp Rate Controlled	%	1% ramping requirement with 2% measurement error

If FP is greater than 0 (zero), then Penalty shall be calculated as follow:

- Under Power Failure Penalty = (AF_U) *(C_U)*(FP_U)
- Over Power Failure Penalty= (AF_O) *(C_O)*(FP_O)

Symbol	Item	Value	Unit
C_U	Nominal Ramp Down Cost	1.96	$/min/MW
C_O	Nominal Ramp Up Cost	0.49	$/min/MW

The penalty is calculated only for the portion exceeding the guaranteed value.

Where:

- Failure Power of Under Power (FP_U) = |Ramp Rate Required Power – CP| [MW]
- Failure Power of Over Power (FP_O) = |CP – Ramp Rate Required Power| [MW]
- Controlled Power (CP) =1 minute Average Power of 1% Ramp Rate Controlled by 1 second
- Acceleration Factor of Under Power (AF_U) = 0.5
- Acceleration Factor of Over Power (AF_O) = 0.5

G. Time Shifting. As described herein, the Storage Unit will be charged during the day and discharged during the night and in this manner will provide GPA with delayed deliveries of Renewable Energy.

E. Communication Protocols. Seller and GPA shall mutually agree (in writing) upon communication protocols to allow GPA to have access to SCADA information and a real-time data feed with respect to the Facility.

II. Delivery of Stored Energy for Dispatch

A. Charging. During the Delivery Period, Seller shall (i) operate and maintain the Storage Unit, (ii) charge the Storage Unit with a portion of the Renewable Energy generated by the Project (referred to as Charging Energy), and (iii) then shall store, discharge and deliver the Stored Energy to the Delivery Point. Charging Energy shall be drawn from the Renewable Energy generated by the Project and Stored Energy when delivered shall count towards the Minimum Production of the Project each Contract Year. In no case shall Seller be penalized for a reduction in the Renewable Energy delivered based on Charging Energy used to charge the Storage Unit.

B. Discharging. Seller shall sell and deliver, or cause to be delivered, and GPA shall purchase and receive, or cause to be received, all Stored Energy discharged by the Storage Unit, at the Delivery Point, and GPA shall pay Seller the Annual Storage Payment as compensation for Seller's operation of the Storage Unit and deliver of such Quantity of Stored Energy to the Delivery Point.

Stored Energy shall be discharged each day during the Delivery Period beginning from a time out of the 6 options as follows: 6 pm, 7 pm, 8 pm, 9 pm, 10 pm and 11 pm local time and shall be delivered to the Delivery

Point except during any Excused Hours and Weather Hours. The Discharge Energy shall be fixed as 5MW and the Delivery Period ends once all remaining Energy in the Microgrid has been discharged until the designated SOC of the Microgrid has been met.

If GPA desires to change the daily start time of the dispatch of the Storage Unit at any time during the Delivery Period, then GPA shall deliver Notice to Seller of such proposed change at least seven (7) days prior to the date on which Seller is being asked to implement such change ("Dispatch Instruction"). Seller shall not be obligated to accept and implement Dispatch Instruction requested by GPA if (i) such Dispatch Instruction is not consistent with the Operating Parameters, Good Utility Practices, any Planned Outages, applicable law or any limits set forth in any permit or approval received by Seller in connection with the Facility, or (ii) implementation of such dispatch instructions would limit, interfere with or prevent Seller's operation and maintenance of the Facility and/or its performance of its obligations under this Agreement, including without limitation, Seller's obligations with respect to the Guaranteed Dispatch Rate and/or Minimum Production and any make-up amounts Seller reasonably expects to deliver in any Contract Year, or (iii) implementation of such dispatch instructions would limit, interfere with or prevent Seller's performance of its obligations under the Interconnection Agreement. Any Dispatch Instruction delivered by GPA shall remain in effect until another valid Dispatch Instruction is delivered by GPA to Seller in accordance herewith.

Contract Year	Estimated Annual Stored Energy to be discharged from the Storage Unit and delivered to the Delivery Point referred to herein as the "Guaranteed Dispatch Rate"
1	6,570
2	6,554
3	6,501
4	6,466
5	6,431
6	6,415
7	6,362
8	6,327
9	6,293
10	6,276
11	6,223
12	6,188
13	6,153
14	6,136
15	6,084
16	6,049
17	6,015
18	5,997
19	5,945
20	5,910
21	5,875
22	5,857
23	5,805
24	5,771
25	5,736

The annual estimate of Stored Energy to be delivered shall be subject to the terms set forth in part II.C below.

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C. Guaranteed Storage Output. The Storage Unit is expected to allow Seller to deliver a minimum number of MWhs of Stored Energy each Contract Year as set forth above (such annual MWh production is the "Guaranteed Dispatch Rate").

Seller during the Delivery Period shall (i) during any Contract Year, deliver to GPA at least ninety percent (90%) of the Guaranteed Dispatch Rate, and (ii) for any consecutive six (6) Contract Years during the Delivery Period, deliver to GPA at least ninety percent (90%) of the aggregate Guaranteed Dispatch Rate during such period (which shall include make-up amounts generated and delivered in any years in excess of one hundred percent (100%) of the Guaranteed Dispatch Rate for such year) (any such time period a "Storage Measurement Period" and each such guaranteed amount of delivered Stored Energy during any Stored Measurement Period, the "Guaranteed Storage Output"). Any shortfall of Stored Energy (expressed in MWhs/year) from the applicable Guaranteed Storage Output during a Storage Measurement Period shall be deemed a "Storage Deficiency Amount."

The Annual Storage Payment for the following Contract Year shall be adjusted for any Storage Deficiency Amount which is not due to Excused Hours or Weather Hours (except, in the case of Weather Hours, as set forth below) ("Shortfall Adjustment"). The Shortfall Adjustment will be calculated as set forth below:

Adjusted Annual Storage Payment = (Storage Deficiency Amount/Guaranteed Dispatch Rate) x Annual Storage Payment

For purposes of clarity, Seller shall be entitled to deliver to GPA Renewable Energy or Stored Energy in the amount of such Storage Shortfall in subsequent time periods (even if such make-up amounts are in excess of the Guaranteed Dispatch Rate for such subsequent year), and this Agreement may be extended as necessary for a period of up to six (6) months to allow Seller to make up any Storage Deficiency Amount; however, there shall be no Shortfall Adjustment for such individual Contract Year unless such Stored Energy delivered hereunder is less than [ninety percent (90%) of the] Guaranteed Storage Output for the applicable Storage Measurement Period, and such shortfall is not due to Excused Hours or Weather Hours (except, in the case of Weather Hours, as set forth below).

In the event Shortfall Adjustment applies to a Storage Measurement Period of six (6) rolling Contract Years, then such Shortfall Adjustment shall be reduced by the amount of any Shortfall Adjustment paid for any Contract Year during such six (6) year Storage Measurement Period. The Shortfall Adjustment to the Annual Storage Payment shall be Seller's sole liability and obligation, and GPA's sole right and remedy, with respect to Seller's failure to deliver the Guaranteed Output during any Storage Measurement Period.

To the extent any Storage Deficiency Amount is due to Weather Hours, Seller's sole liability and GPA's sole remedy shall be to deliver thereafter Renewable Energy or Stored Energy equal to such Storage Deficiency Amount attributable to Weather Hours, calculated in accordance with Appendix K (which includes a sample calculation for a hypothetical Storage Measurement Period). If any portion of a Storage Deficiency Amount due to Weather Hours is not made up in the five (5) Contract Years beginning in the first Contract Year following the Contract Year in which the Weather Hours Storage Deficiency Amount occurred, then a Shortfall Adjustments shall be applied for the remaining Storage Deficiency Amount. Notwithstanding the foregoing, with respect to any Storage Deficiency Amount that is due to Weather Hours, Seller shall have the option, at any time prior to the expiration of the five (5) Contract Year make-up period, to elect to apply any remaining Shortfall Adjustment in its entirety. If the Storage Deficiency Amount arising as a result of Weather Hours occurs in the last five (5) years of the Delivery Period, then unless Seller exercises its option to apply any remaining Shortfall Adjustment early, the Delivery Period shall be extended as necessary, for a period of up to six (6) months, to achieve a make-up period of five (5) Contract Years as described above.

Seller shall be entitled to sell, and GPA shall purchase, quantities of Stored Energy for which Shortfall Adjustments are paid hereunder, during any remaining Storage Measurement Period during the Delivery Period. During any Contract Year, all Renewable Energy delivered by Seller to GPA in excess of the Guaranteed Dispatch Rate shall be credited against makeup of any outstanding Storage Adjustment, with oldest Storage Adjustment made up first.

To the extent any Storage Adjustment is due to Excused Hours, Seller shall be excused from any liability with respect thereto.

D. Remedies. For Seller's failure to deliver Stored Energy as required hereunder, GPA's remedies shall be as set forth in part II.C above. For GPA's failure to purchase and receive Stored Energy as required hereunder, Seller shall in addition have all other remedies available at law or in equity.

E. Title and Risk of Loss. Seller shall be responsible for any costs or charges imposed on or associated with the Stored Energy or its delivery up to the Delivery Point. GPA shall be responsible for any costs or charges imposed on or associated with Stored Energy or its receipt at and from the Delivery Point. Title to and risk of loss of Stored Energy from the Facility delivered to the Delivery Point shall transfer to GPA at the Delivery Point. Seller warrants that it will deliver to Buyer Stored Energy free and clear of all liens, security interests, claims and encumbrances or any interest therein or thereto by any person arising prior to the Delivery Point.

III. Compensation for Storage Unit Operations

Compensation to Seller for the operation of the Storage Unit during the Delivery Period shall consist of an Annual Storage Payment as set forth in Appendix A. The Annual Storage Payment shall be paid in accordance with Sections 7.1, 7.2 and 7.5 of this Agreement.

The Annual Storage Payment shall only be subject to reduction or offset for, and GPA's sole remedy for Seller's failure to deliver Stored Energy and Seller's operation of the Storage Unit shall be, the application of any Shortfall Adjustment in accordance with Section II.C above.

Schedule C-1
Technical Specifications for Storage Unit

- Microgrid Capacity: 20MW PCS, 32.5MWh usable energy (Actual installed capacity shall be determined at later stage)
- The Microgrid will normally perform the ramp rate control as required, but if the Power Plant output exceeds 22.5MW, it will charge the excess amount into the Microgrid.
- The Microgrid will also force charge the Microgrid if the weather conditions are not sufficient enough to make the Power Plant to reach production amounts above 22.5MW to ensure that the Microgrid will discharge every year the agreed on discharge amount.

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Schedule C-2
Operating Parameters for Storage Unit

- The output that the Facility delivers to the grid shall be limited to 22.5MWac throughout the Delivery Period.
- [Seller to provide additional Operating Parameters]

APPENDIX D

NOT USED

APPENDIX E

NOT USED

APPENDIX F-1

FORM OF LETTER OF CREDIT

(Provided is sample which may be replaced by Bank / Financial Institution Form)

(*Bank or Financial Institution*)

_____, 201__

Irrevocable Standby Letter of Credit No. ____

Beneficiary:
Guam Power Authority
P.O. Box 2977
Guam 96932-2977
Attn:
Applicant:

Dear _____:

We hereby establish for the account of (*Company Name*) ("Applicant") our irrevocable standby letter of credit in your favor for an amount of USD 4,000,000 (Four Million United States Dollars). Applicant has advised us that this letter of credit is issued in connection with the Renewable Energy Purchase Agreement, dated as of _____, 2012, by and between the Applicant, and Guam Power Authority (the "Beneficiary"). This letter of credit shall become effective immediately on the date hereof and shall expire on _____ [*the date that is XX days after the Effective Date of the PPA*] (such date, or such later date(s) as determined by Applicant in accordance with the next succeeding sentence, the "Expiration Date"). The Expiration Date can be extended on one or more occasions by written notice to us from the Applicant, provided that such written notice is received at least 10 days prior to the Expiration Date. This letter of credit is subject to the following:

1. Funds under this letter of credit shall be made available to Beneficiary against its draft drawn on us in the form of Annex 1 hereto, accompanied by (a) a certificate in the form of Annex 2 hereto, appropriately completed and signed by an authorized officer of Beneficiary, dated the date of presentation, and (b) the original of the letter of credit (the "Accompanying Documents") and presented at our office located at (*Bank/Financial Institution Address*) attention _____. (or at any other office which may be designated by us by written notice delivered to you). A presentation under this letter of credit may be made only on a day, and during hours, in which such office is open for business (a "Business Day"). If we receive your draft and the Accompanying Documents at such office on any Business Day, all in strict conformity with the terms and conditions of this letter of credit, we will honor the same by making payment in accordance with your payment instructions on the third succeeding Business Day after presentation.

2. This letter of credit shall terminate upon the earliest to occur of (i) our receipt of a notice in the form of Annex 3 hereto signed by an authorized officer of Beneficiary, accompanied by this letter of credit for cancellation, or (ii) our close of business at our aforesaid office on the Expiration Date, or if the Expiration Date is not a Business Day, then on the succeeding Business Day. This letter of credit shall be surrendered to us by you upon the earlier of presentation or expiration.

3. This letter of credit is issued and subject to the International Standby Practices 1998 (ISP98) International Chamber of Commerce Publication No. 590, and as to matters not addressed by ISP98, shall be governed by and construed in accordance with the laws of the State of New York and application of U.S. Federal Law.

4. This letter of credit sets forth in full our undertaking, and such undertaking shall not in any way be modified, amended, amplified or limited by reference to any document, instrument or agreement referred to herein, except for Annexes 1, 2 and 3 hereto and the notices referred to herein; and any such reference shall not be deemed to incorporate herein by reference any document, instrument or agreement except as otherwise provided in this paragraph 5.

5. Communications with respect to this letter of credit shall be in writing and shall be addressed to us at the address referred to in paragraph 1 above, and shall specifically refer to this letter of credit no. _____.

Very truly yours,

_____

Authorized signature
(*Bank or Financial Institution*)

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ANNEX 1
TO LETTER OF CREDIT NO. _____

under LETTER OF CREDIT No. _____

To:
(*Bank or Financial Institution*)
(*Bank/Financial Institution Address*)
Attn: _____

[*Month, Day , Year*]

On Sight

Pay to Guam Power Authority U.S. $ _____ [not to exceed amount available to be drawn]

Wire to:
Bank's Name: Bank of Guam
Bank's Location: 111 Chalan Santo Papa St., Hagatna, Guam 96910
Bank's Mailing Address: P.O. Box BW, Hagatna, Guam 96932
Account Name: Guam Power Authority Revenue Fund Account
Acct. No.: (to be provided)
Routing No.: (to be provided)

For value received and charge to account of Letter of Credit No. _____ of (*Company Name*)

GUAM POWER AUTHORITY

By: _____

Name: _____

Title: _____

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ANNEX 2
TO LETTER OF CREDIT NO. _____

Drawing under Letter of Credit No. _____

Date: _____

To:
(*Bank or Financial Institution*)
(*Bank/Financial Institution Address*)
Attn: _____

The undersigned, a duly authorized officer of the Guam Power Authority, ("Beneficiary"), hereby certifies on behalf of Beneficiary to (*Bank or Financial Institution*) and to (*Company Name*) (the "Applicant") with reference to irrevocable standby Letter of Credit No. _____ (the "Letter of Credit") issued for the account of (*Company Name*) ("Applicant"), that:

1) pursuant to the Renewable Energy Purchase Agreement, dated as of _____, 201__, by and between Applicant and Beneficiary and as of the date hereof Beneficiary is entitled to draw under the Letter of Credit;

2) by presenting this certificate and the accompanying sight draft, Beneficiary is requesting that payment in the amount of $_____, as specified on said draft, be made under the Letter of Credit by wire transfer or deposit of funds into the account specified on said draft; and

3) the amount specified on the sight draft accompanying this certificate does not exceed the remaining amount to which Beneficiary is entitled to draft under said Renewable Energy Purchase Agreement.

In witness whereof, Beneficiary has caused this certificate to be duly executed and delivered by its duly authorized officer as of the date and year written below.

Date: _____

GUAM POWER AUTHORITY

By: _____
Name: _____
Title: _____

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ANNEX 3
TO LETTER OF CREDIT NO. _____

Notice of surrender of Letter of Credit No. _____

Date: _____

To:
(*Bank or Financial Institution*)
(*Bank/Financial Institution Address*)
Attn: _____

Re: Letter of Credit No. _____ issued for the account of (*Company Name*)

Ladies and Gentlemen:

We refer to your above-mentioned irrevocable standby Letter of Credit (the "Letter of Credit"). The undersigned hereby surrenders the Letter of Credit to you for cancellation as of the date hereof. No payment is demanded of you under this Letter of Credit in connection with this surrender.

Very truly yours,

GUAM POWER AUTHORITY

By: _____

Name: _____

Title: _____

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APPENDIX F-2

To be provided

APPENDIX G

NOT USED

APPENDIX H

SCHEDULING AND COORDINATION PROCEDURES

The Parties acknowledge that as of the Effective Date GPA has not yet established protocols for scheduling (firm or intermittent) power to permit solar projects to participate in GPA's scheduling process. As soon as practicable, Seller and GPA shall establish such protocols by mutual agreement in writing. Seller shall use Commercially Reasonable Efforts to comply with all additional reasonable protocols issued by GPA relating to available resources during the Delivery Period, and GPA shall consult with Seller (and take into account and accommodate Seller's reasonable comments) in connection with the preparation of any such additional protocols. The foregoing shall be subject to Section 4.16 of this Agreement.

1.1 General

(a) Notices. Seller shall submit to GPA notices and updates required under this Agreement regarding the Project's status, including, but not limited to, outage requests, forced outages and forced outage reports. If a web based system is not available, Seller shall promptly submit such information to GPA (in order of preference) telephonically, by electronic mail, or facsimile transmission to the personnel designated to receive such information. **Need to include PSCC requirements for Hourly Reports, Daily Production Reports, etc.**

(b) GPA Settlements. GPA shall be responsible for all settlement functions within GPA related to the Project.

(c) Resource Data Template. Seller shall provide the data to the GPA that is required for GPA's resource data template (or successor data system) for the Project consistent with this Agreement. Neither Party shall change such data without the other Party's prior written consent.

(d) Annual Delivery Schedules. No later than forty-five (45) days before (A) the first day of the first Contract Year and (B) the beginning of each calendar year for every subsequent Contract Year during the Delivery Term, Seller shall provide a non-binding forecast of each month's average-day expected Actual Renewable Energy for the following calendar year.

(e) Monthly Delivery Schedules. Ten (10) Business Days before the beginning of each month during the Delivery Term, Seller shall provide a non-binding forecast of each day's average expected Actual Renewable Energy for the following month ("Monthly Delivery Forecast") .

(f) Daily Delivery Schedules. By 5:30 AM Guam Prevailing Time on the Business Day immediately preceding the date of delivery, Seller shall provide GPA with a non-binding forecast of the Project's available energy (a "Day-Ahead Forecast"). A Day-Ahead Forecast provided in a day prior to any non-Business Day(s) shall include Schedules for the immediate day, each succeeding non-Business Day and the next Business Day. Each Day-Ahead Forecast shall clearly identify, for each hour, Seller's estimate of the Project's available energy. Seller may not change such Schedule past the deadlines provided in this section except in the event of a Forced Outage or Schedule change imposed by GPA, in which case Seller shall promptly provide GPA with a copy of any and all updates to such Schedule indicating changes from the then-current Schedule. These notices and changes to the Schedules shall be sent to GPA's on-duty scheduling coordinator. If Seller fails to provide GPA with a Day-Ahead Forecast as required herein, then for such unscheduled delivery period

only GPA shall rely on the delivery Schedule provided in the Monthly Delivery Forecast or GPA's best estimate based on information reasonably available to GPA and Seller shall be liable for Scheduling and delivery based on such Monthly Delivery Forecast or GPA's best estimate.

(g) Hourly Delivery Schedules. Notwithstanding anything to the contrary herein, in the event Seller makes a change to its Schedule on the actual date of delivery for any reason, including Forced Outages (other than a scheduling change imposed by GPA), that results in a change to its deliveries (whether in part or in whole), Seller shall notify GPA immediately by calling GPA's on-duty scheduling coordinator. Seller shall notify GPA of Forced Outages in accordance with this Agreement. Seller shall keep GPA reasonably informed of any developments that are reasonably expected to affect either the duration of the outage or the availability of the Project during or after the end of the outage.

1.2 Dispatch Down/Curtailment.

(a) GPA shall have the right to order Seller to curtail deliveries of Renewable Energy from the Project to the Delivery Point pursuant to a Notice of a Dispatch Down as defined in Appendix K delivered to Seller, provided that the value attributable to any Renewable Energy [in an aggregated quantity of more than _2% of the Minimum Production for any Contract Year] which is not delivered during such curtailment periods, whether for transmission unavailability, operational dispatch or pre-set ramping parameters or otherwise, shall be reimbursed to Seller as provided below.

(b) GPA shall have the right to order Seller to curtail deliveries of Stored Energy from the Microgrid Unit to the Delivery Point pursuant to a Notice of a Dispatch Down as defined in Appendix K delivered to Seller, provided that GPA shall remain obligated to pay Seller the complete Annual Microgrid Payment without adjustment notwithstanding such curtailments, whether for transmission unavailability, operational dispatch or pre-set ramping parameters or otherwise.

(c) Seller shall have the right in its discretion to make up any curtailed quantities of Renewable Energy as a result of a Dispatch Down ("Dispatch Down Makeup Production"), for which it is not reimbursed pursuant to this Appendix H, in the first and any subsequent Contract Year in which at least the Minimum Production is delivered and to extend the Term to the extent necessary, but not to exceed six (6) months, to make up any curtailed quantities. The Contract Price for the Contract Year in which the make-up occurs shall apply to Dispatch Down Makeup Production up to the Minimum Production amount for the Contract Year in which the Dispatch Down originally occurred. For production quantities in excess of the Minimum Production for the Contract Year in which the Dispatch Down originally occurred, the price will be the lesser of the then current LEAC Rate or the Contract Price in the Contract Year in which the make-up occurs. Production in excess of Minimum Production for any Contract Year will first be applied to any previous years' Deficiency Amounts, then to Dispatch Down Makeup Production, then treated under this Agreement as production in excess of Minimum Production.

(d) GPA shall provide to Seller all technical information necessary to justify and support each Dispatch Down.

(e) GPA shall pay Seller, on the date payment would otherwise be due in respect of the month in which any such curtailment in excess of 2% of Minimum Production for such Contract Year occurred], an amount equal to the product of the Contract Price times the amount of Renewable Energy that Seller could reasonably have delivered to

GPA but for such curtailment ("Lost Revenue"). During the Contract Year-end annual true-up process, any payments made by GPA to the Seller for production (MWh) in excess of the Minimum Production for that Contract Year, whether such production results from actual generation surpluses or Lost Revenue, will be adjusted to reflect the lesser of the Contract Price for the then current Contract Year or then current LEAC Rate. For purposes of clarification, for any given Contract Year, GPA will not be required to pay the Contract Price on amounts of production beyond the Minimum Production if the Contract Price for that Contract Year is higher than the LEAC Rate for that Contract Year. Seller agrees to reduce the Project's Renewable Energy as set forth in such a Notice of Dispatch Down that meets the requirements set forth herein.

(f) For purposes of clarification, no curtailment by GPA, as a result of a warranted failure of or defect in the interconnection facilities transferred by Seller to GPA pursuant to the Interconnection Agreement, during the one-year warranty term thereof, shall count against the 2% curtailment threshold set forth above. During the one-year warranty term of the interconnection facilities transferred, any curtailment by GPA which results from such failure of or defect in the interconnection facilities transferred will not be eligible for reimbursement by GPA to Seller, Lost Revenue payments, or Dispatch Down Makeup Production in future Contract Years.

1.3 Outage Notification.

(a) Planned Outages. Seller shall schedule Planned Outages in accordance with Good Utility Practices and with the prior written consent of GPA, which consent may not be unreasonably withheld, conditioned or delayed. Nonetheless, the Parties acknowledge that in all circumstances, Good Utility Practices shall dictate when Planned Outages should occur. Seller shall notify GPA of Seller's proposed Planned Outage schedule for the Project for the following calendar year by submitting a written Planned Outage schedule no later than October 1st of each year during the Delivery Period. The Planned Outage schedule is subject to GPA's concurrence, which concurrence may not be unreasonably withheld, conditioned or delayed. GPA shall promptly respond with its approval or with reasonable modifications to the Planned Outage schedule and Seller shall use its Commercially Reasonable Efforts in accordance with Good Utility Practices to accommodate GPA's requested modifications. Notwithstanding the submission of the Planned Outage schedule described above, Seller shall also submit a completed form of outage notification to GPA no later than fourteen (14) days prior to each Planned Outage and reasonably appropriate outage information or requests to GPA. Seller shall contact GPA with any requested changes to the Planned Outage schedule if Seller believes the Project must be shut down to conduct maintenance that cannot be delayed until the next scheduled Planned Outage consistent with Good Utility Practices. Seller shall not change its Planned Outage schedule without GPA's concurrence, not to be unreasonably withheld, conditioned or delayed.

(b) Forced Outages. Within two hours of any Forced Outage Seller shall submit a completed form of outage notification to GPA in accordance with the instructions shown on the agreed form and shall submit outage information to GPA. Seller shall not substitute Renewable Energy from any other source for the output of the Project during a Forced Outage.

(c) Coordination with GPA. GPA shall cooperate with Seller in arranging and coordinating all Project outages.

1.4 Operations Logs and Access Rights.

(a) Operations Logs. Seller shall maintain a log of all material operations and maintenance information on a daily basis. Such log shall include, but not be limited to, information on power production, efficiency, availability, maintenance performed, outages, results of inspections, manufacturer recommended services, replacements, and control settings or adjustments of equipment and protective devices. Seller shall maintain this information for at least two (2) years and shall provide this information electronically to GPA within five days of GPA's request.

(b) Access Rights. GPA, its authorized agents, employees and inspectors shall have the right of ingress to and egress from the Project during normal business hours upon reasonable advance notice and for any purposes reasonably connected with this Agreement.

APPENDIX I

BASE CONDITIONS AND FACILITY TEST PROTOCOL

[Since this bid is opened to different renewable resources GPA is requiring bidders to provide their own test protocols for GPA's review and approval.]

APPENDIX J
INTERCONNECTION AGREEMENT
(TO BE PROVIDED UPON ITS EXECUTION)

APPENDIX K

ADDITIONAL TERMS REGARDING WEATHER HOURS AND DISPATCH DOWN

WEATHER HOURS

For each applicable period, Seller shall calculate (1) the expected production of the Facility using the historical Weather Data from "WeatherBank PGUM_2004-PRES_solar data" provided in bid Amendment 2 (the "Expected Historical Production") and (2) the expected production of the Facility using the actual Weather Data (the "Expected Actual Production"). Seller than then obtain the quotient, rounded to the fourth decimal place (the "Production Factor"), equal to the Expected Actual Production divided by the Expected Historical Production. If the Production Factor is greater than one (1), then no Weather Hours shall be deemed to have occurred. However, if the Production Factor is less than one (1), then Weather Hours shall be deemed to have occurred. The portion of any Deficiency Amount (as defined in the Agreement) attributable to such Weather Hours shall be the difference equal to (A) the aggregate Minimum Production amount for that period minus (B) the product of (x) the Production Factor and (y) the aggregate Minimum Production amount for that period. The Deficiency Amount due to weather shall not be penalized.

The Deficiency Amount due to weather shall be audited annually by an independent auditor to be selected and the cost shared by both Parties.

DISPATCH DOWN

Buyer shall pay Seller, on the date payment would otherwise be due in respect of the day in which any curtailment is initiated by GPA for reasons of Dispatch Down, an amount equal to the Contract Price times the amount of Renewable Energy that Seller could reasonably have delivered to Buyer but for such Dispatch Down. The determination of the curtailed amount associated with any Dispatch Down shall be calculated as follows:

1) Identification of weather conditions for the period of Dispatch Down
   For any period the Facility was Dispatched Down, Seller shall document the Weather Data associated therewith. ("Weather Data" means solar irradiation, wind speed, and ambient temperatures.)

2) Curtailed amount calculation
   a. Seller shall use PVSyst energy simulation software or other software as agreed by the Parties to generate hypothetical generation amounts for the Dispatch Down period (curtailed amount MWh) by utilizing the Weather Data.

   b. In addition to "Annual Facility Test" (as described in Section 4.9 of this Agreement), GPA shall be entitled to check the accuracy of the equipment associated with the Weather Data once in each Contract Year as agreed with Seller.

APPENDIX L

RESOLUTIONS OF CONSOLIDATED COMMITTEE ON UTILITIES

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Exhibit F

GPA Contract No. _____

RENEWABLE ENERGY
PURCHASE AGREEMENT

BETWEEN
GUAM POWER AUTHORITY
AND

[HANWHA ENERGY CORPORATION][1]

[1] Please note that it is expected that Hanwha Energy Corporation will establish a special-purpose entity to execute the PPA

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RENEWABLE ENERGY
PURCHASE AGREEMENT
BETWEEN
GUAM POWER AUTHORITY
AND
[HANWHA ENERGY CORPORATION][2]

THIS RENEWABLE ENERGY PURCHASE AGREEMENT (the "Agreement"), effective as of last date set forth on the signature page hereto (the "Effective Date"), is entered into by and between and Guam Power Authority, ("GPA" or "Buyer") and [Hanwha Energy Corporation] [3], a _____ ("Seller"). The purpose of this Agreement is to establish the terms and conditions under which Seller shall sell and GPA shall purchase Renewable Energy and associated Renewable Energy Credits, as defined herein. In this Agreement, Seller and GPA may be individually referred to as a "Party" or collectively as "Parties."

Recitals

WHEREAS, Seller desires to sell to GPA at the Delivery Point a portion of the Renewable Energy and associated RECs from the Facility and GPA desires to buy the same from the Seller at the Delivery Point.

WHEREAS, on the date hereof, Seller and GPA have entered into a Renewable Energy Purchase Agreement as to the remaining capacity of the Facility (the "Additional PPA").

Therefore, for good and valuable consideration, including, without limitation, the covenants and agreements of the Parties contained in this Agreement, the receipt and sufficiency of which consideration is acknowledged, the Parties agree as follows:

ARTICLE ONE: DEFINITIONS

The following definitions apply to this Agreement:

1.1 "Actual Renewable Energy" means the actual output of the Facility (expressed in MWhs), measured at the Delivery Point, including all Renewable Energy and all Stored Energy, over any Production Measurement Period. Actual Renewable Energy shall be measured by the Seller Metering Equipment, and adjusted as applicable in accordance with Section 7.4.

1.2 "Affiliate" means, with respect to any party, any other party (other than an individual) that, directly or indirectly, through one or more intermediaries, controls, or is controlled by, or is under common control with, such party. For this purpose, "control" means the direct or indirect ownership of fifty percent (50%) or more of the outstanding capital stock or other equity interests having ordinary voting power.

1.3 "Annual Facility Test" has the meaning set forth in Section 4.9.

1.4 "Annual Microgrid Payment" means, as to each Contract Year, the amount set forth in Appendix A.

1.5 "Appraisal Price" means the average of three (3) appraisals of the market value of the Facility at the end of the Delivery Term, delivered by three (3) independent appraisers qualified by experience and expertise to

[2] Please note that it is expected that Hanwha Energy Corporation will establish a special-purpose entity to execute the PPA

[3] Please note that it is expected that Hanwha Energy Corporation will establish a special-purpose entity to execute the PPA

determine the arm's length market value of the Facility. If the Parties do not agree on the independent appraisers then they shall be determined by arbitration in accordance with Section 12.9.

1.6 "Bankrupt" means with respect to any entity, such entity (i) files a petition or otherwise commences, authorizes or acquiesces in the commencement of a proceeding or cause of action under any bankruptcy, insolvency, reorganization or similar law, or has any such valid petition filed or commenced against it, (ii) makes an assignment or any general arrangement for the benefit of creditors, (iii) otherwise becomes bankrupt or insolvent (however evidenced), (iv) has a liquidator, administrator, receiver, trustee, conservator or similar official appointed with respect to it or any substantial portion of its property or assets, or (v) is generally unable to pay its debts as they fall due.

1.7 "Bid Security" or "Bid Bond" means the $150,000.00, which is the amount of the security provided by Seller in connection with its initial bid to GPA for the Project.

1.8 "Business Day" means any day except a Saturday, Sunday, a Federal Reserve Bank holiday or an official Guam holiday. A Business Day shall open at 8:00 a.m. and close at 5:00 p.m. local time for the relevant Party's principal place of business. The relevant Party, in each instance unless otherwise specified, shall be the Party by whom the Notice or payment or delivery is to be received.

1.9 "Buyout Payment" means, with respect to Seller's election not to re-build the Facility pursuant to Section 12.2, an amount equal to: Minimum Production x the number of Contract Years (or portion thereof) remaining in the Delivery Period x Incremental Price

1.10 "Change Event" has the meaning set forth in Section 4.16(c).

1.11 "Charging Energy" means Renewable Energy generated by the Facility and used to charge the Microgrid Unit as contemplated in Appendix C.

1.12 "Claiming Party" has the meaning set forth in Section 4.9.

1.13 "Claims" means all claims or actions, threatened or filed and, whether groundless, false, fraudulent or otherwise, that directly or indirectly relate to the subject matter of an indemnity, and the resulting losses, damages, expenses, attorneys' fees and court costs, whether incurred by settlement or otherwise.

1.14 "COD Extension" has the meaning set forth in Section 4.2(a).

1.15 "COD Extension Payment" has the meaning set forth in Section 4.2(a).

1.16 "Commercially Reasonable" or "Commercially Reasonable Efforts" means, with respect to any purchase, sale, decision, or other action made, attempted or taken by a Party, such efforts as a reasonably prudent business would undertake for the protection of its own interest under the conditions affecting such purchase, sale, decision or other action, consistent with Good Utility Practices, including, without limitation, electric system reliability and stability or other regulatory mandates relating to renewable energy portfolio requirements, the cost of such action (including whether such cost is reasonable), the amount of notice of the need to take a particular action, the duration and type of purchase or sale or other action, and the commercial environment in which such purchase, sale, decision or other action occurs. "Commercially Reasonable" or "Commercially Reasonable Efforts" shall be reviewed and determined based upon the facts and circumstances known, or which could have been known with the exercise of reasonable efforts, at the time that a sale, purchase, or other action is taken and shall not be based upon a retroactive review of what would have been optimal at such time.

1.17 "Commercial Operation" has the meaning set forth in Section 4.1.

1.18 "Commercial Operation Date" or "COD" means the date that Commercial Operation of the Project has been achieved in accordance with Section 4.1.

1.19 "Confidential Information" means all information, whether written or oral, that is disclosed or otherwise available in connection with this Agreement or the performance by either Party of any of its duties hereunder, except any information which: (i) at the time of disclosure or thereafter is generally available to the public (other than as a result of a disclosure by any Party in violation of this Agreement); (ii) was available to any Party on a non-confidential basis from a source other than the Party hereto providing the Confidential Information, provided that such source is not bound by a confidentiality agreement that protected the Confidential Information; or (iii) has been independently acquired or developed by any Party without violating any of its obligations under this Agreement.

1.20 "Contract Price" means the price in U.S. Dollars (unless otherwise provided for) rounded to the nearest $0.01, to be paid by GPA to Seller for the purchase of the Renewable Energy, as described in Appendix A.

1.21 "Contract Year" means the annual period, beginning on the Commercial Operation Date, and renewing thereafter on each anniversary of the Commercial Operation Date.

1.22 "Conventional Energy Resource" is an energy resource that is non-renewable in nature, such as natural gas, coal, oil, and uranium, or electricity that is produced with energy resources that are not Renewable Energy resources.

1.23 "Credit Rating" means, with respect to any entity, the rating then assigned to such entity's unsecured, senior long-term debt obligations (not supported by third party credit enhancements) or if such entity does not have a rating for its senior unsecured long-term debt, then the rating then assigned to such entity as an issuer rating by S&P, Moody's or any other rating agency agreed by the Parties.

1.24 "Cure Plan" has the meaning set forth in Section 4.7.

1.25 "Daily Delay Liquidated Damages" has the meaning set forth in Section 4.2(b).

1.26 "Defaulting Party" has the meaning set forth in Section 6.1.

1.27 "Deficiency Amount" has the meaning set forth in Section 4.8

1.28 "Delivery Period" means the period of delivery under this Agreement, commencing on the Commercial Operation Date and continuing for the Term, as such period may be extended in accordance with this Agreement.

1.29 "Delivery Point" means the point at which the Renewable Energy (including Stored Energy) will be delivered and received, as specified in Section 2.1 herein, or such other delivery point as may be agreed to by the Parties in writing.

1.30 "Development Security" means the security deposit during construction of the renewable project or facility prior to Commercial Operation Date. The Development Security shall be 50% of the total projected payment for the 1st contract year based on the contractor's 1st Contract Year energy rate and the guaranteed energy production. Refer to Section 9.1 for additional requirements.

1.31 "Dispatch Down" means any curtailment is initiated by GPA for reasons other than Force Majeure or Seller Event of Default.

1.32 "Early Termination Date" has the meaning set forth in Section 6.2.

1.33 "Effective Date" means the date first set forth above.

1.34 "Eligible Renewable Energy Resources" are applications of the following defined technologies that displace Conventional Energy Resources that would otherwise be used to provide electricity to GPA's customers: biogas electricity generator, biomass electricity generator, fuel cell that use only renewable fuels, geothermal

generator, hybrid wind and solar electric generator, landfill gas generator, solar electricity resources, wind generator and such other generally accepted renewable energy resources.

1.35 "Emergency" means any abnormal interconnection or system condition (including, without limitation, equipment or transmission limitations and constraints caused by thermal limits, stability, voltage, or loop flows) that Buyer determines in accordance with Good Utility Practices): (a) requires automatic or immediate manual operation to prevent or limit loss of Buyer's system or generation supply; (b) could adversely affect the reliability of the Buyer system or generation supply; (c) could adversely affect the reliability of any interconnected electric system; or (d) could otherwise pose a threat to public safety.

1.36 "End Date" has the meaning given in Section 12.1(b).

1.37 "Environmental Attributes" means environmental characteristics that are attributable to Renewable Energy, including credits; credits towards achieving local, national or international renewable portfolio standards; green tags; Renewable Energy Credits; greenhouse gas or emissions reductions, credits, offsets, allowances or benefits; actual SO2, NOx, CO2, CO, Carbon, VOC, PM_{10}, mercury, and other emissions avoided; and any and all other green energy or other environmental benefits associated with the generation of Renewable Energy (regardless of how any present or future law or regulation attributes or allocates such characteristics). Such Environmental Attributes shall be expressed in kWh or, as applicable in the case of emissions credits, in tonne equivalent or other allowance measurement. Environmental Attributes does not include Tax Benefits, or any energy, capacity, reliability, or other power attributes used by Seller to provide electricity services.

1.38 "EPC Contractor" means the contractor(s) under the engineering, procurement and construction contract for the Project.

1.39 "Equitable Defenses" means any bankruptcy, insolvency, reorganization and other laws affecting creditors' rights generally, and with regard to equitable remedies, the discretion of the court before which proceedings to obtain same may be pending.

1.40 "Event of Default" has the meaning set forth in Section 6.1.

1.41 "Excused Hours" means the hours in the applicable Production Measurement Period (i) in which Seller has declared Force Majeure, (ii) during any Planned Outage or Forced Outage but subject to an aggregate maximum of six hours per Contract Year; (ii) in which Seller has initiated a Dispatch Down or (iii) in which Seller's delivery to GPA of Renewable Energy is adversely affected as a result of failure by GPA to perform its obligations under this Agreement or the Interconnection Agreement or in which GPA does not accept delivery of Renewable Energy for any reason.

1.42 "Facility" means all of the following: the Project, as defined in Section 2.1 of this Agreement, the purpose of which is to produce Renewable Energy including the Microgrid Unit, Seller's Interconnection Facilities and all equipment and other tangible assets, land rights and contract rights reasonably necessary for the construction, operation, and maintenance of the electric generating facility that produces the Renewable Energy being sold under this Agreement.

1.43 "Facility Capacity" has the meaning set forth in Section 2.1.

1.44 "Facility Test" has the meaning set forth in Section 4.1(e).

1.45 "Facility Debt" means the obligations of Seller or its Affiliates to any Facility lender, tax equity investor or other financing party pursuant to the Financing Documents, including without limitation, principal of, premium and interest on indebtedness, reimbursement obligations regarding letters of credit, obligations under financing leases, fees, expenses or penalties, amounts due upon acceleration, prepayment or restructuring, swap or interest rate hedging obligations and breakage costs and any claims or interest due with respect to any of the foregoing. Facility Debt does not include trade debt or obligations incurred in the ordinary course of business.

1.46 "FERC" means the Federal Energy Regulatory Commission or any successor government agency.

1.47 “Financing Documents” means the loan and credit agreements, notes, bonds, indentures, security agreements, lease financing agreements, mortgages, deeds of trust, interest rate exchanges, swap agreements and other documents relating to the development, bridge, construction and/or permanent debt financing or a tax equity investment for the Facility (including any portfolio debt financing of which the Facility is included), including any credit enhancement, credit support, working capital financing, or refinancing documents, and any and all amendments, modifications, or supplements to the foregoing that may be entered into from time to time at the discretion of Seller and/or its Affiliates in connection with development, construction, ownership, leasing, operation or maintenance of the Facility.

1.48 “Forced Outage” means the shutdown or unavailability of the Facility, or a portion thereof other than as a Planned Outage, for reasons including, but not limited to, unanticipated equipment breakdown, human error, or Emergency conditions. A Forced Outage shall not include any Outage that may be deferred consistent with Good Utility Practices and without causing safety risk damage to equipment or additional costs.

1.49 “Forced Outage Notice” has the meaning set forth in Section 4.12(b).

1.50 Force Majeure” means an event or circumstance which prevents one Party from performing its obligations under this Transaction, which event or circumstance was not anticipated as of the date the Transaction was agreed to, which is not within the reasonable control of, or the result of the negligence of, the Claiming Party, and which, by the exercise of due diligence, the Claiming Party is unable to overcome or avoid or cause to be avoided. So long as the requirements of the preceding sentence are met, a “Force Majeure” event may include, but shall not be limited to, any act of God, an act or threatened act of the public enemy, blockade, accidents of navigation or breakdown or injury of vessels, accidents to harbors, docks, canals or other assistances to, or adjuncts of, shipping or navigation, perils of the sea, air crash, shipwreck, train wrecks or other failures or delays of transportation, nuclear emergency, radioactive contamination, ionizing radiation, release of hazardous waste or materials, sabotage, invasion, riot, civil disturbance or disobedience, flood, drought, military ordinances or archaeological discoveries at the Project site, change in applicable law or interpretation or application thereof, failure or delay by any Governmental Authority in issuing or granting any required clearance, approval, arrangement, or permit, an earthquake, storm, fire, flood, tidal wave, storm, wind, explosion or any similar cataclysmic occurrence, lightning, epidemic, war (imminent, declared or otherwise), terrorism or riot. Notwithstanding the foregoing, Force Majeure shall not be based on (i) the loss of Buyer's markets; (ii) Buyer's inability economically to use or resell the Renewable Energy purchased hereunder; (iii) the loss or failure of Seller's supply, including materials or equipment, unless such loss or failure is caused by a Force Majeure event (iv) the delay in or inability of Seller to obtain financing or economic hardship of any kind; or (v) Seller's ability to sell the Renewable Energy at a price greater than the Contract Price or Buyer’s ability to purchase the Renewable Energy at a price less than the Contract Price; or (vi) strike or other labor dispute. Neither Party may raise a claim of Force Majeure based in whole or in part on curtailment by a transmission provider unless (i) such Party has contracted for firm transmission with a transmission provider for the Renewable Energy to be delivered to or received at the Delivery Point and (ii) such curtailment is due to "force majeure" or "uncontrollable force" or a similar term as defined under the transmission provider's tariff.

1.51 “Force Majeure Extension” has the meaning set forth in Section 4.2(c).

1.52 “Good Utility Practices” means any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result of the lowest reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method or act to the exclusion of all others, but rather to be generally accepted and consistently adhered to acceptable practices, methods, or acts.

1.53 “Governmental Authority” means any federal, territorial or local government body; any governmental, quasi-governmental, regulatory or administrative agency, commission, body or other authority exercising or entitled to exercise any administrative, executive, judicial, legislative, policy, regulatory or taxing authority or power; or any court or governmental tribunal.

1.54 “Governmental Charges” has the meaning set forth in Section 10.2.

1.55 “GPA Delay” means any delay by GPA in performing an obligation under this Agreement or under the Interconnection Agreement which results in a delay to Seller achieving COD. A GPA Delay is not an Event of Default unless it is otherwise so designated in this Agreement.

1.56 “Guaranteed Output” has the meaning given in Section 4.8.

1.57 “Incremental Price” means, at the time of its calculation, the LEAC Rate minus the Contract Price, provided, however, if the LEAC Rate is less than the Contract Price then the Incremental Price shall be deemed to be zero. Sample calculations of the Incremental Price are shown in Schedule III to Appendix K.

1.58 “Independent Engineer” shall mean one of the engineering firms set forth in Appendix D hereto, and any other independent engineer or engineering firm, nationally recognized in the United States and having knowledge and expertise in the United States generation industry (including specifically the design and construction of utility scale solar photovoltaic power projects), and which is mutually agreed to by the Parties.

1.59 “Interconnection Agreement” means the agreement for interconnection service relating to the Facility between GPA and Seller, executed and delivered as of the Effective Date in the form attached hereto as Appendix J.

1.60 “Interest Rate” means, for any date, the lesser of (a) the per annum rate of interest equal to the prime lending rate as may from time to time be published in The Wall Street Journal under "Money Rates" on such day (or if not published on such day on the most recent preceding day on which published), plus two percent (2%) and (b) the maximum rate permitted by applicable law.

1.61 “kWh” means kilowatt hour.

1.62 “LEAC Rate” means the “Fuel Recovery Charge” (expressed in US$/MWh) as set forth in GPA’s most recent approved tariff in effect as of any date of determination of the LEAC Rate under this Agreement.

1.63 “Letter(s) of Credit” means one or more irrevocable standby letters of credit issued by a U.S. commercial bank or a foreign bank with a U.S. branch with such bank having a Credit Rating of at least A- from S&P or A3 from Moody's, in substantially the form set forth in Appendix [F-1] hereto; provided, however that such form may be modified by the issuing bank as long as such modifications are acceptable to the beneficiary in its sole discretion. Costs of a Letter of Credit shall be borne by the applicant for such Letter of Credit.

1.64 “Merger Event” means, with respect to a Party, that such Party consolidates or amalgamates with, or merges into or with, or transfers substantially all of its assets to another entity and (i) the resulting entity fails to assume all of the obligations of such Party hereunder or (ii) the benefits of any credit support provided pursuant to this Agreement fail to extend to the performance by such resulting, surviving or transferee entity of its obligations hereunder unless such credit support is replaced by the resulting, surviving or transferee entity in accordance with this Agreement.

1.65 “Minimum Production” has the meaning set forth in Section 4.8.

1.66 “Month” means a calendar Month. The term “Monthly” shall have a meaning correlative to a Month.

1.67 “Moody's” means Moody's Investor Services, Inc. or its successor.

1.68 “MW” or “MWh” means megawatt or megawatt hour, in each case rounded to the nearest whole MW or MWh.

1.69 “NAR” means the North American Renewables Registry.

1.70 “NAR Operating Procedures” means any and all guidelines, procedures, requirements and obligations established by the NAR, including the terms of use, operating procedures, and fee schedules, as such may be amended from time to time.

1.71 “Non-Defaulting Party” has the meaning set forth in Section 6.

1.72 "Notice” has the meaning set forth in Section 12.7.

1.73 “Outage” means the period during which the Facility or a portion thereof is out of service.

1.74 “Outside Commercial Operation Date” has the meaning set forth in Section 4.2(b).

1.75 “Payment and Performance Bond” means one or more payment and performance bonds issued by an insurance company or other institution having an investment grade Credit Rating from S&P, Moody’s or Fitch, in substantially the form set forth in Appendix [F-2] hereto; provided, however that such form may be modified by the issuing entity as long as such modifications are acceptable to the beneficiary in its sole discretion.

1.76 “Planned Outage” means any Outage that is not a Forced Outage, and refers to the shutdown or unavailability of the Facility or a portion thereof for inspection or maintenance in accordance with an advance schedule.

1.77 “Production Measurement Period” has the meaning set forth in Section 4.8.

1.78 “Project” has the meaning set forth in Section 2.1.

1.79 “QRE” means the Qualified Reporting Entity as such term is defined in the NAR Operating Procedures.

1.80 “Quantity” means the actual quantity of Renewable Energy (including Stored Energy) sold by Seller and purchased by and delivered to GPA pursuant to this Agreement. The Quantity shall be measured based on the metered data from the Seller Metering Equipment at the Delivery Point.

1.81 “Renewable Energy” means energy derived from a Renewable Energy Resource.

1.82 “Renewable Energy Credit” or “REC” means the unit created to track kWh derived from an Eligible Renewable Energy Resource or kWh equivalent of Conventional Energy Resources displaced by distributed renewable energy resources if and to the extent recognized under applicable law.

1.83 “Renewable Energy Resource” means an energy resource that is replaced rapidly by a natural, ongoing process and that is not nuclear or fossil fuel.

1.84 “Replacement Price” means the price at which GPA, acting in a Commercially Reasonable Manner, purchases electricity in place of Renewable Energy.

1.85 “S&P” means the Standard & Poor's Rating Group (a division of McGraw-Hill, Inc.) or its successor.

1.86 “SCADA” means “supervisory control and data acquisition” and shall refer to that category of software application program that can be used to gather data from the Facility remotely in real time in order to monitor Facility equipment and conditions.

1.87 “Schedule,” "Scheduled” or "Scheduling” means the actions of Seller, Buyer and/or their designated representatives, of notifying, requesting and confirming to each other the quantity and type of Renewable Energy (including Stored Energy) to be delivered on any given day or days during the Delivery Period at a specified Delivery Point.

1.88 "Scheduled Commercial Operation Date" has the meaning set forth in Section 4.2(a).

1.89 "Seller Failure" has the meaning set forth in Section 5.1.

1.90 "Seller Failure Damages" has the meaning set forth in Section 5.1.

1.91 "Seller's Interconnection Facilities" means Seller's equipment as specified in the Interconnection Agreement.

1.92 "Seller Metering Equipment" means all metering equipment and data processing equipment used to measure the Quantity delivered to the Delivery Point.

1.93 "Shortfall Damages" has the meaning set forth in Section 4.8.

1.94 "Sponsor Interest" means an upstream ownership interest held by an entity that is an Affiliate of the Seller as of the Effective Date which represents a partial indirect ownership interest in Seller and which is established in connection with a tax equity financing.

1.95 "Microgrid Unit" means the energy storage unit to be installed by Seller as part of the Facility, as contemplated in Appendix C.

1.96 "Stored Energy" means Charging Energy stored in the Microgrid Unit which is later delivered to the Delivery Point as contemplated in Appendix C.

1.97 "Tax Benefits" means any and all tax benefits arising from the ownership and operation of the Facility, including without limitation Renewable Energy related tax credits or other benefits established under Section 45 and Section 48 of the Internal Revenue Code, as amended, or any similar or successor provision of the Internal Revenue Code, or any other applicable tax law, regulation, or code.

1.98 "Tax Equity Investor Interest" means an upstream ownership interest held by a financing party (including a financial institution, insurance company or other third party not affiliated with the Seller except based on the applicable tax equity investment or other similar investments or financings) as of the Effective Date which represents a partial indirect ownership interest in Seller and which is established in connection with a tax equity financing.

1.99 "Term" has the meaning set forth in Section 12.1.

1.100 "Termination Damages" has the meaning set forth in Section 4.4.

1.101 "Test Energy" means non-firm Renewable Energy generated prior to the Commercial Operation Date, subject to immediate interruption, fluctuations or reduction/increase with no prior Notice, due to unit performance.

1.102 "Transaction" means the transaction relating to the purchase or sale of Renewable Energy as contemplated in this Agreement.

1.103 "Unit Contingent" means that the Renewable Energy (excluding Charging Energy but including Stored Energy) is intended to be supplied from the Facility as it is produced.

1.104 "Weather Hours" means the total hours in any Production Measurement Period, as applicable, in which the Facility is derated as a result of cumulative weather conditions which are outside historical average conditions for any applicable Month during the Production Measurement Period in which the deration occurs, calculated in accordance with Appendix K.

ARTICLE TWO: COMMERCIAL TERMS

2.1 Commercial Terms.

The following commercial terms apply to the Transaction that is the subject of this Agreement, each as more fully described herein:

Buyer: GPA	**Seller:** Hanwha Energy Corporation
Project: Hanwha Project B	
Delivery Point: The "Point of Interconnection" as defined in the Interconnection Agreement	
Guaranteed Annual Production (MWhs): As set forth in Appendix A	**Estimated Annual Production: (MWhs):** NOT APPLICABLE
Guaranteed Availability (%): NOT APPLICABLE	**Guaranteed Capacity (MWs):** NOT APPLICABLE
Delivery Period: Twenty-five (25) years from the Commercial Operation Date	**Contract Price ($/MWh):** See Appendix A
Renewable Energy Type: Unit Contingent (solar) and associated RECs	**Development Security:** As contemplated in Section 9.1
Day(s) of week: Monday through Sunday, including NERC holidays	**Hours:** Hour Ending 0100 – Hour Ending 2400, Monday through Sunday Chamorro Standard Time (CHST), Guam time
Commercial Operation Date: No later than 36 months after Effective Date.	
Test Energy: Seller agrees to sell and Buyer agrees to purchase all Test Energy from the Facility. The test period shall be up to six (6) months. . The price of such Test Energy for the first thirty days shall be the current LEAC Rate. The price thereafter shall be the Year 1 Contract Price set out in Appendix A. Test Energy shall be delivered in accordance with the Scheduling provisions contained herein. Both Parties agree that Seller will use Commercially Reasonable Efforts to pre-schedule the Test Energy, but Buyer shall nonetheless be obligated to accept all Test Energy up to 22.5 MW per hour of Test Energy for the period set forth above. Seller shall provide to Buyer all RECs associated with the Test Energy sold hereunder in accordance with Section 4.16.	

ARTICLE THREE: REPRESENTATIONS AND WARRANTIES

3.1 Mutual Representations and Warranties.

On the Effective Date of this Agreement, each Party represents and warrants to the other Party that:

(a) It is duly organized, validly existing and in good standing under the laws of the jurisdiction of its formation;

(b) It has all regulatory authorizations necessary for it to legally perform its obligations under this Agreement (other than permits or regulatory authorizations to be obtained by Seller for the construction, operation or maintenance of the Facility, which Seller reasonably anticipates it will be able to obtain in due course);

(c) The execution, delivery and performance of this Agreement are within its powers, have been duly authorized by all necessary action and do not violate any of the terms and conditions in its governing documents, any contracts to which it is a party or any law, rule, regulation, order or the like applicable to it, and the Agreement constitutes its legally valid and binding obligation enforceable against it in accordance with its terms, subject to any Equitable Defenses.

(d) It is not Bankrupt and there are no proceedings pending or being contemplated by it or, to its knowledge, threatened against it which would result in it being or becoming Bankrupt;

(e) There is not pending or, to its knowledge, threatened against it or any of its Affiliates any legal proceedings that could materially adversely affect its ability to perform its obligations under this Agreement;

(f) No Event of Default or potential Event of Default with respect to it has occurred and is continuing and no such event or circumstance would occur as a result of its entering into or performing its obligations under this Agreement; and

(g) It is acting for its own account, has made its own independent decision to enter into this Agreement and as to whether this Agreement is appropriate or proper for it based upon its own judgment, is not relying upon the advice or recommendations of the other Party in so doing, and is capable of assessing the merits of and understanding, and understands and accepts, the terms, conditions and risks of this Agreement;

3.2 Seller Representations and Warranties.

Seller affirmatively represents and warrants to GPA that:

(a) On the Effective Date of this Agreement, or in due course as required in accordance with the Financing Arrangement Deadline (as may be extended as provided in Section 4.3), Seller has (or reasonably expects to have in due course), good defensible title, or valid and effective leasehold rights in the case of leased property, to the Facility, free and clear of all liens, charges, claims, pledges, security interests, equities and encumbrances of any nature whatsoever other than the lien of current taxes not delinquent, liens, charges, claims, pledges, security, interests, equities and encumbrances relating to Facility Debt as provided for herein, or liens that in the aggregate do not materially detract from or interfere with the ability of Seller to deliver the Quantity of the Renewable Energy;

(b) All acts necessary to the valid execution, delivery and performance of this Agreement by Seller have or will be taken and performed as required under Seller's ordinances, bylaws, or other regulations including, but not limited to (i) the valid authority of the person

executing this Agreement to bind Seller and (ii) the Term of this Agreement does not extend beyond any limitation applicable to Seller imposed by relevant governing documents and applicable law; and

(c) Seller will have at the time of sale, title to and ownership of the RECs sold hereunder.

3.3 GPA Representations and Warranties.

GPA represents and warrants that:

(a) The Commission on Consolidated Utilities has made all certifications required by the Guam Public Utilities Commission and the Guam legislature in order for the valid execution, delivery and performance of this Agreement by GPA copies of which are attached hereto as Appendix L.

(b) Each of the PPA Approval and the ICA Approval is final, non-appealable and not subject to rehearing or other proceedings challenging its validity or enforceability.

(c) No authorizations, approvals or consents of any governmental or regulatory authority or agency or any other person, and no filings or registrations with any governmental authority or agency, are necessary for the execution, delivery or performance by GPA of this Agreement, or for the validity or enforceability thereof, except for any authorizations, approvals, consents or filings which have been made or obtained prior to the date hereof and are in full force and effect and are conclusive, binding and final.

(d) During the entire Term of the Agreement, all terms and conditions set forth in this Agreement shall be valid and enforceable against GPA.

(e) All legal, statutory and regulatory requirements and conditions necessary for the validity and enforceability of this Agreement and the obligations of GPA hereunder to purchase Renewable Energy, including, without limitation, the conditions and requirements as set forth in Title 12 of the Guam Code Annotated, Section 8306, have been satisfied, and at the time of the execution of the Agreement GPA further represents and warrants specifically as to the following: **NOTE TO GPA: GPA IS TO ENSURE THE RESOLUTIONS OF THE CCU ATTEST TO THE MATTERS SET FORTH BELOW**.

(i) Pursuant to the provisions of Public Law 30-66 (as codified in Title 12 of the Guam Code Annotated, Section 8104(n)), GPA is authorized to enter into this Agreement, together with any other agreement to be entered into by GPA and Seller as provided herein, and perform all the obligations imposed upon GPA as set forth herein, including, without limitation, the obligation to purchase Renewable Energy and pay all amounts due and owing to the Seller under the terms of this Agreement, and that no separate and specific appropriation or approval by *Liheslaturan Guahan* is required for such purpose.

(ii) This Agreement and the purchase of Renewable Energy by GPA at the time of the execution of the Agreement pursuant to the terms herein will not result in (A) costs to GPA which exceed the average cost of producing power under the islandwide power system owned and operated by GPA not inclusive of energy production from any backup diesel generators or other renewable energy sources, and (B) increased expenses and costs for GPA.

(iii) As set forth in the resolutions attached hereto as Appendix L, the Consolidated Commission on Utilities has certified that this Agreement is consistent with and does not violate any and all bond covenants applicable to and imposed upon

GPA and that the price to be paid by GPA for Renewable Energy as provided herein does not exceed GPA's actual current avoided cost.

GPA is not a party to a pooling agreement or any other agreement with the United States Department of Navy or any other federal agency, department or instrumentality ("Federal Government) which requires GPA to notify or obtain the approval of the Federal Government of this Agreement.

(iv) Any and all Renewable Energy to be purchased by GPA pursuant to the terms of this Agreement constitutes electrical power needed and required by GPA in connection with the operation and stability of the islandwide power system and to meet renewable energy portfolio standards which GPA is mandated to achieve and satisfy by law including without limitation, the mandates as set forth in Public Law 29-062 as codified in Title 12 of the Guam Code Annotated, Section 8311.

ARTICLE FOUR: PERFORMANCE REQUIREMENTS

4.1 Commercial Operation.

Seller shall achieve Commercial Operation of the Project no later than the Scheduled Commercial Operation Date except to the extent such date is extended pursuant to Section 4.2, in which case Commercial Operation shall occur on or prior to the Outside Commercial Operation Date. Commercial Operation shall be achieved as of the date on which each of the following conditions precedent has been satisfied or waived in writing by the Parties, as applicable ("Commercial Operation"):

(a) Seller shall have obtained all governmental and regulatory authorizations, including any applicable permits, required for the construction, ownership, operation and maintenance of the Project and for the sale of the Renewable Energy therefrom;

(b) Seller and Buyer shall have entered into the Interconnection Agreement;

(c) Seller shall have established SCADA information and real time data feed to enable GPA to view parameters or data points that relate to Renewable Energy data and other actual resource data for the Facility;

(d) The Microgrid Unit shall be capable of charging and discharging Renewable Energy;

(e) The Project shall in all other respects be capable of delivering the Renewable Energy to GPA at the Delivery Point;

(f) Seller shall perform at its cost a capacity test in accordance with the protocol outlined in Appendix I to determine the capacity of the Project ("Facility Test"). GPA shall receive the entire Renewable Energy from the Facility during such test. Renewable Energy deliveries during testing shall be measured at the Delivery Point.

GPA shall use all available Commercially Reasonable Efforts to assist Seller in achieving the Scheduled Commercial Operation Date. Seller shall present to GPA a certificate executed by its duly executed officer, and by an Independent Engineer as to items (c), (d) and (e), verifying that each of the foregoing conditions has been satisfied or waived in writing by the Parties and Commercial Operation shall be deemed to have occurred upon the delivery of such certificate to GPA unless GPA objects to such certificate within ten (10) Business Days of delivery thereof and such objections are either agreed by Seller or resolved in favor of GPA pursuant to Section 12.9 hereof. Upon any acceptance or deemed acceptance of Seller's certificate by GPA, all conditions, set forth above shall no longer be a condition precedent to Commercial Operation of the Project. If the Commercial Operation Date does not occur on or before the Outside Commercial Operation Date, as such date may be extended in accordance with Section 4.2 herein; either Party shall have the right to terminate the Agreement upon written Notice to the other Party. In the event of such termination by either Party, GPA shall be entitled to Termination Damages set forth in Section 4.4; provided, however, that in accordance with Section 4.2(c), GPA shall not be entitled to such Termination Damages if the Outside Commercial Operation Date is not achieved due to a Force Majeure event or a GPA Delay.

4.2 Extension of Commercial Operation Date.

(a) Planned Extension. The Parties agree that the Commercial Operation Date is expected to be No later than 36 months after Effective Date. (as extended pursuant to the terms of this Agreement, the "Scheduled Commercial Operation Date"). Seller may elect to extend the Commercial Operation Date beyond such date (the "COD Extension") by paying GPA for such extension (the "COD Extension Payment"). The COD Extension Payment shall be in the amount of fifty percent (50%) of the Shortfall Damages (based on ninety percent (90%) of the Minimum Production for the first Contract Year per day for

each day (or portion thereof) after but not including the date of the COD Extension until, but not including, the date on which the Project actually achieves Commercial Operation]. To extend the Commercial Operation Date, Seller must, as early as reasonably possible, but in no event later than fourteen (14) days prior to the first day of the proposed extension, provide GPA with Notice of its election to extend the Commercial Operation Date along with an estimate of the duration of the extension. The COD Extension Payment is in addition to and not to be considered part of the Development Security, and shall be paid to GPA at the time of the Notice hereunder. Seller's request to extend the Commercial Operation Date shall not be valid unless proper Notice and payment are timely received by GPA. No Event of Default shall be deemed to have occurred with respect to Seller's extension as provided herein, and GPA shall not have the right to terminate the Agreement or to receive Termination Damages with respect to such extension so long as Seller has provided the Notice, estimation and payment as provided in this Section 4.2(a). Seller may further extend the Commercial Operation Date beyond the original COD Extension, subject to the foregoing Notice, estimation and payment terms applicable to the original COD Extension.

Seller shall be entitled to a prompt refund, without interest, of any portion of the COD Extension Payment held by GPA which exceeds the amount required to cover the number of days by which the Commercial Operation Date was actually extended. In no event may Seller extend the Commercial Operation Date by more than ninety (90) days through the payment of the COD Extension Payment, except as provided in Section 4.2(b). In the event that the Project does not achieve Commercial Operation on or before the expiration of any COD Extension period as provided herein, either Party shall have the right to terminate the Agreement upon written Notice to the other, subject to any further extension rights pursuant to Sections 4.2(b) or (c) below. In the event of such termination by either Party in accordance with this provision, GPA shall be entitled to Termination Damages as set forth in Section 4.4 as its sole and exclusive remedy, subject to Section 4.2(c).

(b) Unplanned Extension/Additional Planned Extension. In the event that (i) the Project does not achieve Commercial Operation by the Scheduled Commercial Operation Date and Seller fails to provide sufficient Notice and/or payment in order to extend the Commercial Operation Date as provided in Section 4.2(a), or (ii) the Commercial Operation Date shall not have occurred within the ninety (90) day planned extension period provided under Section 4.2(a), then Seller may further extend the Commercial Operation Date by paying GPA damages ("Daily Delay Liquidated Damages"). The Daily Delay Liquidated Damages shall be in the amount of one hundred percent (100%) of the Shortfall Damages (based on ninety percent (90%) of the Minimum Production for the first Contract Year) per day for each day (or portion thereof) after but not including the earlier of the dates set forth in sub-clauses (i) or (ii) above, or until, but not including, the date on which the Project actually achieves Commercial Operation, and shall be payable within ten (10) Business Days following receipt of an invoice from GPA for any such Daily Delay Liquidated Damages. No Event of Default shall be deemed to have occurred with respect to Seller's extension as provided herein and GPA shall not have the right to terminate the Agreement with respect to such extension or to receive Termination Damages so long as Seller has extended the Commercial Operation Date and pays the Daily Delay Liquidated Damages as provided in this Section 4.2(b).

In no event may the Commercial Operation Date be extended more than one hundred and eighty (180) days through the payment of Daily Delay Liquidated Damages, without the express written consent of GPA. In the event that the Project does not achieve Commercial Operation on or before three hundred and sixty-five (365) days from the Scheduled Commercial Operation Date (as extended pursuant to this Agreement, the "Outside Commercial Operation Date"), then either Party shall have the right to terminate the Agreement upon written Notice to the other, subject to any further extension rights

pursuant to Section 4.2(c) below. In the event of such termination by either Party in accordance with this provision, GPA shall be entitled to Termination Damages as set forth in Section 4.4 as its sole and exclusive remedy, subject to Section 4.2(c).

(c) Additional Extension. The Scheduled Commercial Operation Date and the Outside Commercial Operation Date shall also be extended, without payment or other penalty, on a day-for-day basis for each day of delay caused by reason of Force Majeure (a "Force Majeure Extension") or by reason of GPA Delay. Any Force Majeure Extension or GPA Delay shall also extend the period of any planned or unplanned extensions pursuant to Sections 4.2(a) or (b) on a day-for-day basis for each day during the Force Majeure Extension or GPA Delay, and Seller shall not be required to pay any COD Extension Payments or Daily Delay Liquidated Damages, as applicable, for any days during the Force Majeure Extension or GPA Delay. Notwithstanding any other provision in this Agreement, if, due solely to a Force Majeure Extension and/or a GPA Delay, the Project does not achieve Commercial Operation on or before the Outside Commercial Operation Date, then the Parties by mutual agreement may terminate this Agreement without penalty or further obligation to either Party, and after one hundred and eighty 180 days following the Outside Commercial Operation Date, either Party may unilaterally terminate this Agreement without penalty or further obligation to either Party. For the sake of clarityin the event of any such termination, GPA shall not be entitled to Termination Damages.

4.3 Financing Arrangement Deadline.

Seller shall make Commercially Reasonable Efforts to secure a financing sufficient for the successful completion of the Project as and when required and procure a preliminary agreement customary for such financing (such as an engagement letter) no later than one (1) year after the Effective Date as extended day-for-day for any Force Majeure Extension or GPA Delay (the "Financing Arrangement Deadline"). After the execution of the preliminary agreement, Seller shall provide GPA with a copy of such agreement within three (3) Business Days. In the event that Seller fails to procure the execution of a preliminary agreement by the Financing Arrangement Deadline, GPA may terminate the Agreement and shall be entitled to Termination Damages set forth in Section 4.4 as its sole and exclusive remedy.

4.4 Termination Damages.

Prior to the Commercial Operation Date, Seller may terminate this Agreement at any time for its convenience. GPA shall be entitled to termination damages, payable solely from the Bid Security or the Development Security established in Section 9.1 ("Termination Damages"), in the amounts set forth in the table below, if: (a) subject to the last sentence of this Section 4.4, Seller terminates the Agreement prior to the Commercial Operation Date for any reason other than: (i) a Force Majeure event or (ii) an Event of Default by GPA; [(b) GPA terminates the Agreement as a result of Seller failing to meet any Financing Arrangement Deadline after the passage of a grace period of thirty (30) days (as extended day-for-day for any Force Majeure Extension or GPA Delay);] and/or (c) GPA terminates the Agreement as a result of Seller failing to achieve the Commercial Operation Date on or prior to the Scheduled Commercial Operation Date, as the same may have been extended pursuant to Section 4.2. The Termination Damages are designed to help compensate GPA for, among other things, transactions that it did not consummate because it relied on this Agreement with Seller, and GPA's potential failure to meet its applicable renewable energy portfolio requirements and do not constitute a penalty payment. Accordingly, Seller shall pay to GPA, from the Development Security, Termination Damages in the following amounts, based upon when the termination occurs:

Prior to Posting Date of Development Security pursuant to Section 9.1:	$0.00

[Up to Financing Arrangement Deadline]	100% of the Bid Security
[Up to six months following Financing Arrangement Deadline]	50% of Development Security
[From six months to twelve months following Financing Arrangement Deadline]	75% of Development Security
[From twelve months following Financing Arrangement Deadline]	100% of Development Security

No later than five (5) Business Days following the Financing Arrangement Deadline, GPA shall return the Bid Security to Seller, to the extent GPA has not validly claimed the Bid Security in respect of Termination Damages on or prior to such date. Notwithstanding the foregoing, in the event that Seller terminates this Agreement for any reason prior to the posting date for the Development Security as set forth in Section 9.1 herein, then Seller shall owe GPA no Termination Damages and such termination shall be without penalty to Seller.

4.5 Seller's and Buyer's Obligations.

Subject to Appendix H and Appendix C, Seller shall sell and deliver, or cause to be delivered, and GPA shall purchase and receive, or cause to be received, all Renewable Energy generated by the Facility (excluding Charging Energy but including Stored Energy when delivered, in each case, as set forth in Appendix C), at the Delivery Point, and GPA shall pay Seller the Contract Price for such Quantity of Renewable Energy (including Stored Energy) as measured by the Seller's Metering Equipment at the Delivery Point; provided that for quantities of Renewable Energy (including Stored Energy) in excess of the Estimated Annual Renewable Energy Amount, as shown in the third column of Appendix A, which are not make-up quantities for delivery deficiencies in prior Production Measurement Periods, the price payable by GPA shall be the lower of the Contract Price and the LEAC Rate.

For Seller's failure to deliver Renewable Energy as required hereunder, GPA's remedies shall be as set forth in Section 4.8. For GPA's failure to purchase and receive Renewable Energy (including Stored Energy) as required hereunder, Seller shall in addition have all other remedies available at law or in equity. Seller shall be responsible for any costs or charges imposed on or associated with the Renewable Energy (including Stored Energy) or its delivery up to the Delivery Point. GPA shall be responsible for any costs or charges imposed on or associated with Renewable Energy (including Stored Energy) or its receipt at and from the Delivery Point. Title to and risk of loss of Renewable Energy (including Stored Energy) from the Facility delivered to the Delivery Point shall transfer to GPA at the Delivery Point. Seller warrants that it will deliver to Buyer Renewable Energy (including Stored Energy) free and clear of all liens, security interests, claims and encumbrances or any interest therein or thereto by any person arising prior to the Delivery Point.

4.6 Operation of Facility.

Seller shall operate and maintain the Facility in accordance with Good Utility Practices and in accordance with the Agreed Ramp Rate as set forth in Appendix C.

4.7 Not Used.

4.8 Minimum Production.

The Facility is expected to produce a minimum number of MWhs of Renewable Energy (including Stored Energy) each Contract Year as set forth in the third column of Appendix A (such annual MWh production is the "Minimum Production"). Seller during the Delivery Period shall (i) during any Contract Year, deliver to GPA at least ninety percent (90%) of the Minimum Production (which calculated amounts are set forth in the fourth column

of Appendix A), and (ii) for any consecutive six (6) Contract Years during the Delivery Period, deliver to GPA at least ninety-five percent (95%) of the aggregate Minimum Production during such period (which shall include make-up amounts generated and delivered in any years in excess of one hundred percent (100%) of the Minimum Production for such year) (any such time period a "Production Measurement Period" and each such guaranteed amount of delivered Renewable Energy during any Production Measurement Period, the "Guaranteed Output"). Any shortfall of Renewable Energy (expressed in MWhs/year) from the applicable Guaranteed Output during a Production Measurement Period shall be deemed a "Deficiency Amount." For the avoidance of doubt, (i) Stored Energy delivered to the Delivery Point shall count towards Seller's achievement of the Minimum Production during each Production Measurement Period, and (ii) Charging Energy shall not be delivered by Seller and shall not count towards any Deficiency Amount as it is used to charge the Microgrid Unit as contemplated in Appendix C.

GPA shall be entitled to receive damages for any Deficiency Amount ("Shortfall Damages") which are not due to Excused Hours or Weather Hours (except, in the case of Weather Hours, as set forth below). Shortfall Damages shall be calculated as follows on an annual basis at the end of each Contract Year (and [in accordance with the example set forth in Schedule I to Appendix K].):

Shortfall Damages = Deficiency Amount x Incremental Price.

For purposes of clarity, if Actual Renewable Energy (including Stored Energy) for any given Contract Year is less than the Minimum Production for that year (even if due to Excused Hours or Weather Hours), there shall be a "Shortfall," and Seller shall be entitled to deliver to GPA Renewable Energy in the amount of such Shortfall in subsequent time periods (even if such make-up amounts are in excess of the Minimum Production for such subsequent year), and this Agreement may be extended as necessary for a period of up to six (6) months to allow Seller to make up any Shortfalls; however, there shall be no Shortfall Damages owing to GPA for such individual Contract Year unless such Actual Renewable Energy is less than the Guaranteed Output for the applicable Production Measurement Period, and such shortfall is not due to Excused Hours or Weather Hours (except, in the case of Weather Hours, as set forth below).

In the event Shortfall Damages are due for a Production Measurement Period of six (6) rolling Contract Years, then such Shortfall Damages shall be reduced by the amount of any Shortfall Damages paid for any Contract Year during such six (6) year Production Measurement Period. Seller's payment of Shortfall Damages shall be Seller's sole liability and obligation, and GPA's sole right and remedy, with respect to Seller's failure to deliver the Guaranteed Output during any Production Measurement Period.

To the extent any Deficiency Amount is due to Weather Hours, Seller's sole liability and GPA's sole remedy shall be to deliver thereafter Renewable Energy equal to such Deficiency Amount attributable to Weather Hours, calculated in accordance with Appendix K (which includes a sample calculation for a hypothetical Production Measurement Period). If any portion of a Deficiency Amount due to Weather Hours is not made up in the five (5) Contract Years beginning in the first Contract Year following the Contract Year in which the Weather Hours Deficiency Amount occurred, then Seller shall pay Shortfall Damages for the remaining Deficiency Amount. Notwithstanding the foregoing, with respect to any Deficiency Amount that is due to Weather Hours, Seller shall have the option, at any time prior to the expiration of the five (5) Contract Year make-up period, to pay any remaining associated Shortfall Damages in their entirety. If the Deficiency Amount arising as a result of Weather Hours occurs in the last five (5) years of the Delivery Period, then unless Seller exercises its option to pay the Deficiency Amount early, the Delivery Period shall be extended as necessary, for a period of up to six (6) months, to achieve a make-up period of five (5) Contract Years as described above. The Contract Price for such Renewable Energy shall be the Contract Price in effect in the Contract Year in which the Deficiency Amount due to Weather Hours accrued.

Seller shall be entitled to sell, and GPA shall purchase, quantities of Renewable Energy for which Shortfall Damages are paid hereunder, during any remaining Production Measurement Period during the Delivery Period. The price therefore shall be the Contract Price in effect at the time the Shortfall Damages accrued. During any Contract Year, all Renewable Energy delivered by Seller to GPA in excess of the Minimum Production shall be credited against makeup of any outstanding Deficiency Amounts, with oldest Deficiency Amounts made up first.

To the extent any Deficiency Amount is due to Excused Hours, Seller shall be excused from any liability with respect thereto.

Notwithstanding the foregoing, in the event that the Delivery Point is unavailable for any reason other than due to GPA's electric system, Seller's obligation to supply and sell, and GPA's obligation to accept and purchase, Renewable Energy shall be limited to such Renewable Energy that is actually deliverable from the Facility to the Delivery Point during such period except this paragraph shall not apply in the case of Excused Hours or an Event of Default by either Party.

4.9 Facility Testing.

In addition to the Facility Test referenced in Section 4.1(e), the capacity of the Facility shall be tested during each Contract Year during the Delivery Period (the "Annual Facility Test"). Seller shall notify GPA of the specific date on which it intends to conduct the Annual Facility Test at least ten (10) Business Days in advance and shall permit GPA to be present at such test. GPA shall have the right to receive copies of the results of the Annual Facility Test, which shall be conducted in accordance with the protocol set forth in Appendix I. Any dispute regarding the results of the Annual Facility Test shall be resolved as set forth in Section 12.9 of this Agreement. GPA shall receive, in accordance with Section 4.5, the entire Renewable Energy from the Facility during any Annual Facility Test or re-test. Renewable Energy deliveries during testing shall be measured at the Delivery Point.

4.10 Scheduling.

Seller agrees to supply at the Delivery Point all Renewable Energy produced by the Project, net of Renewable Energy self-generated and consumed at the Facility, and net of any generation losses prior to the Delivery Point, up to the Facility Capacity, in accordance with the scheduling and coordination procedures set out in Appendix H. GPA agrees to take at the Delivery Point all Renewable Energy tendered by Seller in accordance with the foregoing sentence. The Schedules and estimates provided pursuant to this Section 4.10 shall be made by Seller in good faith and based on information available to it at such time, but in no event shall such Schedules be binding on Seller nor shall Seller be liable for any inaccuracies in such Schedules.

4.11 Force Majeure.

To the extent either Party is prevented by Force Majeure from carrying out, in whole or part, its obligations under this Transaction and such Party (the "Claiming Party") gives Notice and details of the Force Majeure to the other Party as soon as practicable, then the Claiming Party shall be excused from the performance of its obligations with respect to such Transaction (other than the obligation to make payments then due or becoming due hereunder). The Claiming Party shall remedy the Force Majeure with all reasonable dispatch. The non-Claiming Party shall not be required to perform or resume performance of its obligations to the Claiming Party corresponding to the obligations of the Claiming Party excused by Force Majeure.

4.12 Facility Outages and Maintenance Scheduling.

(a) Planned Outages. Seller shall provide written Notice to GPA prior to conducting any Planned Outages of the Facility. Within ninety (90) days prior to the Commercial Operation Date, as the same may be extended in accordance with the provisions of Section 4.2, and on or before the first day of each subsequent Contract Year, Seller shall provide GPA with a schedule of such proposed Planned Outages. The proposed Planned Outages schedule shall be submitted electronically to GPA, using a reasonably acceptable format provided by GPA. Such format is subject to change from time-to-time during the Term of this Agreement by agreement of the Parties, but will generally describe the nature of the Outage, the expected duration, and any other pertinent information that will assist GPA in planning for the decreased output of the Facility as a result of the Outage.

GPA shall promptly review Seller's proposed schedule and may request modifications within thirty (30) days of GPA's receipt of such schedule. Changes to the schedule may

be requested by either Party and each Party shall make Commercially Reasonable Efforts to accommodate such changes, provided further that Seller shall have no obligation to agree to GPA's proposed modifications or revisions to any Planned Outage schedule.

Notwithstanding any of the foregoing, Seller shall not commence a Planned Outage that is expected to result in an Outage of ten percent (10%) or more of the Facility without notifying GPA of the Planned Outage at least five (5) Business Days prior to the start of such Planned Outage.

(b) Forced Outages. In the event of any Forced Outage, Seller shall promptly notify GPA of the same. Seller shall immediately notify GPA verbally and shall then, within twenty-four (24) hours thereafter, provide written Notice to GPA (the "Forced Outage Notice"). The Forced Outage Notice shall be submitted electronically to GPA, using a reasonably acceptable format provided by GPA. Such format is subject to change from time-to-time during the Term of this Agreement by agreement of the Parties, but will generally describe the nature of the Outage, the expected duration, and any other pertinent information that will assist GPA in planning for the decreased output of the Facility as a result of the Outage. Seller shall return the Facility to service as soon as possible, consistent with Good Utility Practices, after the Forced Outage ceases to exist.

(c) GPA Parts Inventory. To the extent GPA maintains an inventory of parts or components that are used or useful in the Facility and provided it can prudently do so under its own ordinary course operating practices and restrictions, GPA shall cooperate with Seller in a commercially reasonable manner by making such parts or components available to Seller at its request during the period of time Seller is obtaining replacement parts or components for the Facility in order to maximize output of Renewable Energy. If Seller obtains a replacement part or component from GPA, it shall at GPA's option either replace such part or component with the new part or component ordered by Seller or return the borrowed part or component to GPA at such time as Seller obtains the replacement. Seller shall bear the installation, transportation and labor charges relating to GPA's replacement parts or components, and if the parts or components are returned to GPA then Seller shall reimburse GPA for any damage to such parts or components while in Seller's possession.

4.13 Operating Status Reports.

From the Effective Date of this Agreement, through the date of Commercial Operation, Seller shall provide GPA with Monthly reports regarding material data pertaining to the operation of the Facility. The operations data is generally identified as performance, Outage, and risk data and shall be sent electronically to GPA using a reasonably acceptable format provided by GPA. The operations data report format may be modified by agreement of the Parties from time-to-time during the Term of this Agreement.

4.14 Resource Quality Reporting: Forecasting.

Seller shall provide to GPA at its request copies of non-proprietary resource quality data that could reasonably be expected to affect, in any material manner, the operation and/or productivity of the Facility, whether produced, compiled or otherwise generated by Seller or any third party in a Commercially Reasonable manner, so that GPA can evaluate the expected performance of the Facility. Seller shall provide such data as it is produced or otherwise made available to Seller. Upon Commercial Operation of the Facility, to the extent generated or procured by Seller, Seller shall also provide to GPA Monthly and day-ahead forecasting information for the Facility. Such information shall be in a format agreed to by the Parties and include, among other things: Seller's forecasts for the performance of the Facility based on Facility specifications, weather-based forecasting, and weather-related studies. Such information, which will be used by GPA solely for evaluation, Scheduling, and other purposes related to this Agreement, shall be provided as available. In no event shall the data and/or information provided to GPA pursuant to this Section 4.14 be binding upon Seller, nor shall Seller be liable for any penalties, charges or other damages based on the inaccuracy of such data or information.

4.15 Permit Violations.

Seller shall at all times during the Term of this Agreement maintain and comply with all applicable permits for the development, ownership and maintenance of the Facility in all material respects. As soon as practicable after the occurrence of any event known to Seller that would constitute or is reasonably likely to lead to a violation of any applicable permit, but in no event more than ten (10) Business Days thereafter, Seller shall provide GPA with written Notice of the same.

4.16 Change in Technical Requirements.

The Parties agree that, from and after the Effective Date, if Seller is required at any time to comply with new or modified technical or other performance requirements for the Facility or any material portion thereof (or in the manner any such facilities are to be operated or maintained) and such addition to or change in the above standards causes an increase in Seller's actual costs to perform in excess of $25,000 in the aggregate, then the Parties shall negotiate in good faith to agree upon an adjustment to the Contract Price and/or the Annual Microgrid Payment, as applicable, to compensate Seller for such increased costs. Such a change in the technical or performance requirements may arise as a result of the scheduling protocols or the communication protocols to be established by GPA pursuant to Appendix H or any other protocols or regulations established by GPA, requirements imposed by the transmission provider or pursuant to the Interconnection Agreement, requirements imposed by GPA or another Governmental Authority pursuant to or in connection with this Agreement, among other circumstances.

Seller will deliver prompt notice of the occurrence of a change in technical or performance requirements which has or is reasonably expected to result in the additional actual costs described above. If, on the date which is forty-five (45) days following Seller's delivery of notice to GPA, the Parties are unable to agree upon an adjustment to the Contract Price and/or the Annual Microgrid Payment, as applicable, which compensates Seller for such additional costs and is otherwise mutually acceptable, then Supplier may submit such dispute for resolution pursuant to Section 12.9.

4.17 Delivery of RECs.

(a) Use of North American Renewables Registry. At least ten (10) days prior to COD, Seller shall transfer to GPA the authority to create, own and transfer all Environmental Attributes associated with the Renewable Energy produced by the Facility, by executing and delivering the form entitled "Generator Owner's Designation of Responsible Party" published by NAR, wherein Seller shall designate GPA as the "responsible party" for all matters relating to the creation, ownership, and transfer of any RECS. Thereafter, GPA shall be responsible for all obligations relating to creating and transferring RECs and Seller shall have no further obligations or liabilities with respect thereto, provided, however, that Seller shall reimburse to GPA its costs of creating and maintaining the NAR account and NAR's fees charged to transfer the RECs, up to an aggregate maximum amount of $5,000 per annum. In the event this Agreement is terminated for any reason, the Parties agree to each consent to the termination of such designation in accordance with NAR procedures.

(b) GPA Registration as a QRE. GPA shall be the QRE for the Facility as required by NAR and shall comply with any and all NAR Operating Procedures relating to the registration and operation as a QRE and the reporting of generation data from the Facility to NAR. As the QRE, each month upon receipt of an invoice and associated interval metering data from Seller in accordance with Section 7.5 herein, GPA shall report such data to NAR within three (3) Business Days following receipt of such data. The Parties shall cooperate to ensure that the Seller Metering Equipment and the resulting interval metering data meet the NAR requirements for metering equipment and generation data.

(c) Change Event. During the Term, in the event that (i) the NAR Operating Procedures are amended or changed such that it becomes impossible for the Parties to utilize NAR as the REC tracking method and/or for GPA to continue as "responsible party" for purposes of

creating, owning and transferring RECs attributable to the Facility; (ii) the fees or charges imposed by NAR on either Seller or GPA to utilize the NAR REC tracking system are materially increased such that use of the NAR REC tracking system becomes uneconomic or infeasible; or (iii) the NAR REC tracking system is eliminated (each one individually, a "Change Event"), then the Parties shall promptly negotiate in good faith to reform the terms of this Agreement in order to give effect to the original intention of the Parties to the extent reasonable under the circumstances, including utilizing an alternative method for transferring RECs to GPA, but in no case shall Seller's cost with respect thereto exceed $5,000 per annum.

4.18 Ramp Rate Control Performance.

During the Delivery Period, Seller shall cause the Microgrid Unit to comply with the performance guarantees for ramp rate control set forth [below] (the "Ramp Rate Control Performance Guarantees").] If the Microgrid Unit System fails to meet the Ramp Rate Control Performance Guarantees over the time periods set forth [below], GPA may provide written notice to Seller of the failure to meet the Ramp Rate Control Performance Guarantees and a request for Seller to take steps needed for the Energy Storage System to meet the Ramp Rate Control Performance Guarantees. In response to such a notice, Seller shall, within two (2) weeks from the date of such notice, provide GPA with a written remedial action plan that provides a detailed description of Seller's course of action and plan to meet the Ramp Rate Control Performance Guarantees and shall take steps to implement such remedial action within six (6) months of the date of such action plan; provided, however, GPA shall not be entitled to such a remedial action plan if the failure to achieve the Ramp Rate Control Performance Guarantees is due to a Force Majeure event, GPA Delay or an Event of Default by GPA. Seller's sole obligation with respect to any deficiency in the Ramp Rate Control Performance Guarantees is to follow its remedial action plan.

If ramp rate is greater than 3 MW/minute seller shall reduce plant output until ramp rate is less than 3 MW/minute. If system issues remain, GPA reserves the right to restrict Seller's plant output until seller restores operation with a ramp rate less than 3 MW/minute. The Interconnection Agreement shall define conditions for Seller's plant reduction and implementation of GPA's restrictions.

ARTICLE FIVE: SELLER FAILURE

5.1 Seller Failure.

In the event Seller fails to deliver to GPA any Quantity of Renewable Energy to which GPA is entitled in accordance with the terms of this Agreement and instead sells such Quantity of Renewable Energy to which GPA is entitled to a third party in violation of this Agreement ("Seller Failure"), then Seller shall pay to GPA the "Seller Failure Damages," which shall mean the positive difference, if any, between the Replacement Price and the Contract Price for the period of such Seller failure, times such Quantity of Renewable Energy. GPA shall calculate the Seller Failure Damages and shall provide to Seller an invoice for such amount, including a written statement explaining in reasonable detail the calculation of such amount. Seller shall pay the Seller Failure Damages not later than ten (10) days following its receipt of such an invoice from GPA. If the Replacement Price is less than the Contract Price, then the Seller Failure Damages are deemed to be zero. The Seller Failure Damages represent the sole and exclusive remedy of GPA for Seller's failure as described herein.

ARTICLE SIX: EVENTS OF DEFAULT; REMEDIES

6.1 Events of Default.

An "Event of Default" shall mean, with respect to a Party (a "Defaulting Party"), the occurrence of any of the following:

(a) The failure to make, when due, any payment required pursuant to this Agreement if such failure is not remedied within three (3) Business Days after receipt of written Notice;

(b) Any representation or warranty made by such Party herein is false or misleading in any material respect when made or when deemed made or repeated, if such failure is not remedied within thirty (30) Business Days after receipt of written Notice, or such longer time, not to exceed sixty (60) Business Days, as is reasonably required to remedy such failure, provided the Defaulting Party is employing Commercially Reasonable Efforts to achieve the remedy;

(c) The failure to perform any material covenant or obligation set forth in this Agreement (except to the extent constituting a separate Event of Default and except for such Party's obligations to deliver or receive the Renewable Energy, the remedies for which are provided in Article Five) if such failure is not remedied within thirty (30) Business Days after written Notice, or such longer time, not to exceed sixty (60) Business Days, as is reasonably required to remedy such failure, provided the Defaulting Party is employing Commercially Reasonable Efforts to achieve the remedy;

(d) Such Party becomes Bankrupt (or if the Bankruptcy is involuntary, the failure of such Party to achieve dismissal of the Bankruptcy within ninety (90) days);

(e) A Merger Event occurs with respect to such Party;

(f) If during the Term of this Agreement there have occurred three (3) or more Seller Failures as that term is used in Section 5.1;

(g) With respect to Seller, a material permit violation occurs, such violation has or is reasonably likely to result in a material adverse effect on the Seller's ability to perform its obligations under this Agreement and such violation is not remedied within fifteen (15) Business Days after Notice by either GPA or the relevant permitting authority, or such longer time, not to exceed sixty (60) Business Days, as is reasonably required to remedy such failure, provided the Defaulting Party is employing Commercially Reasonable Efforts to achieve the remedy;

(h) With respect to Seller, failure to maintain the Development Security as required pursuant to this Agreement and the failure to reinstate the same within ten (10) Business Days after Seller's receipt of written Notice thereof from GPA.

6.2 Declaration of an Early Termination Date.

If an Event of Default with respect to a Defaulting Party shall have occurred on or after the Commercial Operation Date and be continuing, the other Party (the "Non-Defaulting Party") shall have the right but not the obligation to: (i) designate a day, no earlier than the day such Notice is effective and no later than twenty (20) days after such Notice is effective, as an early termination date ("Early Termination Date") to accelerate all amounts owing between the Parties and to liquidate and terminate this Agreement between the Parties; (ii) withhold any payments due to the Defaulting Party under this Agreement as setoff against termination costs and liabilities as determined herein (and until such amounts are determined); and (iii) suspend its performance under this Agreement.

6.3 Suspension of Performance and Other Remedies.

Except as otherwise expressly provided in this Agreement, if an Event of Default shall have occurred and be continuing, the Non-Defaulting Party, upon written Notice to the Defaulting Party, shall have the right (i) to suspend performance under this Agreement; and (ii) to the extent an Event of Default shall have occurred and be continuing to exercise any remedy available at law or in equity including any specific remedies set forth in this Agreement; provided, however, that any damages shall include only the direct actual damages incurred by the Non-Defaulting Party as provided in Section 8.1.

ARTICLE SEVEN: PAYMENT AND NETTING

7.1 Billing Period.

Unless otherwise specifically agreed upon by the Parties, the calendar Month shall be the standard period for all payments under this Agreement. The Annual MicroGrid Payment shall be divided into twelve equal monthly payments each Contract Year. No later than the tenth (10^{th}) day after the end of each Month, each Party will render to the other Party an invoice (in the case of Seller, such invoice being rendered in accordance with Section 7.5) for the payment obligations of non-invoicing Party, if any, incurred hereunder during the preceding Month.

7.2 Timeliness of Payment.

Unless otherwise agreed by the Parties, all invoices under this Agreement shall be due and payable in accordance with each Party's invoice instructions on or before the later of the tenth (10th) day of each Month, or if later the tenth (10th) day after receipt of the invoice or, if such day is not a Business Day, then on the next Business Day. Each Party will make payments by electronic funds transfer, or by other mutually agreeable method(s), to the account designated by the other Party. Any amounts not paid by the due date will be deemed delinquent and will accrue interest at the Interest Rate, such interest to be calculated from and including the due date to but excluding the date the delinquent amount is paid in full.

7.3 Disputes and Adjustments of Invoices.

A Party may, in good faith, dispute the correctness of any invoice or any adjustment to an invoice, rendered under this Agreement or adjust any invoice for any arithmetic or computational error within twelve (12) Months of the date the invoice, or adjustment to an invoice, was rendered. In the event an invoice or portion thereof, or any other claim or adjustment arising hereunder, is disputed, payment of the undisputed portion of the invoice shall be required to be made when due, with Notice of the objection given to the other Party. Any invoice dispute or invoice adjustment shall be in writing and shall state the basis for the dispute or adjustment. Except as otherwise provided in this Agreement, payment of the disputed amount shall not be required until the dispute is resolved. Upon resolution of the dispute, any required payment shall be made within two (2) Business Days of such resolution along with interest accrued at the Interest Rate from and including the due date to but excluding the date paid. Inadvertent overpayments shall be returned upon request or deducted by the Party receiving such overpayment from subsequent payments, with interest accrued at the Interest Rate from and including the date of such overpayment to but excluding the date repaid or deducted by the Party receiving such overpayment. Any dispute with respect to an invoice is waived unless the other Party is notified in accordance with this Section 7.3 within twelve (12) Months after the invoice is rendered or any specific adjustment to the invoice is made. If an invoice is not rendered within twelve (12) Months after the close of the Month during which performance of a Transaction occurred, the right to payment for such performance is waived.

7.4 Metering and Other Facilities.

Seller shall be responsible, at its sole expense, for providing the Seller Metering Equipment in accordance with Good Utility Practices. In accordance with the terms of the Interconnection Agreement, the Seller may elect to have GPA provide Seller with the Seller Metering Equipment; provided, however, the cost of such meters shall be borne solely by Seller at no cost to GPA. Seller shall be solely responsible for operating, maintaining, and repairing the Seller Metering Equipment at its own expense throughout the Term of this Agreement. Seller shall inspect and test the Seller Metering Equipment upon its installation and at least once every year at Seller's expense. Seller shall give GPA reasonable advance Notice of any test, and promptly provide GPA with the results of any such test. GPA may observe the test and conduct its own tests, at GPA's expense, to verify Seller's procedures and results.

Upon an inaccurate read of the Seller Metering Equipment or if Seller knows of any material inaccuracy or defect in Seller Metering Equipment, Seller shall notify GPA in writing within forty-eight (48) hours of such defect. Seller shall be solely responsible for adjusting, repairing, replacing or recalibrating such metering device as near as practicable to a condition of zero (-0-) error, and for paying any expenses associated with such adjustment, repair,

replacement or recalibration. If a metering device fails to register or is found upon testing to be inaccurate, an adjustment will be made correcting all measurements by the inaccurate or defective metering device in the following manner:

(a) In the event that an adjustment factor cannot be reliably calculated, the Parties shall use the measurements from GPA-owned meters if they are installed, fully operational and calibrated in accordance with Good Utility Practices. If for any reason the measurements cannot be obtained from GPA owned meters, the Parties shall use data from Seller's computer monitoring system to determine the relevant measurements. If Seller's computer monitoring system is found to be inaccurate by more than two (2) percent, the Parties shall estimate the amount of the necessary adjustment using the site meteorological information for the period of the inaccuracy based upon deliveries of Renewable Energy delivered to GPA at the Delivery Point from the Facility during periods of similar operating conditions when the Seller Metering Equipment was registering accurately. The adjustment will be made for the period during which inaccurate measurements were made.

(b) If the Parties cannot agree on the actual period during which the inaccurate measurements were made, the period during which the measurements are to be adjusted will be the shorter of: (1) the last one-half of the period from the last previous test of the metering device to the test that found the metering device to be defective or inaccurate; or (2) the one hundred and eighty 180-day period immediately preceding the test that found the metering device to be defective or inaccurate.

(c) Upon determination of corrected measurements, the required payment adjustment shall be made according to the procedures set forth in Section 7.3.

7.5 Invoices.

Seller shall maintain and read the Seller Metering Equipment for measuring the Renewable Energy (including Stored Energy) delivered hereunder. For review purposes, Seller shall furnish GPA with a written invoice reflecting the Contract Price and the interval data from the Seller Metering Equipment used to calculate that invoice; and any other charges due, within ten (10) Business Days after Seller reads the Seller Metering Equipment. Seller shall furnish GPA with a written invoice reflecting the applicable portion of the Annual Microgrid Payment the tenth (10^{th}) day after the end of each Month. Such invoices may be furnished to GPA by facsimile transmission or by such other method as the Parties agree.

ARTICLE EIGHT: LIMITATIONS

8.1 Limitation of Remedies, Liability and Damages.

EXCEPT AS SET FORTH HEREIN, THERE IS NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND ANY AND ALL IMPLIED WARRANTIES ARE DISCLAIMED. THE PARTIES CONFIRM THAT THE EXPRESS REMEDIES AND MEASURES OF DAMAGES PROVIDED IN THIS AGREEMENT SATISFY THE ESSENTIAL PURPOSES HEREOF. FOR BREACH OF ANY PROVISION FOR WHICH AN EXPRESS REMEDY OR MEASURE OF DAMAGES IS PROVIDED HEREIN, SUCH EXPRESS REMEDY OR MEASURE OF DAMAGES SHALL BE THE SOLE AND EXCLUSIVE REMEDY AND THE OBLIGOR'S LIABILITY SHALL BE LIMITED AS SET FORTH IN SUCH PROVISION AND ALL OTHER REMEDIES OR DAMAGES AT LAW OR IN EQUITY ARE WAIVED. IF NO REMEDY OR MEASURE OF DAMAGES IS EXPRESSLY PROVIDED HEREIN OR IN A TRANSACTION, THE OBLIGOR'S LIABILITY SHALL BE LIMITED TO DIRECT ACTUAL DAMAGES ONLY, SUCH DIRECT ACTUAL DAMAGES SHALL BE THE SOLE AND EXCLUSIVE REMEDY AND ALL OTHER REMEDIES OR DAMAGES AT LAW OR IN EQUITY ARE WAIVED. UNLESS EXPRESSLY HEREIN PROVIDED, NEITHER PARTY SHALL BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, PUNITIVE, EXEMPLARY OR INDIRECT DAMAGES, LOST PROFITS OR OTHER BUSINESS INTERRUPTION DAMAGES, BY STATUTE, IN TORT OR CONTRACT, UNDER ANY INDEMNITY PROVISION OR OTHERWISE. IT IS THE INTENT OF THE PARTIES THAT THE LIMITATIONS HEREIN IMPOSED ON REMEDIES AND THE MEASURE OF DAMAGES BE WITHOUT REGARD TO THE CAUSE OR CAUSES RELATED THERETO, INCLUDING THE NEGLIGENCE OF ANY PARTY, WHETHER SUCH NEGLIGENCE BE SOLE, JOINT OR CONCURRENT, OR ACTIVE OR PASSIVE. TO THE EXTENT ANY DAMAGES REQUIRED TO BE PAID HEREUNDER ARE LIQUIDATED, THE PARTIES ACKNOWLEDGE THAT THE DAMAGES ARE DIFFICULT OR IMPOSSIBLE TO DETERMINE, OR OTHERWISE OBTAINING AN ADEQUATE REMEDY IS INCONVENIENT AND THE DAMAGES CALCULATED HEREUNDER CONSTITUTE A REASONABLE APPROXIMATION OF THE HARM OR LOSS.

Notwithstanding the foregoing, if GPA is the Defaulting Party, the Parties agree that the actual damages recoverable to Seller hereunder on account of an Event of Default by GPA shall include loss of Tax Benefits on a grossed up after tax basis, using the highest applicable United States marginal personal income tax rate.

Any assets transferred to GPA as required by the Interconnection Agreement shall require a one year warranty on all construction work and assignment of any manufacturer warranties from the transfer of such assets; provided, however, that the obligations and liability of Seller pursuant to such warranty and obligation to assign shall be subject to any limitations and exclusions set forth in the Interconnection Agreement.

ARTICLE NINE: CREDIT AND COLLATERAL REQUIREMENTS

9.1 Development Security.

In order to secure Seller's obligations prior to Commercial Operation of the Facility, hereunder, Seller shall post the Development Security in the form of a Letter of Credit or cash deposit in the amount of $2,375,805 The Development Security shall be held by GPA as security for Seller's obligations prior to the Commercial Operation Date including its obligation to satisfy the Financing Arrangement Deadline, but GPA may draw on the Development Security at any time only in the amounts and according to the schedule set forth in Section 4.4. Seller shall post the Development Security in accordance with the following terms and conditions:

(a) Seller shall post the Development Security within ten business (10) days following the Effective Date of this Agreement.

(b) If the Development Security is posted as a Letter of Credit, it shall be in substantially the form attached hereto as Appendix [F-1].

(c) Any Development Security posted in cash shall bear simple interest at a rate equal to the Interest Rate. The calculation and payment of any such interest shall be made in accordance with the procedure specified in Section 9.3 of this Agreement.

9.2 Forfeiture of Development Security.

In the event that the Commercial Operation Date does not occur on or before the Scheduled Commercial Operations Date, as extended pursuant to the terms of this Agreement, and to the extent Seller does not remit any COD Extension Payment or Daily Delay Liquidated Damages payment when due, then GPA shall be entitled to proceed against the Development Security in accordance with the terms thereof, to the extent of the amount(s) due and owing from time to time. Seller acknowledges and agrees that forfeiture of all or a portion of the Development Security, as provided herein, represents reasonable compensation to GPA for, among other things, transactions that it did not consummate because it relied on this Agreement with Seller, and GPA's potential failure to meet its applicable renewable energy portfolio requirements as a result of Seller's failure to achieve Commercial Operation by the Scheduled Commercial Operation Date. Notwithstanding the foregoing, if Seller terminates this Agreement prior to the Commercial Operation Date for the sole purpose of selling the Renewable Energy to a third party, GPA shall be entitled to both the Development Security and any other remedies available at law or in equity to the extent that GPA's actual damages exceed the value of the Development Security.

9.3 Return of Development Security.

At the end of the Term or upon the termination of this Agreement following the settlement and payment of any damages owed as a result of such termination, GPA shall return to Seller any remaining portion of the Development Security still held by GPA and to which GPA has no claim pursuant to the terms of this Agreement. If the Development Security was posted as a Letter of Credit, GPA shall return the Letter of Credit to Seller and Seller shall be entitled to immediately cancel such Letter of Credit. If the Development Security was posted in cash, GPA shall return to Seller the balance of the Development Security, together with daily interest at the Interest Rate, from and including the date that the Development Security was posted until, but not including, the date on which the Development Security is returned by GPA.

9.4 Performance Security.

In order to secure Seller's obligations after Commercial Operation of the Facility and during the Delivery Period hereunder, Seller shall post security in one of the forms contemplated below, each of which is deemed acceptable by GPA (the "Performance Security"):

(a) A Letter of Credit or cash in the amount of $4,751,610; or

(b) A Payment and Performance Bond in the amount of $4,751,610; or

(c) A subordinated second lien on the Sponsor Interest and Seller agrees to take such action as is reasonably required in order to perfect GPA's security interest in, and lien on, such collateral and any and all proceeds resulting therefrom; provided, that concurrently with the grant of such lien, GPA shall enter into such subordination, inter-creditor and other agreements with the senior financing parties as they as may reasonably require pursuant to which GPA shall agree that their rights and remedies pursuant to their second lien shall be subordinated in all respects to the senior first lien held by the financing parties; provided further, for the avoidance of doubt, there shall be no lien granted on the Tax Equity Investor Interest.

The Performance Security shall be held by GPA as security for Seller's obligations after the Commercial Operation Date and during the Delivery Period, but GPA may draw on the Performance Security at any time only in the amounts actually due and payable by Seller to GPA pursuant to this Agreement. Seller may (i) post the Performance Security by posting a combination or one or more of the above acceptable forms of credit support in an aggregate amount of $4,751,609.95, and (ii) at any time elect to substitute any form of one or more of the above acceptable forms of credit support for any existing Performance Security in which case GPA shall return the replaced Performance Security and reasonably cooperate with Seller in the exchange or cancellation of such credit support.

Seller shall post the Performance Security in accordance with the following terms and conditions:

(a) Seller shall post the Development Security within ten (10) business days following the Commercial Operation Date.

(b) If the Performance Security is posted as a Letter of Credit, it shall be in substantially the form attached hereto as Appendix [F-1].

(c) If the Performance Security is posted as a Payment and Performance Bond, it shall be in substantially the form attached hereto as Appendix [F-2].

(d) Any Performance Security posted in cash shall bear simple interest at a rate equal to the Interest Rate. The calculation and payment of any such interest shall be made in accordance with the procedure specified in Section 9.5 of this Agreement.

9.5 Return of Performance Security.

At the end of the Term or upon the termination of this Agreement following the settlement and payment of any damages owed as a result of such termination, GPA shall return to Seller any remaining portion of the Performance Security still held by GPA and to which GPA has no claim pursuant to the terms of this Agreement. If the Performance Security was posted as a Letter of Credit or a Payment and Performance Bond, then GPA shall return the Letter of Credit or Payment and Performance Bond to Seller and Seller shall be entitled to immediately cancel such Letter of Credit or Payment and Performance Bond. If the Performance Security was posted in cash, GPA shall return to Seller the balance of the Performance Security, together with daily interest at the Interest Rate, from and including the date that the Performance Security was posted until, but not including, the date on which the Performance Security is returned by GPA.

ARTICLE TEN: GOVERNMENTAL CHARGES

10.1 Cooperation.

Each Party shall use Commercially Reasonable Efforts to implement the provisions of and to administer this Agreement in accordance with the intent of the Parties to minimize all taxes, so long as neither Party is materially adversely affected by such efforts.

10.2 Governmental Charges.

Seller shall pay or cause to be paid all taxes imposed by any Government Authority ("Governmental Charges") on or with respect to the Renewable Energy or this Agreement arising prior to the Delivery Point. GPA shall pay or cause to be paid all Governmental Charges on or with respect to the Renewable Energy or this Agreement at and from the Delivery Point (other than ad valorem, franchise or income taxes which are related to the sale of the Renewable Energy and are, therefore, the responsibility of the Seller). In the event Seller is required by law or regulation to remit or pay Governmental Charges, which are GPA's responsibility hereunder, GPA shall promptly reimburse Seller for such Governmental Charges. If GPA is required by law or regulation to remit or pay Governmental Charges which are Seller's responsibility hereunder, GPA may deduct the amount of any such Governmental Charges from the sums due to Seller under Article Seven of this Agreement. Nothing shall obligate or cause a Party to pay or be liable to pay any Governmental Charges for which it is exempt under the law.

ARTICLE ELEVEN: ASSIGNMENT

11.1 Buyer Assignment.

Buyer may not assign this Agreement or assign or delegate its rights and obligations under this Agreement, in whole or in part, without Seller's consent, not to be unreasonably withheld.

11.2 Seller Assignment.

Seller may perform any of the following, without the consent of the Buyer (1) transfer, pledge, encumber, or assign this Agreement or the accounts, revenues, or proceeds hereof, in connection with any financing or other financial arrangements for the Facility, (2) transfer or assign this Agreement to any of its Affiliates in connection with a transfer of the Facility to such Affiliate, (3) transfer or assign this Agreement to any person or entity succeeding to all or substantially all of the assets of such Party, and (4) transfer or assign this Agreement to _____ or to any of its Affiliates; provided, that Seller provides Buyer prior notice of any such transfer or assignment and, with respect to any transfer to an such assignee of Seller, (A) such assignee posts replacement credit support in accordance with this Agreement, and (B) such Affiliate enters into an assignment and assumption agreement, in form and substance reasonably satisfactory to Buyer, pursuant to which Affiliate assumes all of Seller's obligations hereunder and otherwise agrees to be bound by the terms of this Agreement. Seller agrees that it will provide written notice to Buyer of any assignment of this Agreement by Seller within five (5) Business Days of the date of such assignment.

Except as stated above, neither this Agreement nor any of the rights, interests and obligations hereunder shall be assigned by Seller without the prior written consent of Buyer, which consent shall not be unreasonably withheld. Any assignment of this Agreement in violation of the foregoing shall be, at the option of Buyer, void.

11.3 Liability After Assignment.

A Party's assignment or transfer of rights or obligations pursuant to this Article 11 shall relieve said Party from any liability and financial responsibility for the performance thereof arising after any such transfer or assignment.

11.4 Transfers of Ownership.

Subject to any rights of first offer or refusal under this Agreement, during the Term, Seller shall not sell, transfer, assign or otherwise dispose of its interest in the Facility to any third-party absent (1) a transfer of this Agreement to such third-party and (2) Seller entering into an assignment and assumption agreement, in form and substance reasonably satisfactory to Buyer, with such third-party.

11.5 Successors and Assigns.

This Agreement and all of the provisions hereof are binding upon, and inure to the benefit of, the Parties and their respective successors and permitted assigns.

11.6 Collateral Assignment by Seller.

In the event that Seller pursuant to Section 11.2 (1) transfers, pledges, encumbers or collaterally assigns this Agreement to Seller's lenders, Seller shall provide written notice to Buyer of such transfer, pledge, encumbrance or assignment, including the address of Seller's lenders. In connection with any financing or refinancing of the Facility, Buyer at Seller's request shall negotiate in good faith with Seller and Seller's lenders to agree upon a reasonable direct agreement with respect to this Agreement, which shall be in form and substance reasonably agreed to by Buyer, Seller and Seller's lenders, and which shall, among other terms. include provisions substantially as follows:

(a) The Parties shall not amend or modify this Agreement in any material respect without the prior written consent of the Seller's lenders;

(b) Prior to exercising its right to terminate this Agreement as a result of an Event of Default by Seller, Buyer shall give notice of such Event of Default by Seller to the administrative agent of Seller's lenders, which Buyer has been provided written notice of; and

(c) Seller's lenders shall have the right, but not the obligation, to cure an Event of Default on behalf of Seller in accordance with the provisions of this Agreement, provided that Seller's lenders shall be provided an additional forty-five (45) days, from the end of the cure periods provided pursuant to Section 6.1, to effect a cure of such Event of Default.

ARTICLE TWELVE: MISCELLANEOUS

12.1 Term of Agreement; Conditions Precedent.

(a) The Term of this Agreement shall commence on the Effective Date and shall remain in effect for the duration of the Delivery Period, as set forth in Section 2.1, unless earlier terminated by either Party in accordance with this Agreement herein (the "Term"); provided, however, that such termination shall not affect or excuse the performance of either Party under any provision of this Agreement that by its terms survives any such termination.

(b) This Agreement shall be effective on the Effective Date provided that the Parties' obligations hereunder shall be subject to the satisfaction of the following conditions precedent:

(i) Receipt by GPA of a final, non-appealable approval of this Agreement by the Guam Public Utilities Commission ("PPA Approval");

(ii) Execution of the Interconnection Agreement by the Parties;

(iii) Receipt by GPA of a final, non-appealable approval of the Interconnection Agreement by the Guam Public Utilities Commission ("ICA Approval"); and

GPA shall submit this Agreement for approval by the Guam Public Utilities Commission within thirty (30) days of the Effective Date. GPA shall also submit the Interconnection Agreement for approval by the Guam Public Utilities Commission within thirty (30) days of the execution of the Interconnection Agreement. Each Party shall use Commercially Reasonable Efforts to satisfy the conditions precedent prior to the End Date; provided that neither Party shall be obligated to execute the Interconnection Agreement except on terms acceptable to such Party in its sole discretion. Seller shall have the right in its sole discretion to waive the conditions precedent set forth in section 12.1(b) above.

Either Party has the right to terminate this Agreement by Notice, which will be effective five (5) Business Days after such Notice is given, if the conditions precedent set forth above have not been satisfied (or waived in accordance herewith) within [**to be determined based on date of signing – between 60-120 days consistent with proposed project schedule**] days after the Effective Date ("End Date"). If either Party exercises its termination right pursuant to this Section 12.1(b), no Termination Damages will be due or owing by either Party and Seller will be entitled to a return of any Development Security provided to GPA.

12.2 Insurance.

At all times during the Term of this Agreement, Seller shall maintain at its own expense insurance policies for the Facility and its tangible assets in such amounts and against such risks and losses as are consistent with Good Utility Practices and those policies listed below. Such insurance policies shall be maintained only with insurers rated at least A- VII by MVI Best or comparable ratings agency.

- Commercial General Liability with limits of $1,000,000 including products, completed operations, and contractual for this Agreement. GPA shall be an additional insured. Seller shall grant a waiver of subrogation in favor of GPA.

- Commercial Auto Liability in the amount of $1,000,000 combined single limit for bodily injury and property damage. GPA shall be an additional insured. Seller shall grant a waiver of subrogation in favor of GPA.

- Excess Liability with limits of $5,000,000. GPA shall be an additional insured. Seller shall grant a waiver of subrogation in favor of GPA.

- Workers Compensation and Employers Liability with statutory limits and $1,000,000/$1,000,000/$1,000,000 respectively. Seller shall add a waiver of subrogation endorsement in favor of GPA.

- Pollution Liability, when applicable, with limits for $5,000,000. GPA is to be an additional insured. Seller shall grant a waiver of Subrogation in favor of GPA.

- Builder's Risk or Installation Floater, when applicable, is to be furnished by Contractor.

- Property insurance that will keep the premises, property, improvements, structures, and machinery and equipment on the premises insured, at a minimum, against with an all risk property policy for full replacement value as determined from time to time. Such insurance shall be issued by financially responsible insurers duly authorized to do business in Guam, and shall contain the standard form of waiver of subrogation. Nothing contained herein shall be construed as creating any liability or responsibility on the part of GPA for the adequacy of insurance coverage on the premises. As to any insurable risks of loss or damage to the premises not required to be insured hereunder, Seller shall bear the cost of the same. Seller shall be deemed to be self-insured as to the deductible or co-insurance amount applicable to such insurance coverage and shall pay any deductible or co-insurance amount applicable in the event of such loss or damage.

At all times after achieving COD, Seller may discontinue or otherwise cancel each of the aforementioned policies, except the following insurance policies, which shall be maintained with the limits set forth below:

- Commercial General Liability with limits of $1,000,000.00 including products, completed operations, and contractual for this Agreement. GPA shall be an additional insured. Seller shall grant a waiver of subrogation in favor of GPA.

- Excess Liability with limits of $3,000,000.00. GPA shall be an additional insured. Seller shall grant a waiver of subrogation in favor of GPA.

- Property insurance that will keep the premises, property, improvements, structures, and machinery and equipment on the premises insured, at a minimum, against with an all risk property policy for full replacement value as determined from time to time. Such insurance shall be issued by any financially responsible insurer duly authorized to do business in Guam, and shall contain the standard form of waiver of subrogation. Nothing contained herein shall be construed as creating any liability or responsibility on the part of GPA for the adequacy of insurance coverage on the premises. As to any insurable risks of loss or damage to the premises not required to be insured hereunder, Seller shall bear the cost of the same. Seller shall be deemed to be self-insured as to the deductible or co- insurance amount applicable to such insurance coverage and shall pay any deductible or co-insurance amount applicable in the event of such loss or damage.

- Seller is also required to carry Business Interruption and Extra Expense insurance in the amount of $1,000,000.00.

If the Facility is lost or damaged due to a casualty, then only if and to the extent Seller is not required to use available insurance proceeds to prepay any Facility Debt then outstanding, Seller shall re-build the Facility promptly and in a commercially reasonable manner if and to the extent technically feasible and commercially reasonable in

light of the available insurance proceeds and subject to the procurement by Seller of the consent of any lender or financing party pursuant to the Financing Documents if required thereunder; provided, however, (i) if the time to re-build the Facility would result in less than five (5) years remaining in the Delivery Period then (A) Seller shall have the option in lieu of re-building the Facility to pay to GPA the Buyout Payment and terminate this Agreement with no further costs or penalties provided that the Buyout Payment shall not in any case exceed the available insurance proceeds remaining following full prepayment of the Facility Debt, or (B) if Seller nevertheless elects to re-build the Facility then GPA shall reimburse Seller for any deductibles payable by Seller under its property insurance, and (ii) regardless of when the casualty event occurs, if Seller re-builds the Facility then the Delivery Period shall be extended for the greater of one (1) year or two (2) times the length of the interruption of the sale of Renewable Energy (pro rated based on the Minimum Production for partial interruptions), and the Contract Price shall be the price in effect, without escalation, at the beginning of the re-building period.

Within ten (10) Business Days after receipt of a request for the same from GPA, Seller shall deliver to GPA a certificate of insurance for any or all policies maintained in accordance with this Section 12.2, which certificate shall include at least the following information: (i) the name of the insurance company, policy number and expiration date; and (ii) the coverage and limits on coverage, including the amount of deductibles or self-insured retentions.

Seller shall furnish certificates of insurance and waiver of subrogation endorsement to GPA prior to commencement of construction of the Facility showing evidence of such coverage, including the statement to the effect that cancellation or termination of the insurance shall not be effective until at least thirty (30) days after receipt of written Notice to GPA. At all times Seller's insurance shall be primary and non-contributory to any other insurance that may be carried by GPA. The statement of limits of insurance coverage shall not be construed as in any way limiting the Seller's liability under this Agreement. GPA shall be an additional insured on all liability coverage and certificates of insurance shall clearly indicate such.

12.3 Indemnity.

To the extent permitted by law, each Party shall indemnify, defend and hold harmless the other Party from and against any Claims arising from or out of any event, circumstance, act or incident first occurring or existing during the period when control and title to the Renewable Energy is vested in such Party, unless a Claim is due to such Party's willful misconduct or gross negligence. To the extent permitted by law, each Party shall indemnify, defend and hold harmless the other Party against any Governmental Charges for which such Party is responsible under Article Ten. Notwithstanding anything to the contrary contained in this Agreement, no individual representative of either Party shall have any personal liability to the other Party as a result of the breach of any representation, warranty, covenant or agreement contained herein.

12.4 Site Access and Inspection of Records.

Seller shall provide GPA with reasonable access to the Facility site for purposes of review and inspection during regular business hours within a reasonable time after a request for the same is made by GPA. During such reviews and inspections, GPA representatives shall be permitted to review such records relating to the Facility and reasonably related to the performance of this Agreement, including Facility maintenance and operations logs. GPA shall have access to the Facility site for the limited purposes described herein, but Seller shall at all times remain responsible and liable for the control and operation of the Facility and the Facility site. GPA representatives shall follow Seller's safety procedures when accessing the Facility site and shall conduct themselves in a manner that will not interfere with the operation of the Facility. Seller will provide GPA with information about such safety procedures to enable GPA to comply with this requirement.

12.5 Audit.

Subject to Section 7.3, each Party has the right, at its sole expense and during normal working hours, to examine copies of the records of the other Party to the extent reasonably necessary to verify the accuracy of any statement, charge or computation made pursuant to this Agreement.

12.6 Confidentiality.

The Parties will make Commercially Reasonable Efforts to safeguard Confidential Information against disclosure by employing the same means to protect such Confidential Information as that Party uses to protect its own non-public, confidential or proprietary information, and otherwise in accordance with the provisions of this Section 12.6. Specifically, no receiving Party shall itself, or permit its employees, consultants and/or agents to disclose to any person, corporation or other entity the Confidential Information without the prior written consent of the Party providing the Confidential Information, except a receiving Party may distribute the Confidential Information to its and its Affiliates' board members, officers, employees, agents, consultants, actual or potential investors, actual or potential purchasers, actual or potential Facility lenders or financing parties, and others who have a need for such Confidential Information.

The Parties acknowledge, however, that a Party may need to disclose the Confidential Information in connection with its regulatory filings or to otherwise satisfy its governmental and regulatory requirements. In the event that a Party intends to disclose any of the Confidential Information to its regulatory authorities including, but not limited to, the Guam Public Utilities Commission, the FERC, or any employee, staff member, consultant, and/or agent of the foregoing, it shall give the other Party prompt prior written Notice of its intention so that the other Party may seek a protective order or other appropriate remedy. In addition, each Party specifically agrees not to use the other Party's name in connection with this Agreement or the Facility in any press releases, public meetings or hearings, or other public communications, including any release to any newswire service, without the express written consent of the other Party. The Parties anticipate that at some future time it may be in the best interests of one or both of them to disclose Confidential Information to the media and the Parties anticipate entering into a subsequent agreement that will govern the terms of such disclosure. The Parties expressly agree, however, that unless and until such subsequent agreement is executed between the Parties, the terms of this Agreement shall be binding with respect to such disclosure.

In the event that any Party receiving the Confidential Information becomes legally compelled (by deposition, interrogatory, request for documents, subpoena, civil investigative demand or similar process) to disclose any of the Confidential Information, the legally compelled Party shall give the other Party providing the Confidential Information prompt prior written Notice of such requirement so that the providing Party may seek a protective order or other appropriate remedy and/or waive compliance with the terms of this Agreement. In the event that such protective order or other remedy is not obtained, the providing Party waives compliance with the terms hereof.

Each Party acknowledges that the unauthorized disclosure of any Confidential Information may cause irreparable harm and significant injury that may be difficult to ascertain. Each Party therefore agrees that specific performance or injunctive relief, in addition to other legal and equitable relief, are appropriate remedies for any actual or threatened violation or breach of this Agreement, **although neither Party shall be entitled to any special, consequential, indirect or punitive damages as a result of a breach of this Agreement, whether a claim is based in contract, tort or otherwise**. The Parties agree that the respondent in any action for an injunction, specific performance decree or similar relief shall not allege or assert that the initiating Party has an adequate remedy at law in respect to the relief sought in the proceeding, nor shall the respondent seek the posting of a bond by the Party initiating the action. Under no circumstances will either Party's directors, management, employees, agents or consultants be individually liable for any damages resulting from the disclosure of Confidential Information in violation of the terms of this Agreement.

12.7 Notices.

All notices, requests, statements or payments ("Notices") shall be made as specified on Appendix B attached hereto and incorporated herein by reference. Notices (other than with respect to scheduling) shall, unless otherwise specified herein, be in writing and may be delivered by hand delivery, United States mail, overnight courier service or facsimile. Notice by facsimile or hand delivery shall be effective at the close of business on the day actually received, if received during business hours on a Business Day, and otherwise shall be effective at the close of business on the next Business Day. Notice by overnight United States mail or courier shall be effective on the next Business Day after it was sent. Notices relating to Facility operations and Scheduling, as required pursuant to Appendix H, may be given electronically and shall be deemed effective upon receipt; otherwise,

electronic notices shall not be effective unless affirmatively acknowledged in writing (including by reply e-mail) by the receiving Party. A Party may change its addresses by providing Notice of same in accordance herewith.

12.8 Purchase Option.

(a) Transfer During the Delivery Period. In the event that Seller desires to sell the Facility during the Delivery Period, Seller shall provide prior written Notice of the same to GPA, and agrees to engage in discussions with GPA during an exclusivity period with GPA if GPA desires to purchase the Facility. Within ninety (90) days following Seller's Notice to GPA of its intent to sell the Facility, GPA may deliver to Seller an indicative purchase price at which it would be willing to purchase the Facility. If GPA does not deliver the indicative purchase price within ninety (90) days, then Seller shall be free to transfer the Facility under any terms and conditions at any time thereafter. If GPA delivers the indicative purchase price within ninety (90) days, then the Parties shall negotiate exclusively for a period of up to sixty (60) days after GPA delivers the indicative purchase price. If no binding agreement is entered into by the Parties during such sixty (60)-day period then Seller shall be free to transfer the Facility to any person on materially comparable terms, including price, better than GPA's indicative offer, and neither Party shall have any further liability or obligation to the other Party in connection with such sale or as a result of the terminated negotiations. If Seller does not transfer the Facility on such basis within one (1) year following the end of the sixty (60)-day exclusive negotiation period, then the procedure in this paragraph shall apply to any subsequent sale of the Facility during the Term of this Agreement.

(b) Transfer or Extension of Delivery Period. GPA, by Notice delivered to Seller at least one hundred and eighty (180) days prior to the end of the Delivery Period, may either (i) extend the Term of this Agreement on a year-to-year basis, in which case the Contract Price during the extension of the Term shall be eighty percent (80%) of the LEAC Rate in effect from time to time during such extension (whereupon either Party may thereafter terminate this Agreement on one hundred and eighty (180) days' Notice prior to the end of any extension year), or (ii) purchase the Facility from Seller at eighty percent (80%) of the Appraisal Price, within thirty (30) days of the determination of the Appraisal Price. If GPA fails to send such Notice then this Agreement shall terminate in accordance with the terms hereof.

12.9 Alternative Dispute Resolution. All disputes arising under this Agreement are subject to the provisions of this Section 12.9.

(a) If a dispute, controversy or claim arises out of, relates, or is in connection with, this Agreement, or the breach, termination or validity thereof, whether sounding in contract, tort, unfair competition, equity, or other legal form, it shall be settled solely in the manner provided for in this Section 12.9. A meeting of the Parties shall be held within ten (10) Business Days after either Party gives the other Party written Notice of the dispute. The Notice shall set forth in reasonable detail the aggrieved Party's position and its proposal for resolution of the dispute. A representative of each Party who has authority to resolve the dispute shall be in attendance at all meetings. If the dispute is not resolved within thirty (30) days after the first meeting of the Parties, or such other period of time as to which the Parties agree, the dispute shall be settled by arbitration in the manner provided in this Section 12.9). A Party's failure to comply with this Section 12.9 shall entitle the other Party to recover its costs and reasonable attorney's fees in any judicial proceedings that circumvent this dispute resolution provision. Settlement discussions undertaken under this Section 12.9 shall be privileged and confidential and no position taken or communication made by a party during or in connection with said settlement discussions may be presented as evidence in the ensuing arbitration should settlement fail to achieve a negotiated result.

(a) Arbitration. Any disputes between the Parties and/or their respective representatives involving or arising under a Claim relating to the terms of this Agreement, or the breach thereof, may be submitted to binding arbitration, whether such Claims sound in contract, tort or otherwise. The arbitration shall be conducted in accordance with the Federal Arbitration Act and the then prevailing Commercial Arbitration Rules of the American Arbitration Association. The validity, construction, and interpretation of this Agreement to arbitrate and all procedural aspects of the arbitration conducted pursuant hereto shall be decided by the arbitrator(s). Submission shall be made upon the request of either Party. Within twenty (20) calendar days of the receipt by the respondent of service of the Notice of arbitration, the Parties shall select one (1) arbitrator by mutual consent. If the Parties are unable to agree upon a single arbitrator, there shall be three (3) arbitrators. Specifically, in the event the Parties cannot agree upon a single arbitrator, both the claimant and the respondent shall appoint one (1) arbitrator within ten (10) calendar days after written Notice by either Party that three (3) arbitrators shall be necessary. The two (2) arbitrators so appointed shall then select the third arbitrator within twenty (20) calendar days, who shall be the chairperson, of the tribunal. The chairperson shall be a person who has over eight (8) years of experience in energy-related transactions, and none of the arbitrators shall have been previously employed by either Party or have any direct interest in either Party or the subject matter of the arbitration, unless such conflict is expressly acknowledged and waived in writing by both Parties. The chairperson shall be bound to schedule and hear the dispute in its entirety within three (3) Months after his/her appointment and shall render the panel's decision within thirty (30) calendar days after the hearing concludes. It is agreed that the arbitration proceeding shall be conducted in Honolulu, Hawaii, or another neutral location mutually agreed to by the Parties; provided, however, either Party may provide all witnesses, deponents and other ancillary personnel by video telecast or other electronic media, it being the intent of the Parties to minimize expenses of conducting the arbitration. It is further agreed that the arbitrator(s) shall have no authority to award consequential, treble, exemplary, or punitive damages of any type or kind regardless of whether such damages may be available under any law or right, with the Parties hereby affirmatively waiving their rights, if any, to recover or claim such damages. The compensation and any costs and expenses of the arbitrators shall be borne equally by the Parties. Any arbitration proceedings, decision or award rendered hereunder and the validity, effect and interpretation of this arbitration provision shall be governed by the Federal Arbitration Act. The award shall be final and binding on the Parties and judgment upon any award may be entered in any court of competent jurisdiction. The Parties agree that all information exchanged as a result of any proceeding as described herein shall be deemed Confidential Information.

(b) Judicial Relief. Either Party may petition a court of appropriate jurisdiction, as described in Section 12.11, for non-monetary relief relating to any claim of breach of this Agreement in order to prevent undue hardship relating to any such claimed breach pending the appointment of an arbitration panel as described in this Section 12.9.

12.10 Governing Law.

THIS AGREEMENT AND THE RIGHTS AND DUTIES OF THE PARTIES HEREUNDER SHALL BE GOVERNED BY AND CONSTRUED, ENFORCED AND PERFORMED IN ACCORDANCE WITH THE LAWS OF GUAM**,** WITHOUT REGARD TO PRINCIPLES OF CONFLICTS OF LAW.

12.11 Jurisdiction and Costs.

Subject to the mandatory arbitration provisions herein, with respect to any proceeding in connection with any claim, counterclaim, demand, cause of action, dispute and controversy arising out of or relating to this Agreement, the Parties hereby consent to the exclusive jurisdiction of the local and federal courts in the Territory of Guam. Both Parties waive any right to trial by jury in such action. In the event such judicial proceedings are

instituted by either Party, the prevailing Party shall be entitled to award of its costs and reasonable attorneys' fees incurred in connection with such proceedings.

12.12 Financial Accounting Standards.

Under the latest interpretations of the Financial Accounting Standards Board's Interpretation No. 46(R) (FIN No. 46(R)), "Consolidation of Variable Interest Entities," GPA may be required to consolidate a Seller's entity for which GPA has entered into a long-term power purchase agreement. Seller agrees to provide all information needed in order for GPA to determine whether or not the special purpose entity which owns the Seller's generating facility must be consolidated by GPA under FIN No. 46(R). If it is determined that GPA needs to consolidate such special purpose entity, Seller agrees to provide all information needed to comply with the consolidation requirements of FIN 46(R) in a timely manner every calendar quarter. If GPA is required to consolidate the special purpose entity that owns the Seller's generating facility in its financial statements, Seller agrees to provide access to any needed records and personnel, as requested, so GPA's independent auditor, Deloitte & Touche LLP, can conduct financial statement audits in accordance with generally accepted auditing standards, as well as internal control audits in accordance with Section 404 of the Sarbanes-Oxley Act of 2002.

12.13 Forward Contract.

The Parties intend that in any relevant proceedings, each be regarded as a forwards trading merchant in respect of this Agreement and that each Transaction be a forwards contract for purposes of the United States Bankruptcy Code, 11 U.S.C. §§ 101 et seq., as amended from time to time.

12.14 General.

No delay of a Party in the exercise of, or the failure to exercise, any rights under this Agreement shall operate as a waiver of such rights, a waiver of any other rights under this Agreement or a release of the other Party from any of its obligations under this Agreement. Any provision declared or rendered unlawful by any applicable court of law or regulatory agency or deemed unlawful because of a statutory change will not otherwise affect the remaining lawful obligations that arise under this Agreement; and provided, further, that if such an event occurs, the Parties shall use their best efforts to reform this Agreement in order to give effect to the original intention of the Parties. The term "including" when used in this Agreement shall be by way of example only and shall not be considered in any way to be in limitation. The headings used herein are for convenience and reference purposes only. The indemnity provisions of this Agreement shall survive the termination of this Agreement for the period of the applicable statute of limitations. The audit provisions of this Agreement shall survive the termination of this Agreement for a period of twelve (12) Months. This Agreement shall be binding on each Party's successors and permitted assigns.

12.15 Entire Agreement; Amendment.

This Agreement, together with any appendices, schedules, and any written supplements hereto constitutes the entire agreement between the Parties relating to the subject matter hereof. This Agreement shall be considered for all purposes as prepared through the joint efforts of the Parties and shall not be construed against one Party or the other as a result of the preparation, substitution, submission or other event of negotiation, drafting or execution hereof. Except to the extent herein provided for, no amendment or modification to this Agreement shall be enforceable unless reduced to writing and executed by both Parties.

12.16 Appendices.

The following Appendices are included in this Agreement for all purposes:

Appendix A	Contract Price and Minimum Production
Appendix B	Notice Addresses
Appendix C	Ramp Rate Control and Microgrid

Appendix D	Independent Engineers
Appendix E	[Not Used]
Appendix F	Form of Letter of Credit
Appendix G	[Not Used]
Appendix H	Scheduling and Coordination
Appendix I	Base Conditions and Facility Test Protocol
Appendix J	Interconnection Agreement
Appendix K	Additional Terms regarding Ramps Rates and Dispatch Down
Appendix L	Resolutions of Consolidated Committee on Utilities

12.17 Special Provisions.

It is the policy of GPA not to discriminate on the basis of age, race, sex, color, national origin, or disability in its hiring and employment practices, or in admission to, access to, or operation of its programs, services, and activities. With regard to all aspects of this Agreement, Seller certifies and warrants it will comply with this policy. No person shall be excluded from participation in, be denied benefits of, be discriminated against in the admission or access to, or be discriminated against in treatment or employment in GPA's contracted programs or activities, on the grounds of such person's handicap or disability, age, race, color, religion, sex, national origin, or any other classification protected by federal or Guam law; nor shall any person be excluded from participation in, be denied benefits of, or be otherwise subjected to discrimination in performance of contracts with GPA or in the employment practices of GPA's contractors. Accordingly, all persons entering into contracts with GPA shall, upon request, be required to show proof of such nondiscrimination and to post notices of non-discrimination in conspicuous places that are available to all employees and applicants.

Seller hereby represents that Seller has not been retained or retained any persons to solicit or secure a contract from GPA upon an agreement or understanding for a contingent commission, percentage, or brokerage fee, except for retention of bona fide employees or bona fide established commercial selling agencies for the purpose of securing business. Breach of the provisions of this section is, in addition to a breach of this Agreement, a breach of ethical standards, which may result in civil or criminal sanction, debarment or suspension from being a contractor or subcontractor under any other contract with GPA and any Government Authority.

It shall be a breach of ethical standards for any person to offer, give or agree to give any employee or former employee, or for any employee or former employee to solicit, demand, accept or agree to accept from another person, a gratuity or an offer of employment in connection with any decision, approval, disapproval, recommendation, preparation of any part of a program requirement or a purchase request, influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing or in any other advisory capacity in any proceeding or application, request for ruling, determination, claim or controversy or other particular matter, pertaining to any program requirement of a contract or subcontract or to any solicitation or proposal therefor. It shall be breach of ethical standards for any payment, gratuity or offer of employment to be made by or on behalf of a subcontractor under a contract to the prime contractor or higher tier subcontractor or a person associated therewith, as an inducement for the award of a subcontractor or order. Breach of the provisions of this paragraph is, in addition to a breach of this Agreement, a breach of ethical standards, which may result in civil or criminal sanction, debarment or suspension from being a contractor or subcontractor under any other contract with GPA and any Governmental Authority.

Seller warrants that no person providing services on behalf of Seller or in its employment who has been convicted of a sex offense under the provisions of Chapter 25 of Title 9 of the Guam Code Annotated, or convicted of an offense

defined in Article 2 of Chapter 28 of Title 9 of the Guam Code Annotated regardless of the jurisdiction in which the conviction was obtained, shall provide services on behalf of Seller relative to this Agreement. If any person employed by Seller and providing services under this Agreement is convicted subsequent to the date of this Agreement, then Seller warrants that it will notify GPA of the conviction within twenty-four hours of the conviction, and will immediately remove such convicted person from providing services under this Agreement. If Seller is found to be in violation of any of the provisions of this paragraph, then GPA shall give Notice to Seller to take corrective action. Seller shall take corrective action within twenty-four hours of Notice from GPA, and Seller shall notify GPA when action has been taken. If Seller fails to take corrective steps within twenty-four hours of Notice from GPA, then GPA in its sole discretion may suspend this Agreement temporarily.

12.18 Waiver of Immunity.

To the extent that GPA may in any jurisdiction claim for itself or its assets or revenues immunity from suit, execution, attachment (whether in aid of execution, before judgment or otherwise) or other legal process and to the extent that in any such jurisdiction there may be attributed to GPA or its assets or revenues such immunity (whether or not claimed), GPA agrees not to claim and irrevocably waives such immunity to the full extent permitted by the laws of such jurisdiction.

IN WITNESS THEREOF, the Parties hereto made and executed this Agreement, signed by their duly authorized officers or individuals, as of the dates listed below.

GUAM POWER AUTHORITY **GPA or Buyer**		**HANWHA ENERGY CORPORATION Seller**	
By:	_____	By:	_____
Name:	_____	Name:	_____
Title:	_____	Title:	_____
Date:	_____	Date:	_____

[Signature Page to Renewable Energy Purchase Agreement]

APPENDICES

APPENDIX A

CONTRACT PRICE AND MINIMUM PRODUCTION

Contract Year	Annual Price ($/MWH)	Guaranteed Net Annual Generation (MWH/YR)
1	62.45	72,005
2	63.08	71,831
3	63.71	71,245
4	64.35	70,865
5	64.99	70,485
6	65.64	70,306
7	66.30	69,724
8	66.96	69,344
9	67.63	68,693
10	68.31	68,780
11	68.99	68,202
12	69.68	67,821
13	70.37	67,440
14	71.08	67,252
15	71.79	66,678

Contract Year	Annual Price ($/MWH)	Guaranteed Net Annual Generation (MWH/YR)
16	72.51	66,296
17	73.23	65,915
18	73.96	65,722
19	74.70	65,151
20	75.45	64,770
21	76.21	64,388
22	76.97	64,190
23	77.74	63,623
24	78.52	63,241
25	79.30	62,859
26		
27		
28		
29		
30		

ESS MICRO GRID

Contract Year	Micro Grid Operation Price ($)
1	1,287,082
2	1,264,710
3	1,244,969
4	1,225,229
5	1,206,804
6	1,188,380
7	1,171,271
8	1,155,479
9	1,139,686
10	1,123,894
11	1,108,101
12	1,093,625
13	1,079,149
14	1,064,672
15	1,051,512

Contract Year	Micro Grid Operation Price ($)
16	1,038,352
17	1,025,191
18	1,012,031
19	998,871
20	987,026
21	975,182
22	963,338
23	951,493
24	939,649
25	927,805

APPENDIX B

NOTICE ADDRESSES

APPENDIX C

RAMP RATE CONTROL & MICROGRID

I. Description of Storage Unit

A. Specifications. The Facility shall include the Storage Unit as more fully described in the technical specifications set forth in Schedule C-1 attached hereto ("Storage Technical Specifications").

B. Operations. The operation of the Storage Unit shall at all times be subject to the operating restrictions and limitation set forth in Schedule C-2 attached hereto ("Storage Operating Restrictions"). At no time will Seller be expected to operate the Storage Unit in a manner that is inconsistent with the Storage Operating Restrictions notwithstanding any contrary terms in this Agreement.

C. Metering. Seller will install and maintain a separate meter for the Storage Unit and the operation and maintenance of such meter shall be governed by section 7.4 of this Agreement. The Storage Unit will not serve station use and Seller shall separately meter station use.

D. Augmentation. Seller shall be entitled to determine the actions necessary to achieve the Guaranteed Storage Output (as defined below) from time to time, including without limitation, whether to augment the batteries included in the Storage Unit solely as determined by Seller in its discretion.

E. Ramp Rate Control. The Storage Unit shall be operated such that the charging and output of the Storage Unit does not exceed 1% of the Project's nameplate capacity per minute; provided that Seller shall only be obligated to achieve such ramp rate as set forth in the table below on an average basis during each Contract Year ("Agreed Ramp Rate").

Contract Year	Agreed Ramp Rate
1	98.00%
2	97.90%
3	97.80%
4	97.70%
5	97.60%
6	97.50%
7	97.40%
8	97.30%
9	97.20%
10	97.10%
11	97.00%
12	96.90%
13	96.80%
14	96.70%
15	96.60%
16	96.50%
17	96.40%
18	96.30%
19	96.20%

20	96.10%
21	96.00%
22	95.90%
23	95.80%
24	95.70%
25	95.60%

F. Ramp Rate Control Performance

Energy Storage System will control the ramping rate under 1% of the Facility Capacity (i.e. 600 kW) per minute and the control period [for the ramping rate] will be no more than 1 second. Detailed ramping control algorithm will be finalized through discussions between GPA and Seller after the final design of the Energy Storage System is put in place but no later than one (1) month before the commissioning test of the Facility will start.

Evaluation of Performance Verification:

During the Delivery Period, on an annual basis, Seller shall carry out the evaluation process for the performance verification of the Energy Storage System, including power test and 1% ramp-rate control test in the presence of GPA, once every year with annual data storage in the Facility database and GPA SCADA. [Note: specify what is to be measured and equation below.]

$$\left| \frac{\sum_{t-\Delta t}^{t} PV_i(x)}{\Delta t} - \frac{\sum_{t-2\Delta t}^{t-\Delta t} PV_i(x)}{\Delta t} \right| > P_{ramp}$$

Where:

- Δt = 60 seconds
- $PV_i(x)$: PV generation at time t
- i = 1,2,3, ….., 60 seconds
- P_{ramp}: active power considering ramp rate limit per 1min window

Ramp Rate Control shall be based on a plus or minus (±) 1% of rated power of 60MW plant ("Measured Value"). Ramp Rate Control Failure means a plus or minus (±) 2% of Measured Value.

Ramp Control Penalty:

Penalty will apply to failure to meet the 1% ramp per minute rate for both under and over power. Ramp-Control must be controlled within 1 second. The failure percentage is as below:

- Failure Percentage (FP) = (E1 – E2)

Symbol	Item	Unit	Remarks
E1	Guaranteed value of Succeed Ramp-Rate	%	Proposal (offer) shown in table below

E2	Output of Ramp Rate Controlled	%	1% ramping requirement with 2% measurement error

If FP is greater than 0 (zero), then Penalty shall be calculated as follow:

- Under Power Failure Penalty = (AF_U) *(C_U)*(FP_U)
- Over Power Failure Penalty= (AF_O) *(C_O)*(FP_O)

Symbol	Item	Value	Unit
C_U	Nominal Ramp Down Cost	1.96	$/min/MW
C_O	Nominal Ramp Up Cost	0.49	$/min/MW

The penalty is calculated only for the portion exceeding the guaranteed value.

Where:

- Failure Power of Under Power (FP_U) = |Ramp Rate Required Power – CP| [MW]
- Failure Power of Over Power (FP_O) = |CP – Ramp Rate Required Power| [MW]
- Controlled Power (CP) =1 minute Average Power of 1% Ramp Rate Controlled by 1 second
- Acceleration Factor of Under Power (AF_U) = 0.5
- Acceleration Factor of Over Power (AF_O) = 0.5

G. Time Shifting. As described herein, the Storage Unit will be charged during the day and discharged during the night and in this manner will provide GPA with delayed deliveries of Renewable Energy.

E. Communication Protocols. Seller and GPA shall mutually agree (in writing) upon communication protocols to allow GPA to have access to SCADA information and a real-time data feed with respect to the Facility.

II. Delivery of Stored Energy for Dispatch

A. Charging. During the Delivery Period, Seller shall (i) operate and maintain the Storage Unit, (ii) charge the Storage Unit with a portion of the Renewable Energy generated by the Project (referred to as Charging Energy), and (iii) then shall store, discharge and deliver the Stored Energy to the Delivery Point. Charging Energy shall be drawn from the Renewable Energy generated by the Project and Stored Energy when delivered shall count towards the Minimum Production of the Project each Contract Year. In no case shall Seller be penalized for a reduction in the Renewable Energy delivered based on Charging Energy used to charge the Storage Unit.

B. Discharging. Seller shall sell and deliver, or cause to be delivered, and GPA shall purchase and receive, or cause to be received, all Stored Energy discharged by the Storage Unit, at the Delivery Point, and GPA shall pay Seller the Annual Storage Payment as compensation for Seller's operation of the Storage Unit and deliver of such Quantity of Stored Energy to the Delivery Point.

Stored Energy shall be discharged each day during the Delivery Period beginning from a time out of the 6 options as follows: 6 pm, 7 pm, 8 pm, 9 pm, 10 pm and 11 pm local time and shall be delivered to the Delivery

Point except during any Excused Hours and Weather Hours. The Discharge Energy shall be fixed as 5MW and the Delivery Period ends once all remaining Energy in the Microgrid has been discharged until the designated SOC of the Microgrid has been met.

If GPA desires to change the daily start time of the dispatch of the Storage Unit at any time during the Delivery Period, then GPA shall deliver Notice to Seller of such proposed change at least seven (7) days prior to the date on which Seller is being asked to implement such change ("Dispatch Instruction"). Seller shall not be obligated to accept and implement Dispatch Instruction requested by GPA if (i) such Dispatch Instruction is not consistent with the Operating Parameters, Good Utility Practices, any Planned Outages, applicable law or any limits set forth in any permit or approval received by Seller in connection with the Facility, or (ii) implementation of such dispatch instructions would limit, interfere with or prevent Seller's operation and maintenance of the Facility and/or its performance of its obligations under this Agreement, including without limitation, Seller's obligations with respect to the Guaranteed Dispatch Rate and/or Minimum Production and any make-up amounts Seller reasonably expects to deliver in any Contract Year, or (iii) implementation of such dispatch instructions would limit, interfere with or prevent Seller's performance of its obligations under the Interconnection Agreement. Any Dispatch Instruction delivered by GPA shall remain in effect until another valid Dispatch Instruction is delivered by GPA to Seller in accordance herewith.

Contract Year	Estimated Annual Stored Energy to be discharged from the Storage Unit and delivered to the Delivery Point referred to herein as the "Guaranteed Dispatch Rate"
1	6,570
2	6,554
3	6,501
4	6,466
5	6,431
6	6,415
7	6,362
8	6,327
9	6,293
10	6,276
11	6,223
12	6,188
13	6,153
14	6,136
15	6,084
16	6,049
17	6,015
18	5,997
19	5,945
20	5,910
21	5,875
22	5,857
23	5,805
24	5,771
25	5,736

The annual estimate of Stored Energy to be delivered shall be subject to the terms set forth in part II.C below.

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C. Guaranteed Storage Output. The Storage Unit is expected to allow Seller to deliver a minimum number of MWhs of Stored Energy each Contract Year as set forth above (such annual MWh production is the "Guaranteed Dispatch Rate").

Seller during the Delivery Period shall (i) during any Contract Year, deliver to GPA at least ninety percent (90%) of the Guaranteed Dispatch Rate, and (ii) for any consecutive six (6) Contract Years during the Delivery Period, deliver to GPA at least ninety percent (90%) of the aggregate Guaranteed Dispatch Rate during such period (which shall include make-up amounts generated and delivered in any years in excess of one hundred percent (100%) of the Guaranteed Dispatch Rate for such year) (any such time period a "Storage Measurement Period" and each such guaranteed amount of delivered Stored Energy during any Stored Measurement Period, the "Guaranteed Storage Output"). Any shortfall of Stored Energy (expressed in MWhs/year) from the applicable Guaranteed Storage Output during a Storage Measurement Period shall be deemed a "Storage Deficiency Amount."

The Annual Storage Payment for the following Contract Year shall be adjusted for any Storage Deficiency Amount which is not due to Excused Hours or Weather Hours (except, in the case of Weather Hours, as set forth below) ("Shortfall Adjustment"). The Shortfall Adjustment will be calculated as set forth below:

Adjusted Annual Storage Payment = (Storage Deficiency Amount/Guaranteed Dispatch Rate) x Annual Storage Payment

For purposes of clarity, Seller shall be entitled to deliver to GPA Renewable Energy or Stored Energy in the amount of such Storage Shortfall in subsequent time periods (even if such make-up amounts are in excess of the Guaranteed Dispatch Rate for such subsequent year), and this Agreement may be extended as necessary for a period of up to six (6) months to allow Seller to make up any Storage Deficiency Amount; however, there shall be no Shortfall Adjustment for such individual Contract Year unless such Stored Energy delivered hereunder is less than [ninety percent (90%) of the] Guaranteed Storage Output for the applicable Storage Measurement Period, and such shortfall is not due to Excused Hours or Weather Hours (except, in the case of Weather Hours, as set forth below).

In the event Shortfall Adjustment applies to a Storage Measurement Period of six (6) rolling Contract Years, then such Shortfall Adjustment shall be reduced by the amount of any Shortfall Adjustment paid for any Contract Year during such six (6) year Storage Measurement Period. The Shortfall Adjustment to the Annual Storage Payment shall be Seller's sole liability and obligation, and GPA's sole right and remedy, with respect to Seller's failure to deliver the Guaranteed Output during any Storage Measurement Period.

To the extent any Storage Deficiency Amount is due to Weather Hours, Seller's sole liability and GPA's sole remedy shall be to deliver thereafter Renewable Energy or Stored Energy equal to such Storage Deficiency Amount attributable to Weather Hours, calculated in accordance with Appendix K (which includes a sample calculation for a hypothetical Storage Measurement Period). If any portion of a Storage Deficiency Amount due to Weather Hours is not made up in the five (5) Contract Years beginning in the first Contract Year following the Contract Year in which the Weather Hours Storage Deficiency Amount occurred, then a Shortfall Adjustments shall be applied for the remaining Storage Deficiency Amount. Notwithstanding the foregoing, with respect to any Storage Deficiency Amount that is due to Weather Hours, Seller shall have the option, at any time prior to the expiration of the five (5) Contract Year make-up period, to elect to apply any remaining Shortfall Adjustment in its entirety. If the Storage Deficiency Amount arising as a result of Weather Hours occurs in the last five (5) years of the Delivery Period, then unless Seller exercises its option to apply any remaining Shortfall Adjustment early, the Delivery Period shall be extended as necessary, for a period of up to six (6) months, to achieve a make-up period of five (5) Contract Years as described above.

Seller shall be entitled to sell, and GPA shall purchase, quantities of Stored Energy for which Shortfall Adjustments are paid hereunder, during any remaining Storage Measurement Period during the Delivery Period. During any Contract Year, all Renewable Energy delivered by Seller to GPA in excess of the Guaranteed Dispatch Rate shall be credited against makeup of any outstanding Storage Adjustment, with oldest Storage Adjustment made up first.

To the extent any Storage Adjustment is due to Excused Hours, Seller shall be excused from any liability with respect thereto.

D. Remedies. For Seller's failure to deliver Stored Energy as required hereunder, GPA's remedies shall be as set forth in part II.C above. For GPA's failure to purchase and receive Stored Energy as required hereunder, Seller shall in addition have all other remedies available at law or in equity.

E. Title and Risk of Loss. Seller shall be responsible for any costs or charges imposed on or associated with the Stored Energy or its delivery up to the Delivery Point. GPA shall be responsible for any costs or charges imposed on or associated with Stored Energy or its receipt at and from the Delivery Point. Title to and risk of loss of Stored Energy from the Facility delivered to the Delivery Point shall transfer to GPA at the Delivery Point. Seller warrants that it will deliver to Buyer Stored Energy free and clear of all liens, security interests, claims and encumbrances or any interest therein or thereto by any person arising prior to the Delivery Point.

III. Compensation for Storage Unit Operations

Compensation to Seller for the operation of the Storage Unit during the Delivery Period shall consist of an Annual Storage Payment as set forth in Appendix A. The Annual Storage Payment shall be paid in accordance with Sections 7.1, 7.2 and 7.5 of this Agreement.

The Annual Storage Payment shall only be subject to reduction or offset for, and GPA's sole remedy for Seller's failure to deliver Stored Energy and Seller's operation of the Storage Unit shall be, the application of any Shortfall Adjustment in accordance with Section II.C above.

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Schedule C-1
Technical Specifications for Storage Unit

- Microgrid Capacity: 20MW PCS, 32.5MWh usable energy (Actual installed capacity shall be determined at later stage)
- The Microgrid will normally perform the ramp rate control as required, but if the Power Plant output exceeds 22.5MW, it will charge the excess amount into the Microgrid.
- The Microgrid will also force charge the Microgrid if the weather conditions are not sufficient enough to make the Power Plant to reach production amounts above 22.5MW to ensure that the Microgrid will discharge every year the agreed on discharge amount.

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Schedule C-2
Operating Parameters for Storage Unit

- The output that the Facility delivers to the grid shall be limited to 22.5MWac throughout the Delivery Period.
- [Seller to provide additional Operating Parameters]

APPENDIX D

NOT USED

APPENDIX E

NOT USED

APPENDIX F-1

FORM OF LETTER OF CREDIT

(Provided is sample which may be replaced by Bank / Financial Institution Form)

(*Bank or Financial Institution*)

_____, 201__

Irrevocable Standby Letter of Credit No. ____

Beneficiary:
Guam Power Authority
P.O. Box 2977
Guam 96932-2977
Attn:
Applicant:

Dear _____:

We hereby establish for the account of (*Company Name*) ("Applicant") our irrevocable standby letter of credit in your favor for an amount of USD 4,000,000 (Four Million United States Dollars). Applicant has advised us that this letter of credit is issued in connection with the Renewable Energy Purchase Agreement, dated as of _____, 2012, by and between the Applicant, and Guam Power Authority (the "Beneficiary"). This letter of credit shall become effective immediately on the date hereof and shall expire on _____ [*the date that is XX days after the Effective Date of the PPA*] (such date, or such later date(s) as determined by Applicant in accordance with the next succeeding sentence, the "Expiration Date"). The Expiration Date can be extended on one or more occasions by written notice to us from the Applicant, provided that such written notice is received at least 10 days prior to the Expiration Date. This letter of credit is subject to the following:

1. Funds under this letter of credit shall be made available to Beneficiary against its draft drawn on us in the form of Annex 1 hereto, accompanied by (a) a certificate in the form of Annex 2 hereto, appropriately completed and signed by an authorized officer of Beneficiary, dated the date of presentation, and (b) the original of the letter of credit (the "Accompanying Documents") and presented at our office located at (*Bank/Financial Institution Address*) attention _____. (or at any other office which may be designated by us by written notice delivered to you). A presentation under this letter of credit may be made only on a day, and during hours, in which such office is open for business (a "Business Day"). If we receive your draft and the Accompanying Documents at such office on any Business Day, all in strict conformity with the terms and conditions of this letter of credit, we will honor the same by making payment in accordance with your payment instructions on the third succeeding Business Day after presentation.

2. This letter of credit shall terminate upon the earliest to occur of (i) our receipt of a notice in the form of Annex 3 hereto signed by an authorized officer of Beneficiary, accompanied by this letter of credit for cancellation, or (ii) our close of business at our aforesaid office on the Expiration Date, or if the Expiration Date is not a Business Day, then on the succeeding Business Day. This letter of credit shall be surrendered to us by you upon the earlier of presentation or expiration.

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3. This letter of credit is issued and subject to the International Standby Practices 1998 (ISP98) International Chamber of Commerce Publication No. 590, and as to matters not addressed by ISP98, shall be governed by and construed in accordance with the laws of the State of New York and application of U.S. Federal Law.

4. This letter of credit sets forth in full our undertaking, and such undertaking shall not in any way be modified, amended, amplified or limited by reference to any document, instrument or agreement referred to herein, except for Annexes 1, 2 and 3 hereto and the notices referred to herein; and any such reference shall not be deemed to incorporate herein by reference any document, instrument or agreement except as otherwise provided in this paragraph 5.

5. Communications with respect to this letter of credit shall be in writing and shall be addressed to us at the address referred to in paragraph 1 above, and shall specifically refer to this letter of credit no. _____.

Very truly yours,

_____

Authorized signature
(*Bank or Financial Institution*)

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ANNEX 1
TO LETTER OF CREDIT NO. _____

under LETTER OF CREDIT No. _____

To:
(*Bank or Financial Institution*)
(*Bank/Financial Institution Address*)
Attn: _____

[*Month, Day , Year*]

On Sight

Pay to Guam Power Authority U.S. $ _____ [not to exceed amount available to be drawn]

Wire to:
Bank's Name: Bank of Guam
Bank's Location: 111 Chalan Santo Papa St., Hagatna, Guam 96910
Bank's Mailing Address: P.O. Box BW, Hagatna, Guam 96932
Account Name: Guam Power Authority Revenue Fund Account
Acct. No.: (to be provided)
Routing No.: (to be provided)

For value received and charge to account of Letter of Credit No. _____ of (*Company Name*)

GUAM POWER AUTHORITY

By: _____

Name: _____

Title: _____

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ANNEX 2
TO LETTER OF CREDIT NO. _____

Drawing under Letter of Credit No. _____

Date: _____

To:
(*Bank or Financial Institution*)
(*Bank/Financial Institution Address*)
Attn: _____

The undersigned, a duly authorized officer of the Guam Power Authority, ("Beneficiary"), hereby certifies on behalf of Beneficiary to (*Bank or Financial Institution*) and to (*Company Name*) (the "Applicant") with reference to irrevocable standby Letter of Credit No. _____ (the "Letter of Credit") issued for the account of (*Company Name*) ("Applicant"), that:

1) pursuant to the Renewable Energy Purchase Agreement, dated as of _____, 201__, by and between Applicant and Beneficiary and as of the date hereof Beneficiary is entitled to draw under the Letter of Credit;

2) by presenting this certificate and the accompanying sight draft, Beneficiary is requesting that payment in the amount of $_____, as specified on said draft, be made under the Letter of Credit by wire transfer or deposit of funds into the account specified on said draft; and

3) the amount specified on the sight draft accompanying this certificate does not exceed the remaining amount to which Beneficiary is entitled to draft under said Renewable Energy Purchase Agreement.

In witness whereof, Beneficiary has caused this certificate to be duly executed and delivered by its duly authorized officer as of the date and year written below.

Date: _____

GUAM POWER AUTHORITY

By: _____
Name: _____
Title: _____

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ANNEX 3
TO LETTER OF CREDIT NO. _____

Notice of surrender of Letter of Credit No. _____

Date: _____

To:
(*Bank or Financial Institution*)
(*Bank/Financial Institution Address*)
Attn: _____

Re: Letter of Credit No. _____ issued for the account of (*Company Name*)

Ladies and Gentlemen:

We refer to your above-mentioned irrevocable standby Letter of Credit (the "Letter of Credit"). The undersigned hereby surrenders the Letter of Credit to you for cancellation as of the date hereof. No payment is demanded of you under this Letter of Credit in connection with this surrender.

Very truly yours,

GUAM POWER AUTHORITY

By: _____

Name: _____

Title: _____

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APPENDIX F-2

To be provided

APPENDIX G

NOT USED

APPENDIX H

SCHEDULING AND COORDINATION PROCEDURES

The Parties acknowledge that as of the Effective Date GPA has not yet established protocols for scheduling (firm or intermittent) power to permit solar projects to participate in GPA's scheduling process. As soon as practicable, Seller and GPA shall establish such protocols by mutual agreement in writing. Seller shall use Commercially Reasonable Efforts to comply with all additional reasonable protocols issued by GPA relating to available resources during the Delivery Period, and GPA shall consult with Seller (and take into account and accommodate Seller's reasonable comments) in connection with the preparation of any such additional protocols. The foregoing shall be subject to Section 4.16 of this Agreement.

1.1 General

(a) Notices. Seller shall submit to GPA notices and updates required under this Agreement regarding the Project's status, including, but not limited to, outage requests, forced outages and forced outage reports. If a web based system is not available, Seller shall promptly submit such information to GPA (in order of preference) telephonically, by electronic mail, or facsimile transmission to the personnel designated to receive such information. **Need to include PSCC requirements for Hourly Reports, Daily Production Reports, etc.**

(b) GPA Settlements. GPA shall be responsible for all settlement functions within GPA related to the Project.

(c) Resource Data Template. Seller shall provide the data to the GPA that is required for GPA's resource data template (or successor data system) for the Project consistent with this Agreement. Neither Party shall change such data without the other Party's prior written consent.

(d) Annual Delivery Schedules. No later than forty-five (45) days before (A) the first day of the first Contract Year and (B) the beginning of each calendar year for every subsequent Contract Year during the Delivery Term, Seller shall provide a non-binding forecast of each month's average-day expected Actual Renewable Energy for the following calendar year.

(e) Monthly Delivery Schedules. Ten (10) Business Days before the beginning of each month during the Delivery Term, Seller shall provide a non-binding forecast of each day's average expected Actual Renewable Energy for the following month ("Monthly Delivery Forecast") .

(f) Daily Delivery Schedules. By 5:30 AM Guam Prevailing Time on the Business Day immediately preceding the date of delivery, Seller shall provide GPA with a non-binding forecast of the Project's available energy (a "Day-Ahead Forecast"). A Day-Ahead Forecast provided in a day prior to any non-Business Day(s) shall include Schedules for the immediate day, each succeeding non-Business Day and the next Business Day. Each Day-Ahead Forecast shall clearly identify, for each hour, Seller's estimate of the Project's available energy. Seller may not change such Schedule past the deadlines provided in this section except in the event of a Forced Outage or Schedule change imposed by GPA, in which case Seller shall promptly provide GPA with a copy of any and all updates to such Schedule indicating changes from the then-current Schedule. These notices and changes to the Schedules shall be sent to GPA's on-duty scheduling coordinator. If Seller fails to provide GPA with a Day-Ahead Forecast as required herein, then for such unscheduled delivery period

only GPA shall rely on the delivery Schedule provided in the Monthly Delivery Forecast or GPA's best estimate based on information reasonably available to GPA and Seller shall be liable for Scheduling and delivery based on such Monthly Delivery Forecast or GPA's best estimate.

(g) Hourly Delivery Schedules. Notwithstanding anything to the contrary herein, in the event Seller makes a change to its Schedule on the actual date of delivery for any reason, including Forced Outages (other than a scheduling change imposed by GPA), that results in a change to its deliveries (whether in part or in whole), Seller shall notify GPA immediately by calling GPA's on-duty scheduling coordinator. Seller shall notify GPA of Forced Outages in accordance with this Agreement. Seller shall keep GPA reasonably informed of any developments that are reasonably expected to affect either the duration of the outage or the availability of the Project during or after the end of the outage.

1.2 Dispatch Down/Curtailment.

(a) GPA shall have the right to order Seller to curtail deliveries of Renewable Energy from the Project to the Delivery Point pursuant to a Notice of a Dispatch Down as defined in Appendix K delivered to Seller, provided that the value attributable to any Renewable Energy [in an aggregated quantity of more than _2% of the Minimum Production for any Contract Year] which is not delivered during such curtailment periods, whether for transmission unavailability, operational dispatch or pre-set ramping parameters or otherwise, shall be reimbursed to Seller as provided below.

(b) GPA shall have the right to order Seller to curtail deliveries of Stored Energy from the Microgrid Unit to the Delivery Point pursuant to a Notice of a Dispatch Down as defined in Appendix K delivered to Seller, provided that GPA shall remain obligated to pay Seller the complete Annual Microgrid Payment without adjustment notwithstanding such curtailments, whether for transmission unavailability, operational dispatch or pre-set ramping parameters or otherwise.

(c) Seller shall have the right in its discretion to make up any curtailed quantities of Renewable Energy as a result of a Dispatch Down ("Dispatch Down Makeup Production"), for which it is not reimbursed pursuant to this Appendix H, in the first and any subsequent Contract Year in which at least the Minimum Production is delivered and to extend the Term to the extent necessary, but not to exceed six (6) months, to make up any curtailed quantities. The Contract Price for the Contract Year in which the make-up occurs shall apply to Dispatch Down Makeup Production up to the Minimum Production amount for the Contract Year in which the Dispatch Down originally occurred. For production quantities in excess of the Minimum Production for the Contract Year in which the Dispatch Down originally occurred, the price will be the lesser of the then current LEAC Rate or the Contract Price in the Contract Year in which the make-up occurs. Production in excess of Minimum Production for any Contract Year will first be applied to any previous years' Deficiency Amounts, then to Dispatch Down Makeup Production, then treated under this Agreement as production in excess of Minimum Production.

(d) GPA shall provide to Seller all technical information necessary to justify and support each Dispatch Down.

(e) GPA shall pay Seller, on the date payment would otherwise be due in respect of the month in which any such curtailment in excess of 2% of Minimum Production for such Contract Year occurred], an amount equal to the product of the Contract Price times the amount of Renewable Energy that Seller could reasonably have delivered to

GPA but for such curtailment ("Lost Revenue"). During the Contract Year-end annual true-up process, any payments made by GPA to the Seller for production (MWh) in excess of the Minimum Production for that Contract Year, whether such production results from actual generation surpluses or Lost Revenue, will be adjusted to reflect the lesser of the Contract Price for the then current Contract Year or then current LEAC Rate. For purposes of clarification, for any given Contract Year, GPA will not be required to pay the Contract Price on amounts of production beyond the Minimum Production if the Contract Price for that Contract Year is higher than the LEAC Rate for that Contract Year. Seller agrees to reduce the Project's Renewable Energy as set forth in such a Notice of Dispatch Down that meets the requirements set forth herein.

(f) For purposes of clarification, no curtailment by GPA, as a result of a warranted failure of or defect in the interconnection facilities transferred by Seller to GPA pursuant to the Interconnection Agreement, during the one-year warranty term thereof, shall count against the 2% curtailment threshold set forth above. During the one-year warranty term of the interconnection facilities transferred, any curtailment by GPA which results from such failure of or defect in the interconnection facilities transferred will not be eligible for reimbursement by GPA to Seller, Lost Revenue payments, or Dispatch Down Makeup Production in future Contract Years.

1.3 Outage Notification.

(a) Planned Outages. Seller shall schedule Planned Outages in accordance with Good Utility Practices and with the prior written consent of GPA, which consent may not be unreasonably withheld, conditioned or delayed. Nonetheless, the Parties acknowledge that in all circumstances, Good Utility Practices shall dictate when Planned Outages should occur. Seller shall notify GPA of Seller's proposed Planned Outage schedule for the Project for the following calendar year by submitting a written Planned Outage schedule no later than October 1st of each year during the Delivery Period. The Planned Outage schedule is subject to GPA's concurrence, which concurrence may not be unreasonably withheld, conditioned or delayed. GPA shall promptly respond with its approval or with reasonable modifications to the Planned Outage schedule and Seller shall use its Commercially Reasonable Efforts in accordance with Good Utility Practices to accommodate GPA's requested modifications. Notwithstanding the submission of the Planned Outage schedule described above, Seller shall also submit a completed form of outage notification to GPA no later than fourteen (14) days prior to each Planned Outage and reasonably appropriate outage information or requests to GPA. Seller shall contact GPA with any requested changes to the Planned Outage schedule if Seller believes the Project must be shut down to conduct maintenance that cannot be delayed until the next scheduled Planned Outage consistent with Good Utility Practices. Seller shall not change its Planned Outage schedule without GPA's concurrence, not to be unreasonably withheld, conditioned or delayed.

(b) Forced Outages. Within two hours of any Forced Outage Seller shall submit a completed form of outage notification to GPA in accordance with the instructions shown on the agreed form and shall submit outage information to GPA. Seller shall not substitute Renewable Energy from any other source for the output of the Project during a Forced Outage.

(c) Coordination with GPA. GPA shall cooperate with Seller in arranging and coordinating all Project outages.

1.4 Operations Logs and Access Rights.

(a) Operations Logs. Seller shall maintain a log of all material operations and maintenance information on a daily basis. Such log shall include, but not be limited to, information on power production, efficiency, availability, maintenance performed, outages, results of inspections, manufacturer recommended services, replacements, and control settings or adjustments of equipment and protective devices. Seller shall maintain this information for at least two (2) years and shall provide this information electronically to GPA within five days of GPA's request.

(b) Access Rights. GPA, its authorized agents, employees and inspectors shall have the right of ingress to and egress from the Project during normal business hours upon reasonable advance notice and for any purposes reasonably connected with this Agreement.

APPENDIX I

BASE CONDITIONS AND FACILITY TEST PROTOCOL

[Since this bid is opened to different renewable resources GPA is requiring bidders to provide their own test protocols for GPA's review and approval.]

APPENDIX J
INTERCONNECTION AGREEMENT
(TO BE PROVIDED UPON ITS EXECUTION)

APPENDIX K

ADDITIONAL TERMS REGARDING WEATHER HOURS AND DISPATCH DOWN

WEATHER HOURS

For each applicable period, Seller shall calculate (1) the expected production of the Facility using the historical Weather Data from "WeatherBank PGUM_2004-PRES_solar data" provided in bid Amendment 2 (the "Expected Historical Production") and (2) the expected production of the Facility using the actual Weather Data (the "Expected Actual Production"). Seller than then obtain the quotient, rounded to the fourth decimal place (the "Production Factor"), equal to the Expected Actual Production divided by the Expected Historical Production. If the Production Factor is greater than one (1), then no Weather Hours shall be deemed to have occurred. However, if the Production Factor is less than one (1), then Weather Hours shall be deemed to have occurred. The portion of any Deficiency Amount (as defined in the Agreement) attributable to such Weather Hours shall be the difference equal to (A) the aggregate Minimum Production amount for that period minus (B) the product of (x) the Production Factor and (y) the aggregate Minimum Production amount for that period. The Deficiency Amount due to weather shall not be penalized.

The Deficiency Amount due to weather shall be audited annually by an independent auditor to be selected and the cost shared by both Parties.

DISPATCH DOWN

Buyer shall pay Seller, on the date payment would otherwise be due in respect of the day in which any curtailment is initiated by GPA for reasons of Dispatch Down, an amount equal to the Contract Price times the amount of Renewable Energy that Seller could reasonably have delivered to Buyer but for such Dispatch Down. The determination of the curtailed amount associated with any Dispatch Down shall be calculated as follows:

1) Identification of weather conditions for the period of Dispatch Down
   For any period the Facility was Dispatched Down, Seller shall document the Weather Data associated therewith. ("Weather Data" means solar irradiation, wind speed, and ambient temperatures.)

2) Curtailed amount calculation
   a. Seller shall use PVSyst energy simulation software or other software as agreed by the Parties to generate hypothetical generation amounts for the Dispatch Down period (curtailed amount MWh) by utilizing the Weather Data.

   b. In addition to "Annual Facility Test" (as described in Section 4.9 of this Agreement), GPA shall be entitled to check the accuracy of the equipment associated with the Weather Data once in each Contract Year as agreed with Seller.

APPENDIX L

RESOLUTIONS OF CONSOLIDATED COMMITTEE ON UTILITIES

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GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

Issues for Decision

Resolution No. 2018-05:

AUTHORIZATION OF INCREASE OF ENGINEERING, PROCUREMENT, AND CONSTRUCTION MANAGEMENT CONTRACT AMOUNT

What is the project's objective? Is it necessary and urgent?

Stanley Consultants was contracted in March 2017 through GPA RFP-17-001 as the Engineering, Procurement and Construction Management (EPCM) Contractor for the New 120-180 MW Power Plant in March 2017. As the EPCM, Stanley is providing the technical and contractual support in the new IPP procurement development and will support procurement activities including contract negotiations. The increase in contract cost will cover services through September 2018.

Where is the location?

The new power plant proposed siting is adjacent to the Harmon Substation.

How much will it cost?

GPA is requesting a $650,000 increase for technical services to develop procurement documents and support procurement activities.

When will it be completed?

Additional costs are for services through September 2018. The contract has a term of 5 years from March 2017.

What is its funding source?

CIP Funds

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671) 648-3002 | guamccu.org

RESOLUTION NO. 2018-05

RELATIVE TO AUTHORIZATION OF INCREASE FOR ENGINEERING, PROCUREMENT, AND CONSTRUCTION MANAGEMENT CONTRACT AMOUNT

WHEREAS, Stanley Consultants was selected through GPA RFP-17-001 as the Engineering, Procurement and Construction Management (EPCM) Contractor for the New 120-180 MW Power Plant in March 2017; and

WHEREAS, in October 2016 the PUC Docket 17-06 approved the initial funding of $750,000 for the procurement development of the new power plant from 2014 Bond Funds – LNG Startup Bond Project; and

WHEREAS, Stanley and its subcontractors have completed several tasks which include

- an initial kick off meeting on site to discuss new plant scope and contract options,
- draft bid documents and contracts including the Request for Qualifications and Technical Bid documents,
- continued technical discussions for IPP scope and support for current land rezoning efforts,
- scope development for geotechnical services; and

WHEREAS, additional funds are required to complete the bid documents to incorporate

- final land details including upcoming preliminary geotechnical studies and environmental and archaeological studies,
- incorporate additional LNG details to support secondary fuel infrastructure requirements for the fuel supply line and at the power generating facility,
- address regulatory requirements and conditions,
- support procurement activities including responses to bidder questions; and

RESOLUTION NO: 2018-05

WHEREAS, GPA estimate funding requirements through September 30, 2018 is an additional $650,000.

WHEREAS, GPA has an approved FY'2018 CIP budget of $800K for IPP Procurement/Construction Management (EPCM Scope); and

WHEREAS, GPA continues to work with Stanley to develop the additional funding requirements through contract award and for services as Owner's Engineer and construction management support activities during construction which will require PUC approval; and

WHEREAS, the increase contract cost exceeds the GPA General Manager's approval authority.

NOW, THEREFORE, BE IT RESOLVED, by the CONSOLIDATED COMMISSION ON UTILITIES, the GOVERNING BODY of the GUAM POWER AUTHORITY as FOLLOWS:

1. The CCU authorizes GPA to increase the Stanley EPCM contract by $650K for a contract total of $1.4M for consulting and technical services through September 2018.
2. The CCU authorizes the GPA General Manager to petition the PUC for approval to increase the Stanley EPCM contract by an additional $650K for a contract total of $1.4M for consulting and technical services through September 2018.

RESOLVED, that the Chairman certifies and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED AND APPROVED THIS 27th DAY OF FEBRUARY 2018.

Certified by:

JOSEPH T. DUENAS
Chairperson
Consolidated Commission on Utilities

Attested by:

J. GEORGE BAMBA
Secretary
Consolidated Commission on Utilities

RESOLUTION NO: 2018-05

I, J. George Bamba, Secretary for the Consolidated Commission on Utilities (CCU), as evidenced by my signature above do certify as follows:

The foregoing is a full, true, and accurate copy of the resolution duly adopted at a regular meeting of the members of Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

Ayes: _____

Nays: _____

Absent: _____

Abstain: _____

GPA EPCM Budget Forecast R1

6-Feb-18

Actual Spend per Month	March	April	May	June	July	August	September	October	November	December	Total
SCI	$ 32,198	$ 49,812	$ 71,096	$ 33,341	$ 19,380	$ 24,995	$ 10,081	$ 21,988	$ 21,353	$ 19,867	**$ 304,111**
K&M	$ 42,495	$ 29,865	$ 23,730	$ 48,330	$ 12,375	$ 1,350	$ -	$ 2,445	$ 1,500	$ 1,350	**$ 163,440**
Pond	$ 8,093	$ 1,268	$ 6,820	$ 5,893	$ -	$ -	$ -	$ 1,950	$ -	$ 4,532	**$ 28,556**
EA	$ -	$ -	$ -	$ -	$ 380	$ -	$ -	$ -	$ 847	$ -	**$ 1,227**
RIM	$ -	$ -	$ 1,054	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ 1,054**
GRT	$ 4,113	$ 3,372	$ 4,278	$ 3,648	$ 1,339	$ 1,098	$ 420	$ 1,099	$ 987	$ 1,073	**$ 21,427**
Expenses	$ 15,947	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ 15,947**
Totals	**$ 102,846**	**$ 84,317**	**$ 106,978**	**$ 91,212**	**$ 33,473**	**$ 27,443**	**$ 10,501**	**$ 27,482**	**$ 24,688**	**$ 26,822**	**$ 535,761**

Average Spend Per month		Rate (avg.)	1 FTE	1.5 FTE	2 FTE
SCI	$ 30,411	$ 181.67	173	259.5	346
K&M	$ 16,344	$ 270.00			
Pond	$ 2,856	$ 258.97			
EA	$ 123				
RIM	$ 105				
GRT	$ 2,143				
Expenses	$ 1,595				
Totals	**$ 53,576**				

	2018												2019	
Forecast Spending	**January**	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**	**January**	**TOTALS**
SCI	$ 30,411	$ 30,411	$ 31,428	$ 31,428	$ 30,411	$ 30,411	$ 30,411	$ 30,411	$ 62,857	$ 62,857	$ 62,857	$ 15,714	$ 15,714	**$ 465,323**
K&M	$ 1,750	$ 1,750	$ 46,710	$ 46,710	$ 16,344	$ 16,344	$ 16,344	$ 16,344	$ 46,710	$ 46,710	$ 46,710	$ 46,710	$ -	**$ 349,136**
Pond	$ -	$ 15,250	$ 9,333	$ 9,333	$ 2,856	$ 2,856	$ 2,856	$ 2,856	$ 22,400	$ 22,400	$ 22,400	$ -	$ -	**$ 112,540**
EA	$ -	$ -	$ 41,904	$ 53,588	$ 39,787	$ 39,787	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ 175,067**
RIM	$ 1,000	$ 3,500	$ 3,500	$ 1,000	$ 105	$ 105	$ 105	$ 105	$ 105	$ 105	$ 1,000	$ 105	$ 105	**$ 10,843**
Expenses	$ -	$ -	$ 250	$ 9,000	$ -	$ -	$ -	$ -	$ -	$ 7,500	$ 7,500	$ 7,500	$ -	**$ 31,750**
GRT (4.166%)	$ 1,381	$ 2,121	$ 5,546	$ 6,293	$ 3,729	$ 3,729	$ 2,071	$ 2,071	$ 5,502	$ 5,815	$ 5,852	$ 2,917	$ 659	**$ 47,686**
Totals	**$ 34,543**	**$ 53,032**	**$ 138,672**	**$ 157,353**	**$ 93,232**	**$ 93,232**	**$ 51,787**	**$ 51,787**	**$ 137,575**	**$ 145,387**	**$ 146,319**	**$ 72,947**	**$ 16,479**	**$ 1,192,345**
Cumulative Totals			**$750K**					**$1.2M**						
SCI	$ 334,522	$ 364,933	$ 396,362	$ 427,790	$ 458,201	$ 488,612	$ 519,023	$ 549,434	$ 612,291	$ 675,148	$ 738,005	$ 753,719	$ 769,434	**$ 769,434**
K&M	$ 165,190	$ 166,940	$ 213,650	$ 260,360	$ 276,704	$ 293,048	$ 309,392	$ 325,736	$ 372,446	$ 419,156	$ 465,866	$ 512,576	$ 512,576	**$ 512,576**
Pond	$ 28,556	$ 43,806	$ 53,139	$ 62,472	$ 65,328	$ 68,183	$ 71,039	$ 73,894	$ 96,295	$ 118,695	$ 141,096	$ 141,096	$ 141,096	**$ 141,096**
EA	$ 1,227	$ 1,227	$ 43,131	$ 96,719	$ 136,507	$ 176,294	$ 176,294	$ 176,294	$ 176,294	$ 176,294	$ 176,294	$ 176,294	$ 176,294	**$ 176,294**
RIM	$ 2,054	$ 5,554	$ 9,054	$ 10,054	$ 10,159	$ 10,265	$ 10,370	$ 10,475	$ 10,581	$ 10,686	$ 11,686	$ 11,791	$ 11,897	**$ 11,897**
Expenses	$ 15,947	$ 15,947	$ 16,197	$ 25,197	$ 25,197	$ 25,197	$ 25,197	$ 25,197	$ 25,197	$ 32,697	$ 40,197	$ 47,697	$ 47,697	**$ 47,697**
GRT	$ 22,808	$ 24,929	$ 30,475	$ 36,768	$ 40,497	$ 44,226	$ 46,297	$ 48,368	$ 53,870	$ 59,685	$ 65,537	$ 68,454	$ 69,113	**$ 69,113**
Project Cumulative Totals	**$ 570,304**	**$ 623,336**	**$ 762,007**	**$ 919,361**	**$ 1,012,593**	**$ 1,105,825**	**$ 1,157,612**	**$ 1,209,399**	**$ 1,346,974**	**$ 1,492,361**	**$ 1,638,681**	**$ 1,711,628**	**$ 1,728,106**	**$ 1,728,106**

GRAND TOTAL
(current spend thru 12/17 + forecast)
$ 1,728,106

STANLEYCONSULTANTS, Inc
8000 South Chester Street ❯ Suite 500 ❯ Centennial, CO 80112
303.799.6806 ❯ stanleyconsultants.com

February 7, 2018

This scope of work is the basis for the budget forecast submitted to GPA on February 2, 2018.

Tranche 1 to $750,000

- **Support Land rezoning – schedule item MI3-1901**. This scope includes work by RiMS and Stanley in support of the property rezoning legislature effort and work by EA Engineering, Science and Technology to perform environmental property surveys and Archeology Inventory survey. January 1 through March 31.

- **Project Management activity PM000**. This scope of work includes support conference calls, coordinate response to GPA questions and requests, prepare meeting minutes, periodic reports, monthly reports and invoices, manage the internal team and subcontractors. Ongoing through March 31.

- **Incorporate comments for Integrated Power Producer (IPP) Issue for Bid (IFB) documents Package – schedule item MI3-1030**. Pond, Stanley Consultants and K&M Advisors will incorporate GPA comments and discussed changes into documents in preparation for CCU and PUC review and comments. CCU comments will be incorporated prior to submittal to PUC. February 5 through March 31.

- **Evaluate RFQ responses – schedule item MI3-1009**. Stanley Consultants and K&M Advisors personnel will support GPA in the evaluations of the submitted RFQ proposals and recommend the selection of the most qualified IPP proponents and document the reasons for disqualifications. This is planned to be a large effort as many responses are expected; several that may be outside the RFQ requirements. Evaluations to take place at GPA offices. March 23 to April 6.

Tranche 2 to $1,500,000

- **Support Land rezoning – schedule item MI3-1901**. This scope includes work by RiMS and Stanley in support of the property rezoning legislature effort. This also includes the remaining environmental survey work by EA Engineering, Science and Technology to perform property surveys and Archeology Inventory survey. April 1 through June 1.

- **Project Management activity PM000**. Support conference calls, coordinate response to GPA questions and requests, prepare meeting minutes, periodic reports, monthly reports and invoices, manage the internal team and subcontractors. Ongoing through January 31, 2019.



- **Respond to PUC questions about the IFB documents and process. Schedule item MI3-1036**. April 3 to April 23,

- **Incorporate Land information and PUC comments into the IFB documents. Schedule items MI3-1040 and MI31902**. Pond, Stanley Consultants and K&M Advisors will incorporate PUC comments and discussed changes into IFB documents in preparation for issuing for bid by GPA procurement. April 13 through May 18.

- **Support IPP IFB questions during bid process – Schedule item MI3-1052**. Stanley Consultants, Pond and K&M Advisors will support GPA in the response to bidder questions during the IFB proposal development period. Support GPA with preparation of addendums added during the proposal development period. May 15 to September 6.

- **Develop IPP IFB proposal review, evaluation, and recommendations. Schedule item MI3-1060**. Stanley Consultants, K&M Advisors and Pond will support GPA procurement and personnel in the review and evaluation of submitted IPP IFB proposals. This will include rankings and a recommendation for selection. Review and evaluation of proposals to take place at GPA offices. September 6 to November 1.

- **Provide procurement – negotiations support to GPA with the selected proponent to reach contractual agreement. Schedule item MI3-1070**. November 1 through January 31, 2019.

- **Respond to requests for information and questions from the CCU during the contract approval. Schedule item MI3-107**1. December 18 to January 3, 2019.

- **Respond to requests for information and questions from the PUC during the contract approval. Schedule item MI3-1073**. January 3 to January 31, 2019.

- **Support GPA in responding to questions and comments during the protest period.** December 18 to January 9, 2019

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

TO: **Consolidated Commission on Utilities**

FROM: **General Manager**

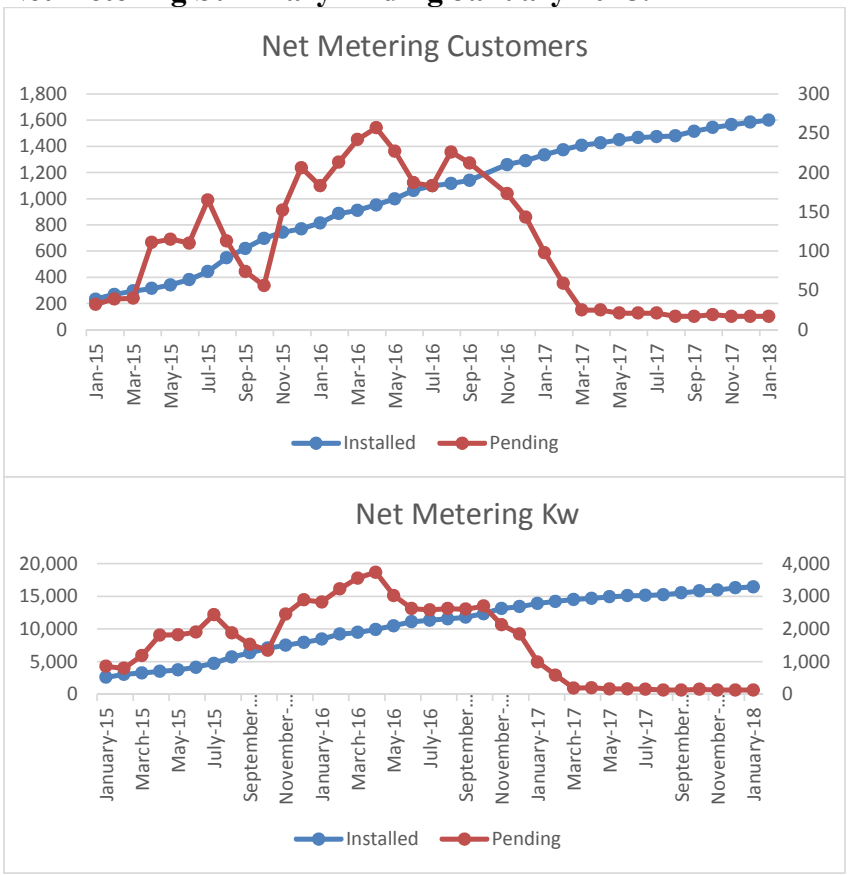
DATE: **February 22, 2018**

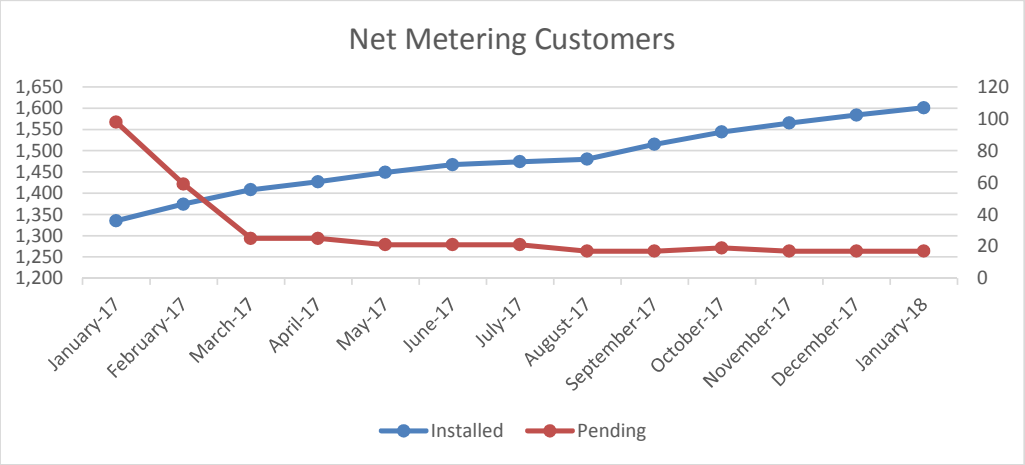
SUBJECT: **General Manager's Report**

1. **Generation System Update:** The following summarizes the expected generation capacity situation for March 2018. The peak demand for March is estimated at 248 MW. GPA plans to do chemical cleaning of both Cabras 1 & 2 steam units in March thru early April. The cleaning is necessary in order to improve plant availability and reliability.

March 2018 Capacity Available:	**332 MW**
March 2018 Projected Demand	**248 MW**
Available Reserve Margin	**84 M**

2. Net metering Summary Ending January 2018:





Description: Net Metering Ending January 2018	**Count**	**Kw**	
Active	**1,601**	**16,430**	
Pending	17	129	
Totals:	1,618	16,559	
Service:	**Count**	**KW**	**Kw/Customer**
Residential	1,519	13,689	9.0
Others	82	2,741	33.4
Total:	1,601	16,430	10.3
% Residential	**94.9%**	**83.3%**	
Estimated 12 Months Revenue Impact:	**$3,056,023**		

3. Renewable Energy Production Summary Thru January 2018:

Energy Production Source:	Kwh	Oil Barrels Avoided	Fuel Cost Avoided
NRG Total Production beginning Oct 2015	111,336,380	186,156	$10,238,598
Net Metering Estimated Production beginning Jan 2015	53,077,366	88,746	$4,881,045
Wind Power Production beginning Jan 2016	828,109	1,385	$76,154
Renewables Total:	**165,241,855**	**276,287**	**$15,195,797**

4. Demand Side Management (DSM) Program Expenses Thru January 2018:

All Expenses – Fiscal Year

Description	FY16	FY17	FY18 as of January '18	Total to Date
Regular/OT Pay	$11,348.80	$22,256.00	$4,690.09	$38,294.89
Other Contractual	$28,278.50	$73,010.05	$2,885.00	$104,173.55
Paid Rebates–Split AC	$154,700.00	$557,275.00	$367,200.00	$1,079,175.00
Paid Rebates–Central AC	$3,400.00	$8,200.00	$800.00	$12,400.00
Paid Rebates–Washer/Dryer	$2,800.00	$7,425.00	$1,800.00	$12,025.00
Total Expenses	200,527.30	$668,166.05	$377,375.09	$1,246,068.44

5. **Phase II Renewables:** The PUC is expected to deliberate the approval of the KEPCO-LG 60 MW Power Purchase Agreement at its February 22nd Meeting. The HANWHA 60 MW PPA contract is before the CCU for approval this month. If CCU approves, the PUC may approve the project in their March 2018 meeting.

6. **Phase III Renewables Bid**: The bid has been issued. The bid request is for about 40MW of solar PV renewables to be constructed on Navy leased land. The energy produced would be stored in batteries during the day and released at nighttime to meet peak time load. The bid price opening date for acceptable proposals is set for April 17, 2018.

7. **PUC Agenda for February 22, 2018:**
    - **GPA Docket 18-06, Petition to Approve Phase II Renewable Award to KEPCO-LG CNS Consortium**
    - **GPA Docket 18-07, Petition to Approve Piti Substation GIS Maintenance Award to AYM International**

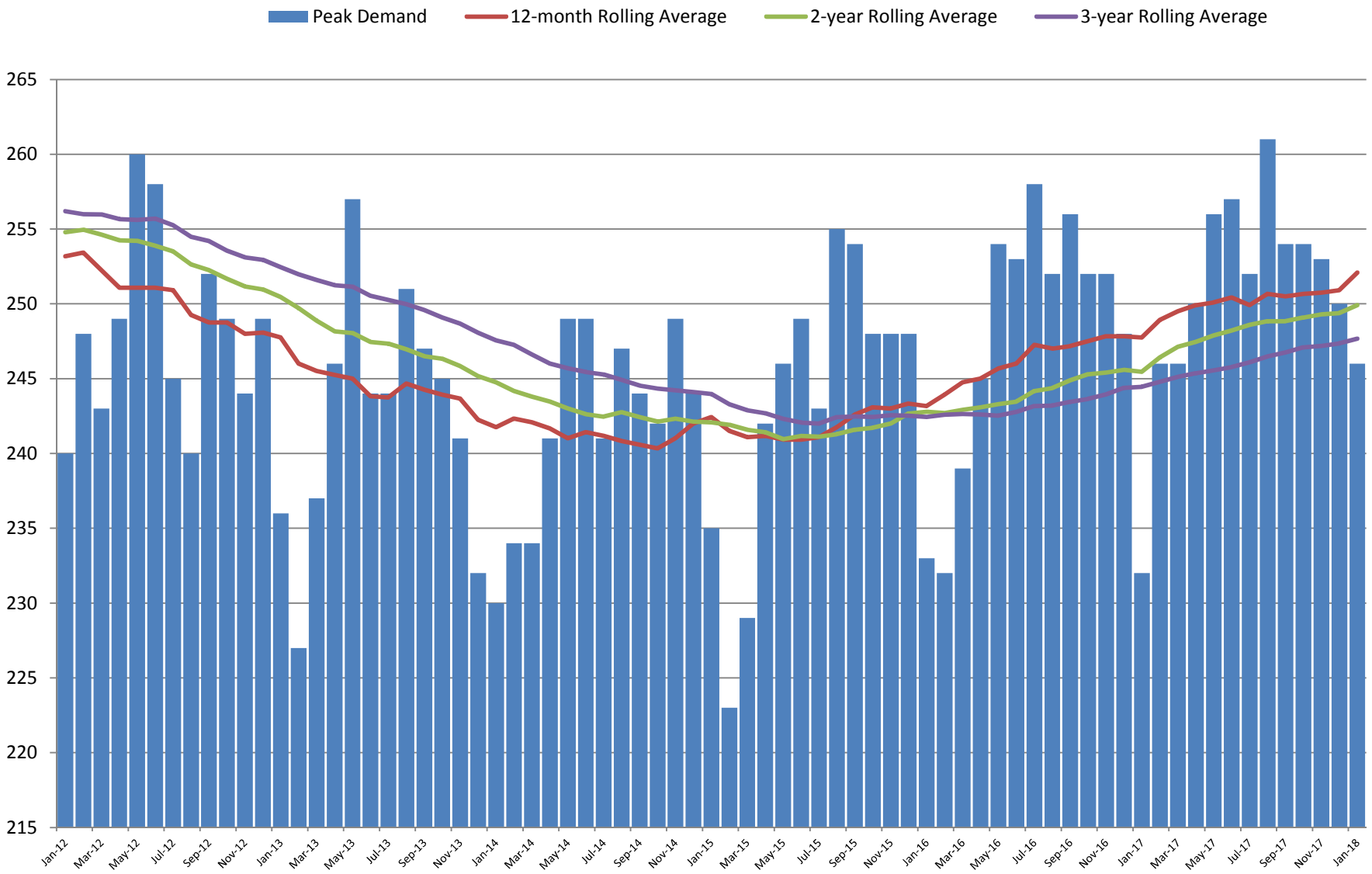
8. **New Power Plant Procurement:**
    - The rezoning effort for the land for the new power plant continues. Senator Ada held a public hearing on Bill-223-34 on February 9th. He has noted he will introduce the bill to be deliberated in the Legislature's February session.

9. **Employees Briefings:** We conducted employee briefings on February 19th and 20th. Twice a year we update our employees/team on the progress of the utility and where we are heading.

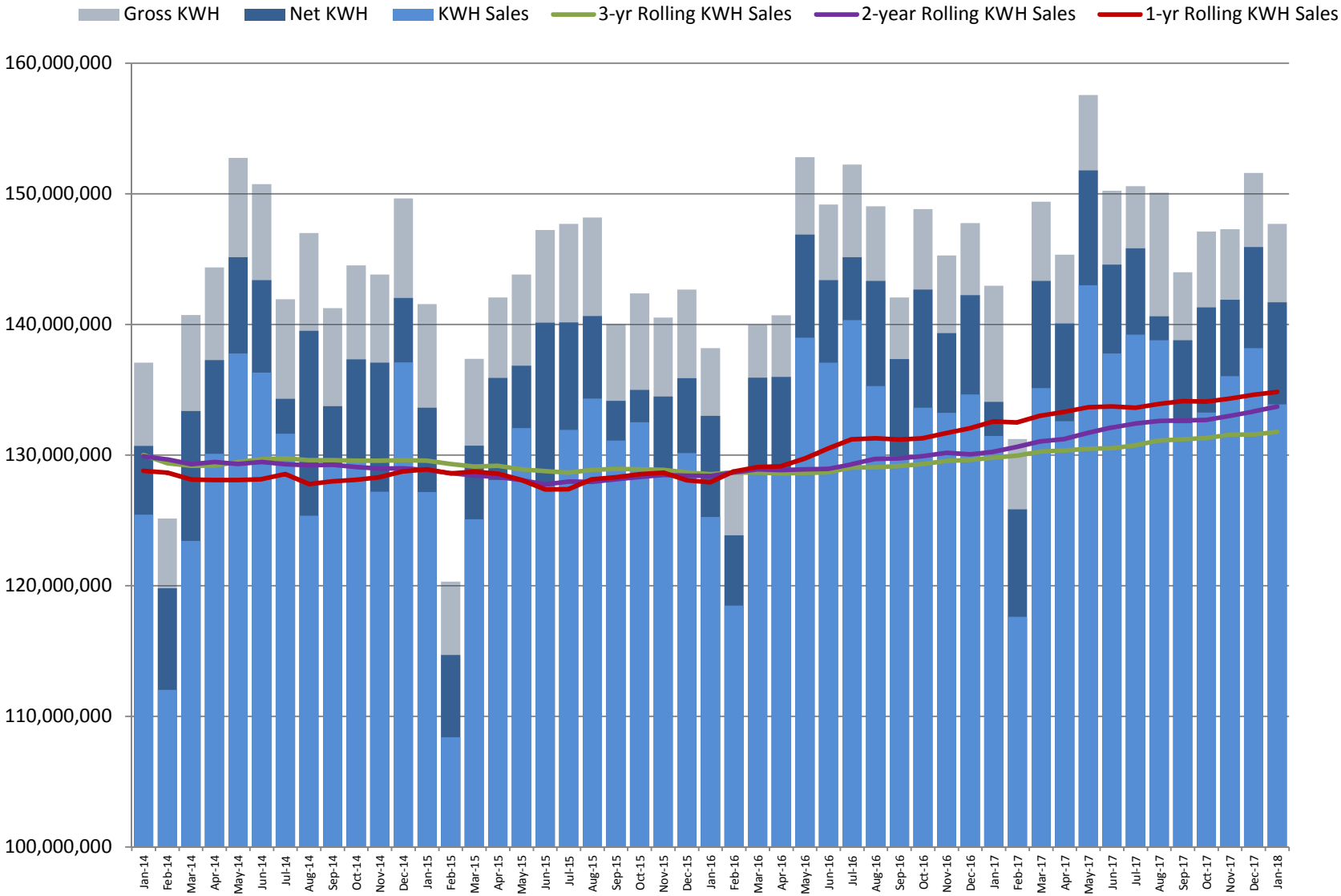
10. **Key Performance Indicators:** The following pages provide updated information thru January 2018.

John M. Benavente, P.E.

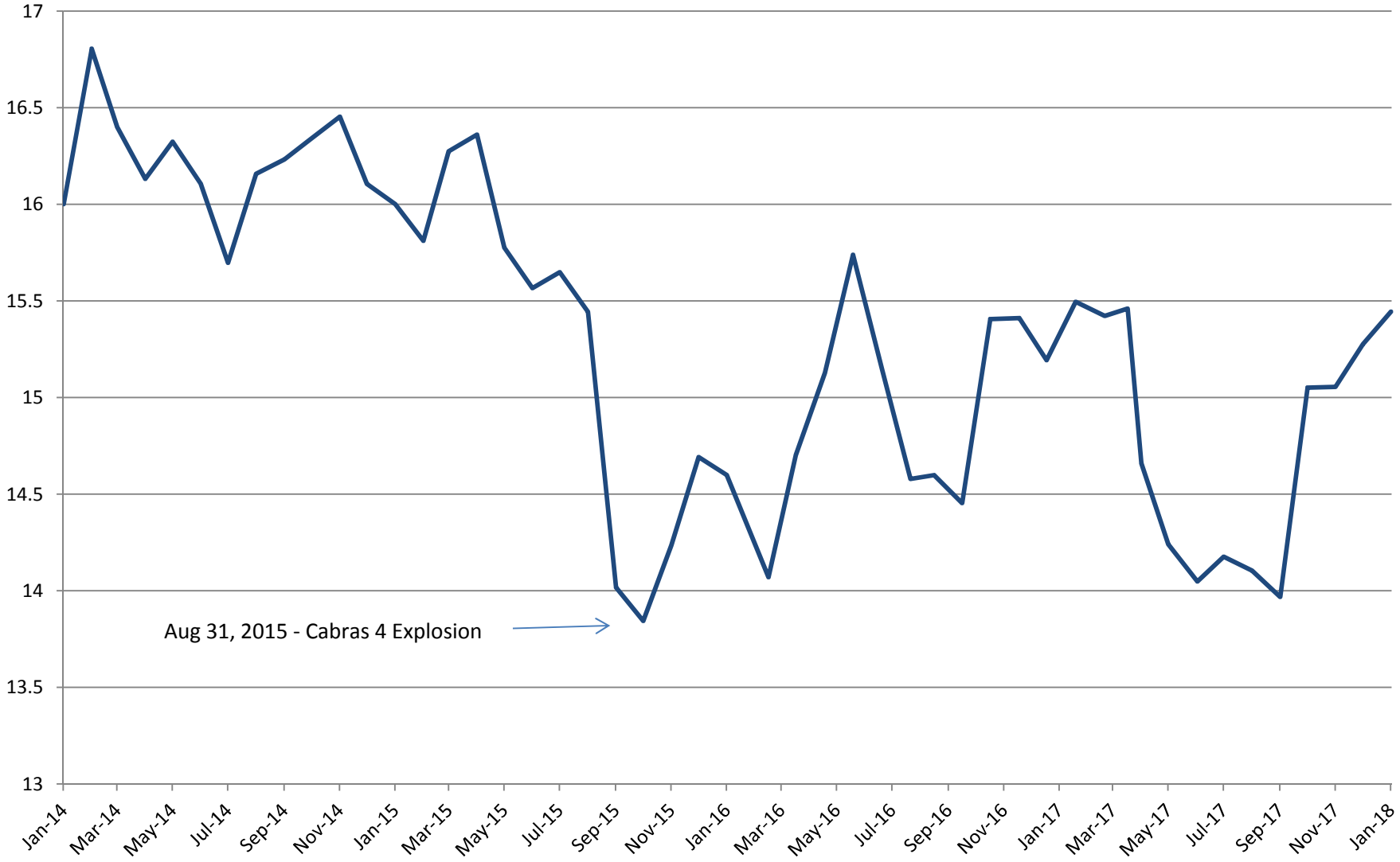
Historical Monthly Peak Demand
January 2012 - January 2018



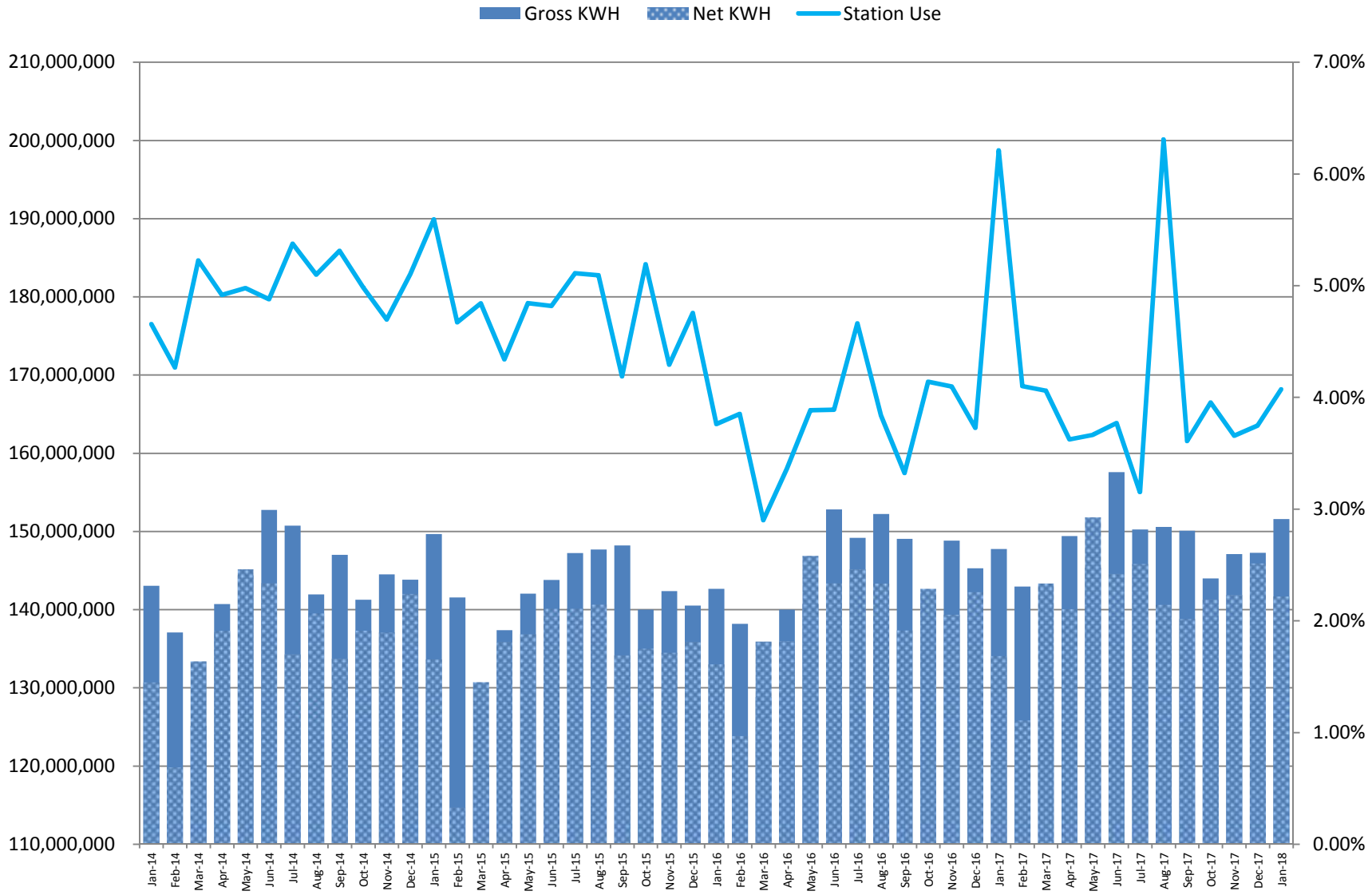
Historical KWH Sales
January 2014 - January 2018



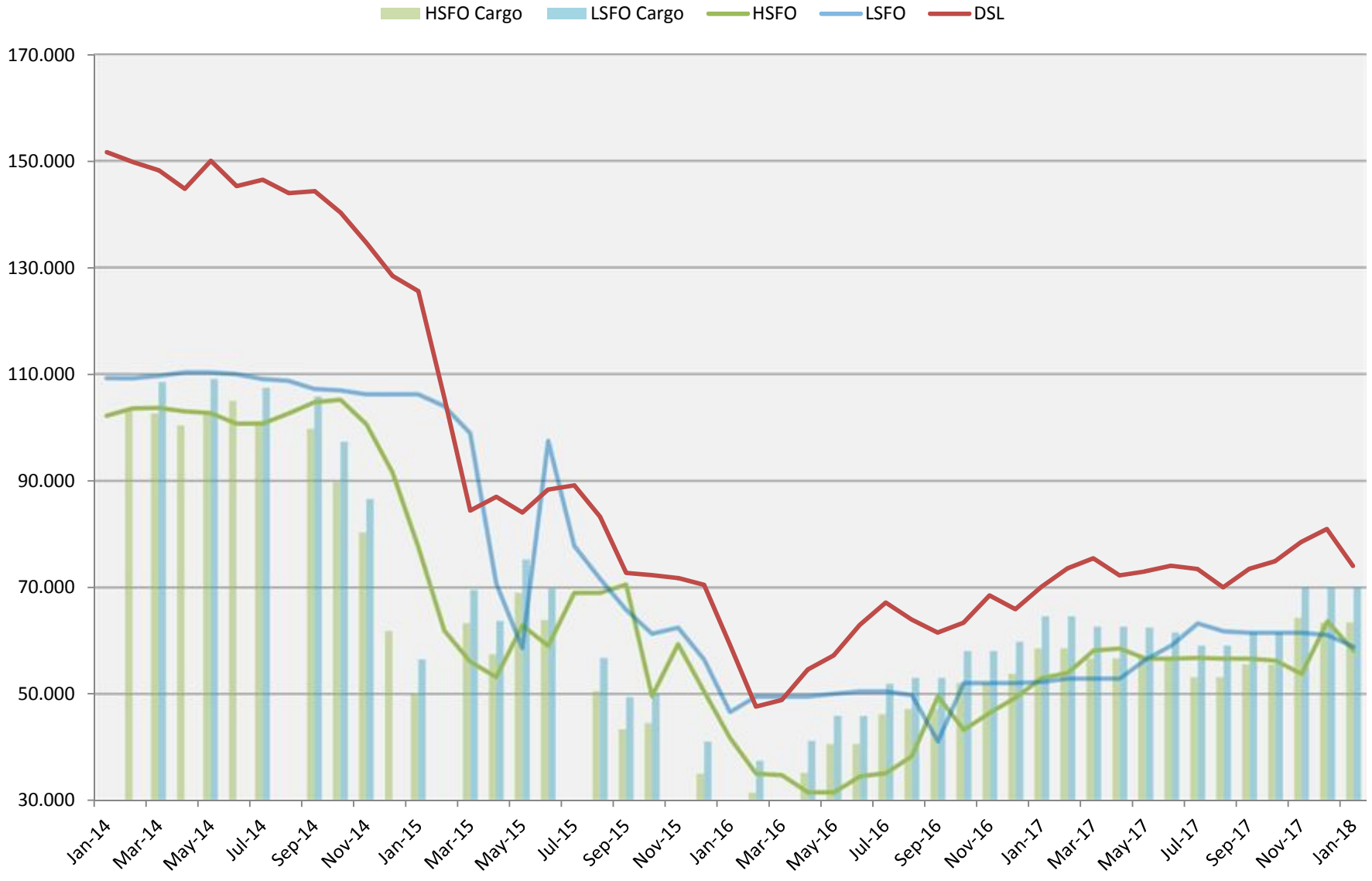
SYSTEM GROSS HEAT RATE
(KWH/Gal)
January 2014 - January 2017



Gross and Net Generation (KWH)
January 2014- January 2018



Fuel Cargo and Fuel Consumption Costs ($/bbl)
January 2014 - January 2018



Guam Power Authority

50th Anniversary

~Celebrating 50 Years Powering Our Island Community~

May 15, 2018

Communications-Public Information Office

Why Celebrate 50 Years?

- GPA should be eager to mark the accomplishments of the Authority and share the momentous occasion across our island community.

- GPA's anniversary campaign is planned to recognize all GPA operations, honor & thank current & past employees and leadership; show appreciation to employee's families, retirees; and thank leaders & the community.

- Goal: *To reflect on the history of GPA and its positive impact on the community; continue to promote GPA's mission and build goodwill.*

50th Anniversary Planning Committee

- **Planning Committee with Chair and Co-Chair**
- **Art Perez - Advisor**
- **Patti Diego - Advisor**

Suggested Events

1. Proclamation Signing
2. GPA Employee Breakfast Briefing(s)
3. '50 Days of GPA' – March 26 to May 15 **= 50 days**
4. GPA TimeLine Wall - featuring 50 Years/5 decades of GPA operations on Guam
5. Promotional items
6. Produce an air historical-testimonial video montage – to incorporate past (retired) and present employees, GPA leadership, GPA governance (board/CCU) members
7. GPA Time Capsule Event – to be opened in 2043 (25 years) or 2068 (50 Years)
8. Guam Museum – connection – (eg. Brass Plate from Tanguisson)
9. Family Picnic and/or Evening Banquet Event
10. GPA Executive Management/CCU Members – factual, inspirational quotes; color photos and text mounted on walls
11. Media Rounds
12. UOG/CIS Conference

Communications Objective and Logo





- Only adding an anniversary "element" to an existing GPA logo
- Draft a statement that summarizes the purpose behind the 50th anniversary celebration, which serve as its theme.

- A theme can be as simple as "50 Years of Innovation" or "50 Years of Powering Guam"

(Other/Relatable)

Suggested Events:

1. GPA can build its 2018 Liberation Day parade float to commemorate the 50th anniversary. Parts or segments can be preserved and re-used at the GovGuam Labor Day Picnic in September

2. For 2018 GovGuam Labor Day - on the GPA-side, re-purpose parts from Liberation Day Float in decorations

3. 2018 GPA/PPW – October – overlay GPA 50th anniversary history to call attention to GPA's 50-year celebration.

4. December 2018 – send 'thanks' for sharing in the celebration by producing a year-end greeting card with design sourced from 50-Year TimeLine Wall

5. GPA Semi-Centennial Garden of Fruit Trees at Fadian –to commemorate the GPA 50th Anniversary for years to come. This decoration will beautify the organization's headquarters while reminding visitors that the organization has a long, trusted history; incorporate Semi-Centennial Logo

Example: GPA TimeLine Wall

1. Showcase employees and events from over the 50 years GPA has existed

2. Share photos and stories from the past.

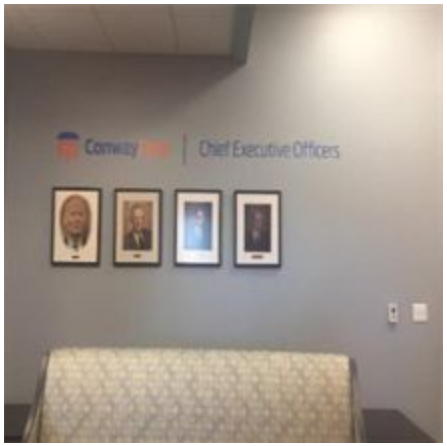
3. Constructed in panels / or phases – unveiling event(s) opportunities



Events: Inspirational Quotes

1. Design to match TimeLine Wall
2. Features: GPA Executive Management/CCU Members
3. Factual, inspirational quotes mounted on wall
4. Color photos
5. Text





‘Free’ Advertising/Publicity Opportunities:

1. Incorporate use of GPA ’50 Year’ logo on all official correspondence ‘tags’ in 2018
2. Celebrate 50 Years in monthly GPA Ratepayer newsletter
3. Celebrate 50 Years in internal GPA Employee newsletter
4. Additional ‘text’ on GPA Energy Statement
5. Visit to Radio Talk Show
6. Visit to Television Talk Show
7. Posting activities on all social media
8. GPA Employee Tshirts

Net Metering Stakeholder Discussions

Public Meeting Dates

- 2016 August 11
- 2016 September 7
- 2016 October 27
- 2017 February 28
- 2017 May 9
- 2018 February 1

2016 August 11

- GPA presented Black & Veatch's Report regarding NEM:
  - NEM Cross-subsidies by Non-NEM Customers
  - Proposed NEM Rates for NEM Energy into the Grid
  - Proposed NEM Rates for Grid Services
- CCU addressed Stakeholders for feedback and input
  - B&V Report is not CCU policy
  - CCU wishes to shape policy on thorough discussions with Stakeholders including GPA, Consultant, NEM System Customers and the Solar PV Industry inputs

2016 September 7

- GPA solicited inputs from the Stakeholder Community regarding B&V's NEM Report and B&V recommendations.
- Chairman Duenas remarked that all stakeholder and customer comments are well taken. The CCU welcomes feedback from the stakeholder community including data and comments about the B&V NEM Report. GPA has not decided on B&V's recommendations. Only after meaningful dialog with the Stakeholder community will the CCU decide on its recommendations regarding Net Metering Policy.
- Commissioner Bamba expressed his position as a renewable energy proponent and his personal research regarding what other markets are doing. Bamba stated that Guam is not only market struggling with ramifications of net metering. Furthermore, Bamba pointed out that when the sun goes down NEM customers still need to access GPA system unless they have their own battery storage units.
- Commissioner Sanchez declared that GPA is currently the largest supplier of renewable energy and the CCU/GPA are committed to renewable energy. Renewable energy stakeholders should hold these types of discussions on how to increase economically viable renewable energy while ensuring energy resiliency and power supply. The sun does not always shine, but customers demand that power be available when they want it and as much as they want it. The PUC envisioned that at the 1000 customer mark there would be enough information to start having meaningful conversations. Sanchez called for the renewables industry to help and provide feedback on costs and capabilities. Sanchez challenged the group to do what 36 other communities are doing – review the NEM policy as applied, see what we like, what we don't like and see if we can agree what changes we can agree to that benefit everyone.
- About 50-60 stakeholders and customers submitted written and oral testimony regarding potential changes to NEM program.

2016 September 7

- Stakeholder oral and written testimony largely expressed the following ideas on the Value of Solar (VOS). (Value of Solar) Excess Net Metered Energy saves the Authority on the following (NEM bears these costs):
  - Maintenance costs for generations, labor costs, poles, hardware e.g. lines, substations, transformers. No down time for generators (excess power reduces need to run generators);
  - Line loss reduction (serves nearby customers instead of through transmission lines, substations, transformers etc.);
  - Insurances costs;
  - Costs associated with fuel and fuel shipments; costs is levelized and constant;
  - Helps GPA reach its energy portfolio; reduces need for additional renewable projects;
  - Savings to environment; reduces carbon footprint, savings through efficiency.
- Bill Hagen's (Pacific Solar) submitted written testimony referring to the Minnesota Value of Solar breakdown:
  - Avoided Fuel Costs (purchase of fuel from polluting sources);
  - Avoided Plant O&M;
  - Avoided Plant Fixed;
  - Avoided Generations Capacity Costs (additional generation);
  - Avoided Reserve Capacity Costs;
  - Avoided Transmission/Distribution Costs;
  - Avoided Environment Costs.

2016 September 7

- MRE stated that less than 1% grid penetration was too early to modify GPA's NEM policy. Hawaii stopped NEM - and now, it is being revived – making modifications only after 20% penetration. Stakeholders stated that GPA should follow other jurisdictions and allow for between five to 21 percent penetration rate to gather more information on benefits and true costs.
- Stakeholders remarked that the B&V report was skewed to GPA. Various Stakeholders called for an industry report considering the Value of Solar (VOS). MRE's JV suggested that his company review the B&V report and perform their own VOS Study.
- Stakeholders remarked that NEM customers bear the following costs:
  - Investments in PV technology;
  - Finance costs;
  - Insurance costs;
  - Maintenance costs;
  - NEM customers do not get full retail; GPA charges full retail for NEM energy to other customers.
- Stakeholders posited that the NEM program promotes economic benefits:
  - Employment through PV companies
  - Direct Tax Revenues through jobs, fees, licenses, insurance, financing, services, sales etc.
  - Indirect benefits through purchase of goods and services, mortgages and investments into local communities.

2016 September 7

- Stakeholders suggested that GPA consider subsidies/incentives for home storage systems to help during peak hours.
- In aggregate, NEM customers cited that the B&V recommendations do not allow them to recoup their investment that they made in good faith. Stakeholder requested that a grandfather provision be made part of any future NEM policy. Customers also agreed that we should be fair to each of the constituencies represented at the roundtable discussion.

2016 October 27

- The emphasis at this meeting was focused, at the direction of Stakeholders, with interpretations on Guam Public Laws 27-132 and 30-141 regarding net metering:
  - PUC policy call relative to analysis of rate impact to GPA and non-NEM customers when the NEM program reaches 1000 NEM customers
  - A move to review the data and determine the lay of the land
- CCU committed to extending this discussion to continue as CCU and Stakeholders get better acquainted with the issues.
- A Stakeholder raised the issue of compensation being applicable to third-party solar lease providers to GPA customers. *(Graham was to research this issue as per CCU Chair)*

2017 February 28

- CCU continued the dialog between NEM stakeholders, CCU, and GPA. CCU invited Stakeholders to present at the next NEM Stakeholder Meeting.
- Stakeholders requested that existing NEM customers be grandfathered at the full-retail credit until they pay off their investments. Additionally, any reduction in the NEM credit should be phased in.
- Jeff Voacolo (JV) from MRE volunteered to present on Value of Solar at the next NEM Stakeholder Meeting.

2017 May 9

- At this meeting Jeff Voacolo (MRE) and Ben Norris (Clean Power Research) presented on MRE paying for and conducting a Guam-Specific Study for the Value of Solar. Jeff Voacolo (MRE) stated:
  - MRE paying for the study
  - This is a Guam-specific study for the value of solar
  - Hired Ben Norris (Clean Power Research)
  - Should take 60-90 days for report.
- Norris presented elements of the intent and methodology of his VOS study:
  - Value must distinguish between utility-avoided costs and societal benefits
  - Clean Power Research is neutral vis-à-vis net metering
  - Considers solar+energy storage
  - Input Data Request
    - Financial Data (WACC)
    - Hourly Loads
    - Hourly Marginal Costs
    - Heat Rates (Diesel Units Displaced by Solar)
    - Fuel Price Forecast
    - Hourly Solar Generation from Utility-Scale Plant
    - Hourly Solar Generation from “Many” Small, Distributed Resources (With No Net Metering)

2018 February 1

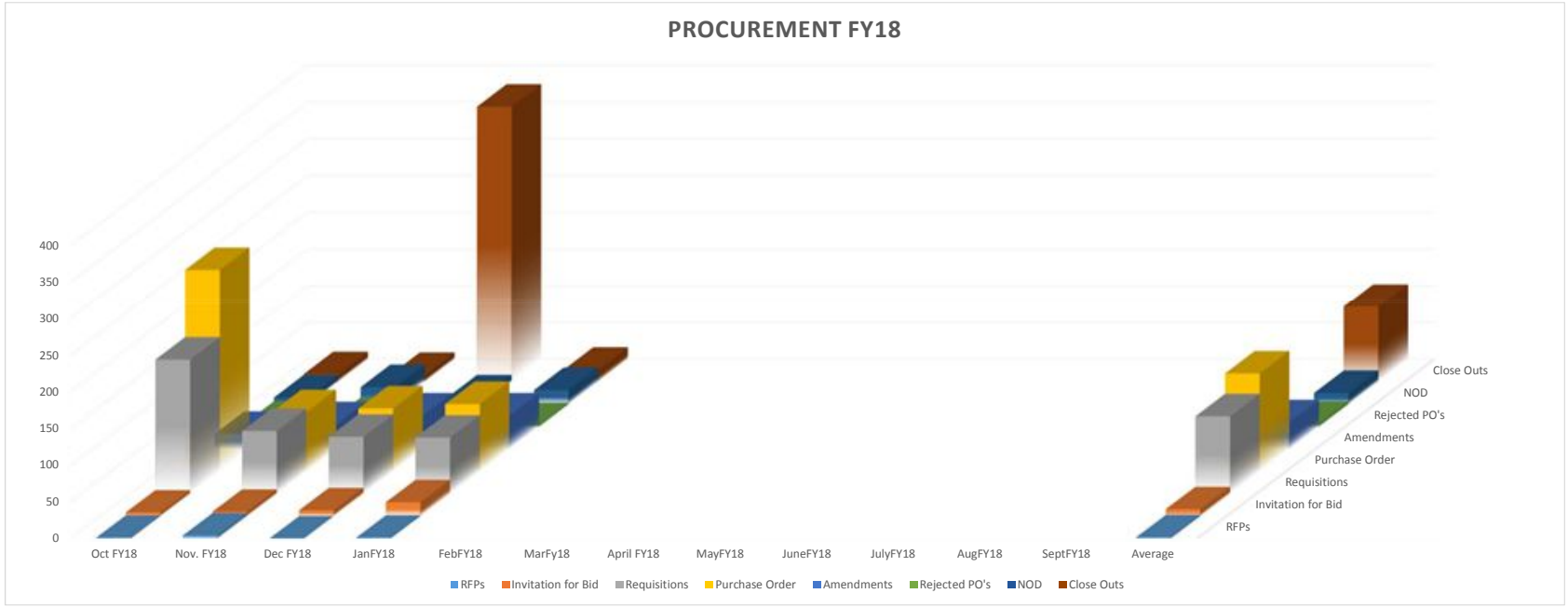
- At this meeting no Stakeholders showed up.
- The CCU Chairman related that MRE's JV could not provide his Value of Solar Study. Although JV had requested additional time, the CCU has provided more than adequate time.
- The Chairman reported: in the May 9, 2017 meeting, JV stated that it should take 60 to 90 days for his report to be completed. After some time, JV requested information from GPA.
  - GPA provided MRE's JV with the information requested initially and subsequently.
  - Both SPORD Manager and AGMETS had asked JV via email whether he had all the information he needed.
  - JV's response was that he had.
- Therefore, the CCU considers the matter closed. CCU required GPA to make recommendations regarding VOS and modifications to the NEM program.

NEM Stakeholder Meeting Attendance

Stakeholder	Organization	2016 August 11	2016 September 7	2016 October 27	2017 February 28	2017 May 9	2018 February 1
Mark Qunga	1st Green Protection Solutions						
Larry Ko	Ace Realty CO.	✓					
Selma Blas	Administrative Officer	✓			✓		✓
Angelica Perez	AM Insurance						
Tina Mafnas	Bureau of Statistics and. Plans		✓				
Patrick Keeler	Bureau of Statistics and. Plans		✓				
Simon A. Sanchez, II	CCU Board Member	✓	✓	✓	✓	✓	✓
Joey Duenas	CCU Chairman	✓	✓	✓	✓	✓	✓
George Bamba	CCU Secretary	✓	✓	✓	✓	✓	✓
Gary Leischner	Enable Energy, LLC	✓	✓		✓		
Kelon Jones	Enable Energy, LLC	✓					
Michael Diamond	Enable Energy, LLC	✓	✓	✓	✓	✓	
Morgan Hefler	Enable Energy, LLC	✓	✓	✓	✓	✓	
Princess Miranda	Enable Energy, LLC	✓			✓	✓	
John Cruz, Jr.	GPA AGMETS	✓	✓	✓	✓	✓	✓
Cora Montellano	GPA Assistant CFO	✓	✓	✓	✓	✓	✓
John J.E. Kim	GPA CFO	✓	✓	✓	✓	✓	✓
John M. Benavente, P.E.	GPA General Manager	✓	✓	✓	✓	✓	✓
D. Graham Botha	GPA Legal Counsel	✓	✓	✓	✓	✓	✓
Artemio S. Perez	GPA PIO - Communication Manager	✓	✓	✓	✓	✓	
Patti Diego	GPA PIO Program Coordinator III				✓		✓
Lynn Scott	Green Energy Solutions Inc. (GESI)	✓	✓				
Carl Leon Guerro	GTA Teleguam	✓					
John O'Connor	Guam Daily Post	✓					
Neil Pang	Guam Daily Post		✓				
Lorilee Crisostomo	Guam Energy Office				✓	✓	
James Thomas	Guam Energy Task Force		✓				
Debbie Staley	Harvest Christian Academy, NEM System Owner	✓					
Tricee Limtiaco	Initially Office of the Governor/ Now GPA AGMA	✓	✓		✓		✓

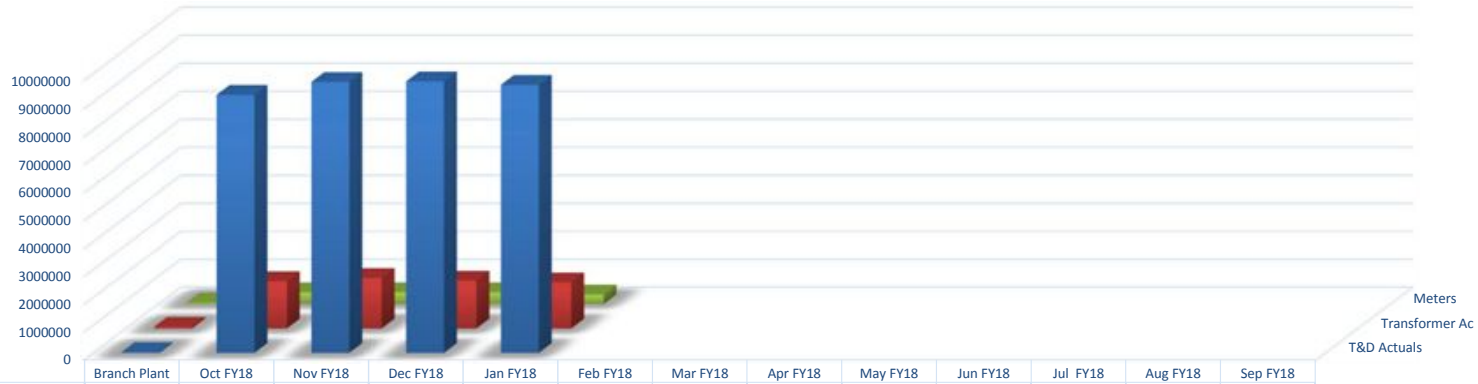
NEM Stakeholder Meeting Attendance

Stakeholder	Organization	2016 August 11	2016 September 7	2016 October 27	2017 February 28	2017 May 9	2018 February 1
Nestor Licanto	KUAM		✓				
Frank Pangelinan	Latte Stone Properties, LLC	✓					
Joe Rosario	Marianas Renewable Energy, Inc	✓	✓			✓	
Tracy Voacolo	Marianas Renewable Energy, Inc	✓				✓	
Chris Babasa	Marianas Renewable Energy, Inc		✓				
Dorothy Shultice	Marianas Renewable Energy, Inc					✓	
Camilo Lorenzo	Matson Navigation	✓					
Victoria Zialcita	NAVFAC Marianas	✓					
Amy Morgan	NEM System Owner	✓					
Anna Cepeda	NEM System Owner	✓					
David Cepeda	NEM System Owner	✓					
Enriko Horta	NEM System Owner	✓					
John Scott	NEM System Owner		✓	✓	✓		
Margaret Greenwood	NEM System Owner	✓					
Matt Lewis	NEM System Owner	✓					
Patricia Scott	NEM System Owner		✓	✓	✓		
Patricio Cortado	NEM System Owner	✓					
Patrick Finona	NEM System Owner	✓					
Paul Tobiason	NEM System Owner	✓	✓		✓	✓	
Roy G.Adkerson	NEM System Owner	✓					
Rudy San Agustin	NEM System Owner		✓	✓	✓		
Tony and Bernie Blas	NEM System Owner		✓				
Victor Huncho	NEM System Owner	✓					
Wayne Pritchard	NEM System Owner	✓					
William Weare	NEM System Owner	✓	✓				
William Clark	NEM System Owner	✓					
Grant Lewis	Pacific Renewable Energy Solutions		✓				
Molly Mack	Pacific Renewable Energy Solutions		✓				
Nestor Nimis	Pacific Renewable Energy Solutions		✓		✓		
Ram Tuazon	Pacific Renewable Energy Solutions		✓		✓		



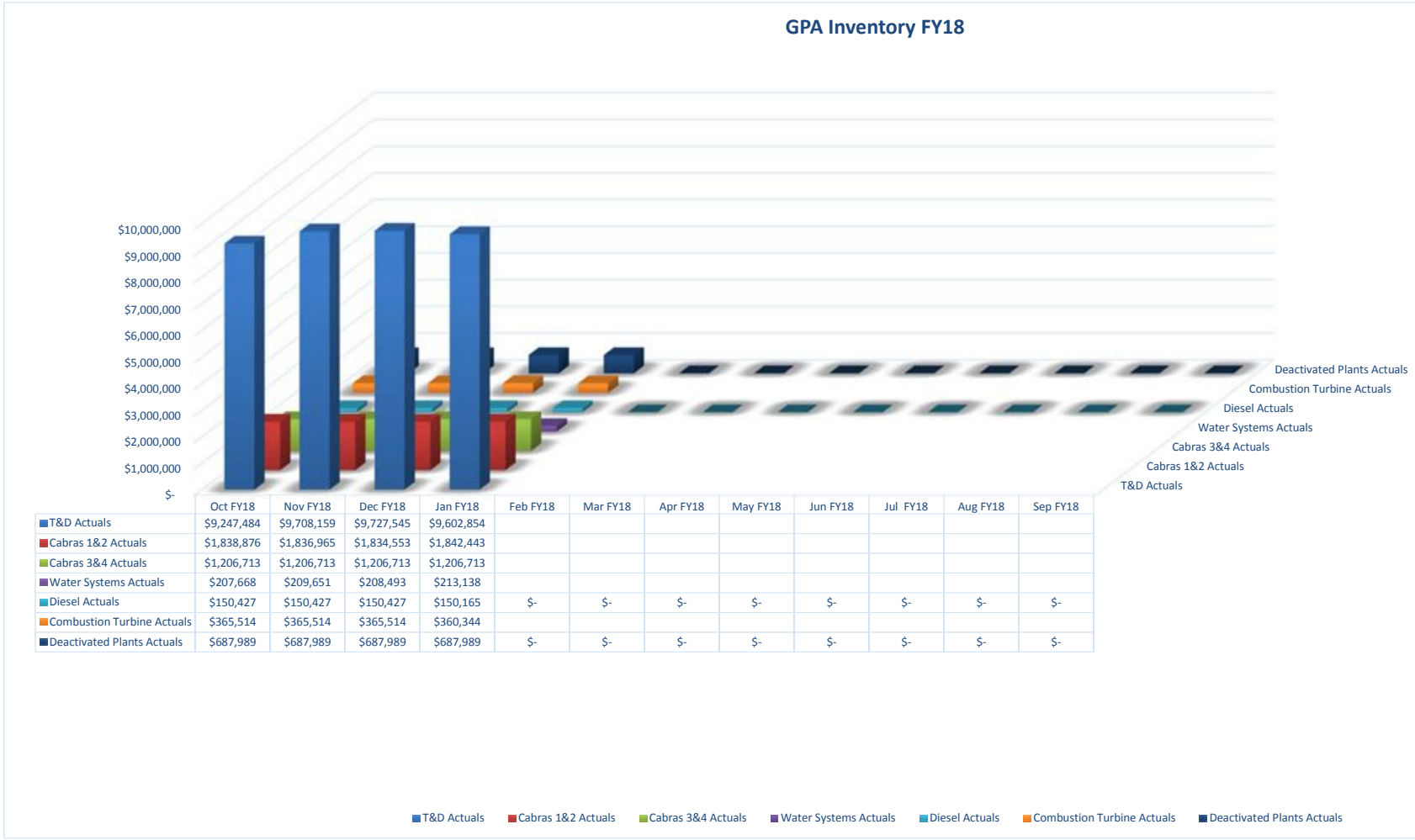
	Oct FY18	Nov. FY18	Dec FY18	JanFY18	FebFY18	MarFy18	April FY18	MayFY18	JuneFY18	JulyFY18	AugFY18	SeptFY18	Average
RFPs	1	4	0	1									1.5
Invitation for Bid	5	6	8	19									9.5
Requisitions	183	86	78	77									106
Purchase Order	275	81	86	92									133.5
Amendments	**21**	**34**	**46**	**46**									36.75
Rejected PO's	4	9	0	2									3.75
NOD	9	23	9	19									15
Close Outs	10	9	374	16									102.25

T&D Inventory Actuals FY18



	Branch Plant	Oct FY18	Nov FY18	Dec FY18	Jan FY18	Feb FY18	Mar FY18	Apr FY18	May FY18	Jun FY18	Jul FY18	Aug FY18	Sep FY18
T&D Actuals	32100	$9,247,484	$9,708,159	$9,727,545	$9,602,854								
Transformer Actuals	59900	$1,701,456	$1,817,711	$1,724,028	$1,664,121								
Meters	59100	$431,024	$431,024	$431,024	$345,888								

T&D Actuals Transformer Actuals Meters



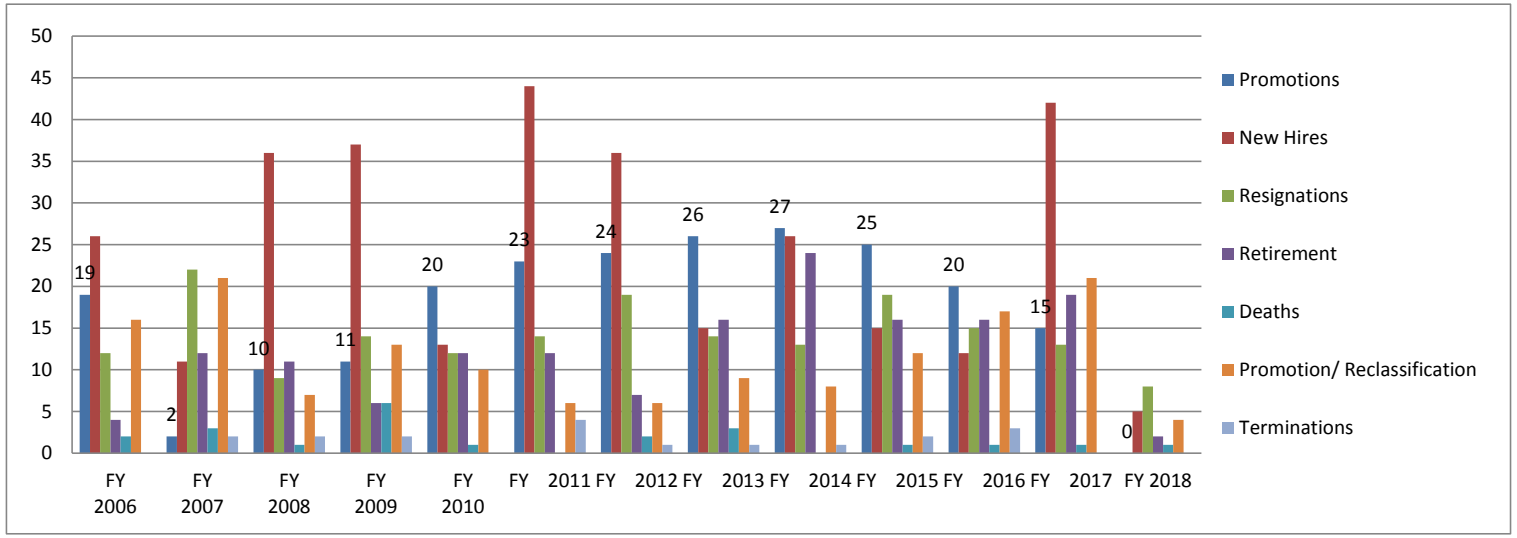
	Oct FY18	Nov FY18	Dec FY18	Jan FY18	Feb FY18	Mar FY18	Apr FY18	May FY18	Jun FY18	Jul FY18	Aug FY18	Sep FY18
T&D Actuals	$9,247,484	$9,708,159	$9,727,545	$9,602,854								
Cabras 1&2 Actuals	$1,838,876	$1,836,965	$1,834,553	$1,842,443								
Cabras 3&4 Actuals	$1,206,713	$1,206,713	$1,206,713	$1,206,713								
Water Systems Actuals	$207,668	$209,651	$208,493	$213,138								
Diesel Actuals	$150,427	$150,427	$150,427	$150,165	$-	$-	$-	$-	$-	$-	$-	$-
Combustion Turbine Actuals	$365,514	$365,514	$365,514	$360,344								
Deactivated Plants Actuals	$687,989	$687,989	$687,989	$687,989	$-	$-	$-	$-	$-	$-	$-	$-

RECRUITMENT ANALYSIS

Fiscal Year	Promotions	New Hires	Resignations	Retirement	Deaths	Promotion/ Reclassifi-cation	Termina-tions	Total Author-ized FTE	Attrition Rate	Total Filled FTE at end of Fiscal Year	Percentage of Filled FTE at end of Fiscal Year
2006	19	26	12	4	2	16	0	584	3.3%	536	91.8%
2007	2	11	22	12	3	21	2	584	7.2%	510	87.3%
2008	10	36	9	11	1	7	2	592	4.5%	525	88.7%
2009	11	37	14	6	6	13	2	592	5.3%	534	90.2%
2010	20	13	12	12	1	10	0	592	4.7%	522	88.2%
2011	23	44	14	12	0	6	4	592	5.7%	536	90.5%
2012	24	36	19	7	2	6	1	568	5.4%	543	95.6%
2013	26	15	14	16	3	9	1	568	6.3%	524	92.3%
2014	27	26	13	24	0	8	1	568	7.3%	512	90.1%
2015	25	15	19	16	1	12	2	539	7.4%	489	90.7%
2016	20	12	15	16	1	17	3	510	7.2%	466	91.4%
2017	15	42	13	19	1	21	0	510	7.1%	476	93.3%
2018	0	5	8	2	1	4	0	510	2.3%	470	92.2%

Recruitment Analysis (FY 2018) ..1 of 2

as of 01/31/18



	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Promotions	19	2	10	11	20	23	24	26	27	25	20	15	0
New Hires	26	11	36	37	13	44	36	15	26	15	12	42	5
Resignations	12	22	9	14	12	14	19	14	13	19	15	13	8
Retirement	4	12	11	6	12	12	7	16	24	16	16	19	2
Deaths	2	3	1	6	1	0	2	3	0	1	1	1	1
Promotion/ Reclassification	16	21	7	13	10	6	6	9	8	12	17	21	4
Terminations	0	2	2	2	0	4	1	1	1	2	3	0	0

TOTAL NO. OF EMPLOYEES	**536**	**510**	**525**	**534**	**522**	**536**	**543**	**524**	**512**	**489**	**466**	**476**	**470**

Recruitment Analysis (FY 2018) .. 2 of 2

as of 01/31/18

GUAM POWER AUTHORITY
HUMAN RESOURCES DIVISION
STAFFING REPORT (FY 2018)
AS OF January 31, 2018

DIVISION	B1 ACTIVE EMP	B2 LAST EMP	C PROMOTE /TRANS	D PROM. RECLASS	E NEW HIRES	F RESIGN/ TERM	G RETIRE	H CURR VAC	I LAST VAC	(B1+H=K) TOTAL STAFFING
INTERNAL AUDIT/REVENUE PROTECTION	2	3	0	0	0	1	0	2	1	4
BOARD(10200)	2	2	0	0	0	0	0	0	0	2
GENERAL MANAGER (CUS) [10100]	0	0	0	0	0	0	0	0	0	0
GENERAL MANAGER (20500)	4	4	0	0	0	0	0	0	0	4
PUBLIC INFORMATION OFFICE	2	2	0	0	0	0	0	0	0	2
ASSIST GM-ENG/TECH SVCS (30500)	1	1	0	0	0	0	0	0	0	1
ASSISTANT GENERAL MGR (30800)	1	1	0	0	0	0	0	1	1	2
ASSISTANT GENERAL MGR (AGMO) 50900	2	2	0	0	0	0	0	0	0	2
STRAT PLANN & OPTNS RESEARCH DIV	9	10	0	0	0	1	0	2	1	11
FACILITIES	9	9	0	0	0	0	0	0	0	9
HUMAN RESOURCES	10	10	0	0	0	0	0	0	0	10
CUSTOMER SERVICES	34	34	0	0	0	0	0	3	3	37
INFORMATION TECHNOLOGY	16	16	0	0	0	0	0	0	0	16
FINANCE	42	42	0	0	0	0	0	4	4	46
PROCUREMENT	21	21	0	0	0	0	0	1	1	22
TRANSPORTATION	9	9	0	0	0	0	0	2	2	11
SAFETY	6	6	0	0	0	0	0	1	1	7
PLANNING & REG	8	8	0	0	0	0	0	0	0	8
ENGINEERING	37	38	0	0	0	1	0	2	1	39
GENERATION	136	137	0	0	0	1	0	9	8	145
TRANSMISSION/DISTRIBUTION	97	97	0	0	0	0	0	10	10	107
POWER SYSTEM CONTROL CENTER	22	22	0	0	0	0	0	3	3	25
	470	474	0	0	0	4	0	40	36	510
JOBS/SCSEP/GETP PARTICIPANTS	1	1								1
WORK EXPERIENCE PROGRAM	1	0								
APPRENTICESHIP PROGRAM	0	0								0
SUMMER ENGINEERING INTERNS	0	0								0
TEMPORARY (P.L. 34-32)	1	1								1
GRAND TOTAL WORKFORCE:	473	476	0	0	0	4	0	40	36	512

FTE Count per FY18 FMP: 510

Current vacancies adjusted to reflect FTE of 510

** JOBS = Job Opportunities and Basic Skills (individuals under the Public Health assistance program)

** GETP = Guam Employment & Training Program (individuals under the Public Health assistance program)

** SCSEP = Senior Community Service Employment Program

** APPRENTICESHIP TRAINING PROGRAM - Generation, PSCC and T&D combined total

** JOBS/SCSEP/GETP and Apprentice program participants are not included in the total annual budgeted FTE (Full-Time Employee) count.

** P.L. 34-32 -Temporary employee(s)

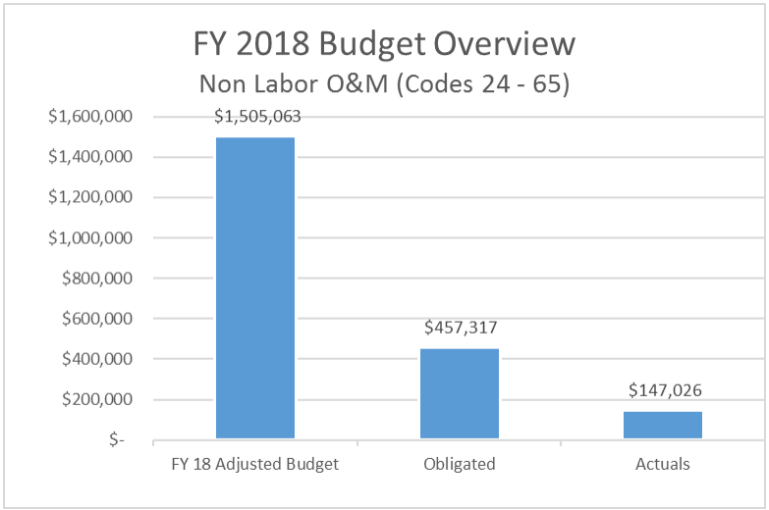
Staffing Report as of January 31, 2018 - PREPARED BY: J.Aguigui

SPORD CCU Report

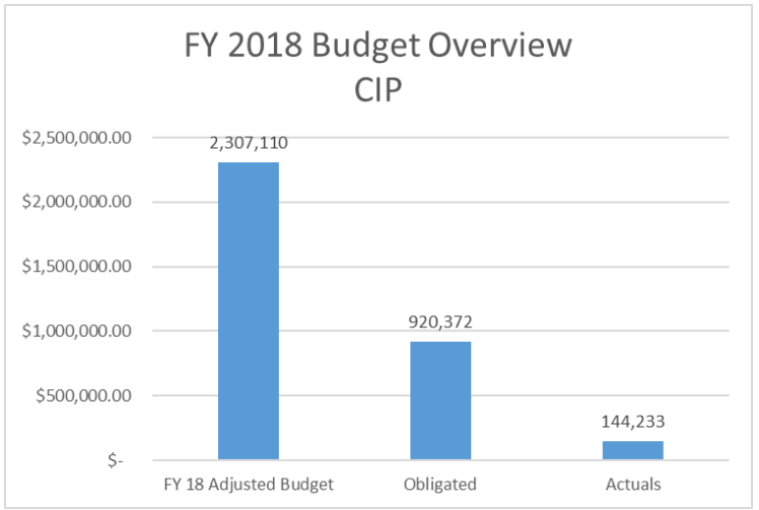
January 2018

SPORD FY 2018 Budget Status

- SPORD O&M:

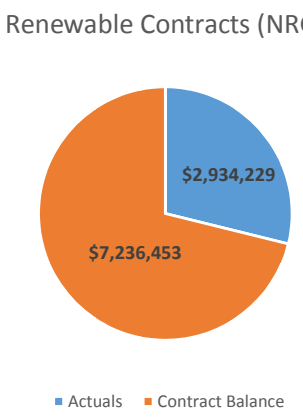


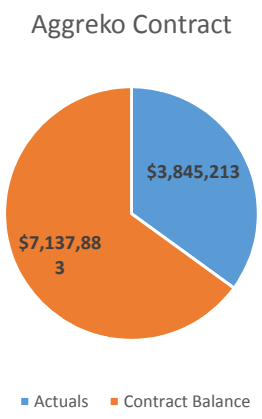
- CIP

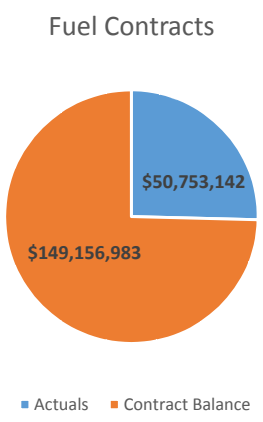


SPORD FY 2018 Budget Status

- Major Contracts (Non-O&M)



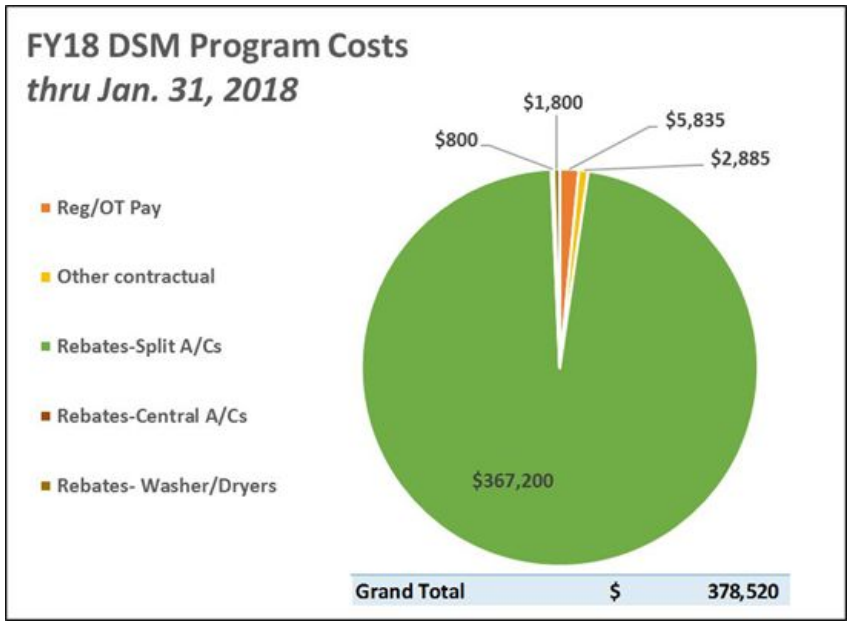


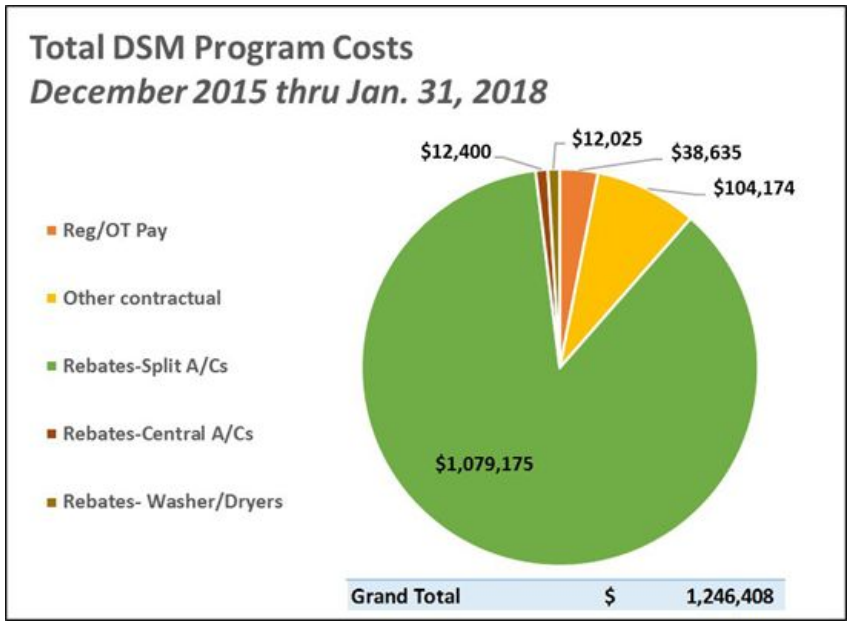


SPORD Manages $221,063,903 in Non-O&M Fuel and PPA Contracts

SPORD FY 2018 Budget Status

- DSM Expenses





DSM Requires a New Funding Source

FY16	FY17	Q1 FY18	FY18 Forecast	
			Low	High
$ 200,527.30	$ 668,166.05	$ 343,315.09	$ 1,373,260.36	$ 1,923,855.29

- DSM Running Total Estimates: $480,000 remaining balance
- Requesting $750,000 Additional Funding for FY 2018

- Low Forecast based on 4 X Q1 Expenses
- High Forecast assumes FY17 Quarter over Quarter Growth holds for FY 2018.

Ongoing Activities

- Contract Performance Management (IPP, PMC, Agrekko)
- Generation Fuel Supply & Fuel Farm Management
- DSM Rebate Processing
- Renewables (Wind Turbine Maint & DOAg MOA, NRG Invoicing, NRG ramping and technical issues)
- Smart Grid/Network Support
- Project Management (*See January Project Activities*)

Project Activities

No.	Project Description	January 2018 Activities	Status / Est. Completion
1	Energy Storage System (Phase I)	GPA reviewing 100% design. Clearing and Grading work commenced in November 2017 and is on-going. Construction is 17% completed.	August 2018
2	Renewable Energy Resource Phase II	KEPCO PPA approved by CCU(. GPA finalizing negotations with Hanwha.	~ Dec 2019 2 years after contract signing (Commerical Operation)
3	New Power Plant Bid (EPCM)	Request for Qualification announced on January 16, 2018. Proposals due on March 22, 2018. Technical specification are being reviewed and updated based on discussions on the	Jan 2018 (Issue RFP Step 1 Solicitation)
4	DSM Marketing	DSM Marketing continues. Initiated work with Adztech/Jay Merril on DSM Survey, scheduling initial survey activities in February.	Continuous
5	DSM Rebate Program	Processed over 140 equipment in applications for rebates totaling ~ $31K	Continuous
6	Wireless Network Expansion	Commenced Southern Expansion in collaboration with GWA: 30% Assessment of GWA Well Locations: Completed Assessment of Existing Tropos Units: 20%	To be Updated Completed Continuous
7	Performance Metrics Automation Project	Presentation on iDashboard provided to GM. GPA contiues to work with consultant on automating reports and formating.	Mar-18
8	Electric Grid Analysis Software	Additional training for users	Mar 2018
9	Services to Develop Business Performance Indices using iDashboards	Dashboard builds 95%	Dec 2017
10	Supervisory Control and Data Acquisition (SCADA) System	Change Order Approved for October 2018 Completion and hardware costs	Oct 2018

Project Activities

No.	Project Description	January 2018 Activities	Status / Est. Completion
11	Mobile Workforce Management System	Bid Evaluation Ongoing	Feb 2018 (Bid Award)
12	Consulting Services for Smart Grid Analytics Enabled Distribution System Planning, Technical, and Economic Feasibility Studies	RFP evaluation completed for sole bidder. Bidder did not qualifiy. Committee recommendation to rebid.	Feb 2018 (Rebid)
13	TEMES Piti # 7 ECA Expiration & Transition to GPA	Transition completed. Pending Technical Assessment report from LEIDOS.	Transisition Completion Date: Nov 2017
14	MEC Piti &8 and #9 - ECA Expiration	ESA & Technical Assessment pending completion of discussions with LEIDOS/BWSC. Bid Document Preparation for New IPP Procurement. Data Compilation in Progress.	Jan 2018 (Bid Docs) Mar/Apr 2018 (ESA &Tech Assessment Report)
15	Planning Software Upgrades & Training (Capacity Expansion/ Portfolio Optimization / Stochastics)	Training of 2 SPORD Engineers for PO use commenced 10/3/2017. Upcoming task: Configuration and management of database, training for - SPORD - PSCC	Start Date: Oct 2017 Completion Date: Sept 2018
16	Generation Software (GADS open software)	Installation at Generation Division completed. Database configuration in progress. Training completed on Nov. 15, 2017.	Nov 2017
17	IFB for ULSD Supply for Baseloads and Peaking Units	Solicitation in progress	Start Date: Nov 2017 Est. completion: FY2018
18	Contract for Lease of Bulk ULSD Storage	196KB continues ongoing repairs for availability in Feb 2018. GPA is leasing alternate tanks in the interim.	Early 2018 (Tank Available)
19	EV Infrastructure	Developing fast charge station scope for Mangilao offices.	Sept 2018

Project Activities

No.	Project Description	January 2018 Activities	Status / Est. Completion
20	Consulting Support, new procurements for Piti 7,8,9	Data compilation and bid document preparation (GPA side) in progress. Awaiting LEIDOS recommendations and draft.	Start: October 2017, Announce in Jan/Feb 2018 Completion: August 2018
21	Fuel Conversion Plan	Initial discussion commenced, detailed discussions in November after submission of Assessment Report. Data Requests being addressed.	Start: October 2017 Completion: June 2018
22	Fuel Bulk Storage Facility Assessment	Consultant Site Visits for ESA and Technical Inspeciton completed. Reports due January 2018.	Start: Sept 2017 End: January 2018
23	Design and Engineering Consulting for Remote Start of GPA Plants	Engineering Project Management team reviewed scope. Dratt of assessment and implementation plan completed.	August 2018
24	Renewable Energy Resource Phase III	Completed pre-bid conference and site visits January 23-24 2018.	(Mar 2018) Tech Proposal Due
25	Utility Energy Services Contract (UESC)	Kicked off discussions with UOG, Guam Energy Office, Dept. of Navy, and GPA team on project development and opportunities. Discusssed DSM Model House. UOG Campus Assessment, Discussion on Solar Rooftop on DOE campuses.	
26	IFB for ULSD Supply & Delivery Services for GPA Plants	Restructuring of Bid Package for Re-Solicitation in progress	Start: Feb 2018 Completion: FY2019 Contract Start: Jan 01, 2019
27	IFB for RFO Supply to Baseload Plants	Solicitation in progress	Start: November 2017 Est. Completion: FY2018 Contract Start: TBD
28	IFB for Petroleum Inspection Services	Solicitation in progress	Start: November 2017 Est. Completion: FY2018 Contract Start: Jun 01, 2018
29	RFO Storage Lease	Lease extension approved by CCU. For PUC review and approval	Start: November 2017 Est. Completion: Mar 2018 Contract Start: Aug 1, 2018

Planned Procurements

- Piti #7 Additional Procurements
  - Pending Technical Assessment of plant potential procurements may include Maintenance Services Contract or a Re-capitalization Contract.
- Piti #8 and #9
  - Developing solicitation for re-capitalization contract after expiration of ECA in Jan 2019.
- IPP Contracts for up to 180 MW Generation Resources
  - Technical Documents being drafted..
- ULSD Supply & Delivery to Baseload and Peaking Units
  - Solicitation in progress

Planned Procurements

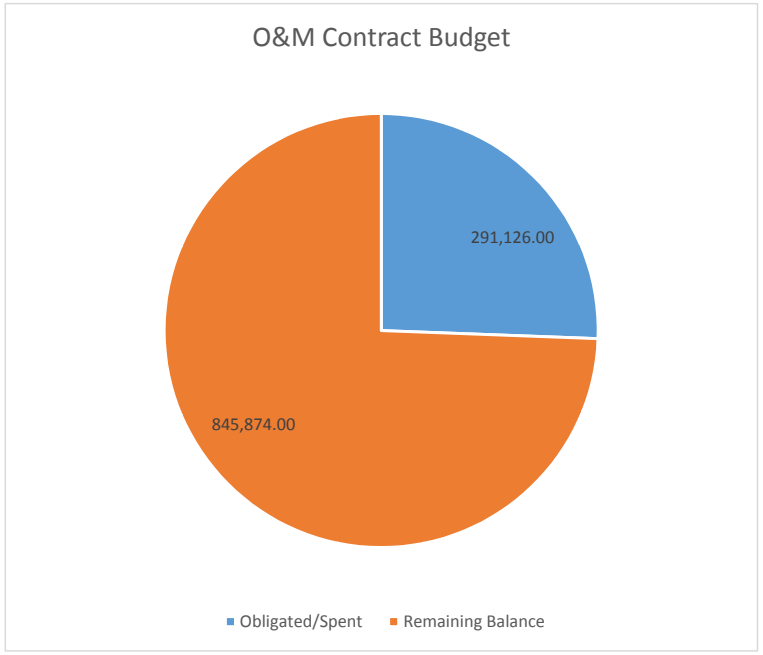
- MV90 Integration and Training Services
  - Bid announced January 2018
- Engineering Analysis Trainings Services
  - Processing Documents through PMM to be solicited in February 2018

Planning & Regulatory CCU Report

January 31, 2018

Planning & Regulatory O&M Contract Budget

- Revenue Funded
- Target
  - 7.41% O&M Obligated by November 16, 2017
  - 19.28 O&M Obligated as of Nov. 30, 2017 (actual)
  - 19.36 O&M Obligated as of Dec. 31, 2017 (actual)
  - 25.60 O&M Obligated as of Jan. 31, 2018 (actual)
  - 30.09% O&M Obligation by February 28, 2018



2

P&R Weekly & Monthly Inspection Reports

- Best Management Practices (BMP) Report Summary [Weekly]
- Generation Spill Prevention, Control, and Countermeasures (SPCC) Report Summary [Monthly]
- T&D Spill Prevention, Control, and Countermeasures (SPCC) Report Summary [Monthly]

- GPA is responsible to employees, the island environment, and the community to take all reasonable steps necessary to prevent spills from its facilities in order to protect human health and the environment

P&R Inspection Report Purpose

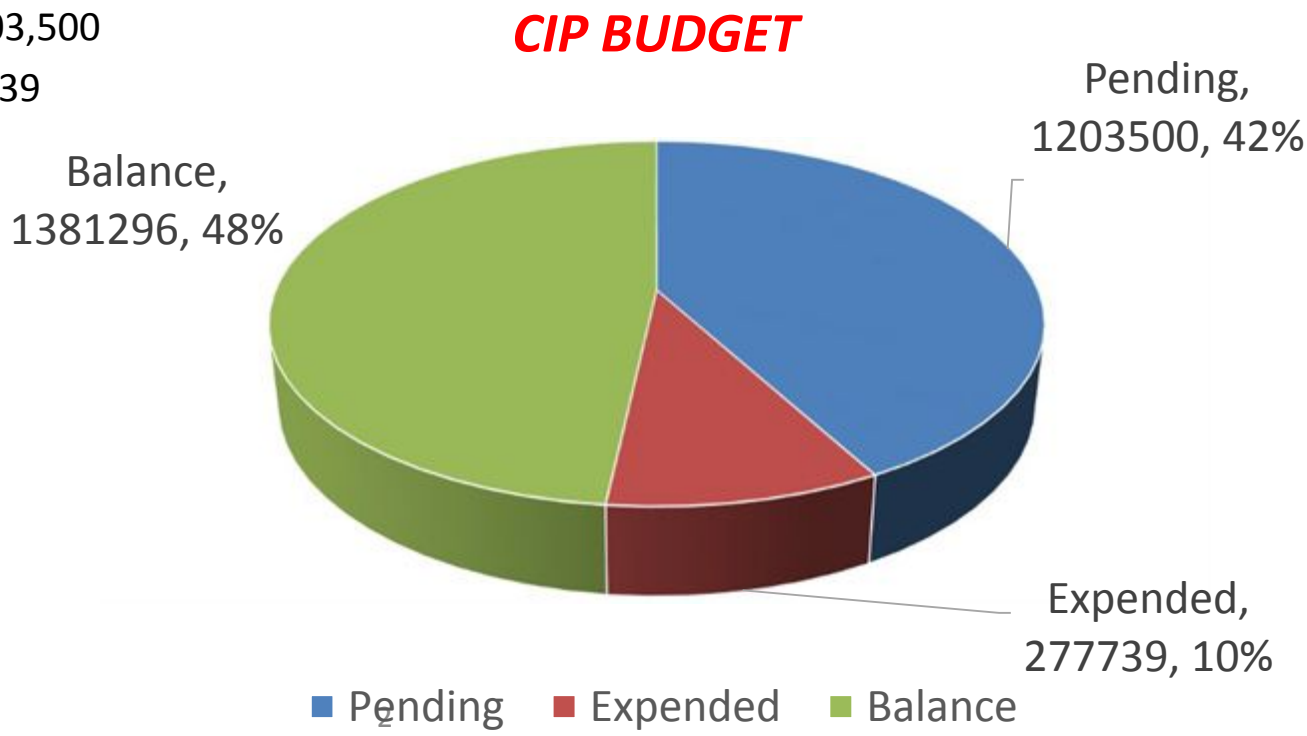
- The purpose of these inspections is to catch discrepancies and violations internally and correct them before inspections by Guam EPA and US EPA
- Regulatory Agencies can conduct scheduled or un-scheduled (surprise) inspections any time
- Any major discrepancies or violations cited can lead to issuance of a Notice of Violation (NOV), possible fines, and/or other enforcement action
- P&R conducts routine SPCC inspections in compliance with the requirements of 40CFR 112.7(a)(3)(ii), Discharge Prevention Measures

IT Budget
Execution Performance

January 31, 2018

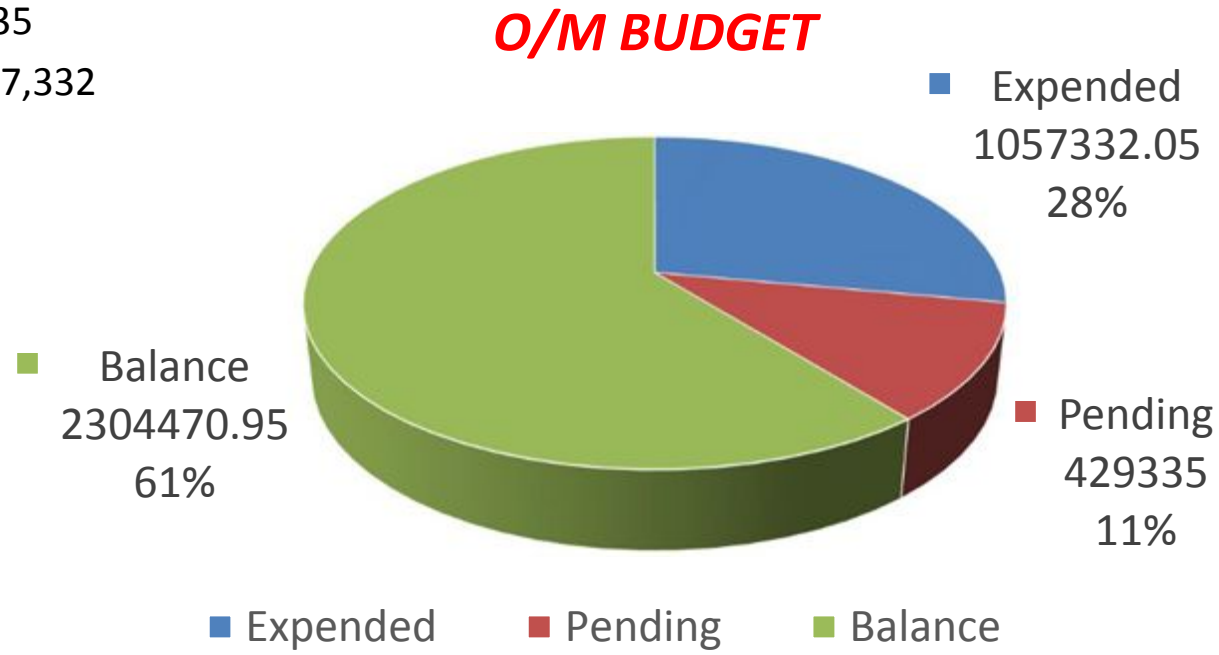
IT Revenue CIP Budget

- Revenue Funded
- Current State
  - Balance $1,381,296
  - Pending PO $1,203,500
  - Expended $277,739



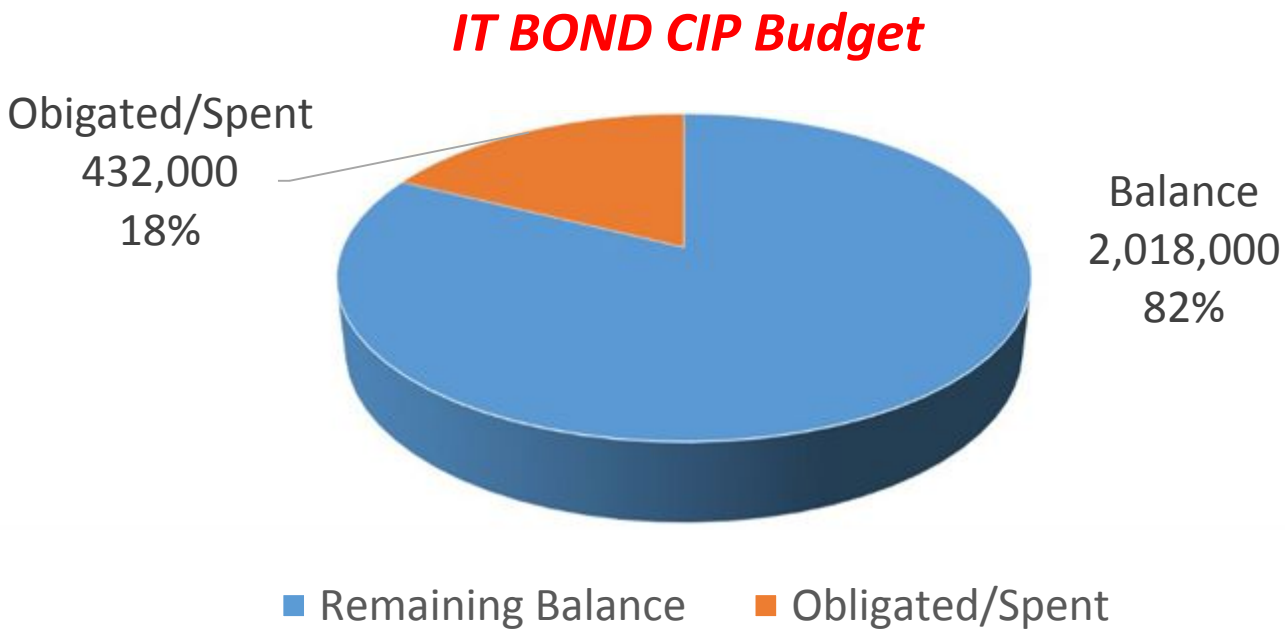
IT O&M Contract Budget

- Revenue Funded
- Current State
  - Balance $230,4470
  - Pending $429,335
  - Expended $1,057,332



IT 2014 Bond Series CIP Budget

- Bond Funded
- Current State
  - Obligated/Spent - $432,000
  - Balance - $2,018,000



GPA INFORMATION TECHNOLOGY
JANUARY 2017

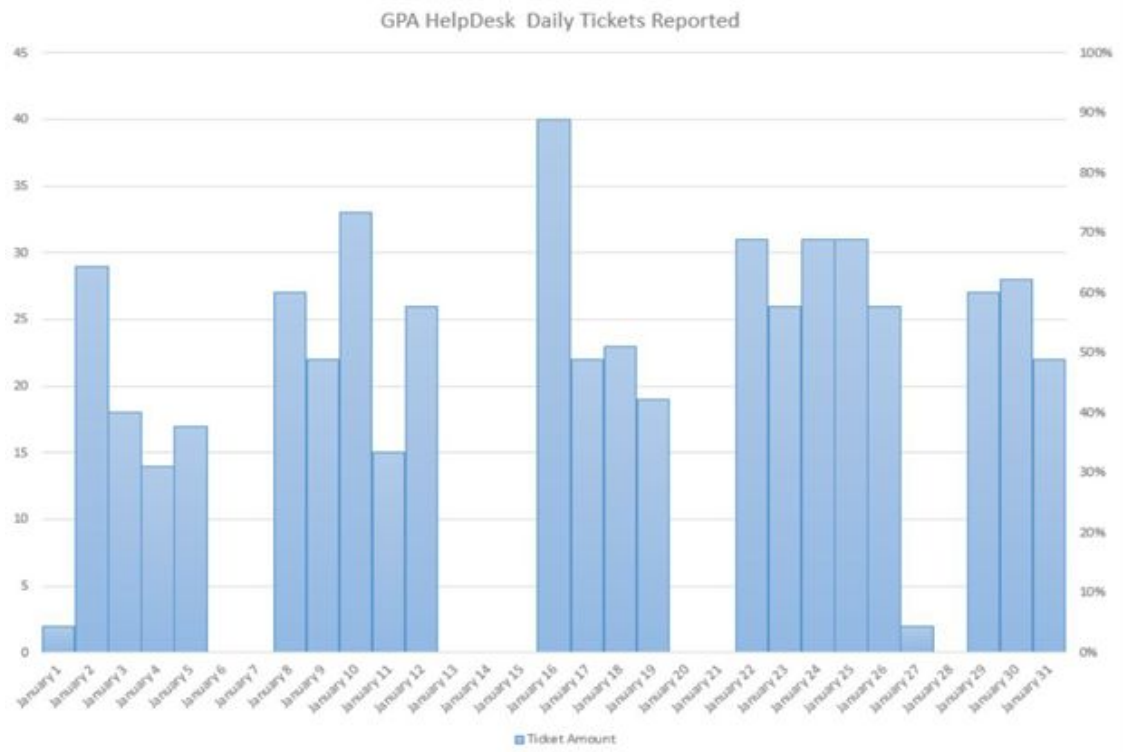
SUMMARY:

The Information Technology Department continues to improve services, monitoring processes and system infrastructure utilization as guided by Cyber-Security initiatives and regulatory compliance. We strive and continue to improve all areas. Computer Services continues to seek new technology with networking, system access and utilization. We also strive to meet target levels of uptime, to include the IBM i-Series AS400, Virtual Machine environment, (VMware V-Sphere), (Blade Servers and Disk Array Storage), and Physical Servers, (non-Virtual Machines).

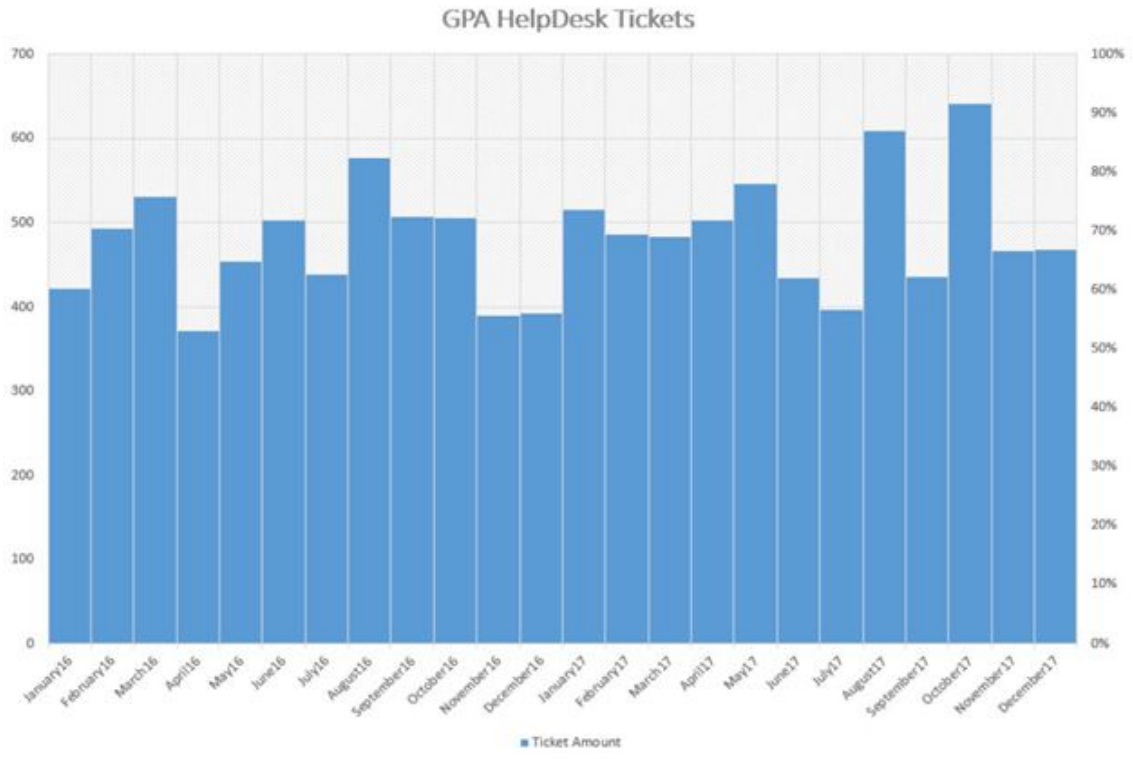
INCIDENT CALL SUMMARY:

The significance to record and utilize the Helpdesk Incident Handling Tool (ChangeGear) is to manage, track and measure workloads and assignments of customer reported IT incidents. The tracking of incidents is paramount. Measurements will be used for IT Customer Feedback survey in the future.

JANUARY 2018 TICKETS



22 MONTH COMPARATIVE



For January 2018, Computer Services responded to 531 help desk calls from GPA internal and external customers. Breakdown as follows:

CLOSED TICKETS

Low	Medium	High	Critical
200	124	178	9

TICKET TYPES

End User	Hardware	Software	Network
393	31	48	39

OPEN TICKETS

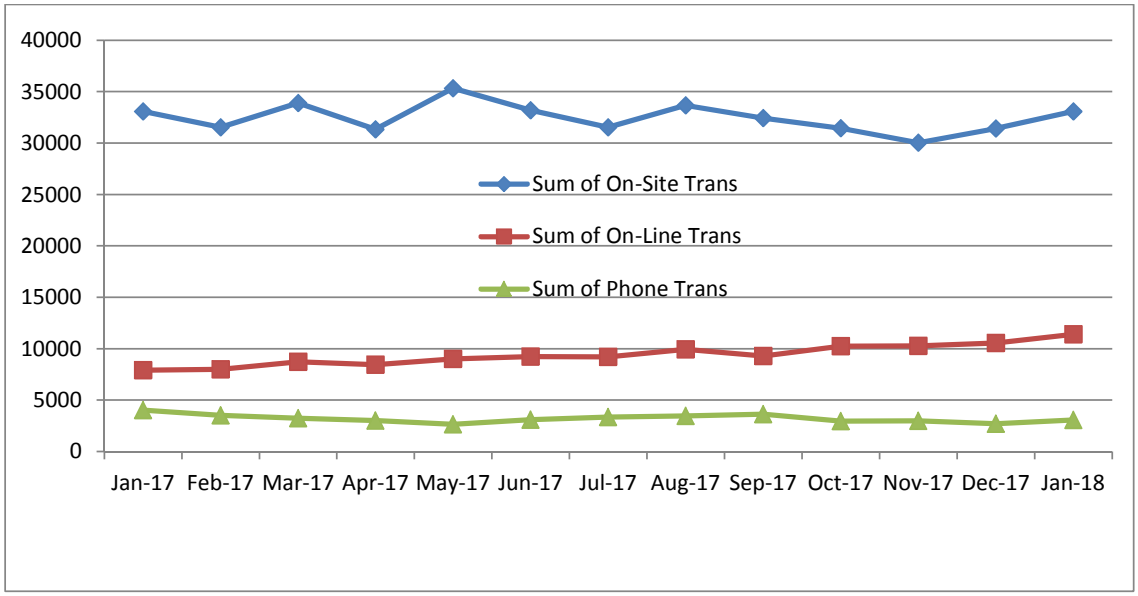
Low	Medium	High	Critical
8	17	21	1

TICKET TYPES

End User	Hardware	Software	Network
25	6	16	0

CC&B PAYMENT SUMMARY TRANSACTIONS:

Payment Transactions by On Site/On Line/By Phone



Row Labels	Sum of On-Site Trans	Sum of On-Line Trans	Sum of Phone Trans
Jan-17	33075	7924	4031
Feb-17	31516	8002	3513
Mar-17	33886	8722	3241
Apr-17	31315	8452	3025
May-17	35331	8999	2635
Jun-17	33180	9244	3113
Jul-17	31532	9217	3364
Aug-17	33646	9934	3451
Sep-17	32416	9302	3630
Oct-17	31435	10234	2959
Nov-17	30027	10278	2991
Dec-17	31406	10556	2717
Jan-18	33076	11398	3078
Grand Total	**421841**	**122262**	**41748**

MAJOR APPLICATION ISSUES FOR January 2018

1. ORACLE CUSTOMER CARE & BILLING
   No system issue reported.

2. LANDIS & GYR AMI METERS (SMART METERS)
   No system issue reported.

3. ORACLE JDE
   No system issue reported.

4. METER DATA MANAGEMENT SYSTEM (MDMS)
   No system issue reported.

5. SHORETEL VOIP PHONE SYSTEM
   No system issue reported.

6. EMAIL EXCHANGE SERVER
   No system issue reported.

7. ONLINE PAYMENT SYSTEM (PAYGPA.COM)
   No system issue reported.

ONGOING PROJECT UPDATES:

Network Penetration Testing and Vulnerability Assessment: Project to provide network testing and vulnerability assessment to benchmark GPA and GWA's network and host systems. This will also include IT Controls Systems testing and Business Impact Analysis for GPA and GWA critical IT systems. PO has been issued and work has been started. Expected completion by April 2018.

SMS Emergency Outage Notification: Project to provide SMS text alerts for Emergency Outages notification for customers and emergency response agencies. Awaiting next steps from operations. In testing process at the moment with PSCC.

Pay by Phone Project: Working with vendor for Pay by Phone system to allow customers to call after hours and make automated payments to their GPA account. Ongoing testing.

Mobile APP Project: Project to create a mobile payment APP for ANDROID and APPLE IOS smartphones. This will allow customers to review their accounts and make payments from their Smartphones. Both Android and iOS versions have been released and are live.

Oracle Business Intelligence (BI) Project: Project to install Oracle's BI tool to allow for reporting from CC&B and JDE. Expected completion by December 2017. Currently ongoing.

Customer Care & Billing (CC&B) Upgrade: Upgrade of the current Oracle CC&B program from version 2.4 to version 2.5. The current version of CC&B 2.4 will be end of life by Sept. 30, 2017 and support thereafter will be limited. Expected completion by September 2018.

Disaster Recovery Site: Project to procure a Disaster Recovery (DR) site to provide redundancy for critical GPA applications and databases in case of disruption of the primary Fadian Data Center. Expected completion by March 2018.

Physical Security: Project to provide additional surveillance monitoring for Fadian, T&D, Dededo CT and Transportation Warehouse. RFP has been issued with closing date of March 7, 2018.

GPWA Website Upgrades: Project to revamp GPA and GWA websites for GUAMPOWERAUTHORITY.COM, PAYGPA.COM, GUAMWETERWORKS.ORG and PAYGWA.COM. RFP is pending release. Expected to be completed in 160 days.

Submitted by:

Melvyn Kwek
Chief Information Technology Officer

Guam GPA & GWA EMS/SCADA System

SIEMENS



GUAM POWER AUTHORITY
Bringing Energy Solutions to You

GUAM WATERWORKS AUTHORITY

Monthly Project Report

January 2018

Grow together and WIN

Unrestricted

Project Progression Summary

The last reporting period captured for Project No. GPA-066-16 was September 2017. Issues with TAA, equipment TPM certification, Taiwan customs, shipping has been the center of all discussions since.

Collaboratively, GPWA, Benson Guam and Siemens have arrived to a solution. Leveraging Dell Federal and in coordination with their local representative Data Management Resources (DMR), we have come to terms. In summary, Benson/Siemens will purchase the equipment from Dell Federal, who in turn will ship the equipment directly to Taiwan. Siemens Taiwan will receive the equipment for configuration, test and factory acceptance test purposes only. Upon completion, GPWA will conduct FAT acceptance in Taiwan. Upon completion and acceptance of the FAT, Siemens will ship the equipment to GPWA for Phase II – Site Installation and Integration.

Project Continuation

October 10, 2017 – GPA-SCADA-RFI-11 – Response to GPWA Transmittal No. 29 – Updated Proposed Schedule

October 12, 2017 – GPWA Transmittal No. 31 – Updated Project Schedule

October 25, 2017 – GPWA Transmittal No. 32 – SCADA RFI No. 1

October 31, 2017 – GPWA Transmittal No. 33 – Response to GPA-SCADA-D-001-1

November 1, 2017 – GPWA Transmittal No. 34 – Government of Guam Holidays

December 6, 2017 – GPA-SCADA-RFI-12 – Official Submission of SCADA Architecture

December 13, 2017 – GPA-SCADA-RFI-13 – Final Quote – Cisco Equipment

December 13, 2017 – GPA-SCADA-RFI-14 – Request for Approval of Hardware Specifications

December 14, 2017 – GPWA Transmittal No. 35 – Response to GPA-SCADA-RFI-12

December 22, 2017 – GPA-SCADA-E-005-1 – Consolidated Hardware List

GPWA SCADA EMS Project Bid No. GPA 066-16

Project Director: Charles Wu
Project Manager: Jonathan Chargualaf
Contract Administrator: Monito Co

Requires immediate attention (R)
Near-term corrective action required (Y)
No corrective action required (G)

Overall Status	Risks & Issues	Schedule	Scope	Financial
G	G	G	G	G

Resources

1. Benson/Siemens
2. GPWA

Updates & Accomplishments for the Month of: January 2018

1. 01/12/18 - GPWA Transmittal No. 37 – Approval of all Hardware / Disapproval of Monitor due to resolution requirement
2. 01/12/18 – GPA-SCADA-E-005-2 – New Proposed Monitor to meet bid specifications
3. 01/12/18 – GPWA Transmittal No. 38 – Approval of all Hardware including new monitor
4. 01/10/18 – GPA-SCADA-RFI-15 – Request to purchase equipment pending official processing of GPA Change Order No.3 and GWA Change Order No. 4 to align with project schedule
5. 01/12/18 – GPWA Transmittal No. 39 – Approval to Purchase Equipment
6. 01/17/18 - GPA-SCADA-E-005-3 – Clarification of Dell 18.5” LED KMM and approval request
7. 01/18/18 – GPWA Transmittal No. 40 – Approval of Dell 18.5” LED KMM
8. 01/18/18 – GPWA Transmittal No. 41 – Revision of Anigua Analog and Status Points
9. 01/18/18 – GPWA Transmittal No. 42 – Request for Factory Acceptance Test Agenda and Procedures
10. **01/30/18 - DATA MANAGEMENT RESOURCES (DMR) Reports Equipment Order has been processed.**

Resource	Upcoming Tasks / Open Items	TCD/ECD
1. Siemens 2. GPWA 3. Siemens 4. Benson/ Siemens	FAT Agenda and Procedures Cisco Equipment IP Addressing List Visa requirement for FAT attendees as brought up by Roel Cahinhinan Non-Disclosure agreement submissions for all Benson/Siemens personnel accessing the system	

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE

Legend:

2/20/2018

GPWA SCADA EMS Project
Bid No. GPA 066-16

Project Director: Charles Wu
Project Manager: Jonathan Chargualaf
Contract Administrator: Monito Co

Overall Status

Burn Rate	This Month	Last Month	Incremental
Scope (%)			
Budget (%)	13.2%		
Milestones Achieved	1, 3-7 of 18		

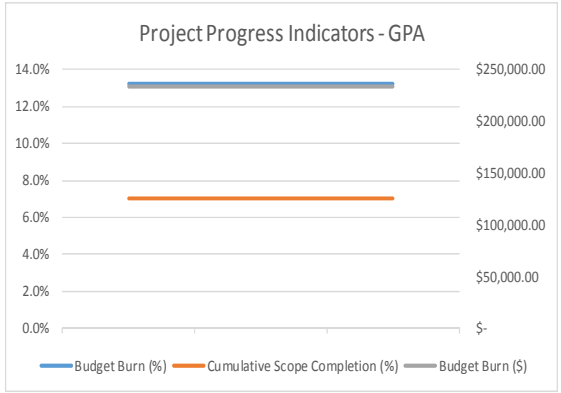
G

Resources

1. Benson/Siemens
2. GPWA

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Project Progress Indicators



Project Phase	Original Contract Budget	Increase	Current Budget	# Change Orders
Phase I	$ 1,518,769.00		$ 1,518,769.00	4
Phase I	$ 1,518,769.00	$ 250,537.38	$ 1,769,306.38	4

Project Schedule & Budget Performance Indicators

Project Milestone	Planned Completion Date	Actual Completion Date	Performance (Days Over/Under)	Color Performance Indicator
Contract Start Date	14-Dec-16	14-Dec-16	0	
GPWA SCADA/EMS Project	1-Oct-18		224	
Factory Activities (In Taiwan / Germany)	9-Jul-18		140	
Approval of revised documentation	4-Dec-17		77	
Preliminary Factory Acceptance Test (Pre-FAT) in Taiwan	2-May-18			
- Base Applications	27-Apr-18			
- Advanced Applications	2-May-18			
Factory Acceptance Test (FAT) in Taiwan	7-May-18			
- Advanced Applications	7-May-18			
- Hardware delivery to Site	31-May-18			
Site Activities (In Guam)	1-Oct-18			
Site Commissioning (Point to point testing)	29-Aug-18			
Site Commissioning (GPA - Point to point testing)	28-Aug-18			
Issuance of Site Commissioning Completion Certificate	28-Aug-18			
Site Acceptance Test (SAT)	3-Sep-18			
- Advanced Applications	2-Sep-18			
Investigation of variance / bug (SAT if any - Advanced Applications)	3-Sep-18			
Issuance of Site Acceptance Certificate	3-Sep-18			
Availability Test (AVT) - 1000hrs （42 Calindar Day， 28 working day）	1-Oct-18			
Issuance of AVT Certificate	1-Oct-18			
Handover of System to end customer	1-Oct-18			
Commencement of warranty (12 months)	1-Oct-19			
Issuance of Final Acceptance Certificates (FAC)	1-Oct-19			

Legend:

G No corrective action required

Y Near-term corrective action required

R Requires immediate attention

2/20/2018

4

GPWA SCADA EMS Project
Bid No. GPA 066-16

Project Director: Charles Wu
Project Manager: Jonathan Chargualaf
Contract Administrator: Monito Co

Overall Status	G

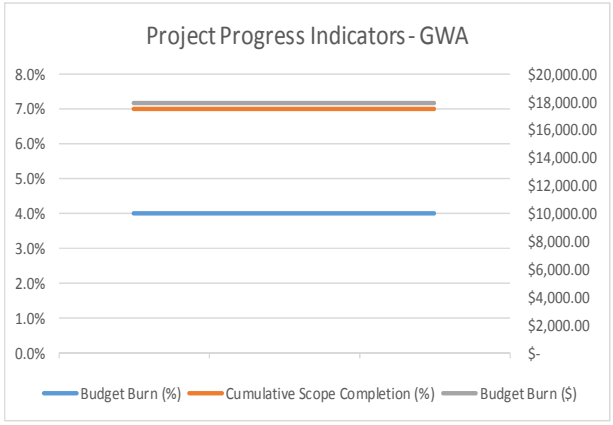
Burn Rate	This Month	Last Month	Incremental
Scope (%)			
Budget (%)	4.0%		
Milestones Achieved	1,3-7 of 18		

Resources

1. Benson/Siemens
2. GPWA

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Project Progress Indicators



Project Phase	Original Contract Budget	Increase	Current Budget	# Change Orders
Phase I	$ 432,705.00		$ 432,705.00	4
		$ 18,000.00	$ 450,705.00	4

Project Schedule & Budget Performance Indicators

Contract Start Date	14-Dec-16	14-Dec-16	0	
GPWA SCADA/EMS Project	1-Oct-18		224	
Factory Activities (In Taiwan / Germany)	9-Jul-18		140	
Approval of revised documentation	4-Dec-17		77	
Preliminary Factory Acceptance Test (Pre-FAT) in Taiwan	2-May-18			
- Base Applications	27-Apr-18			
- Advanced Applications	2-May-18			
Factory Acceptance Test (FAT) in Taiwan	7-May-18			
- Advanced Applications	7-May-18			
- Hardware delivery to Site	31-May-18			
Site Activities (In Guam)	1-Oct-18			
Site Commissioning (Point to point testing)	29-Aug-18			
Site Commissioning (GPA - Point to point testing)	28-Aug-18			
Issuance of Site Commissioning Completion Certificate	28-Aug-18			
Site Acceptance Test (SAT)	3-Sep-18			
- Advanced Applications	2-Sep-18			
Investigation of variance / bug (SAT if any - Advanced Applications)	3-Sep-18			
Issuance of Site Acceptance Certificate	3-Sep-18			
Availability Test (AVT) - 1000hrs (42 Calindar Day, 28 working day)	1-Oct-18			
Issuance of AVT Certificate	1-Oct-18			
Handover of System to end customer	1-Oct-18			
Commencement of warranty (12 months)	1-Oct-19			
Issuance of Final Acceptance Certificates (FAC)	1-Oct-19			

Legend:

G No corrective action required

Y Near-term corrective action required

R Requires immediate attention

2/20/2018

5

GPWA SCADA EMS Project
Bid No. GPA 066-16

Project Director: Charles Wu
Project Manager: Jonathan Chargualaf
Contract Administrator: Monito Co

Overall Status	G

Burn Rate	This Month	Last Month	Incremental
Scope (%)			
Budget (%)			
Milestones Achieved	1, 3-7 of 18		
1. Mobilization			
2. Project Management			
3. Permits, Bonds and Codes			
4. Project Installation Site Survey			
5. Interconnection and Integration Design			
6. Communications and Networking Design and Execution Plan			
7. Installation Design			
8. Software Cost, Procurement and Delivery			
9. Third Party Software Cost, Procurement and Delivery			
10. Software Installation			
11. Equipment Cost, Procurement and Delivery			
12. Construction, Equipment Installation and Interconnection			
13. Commissioning, Quality Assurance and Performance Testing			
14. Training			
15. Demobilization			
16. Warranty			
17. Documentation			
18. Annual Maintenance			

Legend:

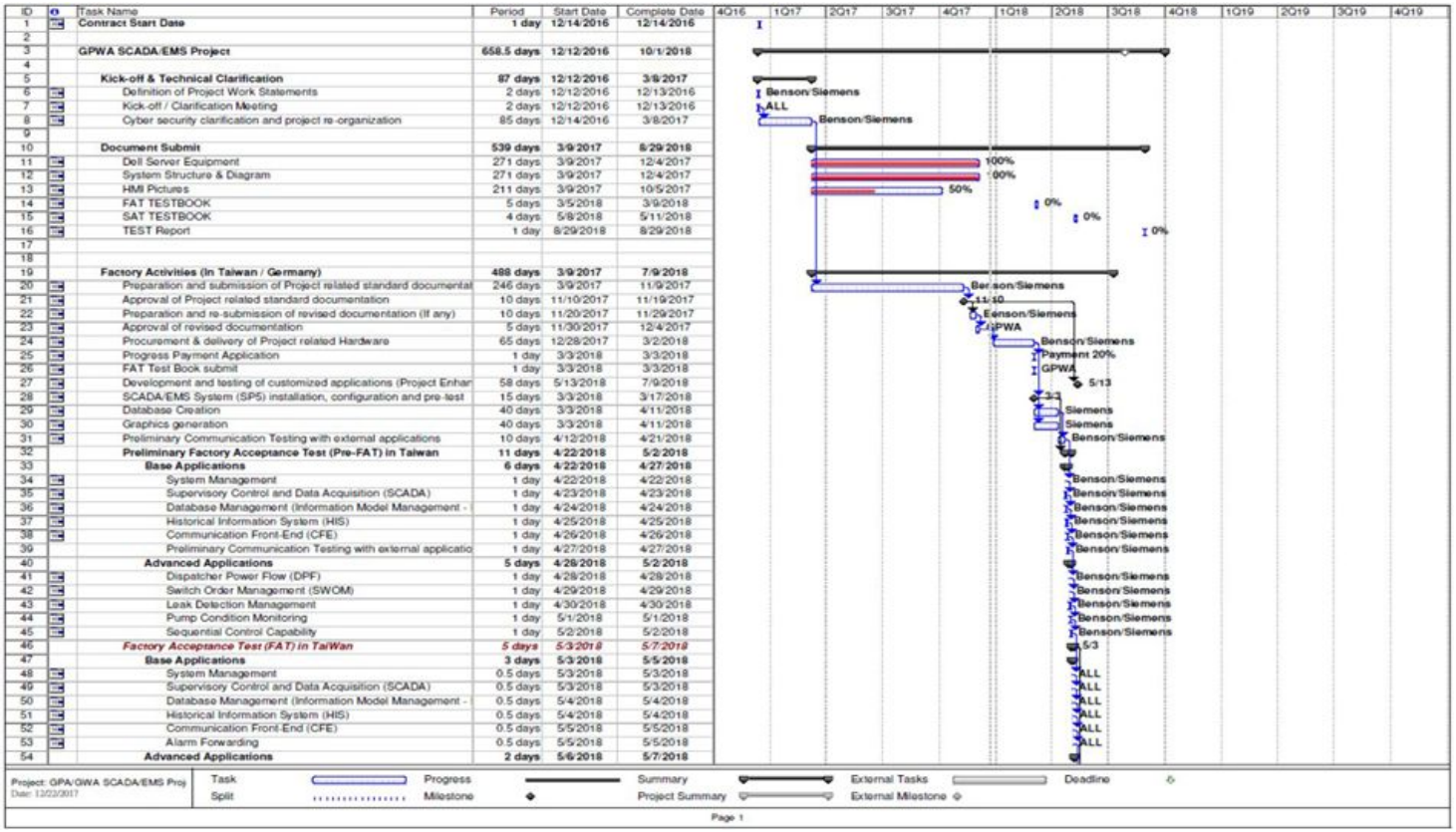
G — No corrective action required

Y — Near-term corrective action required

R — Requires immediate attention

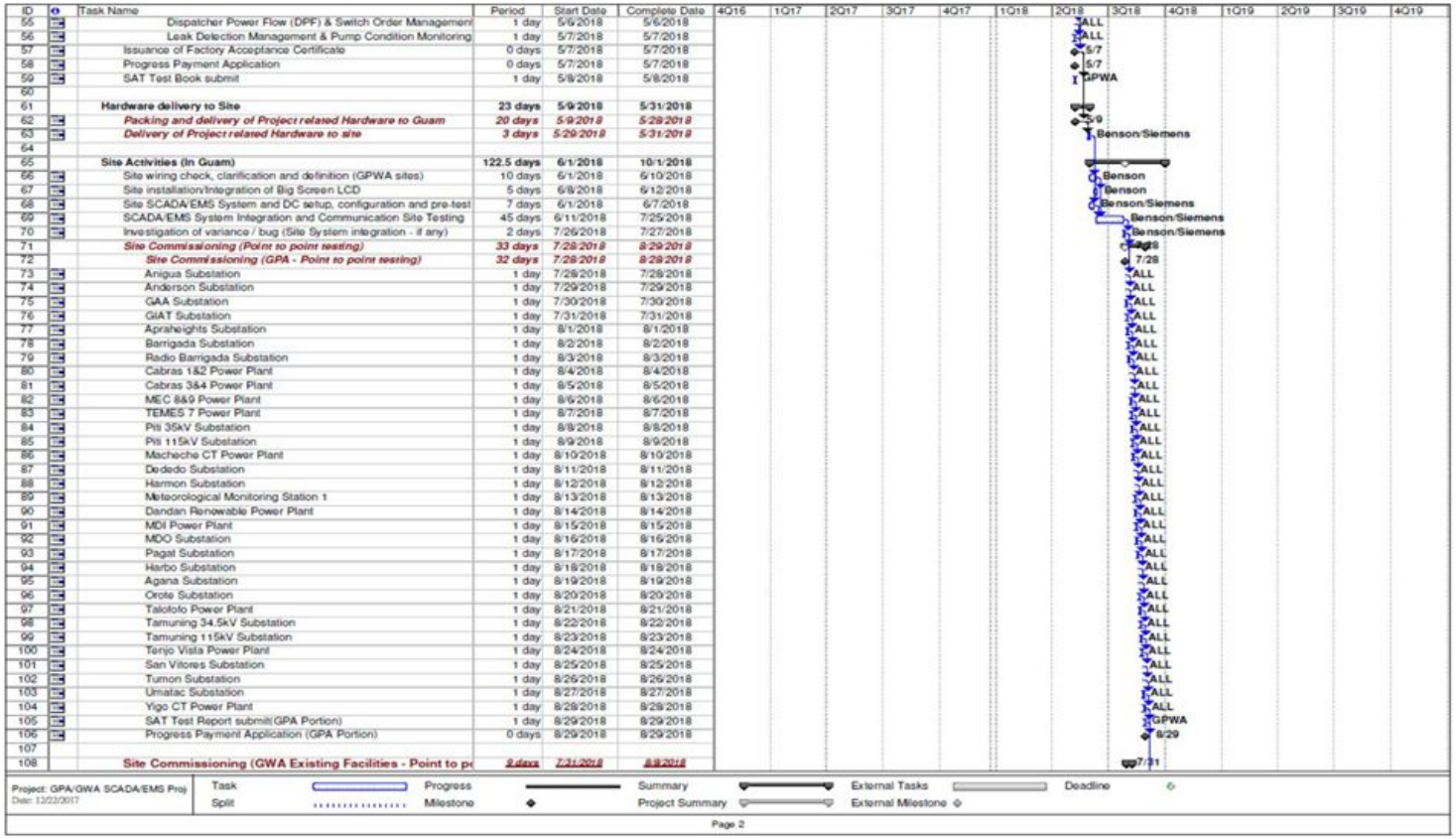
2/20/2018

Project Schedule 1/3



ID	Task Name	Period	Start Date	Complete Date
1	**Contract Start Date**	**1 day**	**12/14/2016**	**12/14/2016**
2				
3	**GPWA SCADA/EMS Project**	**658.5 days**	**12/12/2016**	**10/1/2018**
4				
5	**Kick-off & Technical Clarification**	**87 days**	**12/12/2016**	**3/9/2017**
6	Definition of Project Work Statements	2 days	12/12/2016	12/13/2016
7	Kick-off / Clarification Meeting	2 days	12/12/2016	12/13/2016
8	Cyber security clarification and project re-organization	85 days	12/14/2016	3/8/2017
9				
10	**Document Submit**	**539 days**	**3/9/2017**	**8/29/2018**
11	Dell Server Equipment	271 days	3/9/2017	12/4/2017
12	System Structure & Diagram	271 days	3/9/2017	12/4/2017
13	HMI Pictures	211 days	3/9/2017	10/5/2017
14	FAT TESTBOOK	5 days	3/5/2018	3/9/2018
15	SAT TESTBOOK	4 days	5/8/2018	5/11/2018
16	TEST Report	1 day	8/29/2018	8/29/2018
17				
18				
19	**Factory Activities (In Taiwan / Germany)**	**488 days**	**3/9/2017**	**7/9/2018**
20	Preparation and submission of Project related standard documentat	246 days	3/9/2017	11/9/2017
21	Approval of Project related standard documentation	10 days	11/10/2017	11/19/2017
22	Preparation and re-submission of revised documentation (If any)	10 days	11/20/2017	11/29/2017
23	Approval of revised documentation	5 days	11/30/2017	12/4/2017
24	Procurement & delivery of Project related Hardware	65 days	12/28/2017	3/2/2018
25	Progress Payment Application	1 day	3/3/2018	3/3/2018
26	FAT Test Book submit	1 day	3/3/2018	3/3/2018
27	Development and testing of customized applications (Project Enhar	58 days	5/13/2018	7/9/2018
28	SCADA/EMS System (SPS) installation, configuration and pre-test	15 days	3/3/2018	3/17/2018
29	Database Creation	40 days	3/3/2018	4/11/2018
30	Graphics generation	40 days	3/3/2018	4/11/2018
31	Preliminary Communication Testing with external applications	10 days	4/12/2018	4/21/2018
32	**Preliminary Factory Acceptance Test (Pre-FAT) in Taiwan**	**11 days**	**4/22/2018**	**5/2/2018**
33	**Base Applications**	**6 days**	**4/22/2018**	**4/27/2018**
34	System Management	1 day	4/22/2018	4/22/2018
35	Supervisory Control and Data Acquisition (SCADA)	1 day	4/23/2018	4/23/2018
36	Database Management (Information Model Management -	1 day	4/24/2018	4/24/2018
37	Historical Information System (HIS)	1 day	4/25/2018	4/25/2018
38	Communication Front-End (CFE)	1 day	4/26/2018	4/26/2018
39	Preliminary Communication Testing with external applicatio	1 day	4/27/2018	4/27/2018
40	**Advanced Applications**	**5 days**	**4/26/2018**	**5/2/2018**
41	Dispatcher Power Flow (DPF)	1 day	4/28/2018	4/28/2018
42	Switch Order Management (SWOM)	1 day	4/29/2018	4/29/2018
43	Leak Detection Management	1 day	4/30/2018	4/30/2018
44	Pump Condition Monitoring	1 day	5/1/2018	5/1/2018
45	Sequential Control Capability	1 day	5/2/2018	5/2/2018
46	***Factory Acceptance Test (FAT) in TaiWan***	***5 days***	***5/3/2018***	***5/7/2018***
47	**Base Applications**	**3 days**	**5/3/2018**	**5/5/2018**
48	System Management	0.5 days	5/3/2018	5/3/2018
49	Supervisory Control and Data Acquisition (SCADA)	0.5 days	5/3/2018	5/3/2018
50	Database Management (Information Model Management -	0.5 days	5/4/2018	5/4/2018
51	Historical Information System (HIS)	0.5 days	5/4/2018	5/4/2018
52	Communication Front-End (CFE)	0.5 days	5/5/2018	5/5/2018
53	Alarm Forwarding	0.5 days	5/5/2018	5/5/2018
54	**Advanced Applications**	**2 days**	**5/6/2018**	**5/7/2018**

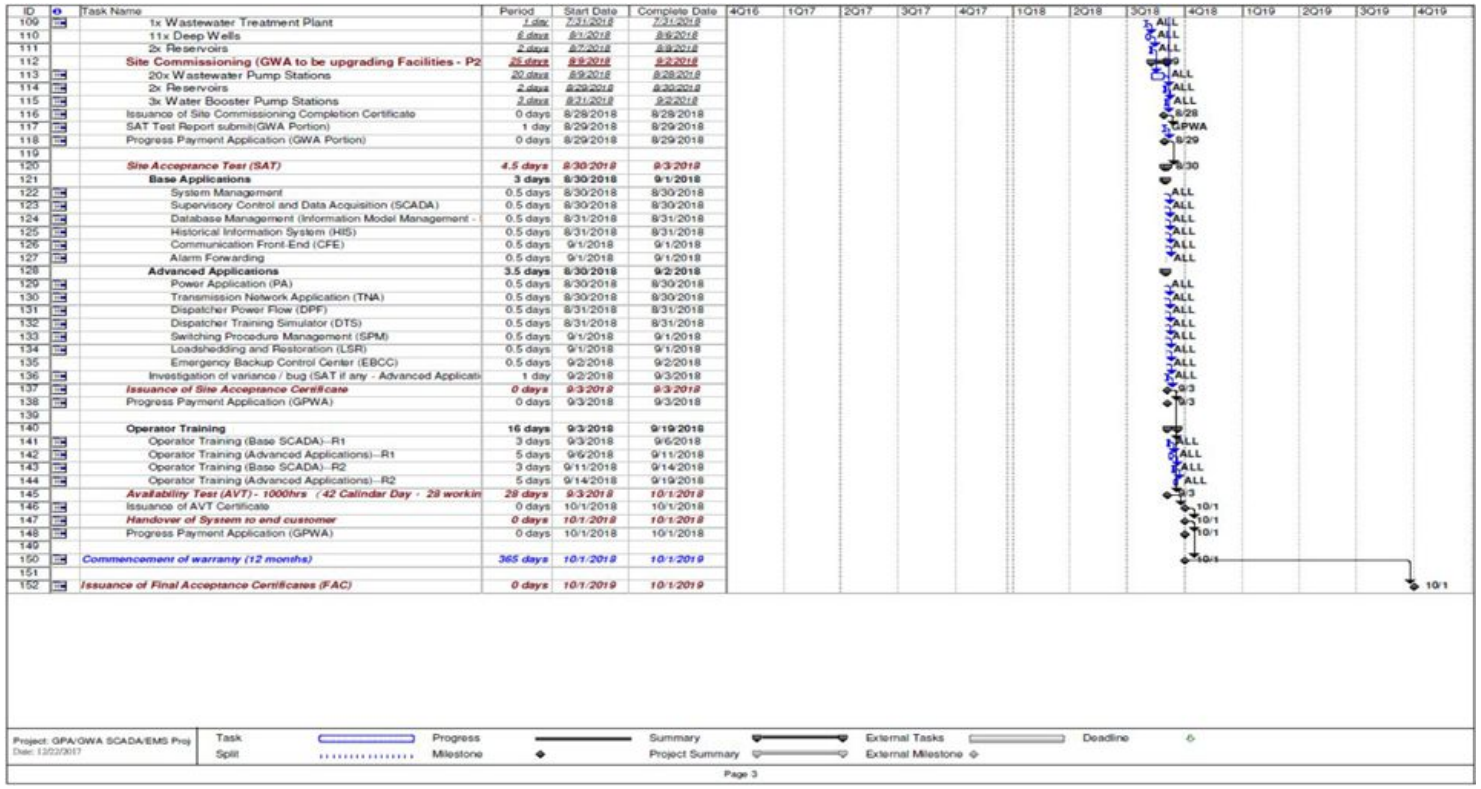
Project Schedule 2/3



ID	Task Name	Period	Start Date	Complete Date
55	Dispatcher Power Flow (DPF) & Switch Order Management	1 day	5/6/2018	5/6/2018
56	Leak Detection Management & Pump Condition Monitoring	1 day	5/7/2018	5/7/2018
57	Issuance of Factory Acceptance Certificate	0 days	5/7/2018	5/7/2018
58	Progress Payment Application	0 days	5/7/2018	5/7/2018
59	SAT Test Book submit	1 day	5/8/2018	5/8/2018
60				
61	**Hardware delivery to Site**	**23 days**	**5/9/2018**	**5/31/2018**
62	***Packing and delivery of Project related Hardware to Guam***	***20 days***	***5/9/2018***	***5/28/2018***
63	***Delivery of Project related Hardware to site***	***3 days***	***5/29/2018***	***5/31/2018***
64				
65	**Site Activities (In Guam)**	**122.5 days**	**6/1/2018**	**10/1/2018**
66	Site wiring check, clarification and definition (GPWA sites)	10 days	6/1/2018	6/10/2018
67	Site installation/Integration of Big Screen LCD	5 days	6/8/2018	6/12/2018
68	Site SCADA/EMS System and DC setup, configuration and pre-test	7 days	6/1/2018	6/7/2018
69	SCADA/EMS System Integration and Communication Site Testing	45 days	6/11/2018	7/25/2018
70	Investigation of variance / bug (Site System integration - if any)	2 days	7/26/2018	7/27/2018
71	***Site Commissioning (Point to point testing)***	***33 days***	***7/28/2018***	***8/29/2018***
72	***Site Commissioning (GPA - Point to point testing)***	***32 days***	***7/28/2018***	***8/28/2018***
73	Anigua Substation	1 day	7/28/2018	7/28/2018
74	Anderson Substation	1 day	7/29/2018	7/29/2018
75	GAA Substation	1 day	7/30/2018	7/30/2018
76	GIAT Substation	1 day	7/31/2018	7/31/2018
77	Apraheights Substation	1 day	8/1/2018	8/1/2018
78	Barrigada Substation	1 day	8/2/2018	8/2/2018
79	Radio Barrigada Substation	1 day	8/3/2018	8/3/2018
80	Cabras 1&2 Power Plant	1 day	8/4/2018	8/4/2018
81	Cabras 3&4 Power Plant	1 day	8/5/2018	8/5/2018
82	MEC 8&9 Power Plant	1 day	8/6/2018	8/6/2018
83	TEMES 7 Power Plant	1 day	8/7/2018	8/7/2018
84	Piti 35kV Substation	1 day	8/8/2018	8/8/2018
85	Piti 115kV Substation	1 day	8/9/2018	8/9/2018
86	Macheche CT Power Plant	1 day	8/10/2018	8/10/2018
87	Dededo Substation	1 day	8/11/2018	8/11/2018
88	Harmon Substation	1 day	8/12/2018	8/12/2018
89	Meteorological Monitoring Station 1	1 day	8/13/2018	8/13/2018
90	Dandan Renewable Power Plant	1 day	8/14/2018	8/14/2018
91	MDI Power Plant	1 day	8/15/2018	8/15/2018
92	MDO Substation	1 day	8/16/2018	8/16/2018
93	Pagat Substation	1 day	8/17/2018	8/17/2018
94	Harbo Substation	1 day	8/18/2018	8/18/2018
95	Agana Substation	1 day	8/19/2018	8/19/2018
96	Orote Substation	1 day	8/20/2018	8/20/2018
97	Talofofo Power Plant	1 day	8/21/2018	8/21/2018
98	Tamuning 34.5kV Substation	1 day	8/22/2018	8/22/2018
99	Tamuning 115kV Substation	1 day	8/23/2018	8/23/2018
100	Tenjo Vista Power Plant	1 day	8/24/2018	8/24/2018
101	San Vitores Substation	1 day	8/25/2018	8/25/2018
102	Tumon Substation	1 day	8/26/2018	8/26/2018
103	Umatac Substation	1 day	8/27/2018	8/27/2018
104	Yigo CT Power Plant	1 day	8/28/2018	8/28/2018
105	SAT Test Report submit(GPA Portion)	1 day	8/29/2018	8/29/2018
106	Progress Payment Application (GPA Portion)	0 days	8/29/2018	8/29/2018
107				
108	**Site Commissioning (GWA Existing Facilities - Point to p**	***9 days***	***7/31/2018***	***8/9/2018***

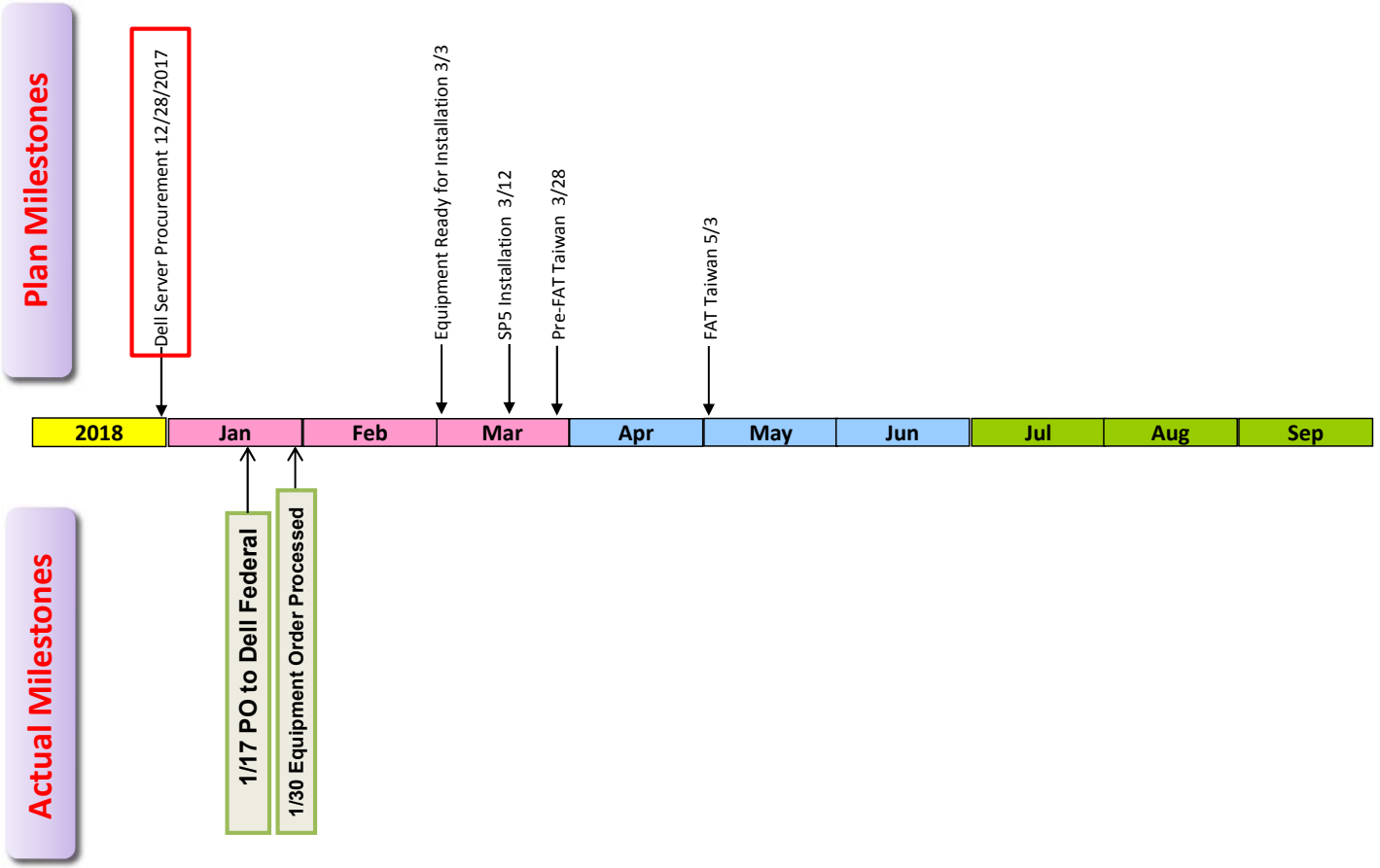
Benson

Project Schedule 3/3



ID	Task Name	Period	Start Date	Complete Date
109	1x Wastewater Treatment Plant	1 day	7/31/2018	7/31/2018
110	11x Deep Wells	6 days	8/1/2018	8/6/2018
111	2x Reservoirs	2 days	8/7/2018	8/8/2018
112	**Site Commissioning (GWA to be upgrading Facilities - P2**	25 days	8/8/2018	9/2/2018
113	20x Wastewater Pump Stations	20 days	8/9/2018	8/28/2018
114	2x Reservoirs	2 days	8/29/2018	8/30/2018
115	3x Water Booster Pump Stations	3 days	8/31/2018	9/2/2018
116	Issuance of Site Commissioning Completion Certificate	0 days	8/28/2018	8/28/2018
117	SAT Test Report submit(GWA Portion)	1 day	8/29/2018	8/29/2018
118	Progress Payment Application (GWA Portion)	0 days	8/29/2018	8/29/2018
119				
120	***Site Acceptance Test (SAT)***	**4.5 days**	**8/30/2018**	**9/3/2018**
121	**Base Applications**	**3 days**	**8/30/2018**	**9/1/2018**
122	System Management	0.5 days	8/30/2018	8/30/2018
123	Supervisory Control and Data Acquisition (SCADA)	0.5 days	8/30/2018	8/30/2018
124	Database Management (Information Model Management -	0.5 days	8/31/2018	8/31/2018
125	Historical Information System (HIS)	0.5 days	8/31/2018	8/31/2018
126	Communication Front-End (CFE)	0.5 days	9/1/2018	9/1/2018
127	Alarm Forwarding	0.5 days	9/1/2018	9/1/2018
128	**Advanced Applications**	**3.5 days**	**8/30/2018**	**9/2/2018**
129	Power Application (PA)	0.5 days	8/30/2018	8/30/2018
130	Transmission Network Application (TNA)	0.5 days	8/30/2018	8/30/2018
131	Dispatcher Power Flow (DPF)	0.5 days	8/31/2018	8/31/2018
132	Dispatcher Training Simulator (DTS)	0.5 days	8/31/2018	8/31/2018
133	Switching Procedure Management (SPM)	0.5 days	9/1/2018	9/1/2018
134	Loadshedding and Restoration (LSR)	0.5 days	9/1/2018	9/1/2018
135	Emergency Backup Control Center (EBCC)	0.5 days	9/2/2018	9/2/2018
136	Investigation of variance / bug (SAT if any - Advanced Applicati	1 day	9/2/2018	9/3/2018
137	***Issuance of Site Acceptance Certificate***	**0 days**	**9/3/2018**	**9/3/2018**
138	Progress Payment Application (GPWA)	0 days	9/3/2018	9/3/2018
139				
140	**Operator Training**	**16 days**	**9/3/2018**	**9/19/2018**
141	Operator Training (Base SCADA)--R1	3 days	9/3/2018	9/6/2018
142	Operator Training (Advanced Applications)--R1	5 days	9/6/2018	9/11/2018
143	Operator Training (Base SCADA)--R2	3 days	9/11/2018	9/14/2018
144	Operator Training (Advanced Applications)--R2	5 days	9/14/2018	9/19/2018
145	***Availability Test (AVT) - 1000hrs (42 Calindar Day - 28 workin***	**28 days**	**9/3/2018**	**10/1/2018**
146	Issuance of AVT Certificate	0 days	10/1/2018	10/1/2018
147	***Handover of System to end customer***	**0 days**	**10/1/2018**	**10/1/2018**
148	Progress Payment Application (GPWA)	0 days	10/1/2018	10/1/2018
149				
150	***Commencement of warranty (12 months)***	**365 days**	**10/1/2018**	**10/1/2019**
151				
152	***Issuance of Final Acceptance Certificates (FAC)***	**0 days**	**10/1/2019**	**10/1/2019**

Project FAT Milestone



Production Data

31-Jan-18

SYSTEM											
YEAR	MONTH	# of DAYS	GROSS GENERATION	FUEL CONSUMPTION		GROSS FUEL EFFICIENCY (Target ≥ 15.99 kWh/gal)	COST per GROSS kWh	GROSS HEAT RATE (Baseloads) PUC Target less than 9,600	GROSS HEAT RATE (Peaking) PUC Target less than 13,600	Ave. MW	Peak MW
				(gal)	(bbl)						
2015	Oct	31	142,387,859	10,285,716	244,898	13.84	$ 0.1076	9,797.11	12,360.42	191	258
	Nov	30	140,522,664	9,871,651	235,039	14.23	$ 0.1185	9,731.04	12,945.82	195	248
	Dec	31	142,668,711	9,711,263	231,221	14.69	$ 0.0951	9,538.53	12,579.77	192	239
2016	Jan	31	138,191,484	9,446,289	224,912	14.63	$ 0.0676	9,662.86	13,413.90	186	233
	Feb	29	128,816,826	8,860,399	210,962	14.54	$ 0.0706	9,692.42	12,038.19	185	232
	Mar	31	139,991,832	9,522,573	226,728	14.70	$ 0.0732	9,172.99	11,597.00	188	239
	Apr	30	140,706,546	9,301,856	221,473	15.13	$ 0.0734	9,368.24	11,041.70	195	245
	May	31	152,815,417	9,751,521	232,179	15.67	$ 0.0681	9,459.10	11,388.57	205	254
	June	30	149,191,844	9,851,575	234,561	15.14	$ 0.0805	9,666.70	11,074.48	207	253
	July	31	151,248,202	10,443,028	248,644	14.48	$ 0.0920	9,477.71	12,208.87	203	258
	Aug	31	149,051,031	10,210,429	243,105	14.60	$ 0.0935	9,431.70	11,155.10	200	252
	Sept	30	142,069,206	9,829,773	234,042	14.45	$ 0.0956	9,509.75	11,393.73	197	256
	Oct	31	148,824,965	9,660,319	230,008	15.41	$ 0.0729	9,749.38	10,738.69	200	252
	Nov	30	145,293,562	9,427,636	224,468	15.41	$ 0.0901	9,714.47	10,786.30	202	252
	Dec	31	147,753,552	9,725,521	231,560	15.19	$ 0.0934	9,661.13	10,645.44	199	248
2017	Jan	31	142,960,618	9,226,278	219,673	15.49	$ 0.0913	9,620.29	10,965.71	192	234
	Feb	28	113,499,400	7,270,830	173,115	15.61	$ 0.0900	9,609.08	11,503.12	195	246
	Mar	31	149,402,182	9,664,440	230,106	15.46	$ 0.1014	9,719.35	11,440.45	201	246
	Apr	30	145,351,026	9,913,757	236,042	14.66	$ 0.1101	9,750.73	11,392.12	202	250
	May	31	157,573,506	11,065,930	263,475	14.24	$ 0.1170	10,067.14	11,323.20	212	256
	June	30	150,240,751	10,654,196	253,671	14.10	$ 0.1101	10,209.74	11,248.62	209	257
	July	31	150,580,050	10,622,458	252,916	14.18	$ 0.1169	9,544.54	11,837.62	202	252
	Aug	31	150,084,827	10,642,044	253,382	14.10	$ 0.1177	9,206.15	11,917.58	202	261
	Sept	30	143,990,208	10,309,304	245,460	13.97	$ 0.1152	9,541.20	13,107.05	200	254
	Oct	31	147,122,071	9,774,857	232,735	15.05	$ 0.1079	9,590.71	11,375.81	198	254
	Nov	30	147,284,781	9,783,352	232,937	15.05	$ 0.1061	9,563.85	11,257.17	205	253
	Dec	31	151,600,064	9,925,003	236,310	15.27	$ 0.1122	9,607.13	11,035.82	204	250
2018	Jan	31	147,704,057	9,563,641	227,706	15.44	$ 0.1078	9,755.40	11,029.21	199	246

NET METERING
January 2018

	Quantity	Connected kVA
Completed	1,601	16,430
Pending	17	129
Grand Total	1,618	16,560

Rate Class

Schedule	Count	Total kW
R - Residential	1,521	13,693.06
J - General Service Demand	31	1,546.51
K - Small Government Demand	7	157.80
L - Large Government	1	22.80
P - Large Power	3	240.70
G - General Service Non-Demand	31	690.62
S - Small Government Non-Demand	7	78.80
Grand Total	**1,601**	**16,430.29**

Rate Class and Technology

Technology	Schedule	Count	Total kW
Solar Energy	R - Residential	1,519	13,689.46
	J - Gen Service Dmd	31	1,546.51
	K - Small Gov Dmd	7	157.80
	L - Large Government	1	22.80
	P - Large Power	3	240.70
	G - Gen Serv Non-Dmd	31	690.62
	S - Sm Gov Non-Dmd	7	78.80
Wind Turbine	R - Residential	2	3.60
Grand Total		**1,601**	**16,430.29**

Projected FY 2017 Non-Fuel Revenue Loss

Customer Rate Class	Renewable Energy Capacity (kW)	Annual kWh Generated (@5.092 hours/day)*	Average Non-Fuel Yield $/kWh	Estimated Annual Revenue Loss
R	13,693.06	25,447,981.5	0.09293	$ 2,364,906.37
J	1,546.51	2,874,124.4	0.13112	$ 376,858.07
K	157.80	293,264.7	0.13932	$ 40,858.23
L	22.80	42,372.9	0.13525	$ 5,730.84
P	240.70	447,330.9	0.11539	$ 51,617.07
G	690.62	1,283,488.5	0.15084	$ 193,596.27
S	78.80	146,446.5	0.15334	$ 22,456.26
Grand Total	**16,430.29**	**30,535,009.4**		**$ 3,056,023.10**

*Estimated number of hours from NREL for Guam (13.4 degrees North and 144 degrees East).

Estimated Annual Revenue Loss

Description	Estimated kWh	*Total Estimated Cost
FY17	28,242,917	$ 2,828,834.71
FY16	21,867,383	$ 2,200,794.56
FY15	7,383,621	$ 856,921.27
FY14	3,137,212	$ 410,558.94
FY13	1,556,949	$ 178,996.00
FY12	494,672	$ 58,545.89
FY11	170,070	$ 18,177.13
FY10	98,830	$ 8,483.27
FY09	23,912	$ 1,656.87

*Source for effective yield rate from the Year End Revenue Reports (12 month Average Yield)

NET METERING

January 2018

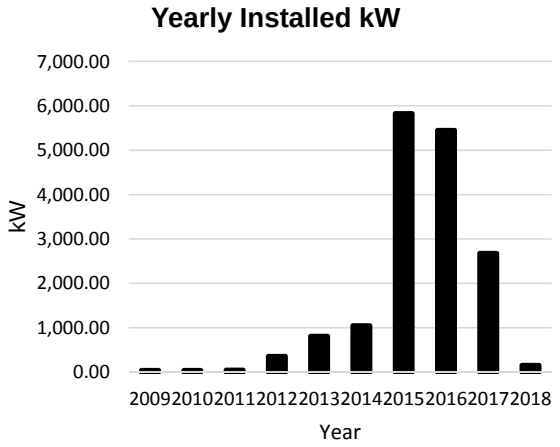
Customer Count and Connected kW by Feeder

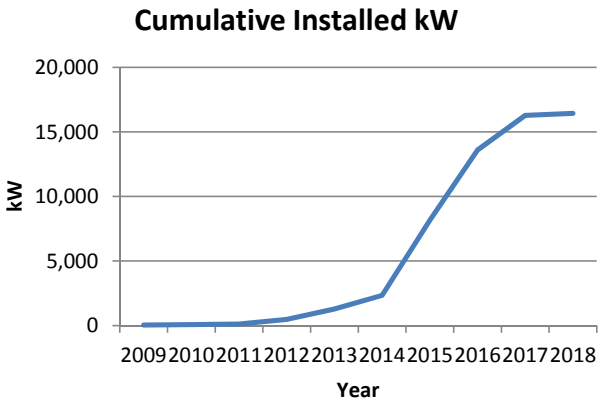
Status	Feeder	Net Metering Connected kW	Customer Count	% of Feeder Maximum kW	% of Feeder Minimum Daytime kW
Completed	P-005	210.27	21	12.2%	24.5%
	P-046	193.57	24	4.6%	7.0%
	P-088	603.78	67	10.0%	15.9%
	P-089	440.95	56	9.9%	23.7%
	P-111	60.00	1	1.1%	2.0%
	P-203	401.36	31	5.4%	15.2%
	P-204	118.08	15	2.5%	5.2%
	P-205	36.40	4	0.8%	1.3%
	P-210	486.79	50	9.5%	12.9%
	P-212	848.80	81	20.5%	53.1%
	P-213	295.33	11	11.3%	15.2%
	P-220	155.14	17	25.5%	80.0%
	P-221	467.59	49	10.6%	21.2%
	P-223	487.96	53	20.5%	29.3%
	P-240	58.55	2	0.9%	7.9%
	P-245	25.00	1	0.5%	1.1%
	P-250	878.19	90	13.5%	23.7%
	P-251	145.50	7	5.9%	9.0%
	P-253	466.61	50	10.4%	16.4%
	P-262	942.06	97	24.7%	59.3%
	P-270	313.67	26	6.2%	12.4%
	P-271	122.78	12	2.1%	4.4%
	P-272	221.03	16	8.6%	19.6%
	P-280	311.59	25	17.3%	32.2%
	P-281	129.70	3	4.6%	12.9%
	P-282	21.00	2	0.6%	1.7%
	P-283	485.05	46	13.4%	23.0%
	P-294	979.34	95	22.6%	44.8%
	P-301	199.26	22	14.1%	25.1%
	P-311	549.83	47	13.8%	23.6%
	P-322	803.14	86	10.6%	21.0%
	P-323	274.41	17	5.8%	18.0%
	P-330	535.37	67	9.8%	19.8%
	P-331	704.08	81	11.2%	18.1%
	P-332	384.46	46	6.8%	10.0%
	P-340	497.37	43	27.4%	60.4%
	P-087	1,032.25	112	26.3%	41.2%
	P-252	436.44	26	10.4%	21.1%
	P-321	246.63	24	4.4%	4.9%
	P-260	45.99	5	6.7%	23.0%
	P-067	68.25	10	0.8%	1.0%
	P-312	68.90	4	4.1%	4.8%
	P-206	18.33	2	1.9%	3.4%
	P-242	23.75	2	0.4%	1.1%
	P-310	181.57	8	6.6%	12.1%
	P-261	327.57	35	11.8%	20.3%
	P-201	40.00	5	1.1%	2.0%
	P-007	42.33	4	5.8%	12.5%
	P-244	18.00	1	1.0%	1.0%
	P-202	22.00	1	0.7%	1.6%
	P-341	4.30	1	0.4%	1.6%
Completed Total		**16,430.29**	**1,601**		
Pending	Pending	129.41	17	0.0%	0.0%
Pending Total		**129.41**	**17**	**0.0%**	**0.0%**
Grand Total		**16,559.70**	**1,618**		
	Feeders highlighted in red indicates renewable energy capacity has exceeded 25% of minimum daytime load.				
	Feeders highlighted in yellow indicates renewable energy capacity has reached 15% to 24% of minimum daytime load.				

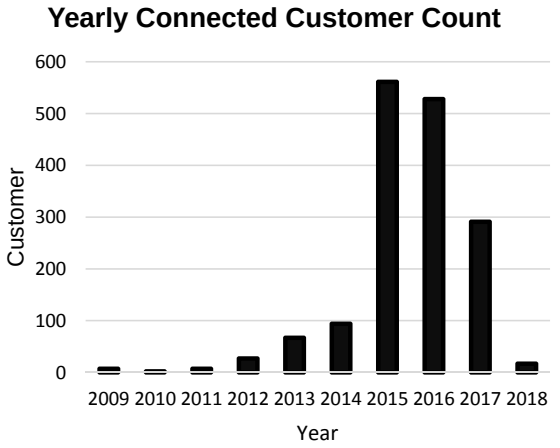
NET METERING
JANUARY 2018

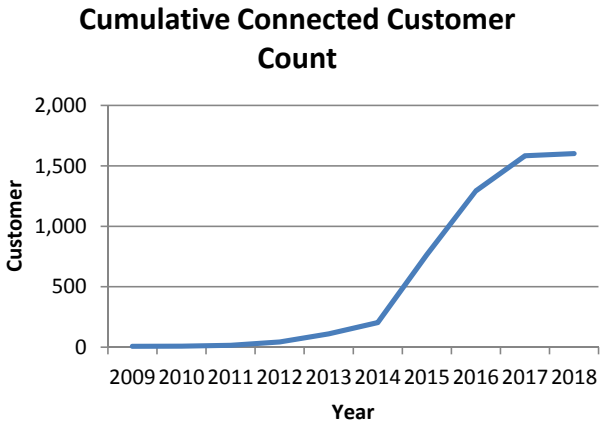
Installed kW by Year		
Year	Total	Cumulative
2009	39.46	39.46
2010	39.20	78.66
2011	43.61	122.27
2012	354.61	476.88
2013	808.45	1,285.33
2014	1,046.54	2,331.87
2015	5,824.70	8,156.57
2016	5,446.95	13,603.51
2017	2,674.45	16,277.96
2018	152.33	16,430.29
Grand Total	16,430.29	

Customer Count by Year		
Year	Total	Cumulative
2009	7	7
2010	2	9
2011	7	16
2012	27	43
2013	67	110
2014	94	204
2015	561	765
2016	528	1,293
2017	291	1,584
2018	17	1,601
Grand Total	1,601	







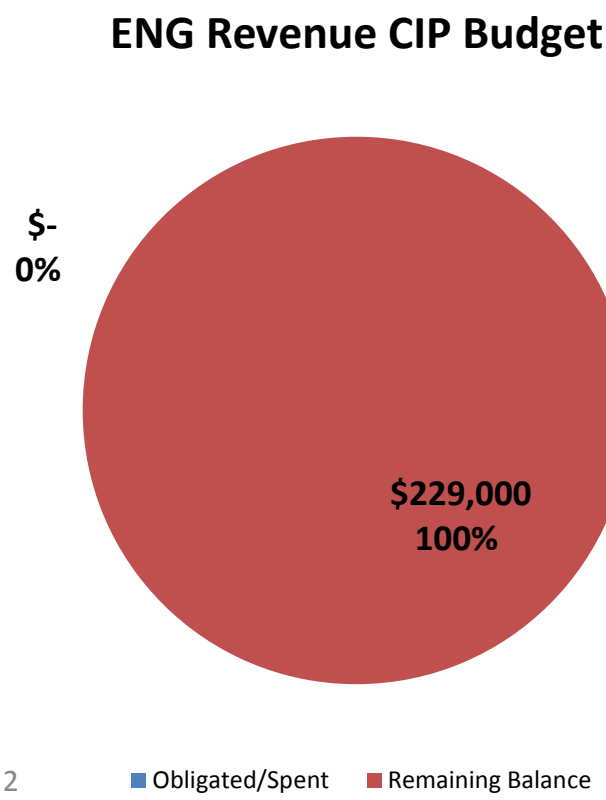


ENG Budget Execution Performance

January 31, 2018

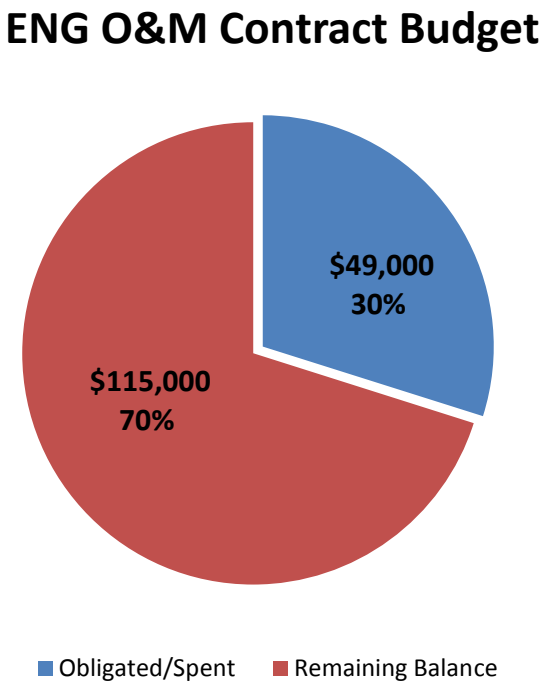
ENG Revenue CIP Budget

- Revenue Funded
- Target
  - 50% CIP Obligation by June 1, 2018
  - 100% CIP Spend by September 30, 2018



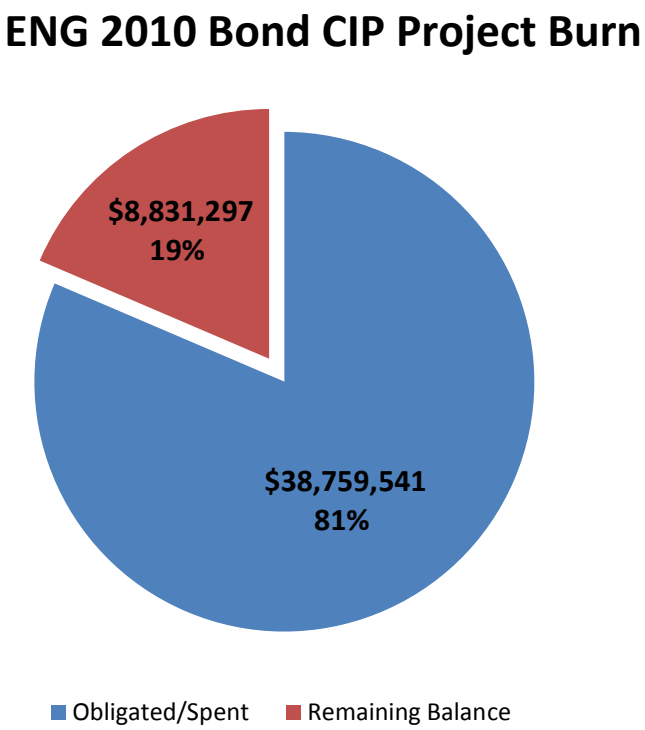
ENG O&M Contract Budget

- Revenue Funded
- Target
  - 25% CIP Obligated by April 30, 2018
  - 75% CIP Obligation by August 30, 2018
  - 100% CIP Spend by September 30, 2018



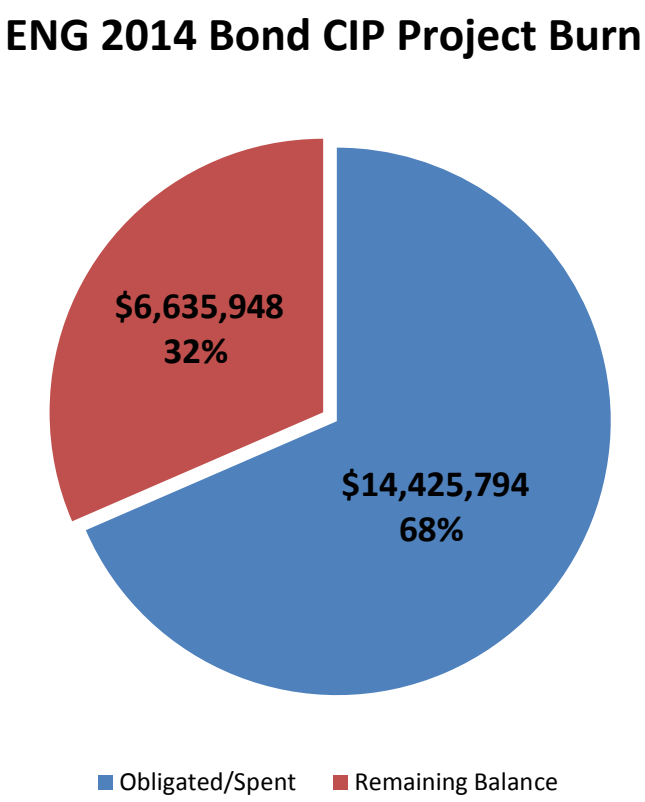
ENG 2010 Bond Series CIP Budget

- Bond Funded
- Target
  - Pending

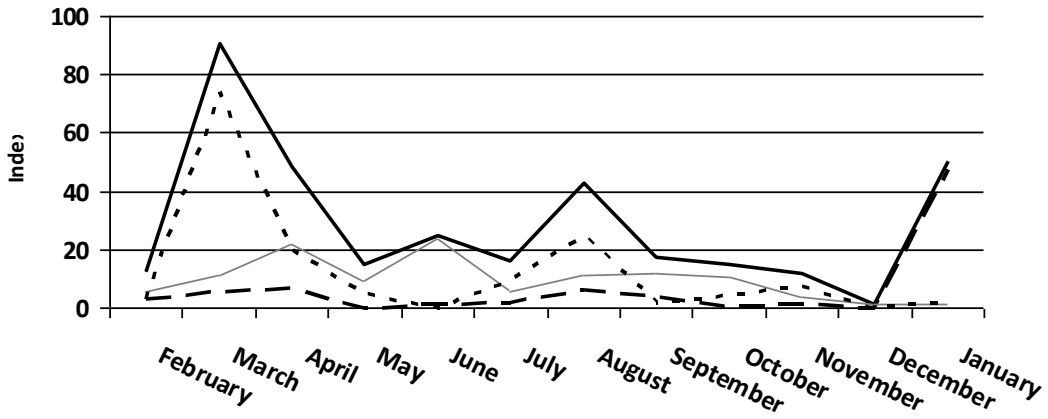


ENG 2014 Bond Series CIP Budget

- Bond Funded
- Target
  - Pending



(Item 1.1,1.2,1.5) January 2018 SAIDI = 346.17 ↑ (322.68)



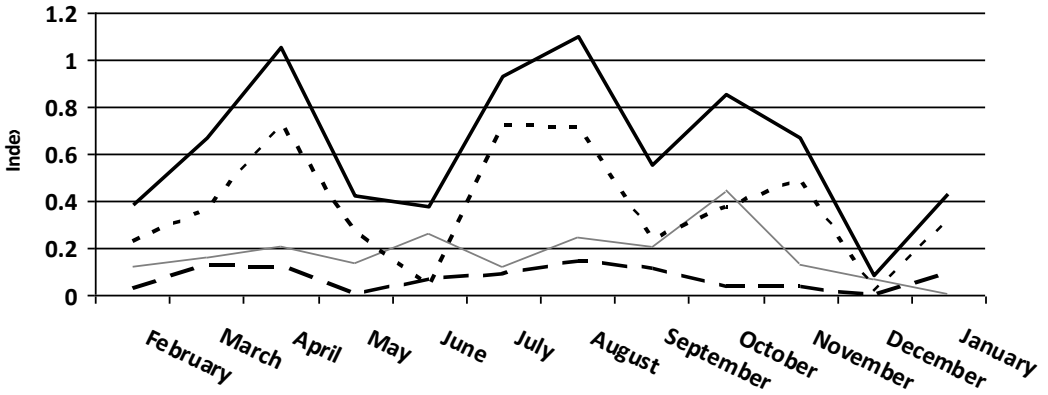
ALL

GEN=151.99 ↓ (158.60)

TRANS=77.14 ↑ (30.85)

DIST=117.04 ↓ (133.22)

(Item 1.1,1.2,1.5) January 2018 SAIFI = 7.52 ↓ (8.05)



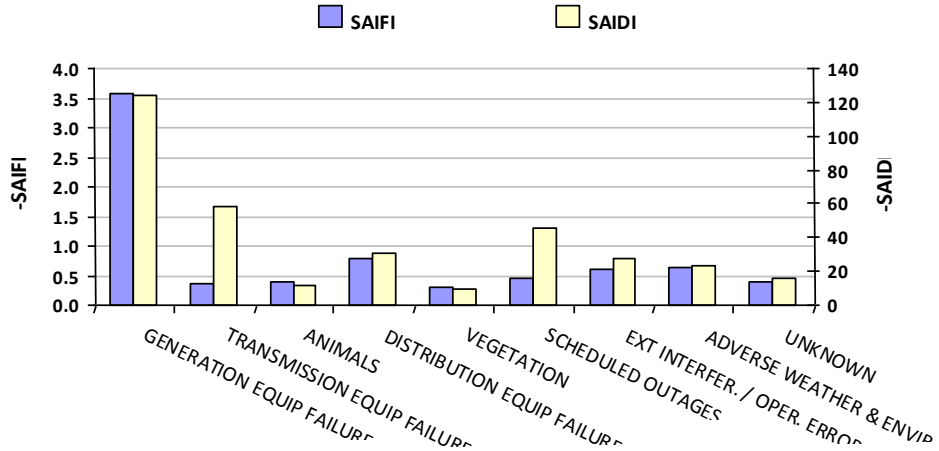
ALL

GEN=4.50 ↓ (4.97)

TRANS=0.89 ↑ (0.81)

DIST=2.13 ↓ (2.27)

(Item 1.9) 12 Month Cause Contributions to Reliability



GENERATION EQUIP FAILURE
F:44.9% D:35.9%

TRANSMISSION EQUIP FAILURE
F:7.0% D:16.7%

ANIMALS
F:5.2% D:3.4%

DISTRIBUTION EQUIP FAILURE
F:10.6% D:8.8%

VEGETATION
F:4.5% D:2.9%

SCHEDULED OUTAGES
F:9.4% D:13.1%

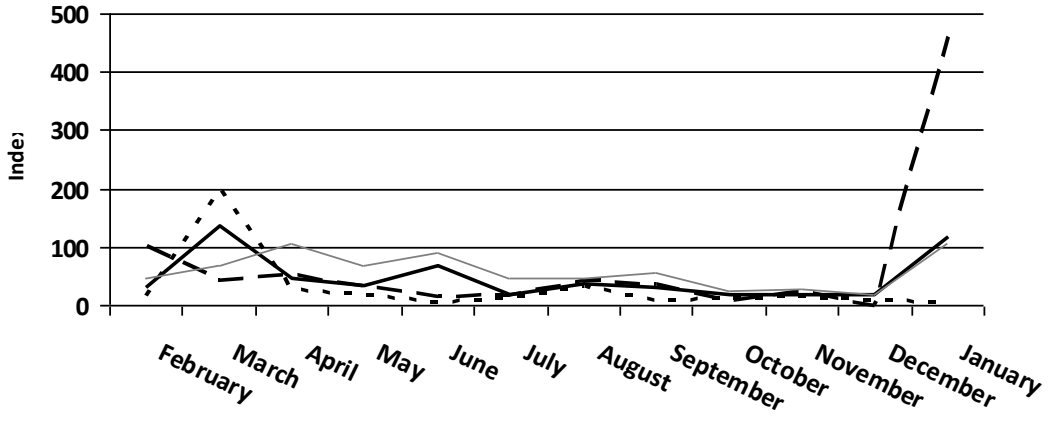
EXT INTERFER. / OPER. ERROR
F:7.0% D:7.9%

ADVERSE WEATHER & ENVIR.
F:6.3% D:6.7%

UNKNOWN
F:5.2% D:4.6%

As of January 31, 2018

(Item 1.1,1.2,1.5) January 2018 CAIDI = 46.01 ↑ (40.09)



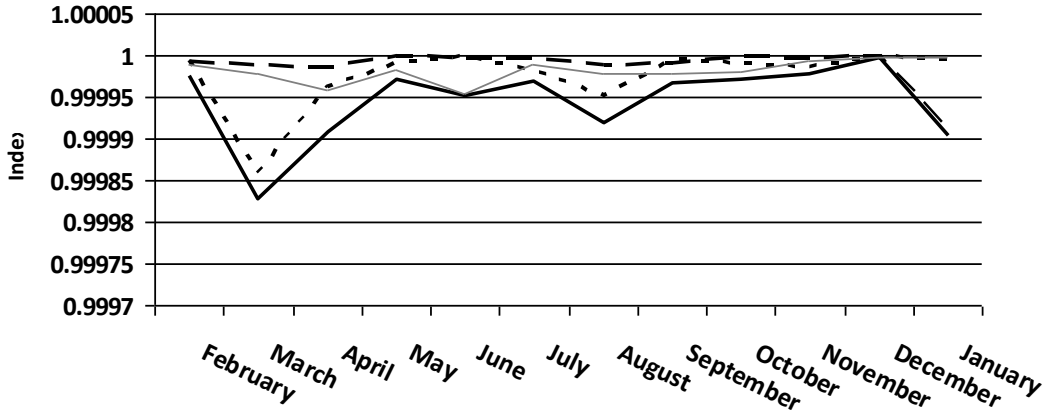
ALL

GEN=33.76 (31.9) ↑

TRANS=86.42 (38.06) ↑

DIST=54.97 (58.77) ↓

(Item 1.1,1.2,1.5) January 2018 ASAI = 0.9993 ↓ (0.9994)



ALL

GEN=0.9997 (0.9997) ↑

TRANS=0.9999 (0.9999) ↓

DIST=0.9998 (0.9997) ↑

(Item 1.4) Top 5 Worst Feeders Distribution Causes

#	Feeder	Outage Count
1	P340	10
2	P403	7
3	P261	7
4	P221	7
5	P332	5

(Item 1.4) Top 5 Distribution Outage Causes

#	Outage Cause	Count
1	Overhead Equipment	31
2	Underground Equipment	16
3	Vegetation	13
4	Vehicles	7
5	Snakes	6

(Item 1.3) Outage Count

TOTAL	UFLS	Non-UFLS
445	225	220

(Item 1.3) UFLS Contribution to Reliability

SAIDI	SAIFI	CAIDI
141.64	4.29	33.01

As of January 31, 2018

NAVFAC
Naval Facilities Engineering Command

U.S. DEPARTMENT OF THE NAVY
REPO
RESILIENT ENERGY PROGRAM OFFICE

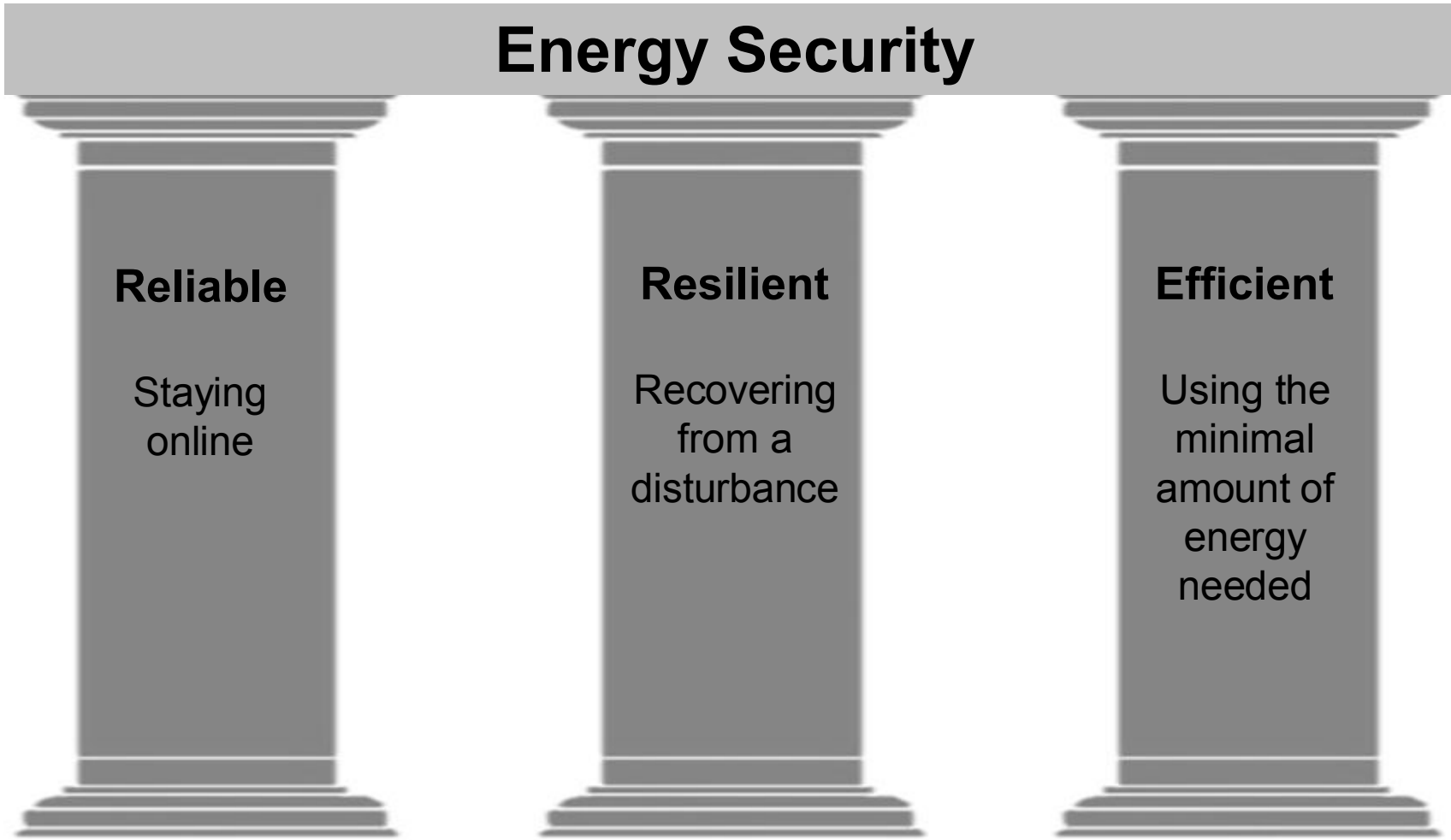
Energy Resiliency in Support of the Mission

GUAM Project Brief

14 February 2018

Overall Classification: UNCLAS

Energy Security Framework

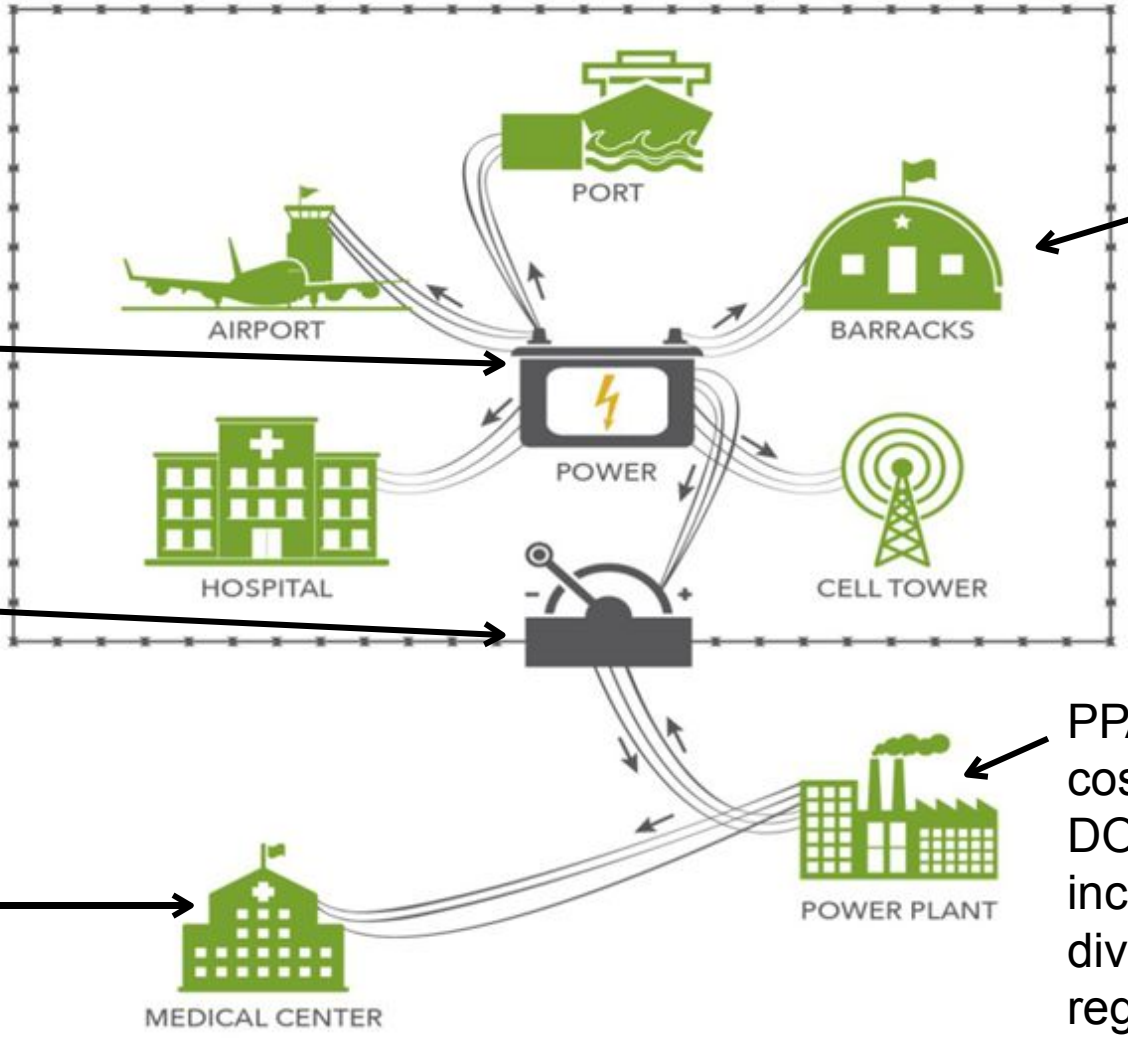


Holistic Approach to Energy Security

Critical assets powered by distributed energy resources and energy storage

Islanding microgrid capabilities

Potential community microgriding capabilities

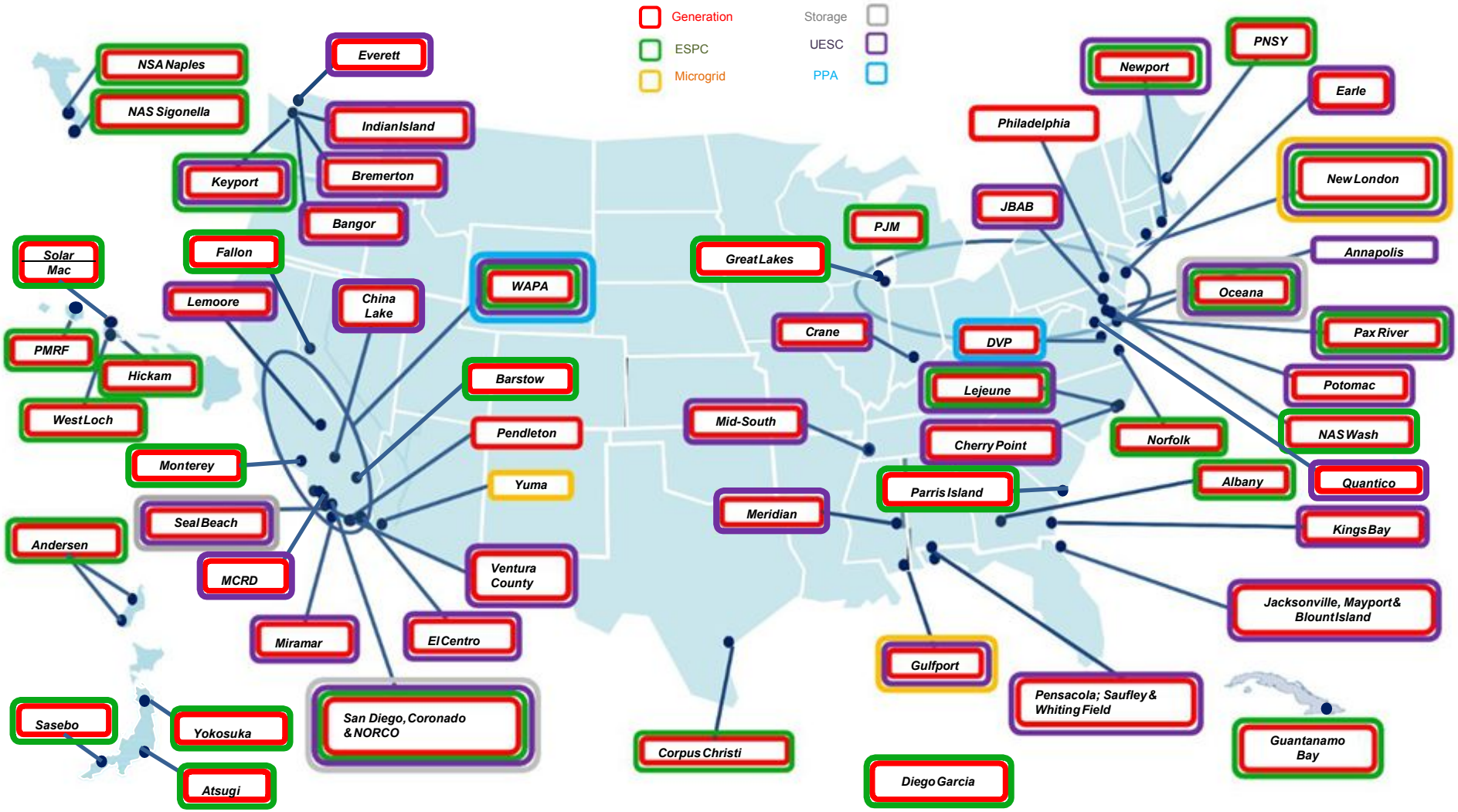


ESPCs / UESCs make buildings and utilities more efficient producing long-term cost savings

PPAs can provide cost stability for the DON and help to incentivize the diversification of regional energy sources

REPO Projects

(as of September 2017)



*Projects completed, in-progress and planned

Guam Project Description & Background

- **Location:** 5 project sites at Joint Region Marianas (JRM)
- **Technology:** Ground Mounted Photovoltaic Systems with Battery Energy Storage System (BESS)
- **Potential PV Power Capacity:** ~38 MW_{DC}
- **Potential BESS Capability:** ~160 MWh
- **Potential Land Availability:** ~164 acres
- **Acquisition Model:** 2 (On-base generation for Utility Offtake, GPA)
- **NEPA:** Performed Environmental Assessment (EA)

Win-Win

The project will benefit the DON and the broader Guam community.

The Base

In the event of a off-base grid outage, the energy system will feed electricity to the base without disruption to ensure mission operations are not compromised or threatened. Further, the system enables island mode operation with black start capabilities.

Guam

The energy system presents mutually benefiting opportunities through power quality improvement to the Guam community, NBG and AAFB. Under the “One Guam” initiative, the DON is committed to improving the quality of life for the people of Guam as well as the military who call Guam “home.” Implementing the PV and BESS energy system will positively impact and unite the community and protect the land, via energy security.

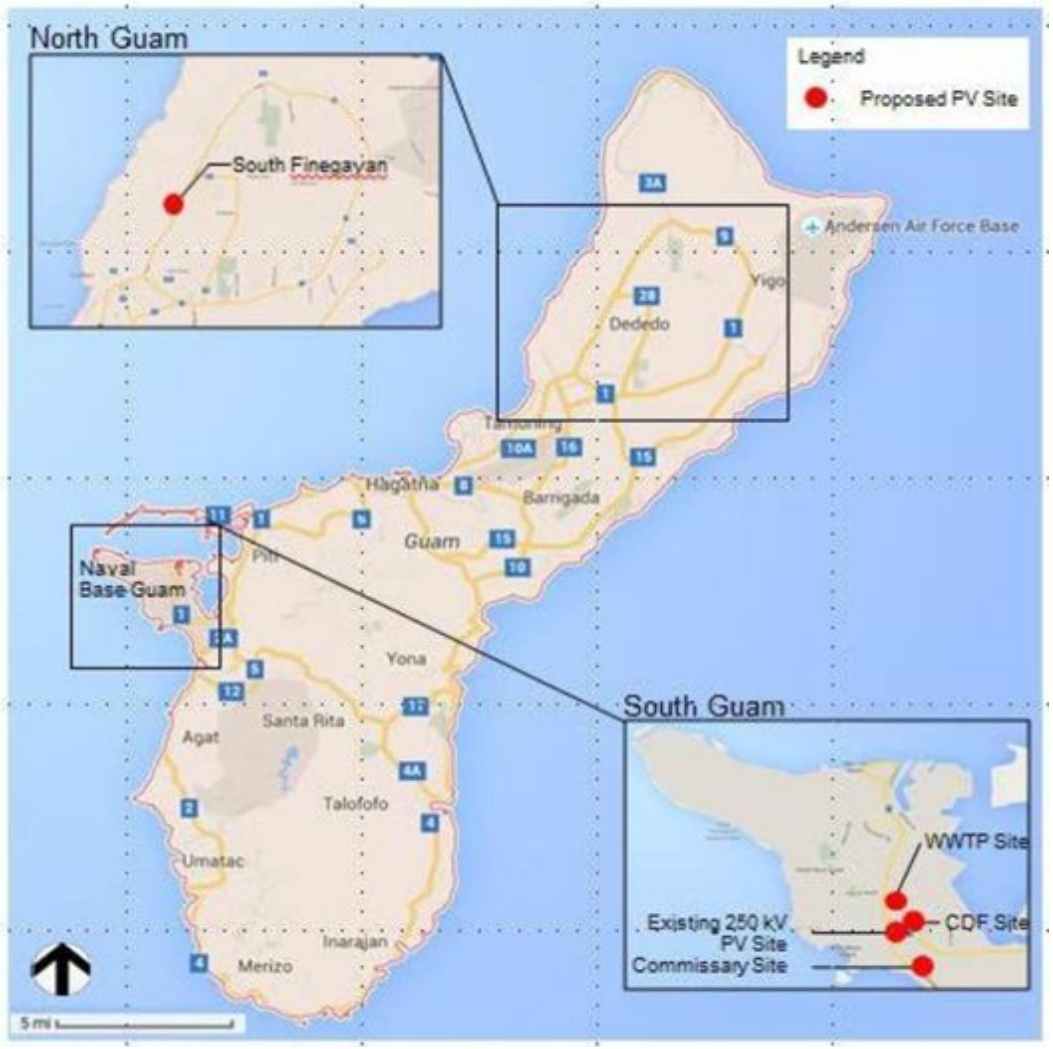
Site Plan

Northern Guam

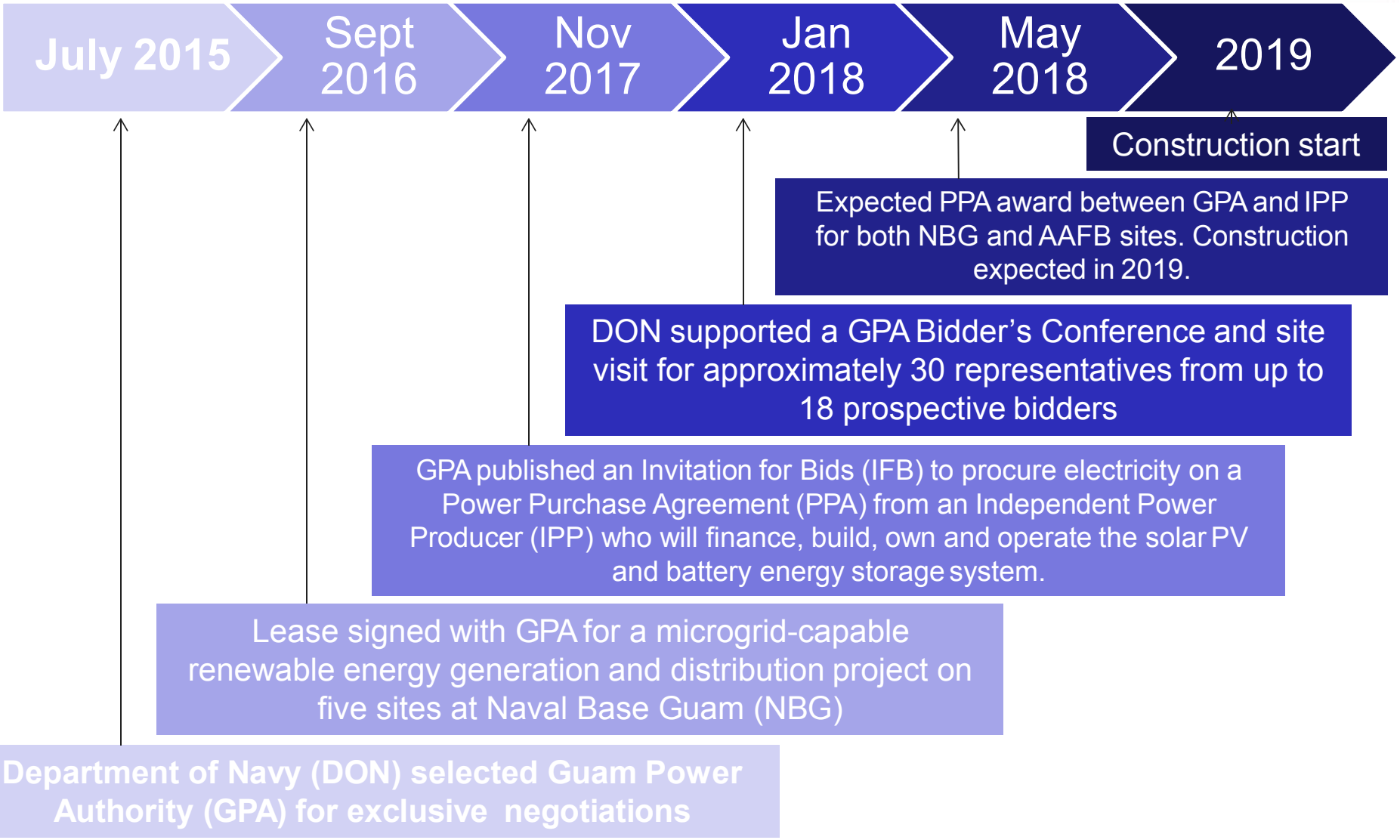
1. S. Finnegayan Housing Area

Southern Guam

1. Existing PV Site
2. WW Treatment Plant
3. CDF Area
4. Commissary Site



Project Timeline



In-Kind Considerations

- **Direct access to 38 MW solar PV and Battery Energy Storage system providing**
  - Power quality improvement
  - Black start capability
  - Island mode operation
  - Access to firm power for entire installation during grid outage via automated switching
  - Redundant feeders
  - Switching station and isolation devices
  - Altered length and operating voltages of underground subtransmission lines to match installation loads
  - Protective and Control relays
  - New switchgear and fiber optic telemetry

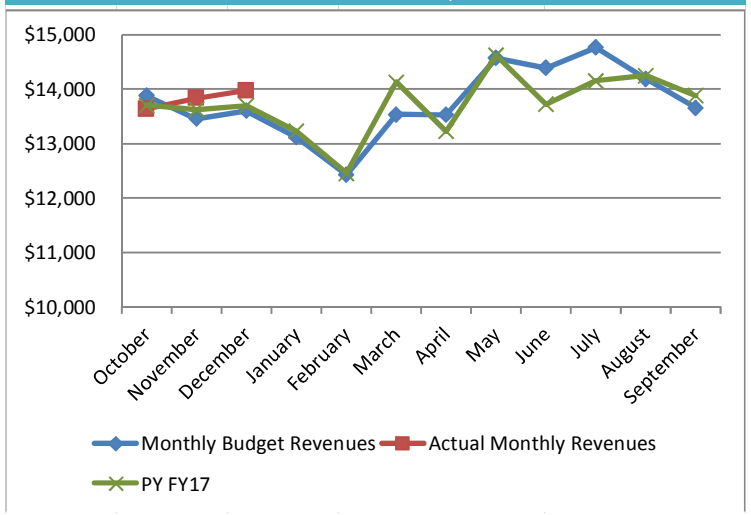
Questions?

December 2017 Monthly Financial Highlight

Base Revenue Through December 31, 2017

$000	Monthly Budget Revenues	Actual Monthly Revenues	Variance		PY FY17	CY vs PY Variance	
October	$ 13,873	$ 13,625	$ (248)	↓	$ 13,702	$ (77)	↓
November	13,451	13,827	$ 376	↑	13,622	$ 205	↑
December	13,599	13,968	$ 369	↑	13,695	$ 273	↑
January	13,114				13,220		
February	12,422				12,454		
March	13,534				14,123		
April	13,525				13,224		
May	14,568				14,617		
June	14,386				13,722		
July	14,759				14,151		
August	14,183				14,244		
September	13,651				13,874		
Total	**$ 165,064**	**$ 41,420**	**$ 497**		**$ 164,649**	**$ 401**	

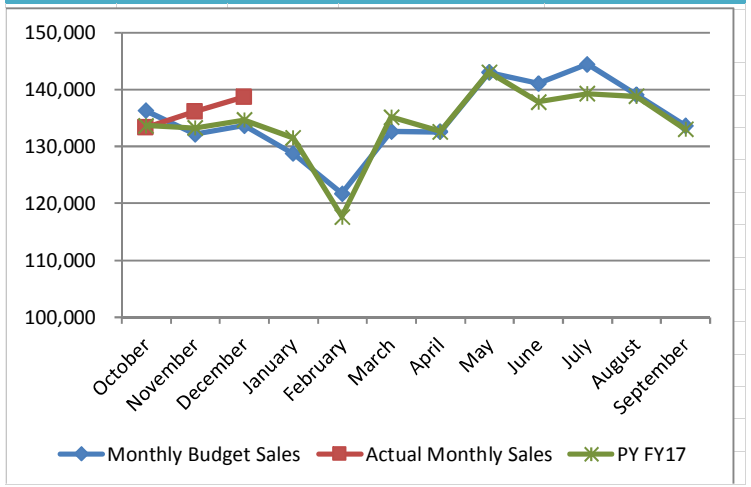
Base Rate Revenue $000



MWH Sales Through December 31, 2017

mwh	Monthly Budget Sales	Actual Monthly Sales	Variance		PY FY17	CY vs PY Variance	
October	136,219	133,262	(2,957)	↓	133,620	(358)	↓
November	132,132	136,044	3,912	↑	133,235	2,809	↑
December	133,625	138,587	4,962	↑	134,634	3,953	↑
January	128,711				131,461		
February	121,668				117,617		
March	132,587				135,131		
April	132,532				132,587		
May	142,956				143,013		
June	141,064				137,777		
July	144,404				139,227		
August	139,093				138,797		
September	133,658				132,993		
Total	**1,618,650**	**407,893**	**5,917**		**1,610,093**	**6,404**	

MWh Sales

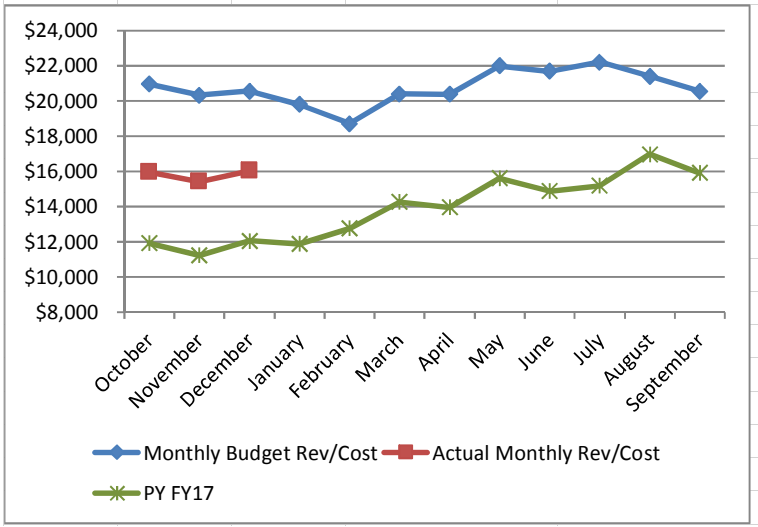


December Monthly Financial Highlight (Continued)

Fuel Revenue Through December 31, 2017

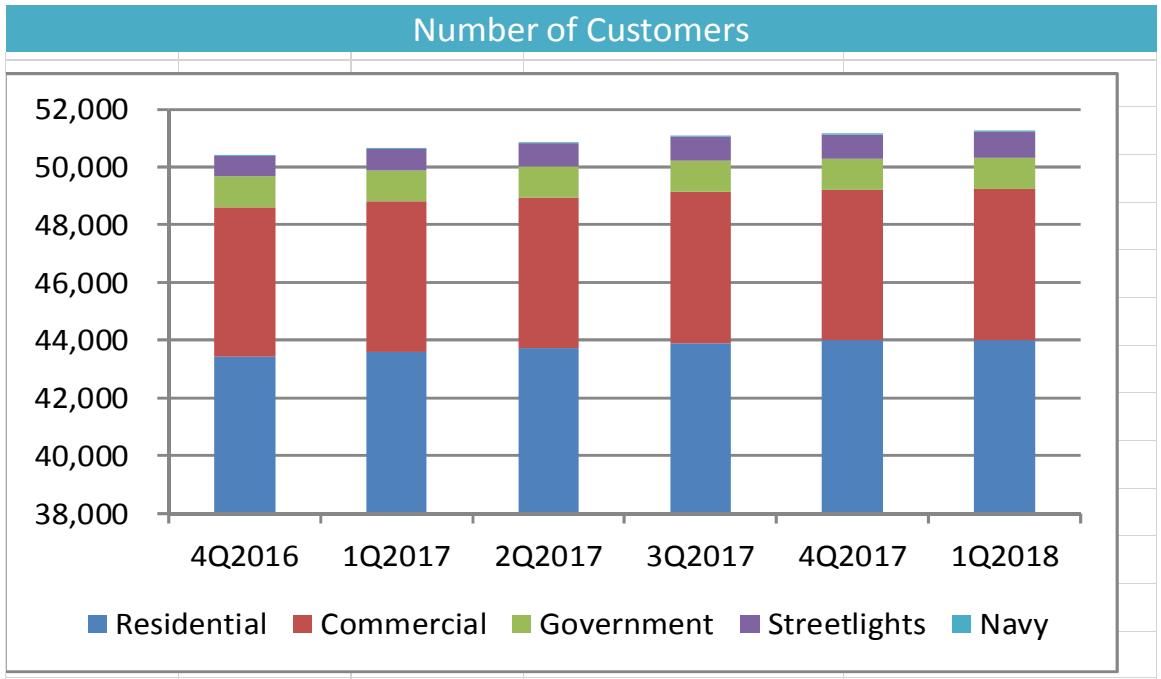
$000	Monthly Budget Rev/Cost	Actual Monthly Rev/Cost	Variance		PY FY17	CY vs PY Variance	
October	$ 20,928	$ 15,936	$ (4,992)	↓	$ 11,894	$ 4,042	↑
November	20,300	15,400	$ (4,899)	↓	11,215	$ 4,185	↑
December	20,529	16,007	$ (4,522)	↓	12,036	$ 3,971	↑
January	19,774				11,867		
February	18,692				12,751		
March	20,370				14,248		
April	20,361				13,940		
May	21,963				15,596		
June	21,672				14,859		
July	22,185				15,175		
August	21,369				16,947		
September	20,534				15,895		
Total	**$ 248,677**	**$ 47,343**	**$ (14,413)**		**$ 166,425**	**$ 12,198**	

Fuel Revenue/ Cost $000



December 2017 Monthly Financial Highlight (Continued)

Number of Customers						
	4Q2016	1Q2017	2Q2017	3Q2017	4Q2017	1Q2018
Residential	43,408	43,582	43,718	43,902	43,991	43,996
Commercial	5,198	5,235	5,236	5,252	5,226	5,233
Government	1,089	1,071	1,077	1,071	1,073	1,079
Streetlights	688	722	800	824	823	905
Navy	1	1	1	1	1	1
	50,384	50,611	50,832	51,050	51,114	51,214

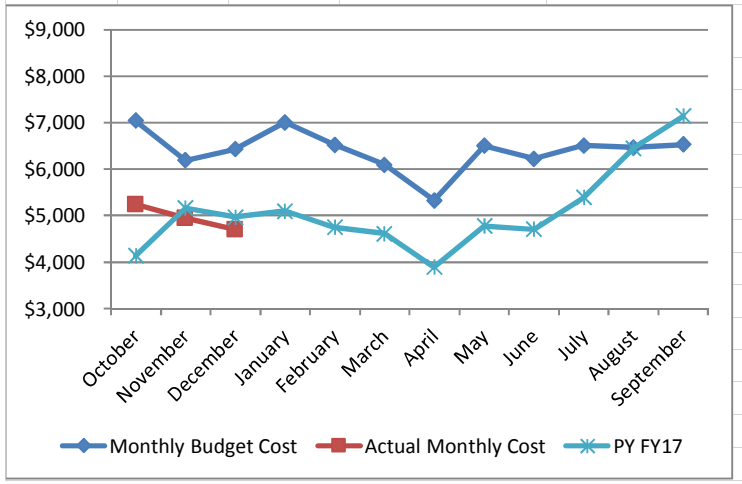


December 2017 Monthly Financial Highlight (Continued)

O&M Cost Through December 31, 2017

$000	Monthly Budget Cost	Actual Monthly Cost	Variance		PY FY17	CY vs PY Variance	
October	$ 7,040	5,239	1,801	↑	4,135	(1,103)	↓
November	6,182	4,941	1,240	↑	5,158	217	↑
December	6,428	4,694	1,735	↑	4,966	273	↑
January	7,001				5,092		
February	6,522				4,748		
March	6,091				4,612		
April	5,320				3,892		
May	6,495				4,772		
June	6,221				4,702		
July	6,508				5,385		
August	6,462				6,445		
September	6,526				7,138		
Total	**$ 76,796**	**$ 14,874**	**$ 4,776**		**$ 61,045**	**$ (614)**	

O&M Cost $000



- DSC greater than target of 1.75

Debt service coverage (DSC) calculation-indenture	2012	2013	2014	2015	2016	2017	YTD Dec. 2017
Senior lien coverage	2.13	3.36	3.16	3.62	3.35	2.81	3.12
Aggregate debt service coverage	1.35	1.88	1.98	2.62	3.35	2.81	3.12
Debt service coverage (DSC) calculation-IPP as O&M							
Senior lien coverage	1.29	2.16	2.25	2.56	2.52	1.95	2.19
Aggregate debt service coverage	0.82	1.21	1.41	1.85	2.52	1.95	2.19

- Under recovery of LEAC - $16.8 million

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

GUAM POWER AUTHORITY
FINANCIAL STATEMENT OVERVIEW
December 2017

Attached are the financial statements and supporting schedules for the month and fiscal year ended December 31, 2017.

Summary
The increase in net assets for the month ended was $0.1 million as compared to the anticipated net decrease of $0.3 million projected at the beginning of the year. The total kWh sales for the month were 3.71% more than projected and non-fuel revenues were $0.4 million more than the estimated amount. O & M expenses for the month were $4.6 million which was $1.7 million under our projections for the month. Other expenses for the month such as interest expense, IPP costs, (net of interest income and other income) totaled to $3.1 million, which was $0.9 million less than the projected amount. There were no other significant departures from the budget during the period.

Analysis

Description	Previous Month	Current Month	Target
Quick Ratio	2.03	1.74	2
Days in Receivables	41	41	52
Days in Payables	24	35	30
LEAC (Over)/Under Recovery Balance -YTD	$15,977,766	$16,797,412	$9,021,347
T&D Losses	4.91%	4.90%	7.00%
Debt Service Coverage	2.03	2.19	1.75
Long-term equity ratio	13%	13%	30 – 40%
Days in Cash	136	154	60

The Quick Ratio has been a challenge for GPA historically. However, over the last two fiscal years, the influx of cash has continued to improve this ratio. GPA has current obligations of approximately $86 million and approximately $150 million in cash and current receivables. Debt Service Coverage ratio is calculated using the methodology in use before the Fiscal Year 2002 change in accounting practice.

Financial Statement
December 2017
Significant Assumptions

The significant assumptions in the financial statements are as follows:

- Accrual cutoff procedures were performed at month end
- An inventory valuation is performed at year-end only
- Accounts Receivable includes accruals based on prior months' usage.

Prepared by:	Reviewed by:	Approved by:
Lenora M. Sanz	John J.E. Kim	John M. Benavente, P.E.
Controller	Chief Financial Officer	General Manager

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)
Statements of Net Position
December 31, 2017 and September 30, 2017

	Unaudited December 2017	Unaudited September 2017	Change from Sept 30 2017
ASSETS AND DEFERRED OUTFLOWS OF RESOURCES			
Current assets:			
Cash and cash equivalents:			
Held by trustee for restricted purposes:			
Interest and principal funds	$ 7,449,683	$ 18,061,879	$ (10,612,196)
Bond indenture funds	54,749,314	56,907,535	(2,158,221)
Held by Guam Power Authority:			
Bond indenture funds	112,063,892	132,579,889	(20,515,997)
Self insurance fund-restricted	19,253,131	19,251,372	1,759
Energy sense fund	736,812	1,074,491	(337,679)
Total cash and cash equivalents	194,252,832	227,875,166	(33,622,334)
Accounts receivable, net	37,184,729	35,603,289	1,581,440
Total current receivables	37,184,729	35,603,289	1,581,440
Materials and supplies inventory	12,745,964	11,989,745	756,219
Fuel inventory	54,963,684	52,387,369	2,576,315
Prepaid expenses	7,603,268	682,814	6,920,454
Total current assets	306,750,477	328,538,383	(21,787,906)
Utility plant, at cost:			
Electric plant in service	1,039,123,386	1,037,419,517	1,703,869
Construction work in progress	21,948,641	18,382,414	3,566,227
Total	1,061,072,027	1,055,801,931	5,270,096
Less: Accumulated depreciation	(575,852,774)	(565,144,900)	(10,707,874)
Total utility plant	485,219,253	490,657,031	(5,437,778)
Other non-current assets:			
Investment - bond reserve funds held by trustee	48,480,037	48,576,863	(96,826)
Unamortized debt issuance costs	23,106,020	4,267,305	18,838,715
Total other non-current assets	71,586,057	52,844,168	18,741,889
Total assets	863,555,787	872,039,582	(8,483,795)
Deferred outflow of resources:			
Deferred fuel revenue	16,797,412	16,751,048	46,364
Unamortized loss on debt refunding	10,763,980	11,076,064	(312,084)
Pension	8,168,718	8,168,718	0
Unamortized forward delivery contract costs	597,518	637,358	(39,840)
Total deferred outflows of resources	36,327,628	36,633,188	(305,560)
	$ 899,883,415	$ 908,672,770	$ (8,789,355)

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)
Statement of Net Position, Continued
December 31, 2017 and September 30, 2017

	Unaudited December 2017	Unaudited September 2017	Change from Sept 30 2017
LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION			
Current liabilities:			
Current maturities of long-term debt	$ 1,495,000	$ 1,780,000	$ (285,000)
Current obligations under capital leases	16,949,416	16,949,416	0
Accounts payable			
Operations	44,281,925	56,671,898	(12,389,973)
Others	4,316,635	5,425,336	(1,108,701)
Accrued payroll and employees' benefits	859,987	1,546,860	(686,873)
Current portion of employees' annual leave	2,445,747	2,324,895	120,852
Interest payable	7,839,450	15,065,830	(7,226,380)
Customer deposits	8,429,092	8,503,783	(74,691)
Total current liabilities	86,617,252	108,268,018	(21,650,766)
Regulatory liabilities:			
Provision for self insurance	19,550,977	19,550,977	0
Total regulatory liabilities	19,550,977	19,550,977	0
Long term debt, net of current maturities	607,868,768	590,568,862	17,299,906
Obligations under capital leases, net of current portion	24,413,404	30,343,708	(5,930,304)
Net Pension liability	63,091,097	64,596,253	(1,505,156)
DCRS sick leave liability	4,008,397	4,008,397	0
Employees' annual leave net of current portion	806,762	806,762	0
Customer advances for construction	372,489	369,180	3,309
Total liabilities	806,729,146	818,512,157	(11,783,011)
Deferred inflows of resources:			
Unearned forward delivery contract revenue	2,190,066	2,336,071	(146,005)
Pension	732,788	732,788	0
Total deferred inflows of resources	2,922,854	3,068,859	(146,005)
Commitments and contigencies			
Net Position:			
Net investment in capital assets	(63,016,539)	(43,869,737)	(19,146,802)
Restricted	16,817,689	15,232,832	1,584,857
Unrestricted	136,430,264	115,728,658	20,701,606
Total net position	90,231,414	87,091,754	3,139,660
	$ 899,883,415	$ 908,672,770	$ (8,789,355)

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM
Statement of Revenues, Expenses and Changes in Net Assets

	December 31			Three Months Ending December 31		
	Unaudited 2017	Unaudited 2016	% of change Inc (dec)	Unaudited 2017	Unaudited 2016	% of change Inc (dec)
Revenues						
Sales of electricity	$ 29,975,334	$ 25,731,231	16	$ 88,763,807	$ 76,164,617	17
Miscellaneous	122,242	149,309	(18)	407,052	529,904	(23)
Total	30,097,576	25,880,540	16	89,170,859	76,694,521	16
Bad debt expense	(86,583)	(83,333)	4	(259,750)	(250,000)	4
Total revenues	30,010,993	25,797,207	16	88,911,109	76,444,521	16
Operating and maintenance expenses						
Production fuel	16,007,336	12,036,465	33	47,343,365	35,145,493	35
Other production	936,410	1,044,858	(10)	3,525,714	3,552,823	(1)
	16,943,746	13,081,323	30	50,869,079	38,698,316	31
Depreciation	3,567,508	3,621,422	(1)	10,740,759	10,745,217	(0)
Energy conversion cost	1,432,452	1,455,463	(2)	4,941,972	4,370,630	13
Transmission & distribution	1,108,137	984,711	13	2,959,860	2,913,696	2
Customer accounting	432,690	292,768	48	1,267,214	969,219	31
Administrative & general	2,129,750	2,277,938	(7)	6,861,300	6,291,524	9
Total operating and maintenance expenses	25,614,283	21,713,625	18	77,640,184	63,988,602	21
Operating income	4,396,710	4,083,582	8	11,270,925	12,455,919	(10)
Other income (expenses)						
Interest income	741,024	74,400	896	1,751,460	227,803	669
Interest expense and amortization	(2,729,985)	(2,783,224)	(2)	(8,168,390)	(8,390,260)	(3)
Bond issuance costs	(2,487,564)	76,827	(3,338)	(2,333,910)	230,481	(1,113)
Allowance for funds used during construction	273,336	322,071	(15)	819,921	968,537	(15)
Other expense	(82,834)	(4,291)	1,830	(205,147)	(12,873)	1,494
Total other income (expenses)	(4,286,023)	(2,314,217)	85	(8,136,066)	(6,976,312)	17
Income (loss) before capital contributions	110,687	1,769,365	(94)	3,134,859	5,479,607	(43)
Capital contributions	0	0	0	4,795	11,488	(58)
Increase (decrease) in net assets	110,687	1,769,365	(94)	3,139,654	5,491,095	(43)
Total net assets at beginning of period (restated)	90,120,721	80,782,059	12	87,091,754	77,060,329	13
Total net assets at end of period	$ 90,231,408	$ 82,551,424	9	$ 90,231,408	$ 82,551,424	9

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)
Statements of Cash Flows
Period Ended December 31, 2017

	Month Ended 12/31/2017	YTD Ended 12/31/2017
Increase(decrease) in cash and cash equivalents		
Cash flows from operating activities:		
Cash received from customers	$30,797,532	$ 87,323,839
Cash payments to suppliers and employees for goods and services	34,596,841	113,668,354
Net cash provided by operating activities	($3,799,309)	(26,344,515)
Cash flows from investing activities:		
Interest and dividends on investments and bank accounts	741,024	1,751,460
Net cash provided by investing activities	741,024	1,751,460
Cash flows from non-capital financing activities		
Interest paid on short term debt	(5,977)	(18,380)
Provision for self insurance funds	(1,759)	(1,759)
Net cash provided by noncapital financing activities	(7,736)	(20,139)
Cash flows from capital and related financing activities		
Acquisition of utility plant	(1,976,197)	(5,302,974)
Principal paid on bonds and other long-term debt	(1,770,000)	(3,550,000)
Interest paid on bonds(net of capitalized interest)	273,336	(13,556,279)
Interest paid on capital lease obligations	(340,585)	(1,000,190)
Interest & principal funds held by trustee	(515,158)	10,612,196
Reserve funds held by trustee	40,572	96,826
Bond funds held by trustee	386,103	2,158,221
Principal payment on capital lease obligations	(1,894,000)	(5,930,304)
Grant from DOI/FEMA	-	4,795
Debt issuance costs/loss on defeasance	21,016,392	20,564,906
Net cash provided by (used in) capital and related financing activities	15,220,463	4,097,197
Net (decrease) increase in cash and cash equivalents	12,154,441.28	(20,515,997)
Cash and cash equivalents, beginning	99,909,451	132,579,889
Cash and cash equivalents-Funds held by GPA, December 31, 2017	**$ 112,063,892**	**$ 112,063,892**

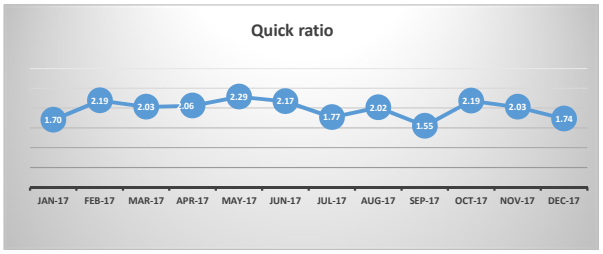
GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)
Statements of Cash Flows, continued
Period Ended December 31, 2017

	Month Ended 12/31/2017	YTD Ended 12/31/2017
Reconciliation of operating earnings to net cash provided by operating activities:		
Operating earnings net of depreciation expense and excluding interest income	$4,396,710	$11,270,925
Adjustments to reconcile operating earnings to net cash provided by operating activities:		
Depreciation and amortization	3,567,508	10,740,759
Other expense	(2,570,398)	(2,539,057)
(Increase) decrease in assets:		
Accounts receivable	784,516	(1,581,440)
Materials and inventory	(24,008)	(756,219)
Fuel inventory	(6,992,429)	(2,576,315)
Prepaid expenses	934,201	(6,920,454)
Unamortized debt issuance cost	(18,901,931)	(18,838,715)
Deferred fuel revenue	(819,646)	(46,364)
Unamortized loss on debt refunding	104,028	312,084
Unamortized forward delivery contract costs	13,280	39,840
Increase (decrease) in liabilities:		
Accounts payable-operations	16,032,782	(12,389,973)
Accounts payable-others	349,053	(771,022)
Accrued payroll and employees' benefits	163,316	(686,873)
Net pension liability	(520,208)	(1,505,156)
Employees' annual leave	(5,015)	120,852
Customers deposits	(262,400)	(74,691)
Customer advances for construction	-	3,309
Unearned forward delivery contract revenue	(48,668)	(146,005)
Net cash provided by operating activities	**($3,799,309)**	**$ (26,344,515)**

Guam Power Authority
Financial Analysis
12/31/2017

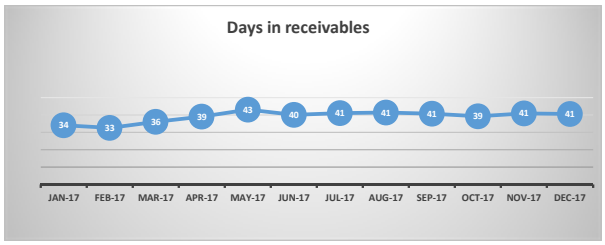
Quick Ratio

A	Reserve Funds Held by GPA	112,063,892
B	Current Accounts Receivable	38,242,089
C	Total Cash and A/R (A+B)	150,305,981
D	Total Current Liabilities	86,617,252
E	**Quick Ratio (F/G)**	**1.74**



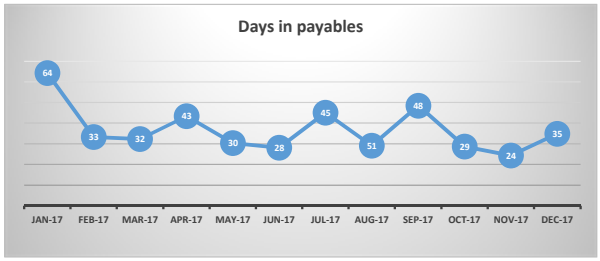
Days in Receivables

A	FY 18 Moving 12 Mos.-Actual	343,673,245
B	No. of Days	365
C	Average Revenues per day (A/B)	941,571
D	Current Accounts Receivable	38,242,089
E	**Days in Receivables (D/C)**	**41**



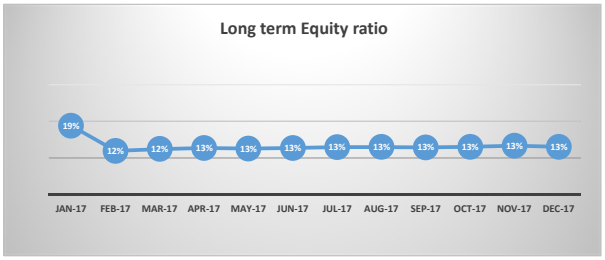
Days in Payables

A	FY 18 Moving 12 Months-Actual	509,492,667
B	No. of Days	365
C	Average Payables per day (A/B)	1,395,870
D	Current Accounts Payables	48,598,561
E	**Days in Payables (D/C)**	**35**



Long term equity ratio

A	Equity	$	90,231,414.00
B	Total Long term Liability	$	602,636,318.00
C	Total Equity and liability	$	692,867,732.00
D	**Long term equity ratio (A/C)**		**13%**

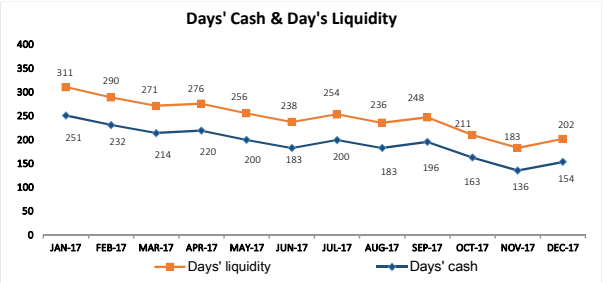


Days cash on hand

A	Unresctricted cash & cash equivalents	112,064
B	No. of Days -YTD	92
C	A x B	10,309,878
D	Total Operating expenses excluding depreciatior	66,899
E	**Days cash on hand**	**154**

Days' Liquidity

A	Unresctricted cash , cash equivalents & revolvin	147,064
B	No. of Days -YTD	92
C	A x B	13,529,878
D	Total Operating expenses excluding depreciatior	66,899
E	**Days liquidity**	**202**



GPA 302
1/17/2018

GUAM POWER AUTHORITY
ACCRUED REVENUE
DECEMBER 2017

	FOR THE MONTH ENDED DECEMBER		THREE MONTHS ENDED DECEMBER	
	2017	2016	2017	2016
KWH SALES:				
Residential	43,307,944	41,105,614	128,376,797	124,298,783
Small Gen. Non Demand	6,956,278	6,987,253	21,083,461	20,681,755
Small Gen. Demand	15,848,505	16,033,983	47,430,029	47,579,490
Large General	27,485,887	26,487,608	80,336,690	79,179,733
Independent Power Producer	40,140	96,065	226,207	273,909
Private St. Lights	35,129	39,997	104,022	141,553
Sub-total	93,673,883	90,750,519	277,557,205	272,155,222
Government Service:				
Small Non Demand	1,272,026	1,121,641	3,778,769	3,442,048
Small Demand	8,063,549	8,060,205	24,445,741	24,987,539
Large	6,812,255	6,238,617	19,781,131	18,735,314
Street Lighting	697,921	994,072	2,179,335	2,888,990
Sub-total	16,845,750	16,414,534	50,184,976	50,053,891
Total	110,519,633	107,165,053	327,742,181	322,209,113
U. S. Navy	28,067,673	27,468,943	80,150,976	79,280,394
GRAND TOTAL	138,587,306	134,633,996	407,893,157	401,489,507
REVENUE:				
Residential	$ 9,238,911	$ 7,527,553	$ 27,421,418	$ 22,756,049
Small Gen. Non Demand	$ 1,765,223	$ 1,572,329	$ 5,347,367	$ 4,642,333
Small Gen. Demand	$ 3,769,415	$ 3,341,792	$ 11,226,738	$ 9,834,497
Large General	$ 6,067,740	$ 5,049,240	$ 17,662,933	$ 15,034,002
Independent Power Producer	$ 9,249	$ 19,759	$ 49,046	$ 55,029
Private St. Lights	$ 25,553	$ 25,575	$ 76,274	$ 81,280
Sub-total	$ 20,876,091	$ 17,536,247	$ 61,783,776	$ 52,403,189
Government Service:				
Small Non Demand	$ 341,017	$ 268,979	$ 1,009,458	$ 821,871
Small Demand	$ 2,046,340	$ 1,798,184	$ 6,157,492	$ 5,506,709
Large	$ 1,652,805	$ 1,334,239	$ 4,783,239	$ 3,993,317
Street Lighting	$ 416,951	$ 548,266	$ 1,281,753	$ 1,498,104
Sub-total	$ 4,457,113	$ 3,949,668	$ 13,231,943	$ 11,820,000
Total	$ 25,333,204	$ 21,485,915	$ 75,015,719	$ 64,223,190
U. S. Navy	$ 4,642,130	$ 4,245,316	$ 13,748,089	$ 11,941,428
GRAND TOTAL	$ 29,975,334	$ 25,731,231	$ 88,763,807	$ 76,164,617
NUMBER OF CUSTOMERS:				
Residential	43,898	43,582	43,948	43,376
Small Gen. Non Demand	4,129	4,125	4,131	4,088
Small Gen. Demand	981	991	982	994
Large General	118	116	118	115
Independent Power Producer	3	3	3	3
Private St. Lights	530	517	529	528
Sub-total	49,659	49,334	49,711	49,103
Government Service:				
Small Non Demand	679	680	678	689
Small Demand	350	346	352	343
Large	47	45	47	45
Street Lighting	378	205	378	164
Sub-total	1,454	1,276	1,454	1,240
Total	51,113	50,610	51,165	50,343
US Navy	1	1	1	1
GRAND TOTAL	51,114	50,611	51,166	50,344

GPA403
1/17/2018

GUAM POWER AUTHORITY
ACCRUED REVENUE

	TWELVE MONTHS ENDING	DECEMBER 2017	NOVEMBER 2017	OCTOBER 2017	SEPTEMBER 2017	AUGUST 2017	JULY 2017	JUNE 2017	MAY 2017	APRIL 2017	MARCH 2017	FEBRUARY 2017	JANUARY 2017
KWH SALES:													
Residential	510,413,616	43,307,944	43,386,853	41,682,000	41,491,015	44,434,719	45,094,364	45,699,553	46,940,445	42,105,054	40,911,781	35,936,337	39,423,550
Small General Non Demand	84,301,405	6,956,278	7,060,041	7,067,142	7,022,092	7,347,440	7,087,373	7,546,692	7,375,238	6,926,353	6,767,505	6,497,885	6,647,367
Small General Demand	189,901,464	15,848,505	15,789,397	15,792,127	15,509,408	16,488,257	15,839,125	16,853,701	16,415,592	15,638,177	16,300,307	13,890,958	15,535,910
Large General	315,730,188	27,485,887	26,267,661	26,583,141	25,432,034	27,038,013	27,119,633	26,399,095	27,209,329	25,771,823	26,173,462	23,699,969	26,550,140
Private Outdoor Lighting	454,876	35,129	35,042	33,851	76,532	33,324	35,412	36,199	31,956	34,275	34,097	32,325	36,736
Independent Power Producer	914,121	40,140	93,823	92,244	34,586	57,754	82,800	93,447	97,039	78,158	83,841	67,797	92,493
Sub-Total	1,101,715,671	93,673,883	92,632,817	91,250,505	89,565,666	95,399,508	95,258,706	96,628,687	98,069,599	90,553,840	90,270,993	80,125,270	88,286,197
Government Service:													
Small Non Demand	14,238,967	1,272,026	1,255,131	1,251,612	1,246,106	1,243,487	1,254,979	1,154,625	1,242,514	1,118,738	1,123,675	996,603	1,079,470
Small Demand	96,336,804	8,063,549	8,098,974	8,283,218	8,084,368	8,147,386	7,962,644	7,847,651	8,507,100	7,890,703	8,171,598	7,382,544	7,897,069
Large	75,943,786	6,812,255	6,550,623	6,418,254	6,493,449	6,520,699	6,219,351	6,043,966	6,712,069	6,145,212	6,340,287	5,654,767	6,032,854
Street Lighting (Agencies)	8,804,951	697,921	668,464	812,949	697,002	877,130	638,971	843,815	771,506	720,057	829,968	707,509	539,658
Sub-Total	195,324,508	16,845,750	16,573,193	16,766,033	16,520,925	16,788,702	16,075,944	15,890,058	17,233,190	15,874,710	16,465,529	14,741,423	15,549,052
Total	1,297,040,178	110,519,633	109,206,010	108,016,537	106,086,591	112,188,210	111,334,651	112,518,745	115,302,789	106,428,550	106,736,522	94,866,692	103,835,249
U.S. Navy	319,456,483	28,067,673	26,837,883	25,245,420	26,906,320	26,608,721	27,892,205	25,258,344	27,710,121	26,158,807	28,394,970	22,750,741	27,625,278
Grand Total	1,616,496,661	138,587,306	136,043,893	133,261,957	132,992,911	138,796,930	139,226,856	137,777,089	143,012,910	132,587,357	135,131,492	117,617,433	131,460,526
REVENUE:													
Residential	$ 105,267,346	$ 9,238,911	$ 9,263,463	$ 8,919,044	$ 8,887,320	$ 9,762,810	$ 9,056,344	$ 9,109,920	$ 9,464,539	$ 8,447,732	$ 8,255,658	$ 7,648,484	$ 7,213,121
Small General Non Demand	$ 20,745,767	$ 1,765,223	$ 1,789,263	$ 1,792,881	$ 1,783,997	$ 1,902,660	$ 1,709,931	$ 1,790,832	$ 1,782,557	$ 1,661,818	$ 1,647,869	$ 1,650,380	$ 1,468,355
Small General Demand	$ 43,461,759	$ 3,769,415	$ 3,699,298	$ 3,758,026	$ 3,692,273	$ 3,964,157	$ 3,527,191	$ 3,704,661	$ 3,828,208	$ 3,333,389	$ 3,674,304	$ 3,310,305	$ 3,200,532
Large General	$ 66,806,991	$ 6,067,740	$ 5,793,817	$ 5,801,375	$ 5,643,059	$ 6,028,539	$ 5,589,484	$ 5,443,855	$ 5,621,797	$ 5,382,999	$ 5,370,285	$ 5,066,026	$ 4,998,015
Private Outdoor Lighting	$ 301,951	$ 25,553	$ 25,471	$ 25,250	$ 25,361	$ 25,094	$ 25,099	$ 25,329	$ 24,432	$ 25,014	$ 25,012	$ 24,793	$ 25,546
Independent Power Producer	$ 205,048	$ 9,249	$ 20,053	$ 19,744	$ 17,076	$ 14,804	$ 17,270	$ 19,157	$ 20,386	$ 16,006	$ 17,451	$ 15,045	$ 18,807
Sub-Total	$ 236,788,861	$ 20,876,091	$ 20,591,366	$ 20,316,320	$ 20,049,087	$ 21,698,063	$ 19,925,320	$ 20,093,753	$ 20,741,919	$ 18,866,957	$ 18,990,578	$ 17,715,032	$ 16,924,376
Government Service:													
Small Non Demand	$ 3,700,596	$ 341,017	$ 334,963	$ 333,478	$ 333,079	$ 332,325	$ 319,135	$ 297,031	$ 313,817	$ 289,279	$ 289,226	$ 258,835	$ 258,411
Small Demand	$ 23,480,862	$ 2,046,340	$ 2,043,720	$ 2,067,433	$ 2,050,292	$ 2,052,253	$ 1,907,628	$ 1,885,990	$ 1,985,615	$ 1,919,140	$ 1,956,670	$ 1,819,228	$ 1,746,554
Large	$ 17,769,287	$ 1,652,805	$ 1,583,988	$ 1,546,446	$ 1,575,080	$ 1,573,445	$ 1,424,292	$ 1,393,449	$ 1,572,201	$ 1,374,482	$ 1,454,690	$ 1,331,459	$ 1,286,951
Street Lighting (Agencies)	$ 5,222,345	$ 416,951	$ 419,351	$ 445,451	$ 436,808	$ 516,047	$ 418,012	$ 451,933	$ 439,403	$ 431,759	$ 447,332	$ 447,721	$ 351,576
Sub-Total	$ 50,173,090	$ 4,457,113	$ 4,382,022	$ 4,392,807	$ 4,395,259	$ 4,474,070	$ 4,069,066	$ 4,028,403	$ 4,311,036	$ 4,014,660	$ 4,147,918	$ 3,857,244	$ 3,643,492
Total	$ 286,961,951	$ 25,333,204	$ 24,973,388	$ 24,709,127	$ 24,444,346	$ 26,172,133	$ 23,994,386	$ 24,122,156	$ 25,052,955	$ 22,881,617	$ 23,138,496	$ 21,572,276	$ 20,567,868
U.S. Navy	$ 56,711,294	$ 4,642,130	$ 4,254,065	$ 4,851,893	$ 5,325,383	$ 5,019,382	$ 5,331,702	$ 4,458,411	$ 5,160,265	$ 4,283,028	$ 5,232,508	$ 3,632,683	$ 4,519,844
Grand Total	$ 343,673,245	$ 29,975,334	$ 29,227,453	$ 29,561,020	$ 29,769,728	$ 31,191,516	$ 29,326,087	$ 28,580,567	$ 30,213,220	$ 27,164,645	$ 28,371,004	$ 25,204,958	$ 25,087,712
NUMBER OF CUSTOMERS:													
Residential	43,855	43,898	43,996	43,950	43,991	43,969	43,866	43,902	43,803	43,807	43,718	43,647	43,710
Small General Non Demand	4,131	4,129	4,131	4,134	4,127	4,134	4,131	4,145	4,130	4,137	4,128	4,119	4,127
Small General Demand	986	981	982	982	980	981	984	988	988	988	989	992	994
Large General	116	118	117	119	116	115	116	116	117	115	116	116	116
Private Outdoor Lighting	528	530	527	530	526	527	526	527	530	528	528	527	525
Independent Power Producer	3	3	3	3	3	3	3	3	3	3	3	3	3
Sub-Total	49,619	49,659	49,756	49,718	49,743	49,729	49,626	49,681	49,571	49,578	49,482	49,404	49,475
Government Service:													
Small Non Demand	680	679	678	676	675	678	678	677	684	684	684	682	684
Small Demand	350	350	354	351	353	351	352	349	346	347	348	347	347
Large	45	47	47	46	45	45	45	45	45	45	45	45	45
Street Lighting (Agencies)	305	378	378	377	297	297	297	297	293	290	272	271	211
Sub-Total	1,380	1,454	1,457	1,450	1,370	1,371	1,372	1,368	1,368	1,366	1,349	1,345	1,287
Total	50,998	51,113	51,213	51,168	51,113	51,100	50,998	51,049	50,939	50,944	50,831	50,749	50,762
U.S. Navy	1	1	1	1	1	1	1	1	1	1	1	1	1
Grand Total	50,999	51,114	51,214	51,169	51,114	51,101	50,999	51,050	50,940	50,945	50,832	50,750	50,763

GPA303

GUAM POWER AUTHORITY
ACCRUED REVENUE
DECEMBER 2017

RATE	NUMBER OF CUSTOMERS	KWH SALES	TOTAL REVENUE AMOUNT	TOTAL REVENUE C/KWH	BASE RATE REVENUE C/KWH	BASE RATE REVENUE AMOUNT	AVERAGE PER CUSTOMER KWH	AVERAGE PER CUSTOMER REVENUE	NON-FUEL C/KWH	NON-FUEL AMOUNT	FUEL C/KWH	FUEL AMOUNT
Month												
R Residential	43,898	43,307,944	$ 9,238,911	$ 21.33	$ 21.33	$ 9,238,911	986.56	$ 210.46	$ 9.5613	$ 4,140,786	$ 11.7718	$ 5,098,125
G Small Gen. Non Demand	4,129	6,956,278	$ 1,765,223	$ 25.38	$ 25.38	$ 1,765,223	1,684.74	$ 427.52	$ 13.6042	$ 946,344	$ 11.7718	$ 818,879
J Small Gen. Demand	981	15,848,505	$ 3,769,415	$ 23.78	$ 23.78	$ 3,769,415	16,155.46	$ 3,842.42	$ 12.0159	$ 1,904,339	$ 11.7681	$ 1,865,075
P Large General	118	27,485,887	$ 6,067,740	$ 22.08	$ 22.08	$ 6,067,740	232,931.25	$ 51,421.52	$ 10.3598	$ 2,847,494	$ 11.7160	$ 3,220,246
I Independent Power Producer	3	40,140	$ 9,249	$ 23.04	$ 23.04	$ 9,249	13,379.97	$ 3,082.98	$ 11.6410	$ 4,673	$ 11.4008	$ 4,576
H Private St. Lights	530	35,129	$ 25,553	$ 72.74	$ 72.74	$ 25,553	66.28	$ 48.21	$ 60.9688	$ 21,417	$ 11.7718	$ 4,135
Sub-Total	49,659	93,673,883	$ 20,876,091	$ 22.29	$ 22.29	$ 20,876,091	1,886.34	$ 420.39	$ 10.5313	$ 9,865,054	$ 11.7546	$ 11,011,036
Government Service:												
S Small Non Demand	679	1,272,026	$ 341,017	$ 26.81	$ 26.81	$ 341,017	1,873.38	$ 502.23	$ 15.0372	$ 191,277	$ 11.7718	$ 149,740
K Small Demand	350	8,063,549	$ 2,046,340	$ 25.38	$ 25.38	$ 2,046,340	23,038.71	$ 5,846.68	$ 13.6059	$ 1,097,115	$ 11.7718	$ 949,225
L Large	47	6,812,255	$ 1,652,805	$ 24.26	$ 24.26	$ 1,652,805	144,941.59	$ 35,166.07	$ 12.6298	$ 860,372	$ 11.6325	$ 792,433
F Street Lighting (Agencies)	378	697,921	$ 416,951	$ 59.74	$ 59.74	$ 416,951	1,846.35	$ 1,103.05	$ 47.9701	$ 334,793	$ 11.7718	$ 82,158
Sub-Total	1,454	16,845,750	$ 4,457,113	$ 26.46	$ 26.46	$ 4,457,113	11,585.80	$ 3,065.41	$ 14.7429	$ 2,483,557	$ 11.7155	$ 1,973,556
	51,113	110,519,633	$ 25,333,204	$ 48.74	$ 48.74	$ 25,333,204	2,162.26	$ 495.63	$ 36.9956	$ 12,348,611	$ 11.7487	$ 12,984,593
U.S. Navy	1	28,067,673	$ 4,642,130	$ 16.54	$ 16.54	$ 4,642,130			$ 5.7230	$ 1,606,307	$ 10.8161	$ 3,035,823
TOTAL	51,114	138,587,306	$ 29,975,334	$ 21.63	$ 21.63	$ 29,975,334	2,711.34	$ 586.44	$ 10.0694	$ 13,954,918	$ 11.5598	$ 16,020,416
Three Months Ended December 2017												
R Residential	43,948	128,376,797	$ 27,421,418	$ 21.36	$ 21.36	$ 27,421,418	2,921.11	$ 623.95	$ 9.5883	$ 12,309,158	$ 11.7718	$ 15,112,260
G Small Gen. Non Demand	4,131	21,083,461	$ 5,347,367	$ 25.36	$ 25.36	$ 5,347,367	5,103.31	$ 1,294.34	$ 13.5911	$ 2,865,464	$ 11.7718	$ 2,481,903
J Small Gen. Demand	982	47,430,029	$ 11,226,738	$ 23.67	$ 23.67	$ 11,226,738	48,315.82	$ 11,436.41	$ 11.9022	$ 5,645,216	$ 11.7679	$ 5,581,522
P Large General	118	80,336,690	$ 17,662,933	$ 21.99	$ 21.99	$ 17,662,933	680,819.41	$ 149,685.87	$ 10.2733	$ 8,253,260	$ 11.7128	$ 9,409,673
I Independent Power Producer	529	226,207	$ 49,046	$ 21.68	$ 21.68	$ 49,046	427.61	$ 92.71	$ 10.3021	$ 23,304	$ 11.3799	$ 25,742
H Private St. Lights	3	104,022	$ 76,274	$ 73.33	$ 73.33	$ 76,274	34,673.84	$ 25,424.60	$ 61.5532	$ 64,029	$ 11.7718	$ 12,245
Sub-Total	49,711	277,557,205	$ 61,783,776	$ 22.26	$ 22.26	$ 61,783,776	5,583.42	$ 1,242.86	$ 10.5061	$ 29,160,431	$ 11.7537	$ 32,623,345
Government Service:												
S Small Non Demand	678	3,778,769	$ 1,009,458	$ 26.71	$ 26.71	$ 1,009,458	5,576.15	$ 1,489.61	$ 14.9421	$ 564,629	$ 11.7718	$ 444,829
K Small Demand	352	24,445,741	$ 6,157,492	$ 25.19	$ 25.19	$ 6,157,492	69,513.96	$ 17,509.46	$ 13.4166	$ 3,279,789	$ 11.7718	$ 2,877,704
L Large	47	19,781,131	$ 4,783,239	$ 24.18	$ 24.18	$ 4,783,239	423,881.39	$ 102,497.98	$ 12.5503	$ 2,482,592	$ 11.6305	$ 2,300,647
F Street Lighting (Agencies)	378	2,179,335	$ 1,281,753	$ 58.81	$ 58.81	$ 1,281,753	5,770.52	$ 3,393.87	$ 47.0422	$ 1,025,206	$ 11.7718	$ 256,547
Sub-Total	1,454	50,184,976	$ 13,231,943	$ 26.37	$ 26.37	$ 13,231,943	34,523.03	$ 9,102.46	$ 14.6502	$ 7,352,215	$ 11.7161	$ 5,879,727
U.S. Navy	1	80,150,976	$ 13,748,089	$ 17.15	$ 17.15	$ 13,748,089			$ 6.1069	$ 4,894,717	$ 11.0459	$ 8,853,372
TOTAL	51,166	407,893,157	$ 88,763,807	$ 21.76	$ 21.76	$ 88,763,807	7,972.01	$ 1,734.83	$ 10.1515	$ 41,407,364	$ 11.6100	$ 47,356,444
Twelve Months Ended December 2017												
R Residential	43,855	510,413,616	$ 105,267,346	$ 20.62	$ 20.62	$ 105,267,346	11,638.73	$ 2,400.36	$ 9.6098	$ 49,049,503	$ 11.0142	$ 56,217,843
G Small Gen. Non Demand	4,131	84,301,405	$ 20,745,767	$ 24.61	$ 24.61	$ 20,745,767	20,407.02	$ 5,021.97	$ 13.5961	$ 11,461,675	$ 11.0130	$ 9,284,092
J Small Gen. Demand	986	189,901,464	$ 43,461,759	$ 22.89	$ 22.89	$ 43,461,759	192,646.68	$ 44,090.04	$ 11.9048	$ 22,607,388	$ 10.9817	$ 20,854,370
P Large General	116	315,730,188	$ 66,806,991	$ 21.16	$ 21.16	$ 66,806,991	2,712,070.33	$ 573,861.05	$ 10.3080	$ 32,545,392	$ 10.8515	$ 34,261,598
I Independent Power Producer	3	914,121	$ 205,048	$ 22.43	$ 22.43	$ 205,048	296,471.77	$ 66,502.05	$ 11.5110	$ 105,224	$ 10.9202	$ 99,824
H Private St. Lights	528	454,876	$ 301,951	$ 66.38	$ 66.38	$ 301,951	862.19	$ 572.33	$ 56.5147	$ 257,072	$ 9.8663	$ 44,879
Sub-Total	49,619	1,101,715,671	$ 236,788,861	$ 21.49	$ 21.49	$ 236,788,861	22,203.69	$ 4,772.18	$ 10.5314	$ 116,026,255	$ 10.9613	$ 120,762,606
Government Service:												
S Small Non Demand	680	14,238,967	$ 3,700,596	$ 25.99	$ 25.99	$ 3,700,596	20,942.22	$ 5,442.72	$ 15.0663	$ 2,145,280	$ 10.9230	$ 1,555,316
K Small Demand	350	96,336,804	$ 23,480,862	$ 24.37	$ 24.37	$ 23,480,862	275,576.08	$ 67,168.14	$ 13.4849	$ 12,990,929	$ 10.8888	$ 10,489,933
L Large	45	75,943,786	$ 17,769,287	$ 23.40	$ 23.40	$ 17,769,287	1,672,156.76	$ 391,250.36	$ 12.6228	$ 9,586,235	$ 10.7751	$ 8,183,052
F Street Lighting (Agencies)	305	8,804,951	$ 5,222,345	$ 59.31	$ 59.31	$ 5,222,345	28,884.48	$ 17,131.80	$ 48.3794	$ 4,259,781	$ 10.9321	$ 962,564
Sub-Total	1,380	195,324,508	$ 50,173,090	$ 25.69	$ 25.69	$ 50,173,090	141,565.14	$ 36,363.90	$ 14.8380	$ 28,982,225	$ 10.8491	$ 21,190,865
	50,998	1,297,040,178	$ 286,961,951	$ 22.12	$ 22.12	$ 286,961,951	25,432.99	$ 41,136.08	$ 11.1800	$ 145,008,480	$ 10.9444	$ 141,953,471
U.S. Navy	1	319,456,483	$ 56,711,294	$ 17.75	$ 17.75	$ 56,711,294			$ 6.2698	$ 20,029,165	$ 11.4827	$ 36,682,129
TOTAL	50,999	1,616,496,661	$ 343,673,245	$ 21.26	$ 21.26	$ 343,673,245	31,696.43	$ 6,738.78	$ 10.2096	$ 165,037,645	$ 11.0508	$ 178,635,601

GPA-318
318Dec17

ENERGY ACCOUNT
FY 2018 Versus FY 2017

FOR INTERNAL USE ONLY

	December 2017		December 2016		Y T D 2018		Y T D 2017		MOVING TWELVE MONTHS	
Gross Generation										
Number of days in Period	**31**		**31**		**92**		**31**		**365**	
Peak demand	**250**		**248**		**254**		**252**		**261**	
Date	**12/11/17**		**12/06/16**		**10/30/17**		**11/29/16**		**08/01/17**	
	KWH	**% change**	**KWH**	**% change**	**KWH**	**% change**	**KWH**	**% change**	**KWH**	**% change**
Energy Account:										
Kilowatt hours GPA:										
Cabras 1 & 2	64,178,000		55,471,000		183,204,000		204,518,000		673,679,000	
Cabras No. 3	0		0		0		0		0	
Cabras No. 4	0		0		0		0		0	
MEC (ENRON) Piti 8 (IPP)	27,889,800		25,998,400		78,809,700		83,296,400		315,147,000	
MEC (ENRON) Piti 9 (IPP)	29,520,800		29,761,700		87,270,400		78,489,200		316,843,500	
TEMES Piti 7 (IPP)	666,966		919,270		5,310,865		1,254,376		51,037,857	
Tanguisson 2	0		0		0		0		0	
Tanguisson 1	0		0		0		0		0	
Diesels/CT's & Others:							0			
MDI 10MW	0		795,695		21,414		1,036,394		1,242,647	
NRG Solar Dandan	3,677,204		3,451,729		10,596,596		10,362,279		43,425,119	
Dededo CT #1	22,510		0		384,400		0		7,507,700	
Dededo CT #2	26,690		0		77,300		0		5,909,892	
Macheche CT	3,097,673		1,908,647		12,928,470		2,594,025		65,902,002	
Yigo CT (Leased)	3,215,066		3,595,542		9,487,126		9,609,686		41,253,387	
Tenjo	3,664,320		3,617,980		10,604,530		5,348,950		50,713,060	
Talofofo 10 MW	1,575,840		1,306,090		2,443,230		1,677,710		19,536,910	
Aggreko	14,059,832		20,488,166		45,451,269		43,103,463		175,794,346	
Wind Turbine*	64,423		76,703		102,802		154,867		335,130	
Orote	0		0		0		0		0	
Marbo	0		0		0		0		0	
	151,659,124		**147,390,923**		**446,692,102**		**441,445,349**		**1,768,327,550**	
Ratio to last year		102.90		103.41		101.19		**102.43**		**102.42**
Station use	5,691,120		5,502,422		16,855,339		17,622,071		65,128,264	
Ratio to Gross generation		3.75		3.73		3.77		3.99		**3.68**
Net send out	145,968,003		141,888,501		429,836,763		423,823,277		1,703,199,286	
Ratio to last year		102.88		103.99		101.42		**102.72**		**102.50**
KWH deliveries:										
Sales to Navy (@34.5kv)	**28,067,673**		**27,468,943**		**80,150,976**		**79,280,395**		**319,456,484**	
Ratio to last year		102.18		100.88		101.10		**98.72**		**100.83**
GPA-metered	**117,900,330**		**114,419,558**		**349,685,787**		**344,542,882**		**1,383,742,802**	
Ratio to last year		103.04		104.76		101.49		**103.69**		**103.66**
Power factor adj.	0		0		0		0		0	
Adjusted	117,900,330		114,419,558		349,685,787		344,542,882		1,383,742,802	
GPA KWH Accountability:										
Sales to civilian customers-accrual basis	**110,519,633**		**107,165,053**		**327,742,180**		**322,209,113**		**1,297,040,179**	
Ratio to last year		103.13		104.12		101.72		**103.66**		**102.66**
GPA use-KWH	323,091		250,441		864,992		776,193		3,233,037	
Unaccounted For	7,057,606		7,004,064		21,078,614		21,557,576		83,469,586	
Ratio to deliveries		5.99		6.12		6.03		6.26		6.03
Ratio to Gross Generation		4.65		4.75		4.72		4.88		4.72
Ratio to Net Send Out		4.84		4.94		4.90		5.09		4.90

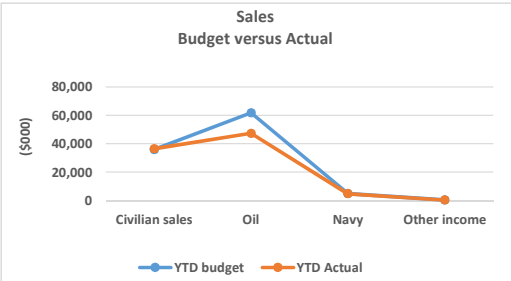
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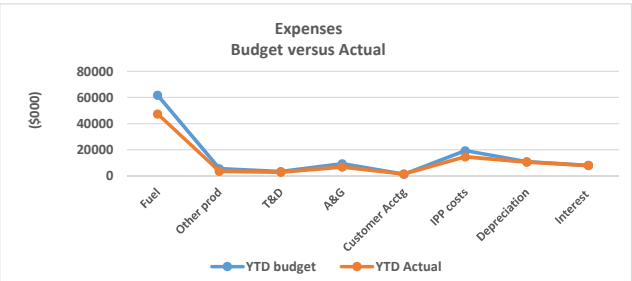
Guam Power Authority
Fuel Consumption
FY 2018

Description	December 2017 BARRELS	December 2017 AMOUNT	YEAR-TO-DATE BARRELS	YEAR-TO-DATE AMOUNT	MOVING 12 MONTHS BARREL S	MOVING 12 MONTHS AMOUNT
FUEL FURNISHED:						
NAVY:						
Diesel	0	0	0	0	0	0
Low Sulfur	0	0	0	0	0	0
	0	**0**	**0**	**0**	**0**	**0**
GPA:						
RFO	178,415	$11,360,279	460,485	$ 26,826,678	1,505,636	$ 85,489,504
Diesel	51,274	$4,102,382	169,217	$ 13,157,971	845,518	$ 62,158,528
Low Sulfur	2,834	$173,022	63,342	$ 3,892,421	475,026	$ 27,823,884
Deferred Fuel Costs	0	-$819,646	0	$ (46,364)	0	$ (12,719,855)
Fuel Adjustments	0	$0		$ (9,121)	0	$ (212,502)
Fuel Handling Costs	0	$1,191,299	0	$ 3,521,780	0	$ 16,083,094
	232,523	**$16,007,336**	**693,044**	**$ 47,343,365**	**2,826,179**	**$ 178,622,654**
IWPS:						
GPA RFO	178,415	$11,360,279	460,485	$ 26,826,678	1,505,636	$ 85,489,504
Diesel	51,274	$4,102,382	169,217	$ 13,157,971	845,518	$ 62,158,528
Low Sulfur	2,834	$173,022	63,342	$ 3,892,421	475,026	$ 27,823,884
Deferred Fuel Costs	0	-$819,646	0	$ (46,364)	0	$ (12,719,855)
Fuel Variance	0	$0	0	$ (9,121)		$ (212,502)
Fuel Handling Costs	0	$1,191,299	0	$ 3,521,780	0	$ 16,083,094
	232,523	**$16,007,336**	**693,044**	**$ 47,343,365**	**2,826,179**	**$ 178,622,654**
AVERAGE COST/Bbl.						
GPA RFO		**$63.67**		**$58.26**		**$56.78**
Diesel		**$80.01**		**$77.76**		**$73.52**
Low Sulfur		**$61.05**		**$61.45**		**$58.57**
AS BURNED						
Cabras 1 & 2						
RFO	101,116	$ 6,477,191	259,491	$ 15,162,083	940,364	$ 53,460,561
Low Sulfur	2,464	$ 150,264	40,020	$ 2,459,039	190,628	$ 11,151,672
Diesel	166	$ 12,424	258	$ 19,196	2,777	$ 187,106
	103,746	$ 6,639,878	299,770	$ 17,640,317	1,133,768	$ 64,799,339
Cabras 3 & 4						
RFO	0	$ -	0	$ -	0	$ -
Low Sulfur	0	$ -	0	$ -	0	$ -
Diesel	0	$ -	0	$ -	0	$ -
	0	$ -	0	$ -	0	$ -
MEC (Piti Units 8&9)						
RFO	77,299	$ 4,883,088	200,994	$ 11,664,595	565,272	$ 32,028,943
Low Sulfur	370	$ 22,758	23,321	$ 1,433,383	284,398	$ 16,672,212
Diesel	0	$ -	0	$ -	40	$ 2,194
	77,669	$ 4,905,846	224,315	$ 13,097,978	849,710	$ 48,703,349
Diesel & CT's - GPA:						
MDI Dsl	0	$ -	31	$ 2,013	1,981	$ 128,213
Macheche CT	6,674	$ 529,513	27,744	$ 2,133,448	142,773	$ 10,499,278
Yigo CT	6,529	$ 520,056	19,175	$ 1,499,377	84,999	$ 6,246,310
Talofofo 10 MW	2,738	$ 220,773	4,173	$ 329,650	32,977	$ 2,407,937
Aggreko	25,838	$ 2,070,344	83,202	$ 6,450,163	319,499	$ 23,451,392
Tenjo	6,232	$ 520,200	18,241	$ 1,473,800	88,217	$ 6,669,792
TEMES (IPP)	2,949	$ 217,648	14,660	$ 1,107,961	129,764	$ 9,451,403
GWA Generators	4	$ 415	240	$ 28,204	709	$ 83,470
	51,108	$ 4,089,958	168,959	$ 13,138,775	842,701	$ 61,969,228
Deferred Fuel Costs	0	$ (819,646)		$ (46,364)		$ (12,719,855)
Adjustment		$ -		$ (9,121)		$ (212,502)
Fuel Handling Costs	0	$ 1,191,299		$ 3,521,780		$ 16,083,094
TOTAL	**232,523**	**$ 16,007,336**	**693,044**	**$ 47,343,365**	**2,826,179**	**$ 178,622,654**

Statement of operations
Comparison-Budget versus Actual
For the month and year to date ended December 31, 2017

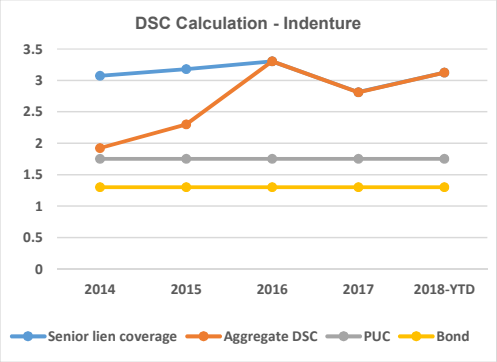
	Budget	Actual December-17	Variance	YTD Budget	YTD Actual	Variance
KwH Sales-Civilian	106,555	110,538	-3,983	322,135	327,761	-5,626
Non-fuel yield	$ 0.105708	$ 0.111717	$ (0.006009)	$ 0.111726	$ 0.111401	$ 0.000325
KwH Sales-Navy	27,070	27,657	-587	79,840	79,740	100
Non-fuel yield	$ 0.061774	$ 0.058068	$ 0.003705	$ 0.061774	$ 0.061374	$ 0.000400
Operating revenue						
Civilian sales	11,927	12,349	(422)	35,991	36,513	(522)
Oil	20,529	16,020	4,509	61,757	47,356	14,401
Navy	1,672	1,606	66	4,932	4,894	38
Other income	169	122	47	508	407	100
	34,297	30,097	4,200	103,187	89,170	14,017
Bad debts expense	87	87	0	260	260	0
Total operating revenues	34,211	30,011	4,200	102,927	88,910	14,017
Operating expenses:						
Production fuel	20,529	16,007	4,522	61,757	47,343	14,413
O & M expenses:						
Other production	1,850	936	913	5,553	3,526	2,028
Transmission distribution	1,074	1,108	(34)	3,316	2,960	356
Administrative expense	3,063	2,130	933	9,437	6,861	2,576
Customer accounting	355	433	(78)	1,084	1,267	(183)
	6,342	4,607	1,735	19,390	14,614	4,776
IPP costs	1,635	1,432	203	4,905	4,942	(37)
Depreciation	3,635	3,568	67	10,905	10,741	164
	32,141	25,614	6,526	96,957	77,640	19,317
Operating income	2,070	4,396	(2,326)	5,970	11,270	(5,300)
Other revenue (expenses):						
Investment income	99	741	(642)	296	1,751	(1,455)
Interest expense	(2,657)	(2,730)	73	(7,971)	(8,168)	198
AFUDC	61	273	(213)	183	820	(637)
Bond issuance costs/Other expen	135	(2,570)	2,705	404	(2,539)	2,943
Net income before capital contributic	(293)	110	(404)	(1,118)	3,134	(4,253)
Grants from the U.S. Government	-	-	-	-	5	(5)
Increase (decrease) in net assets	(293)	110	(404)	(1,118)	3,139	(4,258)

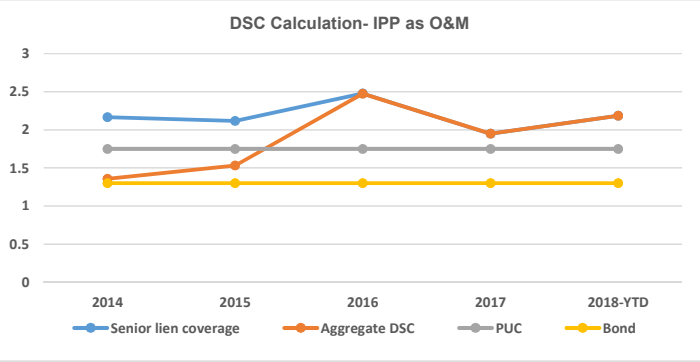




Guam Power Authority Debt service coverage December 31, 2017	2014	2015	2016	2017	YTD 12/31/2017
Operating revenues					
Sales	434,462	366,185	306,896	331,071	88,763
Miscellaneous	2,156	4,775	2,294	2,245	407
Total revenues	436,618	370,960	309,190	333,316	89,170
Bad debts expense	178	959	990	472	260
Total operating revenues	436,440	370,001	308,200	332,844	88,910
Operating expenses					
Production fuel	271,175	204,136	146,340	166,425	47,343
Other production	19,305	20,079	15,789	17,784	3,526
Energy conversion costs	20,632	18,404	16,800	19,935	4,942
Transmission and distribution	12,950	11,170	10,721	11,704	2,960
Customer accounting	3,821	3,780	4,502	4,284	1,267
Admin and General	28,393	21,908	28,846	26,798	6,861
Total Expenses	356,276	279,477	222,998	246,930	66,899
Operating income	80,164	90,524	85,202	85,914	22,011
Interest/Other income (expenses)	157	256	-1,188	-32	1,546
Debt service and lease payments					
IPP lease payments	23,084	26,622	20,790	20,796	5,198
Capital lease payments-Aggreko	0	0	0	5,609	1,870
2017 bonds	0	0	0	0	0
2014 bonds	0	0	10	5,084	1,271
2012 bonds	17,455	17,096	17,098	17,449	4,272
2010 senior bonds	7,999	7,999	7,999	7,999	2,000
2010 subordinate	15,193	9,605	0	0	0
Total Debt service-bonds	40,647	34,700	25,106	30,532	7,543
Total Debt service and capital lease	63,731	61,322	45,896	56,937	14,610

Debt service coverage (DSC) calculation-indenture					
Senior lien coverage	3.16	3.62	3.35	2.81	3.12
Aggregate debt service coverage	1.98	2.62	3.35	2.81	3.12
Debt service coverage (DSC) calculation-IPP as O&M					
Senior lien coverage	2.55	2.56	2.52	1.95	2.19
Aggregate debt service coverage	1.41	1.85	2.52	1.95	2.19

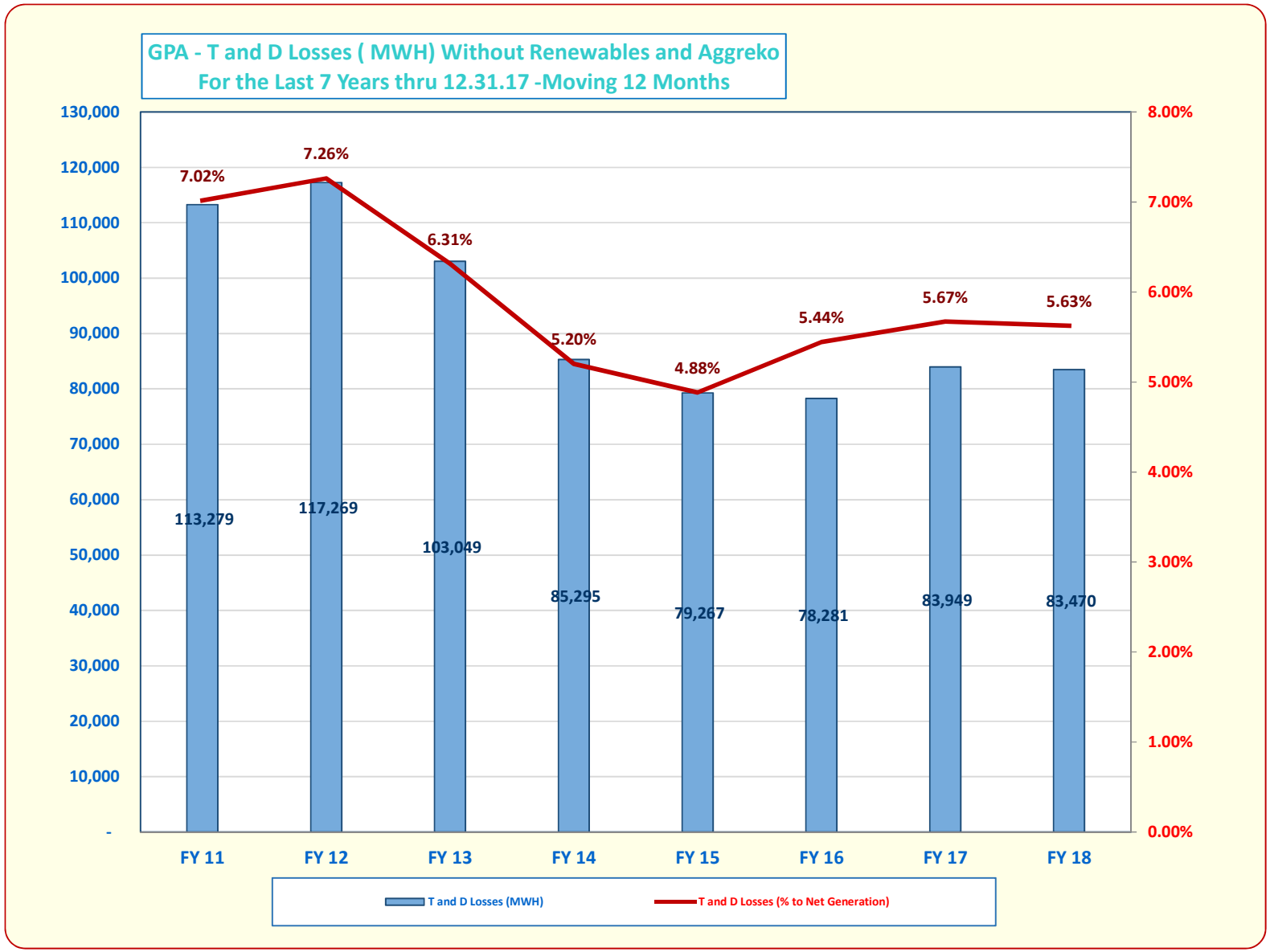


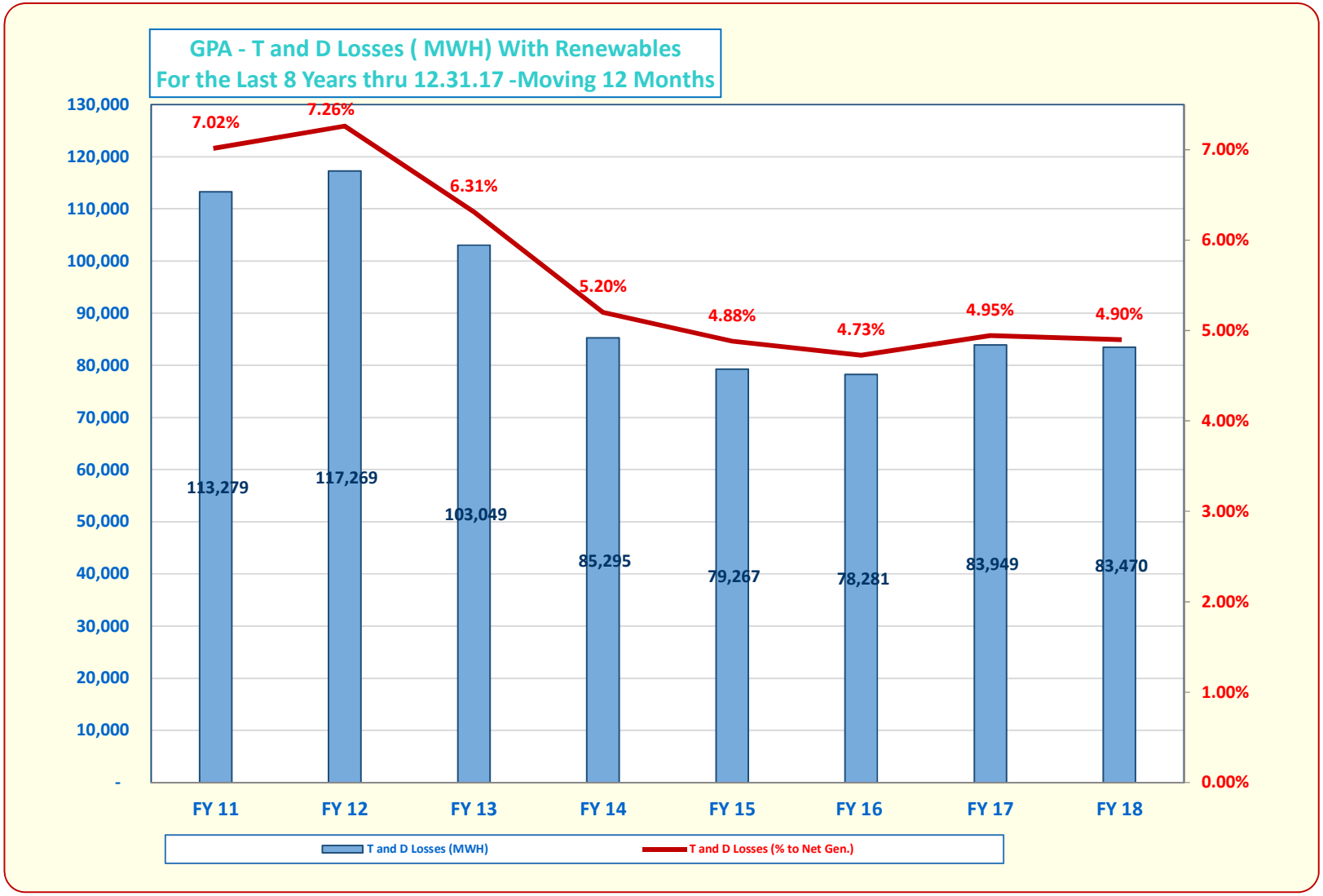


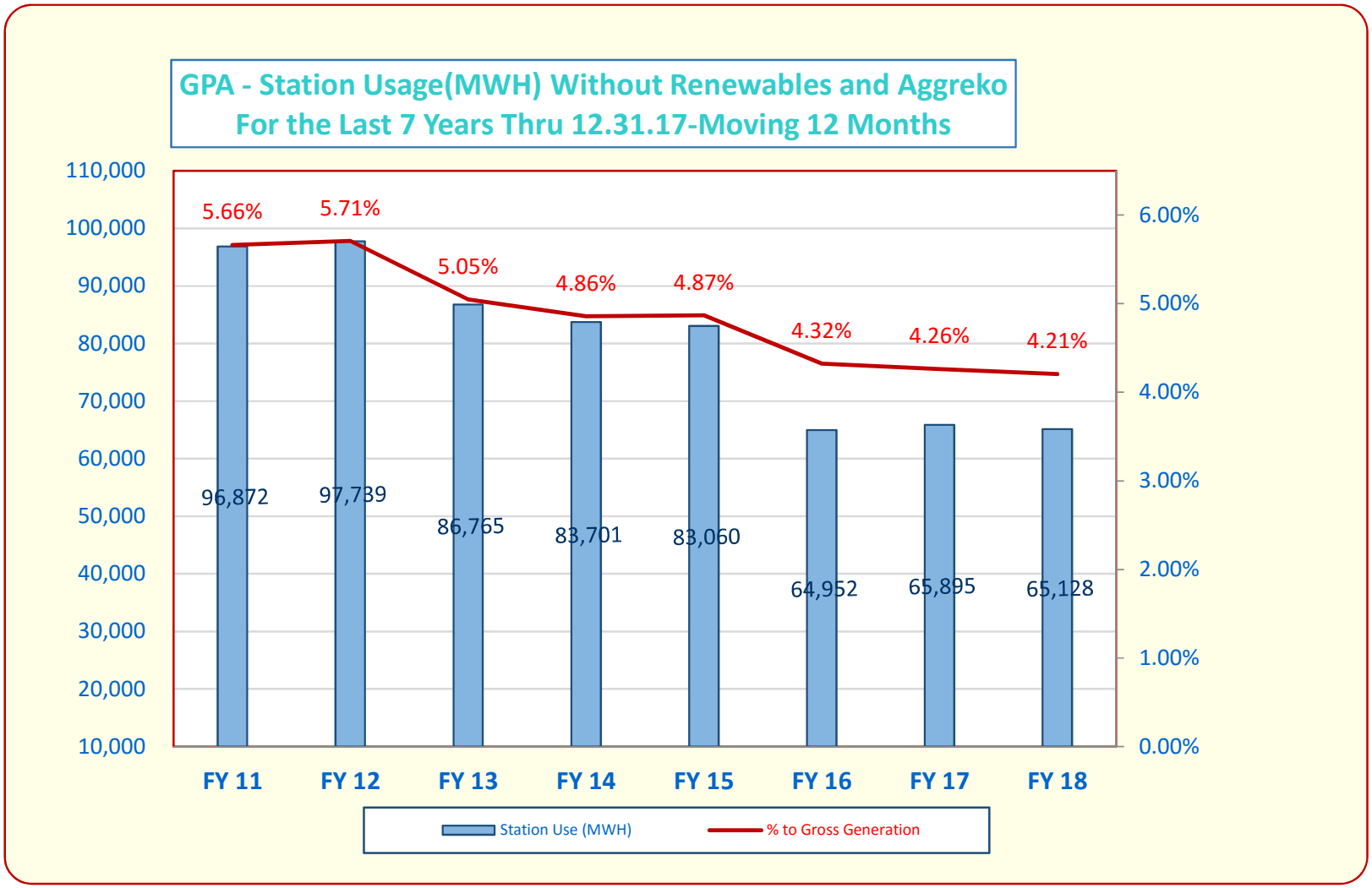
REVENUES-ACTUAL VS PROJECTIONS

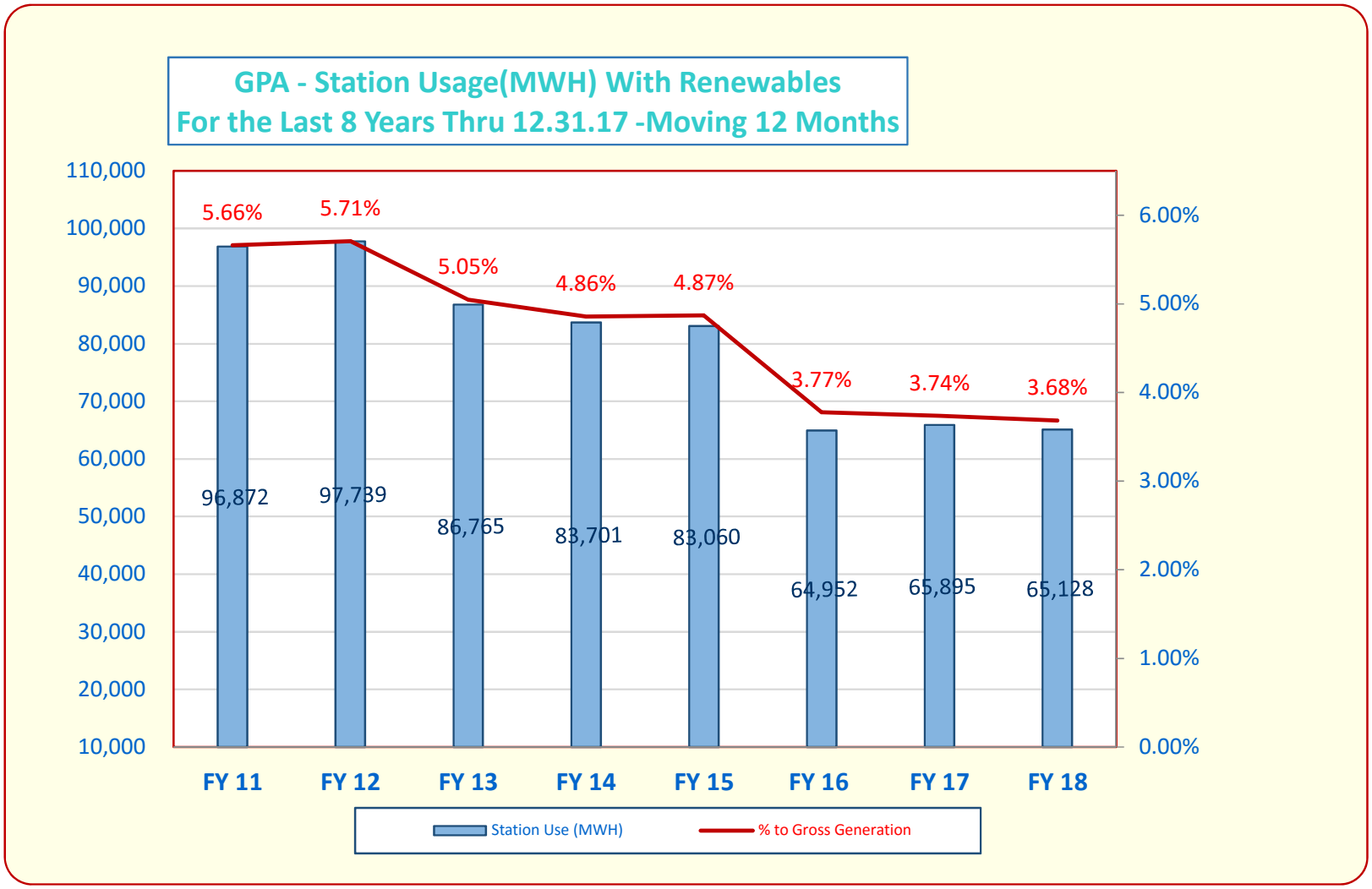
	MONTHLY - DECEMBER 2017				YTD THRU 12/31/2017			
	PROJECTIONS	ACTUAL	VARIANCE	% VARIANCE	PROJECTIONS	ACTUAL	VARIANCE	% VARIANCE
KWH								
Residential	41,481,456	43,307,944	1,826,488	4.40%	125,284,593	128,376,797	3,092,204	2.47%
Small General-Non-Demand	6,991,667	6,956,278	(35,390)	-0.51%	20,702,164	21,083,461	381,296	1.84%
Small General-Demand	15,629,003	15,848,505	219,503	1.40%	47,615,727	47,430,029	(185,698)	-0.39%
Large	26,731,694	27,485,887	754,193	2.82%	80,673,432	80,336,690	(336,742)	-0.42%
Independent Power Producers	33,439	40,140	6,701	20.04%	100,914	226,207	125,293	124.16%
Private St. Lites	53,736	35,129	(18,608)	-34.63%	167,522	104,022	(63,500)	-37.91%
Sub-total	**90,920,995**	**93,673,883**	**2,752,888**	**3.03%**	**274,544,352**	**277,557,205**	**3,012,853**	**1.10%**
Government								
Small_Non Demand	1,124,232	1,272,026	147,794	13.15%	3,327,399	3,778,769	451,370	13.57%
Small-Demand	7,717,751	8,063,549	345,798	4.48%	23,647,447	24,445,741	798,294	3.38%
Large	5,874,329	6,812,255	937,925	15.97%	18,113,051	19,781,131	1,668,081	9.21%
Public St. Lites	917,576	697,921	(219,654)	-23.94%	2,503,121	2,179,335	(323,787)	-12.94%
Sub-total	**15,633,887**	**16,845,750**	**1,211,863**	**7.75%**	**47,591,018**	**50,184,976**	**2,593,958**	**5.45%**
Total-Civilian	**106,554,882**	**110,519,633**	**3,964,752**	**3.72%**	**322,135,370**	**327,742,181**	**5,606,811**	**1.74%**
USN	27,070,271	28,067,673	997,402	3.68%	79,840,743	80,150,976	310,233	0.39%
Grand Total	**133,625,152**	**138,587,306**	**4,962,154**	**3.71%**	**401,976,113**	**407,893,157**	**5,917,044**	**1.47%**
					-	-		
Non-Oil Yield								
Residential	0.096203	0.095613	(0.000591)	-0.61%	0.096203	0.095883	(0.000320)	-0.33%
Small General-Non-Demand	0.136364	0.136042	(0.000322)	-0.24%	0.136364	0.135911	(0.000454)	-0.33%
Small General-Demand	0.119423	0.120159	0.000736	0.62%	0.119423	0.119022	(0.000401)	-0.34%
Large	0.103705	0.103598	(0.000106)	-0.10%	0.103705	0.102733	(0.000971)	-0.94%
Independent Power Producers	0.117983	0.116410	(0.001573)	0.00%	0.117983	0.103021	(0.014962)	0.00%
Private St. Lites	0.454278	0.609688	0.155410	34.21%	0.454278	0.615532	0.161254	35.50%
Sub-total	**0.105708**	**0.105313**	**(0.000395)**	**-0.37%**	**0.105690**	**0.105061**	**(0.000629)**	**-0.59%**
Government					-			
Small_Non Demand	0.152255	0.150372	(0.001883)	-1.24%	0.152255	0.149421	(0.002833)	-1.86%
Small-Demand	0.135082	0.136059	0.000977	0.72%	0.135082	0.134166	(0.000916)	-0.68%
Large	0.128102	0.126298	(0.001804)	-1.41%	0.128102	0.125503	(0.002599)	-2.03%
Public St. Lites	0.380746	0.479701	0.098954	25.99%	0.380746	0.470422	0.089675	23.55%
Sub-total	**0.148112**	**0.147429**	**(0.000683)**	**-0.46%**	**0.146547**	**0.146502**	**(0.000045)**	**-0.03%**
Total-Civilian	**0.111930**	**0.111732**	**(0.000198)**	**-0.18%**	**0.111726**	**0.111407**	**(0.000319)**	**-0.29%**
USN	0.061774	0.057230	(0.004544)	-7.36%	0.061774	0.061069	(0.000705)	-1.14%
Grand Total	**0.101769**	**0.100694**	**(0.001075)**	**-1.06%**	**0.101804**	**0.101515**	**(0.000289)**	**-0.28%**
Non-Oil Revenues								
Residential	3,990,657	4,140,786	150,130	3.76%	12,052,802	12,309,158	256,356	2.13%
Small General-Non-Demand	953,413	946,344	(7,069)	-0.74%	2,823,035	2,865,464	42,429	1.50%
Small General-Demand	1,866,465	1,904,339	37,875	2.03%	5,686,420	5,645,216	(41,204)	-0.72%
Large	2,772,201	2,847,494	75,293	2.72%	8,366,209	8,253,260	(112,949)	-1.35%
Independent Power Producers	3,945	4,673	727	18.44%	11,906	23,304	11,398	95.73%
Private St. Lites	24,411	21,417	(2,994)	-12.26%	76,101	64,029	(12,073)	-15.86%
Sub-total	**9,611,092**	**9,865,054**	**253,963**	**2.64%**	**29,016,474**	**29,160,431**	**143,958**	**0.50%**
Government								
Small_Non Demand	171,169	191,277	20,108	11.75%	506,612	564,629	58,018	11.45%
Small-Demand	1,042,528	1,097,115	54,587	5.24%	3,194,340	3,279,789	85,449	2.68%
Large	752,514	860,372	107,858	14.33%	2,320,319	2,482,592	162,273	6.99%
Public St. Lites	349,363	334,793	(14,570)	-4.17%	953,054	1,025,206	72,152	7.57%
Sub-total	**2,315,574**	**2,483,557**	**167,983**	**7.25%**	**6,974,324**	**7,352,215**	**377,892**	**5.42%**
Total-Civilian	**11,926,666**	**12,348,611**	**421,945**	**3.54%**	**35,990,798**	**36,512,647**	**521,849**	**1.45%**
USN	1,672,238	1,606,307	(65,930)	-3.94%	4,932,079	4,894,717	(37,362)	-0.76%
Grand Total	**13,598,903**	**13,954,918**	**356,015**	**2.62%**	**40,922,876**	**41,407,364**	**484,487**	**1.18%**
% of Total Revenues	39.85%	46.55%			39.86%	46.65%		
Oil Revenues								
Residential	6,372,890	5,098,125	(1,274,765)	-20.00%	19,247,756	15,112,260	(4,135,496)	-21.49%
Small General-Non-Demand	1,074,146	818,879	(255,267)	-23.76%	3,180,520	2,481,903	(698,618)	-21.97%
Small General-Demand	2,401,119	1,865,075	(536,044)	-22.32%	7,315,312	5,581,522	(1,733,790)	-23.70%
Large	4,106,851	3,220,246	(886,605)	-21.59%	12,394,042	9,409,673	(2,984,369)	-24.08%
Independent Power Producers	5,137	4,576	(561)	-10.92%	15,504	25,742	10,238	66.04%
Private St. Lites	8,256	4,135	(4,120)	-49.91%	25,737	12,245	(13,492)	-52.42%
Sub-total	**13,968,398**	**11,011,036**	**(2,957,362)**	**-21.17%**	**42,178,871**	**32,623,345**	**(9,555,526)**	**-22.65%**
Government								
Small_Non Demand	172,718	149,740	(22,978)	-13.30%	511,196	444,829	(66,367)	-12.98%
Small-Demand	1,185,696	949,225	(236,471)	-19.94%	3,633,011	2,877,704	(755,307)	-20.79%
Large	902,487	792,433	(110,053)	-12.19%	2,782,749	2,300,647	(482,102)	-17.32%
Public St. Lites	140,969	82,158	(58,811)	-41.72%	384,560	256,547	(128,013)	-33.29%
Sub-total	**2,401,869**	**1,973,556**	**(428,313)**	**-17.83%**	**7,311,516**	**5,879,727**	**(1,431,789)**	**-19.58%**
Total-Civilian	**16,370,268**	**12,984,593**	**(3,385,675)**	**-20.68%**	**49,490,387**	**38,503,072**	**(10,987,315)**	**-22.20%**
USN	4,158,867	3,035,823	(1,123,044)	-27.00%	12,266,114	8,853,372	(3,412,742)	-27.82%
Grand Total	**20,529,135**	**16,020,416**	**(4,508,719)**	**-21.96%**	**61,756,501**	**47,356,444**	**(14,400,057)**	**-23.32%**
% of Total Revenues	60.15%	53.45%			60.14%	53.35%		
Grand Total								
Residential	10,363,547	9,238,911	(1,124,636)	-10.85%	31,300,558	27,421,418	(3,879,140)	-12.39%
Small General-Non-Demand	2,027,559	1,765,223	(262,336)	-12.94%	6,003,555	5,347,367	(656,188)	-10.93%
Small General-Demand	4,267,584	3,769,415	(498,169)	-11.67%	13,001,732	11,226,738	(1,774,993)	-13.65%
Large	6,879,051	6,067,740	(811,311)	-11.79%	20,760,251	17,662,933	(3,097,318)	-14.92%
Independent Power Producers	9,082	9,249	167	1.83%	27,410	49,046	21,636	78.94%
Private St. Lites	32,667	25,553	(7,114)	-21.78%	101,838	76,274	(25,564)	-25.10%
Sub-total	**23,579,490**	**20,876,091**	**(2,703,399)**	**-11.47%**	**71,195,344**	**61,783,776**	**(9,411,568)**	**-13.22%**
Government					-			
Small_Non Demand	343,888	341,017	(2,870)	-0.83%	1,017,807	1,009,458	(8,349)	-0.82%
Small-Demand	2,228,223	2,046,340	(181,884)	-8.16%	6,827,350	6,157,492	(669,858)	-9.81%
Large	1,655,000	1,652,805	(2,195)	-0.13%	5,103,068	4,783,239	(319,829)	-6.27%
Public St. Lites	490,333	416,951	(73,382)	-14.97%	1,337,614	1,281,753	(55,861)	-4.18%
Sub-total	**4,717,443**	**4,457,113**	**(260,330)**	**-5.52%**	**14,285,840**	**13,231,943**	**(1,053,897)**	**-7.38%**
Total-Civilian	**28,296,933**	**25,333,204**	**(2,963,730)**	**-10.47%**	**85,481,184**	**75,015,719**	**(10,465,465)**	**-12.24%**
USN	5,831,105	4,642,130	(1,188,975)	-20.39%	17,198,193	13,748,089	(3,450,104)	-20.06%
Grand Total	**34,128,038**	**29,975,334**	**(4,152,704)**	**-12.17%**	**102,679,377**	**88,763,807**	**(13,915,570)**	**-13.55%**
	-	-	-					

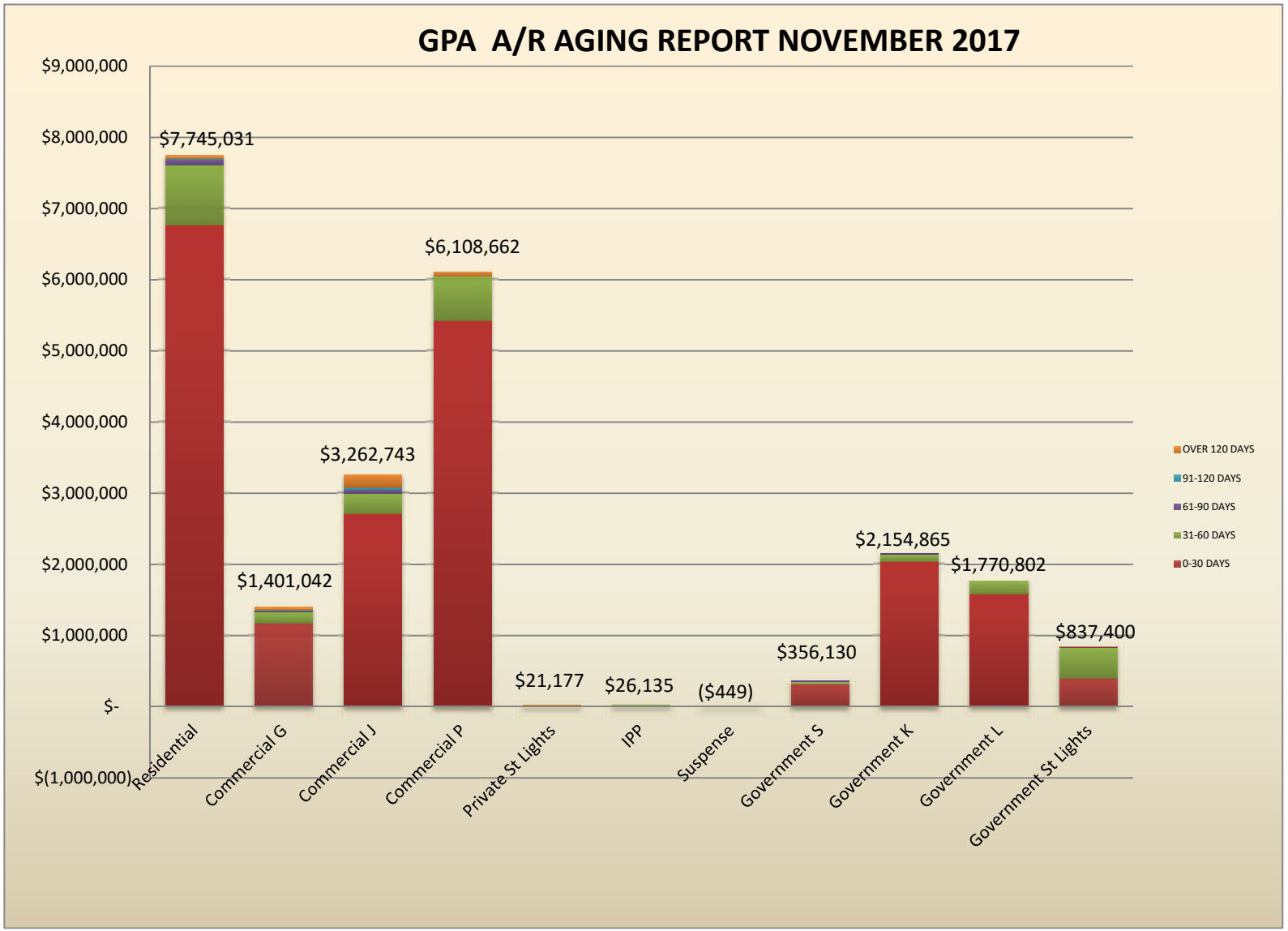
	YTD REVENUES - CURRENT YEAR VS PRIOR YEAR				MTD REVENUES - CURRENT YEAR VS PRIOR YEAR			
	ACTUALS - 3 MONTHS ENDED DECEMBER 31				ACTUALS - MONTH ENDED DECEMBER 31			
	2017	2016	VARIANCE	% VARIANCE	2017	2016	VARIANCE	% VARIANCE
KWH								
Residential	128,376,797	124,298,783	4,078,014	3.28%	43,307,944	41,105,614	2,202,330	5.36%
Small General-Non-Demand	21,083,461	20,681,755	401,705	1.94%	6,956,278	6,987,253	(30,975)	-0.44%
Small General-Demand	47,430,029	47,579,490	(149,461)	-0.31%	15,848,505	16,033,983	(185,477)	-1.16%
Large	80,336,690	79,179,733	1,156,957	1.46%	27,485,887	26,487,608	998,280	3.77%
Independent Power Producers	226,207	273,909	(47,702)	-17.42%	40,140	96,065	(55,925)	-58.22%
Private St. Lites	104,022	141,553	(37,531)	-26.51%	35,129	39,997	(4,868)	-12.17%
Sub-total	**277,557,205**	**272,155,222**	**5,401,982**	**1.98%**	**93,673,883**	**90,750,519**	**2,923,365**	**3.22%**
Government								
Small_Non Demand	3,778,769	3,442,048	336,721	9.78%	1,272,026	1,121,641	150,385	13.41%
Small-Demand	24,445,741	24,987,539	(541,798)	-2.17%	8,063,549	8,060,205	3,343	0.04%
Large	19,781,131	18,735,314	1,045,818	5.58%	6,812,255	6,238,617	573,638	9.19%
Public St. Lites	2,179,335	2,888,990	(709,656)	-24.56%	697,921	994,072	(296,151)	-29.79%
Sub-total	**50,184,976**	**50,053,891**	**131,085**	**0.26%**	**16,845,750**	**16,414,534**	**431,216**	**2.63%**
Total-Civilian	**327,742,181**	**322,209,113**	**5,533,068**	**1.72%**	**110,519,633**	**107,165,053**	**3,354,580**	**3.13%**
USN	80,150,976	79,280,394	870,581	1.10%	28,067,673	27,468,943	598,730	2.18%
Grand Total	**407,893,157**	**401,489,507**	**6,403,649**	**1.59%**	**138,587,306**	**134,633,996**	**3,953,311**	**2.94%**
Non-Oil Yield								
Residential	0.095883	0.096462	-0.000579	-0.60%	0.095613	0.096514	-0.000902	-0.93%
Small General-Non-Demand	0.135911	0.137852	-0.001942	-1.41%	0.136042	0.138415	-0.002373	-1.71%
Small General-Demand	0.119022	0.120037	-0.001015	-0.85%	0.120159	0.121613	-0.001454	-1.20%
Large	0.102733	0.102585	0.000148	0.14%	0.103598	0.101153	0.002445	2.42%
Independent Power Producers	0.000000	0.109998	-0.109998	-100.00%	0.116410	0.101502	0.014907	14.69%
Private St. Lites	0.615532	0.487587	0.127945	26.24%	0.609688	0.552808	0.056880	10.29%
Sub-total	**0.105061**	**0.105728**	**-0.000667**	**-0.63%**	**0.105313**	**0.105735**	**-0.000423**	**-0.40%**
Government								
Small_Non Demand	0.149421	0.152161	-0.002739	-1.80%	0.150372	0.153196	-0.002824	-1.84%
Small-Demand	0.134166	0.133765	0.000401	0.30%	0.136059	0.136481	-0.000422	-0.31%
Large	0.125503	0.124992	0.000511	0.41%	0.126298	0.120568	0.005729	4.75%
Public St. Lites	0.470422	0.431943	0.038478	8.91%	0.479701	0.464923	0.014778	3.18%
Sub-total	**0.146502**	**0.148957**	**-0.002454**	**-1.65%**	**0.147429**	**0.151466**	**-0.004037**	**-2.67%**
Total-Civilian	**0.111407**	**0.112443**	**-0.001036**	**-0.92%**	**0.111732**	**0.112740**	**-0.001008**	**-0.89%**
USN	0.061069	0.060405	0.000664	1.10%	0.057230	0.058721	-0.001491	-2.54%
Grand Total	**0.101515**	**0.102167**	**-0.000652**	**-0.64%**	**0.100694**	**0.101718**	**-0.001024**	**-1.01%**
Non-Oil Revenues								
Residential	12,309,158	11,990,159	318,999	2.66%	4,140,786	3,967,273	173,514	4.37%
Small General-Non-Demand	2,865,464	2,851,024	14,441	0.51%	946,344	967,142	(20,798)	-2.15%
Small General-Demand	5,645,216	5,711,317	(66,101)	-1.16%	1,904,339	1,949,946	(45,607)	-2.34%
Large	8,253,260	8,122,679	130,581	1.61%	2,847,494	2,679,312	168,182	6.28%
Independent Power Producers	23,304	30,129	(6,825)	-22.65%	4,673	9,751	(5,078)	-52.08%
Private St. Lites	64,029	69,019	(4,991)	-7.23%	21,417	22,111	(693)	-3.14%
Sub-total	**29,160,431**	**28,774,327**	**386,104**	**1.34%**	**9,865,054**	**9,595,534**	**269,520**	**2.81%**
Government								
Small_Non Demand	564,629	523,745	40,884	7.81%	191,277	171,831	19,446	11.32%
Small-Demand	3,279,789	3,342,463	(62,675)	-1.88%	1,097,115	1,100,065	(2,950)	-0.27%
Large	2,482,592	2,341,770	140,821	6.01%	860,372	752,180	108,192	14.38%
Public St. Lites	1,025,206	1,247,880	(222,673)	-17.84%	334,793	462,167	(127,374)	-27.56%
Sub-total	**7,352,215**	**7,455,858**	**(103,642)**	**-1.39%**	**2,483,557**	**2,486,242**	**(2,686)**	**-0.11%**
Total-Civilian	**36,512,647**	**36,230,185**	**282,462**	**0.78%**	**12,348,611**	**12,081,777**	**266,834**	**2.21%**
USN	4,894,717	4,788,939	105,778	2.21%	1,606,307	1,612,990	(6,683)	-0.41%
Grand Total	**41,407,364**	**41,019,124**	**388,239**	**0.95%**	**13,954,918**	**13,694,767**	**260,152**	**1.90%**
% of Total Revenues								
Oil Revenues								
Residential	15,112,260	10,765,890	4,346,369	40.37%	5,098,125	3,560,281	1,537,844	43.19%
Small General-Non-Demand	2,481,903	1,791,309	690,594	38.55%	818,879	605,187	213,692	35.31%
Small General-Demand	5,581,522	4,123,180	1,458,342	35.37%	1,865,075	1,391,846	473,230	34.00%
Large	9,409,673	6,911,323	2,498,350	36.15%	3,220,246	2,369,928	850,318	35.88%
Independent Power Producers	25,742	24,900	842	3.38%	4,576	10,008	(5,432)	-54.27%
Private St. Lites	12,245	12,260	(15)	-0.12%	4,135	3,464	671	19.37%
Sub-total	**32,623,345**	**23,628,862**	**8,994,483**	**38.07%**	**11,011,036**	**7,940,713**	**3,070,323**	**38.67%**
Government								
Small_Non Demand	444,829	298,126	146,703	49.21%	149,740	97,149	52,592	54.14%
Small-Demand	2,877,704	2,164,246	713,458	32.97%	949,225	698,119	251,106	35.97%
Large	2,300,647	1,651,546	649,101	39.30%	792,433	582,059	210,374	36.14%
Public St. Lites	256,547	250,224	6,323	2.53%	82,158	86,100	(3,942)	-4.58%
Sub-total	**5,879,727**	**4,364,142**	**1,515,585**	**34.73%**	**1,973,556**	**1,463,426**	**510,131**	**34.86%**
Total-Civilian	**38,503,072**	**27,993,004**	**10,510,068**	**37.55%**	**12,984,593**	**9,404,139**	**3,580,454**	**38.07%**
USN	8,853,372	7,152,489	1,700,883	23.78%	3,035,823	2,632,326	403,497	15.33%
Grand Total	**47,356,444**	**35,145,493**	**12,210,951**	**34.74%**	**16,020,416**	**12,036,464**	**3,983,951**	**33.10%**
% of Total Revenues								
Grand Total								
Residential	27,421,418	22,756,049	4,665,369	20.50%	9,238,911	7,527,553	1,711,358	22.73%
Small General-Non-Demand	5,347,367	4,642,333	705,035	15.19%	1,765,223	1,572,329	192,894	12.27%
Small General-Demand	11,226,738	9,834,497	1,392,242	14.16%	3,769,415	3,341,792	427,623	12.80%
Large	17,662,933	15,034,002	2,628,931	17.49%	6,067,740	5,049,240	1,018,500	20.17%
Independent Power Producers	49,046	55,029	(5,983)	-10.87%	9,249	19,759	(10,510)	-53.19%
Private St. Lites	76,274	81,280	(5,006)	-6.16%	25,553	25,575	(22)	-0.09%
Sub-total	**61,783,776**	**52,403,189**	**9,380,587**	**17.90%**	**20,876,091**	**17,536,247**	**3,339,843**	**19.05%**
Government								
Small_Non Demand	1,009,458	821,871	187,587	22.82%	341,017	268,979	72,038	26.78%
Small-Demand	6,157,492	5,506,709	650,784	11.82%	2,046,340	1,798,184	248,156	13.80%
Large	4,783,239	3,993,317	789,922	19.78%	1,652,805	1,334,239	318,567	23.88%
Public St. Lites	1,281,753	1,498,104	(216,351)	-14.44%	416,951	548,266	(131,315)	-23.95%
Sub-total	**13,231,943**	**11,820,000**	**1,411,942**	**11.95%**	**4,457,113**	**3,949,668**	**507,445**	**12.85%**
Total-Civilian	**75,015,719**	**64,223,190**	**10,792,529**	**16.80%**	**25,333,204**	**21,485,915**	**3,847,288**	**17.91%**
USN	13,748,089	11,941,428	1,806,661	15.13%	4,642,130	4,245,316	396,814	9.35%
Grand Total	**88,763,807**	**76,164,617**	**12,599,190**	**16.54%**	**29,975,334**	**25,731,231**	**4,244,103**	**16.49%**


GPA - T and D Losses (MWH) Without Renewables and Aggreko
For the Last 7 Years thru 12.31.17 -Moving 12 Months
130,000
120,000
110,000
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
-
8.00%
7.00%
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
7.02%
7.26%
6.31%
5.20%
4.88%
5.44%
5.67%
5.63%
113,279
117,269
103,049
85,295
79,267
78,281
83,949
83,470
FY 11
FY 12
FY 13
FY 14
FY 15
FY 16
FY 17
FY 18
T and D Losses (MWH)
T and D Losses (% to Net Generation)


GPA - T and D Losses (MWH) With Renewables
For the Last 8 Years thru 12.31.17 -Moving 12 Months
130,000
120,000
110,000
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
-
7.00%
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
7.02%
7.26%
6.31%
5.20%
4.88%
4.73%
4.95%
4.90%
113,279
117,269
103,049
85,295
79,267
78,281
83,949
83,470
FY 11
FY 12
FY 13
FY 14
FY 15
FY 16
FY 17
FY 18
T and D Losses (MWH)
T and D Losses (% to Net Gen.)


GPA - Station Usage(MWH) Without Renewables and Aggreko
For the Last 7 Years Thru 12.31.17-Moving 12 Months
110,000
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
5.66%
5.71%
5.05%
4.86%
4.87%
4.32%
4.26%
4.21%
96,872
97,739
86,765
83,701
83,060
64,952
65,895
65,128
FY 11
FY 12
FY 13
FY 14
FY 15
FY 16
FY 17
FY 18
Station Use (MWH)
% to Gross Generation


GPA - Station Usage(MWH) With Renewables
For the Last 8 Years Thru 12.31.17 -Moving 12 Months
110,000
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
5.66%
5.71%
5.05%
4.86%
4.87%
3.77%
3.74%
3.68%
96,872
97,739
86,765
83,701
83,060
64,952
65,895
65,128
FY 11
FY 12
FY 13
FY 14
FY 15
FY 16
FY 17
FY 18
Station Use (MWH)
% to Gross Generation


GPA A/R AGING REPORT NOVEMBER 2017
$9,000,000
$8,000,000
$7,000,000
$6,000,000
$5,000,000
$4,000,000
$3,000,000
$2,000,000
$1,000,000
$-
$(1,000,000)
$7,745,031
$1,401,042
$3,262,743
$6,108,662
$21,177
$26,135
($449)
$356,130
$2,154,865
$1,770,802
$837,400
Residential
Commercial G
Commercial J
Commercial P
Private St Lights
IPP
Suspense
Government S
Government K
Government L
Government St Lights
OVER 120 DAYS
91-120 DAYS
61-90 DAYS
31-60 DAYS
0-30 DAYS

GUAM POWER AUTHORITY
GOVERNMENT ACCOUNTS RECEIVABLE
BILLING UP TO 01/31/2018 and Payment Applied as of 02/08/2018

Current (01/18 Billing due 12/31/17
30 days Arrears (12/17 due 01/15/18)
60 days and over Arrears (11/17 billing due 12/15/17)

NEW ACCT NUMBER		DEPARTMENT	ARREARS BALANCE 12/31/2017	CURRENT BILL FOR 1/31/2018 BILL DATE 02/08/2018	BILLING ADJUSTMENT 2/8/2018	PAYMENTS AS OF 2/8/2018	BILLING BALANCE 2/8/2018	
		Line Agencies						
124378	0237100000	Dept. of Corrections	$ 71,876.65	76,357.95	$ -	$ (71,876.65)	$ 76,357.95	
124401	0437100000	Dept. of Parks & Rec.	$ 19,338.89	21,604.88	$ 454.01	$ (19,338.89)	$ 22,058.89	
124415	0537100000	Guam Fire Department	$ 16,633.04	18,430.82	$ -	$ (16,633.04)	$ 18,430.82	
108818	6995000000	DOA-Supply Management	$ 1,471.82	1,401.33	$ -	$ (1,471.82)	$ 1,401.33	
108799	7895000000	Dept. of Administration	$ 3,445.86	3,556.61	$ -	$ (3,445.86)	$ 3,556.61	
124392	1337100000	Nieves Flores Library	$ 9,587.42	10,039.51	$ -	$ (9,587.42)	$ 10,039.51	
140297	2206200000	General Services Agency	$ 248.89	248.89	$ -	$ (248.89)	$ 248.89	
124380	2237100000	DOA-Data Processing	$ 7,231.40	7,430.16	$ -	$ (7,231.40)	$ 7,430.16	
124393	2337100000	Dept. of PH&SS	$ 64,757.94	67,904.01	$ -	$ (64,757.94)	$ 67,904.01	
124381	3237100000	Dept. of Education	$ 989,306.83	1,044,872.63	$ 7,769.56	$ -	$ 2,041,949.02	1
124394	3337100000	Guam Police Department	$ 33,545.23	36,119.49	$ -	$ (33,545.23)	$ 36,119.49	
128478	3569100000	Dept of Youth Affairs (Federal)	$ 957.52	952.17	$ -	$ (957.52)	$ 952.17	
124407	4437100000	Dept. of Youth Affair* (Local)	$ 13,224.62	14,691.96	$ -	$ (13,224.62)	$ 14,691.96	
124445	4737100000	Guam Environmental Protect	$ 5,690.97	6,280.87	$ -	$ (5,690.97)	$ 6,280.87	
124408	5437100000	Mental Health/Subst.	$ 39,421.05	43,376.75	$ -	$ (39,421.05)	$ 43,376.75	
148823	7200300000	Veteran Affairs	$ 908.97	1,041.34	$ -	$ (908.97)	$ 1,041.34	
124412	7437100000	Civil Defense (Military Affairs)	$ 10,856.02	10,609.42	$ -	$ (10,856.02)	$ 10,609.42	
158935	7463300000	Pacific Energy Resource Center	$ 573.20	504.83	$ -	$ (573.20)	$ 504.83	
124374	8137100000	Dept. of Agriculture	$ 8,871.44	9,579.62	$ -	$ (8,871.44)	$ 9,579.62	
124399	8337100000	DPW-FAC Adm Account	$ 24,651.28	26,479.88	$ -	$ (24,651.28)	$ 26,479.88	
	8437100000	Guam Visitors Bureau	$ 4,024.78	4,386.80	$ -	$ (4,024.78)	$ 4,386.80	
166560	8446300000	Yona Senior Citizen Center	$ 711.15	759.01	$ -	$ (711.15)	$ 759.01	
124414	9437100000	Chamorro Village	$ 3,912.71	4,223.69	$ -	$ (3,912.71)	$ 4,223.69	
292266	5247210000	Mayors Council	$ 2,225.31	2,479.73	$ -	$ (2,225.31)	$ 2,479.73	
309494	6293410000	Office of the Governor	$ 22,051.44	22,820.53	$ -	$ (22,051.44)	$ 22,820.53	
	8555858369	Dept of Chamorro Affairs (Guam Museum)	$ 17,351.60	19,976.83	$ -	$ (17,351.60)	$ 19,976.83	
		Sub Total	**$ 1,372,876.03**	**$ 1,456,129.71**	**$ 8,223.57**	**$ (383,569.20)**	**$ 2,453,660.11**	
		MAYORS						
124427	0637100000	Santa Rita Mayor	$ 3,620.20	$ 4,044.06		$ (3,620.20)	$ 4,044.06	
124437	0737100000	Ordot/Chalan Pago Mayor	$ 1,792.03	$ 1,467.75		$ (1,792.03)	$ 1,467.75	
124417	1537100000	Agana Mun Planning Council	$ 1,391.16	$ 1,564.41		$ (1,391.16)	$ 1,564.41	
124428	1637100000	Piti Mayor	$ 1,285.78	$ 1,326.75		$ (1,285.78)	$ 1,326.75	
124438	1737100000	Mongmong/Toto/Maite Mayor	$ 1,146.00	$ 965.78		$ (1,146.00)	$ 965.78	
124429	2637100000	Asan/Maina/Adelup Mayor	$ 855.75	$ 1,014.37		$ (855.75)	$ 1,014.37	
124439	2737100000	Sinajana Mayor	$ 3,938.58	$ 4,559.15		$ (3,938.58)	$ 4,559.15	
124430	3637100000	Dededo Mayor	$ 5,982.48	$ 6,016.36		$ (6,077.30)	$ 5,921.54	
124431	4637100000	Yigo Mayor	$ 4,280.88	$ 5,202.39		$ (4,280.88)	$ 5,202.39	
124432	5637100000	Umatac Mayor	$ 1,391.80	$ 1,463.49		$ (1,391.80)	$ 1,463.49	
124423	6537100000	Agana Hts. Mayor	$ 5,180.17	$ 5,626.31		$ (5,180.17)	$ 5,626.31	
124433	6637100000	Merizo Mayor	$ 1,293.33	$ 1,441.25		$ (1,293.33)	$ 1,441.25	
124453	6737100000	Barrigada Mayors Office	$ 2,146.49	$ 2,424.36		$ (2,146.49)	$ 2,424.36	
124424	7537100000	Agat Mayor	$ 2,300.79	$ 2,176.19		$ (2,300.79)	$ 2,176.19	
124434	7637100000	Inarajan Mayor	$ 1,300.34	$ 1,595.63		$ (1,300.34)	$ 1,595.63	
124425	8537100000	Tamuning Mayor	$ 5,662.85	$ 5,989.13		$ (5,662.85)	$ 5,989.13	
124435	8637100000	Talofofo Mayor	$ 2,271.58	$ 2,274.00		$ (2,271.58)	$ 2,274.00	
124426	9537100000	Mangilao Mayor	$ 4,643.74	$ 4,807.72		$ (4,643.74)	$ 4,807.72	
124436	9637100000	Yona Mayor	$ 823.62	$ 838.00	$ 50.00	$ (823.62)	$ 888.00	
		Sub Total	**$ 51,307.57**	**$ 54,797.10**	**$ 50.00**	**$ (51,402.39)**	**$ 54,752.28**	
		DPW ACCOUNTS						
124395	4337100000	DPW-Village St. Lights	$ 317,921.27	$ 317,976.59	$ 50.00	$ (317,921.27)	$ 318,026.59	
124396	5337100000	DPW- Primary St. Lights	$ 79,623.58	$ 80,223.39	$ 872.25	$ (79,623.58)	$ 81,095.64	
124397	6337100000	DPW-Sec/Coll St. Lights	$ 24,425.52	$ 24,463.91	$ -	$ (24,425.52)	$ 24,463.91	
124398	7337100000	DPW-Signal Lights	$ 9,714.50	$ 10,574.43	$ -	$ (9,714.50)	$ 10,574.43	
		Sub Total	**$ 431,684.87**	**$ 433,238.32**	**$ 922.25**	**$ (431,684.87)**	**$ 434,160.57**	
		(B) AUTONOMOUS/PUBLIC CORP						
124402	1437100000	Retirement Fund	$ 5,293.74	$ 4,576.64	$ -	$ (5,293.74)	$ 4,576.64	
208988	1915500000	Guam Housing Corp Rental Division	$ 1,981.92	$ 1,450.38	$ 106.12	$ (1,433.58)	$ 2,104.84	1
124403	2437100000	University of Guam	$ 160,245.34	$ 173,804.07	$ -	$ (160,245.34)	$ 173,804.07	
124383	4237100000	Guam Airport Authority	$ 494,492.11	$ 489,483.97	$ -	$ (494,492.11)	$ 489,483.97	
	5357510000	University of Guam (NET METERED)	$ 73,638.59	$ 77,601.50	$ -	$ (73,638.59)	$ 77,601.50	
124387	6237100000	G H U R A	$ 10,458.78	$ 24,219.38	$ -	$ (22,150.63)	$ 12,527.53	
124409	6437100000	Guam Community College	$ 42,596.41	$ 51,131.35	$ -	$ (42,596.41)	$ 51,131.35	
124388	7237100000	Guam Memorial Hospital	$ 319,305.24	$ 167,401.45	$ 2,394.78	$ -	$ 489,101.47	2
124377	9137100000	Port Authority of Guam	$ 83,636.83	$ 97,584.18	$ 50.00	$ (83,636.83)	$ 97,634.18	
	9157510000	Guam Community College (NET METERED)	$ 33,659.31	$ 37,824.67	$ -	$ (33,659.31)	$ 37,824.67	
288441	9173210000	Guam Solid Waste Authority	$ 5,165.63	$ 5,511.64	$ -	$ (5,165.63)	$ 5,511.64	
124400	9337100000	Guam Waterworks Authority	$ 1,092,763.52	$ 1,237,130.34	$ 50.00	$ (1,092,763.52)	$ 1,237,180.34	
		Sub Total	**$ 2,323,237.42**	**$ 2,367,719.57**	**$ 2,600.90**	**$ (2,015,075.69)**	**$ 2,678,482.20**	
		(C) OTHERS						
124391	0337100000	Guam Legislature	$ 219.53	$ 143.60		$ (219.53)	$ 143.60	
	9503154359	Guam Legislature (NET METER)	$ 5,819.82	$ 5,761.11		$ (5,819.82)	$ 5,761.11	
124379	1237100000	Superior Court of Guam	$ 67,185.92	$ 73,991.57		$ (67,185.92)	$ 73,991.57	
124418	2537100000	Agana Post Office	$ 5,466.68	$ 5,825.03		$ (5,466.68)	$ 5,825.03	
130431	2570200000	Customs & Quarantine Agency	$ 871.76	$ 954.26		$ (871.76)	$ 954.26	
124419	3537100000	U.S. Post Office	$ 37,634.10	$ 41,553.69		$ (37,634.10)	$ 41,553.69	
124422	5537100000	Dept. of Military Affairs	$ 72,035.29	$ 76,366.87		$ (72,035.29)	$ 76,366.87	
	3209463043	Dept. of Military Affairs (NET METERED)	$ 2,846.00	$ 3,172.76		$ (2,846.00)	$ 3,172.76	
124446	5737100000	KGTF	$ 6,228.23	$ 6,621.11		$ (6,228.23)	$ 6,621.11	
102783	7281000000	Tamuning Post Office	$ 5,122.85	$ 5,079.66		$ (5,122.85)	$ 5,079.66	
		Sub Total	**$ 203,430.18**	**$ 219,469.66**	**$ -**	**$ (203,430.18)**	**$ 219,469.66**	
		Sub Total (w/out Promissory Note)	**$ 4,382,536.07**	**$ 4,531,354.36**	**$ 11,796.72**	**$ (3,085,162.33)**	**$ 5,840,524.82**	

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671) 648-3002 | guamccu.org

GUAM POWER AUTHORITY WORK SESSION

CCU Conference Room
4:30 p.m., March 22, 2018

AGENDA

1. **ISSUES FOR DECISION**
   - 1.1 Relative to Procuring Property Insurance / Resolution 2018-06
   - 1.2 Piti 8&9 Contract / Resolution 2018-07
2. **GM REPORT**
   - 2.1 Updates
3. **ISSUES FOR DISCUSSION**
4. **DIVISION REPORTS**
   - 4.1 Administration: Customer Service, HR, Procurement
   - 4.2 Engineering & Technical: Engineering, IT, Planning & Regulatory, SPORD
   - 4.3 Finance Reports
   - 4.4 Operations: Facilities, Generation, PSCC, T&D, Transportation
   - 4.5 Public Information Office
5. **ANNOUNCEMENTS**
   - 5.1 Next Meeting: CCU Meeting – March 27
6. **ADJOURNMENT**

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

Issues for Decision

Resolution No. 2018-06:

What is the project's objective and is it necessary and urgent?

The Consolidated Commission on Utilities has determined that is a prudent and reasonable business practices to maintain insurance coverage on GPA's assets to the extent practical. The Guam Power Authority's bond indenture agreement requires GPA to "secure and maintain property insurance on all facilities constituting the System against risks of loss or damage…to the extent that such insurance is obtainable at reasonable cost." The indenture further requires GPA to carry insurance "of a scope and nature as that usually carried in the industry."

The contract review protocol established by the Public Utilities Commission requires that all contracts in excess of $1.5 million be authorized by the PUC in advance of the procurement.

How does it cost?

GPA's current property insurance costs exceed $6.4 million and this procurement will exceed the PUC contract review threshold.

When will this start?

GPA's property insurance policy including boiler and machinery coverage is expiring on November 1, 2018 and a re-bidding of the policies is required under Guam procurement regulations.

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

RESOLUTION NO. 2018-06

RELATIVE TO PETITION THE PUBLIC UTILITIES COMMISSION FOR AUTHORIZATION TO BEGIN PROCUREMENT FOR PROPERTY INSURANCE

WHEREAS, the Consolidated Commission on Utilities has determined that is a prudent and reasonable business practices to maintain insurance coverage on GPA's assets to the extent practical; and

WHEREAS, the Guam Power Authority's bond indenture agreement requires GPA to "secure and maintain property insurance on all facilities constituting the System against risks of loss or damage…to the extent that such insurance is obtainable at reasonable cost"; and

WHEREAS, the indenture further requires GPA to carry insurance "of a scope and nature as that usually carried in the industry"; and

WHEREAS, GPA's property insurance policy including boiler and machinery coverage is expiring on November 1, 2018 and a re-bidding of the policies is required under Guam procurement regulations; and

WHEREAS, the contract review protocol established by the Public Utilities Commission requires that all contracts in excess of $1.5 million be authorized by the PUC in advance of the procurement;

WHEREAS, GPA's current property insurance costs exceed $6.4 million and this procurement will exceed the PUC contract review threshold; and

WHEREAS, GPA desires to issue its insurance bid as soon as possible in order to allow sufficient time for insurance vendors to prepare their bids; and

WHEREAS, GPA has submitted its draft invitation for bids to the Consolidated Commission on Utilities for review and authorization to forward to the PUC; and

NOW THEREFORE, BE IT RESOLVED BY THE CONSOLIDATED COMMISSION ON UTILITIES, AS THE GOVERNING BODY OF THE GUAM POWER AUTHORITY, AS FOLLOWS:

1. After careful review and scrutiny of the GPA draft Invitation for Bids for property insurance coverage to include boiler and machinery coverage, the Consolidated Commission on Utilities has determined that property insurance costs are a prudent expense and the GPA General Manager is authorized to submit the bid document to the Public Utilities Commission for their approval in accordance with the contract review protocol.

2. Final approval from the Consolidated Commission on Utilities is required before a property insurance contract is executed.

RESOLVED, that the Chairman certifies and the Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED AND APPROVED THIS 27TH DAY OF MARCH, 2018.

Certified by:

_____

JOSEPH T. DUENAS
Chairperson
Consolidated Commission on Utilities

Attested by:

_____

J. GEORGE BAMBA
Secretary
Consolidated Commission on Utilities

SECRETARY'S CERTIFICATE

I, **J. George Bamba**, Board Secretary of the Consolidated Commission on Utilities (CCU), as evidenced by my signature above, do hereby certify as follows:

The foregoing is a full, true and correct copy of the resolution duly adopted at a regular meeting by the members of the Guam CCU, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

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GUAM POWER AUTHORITY

ATURIDAT ILEKTRESEDAT GUAHAN
P.O. BOX 2977 HAGATNA, GUAM U.S.A. 96932-2977

PROPERTY INSURANCE BID

Ladies and Gentlemen:

The Guam Power Authority ("GPA") invites qualified insurance, reinsurance intermediaries and underwriters to submit their credentials for the placement and servicing of the GPA's property insurance program for the term November 1, 2018 to November 1, 2021. The current contract term of the incumbent insurance, reinsurance intermediaries and underwriters will expire on October 31, 2018. This tender is open to qualified incumbent and non-incumbent insurance and reinsurance entities.

Insurance services will be for a three-year term with two one-year option and insurance policies may be written for a three-year term with annual renewals or the standard one-year policy with annual renewals.

GPA is looking for Property, Boiler & Machinery, Catastrophe, Terrorism, Business Interruption and Cyber liability coverage.

The deadline to submit proposals is **2:30 p.m. August 1, 2018** to give GPA enough time for discussion and negotiations to meet GPA target selection deadline of August 20, 2018. GPA is undertaking this procurement through the multi-step bidding process.

Please convey your questions and inquiries in writing to GPA no later than **June 15, 2018** so that you may have proper responses in time for the **2:30 p.m. August 1, 2018** submittal deadline.

Please submit your bid according to the detailed instructions and requirements herein; types of insurance underwriting information as set forth in the Appendices thereto.

Thank you for your interest.

Sincerely,

John Benavente
General Manager

DUE: **August 1, 2018 (2:30 p.m.)**

2

*** PRICE PROPOSAL MUST BE SUBMITTED IN A SEPARATE SEALED ENVELOPE MARKED "PRICE PROPOSAL."

TO: GENERAL MANAGER, GUAM POWER AUTHORITY

RE: PROPOSAL PREMIUMS AND COVERAGE

This transmittal sheet serves only as index of proposals more fully described in the attached documents. Please complete with your bid price.

	Annual Premiums		
Coverages	**Original Proposal**	**Optional Coverage**	**Optional Proposal**
Property (Sum insured $300 Million)	$_____	_____	$_____
Business Interruption	$_____	_____	$_____
Cyber Liability	$_____	_____	$_____
Gloria B. Nelson Public Service Building			
Building & Structure	$_____	_____	$_____
Optional:			
Property:			
Sum Insured $400 Million	$_____	_____	$_____
Sum Insured $500 Million	$_____	_____	$_____
Terrorism	$_____	_____	$_____
Above Ground Transmission &			
Distribution	$_____	_____	$_____

Bidder:

Signed By: _____
(Print Name/Title)

_____ Date:_____
Authorized Signatory of Bidder

Telephone No.: _____ E-mail:_____

3

OVERVIEW: THE GUAM POWER AUTHORITY

The Guam Power Authority (The Authority) was created in 1968 as a public corporation and autonomous instrumentality of the Government of Guam. Since that time the Authority has maintained and expanded the island wide power system on Guam. The Authority now has 469 megawatts of generation capacity, 663 miles of transmission and distribution lines, 29 substations, $1.1 billion in assets, and $333 million in annual revenues. GPA currently serves approximately 51,000 customers with the U.S. Navy being the largest representing about 17% of revenues.

The Guam Power Authority was changed into a public corporation of the Government of Guam in 2002 and is governed by a five-member publicly elected Commission – the Consolidated Commission on Utilities (CCU). The CCU retains contracting authority, establishes policies and has control over the selection of top management of the Authority.

The Authority is regulated by the Guam Public Utilities Commission – a rate setting body made up of Commissioners appointed by the Governor of Guam. The PUC has established rules of operation that are similar to those of other jurisdictions within the United States. The PUC has broad regulatory authority over GPA including approval of any contracts that might have an impact on GPA's rates.

SECTION I: INTRODUCTION:

The Guam Power Authority (GPA), hereinafter referred to as GPA, invites qualified insurance, reinsurance intermediaries, carriers and underwriters, hereinafter referred to as Bidder(s), to participate in a Multi-Step Bid (MSB) for Property Insurance Coverage. Minimum Property Insurance coverage specifications are described later in this MSB.

The bidder shall be responsible, at a minimum, for the following services:

- Respond to e-mails and voice mails within 24 hours.
- Provide certificates of insurance within 3 business days.
- Provide notice of claims to underwriters (carriers) and facilitate claims communication in coordination with GPA and underwriters (carriers).
- All other services deemed necessary by GPA.

GPA is hereby inviting bids for Property insurance contracts (policies) on a long-term basis (e.g., three years) with a term to commence November 1, 2018 to November 1, 2021. GPA understands that most insurance policies have 12-month terms, so GPA is not requiring three-year policies. GPA fully expects to stay with the selected insurance program for at least three years renewing on an annual basis.

The Technical and Price Proposals are due on or before the Cut-off Date of Receipt of Proposals which is **2:30 p.m., August 1, 2018.**

The bid evaluation shall be a two-step process. Step one will involve a Technical Proposal that consists of bidder qualifications and insurance coverage offered. This will allow GPA to establish a Qualified Bidders List (QBL). Step two will involve the evaluation of the Price Proposal (Priced Offers) from the Bidders identified on the QBL.

STEP ONE: TECHNICAL OR QUALITATIVE PROPOSALS

Interested bidders at minimum should provide the following information:

Bidder's Firm information including:

- Years in business
- Total property and total liability insurance premiums placed annually
- Ownership legal structure and ownership details
- Office location that would serve GPA
- Claims, loss control/engineering and other core services performed
- List of Power Generation accounts serviced by the account team
- Key personnel who would be placing and servicing the GPA's program
- Biography, certificates, designations, and licenses of account team and key personnel
- Other information that the respective firm believes GPA should consider
- Any key alignments with other insurance entity or intermediary (retail, wholesale, reinsurance, Lloyds, etc.)
- Bidder's experience with electric utilities or Energy Companies, especially those with hurricane or earthquake exposure and boiler & machinery exposure.
- Copies of currently active Licenses of all intermediaries
- Primary (Fronting) Carriers' or underwriters' Certificate of Authority to Transact business on Guam
- Most recent AM Best rating for Primary (Fronting) Carrier

Insurance coverage terms including but not limited to:

- Full policy forms and applicable endorsements
- If multi-year agreements, endorsements, continuity credits, or similar pricing mechanisms are used to offer reduced pricing; a detailed explanation of situations that may lead to any applicable penalties or increases of premium during the policy term must be attached.
- Explanation of any and all exceptions to the minimum coverage specifications
- Explanation of any and all enhancements exceeding minimum specifications
- Explanation of any and all coverage deficiencies not meeting minimum coverage specifications
- Specifically noting which requested coverage enhancements have been achieved, which cannot be achieved and, if applicable, detail any additional enhancements that were obtained.
- Fronting carrier or Primary insurers must be rated A- or better by AM Best with minimum financial size of VII or greater.
- Identification of Lead markets utilized to achieve the 20% commitment or market support.
- This insurance shall be governed by and construed in accordance with the laws of The Territory of Guam and the exclusive jurisdiction of the Territory of Guam courts. Should the policy require an arbitration clause then the seat of arbitration shall be Guam.
- Premium pricing should not be included in the Technical and Qualitative proposal, and should be separately packaged and submitted with the "Price Proposal".

STEP TWO: PRICE PROPOSALS

- All Premiums and optional coverage pricing must be submitted on the format outlined in this MSB. and must be submitted in a separate sealed envelope marked "Price Proposal"
- Price Proposal format as outlined in this bid must be used, and Price Proposal must be signed by person authorized to bind contracts on behalf of bidder.

- If multi-year agreements, endorsements, continuity credits, or similar pricing mechanisms is used to offer reduced pricing; a detailed explanation of situations that may lead to any applicable penalties or increases of premium during the policy term must be attached.

Price proposals from unqualified Bidders shall be returned, unopened, after the Technical Proposal evaluation. GPA will perform a comprehensive evaluation of each price proposal submitted from the QBL and select the BIDDER with the best proposal. If the selected bidder cannot bind the terms as proposed within GPA's timeframe, at any time and its sole discretion GPA reserves the right to:

- Go to the next BIDDER or
- Cancel the bid

Table 1: Bid Milestones indicate the projected start and end dates for milestones in the Bid Process. GPA reserves the right to change the Bid Milestones at any time and at its sole discretion. All changes to the Bid Milestones shall be communicated to all bidders via an Amendment or Official Correspondence from GPA. It is the sole responsibility of the bidder to promptly register for the MSB at GPA and provide accurate correspondence addresses and email addresses and to check promptly for any updates to the bid or the Bid Milestones.

Table 1: Bid Milestones

Bid Process Milestones		**From Date**	**To Date**
Announcement:	Bid Announcement	5/08/2018	6/08/2018
	Bid Documents Available	5/08/2018	6/08/2018
Optional Facility Tour/Walkthrough for Safety and Engineering personnel. Details in MSB		**5/22/2018 and 5/23/2018 @9:00 A.M. both days**	
Submit Questions		5/10/2018	6/15/2018
Cut Off Date for Receipt of Questions		**6/15/2018, 4:00 P.M.**	
GPA Review and Answer Questions		5/10/2018	7/01/2018
Cut Off Date for Receipt of Proposals (BOTH Technical and Price Proposals)		**8/01/2018 2:30 P.M.**	
EVALUATION Step One:	Technical Proposal (Bid) Evaluation	8/02/2018	8/06/2018
	Determine & Notify Qualified Bidders	8/06/2018	8/07/2018
EVALUATION Step Two:	Opening of Price Proposals	**8/21/2018**	
	Evaluation of Price Proposal	8/21/2018	8/24/2018
	Evaluation Approval	8/27/2018	8/30/2018
	Notification of Qualified Bidder	8/30/2018	9/01/2018
Contract Finalization		TBD	TBD
Contract Approval & Award		TBD	TBD
Contract Signing		TBD	

Contract Mobilization	TBD	TBD
Insurance Policy Inception Date	**11/01/2018**	

SECTION II: INSTRUCTIONS AND PROCEDURES FOR BIDDERS:

1. INTRODUCTION

This is a multi-step bid procurement. The Technical and Price Proposals should both be submitted on or before the Cut-off Date of Receipt of Proposals, **2:30 p.m., August 1, 2018**. In Step One, only the submitted Technical Proposals will be evaluated. Bidders whose qualifications and technical proposal have been satisfied will be qualified for Step Two. In Step Two, the Bidder with the best proposal will be considered for award.

2. TIME AND SCHEDULE

The deadline for the submission of bids is **August 1, 2018 at 2:30 p.m.** One (1) Original and five (5) copies of all responsive materials must be received by GPA (not postmarked) no later than that date and hour. It is advisable to hand deliver or use courier services to expedite delivery of your bid, as Guam is served by several such courier services. It is bidder's responsibility to ensure the bid is received as required above. Late bids will not be considered.

3. PREPARATION AND SUBMISSION OF PROPOSALS

Envelopes containing proposals shall be sealed and marked on the face with the name and address of the Bidder, the Proposal Number and the time and date of submission. Prices should be in a separately sealed envelope. Telegraphic proposals with not be considered, nor will modifications by telegraph of proposals already submitted be considered. Proposals shall be delivered and received at the place of opening on or before the opening date and time. Proposals received through the mail will not be accepted if such mail is received at the address showing after the submission date and time. Proposals will not be opened publicly.

All submittals must strictly conform to the Multi Step Bid rules and any addenda.

One (1) Original and five (5) copies of each proposal must be submitted including all addenda, if any. Any and all documentation (proposed insurance policy forms and endorsements) will assist towards Bidder's evaluation and must be furnished with each proposal.

The proposal must be submitted before **August 1, 2018 at 2:30 p.m.** in a sealed envelope indicating the MSB number and addressed as follows:

TO: Guam Power Authority
GPWA Procurement Office
Gloria B. Nelson Public Service Building
688 Route 15
1st Floor, Room 101
Fadian, Guam 96913

Attn: Jamie L.C. Pangelinan
Supply Management Administration

Examination of MSB Document: Bidder shall examine the MSB Documents to inform themselves of all conditions and requirements for the execution of the proposed work. Ignorance on the part of Bidder of any part of the MSB will in no way relieve him/her of the obligation and responsibly assumed under the Contract.

Familiarity with Laws: Bidder is assumed to be familiar with Federal and Local laws, ordinances, rules and regulations that in any manner affect the work. Ignorance on the part of Bidder of any part of the MSB will in no way relieve him/her of the obligation and responsibly assumed under the Contract.

3. EXPLANATION TO BIDDERS

No oral explanation regarding the meaning of the specifications will be made and no oral instructions will be given before the award of the proposal. Discrepancies, omissions, or doubts as to the meaning of the specifications must be communicated in writing to the named procurement contact individual of the Guam Power Authority for interpretation. Bidder should act promptly and allow sufficient time for a reply to reach them before the submission of their proposals. Interpretation, if required, shall be made in the form of an amendment to the specifications, which will be forwarded to all prospective Bidders, and its receipt by the Bidder should be acknowledged on the proposal form. All questions, questions, queries should be received by GPA no later than the **cutoff date for the receipt of questions 6/15/2018 at 4:00 p.m**. Submit written queries, questions, and requests for clarification to:

TO: Guam Power Authority
GPWA Procurement Office
Gloria B. Nelson Public Service Building
688 Route 15
1st Floor, Room 101
Fadian, Guam 96913

Attn: Jamie L.C. Pangelinan
Supply Management Administration
Email: jcpangelinan@gpagwa.com

4. CLARIFICATION ON MULTI STEP BID

Each Bidder must carefully examine the MSB and all addenda. If any Bidder (a) finds any discrepancies, omission or ambiguities in the MSB documents, (b) is uncertain as to the intent or meaning of any provision of the MSB, or (c) has any question regarding the MSB, the Bidder must promptly notify GPA in writing no later than **Friday 6/15/2018 at 4:00 p.m.** at the address specified for submission of proposal. Replies to such notices may be made in the form of addenda, which will be issued simultaneously to all prospective Bidders.

5. FORM

All bids must be in writing and submitted in a sealed envelope and must be signed by an officer of the bidder having authority to bind the bidder's insurance contracts as proposed. The bids should respond in an organized fashion to all requirements of this Invitation for Bid.

6. MODIFICATION OR WITHDRAWAL OF BIDS

Bids may be modified or withdrawn prior to submittal date. Any bid withdrawal, or modification received at GPA after the due date is late and, as such, renders the underlying bid in compliance only as to that which is on hand at the submittal date and hour.

7. RECORDING BIDS.

Bids and modifications shall be submitted to GPA officials on or before **August 1, 2018 at 2:30 p.m**. in a sealed envelope indicating the MSB number and addressed as follows:

To: Guam Power Authority
GPWA Procurement Office
Gloria B. Nelson Public Service Building
688 Route 15,
1st floor, Room 101
Fadian, Guam 96913

Attn: Jamie L.C. Pangelinan
Supply Management Administration

Bidders shall be responsible for ensuring the written bid (and all required documents) is received by the due date and hour. Any bid received after the due date and hour is late and will not be considered by GPA. After the due date and hour, a Register of Bids shall be prepared which shall include for all initial bids the name of each bidder, the number of modifications received, if any, and an indication of the coverage proposed, i.e. coverage of all risks of loss (a) as requested by GPA, (b) less than GPA request, and/or (c) alternate coverage as requested.

8. CONFIDENTIAL DATA

Bidders should designate trade secrets or other proprietary data to be confidential. The Guam procurement laws and regulations shall govern confidentiality.

9. AWARD

Determination of the winning bidder shall be made on or about August 31 - September 1, 2018. GPA intends to have all discussions and negotiations completed no later than August 31, 2018, after which date the Bid Evaluation Committee and the General Manager shall prepare their final report and recommendations. Appropriate notification of award shall be issued promptly after the CCU and PUC approval.

10. CANCELLATION OF INVITATION; DELAYS

GPA reserves the right to cancel or to withdraw this MSB, to delay determination on this MSB, or to reject all bids, in whole or in part, at any time prior to final award. The reasons for the cancellation, delay or rejection shall be made a part of the procurement file and shall be available for public inspection.

11. INSPECTION OF GPA PROPERTIES

Prospective bidders may inspect GPA properties on **May 22 -23, 2018**. These dates will be the only times available for on-site inspections. Please note that proposals are due on or before **August 1, 2018 at 2:30 p.m.** so plan accordingly if you plan to attend these inspections. GPA will provide a representative to conduct the inspections and answer questions on-site. Please advise the Supply Management Administrator, Ms. Jamie Pangelinan, if you plan to inspect the properties. Each person that plans to inspect GPA properties must be cleared by Homeland Security through GPA. Therefore, each person must submit a copy of their Passport to GPA a minimum of 5 business days prior to the inspection date to get security clearance to be allowed on GPA property.

12. SUMMARY OF SERVICES

All bidders should include a summary of how they envision servicing GPA account. Policy servicing should be identified specifically with a list and delivery timeline of services offered. Bidders should also identify the "Account Executive" that will be assigned to GPA and their support team along with frequency of visits, etc.

13. CCU and PUC APPROVAL

Contracts will be subject to the written approval of the Consolidated Commission on Utilities and the Public Utilities Commission on Guam.

14. REPRESENTATION REGARDING GRATUITIES AND KICKBACKS.

The bidder or contractor represents that it has not violated, is not violating, and promises that it will not violate the prohibition against gratuities and kickbacks set forth in Section 11-206 (Gratuities and Kickbacks) of the Guam Procurement Regulations.

15. REPRESENTATION REGARDING CONTINGENT FEES.

Contractor represents that it has not retained a person to solicit or secure a territorial contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, except for retention of bona fide employees or bona fide established commercial selling agencies for the purpose of securing business.

16. BID BOND

Along with the Bid Proposals on or before August 1, 2018 at 2:30 p.m., all bidders shall submit to GPA a bid bond in the amount of TEN THOUSAND U.S. DOLLARS (U.S. $10,000) made payable to the Guam Power Authority. In lieu of a bid bond, bidders may submit US currency valued at TEN THOUSAND U.S. DOLLARS (USD 10,000) in the form of cash in USD, bank draft, certified check, or by wire transfer to Guam Power Authority, Routing/Transit #121405115, Account No. 0601-026246, Bank of Guam, Hagatna, Guam. Bidders with unselected bids will have bid bonds returned with written notices of rejection. Bid bonds submitted in cash or certified check will be returned by wire transfer. Bidders shall advise GPA of bank, location and account number to facilitate delivery. In the absence of a telegraphic address, bid bonds will be returned by mail in check form payable to bidder. The bidder with the acceptable bid will have bid bond returned within ten business days of delivery of Insurance Binders for selected insurance policies by GPA. For the purposes of this solicitation, the bid bond is being required as an indication of "good faith" by the bidder and is in the best interest of GPA in accordance with the procurement laws, rules and regulations of the Government of Guam and GPA.

SECTION III: INSURANCE COVERAGE SPECIFICATIONS

1. INSURANCE COVERAGE

GPA seeks coverage for "all risks of loss" basis coverage to include but not limited to the following lines of business:

a. Property
b. Boiler and Machinery breakdown

c. Catastrophe Coverage including earthquake, flood, wind, and tsunami
d. Business Income/Extra Expense
e. Terrorism, both certified and non-certified acts; quoted on an optional basis
f. Cyber liability

The property, boiler & machinery, catastrophe, business income/extra expense, and terrorism is placed under one cover. GPA is seeking comparable or superior coverage to include all of the above coverage. Terrorism shall be quoted on an optional basis.

Acceptability of any and all proposals will be evaluated as to their overall economic value.

Primary Insurance Carriers or Fronting Carriers must have at least an A.M. Best Rating of A-, VII or greater to be considered.

Reinsurance companies or underwriters must be of demonstrated size and capacity to underwrite a Property program of the size of GPA.

2. BID FORMAT

Bidders are free to submit their bids in a convenient format, however, at a minimum; the bids should provide:

Bidder's Firm information including:

- Years in business
- Total property and total liability insurance premiums placed annually
- Ownership legal structure and ownership details
- Office location that would serve GPA
- Claims, loss control/engineering and other core services performed
- List of Power Generation accounts serviced by the account team
- Key personnel who would be placing and servicing the GPA's program
- Biography, certificates, designations, and licenses of account team and key personnel
- Other information that the respective firm believes GPA should consider
- Any key alignments with other insurance entity or intermediary (retail, wholesale, reinsurance, Lloyds, etc.)
- Bidder's experience with electric utilities or Energy Company, especially those with hurricane or earthquake exposure and boiler & machinery exposure.
- Copies of currently active Licenses of all intermediaries
- Primary (Fronting) Carriers' or underwriters' Certificate of Authority to Transact business on Guam
- Primary (Fronting) Carriers' or underwriters' Most recent AM Best rating

Insurance coverage terms including but not limited to:

- Explanation of any exceptions to the minimum coverage specifications
- Explanation of any coverage enhancements exceeding minimum specifications
- Explanation of any coverage deficiencies not meeting minimum coverage specifications
- Specifically noting which requested coverage enhancements have been achieved, which cannot be achieved and, if applicable, detail any additional enhancements that were obtained.
- Identification of Lead markets utilized to achieve the 20% commitment or market support. Lead markets and/or carriers must be rated A- or better by AM Best with minimum financial size of VII or greater.

- This insurance shall be governed by and construed in accordance with the laws of The Territory of Guam and the exclusive jurisdiction of the Territory of Guam courts. Should the policy require an arbitration clause then the seat of arbitration shall be Guam.
- Proposed policy forms and applicable endorsements in their entirety must be attached to proposals.
- Firm quotes or written confirmation of at least 20% support from insurers, underwriters, or reinsurers.

In order to show bidder's reliability and responsibility, bidder should substantiate its insurer financial capacity and industry reputation to honor and service the size and type of insurance proposed. Bidder should identify its service team, lead market, underwriters, and or insurers represented in as much detail as practical. All proposals must have, at a minimum, 20% of total lines substantiated by firm quotes from proposing underwriters, insurers, or reinsurers. Bidder should include proof of firm quotes either by signed/stamped slips or letters from underwriters, insurers, or reinsurers.

If bidder fails to supply information requested by GPA concerning the bidder's insurer's financial capacity and rating, which GPA may request any time prior to award, GPA shall base determination of responsibility on any available information, or GPA may find bidder non-responsive.

- RATING DATA

Information about GPA and its experience in peril exposure and risk retention and/or transfer is contained in the Rating Data attachment. Prospective bidders requiring additional rating data should address their inquiry to the Procurement Officer identified in this bid. Replies with significant data will be furnished to all persons who, on record, have registered for this multi-step bid (MSB) and have agreed in writing by signing the Non-Disclosure Agreement.

SECTION IV: CONTRACT TERMS

GPA is hereby inviting bids for insurance contracts (policies) on a multi-year or long-term basis (e.g., three years) with term to commence November 1, 2018 to November 1, 2021. GPA understands that most insurance policies have 12-month terms, so GPA is not requiring three-year policies. GPA fully expects to stay with selected insurance program for at least three years renewing on an annual basis.

Insurance policies proposed are acceptable for 12-month terms or 36-month terms billed annually.

Bidders will need to furnish the proposed contract which shall include at a minimum the following:

- Detailed description of the coverage terms proposed including but not limited to:
  - Any exceptions to the minimum coverage specifications outlined in this MSB
  - Specifically noting which requested coverage enhancements have been achieved, which cannot be achieved and, if applicable, detail any additional enhancements that were obtained.
- Premiums for proposed coverage comparable to the expiring coverage as set out in Appendix A, and, any incremental premiums resulting from coverage enhancements. Also, detail any premium increases or decreases for optional limits and deductibles requested in the coverage specifications.
- Lead markets that are utilized to achieve the 20% commitment. Fronting carriers or Primary insurers must be rated A-, VII or better by AM Best.

SECTION V: EVALUATION OF BIDS

In evaluating bids, GPA will consider which proposal offers the most robust and comprehensive insurance coverage available in the market by reputable and highly rated underwriters and carriers with the financial capacity to honor insurance terms for a program the size and quality as the Guam Power Authority with its assets of $1.1 Billion. GPA

reserves the sole right to determine the acceptability and ranking of bids in any respect to meet GPA's needs. In the evaluation process, the following factors will be considered:

CRITERIA	POINTS
• Ability to service GPA/past and current performance of similar contracts	5
• Utility, Municipality, and other large program insurance experience	5
• Intermediary, Underwriter, Insurance Carrier personnel and qualifications	10
• Industry reputation, Client References	10
• Financial capacity and current AM Best rating of carriers and re-insurers	20
• Breadth of Policy coverage and extent of restrictions or exclusions	40
• Additional coverages	10
TOTAL POINTS	100

GUAM POWER AUTHORITY
PROPERTY INSURANCE SPECIFICATIONS
MINIMUM COVERAGE REQUIREMENTS

POLICY INFORMATION:

Named Insured:

Guam Power Authority
and/or its Subsidiary, affiliates,
and/or Associated Agencies as now or hereafter constituted
P.O. Box 2977
Hagatna, Guam 96932-2977

Additional Named Insured's and Loss Payees as their interest may appear:

1. Government of the United Stated of America, in respect of various facilities on Guam owned by the United States of America and leased to the Guam Power Authority
2. Bank of Guam

Policy Period:

From the 1st of November 2018 to the 1st of November 2019 both days at 00:01 hours Local Standard Time at the locations of the Property Insured.

- GPA expects to go through renewals each year.

Property and Interest Insured

Material Damage

Real and personal property including Buildings, Furniture, Fixtures and Equipment, Law and Ordinance Coverage for all property, Contents, Plant, Fuel Stocks, Transmission and Distribution lines on Generating Premise and within 1,000 feet of premises, Underground Transmission and Distribution lines, Machinery and Boilers of every kind, nature and description (including improvements and betterments) owned, leased, acquired, used or intended for use by the insured, or hereafter Erected, Installed or Acquired including whilst in the Incidental Course of Construction, Erection, Installation and Assembly and Real and Personal Property of Others in the Insured's Care, Custody, and Control and including Property in the Care, Custody, and Control of Third Parties and the Insured's liability imposed by law or assumed by contract (by an officer of the Insured) for such Property and/or at the option of the Insured Personal Property of the Insured's Officials and Employees while on the Premises of the Insured and/or Contractors' and Vendors' interests in property covered to the extent of the Insured liability imposed by law or assumed by contract, (by an officer of the Insured) and/or Property in Transit and/or Storage including Raw Materials, Expediting Expenses, Valuable Paper, Bullion, Manuscripts, Drawings, Blueprints and/or Specifications, Leasehold Interest and Records, Accounts Receivable, Electronic Data Processing Equipment, Computer Equipment, Computer Date and Media, Petroleum Products which are liquid form at normal atmospheric pressures and temperatures while such products are in underground storage, and foundations,

piers or other supports of brick, stone or concrete, and shafts, tunnels, and dams, and all structural parts and all appurtenant structures and equipment at the side of underground power houses, and cables, wires and underground conduit and underground Transmission and Distribution lines.

Territorial Limits

Various locations in Guam and whilst in inland transit

Sum Insured

USD $300,000,000 each and every occurrence in respects Property Damage/Business Interruption/Extra Expense combined for 100% subject to sub-limits stated below.

Optional Limits: USD 400,000,000 and USD 500,000,000

Sub-limits

Business Interruption – USD $5,000,000 each and every occurrence

Extra Expense – USD $15,000,000 each and every occurrence

Earthquake, Flood, Windstorm, Cyclone, Typhoon, and Tsunami – USD $100,000,000 each and every occurrence

Debris Removal – USD $10,000,000 or 10% of loss whichever the greater

Seepage of pollution – USD $5,000,000

Ingress/Egress – 30 days and limited to loss occurring within five (5) statute miles of the insured's premises

Military/Civil Authorities Clause – 30 days and limited to loss occurring within five (5) statute miles of the insured's premises

Protection and Preservation of Property – USD $1,000,000 each and every occurrence

Underground Transmission and Distribution Lines – USD $35,000,000

Property in the Incidental Course of Construction – USD $25,000,000

Certified and Non-Certified Acts of Terrorism – USD $200,000,000

Basis of Valuation:

Replacement Cost value for all property regardless of age or condition. See attached property schedule for values.

Retentions:

- Property damage
  - USD $2,500,000 each and every occurrence in respect of all perils other than Earthquake, Flood, Wind, and Tsunami (for 100%) for locations with a declared estimated Replacement Cost value equal to or greater than USD $10,000,000

- USD $1,000,000 each and every occurrence in respect all perils other than Earthquake, Flood, Wind, and Tsunami (for 100%) for locations with a declared estimated Replacement Cost value less than USD $10,000,000
- USD $10,000,000 each and every occurrence in respect of Earthquake, Flood, Wind, and Tsunami (for 100%);
- Business Interruption: 60 days each and every occurrence
- Extra expense: 60 days each and every occurrence

Co-insurance

None

Additional Coverages:

- Cyber Liability Coverage
  Limits: USD 5,000,000 each claim and in the aggregate
  Deductible: USD 50,000 each claim

Underwriting Information

Please find attached a list of underwriting information

Property Schedule is replacement cost

Policy Form

All risk property form

Appendix A

GPA Current Insurance Program

COVERAGE	LIMITS	RETENTIONS
Property and Boiler & Machinery	$300,000,000 Blanket	$2,500,000/$1,000,000
Business Interruption	$5,000,000	60 days
-Terrorism, All Risk	$200,000,000	$2,500,000
Extra Expense	$5,000,000	60 days
Cyber Liability Coverage	$5,000,000 each claim/aggregate	$50,000
	SUBLIMITS:	
Earthquake, Flood, Typhoon and Tsunami	$100,000,000 Blanket	$10,000,000
Underground T&D lines	$35,000,000	$1,000,000

Appendix B

GPA INSURANCE RATING DATA

Appendix C

GPA LOSS HISTORY

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

Issues for Decision

Resolution No. 2018-07:

Authorizing the Management of Guam Power Authority (GPA) to Amend the Energy Conversion Agreement (ECA) for the the Piti #8 and #9 Slow Speed Diesel Power Plant to Extend the Contract Term for Five (5) Additional Contract Years

What is the project's objective? Is it necessary and urgent?
GPA's current ECA with Marianas Energy Company expires January 2019. The ownership of Piti #8 and #9 will transfer to GPA upon ECA expiration. GPA does not have the means to operate and maintain this plant reliably. Notably, GPA neither has the O&M supply chain nor experienced personnel. Currently the most reliable baseload units, Piti #8 and #9 are critical for assuring adequate, uninterrupted power supply. The loss of Piti #8 and #9 increases fuel consumption by over $200,000 at peak loads of up to 277 MW.

GPA will issue a new contract solicitation for the management, operation and maintenance of the power plant. However, in the interim, GPA and customers benefit significantly by extending the Energy Conversion Agreement for following:

- **Retain O&M expertise of the units at a critical time**. There are very few land-based slow speed diesel plants; extending MEC contract retains critical expertise allowing for proper cross-training once the new contract is awarded (cross training will start once the extension period commences, and before the new contract commences; overlap between MEC employees and new IPP employees ensures critical knowledge and skills are documented and transferred). GPA has a slim margin for reserve generation in the next few years with Piti #8 and #9 prior to the new power plant commissioning.
- **Retain relationship with OEM and allow GPA (and MEC) to contract with OEMs and key suppliers for critical repairs, upgrades and upcoming conversion o ULSD**. MEC's strategic advantage includes supply chain relationships with OEMs and key suppliers. Without an extension, GPA cannot smoothly undertake key capital improvement projects such as conversion to ULSD, turbo-charger upgrades, and cylinder liner/injection system upgrade recommended by preliminary Plant Assessment Review studies.
- **Efficient Procurement Process**. MEC can ensure that there is adequate inventory, and can also expedite procurement of necessary equipment and services in case of emergency.
- **Allows efficient operation and maintenance of the plant throughout the period when GPA completes projects related to environmental compliance, as well as during the award, construction and installation of new power plant.**

Where is the location?
The Piti #8 and #9 Power Plant is located in Cabras, Guam.

How much will it cost?

	Re-Capitalization Fee	1	2	3	4	5	
		2019	2020	2021	2022	2023	Total
	CIP/PIP (CAPEX)						
1	Diesel Engine	764,058	1,070,741	898,978	0	0	2,733,777
2	Electrical Sys./Generators /Transformers	0	71,500	132,000	132,000	0	335,500
3	Engine Auxiliary Equipment	869,668	807,034	225,566	0	0	1,902,267
4	Steam System	377,893	384,709	334,950	0	0	1,097,551
5	BOP's	2,252,846	1,761,805	512,664	0	0	4,527,315
6	CIP/PIP (CAPEX)	**4,264,465**	**4,095,788**	**2,104,158**	**132,000**	**0**	**10,596,411**
	MAJOR OVERHAUL						
7	Labor	60,500	62,315	64,185	143,110	145,093	475,203
8	Spare Parts	642,678	687,895	687,895	688,125	688,125	3,394,718
9	Rotating Spares	72,719	78,552	78,552	138,248	138,247	506,318
10	MAJOR OVERHAUL	**775,897**	**828,762**	**830,632**	**969,483**	**971,465**	**4,376,239**
11	**Retrofit from BWSC**				**16,022,512**		**16,022,512**
12	**Sub-Total**	**5,040,362**	**4,924,550**	**2,934,790**	**17,123,995**	**971,465**	**30,995,162**
13	**Cost of Money (4% of Sub-Total)**	201,614	196,982	117,392	684,960	38,859	1,239,806
14	**EPC O&M Fee (10% of Sub-Total)**	504,036	492,455	293,479	1,712,399	97,147	3,099,516
15	**TOTAL**	**$5,746,012**	**$5,613,987**	**$3,345,661**	**$19,521,354**	**$1,107,470**	**$35,334,484**

Per Year	$7,066,897
Per Month	$588,908

The RFP/BID responses:
If approved, GPA will complete discussions and formalize extension negotiations in the 2nd quarter of 2018, followed by the issuance of a bid for a new ECA.

What is its funding source?
Revenue Funds.

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671) 648-3002 | guamccu.org

RESOLUTION NO. 2018-07

RELATIVE TO AUTHORIZATION OF PITI 8&9 CONTRACT EXTENSION

WHEREAS, in 1996 under an Energy Conversion Agreement (ECA), GPA contracted an Independent Power Producer for a Build, Operate and Transfer (BOT) project to construct Piti 8 & 9 Power Plant, perform twenty-years of Operation and Maintenance (O&M), and transfer ownership of the plant to GPA at the end of the contract term; and

WHEREAS, Marianas Energy Company currently manages and operates the plant under the ECA which will expire in January 2019; and

WHEREAS, the Piti 8 & 9 Power Plant contains two slow speed diesel units providing 88 MW of production capacity which is 42% of GPA's total baseload capacity; and

WHEREAS, GPA does not have the staff to manage, operate, and maintain the Piti 8 & 9 Power Plant upon the transfer date of January 2019; and

WHEREAS, GPA proposes a private-public partnership to maintain high efficiency and reliability necessary to support the Island Wide Power System (IWPS); and

WHEREAS, GPA intended to solicit for a new IPP contract but was only recently able to complete a site inspection of the plant performed by specialists in slow speed technology that identifies necessary life extension, safety, and environmental projects required for continued plant operation; and

WHEREAS, the delay in this task has prevented the earlier completion of the bid documents and may impact the transition to a new IPP contract by the current contract expiration date; and

WHEREAS, GPA has experienced delays in contract awards due to procurement protests which may impact the transition schedule; and

RESOLUTION NO: 2018-07

WHEREAS, without a contract extension, MEC will not continue to manage and operate the power plant beyond January 2019; and

WHEREAS, land-based slow speed diesel plants are unique, and there may be challenges in seeking or retaining employees having specialized skills in the operation and maintenance of these units; and

WHEREAS, the continued reliability of the MEC power plant is crucial to the IWPS especially since the loss of the Cabras 3&4 Power Plant and the aged condition of the Cabras 1&2 Power Plant; and

WHEREAS, prior to operation of the New Power Plant, an outage of both Piti 8 & 9 is estimated to cost customers an additional $221,658 in fuel expenses per day assuming a system peak of 277 MW, all other units available, a $60/bbl RFO cost, and an $80/bbl ULSD cost; and

WHEREAS, sustained outages of Piti 8 & 9 will result in increased use of the Cabras 1&2 power plant and less efficient Combustion Turbine Power Plants; and

WHEREAS, with the recommended capital investments and planned conversion from RFO to ULSD fuel, GPA will benefit if the plant is managed by the firm that has an established relationship with OEMs and Key Suppliers; and

WHEREAS, an extended period of cross-training and transitioning prior to expiration of the ECA and before a new IPP contract commences will ensure that the plant will continue to be operated and maintained by qualified personnel; and

WHEREAS, GPA and MEC have mutually agreed to a 5-year extension of the contract starting in January 2019 pursuant to Article 32 of the ECA; and

WHEREAS, approval is requested to allow the General Manager to extend the ECA with MEC for an additional 5 years, and to petition the PUC for approval of the contract extension.

NOW, THEREFORE, BE IT RESOLVED, by the CONSOLIDATED COMMISSION ON UTILITIES, the GOVERNING BODY of the GUAM POWER AUTHORITY as FOLLOWS:

1. The CCU authorizes GPA to extend the Energy Conversion Agreement for management, operations, and maintenance of Piti 8 & 9 power plant with Marianas Energy Company with the following contract provisions:
    a. Term: 5 years

b. Fees:
   i. Annual Fixed Recapitalization Fee of $7,067,000 for $35,334,000 of priority projects needed to ensure plant reliability, and the fuel conversion to ultra-low sulfur diesel (Attachment A) to comply with USEPA regulations.
   ii. Fixed O&M Fee = $6.3720/kW per month estimated at $10,085 million annually
   iii. Variable O&M Fee = $0.0024/kWh estimated at $2,245 million annually
c. Performance Guarantees
   i. Heat Rate – 7,720 BTU/KWH (HHV)
   ii. Availability – 90%
d. Other requirements
   i. Annual Performance Test (Heat Rate)
   ii. ULSD Fuel Conversion

2. The General Manager is authorized to petition the PUC for approval of the extension.

RESOLVED, that the Chairman certifies and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED AND APPROVED THIS 27th DAY OF MARCH 2018.

Certified by:	Attested by:
_____	_____
JOSEPH T. DUENAS	**J. GEORGE BAMBA**
Chairperson	Secretary
Consolidated Commission on Utilities	Consolidated Commission on Utilities

I, J. George Bamba, Secretary for the Consolidated Commission on Utilities (CCU), as evidenced by my signature above do certify as follows:

The foregoing is a full, true, and accurate copy of the resolution duly adopted at a regular meeting of the members of Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

RESOLUTION NO: 2018-07

Ayes: _____

Nays: _____

Absent: _____

Abstain: _____

RESOLUTION NO: 2018-07

ATTACHMENT A

MEC PROJECT SUMMARY

	Re-Capitalization Fee	1	2	3	4	5	
		2019	2020	2021	2022	2023	Total
	CIP/PIP (CAPEX)						
1	Diesel Engine	764,058	1,070,741	898,978	0	0	2,733,777
2	Electrical Sys./Generators /Transformers	0	71,500	132,000	132,000	0	335,500
3	Engine Auxiliary Equipment	869,668	807,034	225,566	0	0	1,902,267
4	Steam System	377,893	384,709	334,950	0	0	1,097,551
5	BOP's	2,252,846	1,761,805	512,664	0	0	4,527,315
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	MAJOR OVERHAUL						
7	Labor	60,500	62,315	64,185	143,110	145,093	475,203
8	Spare Parts	642,678	687,895	687,895	688,125	688,125	3,394,718
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10	MAJOR OVERHAUL	**775,897**	**828,762**	**830,632**	**969,483**	**971,465**	**4,376,239**
11	**Retrofit from BWSC**				**16,022,512**		**16,022,512**
12	**Sub-Total**	**5,040,362**	**4,924,550**	**2,934,790**	**17,123,995**	**971,465**	**30,995,162**
13	**Cost of Money (4% of Sub-Total)**	201,614	196,982	117,392	684,960	38,859	1,239,806
14	**EPC O&M Fee (10% of Sub-Total)**	504,036	492,455	293,479	1,712,399	97,147	3,099,516
15	**TOTAL**	**$5,746,012**	**$5,613,987**	**$3,345,661**	**$19,521,354**	**$1,107,470**	**$35,334,484**

Per Year	$7,066,897
Per Month	$588,908

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

TO: **Consolidated Commission on Utilities**

FROM: **General Manager**

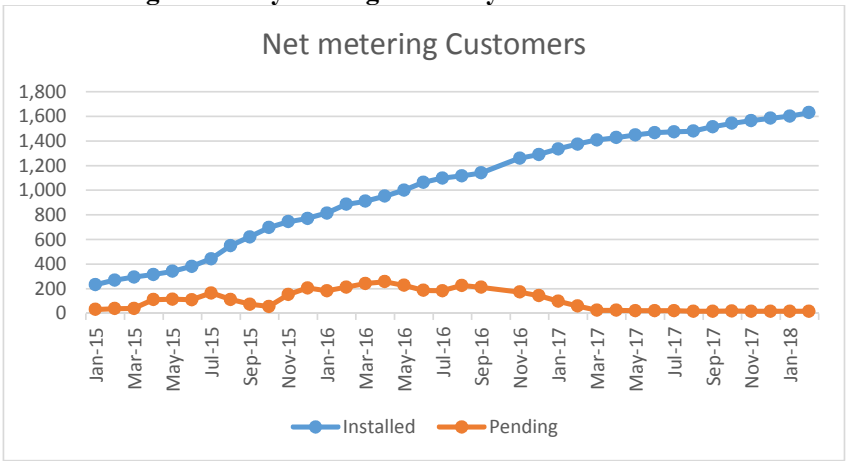
DATE: **March 22, 2018**

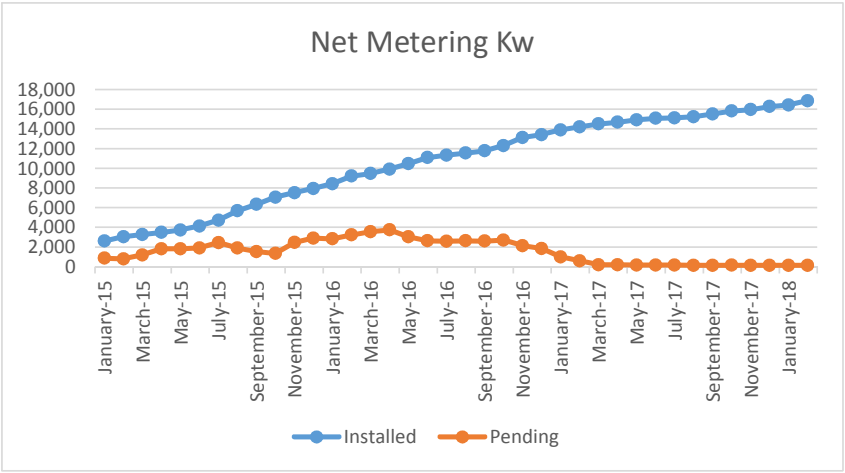
SUBJECT: **General Manager's Report**

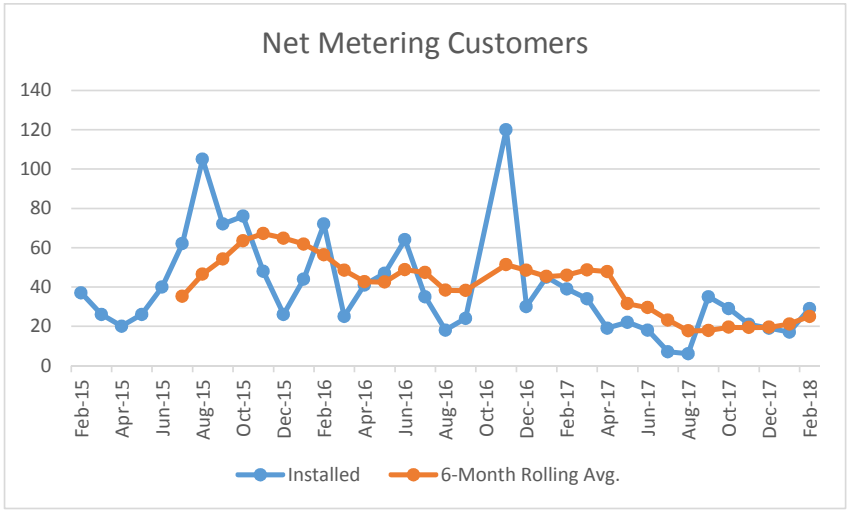
1. **Generation System Update:** The following summarizes the expected generation capacity situation for April 2018. The peak demand for March is estimated at 250 MW. The main transformer change-out and the chemical cleaning of Cabras 2 steam boiler are scheduled to be completed on March 26th. GPA is then scheduled to do chemical cleaning of Cabras 1 steam boiler thereafter thru early April. The chemical cleaning is necessary in order to improve plant availability and reliability.

April 2018 Capacity Available:	**338 MW**
April 2018 Projected Demand	**250 MW**
Available Reserve Margin	**88 MW**

2. Net metering Summary Ending February 2018:







Net Metering Summary Ending February 2018:

Description:	**Count**	**Kw**
Active	**1,630**	**16,849**
Pending	17	129
Totals:	1,647	16,978

Service:	**Count**	**KW**	**Kw/Customer**
Residential	1,544	13,689	8.9
Others	86	3,160	36.7
Total:	1,630	16,849	10.3
% Residential	**94.7%**	**81.2%**	
Estimated 12 Months Revenue Impact:	**$3,143,332**		

3. Renewable Energy Production Summary Thru February 2018:

Energy Production Source:	Kwh	Oil Barrels Avoided	Fuel Cost Avoided
NRG Total Production beginning Oct 2015	115,335,182	192,842	$10,606,332
Net Metering Estimated Production beginning Jan 2015	55,772,399	93,252	$5,128,882
Wind Power Production beginning Jan 2016	867,531	1,451	$79,779
Renewables Total:	**171,975,112**	**287,545**	**$15,814,993**

4. Demand Side Management (DSM) Program Expenses Thru January 2018:

All Expenses – Fiscal Year

Description	FY16	FY17	FY18 as of February	Total to Date
Regular/OT Pay	$11,348.80	$22,256.00	$6,761.02	$40,365.82
Other Contractual	28,278.50	$73,010.05	$2,885.00	$104,173.55
Paid Rebates-Split AC	$154,700.00	$557,275.00	$435,825.00	$1,147,800.00
Paid Rebates-Central AC	$3,400.00	$8,200.00	$800.00	$12,400.00
Paid Rebates-Washer/Dryer	$2,800.00	$7,425.00	$2,800.00	$12,025.00
Total Expenses	200,527.30	$668,166.05	$449,071.02	$1,317,764.37

5. **Net Metering Customer Credit Recommendation:** We continue to prepare GPA's recommendation for CCU's approval but would need more time and now plan to bring our recommendation forward during the May CCU work Session. We are preparing a comprehensive analysis of the demographics of the 1630 customers and need more time to gather the data needed to complete our report. A public meeting for Net Metering is scheduled for Wednesday, April 18, 2018 from 4:00 pm to 6:00 pm here at the Gloria B. Nelson Public Service Building in Fadian. This meeting will allow MRE to present their value of solar (VOS) report. We will review MRE's VOS report before making a final recommendation.

6. **Phase II Renewables:** The PUC conditionally approved the KEPCO-LG 60 MW Power Purchase Agreement at their February 22nd Meeting. It is anticipated the PUC will approve the 60 MW HANWHA project at their March 29th meeting.

7. **Phase III Renewables Bid**: The bid has been issued. The bid request is for about 40MW of solar PV renewables to be constructed on Navy leased land. The energy produced would be stored in batteries during the day and released at nighttime to meet peak time load. The bid price opening date for acceptable proposals is set for April 17, 2018.

8. **PUC Agenda for March 29, 2018 regular meeting:**
    - **Docket 18-06, Petition to Approve Phase II Renewable Award to KEPCO-LG CNS Consortium**
    - **Docket 18-08, Petition to Approve Phase II Renewable Award to HANWA ENERGY CORPORATION**
    - **GPA Docket 18-09, Petition to Increase EPCM Contract**
    - **GPA Docket 18-10, Petition to Approve Contract Extension for Tristar Terminals Guam, Inc.**
    - **GPA Docket 18-11, Petition to Approve GPA's Use of Bond Financing Savings for GPA's "Bringing Energy Savings to Schools" (BESTS) and Demand Side Management Program**

9. **New Power Plant Procurement:** The rezoning of the land for the new power plant is pending Legislative action. Bill-223-34 has not been introduced for deliberation during this March's regular session due to all the special session on GovGuam finances and seems that the bill will more likely be brought up in the April session.

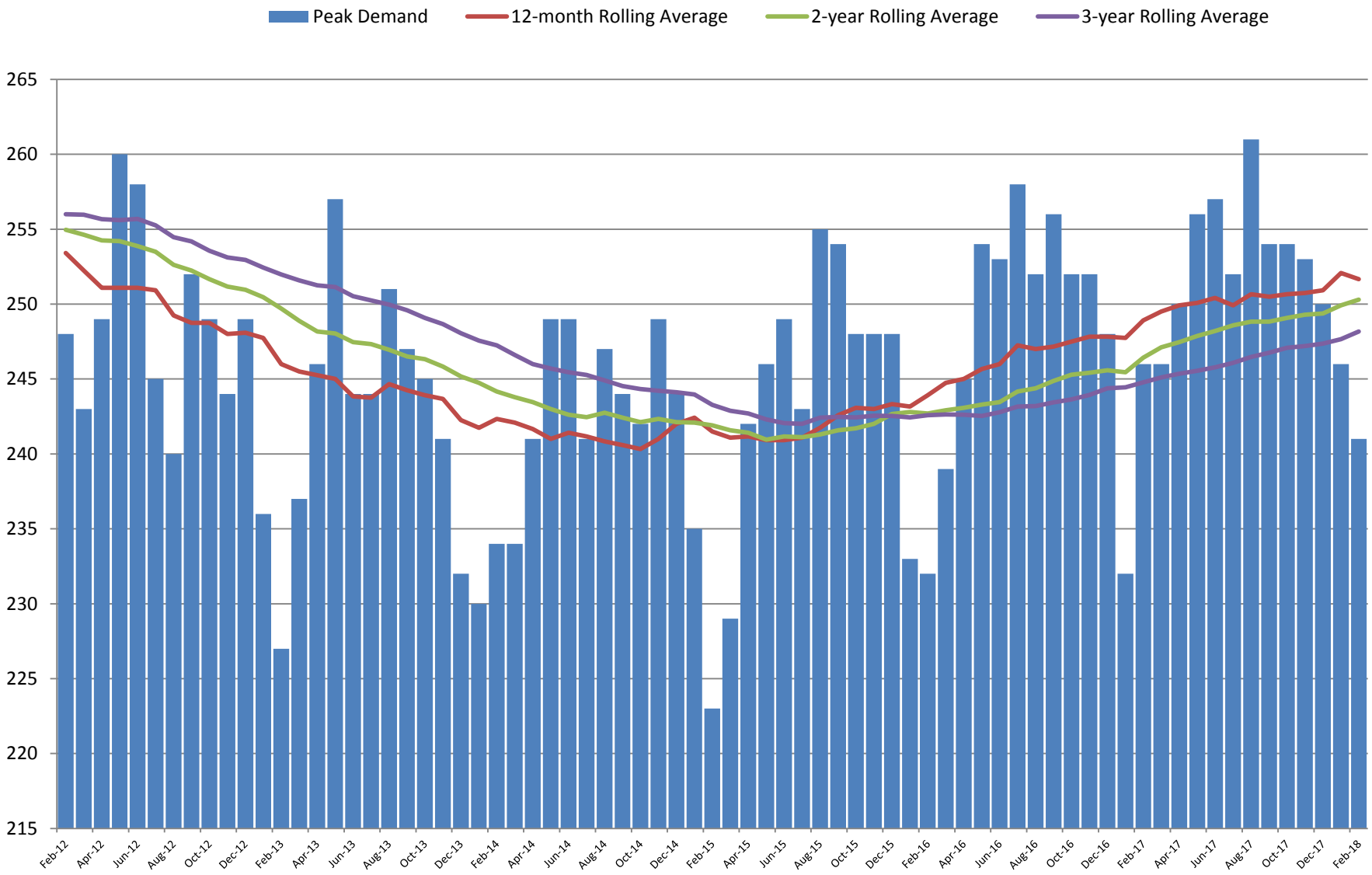
10. **Moody's Rating:** Our bond rating was changed from stable outlook to negative outlook because of the fiscal situation of the Government of Guam. We had discussions with Moody's prior to the change indicating to them that GPA will not be adversely impacted but to no avail. The downgrade was not under any control or failure of GPA and although disappointing, GPA will move on and time should prove GPA's point.

11. **GPA's 50th Anniversary Celebration:** Work continues towards the celebration of GPA's 50th anniversary. A proclamation signing is being scheduled for May 8, 2018 combined with a "roll Call" of the 4th cycle GPA Apprentice Graduates here at our Gloria B. Nelson Facility. The comprehensive suggested listing of programs and events will be presented to the CCU in the April work session.

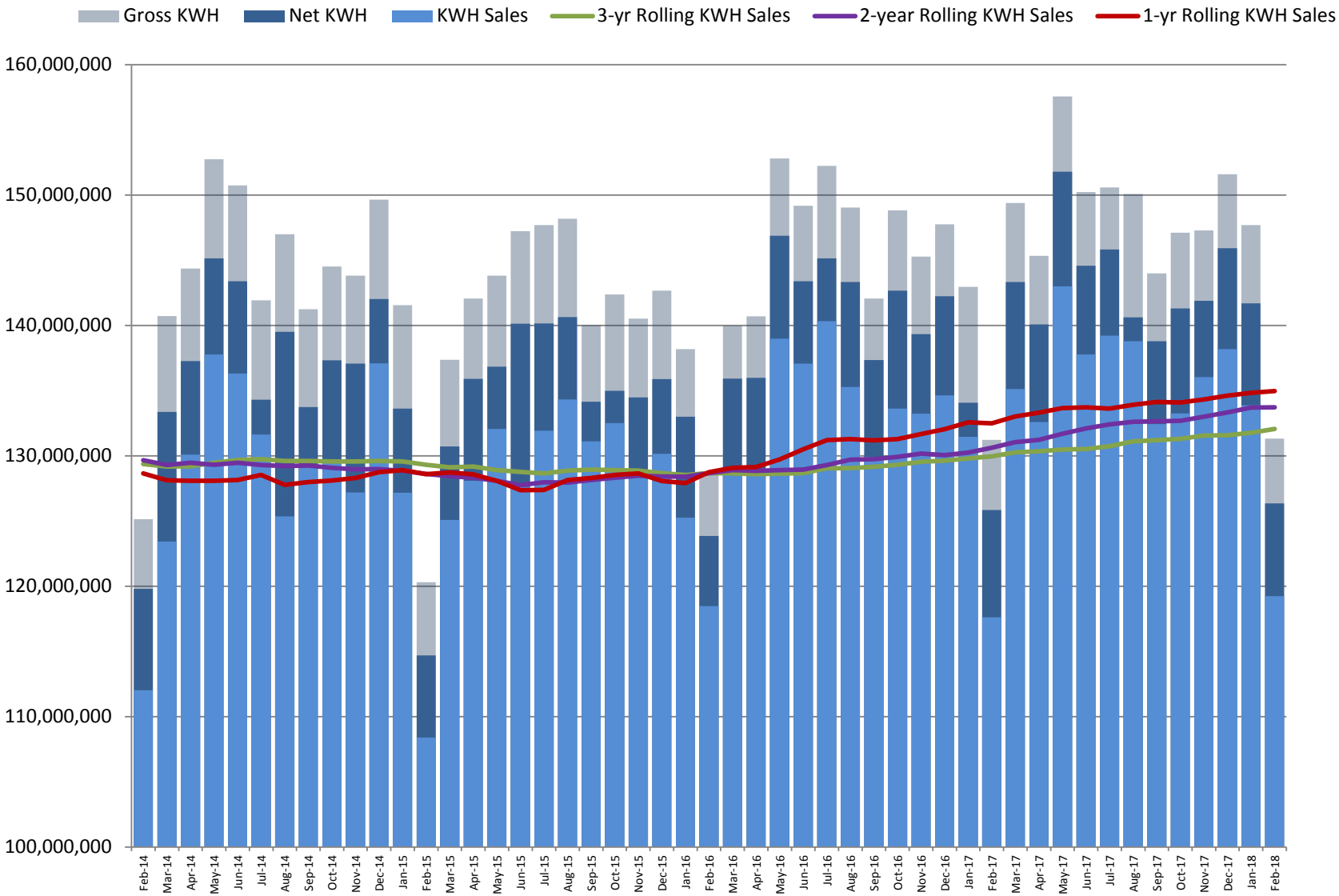
12. **Key Performance Indicators:** The following are updated indicators thru February 2018.

John M. Benavente, P.E.

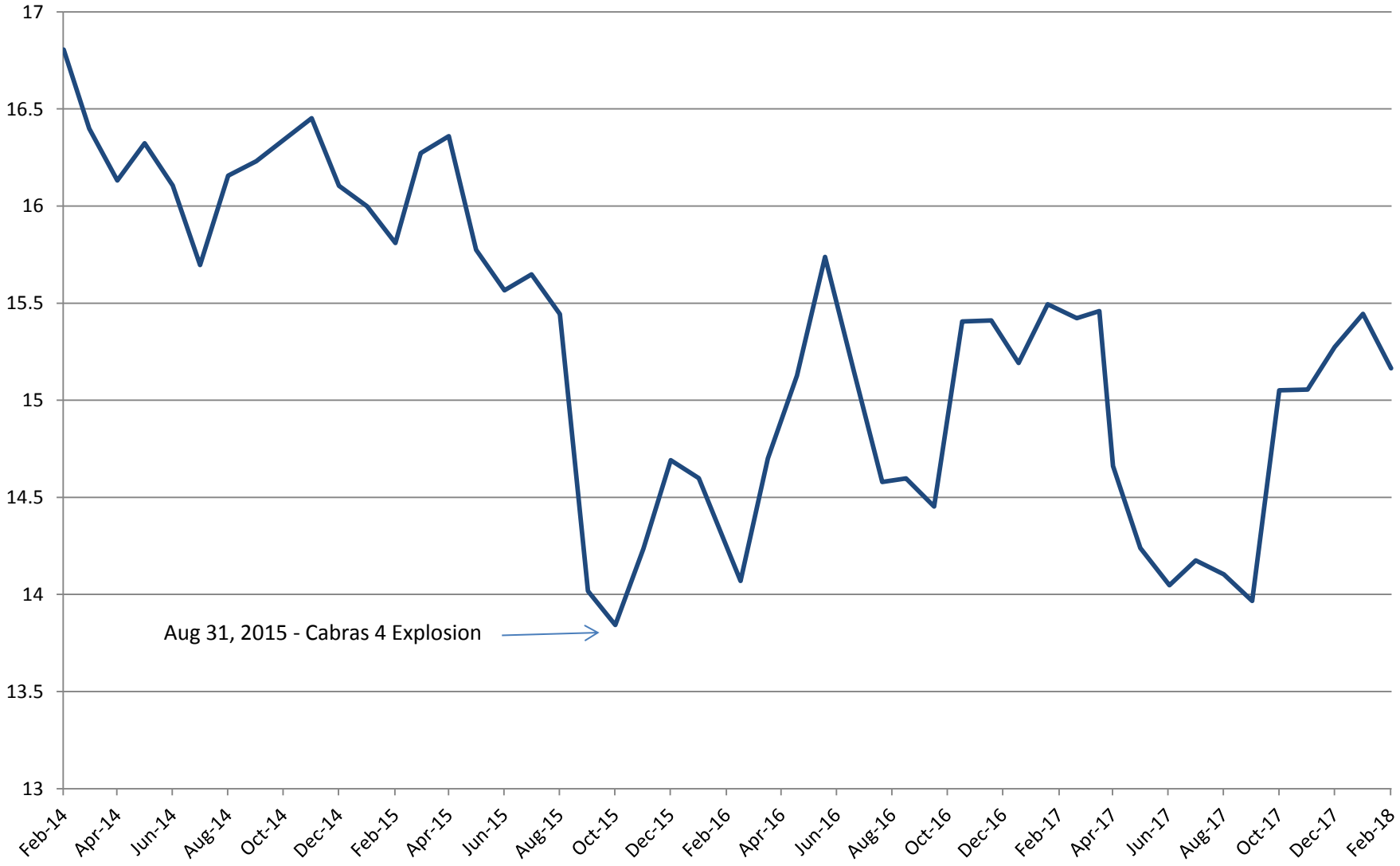
Historical Monthly Peak Demand
February 2012 - February 2018



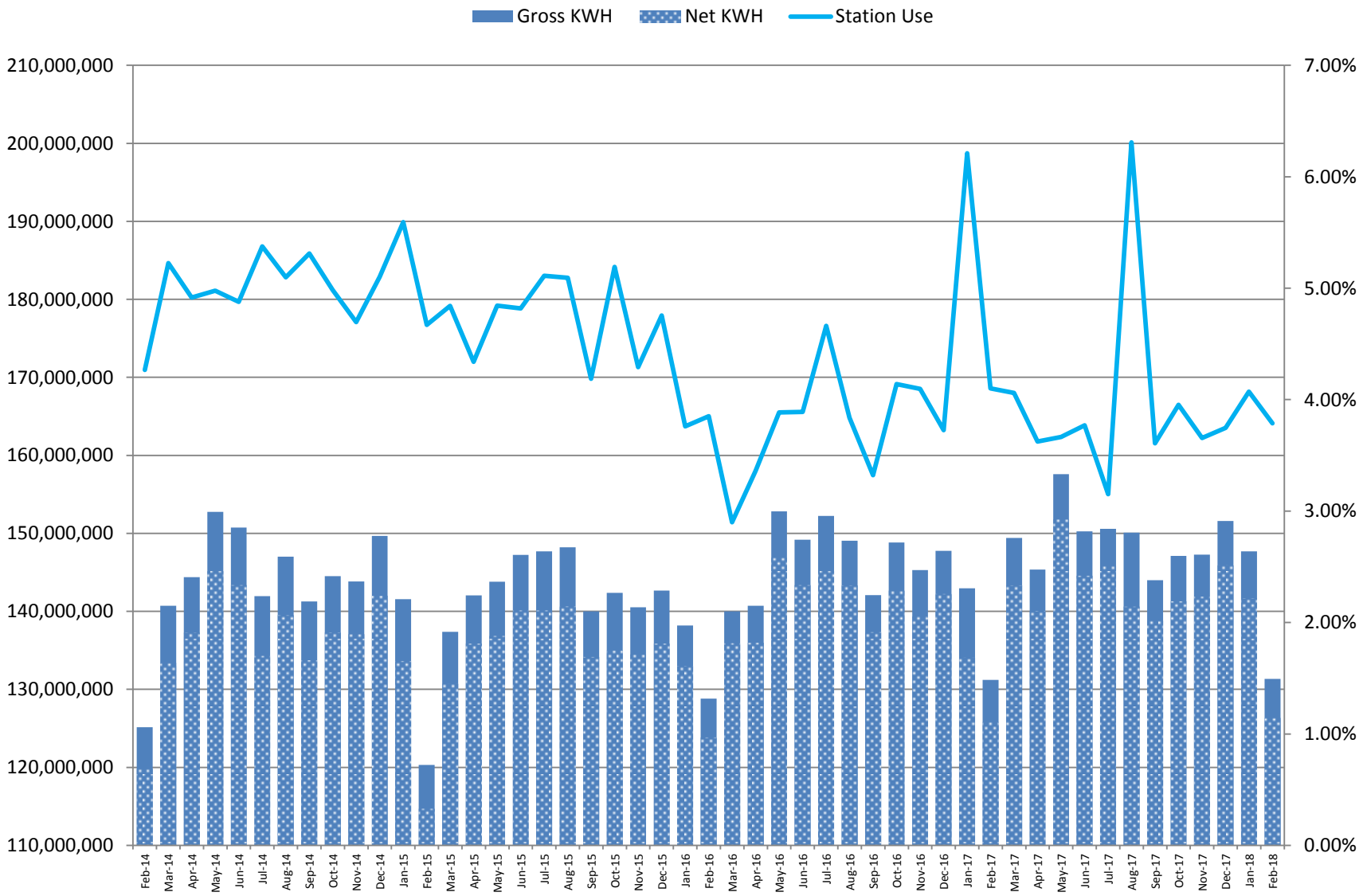
Historical KWH Sales
February 2014 - February 2018



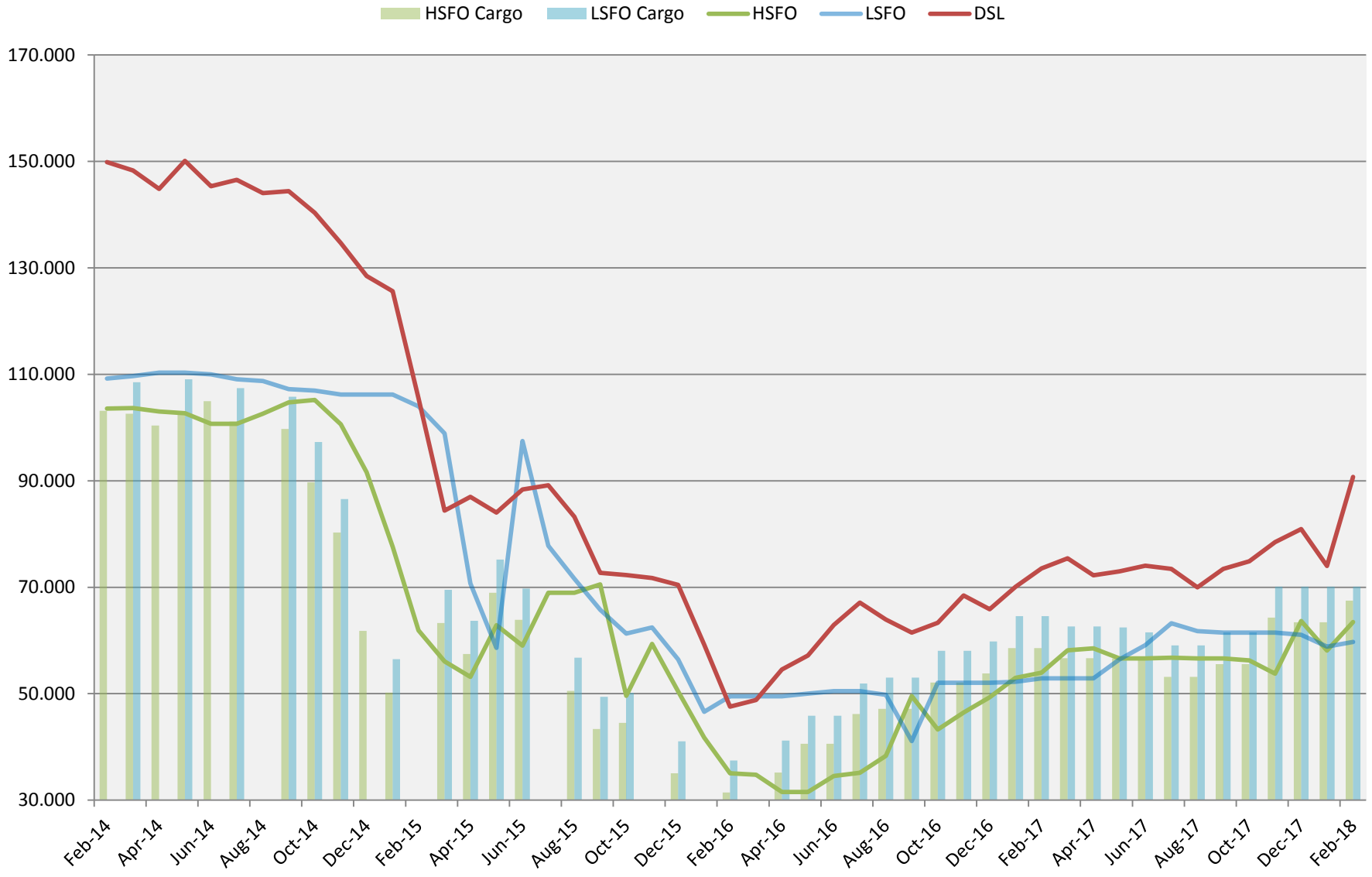
SYSTEM GROSS HEAT RATE
(KWH/Gal)
January 2014 - January 2017



Gross and Net Generation (KWH)
February 2014- February 2018



Fuel Cargo and Fuel Consumption Costs ($/bbl)
February 2014 - February 2018



Run Date: 3/8/2018
Run Time: 2:46:43 PM

Guam Power Authority
Delinquent Active Accounts Summary Report

Report ID: DELRATIO
Page 1 of 1

Rate Classification	Total Cust	Del Cust	Del 28-45	Del 46-60	Del 61-90	Over-90	Current Bill	28-45 Days	46-60 Days	61-90 Days	>90 Days	Total	Total Due
Residential (ERES-R)	42,745	4,173	3,023	1,139	0	363	6,706,503.89	627,204.78	199,408.13	0.00	83,008.99	909,621.90	7,616,125.79
		9.76%	7.07%	2.66%	0.00%	0.85%							
Small Gen Non-Demand (EGEN-G)	4,105	248	180	67	0	38	1,153,277.12	95,011.90	24,649.69	0.00	106,701.64	226,363.23	1,379,640.35
		6.04%	4.38%	1.63%	0.00%	0.93%							
Small Gen Demand (EGEND-J)	983	66	50	16	0	8	2,851,686.49	197,296.54	42,129.39	0.00	279,520.91	518,946.84	3,370,633.33
		6.71%	5.09%	1.63%	0.00%	0.81%							
Large General (ELPS-P)	118	10	10	0	0	1	5,519,323.51	724,886.48	0.00	0.00	153,889.83	878,776.31	6,398,099.82
		8.47%	8.47%	0.00%	0.00%	0.85%							
Private Street Light (EPOL-H)	530	35	18	11	0	13	16,507.01	1,662.81	461.68	0.00	1,921.72	4,046.21	20,553.22
		6.60%	3.40%	2.08%	0.00%	2.45%							
Sub-Total (Private)	**48,481**	**4,532**	**3,281**	**1,233**	**0**	**423**	**16,247,298.02**	**1,646,062.51**	**266,648.89**	**0.00**	**625,043.09**	**2,537,754.49**	**18,785,052.51**
		9.35%	**6.77%**	**2.54%**	**0.00%**	**0.87%**							
Small Gov Non-Demand (ESGS-S)	682	39	38	2	0	4	322,686.51	22,475.50	157.03	0.00	582.09	23,214.62	345,901.13
		5.72%	5.57%	0.29%	0.00%	0.59%							
Small Gov Demand (ESGSD-K)	351	13	13	0	0	0	2,084,380.54	60,799.72	0.00	0.00	0.00	60,799.72	2,145,180.26
		3.70%	3.70%	0.00%	0.00%	0.00%							
Large Government (ELGS-L)	47	5	5	0	0	1	1,627,697.71	608,883.35	0.00	0.00	1,540.65	610,424.00	2,238,121.71
		10.64%	10.64%	0.00%	0.00%	2.13%							
Gov Street Light (ESTL-F)	427	4	3	2	0	0	438,723.66	1,205.46	116.48	0.00	0.00	1,321.94	440,045.60
		0.94%	0.70%	0.47%	0.00%	0.00%							
Sub-Total (Government)	**1,507**	**61**	**59**	**4**	**0**	**5**	**4,473,488.42**	**693,364.03**	**273.51**	**0.00**	**2,122.74**	**695,760.28**	**5,169,248.70**
		4.05%	**3.92%**	**0.27%**	**0.00%**	**0.33%**							
GRAND TOTAL	**49,988**	**4,593**	**3,340**	**1,237**	**0**	**428**	**20,720,786.44**	**2,339,426.54**	**266,922.40**	**0.00**	**627,165.83**	**3,233,514.77**	**23,954,301.21**
		9.19%	**6.68%**	**2.47%**	**0.00%**	**0.86%**							

CUSTOMER SERVICE DIVISION – Feb 2018

SUMMARY REPORT

SITE	Less than 10 Mins.	%	10-15 Mins.	%	15-30 Mins.	%	30-45 Mins.	%	TOTAL	Location %
GBN	1,765	86%	245	12%	15	1%	21	1%	2,046	25%
HAGATNA	2,539	68%	587	16%	453	12%	163	4%	3,742	45%
UPPER TUMON	2,076	84%	342	14%	28	1%	13	1%	2,459	30%
TOTAL:	6,380	77%	1,174	14%	496	6%	197	3%	8,247	100%

Government Accounts Receivable: CSD reports invoices for the month of Jan 2018, for 71 active government accounts with an overall total of $4,857,000.14. 68 accounts were current (96%), 3 account arrears (4%). 9 fax/emails issued to government accounts totaling $1,641,770.80. Jan 2018 invoices, 67 accounts paid in full.

CREDIT AND COLLECTION

Delinquent Ratio: As of Feb 2018 the authority reported a total 48,481 active customers. The "Delinquent Ratio" was recorded at 9.35% with 4,532 total delinquent accounts, total arrears of 2,537,754.49; 1,646,062.51; 3,281 (6.77% / 28-45 days) category; 266,648.89; 1,233 (2.54%/ 46-60 days); and 625,043.09; 423 (0.87% / Over 90 days).

Bankruptcy: During Feb 2018 the Bankruptcy reports one (1) customer account filed, totaling $636.38. Chapter 13.

Damage Claim: The Damage claim committee received five (5) Damage claim at $3,128.04 for the month of Feb 2018.

COMMAND CENTER

Meter Changed Outs: For the month of Feb 2018, there were a total of sixty-five (65) meters changed outs due to defective meter non-communicating.

ACTIVE DELINQUENT – NON PAYMENT

COMMAND CENTER /DISCONNECTIONS/RECONNECTIONS/

Single Phase Meters: Credit and Collection issued orders to Command Center to perform remote disconnect/reconnect for a total of 1,375 customers; 649(47%) were disconnected; 714(52%) deferred; 12(1%) incompletes.

3 Phase Meters: Credit and Collection issued orders to Disconnect Reconnect crew to perform truck roll out disconnect/reconnect for a total of 42 customers; 13(31%) were disconnected; 28(67%) deferred; 1(2%) incompletes.

FY 2018 (Feb 01-28,2018)

	Scheduled	Disc	Deferred	Complete Vs. Scheduled	Incomplete Disconnections	Disc Vs. Scheduled	Deferred Vs. Scheduled	Incomplete Vs. Scheduled
Feb-18	1,417	662	742	1,404 99%	13	47%	52%	1%
Jan-18	1,457	797	634	1,431 98%	26	55%	44%	1%
1st	3,890	2,237	1,646	3,883 100%	7	58%	42%	0%
TOTAL:	6,764	3,696	3,022	6,718 99%	46	55%	45%	0%

FY 2017 (October 01, 2016 – September 30, 2017)

QTR	Scheduled	Disc	Deferred	Complete Vs. Scheduled	Incomplete Disconnections	Disc Vs. Scheduled	Deferred Vs. Scheduled	Incomplete Vs. Scheduled
4th	3,621	2,067	1,553	3,620 100%	1	57%	43%	0%
3rd	4,021	2,683	1,332	4,015 100%	6	67%	33%	0%
2nd	5,125	3,053	2,055	5,108 100%	17	60%	40%	0%
1st	10,187	5,462	4,689	10,151 100%	36	54%	46%	0%
TOTAL:	22,954	13,265	9,629	22,894 100%	60	58%	42%	0%

This concludes the Summary Report for Customer Service Division for the month of Feb 2018.

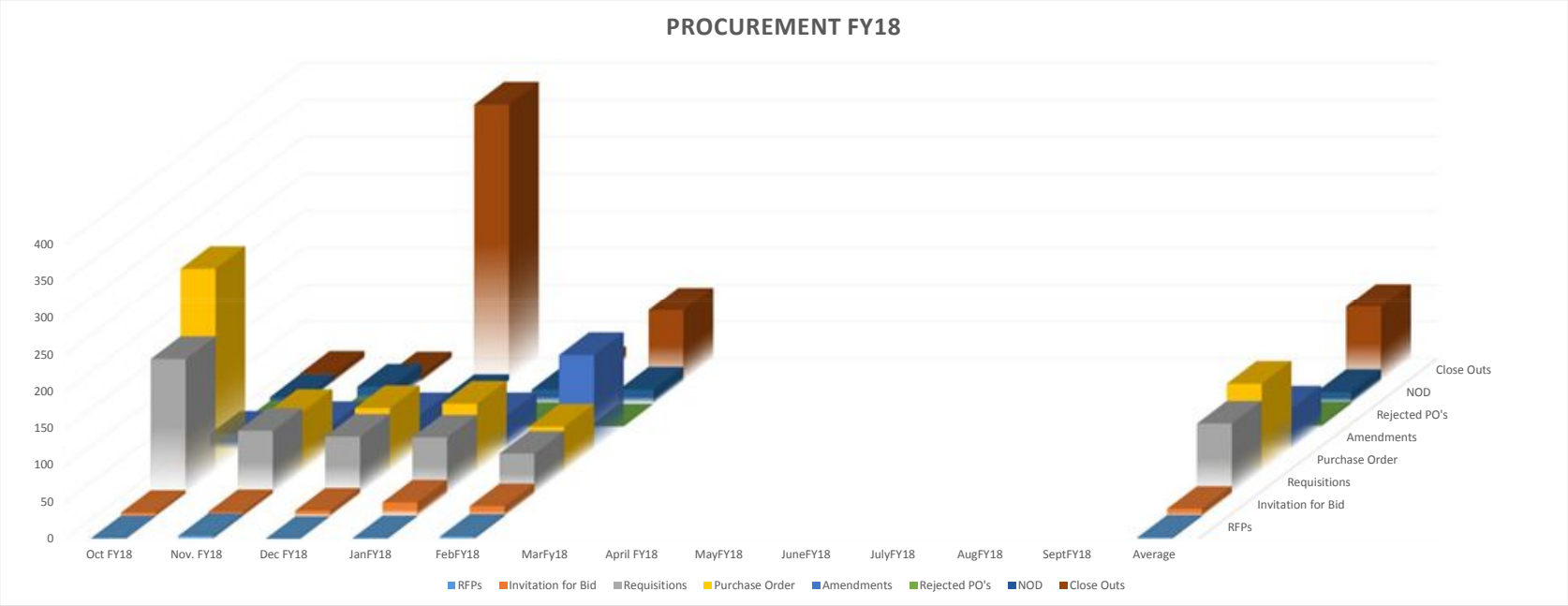
Respectfully submitted,

Marissa Fernandez

Marissa Fernandez, Admin. Officer

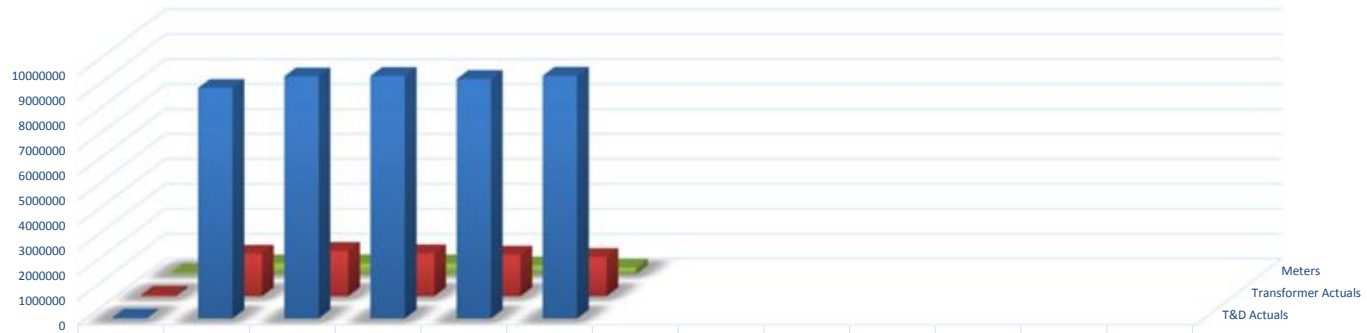
Reviewed / Approved by:

Mercy A. F. Castro, USA

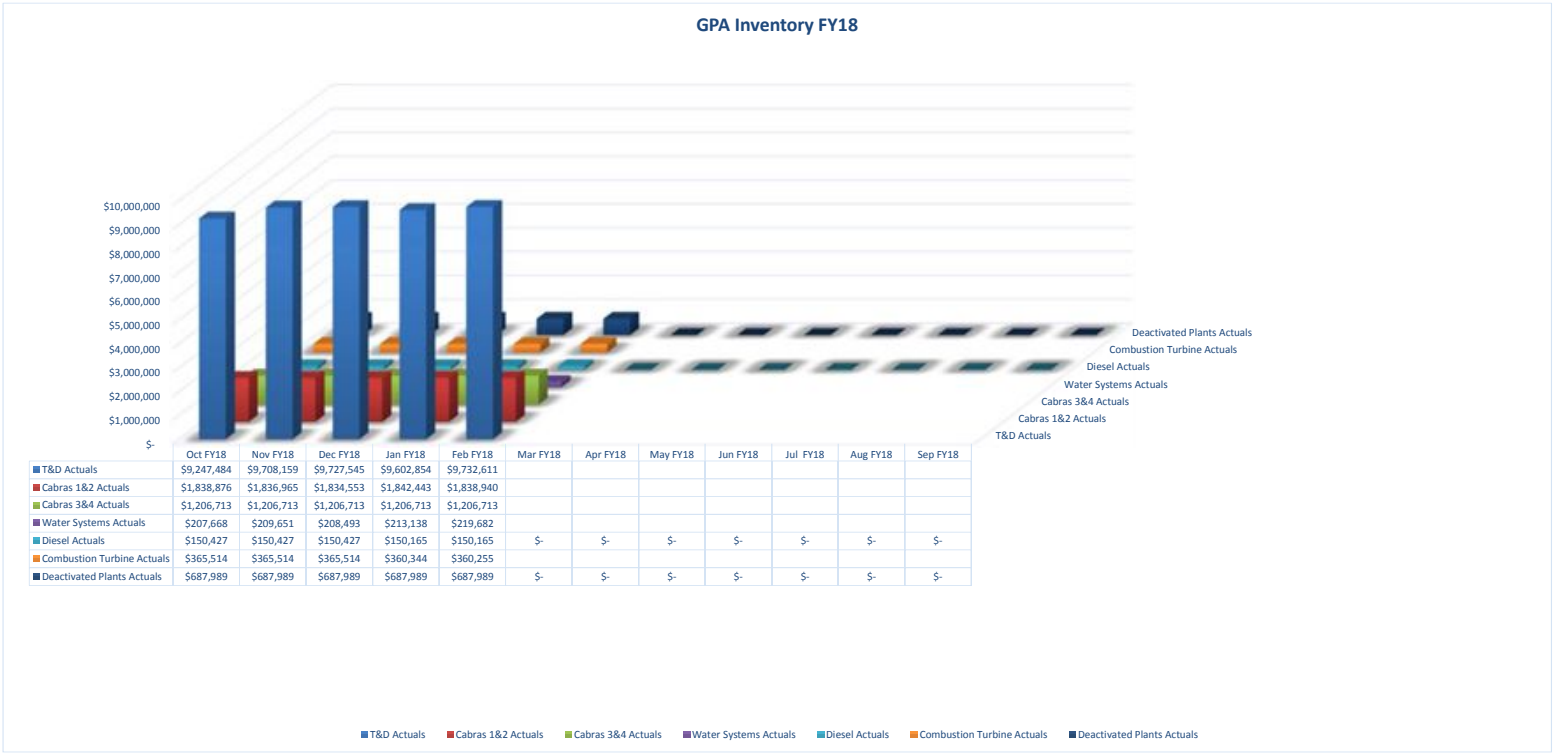


	Oct FY18	Nov. FY18	Dec FY18	JanFY18	FebFY18	MarFy18	April FY18	MayFY18	JuneFY18	JulyFY18	AugFY18	SeptFY18	Average
RFPs	1	4	0	1	3								1.8
Invitation for Bid	5	6	8	19	14								10.4
Requisitions	183	86	78	77	55								95.8
Purchase Order	275	81	86	92	61								119
Amendments	**21**	**34**	**46**	**46**	**127**								54.8
Rejected PO's	4	9	0	2	0								3
NOD	9	23	9	19	19								15.8
Close Outs	10	9	374	16	96								101

T&D Inventory Actuals FY18



Branch Plant	Oct FY18	Nov FY18	Dec FY18	Jan FY18	Feb FY18	Mar FY18	Apr FY18	May FY18	Jun FY18	Jul FY18	Aug FY18	Sep FY18
T&D Actuals	32100	$9,247,484	$9,708,159	$9,727,545	$9,602,854	$9,732,611						
Transformer Actuals	59900	$1,701,456	$1,817,711	$1,724,028	$1,664,121	$1,576,932						
Meters	59100	$431,024	$431,024	$431,024	$345,888	$254,496						



	Oct FY18	Nov FY18	Dec FY18	Jan FY18	Feb FY18	Mar FY18	Apr FY18	May FY18	Jun FY18	Jul FY18	Aug FY18	Sep FY18
T&D Actuals	$9,247,484	$9,708,159	$9,727,545	$9,602,854	$9,732,611							
Cabras 1&2 Actuals	$1,838,876	$1,836,965	$1,834,553	$1,842,443	$1,838,940							
Cabras 3&4 Actuals	$1,206,713	$1,206,713	$1,206,713	$1,206,713	$1,206,713							
Water Systems Actuals	$207,668	$209,651	$208,493	$213,138	$219,682							
Diesel Actuals	$150,427	$150,427	$150,427	$150,165	$150,165	$-	$-	$-	$-	$-	$-	$-
Combustion Turbine Actuals	$365,514	$365,514	$365,514	$360,344	$360,255							
Deactivated Plants Actuals	$687,989	$687,989	$687,989	$687,989	$687,989	$-	$-	$-	$-	$-	$-	$-

PLANNING & REGULATORY DIVISION REPORT

The following summarizes P&R's activities for the month of February 2018

INSPECTIONS/MONITORING

- Best Management Practices (BMP) Weekly Inspection/Report – Cabras Power Plant
- Spill Prevention, Control and Countermeasures (SPCC) Inspection/Report - Cabras, CT, Diesel, Piti 7 Power Plants and Substations
- Took oil samples from old OCB and transformers at Harmon and Barrigada Substations to verify PCB concentration levels

REPORTING

- New Source Performance Standards (NSPS) Monthly– Submitted reports to GEPA for Macheche CT, Yigo CT, Talofofo, Manenggon and Tenjo Diesel Plants.
- Preparation of TIER II report to be submitted to GEPA for review and GM signature
- Hazardous Waste Report submitted to GEPA.

ENVIRONMENTAL RESPONSE

- Responded to transformer leak GHURA 501 in Dededo

AGGREKO

- Meeting with Aggreko and Guam EPA to discuss results of emission testing and Aggreko plans to show continuous compliance with emissions

ENERGY STORAGE SYSTEM PROJECT (ESS)

- coordinated with Lorraine regarding comments from Guam EPA on removal of above ground storage tanks and piping.
- Reviewed reports from Contractor.
- Took part in site visit with Guam EPA, SPORD, and Contractor. EPA had questions regarding removal of 3 storage tanks along with corresponding secondary containment and piping. EPA wanted to confirm that disposal will be done properly to which the contractor affirmed that it would.

FUEL SWITCHING SERVER REPLACEMENT

- IT completed replacement and cloning of server. Full restoration is currently pending.

LEIDOS ASSESSMENT REPORTS

- Reviewed Environmental Site Assessment report for Piti 8 & 9 (MEC)
- Reviewing Condition Assessment report for Piti Unit 7

NAVY TIE IN PROJECT

- Participated in Site Visit with Navy and their Contractors on their project which require outage of GPA 24" RFO supply line. Attended with SPORD and Project Management

PORT AUTHORITY OF GUAM INCIDENT

- Witnessed air sampling by IHP at Cabras Power Plant. Plant grounds were negative for hazardous gases
- Attended meeting to discuss current SOP to monitor SO2 air quality at Port Area when Cabras units start up. Attended with GPA Safety. Also in attendance was Guam EPA.

WASTE DISPOSAL

- Monitoring of UNITEK and GRESCO used oil disposal to the WOF
- Disposed of GPA used light bulbs

OTHERS

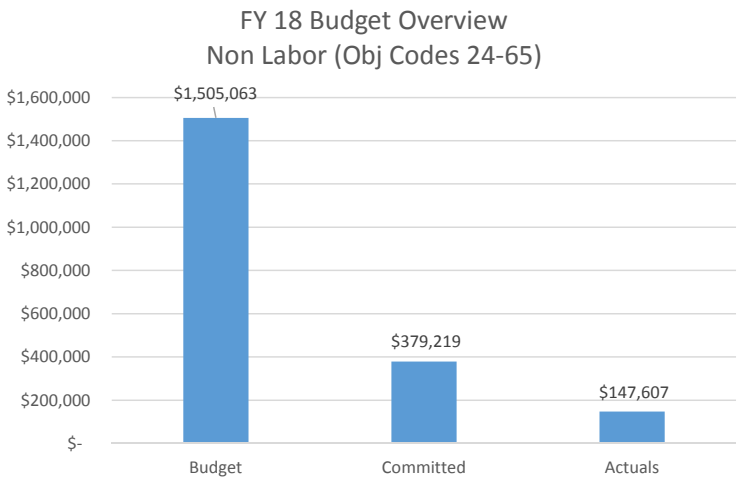
- Prepared and submitted RFP bid to procurement for the Annual Emission testing, and O & M for CEMS and RICE MACT
- Preparation of Bid Documents for the HAZMAT Mitigation (Removal and Disposal) Project for Tanguisson and Dededo Diesel Power Plant
- Provided E&TS with summary of impact the re-designation of Tanguisson area and the rest of the Island to Attainment/Unclasiffiable has on permitting of new plant.
- Attended training at IHP with Safety on the use of hand held air monitoring devices. Requested for quotation from IHP for Air Monitors and calibration kit.

SPORD CCU Report

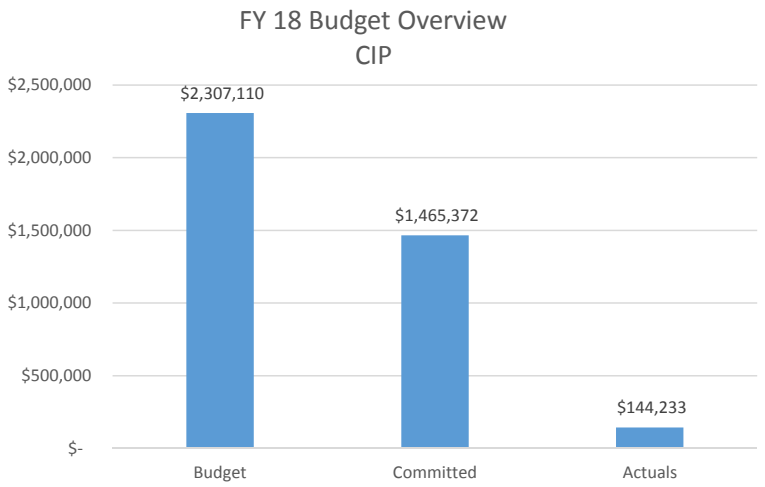
February 2018

SPORD FY 2018 Budget Status

- SPORD O&M:



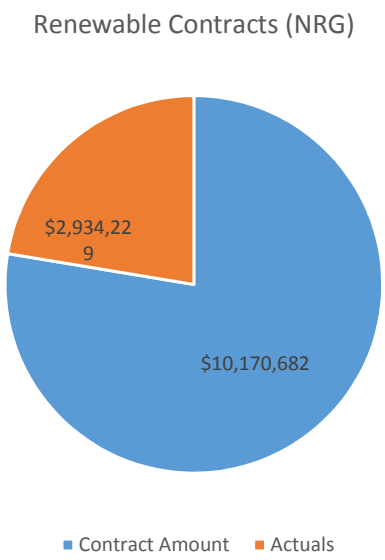
- CIP

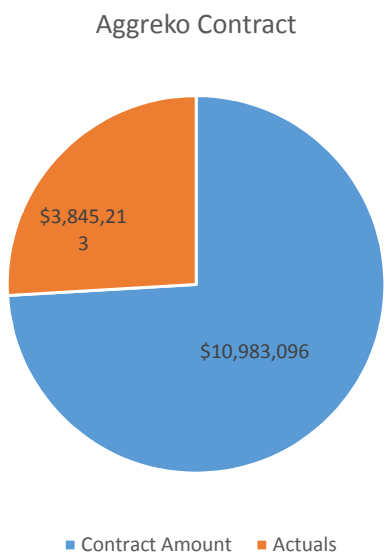


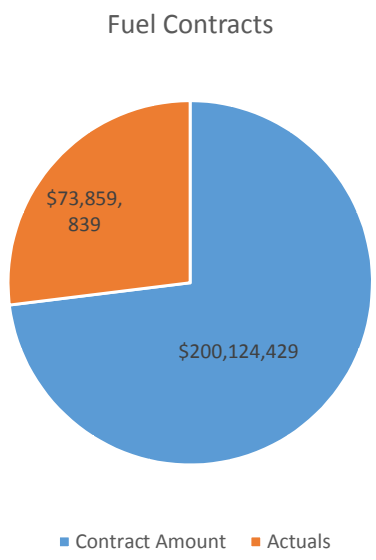
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SPORD FY 2018 Budget Status

- Major Contracts (Non-O&M)



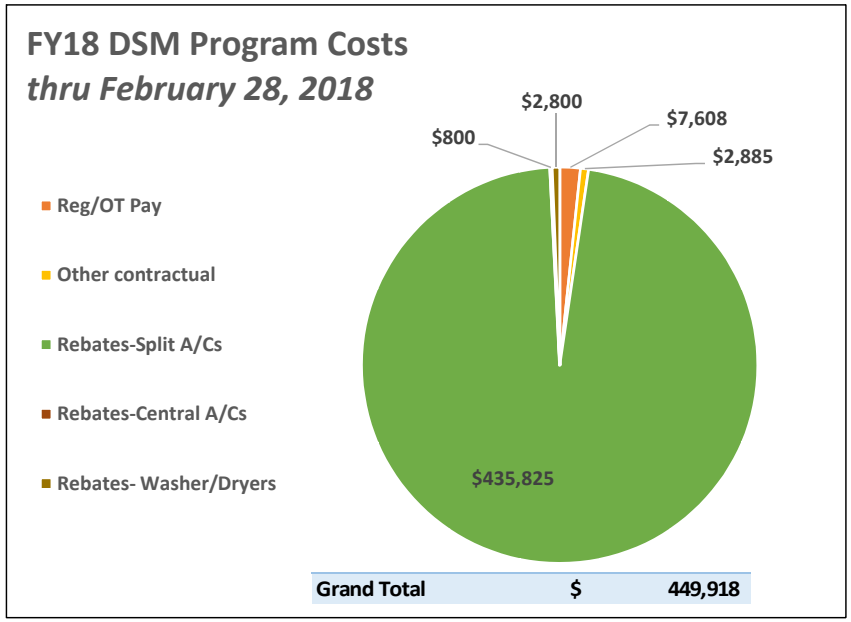


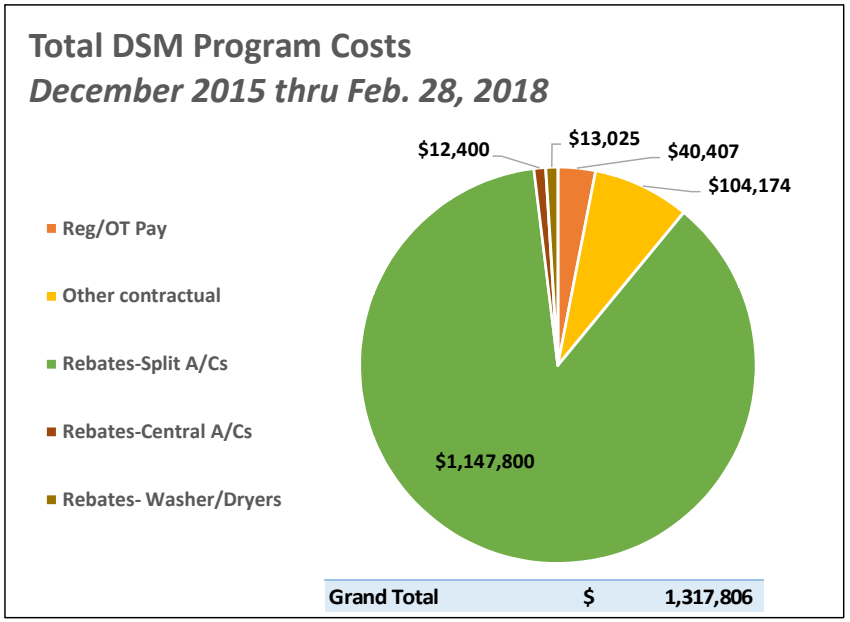


3

SPORD FY 2018 Budget Status

- DSM Expenses





Ongoing Activities

- Contract Performance Management (IPP, PMC, Agrekko)
- Generation Fuel Supply & Fuel Farm Management
- DSM Rebate Processing
- Renewables (Wind Turbine Maint & DOAg MOA, NRG Invoicing)
- Smart Grid/Network Support
- Project Management
  - Procurement
  - *February Project Activities*

PROCUREMENT ACTIVITIES

PENDING AWARD / NTP

Responsible	PROJECT	Description	CCU Date Approved (Resolution No.)	PUC Date Approved (Docket No.)	Projected Start	Projected Completion	Status
SPORD (FJI)	RENEWABLES	Phase II - KEPCO/LG CNS	1/23/18 (2018-01)	(18-06)	10/1/2020	9/25/2045	Pending contract signature & ntp
SPORD (FJI)	RENEWABLES	Phase II - KEPCO/LG CNS	2/27/18 (2018-04)	PENDING	10/1/2020	9/25/2045	

ONGOING PROCUREMENT

Responsible	PROJECT	Description	Bid or RFP	Bid/RFP No	Announced	Bid Opening / Due	Notes
SPORD (RAC)	SCADA	SCADA Workstations	Bid	GPA-049-18	2/13/2018	3/14/2018	
SPORD (FJI)	NEW POWER PLANT	Geotechnical Services	RFP	GPA-RFP-18-002	2/6/2018	3/7/2018	
SPORD (RAC)	SMART GRID	MV90 Integration Services	RFP	GPA-RFP-18-001	1/30/2018	3/6/2018	
SPORD (ANF)	FUEL	Petroleum Inspection Services	MS Bid	GPA-014-18	1/30/2018	3/23/2018	Phase I - Closing of Technical and Price Proposals
SPORD (FJI)	NEW POWER PLANT	Build, Operate & Transfer Contract for 120-180MW of New Generation Capacity. **(PHASE I - REQUEST FOR QUALIFICATIONS)**	MS Bid	GPA-034-18	1/16/2018	3/22/2018	Step I - Closing of Qualifications
SPORD (ANF)	FUEL	Supply of Residual Fuel Oil No. 6	MS Bid	GPA-009-18	11/16/2017	4/13/2018	Phase I - Closing of Technical Proposal
SPORD (ANF)	FUEL	Supply of Diesel Fuel Oil No. 2	MS Bid	GPA-008-18	11/16/2017	4/20/2018	Phase I - Closing of Technical Proposal
SPORD (JTL)	RENEWABLES	Renewable Energy Resource Phase III	MS Bid	GPA-007-18	11/16/2017	4/17/2018	Phase I - Closing of Technical Proposal
SPORD (RAC)	SMART GRID	Mobile Workforce Management System (MWMS) **RE-BID**	MS Bid	GPA-023-17	10/5/2017	3/20/2018	Phase II - Opening of Price Proposals - Public Opening
ENGINEERING	FUEL	GPA Tank Farm Pipeline Upgrade - Design / Build	Bid	GPA-047-18	2/8/2018	3/29/2018	To repair existing RFO lines/replace diesel line to TEMES CT

Project Activities

No.	Project Description	February 2018 Activities	Status / Est. Completion
1	Energy Storage System (Phase I)	Revised 100% design drawings to be submitted early March. Clearing and grading permit work commenced in November 2017. Foundation permit work	August 2018
2	Renewable Energy Resource Phase II	Hanwha's PPA approved by CCU. KEPCO's PPA was filed with PUC and pending offical approval. Hanwha's PPA will be filed with the PUC in March.	KEPCO PV plant COD is Oct 2020. Hanwha's COD is anticipated for 1st qtr of 2020.
3	New Power Plant Bid (EPCM)	Request for Qualification announced on January 16, 2018. Proposals due on April 5, 2018. Technical specification are being reviewed and updated based on discussions on the	April 5, 2018 (Qualifications Due)
4	DSM Marketing	DSM Marketing continues. Initiated work with Adztech/Jay Merril on DSM Survey, scheduling initial survey activities in February.	Continuous
5	DSM Rebate Program	Processed over 326 equipment in applications for rebates totaling ~ $69K	Continuous
6	Wireless Network Expansion	Commenced Southern Expansion in collaboration with GWA: 30% Assessment of GWA Well Locations: Completed Assessment of Existing Tropos Units: 20% Router Equiqment and Accessories purchase	To be Updated Completed Continuous Mar-18
7	Performance Metrics Automation Project	Presentation on iDashboard provided to GM. GPA contiues to work with consultant on automating reports and formating.	Mar-18
8	Electric Grid Analysis Software	Additional training for users	Mar 2018
9	Services to Develop Business Performance Indices using iDashboards	Dashboard builds 95%	Ongoing
10	Supervisory Control and Data Acquisition (SCADA) System	Change Order Approved for October 2018 Completion and hardware costs Equiment on Order	Oct 2018
11	Mobile Workforce Management System	Bid Evaluation Completed, Price Proposal Opening March 20, 2018	May 2018 (Bid Award)
12	Consulting Services for Smart Grid Analytics Enabled Distribution System Planning, Technical, and Economic Feasibility Studies	RFP evaluation completed for sole bidder. Bidder did not qualifiy. Committee recommendation to rebid. Waiting on Acknowledgement from sole-bidder	April 2018 (Rebid)

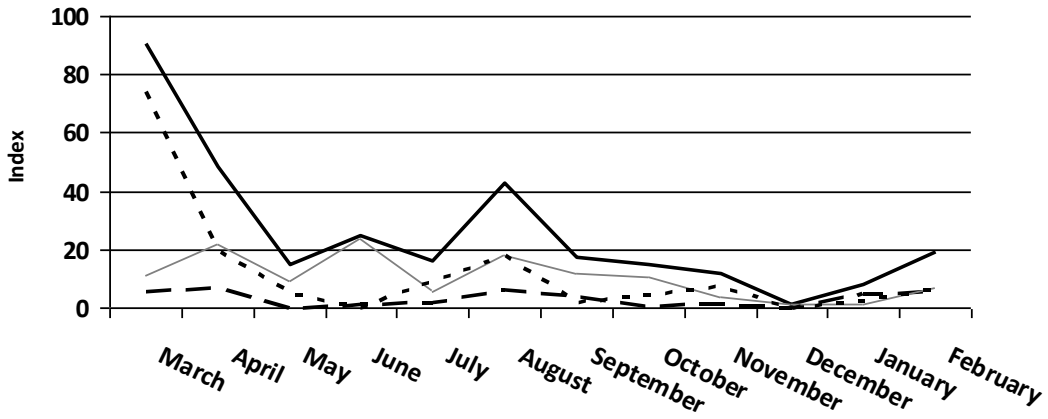
Project Activities

No.	Project Description	February 2018 Activities	Status / Est. Completion
13	TEMES Piti # 7 ECA Expiration & Transition to GPA	Transition completed. Environmental Assessment Report received and submitted to key managers and divisions. Condition Assessment Report under review.	[Completed] [Completed] Copmletion Date: March 2018
14	MEC Piti &8 and #9 - ECA Expiration	Environmental Assessment Report received and submitted to key managers and divisions. Condition Assessment on-going; report expected within 30 days of completion of Assessment. Data Compilation in progress.	[Completed] March 2018 December 2018
15	Planning Software Administration/Maintenance	Training of 2 SPORD Engineers for PO use commenced 10/3/2017. Upcoming task: Configuration and management of database, training for - SPORD - PSCC	Start Date: Oct 2017 Completion Date: Sept 2018
16	Generation Software (GADS open software)	Pending data entry from Generation & SPORD.	[On-going work]
17	IFB for ULSD Supply for Baseloads and Peaking Units	Solicitation in progress	Start Date: Nov 2017 Est. completion: FY2018
18	Contract for Lease of Bulk ULSD Storage	196KB tank repairs completed	27-Feb-18
19	EV Infrastructure	Developing fast charge station scope for Mangilao offices.	Sept 2018
20	Consulting Support, new procurements for Piti 7,8,9	Piti 7 - Management Contract (under Generation) awarded. No IPP bid. Piti 8&9 - Bid documents in progress, scheduled for approval this month.	[Commenced] Bid documents completion: March 2018 Bid Process Start Date: 2nd quarter of 2018 upon CCU/PUC approval
21	Fuel Conversion Plan	Initial discussion commenced, detailed discussions in November after submission of Assessment Report. Data Requests being addressed.	Start: October 2017 Completion: June 2018

Project Activities

No.	Project Description	February 2018 Activities	Status / Est. Completion
22	Fuel Bulk Storage Facility Assessment	Consultant Site Visits for ESA and Technical Inspeciton completed. Reports due January 2018.	Start: Sept 2017 End: January 2018
23	Design and Engineering Consulting for Remote Start of GPA Plants	Engineering Project Management team reviewed scope. Dratt of assessment and implementation plan completed.	August 2018
24	Renewable Energy Resource Phase III	Completed pre-bid conference and site visits January 23-24 2018.	(Mar 2018) Tech Proposal Due
25	Utility Energy Services Contract (UESC)	Kicked off discussions with UOG, Guam Energy Office, Dept. of Navy, and GPA team on project development and opportunities. Discusssed DSM Model House. UOG Campus Assessment, Discussion on Solar Rooftop on DOE campuses.	
26	IFB for Delivery Services for GPA Plants	Bid canceled. Requirements to be included in the ULSD Supply solicitation	IFB Canceled Feb 2018
27	IFB for RFO Supply to Baseload Plants	Solicitation in progress	Start: November 2017 Est. Completion: FY2018 Contract Start: Sep 1, 2018
28	IFB for Petroleum Inspection Services	Re-Solicitation in progress	Start: November 2017 Est. Completion: FY2018 Contract Start: Jun 01, 2018
29	RFO Storage Lease	Lease extension approved by CCU. For PUC review and approval	Start: November 2017 Est. Completion: Mar 2018 Contract Start: Aug 1, 2018
30	GPA Fuel Farm RFO Repair & Upgrade	c/o Engineering Project Mgt	Solicitation in progress
31	GPA Fuel Farm ULSD Pipeline Upgrade	c/o Engineering Project Mgt	Bid Specs Preparation in progress
32	Tk 1934 & Tk1935 API 653 Internal Inspection	c/o Engineering Project Mgt	Bid Specs Preparation in progress
33	Milsoft Systems Software Services	Solicitation in progress	Continuous
34	MV90 Integration Services	Solicitation in progress	Dec-18
35	SCADA Workstations and Monitors	Solicitation in progress	May 2018 (Bid Award)

(Item 1.1,1.2,1.5) February 2018 SAIDI = 311.08 ↑ (303.98)



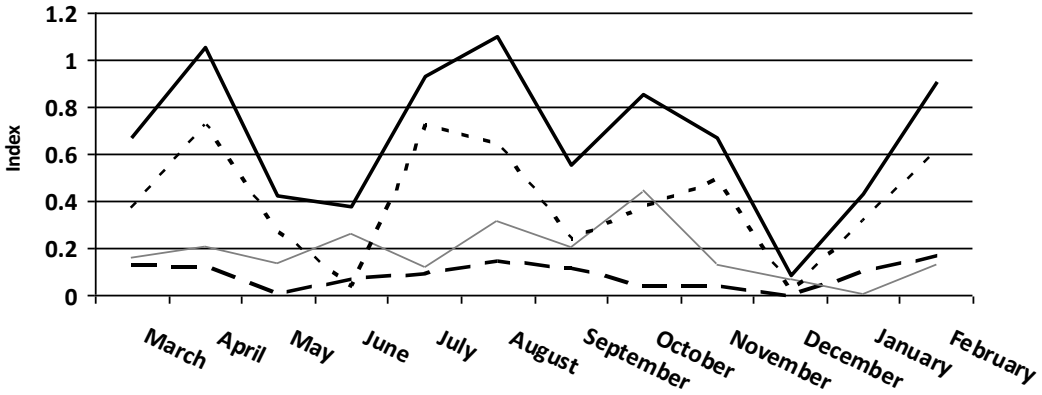
ALL

GEN=148.89 ↑ (145.23)

TRANS=37.48 ↑ (34.95)

DIST=124.71 ↑ (123.79)

(Item 1.1,1.2,1.5) February 2018 SAIFI = 8.05 ↑ (7.52)



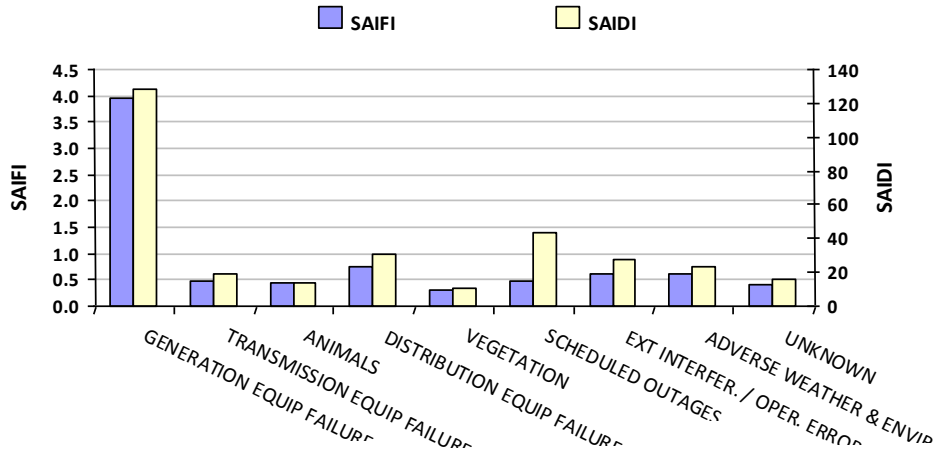
ALL

GEN=4.81 ↑ (4.43)

TRANS=1.03 ↑ (0.89)

DIST=2.21 ↑ (2.20)

(Item 1.9) 12-Month Cause Contributions to Reliability



GENERATION EQUIP FAILURE
F:47.2% D:41.1%

TRANSMISSION EQUIP FAILURE
F:7.5% D:6.2%

ANIMALS
F:6.3% D:4.5%

DISTRIBUTION EQUIP FAILURE
F:9.6% D:9.8%

VEGETATION
F:4.0% D:3.3%

SCHEDULED OUTAGES
F:8.6% D:13.8%

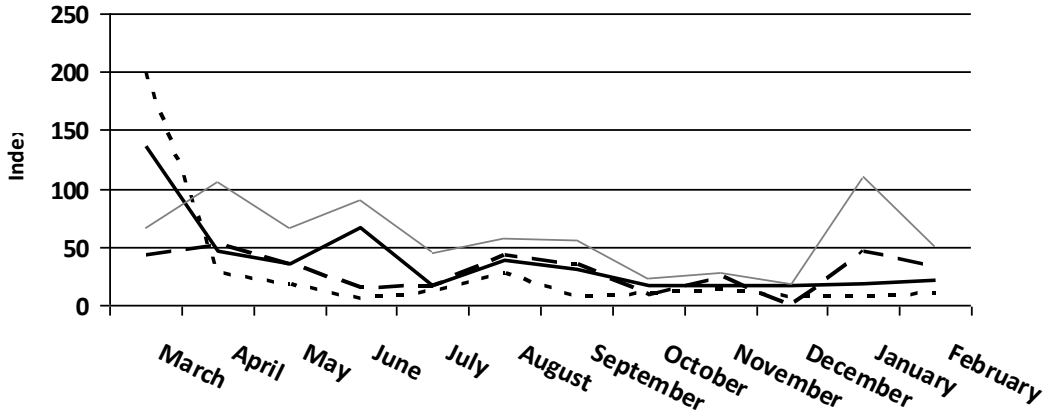
EXT INTERFER. / OPER. ERROR
F:6.3% D:8.7%

ADVERSE WEATHER & ENVIR.
F:5.8% D:7.4%

UNKNOWN
F:4.8% D:5.2%

As of February 28, 2018

(Item 1.1,1.2,1.5) February 2018 CAIDI = 38.66 ↓ (40.4)



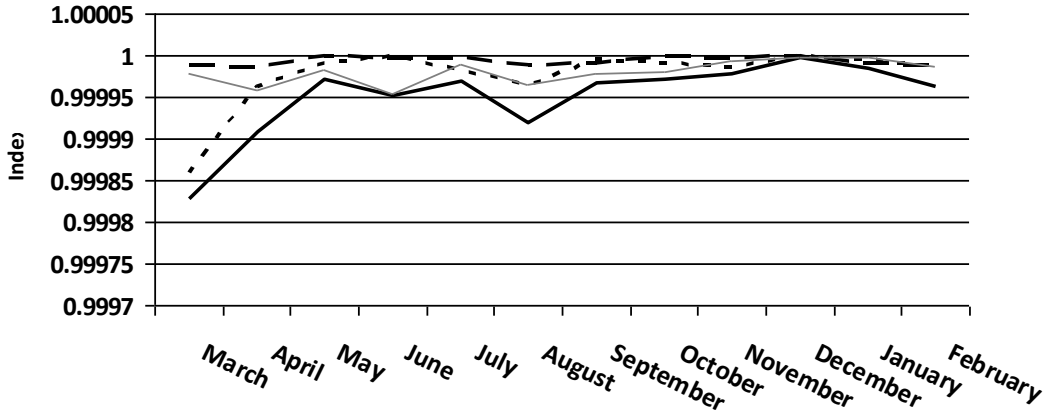
ALL

GEN=30.96
(32.76) ↓

TRANS=36.3
(39.15) ↓

DIST=56.55
(56.34) ↑

(Item 1.1,1.2,1.5) February 2018 ASAI = 0.9994 UNC* (0.9994)



ALL

GEN=0.9997
(0.9997) UNC*

TRANS=0.9999
(0.9999) UNC*

DIST=0.9998
(0.9998) UNC*

(Item 1.4) Top 5 Worst Feeders Distribution Causes

#	Feeder	Outage Count
1	P340	11
2	P403	7
3	P261	7
4	P221	7
5	P332	4

(Item 1.4) Top 5 Distribution Outage Causes

#	Outage Cause	Count
1	Overhead Equipment	29
2	Underground Equipment	17
3	Vegetation	13
4	Snakes	8
5	Vehicles	7

(Item 1.3) Outage Count

TOTAL	UFLS	Non-UFLS
479	246	233

(Item 1.3) UFLS Contribution to Reliability

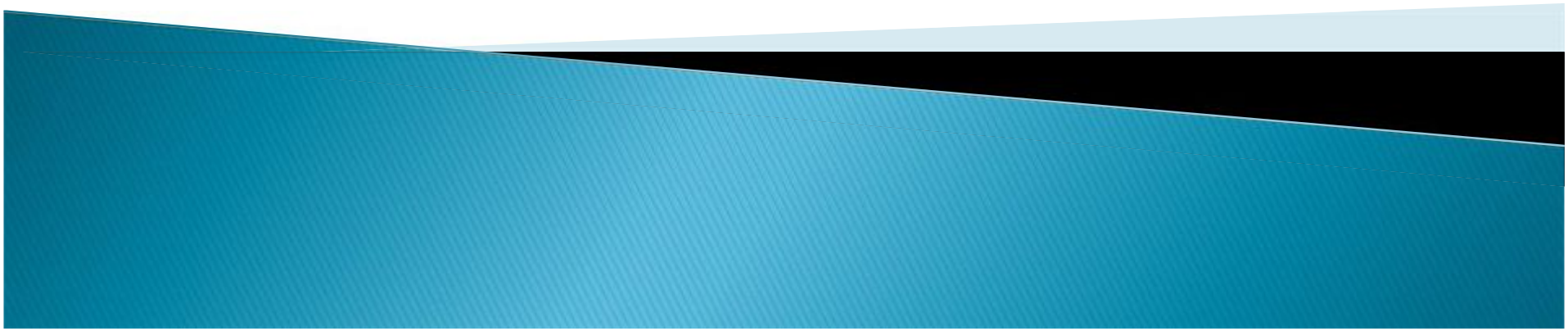
SAIDI	SAIFI	CAIDI
144.22	4.61	31.26

UNC* = Unchanged

As of February 28, 2018

CCU Report– DSM

As of February 28, 2018



All Expenses – Fiscal Year

Description	FY16	FY17	FY18 as of February	Total to Date
Regular/OT Pay	$11,348.80	$22,256.00	$6,761.02	$40,365.82
Other Contractual	28,278.50	$73,010.05	$2,885.00	$104,173.55
Paid Rebates-Split AC	$154,700.00	$557,275.00	$435,825.00	$1,147,800.00
Paid Rebates-Central AC	$3,400.00	$8,200.00	$800.00	$12,400.00
Paid Rebates-Washer/Dryer	$2,800.00	$7,425.00	$2,800.00	$12,025.00

Total Expenses	200,527.30	$668,166.05	$449,071.02	$1,317,764.37

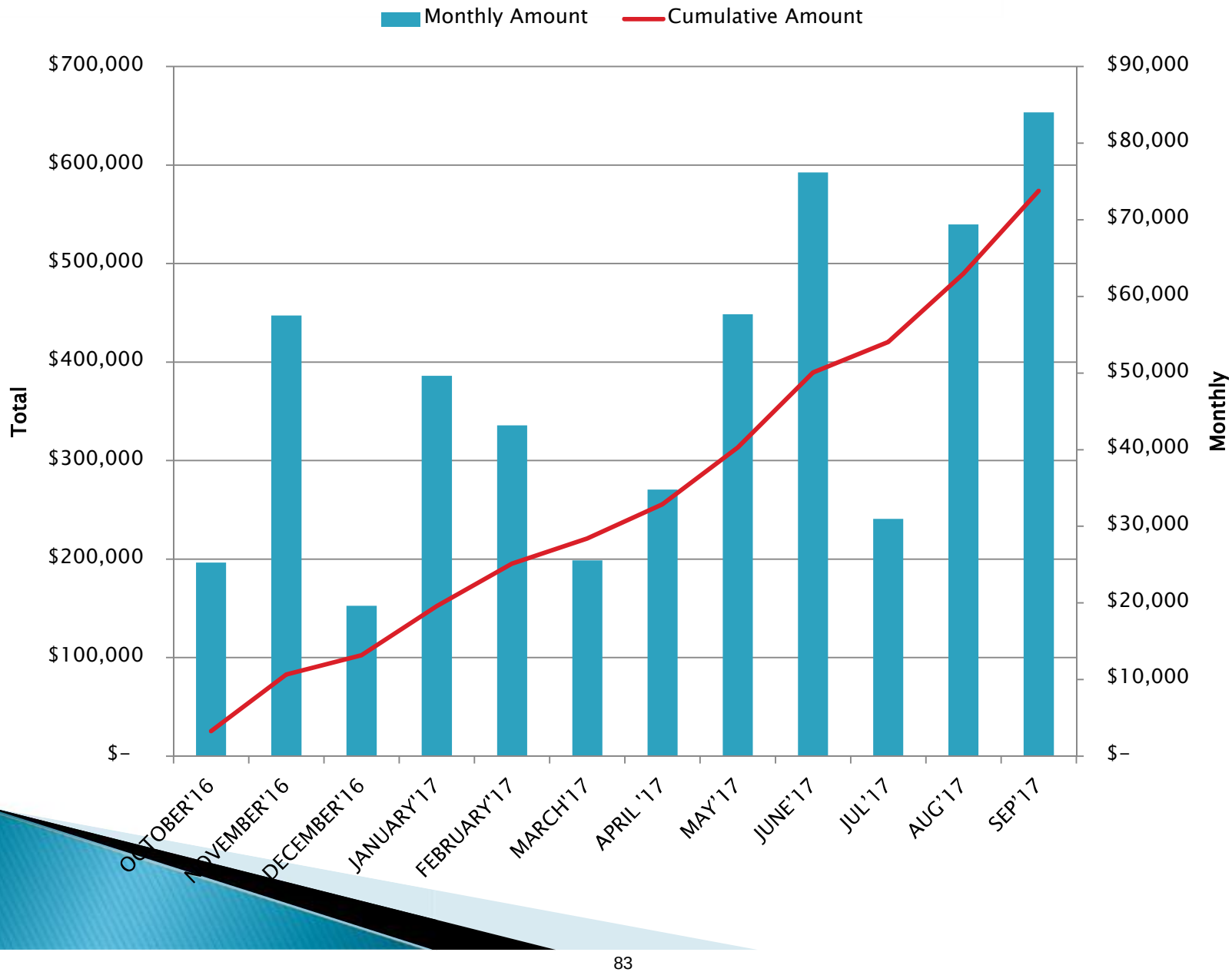
FY 2017- Rebate Amount Paid Monthly

Month	Total	Split A/C Units	Central A/C Units	Washers/Dryers
OCTOBER'16	$25,250.00	$23,450.00	$800.00	$1,000.00
NOVEMBER'16	$57,525.00	$55,625.00	$1,600.00	$300.00
DECEMBER'16	$19,625.00	$18,225.00	$800.00	$600.00
JANUARY'17	$49,650.00	$48,050.00	-	$1,600.00
FEBRUARY'17	$43,175.00	$43,175.00		-
MARCH'17	$25,550.00	$25,550.00	-	-
APRIL '17	$34,800.00	$30,950.00	$800.00	$2,125.00
MAY'17	$57,675.00	$54,275.00	$2,400.00	$1,000.00
JUNE'17	$76,175.00	$74,675.00	$1,300.00	$200.00
JUL'17	$30,975.00	$30,975.00	-	-
AUG'17	$69,400.00	$69,200.00	-	$200.00
SEP'17	$84,025.00	$83,125.00	$500.00	$400.00
TOTALS	$572,900.00	$557,275.00	$8,200.00	$7,425.00

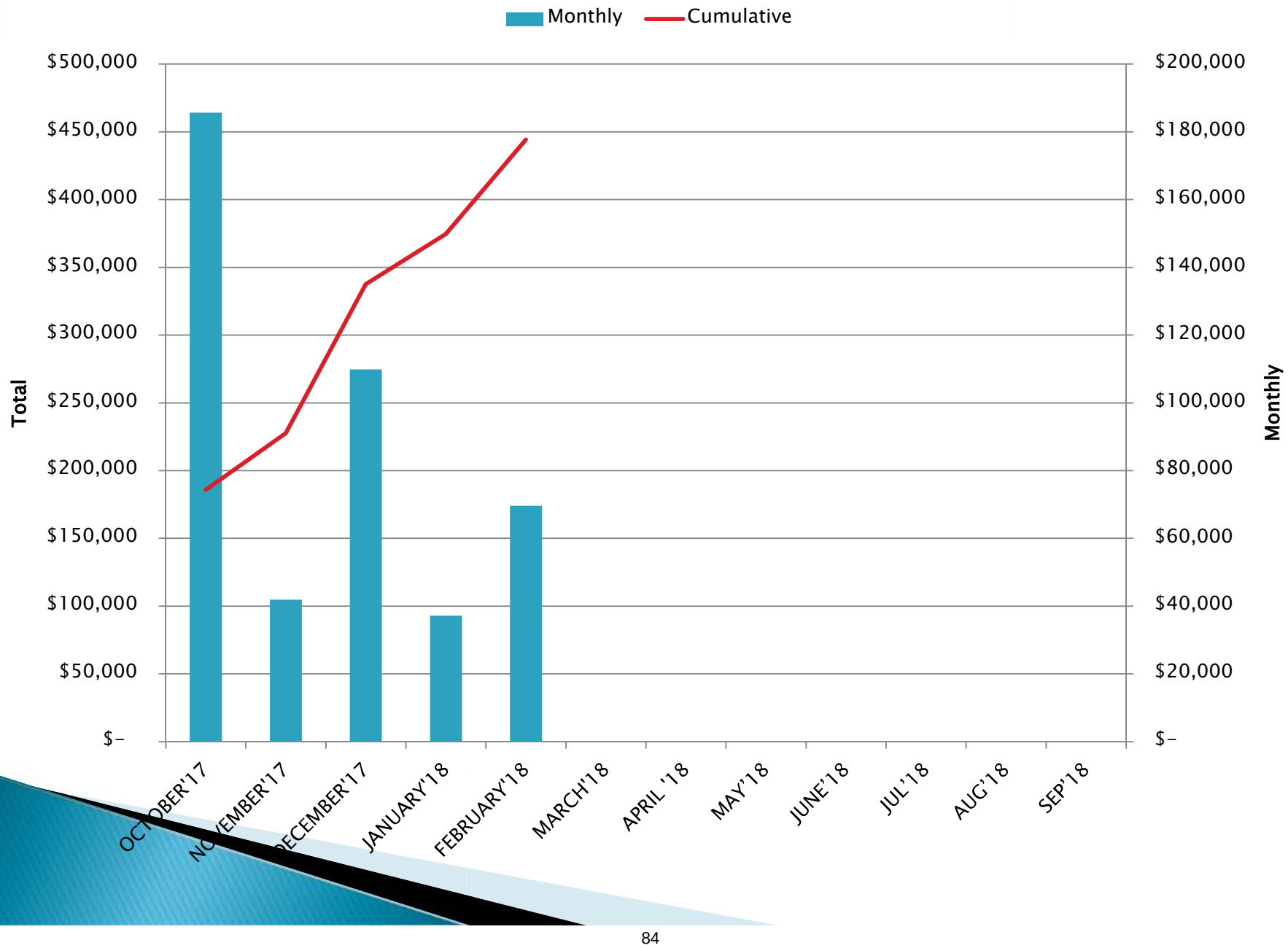
FY 2018– Rebate Amount Paid Monthly

Month	Total	Split A/C Units	Central A/C Units	Washers/ Dryers
OCTOBER'17	$186,850.00	$185,850.00	$800.00	$200.00
NOVEMBER'17	$41,900.00	$41,700.00		$200.00
DECEMBER'17	$109,875.00	$108,475.00		$1,400.00
JANUARY '18	$31,175.00	$31,175.00		
FEBRUARY '18	$69,625.00	$68,625.00		$1,000.00
TOTALS	$439,425	$435,825	$800.00	$2,800

FY 2017- Rebate Amount Paid



FY 2018- Rebate Amount Paid



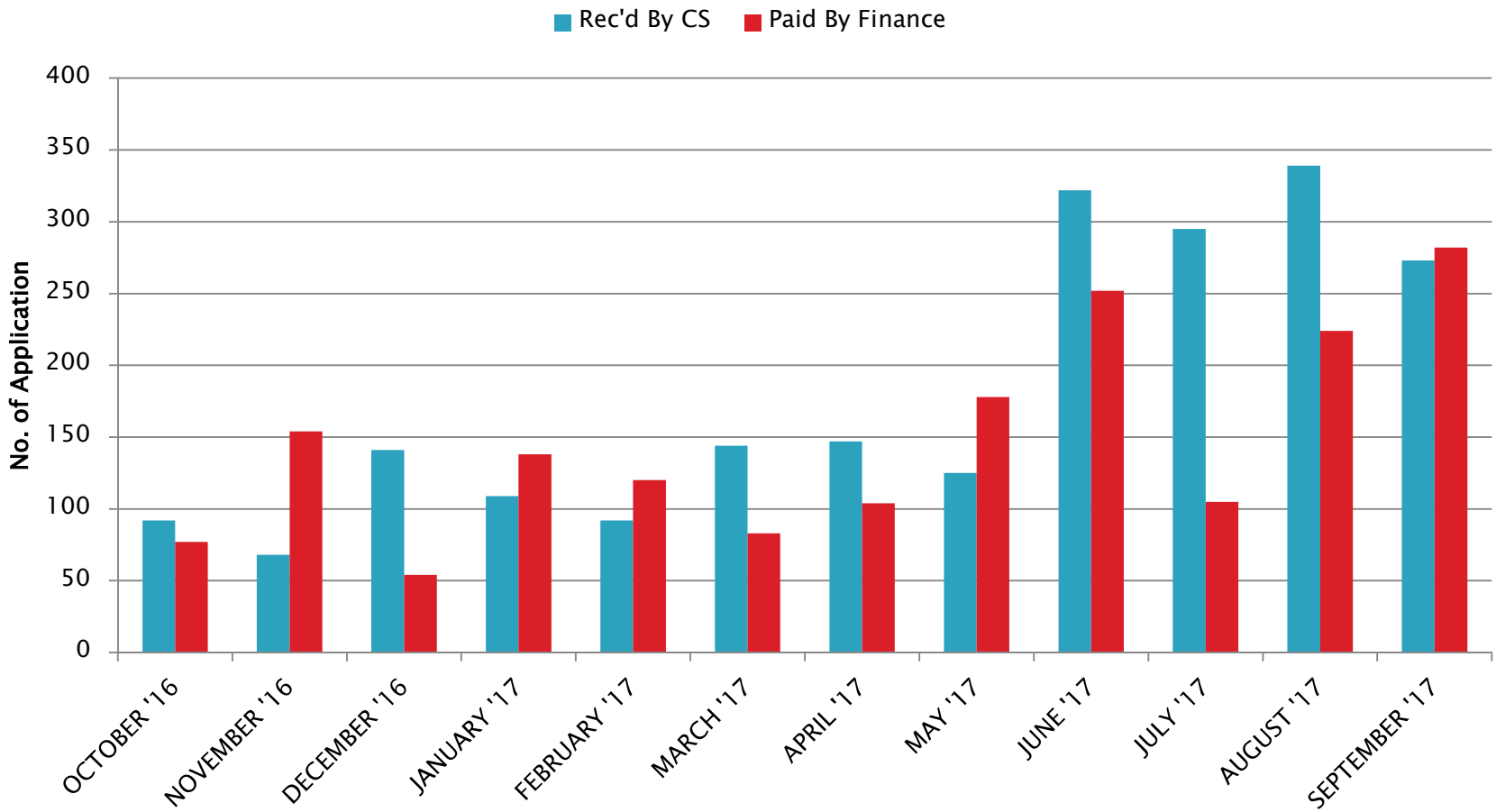
FY 2017- Number of Applications Received By Customer Service and Paid Monthly

Month	Rec'd By CS	Paid By Finance
OCTOBER '16	92	77
NOVEMBER '16	68	154
DECEMBER '16	141	54
JANUARY '17	109	138
FEBRUARY '17	92	120
MARCH '17	144	83
APRIL '17	147	104
MAY '17	215	178
JUNE '17	322	252
JULY '17	295	105
AUGUST '17	339	224
SEPTEMBER '17	270	282

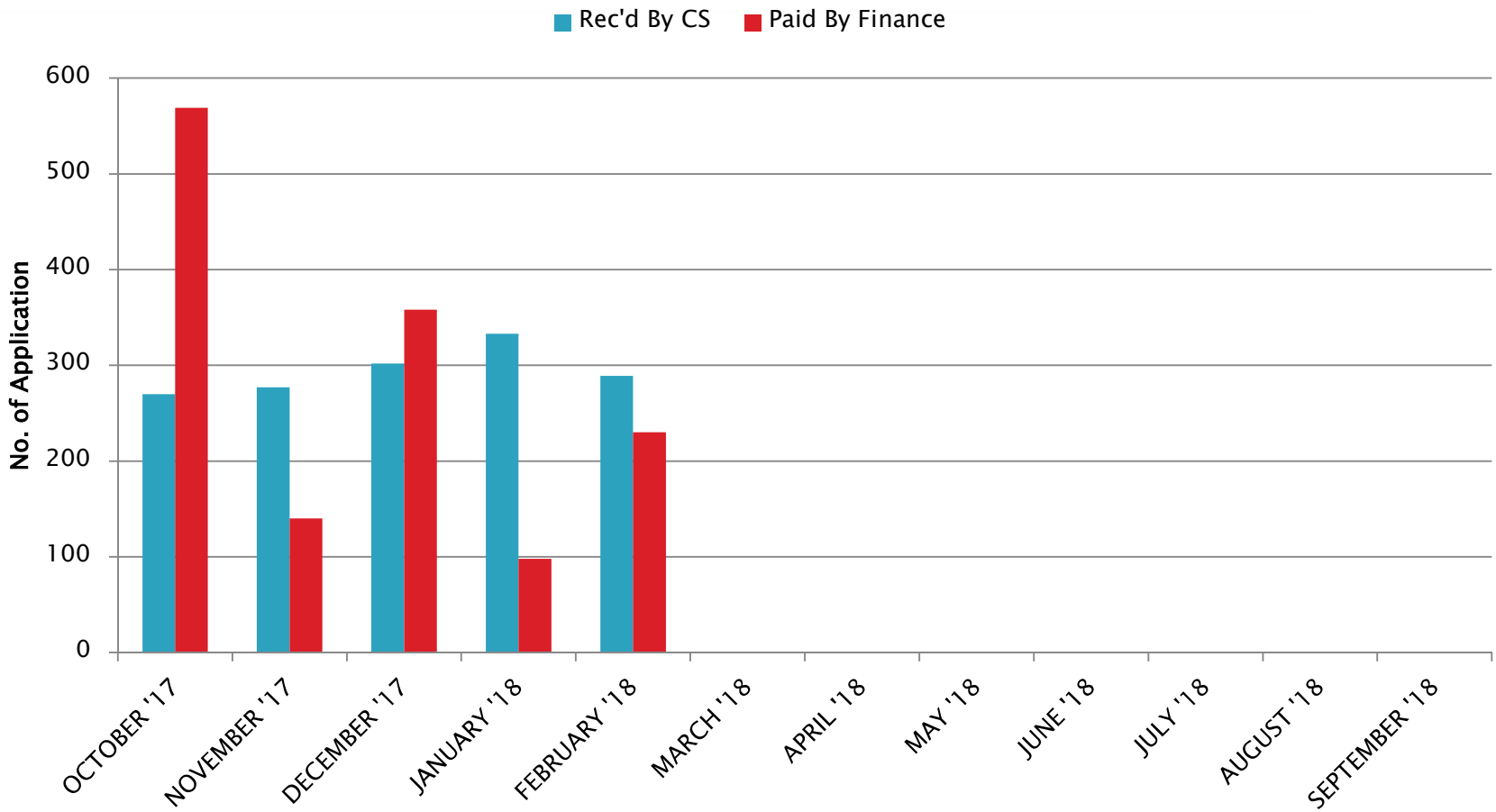
FY 2018- Number of Applications Received By Customer Service and Paid Monthly

Month	Rec'd By CS	Paid By Finance
OCTOBER '17	270	569
NOVEMBER '17	277	140
DECEMBER '17	302	358
JANUARY '18	333	98
FEBRUARY '18	289	230
MARCH '18		
APRIL '18		
MAY '18		
JUNE '18		
JULY '18		
AUGUST '18		
SEPTEMBER '18		

FY 2017- Number of Applications Received By Customer Service and Paid



FY 2018- Number of Applications Received By Customer Service and Paid

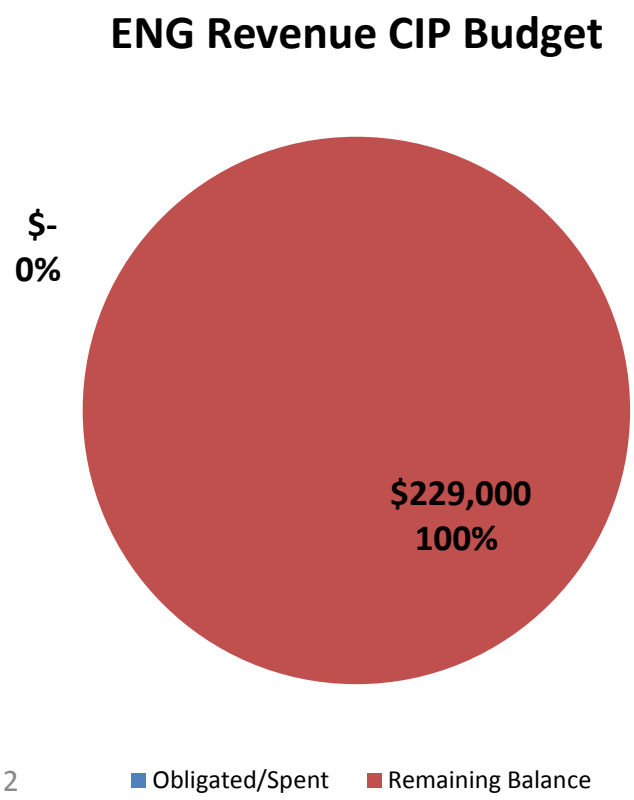


ENG Budget Execution Performance

February 28, 2018

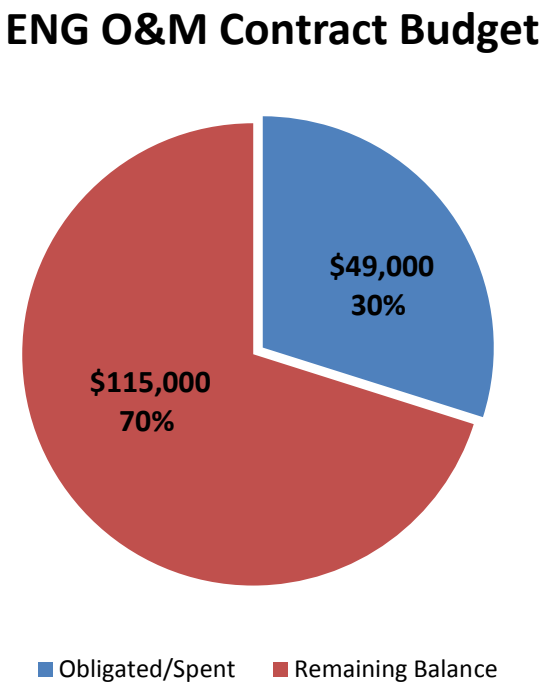
ENG Revenue CIP Budget

- Revenue Funded
- Target
  - 50% CIP Obligation by June 1, 2018
  - 100% CIP Spend by September 30, 2018



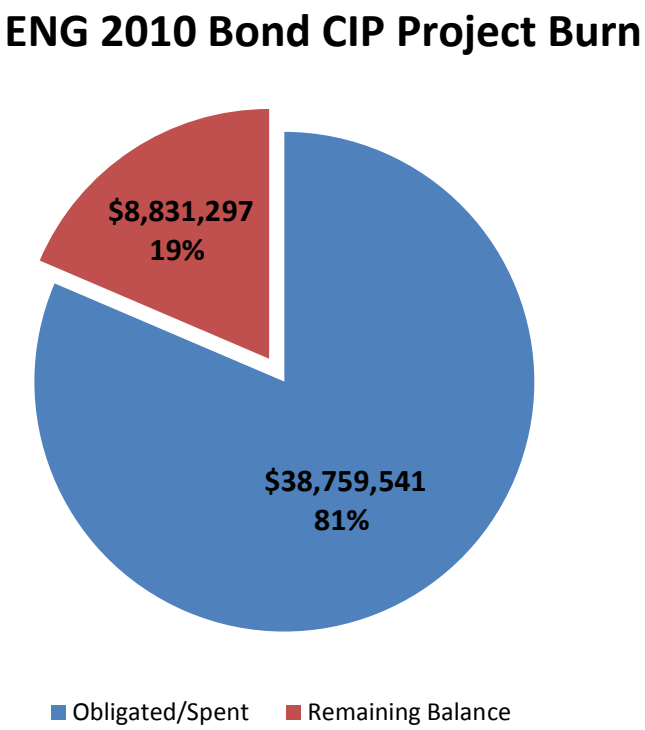
ENG O&M Contract Budget

- Revenue Funded
- Target
  - 25% CIP Obligated by April 30, 2018
  - 75% CIP Obligation by August 30, 2018
  - 100% CIP Spend by September 30, 2018



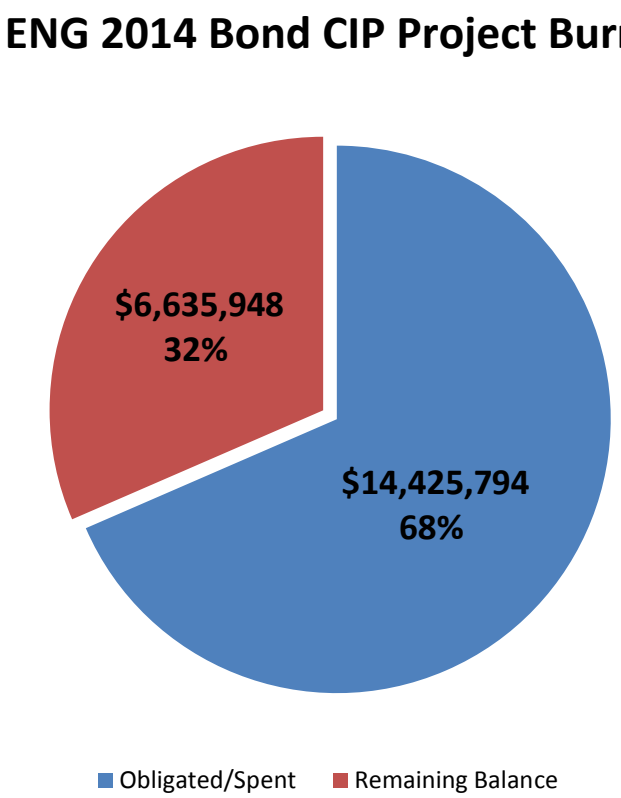
ENG 2010 Bond Series CIP Budget

- Bond Funded
- Target
  - Pending



ENG 2014 Bond Series CIP Budget

- Bond Funded
- Target
  - Pending



Engineering Work Orders

Engineeirng Work Order Summary -February 2018	
Work Orders Received from Customer Services	180
Work Orders Processed & Released to T&D	97
Work Orders Processed & Released to CSR	165
Work Orders Canceled	26
Work Orders Pending Survey	17
Pending Work Orders at Engineering	571

Engineering Large Customer and Net Metering Tracking

Date Received	Customer Name	Work Order Number(s)	Location	KVA	Meter Qty	Status
05/07/14	Port Authority of Guam	412337	Piti			Upgrades of existing facilities, includes line relocations and service conversions from overhead to underground 75% completed. Currently on hold pending Port Authorty direction for final removal.
12/20/13	CoreTech International	Multiple	Dededo	250	50	Lada Estates, 450 kVA, Phase I 100% Completed 242 units energized, Phase II 300 kVA, applications received for 93 units, Phase II 100% Completed. Phase III on hold due to Labor and Permit issues.
01/27/15	TG Engineers PC	422182-85, 90-93, 96-98	Agana Heights	100	11	11 Unit Apartment, 100 kVA, 98% Completed
06/02/15	Docomo Pacific Inc.	Multiple	Various Locations Islandwide	50		New Comm Towers and Power Supplies, 10 sites, 9 completed
05/13/15	CoreTech International Towers	426021	Tamuning	3300	104	New condominiums, 2-1500kVA and 1 300 kVA, Tower 101 100% Completed, Tower 102, 103, and 104 are 45% completed, currently on hold. Temporary power pending for Community Center, 100% Completed. First 52 Service Orders for Tower 101 is 100% completed.
05/11/16	Korando Corp (DPW Bile Pigua Bridge)	437716	Merizo			Bile and Pigua Bridge Reconstruction - 65 % Completed, Route 25/26 Road Widening, currently on hold.
12/09/16	Maeda Pacific	443952	Harmon			Route 1 and Route 3 road improvements - 100% completed, involves new underground 34.5kV and 13.8kV lines and the removal of overhead ples and lines. Pulling of wires intiated 10/9/17. Final Termination and testing Completed. Energizing of new underground 13.8kV and 34.5 kV lines completed. Pending return of materials.
Pending	New Nikko Expansion	Pending	Tumon	1500	1	New Nikko Expansion, pending submittal of work order application. Redesign of primary feed ongoing.
03/10/17	Best Housing Corp Ltd	446924-30	Mangilao	60	6	New 6-Unit Townhome, 50% completed
06/01/17	GWA Pump Stations 2 and 3	450278-9	Santa Rita	150	2	New GWA Pump Stations. 20% Completed.
06/01/17	WM Eng Office Building	450280	Tamuning	150	1	New office building. 100% Completed. Released to T&D.
07/17/17	Keystone Pacific Realty Corp	451488	Hagatna	100	10	New apartment. 92% Completed. Pending additional applications.
07/17/17	Grand Rock Corp.	451490, 1	Santa Rita	50	4	100% Completed. Released to T&D.
08/07/17	Matsumoto, Akiyoshi	452146-49, 51, 4, 6	Tumon	60	7	New 6 Unit Apartment with Common Meter. 5% Completed.
08/17/17	Micronesian Community Corp.	Pending	Mangilao	130	13	New 13 unit subdivison, 10% completed
09/11/17	Grand Harvest Inc.	453016,19,22,24-30,32,34,35,38,40	Dededo	225	17	New 17 Unit Apartment, 100 % Completed. Release t o T&D.
10/02/17	Sumitomo Mitsui (Baza Gardens Waste water)	453369	Yona	300	1	Baza ardens Wastewater Treatment Plant Improvements, 0% Completed
01/25/18	Precision Systems Inc.	456547, 60	Tamuning			Primary Underground Conversion. Removal of three spans of overhead primary and 1 ea. power pole. 95% completed.
02/06/18	Guam Waterworks Authority	Pending Application	Dededo	25	1	Santa Ana Sub. Pump Station. 100% Completed and released to T&D.
03/01/18	Docomo Pacific Inc., New Data Center	Pending Application	Talafofo	3000	1	New Data Center. Planned to come off P-260 and P-262. 0% Completed. Still in Desgn Phase.
Varies	Pending Net Metering Customers	Varies	Various Locations Islandwide		17	Pending Net Metering Customers
			Total	9450	246	

NET METERING
FEBRUARY 2018

	Quantity	Connected kVA
Completed	1,630	16,849
Pending	17	129
Grand Total	1,647	16,978

Rate Class and Technology

Technology	Schedule	Count	Total kW
Solar Energy	R - Residential	1,544	13,901.91
	J - Gen Service Dmd	32	1,646.51
	K - Small Gov Dmd	9	317.80
	L - Large Government	1	22.80
	P - Large Power	3	240.70
	G - Gen Serv Non-Dm	32	636.47
	S - Sm Gov Non-Dmd	7	78.80
Wind Turbine	R - Residential	2	3.60
Grand Total		**1,630**	**16,848.59**

Projected FY 2018 Non-Fuel Revenue Loss

Customer Rate Class	Renewable Energy Capacity (kW)	Annual kWh Generated (@5.092 hours/day)*	Average Non-Fuel Yield $/kWh	Estimated Annual Revenue Loss
R	13,905.51	25,842,810.9	0.09293	$ 2,401,598.26
J	1,646.51	3,059,970.2	0.13112	$ 401,226.36
K	317.80	590,618.1	0.13932	$ 82,286.09
L	22.80	42,372.9	0.13525	$ 5,730.84
P	240.70	447,330.9	0.11539	$ 51,617.07
G	636.47	1,182,853.0	0.15084	$ 178,416.81
S	78.80	146,446.5	0.15334	$ 22,456.26
Grand Total	**16,848.59**	**31,312,402.5**		**$ 3,143,331.69**

*Estimated number of hours from NREL for Guam (13.4 degrees North and 144 degrees East).

Estimated Annual Revenue Loss

Description	Estimated kW	*Total Estimated Cost
FY17	28,242,917	$ 2,828,834.71
FY16	21,867,383	$ 2,200,794.56
FY15	7,383,621	$ 856,921.27
FY14	3,137,212	$ 410,558.94
FY13	1,556,949	$ 178,996.00
FY12	494,672	$ 58,545.89
FY11	170,070	$ 18,177.13
FY10	98,830	$ 8,483.27
FY09	23,912	$ 1,656.87

*Source for effective yield rate from the Year End Revenue Reports (12 month Average Yield)

NET METERING
FEBRUARY 2018

Customer Count and Connected kW by Feeder

Status	Feeder	Net Metering Connected kW	Customer Count	% of Feeder Maximum kW	% of Feeder Minimum Daytime kW
Completed	P-005	210.27	21	12.2%	24.5%
	P-046	226.91	27	5.4%	8.2%
	P-088	603.78	67	10.0%	15.9%
	P-089	475.77	60	10.6%	25.6%
	P-111	60.00	1	1.1%	2.0%
	P-203	401.36	31	5.4%	15.2%
	P-204	118.08	15	2.5%	5.2%
	P-205	36.40	4	0.8%	1.3%
	P-210	486.79	50	9.5%	12.9%
	P-212	857.80	82	20.7%	53.7%
	P-213	295.33	11	11.3%	15.2%
	P-220	155.14	17	25.5%	80.0%
	P-221	489.53	52	11.1%	22.2%
	P-223	495.71	54	20.8%	29.7%
	P-240	58.55	2	0.9%	7.9%
	P-245	25.00	1	0.5%	1.1%
	P-250	924.04	92	14.2%	25.0%
	P-251	145.50	7	5.9%	9.0%
	P-253	466.61	50	10.4%	16.4%
	P-262	942.06	97	24.7%	59.3%
	P-270	313.67	26	6.2%	12.4%
	P-271	122.78	12	2.1%	4.4%
	P-272	228.03	17	8.9%	20.2%
	P-280	311.59	25	17.3%	32.2%
	P-281	189.70	4	6.8%	18.9%
	P-282	21.00	2	0.6%	1.7%
	P-283	485.05	46	13.4%	23.0%
	P-294	979.34	95	22.6%	44.8%
	P-301	199.26	22	14.1%	25.1%
	P-311	649.83	48	16.3%	27.9%
	P-322	823.99	89	10.9%	21.6%
	P-323	274.41	17	5.8%	18.0%
	P-330	540.62	68	9.9%	20.0%
	P-331	704.08	81	11.2%	18.1%
	P-332	384.46	46	6.8%	10.0%
	P-340	497.37	43	27.4%	60.4%
	P-087	1,038.25	113	26.4%	41.4%
	P-252	447.19	27	10.6%	21.6%
	P-321	257.16	25	4.6%	5.2%
	P-260	58.46	6	8.5%	29.2%
	P-067	68.25	10	0.8%	1.0%
	P-312	68.90	4	4.1%	4.8%
	P-206	18.33	2	1.9%	3.4%
	P-242	23.75	2	0.4%	1.1%
	P-310	181.57	8	6.6%	12.1%
	P-261	342.57	37	12.4%	21.3%
	P-201	45.00	6	1.3%	2.3%
	P-007	55.08	5	7.6%	16.2%
	P-244	18.00	1	1.0%	1.0%
	P-202	22.00	1	0.7%	1.6%
	P-341	4.30	1	0.4%	1.6%
Completed Total		**16,848.59**	**1,630**		
Pending	Pending	129.41	17	0.0%	0.0%
Pending Total		**129.41**	**17**	**0.0%**	**0.0%**
Grand Total		**16,978.00**	**1,647**		
	Feeders highlighted in red indicates renewable energy capacity has exceeded 25% of minimum daytime load.				
	Feeders highlighted in yellow indicates renewable energy capacity has reached 15% to 24% of minimum daytime load.				

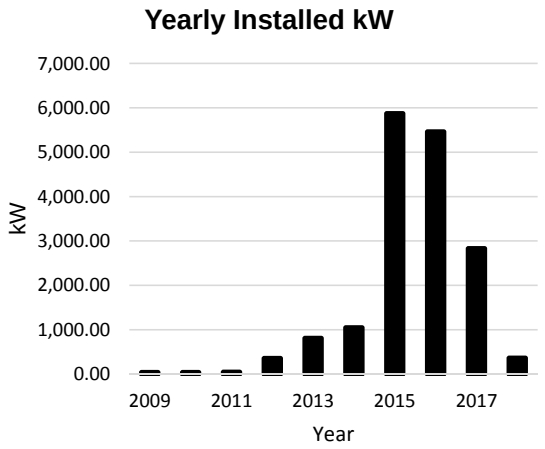
NET METERING
FEBRUARY 2018

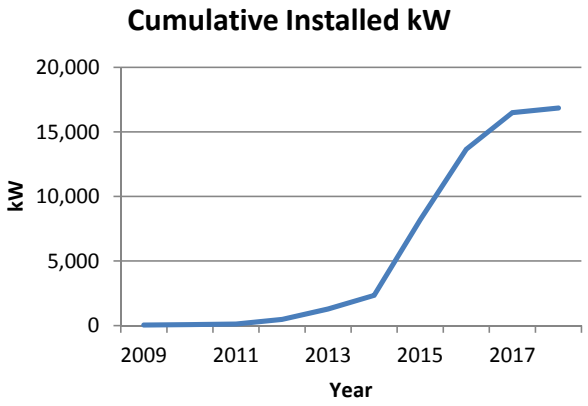
Installed kW by Year

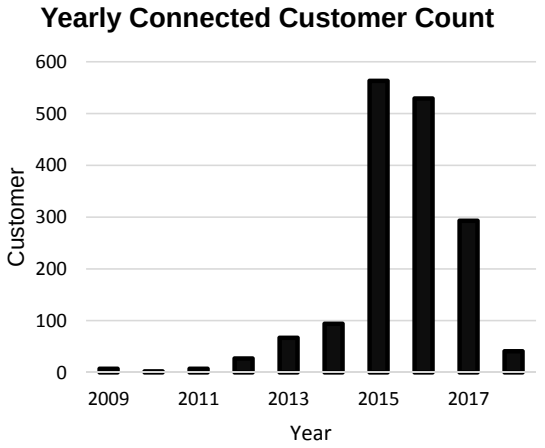
Year	Total	Cumulative
2009	39.46	39.46
2010	39.20	78.66
2011	43.61	122.27
2012	354.61	476.88
2013	808.45	1,285.33
2014	1,046.54	2,331.87
2015	5,870.55	8,202.42
2016	5,458.34	13,660.75
2017	2,828.00	16,488.75
2018	359.84	16,848.59
Grand Total	16,848.59	

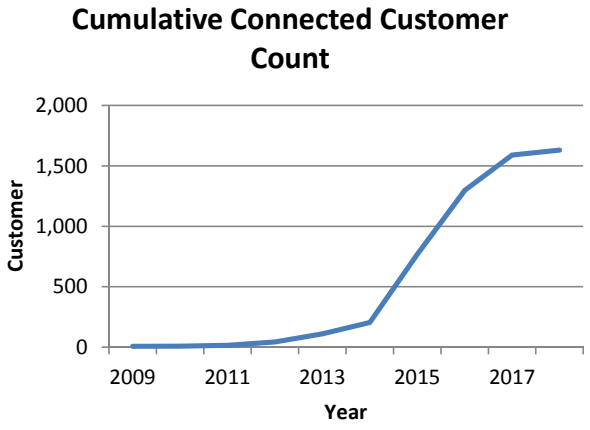
Customer Count by Year

Year	Total	Cumulative
2009	7	7
2010	2	9
2011	7	16
2012	27	43
2013	67	110
2014	94	204
2015	563	767
2016	529	1,296
2017	293	1,589
2018	41	1,630
Grand Total	1,630	







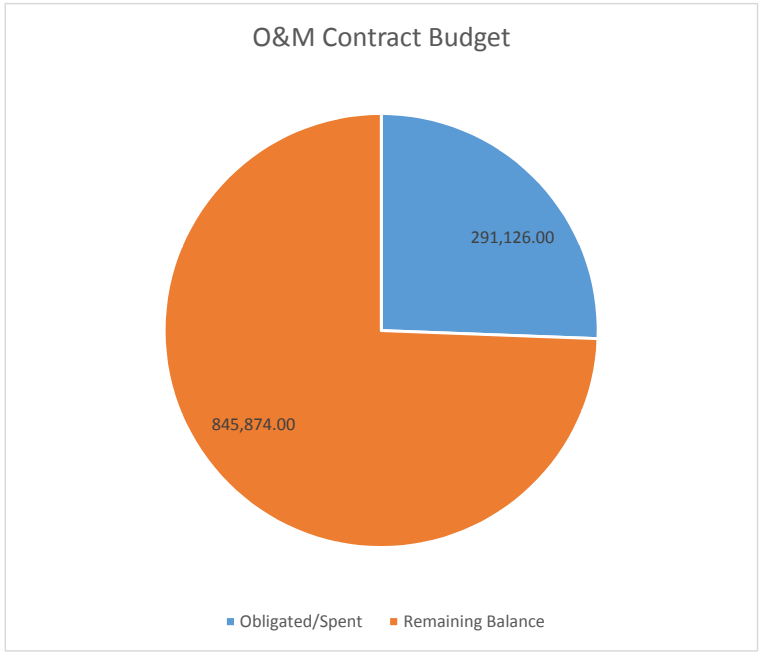


Planning & Regulatory CCU Report

February 28, 2018

Planning & Regulatory O&M Contract Budget

- Revenue Funded
- Target
  - 7.41% O&M Obligated by November 16, 2017
  - 19.28 O&M Obligated as of Nov. 30, 2017 (actual)
  - 19.36 O&M Obligated as of Dec. 31, 2017 (actual)
  - 25.60 O&M Obligated as of Feb. 28, 2018 (actual)
  - 30.09% O&M Obligation by May 31, 2018



2

P&R Weekly & Monthly Inspection Reports

- Best Management Practices (BMP) Report Summary [Weekly]
- Generation Spill Prevention, Control, and Countermeasures (SPCC) Report Summary [Monthly]
- T&D Spill Prevention, Control, and Countermeasures (SPCC) Report Summary [Monthly]

- GPA is responsible to employees, the island environment, and the community to take all reasonable steps necessary to prevent spills from its facilities in order to protect human health and the environment

P&R Inspection Report Purpose

- The purpose of these inspections is to catch discrepancies and violations internally and correct them before inspections by Guam EPA and US EPA
- Regulatory Agencies can conduct scheduled or un-scheduled (surprise) inspections any time
- Any major discrepancies or violations cited can lead to issuance of a Notice of Violation (NOV), possible fines, and/or other enforcement action
- P&R conducts routine SPCC inspections in compliance with the requirements of 40CFR 112.7(a)(3)(ii), Discharge Prevention Measures

Production Data
28-Feb-18

SYSTEM												
YEAR	MONTH	# of DAYS	GROSS GENERATION	FUEL CONSUMPTION		GROSS FUEL EFFICIENCY (Target ≥ 15.99 kWh/gal)	COST per GROSS kWh	GROSS HEAT RATE (Baseloads) PUC Target less than 9,600	GROSS HEAT RATE (Peaking) PUC Target less than 13,600	Ave. MW	Peak MW
				(gal)	(bbl)						
2015	Oct	31	142,387,859	10,285,716	244,898	13.84	$ 0.1076	9,797.11	12,360.42	191	258
	Nov	30	140,522,664	9,871,651	235,039	14.23	$ 0.1185	9,731.04	12,945.82	195	248
	Dec	31	142,668,711	9,711,263	231,221	14.69	$ 0.0951	9,538.53	12,579.77	192	239
2016	Jan	31	138,191,484	9,446,289	224,912	14.63	$ 0.0676	9,662.86	13,413.90	186	233
	Feb	29	128,816,826	8,860,399	210,962	14.54	$ 0.0706	9,692.42	12,038.19	185	232
	Mar	31	139,991,832	9,522,573	226,728	14.70	$ 0.0732	9,172.99	11,597.00	188	239
	Apr	30	140,706,546	9,301,856	221,473	15.13	$ 0.0734	9,368.24	11,041.70	195	245
	May	31	152,815,417	9,751,521	232,179	15.67	$ 0.0681	9,459.10	11,388.57	205	254
	June	30	149,191,844	9,851,575	234,561	15.14	$ 0.0805	9,666.70	11,074.48	207	253
	July	31	151,248,202	10,443,028	248,644	14.48	$ 0.0920	9,477.71	12,208.87	203	258
	Aug	31	149,051,031	10,210,429	243,105	14.60	$ 0.0935	9,431.70	11,155.10	200	252
	Sept	30	142,069,206	9,829,773	234,042	14.45	$ 0.0956	9,509.75	11,393.73	197	256
	Oct	31	148,824,965	9,660,319	230,008	15.41	$ 0.0729	9,749.38	10,738.69	200	252
	Nov	30	145,293,562	9,427,636	224,468	15.41	$ 0.0901	9,714.47	10,786.30	202	252
	Dec	31	147,753,552	9,725,521	231,560	15.19	$ 0.0934	9,661.13	10,645.44	199	248
2017	Jan	31	142,960,618	9,226,278	219,673	15.49	$ 0.0913	9,620.29	10,965.71	192	234
	Feb	28	113,499,400	7,270,830	173,115	15.61	$ 0.0900	9,609.08	11,503.12	195	246
	Mar	31	149,402,182	9,664,440	230,106	15.46	$ 0.1014	9,719.35	11,440.45	201	246
	Apr	30	145,351,026	9,913,757	236,042	14.66	$ 0.1101	9,750.73	11,392.12	202	250
	May	31	157,573,506	11,065,930	263,475	14.24	$ 0.1170	10,067.14	11,323.20	212	256
	June	30	150,240,751	10,654,196	253,671	14.10	$ 0.1101	10,209.74	11,248.62	209	257
	July	31	150,580,050	10,622,458	252,916	14.18	$ 0.1169	9,544.54	11,837.62	202	252
	Aug	31	150,084,827	10,642,044	253,382	14.10	$ 0.1177	9,206.15	11,917.58	202	261
	Sept	30	143,990,208	10,309,304	245,460	13.97	$ 0.1152	9,541.20	13,107.05	200	254
	Oct	31	147,122,071	9,774,857	232,735	15.05	$ 0.1079	9,590.71	11,375.81	198	254
	Nov	30	147,284,781	9,783,352	232,937	15.05	$ 0.1061	9,563.85	11,257.17	205	253
	Dec	31	151,600,064	9,925,003	236,310	15.27	$ 0.1122	9,607.13	11,035.82	204	250
2018	Jan	31	147,704,057	9,563,641	227,706	15.44	$ 0.1078	9,755.40	11,029.21	199	246
	Feb	28	131,329,470	8,660,044	206,192	15.16	$ 0.1150	9,763.94	11,125.15	195	241

SUMMARY OF SPCC INSPECTION REPORT
MONTH OF FEBRUARY, 2018

LEGEND OF TRACKING

- Notification Date
- Completed
- Within Scheduled Remediation
- Deadline is Past Due

SUBSTATIONS

LOCATIONS	Findings		Recommendation/Remarks	Status	Responsible	Completion Date	Due Date	Initial Findings Date
DEDEDO SUBSTATION	*Facility Area*	NO CORRECTIVE ACTION						
DEDEDO SUBSTATION WAREHOUSE	*Facility Area*	NO CORRECTIVE ACTION						
MACHECHE SUBSTATION	*Facility Area*	NO CORRECTIVE ACTION						
TALOFOFO SUBSTATION	*Secondary Containment*	Oil leak from cooling fins	Conduct repair and cleanup				ASAP	February 2018
TENJO SUBSTATION	*Facility Area*	NO CORRECTIVE ACTION						
YIGO SUBSTATION	*Facility Area*	NO CORRECTIVE ACTION						

T&D Vegetation Management

Percent Completion (per Sector Feeder)

Note: Feeders priority listing based on outages due to vegetation

Northern Sector

Feeder	Esitmated Distance (LF)	Distance Trimmed by T&D Crew (LF)	Distance Trimmed by Contractor (LF)	% Completion
P332	6,830	3,410	9,561	190%
P322	7,265	500	4,800	73%
P330	2,635		12,599	478%
P087	4,245	4,200		99%
P046	1,245			
P321	4,045			
P088	3,310			
P089	670			
P331	1,925			
P323	2,810			
P271	50	1,405		2810%
P270	300	1,595		532%
P245	1,660	1,200		72%
P272	150	430		287%
P111	500	475		95%
P244	920	940		102%
P240	430	430		100%
P242	290	160		55%
Total	39,280	14,745	26,960	106%

Central Sector

Feeder	Esitmated Distance (LF)	Distance Trimmed by T&D Crew (LF)	Distance Trimmed by Contractor (LF)	% Completion
P250	33,290	6,000	3,850	30%
P212	17,560			
P253	15,240			
P283	2,230		7,000	314%
P210	10,120			
P280	1,675			
P311	1,360			
P007	778			
P211	6,050			
P202	420			
P251	280			
P213	3,500			
P252	1,520		4,586	302%
P201	100			
P203	370			
P282	525			
P310	370			
P205	350			
P206	140			
P204	530			
P312	200			
P281	525			
P400	150			
Total	97,283	6,000	15,436	22%

Southern Sector

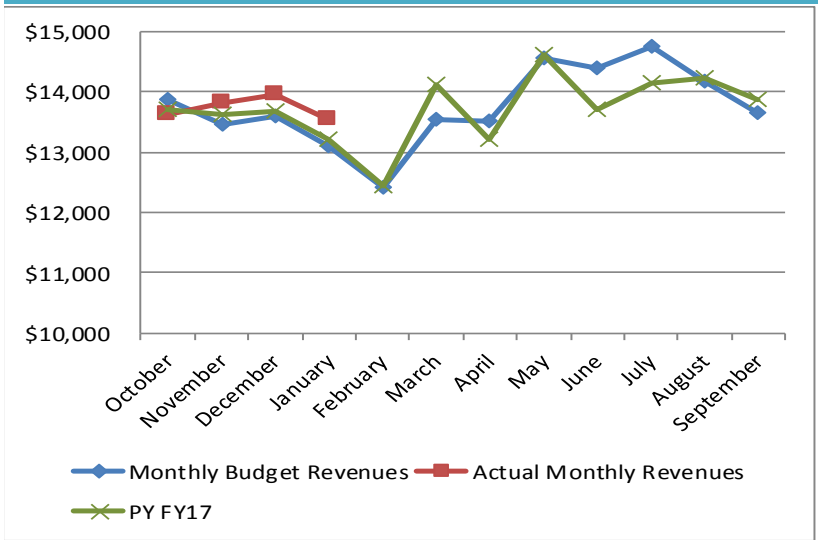
Feeder	Esitmated Distance (LF)	Distance Trimmed by T&D Crew (LF)	Distance Trimmed by Contractor (LF)	% Completion
P294	9,430	45	22,801	242%
P261	4,930		6,439	131%
P340	13,240	335	23,005	176%
P262	5,185	75	9,195	179%
P221	1,570	210		13%
P223	2,500	895		36%
P341	880	50	450	57%
P301	19,915	120	1,675	9%
P005	990			0%
P220	1,250			0%
P260	12,630			0%
Total	72,520	1,730	63,565	90%

January 2018 Monthly Financial Highlight

Base Revenue Through January 31, 2018

$000	Monthly Budget Revenues	Actual Monthly Revenues	Variance		PY FY17	CY vs PY Variance	
October	$ 13,873	$ 13,625	$ (248)	↑	$ 13,702	$ (77)	↑
November	13,451	13,827	$ 376	↑	13,622	$ 205	↑
December	13,599	13,968	$ 369	↑	13,695	$ 273	↑
January	13,114	13,534	$ 420	↑	13,220	$ 314	↑
February	12,422				12,454		
March	13,534				14,123		
April	13,525				13,224		
May	14,568				14,617		
June	14,386				13,722		
July	14,759				14,151		
August	14,183				14,244		
September	13,651				13,874		
Total	**$ 165,064**	**$ 54,954**	**$ 917**		**$ 164,649**	**$ 715**	

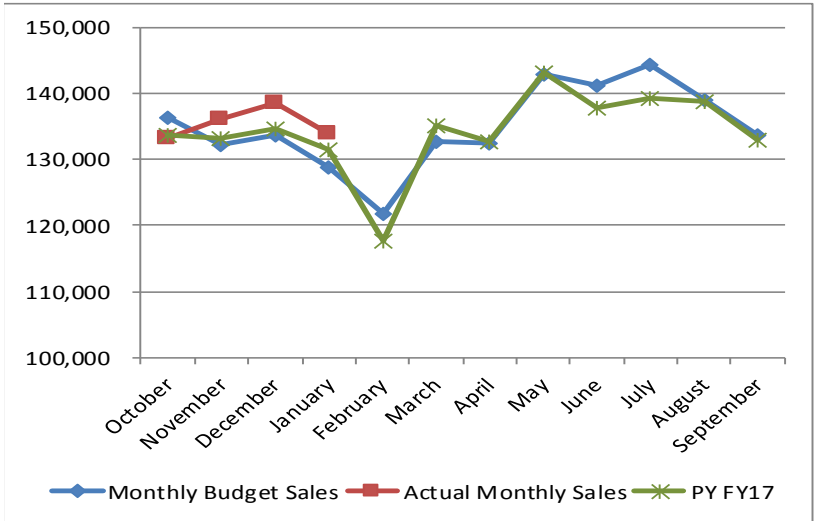
Base Rate Revenue $000



MWH Sales Through January 31, 2018

mwh	Monthly Budget Sales	Actual Monthly Sales	Variance		PY FY17	CY vs PY Variance	
October	136,219	133,262	(2,957)	↑	133,620	(358)	↑
November	132,132	136,044	3,912	↑	133,235	2,809	↑
December	133,625	138,587	4,962	↑	134,634	3,953	↑
January	128,711	133,882	5,170	↑	131,461	2,421	↑
February	121,668				117,617		
March	132,587				135,131		
April	132,532				132,587		
May	142,956				143,013		
June	141,064				137,777		
July	144,404				139,227		
August	139,093				138,797		
September	133,658				132,993		
Total	**1,618,650**	**541,775**	**11,088**		**1,610,093**	**8,825**	

MWh Sales

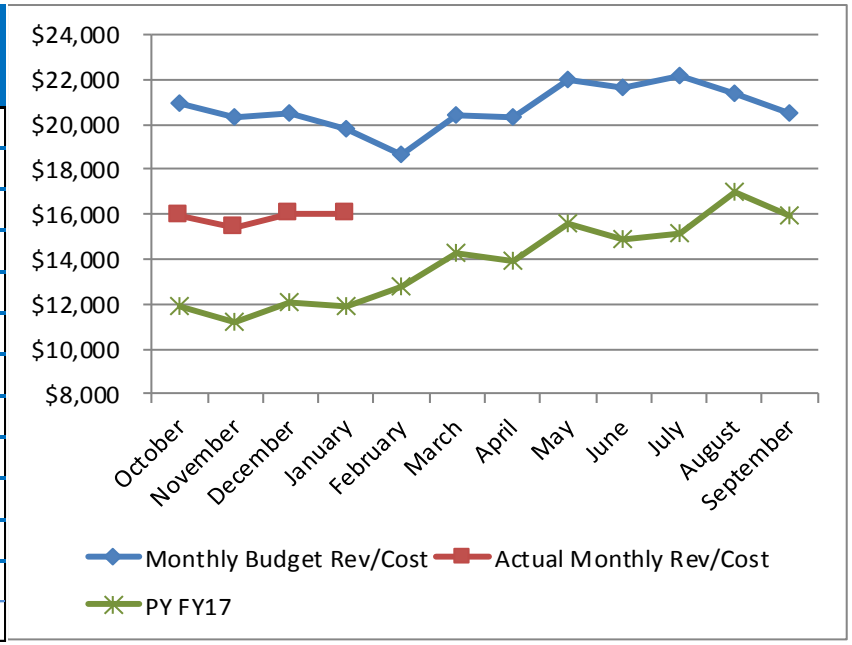


January 2018 Monthly Financial Highlight (Continued)

Fuel Revenue Through January 31, 2018

$000	Monthly Budget Rev/Cost	Actual Monthly Rev/Cost	Variance		PY FY17	CY vs PY Variance	
October	$ 20,928	$ 15,936	$ (4,992)	↑	$ 11,894	$ 4,042	↑
November	20,300	15,400	$ (4,899)	↑	11,215	$ 4,185	↑
December	20,529	16,007	$ (4,522)	↑	12,036	$ 3,971	↑
January	19,774	16,036	$ (3,738)	↑	11,867	$ 4,169	↑
February	18,692				12,751		
March	20,370				14,248		
April	20,361				13,940		
May	21,963				15,596		
June	21,672				14,859		
July	22,185				15,175		
August	21,369				16,947		
September	20,534				15,895		
Total	**$ 248,677**	**$ 63,380**	**$(18,151)**		**$ 166,425**	**$ 16,367**	

Fuel Revenue/ Cost $000



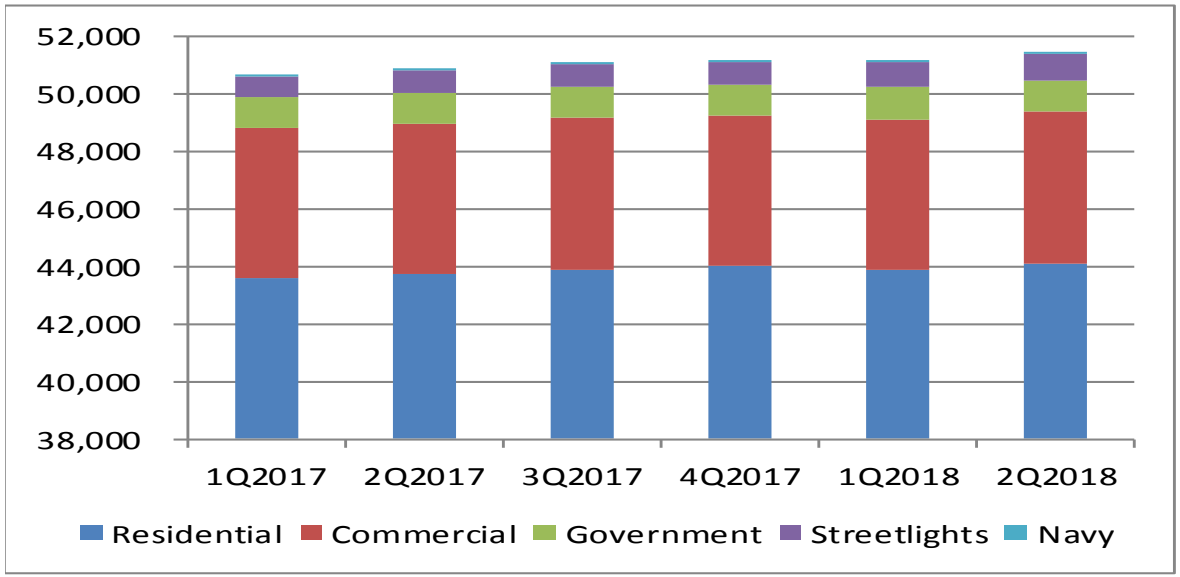
- Under recovery of LEAC - $16.8 million

January 2018 Monthly Financial Highlight (Continued)

Through January 31, 2018

	1Q2017	2Q2017	3Q2017	4Q2017	1Q2018	2Q2018	
Residential	43,582	43,718	43,902	43,991	43,898	44,119	
Commercial	5,235	5,236	5,252	5,226	5,231	5,244	
Government	1,071	1,077	1,071	1,073	1,076	1,083	
Streetlights	722	800	824	823	908	916	
Navy	1	1	1	1	1	1	
	50,611	50,832	51,050	51,114	51,114	51,363	

Number of Customers



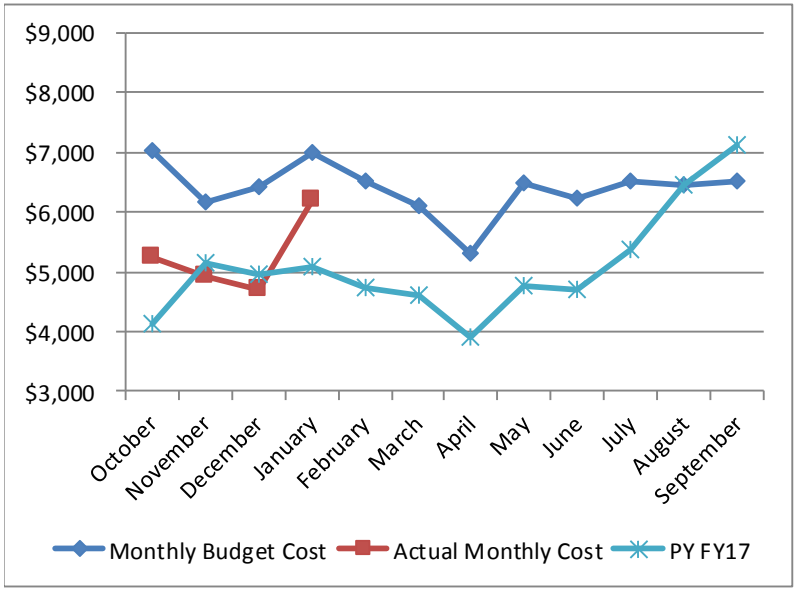
January 2018 Monthly Financial Highlight (Continued)

4

O&M Cost Through January 31, 2018

$000	Monthly Budget Cost	Actual Monthly Cost	Variance		PY FY17	CY vs PY Variance	
October	$ 7,040	5,239	1,801	↑	4,135	(1,103)	↑
November	6,182	4,941	1,240	↑	5,158	217	↑
December	6,428	4,694	1,735	↑	4,966	273	↑
January	7,001	6,204	797	↑	5,092	(1,112)	↑
February	6,522				4,748		
March	6,091				4,612		
April	5,320				3,892		
May	6,495				4,772		
June	6,221				4,702		
July	6,508				5,385		
August	6,462				6,445		
September	6,526				7,138		
Total	**$ 76,796**	**$ 21,078**	**$ 5,573**		**$ 61,045**	**$ (1,726)**	

O&M Cost $000



- DSC greater than target of 1.75

Debt service coverage (DSC) calculation-indentı	2012	2013	2014	2015	2016	2017	YTD Jan. 2018
Senior lien coverage	2.13	3.36	3.16	3.62	3.35	2.81	3.18
Aggregate debt service coverage	1.35	1.88	1.98	2.62	3.35	2.81	3.18
Debt service coverage (DSC) calculation-IPP as O&M							
Senior lien coverage	1.29	2.16	2.25	2.56	2.52	1.95	2.05
Aggregate debt service coverage	0.82	1.21	1.41	1.85	2.52	1.95	2.05

GPA Communications/PIO KPI Status

Week of 19 March 2018

Ratepayer Newsletter

Overall Status	G	Risks & Issues	G	Schedule	G	Scope	G	Financial	G

Status

1. Compiling April newsletter;
2. Renamed *Insights A Monthly Newsletter GPA Ratepayers*
3. Featured Guampedia recipe and Village fiesta schedule remain for newsletter content;
4. Inclusion of story updates: Update on GPA's land rezoning efforts to build Guam's New 180MW Power Plant,

Accomplishments

1. Completed January, February Ratepayer Newsletter;
2. April issue under construction; will meet deadline

Risks and Issues	Resolution
1. None to report;	

Financial	
Budgeted for FY17	

Legend:

No corrective action required

Near-term corrective action required

Requires immediate attention

2017 Annual Report

Overall Status	G	Risks & Issues	G	Schedule	G	Scope	G	Financial	G

Status

1. Bid Awarded for FY17 Annual Report to Card & Card Advertising
2. Card & Card Advertising compiling 'draft' accomplishments from historical 2017 GPA information and activities; Communications/PIO to review.
3. Will distribute information and survey GPA Work Divisions for FY17 Accomplishments;

Accomplishments

1. None to report.

Risks and Issues	Resolution
1. None to Report	

Financial

None to report	Within Budget	

Legend:

No corrective action required

Near-term corrective action required

Requires immediate attention

Special Projects – Social Media

Overall Status	Risks & Issues	Schedule	Scope	Financial
G	G	G	G	G

Status

1. Coordinating with various departments for any updates to share on social media;

Accomplishments

1. Achieved Fiscal Year Goal of 2,500 “Likes” information exchanges and postings ongoing;

Risks and Issues

1. Timely Updates on Forced Outages and Scheduled Outages ;

Resolution

1. Close monitoring of outages and trouble desk for updates;

Financial

Within budget		

Legend:

No corrective action required

Near-term corrective action required

Requires immediate attention

Energy Sense Marketing

Overall Status	Risks & Issues	Schedule	Scope	Financial
G	G	G	G	G

Status

1. Adztech Advertising continuing Phase II DSM Marketing Plan Goals & Objectives;
2. Deferred contract with KUAM Think Green segment; GPA trade allies completed initial and repeat rounds of advertising – not desiring to continue despite free advertising;
3. Major presence at UOG/2018 CIS Conference featuring 'Guam Energy Sense' to include information table, CSR staffing, promotional items and display of GPA Electric Vehicle

Accomplishments

1. On track to with DSM Phase II Marketing Goals & Objectives

Risks and Issues	Resolution
1. SPORD support pending additional funding;	PIO supporting DSM marketing in pending additional SPORD funding

Financial

Budget Support for SPORD for Phase II	

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

Prepaid & SMS (text) Project

Overall Status	Risks & Issues	Schedule	Scope	Financial
G	G	G	G	G

Status

1. None to report

Accomplishments

1. Completed coordination with local carriers (GTA, Docomo & IT&E for SMS Texting test);

Risks and Issues	Resolution
1. Pending review and acceptance from PSCC for testing and eventual rollout;	

Financial	
None to report	

Legend:

No corrective action required

Near-term corrective action required

Requires immediate attention

Live Streaming of CCU Meetings & Work Sessions

Overall Status	Risks & Issues	Schedule	Scope	Financial
G	G	G	G	G

Status

1. Forwarded specifications to IT for OR processing;
2. Bid process in progress

Accomplishments

1. None to report

Risks and Issues

1. None to report at this time

Resolution

Financial

Funding with IT Division & GWA for audio & video equipment & training

Legend:

No corrective action required

Near-term corrective action required

Requires immediate attention

50th Anniversary Activities

Overall Status	Risks & Issues	Schedule	Scope	Financial
G	G	G	G	G

Status

1. Planning activities for 50th Anniversary celebration will take into consideration first, 'connecting to' other existing events and programs where our planned programs/business objectives are already in place or underway or concluding; or where funding was already allocated and we can mark or memorialize the occasion.
2. A small committee meeting to select a theme and a larger planning committee of volunteer employees has occurred, with Communications-PIO serving as advisors. There is a GPA Employees Association on Friday, 23 March 2017 to request a coordination of some events.
3. Budget items, (subject to change) to be presented to GM for approval.

Accomplishments

1. Proclamation Signing date combined with 'Roll Call' of 4th Cycle GPA Apprentice Graduates – 08 May 2018; 10:00am, CCU Boardroom.
2. Promotional items – request for quotations sent
3. 50th logo design to be approved.
4. Theme to be approved.

Financial

None to report	

Risks and Issues	Resolution
1. None to report at this time	

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

Miscellaneous Activities

Overall Status	Risks & Issues	Schedule	Scope	Financial
G	G	G	G	G

Status

1. 'Acting' Communications Manager-PIO appointment reissued indefinitely
2. GPA Web page redesign work in progress
3. Monitoring of CS Business Centers
4. Standard Press/Media scheduled and emergency outage reporting is on-going
5. Education Outreach – random requests.

Accomplishments

1. GPA (volunteer) Employees participated in Guam public school Career Day event at Astumbo Middle School featuring Finance (Cora Montellano and Pam Aguigui; and IT (Jacob Muna Barnes)
2. Cable television installation and services completed with two drops in Employee Fitness Center

Risks and Issues	Resolution
1. None to report at this time;	

Financial	
None to report	

Legend:

No corrective action required

Near-term corrective action required

Requires immediate attention

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671) 648-3002 | guamccu.org

GUAM POWER AUTHORITY WORK SESSION

CCU Conference Room
4:30 p.m., April 19, 2018

AGENDA

1. **ISSUES FOR DECISION**
   - 1.1 **Relative to Pressure Digger / Resolution 2018-09**
2. **GM REPORT**
   - 2.1 **Updates**
3. **ISSUES FOR DISCUSSION**
   - 3.1 **Energy Cost Overview**
4. **DIVISION REPORTS**
   - 4.1 **Administration: Customer Service, HR, Procurement**
   - 4.2 **Engineering & Technical: Engineering, IT, Planning & Regulatory, SPORD**
   - 4.3 **Finance Reports**
   - 4.4 **Operations: Facilities, Generation, PSCC, T&D, Transportation**
   - 4.5 **Public Information Office**
5. **ANNOUNCEMENTS**
   - 5.1 **Next Meeting: CCU Meeting – April 20**
6. **ADJOURNMENT**

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

Issues for Decision

Resolution No. 2018-09:

Relative to Authorizing the Guam Power Authority to purchase two Pressure Diggers

What is the project's objective and is it necessary and urgent?

The objective of the project is to replace salvaged Pressure Diggers and to provide reliable equipment to give the Authority's Transmission & Distribution personnel the capability and capacity to perform new pole installations to support customer growth and to maintain the power system in a safe and efficient manner. Unavailable equipment translates to extended outages and longer response times.

Existing pressure diggers to be salvaged:

Official #	Description	Year	Repair Assessment
1349	Digger(Diamond Rio)	27 years (1991)	Complete replacement of digging unit and engine overhaul.
1535	Digger(Kenworth)	25 years (1993)	Complete replacement of digging unit.

Where is it at?

Pressure Diggers will service the transmission and distribution system island wide.

How much will it cost?

Item	Vendor	Qty	Unit Cost	Extended Cost
Pressure Diggers	Morrico Equipment	2	$516,999.00	$1,033,998.00

When will it be completed?

Delivery is set at 400 days after Notice to Proceed

What is its funding source?

FY17 General Plant Capital Improvement Revenue Funds

The RFP/BID responses:

One bid was received from Morrico Equipment

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

Resolution No. 2018-09

AUTHORIZING THE GUAM POWER AUTHORITY TO PURCHASE TWO PRESSURE DIGGERS

WHEREAS, the Guam Power Authority seeks to procure two new Pressure Diggers to replace existing diggers to be salvaged; and

WHEREAS, the new Pressure Diggers will give the Authority's Transmission & Distribution personnel the capability and capacity to perform new pole installations to support customer growth and to maintain the power system in a safe and efficient manner; and

WHEREAS, two Pressure Diggers within the current fleet are beyond their life expectancies and require extensive repairs on the engines and digging units; and

WHEREAS, the Procurement Officer has provided adequate public announcement to procure two new Pressure Diggers through Bid Invitation No. GPA-055-18 providing the technical specifications for the Pressure Diggers and the information required of each offeror; and

WHEREAS, Morrico Equipment was the sole bidder for GPA's consideration; and

WHEREAS, the GPA Evaluation Committee determined Morrico Equipment to be the only responsive bidder for supply of two Pressure Diggers at a cost of $1,033,998.00; and

WHEREAS, GPA will utilize Revenue Capital Funds to procure the Pressure Diggers; and

WHEREAS, GPA is seeking approval from the Consolidated Commission on Utilities to award a contract to Morrico Equipment for the purchase of two pressure diggers.

NOW, THEREFORE, BE IT RESOLVED, by the CONSOLIDATED COMMISSION ON UTILITIES, the GOVERNING BODY of the GUAM POWER AUTHORITY as FOLLOWS:

1. After careful consideration, the Consolidated Commission on Utilities finds the procurement of two Pressure Diggers with Morrico Equipment to be reasonable and prudent.
2. The General Manager of the Guam Power Authority is hereby authorized an increase in obligating authority up to $1,033,998.00 for the purpose of procuring two Pressure Diggers from Morrico Equipment.

RESOLVED, that the Chairman of the Commission certifies and the Secretary of the Commission attests the adoption of this Resolution.

DULY AND REGULARLY ADOPTED AND APPROVED THIS 20th DAY OF APRIL 2018.

Certified by:	Attested by:
_____	_____
JOSEPH T. DUENAS	**J. GEORGE BAMBA**
Chairperson	Secretary
Consolidated Commission on Utilities	Consolidated Commission on Utilities

I, J. George Bamba, Secretary for the Consolidated Commission on Utilities (CCU), as evidenced by my signature above do certify as follows:

The foregoing is a full, true, and accurate copy of the resolution duly adopted at a regular meeting of the members of Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

Ayes: _____

Nays: _____

Absent: _____

Abstain: _____

Number of Invitations Issued: 4
Number of Bids Received: 1

PURCHASES & STORES DIVISION
GUAM POWER AUTHORITY
ABSTRACT OF BIDS

Invitation Number: GPA-055-18
Opening Date: 4-03-18 Opening Time: 2:00 P.M.

Description of Supplies or Services: 2018 PRESSURE DIGGER

	BIDDER	Acceptance Time (Days)	DISCOUNT	ITEM NO.	1.0						
				QTY	2						
				UNIT	EACH.						
				DELIVERY	400 CAL DAYS ARO						
				MFG							
1)	Morrico Equipment: is submitting				$ 516,999-						
	Bid Bond # KIC-19731-B, 15% of			Del	A/S						
	total Bid; certificate of Authority,			Man	Freightliner &						
	major Share Holders, Non-Collusion,				TEREX						
	no gratuities or kickbacks, Ethical			Make	Freight Leiner						
	standard - wage determination,			Mod	M2112 & A330						
	Sex offender, Local procurement,			Year	2019						
	Business License & Litirate										

I hereby certify that all bids received in response to this invitation were opened under my personal supervision, and that the names of all bidders have been entered hereon.

(Signature)

Tabulated By

Date: 04/03/18

APPROVAL OF AWARD(S) (Bidder(s) and Price(s) circled above)

BASIS FOR AWARD

- ☐ Lowest Responsive Bidder
- ☐ Tie Bid
- ☐ Only Bid
- ☐ Other Than Lowest Responsive Bidder (See explanation on reverse hereof or attached)

Number of Awards (Contractors)

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

TO: **Consolidated Commission on Utilities**

FROM: **General Manager**

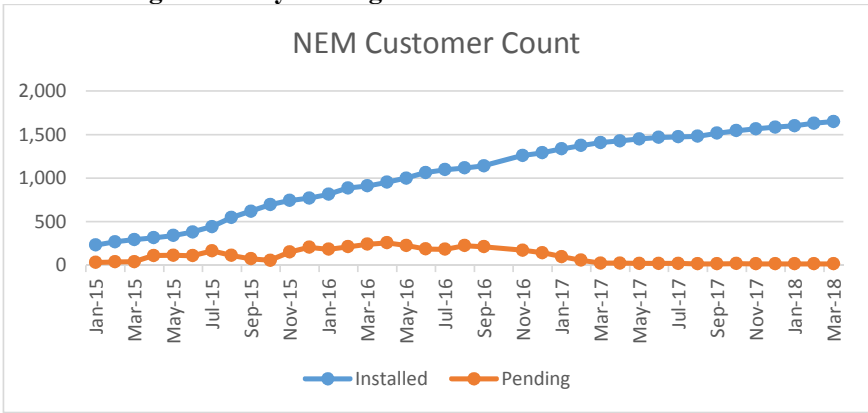
DATE: **April 19, 2018**

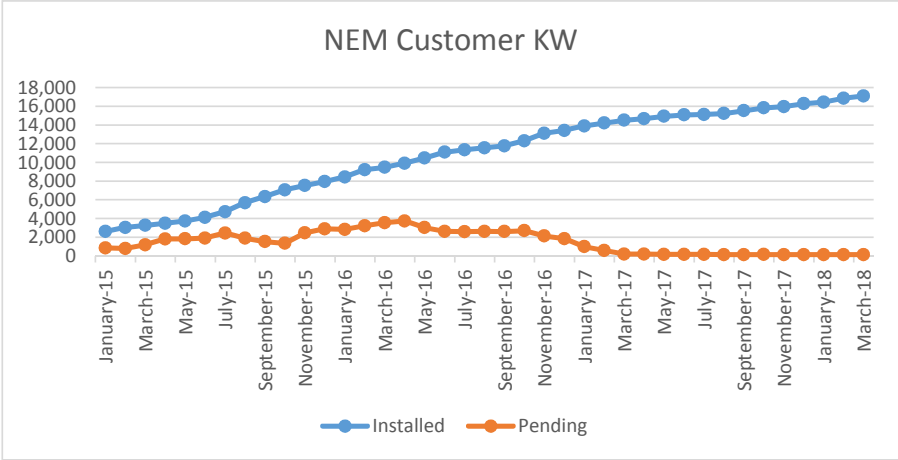
SUBJECT: **General Manager's Report**

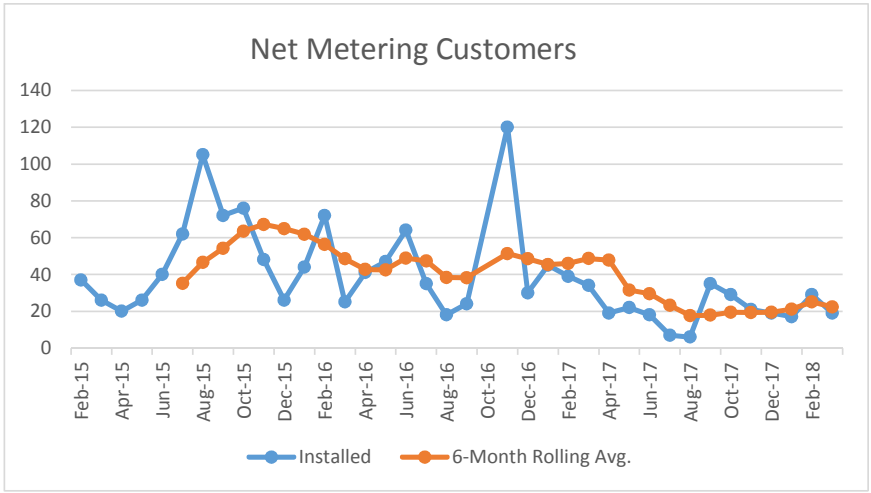
1. **Generation System Update:** The following summarizes the expected generation capacity situation for May 2018. The peak demand for May is estimated at 254 MW. GPA is scheduling the chemical cleaning of the Cabras 1 steam boiler for the end of May. The system is now heading into the higher peak months of the summer. Last year, the peak demand was 261 MW on August 1, 2017.

May 2018 Projected Capacity:	**373 MW**
May 2018 Projected Demand	**254 MW**
Projected Reserve Margin	**119 MW**

2. Net Metering Summary Ending March 2018:







3. Renewable Energy Production Summary Thru March 2018:

Energy Production Source:	Kwh	Oil Barrels Avoided	Fuel Cost Avoided
NRG Total Production beginning Oct 2015	120,289,445	201,126	$11,061,931
Net Metering Estimated Production beginning Jan 2015	59,160,124	98,917	$5,440,421
Wind Power Production beginning Jan 2016	895,916	1,498	$82,389
Renewables Total:	**180,345,485**	**301,541**	**$16,584,741**

4. Demand Side Management (DSM) Program Expenses Thru March 2018.

All Expenses – Fiscal Year

Description	FY16	FY17	FY18 as of March 31	Total to Date
Regular/OT Pay	$11,348.80	$22,256.00	$9,540.94	$43,145.74
Other Contractual	$28,278.50	$73,010.05	$2,885.00	$104,173.55
Bank Fees	$155.00	$1,032.06	$190.00	$1,377.06
Paid Rebates– Split AC	$154,700.00	$557,275.00	$552,925.00	$1,264,900.00
Paid Rebates– Central AC	$3,400.00	$8,200.00	$800.00	$12,400.00
Paid Rebates– Washer/Dryer	$2,800.00	$7,425.00	$3,800.00	$14,025.00
Total Expenses	$200,682.30	$669,198.11	$570,140.94	$1,440,021.35

SUMMARY

DESCRIPTION	AMOUNT
Initial DSM Budget FY'16	$1,806,014.00
Interest Income as of Mar 18	$3,900.94
Total Expense	$1,440,021.35
Ending Balance as of Mar 18	$369,893.59
Addtl. Budget: Approved (FY'18)	$1,139,189.00
Total Ending Balance as of Apr 18:	**$1,509,082.59**

5. **Net Metering Customer Credit Recommendation:** The last public hearing on Net Metering was conducted on April 18, 2018. Marianas Renewable Energy presented their Value of Solar Study. GPA will now proceed in providing the CCU with its analysis and recommendation at the May work session.

6. **Phase II Renewables:** The PUC has approved the entire 120 MW of PV Renewables by KEPCO and HANWHA. GPA would now proceed to sign a Power Purchase Agreement with each of these companies.

7. **Phase III Renewables Bid**: The bid has been issued. The bid request is for about 40MW of solar PV renewables to be constructed on Navy leased land. The energy produced would be stored in batteries during the day and released at nighttime to meet peak time load. The technical proposals are required by June 19, 2018. The opening date of prices of acceptable technical proposals has been set for August 1, 2018.

8. **PUC March 29, 2018 regular meeting resulted in the following:**
    - **Docket 18-06, Petition to Approve Phase II Renewable Award to KEPCO-LG CNS Consortium (approved)**
    - **Docket 18-08, Petition to Approve Phase II Renewable Award to HANWHA ENERGY CORPORATION (approved)**
    - **GPA Docket 18-09, Petition to Increase EPCM Contract (approved $600,000)**
    - **GPA Docket 18-10, Petition to Approve Contract Extension for Tristar Terminals Guam, Inc. (Dock Fees approved; Pipeline part require additional information)**
    - **GPA Docket 18-11, Petition to Approve GPA's Use of Bond Financing Savings for GPA's "Bringing Energy Savings to Schools" (BESTS) and Demand Side Management Program (approved)**

    Dockets to be considered at the April 26th PUC meeting:
    - **GPA Docket 18-12, Petition to Approve Invitation for Bid (IFB) for Property Insurance**
    - **GPA Docket 18-13, Petition to Approve the Piti 8 & 9 Contract Extension with Marianas Energy Corporation**

9. **New Power Plant Procurement:**

    - The rezoning of the land for the new power plant is still pending Legislative action. It seems Bill 223-34 would be brought up for deliberation at next week's session. The land rezoning is the critical path at this point for construction of the new power plant.
    - Multi-Step Bid Invitation No. 034-18 was opened on April 5, 2018. Eighteen (18) proponents submitted their technical and financial information. The evaluation team should have a short list of proponents which met the required financial and technical experience delineated in the bid by the end of April 2018. The short-listed proponents would be provided the technical specifications for them to prepare their technical and priced proposals over the next several months which is the next step of the process.

10. **Standard & Poor's Rating:** Our bond rating was not changed despite the situation of the Government of Guam. They did note that they will be monitoring negative Government impact on receivables which certainly will trigger a negative action.

11. **GPA's 50th Anniversary Celebration:** The proclamation signing is scheduled for May 8, 2018 in the CCU conference room. The proclamation kicks off our 50th anniversary program.

12. **Energy Storage System (ESS) Commissioning:** The Hagatna 24 MW and Talofofo 16 MW ESS is on schedule for commissioning in August 2018. These batteries will significantly improve power quality in the system in addition to helping reduce short term outages cause by generating and renewable PV trips. There will also be a reduction in fuel operating cost resulting from not having to run combustion turbines to provide spinning reserves during daytime hours.

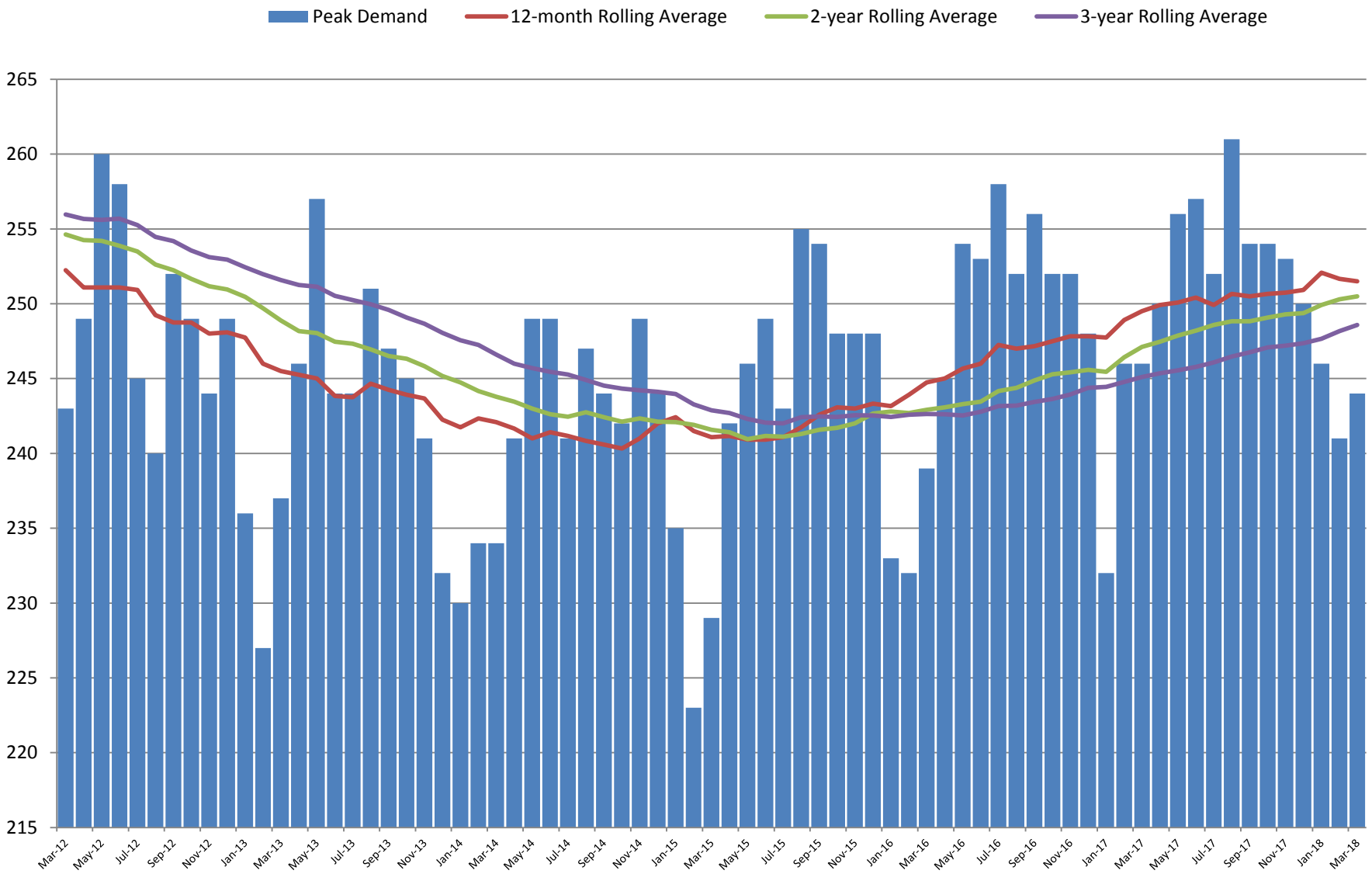
13. **Supervisory Control and Data Acquisition (SCADA) Commissioning:** The new SCADA system in Fadian is on track for commissioning in October 2018. The new system is the latest technology for the GPA power and GWA water and wastewater system. The factory testing of the system's major component is scheduled for early May in Taiwan.

14. **BEST SCHOOLS Program:** A kickoff meeting was held with GDOE Superintendent Jon Fernandez on April 2, 2018. The contract to conduct the evaluation of the GDOE schools has been signed. GPA should have the study and make its appropriate recommendations within the next 4 months.

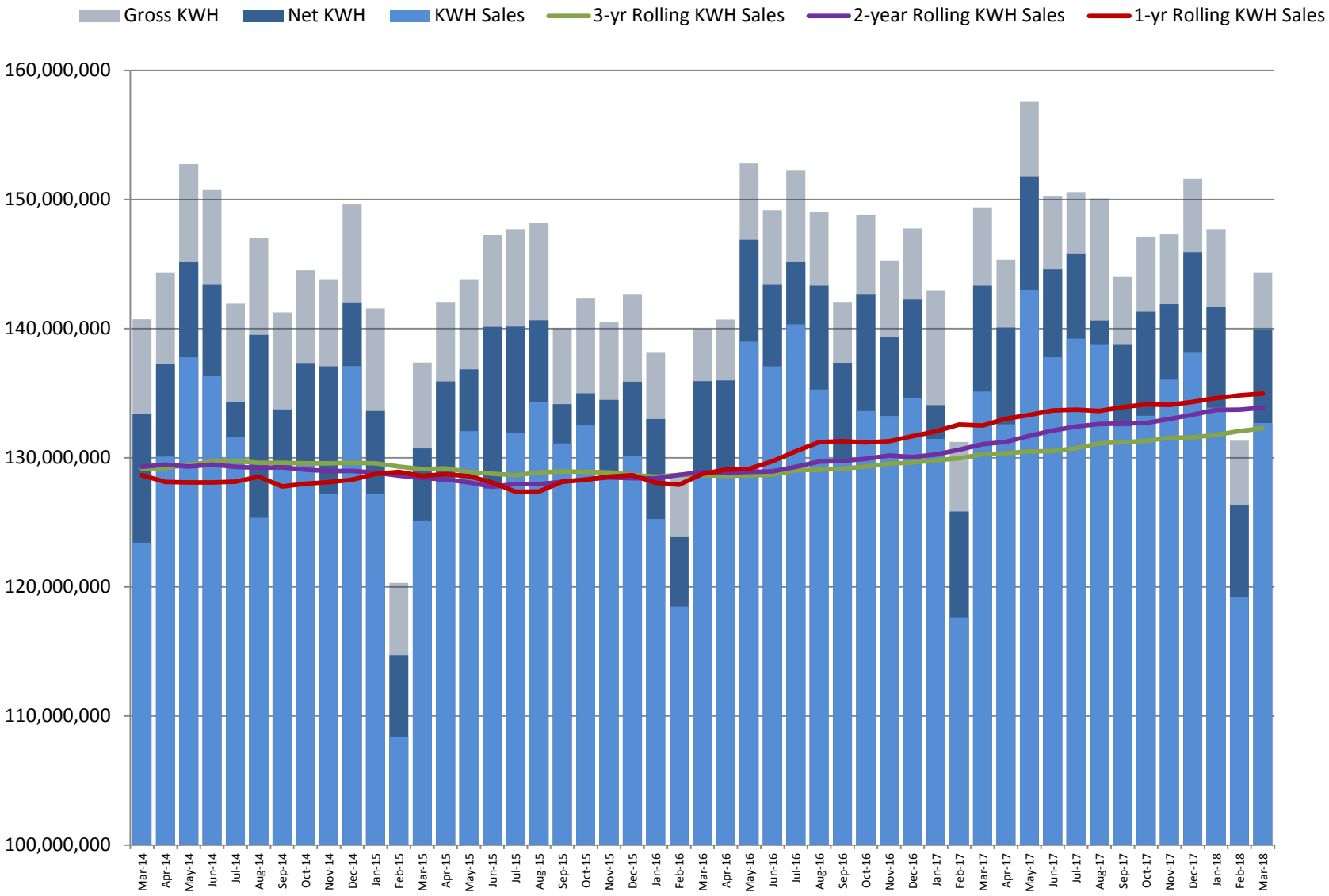
15. **Key Performance Indicators:** The following are updated indicators thru March 2018. Sales continued to be strong. Fuel oil prices have risen but have been remaining in the $60 to $70 per bbl. range.

John M. Benavente, P.E.

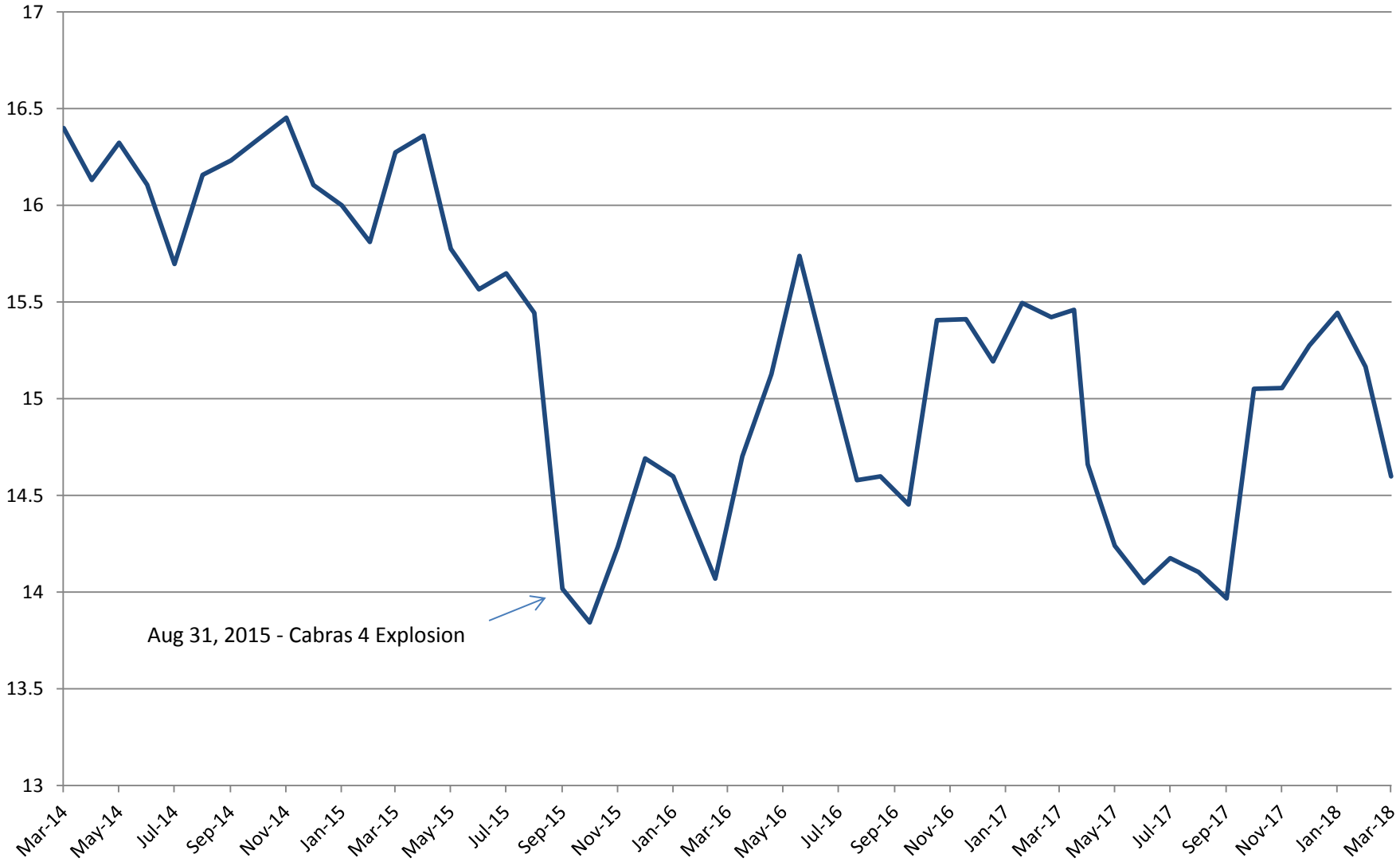
Historical Monthly Peak Demand
March 2012 - March 2018



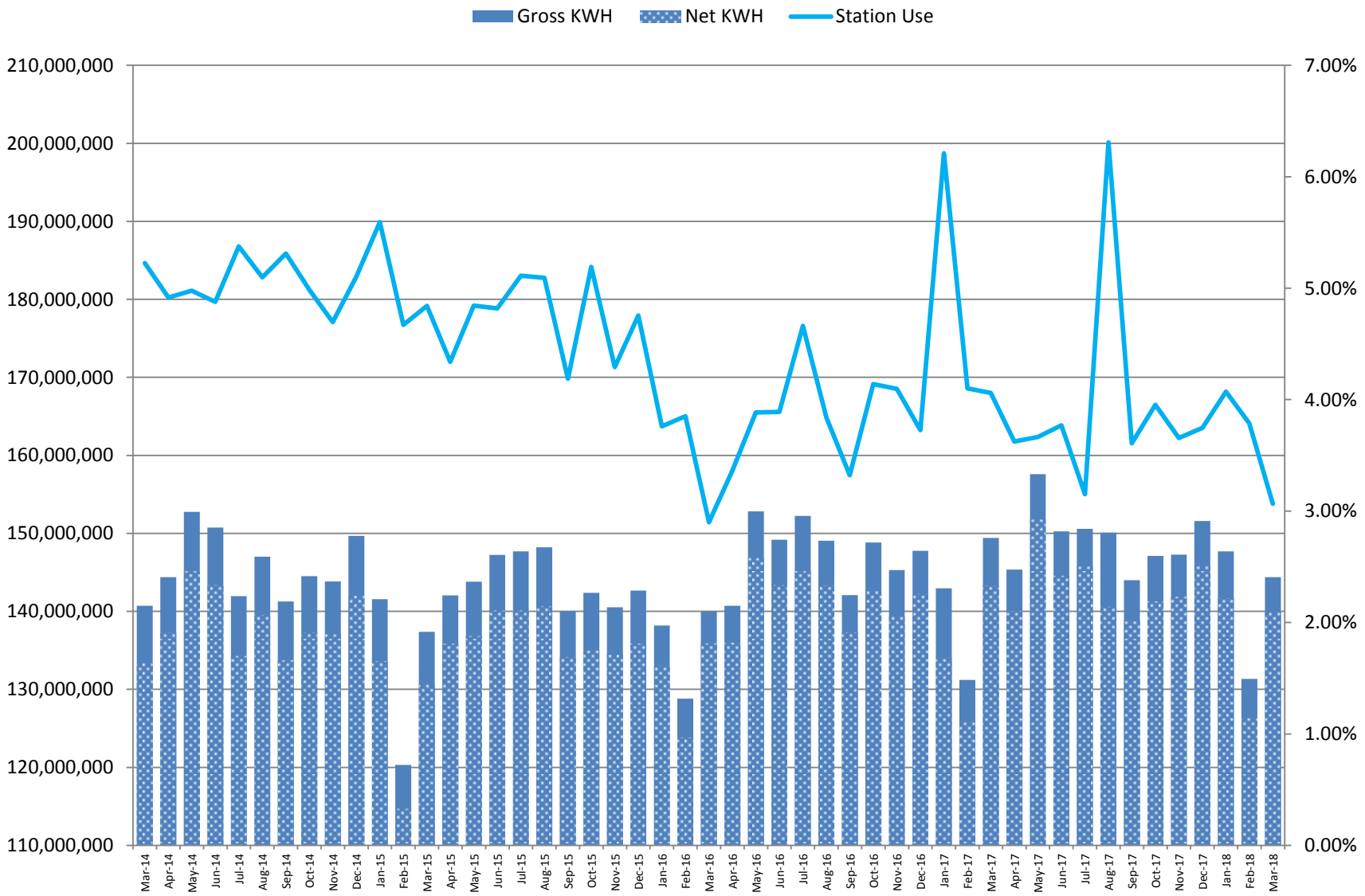
Historical KWH Sales
March 2014 - March 2018



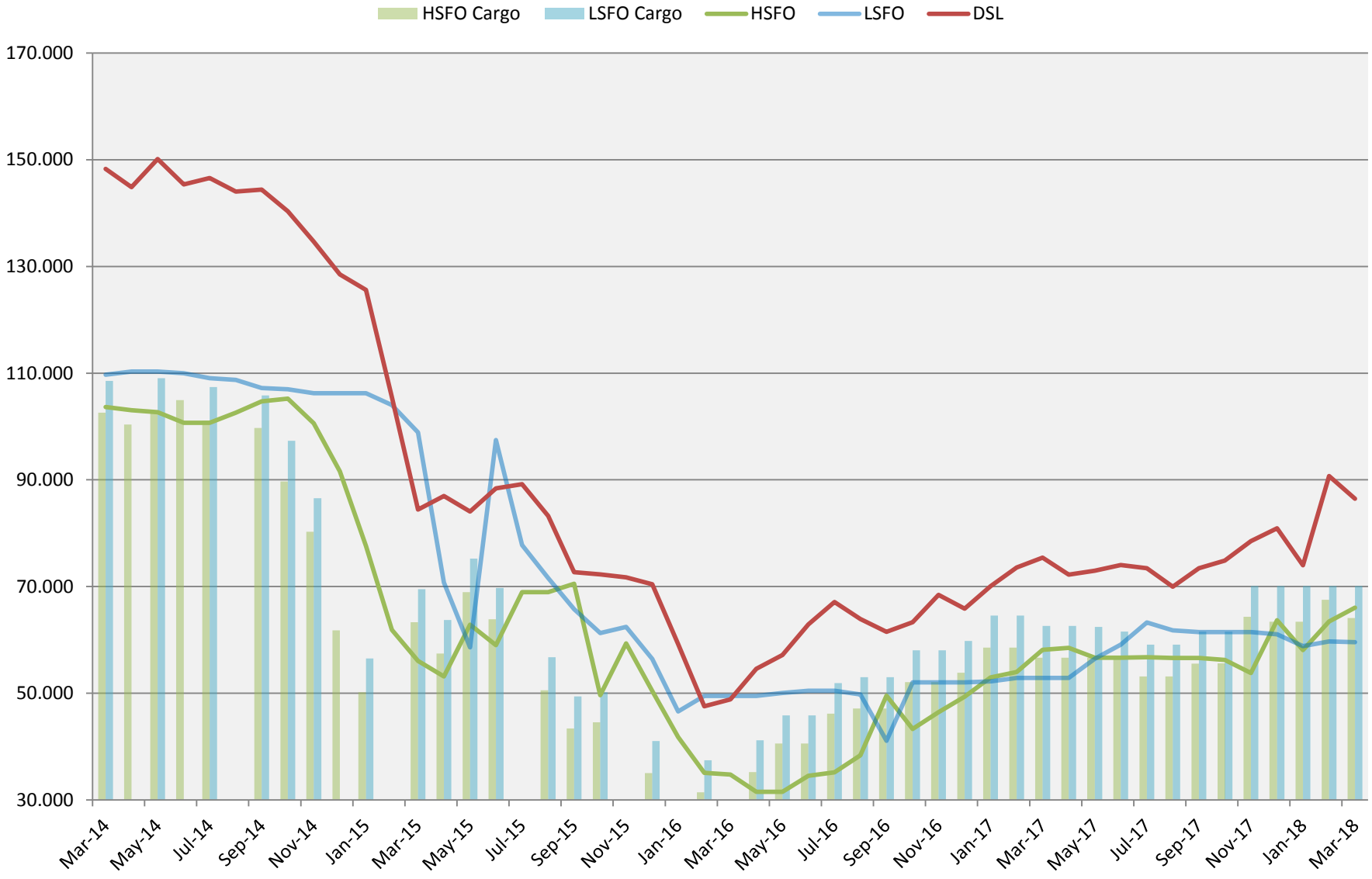
SYSTEM GROSS HEAT RATE
(KWH/Gal)
March 2014 - March 2017



Gross and Net Generation (KWH)
March 2014- March 2018



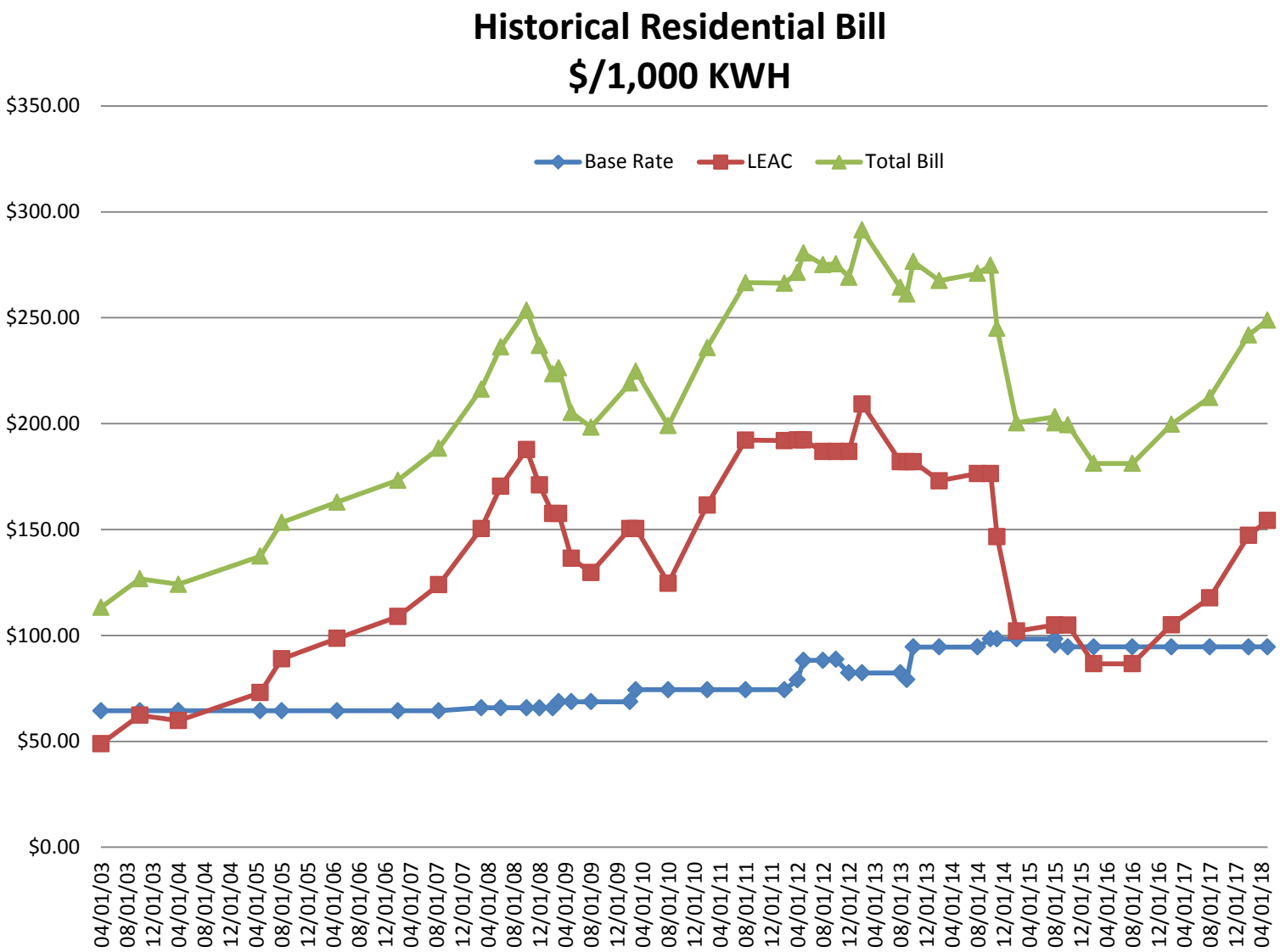
Fuel Cargo and Fuel Consumption Costs ($/bbl)
March 2014 - March 2018



Guam Power Authority

Energy Cost Overview

April 19, 2018


Historical Residential Bill
$/1,000 KWH
Base Rate
LEAC
Total Bill
$350.00
$300.00
$250.00
$200.00
$150.00
$100.00
$50.00
$0.00
04/01/03
08/01/03
12/01/03
04/01/04
08/01/04
12/01/04
04/01/05
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12/01/05
04/01/06
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08/01/17
12/01/17
04/01/18

185 MW of Power Purchase Agreements (PPA)

Projected Commissioning NLT 2021

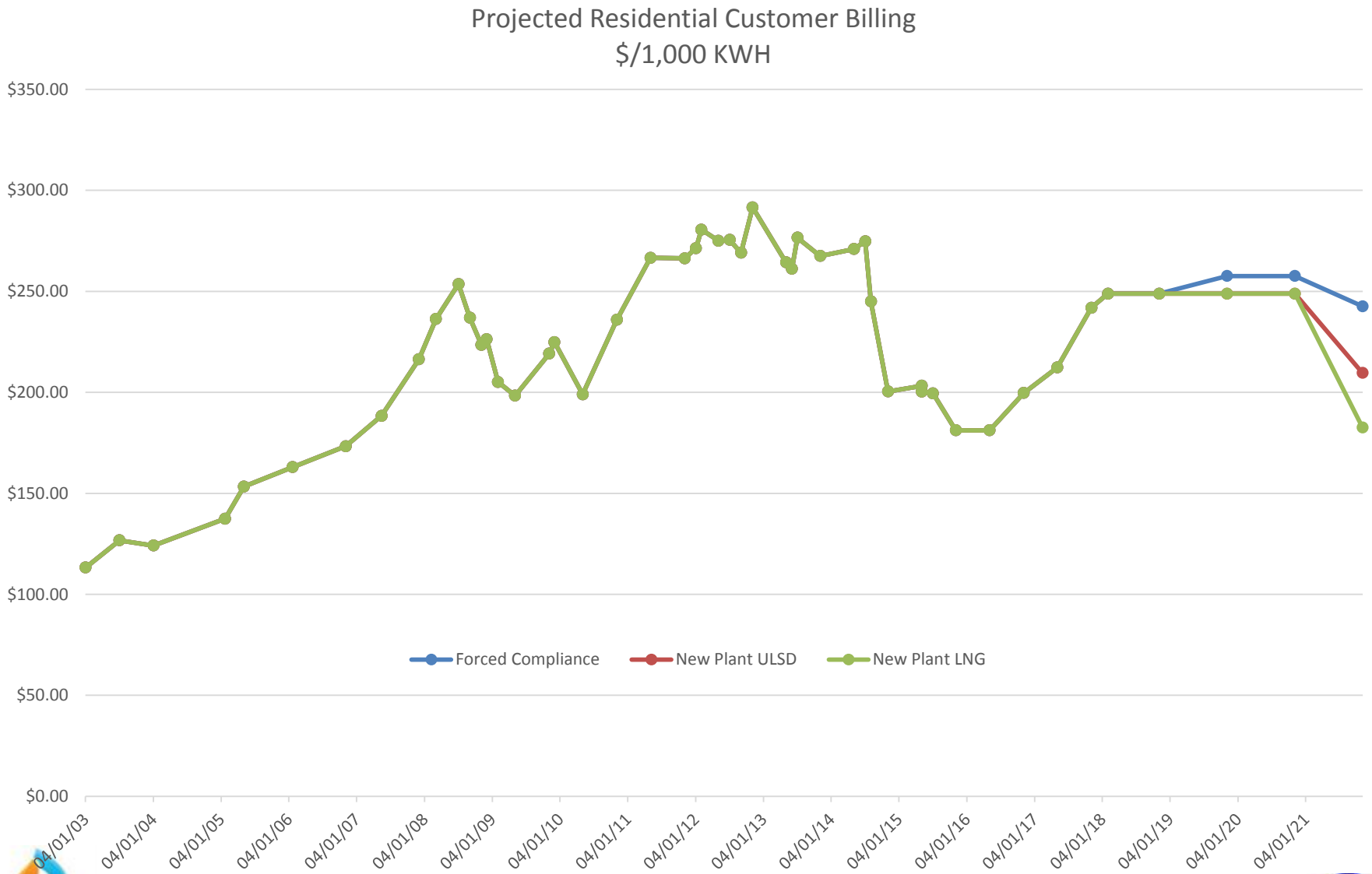
- Power Purchase agreement with KEPCO-LG-CNS Mangilao Solar, LLC for 60 MW of Solar PV, 25 Year contract at $0.0855/KWH with an annual escalator of 1 %.
- Power Purchase agreement with HANWHA for 60 MW of Solar PV, 25 Year contract at about $0.0825/KWH with an annual escalator of 1 %.
- Phase III Bid for 40 MW Solar PV on Navy Land for full load shifting, estimated at $0.12/KWH with an annual escalator of 1%

Cost and Savings Per Scenario

FY 2018 Fuel Oil Prices:
$65/Barrel - Residual Fuel Oil (RFO)
$85/Barrel - Ultra Low Sulfur Diesel (ULSD)
$58/Barrel – Natural Gas Price Equivalent

SCENARIO	ANNUAL FUEL COST	(COST)/SAVINGS ($)	AVG $/kWh	OIL BARRELS CHANGE
Existing Generation Mix	$195,108,397		$0.121	
USEPA Forced Compliance Excluding Penalties	$246,351,059	**$51,242,662**	$0.153	**127,917**
New Power Plant (ULSD + 180 MW Renewables)	**$185,399,918**	**$9,708,478**	**$0.115**	**986,633**
New Power Plant (Natural Gas + 180 MW Renewables)	**$140,881,640**	**$54,226,756**	**$0.088**	**2,551,538**

5

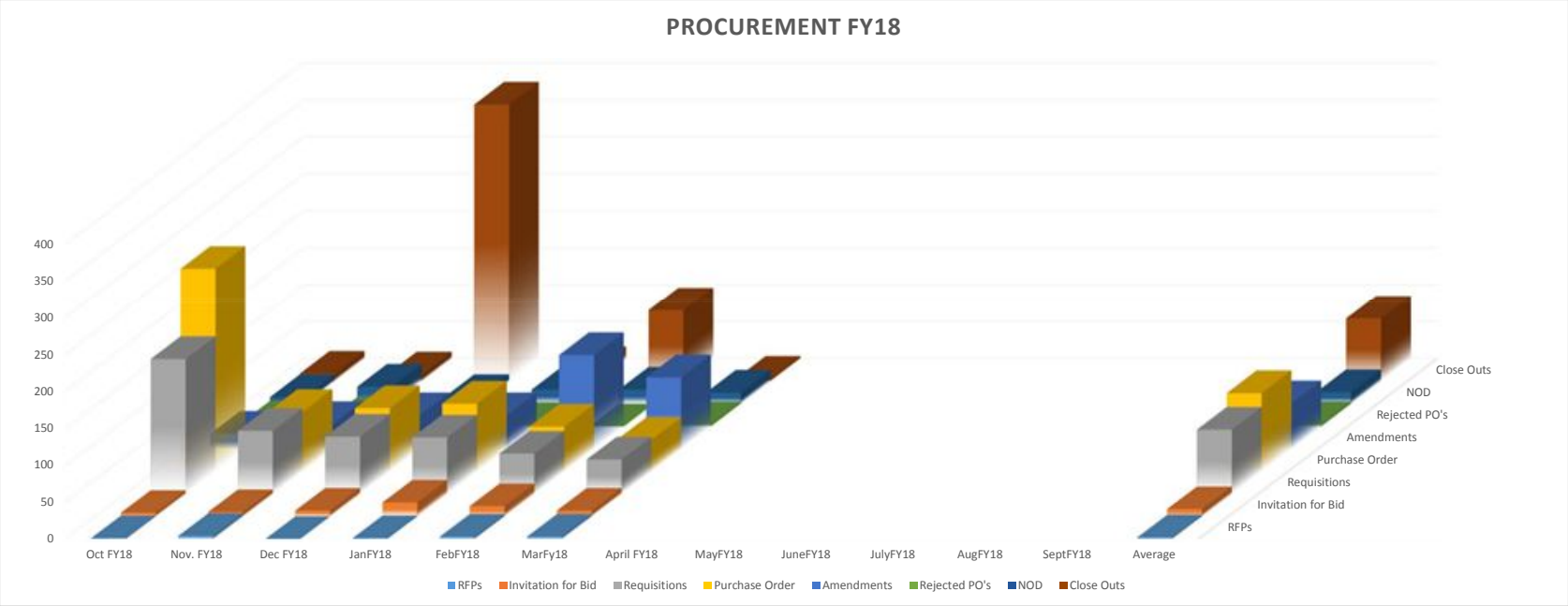

Projected Residential Customer Billing
$/1,000 KWH
$350.00
$300.00
$250.00
$200.00
$150.00
$100.00
$50.00
$0.00
Forced Compliance
New Plant ULSD
New Plant LNG
04/01/03
04/01/04
04/01/05
04/01/06
04/01/07
04/01/08
04/01/09
04/01/10
04/01/11
04/01/12
04/01/13
04/01/14
04/01/15
04/01/16
04/01/17
04/01/18
04/01/19
04/01/20
04/01/21

This table is provided to show that without a new power plant, GPA will not be able to meet load growth by 2022. Furthermore, as shown, because we lack adequate base load capacity, GPA's fuel related cost to provide additional energy to new customers will continue to drive its total energy cost higher because energy production would come from costlier less efficient standby units. The lack of new units which could work with intermittent renewables will result in limited solar PV additions into the grid thereby limiting cost saving opportunities.

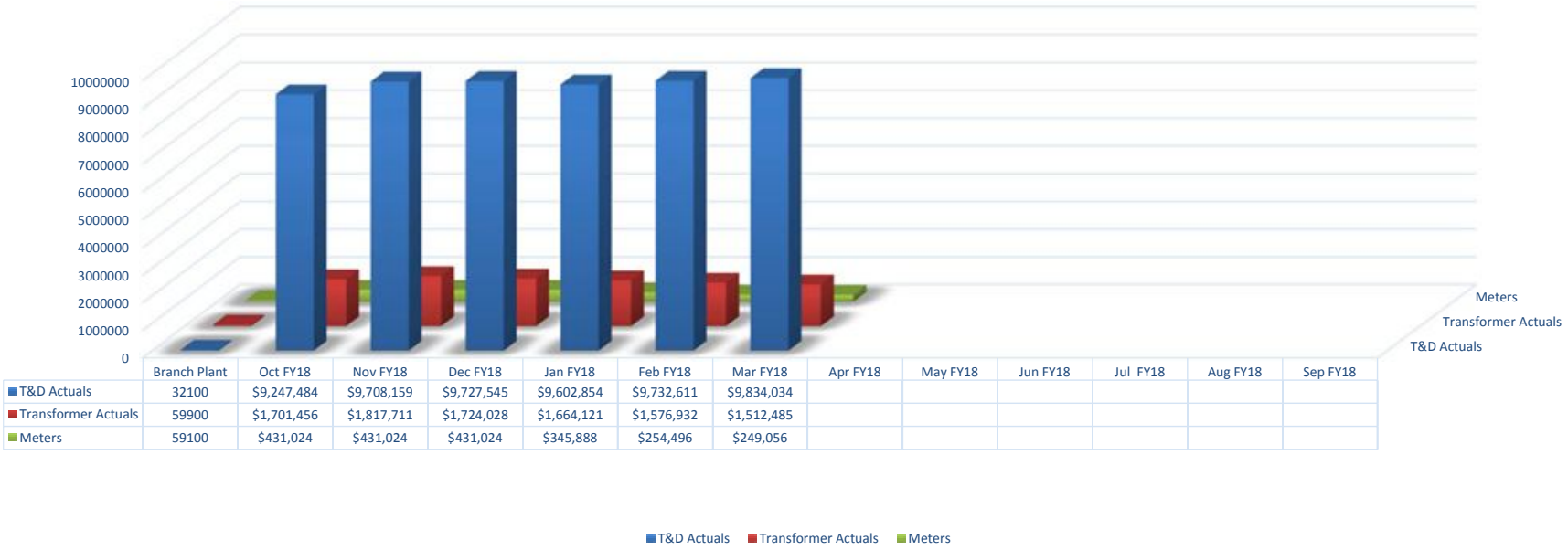
Summary of System Generating Capacity With No New Baseload					**With New 180MW**
Description (MW)	**FY 2015**	**FY2017**	**FY2018**	**FY2021**	**FY2022**
Baseload Capacity	299	208	208	208	268
Emergency/Standby Capacity	120	200	200	200	200
Total Capacity	**419**	**408**	**408**	**408**	**468**
Peak Demand (Customer Requirement)	249	261	266	283	283
Reserve Margin (Balance between Capacity and Requirement)	170	147	142	125	185
Loss of Two Largest Units (Overhaul + Forced Outage)	(132)	(120)	(120)	(120)	(88)
Reserve After Loss of Two Largest Units	**38**	**27**	**22**	**5**	***97**
Utility Scale Renewables Capacity (MW)	**0**	**25**	**25**	**185**	**185**
% Energy from Baseload	98.0%	80.0%	62.2%	62.2%	**72.6%**
% Energy from Renewables	**0.0%**	**3.5%**	**3.5%**	**26.4%**	**26.4%**
% Energy from Emergency/Peaker	2.0%	16.5%	16.5%	11.4%	1.0%

Summary

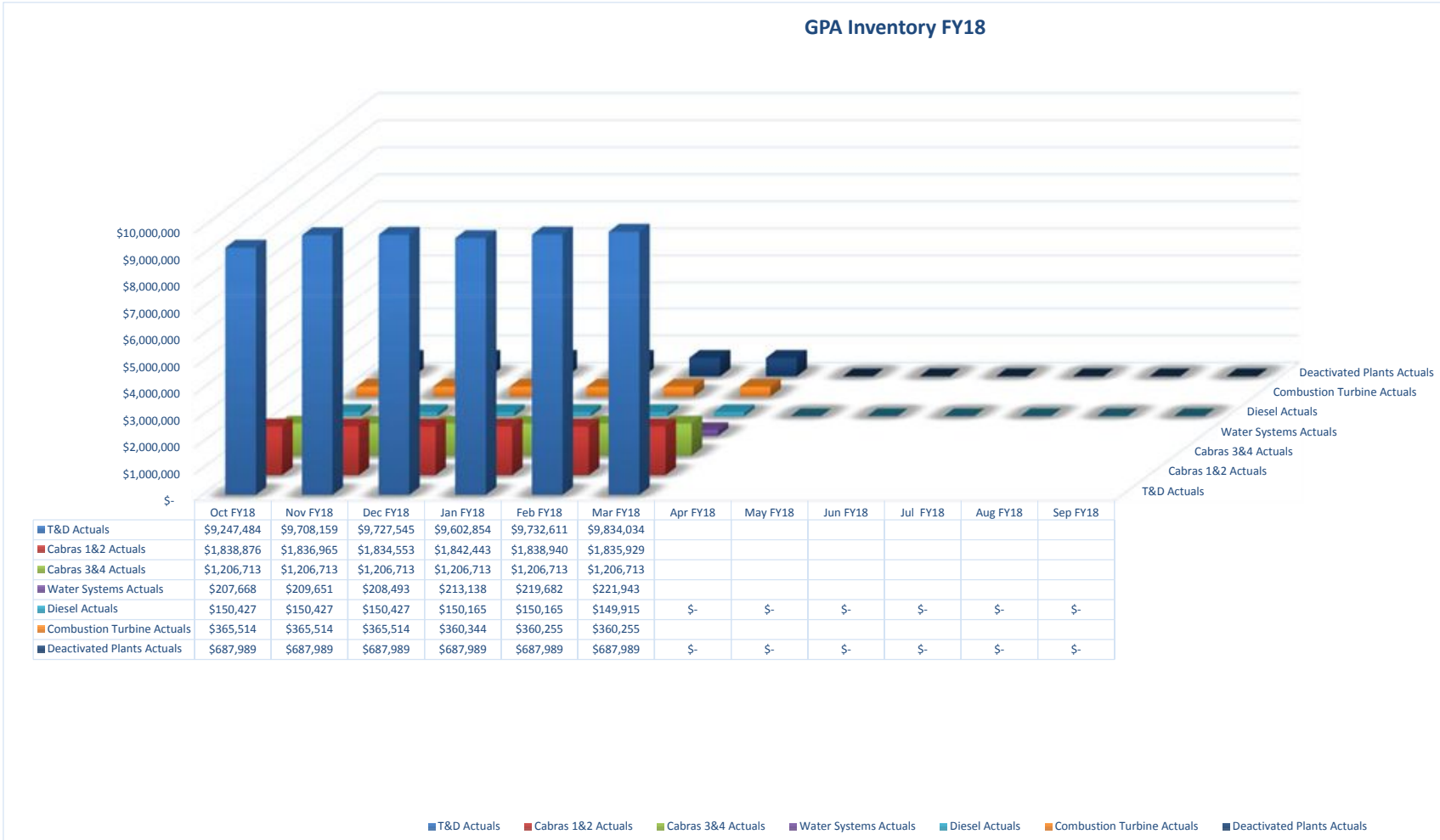
- GPA Approved to contract for 120 MW of Solar PV Renewables
- Phase III Renewables award later this year at estimated $0.12/kWh
- USEPA would most likely force compliance by converting existing units to ULSD within a 2 year timeframe if we don't contract for a new power plant soon. We will need to fund conversion in addition to experiencing higher LEAC cost.
- The highest monthly residential bill for the average 1,000 KWH consumer has been about $291. Our near term plans could drop bill as low as $182.
- GPA plants are aged and the Cabras units are constantly having boiler tube leaks. We will need to spent millions to keep units running.
- GPA needs new base load units to provide reliable and low cost energy.
- GPA needs new fast reacting flexible generation units in order to incorporate low cost renewable energy to hedge against rising fuel cost.



	Oct FY18	Nov. FY18	Dec FY18	JanFY18	FebFY18	MarFy18	April FY18	MayFY18	JuneFY18	JulyFY18	AugFY18	SeptFY18	Average
RFPs	1	4	0	1	3	3							2
Invitation for Bid	5	6	8	19	14	8							10
Requisitions	183	86	78	77	55	47							87.6666667
Purchase Order	275	81	86	92	61	43							106.333333
Amendments	**21**	**34**	**46**	**46**	**127**	**97**							61.8333333
Rejected PO's	4	9	0	2	0	3							3
NOD	9	23	9	19	19	15							15.6666667
Close Outs	10	9	374	16	96	3							84.6666667



	Branch Plant	Oct FY18	Nov FY18	Dec FY18	Jan FY18	Feb FY18	Mar FY18	Apr FY18	May FY18	Jun FY18	Jul FY18	Aug FY18	Sep FY18
T&D Actuals	32100	$9,247,484	$9,708,159	$9,727,545	$9,602,854	$9,732,611	$9,834,034						
Transformer Actuals	59900	$1,701,456	$1,817,711	$1,724,028	$1,664,121	$1,576,932	$1,512,485						
Meters	59100	$431,024	$431,024	$431,024	$345,888	$254,496	$249,056						



	Oct FY18	Nov FY18	Dec FY18	Jan FY18	Feb FY18	Mar FY18	Apr FY18	May FY18	Jun FY18	Jul FY18	Aug FY18	Sep FY18
T&D Actuals	$9,247,484	$9,708,159	$9,727,545	$9,602,854	$9,732,611	$9,834,034						
Cabras 1&2 Actuals	$1,838,876	$1,836,965	$1,834,553	$1,842,443	$1,838,940	$1,835,929						
Cabras 3&4 Actuals	$1,206,713	$1,206,713	$1,206,713	$1,206,713	$1,206,713	$1,206,713						
Water Systems Actuals	$207,668	$209,651	$208,493	$213,138	$219,682	$221,943						
Diesel Actuals	$150,427	$150,427	$150,427	$150,165	$150,165	$149,915	$-	$-	$-	$-	$-	$-
Combustion Turbine Actuals	$365,514	$365,514	$365,514	$360,344	$360,255	$360,255						
Deactivated Plants Actuals	$687,989	$687,989	$687,989	$687,989	$687,989	$687,989	$-	$-	$-	$-	$-	$-

CUSTOMER SERVICE DIVISION - Mar 2018

SUMMARY REPORT

SITE	Less than 10 Mins.	%	10-15 Mins.	%	15-30 Mins.	%	30-45 Mins.	%	TOTAL	Location %
GBN	1,990	85%	186	8%	142	6%	31	1%	2,349	27%
HAGATNA	2,503	68%	558	15%	462	13%	158	4%	3,681	42%
UPPER TUMON	1,987	73%	325	12%	268	10%	133	5%	2,713	31%
TOTAL:	6,480	74%	1,069	12%	872	10%	322	4%	8,743	100%

Government Accounts Receivable: CSD reports invoices for the month of Feb 2018, for 73 active government accounts with an overall total of $4,704,401.42. 69 accounts were current (95%), 4 accounts arrears (5%). 8 fax/emails issued to government accounts totaling $1,942,614.84. Feb 2018 invoices, 67 accounts paid in full.

CREDIT AND COLLECTION

Delinquent Ratio: As of March 2018 the authority reported a total 48,452 active customers. The "Delinquent Ratio" was recorded at 7.57% with 3,668 total delinquent accounts, total arrears of 2,403,260.01; 1,736,806.52; 3,639 (7.51% / 28-45 days) category; 263,332.95; 308 (0.64%/ 46-60 days); and 36,193.08; 47 (0.10% / Over 90 days).

Bankruptcy: During Mar 2018 the Bankruptcy reports seven (7) customer accounts filed, totaling $1,205.46. Chapter 7, six (6) $1,043.26; Chapter 13, one (1) $162.20.

Damage Claim: The Damage claim committee received one (1) Damage claim at $350.00 for the month of Mar 2018.

COMMAND CENTER

Meter Changed Outs: For the month of Mar 2018, there were a total of forty-four (44) meters changed outs due to defective meter non-communicating.

ACTIVE DELINQUENT – NON PAYMENT

COMMAND CENTER /DISCONNECTIONS/RECONNECTIONS/

Single Phase Meters: Credit and Collection issued orders to Command Center to perform remote disconnect/reconnect for a total of 1,192 customers; 549(46%) were disconnected; 635(53%) deferred; 8(1%) incompletes.

3 Phase Meters: Credit and Collection issued orders to Disconnect Reconnect crew to perform truck roll out disconnect/reconnect for a total of 26 customers; 2(8%) were disconnected; 21(81%) deferred; 3(11%) incompletes.

FY 2018 (Mar 01-31,2018)

	Scheduled	Disc	Deferred	Complete Vs. Scheduled	Incomplete Disconnections	Disc Vs. Scheduled	Deferred Vs. Scheduled	Incomplete Vs. Scheduled
Mar-18	1,218	551	656	1,207 99%	11	45%	54%	1%
Feb-18	1,417	662	742	1,404 99%	13	47%	52%	1%
Jan-18	1,457	797	634	1,431 98%	26	55%	44%	1%
1st	3,890	2,237	1,646	3,883 100%	7	58%	42%	0%
TOTAL:	7,982	4,247	3,678	7,925 99%	57	53%	46%	1%

FY 2017 (October 01, 2016 – September 30, 2017)

QTR	Scheduled	Disc	Deferred	Complete Vs. Scheduled	Incomplete Disconnections	Disc Vs. Scheduled	Deferred Vs. Scheduled	Incomplete Vs. Scheduled
4th	3,621	2,067	1,553	3,620 100%	1	57%	43%	0%
3rd	4,021	2,683	1,332	4,015 100%	6	67%	33%	0%
2nd	5,125	3,053	2,055	5,108 100%	17	60%	40%	0%
1st	10,187	5,462	4,689	10,151 100%	36	54%	46%	0%
TOTAL:	22,954	13,265	9,629	22,894 100%	60	58%	42%	0%

This concludes the Summary Report for Customer Service Division for the month of March 2018.

Respectfully submitted,

Marissa Fernandez

Marissa Fernandez, Admin. Officer

Reviewed / Approved by:

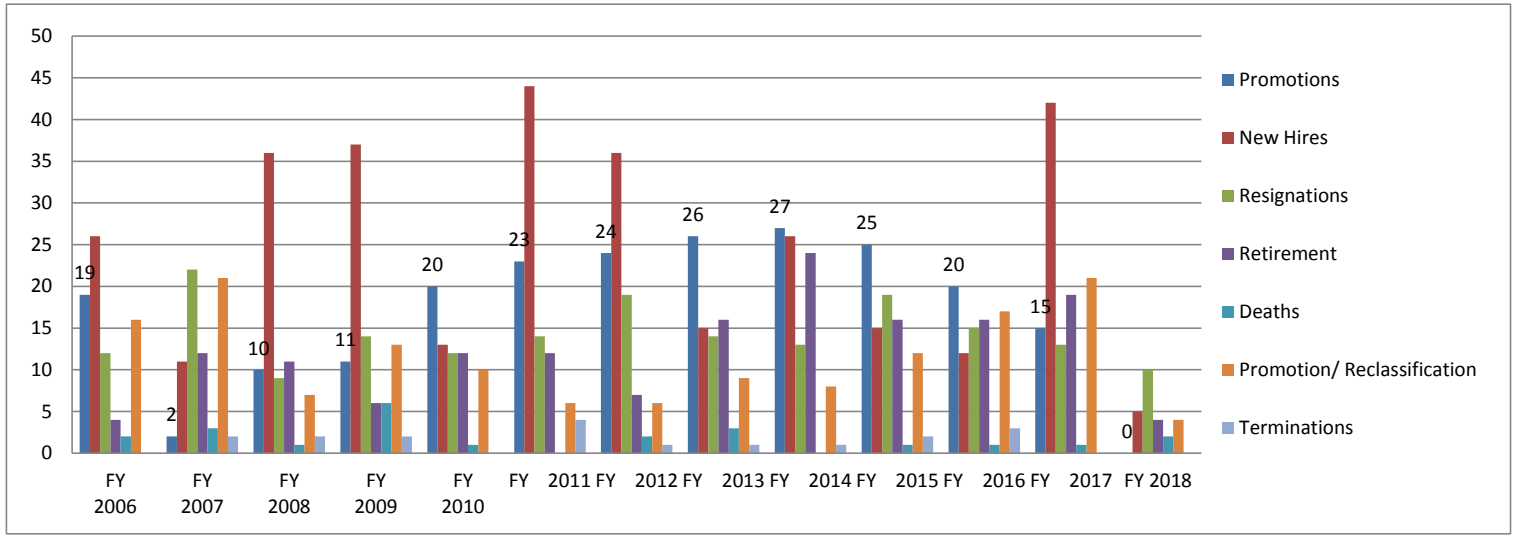
Mercy A. F. Castro, USA

RECRUITMENT ANALYSIS

Fiscal Year	Promotions	New Hires	Resignations	Retirement	Deaths	Promotion/ Reclassifi-cation	Termina-tions	Total Author-ized FTE	Attrition Rate	Total Filled FTE at end of Fiscal Year	Percentage of Filled FTE at end of Fiscal Year
2006	19	26	12	4	2	16	0	584	3.3%	536	91.8%
2007	2	11	22	12	3	21	2	584	7.2%	510	87.3%
2008	10	36	9	11	1	7	2	592	4.5%	525	88.7%
2009	11	37	14	6	6	13	2	592	5.3%	534	90.2%
2010	20	13	12	12	1	10	0	592	4.7%	522	88.2%
2011	23	44	14	12	0	6	4	592	5.7%	536	90.5%
2012	24	36	19	7	2	6	1	568	5.4%	543	95.6%
2013	26	15	14	16	3	9	1	568	6.3%	524	92.3%
2014	27	26	13	24	0	8	1	568	7.3%	512	90.1%
2015	25	15	19	16	1	12	2	539	7.4%	489	90.7%
2016	20	12	15	16	1	17	3	510	7.2%	466	91.4%
2017	15	42	13	19	1	21	0	510	7.1%	476	93.3%
2018	0	5	10	4	2	4	0	510	3.4%	465	91.2%

Recruitment Analysis (FY 2018) ..1 of 2

as of 03/31/18

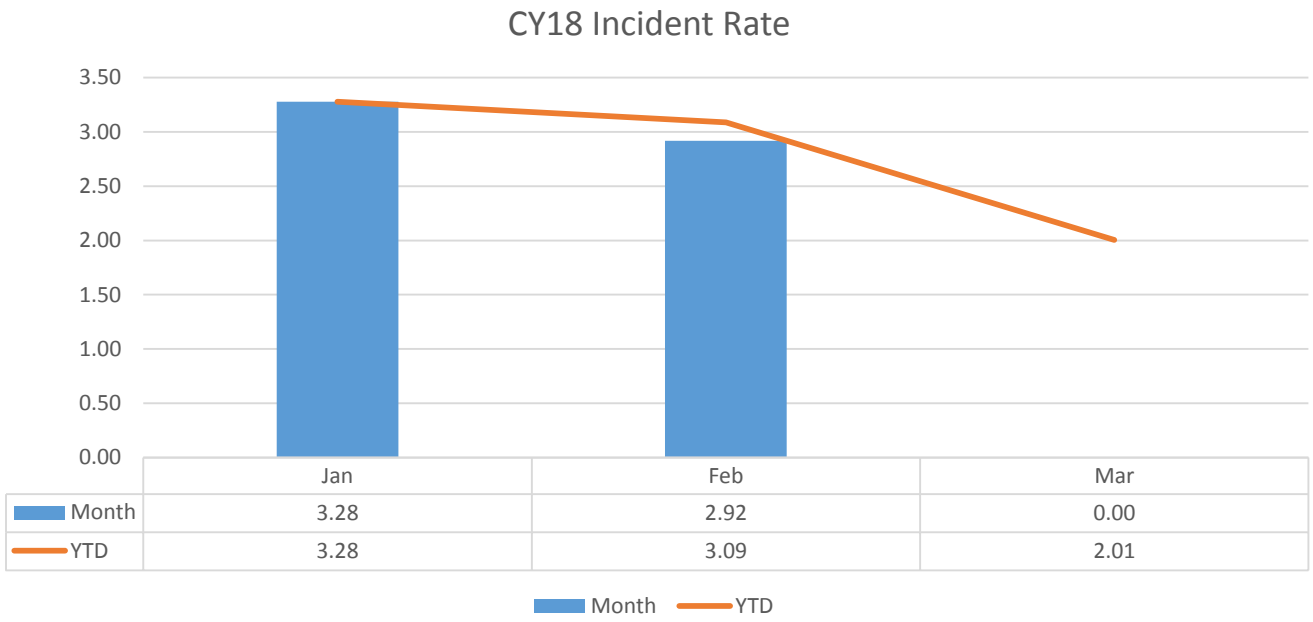


	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Promotions	19	2	10	11	20	23	24	26	27	25	20	15	0
New Hires	26	11	36	37	13	44	36	15	26	15	12	42	5
Resignations	12	22	9	14	12	14	19	14	13	19	15	13	10
Retirement	4	12	11	6	12	12	7	16	24	16	16	19	4
Deaths	2	3	1	6	1	0	2	3	0	1	1	1	2
Promotion/ Reclassification	16	21	7	13	10	6	6	9	8	12	17	21	4
Terminations	0	2	2	2	0	4	1	1	1	2	3	0	0

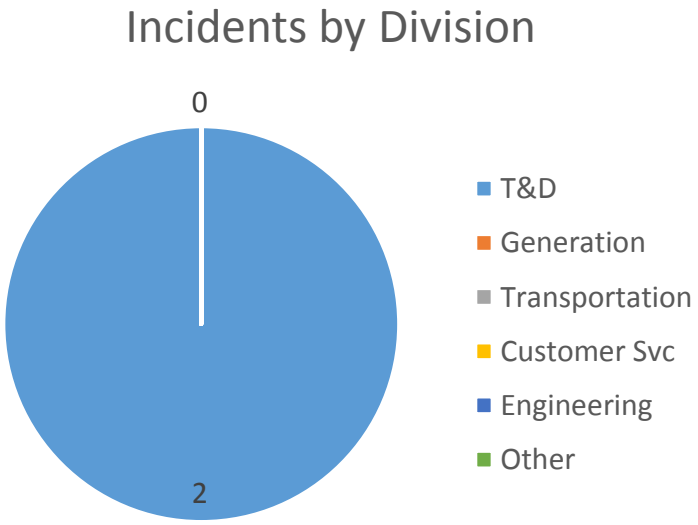
TOTAL NO. OF EMPLOYEES	**536**	**510**	**525**	**534**	**522**	**536**	**543**	**524**	**512**	**489**	**466**	**476**	**465**

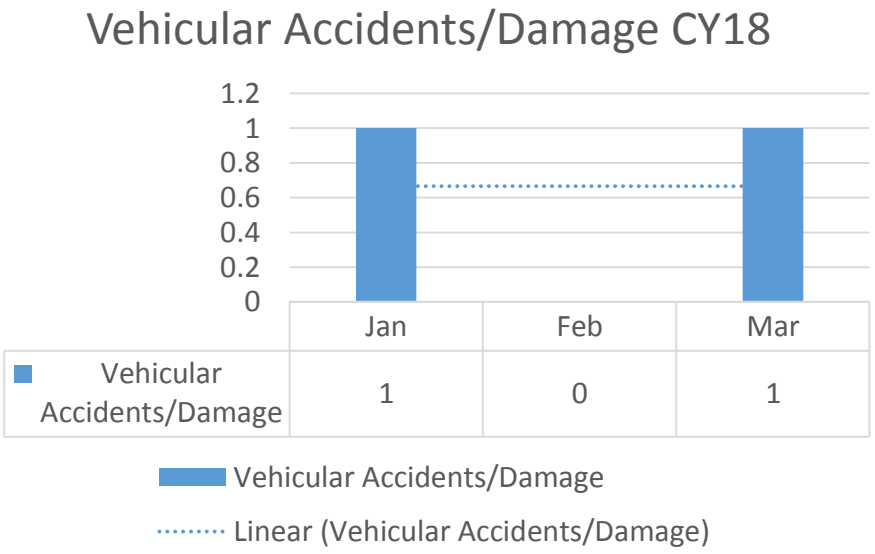
Recruitment Analysis (FY 2018) .. 2 of 2

as of 03/31/18



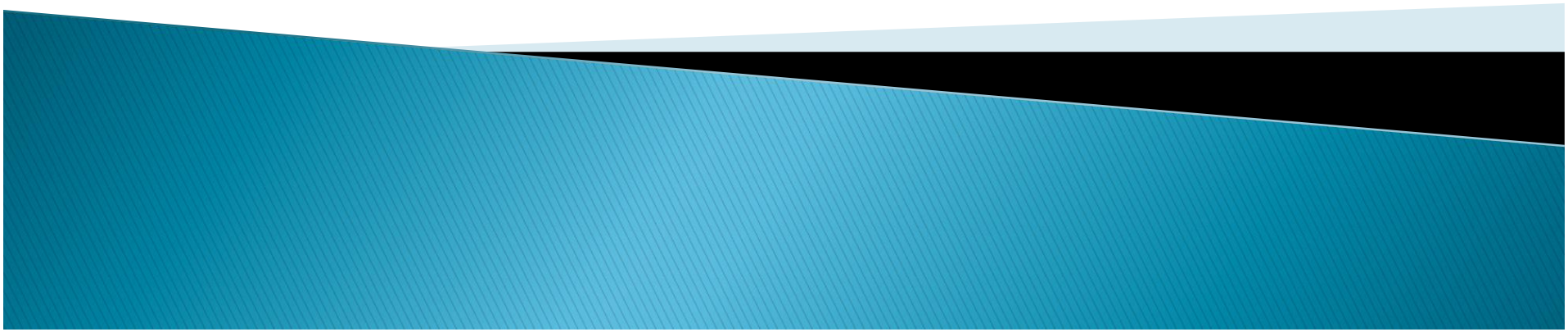
Industry Average (Annual)	GPA Average (YTD)
2.10	2.01





CCU Report– DSM

As of March 31, 2018



All Expenses – Fiscal Year

Description	FY16	FY17	FY18 as of March 31	Total to Date
Regular/OT Pay	$11,348.80	$22,256.00	$9,540.94	$43,145.74
Other Contractual	28,278.50	$73,010.05	$2,885.00	$104,173.55
Paid Rebates-Split AC	$154,700.00	$557,275.00	$552,925.00	$1,264,900.00
Paid Rebates-Central AC	$3,400.00	$8,200.00	$800.00	$12,400.00
Paid Rebates-Washer/Dryer	$2,800.00	$7,425.00	$3,800.00	$14,025.00
Total Expenses	**200,527.30**	**$668,166.05**	**$569,950.94**	**$1,438,644.29**
Interest/Fees	-$1,521.42	-$690.68	-$311.78	-$2,523.88
Ending Balance				$369,893.59

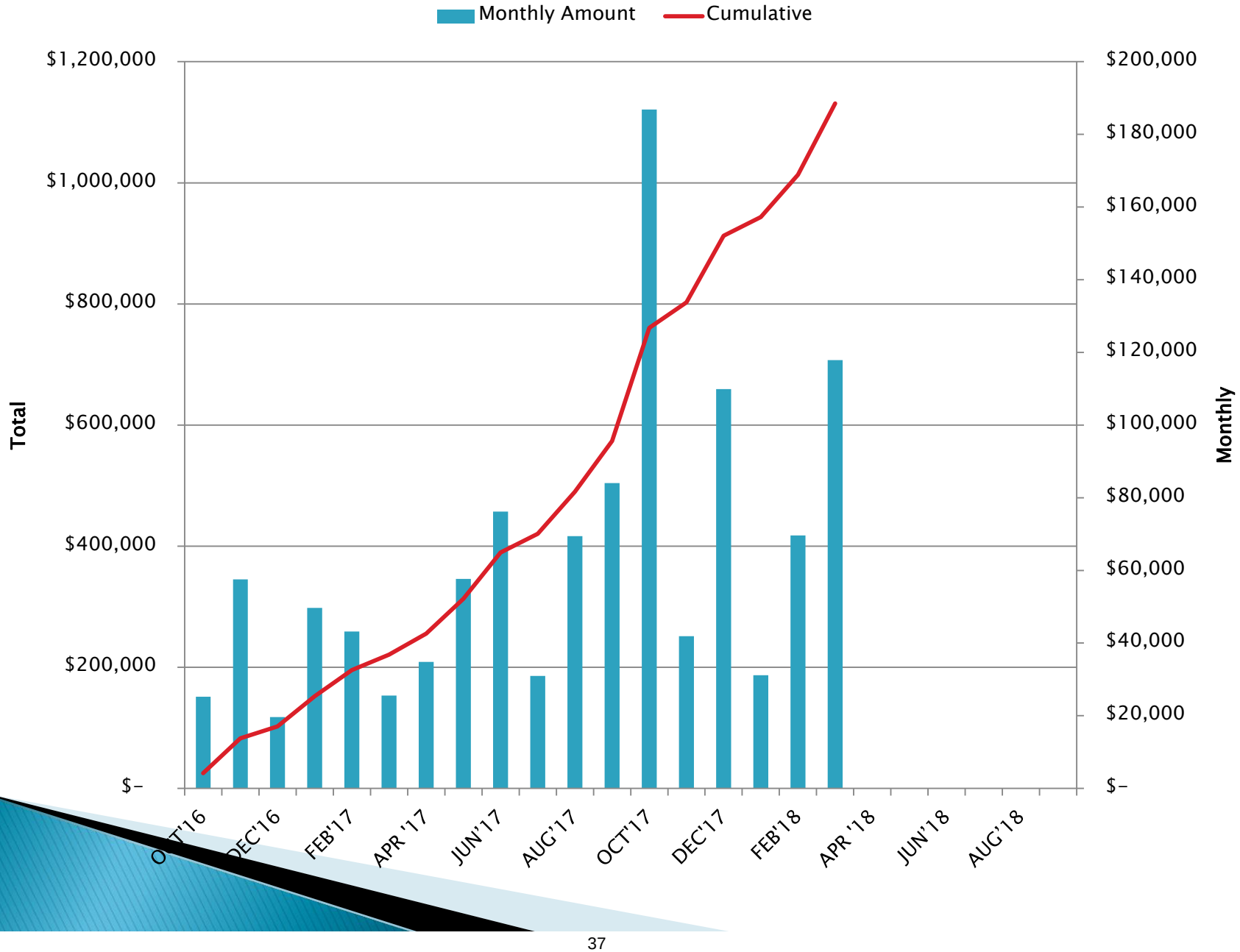
FY 2017– Rebate Amount Paid Monthly

Month	Total	Split A/C Units	Central A/C Units	Washers/Dryers
OCTOBER'16	$25,250.00	$23,450.00	$800.00	$1,000.00
NOVEMBER'16	$57,525.00	$55,625.00	$1,600.00	$300.00
DECEMBER'16	$19,625.00	$18,225.00	$800.00	$600.00
JANUARY'17	$49,650.00	$48,050.00	–	$1,600.00
FEBRUARY'17	$43,175.00	$43,175.00		–
MARCH'17	$25,550.00	$25,550.00	–	–
APRIL '17	$34,800.00	$30,950.00	$800.00	$2,125.00
MAY'17	$57,675.00	$54,275.00	$2,400.00	$1,000.00
JUNE'17	$76,175.00	$74,675.00	$1,300.00	$200.00
JUL'17	$30,975.00	$30,975.00	–	–
AUG'17	$69,400.00	$69,200.00	–	$200.00
SEP'17	$84,025.00	$83,125.00	$500.00	$400.00
TOTALS	$572,900.00	$557,275.00	$8,200.00	$7,425.00

FY 2018– Rebate Amount Paid Monthly

Month	Total	Split A/C Units	Central A/C Units	Washers/ Dryers
OCTOBER'17	$186,850.00	$185,850.00	$800.00	$200.00
NOVEMBER'17	$41,900.00	$41,700.00		$200.00
DECEMBER'17	$109,875.00	$108,475.00		$1,400.00
JANUARY '18	$31,175.00	$31,175.00		
FEBRUARY '18	$69,625.00	$68,625.00		$1,000.00
MARCH '18	$117,900.00	$116,900.00		$1,000.00
TOTALS	$557,325	$552,725	$800.00	$3,800

FY 2017– 2018 Rebate Amount Paid



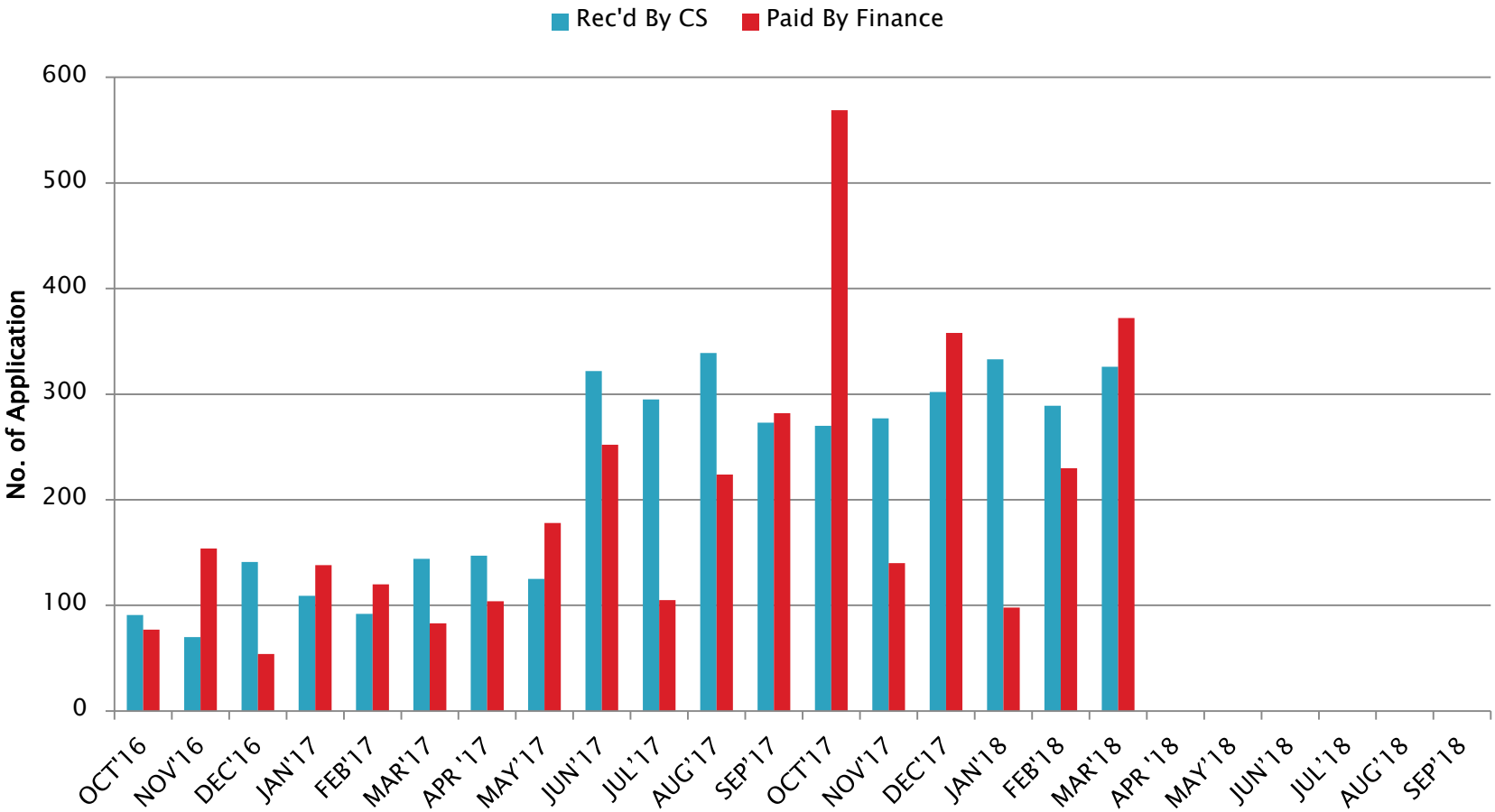
FY 2017- Number of Applications Received By Customer Service and Paid Monthly

Month	Rec'd By CS	Paid By Finance
OCTOBER '16	92	77
NOVEMBER '16	68	154
DECEMBER '16	141	54
JANUARY '17	109	138
FEBRUARY '17	92	120
MARCH '17	144	83
APRIL '17	147	104
MAY '17	215	178
JUNE '17	322	252
JULY '17	295	105
AUGUST '17	339	224
SEPTEMBER '17	270	282

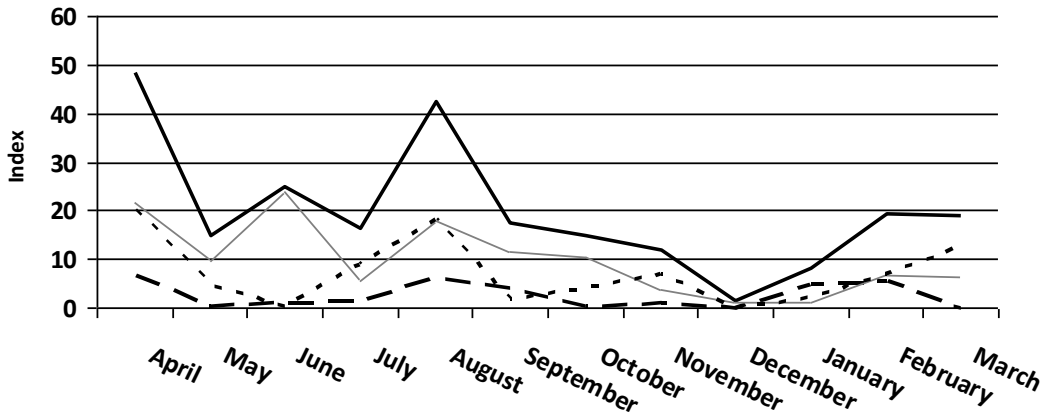
FY 2018- Number of Applications Received By Customer Service and Paid Monthly

Month	Rec'd By CS	Paid By Finance
OCTOBER '17	270	*569*
NOVEMBER '17	277	*140*
DECEMBER '17	302	*358*
JANUARY '18	333	*98*
FEBRUARY '18	289	*230*
MARCH '18	326	*372*
APRIL '18		
MAY '18		
JUNE '18		
JULY '18		
AUGUST '18		
SEPTEMBER '18		

FY 2017– 2018 Number of Applications Received By Customer Service and Paid



(Item 1.1,1.2,1.5) March 2018 SAIDI = 239.30 ↓ (311.08)



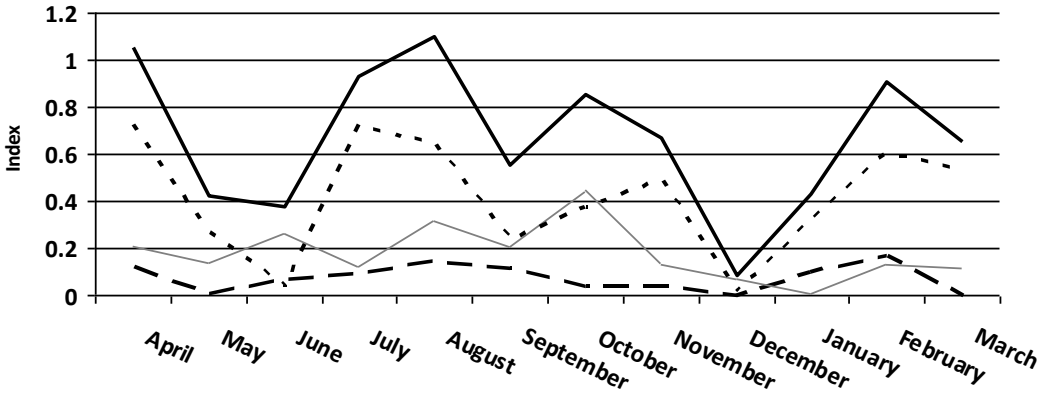
ALL

GEN=87.72 ↓ (148.89)

TRANS=31.74 ↓ (37.48)

DIST=119.83 ↓ (124.71)

(Item 1.1,1.2,1.5) March 2018 SAIFI = 8.03 ↓ (8.05)



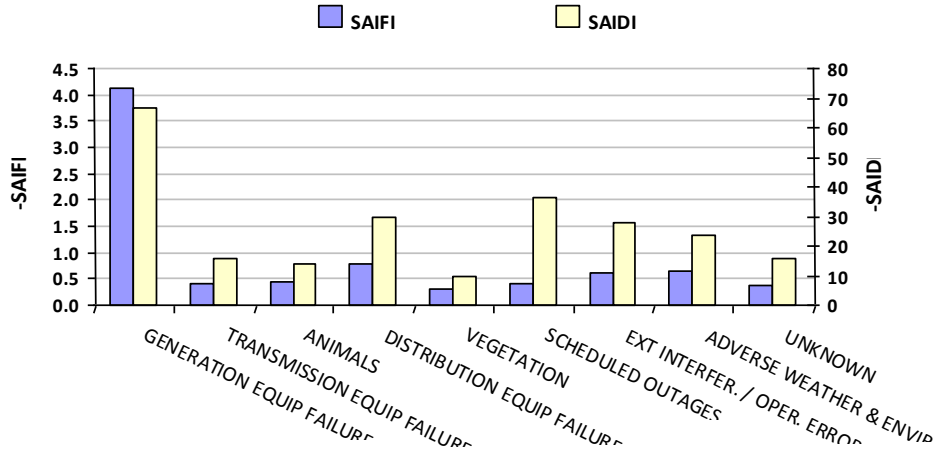
ALL

GEN=4.98 ↑ (4.81)

TRANS=0.90 ↓ (1.03)

DIST=2.16 ↓ (2.21)

(Item 1.9) 12-Month Cause Contributions to Reliability



GENERATION EQUIP FAILURE
F:50.2% D:27.9%

TRANSMISSION EQUIP FAILURE
F:6.6% D:6.7%

ANIMALS
F:6.0% D:5.8%

DISTRIBUTION EQUIP FAILURE
F:9.1% D:12.5%

VEGETATION
F:3.5% D:4.0%

SCHEDULED OUTAGES
F:8.1% D:15.2%

EXT INTERFER. / OPER. ERROR
F:5.8% D:11.6%

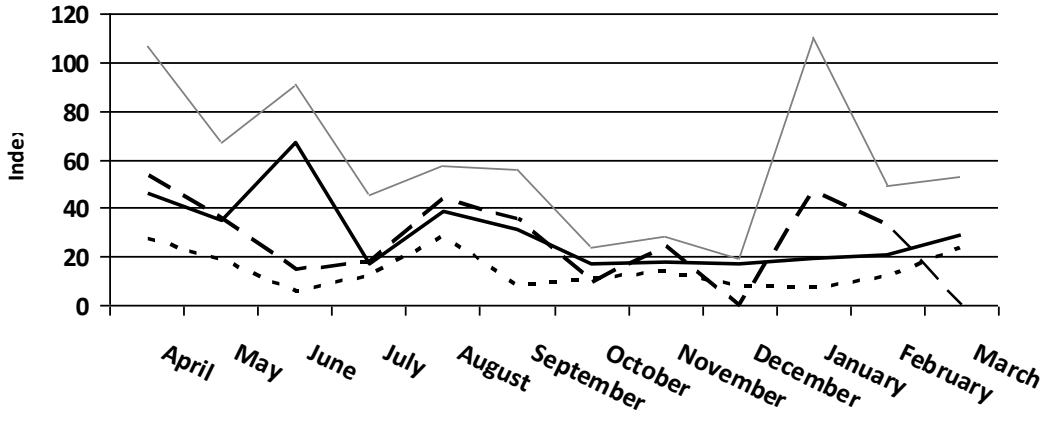
ADVERSE WEATHER & ENVIR.
F:6.2% D:9.8%

UNKNOWN
F:4.5% D:6.5%

ATTACHMENT #1

As of March 31, 2018

(Item 1.1,1.2,1.5) March 2018 CAIDI = 29.79 ↓ (38.66)



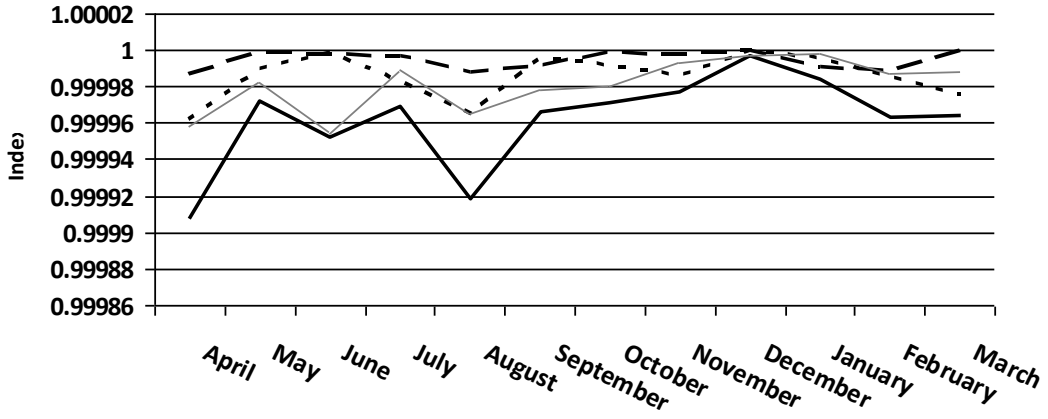
ALL

GEN=17.63 ↓ (30.96)

TRANS=35.3 ↓ (36.3)

DIST=55.51 ↓ (56.55)

(Item 1.1,1.2,1.5) March 2018 ASAI = 0.9995 ↑ (0.9994)



ALL

GEN=0.9998 ↑ (0.9997)

TRANS=0.9999 (0.9999) UNC*

DIST=0.9998 (0.9998) UNC*

(Item 1.4) Top 5 Worst Feeders Distribution Causes

#	Feeder	Outage Count
1	P340	11
2	P261	7
3	P221	7
4	P332	4
5	P330	4

(Item 1.4) Top 5 Distribution Outage Causes

#	Outage Cause	Count
1	Overhead Equipment	32
2	Vegetation	13
3	Underground Equipment	12
4	Snakes	7
5	Vehicles	5

(Item 1.3) Outage Count

TOTAL	UFLS	Non-UFLS
484	261	223

(Item 1.3) UFLS Contribution to Reliability

SAIDI	SAIFI	CAIDI
82.28	4.75	17.31

ATTACHMENT #2

As of March 31, 2018

UNC* - Unchanged

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

April 15, 2018

MEMORANDUM

To: Staff Attorney

Via: AGMETS

From: Engineering Manager

Subject: Compliance Reports

Please transmit the attached Compliance Reports to the PUC. The reports are for the reporting period January to March 2018.

JOVEN G. ACOSTA, P.E.

Cc: General Manager
CFO
Assistant CFO
Contracts Administrator

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

April 15, 2018

MEMORANDUM

To: General Manager

Via: AGMETS

From: Engineering Manager

Subject: Compliance Reports

Attached for your review are the project status reports for Capital Improvement Projects for the Quarter of January to March 2018.

Should you have any questions regarding these CIP reports, please let me know.

Joven G. Acosta, P.E.

/attachments

cc: CFO
Assistant CFO
Contracts Administrator

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

Engineering Capital Improvement Projects

Submitted herewith are the January to March 2018 Progress and Compliance Reports for the following projects:

	Project Name	Engineering Section
1	Distribution System Improvements	Distribution
2	Tumon Bay Lateral Underground Conversion	Distribution
3	Line Reclosing and Load Profiling	Distribution
4	Distribution System Improvements II	Distribution
5	Fire Protection Upgrades at Power Plants	Project Management
6	GPA-GWA Multi-Purpose Facility (Fadian)	Project Management
7	Dededo Combustion Turbine Return to Service	Project Management
8	Facilities Physical Security	Project Management
9	Macheche Combustion Turbine Return to Service	Project Management
10	Yigo Combustion Turbine Return to Service	Project Management
11	Remote Start Capability of Generation Peaking Units	Project Mangement
12	Generator Protection Upgrade with Fault Recorders	Substation/Transmission
13	Piti 115 kV GIS Major Maintenance	Substation/Transmission
14	Substation Major Refurbishment - Power Transformer	Substation/Transmission
15	Agat Shoreline Pole Restoration Project	Substation/Transmission
16	System Protection Improvement & Capacitor Bank Controllers	Substation/Transmission
17	Dededo Substation Capacitor Bank	Substation/Transmission
18	Network Communications - Fiber to Fadian Complex	Substation/Transmission

Joven G. Acosta, P.E.
Engineering Manager

Engineering Division
Project Compliance Report Summary
January - March 2018

	Project Name	PUC Approval	Funding Source	Approved Budget	Latest Eng'g Estimate	% Diff	Commitment to Date	Actual Expenditure	Balance of Approved Budget
1	Distribution System Improvements	Y	Bonds	$ 1,000,000	$ 1,000,000	0.00%	$ 830,560	$ 777,774	$ 222,226
2	Tumon Bay Lateral Underground Conversion	Y	Bonds	$ 6,582,838	$ 6,582,838	0.00%	$ 16,442	$ 16,442	$ 6,566,396
3	Line Reclosing and Load Profiling	Y	Bonds	$ 1,200,000	$ 1,038,750	-13.44%	$ 951,067	$ 951,067	$ 248,933
4	Distribution System Improvements II	Y	Bonds	$ 240,000	$ 240,000	0.00%	$ 64,985	$ 12,985	$ 227,015
5	Fire Protection Upgrades at Power Plants	Y	Bonds	$ 3,808,000	$ 4,179,062	9.74%	$ 2,464,062	$ 2,464,062	$ 1,343,938
6	GPA-GWA Multi-Purpose Facility (Fadian)	Y	Bonds	$ 35,000,000	$ 34,691,381	-0.88%	$ 34,691,381	$ 34,377,715	$ 622,285
7	Dededo Combustion Turbine Return to Service	Y	Bonds	$ 9,698,242	$ 8,895,930	-8.27%	$ 8,897,540	$ 8,521,145	$ 1,177,097
8	Facilities Physical Security	Y	Bonds	$ 1,350,000	$ 1,350,000	0.00%	$ -	$ -	$ 1,350,000
9	Macheche Combustion Turbine Return to Service	Y	Bonds	$ 2,692,500	$ 2,491,569	-7.46%	$ 2,472,330	$ 2,240,869	$ 451,631
10	Yigo Combustion Turbine Return to Service	Y	Bonds	$ 2,300,000	$ 2,300,000	0.00%	$ 2,300,000	$ 2,185,000	$ 115,000
11	Remote Start Capability of Generation Peaking Units	Y	Bonds	$ 350,000	$ 350,000	0.00%	$ 46,500	$ 22,829	$ 327,171
12	Generator Protection Upgrade with Fault Recorders	Y	Bonds	$ 580,000	$ 580,000	0.00%	$ 201,108	$ 201,108	$ 378,892
13	Piti 115 kV GIS Major Maintenance	Y	Bonds	$ 2,637,300	$ 2,637,300	0.00%	$ -	$ -	$ 2,637,300
14	Substation Major Refurbishment - Power Transformer	Y	Bonds	$ 540,000	$ 540,000	0.00%	$ 322,638	$ 322,638	$ 217,362
15	Agat Shoreline Pole Restoration Project	Y	Bonds	$ 384,000	$ 384,000	0.00%	$ 82,597	$ 73,228	$ 310,772
16	System Protection Improvement & Capacitor Bank Controllers	Y	Bonds	$ 1,312,000	$ 1,312,000	0.00%	$ 120,601	$ 120,601	$ 1,191,399
17	Dededo Substation Capacitor Bank	Y	Bonds	$ 165,000	$ 165,000	0.00%	$ -	$ -	$ 165,000
18	Network Communications - Fiber to Fadian Complex	Y	Bonds	$ 1,100,000	$ 1,100,000	0.00%	$ 341,560	$ 341,560	$ 758,440
	TOTAL			$ 70,939,880.00	$ 69,837,829.83	$ (0.20)	$ 53,803,371.21	$ 52,629,022.55	$ 18,310,857.45

Engineering Distribution
Project Status Reports

January – March 2018

Engineering Distribution
Capital Improvement Projects

Submitted are the January 2018 through March 2018 Progress Reports and Compliance Reports for the following projects:

	Project Name	Engineer	Job Order
1	Distribution System Improvements	LCC	100081
2	Tumon Bay Lateral Underground Conversion	EKC	100114
3	Line Reclosing and Load Profiling	EKC	100111
4	Distribution System Improvements II	LCC	100266

Vincent J. Sablan, P.E.

DISTRIBUTION ENGINEERING
Project Compliance Report Summary
January 2018 - March 2018

	Project	Approved Budget	Latest Eng'g. Estimate	Commitment to Date	Actuals	Balance of Appr'd Budget
1	Distribution System Improvements	1,000,000	1,000,000	830,560	777,774	222,226
2	Tumon Bay Lateral Underground Conversion	6,582,838	6,582,838	16,442	16,442	6,566,396
3	Line Reclosing and Load Profiling	1,200,000	1,038,750	951,067	951,067	248,933
4	Distribution System Improvements II	240,000	240,000	64,985	12,985	227,015

Distribution System Improvements

LCC

Overall Status	G

Burn Rate	This Month	Last Month	Incremental
Scope (%)			
Budget (%)			
Milestones Achieved			

Resources

1. Engineering (LCC)
2. T&D (Crew)
3. SPORD (Roel Cahinhinan)

Risks & Issues	Schedule	Scope	Financial
Y	G	G	G

Updates & Accomplishments for the Quarter

1. Updating of the Milsoft EQDB Equipment library is ongoing.
2. Completion of the Milsoft Windmill underground and overhead construction types for both primary and secondary completed.

Resource	Upcoming Tasks / Open Items	ECD
1. Engineering	1. Completion of Regulator Studies (Specs, SOP, and Standards)	TBD
2. Engineering	2. Ordering of Regulators to close out the project.	TBD
3. SPORD and Engineering	3. Completion of updating Milsoft EQDB.	TBD
4. SPORD and Engineering	4. Training on use of Milsoft Windmill and the creation of a maintenance program for the updating schema and creating Milsoft Windmill model	TBD

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE
1. No working distribution power flow software	1. August 2017	1. Training on use of Windmill and the creation of a maintenance program for updating schema and creating the Milsoft Windmill model	1. TBD

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

4/12/2018

1

Distribution System Improvements

LCC

Overall Status	G

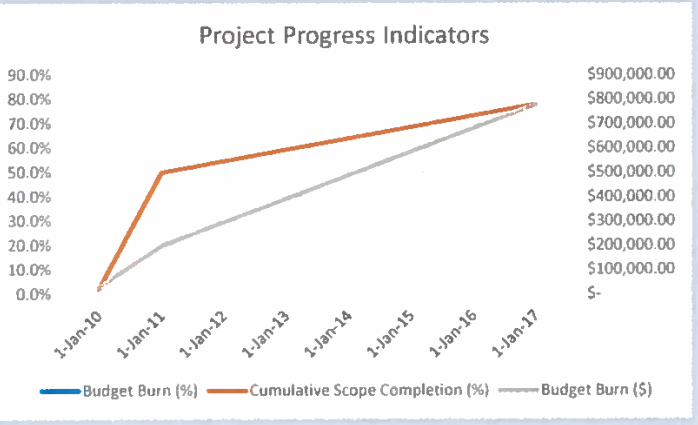
Burn Rate	This Month	Last Month	Incremental
Scope (%)			
Budget (%)			
Milestones Achieved			

Resources

1. Engineering (LCC)
2. T&D (CREW)
3. SPORD (Roel Cahinhinan)

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Project Progress Indicators



Project Schedule & Budget Performance Indicators

Project Milestone	Planned Completion Date	Actual Completion Date	Performance (Days Over/Under)	Color Performance Indicator	Performance
Planned Start Design	1-Sep-10	22-Apr-16			
Planned Finished Design	1-May-18				
Planned Start Construction	1-Jun-18				

Project Phase	Original Contract Budget	Current Budget	# Change Orders
Phase I	$ 1,000,000.00	$ 1,000,000.00	0

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

Distribution System Improvements
COMPLIANCE REPORT
January 2018 - March 2018

Description of Work/Item	Approved Budget	Latest Eng'g. Estimate	Commitment to Date	Actuals	Balance of Appr'd Budget	Remarks (PO# or Work Order #
GPA Purchased Equipment/Materials						
Switches	100,000	100,000	-	-	100,000	
Switched Capacitors	240,000	240,000	136,883	101,883	103,117	Switched Cap. 16053OP, R&D Marketing PO#21876
Garage and Miscellaneous	10,000	10,000	85,290	85,290	(75,290)	
Total GPA Purchased Equipment/Materials	350,000	350,000	222,173	187,173	127,827	
GPA Warehouse Furnished Equipment/Materials	100,000	100,000	166,527	166,527	(66,527)	
Total GPA Warehouse Equipment/Materials	100,000	100,000	166,527	166,527	(66,527)	
Construction Management						
Engineering Labor	10,000	10,000	-	-	10,000	
Garage/Travel/Overhead/Others	10,000	10,000	-	-	10,000	
Total Construction Management	20,000	20,000	-	-	20,000	
Construction by T&D						
Switch Installation	23,750	23,750	-	-	23,750	
Capacitor Installation	23,750	23,750	-	-	23,750	
Fuse Installation and Reconductoring	198,903	198,903	134,635	134,635	64,268	
Travel/Overhead/Others	-	-	-	-	-	
Construction Contractor Work	283,597	283,597	307,226	289,439	(5,842)	P-211 Extension, MD Crisostomo PO#19494
Total Construction	530,000	530,000	441,861	424,074	105,926	
TOTAL	1,000,000	1,000,000	830,560	777,774	222,226	

Tumon Bay Lateral Underground Conversion

EAKC

Overall Status	G

Burn Rate	This Month	Last Month	Incremental
Scope (%)			
Budget (%)			
Milestones Achieved			

Resources

1. Engineering (EAKC, AMM)
2. Procurement

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Updates & Accomplishments for the Quarter

1. Design drawings and specifications completed
2. Project in Procurement Phase

Resource	Upcoming Tasks / Open Items	ECD
1. Procurement	1. Pending completion of Procurement Process	TBD
	2. Bid Opening	TBD
	3. Awarding of Project	TBD

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

4/12/2018

3

Tumon Bay Lateral Underground Conversion

EAKC

Overall Status	G

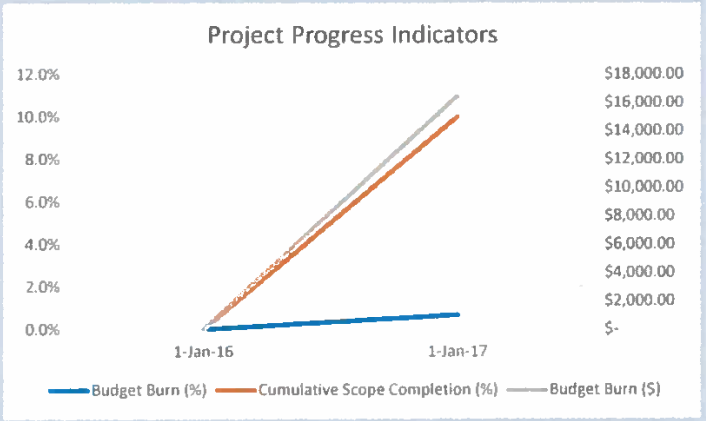
Burn Rate	This Month	Last Month	Incremental
Scope (%)			
Budget (%)			
Milestones Achieved			

Resources

1. Engineering (EAKC, AMM)
2. Procurement

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Project Progress Indicators



Project Schedule & Budget Performance Indicators

Project Milestone	Planned Completion Date	Actual Completion Date	Performance (Days Over/Under)	Color Performance Indicator	Performance
Planned Start Design	1-Jul-16				
Planned Finished Design	1-Jul-17	1-Feb-18			
Planned Start Construction					

Project Phase	Original Contract Budget	Current Budget	# Change Orders
Phase I	$ 6,582,838.00	$ 2,490,000.00	0
Phase II			

Legend:

- No corrective action required
- Near-term corrective action required
- Requires immediate attention

Tumon Bay Lateral Underground Conversion
COMPLIANCE REPORT
January 2018 - March 2018

Description of Work/Item	Approved Budget	Latest Eng'g. Estimate	Commitment to Date	Actuals	Balance of Appr'd Budget	Remarks
Design						
In-House Labor	15,000	15,000	14,778	14,778	222	
Garage/Travel/Overhead/Others	1,500	1,500	1,536	1,536	(36)	
Total Design	16,500	16,500	16,314	16,314	186	
Construction Management						
Engineering Labor	63,000	63,000	-	-	63,000	
T&D Labor	75,000	75,000	-	-	75,000	
Garage/Travel/Overhead/Others	50,000	50,000	128	128	49,872	
Total Construction Management	188,000	188,000	128	128	187,872	
Construction Contractor Work						
Permits & Mobilization	100,000	100,000	-	-	100,000	
Primary Manhole	660,000	660,000	-	-	660,000	
Primary Handhole	65,000	65,000	-	-	65,000	
Secondary Handhole	300,000	300,000	-	-	300,000	
Pad Mounted Transformer	304,000	304,000	-	-	304,000	
Switch Pad	740,000	740,000	-	-	740,000	
Conduit Installation and Restoration	2,076,505	2,076,505	-	-	2,076,505	
Street Lights	250,000	250,000	-	-	250,000	
Removal of Existing Overhead Distribution System	80,000	80,000	-	-	80,000	
Primary Cable and Termination	717,019	717,019	-	-	717,019	
Secondary Cable and Termination	746,040	746,040	-	-	746,040	
Conversion of Existing Service to Underground	211,000	211,000	-	-	211,000	
Testing and Energization	28,774	28,774	-	-	28,774	
Archaeological Work	100,000	100,000	-	-	100,000	
Total Construction	6,378,338	6,378,338	-	-	6,378,338	
TOTAL	6,582,838	6,582,838	16,442	16,442	6,566,396	

Line Reclosing and Load Profiling

EAKC

Overall Status	G

Burn Rate	This Month	Last Month	Incremental
Scope (%)			
Budget (%)			
Milestones Achieved			

Resources

1. Engineering (EAKC)
2. T&D (Crew)

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Updates & Accomplishments for the Quarter

1. Line Reclosers, Controllers, and Transceivers have arrived and have been tested.
2. Communication testing and configuration ongoing.

Resource	Upcoming Tasks / Open Items	ECD
1. T&D	1. Installation of Line Reclosers	TBD
2. Engineering	2. Ordering of more Reclosers, controllers and transceivers to close out the project.	TBD

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

Line Reclosing and Load Profiling

EAKC

Overall Status	G

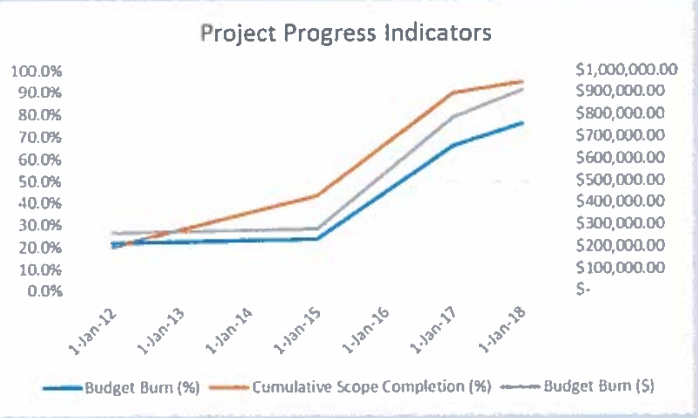
Burn Rate	This Month	Last Month	Incremental
Scope (%)			
Budget (%)			
Milestones Achieved			

Resources

1. Engineering (EAKC)
2. T&D (Crew)

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Project Progress Indicators



Project Schedule & Budget Performance Indicators

Project Milestone	Planned Completion Date	Actual Completion Date	Performance (Days Over/Under)	Color Performance Indicator	Performance
Planned Start Construction	1-Mar-11	1-Jun-11			
Planned Finished Construction	1-Jun-13				

Project Phase	Original Contract Budget	Current Budget	# Change Orders
Phase I	$ 1,200,000.00	$ 1,200,000.00	0
Phase II			

Legend:

- No corrective action required
- Near-term corrective action required
- Requires immediate attention

Line Reclosing and Load Profiling
COMPLIANCE REPORT
January 2018 - March 2018

Description of Work/Item	Approved Budget	Latest Eng'g. Estimate	Commitment to Date	Actuals	Balance of Appr'd Budget	Remarks (PO# or Work Order #
Design						
In-House Labor	38,500	38,500	-	-	38,500	
Garage/Travel/Overhead/Others	1,500	1,500	-	-	1,500	
Total Design	40,000	40,000	-	-	40,000	
GPA Purchased Equipment/Materials						
SEL 734,SEL 751-A and Assoc. Materials	182,950	177,950	524,931	524,931	(341,981)	15767OP - Schweitzer Engineering
SEL 351-6	38,000	38,000	-	-	38,000	
Misc. Materials	166,250	10,000	89,758	89,758	76,492	OR#29458 Line Reclosers
Total GPA Purchased Equipment/Materials	387,200	225,950	614,689	614,689	(227,489)	
Construction Management						
Engineering Labor	45,000	45,000	-	-	45,000	
T&D Labor	150,000	150,000	336,378	336,378	(186,378)	
Garage/Travel/Overhead/Others	100,000	100,000	-	-	100,000	
Total Construction Management	295,000	295,000	336,378	336,378	(41,378)	
Construction Contractor Work						
Permits & Mobilization	121,800	121,800	-	-	121,800	
Circuit As-Built	75,000	75,000	-	-	75,000	
Installation of SEL-734-6	8,000	8,000	-	-	8,000	
Installation of SEL-751-A	45,000	45,000	-	-	45,000	
Installation of SEL-734	53,000	53,000	-	-	53,000	
Removal of Existing Relays and Devices	50,000	50,000	-	-	50,000	
Testing	125,000	125,000	-	-	125,000	
Total Construction	477,800	477,800	-	-	477,800	
TOTAL	1,200,000	1,038,750	951,067	951,067	248,933	

Distribution System Improvements II

LCC

Overall Status	G

Burn Rate	This Month	Last Month	Incremental
Scope (%)			
Budget (%)			
Milestones Achieved			

Resources

1. Engineering (LCC)
2. T&D (Crew)

Risks & Issues	Schedule	Scope	Financial
Y	G	G	G

Updates & Accomplishments for the Quarter

1. Load redistribution at Apra Sub, P-221 and P-223 Completed.
2. SEL Fault Indicators have been ordered and are pending Procurement process.

Resource	Upcoming Tasks / Open Items	ECD
1. T&D	1. Installation of Capacitor Banks	TBD
2. T&D	2. Installation of Fault Indicators	TBD
3. T&D	3. Installation of Voltage Regulators	TBD
4. Eng	4. Ordering of Additional Switched Capacitors to close out the project.	TBD

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE
1. No working power flow software	1. August 2017	1. Training on use of Windmill and the creation of a maintenance program for updating schema and creating the Milsoft Windmill model.	TBD

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

4/12/2018

7

Distribution System Improvements II

LCC

Overall Status	G

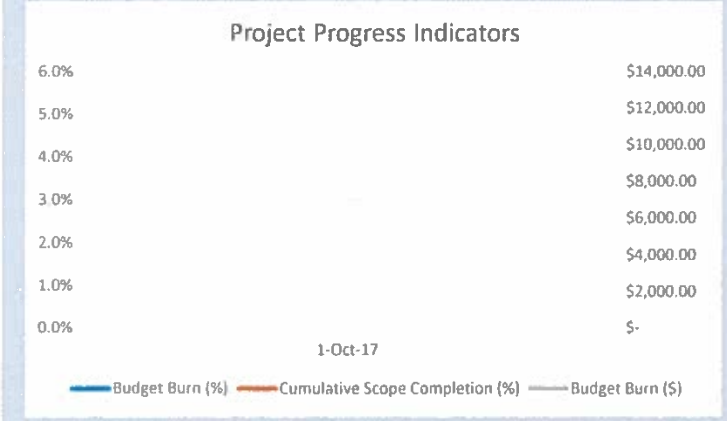
Burn Rate	This Month	Last Month	Incremental
Scope (%)			
Budget (%)			
Milestones Achieved			

Resources

1. Engineering (LCC)
2. T&D (Crew)

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Project Progress Indicators



Project Schedule & Budget Performance Indicators

Project Milestone	Planned Completion Date	Actual Completion Date	Performance (Days Over/Under)	Color Performance Indicator	Performance
Planned Start Construction	1-Apr-15	1-Apr-16			
Planned Finished Construction	1-Sep-16				

Project Phase	Original Contract Budget	Current Budget	# Change Orders
Phase I	$ 240,000.00	$ 240,000.00	0
Phase II			

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

Distribution System Improvements II
COMPLIANCE REPORT
January 2018 - March 2018

Description of Work/Item	Approved Budget	Latest Eng'g. Estimate	Commitment to Date	Actuals	Balance of Appr'd Budget	Remarks (PO# or Work Order #
GPA Purchased Equipment/Materials						
Switches	20,000	20,000	16,255	-	3,745	P-220 Switch Install
Switched Capacitors	10,000	10,000	12,000	-	(2,000)	P-221, P-223, P-340 Cap Bank Install
Garage and Miscellaneous	5,000	5,000	5,580	-	(580)	PO#23089
Total GPA Purchased Equipment/Materials	35,000	35,000	33,835	-	1,165	
GPA Warehouse Furnished Equipment/Materials	38,000	38,000	4,685	-	33,315	
Total GPA Warehouse Equipment/Materials	38,000	38,000	4,685	3,895	33,315	
Construction Management						
Engineering Labor	10,000	10,000	-	-	10,000	
Garage/Travel/Overhead/Others	10,000	10,000	4,157	4,157	5,843	
Total Construction Management	20,000	20,000	4,157	4,157	15,843	
Construction by T&D						
Switch Installation	5,000	5,000	4,000	-	1,000	P-220 Switch Install
Capacitor Installation	5,000	5,000	3,059	798	1,941	221, P-223, P-340, P-282 Cap Bank Install
Fuse Installation and Reconductoring	50,000	50,000	-	-	50,000	
Load Reconfiguration	87,000	87,000	15,250	4,134	82,866	P-221 and P-223 Load Reconfiguration
Construction Contractor Work	-	-	-	-	-	
Total Construction	147,000	147,000	22,309	4,933	142,067	
TOTAL	240,000	240,000	64,985	12,985	192,391	

Engineering Project Management
Project Status Reports

January – March 2018

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUÅHAN
P.O. BOX 2977 • HAGATÑA, GUAM U.S.A. 96932-2977

Engineering Project Management
Capital Improvement Projects

Submitted herewith is the March 2018 Quarterly Compliance Reports for the following projects:

	Project Name	Project Engineer
1.	Fire Protection Upgrades at Various Power Plants • Manenggon Diesel Power Plant	JRMA/SCB
2.	Gloria B. Nelson Public Service Building Additional Works	JRMA/SCB
3.	Facilities Physical Security	JRMA/SCB
4.	Dededo Combustion Turbine Return to Service (Final Report)	HOE/ORE
5.	Macheche Combustion Turbine Return to Service (Final Report)	HOE/ORE
6.	Yigo Combustion Turbine Return to Service (Final Report)	HOE/ORE
7.	Remote Start Capability of Generation Peaking Units	HOE/ORE

Manuel M. Minas
Engineer Supervisor

Project Management Engineering
Project Compliance Report Summary
January - March 2018

	Project Name	Approved Budget	Latest Eng'g Estimate	Commitment to Date	Actual Expenditure	Balance of Approved Budget
1	Fire Protection Upgrades at Power Plants	$ 3,808,000	$ 4,179,062	$ 2,464,062	$ 2,464,062	$ 1,343,938
2	GPA-GWA Multi-Purpose Facility (Fadian)	$ 35,000,000	$ 34,691,381	$ 34,691,381	$ 34,377,715	$ 622,285
3	Dededo Combustion Turbine Return to Service	$ 9,698,242	$ 8,895,930	$ 8,897,540	$ 8,521,145	$ 1,177,097
4	Facilities Physical Security	$ 1,350,000	$ 1,350,000	$ -	$ -	$ 1,350,000
5	Macheche Combustion Turbine Return to Service	$ 2,692,500	$ 2,491,569	$ 2,472,330	$ 2,240,869	$ 451,631
6	Yigo Combustion Turbine Return to Service	$ 2,300,000	$ 2,300,000	$ 2,300,000	$ 2,185,000	$ 115,000
7	Remote Start Capability of Generation Peaking Units	$ 350,000	$ 350,000	$ 46,500	$ 22,829	$ 327,171

GPA Upgrade of Fire Protection and Smoke Alarm Systems at Manenggon Diesel Power Plant

JRMA/SCB

Overall Status		Resources	Risks & Issues	Schedule	Scope	Financial	Assigned By
Design = 100% Design Update = 0% Construction = 0%	G	1. ENGINEERING	G	G	G	G	JGA

Updates & Accomplishments for the Quarter	Resource	Upcoming Tasks / Open Items	ECD
1. In-receipt of Engineering Consultant's cost proposal for the design update (to ensure it meets current codes and standards).	1. A/E	1. Update the design drawings and specifications to include cost estimate	09/28/18
2. On-going review of the cost proposal.	2. ENG'G. / PMM	2. Rebid the project	12/31/18
	3. TBD	3. Construction	09/30/19

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE

Legend:

- No corrective action required
- Near-term corrective action required
- Requires immediate attention

GPA Upgrade of Fire Protection and Smoke Alarm Systems at Manenggon Diesel Power Plant

JRMA/SCB

Overall Status	G

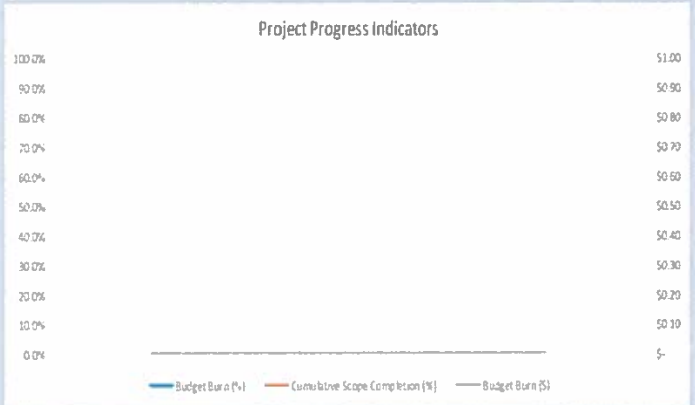
Burn Rate	This Month	Last Month	Incremental
Scope (%)			
Budget (%)			
Milestones Achieved			

Resources

1. ENGINEERING

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Project Progress Indicators



Project Schedule & Budget Performance Indicators

Project Milestone	Planned Completion Date	Actual Completion Date	Performance (Days Over/Under)	Color Performance Indicator
Update design package	28-Sep-18			
Rebid	31-Dec-18			
Construction	30-Sep-19			

Project Phase	Original Contract Budget	Current Budget	# Change Orders
Phase I	$ 520,000.00	$ 520,000.00	0
Phase II			

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

GPA UPGRADE OF FIRE PROTECTION AND SMOKE ALARM SYSTEMS AT VARIOUS FACILITIES
Quarterly Compliance Report
January - March 2018

ITEM	DESCRIPTION OF WORK	APPROVED BUDGET	LATEST ENGINEERING ESTIMATE	COMMITMENT TO DATE	ACTUAL EXPENDITURE	BALANCE OF APPROVED BUDGET	REMARKS
1	**Construction Support/Management**						
a	A/E Construction Support Services	$37,500.00	$37,500.00	$37,500.00	$34,725.00	$0.00	EMCE
b	GPA Construction Management	$149,500.00	$160,080.00	$160,080.00	$160,080.00	($10,580.00)	as of 03/31/18
	Total CSS/CM Cost	**$187,000.00**	**$197,580.00**	**$197,580.00**	**$194,805.00**	**($10,580.00)**	
2	**Construction**						
a	Macheche CT Power Plant (100096)	$350,000.00	$488,629.00	$488,629.00	$488,629.00	($138,629.00)	Completed, GEMCCO
b	Yigo Power Plant (100101)	$428,000.00	$363,408.73	$363,408.73	$363,408.73	$64,591.27	Completed, MIDONG
c	Dededo Diesel Power Plant (100118)	$360,000.00	$337,980.00	$337,980.00	$337,980.00	$22,020.00	Completed, GEMCCO
d	Tenjo Diesel Power Plant (100120)	$428,000.00	$646,538.18	$646,538.18	$646,538.18	($218,538.18)	Completed, BME
e	Talofofo Diesel Power Plant (100122)	$340,000.00	$432,700.77	$432,700.77	$432,700.77	($92,700.77)	Completed, BME
f	Manenggon Power Plant (100121)	$520,000.00	$520,000.00	$0.00	$0.00	$520,000.00	
g	Marbo CT Power Plant (100123)	$445,000.00	$445,000.00	$0.00	$0.00	$445,000.00	
h	Cabras 1&2 Power Plant	$750,000.00	$750,000.00	$0.00	$0.00	$750,000.00	
	Total Construction Cost	**$3,621,000.00**	**$3,984,256.68**	**$2,269,256.68**	**$2,269,256.68**	**$1,351,743.32**	
3	**SUMMARY**						
	TOTAL CSS/CM	**$187,000.00**	**$194,805.00**	**$194,805.00**	**$194,805.00**	**($7,805.00)**	
	TOTAL CONSTRUCTION	**$3,621,000.00**	**$3,984,256.68**	**$2,269,256.68**	**$2,269,256.68**	**$1,351,743.32**	
	TOTAL PROJECT COST	**$3,808,000.00**	**$4,179,061.68**	**$2,464,061.68**	**$2,464,061.68**	**$1,343,938.32**	

Gloria B. Nelson Public Service Building

JRMA/SCB

Overall Status		Resources	Risks & Issues	Schedule	Scope	Financial	Assigned By
Additional Works: Fitness Room = 100% Fitness Equipment = 90% CS Workstation = 50%	G	1. ENGINEERING	G	G	G	G	JGA

Updates & Accomplishments for the Quarter	Resource	Upcoming Tasks / Open Items	ECD
1. Additional works: a. Fitness Room • Processed the final invoice. • GR completed the warranty punch list b. Fitness Equipment Awaiting from Hornet for one fitness equipment to be delivered. c. Customer Service Workstation Modification • PMM issued the NTP/PO to MMB Inc., Contractor. • MMB submitted required shop drawings. • Engineering completed review of the submittal and issued approval.	1. Hornet 2. MMB	1. Fitness Equipment Delivery of the last quantity of equipment 2. CS Workstation Modification Complete installation	06/29/18 04/16/18

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

Gloria B. Nelson Public Service Building

JRMA/SCB

Overall Status

G

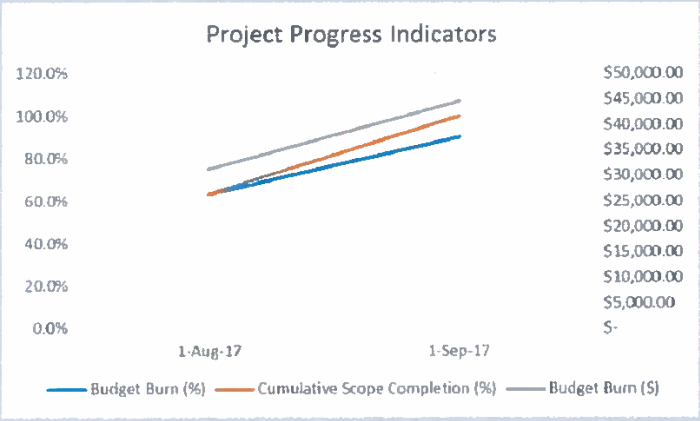
Burn Rate	This Quarter	Last Quarter	Incremental
Scope (%)	99.9%	99.9%	0.0%
Budget (%)	90.0%	63.0%	27.0%
Milestones Achieved	6	2	4

Resources

1. ENGINEERING

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Project Progress Indicators



Project Schedule & Budget Performance Indicators

Project Milestone	Planned Completion Date	Actual Completion Date	Performance (Days Over/Under)	Color Performance Indicator	Performance
Fitness Room - Project Close Out	30-Sep-17	30-Sep-17	0		Early
Fitness Equipment - Final Delivery	22-Jan-18				
CS Glass Partition - Construction	30-Apr-18				

Project Phase	Original Contract Budget	Current Budget	# Change Orders
Phase I	$ 47,934.00	$ 49,434.00	1
Phase II			

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

GLORIA B. NELSON PUBLIC SERVICE BUILDING
Quarterly Compliance Report
January - March 2018

ITEM	DESCRIPTION OF WORK	APPROVED BUDGET	LATEST ENGINEERING ESTIMATE	COMMITMENT TO DATE	ACTUAL EXPENDITURE	BALANCE OF APPROVED BUDGET	REMARKS
1	Design Phase						
a	Architectural	$547,989.00	$547,989.00	$547,989.00	$547,989.00	$0.00	13974OP / RIM
b	Civil	$194,875.00	$194,875.00	$194,875.00	$194,875.00	$0.00	13974OP / RIM
c	Structural	$218,993.00	$218,993.00	$218,993.00	$218,993.00	$0.00	13974OP / RIM
d	Mechanical/Plumbing	$126,598.00	$126,598.00	$126,598.00	$126,598.00	$0.00	13974OP / RIM
e	Electrical	$161,694.00	$161,694.00	$161,694.00	$161,694.00	$0.00	13974OP / RIM
f	LEED/Energy Performance Modeling	$47,496.00	$47,496.00	$47,496.00	$47,496.00	$0.00	13974OP / RIM
g	Cost Estimating	$48,556.00	$48,556.00	$48,556.00	$48,556.00	$0.00	13974OP / RIM
h	Landscape	$14,460.00	$14,460.00	$14,460.00	$14,460.00	$0.00	13974OP / RIM
i	Geotechnical	$28,647.00	$28,647.00	$28,647.00	$28,647.00	$0.00	13974OP / RIM
j	Off Site Sewer Design	$74,768.00	$74,768.00	$74,768.00	$74,768.00	$0.00	13974OP / RIM
k	Route 15 Widening	$123,386.00	$123,386.00	$123,386.00	$123,386.00	$0.00	13974OP / RIM
l	FF & E Design Services	$239,590.00	$239,590.00	$239,590.00	$239,590.00	$0.00	13974OP / RIM
	Total Design Cost	$1,827,052.00	$1,827,052.00	$1,827,052.00	$1,827,052.00	$0.00	13974OP / RIM
2	Construction Support						
a	Architectural	$195,298.00	$195,298.00	$195,298.00	$195,298.00	$0.00	13974OP / RIM
b	Civil	$62,369.00	$62,369.00	$62,369.00	$62,369.00	$0.00	13974OP / RIM
c	Structural	$27,696.00	$27,696.00	$27,696.00	$27,696.00	$0.00	13974OP / RIM
d	Mechanical/Plumbing	$37,882.00	$37,882.00	$37,882.00	$37,882.00	$0.00	13974OP / RIM
e	Electrical	$28,280.00	$28,280.00	$28,280.00	$28,280.00	$0.00	13974OP / RIM
f	LEED/Energy Performance Modeling	$5,546.00	$5,546.00	$5,546.00	$5,546.00	$0.00	13974OP / RIM
g	Cost Estimating	$8,136.00	$8,136.00	$8,136.00	$8,136.00	$0.00	13974OP / RIM
h	Landscape	$4,549.00	$4,549.00	$4,549.00	$4,549.00	$0.00	13974OP / RIM
	Total CA Cost	$369,756.00	$369,756.00	$369,756.00	$369,756.00	$0.00	13974OP / RIM
	Total Design and CA Cost	$2,196,808.00	$2,196,808.00	$2,196,808.00	$2,196,808.00	$0.00	13974OP / RIM
3	Construction Administration						
a	Construction Engineering	$713,410.00	$424,648.00	$424,648.00	$424,648.00	$288,762.00	RWA/West Ent/GWA
b	GPA On-site CM	$476,995.00	$476,995.00	$476,995.00	$476,995.00	$0.00	RIM - CHANGE ORD
c	GPA In House Labor / Field Work	$204,902.00	$185,044.83	$185,044.83	$185,044.83	$19,857.17	as of 03/31/18
	Total CM Cost	$1,395,307.00	$1,086,687.83	$1,086,687.83	$1,086,687.83	$308,619.17	
4	Construction						
a	Construction - Building	$26,933,288.00	$26,933,288.00	$26,933,288.00	$26,648,961.00	$0.00	CoreTech
	a.1 Additional - Finance & Nursing Room	$43,531.00	$43,531.00	$43,531.00	$43,531.00	$0.00	ZME Pacific
	a.2 Additional - Fitness Room	$49,434.00	$49,434.00	$49,434.00	$49,434.00	$0.00	GR Construction
	a.3 Additional - Fitness Equipment	$5,725.00	$5,725.00	$5,725.00	$4,286.00	$1,439.00	HORNETS
	a.4 Additional - CS Workstation	$27,900.00	$27,900.00	$27,900.00	$0.00	$27,900.00	MMB
b	Construction - Route 15 Improvement	$1,499,500.00	$1,499,500.00	$1,499,500.00	$1,499,500.00	$0.00	CoreTech
c	Construction - FFE and Art Work	$2,594,957.00	$2,594,957.00	$2,594,957.00	$2,594,957.00	$0.00	M80
	Total Construction Cost	$31,154,335.00	$31,154,335.00	$31,154,335.00	$30,840,669.00	$29,339.00	
5	Relocation Services	$253,550.00	$253,550.00	$253,550.00	$253,550.00	$0.00	CHA, Dewitt, etc.
6	SUMMARY						
	TOTAL DESIGN and CA	$2,196,808.00	$2,196,808.00	$2,196,808.00	$2,196,808.00	$0.00	
	TOTAL CONSTRUCTION MGMT	$1,395,307.00	$1,086,687.83	$1,086,687.83	$1,086,687.83	$308,619.17	
	TOTAL CONSTRUCTION	$31,154,335.00	$31,154,335.00	$31,154,335.00	$30,840,669.00	$313,666.00	
	TOTAL PROJECT COST	$35,000,000.00	$34,691,380.83	$34,691,380.83	$34,377,714.83	$622,285.17	

Dededo Combustion Turbine Return to Service

HOE/ORE

Overall Status		Resources	Risks & Issues	Schedule	Scope	Financial	Assigned By
Dededo CT1 = 100% Dededo CT2 = 100%	G	1. ENGINEERING 2. GENERATION	G	G	G	G	JGA

Updates & Accomplishments for the Quarter	Resource	Upcoming Tasks / Open Items	ECD
1. Processed all pending invoices and forwarded to Accounting for disbursement.		None	

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE
1. GFD's final acceptance on the completed repair of facility's existing fire protection system.	12/31/17	1. TEMES (PMC) to follow-up consistently with GFD.	Pending

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

Dededo Combustion Turbine Return to Service

HOE/ORE

Overall Status	G

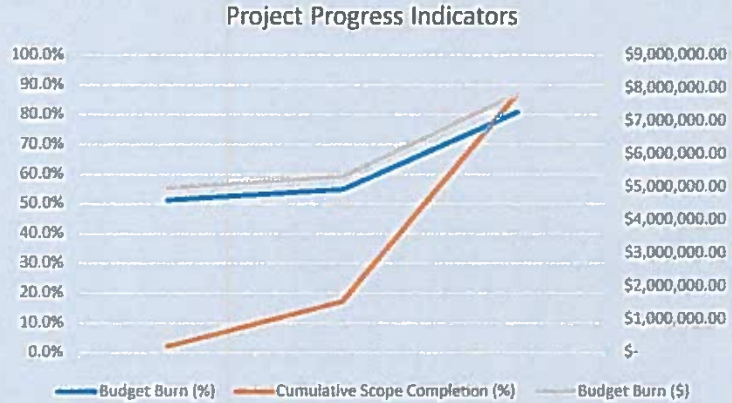
Burn Rate	This Quarter	Last Quarter	Incremental
Scope (%)			
Budget (%)			
Milestones Achieved			

Resources

1. ENGINEERING
2. GENERATION

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Project Progress Indicators



Project Schedule & Budget Performance Indicators

Project Milestone	Planned Completion Date	Actual Completion Date	Performance (Days Over/Under)	Color Performance Indicator	Performance
DCT1	28-Feb-17	11-May-17	72	72	Very Late
DCT2	20-Jan-17	10-May-17	110	110	Very Late

Project Phase	Original Contract Budget	Current Budget	# Change Orders
Phase I	$ 9,698,242.00	$ 9,698,242.00	0
Phase II			

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

DEDEDO CT RETURN TO SERVICE
Quarterly Compliance Report
January - March 2018

ITEM	DESCRIPTION OF WORK	APPROVED BUDGET	LATEST ENGINEERING ESTIMATE	COMMITMENT TO DATE	ACTUAL EXPENDITURE	BALANCE OF APPROVED BUDGET	REMARKS
1	**Reallocated Bond Funds**						
a	Generator #2 Rotor & Stator Repair, Generator #1 Inspection	2,270,000.00	2,269,294.00	2,269,294.00	2,269,291.04	708.96	Completed, NEC
b	Turbine Overhaul Units 1&2	1,750,000.00	2,174,175.00	2,174,175.00	1,797,218.93	(47,218.93)	Completed, TEMES
c	Water System Upgrade	1,041,128.00	215,000.00	216,610.00	188,287.00	852,841.00	Completed, TEMES
d	Replace 13.8kV, 480V Switchboard, 480V MCC, Station Service TR, Power and Control Cables	1,210,000.00	1,209,472.00	1,209,472.00	1,209,472.00	528.00	Completed, SCHNEIDER
e	Black Start Diesel Generator	70,000.00	47,333.00	47,333.00	47,333.00	22,667.00	Completed, TEMES
f	Replace DC Batteries	14,000.00	-	-	-	14,000.00	Completed, TEMES
	Subtotal	6,355,128.00	5,915,274.00	5,916,884.00	5,511,601.97	843,526.03	
2	**2014 Bond Funds**						
a	Control System Upgrade - Turbine Vibration Monitoring System Repair	300,000.00	300,000.00	300,000.00	300,000.00	0	Completed, SCHNEIDER
b	Replace DC Batteries	36,000.00	-	-	-	36,000.00	Completed, TEMES
c	Lubricating Oil	80,000.00	55,331.00	55,331.00	55,331.00	24,669.00	Completed, PPC
d	Turbine Overhaul Units 1&2 - Consumable Material	320,000.00	-	-	-	320,000.00	Completed ,TEMES
	Subtotal	736,000.00	355,331.00	355,331.00	355,331.00	380,669.00	
3	**Revenue Funds**						
a	Air Intake System Repair	371,370.00	422,157.00	422,157.00	458,655.00	(87,285.00)	Completed, TEMES
b	Air Cooling Tower System Replacement	717,061.00	727,061.00	727,061.00	727,055.00	(9,994.00)	Completed, TEMES
c	Outdoor BOP for FO and Raw Water System	255,683.00	305,104.00	305,104.00	299,235.00	(43,552.00)	Completed, TEMES
d	Control System Upgrade - Turbine & Generator	500,000.00	500,000.00	500,000.00	500,000.00	0	Completed, TEMES
e	Control System Upgrade - Auto Voltage Regulator Repair	120,000.00	120,000.00	120,000.00	120,000.00	0	Completed, SCHNEIDER
f	Control System Upgrade - Generator Control Panel Repair	160,000.00	160,000.00	160,000.00	160,000.00	0	Completed, SCHNEIDER
g	I&C Equipment BOP	70,000.00	13,625.00	13,625.00	13,625.00	56,375.00	Completed, TEMES
h	Fire Protection System Repair	300,000.00	270,000.00	270,000.00	268,286.00	31,714.00	Completed, TEMES
i	Switchyard MTR	85,000.00	107,378.00	107,378.00	107,356.00	(22,356.00)	Completed, TEMES
j	Crane Repair	28,000.00	-	-	-	28,000.00	Completed, TEMES
	Subtotal	2,607,114.00	2,625,325.00	2,625,325.00	2,654,212.00	(47,098.00)	
4	**SUMMARY**						
	Reallocated Bond Funds	6,355,128.00	5,915,274.00	5,916,884.00	5,511,601.97	438,244.00	
	2014 Bond Funds	736,000.00	355,331.00	355,331.00	355,331.00	380,669.00	
	Revenue Funds	2,607,114.00	2,625,325.00	2,625,325.00	2,654,212.00	(18,211.00)	
	Total Cost	9,698,242.00	8,895,930.00	8,897,540.00	8,521,144.97	1,177,097.03	

Facilities Physical Security

JRMA/SCB

Overall Status		Resources	Risks & Issues	Schedule	Scope	Financial	Assigned By
Design = 0% Construction = 0%	G	1. ENGINEERING 2. IT 3. SAFETY	G	G	G	G	JGA

Updates & Accomplishments for the Quarter	Resource	Upcoming Tasks / Open Items	ECD
1. Review of the bid document's final draft is in-progress.	1. ENG'G. / PMM	1. Bid the project	09/28/18
2. On-going coordination with Safety and IT.	2. TBD	2. Design and Construction	12/31/19

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE

Legend:

- No corrective action required
- Near-term corrective action required
- Requires immediate attention

Facilities Physical Security

JRMA/SCB

Overall Status

G

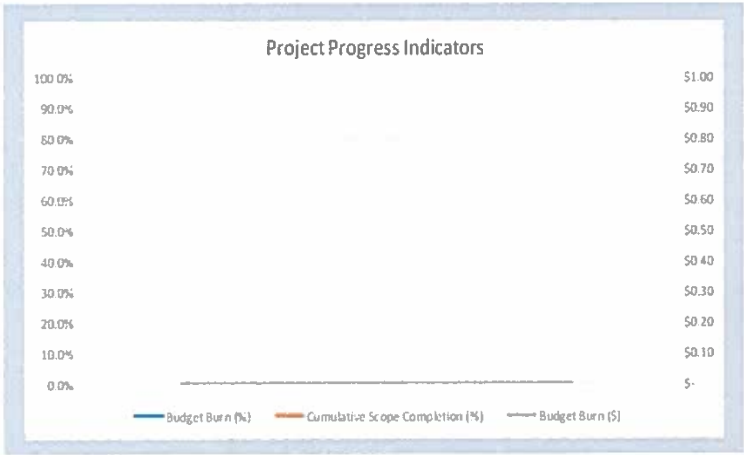
Burn Rate	This Month	Last Month	Incremental
Scope (%)			
Budget (%)			
Milestones Achieved			

Resources

1. ENGINEERING
2. IT
3. SAFETY

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Project Progress Indicators



Project Schedule & Budget Performance Indicators

Project Milestone	Planned Completion Date	Actual Completion Date	Performance (Days Over/Under)	Color Performance Indicator	Performance
Bid the project	28-Sep-18				
Design and construction	31-Dec-19				

Project Phase	Original Contract Budget	Current Budget	# Change Orders
Phase I	$ 1,350,000.00	$ 1,350,000.00	0
Phase II			

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

FACILITIES PHYSICAL SECURITY
Quarterly Compliance Report
January - March 2018

ITEM	DESCRIPTION OF WORK	APPROVED BUDGET	LATEST ENGINEERING ESTIMATE	COMMITMENT TO DATE	ACTUAL EXPENDITURE	BALANCE OF APPROVED BUDGET	REMARKS
1	**Design Phase**						
	Design Development	$75,000.00	$75,000.00	$0.00	$0.00	$75,000.00	as of 03/31/18
	Total Design Cost	**$75,000.00**	**$75,000.00**	**$0.00**	**$0.00**	**$75,000.00**	
2	**Construction Management**						
	Construction Support Services	$60,000.00	$60,000.00	$0.00	$0.00	$60,000.00	
	GPA In-House Labor/Field Work	$15,000.00	$15,000.00	$0.00	$0.00	$15,000.00	as of 03/31/18
	Total CM Cost	**$75,000.00**	**$75,000.00**	**$0.00**	**$0.00**	**$75,000.00**	
3	**Construction**						
	Construction/Installation	$1,200,000.00	$1,200,000.00	$0.00	$0.00	$1,200,000.00	
	Total Construction Cost	**$1,200,000.00**	**$1,200,000.00**	**$0.00**	**$0.00**	**$1,200,000.00**	
	SUMMARY						
4	**TOTAL DESIGN**	**$75,000.00**	**$75,000.00**	**$0.00**	**$0.00**	**$75,000.00**	
	TOTAL CONSTRUCTION MGMT	**$75,000.00**	**$75,000.00**	**$0.00**	**$0.00**	**$75,000.00**	
	TOTAL CONSTRUCTION RETROFIT	**$1,200,000.00**	**$1,200,000.00**	**$0.00**	**$0.00**	**$1,200,000.00**	
	TOTAL PROJECT COST	**$1,350,000.00**	**$1,350,000.00**	**$0.00**	**$0.00**	**$1,350,000.00**	

Macheche Combustion Turbine Return to Service HOE/ORE

Overall Status		Resources	Risks & Issues		Schedule		Scope		Financial		Assigned By
Macheche CT = 100%	G	1. ENGINEERING 2. GENERATION		G		G		G		G	JGA

Updates & Accomplishments for the Quarter	Resource	Upcoming Tasks / Open Items	ECD
1. Processed Change Order invoice and forwarded to Accounting for disbursement.		None	

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

Macheche Combustion Turbine Return to Service

HOE/ORE

Overall Status	G

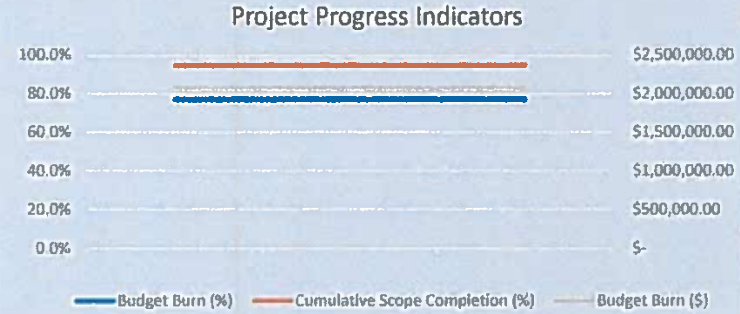
Burn Rate	This Quarter	Last Quarter	Incremental
Scope (%)			
Budget (%)			
Milestones Achieved			

Resources

1. ENGINEERING
2. GENERATION

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Project Progress Indicators



Project Schedule & Budget Performance Indicators

Project Milestone	Planned Completion Date	Actual Completion Date	Performance (Days Over/Under)	Color Performance Indicator	Performance
Repair Work	30-Oct-16	12-Nov-16	13		Neutral
SAT	12-Nov-16	12-Nov-16	0		Early

Project Phase		Original Contract Budget	# Change Orders
Phase I	$ 2,692,500.00	$ 2,692,500.00	1
Phase II			

Legend:

- No corrective action required
- Near-term corrective action required
- Requires immediate attention

MACHECHE COMBUSTION TURBINE RETURN TO SERVICE
Quarterly Compliance Report
January - March 2018

ITEM	DESCRIPTION	APPROVED BUDGET	LATEST ENGINEERING ESTIMATE	COMMITMENT TO DATE	ACTUAL EXPENDITURE	BALANCE OF APPROVED BUDGET	REMARKS
1	**LM 2500 PE Engine and Power Turbine Exchange**					**23158 OP**	
	Engine & Turbine Exchange	$ 2,550,000.00	$ 2,200,000.00	$ 2,200,000.00	$ 2,083,125.34	$ 466,874.66	Completed, TEMES
	GPA Labor	$ 15,000.00	$ 15,000.00	$ 8,674.38	$ 8,674.38	$ 6,325.62	As of 03/31/18
	Subtotal	**$ 2,565,000.00**	**$ 2,215,000.00**	**$ 2,208,674.38**	**$ 2,091,799.72**	**$ 473,200.28**	
2	**TEMES Admin Fees**						
	Administrative Fee	$ 127,500.00	$ 127,500.00	$ 114,587.00	$ -	$ 127,500.00	
	Subtotal	**$ 127,500.00**	**$ 127,500.00**	**$ 114,587.00**	$ -	**$ 127,500.00**	
3	**Additional Scope**						
	VSV Controller - Material	$ -	$ 41,235.00	$ 41,235.00	$ 41,235.00	0	Completed, TEMES
	VSV Controller - Installation	$ -	$ 18,838.00	$ 18,838.00	$ 18,838.00	0	Completed, TEMES
	Spare Fuel Nozzles	$ -	$ 32,566.00	$ 32,566.00	$ 32,566.00	0	Completed, TEMES
	Generator Proportional Band Adjustments	$ -	$ 9,940.00	$ 9,940.00	$ 9,940.00	0	Completed, TEMES
	Repair/modifications of air exhaust duct & diffuser, turbine enclosure vent duct damper, air inertial separator assembly, air intake chamber	$ -	$ 25,000.00	$ 25,000.00	$ 25,000.00	0	Completed, TEMES
	Air intake filter stainless steel screen installation and repainting of interior and exterior surfaces	$ -	$ 8,000.00	$ 8,000.00	$ 8,000.00	0	Completed, TEMES
	Subtotal	$ -	**$ 135,579.00**	**$ 135,579.00**	**$ 135,579.00**	0	
4	**Standby Charges**						
	McHale Performance Test - Standby Charges	$ -	$ 2,400.00	$ 2,400.00	$ 2,400.00	0	
	TRC Emission Test - Delay Charges	$ -	$ 11,090.00	$ 11,090.00	$ 11,090.00	0	
	Subtotal	$ -	**$ 13,490.00**	**$ 13,490.00**	**$ 13,490.00**	0	
5	**SUMMARY**						
	Engine & Turbine Exchange	**$ 2,565,000.00**	**$ 2,215,000.00**	**$ 2,208,674.38**	**$ 2,091,799.72**	**$ 473,200.28**	
	TEMES Admin Fee	**$ 127,500.00**	**$ 127,500.00**	**$ 114,587.00**	$ -	**$ 127,500.00**	
	Additional Scope	$ -	**$ 135,579.00**	**$ 135,579.00**	**$ 135,579.00**	**0**	
	Standby Charges	$ -	**$ 13,490.00**	**$ 13,490.00**	**$ 13,490.00**	**0**	
	Total Cost	**$ 2,692,500.00**	**$ 2,491,569.00**	**$ 2,472,330.38**	**$ 2,240,868.72**	**$ 451,631.28**	

Yigo Combustion Turbine Return to Service

HOE/ORE

Overall Status		Resources	Risks & Issues	Schedule	Scope	Financial	Assigned By
Yigo CT = 100%	G	1. ENGINEERING 2. GENERATION	G	G	G	G	JGA

Updates & Accomplishments for the Quarter	Resource	Upcoming Tasks / Open Items	ECD
None		None	

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE

Legend:

- No corrective action required
- Near-term corrective action required
- Requires immediate attention

Yigo Combustion Return to Service

HOE/ORE

Overall Status	G

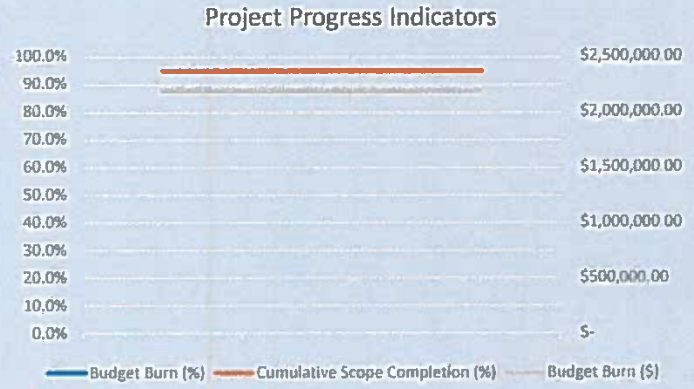
Burn Rate	This Month	Last Month	Incremental
Scope (%)			
Budget (%)			
Milestones Achieved			

Resources

1. GENERATION
2. ENGINEERING

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Project Progress Indicators



Project Schedule & Budget Performance Indicators

Project Milestone	Planned Completion Date	Actual Completion Date	Performance (Days Over/Under)	Color Performance Indicator	Performance
Repair Work	3-Jun-16	6-Jul-16	33		Very Late
SAT	6-Jul-16	6-Jul-16	0		Early

Project Phase	Original Contract Budget	Current Budget	# Change Orders
Phase I	$ 2,300,000.00	$ 2,300,000.00	0
Phase II			

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

YIGO COMBUSTION TURBINE RETURN TO SERVICE
Quarterly Compliance Report
January - March 2018

ITEM	DESCRIPTION	APPROVED BUDGET	LATEST ENGINEERING ESTIMATE	COMMITMENT TO DATE	ACTUAL EXPENDITURE	BALANCE OF APPROVED BUDGET	REMARKS
1	LM 2500 PE Engine and Power Turbine Exchange					22905 OP	
	Engine & Turbine Exchange	$ 2,300,000.00	$ 2,300,000.00	$ 2,300,000.00	$ 2,185,000.00	$ 115,000.00	Completed, TEMES
	Subtotal	$ 2,300,000.00	$ 2,300,000.00	$ 2,300,000.00	$ 2,185,000.00	$ 115,000.00	
3	SUMMARY						
	Engine & Turbine Exchange	$ 2,300,000.00	$ 2,300,000.00	$ 2,300,000.00	$ 2,185,000.00	$ 115,000.00	
	Total Cost	$ 2,300,000.00	$ 2,300,000.00	$ 2,300,000.00	$ 2,185,000.00	$ 115,000.00	

Remote Start Capability of Generation Peaking Units (Tenjo Vista) HOE/ORE

Overall Status	G
Conceptual Design = 100%	

Resources

1. ENGINEERING
2. GENERATION
3. SPORD

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Updates & Accomplishments for the Quarter

1. Review LEIDOS submittal on Task 4 (Infrastructure Assessment) – 01/09/18
2. Review LEIDOS submittal on Task 5 (Implementation Plan) – 01/12/18
3. Transmit approved purchase order to LEIDOS – 01/17/18
4. Review LEIDOS submittal on Task 6 & 7 (Performance Based Specification Development & Cost Estimate) – 01/18/18
5. Process & approve LEIDOS progress payment no. 1 – 02/15/18
6. Prepare bid package documents – 02/23/18

Resource	Upcoming Tasks / Open Items	ECD
1. ENG'G. / SPORD	1. Bid package review, comments & approval	TBD

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE

Legend:

- No corrective action required
- Near-term corrective action required
- Requires immediate attention

4/10/2018

1

Remote Start Capability of Generation Peaking Units (Tenjo Vista) HOE/ORE

Overall Status	G

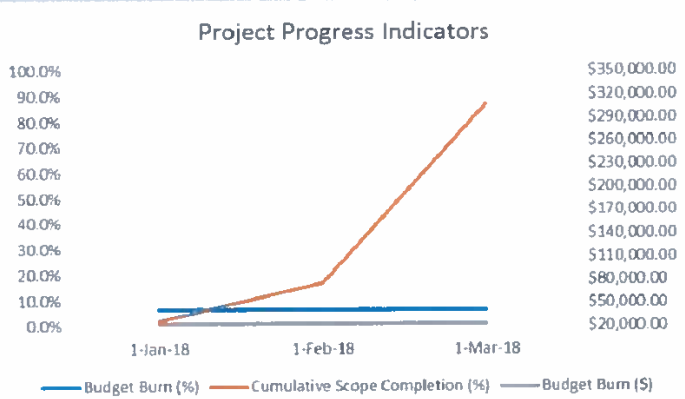
Burn Rate	This Quarter	Last Quarter	Incremental
Scope (%)			
Budget (%)			
Milestones Achieved			

Resources

1. ENGINEERING
2. GENERATION
3. SPORD

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Project Progress Indicators



Project Schedule & Budget Performance Indicators

Project Milestone	Planned Completion Date	Actual Completion Date	Performance (Days Over/Under)	Color Performance Indicator	Performance
Kickoff Call/Data Request	27-Nov-17	27-Nov-17	0		Early
Data Request	11-Dec-17	11-Dec-17	0		Early
Conceptual Design	11-Dec-17	11-Dec-17	0		Early
Infrastructure Assessment	29-Dec-17	29-Dec-17	0		Early
Plan, Specs. & Cost Estimate	18-Jan-18	18-Jan-18	0		Early
Bid Package	23-Feb-18	23-Feb-18	0		Early

Project Phase	Original Contract Budget	Current Budget	# Change Orders
Phase I	$ 350,000.00	$ 350,000.00	0
Phase II			

Legend:

- No corrective action required
- Near-term corrective action required
- Requires immediate attention

REMOTE START CAPABILITY OF GENERATION PEAKING UNITS
Quarterly Compliance Report
January - March 2018

ITEM	DESCRIPTION	APPROVED BUDGET	LATEST ENGINEERING ESTIMATE	COMMITMENT TO DATE	ACTUAL EXPENDITURE	BALANCE OF APPROVED BUDGET	REMARKS
	DESIGN PHASE						
1	Design Development	$ 150,000.00	$ 150,000.00	$ 46,500.00	$ 22,829.00	$ 103,500.00	as of 03/31/18, LEIDOS
	TOTAL DESIGN COST						
	CONSTRUCTION MANAGEMENT						
2	GPA In-House Labor / Fieldwork	$ 15,000.00	$ 15,000.00	$ -	$ -	$ 15,000.00	
	TOTAL CM COST						
	CONSTRUCTION						
3	Construction / Installation	$ 185,000.00	$ 185,000.00	$ -	$ -	$ 185,000.00	
	TOTAL CONSTRUCTION COST						
4	**SUMMARY**						
	TOTAL DESIGN COST	$ 150,000.00	$ 150,000.00	$ 46,500.00	$ 22,829.00	$ 103,500.00	
	TOTAL CM COST	$ 15,000.00	$ 15,000.00	$ -	$ -		
	TOTAL CONSTRUCTION COST	$ 185,000.00	$ 185,000.00	$ -	$ -		
	Total Cost	$ 350,000.00	$ 350,000.00	$ 46,500.00	$ 22,829.00	$ 327,171.00	

Engineering Substation / Transmission Project Status Reports

January – March 2018

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

Engineering Substation/Transmission
Capital Improvement Projects

Submitted herewith are the **January – March 2018** Progress and Compliance Reports for the following projects:

	Project Name	Job Order No.	Engineer
1.	Generator Protection Upgrade with Fault Recorders	100254	W.T. Chen
2.	Piti 115 KV GIS Major Maintenance	100256	J.L. Quinto
3.	Substation Major Refurbishment – Power Transformer	100257	N.T. Guerrero
4.	Agat Shoreline Pole Restoration Project	100261	J.U. Pabunan
5.	System Protection Improvement & Capacitor Bank Controllers	100262	A.B. Salomon
6.	Dededo Substation Capacitor Bank	100263	N.J. Bacsafra
7.	Network Communications – Fiber to Fadian Complex	100268	A.B. Salomon

Irwin B. Loyola, P.E.

SUBSTATION ENGINEERING
Project Compliance Report Summary
January 2018 - March 2018

	Project	Approved Budget	Latest Eng'g. Estimate	Commitment to Date	Actuals	Balance of Appr'd Budget
1	Generator Protection Upgrade with Fault Recorders	580,000	580,000	201,108	201,108	378,892
2	Piti 115 kV GIS Major Maintenance	2,637,300	2,637,300	0	0	2,637,300
3	Substation Major Refurbishment - Power Transformer	540,000	540,000	322,638	322,638	217,362
4	Agat Shoreline Pole Restoration Project	384,000	384,000	82,597	73,228	310,772
5	System Protection Improvement & Capacitor Bank Controllers	1,312,000	1,312,000	120,601	120,601	1,191,399
6	Dededo Substation Capacitor Bank	165,000	165,000	0	0	165,000
7	Network Communications - Fiber to Fadian Complex	1,100,000	1,100,000	341,560	341,560	758,440

Generator Protection Upgrade w/ Fault Recorders J.O. 100254

WTC

Overall Status	G

Burn Rate	This Quarter	Last Quarter	Incremental
Scope (%)			
Budget (%)			
Milestones Achieved			

Resources

1. Engineering
2. T&D Relay Shop
3. PSCC SCADA
4. Generation

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Updates & Accomplishments for the Quarter

1. Performed wire-tracing to produce as-built drawings of the existing generator protection related devices and equipments at Macheche CT.

Resource	Upcoming Tasks / Open Items	ECD
1. Engineering 2. T&D Relay Shop 3. PSCC SCADA 4. Generation	1. Connect GPS clock to Tenjo Vista Units 1 to 6 generator. 2. Upgrade from existing generator protection relays to SEL-700G1+ generator protection relays (primary and backup) for Macheche CT generator. 3. Upgrade from existing generator protection relays to SEL-700G1+ generator protection relays (primary and backup) for Yigo CT generator.	4/1/18 5/1/18 6/1/18

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE
1. Generator outage schedule. 2. T&D Relay Shop Schedule.			

Legend:

No corrective action required

Near-term corrective action required

Requires immediate attention

Generator Protection Upgrade w/ Fault Recorders J.O. 100254

WTC

Overall Status	G

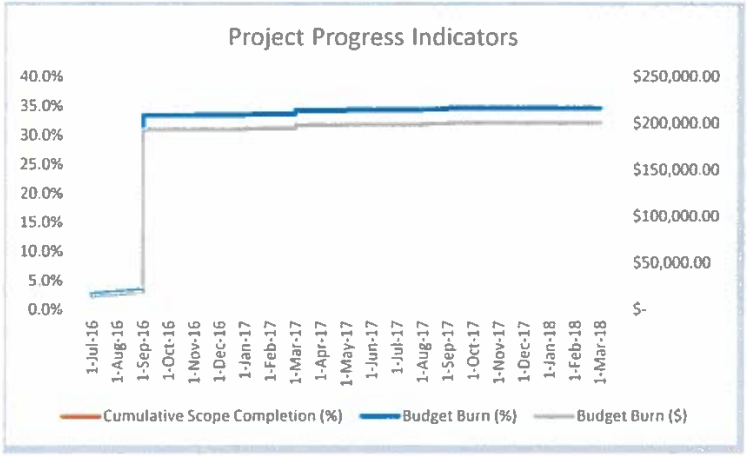
Burn Rate	This Quarter	Last Quarter	Incremental
Scope (%)			
Budget (%)			
Milestones Achieved			

Resources

1. Engineering
2. T&D Relay Shop
3. PSCC SCADA
4. Generation

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Project Progress Indicators



Project Schedule & Budget Performance Indicators

Project Milestone	Planned Completion Date	Actual Completion Date	Performance (Days Over/Under)	Color Performance Indicator	Performance
Construction	31-Dec-19				

Project Phase	Original Contract Budget	Current Budget	# Change Orders
	$ 580,000.00	$ 580,000.00	0

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

GENERATOR PROTECTION UPGRADE WITH FAULT RECORDERS
Quarterly Compliance Report
Jan - Mar 2018

	DESCRIPTION OF WORK	APPROVED BUDGET	LATEST ENG'G ESTIMATE	COMMITMENT TO DATE	ACTUAL EXPENDITURE	BALANCE OF APPR'D BUDGET	Remarks
	Design						
1	Engineering Design	$70,000.00	$10,000.00	$0.00	$0.00	$70,000.00	
	Total Design Cost	**$70,000.00**	**$10,000.00**	**$0.00**	**$0.00**	**$70,000.00**	
	Equipment/Materials						
2	SEL-700G1+ Relays	$89,000.00	$162,000.00	$78,384.00	$78,384.00	$10,616.00	22952 OP
3	Tesla 4003 Fault Recorders	$111,000.00	$103,000.00	$85,826.95	$85,826.95	$25,173.05	22950 OP 22951 OP
4	Materials	$50,000.00	$50,000.00	$36,896.81	$36,896.81	$13,103.19	22950 OP 23596 OP 23597 OP 22951 OP 23598 OP 23667 OP 22953 OP 23668 OP
	Total OFE Cost	**$250,000.00**	**$315,000.00**	**$201,107.76**	**$201,107.76**	**$48,892.24**	
	Construction Management						
5	Construction Engineering	$60,000.00	$55,000.00	$0.00	$0.00	$60,000.00	
6	On-site Construction Management	$50,000.00	$50,000.00	$0.00	$0.00	$50,000.00	
	Total CM Cost	**$110,000.00**	**$105,000.00**	**$0.00**	**$0.00**	**$110,000.00**	
	Construction						
7	T&D Field Work	$150,000.00	$150,000.00	$0.00	$0.00	$150,000.00	
	Total Construction Cost	**$150,000.00**	**$150,000.00**	**$0.00**	**$0.00**	**$150,000.00**	
	SUMMARY						
26	**TOTAL DESIGN**	**$70,000.00**	**$10,000.00**	**$0.00**	**$0.00**	**$70,000.00**	
27	**TOTAL EQUIPMENT/MATERIALS**	**$250,000.00**	**$315,000.00**	**$201,107.76**	**$201,107.76**	**$48,892.24**	
28	**TOTAL CONSTRUCTION MGMT**	**$110,000.00**	**$105,000.00**	**$0.00**	**$0.00**	**$110,000.00**	
29	**TOTAL CONSTRUCTION**	**$150,000.00**	**$150,000.00**	**$0.00**	**$0.00**	**$150,000.00**	
30	**TOTAL PROJECT COST**	**$580,000.00**	**$580,000.00**	**$201,107.76**	**$201,107.76**	**$378,892.24**	

Piti 115kV GIS Major Maintenance J.O. 100256

JLQ

Overall Status	G

Burn Rate	This Quarter	Last Quarter	Incremental
Scope (%)			
Budget (%)			
Milestones Achieved			

Resources

1. Engineering
2. Procurement
3. Management
4. Budget
5. Contractor

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Updates & Accomplishments for the Quarter

1. Engineering prepared memo requesting for additional budget funding for CCU and PUC approval 1/12/18. – Approved.
2. With the approval of additional funding, the Bid Committee submitted the evaluation of price proposal – Step Two. Recommending to award the GIS major maintenance work to AYM International 3/21/18.
3. New budget totaling $2,637,300 is being cleared at Budget section 3/21/18.

Resource	Upcoming Tasks / Open Items	ECD
1. Eng, Budgt, Mgmnt, & Prcmnt	1. Budget clearance for the CCU-approved and PUC-approved Additional Funding Request.	5/30/18
2. Prcmnt	2. Notification of successful bidder. Award and Issuance of NTP.	6/30/18
3. Eng & Contractor	3. Construction commence.	6/30/18
4. Eng & Contractor	4. Project Completion (12 Months).	4/30/19

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE
1. Bid submittal over budget. 2. Substation outage scheduling.			

Legend:

- No corrective action required
- Near-term corrective action required
- Requires immediate attention

1/8/2018

1

Piti 115kV GIS Major Maintenance J.O. 100256

JLQ

Overall Status	G

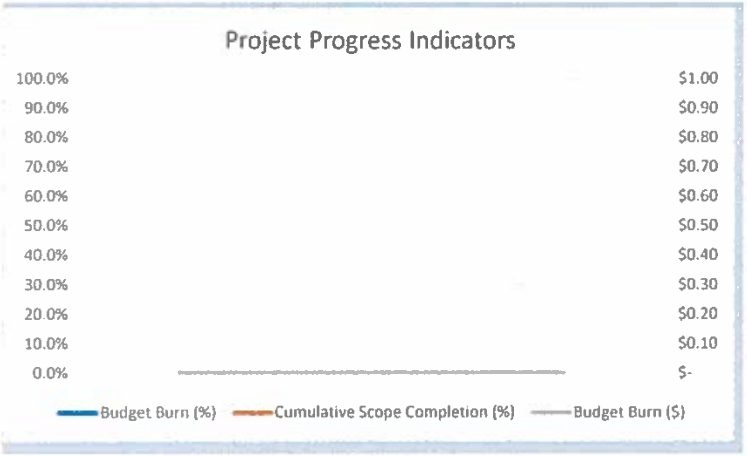
Burn Rate	This Quarter	Last Quarter	Incremental
Scope (%)			
Budget (%)			
Milestones Achieved			

Resources

1. Engineering
2. Procurement
3. Management
4. Budget
5. Contractor

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Project Progress Indicators



Project Schedule & Budget Performance Indicators

Project Milestone	Planned Completion Date	Actual Completion Date	Performance (Days Over/Under)	Color Performance Indicator	Performance
Design	12-Dec-16	12-Dec-16			
Construction	30-Apr-19				

Project Phase	Original Contract Budget	Current Budget	# Change Orders
	$ 2,637,300.00	$ 2,637,300.00	0

Legend:

- No corrective action required
- Near-term corrective action required
- Requires immediate attention

PITI 115KV GIS MAJOR MAINTENANCE
Quarterly Compliance Report
January - March 2018

	DESCRIPTION OF WORK	APPROVED BUDGET	LATEST ENG'G ESTIMATE	COMMITMENT TO DATE	ACTUAL EXPENDITURE	BALANCE OF APPR'D BUDGET	Remarks
	Design						
1	In-house Design Development	$25,000.00	$25,000.00			$25,000.00	
2	Advertise/Bid/Award	$5,000.00	$5,000.00			$5,000.00	
	Total Design Cost	**$30,000.00**	**$30,000.00**	**$0.00**	**$0.00**	**$30,000.00**	
	Construction Management						
3	Construction Engineering	$20,000.00	$20,000.00			$20,000.00	
4	On-site Construction Management	$30,000.00	$30,000.00			$30,000.00	
5	T&D Field Work	$50,000.00	$50,000.00			$50,000.00	
	Total CM Cost	**$100,000.00**	**$100,000.00**	**$0.00**	**$0.00**	**$100,000.00**	
	Construction						
6	Mobilization/Demobilization	$436,800.00	$436,800.00			$436,800.00	
7	GIS Major Maintenance 115kV	$1,549,000.00	$1,549,000.00			$1,549,000.00	
8	GIS Spare Parts	$165,000.00	$165,000.00			$165,000.00	
9	SF6 Gas and Filling	$72,500.00	$72,500.00			$72,500.00	
10	Testing	$212,000.00	$212,000.00			$212,000.00	
11	GIS Training	$72,000.00	$72,000.00			$72,000.00	
	Total Construction Cost	**$2,507,300.00**	**$2,507,300.00**	**$0.00**	**$0.00**	**$2,507,300.00**	
	SUMMARY						
12	**TOTAL DESIGN**	**$30,000.00**	**$30,000.00**	**$0.00**	**$0.00**	**$30,000.00**	
13	**TOTAL CONSTRUCTION MGMT**	**$100,000.00**	**$100,000.00**	**$0.00**	**$0.00**	**$100,000.00**	
14	**TOTAL CONSTRUCTION**	**$2,507,300.00**	**$2,507,300.00**	**$0.00**	**$0.00**	**$2,507,300.00**	
15	**TOTAL PROJECT COST**	**$2,637,300.00**	**$2,637,300.00**	**$0.00**	**$0.00**	**$2,637,300.00**	

Substation Major Refurbishment J.O. 100257

NTG

Overall Status	G

Burn Rate	This Quarter	Last Quarter	Incremental
Scope (%)			
Budget (%)			
Milestones Achieved			

Resources

1. Engineering
2. Procurement
3. T&D Substation
4. Contractor

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Updates & Accomplishments for the Quarter

1. Coordination with T&D Substation for maintenance schedules for late April, 2018, which would later include the re-class of labor and equipment charges. The refurbish work may include radiator replacement and LTC maintenance and repair. (March 2018)
2. Coordination with Finance Division to clarify pending balances for requested reclassifications for completed transformer refurbishment projects. (January 2018)

Resource	Upcoming Tasks / Open Items	ECD
1. Eng / Finance	1. Submit follow-up request and reclass remaining charges for T700 refurbishment project. (Radiators)	02/20/18
2. Eng/T&D Substn	2. Coordinate with Engineering and T&D Substation on additional materials and equipment to be procured or reclassed for T75 refurbishment.	04/31/18
3. Eng/ Finance	3. Coordinate with Finance, Substation and Relay on the reclassification of charges to Refurbishment Work Order for the refurbishment of Barrigada Substation T75 transformer.	06/30/18
4. Eng / Finance	4. Coordinate final reclassification of charges associated with completed work with Finance and T&D (Substation and Relay) Divisions in preparation to close out job order.	07/31/18

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE
1. Bid submittal over budget. 2. Substation outage scheduling.			

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

Substation Major Refurbishment J.O. 100257

NTG

Overall Status	G

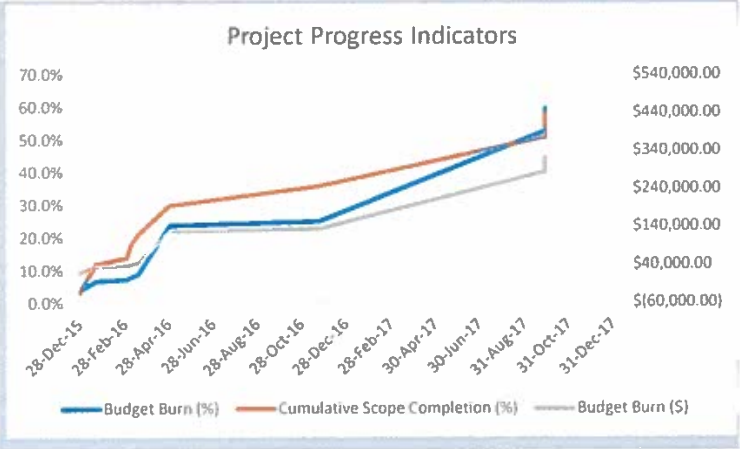
Burn Rate	This Quarter	Last Quarter	Incremental
Scope (%)			
Budget (%)			
Milestones Achieved			

Resources

1. Engineering
2. Procurement
3. T&D Substation
4. Contractor

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Project Progress Indicators



Project Schedule & Budget Performance Indicators

Project Milestone	Planned Completion Date	Actual Completion Date	Performance (Days Over/Under)	Color Performance Indicator	Performance
Construction	31-Dec-18				

Project Phase	Original Contract Budget	Current Budget	# Change Orders
	$ 540,000.00	$ 540,000.00	0

Legend:

- No corrective action required
- Near-term corrective action required
- Requires immediate attention

SUBSTATION MAJOR REFURBISHMENT
Quarterly Compliance Report
January - March 2018

	DESCRIPTION OF WORK	APPROVED BUDGET	LATEST ENG'G ESTIMATE	COMMITMENT TO DATE	ACTUAL EXPENDITURE	BALANCE OF APPR'D BUDGET	Remarks
	Transformer Equipment/Materials						
1	Transformer Radiator Fins Replacemen	$190,000.00	$190,000.00	$81,600.00	$81,600.00	$108,400.00	PO21195 T51 Radiator Reclass
2	Transformer Cooling Fans	$40,000.00	$40,000.00			$40,000.00	
3	Transformer Bushings	$40,000.00	$40,000.00	$36,305.88	$36,305.88	$3,694.12	PO21990/PO21991
4	Surge Arresters	$20,000.00	$20,000.00			$20,000.00	
5	Miscellaneous	$100,000.00	$100,000.00	$54,396.99	$54,396.99	$45,603.01	WO374722/OR27843/PO22686&22687/OR29208; OR29208/PO23035/WO422096/WO445486
	Total OFE Cost	**$390,000.00**	**$390,000.00**	**$172,302.87**	**$172,302.87**	**$217,697.13**	
	Construction Management						
6	Construction Engineering	$10,000.00	$10,000.00			$10,000.00	
7	On-site Construction Management	$5,000.00	$5,000.00			$5,000.00	
8	Other					$0.00	
	Total CM Cost	**$15,000.00**	**$15,000.00**	**$0.00**	**$0.00**	**$15,000.00**	
	Construction						
	BASIC						
9	T&D Field Work	$135,000.00	$135,000.00	$150,335.48	$150,335.48	($15,335.48)	WO370097/374722/353484/428435/422096/ 445486
	Total Construction Cost	**$135,000.00**	**$135,000.00**	**$150,335.48**	**$150,335.48**	**($15,335.48)**	
	SUMMARY						
10	**TOTAL EQUIPMENT/MATERIALS**	**$390,000.00**	**$390,000.00**	**$172,302.87**	**$172,302.87**	**$217,697.13**	
11	**TOTAL CONSTRUCTION MGMT**	**$15,000.00**	**$15,000.00**	**$0.00**	**$0.00**	**$15,000.00**	
12	**TOTAL CONSTRUCTION**	**$135,000.00**	**$135,000.00**	**$150,335.48**	**$150,335.48**	**($15,335.48)**	
13	**TOTAL PROJECT COST**	**$540,000.00**	**$540,000.00**	**$322,638.35**	**$322,638.35**	**$217,361.65**	

Agat Shoreline Restoration Project J.O. 100261

JUP

Overall Status	G

Burn Rate	This Quarter	Last Quarter	Incremental
Scope (%)			
Budget (%)			
Milestones Achieved			

Resources

1. Engineering

Risks & Issues	Schedule	Cost	Quality
G	G	G	G

Updates & Accomplishments for the Quarter

1. SHPO approved the AMDP on 1/15/2018
2. An electronic copy was requested by USCOE for review of the final AMDP on 1/18/2018
3. USCOE responded favorably and approved our permit to proceed with construction with specific conditions on March 19, 2018.
4. Engineering is looking over all the plans and documents prior to final submittal from TG Engineers March 30,2018

Resource	Upcoming Tasks / Open Items	ECD
1. Engineering	1. Completion of review for all documentation	4/25/18
2. Engineering	2. Final submittal and hard copies by TG Engineers	5/14/18
3. Engineering	3. Finalize bid package	6/15/18

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE
Construction permit delays Archaeological findings			

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

Agat Shoreline Restoration Project J.O. 100261

JUP

Overall Status	G

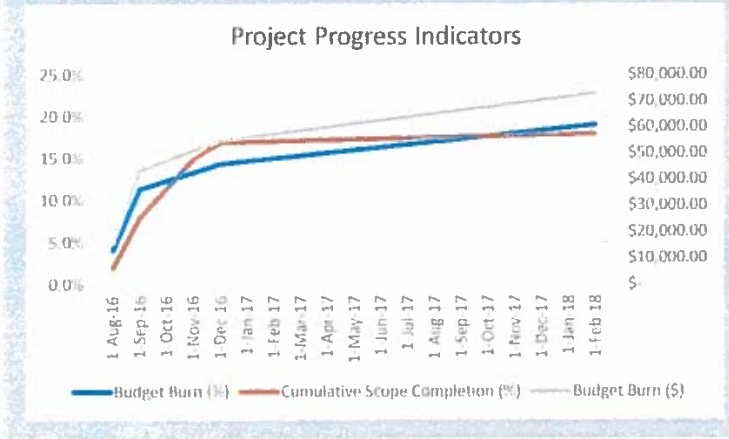
Burn Rate	This Quarter	Last Quarter	Incremental
Scope (%)			
Budget (%)			
Milestones Achieved			

Resources

1. Engineering

Risks & Issues	G	Schedule	G	Scope	G	Financial	G

Project Progress Indicators



Project Schedule & Budget Performance Indicators

Project Milestone	Planned Completion Date	Actual Completion Date	Performance (Days Over/Under)	Color Performance Indicator	Performance
Planned Start Design	1-Aug-15	22-Apr-16			
Planned Finished Design	30-Nov-17				
Planned Start Construction	1-Mar-18				

Project Phase	Original Contract Budget	Current Budget	# Change Orders
Phase I	$ 384,000.00	$ 384,000.00	0

Legend:

- No corrective action required
- Near-term corrective action required
- Requires immediate attention

4/11/2018

2

Agat Shoreline Restoration Project J.O. 100261

JUP

Overall Status	G

Burn Rate	This Quarter	Last Quarter	Incremental
Scope (%)			
Budget (%)			
Milestones Achieved			

Resources

1. Engineering

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Updates & Accomplishments for the Quarter

1. SHPO approved the AMDP on 1/15/2018
2. An electronic copy was requested by USCOE for review of the final AMDP on 1/18/2018
3. USCOE responded favorably and approved our permit to proceed with construction with specific conditions on March 19, 2018
4. Engineering is looking over all the plans and documents prior to final submittal from TG Engineers March 30,2018

Resource	Upcoming Tasks / Open Items	ECD
1. Engineering	1. Completion of review for all documentation	4/25/18
2. Engineering	2. Final submittal and hard copies by TG Engineers	5/14/18
3. Engineering	3. Finalize bid package	6/15/18

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE
Construction permit delays Archaeological findings			

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

4/11/2018

1

Agat Shoreline Restoration Project J.O. 100261

JUP

Overall Status	G

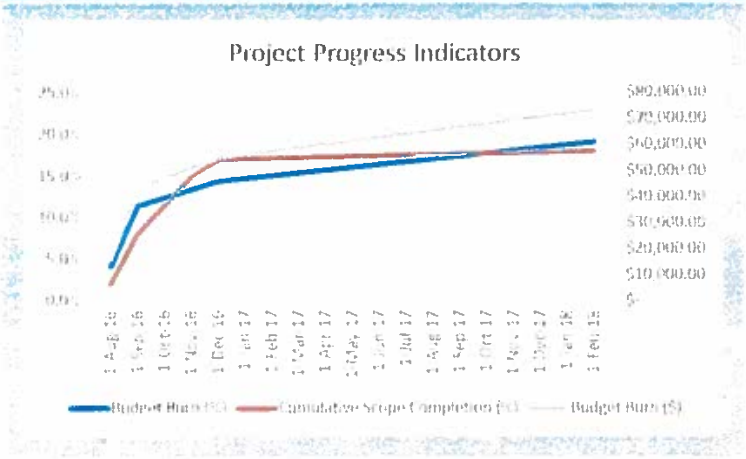
Burn Rate	This Quarter	Last Quarter	Incremental
Scope (%)			
Budget (%)			
Milestones Achieved			

Resources

1. Engineering

G	G	G	G

Project Progress Indicators



Project Schedule & Budget Performance Indicators

Project Milestone	Planned Completion Date	Actual Completion Date	Performance (Days Over/Under)	Color Performance Indicator	Performance
Planned Start Design	1-Aug-15	22-Apr-16			
Planned Finished Design	30-Nov-17				
Planned Start Construction	1-Mar-18				

Project Phase	Original Contract Budget	Current Budget	# Change Orders
Phase I	$ 384,000.00	$ 384,000.00	0

Legend:

- No corrective action required
- Near-term corrective action required
- Requires immediate attention

Agat Shoreline Pole Restoration Project
Quarterly Compliance Report
January - March 2018

	DESCRIPTION OF WORK	APPROVED BUDGET	LATEST ENG'G ESTIMATE	COMMITMNT TO DATE	ACTUAL EXPENDITURE	BALANCE OF APPR'D BUDGET	REMARKS (STATUS OF ACTIVITY)
	Design						
1	A/E Design	$15,000.00	$15,000.00	$82,596.87	$73,228.17	($58,228.17)	22885 OP (TG Engineers) Amended 10/10/17
	Total Design Cost	**$15,000.00**	**$15,000.00**	**$82,596.87**	**$73,228.17**	**($58,228.17)**	
	Owner-Furnished Equipment						
2		$0.00	$0.00	$0.00	$0.00	$0.00	
	Total OFE Cost	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	
	Construction Management						
3	On-site Construction Management	$2,000.00	$2,000.00	$0.00	$0.00	$2,000.00	
4	T&D Field Work	$3,000.00	$3,000.00	$0.00	$0.00	$3,000.00	
	Total CM Cost	**$5,000.00**	**$5,000.00**	**$0.00**	**$0.00**	**$5,000.00**	
	Construction						
5	Mobilization/Demobilization	$30,000.00	$30,000.00	$0.00	$0.00	$30,000.00	
6	Clearing/Grubbing	$30,000.00	$30,000.00	$0.00	$0.00	$30,000.00	
7	Concrete Caisson Foundation	$75,000.00	$75,000.00	$0.00	$0.00	$75,000.00	
8	Rock Wall Riprap	$179,000.00	$179,000.00	$0.00	$0.00	$179,000.00	
	Sub-Total (Bid Schedule A)	**$314,000.00**	**$314,000.00**	**$0.00**	**$0.00**	**$314,000.00**	
	Additive Bid Option						
9	Archaeological Survey	$50,000.00	$50,000.00	$0.00	$0.00	$50,000.00	
	Total Additive Bid Option	**$50,000.00**	**$50,000.00**	$0.00	$0.00	$50,000.00	
	Total Construction Cost	**$364,000.00**	**$364,000.00**	**$0.00**	**$0.00**	**$364,000.00**	
10	**TOTAL DESIGN**	**$15,000.00**	**$15,000.00**	**$82,596.87**	**$73,228.17**	**($58,228.17)**	
11	**TOTAL OFE**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	
12	**TOTAL CONSTRUCTION MGMT**	**$5,000.00**	**$5,000.00**	**$0.00**	**$0.00**	**$5,000.00**	
13	**TOTAL CONSTRUCTION**	**$364,000.00**	**$364,000.00**	**$0.00**	**$0.00**	**$364,000.00**	
14	**TOTAL PROJECT COST**	**$384,000.00**	**$384,000.00**	**$82,596.87**	**$73,228.17**	**$310,771.83**	

System Protection Improvement & Capacitor Bank Controllers JO#100262

ABS

Overall Status	G

Burn Rate	This Quarter	Last Quarter	Incremental
Scope (%)			
Budget (%)			
Milestones Achieved			

Resources

1. Engg
2. T&D
3. SPORD

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Updates & Accomplishments for the Quarter

1. In the process of completing and finalizing the technical specifications and cost estimate of implementing SEL ICON for network communications.
2. Specified the technical specification of the system protection upgrade relays to be implemented under Renewable Project - Phase II.

Resource	Upcoming Tasks / Open Items	ECD
1. Engg, T&D, SPORD	1. Installation of SEL ICON for network communications.	1/31/2019

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE
1. Installation scheduling 2. Outage scheduling 3. Time of completion of Fiber to Fadian Project		1.	1.

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

System Protection Improvement & Capacitor Bank Controllers JO#100262

ABS

Overall Status	G

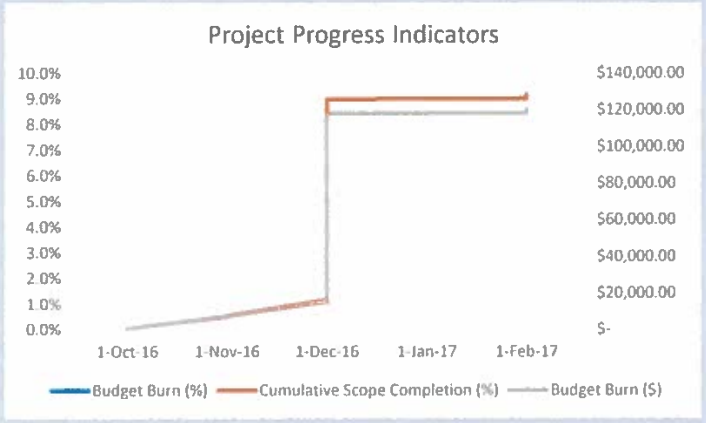
Burn Rate	This Quarter	Last Quarter	Incremental
Scope (%)			
Budget (%)			
Milestones Achieved			

Resources

1. Engg
2. T&D
3. SPORD

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Project Progress Indicators



Project Schedule & Budget Performance Indicators

Project Milestone	Planned Completion Date	Actual Completion Date	Performance (Days Over/Under)	Color Performance Indicator	Performance
Construction	31-Dec-19				

Project Phase	Original Contract Budget	Current Budget	# Change Orders
	$ 1,312,000.00	$ 1,312,000.00	0

Legend:

- No corrective action required
- Near-term corrective action required
- Requires immediate attention

SYSTEM PROTECTION IMPROVEMENT AND CAPACITOR BANK CONTROLLERS
Quarterly Compliance Report
January - March 2018

	DESCRIPTION OF WORK	APPROVED BUDGET	LATEST ENG'G ESTIMATE	COMMITMENT TO DATE	ACTUAL EXPENDITURE	BALANCE OF APPR'D BUDGET	Remarks
	Design						
1	Engineering Design	$85,000.00	$85,000.00	$0.00	$0.00	$85,000.00	
	Total Design Cost	**$85,000.00**	**$85,000.00**	**$0.00**	**$0.00**	**$85,000.00**	
	Equipment/Materials						
2	SEL-311A	$321,000.00	$0.00	$0.00	$0.00	$321,000.00	
3	SEL-311C	$75,000.00	$396,000.00	$76,934.00	$76,934.00	($1,934.00)	23244
4	SEL-421	$30,000.00	$30,000.00	$26,139.00	$26,139.00	$3,861.00	23244
5	SEL-487V	$30,000.00	$30,000.00	$0.00	$0.00	$30,000.00	
5	SEL-2032	$10,000.00	$10,000.00	$0.00	$0.00	$10,000.00	
6	Terminal Blocks, 12 Pt	$5,000.00	$5,000.00	$1,339.00	$1,339.00	$3,661.00	23305
7	Terminal Blocks, 6 Pt	$3,000.00	$3,000.00	$645.50	$645.50	$2,354.50	23305
8	Test Switches	$0.00	$10,000.00	$8,031.50	$8,031.50	($8,031.50)	23306
9	Wires 4C #10	$20,000.00	$20,000.00	$1,812.00	$1,812.00	$18,188.00	23144
10	Wires #10	$30,000.00	$30,000.00	$720.00	$720.00	$29,280.00	23144
11	Wires #12	$10,000.00	$10,000.00	$4,335.00	$4,335.00	$5,665.00	23143/23144
12	Fuses	$11,000.00	$11,000.00	$645.10	$645.10	$10,354.90	23144
13	Communication Cables	$50,000.00	$40,000.00	$0.00	$0.00	$50,000.00	
14	Miscellaneous Materials	$5,000.00	$5,000.00	$0.00	$0.00	$5,000.00	
	Total OFE Cost	**$600,000.00**	**$600,000.00**	**$120,601.10**	**$120,601.10**	**$479,398.90**	
	Construction Management						
5	Construction Engineering	$120,000.00	$120,000.00	$0.00	$0.00	$120,000.00	
6	On-site Construction Management	$75,000.00	$75,000.00	$0.00	$0.00	$75,000.00	
	Total CM Cost	**$195,000.00**	**$195,000.00**	**$0.00**	**$0.00**	**$195,000.00**	
	Construction						
7	T&D Field Work	$432,000.00	$432,000.00	$0.00	$0.00	$432,000.00	
	Total Construction Cost	**$432,000.00**	**$432,000.00**	**$0.00**	**$0.00**	**$432,000.00**	
	SUMMARY						
26	**TOTAL DESIGN**	**$85,000.00**	**$85,000.00**	**$0.00**	**$0.00**	**$85,000.00**	
27	**TOTAL EQUIPMENT/MATERIALS**	**$600,000.00**	**$600,000.00**	**$120,601.10**	**$120,601.10**	**$479,398.90**	
28	**TOTAL CONSTRUCTION MGMT**	**$195,000.00**	**$195,000.00**	**$0.00**	**$0.00**	**$195,000.00**	
29	**TOTAL CONSTRUCTION**	**$432,000.00**	**$432,000.00**	**$0.00**	**$0.00**	**$432,000.00**	
30	**TOTAL PROJECT COST**	**$1,312,000.00**	**$1,312,000.00**	**$120,601.10**	**$120,601.10**	**$1,191,398.90**	

Dededo Substation Capacitor Bank JO#100263

JDB

Overall Status	G

Burn Rate	This Quarter	Last Quarter	Incremental
Scope (%)			
Budget (%)			
Milestones Achieved			

Resources

1. Engineering
2. Procurement
3. T & D
4. Contractor

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Updates & Accomplishments for the Quarter

1. Preparing AutoCAD Drawing
2. Revising the Specification
3. Preparing the Bid Documents

Resource	Upcoming Tasks / Open Items	ECD
1. Engineering/ Procurement 2. Engineering	1. Create requisition for construction and supply 2. Construction	4/19/18 09/01/18

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE
1. Over budget 2. Construction Permit			

Legend:

- No corrective action required
- Near-term corrective action required
- Requires immediate attention

Dededo Substation Capacitor Bank JO#100263

JDB

Overall Status	G

Burn Rate	This Quarter	Last Quarter	Incremental
Scope (%)			
Budget (%)			
Milestones Achieved			

Resources

1. Engineering

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Project Progress Indicators



Project Schedule & Budget Performance Indicators

Project Milestone	Planned Completion Date	Actual Completion Date	Performance (Days Over/Under)	Color Performance Indicator	Performance
Design	15-Nov-17				
Construction	31-Dec-18				

Project Phase	Original Contract Budget	Current Budget	# Change Orders
Phase I	$ 165,000.00	$ 165,000.00	0

Legend:

- No corrective action required
- Near-term corrective action required
- Requires immediate attention

DEDEDO SUBSTATION CAPACITOR BANK
Quarterly Compliance Report
January - March 2018

	DESCRIPTION OF WORK	APPROVED BUDGET	LATEST ENG'G ESTIMATE	COMMITMENT TO DATE	ACTUAL EXPENDITURE	BALANCE OF APPR'D BUDGET	Remarks
	Design						
1	Engineering Design	$6,000.00	$6,000.00	$0.00	$0.00	$6,000.00	
	Total Design Cost	**$6,000.00**	**$6,000.00**	**$0.00**	**$0.00**	**$6,000.00**	
	Equipment/Materials						
2	Substation Capacitor Bank	$118,000.00	$118,000.00	$0.00	$0.00	$118,000.00	
	Total OFE Cost	**$118,000.00**	**$118,000.00**	**$0.00**	**$0.00**	**$118,000.00**	
	Construction Management						
3	Construction Engineering	$2,000.00	$2,000.00	$0.00	$0.00	$2,000.00	
4	On-site Construction Management	$2,000.00	$2,000.00				
5	T&D Labor	$7,000.00	$7,000.00	$0.00	$0.00	$7,000.00	
	Total CM Cost	**$11,000.00**	**$11,000.00**	**$0.00**	**$0.00**	**$9,000.00**	
	Construction						
6	Mobilization and Demobilization	$7,000.00	$7,000.00	$0.00	$0.00	$7,000.00	
7	Capacitor Bank Concrete Pad	$15,000.00	$15,000.00	$0.00	$0.00	$15,000.00	
8	Control Wiring	$3,000.00	$3,000.00	$0.00	$0.00	$3,000.00	
9	Miscellaneous Materials	$5,000.00	$5,000.00	$0.00	$0.00	$5,000.00	
	Total Construction Cost	**$30,000.00**	**$30,000.00**	**$0.00**	**$0.00**	**$30,000.00**	
	SUMMARY						
26	**TOTAL DESIGN**	**$6,000.00**	**$6,000.00**	**$0.00**	**$0.00**	**$6,000.00**	
27	**TOTAL EQUIPMENT/MATERIALS**	**$118,000.00**	**$118,000.00**	**$0.00**	**$0.00**	**$118,000.00**	
28	**TOTAL CONSTRUCTION MGMT**	**$11,000.00**	**$11,000.00**	**$0.00**	**$0.00**	**$11,000.00**	
29	**TOTAL CONSTRUCTION**	**$30,000.00**	**$30,000.00**	**$0.00**	**$0.00**	**$30,000.00**	
30	**TOTAL PROJECT COST**	**$165,000.00**	**$165,000.00**	**$0.00**	**$0.00**	**$165,000.00**	

Network Communications – Fiber to Fadian Complex JO#100268

ABS

Overall Status	G

Burn Rate	This Quarter	Last Quarter	Incremental
Scope (%)			
Budget (%)			
Milestones Achieved			

Resources

1. Engg
2. PSCC
3. IT
4. SPORD

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Updates & Accomplishments for the Quarter

1. Completed technical and price proposal evaluation of Multi-Step Bid No. GPA-094-17 Fiber to Fadian Project Design and Construction on November 24, 2017 and December 27, 2017 respectively.

Resource	Upcoming Tasks / Open Items	ECD
1. Engg, PSCC, IT, SPORD	1. Contract approval, award and issuance of NTP.	TBD

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE
1. Construction permit delay		1.	1.

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

Network Communications – Fiber to Fadian Complex JO#100268

ABS

Overall Status	G

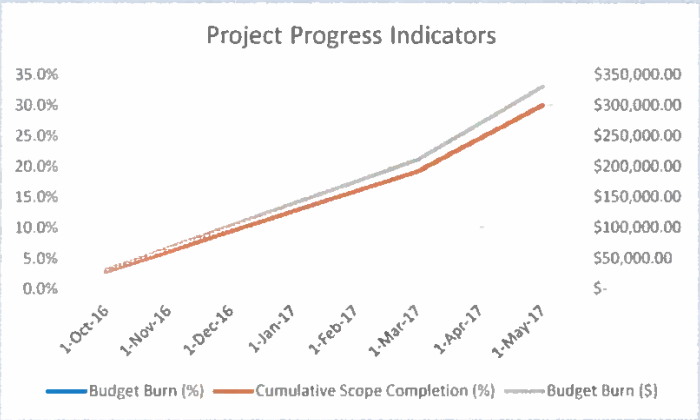
Burn Rate	This Quarter	Last Quarter	Incremental
Scope (%)			
Budget (%)			
Milestones Achieved			

Resources

1. Engg
2. PSCC
3. IT
4. SPORD

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Project Progress Indicators



Project Schedule & Budget Performance Indicators

Project Milestone	Planned Completion Date	Actual Completion Date	Performance (Days Over/Under)	Color Performance Indicator	Performance
Phase 1/2	15-May-17	3-May-17			
Phase 2/2 Construction	29-Jun-19				

Project Phase	Original Contract Budget	Current Budget	# Change Orders
Phase I and II	$ 1,100,000.00	$ 1,100,000.00	0

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

NETWORK COMMUNICATIONS - FIBER TO FADIAN COMPLEX
Quarterly Compliance Report
January - March 2018

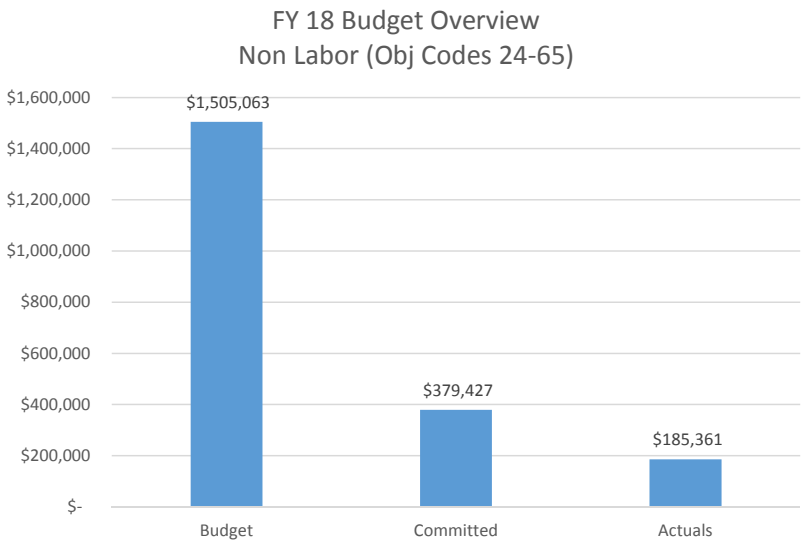
	DESCRIPTION OF WORK	APPROVED BUDGET	LATEST ENG'G ESTIMATE	COMMITMENT TO DATE	ACTUAL EXPENDITURE	BALANCE OF APPR'D BUDGET	Remarks
	Design						
1	Engineering Design	$75,000.00	$75,000.00	$0.00	$0.00	$75,000.00	
	Total Design Cost	**$75,000.00**	**$75,000.00**	**$0.00**	**$0.00**	**$75,000.00**	
	Construction Management						
2	Construction Engineering	$20,000.00	$20,000.00	$0.00	$0.00	$20,000.00	
3	On-site Construction Management	$15,000.00	$15,000.00	$10,914.72	$10,914.72	$4,085.28	
	Total CM Cost	**$35,000.00**	**$35,000.00**	**$10,914.72**	**$10,914.72**	**$24,085.28**	WO 445867
	Construction						
4	**Mobilization and Demobilization**	$100,000.00	$100,000.00	$12,350.00	$12,350.00	$87,650.00	PO 22935
5	**Permits**	$50,000.00	$50,000.00	$12,350.00	$12,350.00	$37,650.00	PO 22935
6	**Pagat to Fadian Fiber**	$150,000.00	$150,000.00	$0.00	$0.00	$150,000.00	
7	**Latte Heights to Route 1 Fiber**	$50,000.00	$50,000.00	$0.00	$0.00	$50,000.00	
8	**Macheche to Dededo Fiber**	$110,000.00	$110,000.00	$0.00	$0.00	$110,000.00	
9	**GWA (Tumon) to Route 1 Fiber**	$50,000.00	$50,000.00	$0.00	$0.00	$50,000.00	
10	**Talofofo to Dandan Fiber**	$160,000.00	$160,000.00	$285,624.63	$285,624.63	($125,624.63)	PO 22935
11	**Miscellaneous Materials**	$270,000.00	$270,000.00	$11,142.17	$11,142.17	$258,857.83	
12	**Testing**	$50,000.00	$50,000.00	$9,178.52	$9,178.52	$40,821.48	
	Total Construction Cost	**$990,000.00**	**$990,000.00**	**$330,645.32**	**$330,645.32**	**$659,354.68**	
	SUMMARY						
26	**TOTAL DESIGN**	**$75,000.00**	**$75,000.00**	**$0.00**	**$0.00**	**$75,000.00**	
28	**TOTAL CONSTRUCTION MGMT**	**$35,000.00**	**$35,000.00**	**$10,914.72**	**$10,914.72**	**$24,085.28**	
29	**TOTAL CONSTRUCTION**	**$990,000.00**	**$990,000.00**	**$330,645.32**	**$330,645.32**	**$659,354.68**	
30	**TOTAL PROJECT COST**	**$1,100,000.00**	**$1,100,000.00**	**$341,560.04**	**$341,560.04**	**$758,439.96**	

SPORD CCU Report

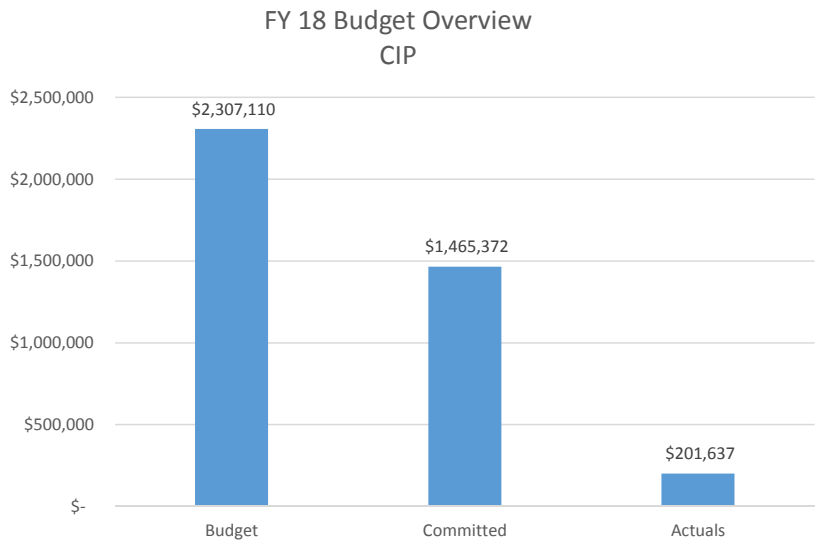
March 2018

SPORD FY 2018 Budget Status

- SPORD O&M:



- CIP



2

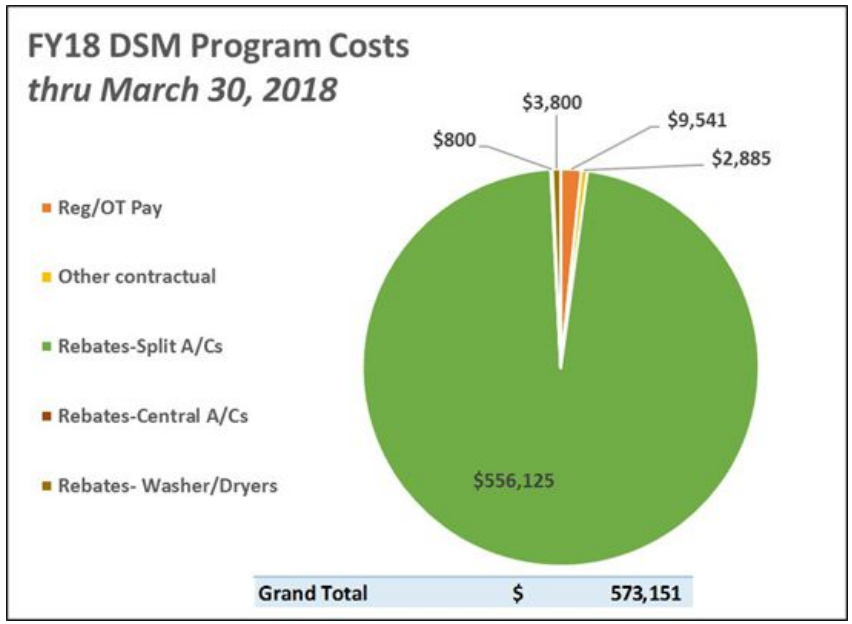
SPORD FY 2018 Budget Status

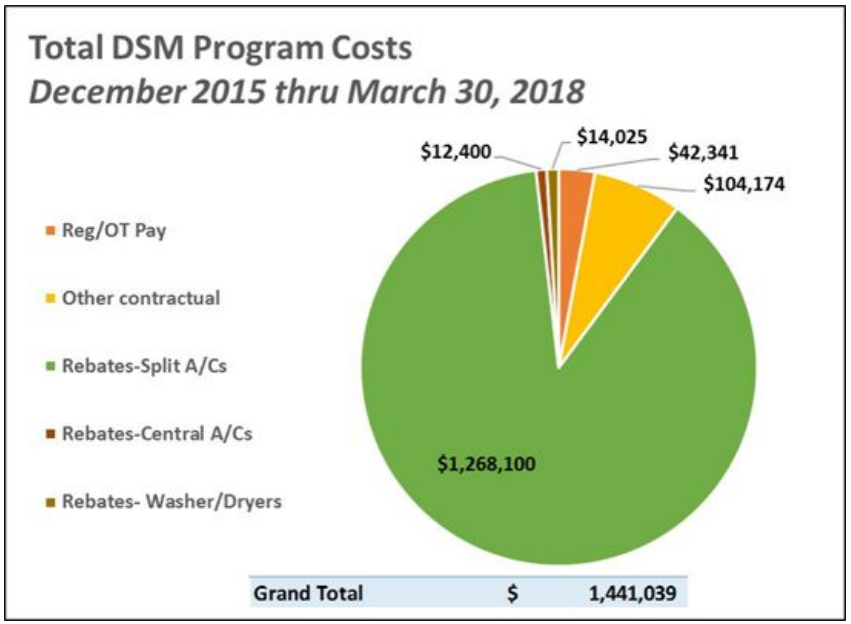
- Major Contracts (Non-O&M) thru March 2018

	Annual Contract Amount	Actuals	Balance
Aggreko Contract	$ 10,983,096	$ 4,825,732	$ 6,157,364
Fuel Contracts	$ 200,124,429	$ 96,205,313	$ 103,919,116
MEC IPP (Piti 8&9)	$ 31,909,347	$ 15,834,882	$ 16,074,465
NRG Contract (Renewable)	$ 10,170,682	$ 4,689,457	$ 5,481,225

SPORD FY 2018 Budget Status

- DSM Expenses





4

Ongoing Activities

- Contract Performance Management (IPP, PMC, Agrekko)
- Generation Fuel Supply & Fuel Farm Management
- DSM Rebate Processing
- Renewables (Wind Turbine Maint & DOAg MOA, NRG Invoicing)
- Smart Grid/Network Support
- Project Management
  - Procurement
  - *March Project Activities*

PROCUREMENT ACTIVITIES

PENDING AWARD / NTP

Responsible	PROJECT	Description	CCU Date Approved (Resolution No.)	PUC Date Approved (Docket No.)	Projected Start*	Projected Completion	Status
SPORD (FJI)	RENEWABLES	Phase II - KEPCO/LG CNS	1/23/18 (2018-01)	(18-06)	4/30/2021	4/24/2046	Pending contract signature & ntp scheduled for May 10, 2018
SPORD (FJI)	RENEWABLES	Phase II - KEPCO/LG CNS	2/27/18 (2018-04)	PENDING	10/1/2020	9/25/2045	Final start dates pending. Also pending contract signing date ~ mid May 2018

ONGOING PROCUREMENT

Responsible	PROJECT	Description	Bid or RFP	Bid/RFP No	Announced	Bid Opening / Due	Notes
SPORD (RAC)	SCADA	SCADA Workstations	Bid	GPA-049-18	2/13/2018	3/14/2018	Award Recommendation memo for approval submitted 3/27/2018. Delivery May 2018
SPORD (FJI)	NEW POWER PLANT	Geotechnical Services	RFP	Resolicitation GPA-RFP-18-002	(2/6/2018) 3/20/18	4/20/2018	Bid resolicited due to no proposals received in original solicitation.
SPORD (RAC)	SMART GRID	MV90 Integration Services	RFP	GPA-RFP-18-001	1/30/2018	3/6/2018	(Evaluation Completed - Approval Memo for award submitted - 3/30/2018)
SPORD (RAC)	PLANNING	Milsoft Systems Software Services	RFP	GPA-RFP-18-003	2/1/2018	3/7/2018	(Evaluation Completed - Approval Memo for award submitted - 3/28/2018)
SPORD (ANF)	FUEL	Petroleum Inspection Services	MS Bid	GPA-014-18	1/30/2018	5/2/2018	Step 2 - Price bid
SPORD (FJI)	NEW POWER PLANT	Build, Operate & Transfer Contract for 120-180MW of New Generation Capacity. **(PHASE I - REQUEST FOR QUALIFICATIONS)**	MS Bid	GPA-034-18	1/16/2018	4/5/2018	Step I - Closing of Qualifications. (18 proposals recevied on 4/5/18)

ONGOING PROCUREMENT (continued)

SPORD (ANF)	FUEL	Supply of Residual Fuel Oil No. 6	MS Bid	GPA-009-18	11/16/2017	4/13/2018	04/04/2018- Finance revised insurance requirements. Phase I- Closing of Technical Proposal to be extended.
SPORD (ANF)	FUEL	Supply of Diesel Fuel Oil No. 2	MS Bid	GPA-008-18	11/16/2017	4/20/2018	Bid specs changed to include delivery-awaiting final review by Fuel Committee and Legal. Phase I- Closing of Technical Proposal to be extended.
SPORD (JTL)	RENEWABLES	Renewable Energy Resource Phase III	MS Bid	GPA-007-18	11/16/2017	4/17/2018	Step I - Closing of Technical Proposal
SPORD (RAC)	SMART GRID	Mobile Workforce Management System (MWMS) **RE-BID**	MS Bid	GPA-023-17	10/5/2017	3/20/2018	(Evaluation Completed - Approval Memo for award submitted - 3/21/2018)
ENGINEERING	FUEL	GPA Tank Farm RFO Pipeline Upgrade - Design / Build	Bid	GPA-047-18	2/8/2018	9/30/2018	To repair existing RFO lines at the Bulk Fuel Farm

DEVELOPING PROCUREMENT

Responsible	PROJECT	Description	Bid or RFP	CCU Meeting	Projected Start	Projected Completion	Status
SPORD (MAT)	IPP Contract	Piti #8&9 IPP Contract	MS Bid				PENDING. Extension of current ECA aproved by CCU and will be filed to PUC for approval; bid document preparation for a new contract (after extension period or in case Extension is disapproved) in-progress.
SPORD (FJI)	NEW POWER PLANT	Build, Operate & Transfer Contract for 120-180MW of New Generation Capacity. **(PHASE II - TECHNICAL SPECIFICATIONS)**	MS Bid				Pending final bid documents.
ENGINEERING	FUEL	GPA Tank Farm DFO Pipeline Upgrade - Design / Build	Bid		2/8/2018	11/30/2018	Preparation of bid specs in progress. To install new diesel line from Navy Tie-in to the Bulk Fuel Tanks and replace diesel line to TEMES CT
ENGINEERING	FUEL	Tank 1935 API 653 Internal Inspection	Bid		5/1/2018	5/31/2019	Preparation of bid specs in progress. Budgetted for FY 2018.
SPORD (RAC)	ELECTRIC VEHICLE	Electric Vehicle Charging Stations	Bid		May-18	Sep-18	
SPORD (RAC)	SMARTWORK SYSTEMS	Smartworks Systems Software Services	RFP		Jun-18	Continous	

Project Activities

No.	Project Description	March 2018 Activities	Status / Est. Completion	RFP/Bid No
1	Energy Storage System (Phase I)	Revised 100% design drawings to be submitted early April. Clearing and grading permit work commenced in November 2017. Foundation permit work commenced in January 2018. Construction is 26% completed.	September 2018	MS Bid GPA-082-15
2	Renewable Energy Resource Phase II	PUC ratifies KEPCO contract (Docket 18-06) and approves HANWHA contract (Docket 18-08) on March 29, 2018.	KEPCO PV plant COD is APR 2021. Hanwha's COD is anticipated for 1st qtr of 2020.	MS Bid GPA-070-16
3	New Power Plant Bid (EPCM)	Request for Qualification announced on January 16, 2018. Proposals deadline extended to April 5, 2018 due to questions and clarificaitons. Technical specifications are being reviewed and updated based on public hearings and technology neutral requirements.	Jan 2018 (Issue RFP Step 1 Solicitation) Apr 2018 (	MS GPA-034-18
4	DSM Marketing	Supported the 2018UOG Sustainability Conference at the Hyatt.	Continuous	
5	DSM Rebate Program	Processed over 540 equipment in applications for rebates totaling ~ $117K	Continuous	
6	Wireless Network Expansion	Commenced Southern Expansion in collaboration with GWA: 30% Assessment of GWA Well Locations: Completed Assessment of Existing Tropos Units: 100% Router Equiqment and Accessories purchase	Dec-18 Completed Completed Arrival - April 30th	 GPA-019-18
7	Performance Metrics Automation Project	Presentation on iDashboard provided to GM. GPA contiues to work with consultant on automating reports and formating.	Mar-18	
8	Electric Grid Analysis Software	Additional training for users Training on Planning and Analysis Cases	Completed Jun-18	GPA-064-16
9	Services to Develop Business Performance Indices using iDashboards	Dashboard builds 95%	Ongoing	GPA-RFP-16-008
10	Supervisory Control and Data Acquisition (SCADA) System	Change Order Approved for October 2018 Completion and hardware costs Equipment on Order Factory Acceptance Test	Oct 2018 (SCADA COD) May 2018 (Factory Acceptance Test)	GPA-066-16

Project Activities

No.	Project Description	March 2018 Activities	Status / Est. Completion
11	Mobile Workforce Management System	Bid Evaluation Completed, Clevest recommendation memo submitted for approval March 21, 2018	May 2018 (Bid Award)
12	Consulting Services for Smart Grid Analytics Enabled Distribution System Planning, Technical, and Economic Feasibility Studies	RFP evaluation completed for sole bidder. Bidder did not qualifiy. Committee recommendation to rebid. Sole-bidder Acknowledgement.	April 30, 2018 (Rebid)
13	TEMES Piti # 7 ECA Expiration & Transition to GPA	Transition completed. Environmental Assessment Report completed. Condition Assessment Report completed by LEIDOS, under GPA review.	[Completed] [Completed] [Completed, under review]
14	MEC Piti &8 and #9 - ECA Expiration	Environmental Assessment Report completed. Condition Assessment due 2nd week of April. Data Compilation in progress.	[Completed] April 2018 December 2018
15	Planning Software Administration/Maintenance	Upcoming tasks: Configuration and management of database, training for - Call-off Consulting for CapEx configuration, CapEx and PO runs for IRP - Configuration and management of DB; Training for SPORD and PSCC	Start Date: Oct 2017 Completion Date: Sept 2018
16	Generation Software (GADS open software)	Pending data entry from Generation & SPORD.	[On-going work]
17	IFB for ULSD Supply for Baseloads and Peaking Units	Solicitation in progress. Bid package revised to include delivery requirements.	Start Date: Nov 2017 Est. completion: FY2018
18	Contract for Lease of Bulk ULSD Storage	196KB tank repairs completed	27-Feb-18
19	EV Infrastructure	Developing fast charge station scope for Mangilao offices.	Sept 2018
20	Consulting Support, new procurements for Piti 7,8,9	Piti 7 - Management Contract (under Generation) awarded. No IPP bid. Piti 8&9 - Bid documents in progress, awaiting decision on Extension of ECA. If extended - will revise bid scope accordingly; if extension disapproved, will proceed with filing for approval of Bid.	[Commenced] Bid documents completion: March 2018 Bid Process Start Date: 2nd quarter of 2018 upon CCU/PUC approval

Project Activities

No.	Project Description	March 2018 Activities	Status / Est. Completion
21	Fuel Conversion Plan	Discussions on-going.	Start: October 2017 Completion: June 2018
22	Fuel Bulk Storage Facility Assessment	Draft report submitted, under GPA review.	Start: Sept 2017 End: January 2018
23	Design and Engineering Consulting for Remote Start of GPA Plants	c/o Engineering Project Mgt	August 2018
24	Renewable Energy Resource Phase III	Completed pre-bid conference and site visits January 23-24 2018.	(Mar 2018) Tech Proposal Due
25	Utility Energy Services Contract (UESC)	Kicked off discussions with UOG, Guam Energy Office, Dept. of Navy, and GPA team on project development and opportunities. Discusssed DSM Model House. UOG Campus Assessment, Discussion on Solar Rooftop on DOE campuses.	
26	IFB for Delivery Services for GPA Plants	Bid canceled. Requirements to be included in the ULSD Supply solicitation	IFB Canceled Feb 2018
27	IFB for RFO Supply to Baseload Plants	Solicitation in progress	Start: November 2017 Est. Completion: FY2018 Contract Start: Sep 1, 2018
28	IFB for Petroleum Inspection Services	Re-Solicitation in progress	Start: November 2017 Est. Completion: FY2018 Contract Start: Jun 01, 2018
29	RFO Storage Lease Agreement w/ Tristar	4-Year Lease extension approved by CCU. For PUC review and approval	Start: November 2017 Est. Completion: Mar 2018 Contract Start: Aug 1, 2018
30	GPA Fuel Farm RFO Pipeline Repair & Upgrade	c/o Engineering Project Mgt	Solicitation in progress
31	GPA Fuel Farm ULSD Pipeline Upgrade	c/o Engineering Project Mgt	Bid Specs Preparation in progress

Project Activities

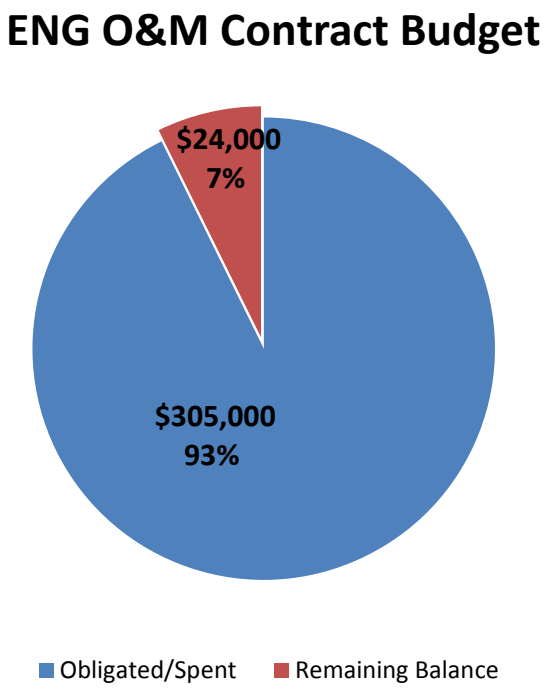
No.	Project Description	March 2018 Activities	Status / Est. Completion
32	Tk 1934 & Tk1935 API 653 Internal Inspection	c/o Engineering Project Mgt	Bid Specs Preparation in progress
33	Milsoft Systems Software Services	Award Recommendation memo (Milsoft - Vendor) for approval submitted 3/28/2018	Continuous
34	MV90 Integration Services	Award Recommendation memo (Itron - Vendor) for approval submitted 3/30/2018	Dec-18
35	SCADA Workstations and Monitors	Award Recommendation memo for approval submitted 3/27/2018	May 2018 (Delivery)
36	Grant Proposal Development and Proposal Application Management Services	Solicitation process complete. Contract signed Feb. 20, 2018. Project activities commences following month	Feb 2018 (Contract signed)
37	Pipeline Lease Agreement w/ Tristar	4-Year Lease extension approved by CCU. For PUC did not approve and requested for clarification on Index referenced. (Docket 18-10)	Start: November 2017 Est. Completion: Mar 2018 Contract Start: Aug 1, 2018
38	Dock Use Agreement w/ Tristar	4-Year Extension approved by CCU. PUC approved on March 29, 2018 (Docket 18-10)	Start: November 2017 Est. Completion: Mar 2018 Contract Start: Aug 1, 2018

ENG Budget Execution Performance

March 31, 2018

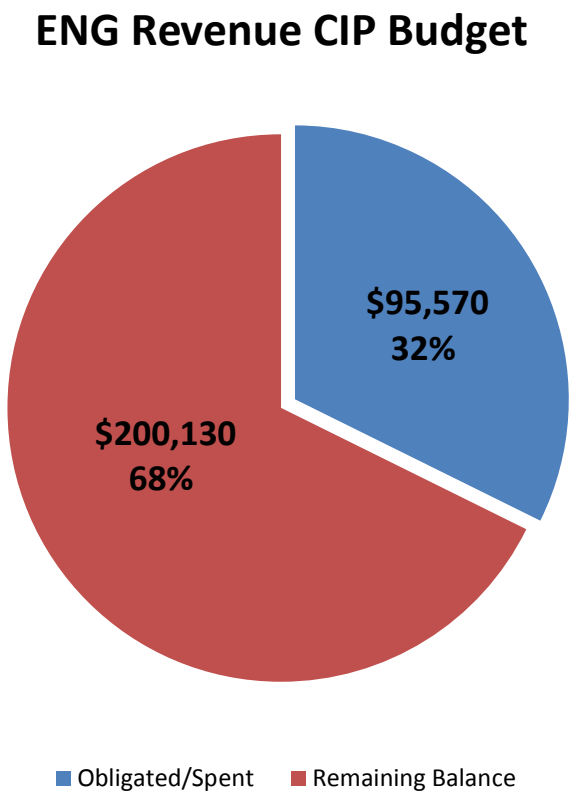
ENG Revenue CIP Budget

- Revenue Funded
- Target
  - 50% CIP Obligation by June 1, 2018
  - 100% CIP Spend by September 30, 2018



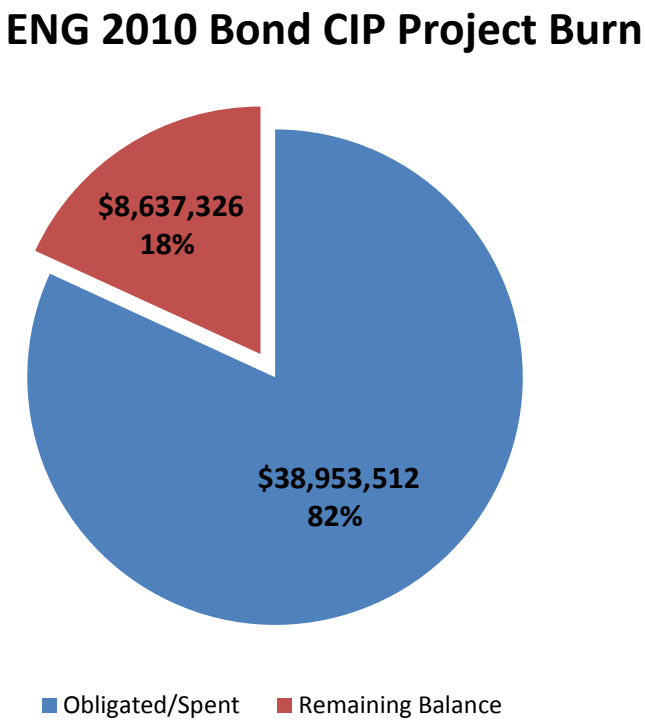
ENG O&M Contract Budget

- Revenue Funded
- Target
  - 25% CIP Obligated by April 30, 2018
  - 75% CIP Obligation by August 30, 2018
  - 100% CIP Spend by September 30, 2018



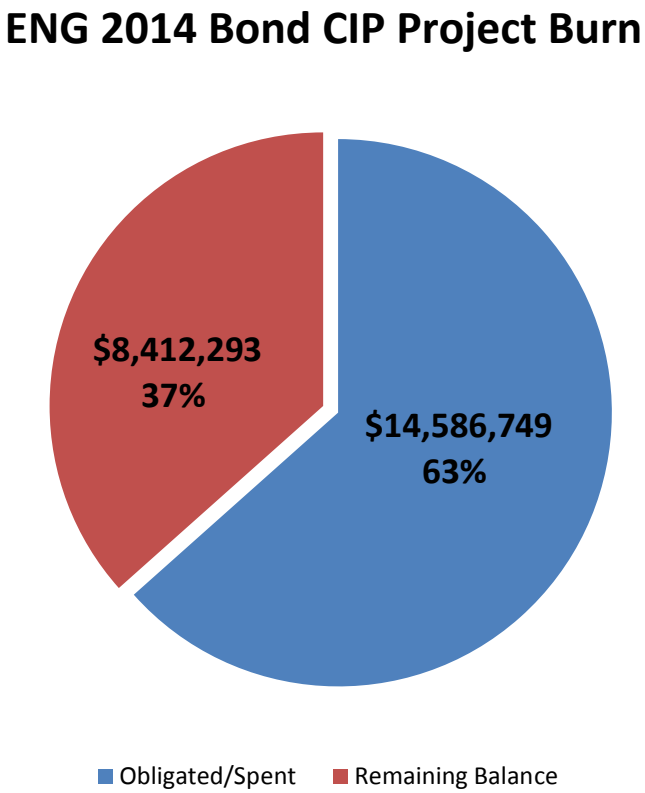
ENG 2010 Bond Series CIP Budget

- Bond Funded
- Target
  - Pending



ENG 2014 Bond Series CIP Budget

- Bond Funded
- Target
  - Pending



Engineering Work Orders

Engineeirng Work Order Summary -March 2018	
Work Orders Received from Customer Services	238
Work Orders Processed & Released to T&D	197
Work Orders Processed & Released to CSR	95
Work Orders Canceled	14
Work Orders Pending Survey	21
Pending Work Orders at Engineering	473

Engineering Large Customer and Net Metering Tracking

Date Received	Customer Name	Work Order Number(s)	Location	KVA	Meter Qty	Status
05/07/14	Port Authority of Guam	412337	Piti			Upgrades of existing facilities, includes line relocations and service conversions from overhead to underground 75% completed. Currently on hold pending Port Authorty direction for final removal.
12/20/13	CoreTech International	Multiple	Dededo	250	50	Lada Estates, 450 kVA, Phase I 100% Completed 242 units energized, Phase II 300 kVA, applications received for 93 units, Phase II 100% Completed. Phase III on hold due to Labor and Permit issues.
01/27/15	TG Engineers PC	422182-85, 90-93, 96-98	Agana Heights	100	11	11 Unit Apartment, 100 kVA, 98% Completed. Work currently on hold.
06/02/15	Docomo Pacific Inc.	Multiple	Various Locations Islandwide	50		New Comm Towers and Power Supplies, 10 sites, 9 completed
05/13/15	CoreTech International Towers	426021	Tamuning	3300	104	New condominiums, 2-1500kVA and 1 300 kVA, Tower 101 100% Completed, Tower 102, 103, and 104 are 45% completed, currently on hold. Temporary power pending for Community Center, 100% Completed. First 52 Service Orders for Tower 101 is 100% completed.
05/11/16	Korando Corp (DPW Bile Pigua Bridge)	437716	Merizo			Bile and Pigua Bridge Reconstruction - 75 % Completed, Route 25/26 Road Widening, construction work has restarted.
12/09/16	Maeda Pacific	443952	Harmon			Route 1 and Route 3 road improvements - 100% completed, involves new underground 34.5kV and 13.8kV lines and the removal of overhead ples and lines. Pulling of wires intiated 10/9/17. Final Termination and testing Completed. Energizing of new underground 13.8kV and 34.5 kV lines completed. Pending return of materials.
Pending	New Nikko Expansion	Pending	Tumon	1500	1	New Nikko Expansion, pending submittal of work order application. Redesign of primary feed ongoing. New primary underground is scheduled to start work in May 2018.
03/10/17	Best Housing Corp Ltd	446924-30	Mangilao	60	6	New 6-Unit Townhome, 750% completed
06/01/17	GWA Pump Stations 2 and 3	450278-9	Santa Rita	150	2	New GWA Pump Stations. 20% Completed.
07/17/17	Keystone Pacific Realty Corp	451488	Hagatna	100	10	New apartment. 92% Completed. Pending additional applications.
08/07/17	Matsumoto, Akiyoshi	452146-49, 51, 4, 6	Tumon	60	7	New 6 Unit Apartment with Common Meter. 5% Completed.
08/17/17	Micronesian Community Corp.	Pending	Mangilao	130	13	New 13 unit subdivison, 10% completed
10/02/17	Sumitomo Mitsui (Baza Gardens Waste water)	453369	Yona	300	1	Baza ardens Wastewater Treatment Plant Improvements, 0% Completed
01/25/18	Precision Systems Inc.	456547, 60	Tamuning			Primary Underground Conversion. Removal of three spans of overhead primary and 1 ea. power pole. 100% completed and Released to T&D.
03/01/18	Docomo Pacific Inc., New Data Center	Pending Application	Talafofo	3000	1	New Data Center. Planned to come off P-260 and P-262. 0% Completed. Still in Desgn Phase.
03/01/18	KUAM	Pending	Chalan Pago			GPI to reroute poles to existing easement. Requires the ground clearing of an existing easement.
Varies	Pending Net Metering Customers	Varies	Various Locations Islandwide		17	Pending Net Metering Customers as of March 31, 2018.
			Total	9000	223	

GPA INFORMATION TECHNOLOGY

MARCH 2018

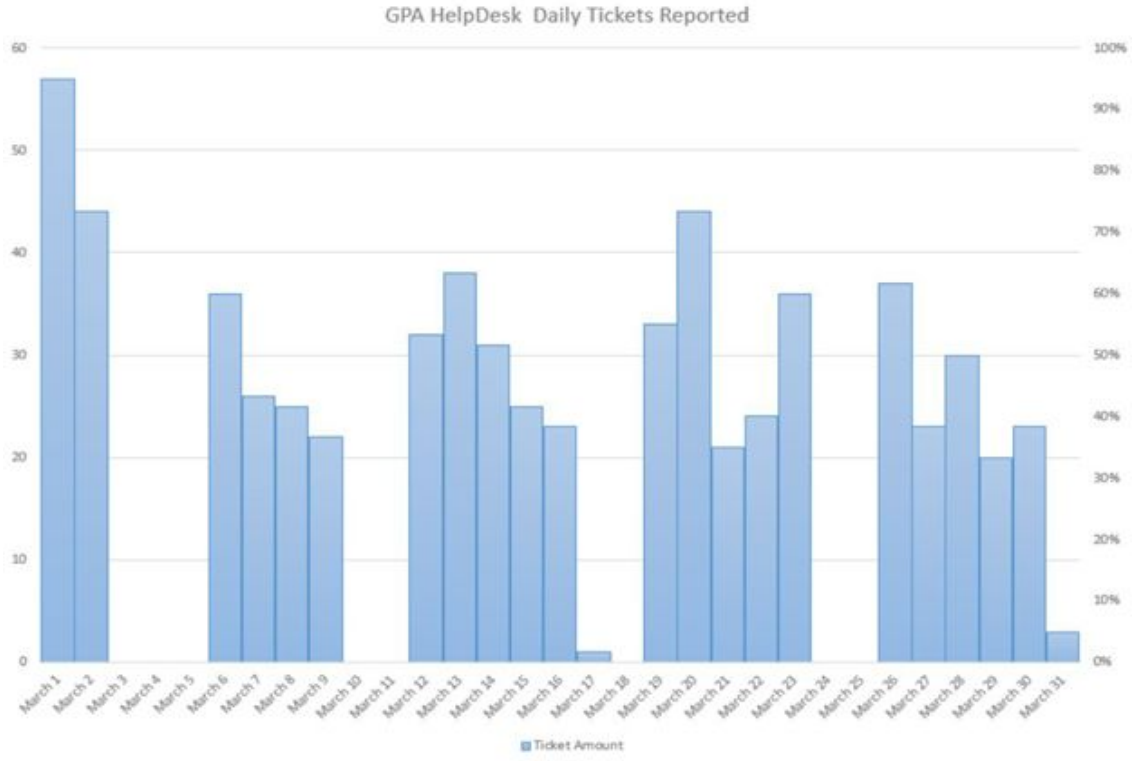
SUMMARY:

The Information Technology Department continues to improve services, monitoring processes and system infrastructure utilization as guided by Cyber-Security initiatives and regulatory compliance. We strive and continue to improve all areas. Computer Services continues to seek new technology with networking, system access and utilization. We also strive to meet target levels of uptime, to include the IBM i-Series AS400, Virtual Machine environment, (VMware V-Sphere), (Blade Servers and Disk Array Storage), and Physical Servers, (non-Virtual Machines).

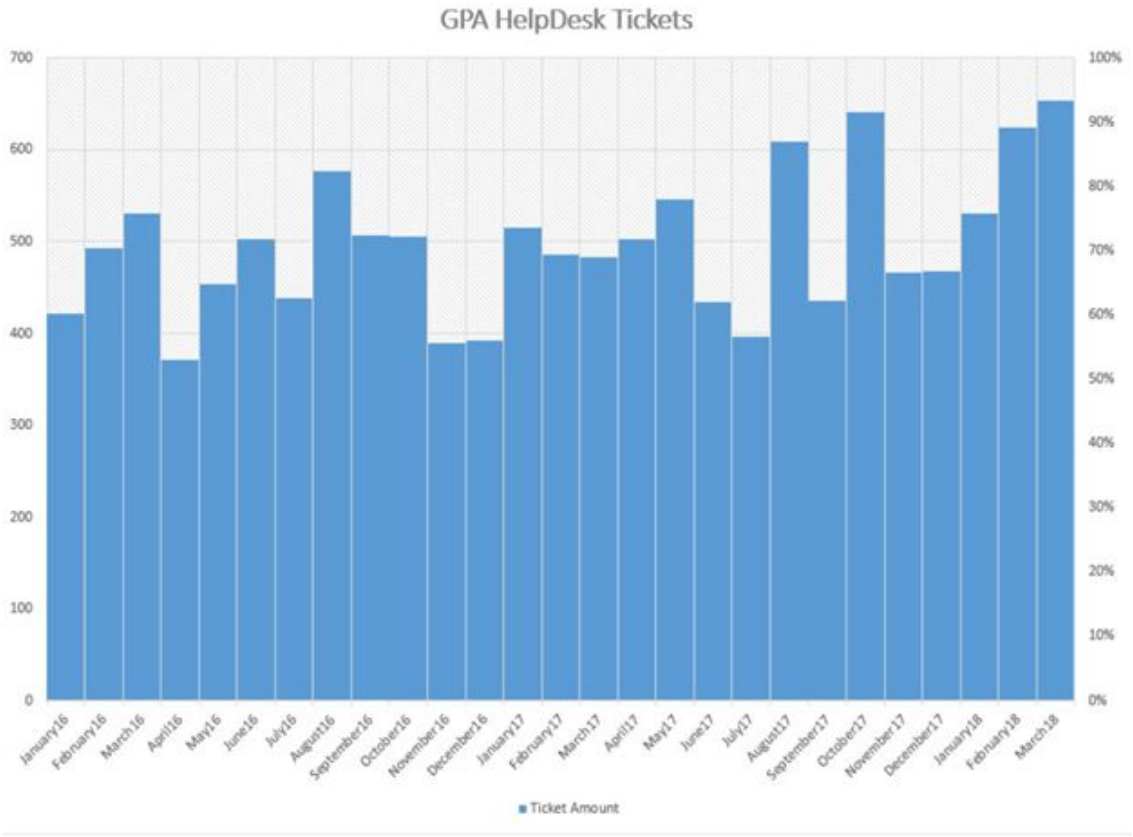
INCIDENT CALL SUMMARY:

The significance to record and utilize the Helpdesk Incident Handling Tool (ChangeGear) is to manage, track and measure workloads and assignments of customer reported IT incidents. The tracking of incidents is paramount. Measurements will be used for IT Customer Feedback survey in the future.

MARCH 2018 TICKETS



22 MONTH COMPARATIVE

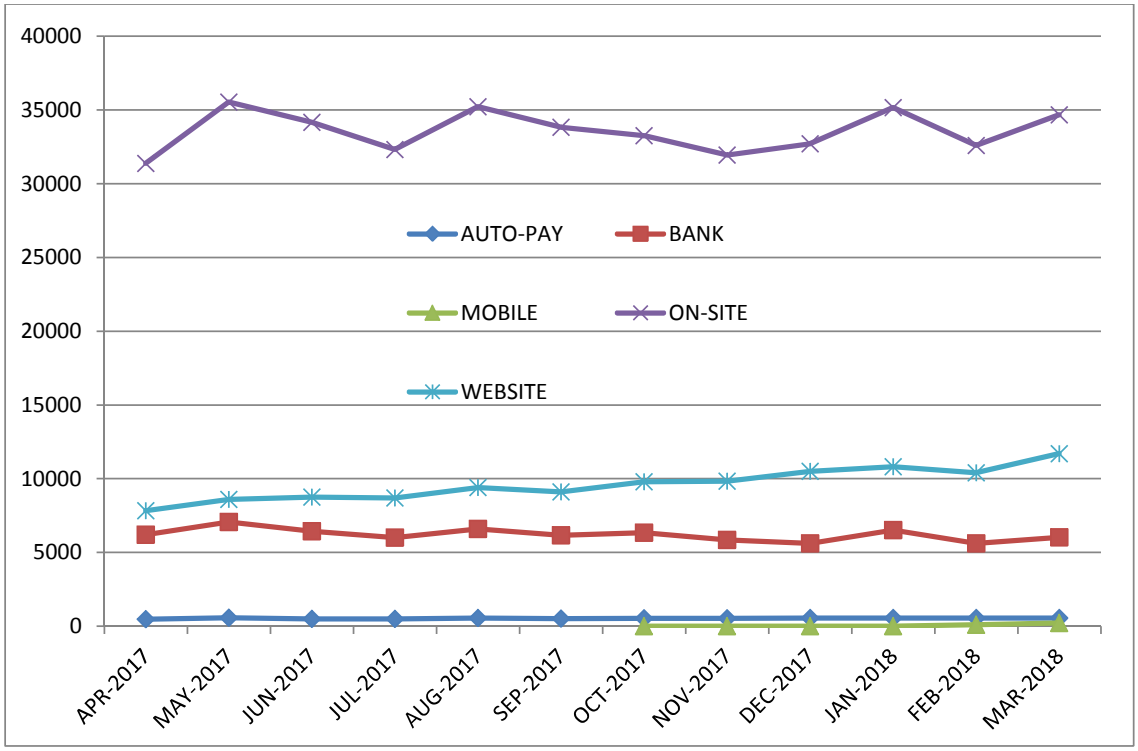


For March 2018, Computer Services responded to 654 help desk calls from GPA internal and external customers. Breakdown as follows:

CLOSED TICKETS			
Low	Medium	High	Critical
258	187	188	4
TICKET TYPES			
End User	Hardware	Software	Network
535	37	38	27
OPEN TICKETS			
Low	Medium	High	Critical
8	17	28	2
TICKET TYPES			
End User	Hardware	Software	Network
33	4	16	2

CC&B PAYMENT SUMMARY TRANSACTIONS:

Payment Transactions by On Site/Website/Auto-Pay/BANK/Mobile



Payment Transactions by Count:

Row Labels	AUTO-PAY	BANK	MOBILE	ON-SITE	WEBSITE
APR-2017	481	6193		31383	7837
MAY-2017	571	7073		35531	8586
JUN-2017	497	6446		34164	8758
JUL-2017	497	6008		32309	8703
AUG-2017	560	6603		35216	9401
SEP-2017	509	6158		33826	9110
OCT-2017	537	6333	5	33255	9790
NOV-2017	535	5846	5	31935	9838
DEC-2017	547	5606	8	32715	10505
JAN-2018	554	6522	6	35169	10817
FEB-2018	559	5606	94	32589	10400
MAR-2018	560	6029	217	34668	11704
Grand Total	**6407**	**74423**	**335**	**402760**	**115449**

MAJOR APPLICATION ISSUES FOR March 2018

1. ORACLE CUSTOMER CARE & BILLING
   No system issue reported.

2. LANDIS & GYR AMI METERS (SMART METERS)
   No system issue reported.

3. ORACLE JDE
   No system issue reported.

4. METER DATA MANAGEMENT SYSTEM (MDMS)
   No system issue reported.

5. SHORETEL VOIP PHONE SYSTEM
   No system issue reported.

6. EMAIL EXCHANGE SERVER
   No system issue reported.

7. ONLINE PAYMENT SYSTEM (PAYGPA.COM)
   No system issue reported.

8. GEOGRAPHIC INFORMATION SYSTEM (GIS)
   No system issue reported.

9. MILSOFT OUTAGE MANAGEMENT SYSTEM (OMS)
   No system issue reported.

10. ADVANCED GRID ANALYTICS (AGA)
    No system issue reported.

11. ORACLE BUSINESS INTELLIGENCE REPORTING
    No system issue reported.

12. Mobile APP Payment Program
    No system issue reported.

ONGOING PROJECT UPDATES:

Network Penetration Testing and Vulnerability Assessment: Project to provide network testing and vulnerability assessment to benchmark GPA and GWA's network and host systems. This will also include IT Controls Systems testing and Business Impact Analysis for GPA and GWA critical IT systems. Work in currently ongoing and expected completion by April 2018.

SMS Emergency Outage Notification: Project to provide SMS text alerts for Emergency Outages notification for customers and emergency response agencies. Awaiting next steps from operations. In testing process at the moment with PSCC.

Pay by Phone Project: Working with vendor for Pay by Phone system to allow customers to call after hours and make automated payments to their GPA account. Changes to the call script and ongoing testing.

Customer Care & Billing (CC&B) Upgrade: Upgrade of the current Oracle CC&B program from version 2.4 to version 2.6. The current version of CC&B 2.4 will be end of life by Sept. 30, 2017 and support thereafter will be limited. Expected completion by September 2018.

Disaster Recovery- Cloud Solution: Project to turn up a backup site on the Oracle Cloud for GPWA's CC&B Application. The Oracle Cloud service has been provisioned and backup replication is online. Final testing of the Oracle Cloud backup is ongoing.

Disaster Recovery Site: Project to procure a Disaster Recovery (DR) site to provide redundancy for critical GPA applications and databases in case of disruption of the primary Fadian Data Center. Incorporating GWA requirements into proposal.

Physical Security: Project to provide additional surveillance monitoring for Fadian, T&D, Dededo CT and Transportation Warehouse. RFP has closed and bid evaluations in progress.

GPWA Website Upgrades: Project to revamp GPA and GWA websites for the following, GUAMPOWERAUTHORITY.COM, PAYGPA.COM, GUAMWETERWORKS.ORG and PAYGWA.COM. RFP has been released and will close on April 26, 2018. Expected to be completed in 160 days.

Oracle CHAT-BOT: Project to provide Oracle Chat Bot services to GPA's PAYGPA.COM, Mobile APP and Facebook Program. This will allow customers to utilize a CHAT program to make inquiries to frequently asked questions and inquiries on their account.

Landis & Gyr Command Center upgrade from ver. 6.5 to 7.2: Project to upgrade GPA AMI Smart Meter Program to the latest version of 7.2. This will allow new functionality for the Command Center and Smart Meter Integration.

Submitted by:
Melvyn Kwek
Chief Information Technology Officer

Guam GPA & GWA EMS/SCADA System

SIEMENS



GUAM POWER AUTHORITY
Bringing Energy Solutions to You

GUAM WATERWORKS AUTHORITY

Monthly Project Report

March 2018

Grow together and WIN

Unrestricted

Project Progression Summary

Factory Acceptance Test

This month was focused on addressing logistics for the upcoming Factory Acceptance Test in Taiwan scheduled for May 3rd through May 7th . The requirement to transport the FAT Attendees on different flights due to liability concerns were accomplished to include ground transport, hotel venue and daily meals.

GPA Datapoints

After a teleconference with the Siemens team and the GPA, revisions to GPA's data points were agreed to and GPA has been transmitting updated data points as they become available.

GWA SCADA Graphical Display Requirements

Benson Guam purchased a Schneider SCADA Pak 334e, same as currently deployed at several GWA stations. In working with Central Pacific Controls (Local Schneider representatives), as well as directly with Schneider Electric representatives, GWA's SCADA Pak particulars were cloned to Benson's unit. Coupled with the P&ID's submitted by GWA, Siemens Taiwan will utilize this to assist in building GWA's Graphical Displays.

Change Order #2 – Ugum Water Treatment Plant Assessment

Ugum WTP assessment has been submitted to GWA. Pending final decisions, Ugum WTP SCADA system upgrades are on the horizon.

Training Schedule

An inquiry was received in regard to the training schedule. Slide 10 of this presentation is provided.

GPWA SCADA EMS Project Bid No. GPA 066-16

Project Director: Charles Wu
Project Manager: Jonathan Chargualaf
Contract Administrator: Monito Co

Requires immediate attention (R)
Near-term corrective action required (Y)
No corrective action required (G)
Legend:

Overall Status	Risks & Issues	Schedule	Scope	Financial
G	G	G	G	G

Resources

1. Benson/Siemens
2. GPWA

Updates & Accomplishments for the Month of: March 2018

1. 02/22/2018 – GPWA Transmittal No. 50 – Yigo Rev2 Analogs and Status
2. 02/23/2018 – GPWA Transmittal No. 51 – Apra Rev2, Barrigada Rev 1, Tumon Rev1, Analogs and Status
3. 03/03/2018 – Dandan Rev1, Talofofo Rev1, Piti Rev1 Analogs and Status
4. 03/10/2018 – GPWA Transmittal No. 53 – Response to RFI-16 – GPA 066-16, Factory Acceptance Test Attendee Informaton
5. 03/12/2018 – Request for Hardware Approval – Brocade Switches
6. 03/18/2018 – GPWA Transmittal No. 54 – Andersen Rev 1, Cabras Rev 1, Dededo CT Rev 1, GAA Rev 1, GIAT Rev 1 Analogs and Status
7. 03/18/2018 – GPWA Transmittal No. 55 – Macheche Rev 1, Marbo Rev 1, Tamuning 115 Rev 1, Tamuning Rev 2 Analogs and Status
8. 03/24/2018 – GPWA Transmittal No. 56 – Response to RFI-19 – Approval request for Brocade Switches

Resource	Upcoming Tasks / Open Items	TCD/ECD
1. Siemens	FAT Agenda and Procedures	
2. GPWA	Cisco Equipment IP Addressing List	
3. Benson/ Siemens	Non-Disclosure agreement submissions for all Benson/Siemens personnel accessing the system	
4. Benson/ Siemens	SCADA Disaster Recovery Requirements	
5. GPWA	GWA SCADA Graphical Display Requirements	

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE

4/18/2018

GPWA SCADA EMS Project
Bid No. GPA 066-16

Project Director: Charles Wu
Project Manager: Jonathan Chargualaf
Contract Administrator: Monito Co

Overall Status

G

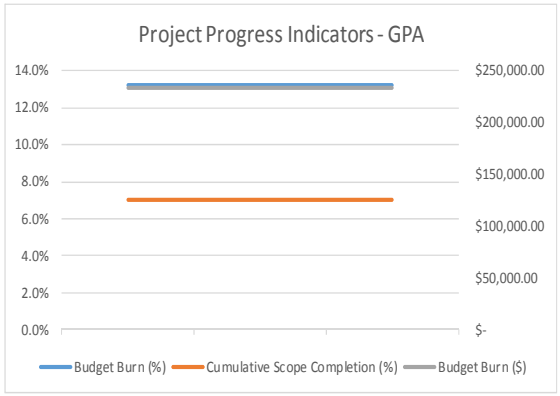
Burn Rate	This Month	Last Month	Incremental
Scope (%)			
Budget (%)	13.2%		
Milestones Achieved	1, 3-7 of 18		

Resources

1. Benson/Siemens
2. GPWA

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Project Progress Indicators



Project Phase	Original Contract Budget	Increase	Current Budget	# Change Orders
Phase I	$ 1,518,769.00		$ 1,518,769.00	4
Phase I	$ 1,518,769.00	$ 250,537.38	$ 1,769,306.38	4

Project Schedule & Budget Performance Indicators

Project Milestone	Planned Completion Date	To be updated: Actual Completion Date	Performance (Days Over/Under)
Contract Start Date	14-Dec-16	14-Dec-16	0
GPWA SCADA/EMS Project	1-Oct-18	1-Oct-18	0
Factory Activities (In Taiwan / Germany)	9-Jul-18	9-Jul-18	0
Approval of revised documentation	4-Dec-17	4-Dec-17	0
Preliminary Factory Acceptance Test (Pre-FAT) in Taiwan	2-May-18	2-May-18	0
- Base Applications	27-Apr-18	27-Apr-18	0
- Advanced Applications	2-May-18	2-May-18	0
Factory Acceptance Test (FAT) in Taiwan	7-May-18	7-May-18	0
- Advanced Applications	7-May-18	7-May-18	0
- Hardware delivery to Site	31-May-18	31-May-18	0
Site Activities (In Guam)	1-Oct-18	1-Oct-18	0
Site Commissioning (Point to point testing)	29-Aug-18	29-Aug-18	0
Site Commissioning (GPA - Point to point testing)	28-Aug-18	28-Aug-18	0
Issuance of Site Commissioning Completion Certificate	28-Aug-18	28-Aug-18	0
Site Acceptance Test (SAT)	3-Sep-18	3-Sep-18	0
- Advanced Applications	2-Sep-18	2-Sep-18	0
Investigation of variance / bug (SAT if any - Advanced Applications)	3-Sep-18	3-Sep-18	0
Issuance of Site Acceptance Certificate	3-Sep-18	3-Sep-18	0
Availability Test (AVT) - 1000hrs (42 Calindar Day, 28 working day)	1-Oct-18	1-Oct-18	0
Issuance of AVT Certificate	1-Oct-18	1-Oct-18	0
Handover of System to end customer	1-Oct-18	1-Oct-18	0
Commencement of warranty (12 months)	1-Oct-19	1-Oct-19	0
Issuance of Final Acceptance Certificates (FAC)	1-Oct-19	1-Oct-19	0

Legend:

G No corrective action required

Y Near-term corrective action required

R Requires immediate attention

4/18/2018

GPWA SCADA EMS Project
Bid No. GPA 066-16

Project Director: Charles Wu
Project Manager: Jonathan Chargualaf
Contract Administrator: Monito Co

Overall Status

G

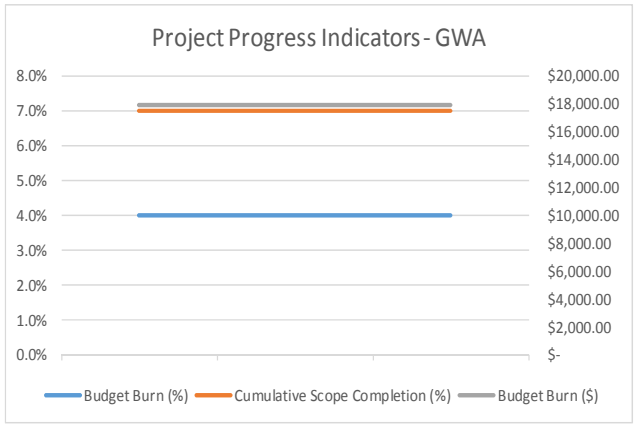
Burn Rate	This Month	Last Month	Incremental
Scope (%)			
Budget (%)	4.0%		
Milestones Achieved	1,3-7 of 18		

Resources

1. Benson/Siemens
2. GPWA

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Project Progress Indicators



Project Phase	Original Contract Budget	Increase	Current Budget	# Change Orders
Phase I	$ 432,705.00		$ 432,705.00	4
		$ 18,000.00	$ 450,705.00	4

Project Schedule & Budget Performance Indicators

Project Milestone	Planned Completion Date	To be updated: Actual Completion Date	Performance (Days Over/Under)
Contract Start Date	14-Dec-16	14-Dec-16	0
GPWA SCADA/EMS Project	1-Oct-18	1-Oct-18	0
Factory Activities (In Taiwan / Germany)	9-Jul-18	9-Jul-18	0
Approval of revised documentation	4-Dec-17	4-Dec-17	0
Preliminary Factory Acceptance Test (Pre-FAT) in Taiwan	2-May-18	2-May-18	0
- Base Applications	27-Apr-18	27-Apr-18	0
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- Advanced Applications	7-May-18	7-May-18	0
- Hardware delivery to Site	31-May-18	31-May-18	0
Site Activities (In Guam)	1-Oct-18	1-Oct-18	0
Site Commissioning (Point to point testing)	29-Aug-18	29-Aug-18	0
Site Commissioning (GPA - Point to point testing)	28-Aug-18	28-Aug-18	0
Issuance of Site Commissioning Completion Certificate	28-Aug-18	28-Aug-18	0
Site Acceptance Test (SAT)	3-Sep-18	3-Sep-18	0
- Advanced Applications	2-Sep-18	2-Sep-18	0
Investigation of variance / bug (SAT if any - Advanced Applications)	3-Sep-18	3-Sep-18	0
Issuance of Site Acceptance Certificate	3-Sep-18	3-Sep-18	0
Availability Test (AVT) - 1000hrs (42 Calindar Day, 28 working day)	1-Oct-18	1-Oct-18	0
Issuance of AVT Certificate	1-Oct-18	1-Oct-18	0
Handover of System to end customer	1-Oct-18	1-Oct-18	0
Commencement of warranty (12 months)	1-Oct-19	1-Oct-19	0
Issuance of Final Acceptance Certificates (FAC)	1-Oct-19	1-Oct-19	0

Legend:

G No corrective action required

Y Near-term corrective action required

R Requires immediate attention

4/18/2018

GPWA SCADA EMS Project
Bid No. GPA 066-16

Project Director: Charles Wu
Project Manager: Jonathan Chargualaf
Contract Administrator: Monito Co

Overall Status	G

Burn Rate	This Month	Last Month	Incremental
Scope (%)			
Budget (%)			
Milestones Achieved	1, 3-7 of 18		
1. Mobilization			
2. Project Management			
3. Permits, Bonds and Codes			
4. Project Installation Site Survey			
5. Interconnection and Integration Design			
6. Communications and Networking Design and Execution Plan			
7. Installation Design			
8. Software Cost, Procurement and Delivery			
9. Third Party Software Cost, Procurement and Delivery			
10. Software Installation			
11. Equipment Cost, Procurement and Delivery			
12. Construction, Equipment Installation and Interconnection			
13. Commissioning, Quality Assurance and Performance Testing			
14. Training			
15. Demobilization			
16. Warranty			
17. Documentation			
18. Annual Maintenance			

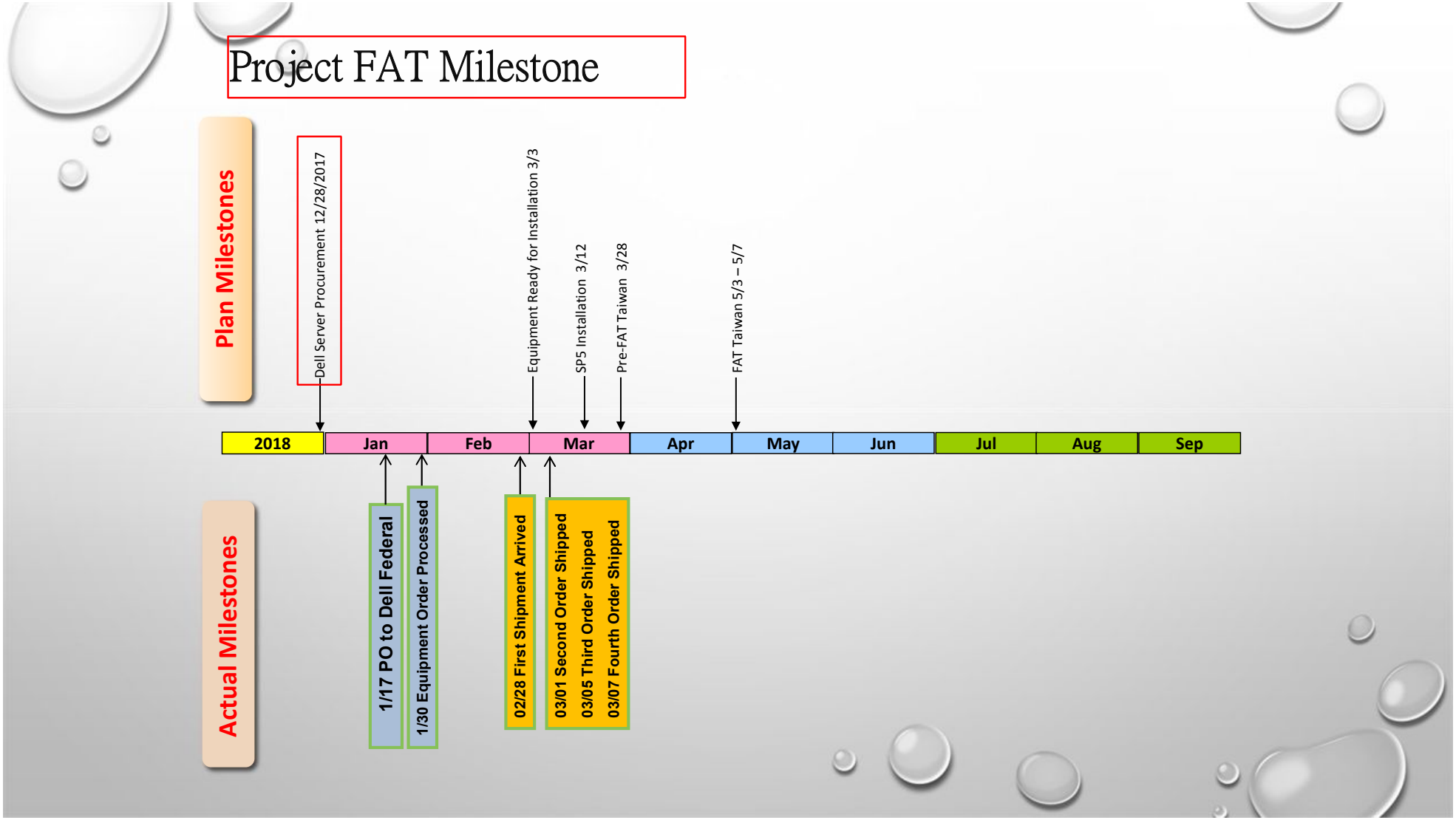
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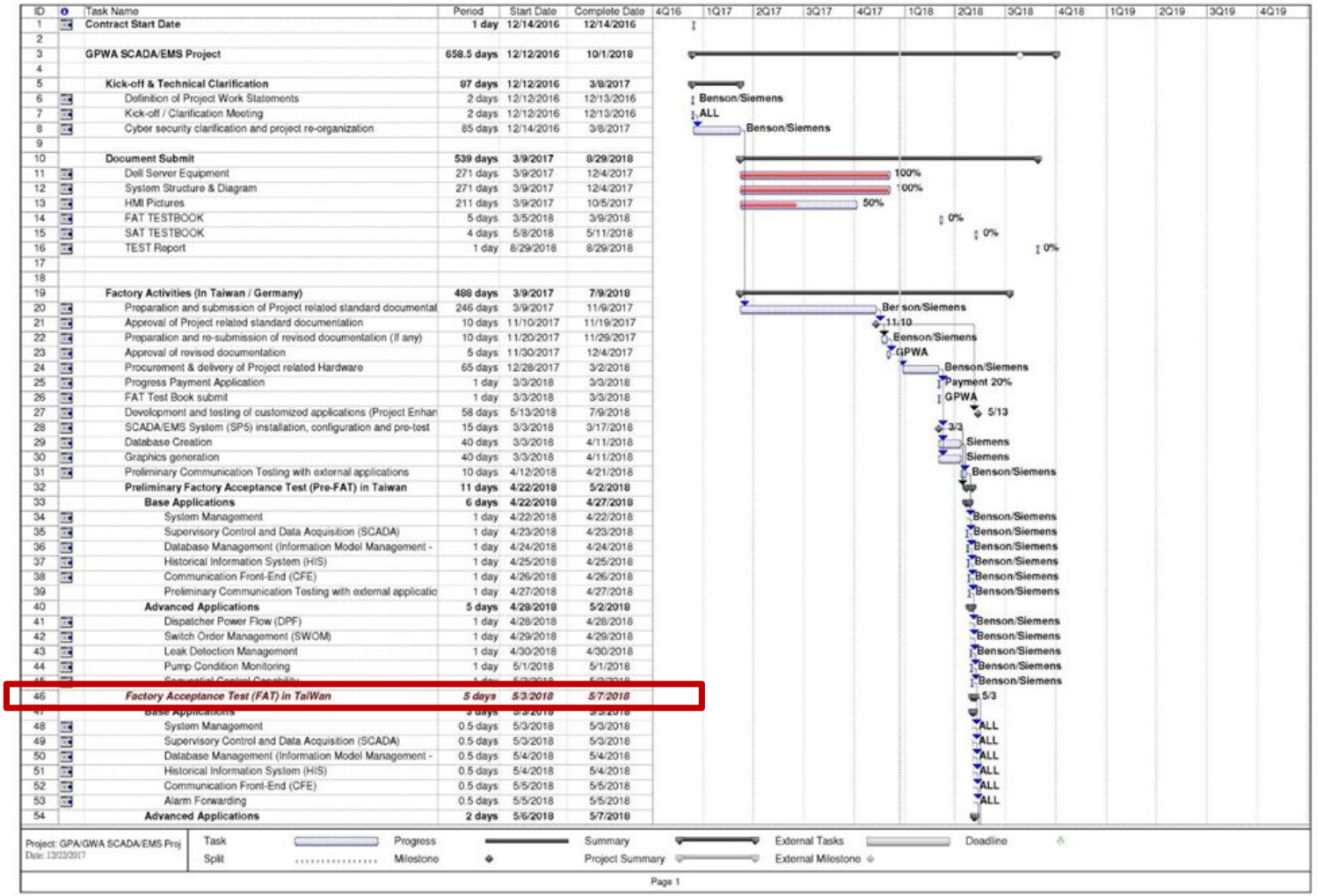
G — No corrective action required

Y — Near-term corrective action required

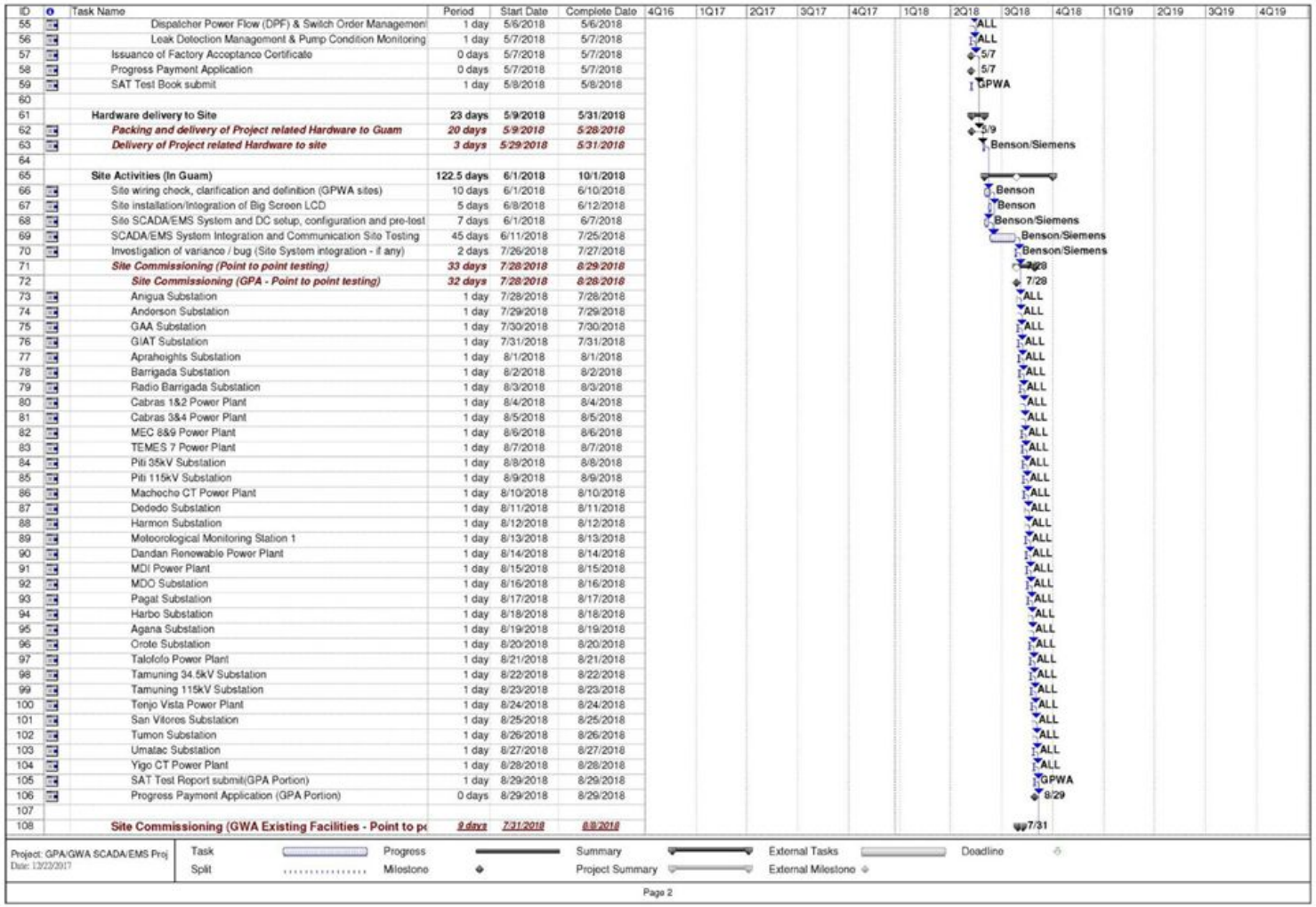
R — Requires immediate attention

4/18/2018

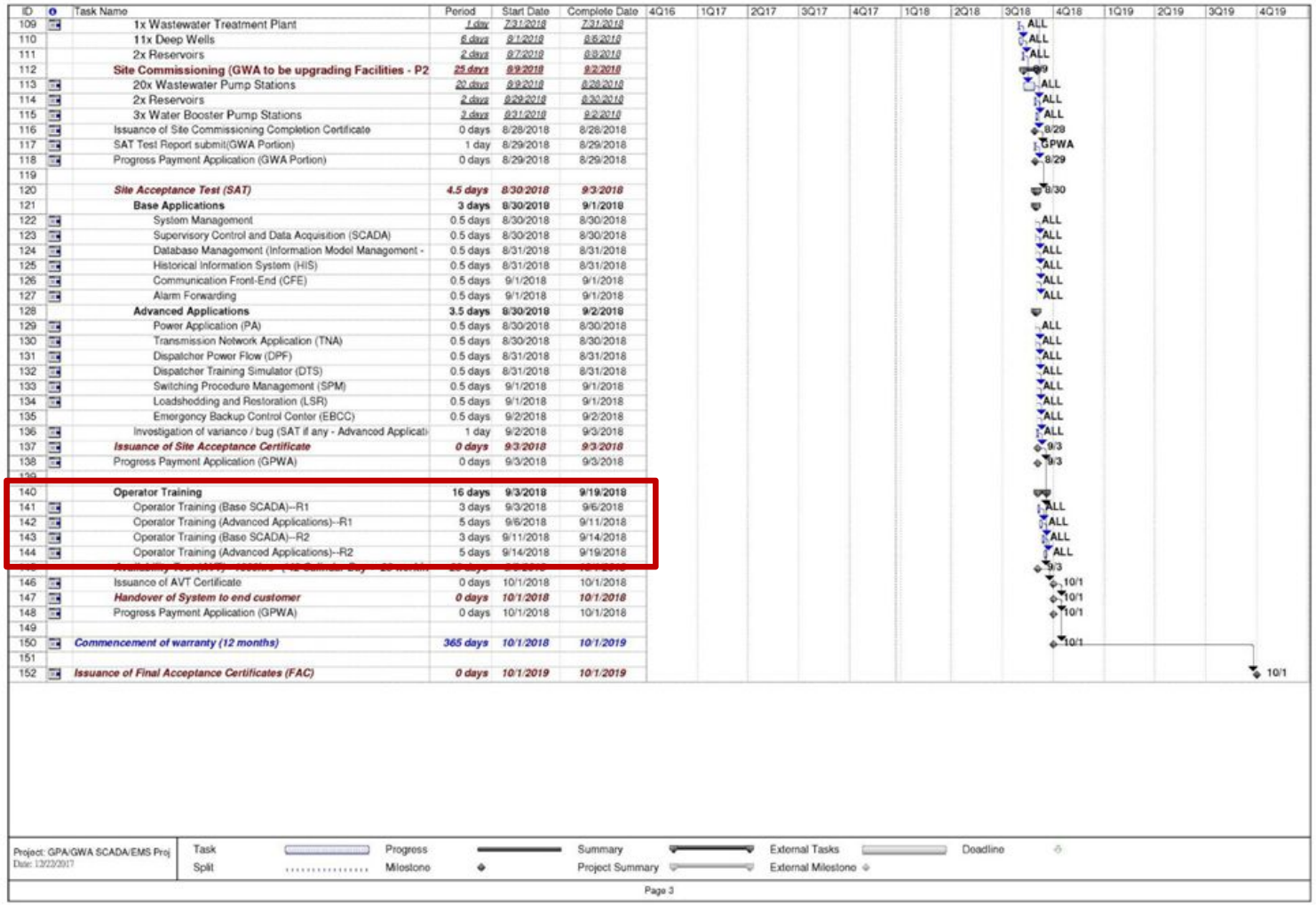

Project FAT Milestone
Plan Milestones
Dell Server Procurement 12/28/2017
Equipment Ready for Installation 3/3
SP5 Installation 3/12
Pre-FAT Taiwan 3/28
FAT Taiwan 5/3 – 5/7
2018
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Actual Milestones
1/17 PO to Dell Federal
1/30 Equipment Order Processed
02/28 First Shipment Arrived
03/01 Second Order Shipped
03/05 Third Order Shipped
03/07 Fourth Order Shipped



ID	Task Name	Period	Start Date	Complete Date
1	**Contract Start Date**	**1 day**	**12/14/2016**	**12/14/2016**
2				
3	**GPWA SCADA/EMS Project**	**658.5 days**	**12/12/2016**	**10/1/2018**
4				
5	**Kick-off & Technical Clarification**	**87 days**	**12/12/2016**	**3/8/2017**
6	Definition of Project Work Statements	2 days	12/12/2016	12/13/2016
7	Kick-off / Clarification Meeting	2 days	12/12/2016	12/13/2016
8	Cyber security clarification and project re-organization	85 days	12/14/2016	3/8/2017
9				
10	**Document Submit**	**539 days**	**3/9/2017**	**8/29/2018**
11	Dell Server Equipment	271 days	3/9/2017	12/4/2017
12	System Structure & Diagram	271 days	3/9/2017	12/4/2017
13	HMI Pictures	211 days	3/9/2017	10/5/2017
14	FAT TESTBOOK	5 days	3/5/2018	3/9/2018
15	SAT TESTBOOK	4 days	5/8/2018	5/11/2018
16	TEST Report	1 day	8/29/2018	8/29/2018
17				
18				
19	**Factory Activities (In Taiwan / Germany)**	**488 days**	**3/9/2017**	**7/9/2018**
20	Preparation and submission of Project related standard documentat	246 days	3/9/2017	11/9/2017
21	Approval of Project related standard documentation	10 days	11/10/2017	11/19/2017
22	Preparation and re-submission of revised documentation (If any)	10 days	11/20/2017	11/29/2017
23	Approval of revised documentation	5 days	11/30/2017	12/4/2017
24	Procurement & delivery of Project related Hardware	65 days	12/28/2017	3/2/2018
25	Progress Payment Application	1 day	3/3/2018	3/3/2018
26	FAT Test Book submit	1 day	3/3/2018	3/3/2018
27	Development and testing of customized applications (Project Enhan	58 days	5/13/2018	7/9/2018
28	SCADA/EMS System (SP5) installation, configuration and pre-test	15 days	3/3/2018	3/17/2018
29	Database Creation	40 days	3/3/2018	4/11/2018
30	Graphics generation	40 days	3/3/2018	4/11/2018
31	Preliminary Communication Testing with external applications	10 days	4/12/2018	4/21/2018
32	**Preliminary Factory Acceptance Test (Pre-FAT) in Taiwan**	**11 days**	**4/22/2018**	**5/2/2018**
33	**Base Applications**	**6 days**	**4/22/2018**	**4/27/2018**
34	System Management	1 day	4/22/2018	4/22/2018
35	Supervisory Control and Data Acquisition (SCADA)	1 day	4/23/2018	4/23/2018
36	Database Management (Information Model Management -	1 day	4/24/2018	4/24/2018
37	Historical Information System (HIS)	1 day	4/25/2018	4/25/2018
38	Communication Front-End (CFE)	1 day	4/26/2018	4/26/2018
39	Preliminary Communication Testing with external applicatic	1 day	4/27/2018	4/27/2018
40	**Advanced Applications**	**5 days**	**4/28/2018**	**5/2/2018**
41	Dispatcher Power Flow (DPF)	1 day	4/28/2018	4/28/2018
42	Switch Order Management (SWOM)	1 day	4/29/2018	4/29/2018
43	Leak Detection Management	1 day	4/30/2018	4/30/2018
44	Pump Condition Monitoring	1 day	5/1/2018	5/1/2018
45	Sequential Control Capability	1 day	5/3/2018	5/3/2018
46	***Factory Acceptance Test (FAT) in TaiWan***	***5 days***	***5/3/2018***	***5/7/2018***
47	**Base Applications**	**3 days**	**5/3/2018**	**5/5/2018**
48	System Management	0.5 days	5/3/2018	5/3/2018
49	Supervisory Control and Data Acquisition (SCADA)	0.5 days	5/3/2018	5/3/2018
50	Database Management (Information Model Management -	0.5 days	5/4/2018	5/4/2018
51	Historical Information System (HIS)	0.5 days	5/4/2018	5/4/2018
52	Communication Front-End (CFE)	0.5 days	5/5/2018	5/5/2018
53	Alarm Forwarding	0.5 days	5/5/2018	5/5/2018
54	**Advanced Applications**	**2 days**	**5/6/2018**	**5/7/2018**



ID	Task Name	Period	Start Date	Complete Date
55	Dispatcher Power Flow (DPF) & Switch Order Management	1 day	5/6/2018	5/6/2018
56	Leak Detection Management & Pump Condition Monitoring	1 day	5/7/2018	5/7/2018
57	Issuance of Factory Acceptance Certificate	0 days	5/7/2018	5/7/2018
58	Progress Payment Application	0 days	5/7/2018	5/7/2018
59	SAT Test Book submit	1 day	5/8/2018	5/8/2018
60				
61	**Hardware delivery to Site**	**23 days**	**5/9/2018**	**5/31/2018**
62	***Packing and delivery of Project related Hardware to Guam***	***20 days***	***5/9/2018***	***5/28/2018***
63	***Delivery of Project related Hardware to site***	***3 days***	***5/29/2018***	***5/31/2018***
64				
65	**Site Activities (In Guam)**	**122.5 days**	**6/1/2018**	**10/1/2018**
66	Site wiring check, clarification and definition (GPWA sites)	10 days	6/1/2018	6/10/2018
67	Site installation/Integration of Big Screen LCD	5 days	6/8/2018	6/12/2018
68	Site SCADA/EMS System and DC setup, configuration and pre-test	7 days	6/1/2018	6/7/2018
69	SCADA/EMS System Integration and Communication Site Testing	45 days	6/11/2018	7/25/2018
70	Investigation of variance / bug (Site System integration - if any)	2 days	7/26/2018	7/27/2018
71	***Site Commissioning (Point to point testing)***	***33 days***	***7/28/2018***	***8/29/2018***
72	***Site Commissioning (GPA - Point to point testing)***	***32 days***	***7/28/2018***	***8/28/2018***
73	Anigua Substation	1 day	7/28/2018	7/28/2018
74	Anderson Substation	1 day	7/29/2018	7/29/2018
75	GAA Substation	1 day	7/30/2018	7/30/2018
76	GIAT Substation	1 day	7/31/2018	7/31/2018
77	Apraheights Substation	1 day	8/1/2018	8/1/2018
78	Barrigada Substation	1 day	8/2/2018	8/2/2018
79	Radio Barrigada Substation	1 day	8/3/2018	8/3/2018
80	Cabras 1&2 Power Plant	1 day	8/4/2018	8/4/2018
81	Cabras 3&4 Power Plant	1 day	8/5/2018	8/5/2018
82	MEC 8&9 Power Plant	1 day	8/6/2018	8/6/2018
83	TEMES 7 Power Plant	1 day	8/7/2018	8/7/2018
84	Piti 35kV Substation	1 day	8/8/2018	8/8/2018
85	Piti 115kV Substation	1 day	8/9/2018	8/9/2018
86	Machocho CT Power Plant	1 day	8/10/2018	8/10/2018
87	Dededo Substation	1 day	8/11/2018	8/11/2018
88	Harmon Substation	1 day	8/12/2018	8/12/2018
89	Meteorological Monitoring Station 1	1 day	8/13/2018	8/13/2018
90	Dandan Renewable Power Plant	1 day	8/14/2018	8/14/2018
91	MDI Power Plant	1 day	8/15/2018	8/15/2018
92	MDO Substation	1 day	8/16/2018	8/16/2018
93	Pagat Substation	1 day	8/17/2018	8/17/2018
94	Harbo Substation	1 day	8/18/2018	8/18/2018
95	Agana Substation	1 day	8/19/2018	8/19/2018
96	Orote Substation	1 day	8/20/2018	8/20/2018
97	Talofofo Power Plant	1 day	8/21/2018	8/21/2018
98	Tamuning 34.5kV Substation	1 day	8/22/2018	8/22/2018
99	Tamuning 115kV Substation	1 day	8/23/2018	8/23/2018
100	Tenjo Vista Power Plant	1 day	8/24/2018	8/24/2018
101	San Vitores Substation	1 day	8/25/2018	8/25/2018
102	Tumon Substation	1 day	8/26/2018	8/26/2018
103	Umatac Substation	1 day	8/27/2018	8/27/2018
104	Yigo CT Power Plant	1 day	8/28/2018	8/28/2018
105	SAT Test Report submit(GPA Portion)	1 day	8/29/2018	8/29/2018
106	Progress Payment Application (GPA Portion)	0 days	8/29/2018	8/29/2018
107				
108	**Site Commissioning (GWA Existing Facilities - Point to p**	***9 days***	***7/31/2018***	***8/8/2018***



ID	Task Name	Period	Start Date	Complete Date
109	1x Wastewater Treatment Plant	1 day	7/31/2018	7/31/2018
110	11x Deep Wells	6 days	8/1/2018	8/6/2018
111	2x Reservoirs	2 days	8/7/2018	8/8/2018
112	**Site Commissioning (GWA to be upgrading Facilities - P2**	**25 days**	**8/9/2018**	**9/2/2018**
113	20x Wastewater Pump Stations	20 days	8/9/2018	8/28/2018
114	2x Reservoirs	2 days	8/29/2018	8/30/2018
115	3x Water Booster Pump Stations	3 days	8/31/2018	9/2/2018
116	Issuance of Site Commissioning Completion Certificate	0 days	8/28/2018	8/28/2018
117	SAT Test Report submit(GWA Portion)	1 day	8/29/2018	8/29/2018
118	Progress Payment Application (GWA Portion)	0 days	8/29/2018	8/29/2018
119				
120	***Site Acceptance Test (SAT)***	***4.5 days***	***8/30/2018***	***9/3/2018***
121	**Base Applications**	**3 days**	**8/30/2018**	**9/1/2018**
122	System Management	0.5 days	8/30/2018	8/30/2018
123	Supervisory Control and Data Acquisition (SCADA)	0.5 days	8/30/2018	8/30/2018
124	Database Management (Information Model Management -	0.5 days	8/31/2018	8/31/2018
125	Historical Information System (HIS)	0.5 days	8/31/2018	8/31/2018
126	Communication Front-End (CFE)	0.5 days	9/1/2018	9/1/2018
127	Alarm Forwarding	0.5 days	9/1/2018	9/1/2018
128	**Advanced Applications**	**3.5 days**	**8/30/2018**	**9/2/2018**
129	Power Application (PA)	0.5 days	8/30/2018	8/30/2018
130	Transmission Network Application (TNA)	0.5 days	8/30/2018	8/30/2018
131	Dispatcher Power Flow (DPF)	0.5 days	8/31/2018	8/31/2018
132	Dispatcher Training Simulator (DTS)	0.5 days	8/31/2018	8/31/2018
133	Switching Procedure Management (SPM)	0.5 days	9/1/2018	9/1/2018
134	Loadshedding and Restoration (LSR)	0.5 days	9/1/2018	9/1/2018
135	Emergency Backup Control Center (EBCC)	0.5 days	9/2/2018	9/2/2018
136	Investigation of variance / bug (SAT if any - Advanced Applicati	1 day	9/2/2018	9/3/2018
137	***Issuance of Site Acceptance Certificate***	***0 days***	***9/3/2018***	***9/3/2018***
138	Progress Payment Application (GPWA)	0 days	9/3/2018	9/3/2018
139				
140	**Operator Training**	**16 days**	**9/3/2018**	**9/19/2018**
141	Operator Training (Base SCADA)--R1	3 days	9/3/2018	9/6/2018
142	Operator Training (Advanced Applications)--R1	5 days	9/6/2018	9/11/2018
143	Operator Training (Base SCADA)--R2	3 days	9/11/2018	9/14/2018
144	Operator Training (Advanced Applications)--R2	5 days	9/14/2018	9/19/2018
145	[illegible]	[illegible]	[illegible]	[illegible]
146	Issuance of AVT Certificate	0 days	10/1/2018	10/1/2018
147	***Handover of System to end customer***	***0 days***	***10/1/2018***	***10/1/2018***
148	Progress Payment Application (GPWA)	0 days	10/1/2018	10/1/2018
149				
150	***Commencement of warranty (12 months)***	***365 days***	***10/1/2018***	***10/1/2019***
151				
152	***Issuance of Final Acceptance Certificates (FAC)***	***0 days***	***10/1/2019***	***10/1/2019***

Infrared Inspection Worksheet

	Circuit	Last Infrared Inspection	
		Fiscal Year	Quarter
1	X065-X183	FY2017	4
2	X038-X124	FY2017	4
3	X123-X143	FY2017	4
4	H710/H760 - H502	FY2017	4
5	X023-X043	FY2017	4
6	X087-X073	FY2018	1
7	X247-X140		
8	X082-X160	FY2017	4
9	X020-X311-X336	FY2017	4
10	X039-X250	FY2018	1
11	X161-X070		
12	X006-X015/X016		
13	X024-X110	FY2017	4
14	X054-X246	FY2017	4
15	X056-X185		
16	X394-X126		
17	X173-X245		
18	H322/H326 - H401/H404		
19	H342/H346 - H402/H403		
20	H362/H366 - H750/H760		
21	H403/H404 - H602	FY2017	4
22	H612 - H501	FY2017	4
23	X021-X315-X334		
24	X022-X037-X190	FY2017	4
25	X036-X305		
26	X040-X112	FY2017	4
27	X045-X055		
28	X053-X209	FY2017	4
29	X081-X178		
30	X088-X151/X154	FY2017	4
31	X134-X180		
32	X150/X152-X221		
33	X214-X263		
34	X222-X067	FY2017	4
35	X150/X155-X071		
36	X080-X260		
37	X086-X101		
38	X093-X103		
39	X097-X227		
40	X098-X130		
41	X133-X170		
42	X174-X175		
43	X210-X226		
44	X301-X324		
45	X309-X326		

Top 10 Worst Circuits
Underground Circuits

Infrared Inspection Worksheet

	Sector	Circuit	Last Infrared Inspection	
			Fiscal Year	Quarter
1	North	P332		
2		P403		
3		P089		
4		P244		
5		P111		
6		P271	FY2017	4
7		P330		
8		P322		
9		P270		
10		P046	FY2018	1
11		P087		
12		P321		
13		P088	FY2017	4
14		P331		
15		P323		
16		P245		
17		P272		
18		P240		
19		P242		
20	Central	P212		
21		P213		
22		P202	FY2017	4
23		P201		
24		P210	FY2017	4
25		P007		
26		P250		
27		P205		
28		P206		
29		P203		
30		P253	FY2017	4
31		P283	FY2017	4
32		P280	FY2017	4
33		P311		
34		P007		
35		P211		
36		P202		
37		P251		
38		P252		
39		P201		
40		P282	FY2017	4
41		P310		
42		P204		
43		P312		
44		P281	FY2017	4
45		P400		
46	South	P340	FY2018	1
47		P261		
48		P221	FY2018	1
49		P294		
50		P341	FY2018	1
51		P005		
52		P260		
53		P003		
54		P220		
55		P298		
56		P262		
57		P223		
58		P301		
59		P005		
60		P260		

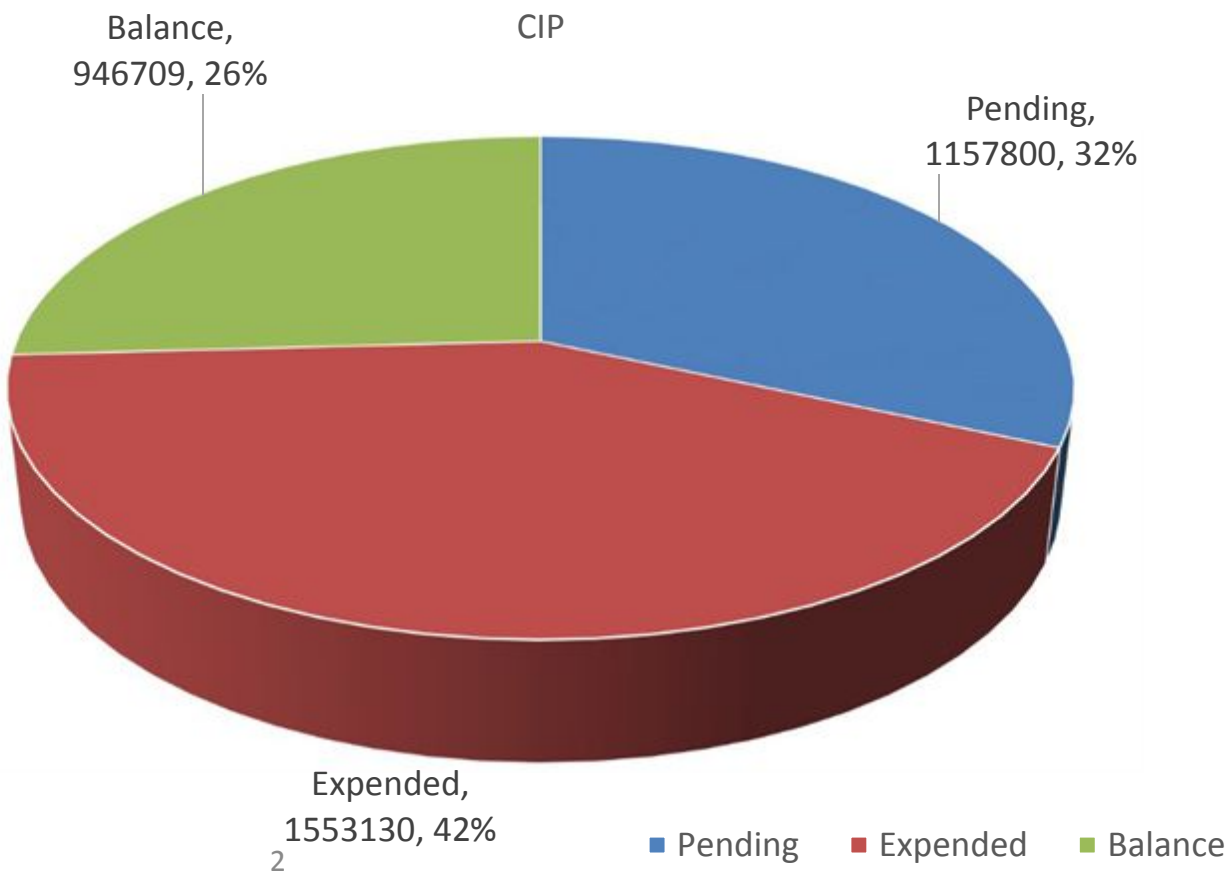
Top 10 Worst Circuits

IT Budget
Execution Performance

March 31, 2018

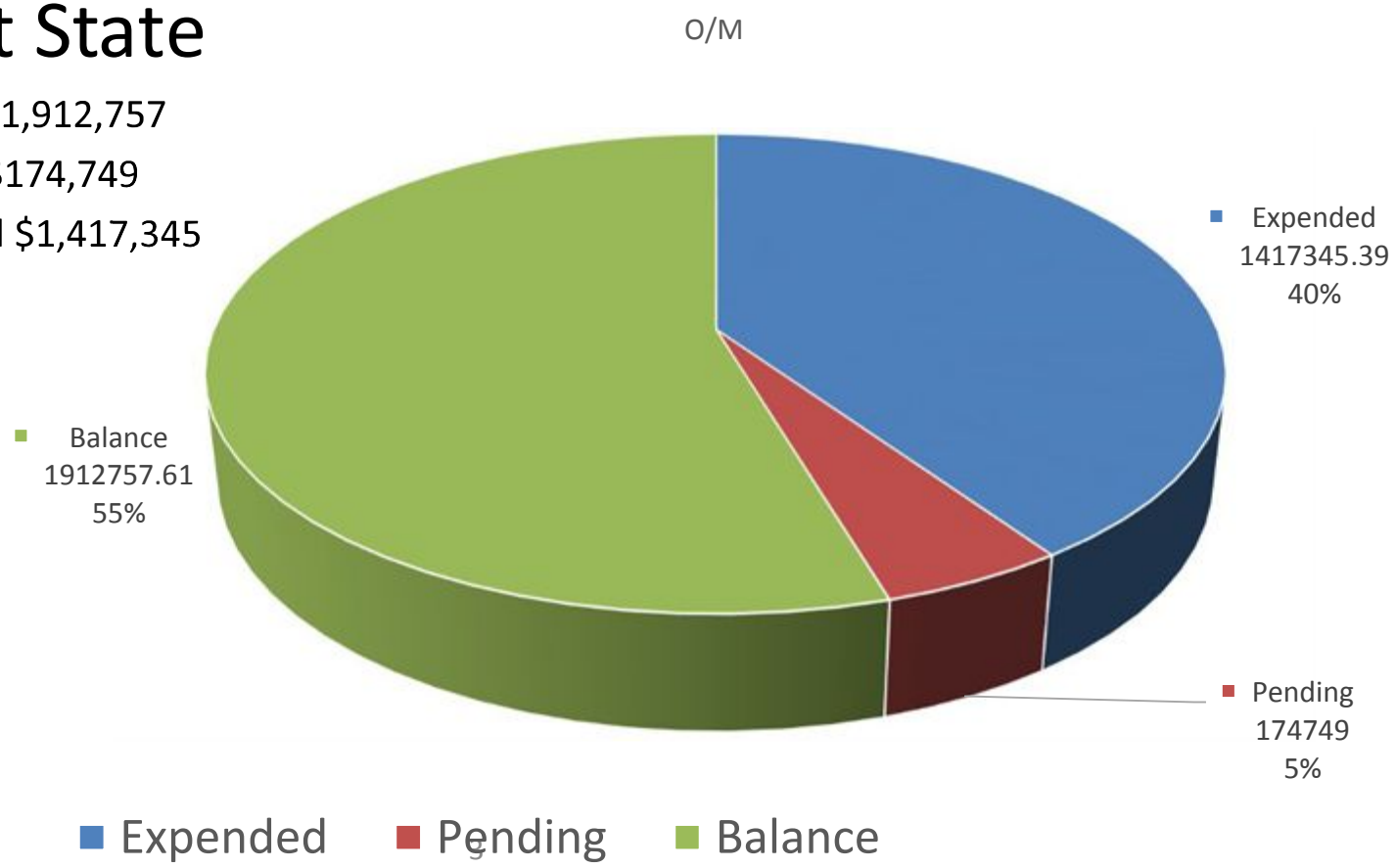
IT Revenue CIP Budget

- Revenue Funded
- Current State
  - Balance $946,709
  - Pending PO $1,157,800
  - Expended $1,553,130



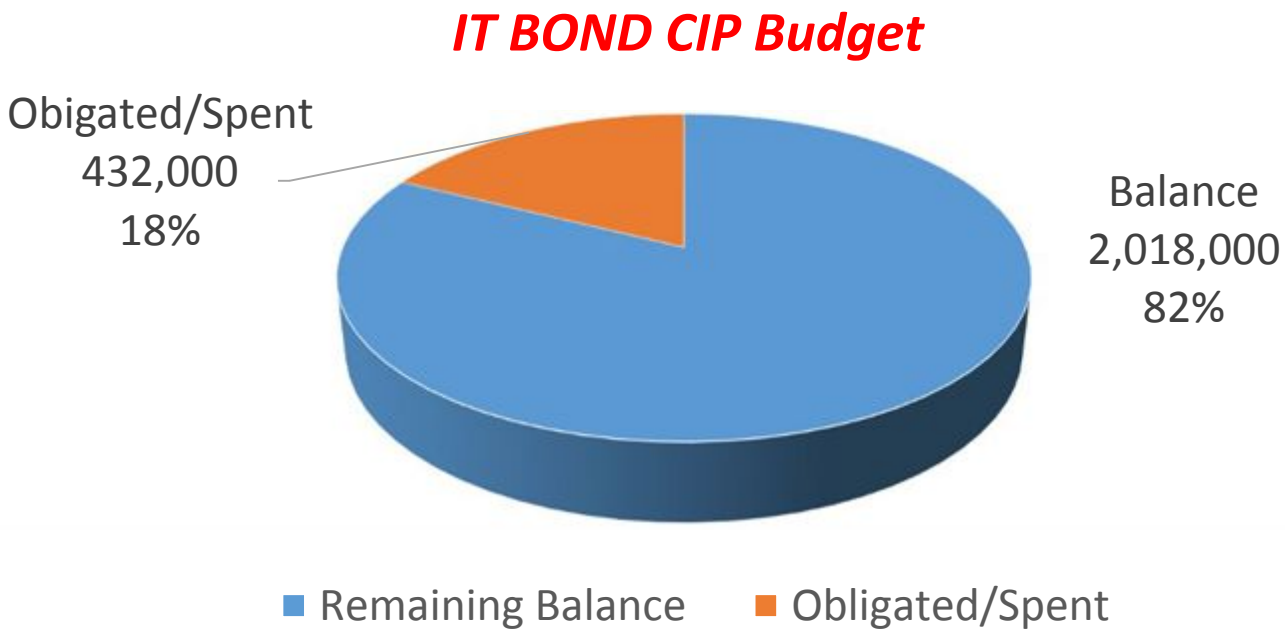
IT O&M Contract Budget

- Revenue Funded
- Current State
  - Balance $1,912,757
  - Pending $174,749
  - Expended $1,417,345



IT 2014 Bond Series CIP Budget

- Bond Funded
- Current State
  - Obligated/Spent - $432,000
  - Balance - $2,018,000



NET METERING
March 2018

	Quantity	Connected kVA
Completed	1,649	17,095
Pending	17	129
Grand Total	1,666	17,225

Rate Class and Technology

Technology	Schedule	Count	Total kW
Solar Energy	R - Residential	1,562	14,118.51
	J - Gen Service Dmd	32	1,646.51
	K - Small Gov Dmd	9	317.80
	L - Large Government	1	22.80
	P - Large Power	3	240.70
	G - Gen Serv Non-Dmd	33	666.47
	S - Sm Gov Non-Dmd	7	78.80
Wind Turbine	R - Residential	2	3.60
Grand Total		**1,649**	**17,095.19**

Projected FY 2018 Non-Fuel Revenue Loss

Customer Rate Class	Renewable Energy Capacity (kW)	Annual kWh Generated (@5.092 hours/day)*	Average Non-Fuel Yield $/kWh	Estimated Annual Revenue Loss
R	13,692.57	25,447,070.8	0.09293	$ 2,364,821.74
J	1,646.51	3,059,970.2	0.13112	$ 401,226.36
K	317.80	590,618.1	0.13932	$ 82,286.09
L	22.80	42,372.9	0.13525	$ 5,730.84
P	240.70	447,330.9	0.11539	$ 51,617.07
G	636.47	1,182,853.0	0.15084	$ 178,416.81
S	78.80	146,446.5	0.15334	$ 22,456.26
Grand Total	**16,635.65**	**30,916,662.4**		**$ 3,106,555.16**

*Estimated number of hours from NREL for Guam (13.4 degrees North and 144 degrees East).

Estimated Annual Revenue Loss

Description	Estimated kWh	*Total Estimated Cost
FY17	28,242,917	$ 2,828,834.71
FY16	21,867,383	$ 2,200,794.56
FY15	7,383,621	$ 856,921.27
FY14	3,137,212	$ 410,558.94
FY13	1,556,949	$ 178,996.00
FY12	494,672	$ 58,545.89
FY11	170,070	$ 18,177.13
FY10	98,830	$ 8,483.27
FY09	23,912	$ 1,656.87

*Source for effective yield rate from the Year End Revenue Reports (12 month Average Yield)

NET METERING
March 2018

Customer Count and Connected kW by Feeder

Status	Feeder	Net Metering Connected kW	Customer Count	% of Feeder Maximum kW	% of Feeder Minimum Daytime kW
Completed	P-005	235.47	22	13.7%	27.4%
	P-046	248.56	30	5.9%	8.9%
	P-088	603.78	67	10.0%	15.9%
	P-089	495.02	62	11.1%	26.6%
	P-111	90.00	2	1.7%	2.9%
	P-203	401.36	31	5.4%	15.2%
	P-204	120.58	15	2.6%	5.3%
	P-205	36.40	4	0.8%	1.3%
	P-210	486.79	50	9.5%	12.9%
	P-212	857.80	82	20.7%	53.7%
	P-213	295.33	11	11.3%	15.2%
	P-220	155.14	17	25.5%	80.0%
	P-221	501.28	53	11.4%	22.7%
	P-223	495.71	54	20.8%	29.7%
	P-240	58.55	2	0.9%	7.9%
	P-245	25.00	1	0.5%	1.1%
	P-250	937.54	93	14.4%	25.3%
	P-251	145.50	7	5.9%	9.0%
	P-253	466.61	50	10.4%	16.4%
	P-262	979.81	100	25.7%	61.7%
	P-270	313.67	26	6.2%	12.4%
	P-271	122.78	12	2.1%	4.4%
	P-272	228.03	17	8.9%	20.2%
	P-280	311.59	25	17.3%	32.2%
	P-281	189.70	4	6.8%	18.9%
	P-282	21.00	2	0.6%	1.7%
	P-283	520.80	49	14.4%	24.7%
	P-294	1,006.09	97	23.2%	46.0%
	P-301	199.26	22	14.1%	25.1%
	P-311	649.83	48	16.3%	27.9%
	P-322	823.99	89	10.9%	21.6%
	P-323	274.41	17	5.8%	18.0%
	P-330	550.37	69	10.1%	20.3%
	P-331	704.08	81	11.2%	18.1%
	P-332	384.46	46	6.8%	10.0%
	P-340	497.37	43	27.4%	60.4%
	P-087	1,048.00	114	26.7%	41.8%
	P-252	447.19	27	10.6%	21.6%
	P-321	257.16	25	4.6%	5.2%
	P-260	58.46	6	8.5%	29.2%
	P-067	68.25	10	0.8%	1.0%
	P-312	68.90	4	4.1%	4.8%
	P-206	18.33	2	1.9%	3.4%
	P-242	23.75	2	0.4%	1.1%
	P-310	181.57	8	6.6%	12.1%
	P-261	345.57	37	12.5%	21.4%
	P-201	45.00	6	1.3%	2.3%
	P-007	55.08	5	7.6%	16.2%
	P-244	18.00	1	1.0%	1.0%
	P-202	22.00	1	0.7%	1.6%
	P-341	4.30	1	0.4%	1.6%
Completed Total		**17,095.19**	**1,649**		
Pending	Pending	129.41	17	0.0%	0.0%
Pending Total		**129.41**	**17**	**0.0%**	**0.0%**
Grand Total		**17,224.60**	**1,666**		

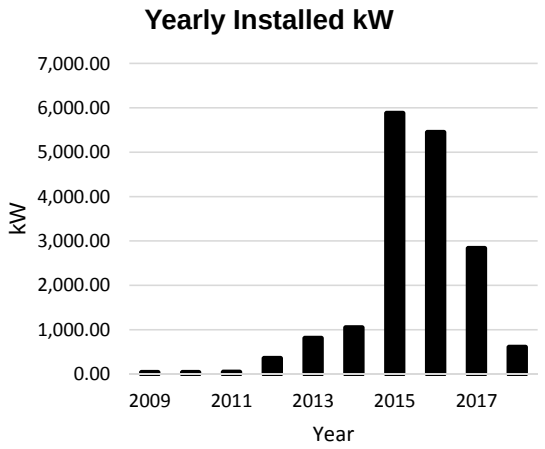
Feeders highlighted in red indicates renewable energy capacity has exceeded 25% of minimum daytime load.

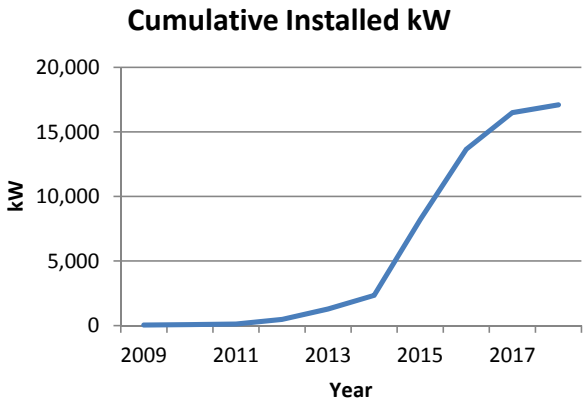
Feeders highlighted in yellow indicates renewable energy capacity has reached 15% to 24% of minimum daytime load.

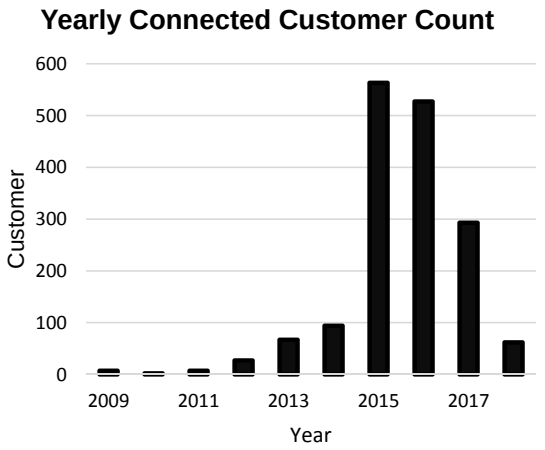
NET METERING
MARCH 2018

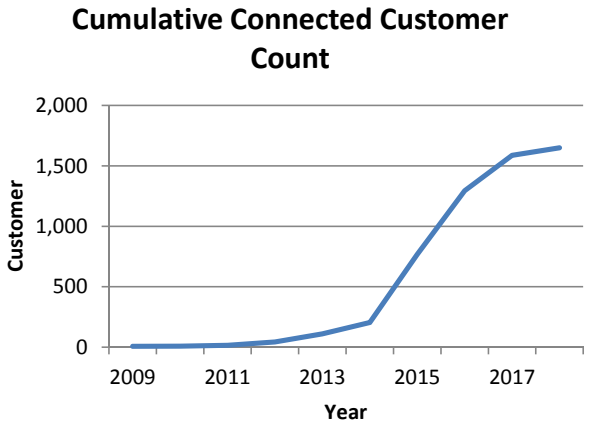
Installed kW by Year		
Year	Total	Cumulative
2009	39.46	39.46
2010	39.20	78.66
2011	43.61	122.27
2012	354.61	476.88
2013	808.45	1,285.33
2014	1,046.54	2,331.87
2015	5,875.55	8,207.42
2016	5,447.60	13,655.01
2017	2,833.25	16,488.26
2018	606.93	17,095.19
Grand Total	17,095.19	

Customer Count by Year		
Year	Total	Cumulative
2009	7	7
2010	2	9
2011	7	16
2012	27	43
2013	67	110
2014	94	204
2015	563	767
2016	527	1,294
2017	293	1,587
2018	62	1,649
Grand Total	1,649	









Production Data
31-Mar-18

SYSTEM												
YEAR	MONTH	# of DAYS	GROSS GENERATION	FUEL CONSUMPTION		GROSS FUEL EFFICIENCY (Target ≥ 15.99 kWh/gal)	COST per GROSS kWh	GROSS HEAT RATE (Baseloads) PUC Target less than 9,600	GROSS HEAT RATE (Peaking) PUC Target less than 13,600	Ave. MW	Peak MW
				(gal)	(bbl)						
2015	Oct	31	142,387,859	10,285,716	244,898	13.84	$ 0.1076	9,797.11	12,360.42	191	258
	Nov	30	140,522,664	9,871,651	235,039	14.23	$ 0.1185	9,731.04	12,945.82	195	248
	Dec	31	142,668,711	9,711,263	231,221	14.69	$ 0.0951	9,538.53	12,579.77	192	239
2016	Jan	31	138,191,484	9,446,289	224,912	14.63	$ 0.0676	9,662.86	13,413.90	186	233
	Feb	29	128,816,826	8,860,399	210,962	14.54	$ 0.0706	9,692.42	12,038.19	185	232
	Mar	31	139,991,832	9,522,573	226,728	14.70	$ 0.0732	9,172.99	11,597.00	188	239
	Apr	30	140,706,546	9,301,856	221,473	15.13	$ 0.0734	9,368.24	11,041.70	195	245
	May	31	152,815,417	9,751,521	232,179	15.67	$ 0.0681	9,459.10	11,388.57	205	254
	June	30	149,191,844	9,851,575	234,561	15.14	$ 0.0805	9,666.70	11,074.48	207	253
	July	31	151,248,202	10,443,028	248,644	14.48	$ 0.0920	9,477.71	12,208.87	203	258
	Aug	31	149,051,031	10,210,429	243,105	14.60	$ 0.0935	9,431.70	11,155.10	200	252
	Sept	30	142,069,206	9,829,773	234,042	14.45	$ 0.0956	9,509.75	11,393.73	197	256
	Oct	31	148,824,965	9,660,319	230,008	15.41	$ 0.0729	9,749.38	10,738.69	200	252
	Nov	30	145,293,562	9,427,636	224,468	15.41	$ 0.0901	9,714.47	10,786.30	202	252
	Dec	31	147,753,552	9,725,521	231,560	15.19	$ 0.0934	9,661.13	10,645.44	199	248
2017	Jan	31	142,960,618	9,226,278	219,673	15.49	$ 0.0913	9,620.29	10,965.71	192	234
	Feb	28	113,499,400	7,270,830	173,115	15.61	$ 0.0900	9,609.08	11,503.12	195	246
	Mar	31	149,402,182	9,664,440	230,106	15.46	$ 0.1014	9,719.35	11,440.45	201	246
	Apr	30	145,351,026	9,913,757	236,042	14.66	$ 0.1101	9,750.73	11,392.12	202	250
	May	31	157,573,506	11,065,930	263,475	14.24	$ 0.1170	10,067.14	11,323.20	212	256
	June	30	150,240,751	10,654,196	253,671	14.10	$ 0.1101	10,209.74	11,248.62	209	257
	July	31	150,580,050	10,622,458	252,916	14.18	$ 0.1169	9,544.54	11,837.62	202	252
	Aug	31	150,084,827	10,642,044	253,382	14.10	$ 0.1177	9,206.15	11,917.58	202	261
	Sept	30	143,990,208	10,309,304	245,460	13.97	$ 0.1152	9,541.20	13,107.05	200	254
	Oct	31	147,122,071	9,774,857	232,735	15.05	$ 0.1079	9,590.71	11,375.81	198	254
	Nov	30	147,284,781	9,783,352	232,937	15.05	$ 0.1061	9,563.85	11,257.17	205	253
	Dec	31	151,600,064	9,925,003	236,310	15.27	$ 0.1122	9,607.13	11,035.82	204	250
2018	Jan	31	147,704,057	9,563,641	227,706	15.44	$ 0.1078	9,755.40	11,029.21	199	246
	Feb	28	131,329,470	8,660,044	206,192	15.16	$ 0.1150	9,763.94	11,125.15	195	241
	Mar	31	144,370,550	9,889,634	235,467	14.60	$ 0.1345	9,183.77	11,853.09	194	244

SPORD (RAC) Project Status

As of 3/31/18

SUMMMARY WEEK

Mobile Workforce Management System

28966OR - Multistep Re-Bid GPA-023-17

Overall Status → 15%	G
Expected Completion Date: 1/11/19	

RESOURCES

1. Engineering
2. SPORD
3. IT
4. T&D
5. PSCC
6. Customer Services

Risks & Issues	G	Schedule	G	Scope	G	Financial	G

Updates & Accomplishments	Resource	Upcoming Tasks / Open Items
1. Price Proposal Opening- Clevest lowest Bidder ~$400K+ → 3/20/2018 2. Recommendation Memo for Award Sent to GM → 3/28/2018	1. GPA	1. Kick-off Meeting with Clevest Tentative → 4/25/2018

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE

Legend:

No corrective action required

Near-term corrective action required

Requires immediate attention

Substation Metering Communications

Overall Status → 50%	G
Meters = 47/60 Substation = 14/29 Expected Completion Date: 12/30/18	

RESOURCES

1. Engineering
2. PSCC
3. SPORD
4. IT

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Updates & Accomplishments

1. Completed Substations/Plants
   - I. Anigua
   - II. Barrigada
   - III. DanDan
   - IV. GAA
   - V. GIAT
   - VI. Macheche Sub / Macheche CT
   - VII. Pagat
   - VIII. San Vitores
   - IX. Talofofo
   - X. Tenjo Substation & Diesel Power Plant
   - XI. Tumon
   - XII. Umatac
   - XIII. Yigo Sub / Yigo CT
   - XIV. Pulantat → 2/27/2018

Resource	Upcoming Tasks / Open Items
1. GPA	1. Manengon Power Plant → 4/18/2018
2. GPA	2. Dededo CT → 5/16/18
3. GPA	3. Dededo Sub → 8/15/18
4. GPA	4. Andersen/Apra/Cold Storage/Marbo/Orote/Radio Barrigada/SRF
5. GPA	5. Talofofo CT provisioning →8/15/18
6. GPA	6. Create System Diagram → 6/30/18
7. SPORD	

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE
1. Navy Substation Cannot install	1. 1/1/14	1. Wait for Navy Approval	1. 7/30/18

No corrective action required | Near-term corrective action required | Requires immediate attention

Electric Grid Analysis Software

28959OR - Multistep Bid GPA-064-16

Overall Status → 95 %	G
Project – 95% **Expected Completion Date: 3/22/18**	

RESOURCES
1. SPORD 2. L&G

Risks & Issues	G	Schedule	G	Scope	G	Financial	G

Updates & Accomplishments	Resource	Upcoming Tasks / Open Items
1. Completed AGA Training → 3/20/2018	1. L&G 2. GPA 3. L&G	1. Install Module on CC Production Environment → 4/15/2018 2. Test Module on CC Production Environment → 4/23/2018 3. Test Module on AGA Production Environment → 4/22/2018

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE
1. Cannot Proceed to install module in CC production until Bing Maps Patch is resolved	1. 3/26/2018	1. Meet with LG management to resolve Bing Patch issue	1. 3/28/2018

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

ABB Router Wireless Network Expansion

Overall Status → 85%	G
Expected Completion Date: 11/9/2018	

RESOURCES

1. IT
2. ABB
3. SPORD

Risks & Issues	G	Schedule	G	Scope	G	Financial	G

Updates & Accomplishments

1. Completed - ABB Router RMA Field Router Assessment → 3/28/2018
2. First and Second Batch of RMA router submitted to ABB → 3/28/2018

Resource	Upcoming Tasks / Open Items
ABB	1. Routers Expected Delivery → 4/6/2018
GPA	2. New Router Installation Assessment → 4/18/2018
GPA	3. New Router Installation → 4/25/2018

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

Consulting Services for S G A E D S P T and E F S 30436OR – GPA-RFP-17-005

Overall Status → 5%	G
Expected Completion Date: 11/12/19	

RESOURCES

1. SPORD
2. PMM

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Updates & Accomplishments	Resource	Upcoming Tasks / Open Items
1. Evaluation Completed → 1/12/2018 2. Bidder Acknowledged non-qualification → 3/6/2018	1. SPORD 2. PMM	1. Update and Split RFP into different Tasks→ 4/23/2018 2. Rebid → 4/29/2018

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE

Legend:

No corrective action required

Near-term corrective action required

Requires immediate attention

Milsoft System Software Services
31470OR – GPA-RFP-18-003

Overall Status → 10%	G
Expected Completion Date: 9/28/18	

RESOURCES
1. SPORD
2. PMM

Risks & Issues	G	Schedule	G	Scope	G	Financial	G

Updates & Accomplishments	Resource	Upcoming Tasks / Open Items
1. Committee Evaluation Milsoft – Sole Bidder→ 3/14/2018 2. Recommendation Memo for Award Sent to GM → 3/28/2018	1. GPA	1. Negotiations → 4/24/2018

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

MV90 Services
31175OR – GPA-RFP-18-001

Overall Status → 10%	G
Expected Completion Date: 9/28/18	

RESOURCES

1. SPORD
2. PMM

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Updates & Accomplishments	Resource	Upcoming Tasks / Open Items
1. Committee Evaluation Itron – Sole Bidder→ 3/14/2018 2. Recommendation Memo for Award Sent to GM → 3/28/2018	1. PMM	1. Negotiations → 4/26/2018

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

Electric Vehicle Chargers
XXXXXOR - Multistep Bid GPA-XXX-18

Overall Status → 12%	G
Expected Completion Date: 9/30/18	

RESOURCES

1. SPORD
2. PMM

Risks & Issues	G	Schedule	G	Scope	G	Financial	G

Updates & Accomplishments	Resource	Upcoming Tasks / Open Items
1. Draft Bid 95% → 3/28/18	1. SPORD 2. PMM	1. Complete Bid → 4/18/18 2. Bid Announcement → 4/24/18

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

MILSOFT DISPATCH (OMS)

Overall Status → 50%	G
Expected Completion Date: 6/30/18	

RESOURCES
1. SPORD 2. Milsoft

Risks & Issues	G	Schedule	G	Scope	G	Financial	G

Updates & Accomplishments	Resource	Upcoming Tasks / Open Items
1. Server Hard Setup Completed → 3/8/2018	1. IT 2. Milsoft 3. SPORD	1. Milsoft OS and Database Software arrive → 4/3/2018 2. Milsoft System Installation → 4/28/2018 3. Update Outage Description Info → 5/4/2018

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

MILSOFT WINDMIL (ENGINEERING ANALYSIS)

Overall Status → 50%	G
Expected Completion Date: 6/30/18	

RESOURCES

1. SPORD
2. Milsoft
3. ENGINEERING

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Updates & Accomplishments	Resource	Upcoming Tasks / Open Items
1. Milsoft and Engineering Meeting Completed → 2/7/2018	1. SPORD	1. Distribution Engineering Training → 4/16/2018

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

GPWA SCADA

23344OP - Multistep Bid GPA-066-16

Overall Status → 20%	G
Expected Completion Date: 10/1/2018	

RESOURCES

1. SPORD
2. Benson
3. IT
4. PSCC

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Updates & Accomplishments (March 2018)

1. GPA submitted to Benson the following points:
→Anigua, Agana, Umatac, Yigo, DanDan, Talofofo, Piti, Apra, Barrigada, Tenjo, Tumon, Andersen, Cabras, Dededo CT, GAA, GIAT, Piti, Cold Storage, Dededo, Orote, San Vitores, Macheche, Marbo, Tamuning 115, Tamuning, SRF, Automatic Fuel Switching, MET and Harmon → 3/31/2018
2. GPWA Brocade SANs switches approved → 3/26/2018
3. Factory Attendee list finalized → 3/16/2018
4. Server Equipment Delivery to Taiwan → 3/31/2018

Resource	Upcoming Tasks / Open Items
1. Benson	1. Factory Acceptance Test Agenda and Procedures → 4/10/2018
2. GPWA	2. Factory Acceptance Test in Taiwan → 5/3/2018

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE

Legend:

G No corrective action required

Y Near-term corrective action required

R Requires immediate attention

T&D Vegetation Management

Percent Completion (per Sector Feeder)

Note: Feeders priority listing based on outages due to vegetation

Northern Sector

Feeder	Esitmated Distance (LF)	Distance Trimmed by T&D Crew (LF)	Distance Trimmed by Contractor (LF)	% Completion
P332	6,830	5,900	9,561	226%
P322	7,265	500	4,800	73%
P330	2,635		12,599	478%
P087	4,245	4,200		99%
P046	1,245			
P321	4,045			
P088	3,310			
P089	670			
P331	1,925			
P323	2,810			
P271	50	1,405		2810%
P270	300	1,595		532%
P245	1,660	1,200		72%
P272	150	430		287%
P111	500	475		95%
P244	920	940		102%
P240	430	430		100%
P242	290	160		55%
Total	39,280	17,235	26,960	113%

Central Sector

Feeder	Esitmated Distance (LF)	Distance Trimmed by T&D Crew (LF)	Distance Trimmed by Contractor (LF)	% Completion
P250	33,290	12,890	3,850	50%
P212	17,560			
P253	15,240			
P283	2,230		7,000	314%
P210	10,120			
P280	1,675			
P311	1,360			
P007	778			
P211	6,050			
P202	420			
P251	280			
P213	3,500			
P252	1,520		4,586	302%
P201	100			
P203	370			
P282	525			
P310	370			
P205	350			
P206	140			
P204	530			
P312	200			
P281	525			
P400	150			
Total	97,283	12,890	15,436	29%

Southern Sector

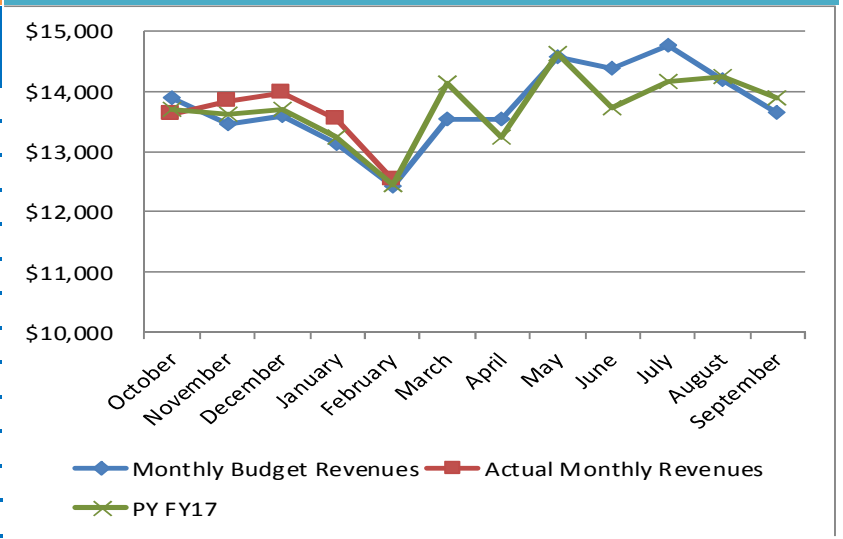
Feeder	Esitmated Distance (LF)	Distance Trimmed by T&D Crew (LF)	Distance Trimmed by Contractor (LF)	% Completion
P294	9,430	45	22,801	242%
P261	4,930		9,939	202%
P340	13,240	455	27,655	212%
P262	5,185	195	16,595	324%
P221	1,570	485		31%
P223	2,500	1,095		44%
P341	880	50	450	57%
P301	19,915	120	1,675	9%
P005	990			0%
P220	1,250	70		6%
P260	12,630			0%
Total	72,520	2,515	79,115	113%

February 2018 Monthly Financial Highlight

Base Through February 28, 2018

$000	Monthly Budget Revenues	Actual Monthly Revenues	Variance		PY FY17	CY vs PY Variance	
October	$ 13,873	$ 13,625	$ (248)	↑	$ 13,702	$ (77)	↑
November	13,451	13,827	$ 376	↑	13,622	$ 205	↑
December	13,599	13,968	$ 369	↑	13,695	$ 273	↑
January	13,114	13,534	$ 420	↑	13,220	$ 314	↑
February	12,422	12,522	$ 100	↑	12,454	$ 68	↑
March	13,534				14,123		
April	13,525				13,224		
May	14,568				14,617		
June	14,386				13,722		
July	14,759				14,151		
August	14,183				14,244		
September	13,651				13,874		
Total	**$ 165,064**	**$ 67,476**	**$ 1,017**		**$ 164,649**	**$ 782**	

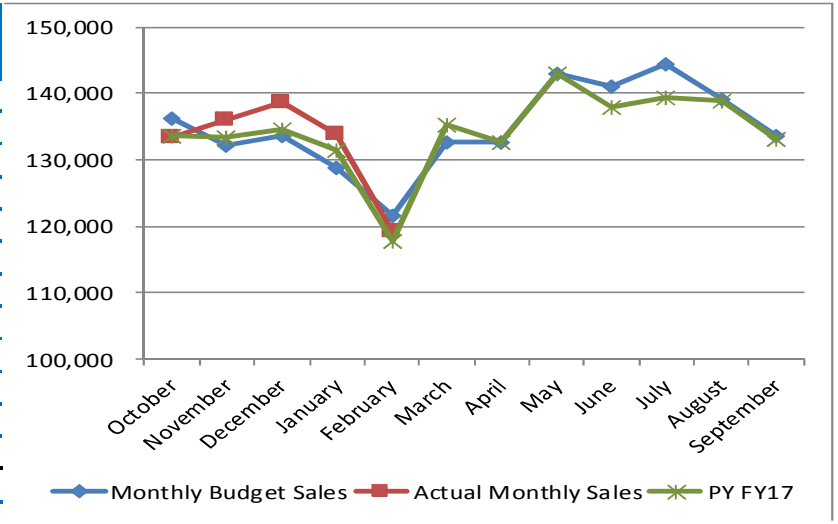
Base Rate Revenue $000



MWH Sales Through February 28, 2018

mwh	Monthly Budget Sales	Actual Monthly Sales	Variance		PY FY17	CY vs PY Variance	
October	136,219	133,262	(2,957)	↑	133,620	(358)	↑
November	132,132	136,044	3,912	↑	133,235	2,809	↑
December	133,625	138,587	4,962	↑	134,634	3,953	↑
January	128,711	133,882	5,170	↑	131,461	2,421	↑
February	121,668	119,241	(2,426)	↑	117,617	1,624	↑
March	132,587				135,131		
April	132,532				132,587		
May	142,956				143,013		
June	141,064				137,777		
July	144,404				139,227		
August	139,093				138,797		
September	133,658				132,993		
Total	**1,618,650**	**661,016**	**8,661**		**1,610,093**	**10,449**	

MWh Sales

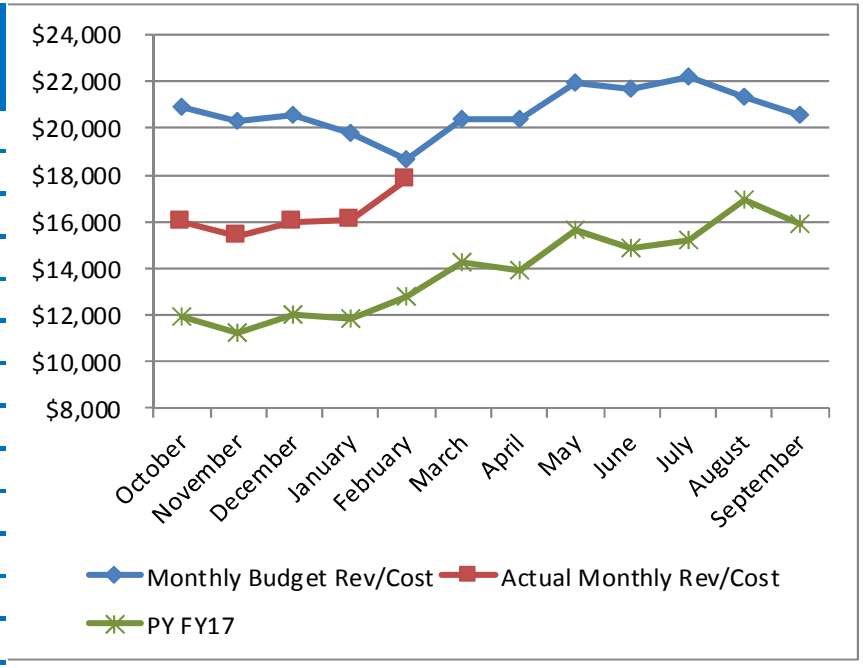


February 2018 Monthly Financial Highlight (Continued)

Fuel Revenue Through February 28, 2018

$000	Monthly Budget Rev/Cost	Actual Monthly Rev/Cost	Variance		PY FY17	CY vs PY Variance	
October	$ 20,928	$ 15,936	$ (4,992)	↑	$ 11,894	$ 4,042	↑
November	20,300	15,400	$ (4,899)	↑	11,215	$ 4,185	↑
December	20,529	16,007	$ (4,522)	↑	12,036	$ 3,971	↑
January	19,774	16,036	$ (3,738)	↑	11,867	$ 4,169	↑
February	18,692	17,763	(930)	↑	12,751	5,012	↑
March	20,370				14,248		
April	20,361				13,940		
May	21,963				15,596		
June	21,672				14,859		
July	22,185				15,175		
August	21,369				16,947		
September	20,534				15,895		
Total	**$ 248,677**	**$ 81,142**	**$(19,081)**		**$ 166,425**	**$ 21,378**	

Fuel Revenue/ Cost $000

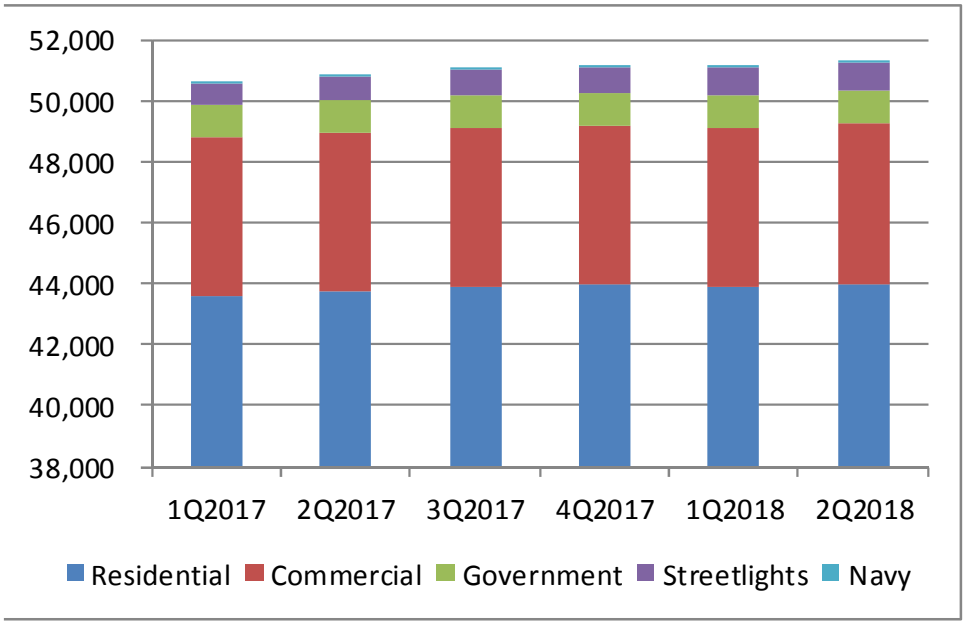


- Under recovery of LEAC - $14.4 million

February 2018 Monthly Financial Highlight (Continued)

Through February 28, 2018						
	1Q2017	2Q2017	3Q2017	4Q2017	1Q2018	2Q2018
Residential	43,582	43,718	43,902	43,991	43,898	43,995
Commercial	5,235	5,236	5,252	5,226	5,231	5,264
Government	1,071	1,077	1,071	1,073	1,076	1,082
Streetlights	722	800	824	823	908	948
Navy	1	1	1	1	1	1
	50,611	50,832	51,050	51,114	51,114	51,290

Number of Customers

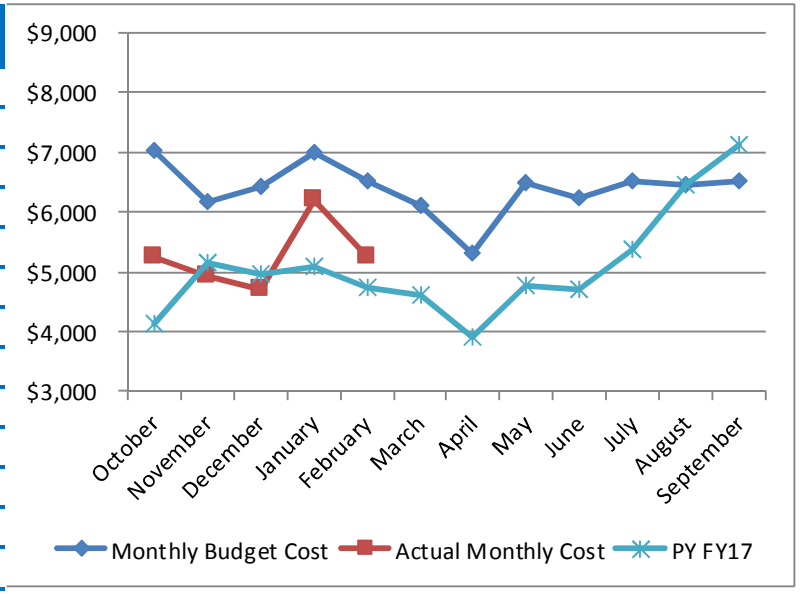


February 2018 Monthly Financial Highlight (Continued)

O&M CostThrough February 28, 2018

$000	Monthly Budget Cost	Actual Monthly Cost	Variance		PY FY17	CY vs PY Variance	
October	$ 7,040	5,239	1,801	↑	4,135	(1,103)	↑
November	6,182	4,941	1,240	↑	5,158	217	↑
December	6,428	4,694	1,735	↑	4,966	273	↑
January	7,001	6,204	797	↑	5,092	(1,112)	↑
February	6,522	5,252	1,270	↑	4,748	(504)	↑
March	6,091				4,612		
April	5,320				3,892		
May	6,495				4,772		
June	6,221				4,702		
July	6,508				5,385		
August	6,462				6,445		
September	6,526				7,138		
Total	**$ 76,796**	**$ 26,330**	**$ 6,844**		**$ 61,045**	**$ (2,230)**	

O&M Cost $000



- DSC greater than target of 1.75

Debt service coverage (DSC) calculation-indenti	2012	2013	2014	2015	2016	2017	YTD Feb. 2018
Senior lien coverage	2.13	3.36	3.16	3.62	3.35	2.81	2.82
Aggregate debt service coverage	1.35	1.88	1.98	2.62	3.35	2.81	2.82
Debt service coverage (DSC) calculation-IPP as O&M							
Senior lien coverage	1.29	2.16	2.25	2.56	2.52	1.95	1.92
Aggregate debt service coverage	0.82	1.21	1.41	1.85	2.52	1.95	1.92

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

GUAM POWER AUTHORITY
FINANCIAL STATEMENT OVERVIEW
February 2018

Attached are the financial statements and supporting schedules for the month and fiscal year ended February 28, 2018.

Summary
The increase in net assets for the month ended was $0.5 million as compared to the anticipated net decrease of $1.3 million projected at the beginning of the year. The total kWh sales for the month were 1.99% less than projected and non-fuel revenues were $0.1 million more than the estimated amount. O & M expenses for the month were $5.2 million which was $1.3 million under our projections for the month. Other expenses for the month such as interest expense, IPP costs, (net of interest income and other income) totaled to $4.0 million, which was right in line with the projected amounts. There were no other significant departures from the budget during the period.

Analysis

Description	Previous Month	Current Month	Target
Quick Ratio	2.05	2.08	2
Days in Receivables	39	38	52
Days in Payables	25	19	30
LEAC (Over)/Under Recovery Balance -YTD	$16,775,982	$14,390,645	$16,146,466
T&D Losses	5.00%	4.92%	<7.00%
Debt Service Coverage	2.05	1.92	1.75
Long-term equity ratio	13%	13%	30 – 40%
Days in Cash	152	131	60

The Quick Ratio has been a challenge for GPA historically. However, over the last two fiscal years, the influx of cash has continued to improve this ratio. GPA has current obligations of approximately $66 million and approximately $136 million in cash and current receivables. Debt Service Coverage ratio is calculated using the methodology in use before the Fiscal Year 2002 change in accounting practice.

Financial Statement
February 2018
Significant Assumptions

The significant assumptions in the financial statements are as follows:

- Accrual cutoff procedures were performed at month end
- An inventory valuation is performed at year-end only
- Accounts Receivable includes accruals based on prior months' usage.

Prepared by:	Reviewed by:	Approved by:
Lenora M. Sanz	John J.E. Kim	John M. Benavente, P.E.
Controller	Chief Financial Officer	General Manager

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)
Statements of Net Position
February 28, 2018 and September 30, 2017

	Unaudited February 2018	Unaudited September 2017	Change from Sept 30 2017
ASSETS AND DEFERRED OUTFLOWS OF RESOURCES			
Current assets:			
Cash and cash equivalents:			
Held by trustee for restricted purposes:			
Interest and principal funds	12,538,504	18,061,879	(5,523,375)
Bond indenture funds	53,326,423	56,907,535	(3,581,112)
Held by Guam Power Authority:			
Bond indenture funds	99,283,884	132,579,889	(33,296,005)
Self insurance fund-restricted	19,254,240	19,251,372	2,868
Energy sense fund	636,727	1,074,491	(437,764)
Total cash and cash equivalents	185,039,778	227,875,166	(42,835,388)
Accounts receivable, net	34,660,723	35,603,289	(942,566)
Total current receivables	34,660,723	35,603,289	(942,566)
Materials and supplies inventory	12,803,243	11,989,745	813,498
Fuel inventory	50,757,324	52,387,369	(1,630,045)
Prepaid expenses	6,333,586	682,814	5,650,772
Total current assets	289,594,654	328,538,383	(38,943,729)
Utility plant, at cost:			
Electric plant in service	1,040,081,918	1,037,419,517	2,662,401
Construction work in progress	23,068,257	18,382,414	4,685,843
Total	1,063,150,175	1,055,801,931	7,348,244
Less: Accumulated depreciation	(580,127,860)	(565,144,900)	(14,982,960)
Total utility plant	483,022,315	490,657,031	(7,634,716)
Other non-current assets:			
Investment - bond reserve funds held by trustee	48,528,276	48,576,863	(48,587)
Unamortized debt issuance costs	2,669,117	4,267,305	(1,598,188)
Total other non-current assets	51,197,393	52,844,168	(1,646,775)
Total assets	823,814,362	872,039,582	(48,225,220)
Deferred outflow of resources:			
Deferred fuel revenue	14,390,645	16,751,048	(2,360,403)
Unamortized loss on debt refunding	28,697,798	11,076,064	17,621,734
Pension	8,168,718	8,168,718	0
Unamortized forward delivery contract costs	570,958	637,358	(66,400)
Total deferred outflows of resources	51,828,119	36,633,188	15,194,931
	875,642,481	908,672,770	(33,030,289)

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)
Statement of Net Position, Continued
February 28, 2018 and September 30, 2017

	Unaudited February 2018	Unaudited September 2017	Change from Sept 30 2017
LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION			
Current liabilities:			
Current maturities of long-term debt	1,630,000	1,780,000	(150,000)
Current obligations under capital leases	16,949,416	16,949,416	0
Accounts payable			
Operations	21,038,280	56,671,898	(35,633,619)
Others	3,299,365	5,425,336	(2,125,970)
Accrued payroll and employees' benefits	1,253,309	1,546,860	(293,551)
Current portion of employees' annual leave	2,432,670	2,324,895	107,775
Interest payable	10,556,891	15,065,830	(4,508,939)
Customer deposits	8,360,991	8,503,783	(142,792)
Total current liabilities	65,520,922	108,268,018	(42,747,096)
Regulatory liabilities:			
Provision for self insurance	19,550,977	19,550,977	0
Total regulatory liabilities	19,550,977	19,550,977	0
Long term debt, net of current maturities	607,045,420	590,568,862	16,476,558
Obligations under capital leases, net of current portion	20,709,136	30,343,708	(9,634,572)
Net Pension liability	62,618,085	64,596,253	(1,978,168)
DCRS sick leave liability	4,008,397	4,008,397	0
Employees' annual leave net of current portion	806,762	806,762	0
Customer advances for construction	380,726	369,180	11,546
Total liabilities	780,640,425	818,512,157	(37,871,732)
Deferred inflows of resources:			
Unearned forward delivery contract revenue	2,092,730	2,336,071	(243,341)
Pension	732,788	732,788	0
Total deferred inflows of resources	2,825,518	3,068,859	(243,341)
Commitments and contigencies			
Net Position:			
Net investment in capital assets	(61,993,542)	(43,869,737)	(18,123,805)
Restricted	10,703,845	15,232,832	(4,528,987)
Unrestricted	143,466,234	115,728,658	27,737,576
Total net position	92,176,537	87,091,754	5,084,783
	875,642,481	908,672,770	(33,030,289)

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM
Statement of Revenues, Expenses and Changes in Net Assets

	February 28			Five Months Ended February 28		
	Unaudited 2018	Unaudited 2017	% of change Inc (dec)	Unaudited 2018	Unaudited 2017	% of change Inc (dec)
Revenues						
Sales of electricity	30,284,040	25,204,958	20	148,618,393	126,457,287	18
Miscellaneous	259,934	(134,257)	(294)	911,572	825,006	10
Total	30,543,974	25,070,701	22	149,529,965	127,282,293	17
Bad debt expense	(86,583)	(83,333)	4	(432,917)	(416,667)	4
Total revenues	30,457,391	24,987,368	22	149,097,048	126,865,626	18
Operating and maintenance expenses						
Production fuel	17,762,535	12,751,030	39	81,142,235	59,763,817	36
Other production	1,212,307	1,456,290	(17)	6,361,949	6,359,170	0
	18,974,842	14,207,320	34	87,504,184	66,122,987	32
Depreciation	2,893,871	4,798,542	(40)	16,132,990	18,814,427	(14)
Energy conversion cost	1,384,140	1,709,160	(19)	7,721,286	7,774,483	(1)
Transmission & distribution	1,248,333	1,065,646	17	5,387,644	5,197,063	4
Customer accounting	378,898	327,577	16	2,051,016	1,745,636	17
Administrative & general	2,325,529	1,949,107	19	12,096,351	10,381,411	17
Total operating and maintenance expenses	27,205,613	24,057,352	13	130,893,471	110,036,007	19
Operating income	3,251,778	930,016	250	18,203,577	16,829,619	8
Other income (expenses)						
Interest income	(443,559)	69,206	(741)	1,460,300	388,945	275
Interest expense and amortization	(2,649,935)	(2,876,235)	(8)	(13,482,485)	(14,156,589)	(5)
Bond issuance costs	67,434	76,827	(12)	(2,175,437)	384,135	(666)
Assets written off	0	0		0	0	
Allowance for funds used during construction	196,517	314,008	(37)	1,217,558	1,601,114	(24)
Other expense	(4,193)	(12,600)	0	(213,631)	(25,473)	739
Total other income (expenses)	(2,833,736)	(2,428,794)	17	(13,193,695)	(11,807,868)	12
Income (loss) before capital contributions	418,042	(1,498,778)	(128)	5,009,882	5,021,751	(0)
Capital contributions	70,107	0	0	74,902	11,488	552
Increase (decrease) in net assets	488,149	(1,498,778)	(133)	5,084,784	5,033,239	1
Total net assets at beginning of period (restated)	91,688,389	83,592,346	10	87,091,754	77,060,329	13
Total net assets at end of period	92,176,538	82,093,568	12	92,176,538	82,093,568	12

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)
Statements of Cash Flows
Period Ended February 28, 2018

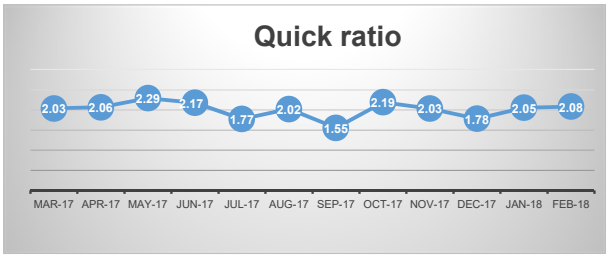
	Month Ended 2/28/2018	YTD Ended 2/28/2018
Increase(decrease) in cash and cash equivalents		
Cash flows from operating activities:		
Cash received from customers	$31,674,425	$ 150,044,598
Cash payments to suppliers and employees for goods and services	37,724,767	175,445,857
Net cash provided by operating activities	($6,050,342)	(25,401,259)
Cash flows from investing activities:		
Interest and dividends on investments and bank accounts	(443,559)	1,460,300
Net cash provided by investing activities	(443,559)	1,460,300
Cash flows from non-capital financing activities		
Interest paid on short term debt	(5,808)	(31,309)
Provision for self insurance funds	(516)	(2,868)
Net cash provided by noncapital financing activities	(6,324)	(34,177)
Cash flows from capital and related financing activities		
Acquisition of utility plant	(1,582,758)	(8,498,273)
Principal paid on bonds and other long-term debt	-	(3,550,000)
Interest paid on bonds(net of capitalized interest)	196,517	(15,158,442)
Interest paid on capital lease obligations	(284,850)	(1,584,115)
Interest & principal funds held by trustee	(2,552,837)	5,523,375
Reserve funds held by trustee	(22,127)	48,587
Bond funds held by trustee	636,006	3,581,112
Principal payment on capital lease obligations	(1,859,247)	(9,634,572)
Grant from DOI/FEMA	70,107	74,902
Debt issuance costs/loss on defeasance	(333,577)	19,876,558
Net cash provided by (used in) capital and related financing activities	(5,732,766)	(9,320,868)
Net (decrease) increase in cash and cash equivalents	(12,232,991.28)	(33,296,005)
Cash and cash equivalents, beginning	111,516,876	132,579,889
Cash and cash equivalents-Funds held by GPA, February 28, 2018	**$ 99,283,884**	**$ 99,283,884**

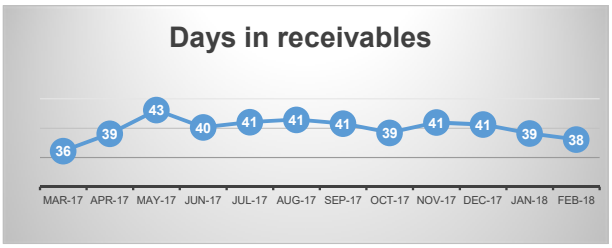
GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)
Statements of Cash Flows, continued
Period Ended February 28, 2018

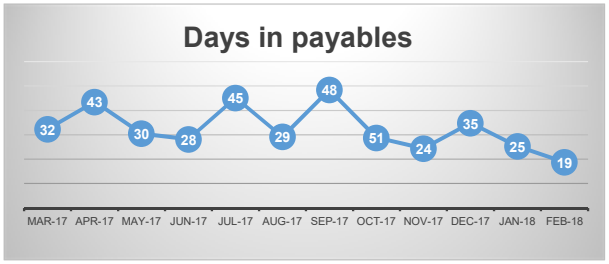
	Month Ended 2/28/2018	YTD Ended 2/28/2018
Reconciliation of operating earnings to net cash provided by operating activities:		
Operating earnings net of depreciation expense and excluding interest income	$3,251,778	$18,203,577
Adjustments to reconcile operating earnings to net cash provided by operating activities:		
Depreciation and amortization	2,893,871	16,132,990
Other expense	63,241	(2,389,068)
(Increase) decrease in assets:		
Accounts receivable	1,242,391	942,566
Materials and inventory	(130,220)	(813,498)
Fuel inventory	(6,861,269)	1,630,045
Prepaid expenses	367,808	(5,650,772)
Unamortized debt issuance cost	23,667	1,598,188
Deferred fuel revenue	2,385,337	2,360,403
Unamortized loss on debt refunding	229,166	(17,621,734)
Unamortized forward delivery contract costs	13,280	66,400
Increase (decrease) in liabilities:		
Accounts payable-operations	(7,000,838)	(35,633,619)
Accounts payable-others	(1,860,848)	(1,688,206)
Accrued payroll and employees' benefits	(334,427)	(293,551)
Net pension liability	(225,249)	(1,978,168)
Employees' annual leave	23,869	107,775
Customers deposits	(88,521)	(142,792)
Customer advances for construction	5,290	11,546
Unearned forward delivery contract revenue	(48,668)	(243,341)
Net cash provided by operating activities	**$ (6,050,342)**	**$ (25,401,259)**

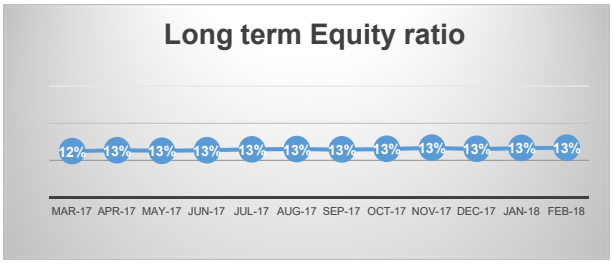
Guam Power Authority
Financial Analysis
February 28, 2018

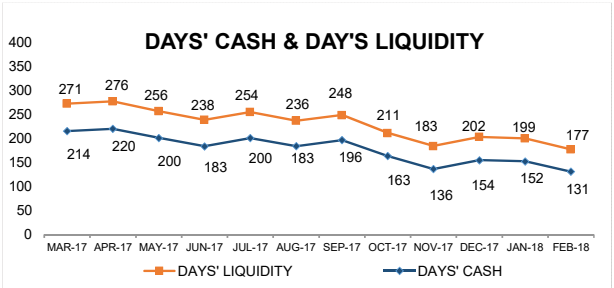
	Quick Ratio	
A	Reserve Funds Held by GPA	99,283,884
B	Current Accounts Receivable	36,834,410
C	Total Cash and A/R (A+B)	136,118,294
D	Total Current Liabilities	65,520,922
E	**Quick Ratio (F/G)**	**2.08**
	Days in Receivables	
A	FY 18 Moving 12 Mos.-Actual	353,235,160
B	No. of Days	365
C	Average Revenues per day (A/B)	967,768
D	Current Accounts Receivable	36,834,410
E	**Days in Receivables (D/C)**	**38**
	Days in Payables	
A	FY 18 Moving 12 Months-Actual	472,289,648
B	No. of Days	365
C	Average Payables per day (A/B)	1,293,944
D	Current Accounts Payables	24,337,644
E	**Days in Payables (D/C)**	**19**
	Long term equity ratio	
A	Equity	$ 92,176,537.00
B	Total Long term Liability	$ 595,824,083.00
C	Total Equity and liability	$ 688,000,620.00
D	**Long term equity ratio (A/C)**	**13%**
	Days cash on hand	
A	Unresctricted cash & cash equivalents	99,284
B	No. of Days -YTD	151
C	A x B	14,991,866
D	Total Operating expenses excluding depreciation	114,760
E	**Days cash on hand**	**131**
	Days' Liquidity	
A	Unresctricted cash , cash equivalents & revolving Credit	134,284
B	No. of Days -YTD	151
C	A x B	20,276,866
D	Total Operating expenses excluding depreciation	114,760
E	**Days liquidity**	**177**











GPA 302

GUAM POWER AUTHORITY
ACCRUED REVENUE
FEBRUARY 2018

	FOR THE MONTH ENDED FEBRUARY		FIFTH MONTH ENDED FEBRUARY	
	2018	2017	2018	2017
KWH SALES:				
Residential	36,809,815	35,936,337	207,254,376	199,658,670
Small Gen. Non Demand	6,154,115	6,497,885	34,082,288	33,827,007
Small Gen. Demand	14,164,319	13,890,958	77,157,122	77,006,358
Large General	23,674,407	23,699,969	130,253,282	129,429,842
Independent Power Producer	28,976	67,797	282,194	434,198
Private St. Lights	32,408	32,325	168,787	210,613
Sub-total	80,864,040	80,125,270	449,198,050	440,566,688
Government Service:				
Small Non Demand	1,119,571	996,603	6,146,591	5,518,121
Small Demand	7,377,578	7,382,544	39,926,301	40,267,151
Large	5,905,830	5,654,767	32,002,581	30,422,936
Street Lighting	669,689	707,509	3,565,091	4,136,157
Sub-total	15,072,669	14,741,423	81,640,563	80,344,365
Total	95,936,708	94,866,692	530,838,612	520,911,054
U. S. Navy	23,304,608	22,750,741	130,177,731	129,656,413
GRAND TOTAL	119,241,316	117,617,433	661,016,343	650,567,466
REVENUE:				
Residential	$ 9,633,432	$ 7,648,484	$ 46,040,029	$ 37,617,654
Small Gen. Non Demand	$ 1,869,658	$ 1,650,380	$ 8,958,947	$ 7,761,068
Small Gen. Demand	$ 4,006,949	$ 3,310,305	$ 18,947,946	$ 16,345,334
Large General	$ 6,086,686	$ 5,066,026	$ 29,511,932	$ 25,098,043
Independent Power Producer	$ 7,969	$ 15,045	$ 63,044	$ 88,881
Private St. Lights	$ 25,733	$ 24,793	$ 127,140	$ 131,618
Sub-total	$ 21,630,428	$ 17,715,032	$ 103,649,038	$ 87,042,598
Government Service:				
Small Non Demand	$ 335,126	$ 258,835	$ 1,677,018	$ 1,339,117
Small Demand	$ 2,094,220	$ 1,819,228	$ 10,268,634	$ 9,072,491
Large	$ 1,628,297	$ 1,331,459	$ 7,937,307	$ 6,611,727
Street Lighting	$ 439,995	$ 447,721	$ 2,149,230	$ 2,297,401
Sub-total	$ 4,497,638	$ 3,857,244	$ 22,032,189	$ 19,320,736
Total	$ 26,128,065	$ 21,572,276	$ 125,681,227	$ 106,363,333
U. S. Navy	$ 4,155,974	$ 3,632,683	$ 22,937,166	$ 20,093,955
GRAND TOTAL	$ 30,284,040	$ 25,204,958	$ 148,618,393	$ 126,457,288
NUMBER OF CUSTOMERS:				
Residential	43,995	43,647	43,992	43,604
Small Gen. Non Demand	4,153	4,119	4,138	4,119
Small Gen. Demand	991	992	983	988
Large General	118	116	118	116
Independent Power Producer	2	3	528	523
Private St. Lights	527	527	3	3
Sub-total	49,786	49,404	49,762	49,353
Government Service:				
Small Non Demand	684	682	681	683
Small Demand	351	347	351	346
Large	47	45	47	45
Street Lighting	421	271	389	199
Sub-total	1,503	1,345	1,467	1,273
Total	51,289	50,749	51,229	50,626
US Navy	1	1	1	1
	51,290	50,750	51,230	50,627

GPA403

GUAM POWER AUTHORITY
ACCRUED REVENUE

	TWELVE MONTHS ENDING	FEBRUARY 2018	JANUARY 2018	DECEMBER 2017	NOVEMBER 2017	OCTOBER 2017	SEPTEMBER 2017	AUGUST 2017	JULY 2017	JUNE 2017	MAY 2017	APRIL 2017	MARCH 2017
KWH SALES:													
Residential	513,931,308	36,809,815	42,067,765	43,307,944	43,386,853	41,682,000	41,491,015	44,434,719	45,094,364	45,699,553	46,940,445	42,105,054	40,911,781
Small General Non Demand	84,154,981	6,154,115	6,844,713	6,956,278	7,060,041	7,067,142	7,022,092	7,347,440	7,087,373	7,546,692	7,375,238	6,926,353	6,767,505
Small General Demand	190,201,689	14,164,319	15,562,774	15,848,505	15,789,397	15,792,127	15,509,408	16,488,257	15,839,125	16,853,701	16,415,592	15,638,177	16,300,307
Large General	315,396,670	23,674,407	26,242,185	27,485,887	26,267,661	26,583,141	25,432,034	27,038,013	27,119,633	26,399,095	27,209,329	25,771,823	26,173,462
Private Outdoor Lighting	450,582	32,408	32,358	35,129	35,042	33,851	76,532	33,324	35,412	36,199	31,956	34,275	34,097
Independent Power Producer	809,819	28,976	27,011	40,140	93,823	92,244	34,586	57,754	82,800	93,447	97,039	78,158	83,841
Sub-Total	1,104,945,049	80,864,040	90,776,805	93,673,883	92,632,817	91,250,505	89,565,666	95,399,508	95,258,706	96,628,687	98,069,599	90,553,840	90,270,993
Government Service:													
Small Non Demand	14,530,715	1,119,571	1,248,251	1,272,026	1,255,131	1,251,612	1,246,106	1,243,487	1,254,979	1,154,625	1,242,514	1,118,738	1,123,675
Small Demand	96,537,751	7,377,578	8,102,981	8,063,549	8,098,974	8,283,218	8,084,368	8,147,386	7,962,644	7,847,651	8,507,100	7,890,703	8,171,598
Large	76,477,613	5,905,830	6,315,619	6,812,255	6,550,623	6,418,254	6,493,449	6,520,699	6,219,351	6,043,966	6,712,069	6,145,212	6,340,287
Street Lighting (Agencies)	8,943,540	669,689	716,067	697,921	668,464	812,949	697,002	877,130	638,971	843,815	771,506	720,057	829,968
Sub-Total	196,489,620	15,072,669	16,382,918	16,845,750	16,573,193	16,766,033	16,520,925	16,788,702	16,075,944	15,890,058	17,233,190	15,874,710	16,465,529
Total	1,301,434,669	95,936,708	107,159,724	110,519,633	109,206,010	108,016,537	106,086,591	112,188,210	111,334,651	112,518,745	115,302,789	106,428,550	106,736,522
U.S. Navy	319,107,219	23,304,608	26,722,147	28,067,673	26,837,883	25,245,420	26,906,320	26,608,721	27,892,205	25,258,344	27,710,121	26,158,807	28,394,970
Grand Total	1,620,541,888	119,241,316	133,881,870	138,587,306	136,043,893	133,261,957	132,992,911	138,796,930	139,226,856	137,777,089	143,012,910	132,587,357	135,131,492
REVENUE:													
Residential	$ 109,024,353	$ 9,633,432	$ 8,985,179	$ 9,238,911	$ 9,263,463	$ 8,919,044	$ 8,887,320	$ 9,762,810	$ 9,056,344	$ 9,109,920	$ 9,464,539	$ 8,447,732	$ 8,255,658
Small General Non Demand	$ 21,238,611	$ 1,869,658	$ 1,741,922	$ 1,765,223	$ 1,789,263	$ 1,792,881	$ 1,783,997	$ 1,902,660	$ 1,709,931	$ 1,790,832	$ 1,782,557	$ 1,661,818	$ 1,647,869
Small General Demand	$ 44,672,129	$ 4,006,949	$ 3,714,258	$ 3,769,415	$ 3,699,298	$ 3,758,026	$ 3,692,273	$ 3,964,157	$ 3,527,191	$ 3,704,661	$ 3,828,208	$ 3,333,389	$ 3,674,304
Large General	$ 68,591,949	$ 6,086,686	$ 5,762,313	$ 6,067,740	$ 5,793,817	$ 5,801,375	$ 5,643,059	$ 6,028,539	$ 5,589,484	$ 5,443,855	$ 5,621,797	$ 5,382,999	$ 5,370,285
Private Outdoor Lighting	$ 302,479	$ 25,733	$ 25,133	$ 25,553	$ 25,471	$ 25,250	$ 25,361	$ 25,094	$ 25,099	$ 25,329	$ 24,432	$ 25,014	$ 25,012
Independent Power Producer	$ 185,194	$ 7,969	$ 6,029	$ 9,249	$ 20,053	$ 19,744	$ 17,076	$ 14,804	$ 17,270	$ 19,157	$ 20,386	$ 16,006	$ 17,451
Sub-Total	$ 244,014,715	$ 21,630,428	$ 20,234,834	$ 20,876,091	$ 20,591,366	$ 20,316,320	$ 20,049,087	$ 21,698,063	$ 19,925,320	$ 20,093,753	$ 20,741,919	$ 18,866,957	$ 18,990,578
Government Service:													
Small Non Demand	$ 3,850,909	$ 335,126	$ 332,434	$ 341,017	$ 334,963	$ 333,478	$ 333,079	$ 332,325	$ 319,135	$ 297,031	$ 313,817	$ 289,279	$ 289,226
Small Demand	$ 24,026,222	$ 2,094,220	$ 2,016,922	$ 2,046,340	$ 2,043,720	$ 2,067,433	$ 2,050,292	$ 2,052,253	$ 1,907,628	$ 1,885,990	$ 1,985,615	$ 1,919,140	$ 1,956,670
Large	$ 18,304,945	$ 1,628,297	$ 1,525,771	$ 1,652,805	$ 1,583,988	$ 1,546,446	$ 1,575,080	$ 1,573,445	$ 1,424,292	$ 1,393,449	$ 1,572,201	$ 1,374,482	$ 1,454,690
Street Lighting (Agencies)	$ 5,290,525	$ 439,995	$ 427,482	$ 416,951	$ 419,351	$ 445,451	$ 436,808	$ 516,047	$ 418,012	$ 451,933	$ 439,403	$ 431,759	$ 447,332
Sub-Total	$ 51,472,601	$ 4,497,638	$ 4,302,609	$ 4,457,113	$ 4,382,022	$ 4,392,807	$ 4,395,259	$ 4,474,070	$ 4,069,066	$ 4,028,403	$ 4,311,036	$ 4,014,660	$ 4,147,918
Total	$ 295,487,315	$ 26,128,065	$ 24,537,443	$ 25,333,204	$ 24,973,388	$ 24,709,127	$ 24,444,346	$ 26,172,133	$ 23,994,386	$ 24,122,156	$ 25,052,955	$ 22,881,617	$ 23,138,496
U.S. Navy	$ 57,747,845	$ 4,155,974	$ 5,033,103	$ 4,642,130	$ 4,254,065	$ 4,851,893	$ 5,325,383	$ 5,019,382	$ 5,331,702	$ 4,458,411	$ 5,160,265	$ 4,283,028	$ 5,232,508
Grand Total	$ 353,235,160	$ 30,284,040	$ 29,570,546	$ 29,975,334	$ 29,227,453	$ 29,561,020	$ 29,769,728	$ 31,191,516	$ 29,326,087	$ 28,580,567	$ 30,213,220	$ 27,164,645	$ 28,371,004
NUMBER OF CUSTOMERS:													
Residential	43,918	43,995	44,119	43,898	43,996	43,950	43,991	43,969	43,866	43,902	43,803	43,807	43,718
Small General Non Demand	4,135	4,153	4,142	4,129	4,131	4,134	4,127	4,134	4,131	4,145	4,130	4,137	4,128
Small General Demand	985	991	981	981	982	982	980	981	984	988	988	988	989
Large General	117	118	119	118	117	119	116	115	116	116	117	115	116
Private Outdoor Lighting	528	527	527	530	527	530	526	527	526	527	530	528	528
Independent Power Producer	3	2	2	3	3	3	3	3	3	3	4	4	3
Sub-Total	49,685	49,786	49,890	49,659	49,756	49,718	49,743	49,729	49,626	49,681	49,572	49,579	49,482
Government Service:													
Small Non Demand	680	684	686	679	678	676	675	678	678	677	684	684	684
Small Demand	350	351	350	350	354	351	353	351	352	349	346	347	348
Large	46	47	47	47	47	46	45	45	45	45	45	45	45
Street Lighting (Agencies)	332	421	389	378	378	377	297	297	297	297	293	290	272
Sub-Total	1,408	1,503	1,472	1,454	1,457	1,450	1,370	1,371	1,372	1,368	1,368	1,366	1,349
Total	51,093	51,289	51,362	51,113	51,213	51,168	51,113	51,100	50,998	51,049	50,940	50,945	50,831
U.S. Navy	1	1	1	1	1	1	1	1	1	1	1	1	1
Grand Total	51,094	51,290	51,363	51,114	51,214	51,169	51,114	51,101	50,999	51,050	50,941	50,946	50,832

GPA303

GUAM POWER AUTHORITY
ACCRUED REVENUE
FEBRUARY 2018

RATE	NUMBER OF CUSTOMERS	KWH SALES	TOTAL REVENUE AMOUNT	TOTAL REVENUE C/KWH	BASE RATE REVENUE C/KWH	BASE RATE REVENUE AMOUNT	AVERAGE PER CUSTOMER KWH	AVERAGE PER CUSTOMER REVENUE	NON-FUEL C/KWH	NON-FUEL AMOUNT	FUEL C/KWH	FUEL AMOUNT
Month												
R Residential	43,995	36,809,815	$ 9,633,432	$ 26.17	$ 26.17	$ 9,633,432	837	$ 219	$ 9.70	$ 3,571,959	$ 16.47	$ 6,061,473
G Small Gen. Non Demand	4,153	6,154,115	$ 1,869,658	$ 30.38	$ 30.38	$ 1,869,658	1,482	$ 450	$ 13.88	$ 854,318	$ 16.50	$ 1,015,340
J Small Gen. Demand	991	14,164,319	$ 4,006,949	$ 28.29	$ 28.29	$ 4,006,949	14,293	$ 4,043	$ 12.17	$ 1,724,241	$ 16.12	$ 2,282,708
P Large General	118	23,674,407	$ 6,086,686	$ 25.71	$ 25.71	$ 6,086,686	200,631	$ 51,582	$ 10.71	$ 2,535,100	$ 15.00	$ 3,551,586
I Independent Power Producer	2	28,976	$ 7,969	$ 27.50	$ 27.50	$ 7,969	14,488	$ 3,984	$ 13.29	$ 3,850	$ 14.21	$ 4,118
H Private St. Lights	527	32,408	$ 25,733	$ 79.40	$ 79.40	$ 25,733	61	$ 49	$ 64.68	$ 20,961	$ 14.73	$ 4,773
Sub-Total	49,786	80,864,040	$ 21,630,428	$ 26.75	$ 26.75	$ 21,630,428	1,624	$ 434	$ 10.77	$ 8,710,429	$ 15.98	$ 12,919,999
Government Service:												
S Small Non Demand	684	1,119,571	$ 335,126	$ 29.93	$ 29.93	$ 335,126	1,637	$ 490	$ 15.20	$ 170,214	$ 14.73	$ 164,912
K Small Demand	351	7,377,578	$ 2,094,220	$ 28.39	$ 28.39	$ 2,094,220	21,019	$ 5,966	$ 13.66	$ 1,007,753	$ 14.73	$ 1,086,466
L Large	47	5,905,830	$ 1,628,297	$ 27.57	$ 27.57	$ 1,628,297	125,656	$ 34,645	$ 13.02	$ 768,942	$ 14.55	$ 859,355
F Street Lighting (Agencies)	421	669,689	$ 439,995	$ 65.70	$ 65.70	$ 439,995	1,591	$ 1,045	$ 50.97	$ 341,373	$ 14.73	$ 98,622
Sub-Total	1,503	15,072,669	$ 4,497,638	$ 29.84	$ 29.84	$ 4,497,638	10,028	$ 2,992	$ 15.18	$ 2,288,282	$ 14.66	$ 2,209,355
Civilian Customers	51,289	95,936,708	$ 26,128,065	$ 27.23	$ 27.23	$ 26,128,065	1,871	$ 509	$ 11.46	$ 10,998,711	$ 15.77	$ 15,129,354
U.S. Navy	1	23,304,608	$ 4,155,974	$ 17.83	$ 17.83	$ 4,155,974			$ 6.53	$ 1,522,793	$ 11.30	$ 2,633,181
TOTAL	51,290	119,241,316	$ 30,284,040	$ 25.40	$ 25.40	$ 30,284,040	2,325	$ 590	$ 10.50	$ 12,521,504	$ 14.90	$ 17,762,536
Five Months Ended February 2018												
R Residential	43,992	207,254,376	$ 46,040,029	$ 22.21	$ 22.21	$ 46,040,029	4,711	$ 1,047	$ 9.61	$ 19,914,164	$ 12.61	$ 26,125,866
G Small Gen. Non Demand	4,138	34,082,288	$ 8,958,947	$ 26.29	$ 26.29	$ 8,958,947	8,237	$ 2,165	$ 13.66	$ 4,655,958	$ 12.63	$ 4,302,989
J Small Gen. Demand	983	77,157,122	$ 18,947,946	$ 24.56	$ 24.56	$ 18,947,946	78,460	$ 19,268	$ 11.99	$ 9,252,332	$ 12.57	$ 9,695,613
P Large General	118	130,253,282	$ 29,511,932	$ 22.66	$ 22.66	$ 29,511,932	1,101,974	$ 249,678	$ 10.35	$ 13,477,504	$ 12.31	$ 16,034,429
I Independent Power Producer	528	282,194	$ 63,044	$ -	$ 22.34	$ 63,044	534	$ 119	$ 10.67	$ 30,118	$ 11.67	$ 32,925
H Private St. Lights	3	168,787	$ 127,140	$ 75.33	$ 75.33	$ 127,140	64,918	$ 48,900	$ 62.99	$ 106,313	$ 12.34	$ 20,827
Sub-Total	49,762	449,198,050	$ 103,649,038	$ 23.07	$ 23.07	$ 103,649,038	9,027	$ 2,083	$ 10.56	$ 47,436,389	$ 12.51	$ 56,212,649
Government Service:												
S Small Non Demand	681	6,146,591	$ 1,677,018	$ 27.28	$ 27.28	$ 1,677,018	9,031	$ 2,464	$ 14.97	$ 920,335	$ 12.31	$ 756,682
K Small Demand	351	39,926,301	$ 10,268,634	$ 25.72	$ 25.72	$ 10,268,634	113,685	$ 29,239	$ 13.40	$ 5,350,597	$ 12.32	$ 4,918,037
L Large	47	32,002,581	$ 7,937,307	$ 24.80	$ 24.80	$ 7,937,307	683,816	$ 169,601	$ 12.63	$ 4,043,227	$ 12.17	$ 3,894,080
F Street Lighting (Agencies)	389	3,565,091	$ 2,149,230	$ 60.29	$ 60.29	$ 2,149,230	9,174	$ 5,531	$ 47.96	$ 1,709,767	$ 12.33	$ 439,463
Sub-Total	1,467	81,640,563	$ 22,032,189	$ 26.99	$ 26.99	$ 22,032,189	55,644	$ 15,016	$ 14.73	$ 12,023,927	$ 12.26	$ 10,008,262
Civilian Customers	51,229	530,838,612	$ 125,681,227		$	125,681,227	10,362	$ 2,453	$	59,460,316	$	66,220,911
U.S. Navy	1	130,177,731	$ 22,937,166	$ 17.62	$ 17.62	$ 22,937,166			$ 6.16	$ 8,015,843	$ 11.46	$ 14,921,323
TOTAL	51,230	661,016,343	$ 148,618,393	$ 22.48	$ 22.48	$ 148,618,393	12,903	$ 2,901	$ 10.21	$ 67,476,159	$ 12.28	$ 81,142,234
Twelve Months Ended February 2018												
R Residential	43,918	513,931,308	$ 109,024,353	$ 21.21	$ 21.21	$ 109,024,353	11,702	$ 2,482	$ 9.60	$ 49,317,073	$ 11.62	$ 59,707,280
G Small Gen. Non Demand	4,135	84,154,981	$ 21,238,611	$ 25.24	$ 25.24	$ 21,238,611	20,351	$ 5,136	$ 13.60	$ 11,448,897	$ 11.63	$ 9,789,714
J Small Gen. Demand	985	190,201,689	$ 44,672,129	$ 23.49	$ 23.49	$ 44,672,129	193,180	$ 45,372	$ 11.89	$ 22,617,464	$ 11.60	$ 22,054,665
P Large General	117	315,396,670	$ 68,591,949	$ 21.75	$ 21.75	$ 68,591,949	2,699,544	$ 587,092	$ 10.31	$ 32,512,451	$ 11.44	$ 36,079,498
I Independent Power Producer	3	809,819	$ 185,194	$ 22.87	$ 22.87	$ 185,194	269,940	$ 61,731	$ 11.46	$ 92,825	$ 11.41	$ 92,369
H Private St. Lights	528	450,582	$ 302,479	$ 67.13	$ 67.13	$ 302,479	854	$ 573	$ 56.73	$ 255,595	$ 10.41	$ 46,883
Sub-Total	49,685	1,104,945,049	$ 244,014,715	$ 22.08	$ 22.08	$ 244,014,715	22,239	$ 4,911	$ 10.52	$ 116,244,306	$ 11.56	$ 127,770,409
Government Service:												
S Small Non Demand	680	14,530,715	$ 3,850,909	$ 26.50	$ 26.50	$ 3,850,909	21,361	$ 5,661	$ 15.02	$ 2,181,930	$ 11.49	$ 1,668,979
K Small Demand	350	96,537,751	$ 24,026,222	$ 24.89	$ 24.89	$ 24,026,222	275,691	$ 68,614	$ 13.42	$ 12,955,488	$ 11.47	$ 11,070,734
L Large	46	76,477,613	$ 18,304,945	$ 23.94	$ 23.94	$ 18,304,945	1,671,642	$ 400,108	$ 12.59	$ 9,631,806	$ 11.34	$ 8,673,139
F Street Lighting (Agencies)	332	8,943,540	$ 5,290,525	$ 59.15	$ 59.15	$ 5,290,525	26,925	$ 15,927	$ 47.70	$ 4,266,111	$ 11.45	$ 1,024,414
Sub-Total	1,408	196,489,620	$ 51,472,601	$ 26.20	$ 26.20	$ 51,472,601	139,519	$ 36,549	$ 14.78	$ 29,035,335	$ 11.42	$ 22,437,266
Civilian Customers	51,093	1,301,434,669	$ 295,487,315	$ 22.70	$ 22.70	$ 295,487,315	25,472	$ 41,460	$ 11.16	$ 145,279,641	$ 11.54	$ 150,207,675
U.S. Navy	1	319,107,219	$ 57,747,845	$ 18.10	$ 18.10	$ 57,747,845			$ 6.32	$ 20,152,453	$ 11.78	$ 37,595,392
TOTAL	51,094	1,620,541,888	$ 353,235,160	$ 21.80	$ 21.80	$ 353,235,160	31,717	$ 6,913	$ 10.21	$ 165,432,094	$ 11.59	$ 187,803,066

GPA-318 **ENERGY ACCOUNT** **FOR INTERNAL USE ONLY**

318Feb18 **FY 2018 Versus FY 2017**

	February 2018		February 2017		Y T D 2018		Y T D 2017		MOVING TWELVE MONTHS	
Gross Generation										
Number of days in Period	**28**		**28**		**151**		**31**		**365**	
Peak demand	**241**		**246**		**254**		**252**		**261**	
Date	**02/12/18**		**02/25/17**		**10/30/17**		**11/29/16**		**08/01/17**	
	KWH	**% change**	**KWH**	**% change**	**KWH**	**% change**	**KWH**	**% change**	**KWH**	**% change**
Energy Account:										
Kilowatt hours GPA:										
Cabras 1 & 2	58,479,000		58,596,000		316,294,000		328,374,000		682,913,000	
Cabras No. 3	0		0		0		0		0	
Cabras No. 4	0		0		0		0		0	
MEC (ENRON) Piti 8 (IPP)	22,095,400		26,974,100		129,721,000		139,541,400		309,813,300	
MEC (ENRON) Piti 9 (IPP)	24,733,700		27,929,300		137,758,900		134,194,400		311,626,800	
TEMES Piti 7 (IPP)	145,493		1,987,690		5,529,245		3,922,984		48,587,629	
Tanguisson 2	0		0		0		0		0	
Tanguisson 1	0		0		0		0		0	
Diesels/CT's & Others:							0			
MDI 10MW	0		409,341		21,414		1,937,833		341,208	
NRG Solar Dandan	3,958,838		3,071,715		18,639,217		16,913,229		44,916,790	
Dededo CT #1	99,340		0		483,740		0		7,607,040	
Dededo CT #2	172,700		11,464		250,000		11,464		6,071,128	
Macheche CT	2,531,287		4,375,860		17,366,989		9,445,103		63,489,443	
Yigo CT (Leased)	2,335,631		1,149,462		13,512,827		13,113,869		41,774,904	
Tenjo	3,076,410		2,723,340		16,140,580		10,786,160		50,811,900	
Talofofo 10 MW	1,402,530		949,150		5,029,410		3,549,180		20,251,620	
Aggreko	11,990,124		3,045,998		64,396,071		53,609,938		184,232,672	
Wind Turbine*	39,425		44,679		180,214		267,324		300,085	
Orote	0		0		0		0		0	
Marbo	0		0		0		0		0	
	131,059,877		**131,268,099**		**725,323,607**		**715,666,884**		**1,772,737,519**	
Ratio to last year		99.84		101.85		101.35		**102.60**		**101.94**
Station use	4,968,404		5,381,525		27,836,668		28,900,995		64,830,669	
Ratio to Gross generation		3.79		4.10		3.84		4.04		**3.66**
Net send out	126,091,473		125,886,573		697,486,939		686,765,890		1,707,906,850	
Ratio to last year		100.16		101.50		101.56		**102.73**		**102.01**
KWH deliveries:										
Sales to Navy (@34.5kv)	**23,304,608**		**22,750,741**		**130,177,731**		**129,656,414**		**319,107,220**	
Ratio to last year		102.43		92.07		100.40		**98.78**		**100.83**
GPA-metered	**102,786,865**		**103,135,832**		**567,309,208**		**557,109,476**		**1,388,799,630**	
Ratio to last year		99.66		103.85		101.83		**103.70**		**102.29**
Power factor adj.	0		0		0		0		0	
Adjusted	102,786,865		103,135,832		567,309,208		557,109,476		1,388,799,630	
GPA KWH Accountability:										
Sales to civilian customers-										
accrual basis	**95,936,708**		**94,866,692**		**530,838,612**		**520,911,054**		**1,301,434,670**	
Ratio to last year		101.13		101.17		101.91		**103.43**		**102.19**
GPA use-KWH	303,811		233,091		1,518,073		1,265,936		3,396,374	
Unaccounted For	6,546,346		8,036,049		34,952,523		34,932,485		83,968,585	
Ratio to deliveries		6.37		7.79		6.16		6.27		6.05
Ratio to Gross Generation		4.99		6.12		4.82		4.88		4.74
Ratio to Net Send Out		5.19		6.38		5.01		5.09		4.92

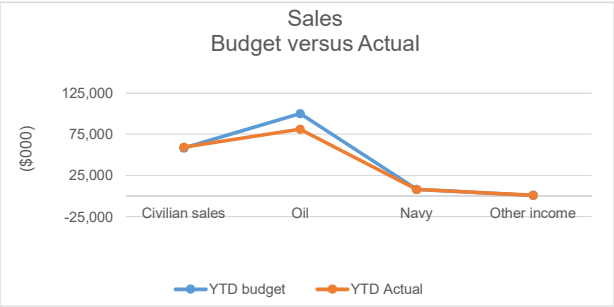
GPA-317Feb18

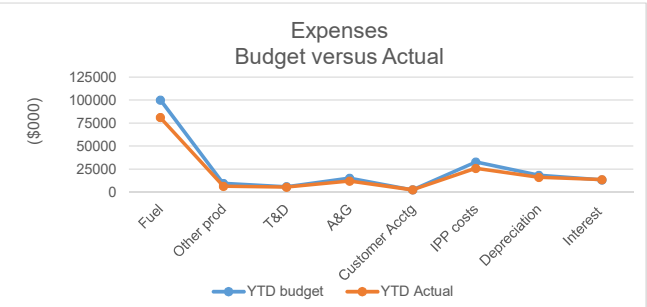
Guam Power Authority
Fuel Consumption
FY 2018

Description	February 2018 BARRELS	February 2018 AMOUNT	YEAR-TO-DATE BARRELS	YEAR-TO-DATE AMOUNT	MOVING 12 MONTHS BARREL S	MOVING 12 MONTHS AMOUNT
FUEL FURNISHED:						
NAVY:						
Diesel	0	0	0	0	0	0
Low Sulfur	0	0	0	0	0	0
	0	**0**	**0**	**0**	**0**	**0**
GPA:						
RFO	157,224	$9,975,593	809,142	$ 49,087,024	1,531,038	$ 90,472,264
Diesel	42,475	$3,853,402	239,410	$ 19,360,827	853,438	$ 63,885,113
Low Sulfur	4,893	$292,279	71,573	$ 4,384,312	451,213	$ 26,633,503
Deferred Fuel Costs	0	$2,385,338	0	$ 2,360,403	0	$ (9,388,192)
Fuel Adjustments	0	-$9,884		$ (19,006)	0	$ (382,263)
Fuel Handling Costs	0	$1,265,807	0	$ 5,968,674	0	$ 16,582,775
	204,592	**$17,762,535**	**1,120,125**	**$ 81,142,235**	**2,835,689**	**$ 187,803,200**
IWPS:						
GPA RFO	157,224	$9,975,593	809,142	$ 49,087,024	1,531,038	$ 90,472,264
Diesel	42,475	$3,853,402	239,410	$ 19,360,827	853,438	$ 63,885,113
Low Sulfur	4,893	$292,279	71,573	$ 4,384,312	451,213	$ 26,633,503
Deferred Fuel Costs	0	$2,385,338	0	$ 2,360,403	0	$ (9,388,192)
Fuel Variance	0	-$9,884	0	$ (19,006)		$ (382,263)
Fuel Handling Costs	0	$1,265,807	0	$ 5,968,674	0	$ 16,582,775
	204,592	**$17,762,535**	**1,120,125**	**$ 81,142,235**	**2,835,689**	**$ 187,803,200**
AVERAGE COST/Bbl.						
GPA RFO		**$63.45**		**$60.67**		**$59.09**
Diesel		**$90.72**		**$80.87**		**$74.86**
Low Sulfur		**$59.73**		**$61.26**		**$59.03**
AS BURNED						
Cabras 1 & 2						
RFO	95,183	$ 6,039,181	473,411	$ 28,812,563	966,176	$ 57,056,523
Low Sulfur	3,607	$ 213,231	46,008	$ 2,813,011	180,009	$ 10,634,399
Diesel	5	$ 355	366	$ 24,519	2,360	$ 159,103
	98,795	$ 6,252,767	519,784	$ 31,650,092	1,148,545	$ 67,850,025
Cabras 3 & 4						
RFO	0	$ -	0	$ -	0	$ -
Low Sulfur	0	$ -	0	$ -	0	$ -
Diesel	0	$ -	0	$ -	0	$ -
	0	$ -	0	$ -	0	$ -
MEC (Piti Units 8&9)						
RFO	62,041	$ 3,936,412	335,731	$ 20,274,461	564,862	$ 33,415,742
Low Sulfur	1,286	$ 79,049	25,565	$ 1,571,301	271,204	$ 15,999,104
Diesel	0	$ -	38	$ 2,127	77	$ 4,322
	63,327	$ 4,015,461	361,334	$ 21,847,889	836,143	$ 49,419,168
Diesel & CT's - GPA:						
MDI Dsl	0	$ -	31	$ 2,013	541	$ 36,221
Macheche CT	6,120	$ 549,055	38,315	$ 3,044,970	138,620	$ 10,350,240
Yigo CT	5,048	$ 455,903	28,008	$ 2,275,839	86,416	$ 6,493,818
Talofofo 10 MW	2,446	$ 223,034	8,683	$ 728,815	34,497	$ 2,594,842
Aggreko	22,174	$ 2,031,090	118,220	$ 9,582,251	335,410	$ 25,207,056
Tenjo	5,293	$ 488,097	27,687	$ 2,322,309	88,266	$ 6,830,333
TEMES (IPP)	440	$ 32,512	15,341	$ 1,158,265	124,091	$ 9,043,219
GWA Generators	22	$ 2,528	283	$ 33,295	684	$ 80,465
	42,470	$ 3,853,047	239,007	$ 19,334,181	851,000	$ 63,721,688
Deferred Fuel Costs	0	$ 2,385,338		$ 2,360,403		$ (9,388,192)
Adjustment		$ (9,884)		$ (19,006)		$ (382,263)
Fuel Handling Costs	0	$ 1,265,807		$ 5,968,674		$ 16,582,775
TOTAL	**204,593**	**$ 17,762,535**	**1,120,125**	**$ 81,142,235**	**2,835,689**	**$ 187,803,200**

Statement of operations
Comparison-Budget versus Actual
For the month and year to date ended February 28, 2018

	Budget	Actual February-18	Variance	YTD Budget	YTD Actual	Variance
KwH Sales-Civilian	97,101	95,937	1,164	521,867	530,858	-8,991
Non-fuel yield	$ 0.106092	$ 0.114648	$ (0.008556)	$ 0.111902	$ 0.112009	$ (0.000107)
KwH Sales-Navy	24,567	23,305	1,262	130,487	129,767	720
Non-fuel yield	$ 0.061774	$ 0.065351	$ (0.003577)	$ 0.061774	$ 0.061765	$ 0.000010
Operating revenue						
Civilian sales	10,904	10,999	(95)	58,398	59,461	(1,063)
Oil	18,692	17,763	929	100,223	81,142	19,081
Navy	1,518	1,523	(5)	8,061	8,015	46
Other income	169	260	(91)	846	912	(66)
	31,283	30,545	738	167,527	149,530	17,998
Bad debts expense	87	87	0	433	433	0
Total operating revenues	31,196	30,458	738	167,094	149,097	17,998
Operating expenses:						
Production fuel	18,692	17,763	930	100,223	81,142	19,081
O & M expenses:						
Other production	2,029	1,212	817	9,605	6,362	3,243
Transmission distribution	1,163	1,248	(86)	5,878	5,388	491
Administrative expense	2,760	2,326	434	15,213	12,096	3,116
Customer accounting	484	379	105	2,045	2,051	(6)
	6,435	5,165	1,270	32,741	25,897	6,844
IPP costs	1,383	1,384	(1)	7,672	7,721	(49)
Depreciation	3,635	2,894	741	18,175	16,133	2,042
	30,146	27,206	2,940	158,810	130,893	27,916
Operating income	1,051	3,253	(2,202)	8,285	18,203	(9,919)
Other revenue (expenses):						
Investment income	99	(444)	542	493	1,460	(967)
Interest expense	(2,654)	(2,650)	(4)	(13,279)	(13,482)	204
AFUDC	61	197	(136)	304	1,218	(913)
Bond issuance costs/Other expenses	135	63	71	673	(2,389)	3,062
Net income before capital contribution	(1,309)	419	(1,729)	(3,524)	5,009	(8,534)
Grants from the U.S. Government	-	70	(70)	-	75	(75)
Increase (decrease) in net assets	(1,309)	489	(1,799)	(3,524)	5,084	(8,609)

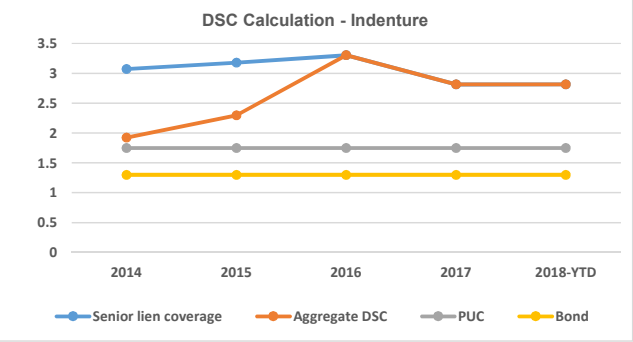


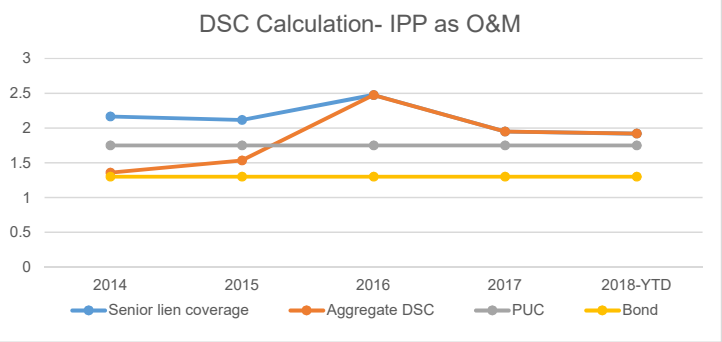


Guam Power Authority
Debt service coverage
February 28, 2018

	2014	2015	2016	2017	YTD 2/28/2018
Operating revenues					
Sales	434,462	366,185	306,896	331,071	148,618
Miscellaneous	2,156	4,775	2,294	2,245	912
Total revenues	436,618	370,960	309,190	333,316	149,530
Bad debts expense	178	959	990	472	433
Total operating revenues	$ 436,440	$ 370,001	$ 308,200	$ 332,844	$ 149,097
Operating expenses					
Production fuel	271,175	204,136	146,340	166,425	81,142
Other production	19,305	20,079	15,789	17,784	6,362
Energy conversion costs	20,632	18,404	16,800	19,935	7,721
Transmission and distribution	12,950	11,170	10,721	11,704	5,388
Customer accounting	3,821	3,780	4,502	4,284	2,051
Admin and General	28,393	21,908	28,846	26,798	12,096
Total Expenses	$ 356,276	$ 279,477	$ 222,998	$ 246,930	$ 114,760
Operating income	$ 80,164	$ 90,524	$ 85,202	$ 85,914	$ 34,336
Interest/Other income (expenses)	157	256	-1,188	-32	1,246
Debt service and lease payments					
IPP lease payments	23,084	26,622	20,790	20,796	8,240
Capital lease payments-Aggreko	0	0	0	5,609	3,116
2017 bonds	0	0	0	0	1,393
2014 bonds	0	0	10	5,084	2,118
2012 bonds	17,455	17,096	17,098	17,449	7,119
2010 senior bonds	7,999	7,999	7,999	7,999	2,000
2010 subordinate	15,193	9,605	0	0	0
Total Debt service-bonds	$ 40,647	$ 34,700	$ 25,106	$ 30,532	$ 12,631
Total Debt service and capital lease	$ 63,731	$ 61,322	$ 45,896	$ 56,937	$ 23,986

Debt service coverage (DSC) calculation-indenture					
Senior lien coverage	3.16	3.62	3.35	2.81	2.82
Aggregate debt service coverage	1.98	2.62	3.35	2.81	2.82
Debt service coverage (DSC) calculation-IPP as O&M					
Senior lien coverage	2.25	2.56	2.52	1.95	1.92
Aggregate debt service coverage	1.41	1.85	2.52	1.95	1.92

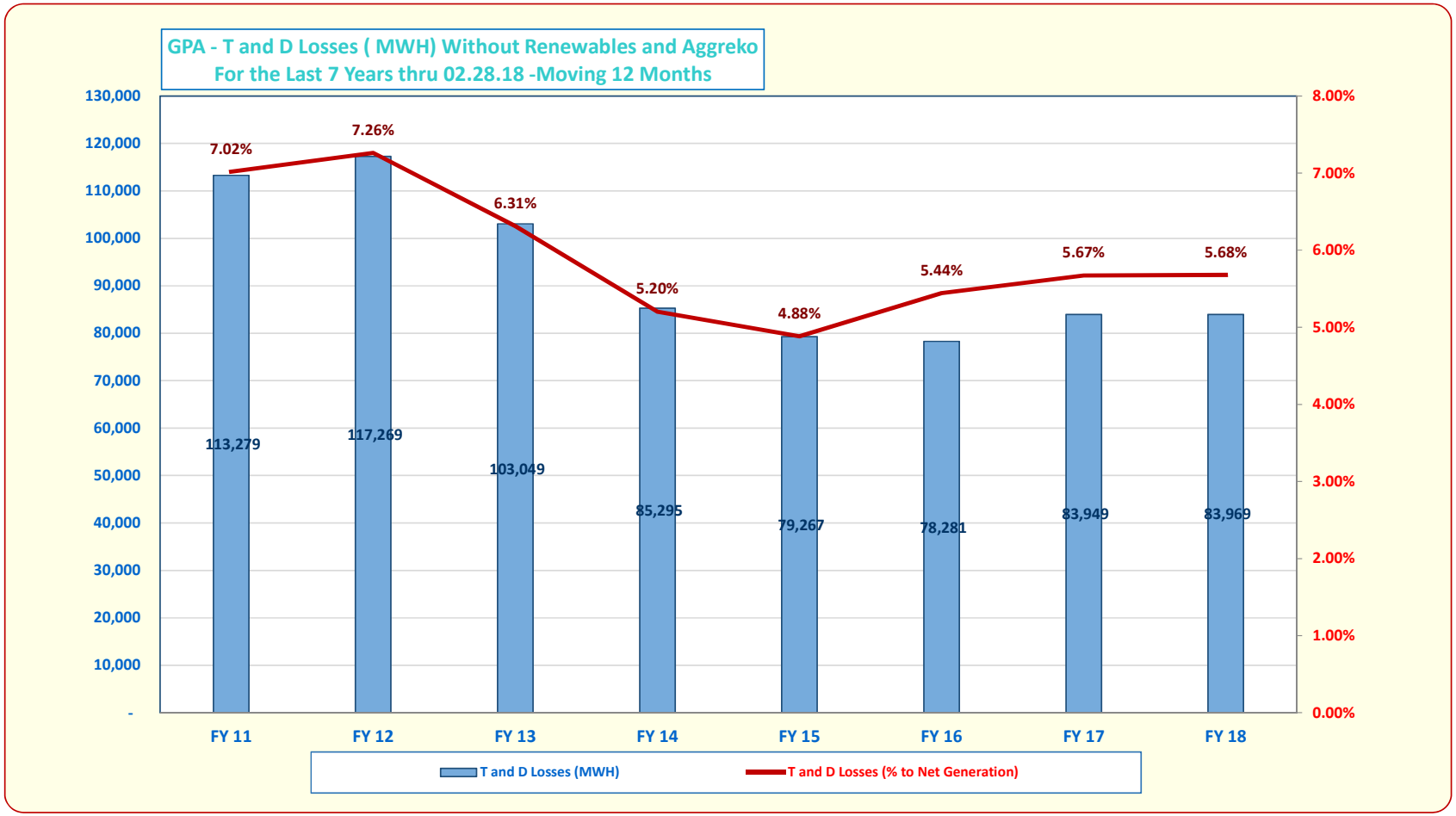


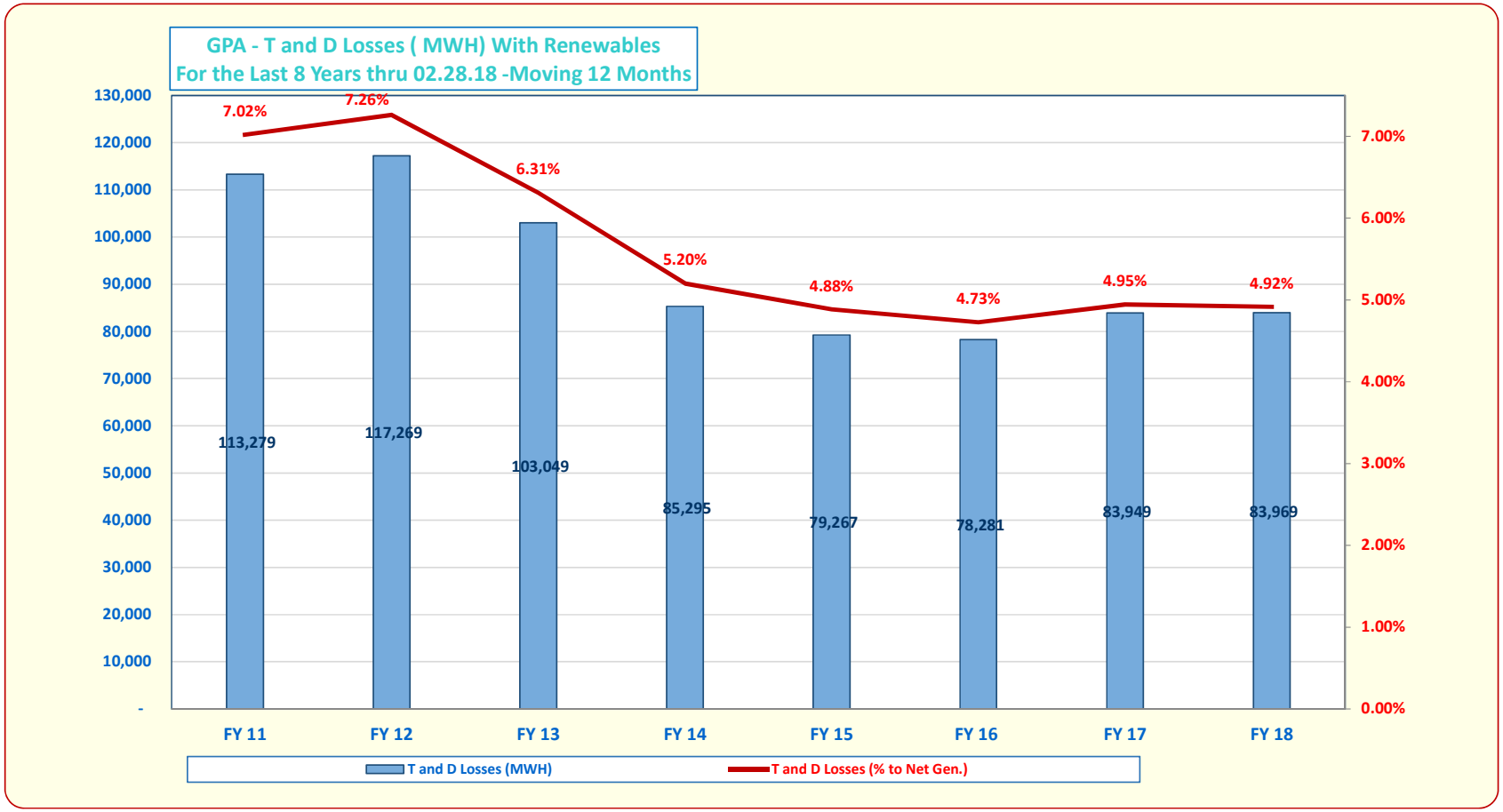


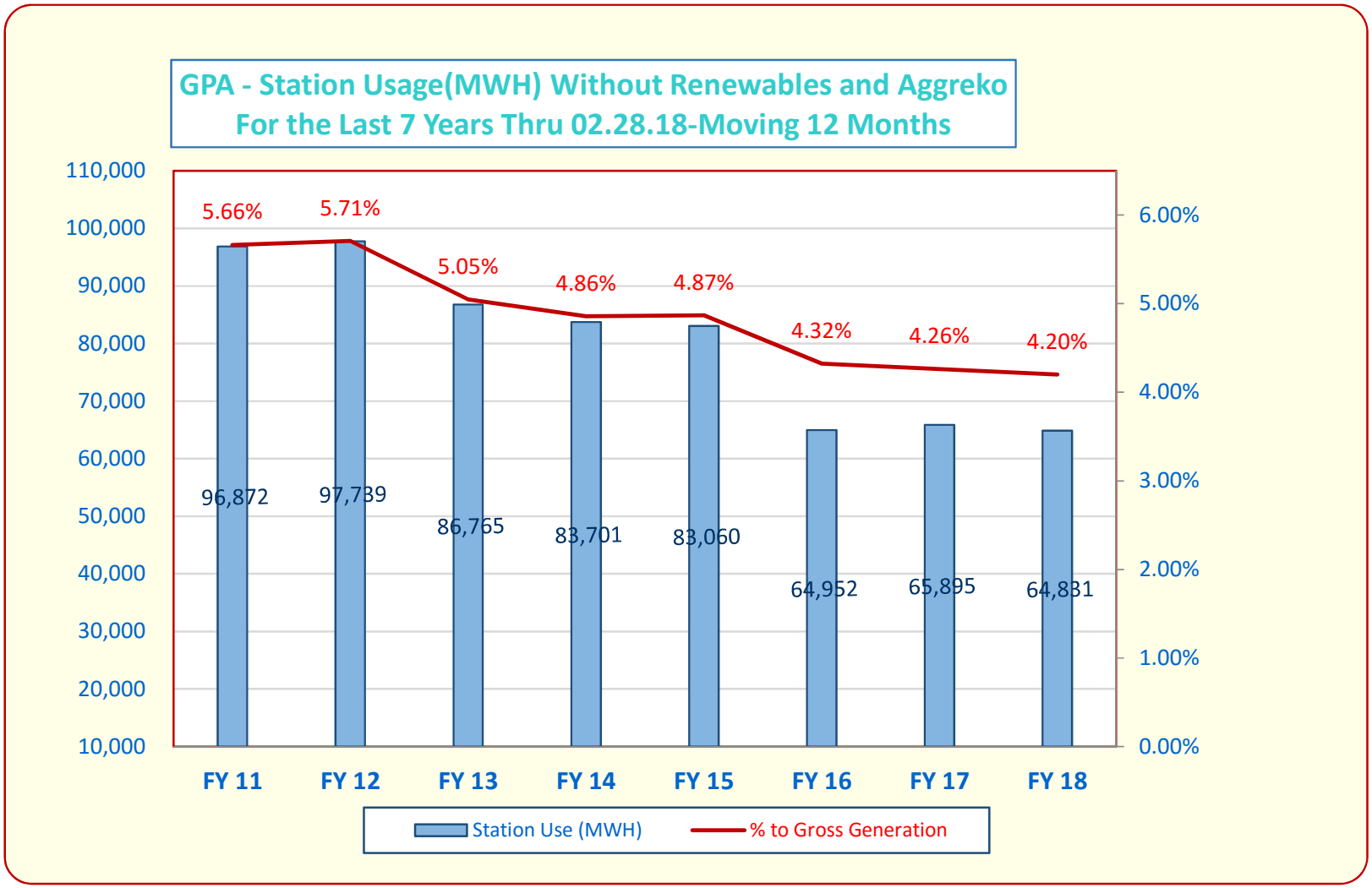
REVENUES-ACTUAL VS PROJECTIONS

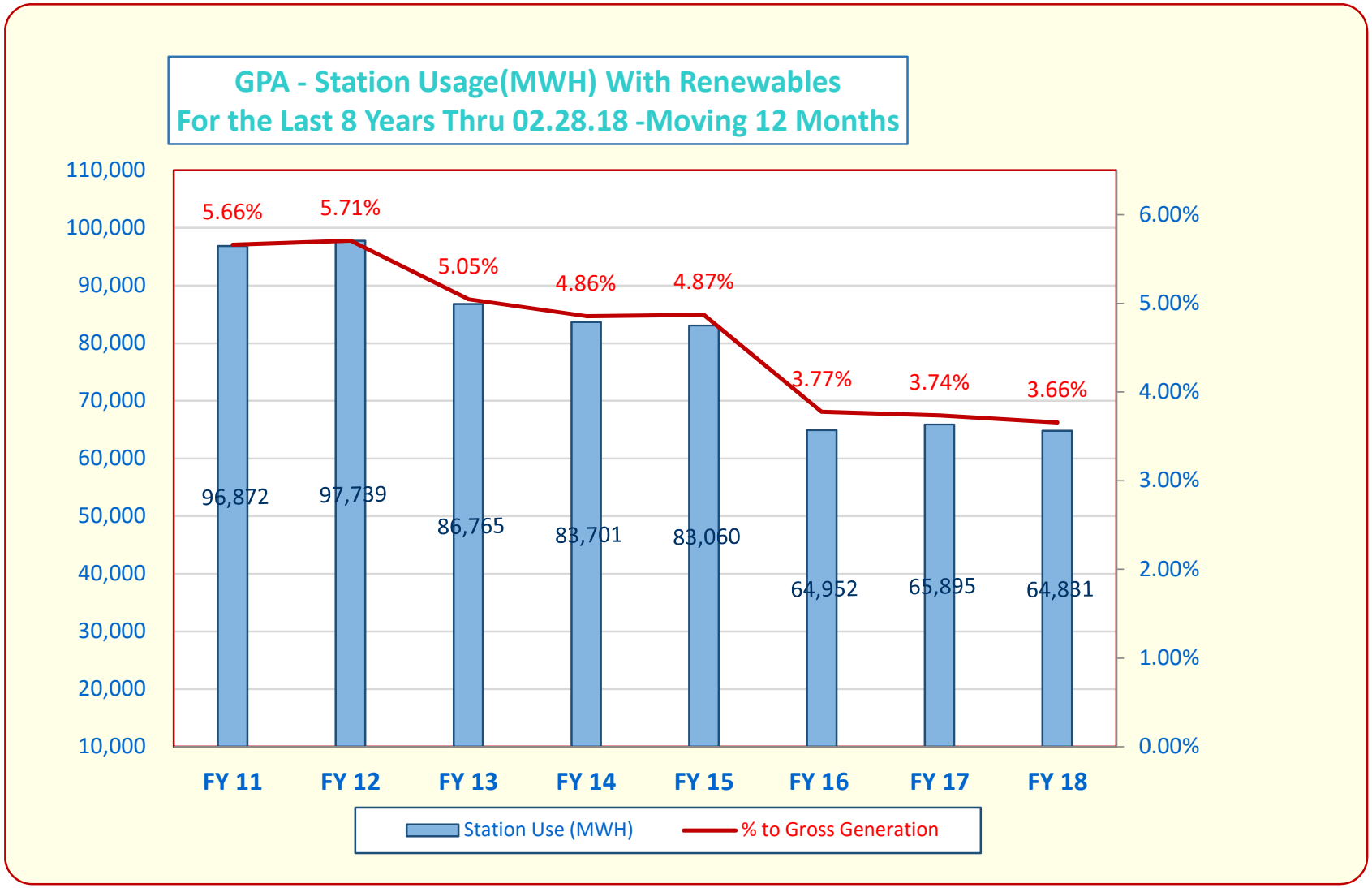
	MONTHLY - FEBRUARY 2018				YTD THRU 02/28/2018			
	PROJECTIONS	ACTUAL	VARIANCE	% VARIANCE	PROJECTIONS	ACTUAL	VARIANCE	% VARIANCE
KWH								
Residential	35,840,161	36,809,815	969,654	2.71%	199,283,037	207,254,376	7,971,339	4.00%
Small General-Non-Demand	6,528,668	6,154,115	(374,553)	-5.74%	34,002,848	34,082,288	79,441	0.23%
Small General-Demand	14,783,115	14,164,319	(618,796)	-4.19%	77,634,962	77,157,122	(477,840)	-0.62%
Large	24,639,833	23,674,407	(965,426)	-3.92%	131,851,233	130,253,282	(1,597,951)	-1.21%
Independent Power Producers	30,822	28,976	(1,846)	-5.99%	164,932	282,194	117,262	71.10%
Private St. Lites	52,233	32,408	(19,826)	-37.96%	275,574	168,787	(106,786)	-38.75%
Sub-total	**81,874,832**	**80,864,040**	**(1,010,793)**	**-1.23%**	**443,212,585**	**449,198,050**	**5,985,465**	**1.35%**
Government								
Small_Non Demand	972,308	1,119,571	147,263	15.15%	5,374,281	6,146,591	772,310	14.37%
Small-Demand	7,686,437	7,377,578	(308,858)	-4.02%	39,329,674	39,926,301	596,626	1.52%
Large	5,814,228	5,905,830	91,602	1.58%	29,914,734	32,002,581	2,087,846	6.98%
Public St. Lites	753,059	669,689	(83,370)	-11.07%	4,036,170	3,565,091	(471,079)	-11.67%
Sub-total	**15,226,031**	**15,072,669**	**(153,363)**	**-1.01%**	**78,654,860**	**81,640,563**	**2,985,703**	**3.80%**
Total-Civilian	**97,100,864**	**95,936,708**	**(1,164,156)**	**-1.20%**	**521,867,445**	**530,838,612**	**8,971,168**	**1.72%**
USN	24,566,683	23,304,608	(1,262,075)	-5.14%	130,487,602	130,177,731	(309,871)	-0.24%
Grand Total	**121,667,546**	**119,241,316**	**(2,426,230)**	**-1.99%**	**652,355,047**	**661,016,343**	**8,661,297**	**1.33%**
					-	-		
Non-Oil Yield								
Residential	0.096203	0.097038	0.000835	0.87%	0.096203	0.096086	(0.000118)	-0.12%
Small General-Non-Demand	0.136364	0.138821	0.002456	1.80%	0.136364	0.136609	0.000245	0.18%
Small General-Demand	0.119423	0.121731	0.002308	1.93%	0.119423	0.119915	0.000492	0.41%
Large	0.103705	0.107082	0.003377	3.26%	0.103705	0.103472	(0.000233)	-0.22%
Independent Power Producers	0.117983	0.132878	0.014895	0.00%	0.117983	0.106729	(0.011254)	0.00%
Private St. Lites	0.454278	0.646774	0.192496	42.37%	0.454278	0.629863	0.175585	38.65%
Sub-total	**0.106092**	**0.107717**	**0.001625**	**1.53%**	**0.105814**	**0.105602**	**(0.000212)**	**-0.20%**
Government					-			
Small_Non Demand	0.152255	0.152035	(0.000219)	-0.14%	0.152255	0.149731	(0.002524)	-1.66%
Small-Demand	0.135082	0.136597	0.001515	1.12%	0.135082	0.134012	(0.001070)	-0.79%
Large	0.128102	0.130201	0.002098	1.64%	0.128102	0.126341	(0.001761)	-1.37%
Public St. Lites	0.380746	0.509748	0.129002	33.88%	0.380746	0.479586	0.098840	25.96%
Sub-total	**0.145663**	**0.151817**	**0.006153**	**4.22%**	**0.146207**	**0.147279**	**0.001072**	**0.73%**
Total-Civilian	**0.112297**	**0.114645**	**0.002348**	**2.09%**	**0.111902**	**0.112012**	**0.000110**	**0.10%**
USN	0.061774	0.065343	0.003569	5.78%	0.061774	0.061576	(0.000198)	-0.32%
Grand Total	**0.102096**	**0.105010**	**0.002914**	**2.85%**	**0.101875**	**0.102079**	**0.000204**	**0.20%**
Non-Oil Revenues								
Residential	3,447,945	3,571,959	124,014	3.60%	19,171,704	19,914,164	742,460	3.87%
Small General-Non-Demand	890,277	854,318	(35,959)	-4.04%	4,636,773	4,655,958	19,186	0.41%
Small General-Demand	1,765,446	1,724,241	(41,205)	-2.33%	9,271,411	9,252,332	(19,079)	-0.21%
Large	2,555,265	2,535,100	(20,165)	-0.79%	13,673,584	13,477,504	(196,081)	-1.43%
Independent Power Producers	3,636	3,850	214	5.88%	19,459	30,118	10,659	54.78%
Private St. Lites	23,729	20,961	(2,768)	-11.66%	125,187	106,313	(18,874)	-15.08%
Sub-total	**8,686,298**	**8,710,429**	**24,131**	**0.28%**	**46,898,118**	**47,436,389**	**538,271**	**1.15%**
Government								
Small_Non Demand	148,038	170,214	22,176	14.98%	818,259	920,335	102,077	12.47%
Small-Demand	1,038,298	1,007,753	(30,544)	-2.94%	5,312,723	5,350,597	37,874	0.71%
Large	744,814	768,942	24,128	3.24%	3,832,138	4,043,227	211,089	5.51%
Public St. Lites	286,725	341,373	54,648	19.06%	1,536,757	1,709,767	173,010	11.26%
Sub-total	**2,217,875**	**2,288,282**	**70,408**	**3.17%**	**11,499,877**	**12,023,927**	**524,050**	**4.56%**
Total-Civilian	**10,904,173**	**10,998,711**	**94,539**	**0.87%**	**58,397,994**	**59,460,316**	**1,062,321**	**1.82%**
USN	1,517,581	1,522,793	5,212	0.34%	8,060,736	8,015,843	(44,893)	-0.56%
Grand Total	**12,421,754**	**12,521,504**	**99,750**	**0.80%**	**66,458,730**	**67,476,159**	**1,017,429**	**1.53%**
% of Total Revenues	39.92%	41.35%			39.87%	45.40%		
Oil Revenues								
Residential	5,506,205	6,061,473	555,268	10.08%	30,616,304	26,125,866	(4,490,438)	-14.67%
Small General-Non-Demand	1,003,014	1,015,340	12,326	1.23%	5,223,935	4,302,989	(920,946)	-17.63%
Small General-Demand	2,271,163	2,282,708	11,545	0.51%	11,927,235	9,695,613	(2,231,622)	-18.71%
Large	3,785,473	3,551,586	(233,887)	-6.18%	20,256,604	16,034,429	(4,222,175)	-20.84%
Independent Power Producers	4,735	4,118	(617)	-13.03%	25,339	32,925	7,587	29.94%
Private St. Lites	8,025	4,773	(3,252)	-40.53%	42,337	20,827	(21,510)	-50.81%
Sub-total	**12,578,616**	**12,919,999**	**341,383**	**2.71%**	**68,091,753**	**56,212,649**	**(11,879,104)**	**-17.45%**
Government								
Small_Non Demand	149,378	164,912	15,534	10.40%	825,663	756,682	(68,981)	-8.35%
Small-Demand	1,180,885	1,086,466	(94,418)	-8.00%	6,042,307	4,918,037	(1,124,270)	-18.61%
Large	893,253	859,355	(33,898)	-3.79%	4,595,868	3,894,080	(701,789)	-15.27%
Public St. Lites	115,694	98,622	(17,072)	-14.76%	620,086	439,463	(180,623)	-29.13%
Sub-total	**2,339,210**	**2,209,355**	**(129,854)**	**-5.55%**	**12,083,924**	**10,008,262**	**(2,075,662)**	**-17.18%**
Total-Civilian	**14,917,826**	**15,129,354**	**211,529**	**1.42%**	**80,175,678**	**66,220,911**	**(13,954,766)**	**-17.41%**
USN	3,774,235	2,633,181	(1,141,054)	-30.23%	20,047,106	14,921,323	(5,125,783)	-25.57%
Grand Total	**18,692,061**	**17,762,536**	**(929,525)**	**-4.97%**	**100,222,783**	**81,142,234**	**(19,080,550)**	**-19.04%**
% of Total Revenues	60.08%	58.65%			60.13%	54.60%		
Grand Total								
Residential	8,954,150	9,633,432	679,282	7.59%	49,788,008	46,040,029	(3,747,979)	-7.53%
Small General-Non-Demand	1,893,291	1,869,658	(23,633)	-1.25%	9,860,707	8,958,947	(901,760)	-9.14%
Small General-Demand	4,036,609	4,006,949	(29,660)	-0.73%	21,198,646	18,947,946	(2,250,700)	-10.62%
Large	6,340,738	6,086,686	(254,052)	-4.01%	33,930,188	29,511,932	(4,418,255)	-13.02%
Independent Power Producers	8,372	7,969	(403)	-4.81%	44,798	63,044	18,246	40.73%
Private St. Lites	31,753	25,733	(6,020)	-18.96%	167,524	127,140	(40,384)	-24.11%
Sub-total	**21,264,914**	**21,630,428**	**365,514**	**1.72%**	**114,989,871**	**103,649,038**	**(11,340,833)**	**-9.86%**
Government					-			
Small_Non Demand	297,416	335,126	37,710	12.68%	1,643,922	1,677,018	33,096	2.01%
Small-Demand	2,219,182	2,094,220	(124,962)	-5.63%	11,355,030	10,268,634	(1,086,396)	-9.57%
Large	1,638,067	1,628,297	(9,770)	-0.60%	8,428,007	7,937,307	(490,700)	-5.82%
Public St. Lites	402,419	439,995	37,577	9.34%	2,156,843	2,149,230	(7,612)	-0.35%
Sub-total	**4,557,085**	**4,497,638**	**(59,447)**	**-1.30%**	**23,583,801**	**22,032,189**	**(1,551,612)**	**-6.58%**
Total-Civilian	**25,821,998**	**26,128,065**	**306,067**	**1.19%**	**138,573,672**	**125,681,227**	**(12,892,445)**	**-9.30%**
USN	5,291,816	4,155,974	(1,135,842)	-21.46%	28,107,842	22,937,166	(5,170,676)	-18.40%
Grand Total	**31,113,815**	**30,284,040**	**(829,775)**	**-2.67%**	**166,681,514**	**148,618,393**	**(18,063,121)**	**-10.84%**
	-	-	-					

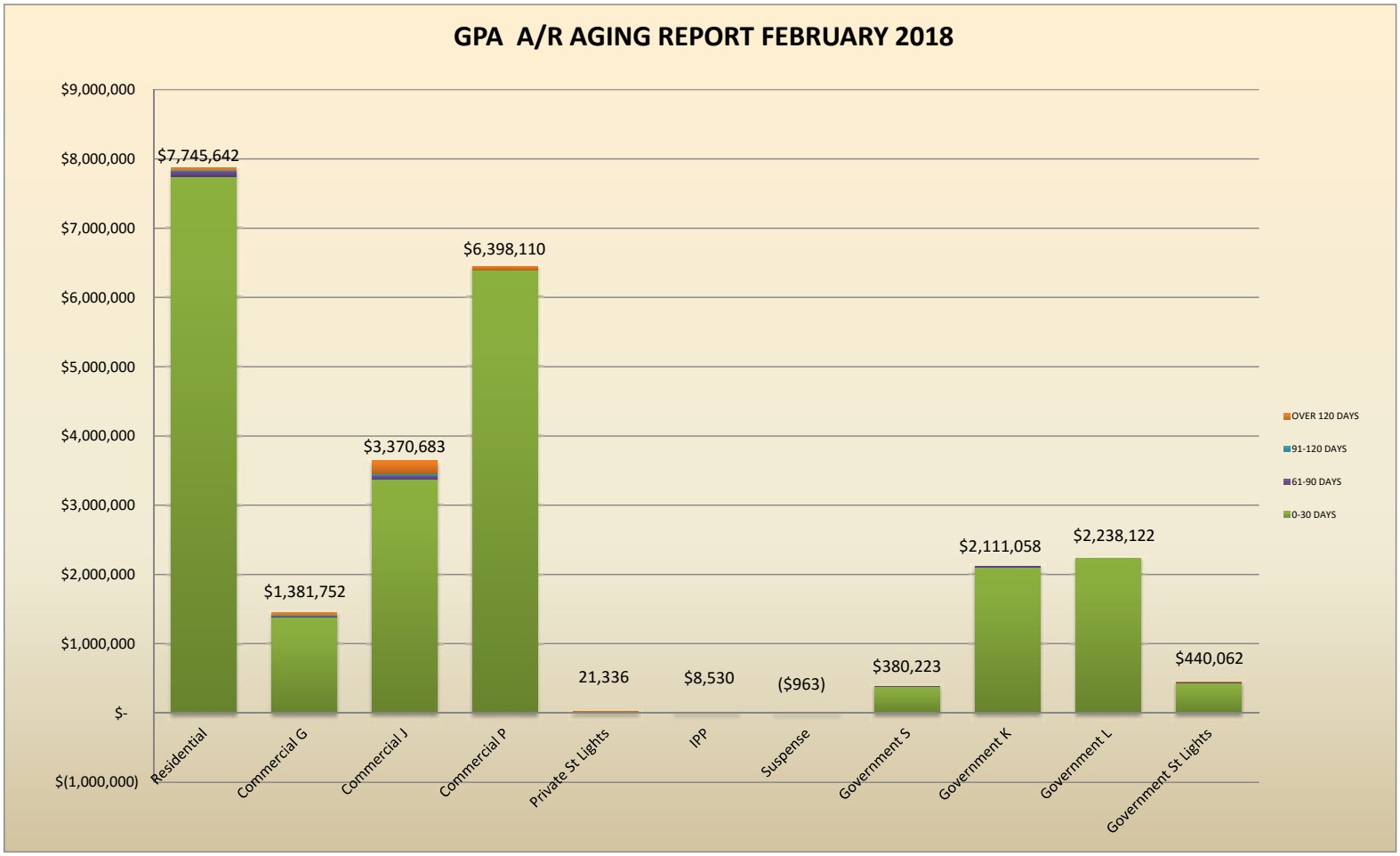
	YTD REVENUES - CURRENT YEAR VS PRIOR YEAR				MTD REVENUES - CURRENT YEAR VS PRIOR YEAR			
	ACTUALS - 5 MONTHS ENDED FEBRUARY 28				ACTUALS - MONTH ENDED FEBRUARY 28			
	2018	2017	VARIANCE	% VARIANCE	2018	2017	VARIANCE	% VARIANCE
KWH								
Residential	207,254,376	199,658,670	7,595,706	3.80%	36,809,815	35,936,337	873,478	2.43%
Small General-Non-Demand	34,082,288	33,827,007	255,281	0.75%	6,154,115	6,497,885	(343,770)	-5.29%
Small General-Demand	77,157,122	77,006,358	150,764	0.20%	14,164,319	13,890,958	273,361	1.97%
Large	130,253,282	129,429,842	823,439	0.64%	23,674,407	23,699,969	(25,562)	-0.11%
Independent Power Producers	282,194	434,198	(152,004)	-35.01%	28,976	67,797	(38,820)	-57.26%
Private St. Lites	168,787	210,613	(41,826)	-19.86%	32,408	32,325	83	0.26%
Sub-total	**449,198,050**	**440,566,688**	**8,631,361**	**1.96%**	**80,864,040**	**80,125,270**	**738,770**	**0.92%**
Government								
Small_Non Demand	6,146,591	5,518,121	628,470	11.39%	1,119,571	996,603	122,967	12.34%
Small-Demand	39,926,301	40,267,151	(340,851)	-0.85%	7,377,578	7,382,544	(4,965)	-0.07%
Large	32,002,581	30,422,936	1,579,645	5.19%	5,905,830	5,654,767	251,063	4.44%
Public St. Lites	3,565,091	4,136,157	(571,066)	-13.81%	669,689	707,509	(37,819)	-5.35%
Sub-total	**81,640,563**	**80,344,365**	**1,296,198**	**1.61%**	**15,072,669**	**14,741,423**	**331,246**	**2.25%**
Total-Civilian	**530,838,612**	**520,911,054**	**9,927,559**	**1.91%**	**95,936,708**	**94,866,692**	**1,070,016**	**1.13%**
USN	130,177,731	129,656,413	521,318	0.40%	23,304,608	22,750,741	553,868	2.43%
Grand Total	**661,016,343**	**650,567,466**	**10,448,877**	**1.61%**	**119,241,316**	**117,617,433**	**1,623,883**	**1.38%**
Non-Oil Yield								
Residential	0.096086	0.096803	-0.000718	-0.74%	0.097038	0.098477	-0.001439	-1.46%
Small General-Non-Demand	0.136609	0.137591	-0.000982	-0.71%	0.138821	0.140148	-0.001327	-0.95%
Small General-Demand	0.119915	0.120878	-0.000962	-0.80%	0.121731	0.125381	-0.003650	-2.91%
Large	0.103472	0.103375	0.000096	0.09%	0.107082	0.107479	-0.000397	-0.37%
Independent Power Producers	0.000000	0.113642	-0.113642	-100.00%	0.132878	0.120229	0.012649	10.52%
Private St. Lites	0.629863	0.535485	0.094378	17.62%	0.646774	0.661940	-0.015165	-2.29%
Sub-total	**0.105602**	**0.106300**	**-0.000698**	**-0.66%**	**0.107717**	**0.109429**	**-0.001712**	**-1.56%**
Government								
Small_Non Demand	0.149731	0.152733	-0.003002	-1.97%	0.152035	0.154667	-0.002631	-1.70%
Small-Demand	0.134012	0.135314	-0.001302	-0.96%	0.136597	0.141372	-0.004775	-3.38%
Large	0.126341	0.126774	-0.000433	-0.34%	0.130201	0.131600	-0.001399	-1.06%
Public St. Lites	0.479586	0.465676	0.013909	2.99%	0.509748	0.527763	-0.018015	-3.41%
Sub-total	**0.147279**	**0.150284**	**-0.003005**	**-2.00%**	**0.151817**	**0.157067**	**-0.005250**	**-3.34%**
Total-Civilian	**0.112012**	**0.113084**	**-0.001072**	**-0.95%**	**0.114645**	**0.116832**	**-0.002186**	**-1.87%**
USN	0.061576	0.060057	0.001519	2.53%	0.065343	0.060232	0.005111	8.48%
Grand Total	**0.102079**	**0.102516**	**-0.000436**	**-0.43%**	**0.105010**	**0.105884**	**-0.000874**	**-0.83%**
Non-Oil Revenues								
Residential	19,914,164	19,327,595	586,569	3.03%	3,571,959	3,538,907	33,052	0.93%
Small General-Non-Demand	4,655,958	4,654,295	1,663	0.04%	854,318	910,664	(56,347)	-6.19%
Small General-Demand	9,252,332	9,308,357	(56,025)	-0.60%	1,724,241	1,741,662	(17,421)	-1.00%
Large	13,477,504	13,379,864	97,640	0.73%	2,535,100	2,547,254	(12,154)	-0.48%
Independent Power Producers	30,118	49,343	(19,225)	-38.96%	3,850	8,151	(4,301)	-52.76%
Private St. Lites	106,313	112,780	(6,467)	-5.73%	20,961	21,397	(436)	-2.04%
Sub-total	**47,436,389**	**46,832,234**	**604,155**	**1.29%**	**8,710,429**	**8,768,035**	**(57,606)**	**-0.66%**
Government								
Small_Non Demand	920,335	842,800	77,535	9.20%	170,214	154,141	16,073	10.43%
Small-Demand	5,350,597	5,448,713	(98,115)	-1.80%	1,007,753	1,043,685	(35,931)	-3.44%
Large	4,043,227	3,856,835	186,392	4.83%	768,942	744,166	24,776	3.33%
Public St. Lites	1,709,767	1,926,111	(216,344)	-11.23%	341,373	373,397	(32,024)	-8.58%
Sub-total	**12,023,927**	**12,074,459**	**(50,532)**	**-0.42%**	**2,288,282**	**2,315,389**	**(27,107)**	**-1.17%**
Total-Civilian	**59,460,316**	**58,906,693**	**553,623**	**0.94%**	**10,998,711**	**11,083,424**	**(84,713)**	**-0.76%**
USN	8,015,843	7,786,778	229,066	2.94%	1,522,793	1,370,332	152,461	11.13%
Grand Total	**67,476,159**	**66,693,471**	**782,688**	**1.17%**	**12,521,504**	**12,453,756**	**67,748**	**0.54%**
% of Total Revenues								
Oil Revenues								
Residential	26,125,866	18,290,060	7,835,806	42.84%	6,061,473	4,109,577	1,951,896	47.50%
Small General-Non-Demand	4,302,989	3,106,773	1,196,216	38.50%	1,015,340	739,715	275,624	37.26%
Small General-Demand	9,695,613	7,036,976	2,658,637	37.78%	2,282,708	1,568,643	714,066	45.52%
Large	16,034,429	11,718,179	4,316,250	36.83%	3,551,586	2,518,772	1,032,814	41.00%
Independent Power Producers	32,925	39,538	(6,613)	-16.72%	4,118	6,894	(2,775)	-40.26%
Private St. Lites	20,827	18,838	1,989	10.56%	4,773	3,396	1,377	40.55%
Sub-total	**56,212,649**	**40,210,364**	**16,002,285**	**39.80%**	**12,919,999**	**8,946,997**	**3,973,002**	**44.41%**
Government								
Small_Non Demand	756,682	496,316	260,366	52.46%	164,912	104,694	60,217	57.52%
Small-Demand	4,918,037	3,623,778	1,294,259	35.72%	1,086,466	775,544	310,923	40.09%
Large	3,894,080	2,754,892	1,139,187	41.35%	859,355	587,292	272,063	46.32%
Public St. Lites	439,463	371,290	68,173	18.36%	98,622	74,324	24,298	32.69%
Sub-total	**10,008,262**	**7,246,277**	**2,761,985**	**38.12%**	**2,209,355**	**1,541,855**	**667,501**	**43.29%**
Total-Civilian	**66,220,911**	**47,456,640**	**18,764,271**	**39.54%**	**15,129,354**	**10,488,852**	**4,640,503**	**44.24%**
USN	14,921,323	12,307,177	2,614,146	21.24%	2,633,181	2,262,351	370,830	16.39%
Grand Total	**81,142,234**	**59,763,817**	**21,378,416**	**35.77%**	**17,762,536**	**12,751,203**	**5,011,333**	**39.30%**
% of Total Revenues								
Grand Total								
Residential	46,040,029	37,617,654	8,422,375	22.39%	9,633,432	7,648,484	1,984,948	25.95%
Small General-Non-Demand	8,958,947	7,761,068	1,197,879	15.43%	1,869,658	1,650,380	219,278	13.29%
Small General-Demand	18,947,946	16,345,334	2,602,612	15.92%	4,006,949	3,310,305	696,645	21.04%
Large	29,511,932	25,098,043	4,413,889	17.59%	6,086,686	5,066,026	1,020,660	20.15%
Independent Power Producers	63,044	88,881	(25,837)	-29.07%	7,969	15,045	(7,076)	-47.03%
Private St. Lites	127,140	131,618	(4,478)	-3.40%	25,733	24,793	940	3.79%
Sub-total	**103,649,038**	**87,042,598**	**16,606,440**	**19.08%**	**21,630,428**	**17,715,032**	**3,915,395**	**22.10%**
Government								
Small_Non Demand	1,677,018	1,339,117	337,901	25.23%	335,126	258,835	76,290	29.47%
Small-Demand	10,268,634	9,072,491	1,196,143	13.18%	2,094,220	1,819,228	274,992	15.12%
Large	7,937,307	6,611,727	1,325,580	20.05%	1,628,297	1,331,459	296,839	22.29%
Public St. Lites	2,149,230	2,297,401	(148,171)	-6.45%	439,995	447,721	(7,726)	-1.73%
Sub-total	**22,032,189**	**19,320,736**	**2,711,453**	**14.03%**	**4,497,638**	**3,857,244**	**640,394**	**16.60%**
Total-Civilian	**125,681,227**	**106,363,333**	**19,317,893**	**18.16%**	**26,128,065**	**21,572,276**	**4,555,790**	**21.12%**
USN	22,937,166	20,093,955	2,843,211	14.15%	4,155,974	3,632,683	523,292	14.41%
Grand Total	**148,618,393**	**126,457,288**	**22,161,105**	**17.52%**	**30,284,040**	**25,204,958**	**5,079,081**	**20.15%**


GPA - T and D Losses (MWH) Without Renewables and Aggreko
For the Last 7 Years thru 02.28.18 -Moving 12 Months
130,000
120,000
110,000
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
-
8.00%
7.00%
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
7.02%
7.26%
6.31%
5.20%
4.88%
5.44%
5.67%
5.68%
113,279
117,269
103,049
85,295
79,267
78,281
83,949
83,969
FY 11
FY 12
FY 13
FY 14
FY 15
FY 16
FY 17
FY 18
T and D Losses (MWH)
T and D Losses (% to Net Generation)


GPA - T and D Losses (MWH) With Renewables
For the Last 8 Years thru 02.28.18 -Moving 12 Months
130,000
120,000
110,000
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
-
7.00%
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
7.02%
7.26%
6.31%
5.20%
4.88%
4.73%
4.95%
4.92%
113,279
117,269
103,049
85,295
79,267
78,281
83,949
83,969
FY 11
FY 12
FY 13
FY 14
FY 15
FY 16
FY 17
FY 18
T and D Losses (MWH)
T and D Losses (% to Net Gen.)


GPA - Station Usage(MWH) Without Renewables and Aggreko
For the Last 7 Years Thru 02.28.18-Moving 12 Months
110,000
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
5.66%
5.71%
5.05%
4.86%
4.87%
4.32%
4.26%
4.20%
96,872
97,739
86,765
83,701
83,060
64,952
65,895
64,831
FY 11
FY 12
FY 13
FY 14
FY 15
FY 16
FY 17
FY 18
Station Use (MWH)
% to Gross Generation


GPA - Station Usage(MWH) With Renewables
For the Last 8 Years Thru 02.28.18 -Moving 12 Months
110,000
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
5.66%
5.71%
5.05%
4.86%
4.87%
3.77%
3.74%
3.66%
96,872
97,739
86,765
83,701
83,060
64,952
65,895
64,831
FY 11
FY 12
FY 13
FY 14
FY 15
FY 16
FY 17
FY 18
Station Use (MWH)
% to Gross Generation


GPA A/R AGING REPORT FEBRUARY 2018
$9,000,000
$8,000,000
$7,000,000
$6,000,000
$5,000,000
$4,000,000
$3,000,000
$2,000,000
$1,000,000
$-
$(1,000,000)
$7,745,642
$1,381,752
$3,370,683
$6,398,110
21,336
$8,530
($963)
$380,223
$2,111,058
$2,238,122
$440,062
Residential
Commercial G
Commercial J
Commercial P
Private St Lights
IPP
Suspense
Government S
Government K
Government L
Government St Lights
OVER 120 DAYS
91-120 DAYS
61-90 DAYS
0-30 DAYS

GUAM POWER AUTHORITY
GOVERNMENT ACCOUNTS RECEIVABLE
BILLING UP TO 03/31/2018 and Payment Applied as of 04/15/2018

Current (03/18 Billing due 02/28/18
30 days Arrears (02/18 due 03/15/18)
60 days and over Arrears (01/18 billing due 02/15/18)

CC&B ACCT NUMBER	DEPARTMENT	BALANCE 2/28/2018	CANCEL/REBILL/ SPEC CHARGE 4/15/2018	BILLING 3/31/2018	PAYMENT 4/15/2018	BALANCE 3/31/2018	
	Line Agencies						
0237100000	Dept. of Corrections	$ 74,013.72	$ -	$ 78,962.97	$ (74,013.72)	$ 78,962.97	
0437100000	Dept. of Parks & Rec.	$ 19,166.30	$ -	$ 17,595.10	$ (19,166.30)	$ 17,595.10	
0537100000	Guam Fire Department	$ 16,887.02	$ -	$ 16,345.53	$ (16,887.02)	$ 16,345.53	
6995000000	DOA Supply Mgmt	$ 1,376.68	$ -	$ 1,490.30	$ (1,376.68)	$ 1,490.30	
7895000000	Dept. of Administration	$ 3,552.40	$ -	$ 3,616.58	$ (3,552.40)	$ 3,616.58	
1337100000	Nieves Flores Library	$ 9,247.73	$ -	$ 9,753.22	$ (9,247.73)	$ 9,753.22	
2206200000	General Services Agency	$ 254.89	$ -	$ 262.27	$ (254.89)	$ 262.27	
2237100000	DOA-Data Processing	$ 6,934.32	$ -	$ 7,940.77	$ (6,934.32)	$ 7,940.77	
2337100000	Dept. of PH&SS	$ 66,797.10	$ -	$ 68,993.14	$ (66,797.10)	$ 68,993.14	
3237100000	Dept. of Education	$ 1,074,401.09	$ 347.78	$ 1,010,787.37	$ (1,041,983.55)	$ 1,043,552.69	1
3337100000	Guam Police Department	$ 34,988.99	$ -	$ 36,200.15	$ (34,988.99)	$ 36,200.15	
3569100000	Dept of Youth Affairs (Federal)	$ 929.63	$ -	$ 963.21	$ (929.63)	$ 963.21	
4437100000	Dept. of Youth Affair* (Local)	$ 13,333.73	$ -	$ 11,309.39	$ (13,333.73)	$ 11,309.39	
4737100000	Guam Environmental Protect	$ 6,193.37	$ -	$ 6,421.34	$ (6,193.37)	$ 6,421.34	
5437100000	Mental Health/Subst.	$ 41,201.04	$ -	$ 40,358.46	$ (41,201.04)	$ 40,358.46	
7200300000	Veteran Affairs	$ 970.37	$ -	$ 839.65	$ (970.37)	$ 839.65	
7437100000	Civil Defense (Military Affairs)	$ 17,890.73	$ 184.04	$ 11,727.35	$ (17,890.73)	$ 11,911.39	
7463300000	Pacific Energy Resource Center	$ 573.83	$ -	$ 657.22	$ (573.83)	$ 657.22	
8137100000	Dept. of Agriculture	$ 9,515.40	$ -	$ 10,125.19	$ (9,515.40)	$ 10,125.19	
8337100000	DPW-FAC Adm Account	$ 25,607.47	$ -	$ 23,551.99	$ (25,607.47)	$ 23,551.99	
8437100000	Guam Visitors Bureau	$ 4,081.59	$ -	$ 4,304.05	$ (4,081.59)	$ 4,304.05	
8446300000	Yona Senior Citizen Center	$ 726.59	$ -	$ 831.98	$ (726.59)	$ 831.98	
9437100000	Dept of Chamorro Affairs/Chamorro Village	$ 4,164.11	$ -	$ 4,243.90	$ (4,164.11)	$ 4,243.90	
5247210000	Mayors Council	$ 2,370.08	$ -	$ 2,486.43	$ (2,370.08)	$ 2,486.43	
6293410000	Office of the Governor	$ 22,244.87	$ -	$ 21,948.85	$ (22,244.87)	$ 21,948.85	
8555858369	Dept of Chamorro Affairs (Guam Museum)	$ 20,430.51	$ -	$ 21,387.60	$ (20,430.51)	$ 21,387.60	
	Sub Total	**$ 1,477,853.56**	**$ 531.82**	**$ 1,413,104.01**	**$ (1,445,436.02)**	**$ 1,446,053.37**	
	MAYORS						
0637100000	Santa Rita Mayor	$ 3,525.04	$ -	$ 3,634.62	$ (3,525.04)	$ 3,634.62	
0737100000	Ordot/Chalan Pago Mayor	$ 1,304.75	$ -	$ 1,794.43	$ (1,304.75)	$ 1,794.43	
1537100000	Hagatna Mayor	$ 1,448.19	$ -	$ 1,509.34	$ (1,448.19)	$ 1,509.34	
1637100000	Piti Mayor	$ 1,290.36	$ -	$ 1,299.62	$ (1,290.36)	$ 1,299.62	
1737100000	Mongmong/Toto/Maite Mayor	$ 933.03	$ -	$ 1,016.33	$ (933.03)	$ 1,016.33	
2637100000	Asan/Maina/Adelup Mayor	$ 882.82	$ -	$ 907.71	$ (882.82)	$ 907.71	
2737100000	Sinajana Mayor	$ 4,260.06	$ -	$ 4,624.88	$ (4,260.06)	$ 4,624.88	
3637100000	Dededo Mayor	$ 5,356.14	$ 94.82	$ 5,958.88	$ (5,356.14)	$ 6,053.70	
4637100000	Yigo Mayor	$ 4,841.17	$ -	$ 3,898.60	$ (4,841.17)	$ 3,898.60	
5637100000	Umatac Mayor	$ 1,500.39	$ -	$ 1,741.55	$ (1,500.39)	$ 1,741.55	
6537100000	Agana Hts. Mayor	$ 5,016.42	$ -	$ 5,343.60	$ (5,016.42)	$ 5,343.60	
6637100000	Merizo Mayor	$ 1,319.06	$ 2.98	$ 969.85	$ (1,319.06)	$ 972.83	
6737100000	Barrigada Mayors Office	$ 2,123.40	$ 0.03	$ 2,165.34	$ (2,123.40)	$ 2,165.37	
7537100000	Agat Mayor	$ 2,027.09	$ -	$ 2,112.30	$ (2,027.09)	$ 2,112.30	
7637100000	Inarajan Mayor	$ 1,841.09	$ -	$ 1,694.72	$ (1,841.09)	$ 1,694.72	
8537100000	Tamuning Mayor	$ 5,642.81	$ -	$ 5,757.46	$ (5,642.81)	$ 5,757.46	
8637100000	Talofofo Mayor	$ 2,016.29	$ 200.00	$ 1,704.08	$ (2,016.29)	$ 1,904.08	
9537100000	Mangilao Mayor	$ 4,712.37	$ -	$ 4,845.57	$ (4,712.37)	$ 4,845.57	
9637100000	Yona Mayor	$ 796.33	$ -	$ 742.66	$ (796.33)	$ 742.66	
	Sub Total	**$ 50,836.81**	**$ 297.83**	**$ 51,721.54**	**$ (50,836.81)**	**$ 52,019.37**	
	DPW ACCOUNTS						
4337100000	DPW-Village St. Lights	$ 342,727.64	$ (100.00)	$ 339,423.00	$ (342,727.64)	$ 339,323.00	
5337100000	DPW- Primary St. Lights	$ 82,004.31	$ -	$ 84,801.41	$ (82,004.31)	$ 84,801.41	
6337100000	DPW-Sec/Coll St. Lights	$ 25,093.41	$ -	$ 25,914.58	$ (25,093.41)	$ 25,914.58	
7337100000	DPW-Signal Lights	$ 10,085.41	$ -	$ 10,511.81	$ (10,085.41)	$ 10,511.81	
	Sub Total	**$ 459,910.77**	**$ (100.00)**	**$ 460,650.80**	**$ (459,910.77)**	**$ 460,550.80**	
	(B) AUTONOMOUS/PUBLIC CORP						
1437100000	Retirement Fund	$ 4,211.38	$ -	$ 4,540.90	$ (4,211.38)	$ 4,540.90	
1915500000	Guam Housing Corp Rental Division	$ 2,441.89	$ 73.48	$ 1,552.42	$ (1,887.88)	$ 2,179.91	
2437100000	University of Guam	$ 176,891.24	$ -	$ 185,927.98	$ (362,819.22)	$ -	
4237100000	Guam Airport Authority	$ 497,480.46		$ 523,858.31	$ (497,480.46)	$ 523,858.31	
5357510000	University of Guam (NET METERED)	$ 78,204.73	$ -	$ 81,823.87	$ (160,028.60)	$ -	
6237100000	G H U R A	$ 12,094.57	$ (77.96)	$ 24,930.45	$ (24,124.76)	$ 12,822.30	
6437100000	Guam Community College	$ 52,905.35	$ -	$ 53,872.27	$ (52,905.35)	$ 53,872.27	
7237100000	Guam Memorial Hospital	$ 331,234.37	$ 3,757.73	$ 167,526.26	$ (169,796.23)	$ 332,722.13	1
9137100000	Port Authority of Guam	$ 98,003.59	$ 84.31	$ 94,885.53	$ (98,003.59)	$ 94,969.84	
9157510000	Guam Community College (NET METERED)	$ 37,819.66	$ -	$ 38,490.54	$ (37,819.66)	$ 38,490.54	
9173210000	Guam Solid Waste Authority	$ 5,416.44	$ -	$ 5,752.47	$ (5,416.44)	$ 5,752.47	
9337100000	Guam Waterworks Authority	$ 1,193,468.74	$ 865.60	$ 1,274,249.38	$ (1,193,468.74)	$ 1,275,114.98	
8237100000	GPA	$ -			$ -	$ -	
	Sub Total	**$ 2,490,172.42**	**$ 4,703.16**	**$ 2,457,410.38**	**$ (2,607,962.31)**	**$ 2,344,323.65**	
	(C) OTHERS						
0337100000	Guam Legislature	$ 161.22	$ -	$ 100.79	$ (161.22)	$ 100.79	
9503154359	Guam Legislature (NET METER)	$ 5,843.44		$ 5,924.79	$ (11,768.23)	$ -	
1237100000	Superior Court of Guam	$ 73,066.04	$ -	$ 72,583.33	$ (73,066.04)	$ 72,583.33	
2537100000	Agana (Guam) Post Office	$ 5,682.61	$ -	$ 5,790.49	$ (11,473.10)	$ -	
2570200000	Customs & Quarantine Agency	$ 802.96	$ -	$ 935.66	$ (802.96)	$ 935.66	
3537100000	U.S. Post Office	$ 40,963.29	$ -	$ 43,722.50	$ (84,685.79)	$ -	
5537100000	Dept. of Military Affairs	$ 66,998.12	$ -	$ 73,447.37	$ (66,998.12)	$ 73,447.37	
3209463043	Dept. of Military Affairs	$ 13,440.75		$ 15,675.05	$ (13,440.75)	$ 15,675.05	
5737100000	KGTF	$ 6,205.43	$ 8.59	$ 6,634.33	$ (5,060.43)	$ 7,787.92	
7281000000	Tamuning Post Office	$ 4,766.81	$ -	$ 4,596.59	$ (9,363.40)	$ -	
	Sub Total	**$ 217,930.67**	**$ 8.59**	**$ 229,410.90**	**$ (276,820.04)**	**$ 170,530.12**	
	GRAND TOTAL	**$ 4,696,704.23**	**$ 5,441.40**	**$ 4,612,297.63**	**$ (4,840,965.95)**	**$ 4,473,477.31**	

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671) 648-3002 | guamccu.org

GUAM POWER AUTHORITY WORK SESSION

CCU Conference Room
4:30 p.m., May 17, 2018

AGENDA (AMENDED)

1. **ISSUES FOR DECISION**
   - 1.1 Relative to Unarmed Security Guard Services / Resolution 2018- 1 0
2. **GM REPORT**
   - 2.1 Updates
3. **ISSUES FOR DISCUSSION**
   - 3.1 Organizational Realignment
   - 3.2 Levelized Energy Adjustment Clause (LEAC)
4. **DIVISION REPORTS**
   - 4.1 Administration: Customer Service, HR, Procurement, Safety
   - 4.2 Engineering & Technical: Engineering, IT, Planning & Regulatory, SPORD
   - 4.3 Finance Reports
   - 4.4 Operations: Facilities, Generation, PSCC, T&D, Transportation
   - 4.5 Public Information Office
5. **ANNOUNCEMENTS**
   - 5.1 Next Meeting: CCU Meeting – May 22, 2018
6. **ADJOURNMENT**

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

Issues for Decision

Resolution No. 2018-10:

Relative to Unarmed Uniformed Security Guard Services

What is the project's objective and is it necessary and urgent?
The renewal of current contract is necessary and urgent in order to provide GPA with security guard services at various locations for the protection of GPA physical assets and employees.

Where is it at?
1) Supply Warehouse, Storage Yard and T&D Service Center
2) Gloria B. Nelson Public Service Facility
3) Cabras Power Plant and Dispatch Control Center Compound
4) Tanguisson Power Plant

How much will it cost?

Site		Monthly Cost
1)	Supply Warehouse, Storage Yard and T&D Service Center	$11,490.20
2)	Gloria B. Nelson Public Service Facility	$8,237.27
3)	Cabras Power Plant and Dispatch Control Center Compound	$11,490.20
4)	Tanguisson Power Plant	$11,490.20
	Monthly Total:	*$42,707.87*
	Total Additional Cost (4 months)	**$170,831.48**

Base Year	$512,494.44	CCU Resolution 2016-35
1st Year Option	$512,494.44	CCU Resolution 2016-35
Temporary Addition of Aggreko/Yigo CTs	$22,948.92	GM Authority
Final Option Year (4 mos)	$170,831.48	
Subtotal	*$1,218,769.28*	
2016-35 Approval	($1,024,988.88)	
Total Additional Funding	**$193,780.40**	

When will it be completed?

Base contract term:	06/01/16 – 09/30/16
	10/01/16 – 05/31/17
1st year option to renew term:	06/01/17 – 09/30/17
	10/01/17 – 05/31/18
2nd year option to renew term:	06/01/18 – 09/30/18

What is its funding source?
O&M Funds

The RFP/BID responses:
GPA-036-16: Pacific Island Security Agency (2nd year option to renew)

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

Resolution No. 2018-10

RELATIVE TO AUTHORIZING THE GUAM POWER AUTHORITY TO CONTRACT FOR UNARMED UNIFORMED SECURITY GUARD SERVICES

WHEREAS, the Guam Power Authority utilizes unarmed security guard services to protect its assets, employees and customers during and after duty hours; and

WHEREAS, the Consolidated Commission on Utilities approved a $1,024,988.88 two-year contract through Resolution 2016-35 with Pacific Island Security Agency for unarmed uniformed security guard services at four (4) primary locations: Supply Warehouse, Storage Yard, and T&D Service Center; Gloria B. Nelson Public Service Facility; Cabras Power Plant and Dispatch Control Center Compound; and Tanguisson Power Plant from June 2016 to May 2018; and

WHEREAS, GPA assumed the security services of the Aggreko/Yigo Combustion Turbine Power Plant Compound in October 2017, and temporarily added this fifth (5^{th}) site to the existing contract from October 2017 to November 2017 through the General Manager's authority; and

WHEREAS, in October 2017, GPA initiated a separate planned procurement of the security services for the Aggreko/Yigo Combustion Turbine Power Plant Compound; and the Dededo Combustion Turbine Power Plant Compound and Piti Unit #7 in preparation to assume responsibility of security services commencing December 2017; and

WHEREAS, the Authority seeks to issue new comprehensive procurement for security services of the original four (4) sites and the additional three (3) sites on or about September 2018; and

WHEREAS, GPA exercised and completed the contract base and first year option and wishes to continue its second-year option to renew; and

WHEREAS, GPA seeks authorization to exercise a second and final renewal option at the cost of $170,831.48 for the term of June 2018 to September 2018 to continue services critical to the continuous safeguarding of its power generation assets**.**

NOW, THEREFORE, BE IT RESOLVED, by the CONSOLIDATED COMMISSION ON UTILITIES, the GOVERNING BODY of the GUAM POWER AUTHORITY as FOLLOWS:

1. After careful consideration, the Consolidated Commission on Utilities finds that the contracting for security for GPA properties is reasonable, prudent, and necessary.

2. The General Manager of the Guam Power Authority is hereby authorized to exercise a second and final renewal contract option for unarmed security services for a term beginning June 1, 2018 through September 30, 2018 at the additional cost of $170,831.48, with a total contract value of $1,218,769.28.

RESOLVED, that the Chairman of the Commission certifies and the Secretary of the Commission attests the adoption of this Resolution.

DULY AND REGULARLY ADOPTED AND APPROVED THIS 22th DAY OF MAY 2018.

Certified by:	Attested by:
_____	_____
JOSEPH T. DUENAS	**J. GEORGE BAMBA**
Chairperson	Secretary
Consolidated Commission on Utilities	Consolidated Commission on Utilities

I, J. George Bamba, Secretary for the Consolidated Commission on Utilities (CCU), as evidenced by my signature above do certify as follows:

The foregoing is a full, true, and accurate copy of the resolution duly adopted at a regular meeting of the members of Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

Ayes: _____

Nays: _____

Absent: _____

Abstain: _____

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

TO: **Consolidated Commission on Utilities**

FROM: **General Manager**

DATE: **May 17, 2018**

SUBJECT: **General Manager's Report**

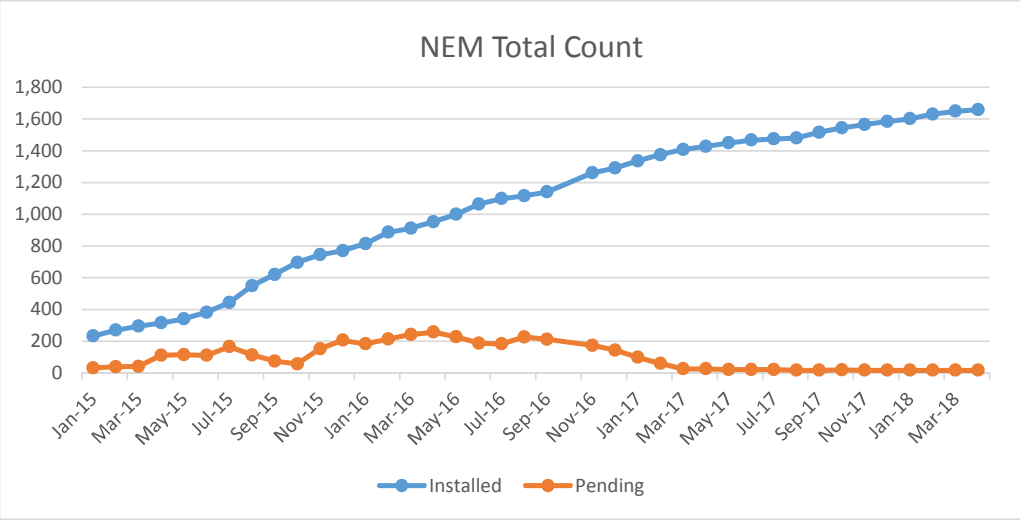
1. **Generation System Update:** The following summarizes the expected generation capacity situation for June 2018. The peak demand for June is projected to be 255 MW. GPA is scheduling the chemical cleaning of the Cabras 1 steam boiler for the end of May. The system is now heading into the higher peak months of the summer. Last year, the peak demand was 261 MW on August 1st, 2017. It is anticipated peak demand for CY 2018 may be 265MW. It appears the Demand Side Management program is having some impact in slowing the system growth in peak demand.

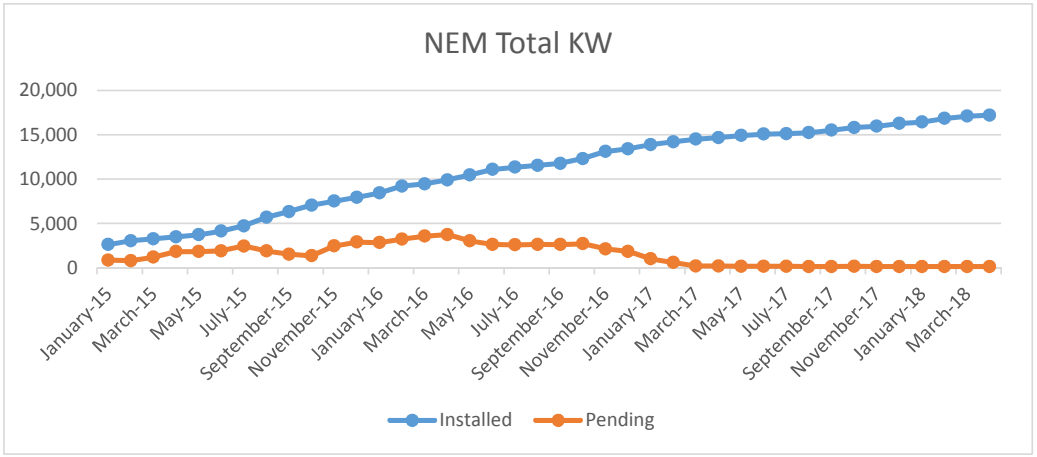
June 2018 Projected Capacity:	**385 MW**
June 2018 Projected Demand	**255 MW**
Projected Reserve Margin	**130 MW**

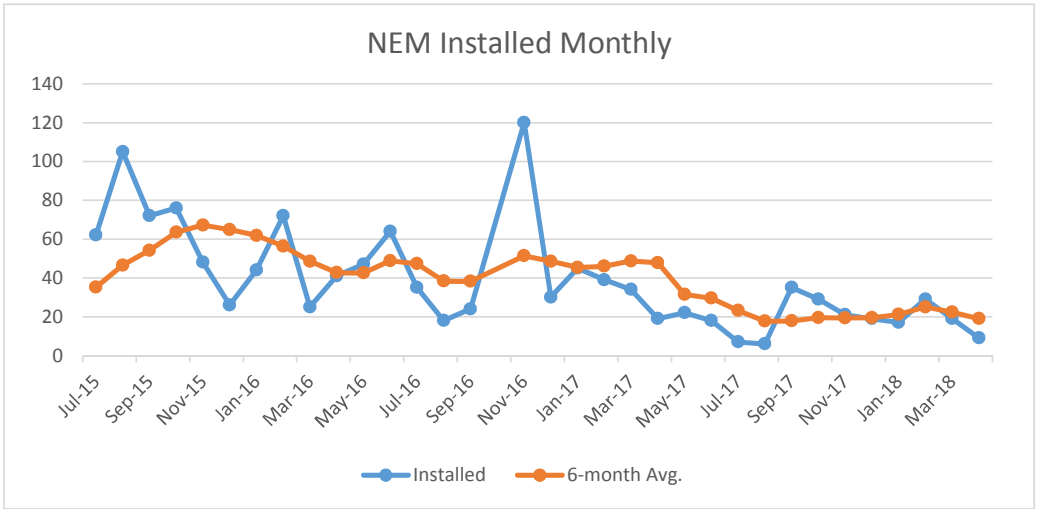
2. Net Metering Summary Ending April 2018:

Description:	**Count**	**Kw**
Active	**1,658**	**17,218**
Pending	17	129
Totals:	1,675	17,347

Service:	**Count**	**KW**	**Kw/Customer**
Residential	1,571	14,242	9.1
Others	87	2,976	34.2
Total:	1,658	17,218	10.4
% Residential	**94.8%**	**82.7%**	
Estimated 12 Months Revenue Impact:	$3,109,983		




NEM Total KW
20,000
15,000
10,000
5,000
0
January-15
March-15
May-15
July-15
September-15
November-15
January-16
March-16
May-16
July-16
September-16
November-16
January-17
March-17
May-17
July-17
September-17
November-17
January-18
March-18
Installed
Pending


NEM Installed Monthly
140
120
100
80
60
40
20
0
Jul-15
Sep-15
Nov-15
Jan-16
Mar-16
May-16
Jul-16
Sep-16
Nov-16
Jan-17
Mar-17
May-17
Jul-17
Sep-17
Nov-17
Jan-18
Mar-18
Installed
6-month Avg.

3. Renewable Energy Production Summary Thru April 2018:

Energy Production Source:	Kwh	Oil Barrels Avoided	Fuel Cost Avoided
NRG Total Production beginning Oct 2015	124,386,711	207,977	$11,438,719
Net Metering Estimated Production beginning Jan 2015	61,981,993	103,635	$5,699,922
Wind Power Production beginning Jan 2016	927,422	1,551	$85,287
Renewables Total:	**187,296,126**	**313,162**	**$17,223,928**

4. Demand Side Management (DSM) Program Expenses Thru April 2018.

All Expenses – Fiscal Year

Description	FY16	FY17	FY18 as of April 30	Total to Date
Labor	$11,348.80	$22,256.00	$11,005.25	$44,610.05
Contracts	$28,278.50	$73,010.05	$2,885.00	$104,173.55
Bank Fees	$155.00	$1,032.06	$230.00	$1,417.06
Paid Rebates-Split AC	$154,700.00	$557,275.00	$649,875.00	$1,361,850.00
Paid Rebates-Central AC	$3,400.00	$8,200.00	$1,300.00	$12,900.00
Paid Rebates-Washer/Dryer	$2,800.00	$7,425.00	$8,600.00	$18,825.00
Total Expenses	$200,682.30	$669,198.11	$673,895.25	$1,543,775.66

SUMMARY

DESCRIPTION	AMOUNT
Initial DSM Budget FY'16	$1,806,014.00
Interest Income as of Apr 18	$3,900.94
Total Expense	$1,543,775.66
Ending Balance as of Apr 18	$266,139.28
Addtl. Budget: Approved (FY'18)	$1,139,189.00
Total Ending Balance as of Apr 18:	**$1,405,328.28**

5. **Net Metering Customer Credit Recommendation:** GPA will complete its analysis and recommendation as to what credit and cost should be applied to net metering energy customers. GPA will provide its recommendation at the June 6, 2018 CCU regular meeting. Once the CCU approves a policy, GPA could petition the PUC for their approval.

6. **Phase II Renewables:** The Signing of the power purchase agreement with KEPCO/LGCNS is tentatively scheduled for May 31st at 9am here at Fadian. We will send out invitations to the CCU.

7. **Phase III Renewables Bid**: The bid has been issued. The bid request is for about 40MW of solar PV renewables to be constructed on Navy leased land. The technical proposals are due on June 19, 2018. The opening date of prices of acceptable technical proposals has been set for August 1, 2018.

8. **PUC April 26, 2018 regular meeting resulted in the following:**
    - **Approval of GPA Docket 18-12, Invitation for Bid (IFB) for Property Insurance**

    Dockets to be considered in the May PUC meeting:
    - **GPA Docket 18-13, Petition to Approve the Piti 8 & 9 Contract Extension with Marianas Energy Corporation**

9. **New Power Plant Procurement:**

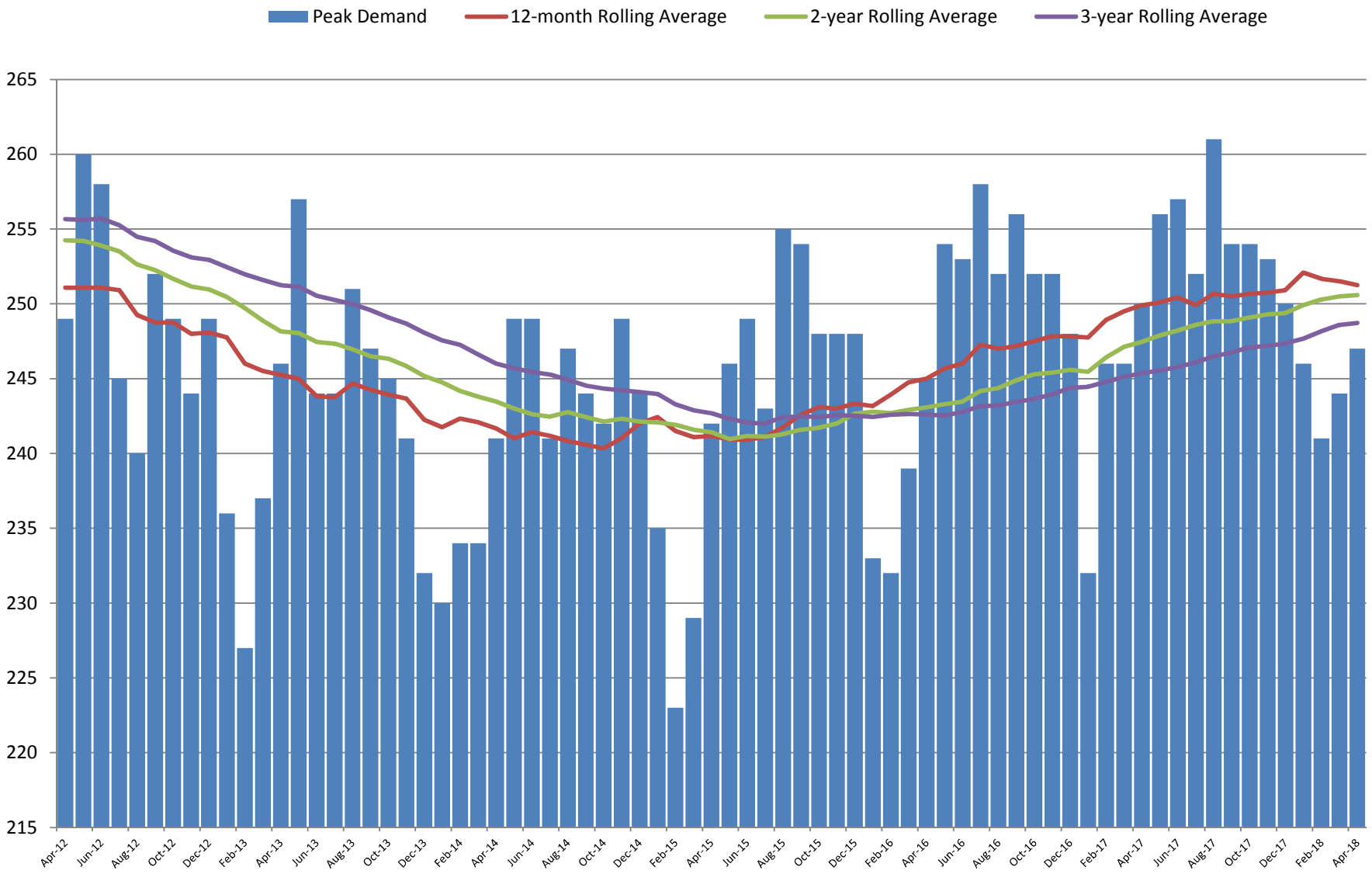
    - Public Law 102-34, consolidation of the Ukudo lots and rezoning to M1 took effect on May 16, 2018. The bill was passed by the 34th Legislature by a vote of 11-2. The Governor has allowed the Bill to lapse and become law. GPA will now file the petition for purchase of the 60 acres to the PUC in hopes they act on it in their May or June meeting.
    - Multi-Step Bid Invitation No. 034-18 was opened on April 5, 2018. Eighteen (18) proponents submitted their technical and financial information. The short list of proponents which met the required financial and technical experience requirement is scheduled to be announced by the end of May 2018.

10. **Supervisory Control and Data Acquisition (SCADA) Commissioning:** The new SCADA system being housed in Fadian is on track for commissioning in October 2018. The new system includes the latest technology for the GPA power and GWA water and wastewater system. The factory testing of the system's major components has been rescheduled to early June in Taiwan.

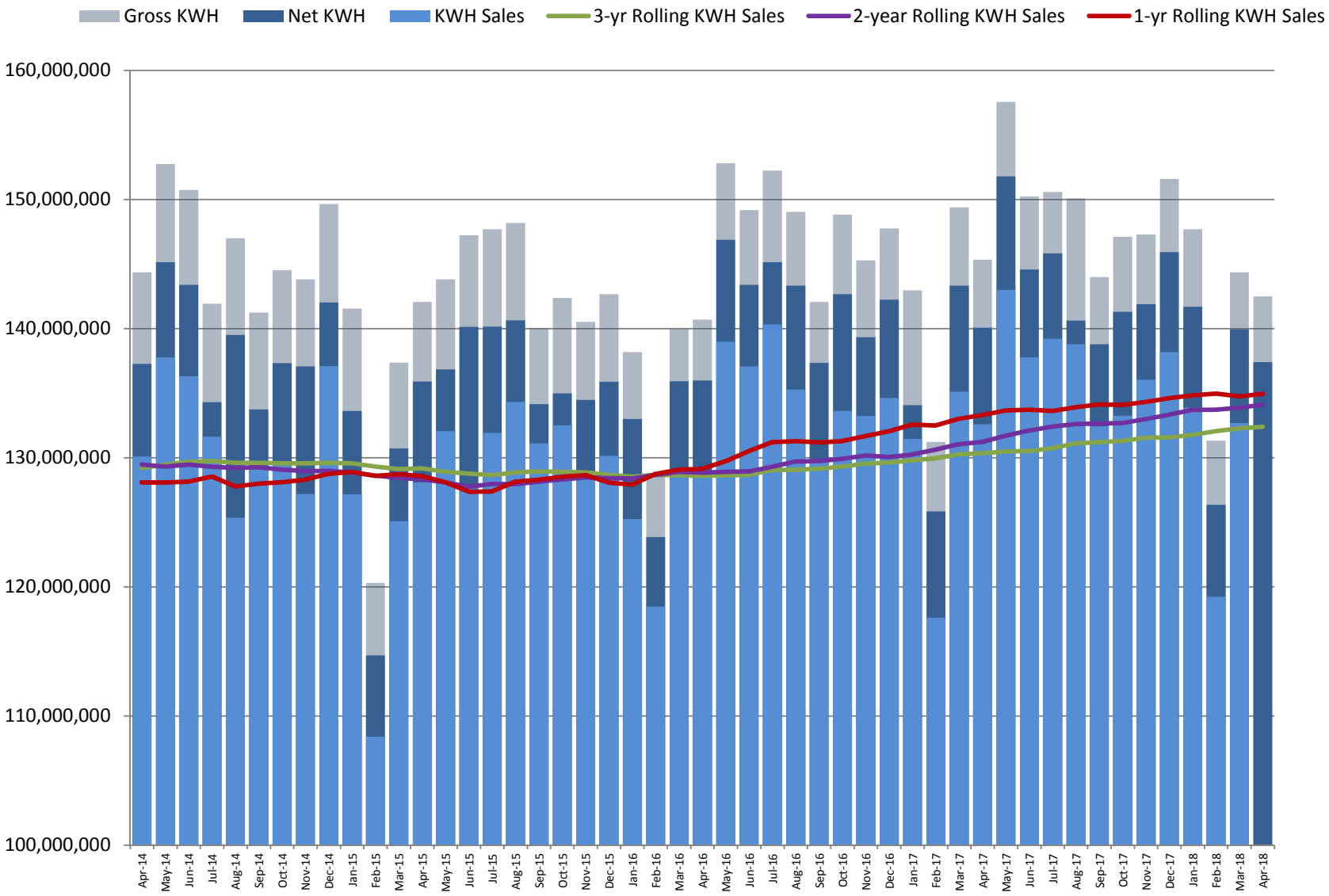
11. **Key Performance Indicators:** The following are updated indicators thru March 2018. Sales continued to be strong. Fuel oil prices have risen again and has passed $70 per bbl.

John M. Benavente, P.E.

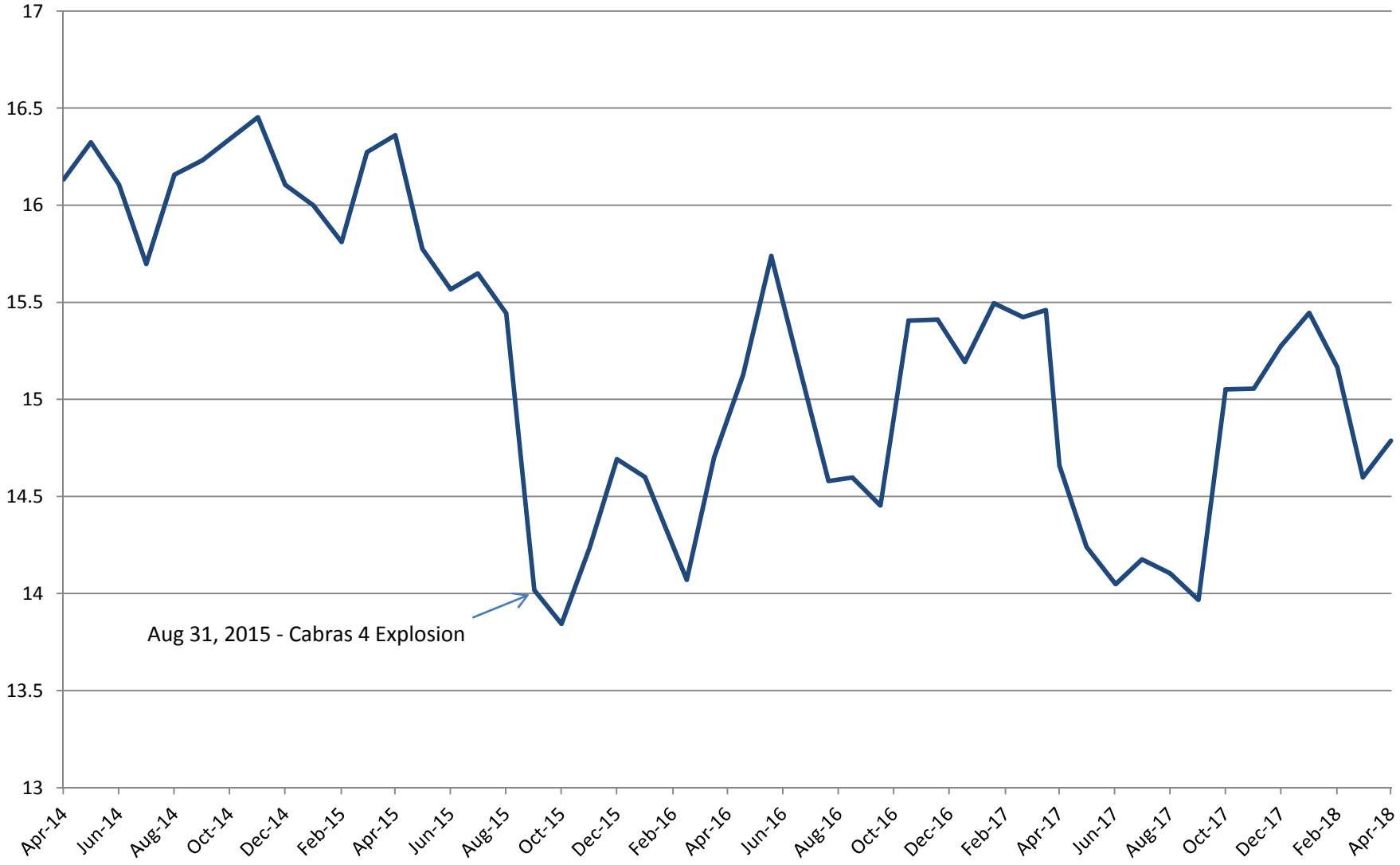
Historical Monthly Peak Demand
April 2012 - April 2018



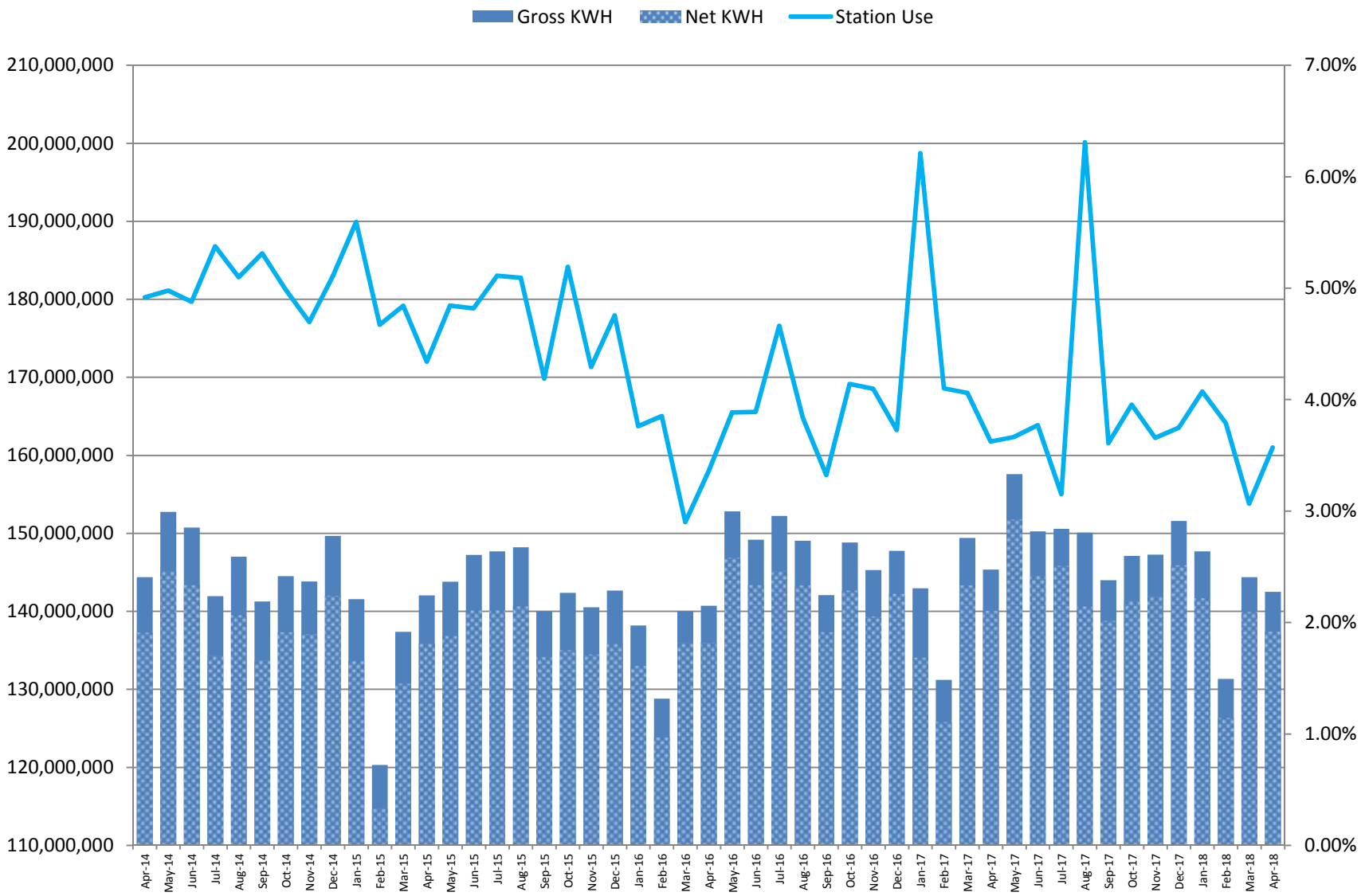
Historical KWH Sales
April 2014 - April 2018



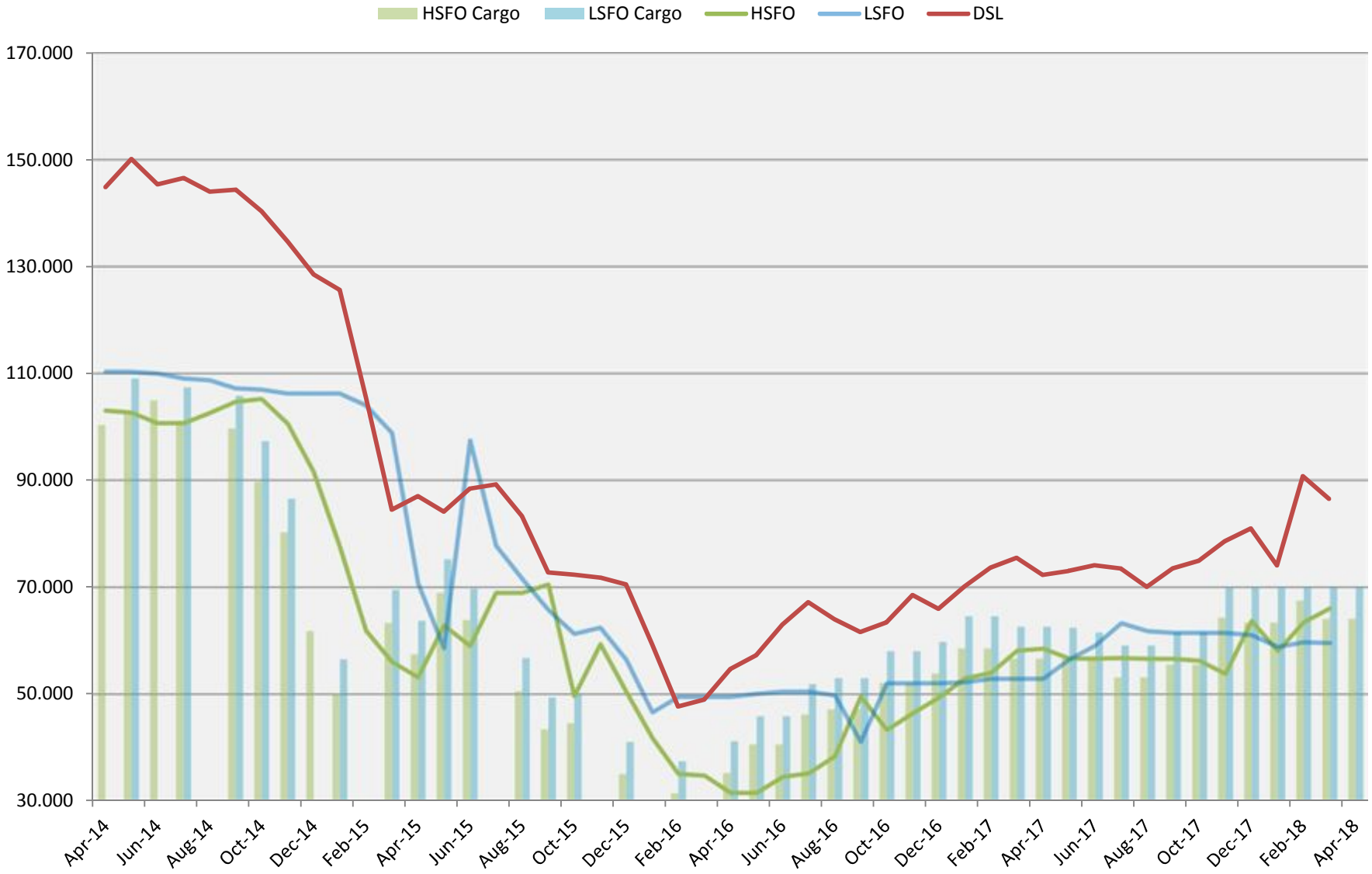
SYSTEM GROSS HEAT RATE
(KWH/Gal)
April 2014 - April 2018



Gross and Net Generation (KWH)
April 2014- April 2018



Fuel Cargo and Fuel Consumption Costs ($/bbl)
April 2014 - April 2018



ISSUES FOR DISCUSSION

ORGANIZATIONAL REALIGNMENT

Summary

- 2011 - 2014: Installation of smart meters and accessories significantly changed GPA's processes & structure
- GPA commissioned an analysis of then-current processes and the anticipated changes
- Several recommendations were instituted, including changes to some business processes and organizational structure
- Other changes were instituted, yet not formalized

Outstanding Actions:

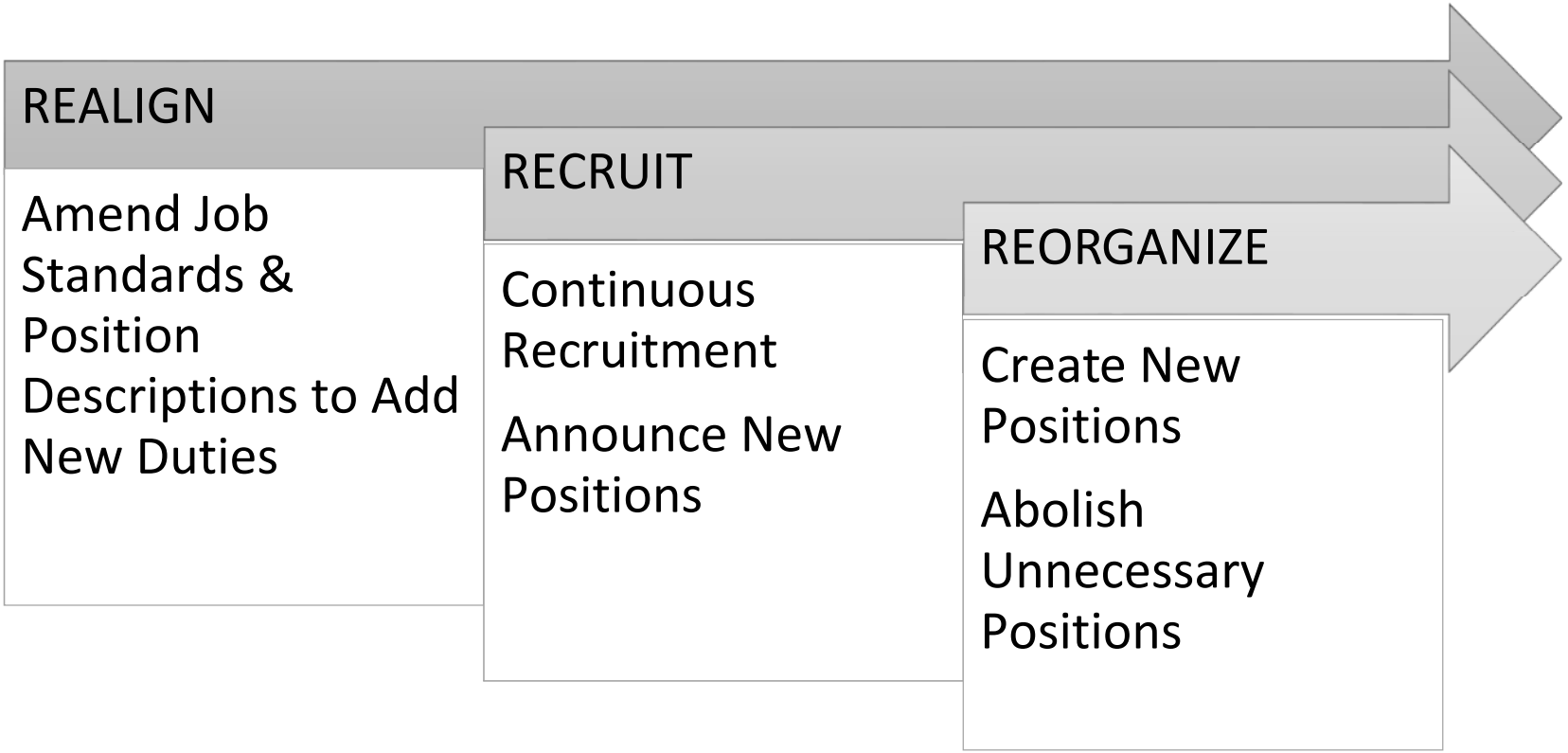
- *Reflect the current processes & structure*
- *Create new positions*
- *Eliminate overlap of similar functions*
- *Abolish unnecessary positions*

Actions

LIST OF POSITIONS TO BE ABOLISHED	LIST OF POSITIONS TO BE CREATED	LIST OF JOB STANDARDS TO BE AMENDED
Electric Meter Reader I	AMI Technician	Meter Electrician I
Electric Meter Reader II	AMI Technician Leader	Meter Electrician II
Electric Meter Reader Leader		Meter Electrician Leader
Electric Meter Reader Supervisor		Meter Electrician Supervisor
Customer Service Electrician I		Electric Relay Technician I
Customer Service Electrician II		Electric Relay Technician II
Customer Service Electrician Leader		Electric Relay Technician Leader
Customer Service Electrician Supervisor		Electric Relay Technician Supervisor

SOPs & APs will be reviewed and amended; or created accordingly.

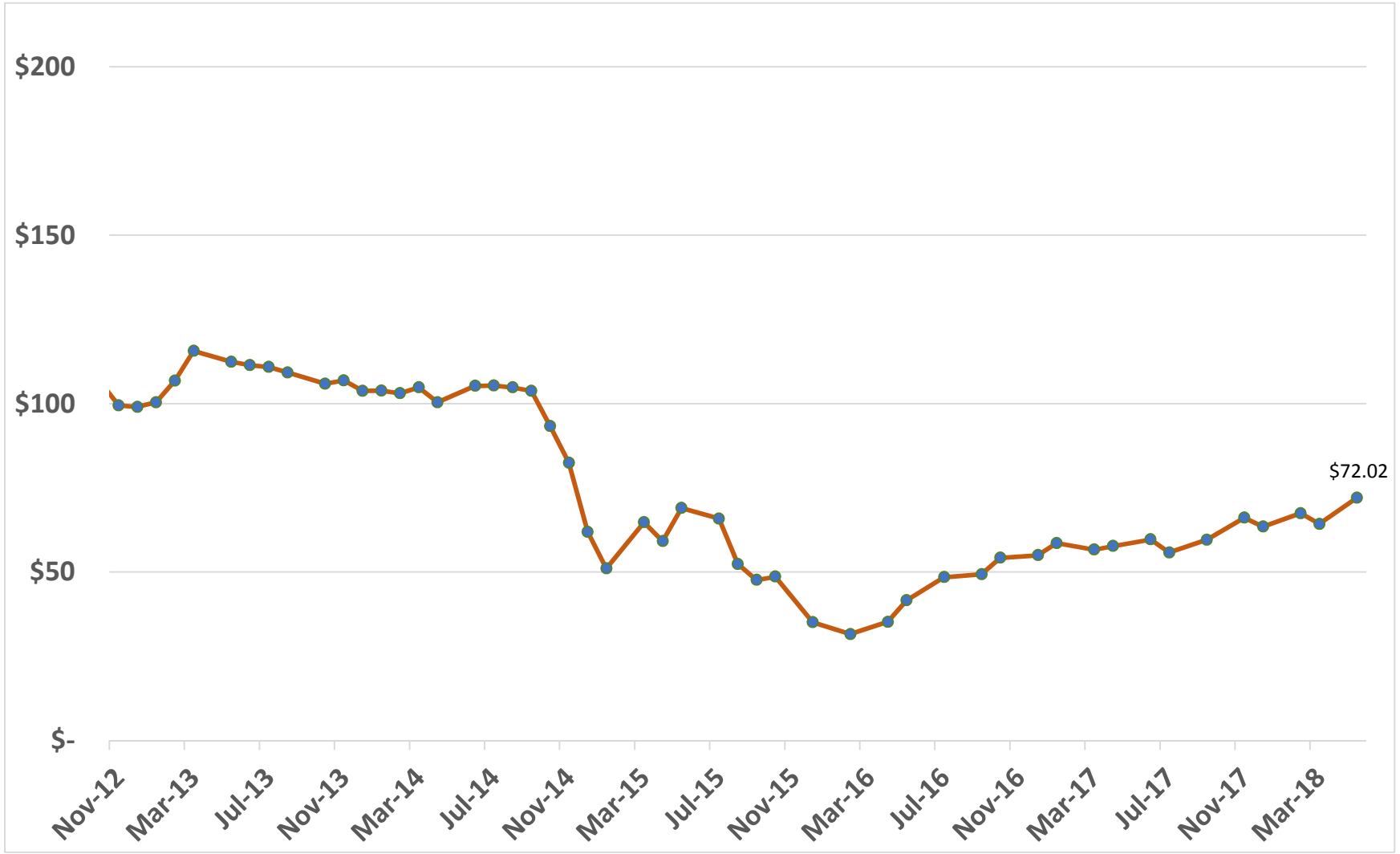
Process


REALIGN
Amend Job Standards & Position Descriptions to Add New Duties
RECRUIT
Continuous Recruitment
Announce New Positions
REORGANIZE
Create New Positions
Abolish Unnecessary Positions

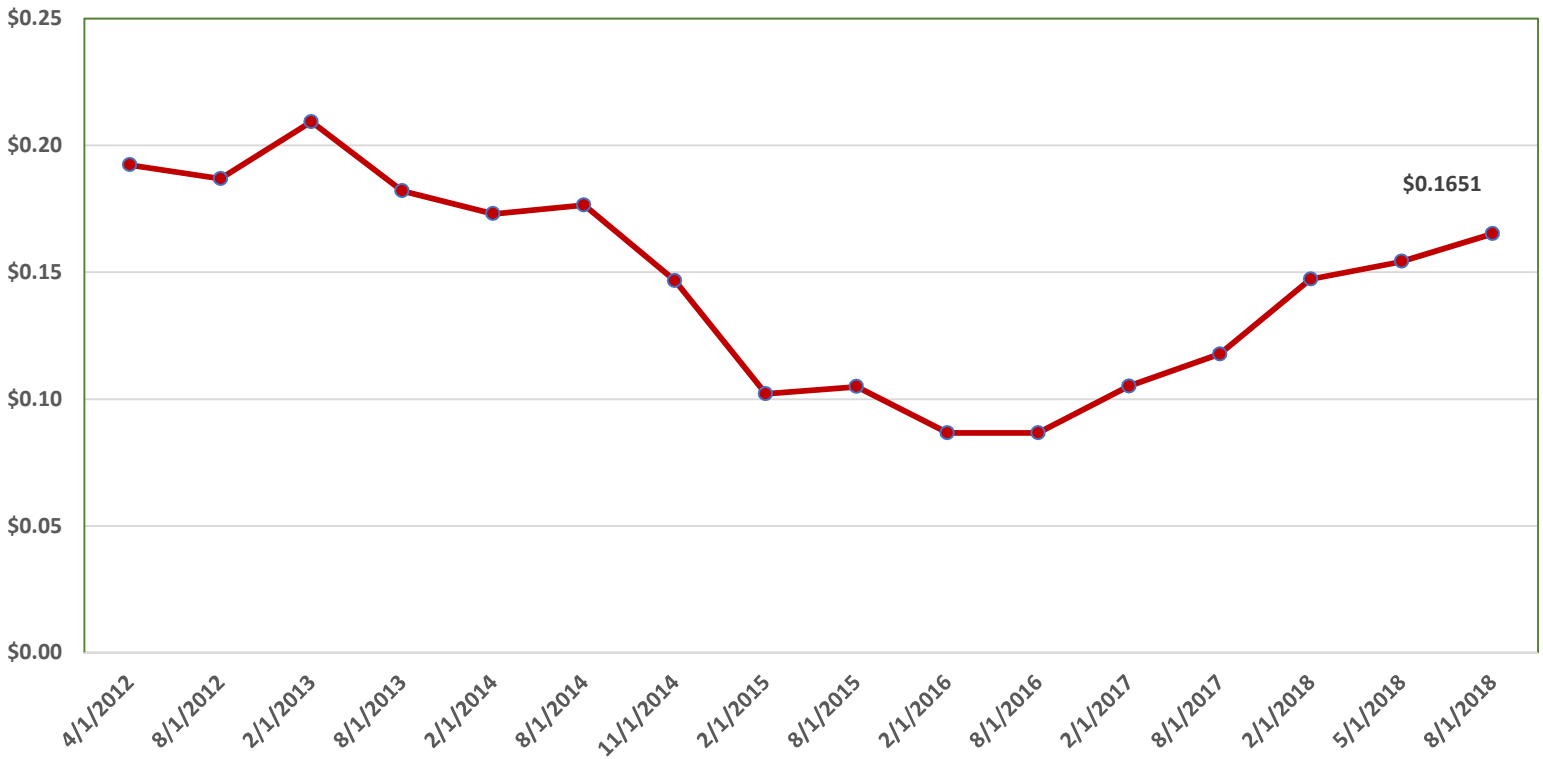
Proposed Action Timeline

	JUN-18	JUL-18	AUG-18	SEP-18	OCT-18
REALIGNMENT	Amend Existing Job Standards & Position Descriptions				
RECRUITMENT	Continue In-House Job Announcements Employee Outreach		Begin to Fill New Positions		
REORGANIZATION	Submit Request to CCU		*23-Aug Proposed Effective Date for New Positions	*30-Sep Proposed Effective Date for Abolished Positions	
	Begin Regulatory Process Upon Approval (Employee Notices, Priority Placement, etc.)				

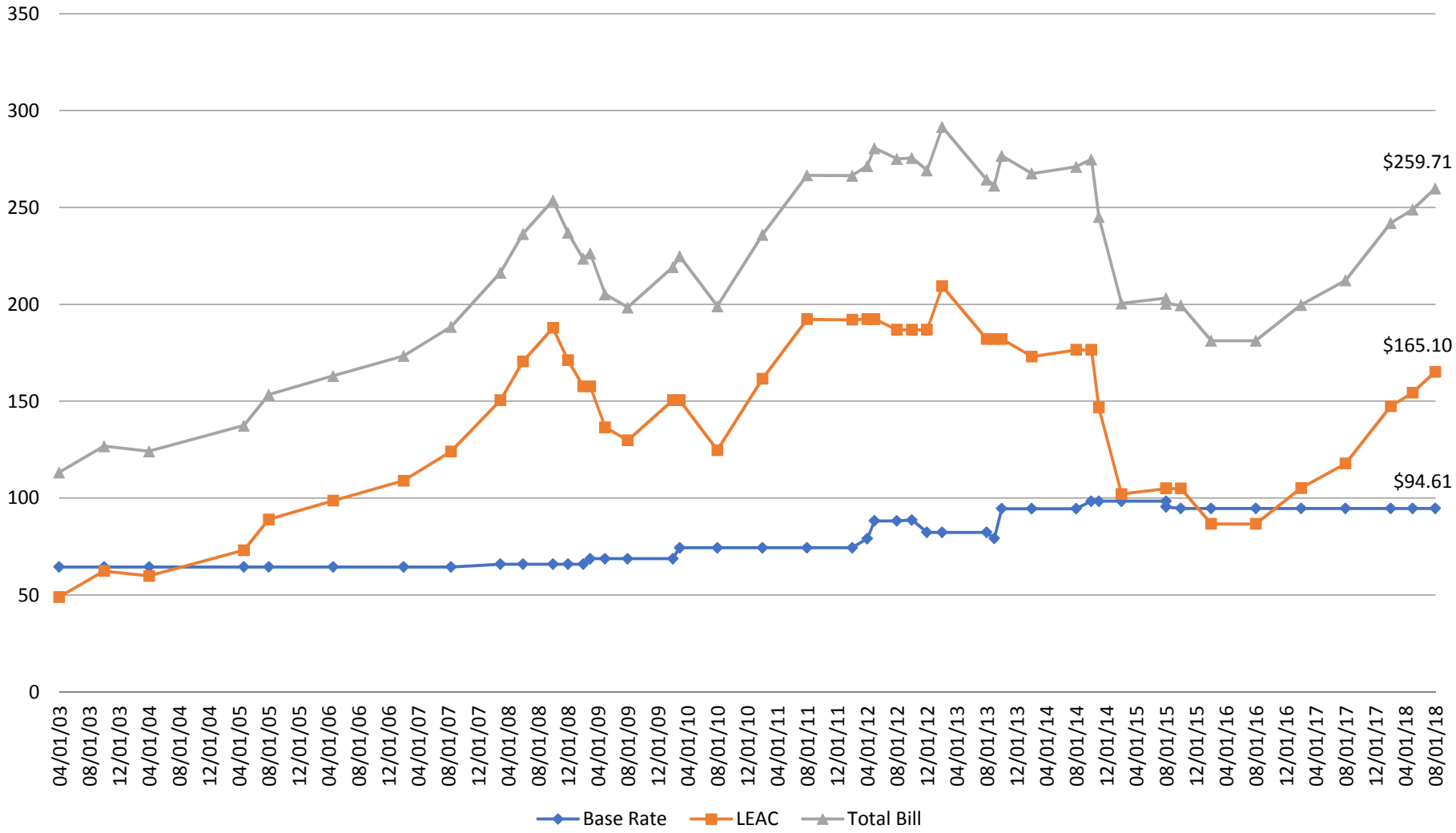
LEAC Update – GPA Fuel Purchases (Per Barrel)



Historical and Proposed LEAC Rate @100% Recovery



Historical Residential Rate with the Proposed LEAC rate



LEAC Update – Scenario Model Runs

		Scenario 1 At Current Fuel Price		
		No Change in Fuel Price [1] Proposed Eff 8/01/2018	@ Zero Cost Recovery Proposed Eff 8/01/2018	@ Full Cost Recovery Proposed Eff 8/01/2018
1	Average Price per Bbl-RFO	$ 65.23	$ 74.59	$ 74.59
2	Average Price per Gal-Diesel	$ 89.86	$ 97.05	$ 97.05
3	Proposed LEAC Rate	**$ 0.154242**	**$ 0.154242**	**$ 0.165100**
4	Monthly Increase/(Decrease) - 1000 kWh	$ -	$ -	$ 10.86
5	% Increase/(Decrease) in LEAC	0.00%	0.00%	7.04%
6	% Increase/(Decrease) in Total Bill	0.00%	0.00%	4.36%
7	Fuel Cost (Over) Under Recovery at the end of the period	($3.0M)	$7.1M	$ -

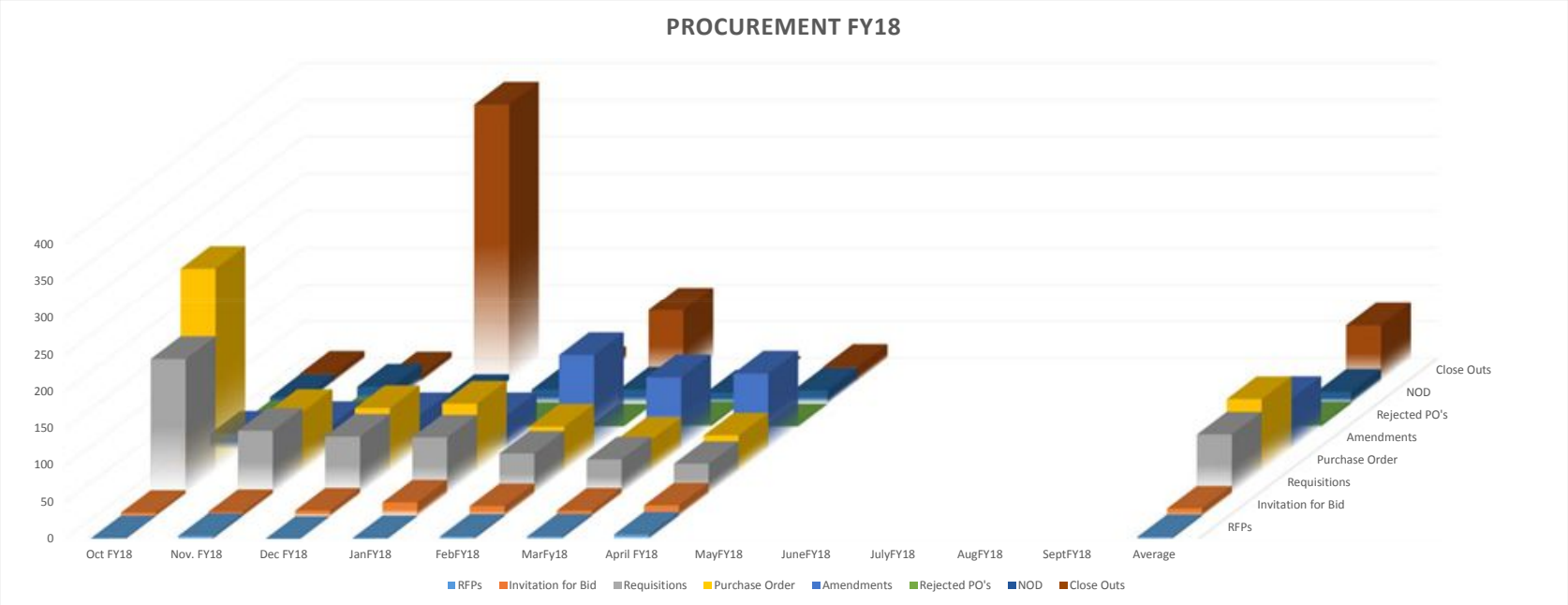
Note 1 If the fuel prices remained the same, the LEAC rate will decreased by 2.94%

LEAC Update – Scenario Model Runs

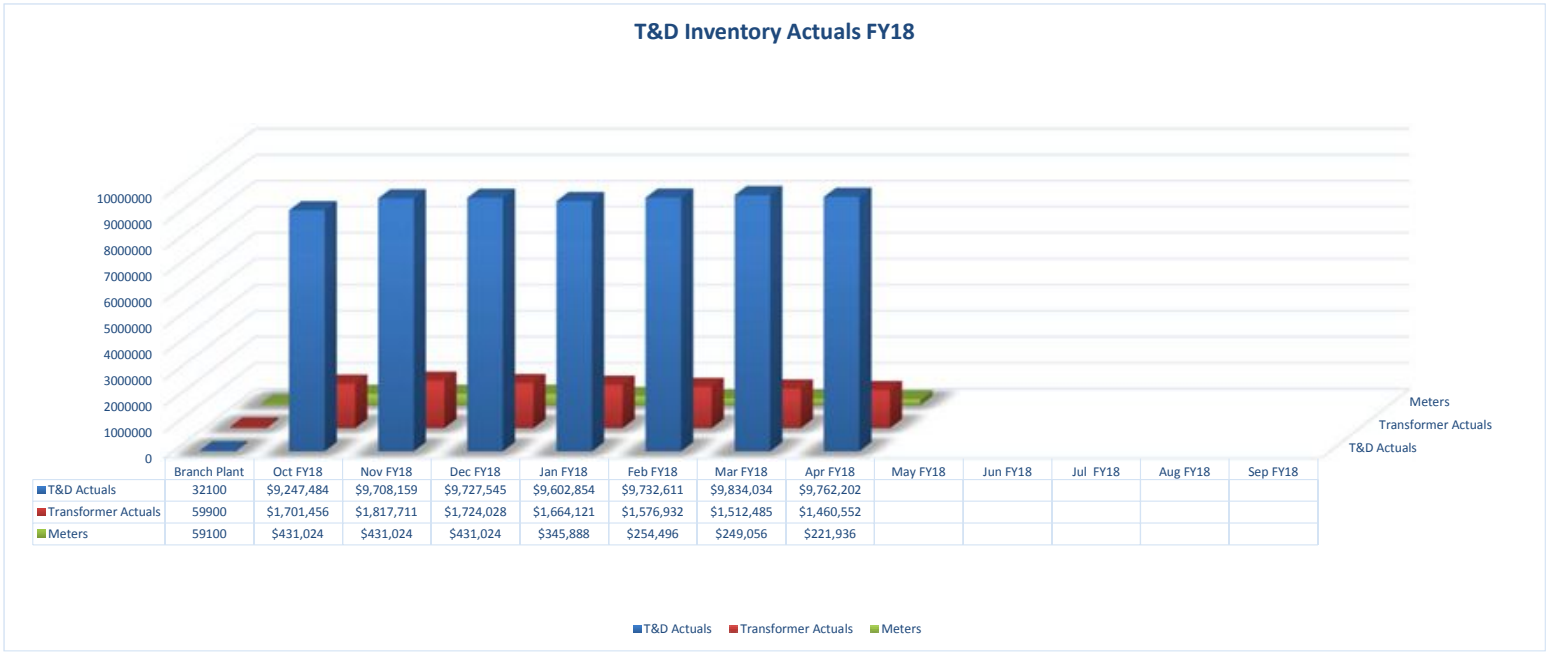
		Scenario 2 Fuel Price Increased by 15%	
		@ Zero Cost Recovery Proposed Eff 8/01/2018	**@ Full Cost Recovery Proposed Eff 8/01/2018**
18	Average Price per Bbl-RFO	$ 85.00	$ 85.00
2	Average Price per Gal-Diesel	$ 110.00	$ 110.00
20	Proposed LEAC Rate	**$ 0.154242**	**$ 0.184695**
21	Monthly Increase/(Decrease) - 1000 kWh	$ -	$ 30.45
22	% Increase/(Decrease) in LEAC	0.00%	19.74%
23	% Increase/(Decrease) in Total Bill	0.00%	12.24%
24	Fuel Cost (Over) Under Recovery at the end of the period	**$20.1M**	$ -

LEAC Update - Sample Residential Bill

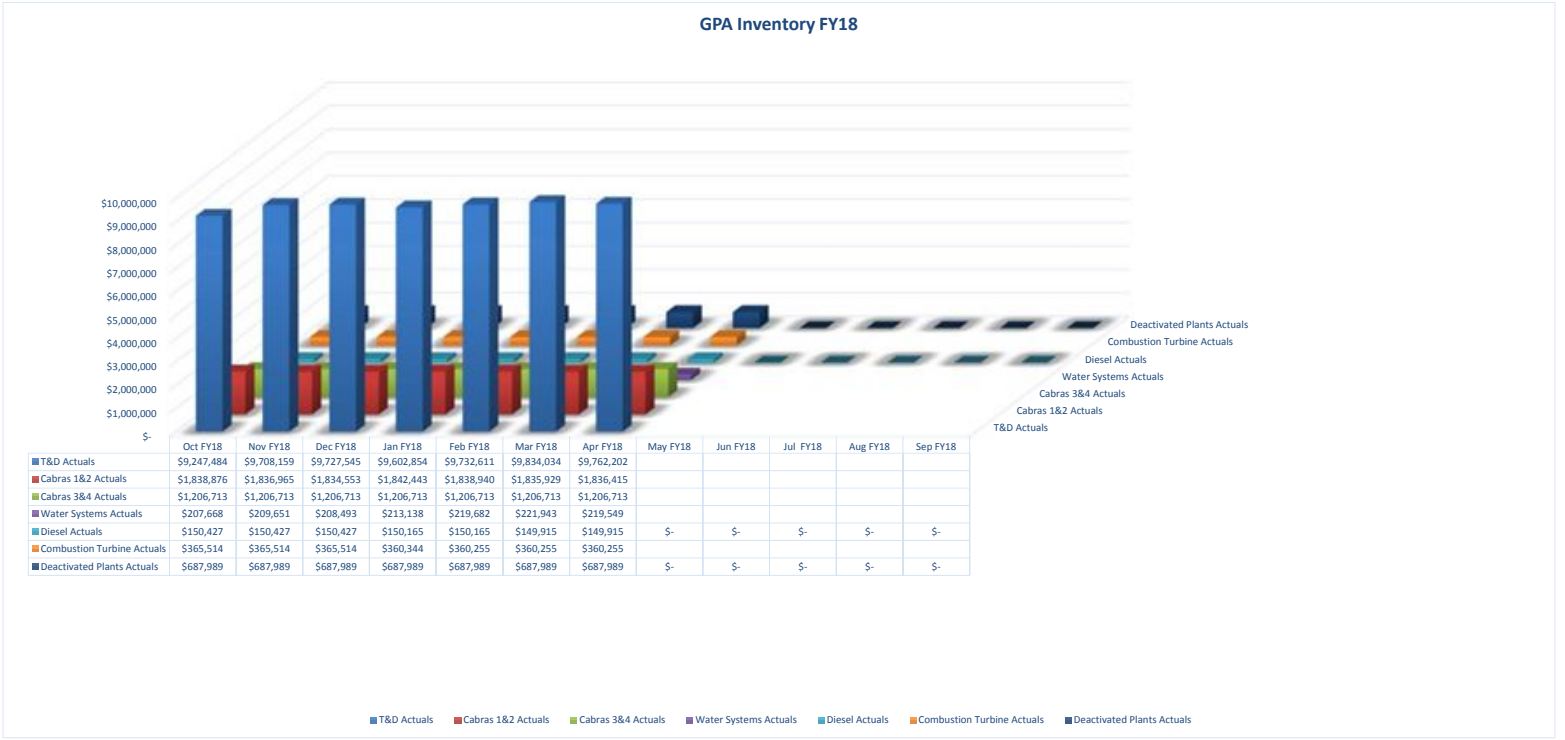
		Rate Schedule R			
		Current LEAC Effective 5/1/18		**Proposed LEAC Effective 8/1/18**	
KWH			1,000		1,000
Monthly Charge		15.00	15.00	15.00	15.00
Non-Fuel Energy Charge					
	First 500 KWH	0.06955	$ 34.78	0.06955	$ 34.78
	Over 500 KWH	0.08687	$ 43.44	0.08687	$ 43.44
Emergency Water-well charge		0.00279	$ 1.40	0.00279	$ 1.40
Insurance Charge			$ -		$ -
Working Capital Fund Surcharge			$ -		$ -
Total Electric Charge before Fuel Recovery Charges			$ 94.61		$ 94.61
Fuel Recovery Charge		**0.154242**	154.24	**0.165100**	165.10
Total Electric Charge			$248.85		$259.71
Increase (Decrease) in Total Bill					$10.86
% Increase (Decrease) in Total Bill					**4.36%**
% Increase (Decrease) in LEAC					**7.04%**



	Oct FY18	Nov. FY18	Dec FY18	JanFY18	FebFY18	MarFy18	April FY18	MayFY18	JuneFY18	JulyFY18	AugFY18	SeptFY18	Average
RFPs	1	4	0	1	3	3	6						2.57142857
Invitation for Bid	5	6	8	19	14	8	15						10.7142857
Requisitions	183	86	78	77	55	47	41						81
Purchase Order	275	81	86	92	61	43	49						98.1428571
Amendments	**21**	**34**	**46**	**46**	**127**	**97**	**102**						67.5714286
Rejected PO's	4	9	0	2	0	3	0						2.57142857
NOD	9	23	9	19	19	15	18						16
Close Outs	10	9	374	16	96	3	19						75.2857143



	Branch Plant	Oct FY18	Nov FY18	Dec FY18	Jan FY18	Feb FY18	Mar FY18	Apr FY18	May FY18	Jun FY18	Jul FY18	Aug FY18	Sep FY18
T&D Actuals	32100	$9,247,484	$9,708,159	$9,727,545	$9,602,854	$9,732,611	$9,834,034	$9,762,202					
Transformer Actuals	59900	$1,701,456	$1,817,711	$1,724,028	$1,664,121	$1,576,932	$1,512,485	$1,460,552					
Meters	59100	$431,024	$431,024	$431,024	$345,888	$254,496	$249,056	$221,936					



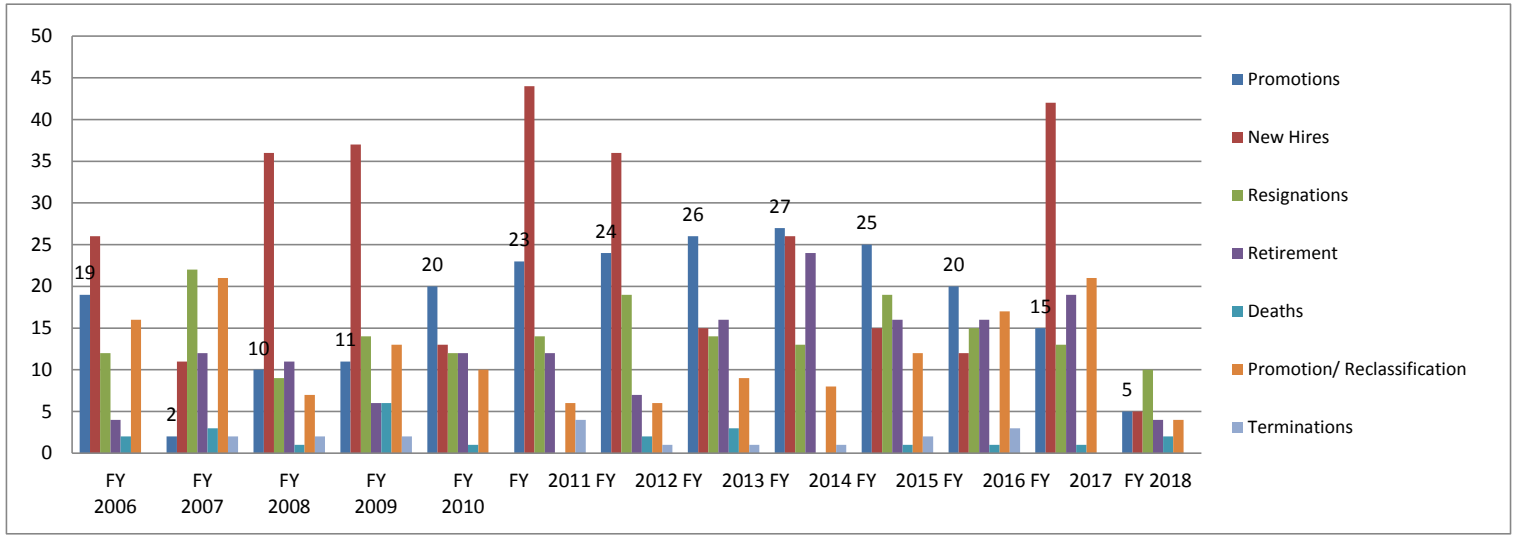
	Oct FY18	Nov FY18	Dec FY18	Jan FY18	Feb FY18	Mar FY18	Apr FY18	May FY18	Jun FY18	Jul FY18	Aug FY18	Sep FY18
T&D Actuals	$9,247,484	$9,708,159	$9,727,545	$9,602,854	$9,732,611	$9,834,034	$9,762,202					
Cabras 1&2 Actuals	$1,838,876	$1,836,965	$1,834,553	$1,842,443	$1,838,940	$1,835,929	$1,836,415					
Cabras 3&4 Actuals	$1,206,713	$1,206,713	$1,206,713	$1,206,713	$1,206,713	$1,206,713	$1,206,713					
Water Systems Actuals	$207,668	$209,651	$208,493	$213,138	$219,682	$221,943	$219,549					
Diesel Actuals	$150,427	$150,427	$150,427	$150,165	$150,165	$149,915	$149,915	$-	$-	$-	$-	$-
Combustion Turbine Actuals	$365,514	$365,514	$365,514	$360,344	$360,255	$360,255	$360,255					
Deactivated Plants Actuals	$687,989	$687,989	$687,989	$687,989	$687,989	$687,989	$687,989	$-	$-	$-	$-	$-

RECRUITMENT ANALYSIS

Fiscal Year	Promotions	New Hires	Resignations	Retirement	Deaths	Promotion/ Reclassifi-cation	Termina-tions	Total Author-ized FTE	Attrition Rate	Total Filled FTE at end of Fiscal Year	Percentage of Filled FTE at end of Fiscal Year
2006	19	26	12	4	2	16	0	584	3.3%	536	91.8%
2007	2	11	22	12	3	21	2	584	7.2%	510	87.3%
2008	10	36	9	11	1	7	2	592	4.5%	525	88.7%
2009	11	37	14	6	6	13	2	592	5.3%	534	90.2%
2010	20	13	12	12	1	10	0	592	4.7%	522	88.2%
2011	23	44	14	12	0	6	4	592	5.7%	536	90.5%
2012	24	36	19	7	2	6	1	568	5.4%	543	95.6%
2013	26	15	14	16	3	9	1	568	6.3%	524	92.3%
2014	27	26	13	24	0	8	1	568	7.3%	512	90.1%
2015	25	15	19	16	1	12	2	539	7.4%	489	90.7%
2016	20	12	15	16	1	17	3	510	7.2%	466	91.4%
2017	15	42	13	19	1	21	0	510	7.1%	476	93.3%
2018	5	5	10	4	2	4	0	510	3.4%	465	91.2%

Recruitment Analysis (FY 2018) ..1 of 2

as of 04/30/18



	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Promotions	19	2	10	11	20	23	24	26	27	25	20	15	5
New Hires	26	11	36	37	13	44	36	15	26	15	12	42	5
Resignations	12	22	9	14	12	14	19	14	13	19	15	13	10
Retirement	4	12	11	6	12	12	7	16	24	16	16	19	4
Deaths	2	3	1	6	1	0	2	3	0	1	1	1	2
Promotion/ Reclassification	16	21	7	13	10	6	6	9	8	12	17	21	4
Terminations	0	2	2	2	0	4	1	1	1	2	3	0	0

TOTAL NO. OF EMPLOYEES	**536**	**510**	**525**	**534**	**522**	**536**	**543**	**524**	**512**	**489**	**466**	**476**	**465**

Recruitment Analysis (FY 2018) .. 2 of 2

as of 04/30/18

GUAM POWER AUTHORITY
HUMAN RESOURCES DIVISION
STAFFING REPORT (FY 2018)
AS OF APRIL 30, 2018

DIVISION	B1 ACTIVE EMP	B2 LAST EMP	C PROMOTE /TRANS	D PROM. RECLASS	E NEW HIRES	F RESIGN/ TERM	G RETIRE	H CURR VAC	I LAST VAC	(B1+H=K) TOTAL STAFFING
INTERNAL AUDIT/REVENUE PROTECTION	2	2	0	0	0	0	0	2	2	4
BOARD(10200)	2	2	0	0	0	0	0	0	0	2
GENERAL MANAGER (CUS) [10100]	0	0	0	0	0	0	0	0	0	0
GENERAL MANAGER (20500)	4	4	0	0	0	0	0	0	0	4
PUBLIC INFORMATION OFFICE	2	2	0	0	0	0	0	0	0	2
ASSIST GM-ENG/TECH SVCS (30500)	1	1	0	0	0	0	0	0	0	1
ASSISTANT GENERAL MGR (30800)	1	1	0	0	0	0	0	1	1	2
ASSISTANT GENERAL MGR (AGMO) 50900	2	2	0	0	0	0	0	0	0	2
STRAT PLANN & OPTNS RESEARCH DIV	9	9	0	0	0	0	0	2	2	11
FACILITIES	9	9	0	0	0	0	0	0	0	9
HUMAN RESOURCES	10	10	0	0	0	0	0	0	0	10
CUSTOMER SERVICES	34	34	0	0	0	0	0	3	3	37
INFORMATION TECHNOLOGY	14	14	0	0	0	0	0	2	2	16
FINANCE	42	42	0	0	0	0	0	4	4	46
PROCUREMENT	21	21	0	0	0	0	0	1	1	22
TRANSPORTATION	9	9	0	0	0	0	0	2	2	11
SAFETY	6	6	0	0	0	0	0	1	1	7
PLANNING & REG	8	8	0	0	0	0	0	0	0	8
ENGINEERING	37	37	0	0	0	0	0	2	2	39
GENERATION	133	133	0	0	0	0	0	12	12	145
TRANSMISSION/DISTRIBUTION	97	97	5	0	0	0	0	10	10	107
POWER SYSTEM CONTROL CENTER	22	22	0	0	0	0	0	3	3	25
	465	465	5	0	0	0	0	45	45	510
JOBS/SCSEP/GETP PARTICIPANTS	2	2								2
WORK EXPERIENCE PROGRAM	4	4								
APPRENTICESHIP PROGRAM	0	0								0
SUMMER ENGINEERING INTERNS	0	0								0
TEMPORARY (P.L. 34-32)	1	1								1
GRAND TOTAL WORKFORCE:	472	472	5	0	0	0	0	45	45	513

FTE Count per FY18 FMP: 510

Current vacancies adjusted to reflect FTE of 510

** JOBS = Job Opportunities and Basic Skills (individuals under the Public Health assistance program)

** GETP = Guam Employment & Training Program (individuals under the Public Health assistance program)

** SCSEP = Senior Community Service Employment Program

** APPRENTICESHIP TRAINING PROGRAM - Generation, PSCC and T&D combined total

** JOBS/SCSEP/GETP and Apprentice program participants are not included in the total annual budgeted FTE (Full-Time Employee) count.

** P.L. 34-32 -Temporary employee(s)

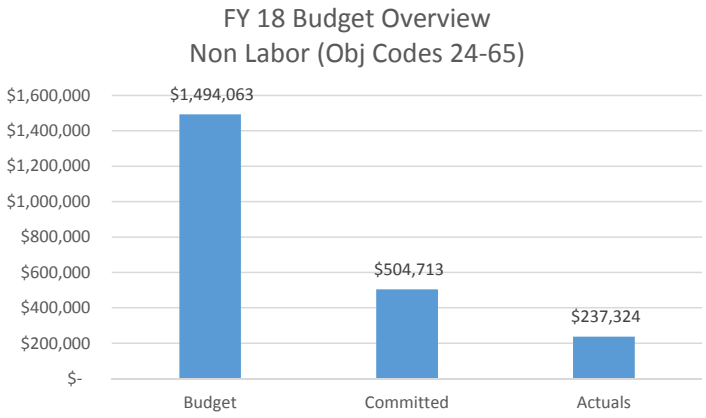
Staffing Report as of April 30, 2018 - PREPARED BY: J.Aguigui

SPORD CCU Report

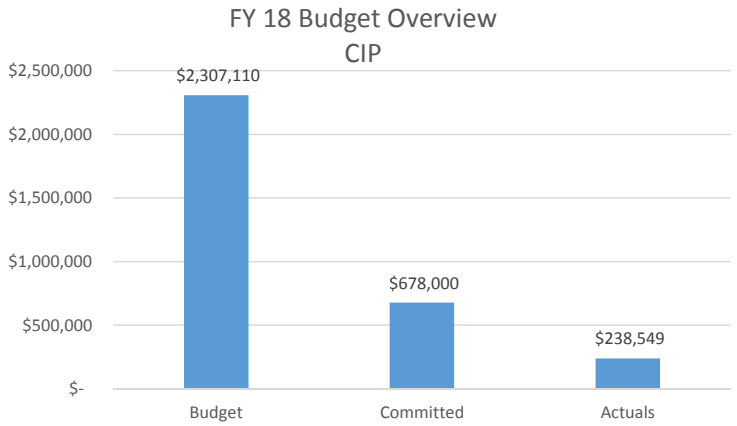
April 2018

SPORD FY 2018 Budget Status

- SPORD O&M:



- CIP



2

SPORD FY 2018 Budget Status

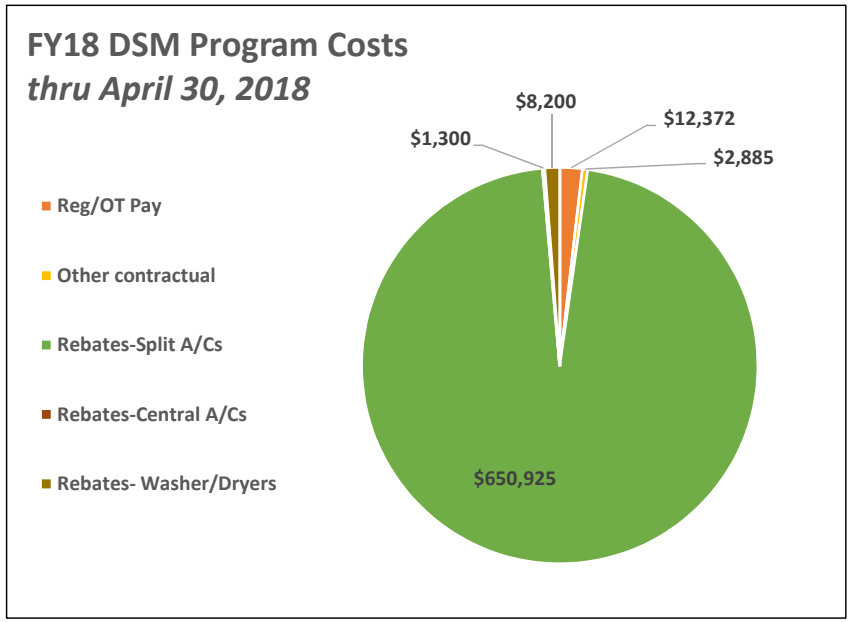
- Major Contracts (Non-O&M) thru March 2018

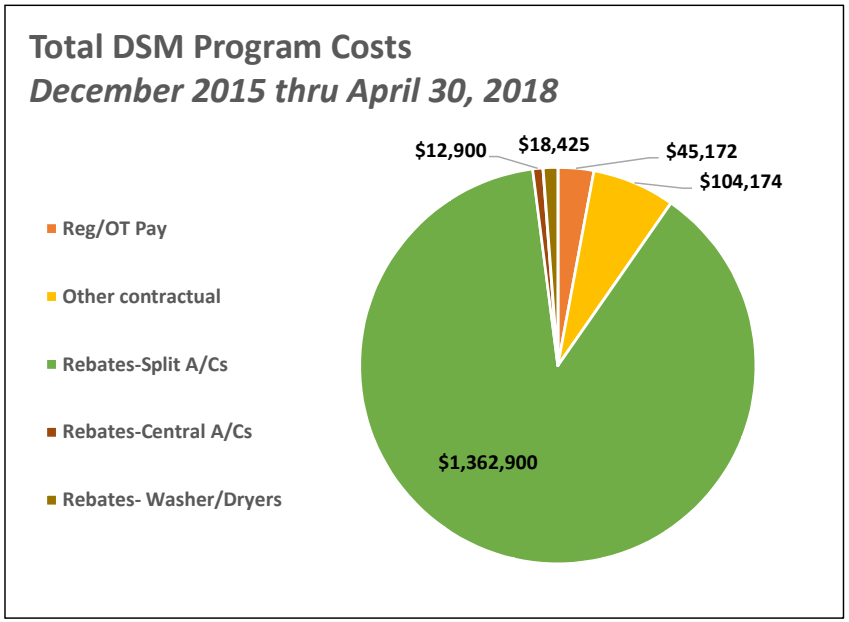
	Annual Contract Amount	Actuals	Balance
Aggreko Contract	$ 10,983,096	$ 5,842,713	$ 5,140,383
Fuel Contracts	$ 200,124,429	$ 96,205,313	$ 103,919,116
MEC IPP (Piti 8&9)	$ 31,909,347	$ 18,509,358	$ 13,399,989
NRG Contract (Renewable)	$ 10,170,682	$ 4,689,457	$ 5,481,225

3

SPORD FY 2018 Budget Status

- DSM Expenses





4

Ongoing Activities

- Contract Performance Management (IPP, PMC, Agrekko)
- Generation Fuel Supply & Fuel Farm Management
- DSM Rebate Processing
- Renewables (Wind Turbine Maintenance & DOAg MOA, NRG Invoicing)
- Smart Grid/Network Support
- Project Management
  - Procurement
  - *April Project Activities*

PROCUREMENT ACTIVITIES

PENDING AWARD / NTP

Responsible	PROJECT	Description	CCU Date Approved (Resolution No.)	PUC Date Approved (Docket No.)	Projected Start*	Projected Completion	Status
SPORD (FJI)	RENEWABLES	Phase II - KEPCO/LG CNS	1/23/18 (2018-01)	3/29/2018 (18-06)	4/30/2021	4/24/2046	Pending contract signature & ntp scheduled for end of May (final date pending)
SPORD (FJI)	RENEWABLES	Phase II - KEPCO/LG CNS	2/27/18 (2018-04)	3/29/2018 (18-08)	10/1/2020	9/25/2045	Final start dates pending. Also pending contract signing date.

ONGOING PROCUREMENT

Responsible	PROJECT	Description	Bid or RFP	Bid/RFP No	Announced	Bid Opening / Due	Notes
SPORD (RAC)	SCADA	SCADA Workstations	Bid	GPA-049-18	2/13/2018	3/14/2018	Award Recommendation memo for approval submitted 3/27/2018. Pending Procurement letter to Vendor.
SPORD (FJI)	NEW POWER PLANT	Geotechnical Services	RFP	Resolicitation GPA-RFP-18-002	5/1/2018 (2/6/2018) (3/20/2018)	5/16/2018	3rd attempt for Bid solicitation resolicited due to no proposals received in original and 2nd solicitation.
SPORD (RAC)	SMART GRID	MV90 Integration Services	RFP	GPA-RFP-18-001	1/30/2018	3/6/2018	(Evaluation Completed - Approval Memo for award submitted - 3/30/2018) PMM Pending Price proposal.
SPORD (RAC)	PLANNING	Milsoft Systems Software Services	RFP	GPA-RFP-18-003	2/1/2018	3/7/2018	(Evaluation Completed - Approval Memo for award submitted - 3/28/2018) Price Proposal under review.
SPORD (ANF)	FUEL	Petroleum Inspection Services	MS Bid	GPA-014-18	1/30/2018	5/2/2018	Step 2 - Price bid
SPORD (FJI)	NEW POWER PLANT	Build, Operate & Transfer Contract for 120-180MW of New Generation Capacity. **(PHASE I - REQUEST FOR QUALIFICATIONS)**	MS Bid	GPA-034-18	1/16/2018	4/5/2018	Step I - Closing of Qualifications. (18 proposals recevied on 4/5/18) Evaluation extended thru 5/11/18.

ONGOING PROCUREMENT (continued)							
SPORD (ANF)	FUEL	Supply of Residual Fuel Oil No. 6	MS Bid	GPA-009-18	11/16/2017	5/11/2018	04/04-24/2018- Finance revised insurance requirements. Phase I- Closing of Technical Proposal extended to May 11, 2018.
SPORD (ANF)	FUEL	Supply of Diesel Fuel Oil No. 2	MS Bid	GPA-008-18	11/16/2017	5/31/2018	Bid specs changed to include delivery-awaiting final review by Fuel Committee and Legal. Phase I- Closing of Technical Proposal extended to May 31, 2018.
SPORD (JTL)	RENEWABLES	Renewable Energy Resource Phase III	MS Bid	GPA-007-18	11/16/2017	6/19/2018	Step I - Closing of Technical Proposal
SPORD (RAC)	SMART GRID	Mobile Workforce Management System (MWMS) **RE-BID**	MS Bid	GPA-023-17	10/5/2017	3/20/2018	(Evaluation Completed - Approval Memo for award submitted - 3/21/2018) Pending Vendor Business License
ENGINEERING	FUEL	GPA Tank Farm RFO Pipeline Upgrade - Design / Build	Bid	GPA-047-18	2/8/2018	12/31/2018	To repair existing RFO lines at the Bulk Fuel Farm and upgrade pipe supports and install new pressure relief system

DEVELOPING PROCUREMENT

Responsible	PROJECT	Description	Bid or RFP	CCU Meeting	Projected Start	Projected Completion	Status
SPORD (MAT)	IPP Contract	Piti #8&9 IPP Contract	MS Bid				PENDING. Extension of current ECA approved by CCU and under PUC revie. Bid document preparation for a new contract in-progress; will bid if Extension not approved by CCU, otherwise, bid will be postpone until 2020, to cover period after extension.
SPORD (FJI)	NEW POWER PLANT	Build, Operate & Transfer Contract for 120-180MW of New Generation Capacity. **(PHASE II - TECHNICAL SPECIFICATIONS)**	MS Bid				Pending final bid documents.
ENGINEERING	FUEL	GPA Tank Farm DFO Pipeline Upgrade - Design / Build	Bid		2/8/2018	9/30/2019	Preparation of IFB bid specs in progress. To install new diesel line from Navy Tie-in to the Bulk Fuel Tanks and replace diesel line to TEMES CT
ENGINEERING	FUEL	Tank 1935 API 653 Internal Inspection	Bid		5/1/2018	5/31/2019	Preparation of IFB bid specs in progress. Budgetted for FY 2018.
ENGINEERING	FUEL	OWS Upgrading	Bid		5/1/2018	5/31/2019	Preparation of IFB bid specs in progress.
ENGINEERING	FUEL	LD System Upgrading	Bid		5/1/2018	5/31/2019	Preparation of IFB bid specs in progress.
SPORD (RAC)	ELECTRIC VEHICLE	Electric Vehicle Charging Stations	Bid		May-18	Sep-18	
SPORD (RAC)	SCADA	DNP3 SA training	RFP		May-18	Dec-18	
SPORD (RAC)	ELECTRIC VEHICLE	Electric Vehicle Infrastructure	RFP		Jun-18	Dec-18	
SPORD (RAC)	STUDIES	Consulting Services for Distribution Study using Smart Grid Analytics	RFP		Jun-18	May-19	
SPORD (RAC)	SMARTWORK SYSTEMS	Smartworks Systems Software Services	RFP		Jun-18	Continous	

Project Activities

No.	Project Description	April 2018 Activities	Status / Est. Completion	RFP/Bid No
1	Energy Storage System (Phase I)	GPA reviewing revised 100% design. Clearing and grading permit work commenced in November 2017. Foundation permit work commenced in January 2018. Construction is 32% completed.	September 2018	MS Bid GPA-082-15
2	Renewable Energy Resource Phase II	PUC ratifies KEPCO contract (Docket 18-06) and approves HANWHA contract (Docket 18-08) on March 29, 2018. Contract signing for KEPCO scheduled for end of May (Kepco). Hanwha scehdule pending.	KEPCO PV plant COD is APR 2021. Hanwha's COD is anticipated for 1st qtr of 2020.	MS Bid GPA-070-16
3	New Power Plant Bid (EPCM)	Request for Qualification announced on January 16, 2018. Proposals deadline extended to April 5, 2018 due to questions and clarificaitons. Technical specifications are being reviewed and updated based on public hearings and technology neutral requirements. Evaluation extended to May 11, 2018.	Jan 2018 (Issue RFP Step 1 Solicitation) Apr 2018 (Proposals Due)	MS GPA-034-18
4	DSM Marketing	Negotiated additional scope for current year to support new vendors and programs and continue DSM marketing.	Continuous	
5	DSM Rebate Program	Processed rebates totaling ~ $103 K for Month of April	Continuous	
6	Wireless Network Expansion	Commenced Southern Expansion in collaboration with GWA: 30% Assessment of GWA Well Locations: Completed Assessment of Existing Tropos Units: 100% Router Equiqment and Accessories purchase	Dec-18 Completed Completed Arrival - May 2nd	 GPA-019-18
7	Performance Metrics Automation Project	Presentation to GM on iDashboard pending.	TBD	
8	Electric Grid Analysis Software	Additional training for users Training on Planning and Analysis Cases	Completed Jun-18	GPA-064-16
9	Supervisory Control and Data Acquisition (SCADA) System	Change Order Approved for October 2018 Completion and hardware costs Equipment on Order Factory Acceptance Test	Oct 2018 (SCADA COD) June 2018 (Factory Acceptance Test)	GPA-066-16
10	Mobile Workforce Management System	Bid Evaluation Completed, Clevest recommendation memo submitted for approval March 21, 2018	May 2018 (Bid Award)	GPA-023-17

Project Activities

No.	Project Description	April 2018 Activities	Status / Est. Completion	RFP/Bid No
11	Consulting Services for Smart Grid Analytics Enabled Distribution System Planning, Technical, and Economic Feasibility Studies	RFP evaluation completed for sole bidder. Bidder did not qualifiy. Committee recommendation to rebid. Sole-bidder Acknowledgement. Scope is being reassessed for resolicitation.	April 30, 2018 (Rebid)	RFP-17-005
12	TEMES Piti # 7 ECA Expiration & Transition to GPA	Transition completed. Environmental Assessment Report & Condition Assessment Report completed. Reports will be provided to Executive Management and Key Managers.	[Completed] [Completed] [On-going]	RFP-17-002
13	MEC Piti &8 and #9 - ECA Expiration	Environmental Assessment Report completed. Condition Assessment past due from Consultant.	[Completed] OVERDUE	RFP-17-002
14	Planning Software Administration/Maintenance	Call-off Consulting for DB Clean-up, CE + PO Plan Integration Configuration for ESS Call-off Consulting for additional work (New Power Plant Bid, etc.)	Start Date: Oct 2017 Completion Date: Sept 2019 *will continue thru next FY	
15	Generation Software (GADS open software)	Pending data entry from Generation & SPORD.	[On-going work]	
16	IFB for ULSD Supply for Baseloads and Peaking Units	Solicitation in progress. Bid package revised to include delivery requirements.	Start Date: Nov 2017 Est. completion: FY2018	IFB GPA-008-18
17	Contract for Lease of Bulk ULSD Storage	196KB tank repairs completed	27-Feb-18	TTGI-SA-2018-001
18	EV Infrastructure	Developing fast charge station scope for Mangilao offices.	Dec 2018	
19	Consulting Support, new procurements for Piti 7,8,9	Piti 7 - Management Contract (under Generation) awarded. No IPP bid. Piti 8&9 - Bid documents in progress, awaiting decision on Extension of ECA. If extended - will revise bid scope accordingly; if extension disapproved, will proceed with filing for approval of Bid.	[Commenced] Bid documents completion: June 2018 Bid Process Start Date: 3rd quarter of 2018 if Extension Not Approved	
20	Fuel Conversion Plan	Discussions on-going; additional budget needed. New Scope: Additional Support as Owner's Engineer	[On-going work, 6/2018 deadline] [thru FY 19 and 20, if approved]	
21	Fuel Bulk Storage Facility Assessment	ESA past due, pending approval from GPA CA past due, pending from Leidos	Start: Sept 2017 End: June 2018	

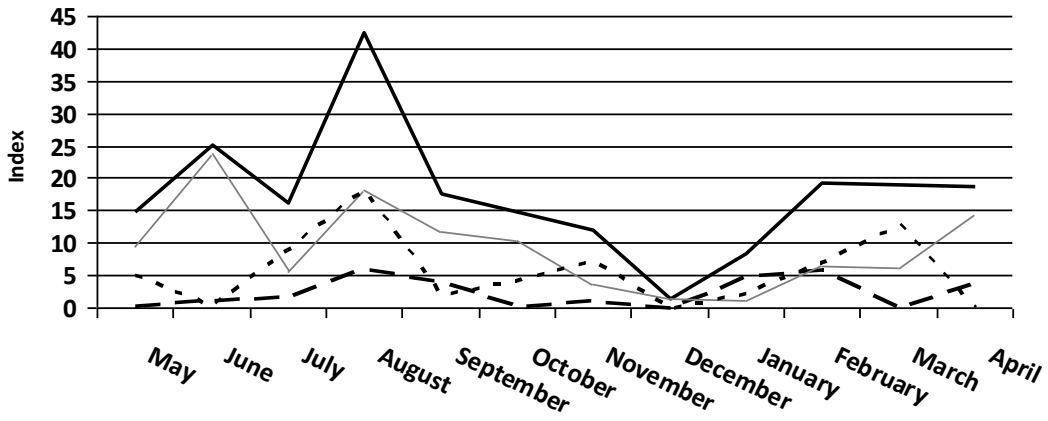
Project Activities

No.	Project Description	April 2018 Activities	Status / Est. Completion	RFP/Bid No
22	Renewable Energy Resource Phase III	Completed pre-bid conference and site visits January 23-24 2018.	(June 2018) Tech Proposal Due	
23	Utility Energy Services Contract (UESC)	Completed DSM Model House (DSM / Energy Efficient Equipment). Working on procedures to download and monitor office use. Obtained PUC approval for BEST GDOE program for energy efficiency. Coordinating meetings for week of May 21st to meet new Navy energy managers, kick off BEST GDOE assessment scope, followup with UOG on programs, meet with other commercial customers (GCC, Docomo, Ken Corp), and finalize financing structure.	Ongoing / Continuous	
24	IFB for RFO Supply to Baseload Plants	Solicitation in progress	Start: November 2017 Est. Completion: FY2018 Contract Start: Sep 1, 2018	IFB GPA-009-18
25	IFB for Petroleum Inspection Services	Re-Solicitation in progress	Start: November 2017 Est. Completion: FY2018 Contract Start: Jun 01, 2018	IFB GPA-014-18
26	RFO Storage Lease Agreement w/ Tristar	4-Year Lease extension Approved by CCU. Disapproved by PUC - requested for clarification on Index referenced. (Docket 18-10)	Start: November 2017 Est. Completion: May 2018 Contract Start: Aug 1, 2018	TTGI-SA-2013-001
27	GPA Fuel Farm RFO Pipeline Repair & Upgrade	c/o Engineering Project Mgt	Solicitation in progress (for award) Est. Completion: FY2019 (1st Qtr)	IFB GPA-047-18
28	GPA Fuel Farm ULSD Pipeline Upgrade	c/o Engineering Project Mgt	Estimated Start: Oct 2019 Est. Completion: Sep 2019	For IFB Solicitation
29	Tk 1934 & Tk1935 API 653 Internal Inspection	c/o Engineering Project Mgt	Estimated Start: Jun 2018 Est. Completion: FY2019	For IFB Solicitation
30	Milsoft Systems Software Services	Award Recommendation memo (Milsoft - Vendor) for approval submitted 3/28/2018 Price Proposal Review 4/19/2018	Continuous	GPA-RFP-18-003

Project Activities

No.	Project Description	April 2018 Activities	Status / Est. Completion	RFP/Bid No
31	MV90 Integration Services	Award Recommendation memo (Itron - Vendor) for approval submitted 3/30/2018	Dec-18	GPA-RFP-18-001
32	SCADA Workstations and Monitors	Award Recommendation memo for approval submitted 3/27/2018	June 2018 (Delivery)	GPA-049-18
33	Grant Proposal Development and Proposal Application Management Services	Solicitation process complete. Contract signed Feb. 20, 2018. Project activities commences following month	Feb 2018 (Contract signed)	Re-Solicitation GPA-RFP-16-011
34	Pipeline Lease Agreement w/ Tristar	4-Year Lease extension Approved by CCU. Disapproved by PUC - requested for clarification on Index referenced. (Docket 18-10)	Start: November 2017 Est. Completion: May 2018 Contract Start: Aug 1, 2018	TTGI-PA-2013-001
35	Dock Use Agreement w/ Tristar	4-Year Lease extension Approved by CCU. Approved by PUC on March 29, 2018. (Docket 18-10)	Start: November 2017 Est. Completion: Mar 2018 Contract Start: Aug 1, 2018	TTGI-DA-2013-001
36	Redesignation of Cabras-Piti / Guam	Re-designation received 12/2018. TRC standing by to assist GPA w/ State Implementation Plan, pending P&R review of Task Order. AAQM Installation/Implementation on hold, will depend on USEPA approval of SIP after submission on/before July 2019	Start: October 2011 Est. Completion: July 2019 *Submitted to EPA by completion date	RFP-11-001
37	Environmental Strategic Planning	Commenced discussions for update of 2012/2013 ESP.	Start: April 2018 Est. Completion: December 2018	RFP-11-001
38	GPA Fuel Farm- OWS Upgrading	c/o Engineering Project Mgt	Estimated Start: Jun 2018 Est. Completion: FY2019	For IFB Solicitation
39	GPA Fuel Farm- LD System Upgrading	c/o Engineering Project Mgt	Estimated Start: Jun 2018 Est. Completion: FY2019	For IFB Solicitation

(Item 1.1,1.2,1.5) April 2018 SAIDI = 209.47 ↓ (239.30)



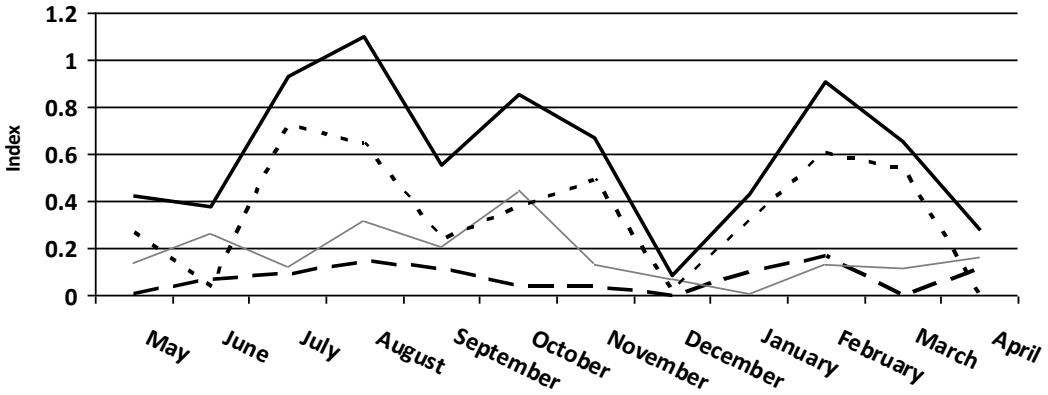
ALL

GEN=67.73 ↓ (87.72)

TRANS=29.04 ↓ (31.74)

DIST=112.69 ↓ (119.83)

(Item 1.1,1.2,1.5) April 2018 SAIFI = 7.26 ↓ (8.03)



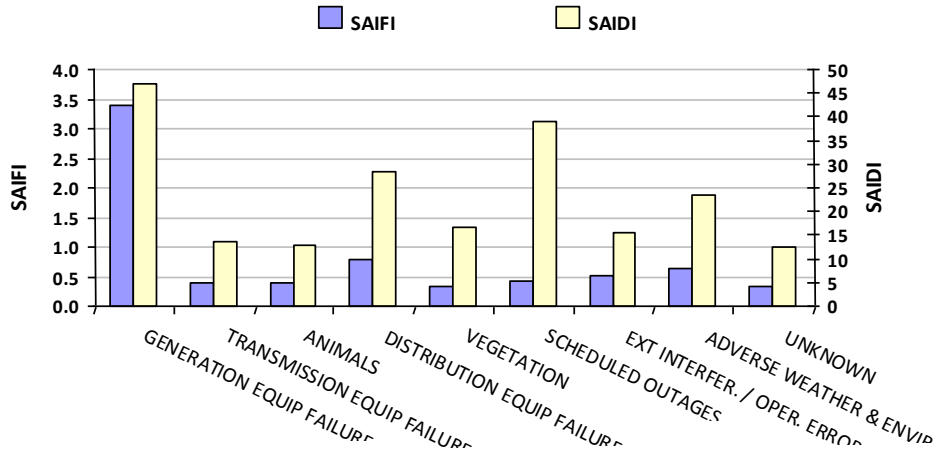
ALL

GEN=4.25 ↓ (4.98)

TRANS=0.89 ↓ (0.90)

DIST=2.11 ↓ (2.16)

(Item 1.9) 12-Month Cause Contributions to Reliability



GENERATION EQUIP FAILURE
F:45.1% D:22.4%

TRANSMISSION EQUIP FAILURE
F:7.0% D:6.6%

ANIMALS
F:6.3% D:6.1%

DISTRIBUTION EQUIP FAILURE
F:9.7% D:13.7%

VEGETATION
F:4.1% D:8.0%

SCHEDULED OUTAGES
F:9.9% D:18.6%

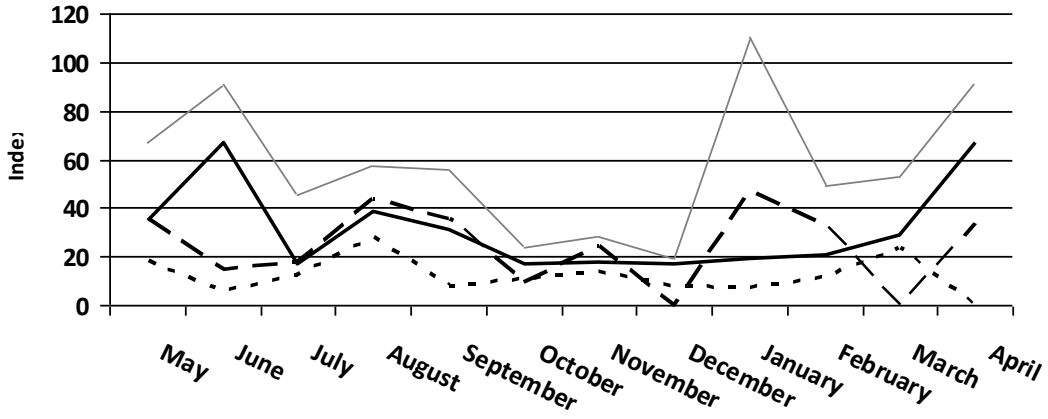
EXT INTERFER. / OPER. ERROR
F:6.5% D:7.4%

ADVERSE WEATHER & ENVIR.
F:6.8% D:11.2%

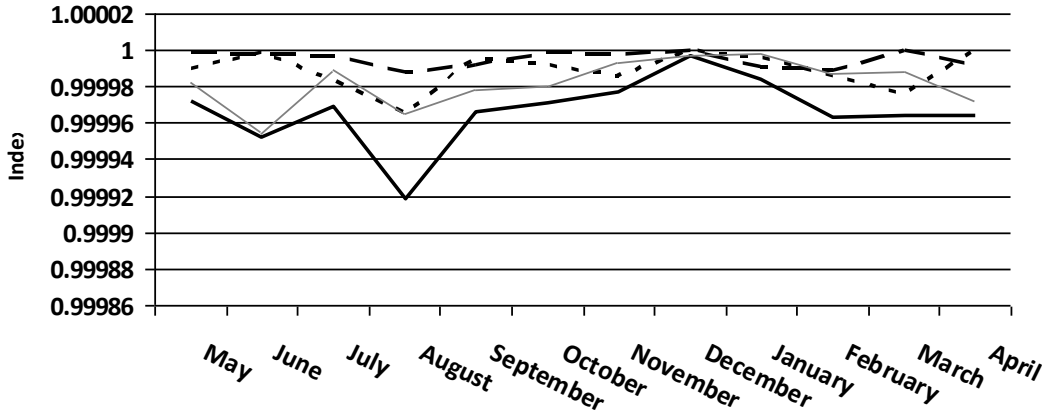
UNKNOWN
F:4.5% D:6.0%

As of April 30, 2018

(Item 1.1,1.2,1.5) April 2018 CAIDI = 28.86 ↓ (29.79)



(Item 1.1,1.2,1.5) April 2018 ASAI = 0.9996 ↑ (0.9995)



(Item 1.4) Top 5 Worst Feeders Distribution Causes

#	Feeder	Outage Count
1	P340	10
2	P261	7
3	P221	7
4	P046	5
5	P250	4

(Item 1.4) Top 5 Distribution Outage Causes

#	Outage Cause	Count
1	Overhead Equipment	32
2	Vegetation	14
3	Underground Equipment	11
4	Snakes	7
5	Customer Equipment Failures	5

(Item 1.3) Outage Count

TOTAL	UFLS	Non-UFLS
444	230	214

(Item 1.3) UFLS Contribution to Reliability

SAIDI	SAIFI	CAIDI
64.06	4.12	15.53

UNC* - Unchanged

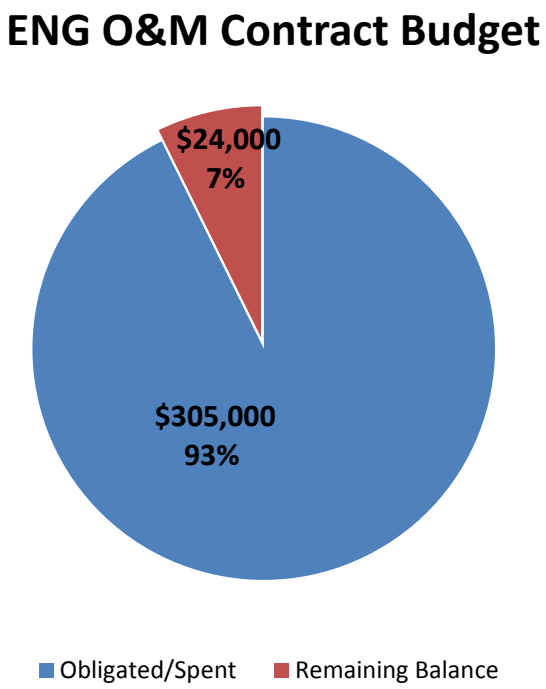
As of April 30, 2018

ENG Budget Execution Performance

April 30, 2018

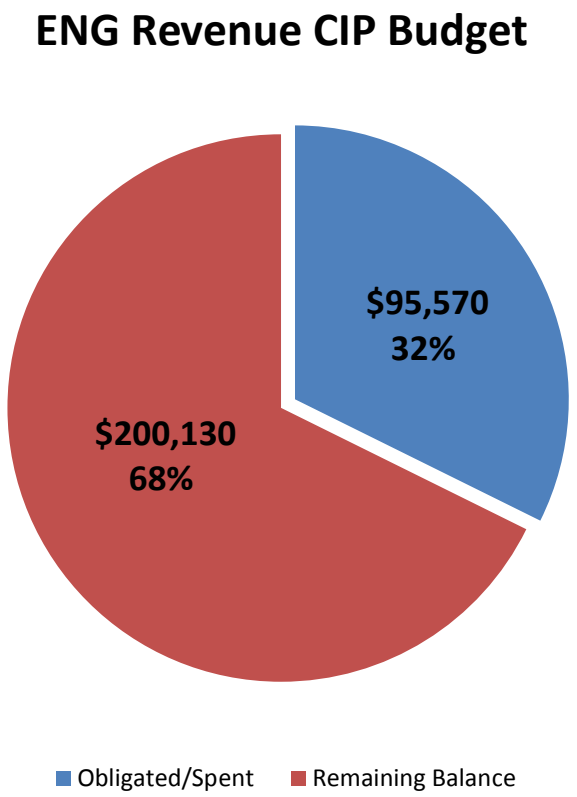
ENG Revenue CIP Budget

- Revenue Funded
- Target
  - 50% CIP Obligation by June 1, 2018
  - 100% CIP Spend by September 30, 2018



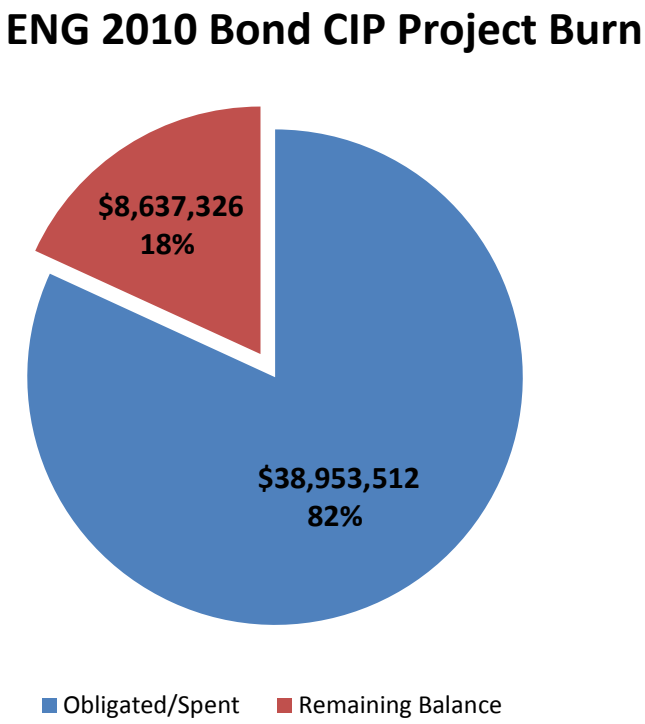
ENG O&M Contract Budget

- Revenue Funded
- Target
  - 25% CIP Obligated by April 30, 2018
  - 75% CIP Obligation by August 30, 2018
  - 100% CIP Spend by September 30, 2018



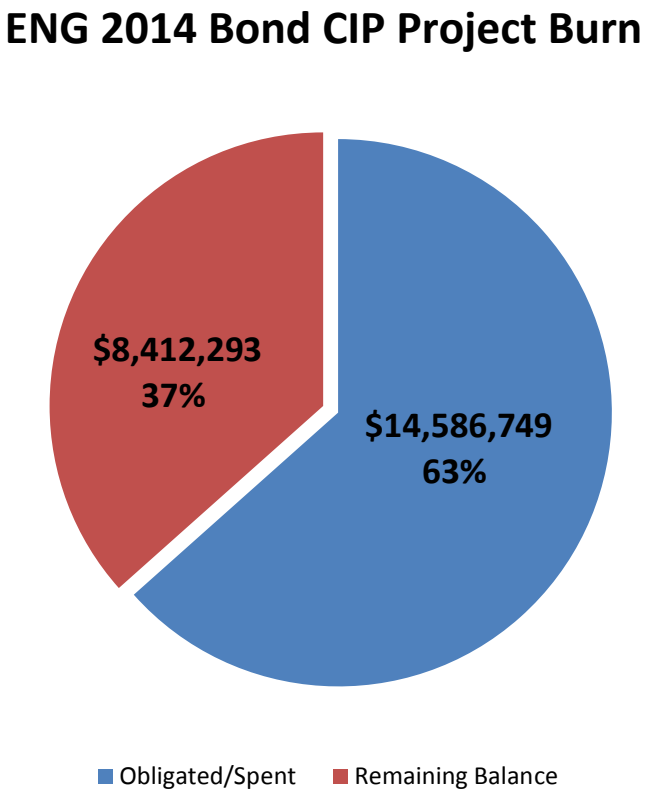
ENG 2010 Bond Series CIP Budget

- Bond Funded
- Target
  - Pending



ENG 2014 Bond Series CIP Budget

- Bond Funded
- Target
  - Pending



Engineering Work Orders

Engineeirng Work Order Summary -April 2018	
Work Orders Received from Customer Services	197
Work Orders Processed & Released to T&D	136
Work Orders Processed & Released to CSR	201
Work Orders Canceled	5
Work Orders Pending Survey	17
Pending Work Orders at Engineering	657

Engineering Large Customer and Net Metering Tracking

Date Received	Customer Name	Work Order Number(s)	Location	KVA	Meter Qty	Status
05/07/14	Port Authority of Guam	412337	Piti			Upgrades of existing facilities, includes line relocations and service conversions from overhead to underground 75% completed. Currently on hold pending Port Authorty direction for final removal.
12/20/13	CoreTech International	Multiple	Dededo	250	50	Lada Estates, 450 kVA, Phase I 100% Completed 242 units energized, Phase II 300 kVA, applications received for 93 units, Phase II 100% Completed. Phase III on hold due to Labor and Permit issues.
01/27/15	TG Engineers PC	422182-85, 90-93, 96-98	Agana Heights	100	11	11 Unit Apartment, 100 kVA, 98% Completed. Work currently on hold.
06/02/15	Docomo Pacific Inc.	Multiple	Various Locations Islandwide	50		New Comm Towers and Power Supplies, 10 sites, 9 completed
05/13/15	CoreTech International Towers	426021	Tamuning	3300	104	New condominiums, 2-1500kVA and 1 300 kVA, Tower 101 100% Completed, Tower 102, 103, and 104 are 45% completed, currently on hold. Temporary power pending for Community Center, 100% Completed. First 52 Service Orders for Tower 101 is 100% completed.
05/11/16	Korando Corp (DPW Bile Pigua Bridge)	437716	Merizo			Bile and Pigua Bridge Reconstruction - 75 % Completed, Route 25/26 Road Widening, construction work has restarted.
12/09/16	Maeda Pacific	443952	Harmon			Route 1 and Route 3 road improvements - 100% completed, involves new underground 34.5kV and 13.8kV lines and the removal of overhead ples and lines. Pulling of wires intiated 10/9/17. Final Termination and testing Completed. Energizing of new underground 13.8kV and 34.5 kV lines completed. Pending return of materials and completion of minor punchlist items..
Pending	New Nikko Expansion	Pending	Tumon	1500	1	New Nikko Expansion, pending submittal of work order application. Redesign of primary feed ongoing. New primary underground is scheduled to start work in May 2018.
03/10/17	Best Housing Corp Ltd	446924-30	Mangilao	60	6	New 6-Unit Townhome, 77% completed
06/01/17	GWA Pump Stations 2 and 3	450278-9	Santa Rita	150	2	New GWA Pump Stations. 25% Completed.
07/17/17	Keystone Pacific Realty Corp	451488	Hagatna	100	10	New apartment. 92% Completed. Pending additional applications.
08/07/17	Matsumoto, Akiyoshi	452146-49, 51, 4, 6	Tumon	60	7	New 6 Unit Apartment with Common Meter. 15% Completed.
08/17/17	Micronesian Community Corp.	Pending	Mangilao	130	13	New 13 unit subdivison, 10% completed
10/02/17	Sumitomo Mitsui (Baza Gardens Waste water)	453369	Yona	300	1	Baza ardens Wastewater Treatment Plant Improvements, 0% Completed
01/25/18	Precision Systems Inc.	456547, 60	Tamuning			Primary Underground Conversion. Removal of three spans of overhead primary and 1 ea. power pole. 100% completed and Released to T&D.
03/01/18	Docomo Pacific Inc., New Data Center	Pending Application	Talafofo	3000	1	New Data Center. Planned to come off P-260 and P-262. 0% Completed. Still in Desgn Phase.
03/01/18	KUAM	Pending	Chalan Pago			GPI to reroute poles to existing easement. Requires the ground clearing of an existing easement.
04/30/18	Rex International	459698	Sinajana	225	1	New Central Police Precinct. 0% Completed.
04/30/18	Black Construction (Route 3 Road Improvements)	Pending Application	Dededo			Route 3 Road Improvements. Involves the relocation of upto 54 ea. 45' concrete poles. 5% Completed.
Varies	Pending Net Metering Customers	Varies	Various Locations Islandwide		17	Pending Net Metering Customers as of April 30, 2018.
			Total	9225	224	

GPA INFORMATION TECHNOLOGY

APRIL 2018

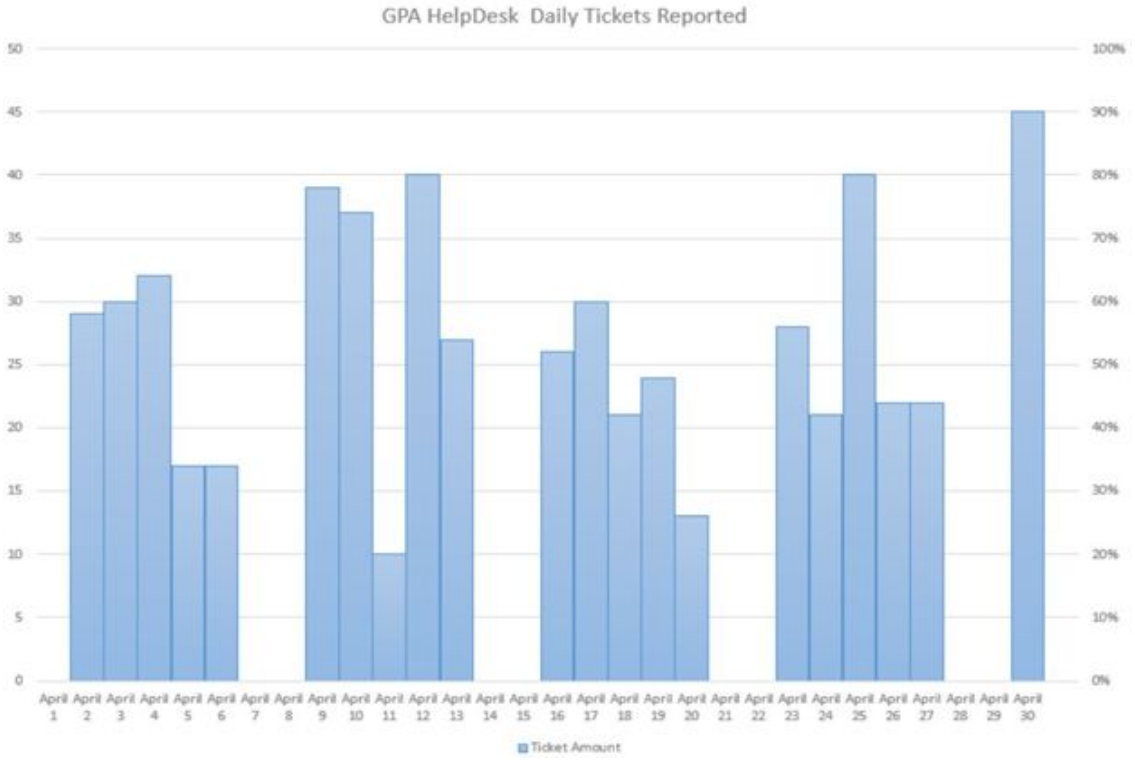
SUMMARY:

The Information Technology Department continues to improve services, monitoring processes and system infrastructure utilization as guided by Cyber-Security initiatives and regulatory compliance. We strive and continue to improve all areas. Computer Services continues to seek new technology with networking, system access and utilization. We also strive to meet target levels of uptime, to include the IBM i-Series AS400, Virtual Machine environment, (VMware V-Sphere), (Blade Servers and Disk Array Storage), and Physical Servers, (non-Virtual Machines).

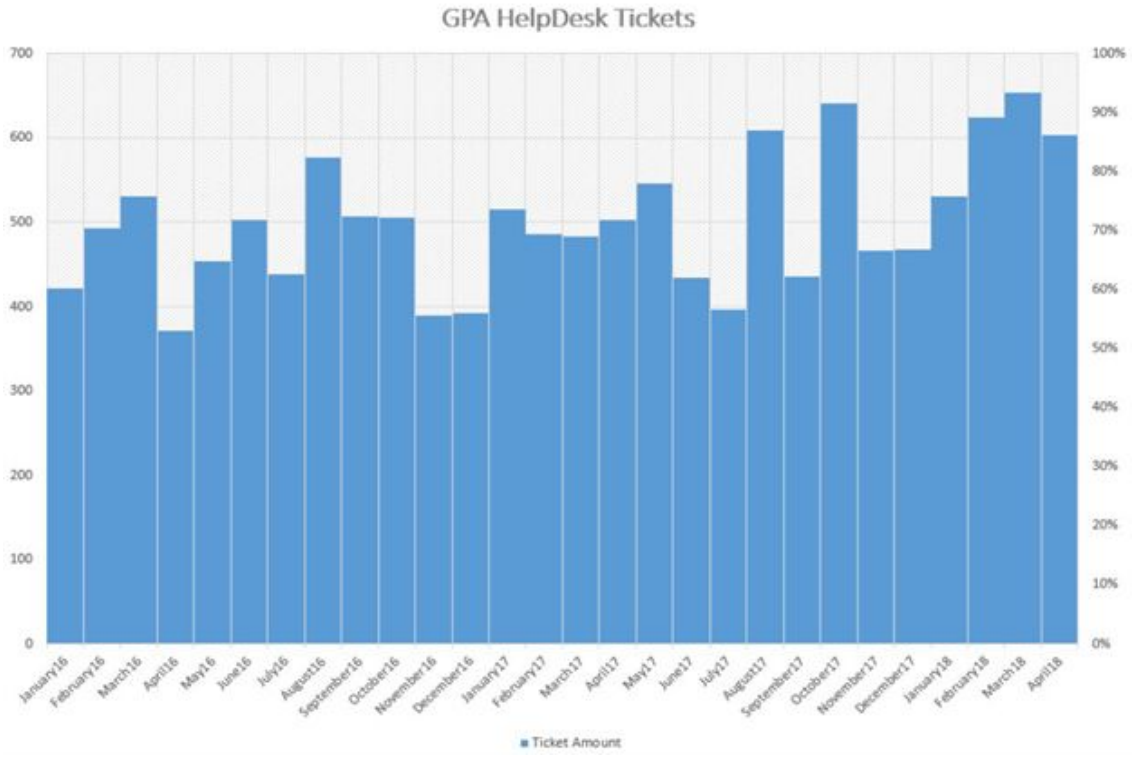
INCIDENT CALL SUMMARY:

The significance to record and utilize the Helpdesk Incident Handling Tool (ChangeGear) is to manage, track and measure workloads and assignments of customer reported IT incidents. The tracking of incidents is paramount. Measurements will be used for IT Customer Feedback survey in the future.

APRIL 2018 TICKETS



22 MONTH COMPARATIVE

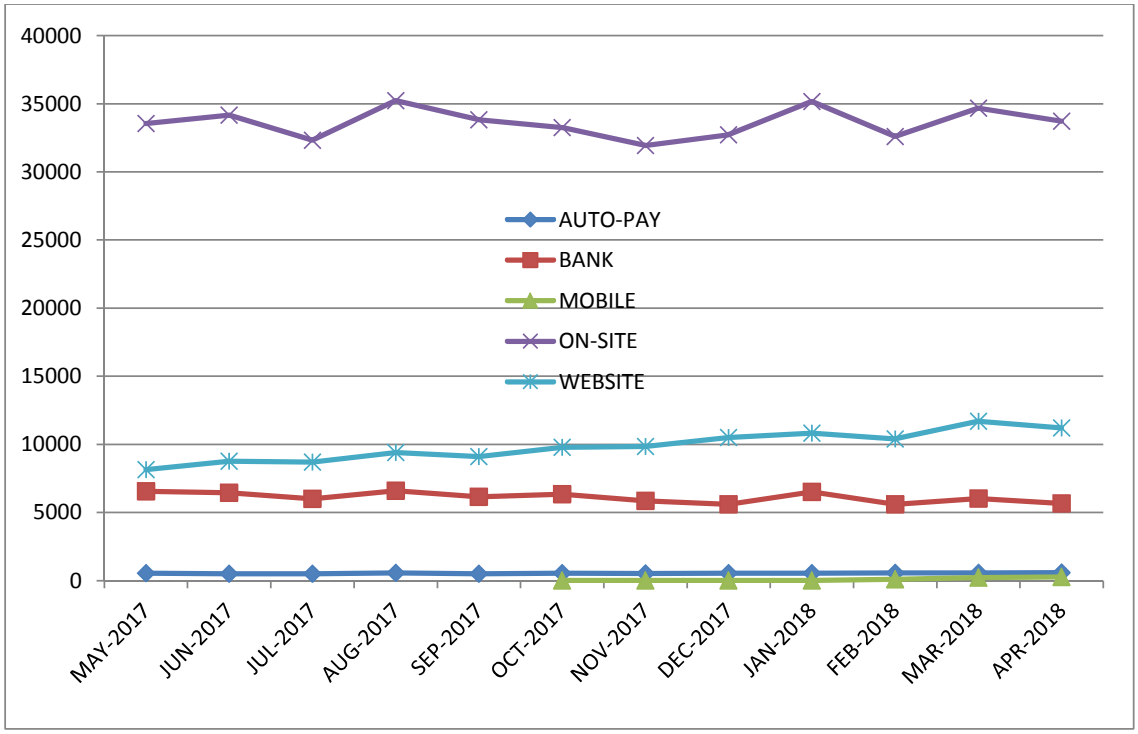


For March 2018, Computer Services responded to 644 help desk calls from GPA internal and external customers. Breakdown as follows:

CLOSED TICKETS			
Low	**Medium**	**High**	**Critical**
250	174	168	3
TICKET TYPES			
End User	**Hardware**	**Software**	**Network**
480	24	52	39
OPEN TICKETS			
Low	**Medium**	**High**	**Critical**
5	15	28	1
TICKET TYPES			
End User	**Hardware**	**Software**	**Network**
29	8	12	0

CC&B PAYMENT SUMMARY TRANSACTIONS:

Payment Transactions by On Site/Website/Auto-Pay/BANK/Mobile



Payment Transactions by Count:

Sum of COUNT	Column Labels				
Row Labels	**AUTO-PAY**	**BANK**	**MOBILE**	**ON-SITE**	**WEBSITE**
MAY-2017	539	6548		33557	8144
JUN-2017	497	6446		34164	8758
JUL-2017	497	6008		32309	8703
AUG-2017	560	6603		35216	9401
SEP-2017	509	6158		33826	9110
OCT-2017	537	6333	5	33255	9790
NOV-2017	535	5846	5	31935	9838
DEC-2017	547	5606	8	32715	10505
JAN-2018	554	6522	6	35169	10817
FEB-2018	559	5606	94	32591	10400
MAR-2018	560	6026	217	34665	11704
APR-2018	584	5655	276	33714	11203
Grand Total	**6478**	**73357**	**611**	**403116**	**118373**

MAJOR APPLICATION ISSUES FOR APRIL 2018

Item #	Supported Applications	System Issues Reported Affecting System Availability								
		None	Partial System Outages				Total System Outages			
			Occurrences		Duration		Occurrences		Duration	
			Month	12-Month Rolling	Month	12-Month Rolling	Month	12-Month Rolling	Month	12-Month Rolling
1	ORACLE CUSTOMER CARE & BILLING	X	-	-	-	-	-	-	-	-
2	LANDIS & GYR AMI SYSTEM (SMART METERS, GRIDSTREAM, ABB/TROPOS, AMI COLLECTORS)	X	-	-	-	-	-	-	-	-
3	ORACLE JDE	X	-	-	-	-	-	-	-	-
4	METER DATA MANAGEMENT SYSTEM (MDMS)	X	-	-	-	-	-	-	-	-
5	SHORETEL VOIP PHONE SYSTEM	X	-	-	-	-	-	-	-	-
6	EMAIL EXCHANGE SERVER	X	-	-	-	-	-	-	-	-
7	ONLINE PAYMENT SYSTEM (PAYGPA.COM)	X	-	-	-	-	-	-	-	-
8	GEOGRAPHIC INFORMATION SYSTEM (GIS)	X	-	-	-	-	-	-	-	-
9	MILSOFT OUTAGE MANAGEMENT SYSTEM (OMS)	X	-	-	-	-	-	-	-	-
10	ADVANCED GRID ANALYTICS (AGA)	X	-	-	-	-	-	-	-	-
11	ORACLE BUSINESS INTELLIGENCE REPORTING	X	-	-	-	-	-	-	-	-
12	MOBILE APP PAYMENT PROGRAM	X	-	-	-	-	-	-	-	-
	Totals	**12**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

ONGOING PROJECT UPDATES:

Network Penetration Testing and Vulnerability Assessment: Project to provide network testing and vulnerability assessment to benchmark GPA and GWA's network and host systems. This will also include IT Controls Systems testing and Business Impact Analysis for GPA and GWA critical IT systems. Work in currently ongoing and expected completion by April 2018.

SMS Emergency Outage Notification: Project to provide SMS text alerts for Emergency Outages notification for customers and emergency response agencies. Awaiting next steps from operations. In testing process at the moment with PSCC.

Pay by Phone Project: Working with vendor for Pay by Phone system to allow customers to call after hours and make automated payments to their GPA account. Changes to the call script and ongoing testing.

Customer Care & Billing (CC&B) Upgrade: Upgrade of the current Oracle CC&B program from version 2.4 to version 2.6. The current version of CC&B 2.4 will be end of life by Sept. 30, 2017 and support thereafter will be limited. Expected completion by September 2018.

Disaster Recovery- Cloud Solution: Project to turn up a backup site on the Oracle Cloud for GPWA's CC&B Application. The Oracle Cloud service has been provisioned and backup replication is online. Final testing of the Oracle Cloud backup is ongoing.

Disaster Recovery Site: Project to procure a Disaster Recovery (DR) site to provide redundancy for critical GPA applications and databases in case of disruption of the primary Fadian Data Center. Incorporating GWA requirements into proposal.

Physical Security: Project to provide additional surveillance monitoring for Fadian, T&D, Dededo CT and Transportation Warehouse. RFP has closed and bid evaluations in progress.

GPWA Website Upgrades: Project to revamp GPA and GWA websites for the following, GUAMPOWERAUTHORITY.COM, PAYGPA.COM, GUAMWETERWORKS.ORG and PAYGWA.COM. RFP has been released and will close on April 26, 2018. Expected to be completed in 160 days.

Oracle CHAT-BOT: Project to provide Oracle Chat Bot services to GPA's PAYGPA.COM, Mobile APP and Facebook Program. This will allow customers to utilize a CHAT program to make inquiries to frequently asked questions and inquiries on their account.

Landis & Gyr Command Center upgrade from ver. 6.5 to 7.2: Project to upgrade GPA AMI Smart Meter Program to the latest version of 7.2. This will allow new functionality for the Command Center and Smart Meter Integration.

Submitted by:
Melvyn Kwek
Chief Information Technology Officer

Guam GPA & GWA EMS/SCADA System

SIEMENS



GUAM POWER AUTHORITY
Bringing Energy Solutions to You

GUAM WATERWORKS AUTHORITY

Monthly Project Report

April 2018

Grow together and WIN

Unrestricted

Project Progression Summary

Factory Acceptance Test

This month was focused on addressing logistics for the upcoming Factory Acceptance Test in Taiwan scheduled for June 6th rd through June 10th . The requirement to transport the FAT Attendees on different flights due to liability concerns were accomplished to include ground transport, hotel venue and daily meals.

Project Schedule

Project schedule is being revised and will be submitted in next update.

GPWA SCADA EMS Project Bid No. GPA 066-16

Project Director: Charles Wu
Project Manager: Jonathan Chargualaf
Contract Administrator: Monito Co

Overall Status	G

Burn Rate	This Month	Last Month	Incremental
Scope (%)			
Budget (%)	13.2%		
Milestones Achieved	1, 3-7 of 18		

Resources

1. Benson/Siemens
2. GPWA

Risks & Issues	G	Schedule	G	Scope	G	Financial	G

Updates & Accomplishments -- Month of March 2018	Resource	Upcoming Tasks / Open Items	TCD/ECD
1. 4/3/18 – GPWA submits Piti REV 1, Cold Storage REV 1, Dededo REV 1, Orote REV 1, San Vitores REV 1, RF REV 1 , Automatic Fuel Switching REV 1 , MET REV 1 , and Harmon REV 1 Analogs and Status 2. 4/6/18 -- FAT attendee List Finalized 3. 4/11/18 – Benson submits Revised System Architecture that depicts the Brocade switch in the architecture. 4. 4/13/18 – Benson submits Factory Acceptance Test (FAT) Agenda and Procedures for review/approval 5. 4/25/18 – GPWA submits IP Scheme for SCADA network 6. 4/25/18 – GPWA submits Dell deployment survey 7. 4/30/18 – Last SCADA equipment for FAT arrives in Taiwan	1. Siemens 2. Benson/Siemens 3. Benson/Siemens	Factory Acceptance Test at Taiwan Non-Disclosure agreement submissions for all Benson/Siemens personnel accessing the system SCADA Disaster Recovery Requirements	6/10/18 6/11/18 6/11/18

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE

Legend:

G No corrective action required
Y Near-term corrective action required
R Requires immediate attention

Infrared Inspection Worksheet

	Circuit	Last Infrared Inspection	
		Fiscal Year	Quarter
1	X065-X183	FY2017	4
2	X038-X124	FY2017	4
3	X123-X143	FY2017	4
4	H710/H760 - H502	FY2017	4
5	X023-X043	FY2017	4
6	X087-X073	FY2018	1
7	X247-X140		
8	X082-X160	FY2017	4
9	X020-X311-X336	FY2017	4
10	X039-X250	FY2018	1
11	X161-X070		
12	X006-X015/X016		
13	X024-X110	FY2017	4
14	X054-X246	FY2017	4
15	X056-X185		
16	X394-X126		
17	X173-X245		
18	H322/H326 - H401/H404		
19	H342/H346 - H402/H403		
20	H362/H366 - H750/H760		
21	H403/H404 - H602	FY2017	4
22	H612 - H501	FY2017	4
23	X021-X315-X334		
24	X022-X037-X190	FY2017	4
25	X036-X305		
26	X040-X112	FY2017	4
27	X045-X055		
28	X053-X209	FY2017	4
29	X081-X178		
30	X088-X151/X154	FY2017	4
31	X134-X180		
32	X150/X152-X221		
33	X214-X263		
34	X222-X067	FY2017	4
35	X150/X155-X071		
36	X080-X260		
37	X086-X101		
38	X093-X103		
39	X097-X227		
40	X098-X130		
41	X133-X170		
42	X174-X175		
43	X210-X226		
44	X301-X324		
45	X309-X326		

Top 10 Worst Circuits
Underground Circuits

Infrared Inspection Worksheet

	Sector	Circuit	Last Infrared Inspection	
			Fiscal Year	Quarter
1	North	P332		
2		P403		
3		P089		
4		P244		
5		P111		
6		P271	FY2017	4
7		P330		
8		P322		
9		P270		
10		P046	FY2018	1
11		P087		
12		P321		
13		P088	FY2017	4
14		P331		
15		P323		
16		P245		
17		P272		
18		P240		
19		P242		
20	Central	P212		
21		P213		
22		P202	FY2017	4
23		P201		
24		P210	FY2017	4
25		P007		
26		P250		
27		P205		
28		P206		
29		P203		
30		P253	FY2017	4
31		P283	FY2017	4
32		P280	FY2017	4
33		P311		
34		P007		
35		P211		
36		P202		
37		P251		
38		P252		
39		P201		
40		P282	FY2017	4
41		P310		
42		P204		
43		P312		
44		P281	FY2017	4
45		P400		
46	South	P340	FY2018	1
47		P261		
48		P221	FY2018	1
49		P294		
50		P341	FY2018	1
51		P005		
52		P260		
53		P003		
54		P220		
55		P298		
56		P262		
57		P223		
58		P301		
59		P005		
60		P260		

Top 10 Worst Circuits

NET METERING
April 2018

	Quantity	Connected kVA
Completed	1,658	17,218
Pending	17	129
Grand Total	1,675	17,348

Rate Class and Technology

Technology	Schedule	Count	Total kW
Solar Energy	R - Residential	1,571	14,241.68
	J - Gen Service Dmd	32	1,646.51
	K - Small Gov Dmd	9	317.80
	L - Large Government	1	22.80
	P - Large Power	3	240.70
	G - Gen Serv Non-Dmd	33	666.47
	S - Sm Gov Non-Dmd	7	78.80
Wind Turbine	R - Residential	2	3.60
Grand Total		**1,658**	**17,218.36**

Projected FY 2018 Non-Fuel Revenue Loss

Customer Rate Class	Renewable Energy Capacity (kW)	Annual kWh Generated (@5.092 hours/day)*	Average Non-Fuel Yield $/kWh	Estimated Annual Revenue Loss
R	13,712.42	25,483,961.2	0.09293	$ 2,368,250.00
J	1,646.51	3,059,970.2	0.13112	$ 401,226.36
K	317.80	590,618.1	0.13932	$ 82,286.09
L	22.80	42,372.9	0.13525	$ 5,730.84
P	240.70	447,330.9	0.11539	$ 51,617.07
G	636.47	1,182,853.0	0.15084	$ 178,416.81
S	78.80	146,446.5	0.15334	$ 22,456.26
Grand Total	**16,655.50**	**30,953,552.8**		**$ 3,109,983.42**

*Estimated number of hours from NREL for Guam (13.4 degrees North and 144 degrees East).

Estimated Annual Revenue Loss

Description	Estimated kWh	*Total Estimated Cost
FY17	28,242,917	$ 2,828,834.71
FY16	21,867,383	$ 2,200,794.56
FY15	7,383,621	$ 856,921.27
FY14	3,137,212	$ 410,558.94
FY13	1,556,949	$ 178,996.00
FY12	494,672	$ 58,545.89
FY11	170,070	$ 18,177.13
FY10	98,830	$ 8,483.27
FY09	23,912	$ 1,656.87

*Source for effective yield rate from the Year End Revenue Reports (12 month Average Yield)

NET METERING
April 2018

Customer Count and Connected kW by Feeder

Status	Feeder	Net Metering Connected kW	Customer Count	% of Feeder Maximum kW	% of Feeder Minimum Daytime kW
Completed	P-005	246.87	23	14.3%	28.7%
	P-046	257.06	31	6.1%	9.3%
	P-088	611.95	68	10.2%	16.1%
	P-089	495.02	62	11.1%	26.6%
	P-111	90.00	2	1.7%	2.9%
	P-203	401.36	31	5.4%	15.2%
	P-204	120.58	15	2.6%	5.3%
	P-205	36.40	4	0.8%	1.3%
	P-210	486.79	50	9.5%	12.9%
	P-212	862.05	82	20.8%	53.9%
	P-213	295.33	11	11.3%	15.2%
	P-220	167.64	18	27.5%	86.4%
	P-221	501.28	53	11.4%	22.7%
	P-223	498.95	54	21.0%	29.9%
	P-240	58.55	2	0.9%	7.9%
	P-245	25.00	1	0.5%	1.1%
	P-250	947.29	94	14.6%	25.6%
	P-251	145.50	7	5.9%	9.0%
	P-253	466.61	50	10.4%	16.4%
	P-262	979.81	100	25.7%	61.7%
	P-270	313.67	26	6.2%	12.4%
	P-271	122.78	12	2.1%	4.4%
	P-272	228.03	17	8.9%	20.2%
	P-280	311.59	25	17.3%	32.2%
	P-281	189.70	4	6.8%	18.9%
	P-282	21.00	2	0.6%	1.7%
	P-283	536.80	50	14.8%	25.4%
	P-294	1,006.09	97	23.2%	46.0%
	P-301	199.26	22	14.1%	25.1%
	P-311	649.83	48	16.3%	27.9%
	P-322	823.99	89	10.9%	21.6%
	P-323	274.41	17	5.8%	18.0%
	P-330	550.37	69	10.1%	20.3%
	P-331	704.08	81	11.2%	18.1%
	P-332	384.46	46	6.8%	10.0%
	P-340	497.37	43	27.4%	60.4%
	P-087	1,052.00	114	26.8%	42.0%
	P-252	447.19	27	10.6%	21.6%
	P-321	275.66	26	4.9%	5.5%
	P-260	70.96	7	10.3%	35.5%
	P-067	73.11	10	0.9%	1.1%
	P-312	68.90	4	4.1%	4.8%
	P-206	18.33	2	1.9%	3.4%
	P-242	23.75	2	0.4%	1.1%
	P-310	181.57	8	6.6%	12.1%
	P-261	355.07	38	12.8%	22.0%
	P-201	45.00	6	1.3%	2.3%
	P-007	55.08	5	7.6%	16.2%
	P-244	18.00	1	1.0%	1.0%
	P-202	22.00	1	0.7%	1.6%
	P-341	4.30	1	0.4%	1.6%
Completed Total		**17,218.36**	**1,658**		
Pending	Pending	129.41	17	0.0%	0.0%
Pending Total		**129.41**	**17**	**0.0%**	**0.0%**
Grand Total		**17,347.77**	**1,675**		

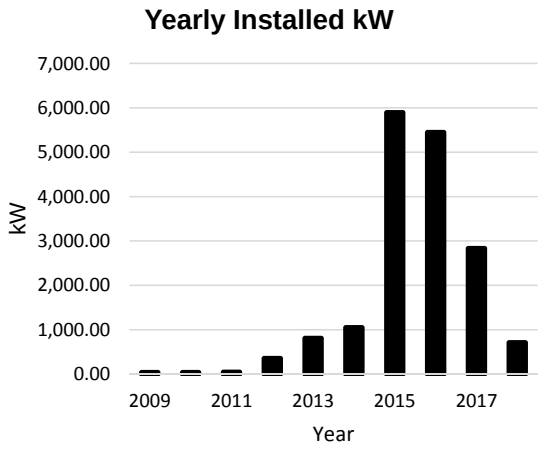
Feeders highlighted in red indicates renewable energy capacity has exceeded 25% of minimum daytime load.

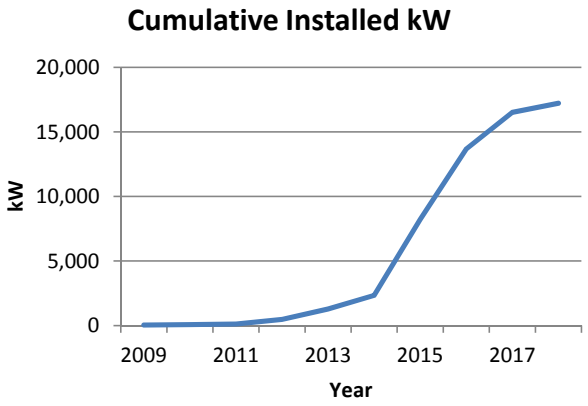
Feeders highlighted in yellow indicates renewable energy capacity has reached 15% to 24% of minimum daytime load.

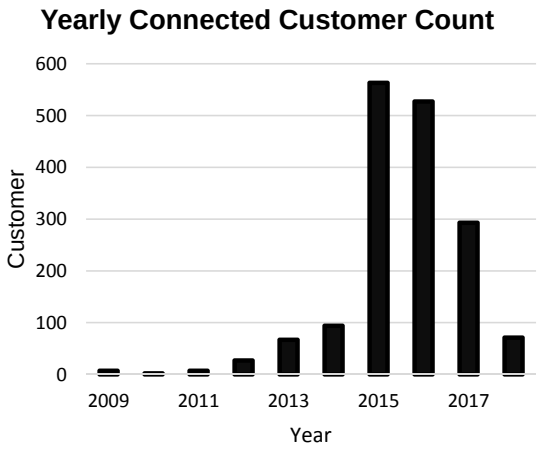
NET METERING
APRIL 2018

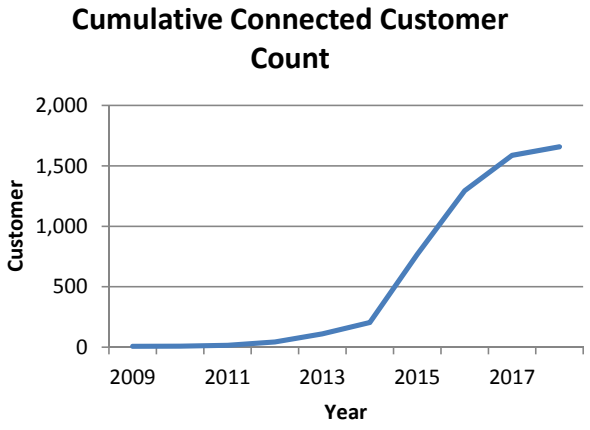
Installed kW by Year		
Year	Total	Cumulative
2009	39.46	39.46
2010	39.20	78.66
2011	43.61	122.27
2012	354.61	476.88
2013	808.45	1,285.33
2014	1,050.04	2,335.37
2015	5,891.90	8,227.27
2016	5,447.60	13,674.86
2017	2,833.25	16,508.11
2018	710.25	17,218.36
Grand Total	17,218.36	

Customer Count by Year		
Year	Total	Cumulative
2009	7	7
2010	2	9
2011	7	16
2012	27	43
2013	67	110
2014	94	204
2015	563	767
2016	527	1,294
2017	293	1,587
2018	71	1,658
Grand Total	1,658	







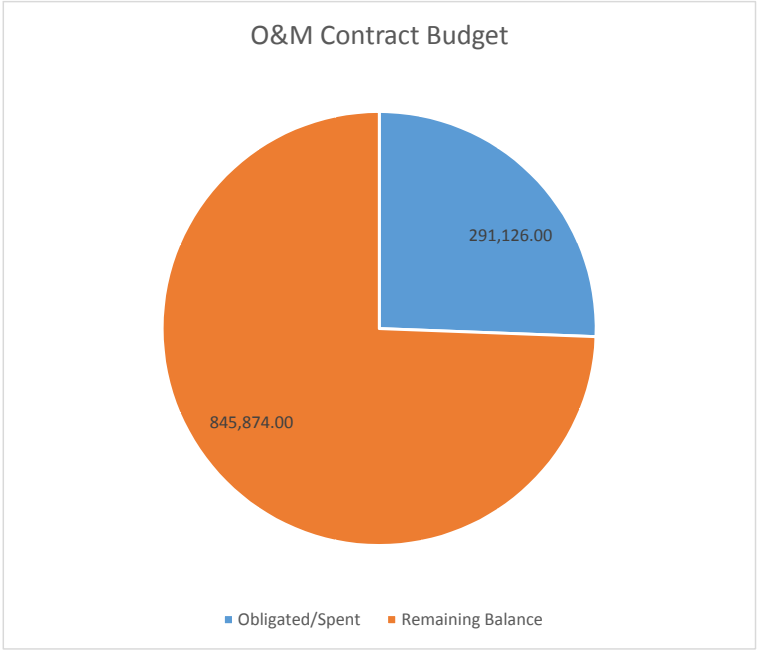


Planning & Regulatory CCU Report

April 30, 2018

Planning & Regulatory O&M Contract Budget

- Revenue Funded
- Target
  - 7.41% O&M Obligated by November 16, 2017
  - 19.28 O&M Obligated as of Nov. 30, 2017 (actual)
  - 19.36 O&M Obligated as of Dec. 31, 2017 (actual)
  - 25.60 O&M Obligated as of Apr. 30, 2018 (actual)
  - 30.09% O&M Obligation by May 31, 2018



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P&R Weekly & Monthly Inspection Reports

- Best Management Practices (BMP) Report Summary [Weekly]
- Generation Spill Prevention, Control, and Countermeasures (SPCC) Report Summary [Monthly]
- T&D Spill Prevention, Control, and Countermeasures (SPCC) Report Summary [Monthly]

- GPA is responsible to employees, the island environment, and the community to take all reasonable steps necessary to prevent spills from its facilities in order to protect human health and the environment

P&R Inspection Report Purpose

- The purpose of these inspections is to catch discrepancies and violations internally and correct them before inspections by Guam EPA and US EPA
- Regulatory Agencies can conduct scheduled or un-scheduled (surprise) inspections any time
- Any major discrepancies or violations cited can lead to issuance of a Notice of Violation (NOV), possible fines, and/or other enforcement action
- P&R conducts routine SPCC inspections in compliance with the requirements of 40CFR 112.7(a)(3)(ii), Discharge Prevention Measures

Weekly BMP Report

WEEKLY BMP REPORT SUMMARY
CABRAS POWER PLANT
MONTH OF APRIL, 2018

LEGEND OF TRACKING

- Notification Date
- Within Scheduled Remediation Period
- Completed
- Deadline is Past Due

INSPECTOR: LORINA SABANGAN

LOCATION	WE 04/06/18 FINDINGS	WE 04/13/18 FINDINGS	WE 04/20/18 FINDINGS	WE 04/27/18 FINDINGS	RECOMMENDATION/ REMARKS	DATES			RESPONSE
						initial Findings	Due	Completed	
OWS next to Outfall (Cabras 3&4)	Corroded OWS	Corroded OWS	Corroded OWS	Corroded OWS	Repair was stopped. Draining and transfer of oil to WOF should be continuous.	12/11/2015			*OWS no longer in operation*
Neutralization tank/pit (Cabras 1&2				Oil sheen	Conduct cleanup	April 2018	ASAP		
Cabras 1&2 Basement	Water leak	Water leak	Water leak	Water leak	Continuous visual monitoring and clean-up	1/10/2014	Dec. 2018		*Major repair by end of 2018*
Pavillion	Stored metal and various debris	Stored metal and various debris	Stored metal and various debris	Stored metal and various debris	Per Francis Cruz on 2/7/8, Cabras 3&4 will send list to Procurement for bid disposal	2/8/2013	ASAP		
Refilling valve pit (Cabras 1, 2, 3, & 4)		Sign of oil leak on Cabras 3&4 refilling valve	Sign of oil leak on Cabras 3&4 refilling valve	Sign of oil leak on Cabras 3&4 refilling valve	Verify, repair valve	April 2018	ASAP		
Central Maintenance	Miscellaneous debris of drums	Miscellaneous debris of drums	Miscellaneous debris of drums	Miscellaneous debris of drums	Conduct cleanup	April 2018	ASAP		
PSCC Dispatch Front Yard	Stored metal debris	Stored metal debris	Stored metal debris	Stored metal debris	Conduct cleanup	2/2/2018	Until cooling water pump is repaired		

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T&D SPCC Inspection Report

SUMMARY OF SPCC INSPECTION REPORT
MONTH OF APRIL, 2018

LEGEND OF TRACKING

- Notification Date
- Completed
- Within Scheduled Remediation
- Deadline is Past Due

SUBSTATIONS

LOCATIONS	Findings		Recommendation/Remarks	Status	Responsible	Completion Date	Due Date	Initial Findings Date
DEDEDO SUBSTATION	*Facility Area*	NO CORRECTIVE ACTION						
DEDEDO SUBSTATION WAREHOUSE	*Facility Area*	Rainwater accumulation on used transformer oil tank area	Drain rainwater					April 2018
MACHECHE SUBSTATION	*Facility Area*	NO CORRECTIVE ACTION						
TALOFOFO SUBSTATION	*Secondary Containment*	NO CORRECTIVE ACTION						
TENJO SUBSTATION	*Facility Area*	NO CORRECTIVE ACTION						
YIGO SUBSTATION	*Facility Area*	NO CORRECTIVE ACTION						

Generation SPCC Inspection Report

SUMMARY OF SPCC INSPECTION REPORT
MONTH OF APRIL, 2018

LEGEND OF TRACKING

- Notification Date
- Completed
- Within Scheduled Remediation
- Deadline is Past Due

POWER PLANT

Location	Findings		Recommendation/Remarks	Status	Responsible	Completion Date	Due Date	Initial Findings Date
CABRAS UNITS 1 & 2	*Suply line 8" from tank farm*	No secondary containment	Provide secondary containment. Regular monitoring recommended				ASAP	November 2015
	Secondary Containment	Exposed/worn out insulation and corroded flanges on tank no.2	Repair	Repair ongoing			ASAP	July 2017
CABRAS UNITS 3 & 4	*FODST Nos. 3&4 Secondary Containment*	Metal and pipe debris in the area	Remove and clear area.	Cleared with John Kim and Joven. Debris is OK for removal. No longer needed for Insurance claim.				June 2016
	MOV	Broken wheel and corroded pipe	Repair/replace wheel and pipe				ASAP	March 2018
	Day Tank 3&4	Overgrown vegetation around tank seams on day tank 3&4	Remove vegetation				ASAP	February 2018
DEDEDO CT	*Tank Farm*	Rainwater on secondary containment	Drain water					April 2018
MACHECHE CT	Fuel Storage Tanks Area	Corrosion at tanks T-130/140 (paint applied over rust only)	Remove rust and repaint				ASAP	October 2015
		Corroded tank support T-130/140 (paint applied over rust only)	Remove rust and repaint				ASAP	October 2015
		Corroded gate valve on tank 110 & 120	Repair completed on T-110; undergoing repair on T-120				ASAP	April 2016
		Rust buildup on seam and tank belly	Remove rust and paint,				ASAP	November 2015
	Secondary Containment	Rainwater accumulation	Drain water				ASAP	April 2018
	Fuel Purifier	Fuel purifier leaking	Repair leak				ASAP	May 2017
		Fuel purifier is not free from oil spill	Conduct cleanup				ASAP	May 2017
YIGO CT	*Facility Area*	Fuel storage tank 140	Rust buildup on shell	Remove rust, re-paint				April 2018
		Secondary containment	Standing water	Drain water				April 2018

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Generation SPCC Inspection Report (cont.)

Location	Findings		Recommendation/Remarks	Status	Responsible	Completion Date	Due Date	Initial Findings Date
MANENGGON DIESEL	*Tank No. 3*	Corroded tank shell	Chip and recoat				ASAP	April 2018
	Secondary Containment	Worn out sealant on the cracks on secondary containment	Replace sealant	Re-sealing is ongoing			ASAP	May 2017
		Algae accumulation in sec. containment	Conduct clean up				ASAP	November 2017
		Corroded fuel supply line	Chip corrosion and recoat				February 2018	December 2017
		Accumulated trash and debris in the parking area	Conduct cleanup				ASAP	March 2018
TALOFOFO DIESEL	*Facility Area*	Damaged window screen	Repair or replace				ASAP	December 2017
	Secondary Containment	Algae accumulation in sec. containment	Conduct clean up				ASAP	May 2018
TENJO DIESEL	*Facility Area*	Worn out gap seal on the secondary containment floor	Seal floor gaps				ASAP	August 2017
		Corroded tank shell on tank #2	Chip and recoat				ASAP	March 2018
		Corroded supply pipe	Chip and recoat				ASAP	March 2018
		Oil spill and debris in waste oil tank sec. containment	Conduct cleanup				ASAP	March 2018
		Debris stored in the plant grounds	Dispose debris				ASAP	January 2018
		Oil spill in work area and used cans with oil	Conduct clean up; rinse oil from old cans before disposing				ASAP	April 2018
PITI #7	*Main Fuel Tank, Day Tank # 1 & 2*	No integrity test	Conduct integrity test				ASAP	January 2018

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Production Data
31-Mar-18

SYSTEM												
YEAR	MONTH	# of DAYS	GROSS GENERATION	FUEL CONSUMPTION		GROSS FUEL EFFICIENCY (Target ≥ 15.99 kWh/gal)	COST per GROSS kWh	GROSS HEAT RATE (Baseloads) PUC Target less than 9,600	GROSS HEAT RATE (Peaking) PUC Target less than 13,600	Ave. MW	Peak MW
				(gal)	(bbl)						
2015	Oct	31	142,387,859	10,285,716	244,898	13.84	$ 0.1076	9,797.11	12,360.42	191	258
	Nov	30	140,522,664	9,871,651	235,039	14.23	$ 0.1185	9,731.04	12,945.82	195	248
	Dec	31	142,668,711	9,711,263	231,221	14.69	$ 0.0951	9,538.53	12,579.77	192	239
2016	Jan	31	138,191,484	9,446,289	224,912	14.63	$ 0.0676	9,662.86	13,413.90	186	233
	Feb	29	128,816,826	8,860,399	210,962	14.54	$ 0.0706	9,692.42	12,038.19	185	232
	Mar	31	139,991,832	9,522,573	226,728	14.70	$ 0.0732	9,172.99	11,597.00	188	239
	Apr	30	140,706,546	9,301,856	221,473	15.13	$ 0.0734	9,368.24	11,041.70	195	245
	May	31	152,815,417	9,751,521	232,179	15.67	$ 0.0681	9,459.10	11,388.57	205	254
	June	30	149,191,844	9,851,575	234,561	15.14	$ 0.0805	9,666.70	11,074.48	207	253
	July	31	151,248,202	10,443,028	248,644	14.48	$ 0.0920	9,477.71	12,208.87	203	258
	Aug	31	149,051,031	10,210,429	243,105	14.60	$ 0.0935	9,431.70	11,155.10	200	252
	Sept	30	142,069,206	9,829,773	234,042	14.45	$ 0.0956	9,509.75	11,393.73	197	256
	Oct	31	148,824,965	9,660,319	230,008	15.41	$ 0.0729	9,749.38	10,738.69	200	252
	Nov	30	145,293,562	9,427,636	224,468	15.41	$ 0.0901	9,714.47	10,786.30	202	252
	Dec	31	147,753,552	9,725,521	231,560	15.19	$ 0.0934	9,661.13	10,645.44	199	248
2017	Jan	31	142,960,618	9,226,278	219,673	15.49	$ 0.0913	9,620.29	10,965.71	192	234
	Feb	28	113,499,400	7,270,830	173,115	15.61	$ 0.0900	9,609.08	11,503.12	195	246
	Mar	31	149,402,182	9,664,440	230,106	15.46	$ 0.1014	9,719.35	11,440.45	201	246
	Apr	30	145,351,026	9,913,757	236,042	14.66	$ 0.1101	9,750.73	11,392.12	202	250
	May	31	157,573,506	11,065,930	263,475	14.24	$ 0.1170	10,067.14	11,323.20	212	256
	June	30	150,240,751	10,654,196	253,671	14.10	$ 0.1101	10,209.74	11,248.62	209	257
	July	31	150,580,050	10,622,458	252,916	14.18	$ 0.1169	9,544.54	11,837.62	202	252
	Aug	31	150,084,827	10,642,044	253,382	14.10	$ 0.1177	9,206.15	11,917.58	202	261
	Sept	30	143,990,208	10,309,304	245,460	13.97	$ 0.1152	9,541.20	13,107.05	200	254
	Oct	31	147,122,071	9,774,857	232,735	15.05	$ 0.1079	9,590.71	11,375.81	198	254
	Nov	30	147,284,781	9,783,352	232,937	15.05	$ 0.1061	9,563.85	11,257.17	205	253
	Dec	31	151,600,064	9,925,003	236,310	15.27	$ 0.1122	9,607.13	11,035.82	204	250
2018	Jan	31	147,704,057	9,563,641	227,706	15.44	$ 0.1078	9,755.40	11,029.21	199	246
	Feb	28	131,329,470	8,660,044	206,192	15.16	$ 0.1150	9,763.94	11,125.15	195	241
	Mar	31	144,370,550	9,889,634	235,467	14.60	$ 0.1345	9,183.77	11,853.09	194	244

T&D Vegetation Management

Percent Completion (per Sector Feeder)

Note: Feeders priority listing based on outages due to vegetation

Northern Sector

Feeder	Esitmated Distance (LF)	Distance Trimmed by T&D Crew (LF)	Distance Trimmed by Contractor (LF)	% Completion
P332	6,830	9,070	9,561	273%
P322	7,265	500	4,800	73%
P330	2,635		12,599	478%
P087	4,245	4,200		99%
P046	1,245			
P321	4,045			
P088	3,310			
P089	670	160		24%
P331	1,925	50		3%
P323	2,810			
P271	50	1,405		2810%
P270	300	1,595		532%
P245	1,660	1,200		72%
P272	150	430		287%
P111	500	475		95%
P244	920	940		102%
P240	430	430		100%
P242	290	160		55%
Total	39,280	20,615	26,960	121%

Central Sector

Feeder	Esitmated Distance (LF)	Distance Trimmed by T&D Crew (LF)	Distance Trimmed by Contractor (LF)	% Completion
P250	33,290	13,340	6,134	58%
P212	17,560	100		1%
P253	15,240			
P283	2,230		7,000	314%
P210	10,120	40		0%
P280	1,675	310		19%
P311	1,360			
P007	778			
P211	6,050			
P202	420			
P251	280			
P213	3,500			
P252	1,520		4,586	302%
P201	100			
P203	370			
P282	525			
P310	370	100		27%
P205	350			
P206	140			
P204	530			
P312	200			
P281	525			
P400	150			
Total	97,283	13,890	17,720	32%

Southern Sector

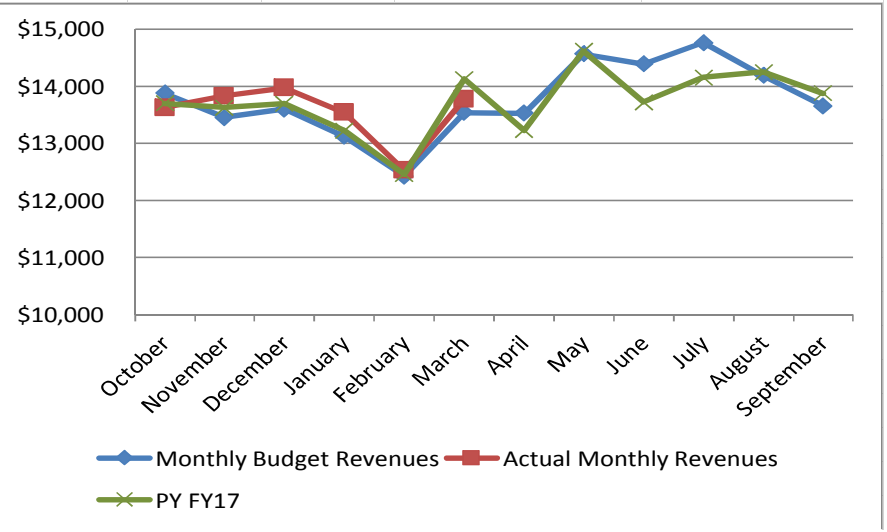
Feeder	Esitmated Distance (LF)	Distance Trimmed by T&D Crew (LF)	Distance Trimmed by Contractor (LF)	% Completion
P294	9,430	45	22,801	242%
P261	4,930	250	9,939	207%
P340	13,240	555	27,675	213%
P262	5,185	195	17,598	343%
P221	1,570	645		41%
P223	2,500	1,475		59%
P341	880	250	450	80%
P301	19,915	1,999	1,675	18%
P005	990	100		10%
P220	1,250	185		15%
P260	12,630	100		1%
Total	72,520	5,799	80,138	119%

March 2018 Monthly Financial Highlight

Through March 31, 2018

$000	Monthly Budget Revenues	Actual Monthly Revenues	Variance		PY FY17	CY vs PY Variance	
October	$ 13,873	$ 13,625	$ (248)	↓	$ 13,702	$ (77)	↓
November	13,451	13,827	$ 376	↑	13,622	$ 205	↑
December	13,599	13,968	$ 369	↑	13,695	$ 273	↑
January	13,114	13,534	$ 420	↑	13,220	$ 314	↑
February	12,422	12,522	$ 100	↑	12,454	$ 68	↑
March	13,534	13,776	$ 242	↑	14,123	$ (347)	↓
April	13,525				13,224		
May	14,568				14,617		
June	14,386				13,722		
July	14,759				14,151		
August	14,183				14,244		
September	13,651				13,874		
Total	**$ 165,064**	**$ 81,252**	**$ 1,259**		**$ 164,649**	**$ 435**	

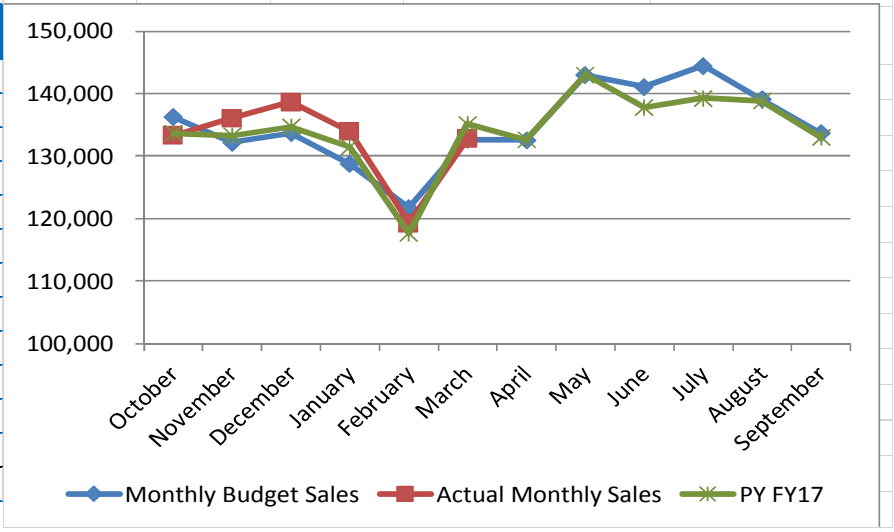
Base Rate Revenue $000



Through March 31, 2018

gwh	Monthly Budget Sales	Actual Monthly Sales	Variance		PY FY17	CY vs PY Variance	
October	136,219	133,262	(2,957)	↓	133,620	(358)	↓
November	132,132	136,044	3,912	↑	133,235	2,809	↑
December	133,625	138,587	4,962	↑	134,634	3,953	↑
January	128,711	133,882	5,170	↑	131,461	2,421	↑
February	121,668	119,241	(2,426)	↓	117,617	1,624	↑
March	132,587	132,693	106	↑	135,131	(2,438)	↓
April	132,532				132,587		
May	142,956				143,013		
June	141,064				137,777		
July	144,404				139,227		
August	139,093				138,797		
September	133,658				132,993		
Total	**1,618,650**	**793,710**	**8,767**		**1,610,093**	**8,011**	

MWh Sales

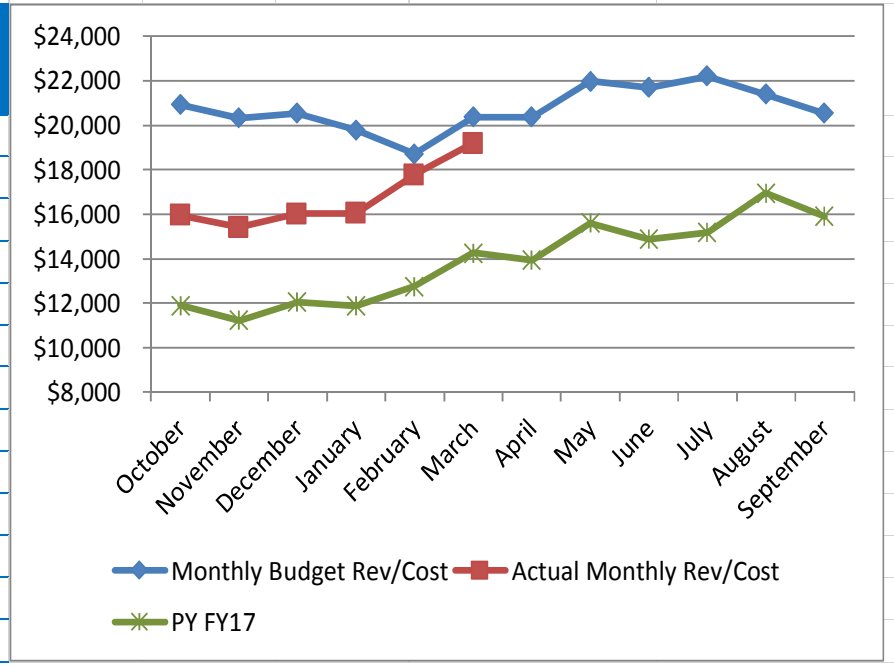


March 2018 Monthly Financial Highlight (Continued)

Through March 31, 2018

$000	Monthly Budget Rev/Cost	Actual Monthly Rev/Cost	Variance		PY FY17	CY vs PY Variance	
October	$ 20,928	$ 15,936	$ (4,992)	↓	$ 11,894	$ 4,042	↑
November	20,300	15,400	$ (4,899)	↓	11,215	$ 4,185	↑
December	20,529	16,007	$ (4,522)	↓	12,036	$ 3,971	↑
January	19,774	16,036	$ (3,738)	↓	11,867	$ 4,169	↑
February	18,692	17,763	$ (930)	↓	12,751	$ 5,012	↑
March	20,370	19,180	$ (1,190)	↓	14,248	$ 4,932	↑
April	20,361				13,940		
May	21,963				15,596		
June	21,672				14,859		
July	22,185				15,175		
August	21,369				16,947		
September	20,534				15,895		
Total	**$ 248,677**	**$ 100,322**	**$ (20,270)**		**$ 166,425**	**$ 26,311**	

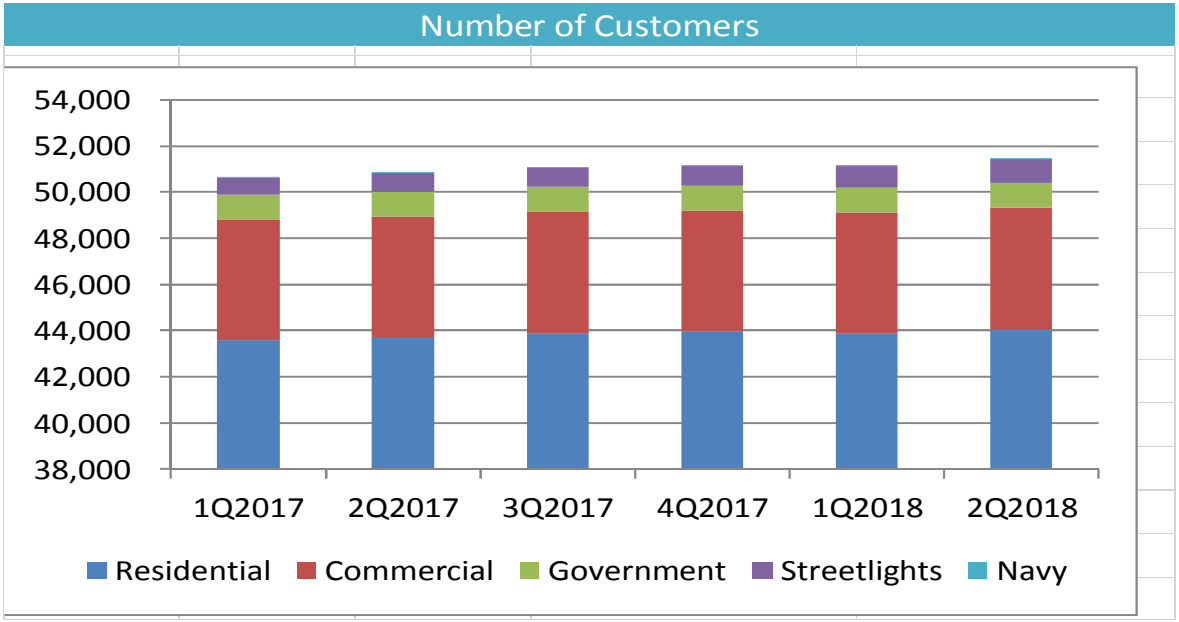
Fuel Revenue/ Cost $000



- Under recovery of LEAC - $14.4 million

March 2018 Monthly Financial Highlight (Continued)

Through March 31, 2018							
	1Q2017	2Q2017	3Q2017	4Q2017	1Q2018	2Q2018	
Residential	43,582	43,718	43,902	43,991	43,898	44,065	
Commercial	5,235	5,236	5,252	5,226	5,231	5,262	
Government	1,071	1,077	1,071	1,073	1,076	1,086	
Streetlights	722	800	824	823	908	1,005	
Navy	1	1	1	1	1	1	
	50,611	50,832	51,050	51,114	51,114	51,419	

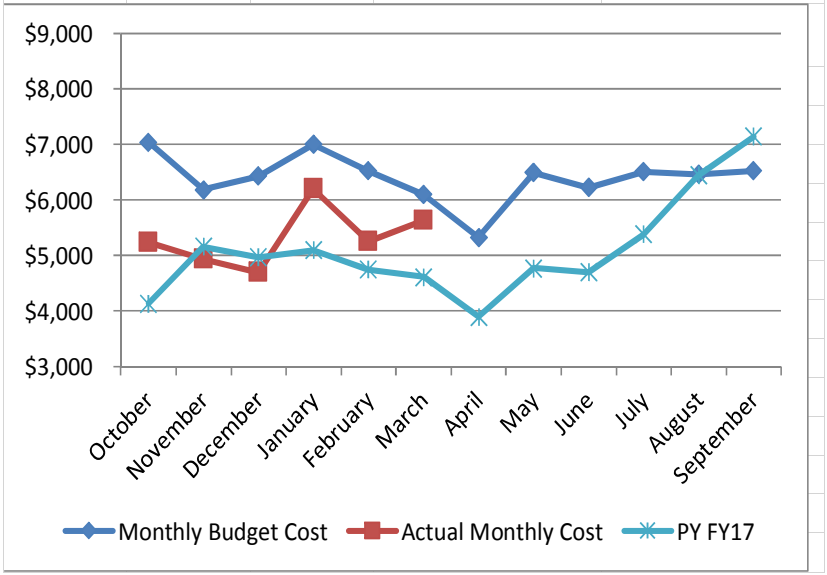


March 2018 Monthly Financial Highlight (Continued)

Through March 31, 2018

$000	Monthly Budget Cost	Actual Monthly Cost	Variance		PY FY17	CY vs PY Variance	
October	$ 7,040	5,239	1,801	↑	4,135	(1,103)	↓
November	6,182	4,941	1,240	↑	5,158	217	↑
December	6,428	4,694	1,735	↑	4,966	273	↑
January	7,001	6,204	797	↑	5,092	(1,112)	↓
February	6,522	5,252	1,270	↑	4,748	(504)	↓
March	6,091	5,638	453	↑	4,612	(1,026)	↓
April	5,320				3,892		
May	6,495				4,772		
June	6,221				4,702		
July	6,508				5,385		
August	6,462				6,445		
September	6,526				7,138		
Total	**$ 76,796**	**$ 31,968**	**$ 7,297**		**$ 61,045**	**$ (3,256)**	

O&M Cost $000



- DSC greater than target of 1.75

Debt service coverage (DSC) calculation-indenture	2013	2014	2015	2016	2017	YTD Mar 2018
Senior lien coverage	3.36	3.16	3.62	3.28	2.65	2.78
Aggregate debt service coverage	1.88	1.98	2.62	3.28	2.65	2.78
Debt service coverage (DSC) calculation-IPP as O&M						
Senior lien coverage	2.16	2.55	2.56	2.45	1.79	1.89
Aggregate debt service coverage	1.21	1.41	1.85	2.45	1.79	1.89

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

GUAM POWER AUTHORITY
FINANCIAL STATEMENT OVERVIEW
March 2018

Attached are the financial statements and supporting schedules for the month and fiscal year ended March 31, 2018.

Summary
The increase in net assets for the month ended was $1.1 million as compared to the anticipated net increase of $0.2 million projected at the beginning of the year. The total kWh sales for the month were 0.08% more than projected and non-fuel revenues were $0.2 million more than the estimated amount. O & M expenses for the month were $5.6 million which was $0.5 million under our projections for the month. Other expenses for the month such as interest expense, IPP costs, (net of interest income and other income) totaled to $3.9 million, which was right in line with the projected amounts. There were no other significant departures from the budget during the period.

Analysis

Description	Previous Month	Current Month	Target
Quick Ratio	2.08	2.22	2
Days in Receivables	38	37	52
Days in Payables	19	31	30
LEAC (Over)/Under Recovery Balance -YTD	$14,390,645	$14,428,269	$15,084,930
T&D Losses	4.92%	4.93%	<7.00%
Debt Service Coverage	1.92	1.89	1.75
Long-term equity ratio	18%	18%	30 – 40%
Days in Cash	131	196	60

The Quick Ratio has been a challenge for GPA historically. However, over the last two fiscal years, the influx of cash from insurance proceeds continued to improve this ratio. GPA has current obligations of approximately $85 million and approximately $189 million in cash and current receivables. Debt Service Coverage ratio is calculated using the methodology in use before the Fiscal Year 2002 change in accounting practice.

Financial Statement
March 2018
Significant Assumptions

The significant assumptions in the financial statements are as follows:

- Accrual cutoff procedures were performed at month end
- An inventory valuation is performed at year-end only
- Accounts Receivable includes accruals based on prior months' usage.

Prepared by:	Reviewed by:	Approved by:
Lenora M. Sanz Controller	John J.E. Kim Chief Financial Officer	John M. Benavente, P.E. General Manager

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)
Statements of Net Position
March 31, 2018 and September 30, 2017

	Unaudited March 2018	Unaudited September 2017	Change from Sept 30 2017
ASSETS AND DEFERRED OUTFLOWS OF RESOURCES			
Current assets:			
Cash and cash equivalents:			
Held by trustee for restricted purposes:			
Interest and principal funds	15,289,095	18,061,879	(2,772,784)
Bond indenture funds	53,008,465	56,907,535	(3,899,070)
Held by Guam Power Authority:			
Bond indenture funds	152,500,338	132,579,889	19,920,449
Self insurance fund-restricted	19,254,852	19,251,372	3,480
Energy sense fund	518,878	1,074,491	(555,613)
Total cash and cash equivalents	240,571,628	227,875,166	12,696,462
Accounts receivable, net	35,022,465	76,563,289	(41,540,824)
Total current receivables	35,022,465	76,563,289	(41,540,824)
Materials and supplies inventory	12,852,329	11,989,745	862,584
Fuel inventory	57,231,975	52,387,369	4,844,606
Prepaid expenses	5,362,440	682,814	4,679,626
Total current assets	351,040,837	369,498,383	(18,457,546)
Utility plant, at cost:			
Electric plant in service	1,041,096,229	1,037,419,517	3,676,712
Construction work in progress	23,104,410	18,382,414	4,721,996
Total	1,064,200,639	1,055,801,931	8,398,708
Less: Accumulated depreciation	(583,219,864)	(565,144,900)	(18,074,964)
Total utility plant	480,980,775	490,657,031	(9,676,256)
Other non-current assets:			
Investment - bond reserve funds held by trustee	48,555,191	48,576,863	(21,672)
Unamortized debt issuance costs	2,645,450	4,267,305	(1,621,855)
Total other non-current assets	51,200,641	52,844,168	(1,643,527)
Total assets	883,222,253	912,999,582	(29,777,329)
Deferred outflow of resources:			
Deferred fuel revenue	14,428,269	16,751,048	(2,322,779)
Unamortized loss on debt refunding	28,468,632	11,076,064	17,392,568
Pension	8,168,718	8,168,718	0
Unamortized forward delivery contract costs	557,678	637,358	(79,680)
Total deferred outflows of resources	51,623,297	36,633,188	14,990,109
	934,845,550	949,632,770	(14,787,220)

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)
Statement of Net Position, Continued
March 31, 2018 and September 30, 2017

	Unaudited March 2018	Unaudited September 2017	Change from Sept 30 2017
LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION			
Current liabilities:			
Current maturities of long-term debt	1,630,000	1,780,000	(150,000)
Current obligations under capital leases	16,949,416	16,949,416	0
Accounts payable			
Operations	39,912,904	56,671,898	(16,758,994)
Others	1,291,561	5,425,336	(4,133,775)
Accrued payroll and employees' benefits	1,679,736	1,546,860	132,876
Current portion of employees' annual leave	2,466,478	2,324,895	141,583
Interest payable	12,944,221	15,065,830	(2,121,609)
Customer deposits	8,443,473	8,503,783	(60,310)
Total current liabilities	85,317,789	108,268,018	(22,950,229)
Regulatory liabilities:			
Provision for self insurance	19,550,977	19,550,977	0
Total regulatory liabilities	19,550,977	19,550,977	0
Long term debt, net of current maturities	606,711,843	590,568,862	16,142,981
Obligations under capital leases, net of current portion	18,835,511	30,343,708	(11,508,197)
Net Pension liability	62,171,523	64,596,253	(2,424,730)
DCRS sick leave liability	4,008,397	4,008,397	0
Employees' annual leave net of current portion	806,762	806,762	0
Customer advances for construction	380,726	369,180	11,546
Total liabilities	797,783,528	818,512,157	(20,728,629)
Deferred inflows of resources:			
Unearned forward delivery contract revenue	2,044,062	2,336,071	(292,009)
Pension	732,788	732,788	0
Total deferred inflows of resources	2,776,850	3,068,859	(292,009)
Commitments and contigencies			
Net Position:			
Net investment in capital assets	(62,119,041)	(43,869,737)	(18,249,304)
Restricted	22,476,697	15,232,832	7,243,866
Unrestricted	173,927,515	156,688,658	17,238,857
Total net position	134,285,171	128,051,754	6,233,417
	934,845,550	949,632,770	(14,787,220)

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM
Statement of Revenues, Expenses and Changes in Net Assets

	March 31			Six Months Ended March 31		
	Unaudited 2018	Unaudited 2017	% of change Inc (dec)	Unaudited 2018	Unaudited 2017	% of change Inc (dec)
Revenues						
Sales of electricity	32,955,817	28,371,004	16	181,574,210	154,828,291	17
Miscellaneous	179,601	317,287	(43)	1,091,173	1,142,293	(4)
Total	33,135,418	28,688,291	16	182,665,383	155,970,584	17
Bad debt expense	(86,583)	(93,433)	(7)	(519,500)	(510,100)	2
Total revenues	33,048,835	28,594,858	16	182,145,883	155,460,484	17
Operating and maintenance expenses						
Production fuel	19,185,808	14,248,215	35	100,328,043	74,012,032	36
Other production	1,497,918	1,280,763	17	7,859,867	7,639,933	3
	20,683,726	15,528,978	33	108,187,910	81,651,965	32
Depreciation	3,118,612	2,453,646	27	19,251,602	21,268,073	(9)
Energy conversion cost	1,401,419	1,587,427	(12)	9,122,705	9,361,910	(3)
Transmission & distribution	1,093,678	917,602	19	6,481,322	6,114,665	6
Customer accounting	469,792	306,771	53	2,520,808	2,052,407	23
Administrative & general	2,489,968	2,013,681	24	14,586,319	12,395,092	18
Total operating and maintenance expenses	29,257,195	22,808,105	28	160,150,666	132,844,112	21
Operating income	3,791,640	5,786,753	(34)	21,995,217	22,616,372	(3)
Other income (expenses)						
Interest income	(233,221)	276,558	(184)	1,227,079	665,503	84
Interest expense and amortization	(2,664,468)	(2,862,233)	(7)	(16,146,953)	(17,018,822)	(5)
Bond issuance costs	61,350	76,827	(20)	(2,114,087)	460,962	(559)
Allowance for funds used during construction	198,949	313,714	(37)	1,416,507	1,914,828	(26)
Other expense	(9,395)	(4,291)	0	(223,026)	(29,764)	649
Total other income (expenses)	(2,646,785)	(2,199,425)	20	(15,840,480)	(14,007,293)	13
Income (loss) before capital contributions	1,144,855	3,587,328	(68)	6,154,737	8,609,079	(29)
Capital contributions	3,778	25,073	0	78,680	36,561	115
Increase (decrease) in net assets	1,148,633	3,612,401	(68)	6,233,417	8,645,640	(28)
Total net assets at beginning of period (restated)	133,136,538	82,093,568	62	128,051,754	77,060,329	66
Total net assets at end of period	134,285,171	85,705,969	57	134,285,171	85,705,969	57

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)
Statements of Cash Flows
Period Ended March 31, 2018

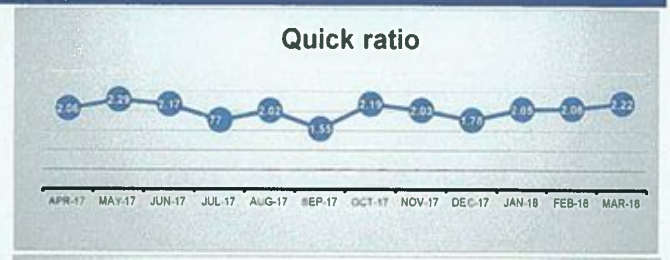
	Month Ended 3/31/2018	YTD Ended 3/31/2018
Increase(decrease) in cash and cash equivalents		
Cash flows from operating activities:		
Cash received from customers	$73,609,522	$ 223,654,120
Cash payments to suppliers and employees for goods and services	14,341,003	189,786,860
Net cash provided by operating activities	$59,268,519	33,867,260
Cash flows from investing activities:		
Interest and dividends on investments and bank accounts	(233,221)	1,227,079
Net cash provided by investing activities	(233,221)	1,227,079
Cash flows from non-capital financing activities		
Interest paid on short term debt	(6,666)	(37,975)
Provision for self insurance funds	(612)	(3,480)
Net cash provided by noncapital financing activities	(7,278)	(41,455)
Cash flows from capital and related financing activities		
Acquisition of utility plant	(1,077,072)	(9,575,345)
Principal paid on bonds and other long-term debt	-	(3,550,000)
Interest paid on bonds(net of capitalized interest)	198,949	(14,959,493)
Interest paid on capital lease obligations	(270,472)	(1,854,587)
Interest & principal funds held by trustee	(2,750,591)	2,772,784
Reserve funds held by trustee	(26,915)	21,672
Bond funds held by trustee	317,958	3,899,070
Principal payment on capital lease obligations	(1,873,625)	(11,508,197)
Grant from DOI/FEMA	3,778	78,680
Debt issuance costs/loss on defeasance	(333,577)	19,542,981
Net cash provided by (used in) capital and related financing activities	(5,811,567)	(15,132,435)
Net (decrease) increase in cash and cash equivalents	53,216,453.81	19,920,449
Cash and cash equivalents, beginning	99,283,884	132,579,889
Cash and cash equivalents-Funds held by GPA, March 31, 2018	**$ 152,500,338**	**$ 152,500,338**

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)
Statements of Cash Flows, continued
Period Ended March 31 2018

	Month Ended 3/31/2018	YTD Ended 3/31/2018
Reconciliation of operating earnings to net cash provided by operating activities:		
Operating earnings net of depreciation expense and excluding interest income	$3,791,640	$21,995,217
Adjustments to reconcile operating earnings to net cash provided by operating activities:		
Depreciation and amortization	3,118,612	19,251,602
Other expense	51,955	(2,337,113)
(Increase) decrease in assets:		
Accounts receivable	40,598,258	41,540,824
Materials and inventory	(49,086)	(862,584)
Fuel inventory	(6,474,651)	(4,844,606)
Prepaid expenses	971,146	(4,679,626)
Unamortized debt issuance cost	23,667	1,621,855
Deferred fuel revenue	(37,624)	2,322,779
Unamortized loss on debt refunding	229,166	(17,392,568)
Unamortized forward delivery contract costs	13,280	79,680
Increase (decrease) in liabilities:		
Accounts payable-operations	18,874,624	(16,758,994)
Accounts payable-others	(1,889,955)	(3,578,162)
Accrued payroll and employees' benefits	426,427	132,876
Net pension liability	(446,562)	(2,424,730)
Employees' annual leave	33,808	141,583
Customers deposits	82,482	(60,310)
Customer advances for construction	-	11,546
Unearned forward delivery contract revenue	(48,668)	(292,009)
Net cash provided by operating activities	**$59,268,519**	**$ 33,867,260**

Guam Power Authority
Financial Analysis
March 31, 2018

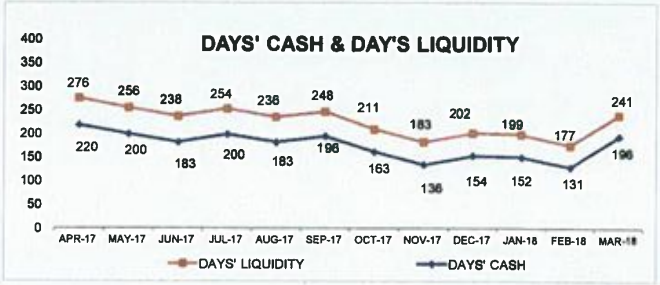
	Quick Ratio		
A	Reserve Funds Held by GPA		152,500,338
B	Current Accounts Receivable		36,572,815
C	Total Cash and A/R (A+B)		189,073,153
D	Total Current Liabilities		85,317,789
E	**Quick Ratio (F/G)**		**2.22**
	Days in Receivables		
A	FY 18 Moving 12 Mos -Actual		357,819,973
B	No. of Days		365
C	Average Revenues per day (A/B)		980,329
D	Current Accounts Receivable		36,572,815
E	**Days in Receivables (D/C)**		**37**
	Days in Payables		
A	FY 18 Moving 12 Months-Actual		479,854,934
B	No. of Days		365
C	Average Payables per day (A/B)		1,314,671
D	Current Accounts Payables		41,204,465
E	**Days in Payables (D/C)**		**31**
	Long term equity ratio		
A	Equity	$	134,285,171.00
B	Total Long term Liability	$	593,226,705.00
C	Total Equity and liability	$	727,511,876.00
D	**Long term equity ratio (A/C)**		**18%**
	Days cash on hand		
A	Unrestricted cash & cash equivalents		152,500
B	No. of Days -YTD		181
C	A x B		27,602,561
D	Total Operating expenses excluding depreci		140,899
E	**Days cash on hand**		**196**
	Days' Liquidity		
A	Unrestricted cash , cash equivalents & rev		187,500
B	No. of Days -YTD		181
C	A x B		33,937,561
D	Total Operating expenses excluding depreci		140,899
E	**Days liquidity**		**241**











GUAM POWER AUTHORITY
ACCRUED REVENUE
MARCH 2018

	FOR THE MONTH ENDED MARCH		SIX MONTHS ENDED MARCH	
	2018	2017	2018	2017
KWH SALES:				
Residential	41,541,824	40,911,781	248,796,200	240,570,451
Small Gen. Non Demand	6,976,607	6,767,505	41,058,895	40,594,512
Small Gen. Demand	15,917,309	16,300,307	93,074,431	93,306,665
Large General	26,155,199	26,173,462	156,408,481	155,603,304
Independent Power Producer	28,536	83,841	310,730	518,040
Private St. Lights	32,791	34,097	201,578	244,710
Sub-total	90,652,265	90,270,993	539,850,315	530,837,682
Government Service:				
Small Non Demand	1,193,794	1,123,675	7,340,385	6,641,796
Small Demand	7,889,205	8,171,598	47,815,506	48,438,749
Large	6,226,210	6,340,287	38,228,791	36,763,223
Street Lighting	743,499	829,968	4,308,590	4,966,126
Sub-total	16,052,709	16,465,529	97,693,272	96,809,894
Total	106,704,974	106,736,522	637,543,587	627,647,576
U. S. Navy	25,988,485	28,394,970	156,166,216	158,051,383
GRAND TOTAL	132,693,459	135,131,492	793,709,803	785,698,959
REVENUE:				
Residential	$ 10,154,660	$ 8,255,658	$ 56,194,689	$ 45,873,312
Small Gen. Non Demand	$ 1,988,097	$ 1,647,869	$ 10,947,044	$ 9,408,937
Small Gen. Demand	$ 4,266,730	$ 3,674,304	$ 23,214,676	$ 20,019,638
Large General	$ 6,565,683	$ 5,370,285	$ 36,077,615	$ 30,468,327
Independent Power Producer	$ 7,406	$ 17,451	$ 70,450	$ 106,332
Private St. Lights	$ 25,785	$ 25,012	$ 152,925	$ 156,630
Sub-total	$ 23,008,362	$ 18,990,578	$ 126,657,399	$ 106,033,175
Government Service:				
Small Non Demand	$ 356,541	$ 289,226	$ 2,033,559	$ 1,628,343
Small Demand	$ 2,224,973	$ 1,956,670	$ 12,493,608	$ 11,029,161
Large	$ 1,707,269	$ 1,454,690	$ 9,644,575	$ 8,066,417
Street Lighting	$ 455,729	$ 447,332	$ 2,604,959	$ 2,744,733
Sub-total	$ 4,744,512	$ 4,147,918	$ 26,776,701	$ 23,468,654
Total	$ 27,752,874	$ 23,138,496	$ 153,434,100	$ 129,501,829
U. S. Navy	$ 5,202,943	$ 5,232,508	$ 28,140,109	$ 25,326,463
GRAND TOTAL	$ 32,955,817	$ 28,371,004	$ 181,574,210	$ 154,828,292
NUMBER OF CUSTOMERS:				
Residential	44,065	43,718	44,004	43,623
Small Gen. Non Demand	4,154	4,128	4,141	4,121
Small Gen. Demand	987	989	984	989
Large General	119	116	118	116
Independent Power Producer	2	3	3	3
Private St. Lights	526	528	528	524
Sub-total	49,853	49,482	49,777	49,375
Government Service:				
Small Non Demand	689	684	682	683
Small Demand	350	348	351	347
Large	47	45	47	45
Street Lighting	479	272	404	212
Sub-total	1,565	1,349	1,484	1,286
Total	51,418	50,831	51,261	50,660
US Navy	1	1	1	1
	51,419	50,832	51,262	50,661

GUAM POWER AUTHORITY
ACCRUED REVENUE

	TWELVE MONTHS ENDED	MARCH 2018	FEBRUARY 2018	JANUARY 2018	DECEMBER 2017	NOVEMBER 2017	OCTOBER 2017	SEPTEMBER 2017	AUGUST 2017	JULY 2017	JUNE 2017	MAY 2017	APRIL 2017
KWH SALES:													
Residential	514,561,351	41,541,824	36,809,815	42,067,765	43,307,944	43,386,853	41,682,000	41,491,015	44,434,719	45,094,364	45,699,553	46,940,445	42,105,054
Small General Non Demand	84,364,083	6,976,607	6,154,115	6,844,713	6,956,278	7,060,041	7,067,142	7,022,092	7,347,440	7,087,373	7,546,692	7,375,238	6,926,353
Small General Demand	189,818,690	15,917,309	14,164,319	15,562,774	15,848,505	15,789,397	15,792,127	15,509,408	16,488,257	15,839,125	16,853,701	16,415,592	15,638,177
Large General	315,378,408	26,155,199	23,674,407	26,242,185	27,485,887	26,267,861	26,583,141	25,432,034	27,038,013	27,119,633	26,399,095	27,209,329	25,771,823
Private Outdoor Lighting	449,276	32,791	32,408	32,358	35,129	35,042	33,851	76,532	33,324	35,412	36,199	31,856	34,275
Independent Power Producer	754,513	28,536	28,976	27,011	40,140	93,823	92,244	34,586	57,754	82,800	93,447	97,039	78,158
Sub-Total	1,105,326,321	90,652,265	80,864,040	90,776,805	93,673,883	92,632,817	91,250,505	89,565,666	95,399,508	95,258,706	96,628,687	98,069,599	90,553,840
Government Service:													
Small Non Demand	14,600,834	1,193,794	1,119,571	1,248,251	1,272,026	1,255,131	1,251,612	1,246,106	1,243,487	1,254,979	1,154,625	1,242,514	1,118,738
Small Demand	96,255,358	7,889,205	7,377,578	8,102,981	8,063,549	8,098,974	8,283,218	8,084,368	8,147,386	7,962,844	7,847,851	8,507,100	7,890,703
Large	76,363,536	6,226,210	5,905,830	6,315,619	6,812,255	6,550,623	6,418,254	6,493,449	6,520,699	6,219,351	6,043,966	6,712,069	6,145,212
Street Lighting (Agencies)	8,857,071	743,499	669,689	716,067	697,921	668,464	812,949	697,002	877,130	638,971	843,815	771,506	720,057
Sub-Total	196,076,800	16,052,709	15,072,669	16,382,918	16,845,750	16,573,193	16,766,033	16,520,925	16,788,702	16,075,944	15,890,058	17,233,190	15,874,710
Total	1,301,403,121	106,704,974	95,936,708	107,159,724	110,519,633	109,206,010	108,016,537	106,086,591	112,188,210	111,334,651	112,518,745	115,302,789	106,428,550
U.S. Navy	316,700,734	25,988,485	23,304,608	26,722,147	28,067,673	26,837,883	25,245,420	26,906,320	26,608,721	27,892,205	25,258,344	27,710,121	26,158,807
Grand Total	1,618,103,855	132,693,459	119,241,316	133,881,870	138,587,306	136,043,893	133,261,957	132,992,911	138,796,930	139,226,856	137,777,089	143,012,910	132,587,357
REVENUE:													
Residential	$ 110,923,355	$ 10,154,660	$ 9,633,432	$ 8,985,179	$ 9,238,911	$ 9,263,463	$ 8,919,044	$ 8,887,320	$ 9,762,810	$ 9,056,344	$ 9,109,920	$ 9,464,539	$ 8,447,732
Small General Non Demand	$ 21,578,839	$ 1,988,097	$ 1,869,658	$ 1,741,922	$ 1,765,223	$ 1,789,263	$ 1,792,881	$ 1,783,997	$ 1,902,660	$ 1,709,931	$ 1,790,832	$ 1,782,557	$ 1,661,816
Small General Demand	$ 45,264,555	$ 4,266,730	$ 4,006,949	$ 3,714,258	$ 3,769,415	$ 3,699,298	$ 3,758,026	$ 3,692,273	$ 3,964,157	$ 3,527,191	$ 3,704,661	$ 3,828,208	$ 3,333,389
Large General	$ 69,787,348	$ 6,565,683	$ 6,086,686	$ 5,762,313	$ 6,067,740	$ 5,793,817	$ 5,801,375	$ 5,643,059	$ 6,028,539	$ 5,589,484	$ 5,443,855	$ 5,621,797	$ 5,362,999
Private Outdoor Lighting	$ 303,253	$ 25,785	$ 25,733	$ 25,133	$ 25,553	$ 25,471	$ 25,250	$ 25,361	$ 25,094	$ 25,099	$ 25,329	$ 24,432	$ 25,014
Independent Power Producer	$ 175,149	$ 7,406	$ 7,969	$ 6,029	$ 9,249	$ 20,053	$ 19,744	$ 17,076	$ 14,804	$ 17,270	$ 19,157	$ 20,386	$ 16,006
Sub-Total	$ 248,032,498	$ 23,008,362	$ 21,630,428	$ 20,234,834	$ 20,876,091	$ 20,591,366	$ 20,316,320	$ 20,049,087	$ 21,698,063	$ 19,925,320	$ 20,093,753	$ 20,741,919	$ 18,866,957
Government Service:													
Small Non Demand	$ 3,918,224	$ 356,541	$ 335,126	$ 332,434	$ 341,017	$ 334,963	$ 333,478	$ 333,079	$ 332,325	$ 319,135	$ 297,031	$ 313,617	$ 289,279
Small Demand	$ 24,294,525	$ 2,224,973	$ 2,094,220	$ 2,016,922	$ 2,046,340	$ 2,043,720	$ 2,067,433	$ 2,050,292	$ 2,052,253	$ 1,907,628	$ 1,885,990	$ 1,985,615	$ 1,919,140
Large	$ 18,557,524	$ 1,707,269	$ 1,628,297	$ 1,525,771	$ 1,652,805	$ 1,583,988	$ 1,546,446	$ 1,575,080	$ 1,573,445	$ 1,424,292	$ 1,393,449	$ 1,572,201	$ 1,374,482
Street Lighting (Agencies)	$ 5,298,922	$ 455,729	$ 439,995	$ 427,482	$ 416,951	$ 419,351	$ 445,451	$ 436,808	$ 516,047	$ 418,012	$ 451,933	$ 439,403	$ 431,759
Sub-Total	$ 52,069,195	$ 4,744,512	$ 4,497,638	$ 4,302,609	$ 4,457,113	$ 4,382,022	$ 4,392,807	$ 4,395,259	$ 4,474,070	$ 4,069,066	$ 4,028,403	$ 4,311,036	$ 4,014,660
Total	$ 300,101,693	$ 27,752,874	$ 26,128,065	$ 24,537,443	$ 25,333,204	$ 24,973,388	$ 24,709,127	$ 24,444,346	$ 26,172,133	$ 23,994,386	$ 24,122,156	$ 25,052,955	$ 22,881,617
U.S. Navy	$ 57,718,280	$ 5,202,943	$ 4,155,974	$ 5,033,103	$ 4,642,130	$ 4,254,065	$ 4,851,893	$ 5,325,383	$ 5,019,382	$ 5,331,702	$ 4,458,411	$ 5,160,265	$ 4,283,028
Grand Total	$ 357,819,973	$ 32,955,817	$ 30,284,040	$ 29,570,546	$ 29,975,334	$ 29,227,453	$ 29,561,020	$ 29,769,728	$ 31,191,516	$ 29,326,087	$ 28,580,567	$ 30,213,220	$ 27,164,645
NUMBER OF CUSTOMERS:													
Residential	43,947	44,065	43,995	44,119	43,898	43,996	43,950	43,991	43,969	43,866	43,902	43,803	43,807
Small General Non Demand	4,137	4,154	4,153	4,142	4,129	4,131	4,134	4,127	4,134	4,131	4,145	4,130	4,137
Small General Demand	984	987	991	981	981	982	982	980	981	984	988	988	988
Large General	117	119	118	119	118	117	119	116	115	116	116	117	115
Private Outdoor Lighting	528	526	527	527	530	527	530	526	527	526	527	530	528
Independent Power Producer	3	2	2	2	3	3	3	3	3	3	3	4	4
Sub-Total	49,716	49,853	49,786	49,890	49,659	49,756	49,718	49,743	49,729	49,626	49,681	49,572	49,579
Government Service:													
Small Non Demand	681	689	684	686	679	678	676	675	678	678	677	684	684
Small Demand	350	350	351	350	350	354	351	353	351	352	349	346	347
Large	46	47	47	47	47	47	46	45	45	45	45	45	45
Street Lighting (Agencies)	349	479	421	389	378	378	377	297	297	297	297	293	290
Sub-Total	1,426	1,565	1,503	1,472	1,454	1,457	1,450	1,370	1,371	1,372	1,368	1,368	1,366
Total	51,142	51,418	51,289	51,362	51,113	51,213	51,168	51,113	51,100	50,998	51,049	50,940	50,945
U.S. Navy	1	1	1	1	1	1	1	1	1	1	1	1	1
Grand Total	51,143	51,419	51,290	51,363	51,114	51,214	51,169	51,114	51,101	50,999	51,050	50,941	50,946

GUAM POWER AUTHORITY
ACCRUED REVENUE
MARCH 2018

RATE	NUMBER OF CUSTOMERS	KWH SALES	TOTAL REVENUE AMOUNT	TOTAL REVENUE C/KWH	BASE RATE REVENUE C/KWH	BASE RATE REVENUE AMOUNT	AVERAGE PER CUSTOMER KWH	AVERAGE PER CUSTOMER REVENUE	NON-FUEL C/KWH	NON-FUEL AMOUNT	FUEL C/KWH	FUEL AMOUNT
Month												
R Residential	44,065	41,541,824	$ 10,154,660	$ 24.44	$ 24.44	$ 10,154,660	943	$ 230.45	$ 9.7178	$ 4,036,961	$ 14.7266	$ 6,117,698
G Small Gen. Non Demand	4,154	6,976,607	$ 1,988,097	$ 28.50	$ 28.50	$ 1,988,097	1,679	$ 478.60	$ 13.7700	$ 960,680	$ 14.7266	$ 1,027,417
J Small Gen. Demand	987	15,917,309	$ 4,266,730	$ 26.81	$ 26.81	$ 4,266,730	16,127	$ 4,322.93	$ 12.0839	$ 1,923,433	$ 14.7217	$ 2,343,297
P Large General	119	26,155,199	$ 6,565,683	$ 25.10	$ 25.10	$ 6,565,683	219,792	$ 55,173.81	$ 10.4462	$ 2,732,228	$ 14.6566	$ 3,833,455
I Independent PowerProducer	2	28,536	$ 7,406	$ 25.95	$ 25.95	$ 7,406	14,268	$ 3,703.07	$ 11.7182	$ 3,344	$ 14.2358	$ 4,062
H Private St. Lights	526	32,791	$ 25,785	$ 78.64	$ 78.64	$ 25,785	62	$ 49.02	$ 63.9091	$ 20,956	$ 14.7266	$ 4,829
Sub-Total	49,853	90,652,265	$ 23,008,362	$ 25.38	$ 25.38	$ 23,008,362	1,818	$ 461.52	$ 10.6755	$ 9,677,603	$ 14.7054	$ 13,330,758
Government Service:												
S Small Non Demand	689	1,193,794	$ 356,541	$ 29.87	$ 29.87	$ 356,541	1,733	$ 517.48	$ 15.1396	$ 180,736	$ 14.7266	$ 175,805
K Small Demand	350	7,889,205	$ 2,224,973	$ 28.20	$ 28.20	$ 2,224,973	22,541	$ 6,357.07	$ 13.4762	$ 1,063,161	$ 14.7266	$ 1,161,812
L Large	47	6,226,210	$ 1,707,269	$ 27.42	$ 27.42	$ 1,707,269	132,473	$ 36,324.86	$ 12.8692	$ 801,265	$ 14.5514	$ 906,004
F Street Lighting (Agencies)	479	743,499	$ 455,729	$ 61.30	$ 61.30	$ 455,729	1,552	$ 951.42	$ 46.5686	$ 346,237	$ 14.7266	$ 109,492
Sub-Total	1,565	16,052,709	$ 4,744,512	$ 29.56	$ 29.56	$ 4,744,512	10,257	$ 3,031.64	$ 14.8972	$ 2,391,399	$ 14.6587	$ 2,353,113
	51,418	106,704,974	$ 27,752,874	$ 26.01	$ 26.01	$ 27,752,874	2,075	$ 539.75	$ 11.3106	$ 12,069,002	$ 14.6984	$ 15,683,871
U.S. Navy	1	25,988,485	$ 5,202,943	$ 20.02	$ 20.02	$ 5,202,943			$ 6.5669	$ 1,706,643	$ 13.4533	$ 3,496,300
TOTAL	51,419	132,693,459	$ 32,955,817	$ 24.84	$ 24.84	$ 32,955,817	2,581	$ 640.93	$ 10.3816	$ 13,775,645	$ 14.4545	$ 19,180,172
Six Months Ended March 2018												
R Residential	44,004	248,796,200	$ 56,194,689	$ 22.59	$ 22.59	$ 56,194,689	5,654	$ 1,277.04	$ 9.6268	$ 23,951,125	$ 12.9598	$ 32,243,564
G Small Gen. Non Demand	4,141	41,058,895	$ 10,947,044	$ 26.66	$ 26.66	$ 10,947,044	9,916	$ 2,643.89	$ 13.6795	$ 5,616,639	$ 12.9823	$ 5,330,406
J Small Gen. Demand	984	93,074,431	$ 23,214,676	$ 24.94	$ 24.94	$ 23,214,676	94,588	$ 23,592.15	$ 12.0073	$ 11,175,765	$ 12.9347	$ 12,038,910
P Large General	118	156,408,481	$ 36,077,615	$ 23.07	$ 23.07	$ 36,077,615	1,321,762	$ 304,881.26	$ 10.3637	$ 16,209,732	$ 12.7026	$ 19,867,884
I Independent PowerProducer	3	310,730	$ 70,450	$ 22.67	$ 22.67	$ 70,450	124,292	$ 28,179.92	$ 10.7689	$ 33,462	$ 11.9035	$ 36,988
H Private St. Lights	528	201,578	$ 152,925	$ 75.86	$ 75.86	$ 152,925	382	$ 289.72	$ 63.1364	$ 127,269	$ 12.7275	$ 25,656
Sub-Total	49,777	539,850,315	$ 126,657,399	$ 23.46	$ 23.46	$ 126,657,399	10,845	$ 2,544.50	$ 10.5796	$ 57,113,992	$ 12.8820	$ 69,543,407
Government Service:												
S Small Non Demand	682	7,340,385	$ 2,033,559	$ 27.70	$ 27.70	$ 2,033,559	10,763	$ 2,981.76	$ 15.0002	$ 1,101,071	$ 12.7035	$ 932,488
K Small Demand	351	47,815,506	$ 12,493,608	$ 26.13	$ 26.13	$ 12,493,608	136,227	$ 35,594.32	$ 13.4136	$ 6,413,759	$ 12.7152	$ 6,079,849
L Large	47	38,228,791	$ 9,644,575	$ 25.23	$ 25.23	$ 9,644,575	816,273	$ 205,933.99	$ 12.6724	$ 4,844,492	$ 12.5562	$ 4,800,083
F Street Lighting (Agencies)	404	4,308,590	$ 2,604,959	$ 60.46	$ 60.46	$ 2,604,959	10,674	$ 6,453.24	$ 47.7187	$ 2,056,004	$ 12.7410	$ 548,956
Sub-Total	1,484	97,693,272	$ 26,776,701	$ 27.41	$ 27.41	$ 26,776,701	65,853	$ 18,049.68	$ 14.7557	$ 14,415,326	$ 12.6533	$ 12,361,375
U.S. Navy	1	156,166,216	$ 28,140,109	$ 18.02	$ 18.02	$ 28,140,109			$ 6.2257	$ 9,722,486	$ 11.7936	$ 18,417,623
TOTAL	51,262	793,709,803	$ 181,574,210	$ 22.88	$ 22.88	$ 181,574,210	15,484	$ 3,542.12	$ 10.2370	$ 81,251,804	$ 12.6397	$ 100,322,406
Twelve Months Ended March 2018												
R Residential	43,947	514,561,351	$ 110,923,355	$ 21.56	$ 21.56	$ 110,923,355	11,709	$ 2,524.04	$ 9.5997	$ 49,396,200	$ 11.9572	$ 61,527,155
G Small Gen. Non Demand	4,137	84,364,083	$ 21,578,839	$ 25.58	$ 25.58	$ 21,578,839	20,391	$ 5,215.74	$ 13.5990	$ 11,472,642	$ 11.9793	$ 10,106,197
J Small Gen. Demand	984	189,816,690	$ 45,264,555	$ 23.85	$ 23.85	$ 45,264,555	192,824	$ 45,981.09	$ 11.8947	$ 22,578,377	$ 11.9515	$ 22,686,178
P Large General	117	315,376,408	$ 69,787,348	$ 22.13	$ 22.13	$ 69,787,348	2,693,823	$ 596,048.52	$ 10.3396	$ 32,608,807	$ 11.7886	$ 37,178,541
I Independent PowerProducer	3	754,513	$ 175,149	$ 23.21	$ 23.21	$ 175,149	258,690	$ 60,051.11	$ 11.5629	$ 87,244	$ 11.6506	$ 87,905
H Private St. Lights	528	449,276	$ 303,253	$ 67.50	$ 67.50	$ 303,253	852	$ 574.80	$ 56.7851	$ 255,122	$ 10.7129	$ 48,131
Sub-Total	49,716	1,105,326,321	$ 248,032,498	$ 22.44	$ 22.44	$ 248,032,498	22,233	$ 4,988.99	$ 10.5307	$ 116,398,391	$ 11.9091	$ 131,634,107
Government Service:												
S Small Non Demand	681	14,600,834	$ 3,918,224	$ 26.84	$ 26.84	$ 3,918,224	21,451	$ 5,756.45	$ 15.0093	$ 2,191,483	$ 11.8263	$ 1,726,741
K Small Demand	350	96,255,358	$ 24,294,525	$ 25.24	$ 25.24	$ 24,294,525	274,754	$ 69,346.88	$ 13.4231	$ 12,920,414	$ 11.8166	$ 11,374,111
L Large	46	78,363,536	$ 18,557,524	$ 24.30	$ 24.30	$ 18,557,524	1,663,090	$ 404,156.59	$ 12.6196	$ 9,636,793	$ 11.6819	$ 8,920,731
F Street Lighting (Agencies)	349	8,857,071	$ 5,298,922	$ 59.83	$ 59.83	$ 5,298,922	25,348	$ 15,165.05	$ 48.0091	$ 4,252,204	$ 11.8179	$ 1,046,717
Sub-Total	1,426	196,076,800	$ 52,069,195	$ 26.56	$ 26.56	$ 52,069,195	137,469	$ 36,505.63	$ 14.7906	$ 29,000,894	$ 11.7649	$ 23,068,300
	51,142	1,301,403,121	$ 300,101,693	$ 23.06	$ 23.06	$ 300,101,693	25,447	$ 41,494.62	$ 11.1725	$ 145,399,286	$ 11.8874	$ 154,702,407
U.S. Navy	1	316,700,734	$ 57,718,280	$ 18.22	$ 18.22	$ 57,718,280			$ 6.2158	$ 19,685,530	$ 12.0091	$ 38,032,750
TOTAL	51,143	1,618,103,855	$ 357,819,973	$ 22.11	$ 22.11	$ 357,819,973	31,639	$ 6,996.41	$ 10.2024	$ 165,084,816	$ 11.9112	$ 192,735,157

GPA-318

318Mar18

ENERGY ACCOUNT

FY 2018 Versus FY 2017

FOR INTERNAL USE ONLY

Gross Generation	March 2018		March 2017		Y T D 2018		Y T D 2017		MOVING TWELVE MONTHS	
Number of days in Period	31		31		182		182		365	
Peak demand	244		249		254		252		261	
Date	03/16/18		03/13/17		10/30/17		11/29/16		08/01/17	
	KWH	% change	KWH	% change	KWH	% change	KWH	% change	KWH	% change
Energy Account:										
Kilowatt hours GPA:										
Cabras 1 & 2	29,598,000		70,267,000		345,892,000		398,641,000		642,244,000	
Cabras No. 3	0		0		0		0		0	
Cabras No. 4	0		0		0		0		0	
MEC (ENRON) Piti 8 (IPP)	28,720,400		31,030,200		158,441,400		170,571,600		307,503,500	
MEC (ENRON) Piti 9 (IPP)	29,252,800		27,832,500		167,011,700		162,026,900		313,047,100	
TEMES Piti 7 (IPP)	6,719,199		705,294		12,248,444		4,628,278		54,601,535	
Tanguisson 2	0		0		0		0		0	
Tanguisson 1	0		0		0		0		0	
Diesels/CT's & Others:							0			
MDI 10MW	922,084		67,011		943,498		2,004,844		1,196,281	
NRG Solar Dandan	4,924,890		3,742,223		23,564,107		20,655,452		46,099,457	
Dededo CT #1	2,656,670		0		3,140,410		0		10,263,710	
Dededo CT #2	2,348,090		254,855		2,598,090		266,319		8,164,363	
Macheche CT	7,379,608		3,386,502		24,746,597		12,831,604		67,482,549	
Yigo CT (Leased)	4,725,702		808,173		18,238,529		13,922,042		45,692,434	
Tenjo	6,736,830		2,987,660		22,877,410		13,773,820		54,561,070	
Talofofo 10 MW	2,630,430		1,278,400		7,659,840		4,827,580		21,603,650	
Aggreko	17,666,134		5,867,886		82,062,205		59,477,824		196,030,920	
Wind Turbine*	72,277		3,146		252,491		270,470		369,216	
Orote	0		0		0		0		0	
Marbo	0		0		0		0		0	
	144,353,114		**148,230,849**		**869,676,721**		**863,897,734**		**1,768,859,784**	
Ratio to last year		97.38		105.66		100.67		**103.11**		**101.25**
Station use	4,423,014		6,060,640		32,259,682		34,961,635		63,193,044	
Ratio to Gross generation		3.06		4.09		3.71		4.05		**3.57**
Net send out	139,930,100		142,170,209		837,417,039		828,936,099		1,705,666,740	
Ratio to last year		98.42		104.36		101.02		**103.01**		**101.52**
KWH deliveries:										
Sales to Navy (@34.5kv)	**25,988,485**		**28,394,970**		**156,166,216**		**158,051,384**		**316,700,735**	
Ratio to last year		91.52		106.25		98.81		**100.05**		**99.54**
GPA-metered	**113,941,615**		**113,775,239**		**681,250,823**		**670,884,715**		**1,388,966,005**	
Ratio to last year		100.15		103.90		101.55		**103.73**		**101.98**
Power factor adj.	0		0		0		0		0	
Adjusted	113,941,615		113,775,239		681,250,823		670,884,715		1,388,966,005	
GPA KWH Accountability:										
Sales to civilian customers-accrual basis	**106,704,974**		**106,736,522**		**637,543,586**		**627,647,578**		**1,301,403,122**	
Ratio to last year		99.97		104.43		101.58		**103.60**		**101.83**
GPA use-KWH	319,483		260,662		1,837,556		1,526,598		3,455,195	
Unaccounted For	6,917,158		6,778,055		41,869,681		41,710,541		84,107,688	
Ratio to deliveries		6.07		5.96		6.15		6.22		6.06
Ratio to Gross Generation		4.79		4.57		4.81		4.83		4.75
Ratio to Net Send Out		4.94		4.77		5.00		5.03		4.93

GPA-317Mar18

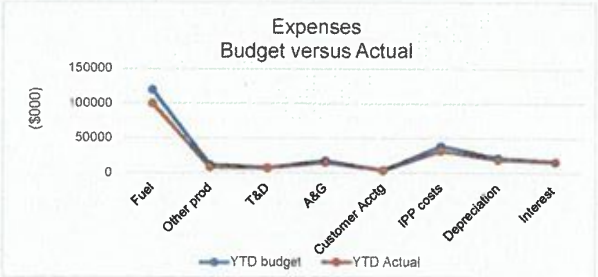
Guam Power Authority
Fuel Consumption
FY 2018

Description	March 2018 BARRELS	March 2018 AMOUNT	YEAR-TO-DATE BARRELS	YEAR-TO-DATE AMOUNT	MOVING 12 MONTHS BARREL S	MOVING 12 MONTHS AMOUNT
FUEL FURNISHED:						
NAVY:						
Diesel	0	0	0	0	0	0
Low Sulfur	0	0	0	0	0	0
	0	**0**	**0**	**0**	**0**	**0**
GPA:						
RFO	118,172	$7,804,565	927,314	$ 56,891,588	1,474,756	$ 88,132,641
Diesel	107,288	$9,276,701	346,698	$ 28,637,528	930,645	$ 70,892,702
Low Sulfur	8,416	$501,446	79,989	$ 4,885,758	436,689	$ 25,921,713
Deferred Fuel Costs	0	-$37,624	0	$ 2,322,779	0	$ (9,337,692)
Fuel Adjustments	0	$0		$ (19,006)	0	$ (222,386)
Fuel Handling Costs	0	$1,640,720	0	$ 7,609,395	0	$ 17,353,815
	233,876	**$19,185,808**	**1,354,002**	**$ 100,328,043**	**2,842,089**	**$ 192,740,793**
IWPS:						
GPA RFO	118,172	$7,804,565	927,314	$ 56,891,588	1,474,756	$ 88,132,641
Diesel	107,288	$9,276,701	346,698	$ 28,637,528	930,645	$ 70,892,702
Low Sulfur	8,416	$501,446	79,989	$ 4,885,758	436,689	$ 25,921,713
Deferred Fuel Costs	0	-$37,624	0	$ 2,322,779	0	$ (9,337,692)
Fuel Variance	0	$0	0	$ (19,006)		$ (222,386)
Fuel Handling Costs	0	$1,640,720	0	$ 7,609,395	0	$ 17,353,815
	233,876	**$19,185,808**	**1,354,002**	**$ 100,328,043**	**2,842,089**	**$ 192,740,793**
AVERAGE COST/Bbl.						
GPA RFO		**$66.04**		**$61.35**		**$59.76**
Diesel		**$86.47**		**$82.60**		**$76.18**
Low Sulfur		**$59.58**		**$61.08**		**$59.36**
AS BURNED						
Cabras 1 & 2						
RFO	47,543	$ 3,133,609	520,953	$ 31,946,172	909,448	$ 54,120,417
Low Sulfur	1,480	$ 87,507	47,489	$ 2,900,518	167,766	$ 9,996,103
Diesel	691	$ 53,308	1,056	$ 77,826	2,938	$ 204,952
	49,714	$ 3,274,423	569,498	$ 34,924,516	1,080,152	$ 64,321,471
Cabras 3 & 4						
RFO	0	$ -	0	$ -	0	$ -
Low Sulfur	0	$ -	0	$ -	0	$ -
Diesel	0	$ -	0	$ -	0	$ -
	0	$ -	0	$ -	0	$ -
MEC (Piti Units 8&9)						
RFO	70,629	$ 4,670,955	406,361	$ 24,945,416	565,308	$ 34,012,225
Low Sulfur	6,936	$ 413,940	32,501	$ 1,985,241	268,923	$ 15,925,610
Diesel	0	$ -	38	$ 2,127	77	$ 4,322
	77,565	$ 5,084,895	438,899	$ 26,932,784	834,308	$ 49,942,156
Diesel & CT's - GPA:						
MDI Dsl	1,485	$ 103,390	1,516	$ 105,403	1,922	$ 132,830
Macheche CT	15,341	$ 1,339,742	53,656	$ 4,384,712	146,537	$ 11,133,197
Yigo CT	9,681	$ 837,443	37,689	$ 3,113,282	94,277	$ 7,196,104
Talofofo 10 MW	4,466	$ 390,983	13,149	$ 1,119,798	36,923	$ 2,832,966
Aggreko	32,891	$ 2,877,595	151,111	$ 12,459,846	357,742	$ 27,289,778
Tenjo	11,732	$ 1,080,977	39,419	$ 3,403,286	94,726	$ 7,500,110
TEMES (IPP)	16,430	$ 1,394,788	31,771	$ 2,553,053	138,637	$ 10,296,883
GWA Generators	8	$ 901	291	$ 34,196	684	$ 80,494
	106,598	$ 9,223,393	345,604	$ 28,557,575	927,629	$ 70,683,428
Deferred Fuel Costs	0	$ (37,624)		$ 2,322,779		$ (9,337,692)
Adjustment		$ -		$ (19,006)		$ (222,386)
Fuel Handling Costs	0	$ 1,640,720		$ 7,609,395		$ 17,353,815
TOTAL	233,877	$ 19,185,807	1,354,002	$ 100,328,043	2,842,089	$ 192,740,793

Statement of operations
Comparison-Budget versus Actual
For the month and year to date ended March 31, 2018

	Budget	Actual March-18	Variance	YTD Budget	YTD Actual	Variance
KwH Sales-Civilian	106,019	106,705	-686	627,886	637,543	-9,657
Non-fuel yield	$ 0.105881	$ 0.113106	$ (0.007226)	$ 0.111948	$ 0.112196	$ (0.000248)
KwH Sales-Navy	26,568	25,988	580	157,055	156,166	889
Non-fuel yield	$ 0.061774	$ 0.065646	$ (0.003872)	$ 0.061774	$ 0.062254	$ (0.000480)
Operating revenue						
Civilian sales	11,892	12,069	(177)	70,290	71,530	(1,240)
Oil	20,370	19,180	1,190	120,592	100,322	20,270
Navy	1,641	1,706	(65)	9,702	9,722	(20)
Other income	169	180	(10)	1,015	1,091	(76)
	34,073	33,135	938	201,600	182,665	18,935
Bad debts expense	87	87	0	520	519	0
Total operating revenues	33,986	33,048	938	201,080	182,146	18,935
Operating expenses:						
Production fuel	20,370	19,186	1,184	120,592	100,328	20,264
O & M expenses:						
Other production	1,868	1,498	370	11,473	7,860	3,613
Transmission distribution	1,150	1,094	57	7,029	6,481	548
Administrative expense	2,398	2,490	(92)	17,610	14,586	3,024
Customer accounting	588	470	118	2,633	2,521	112
	6,004	5,551	453	38,745	31,448	7,296
IPP costs	1,383	1,401	(18)	9,055	9,123	(68)
Depreciation	3,635	3,119	516	21,809	19,252	2,558
	31,392	29,257	2,135	190,202	160,151	30,051
Operating income	2,594	3,791	(1,197)	10,879	21,995	(11,116)
Other revenue (expenses):						
Investment income	99	(233)	332	592	1,227	(635)
Interest expense	(2,654)	(2,664)	10	(15,933)	(16,147)	214
AFUDC	61	199	(138)	365	1,417	(1,052)
Bond issuance costs/Other expenses	135	52	83	808	(2,337)	3,145
Net income before capital contribution	234	1,144	(911)	(3,290)	6,155	(9,445)
Grants from the U.S. Government	-	4	(4)	-	79	(79)
Increase (decrease) in net assets	234	1,148	(915)	(3,290)	6,233	(9,524)





Guam Power Authority
Debt service coverage
March 31, 2018

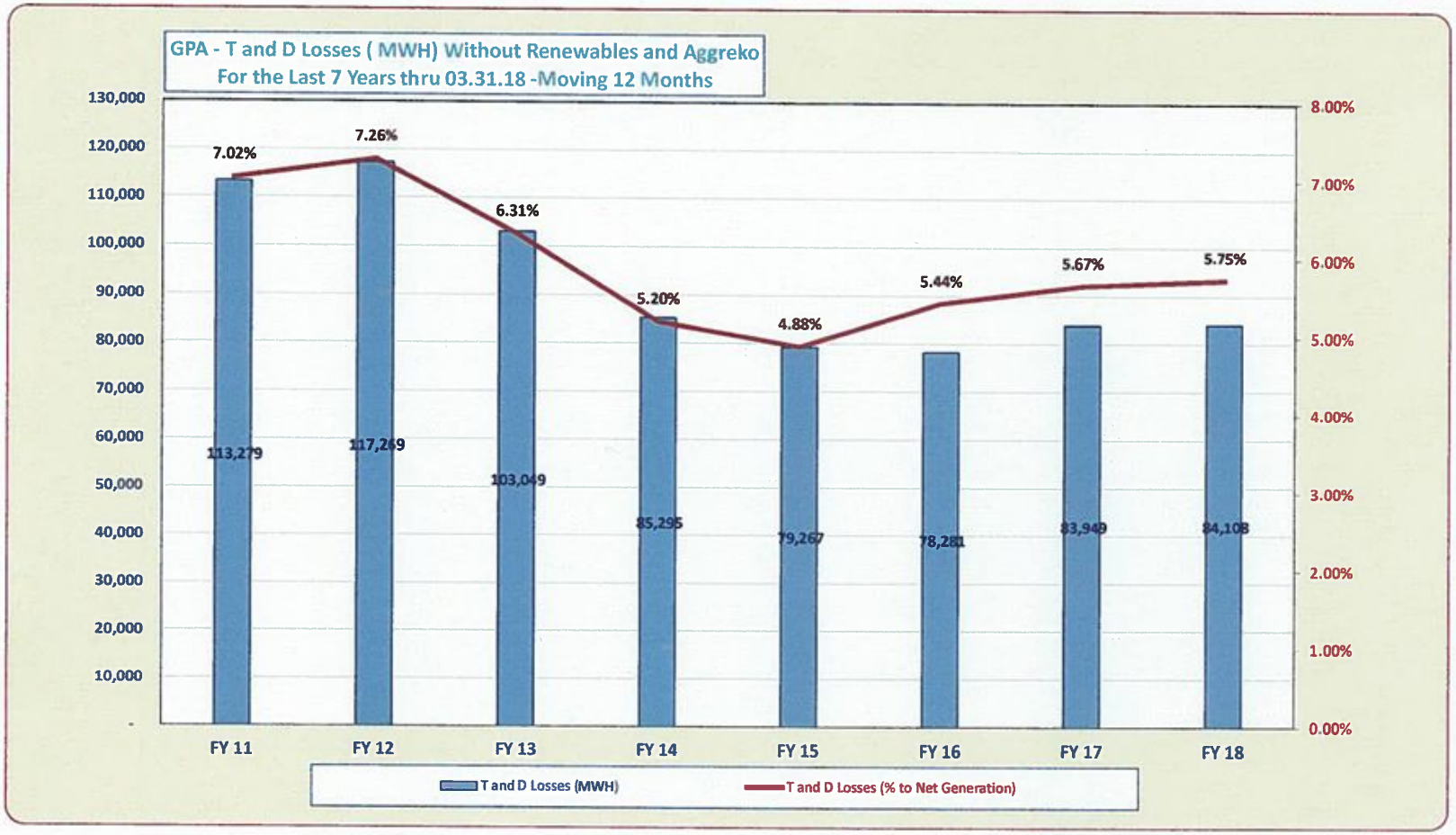
	2014	2015	Restated 2016	2017	YTD 2018
Funds Available for Debt Service					
Earnings from Operations	$40,895	$48,758	$37,981	$36,522	$21,995
Interest Income	$333	$368	$1,227	($32)	$1,004
Depreciation Expense	36,989	41,766	44,240	44,292	19,252
Balance Available for Debt Service	$78,217	$90,892	$83,448	$80,782	$42,251
IPP - Capital Costs					
Principal	$13,064	$18,144	$14,819	$21,263	$11,918
Interest	10,020	8,478	5,970	5,137	1,581
Total IPP Payments	$23,084	$26,622	$20,789	$26,400	$13,499
Bond Debt Service					
Principal (1993 & 1999 Revenue Bond)	$0	$0	$0	$0	$0
Interest (1993 & 1999 Revenue Bond)	0	0	0	0	0
Principal and Interest (2010 Subordinate Bond)	15,193	9,605	0	0	0
Principal and Interest (2010 Senior TE Bond)	7,999	7,999	7,999	7,999	2,000
Principal and Interest (2012 Senior TE Bond)	17,455	17,096	17,098	17,449	8,543
Principal and Interest (2014 Senior TE Bond)		0	10	5,084	2,544
Principal and Interest (2017 Senior TE Bond)					2,098
Total	$40,647	$34,700	$25,107	$30,532	$15,185
Debt Service Coverage (DSC) Calculation					
Existing DSC Methodology (Senior)	2.17 x	2.56 x	2.50 x	1.78 x	1.89
Existing DSC Methodology (Senior+Subordinate)	1.36 x	1.85 x	2.50 x	1.78 x	1.89
Bond Covenant DSC	1.92 x	2.62 x	3.32 x	2.65 x	2.78
Debt Service Coverage Requirements					
Existing Ratemaking DSC Target	1.75 x	1.75 x	1.75 x	1.75 x	1.75
Minimum Bond Covenant Requirement (Senior Bond)	1.30 x	1.30 x	1.30 x	1.30 x	1.30
Minimum Bond Covenant Requirement (Subordinate I	1.20 x	1.20 x	1.20 x	1.20 x	1.20

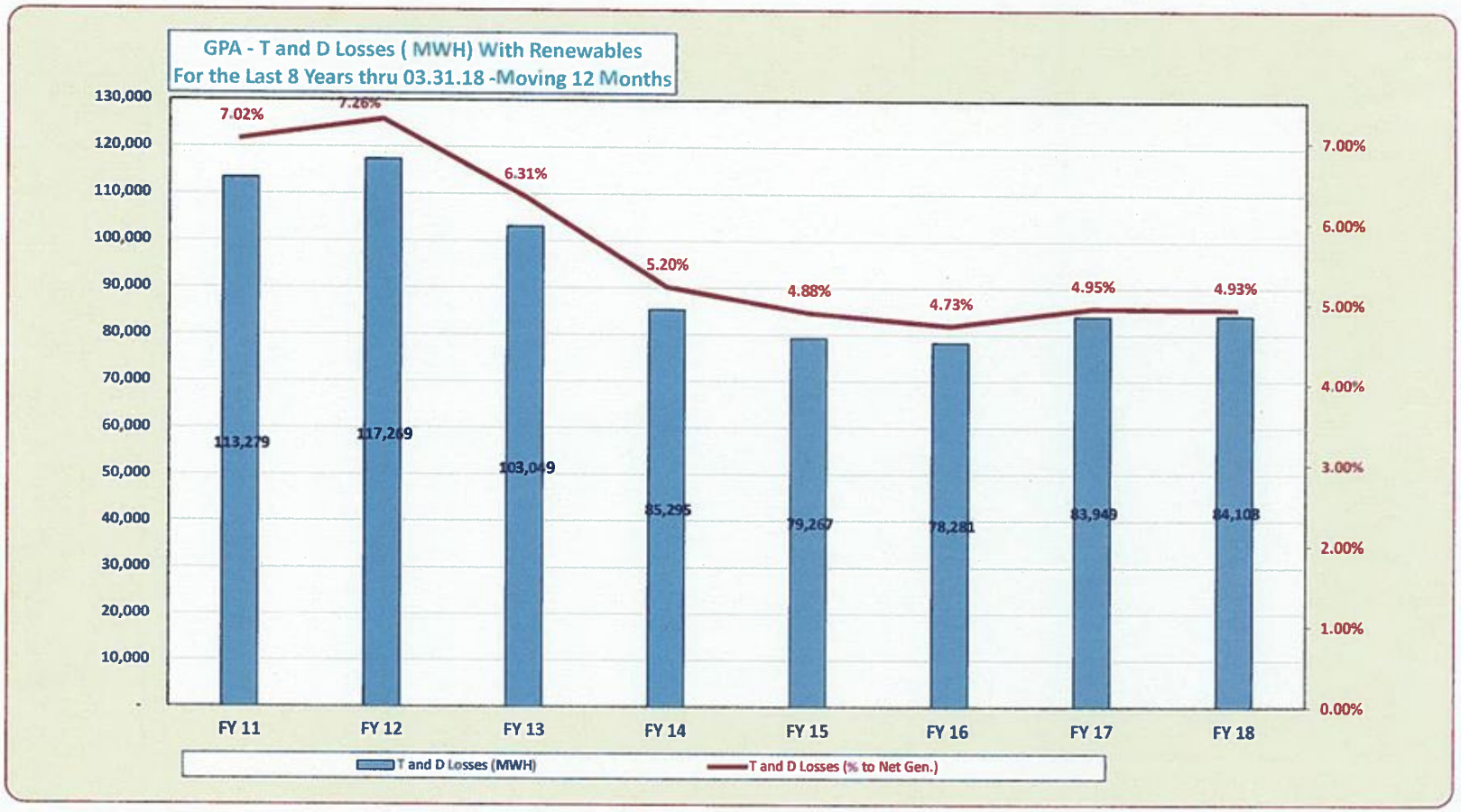
Notes:
(1) Source: Guam Power Authority, 2014 - 2017 Audited Financial Statements
(2) Interest income is net of interest earnings in the Construction Fund and the amortization of deferred credit.
(3) Existing DSC Methodology (Rating Agency Method):
(Operating Earnings + Depreciation Expense - IPP Principal & Interest Payments)/
(Senior and Subordinate Bond Principal & Interest Payments)
(4) Bond Covenant DSC Methodology: (Operating Earnings + Depreciation Expense)/
(Senior and Subordinate Bond Principal & Interest Payments)

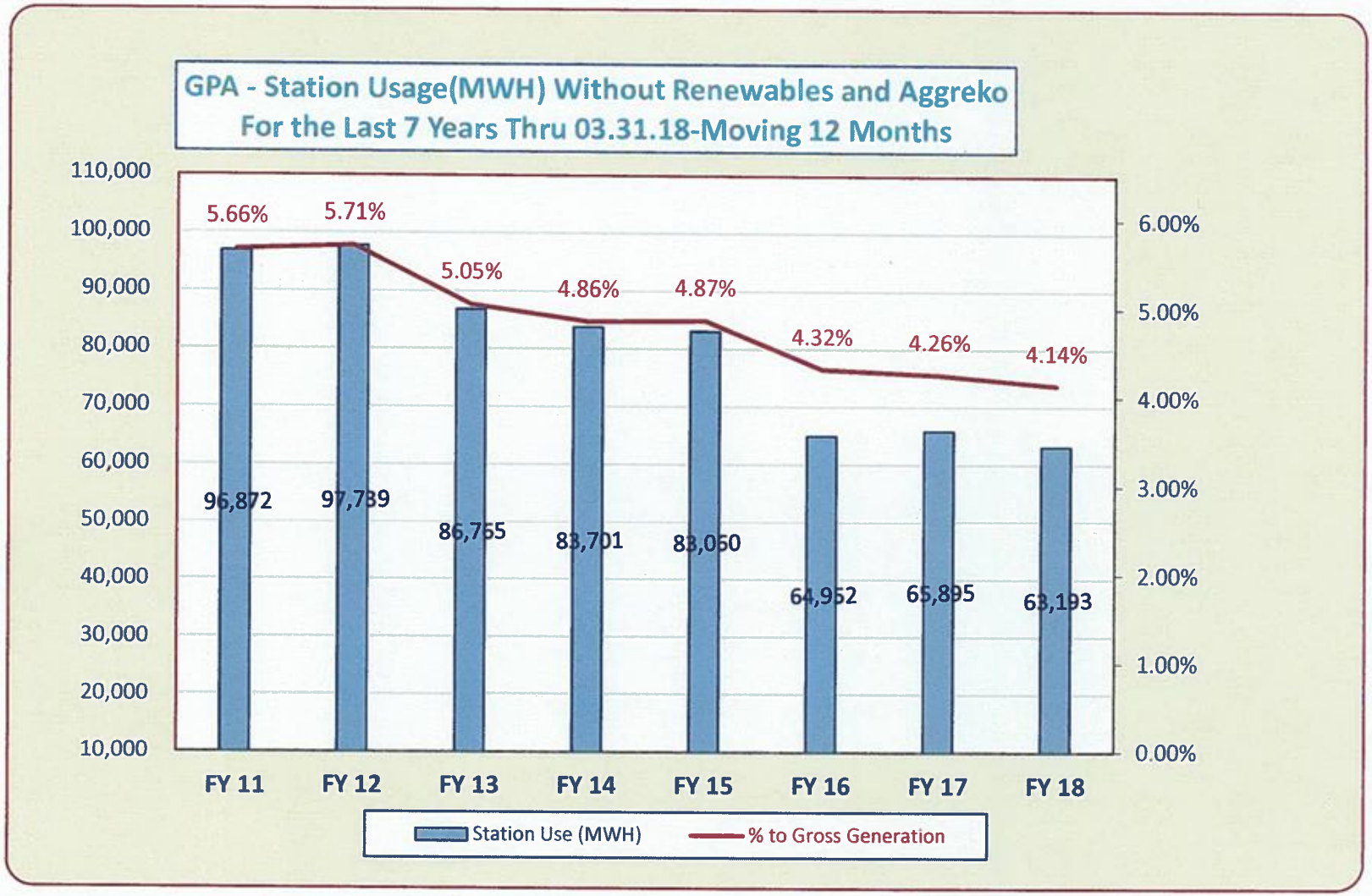
REVENUES-ACTUAL VS PROJECTIONS

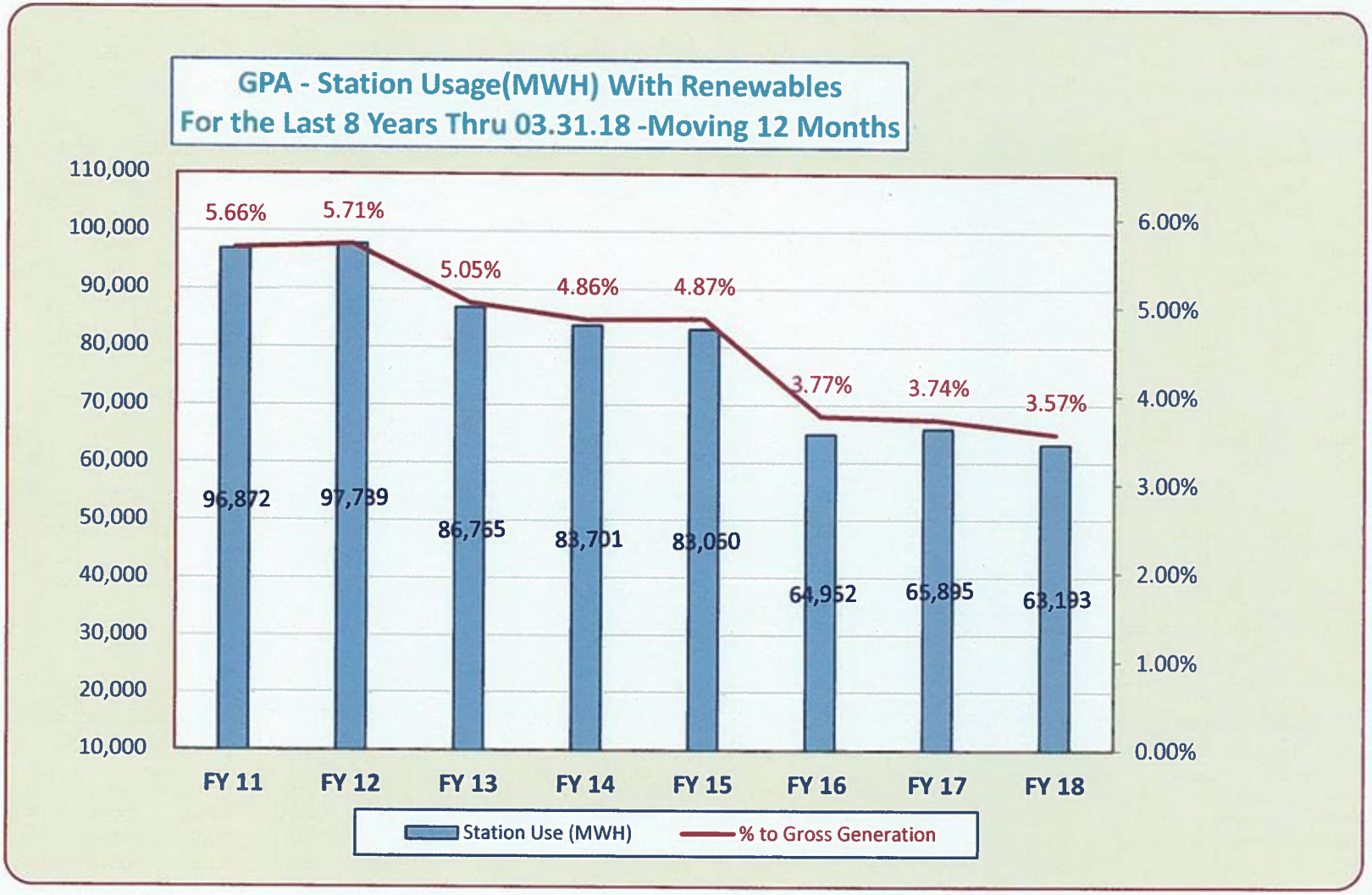
	MONTHLY - MARCH 2018				YTD THRU 03/31/2018			
	PROJECTIONS	ACTUAL	VARIANCE	% VARIANCE	PROJECTIONS	ACTUAL	VARIANCE	% VARIANCE
KWH								
Residential	40,619,329	41,541,824	922,495	2.27%	239,902,366	248,796,200	8,893,834	3.71%
Small General-Non-Demand	7,196,101	6,976,607	(219,494)	-3.05%	41,198,949	41,058,895	(140,054)	-0.34%
Small General-Demand	15,558,703	15,917,309	358,605	2.30%	93,193,665	93,074,431	(119,235)	-0.13%
Large	26,164,226	26,155,199	(9,026)	-0.03%	158,015,458	156,408,481	(1,606,977)	-1.02%
Independent Power Producers	32,729	28,536	(4,193)	-12.81%	197,661	310,730	113,069	57.20%
Private St. Lites	56,106	32,791	(23,315)	-41.56%	331,680	201,578	(130,102)	-39.23%
Sub-total	**89,627,194**	**90,652,265**	**1,025,071**	**1.14%**	**532,839,779**	**538,850,315**	**7,010,536**	**1.32%**
Government								
Small_Non Demand	1,099,547	1,193,794	94,247	8.57%	6,473,828	7,340,385	866,557	13.39%
Small-Demand	8,279,422	7,889,205	(390,216)	-4.71%	47,609,096	47,815,506	206,410	0.43%
Large	6,147,788	6,226,210	78,423	1.28%	36,062,522	38,228,791	2,166,269	6.01%
Public St. Lites	865,032	743,499	(121,533)	-14.05%	4,901,203	4,308,590	(592,613)	-12.09%
Sub-total	**16,391,788**	**16,052,709**	**(339,079)**	**-2.07%**	**95,046,648**	**97,693,272**	**2,646,624**	**2.78%**
Total-Civilian	**106,018,982**	**106,704,974**	**685,992**	**0.65%**	**627,886,427**	**637,543,587**	**9,657,160**	**1.54%**
USN	26,568,285	25,988,485	(579,800)	-2.18%	157,055,887	156,166,216	(889,672)	-0.57%
Grand Total	**132,587,268**	**132,693,459**	**106,192**	**0.08%**	**784,942,314**	**793,709,803**	**8,767,488**	**1.12%**
	-				-	-		
Non-Oil Yield								
Residential	0.096203	0.097178	0.000975	1.01%	0.096203	0.096268	0.000065	0.07%
Small General-Non-Demand	0.136364	0.137700	0.001336	0.98%	0.136364	0.136795	0.000430	0.32%
Small General-Demand	0.119423	0.120839	0.001416	1.19%	0.119423	0.120073	0.000650	0.54%
Large	0.103705	0.104462	0.000758	0.73%	0.103705	0.103637	(0.000067)	-0.07%
Independent Power Producers	0.117983	0.117182	(0.000801)	0.00%	0.117983	0.107689	(0.010294)	0.00%
Private St. Lites	0.454278	0.639091	0.184813	40.68%	0.454278	0.631364	0.177086	38.98%
Sub-total	**0.105881**	**0.106755**	**0.000875**	**0.83%**	**0.105825**	**0.105796**	**(0.000029)**	**-0.03%**
Government	-				-			
Small_Non Demand	0.152255	0.151396	(0.000858)	-0.56%	0.152255	0.150002	(0.002253)	-1.48%
Small-Demand	0.135082	0.134762	(0.000320)	-0.24%	0.135082	0.134136	(0.000946)	-0.70%
Large	0.128102	0.128692	0.000590	0.46%	0.128102	0.126724	(0.001378)	-1.08%
Public St. Lites	0.380746	0.465686	0.084940	22.31%	0.380746	0.477187	0.096441	25.33%
Sub-total	**0.146580**	**0.148972**	**0.002391**	**1.63%**	**0.146271**	**0.147557**	**0.001286**	**0.88%**
Total-Civilian	**0.112173**	**0.113106**	**0.000933**	**0.83%**	**0.111948**	**0.112195**	**0.000247**	**0.22%**
USN	0.081774	0.085689	0.003895	6.31%	0.081774	0.082257	0.000483	0.78%
Grand Total	**0.102074**	**0.103816**	**0.001742**	**1.71%**	**0.101909**	**0.102370**	**0.000461**	**0.45%**
Non-Oil Revenues								
Residential	3,907,717	4,036,961	129,244	3.31%	23,079,421	23,951,125	871,704	3.78%
Small General-Non-Demand	981,291	960,680	(20,611)	-2.10%	5,618,064	5,616,639	(1,425)	-0.03%
Small General-Demand	1,858,089	1,923,453	65,364	3.52%	11,129,480	11,175,765	46,285	0.42%
Large	2,713,351	2,732,228	18,877	0.70%	16,386,936	16,209,732	(177,204)	-1.08%
Independent Power Producers	3,861	3,344	(518)	-13.40%	23,321	33,462	10,142	43.49%
Private St. Lites	25,488	20,956	(4,531)	-17.78%	150,675	127,269	(23,406)	-15.53%
Sub-total	**9,489,778**	**9,677,603**	**187,825**	**1.98%**	**56,387,896**	**57,113,992**	**726,096**	**1.29%**
Government								
Small_Non Demand	167,411	180,736	13,325	7.96%	985,670	1,101,071	115,402	11.71%
Small-Demand	1,118,399	1,063,161	(55,238)	-4.94%	6,431,122	6,413,759	(17,363)	-0.27%
Large	787,544	801,265	13,721	1.74%	4,619,683	4,844,492	224,809	4.87%
Public St. Lites	329,358	348,237	18,879	5.12%	1,866,114	2,056,004	189,889	10.18%
Sub-total	**2,402,712**	**2,391,399**	**(11,313)**	**-0.47%**	**13,902,589**	**14,415,326**	**512,737**	**3.69%**
Total-Civilian	**11,892,490**	**12,069,002**	**176,512**	**1.48%**	**70,290,484**	**71,529,318**	**1,238,834**	**1.76%**
USN	1,641,228	1,706,643	65,415	3.99%	9,701,964	9,722,486	20,522	0.21%
Grand Total	**13,533,718**	**13,775,645**	**241,927**	**1.79%**	**79,992,449**	**81,251,804**	**1,259,356**	**1.57%**
% of Total Revenues	39.92%	41.80%			39.88%	44.75%		
Oil Revenues								
Residential	6,240,439	6,117,698	(122,741)	-1.97%	36,856,744	32,243,564	(4,613,180)	-12.52%
Small General-Non-Demand	1,105,553	1,027,417	(78,136)	-7.07%	6,329,488	5,330,406	(999,082)	-15.78%
Small General-Demand	2,390,319	2,343,297	(47,022)	-1.97%	14,317,554	12,038,910	(2,278,643)	-15.92%
Large	4,019,669	3,833,455	(186,214)	-4.63%	24,276,273	19,867,884	(4,408,389)	-18.16%
Independent Power Producers	5,028	4,062	(966)	-19.21%	30,387	36,988	6,621	21.80%
Private St. Lites	8,620	4,829	(3,791)	-43.98%	50,957	25,656	(25,301)	-49.65%
Sub-total	**13,769,629**	**13,330,758**	**(438,870)**	**-3.19%**	**81,861,382**	**69,543,407**	**(12,317,975)**	**-15.05%**
Government								
Small_Non Demand	168,926	175,805	6,879	4.07%	994,589	932,488	(62,101)	-6.24%
Small-Demand	1,271,986	1,161,812	(110,175)	-8.66%	7,314,293	6,079,849	(1,234,445)	-16.88%
Large	944,499	906,004	(38,495)	-4.08%	5,540,367	4,800,083	(740,284)	-13.36%
Public St. Lites	132,897	109,492	(23,405)	-17.61%	752,983	548,956	(204,027)	-27.10%
Sub-total	**2,518,308**	**2,353,113**	**(165,195)**	**-6.56%**	**14,602,232**	**12,361,375**	**(2,240,857)**	**-15.35%**
Total-Civilian	**16,287,936**	**15,683,871**	**(604,065)**	**-3.71%**	**96,463,614**	**81,904,782**	**(14,558,832)**	**-15.09%**
USN	4,081,746	3,496,300	(585,445)	-14.34%	24,128,852	18,417,623	(5,711,229)	-23.67%
Grand Total	**20,369,682**	**19,180,172**	**(1,189,511)**	**-5.84%**	**120,592,466**	**100,322,406**	**(20,270,060)**	**-16.81%**
% of Total Revenues	60.08%	58.20%			60.12%	55.25%		
Grand Total								
Residential	10,148,157	10,154,660	6,503	0.06%	59,938,165	56,194,689	(3,741,475)	-6.24%
Small General-Non-Demand	2,086,844	1,988,097	(98,747)	-4.73%	11,947,551	10,947,044	(1,000,507)	-8.37%
Small General-Demand	4,248,388	4,266,730	18,342	0.43%	25,447,034	23,214,676	(2,232,358)	-8.77%
Large	6,733,021	6,565,683	(167,338)	-2.49%	40,663,208	36,077,615	(4,585,593)	-11.28%
Independent Power Producers	8,890	7,406	(1,483)	-16.69%	53,688	70,450	16,762	31.22%
Private St. Lites	34,108	25,785	(8,322)	-24.40%	201,632	152,925	(48,706)	-24.16%
Sub-total	**23,259,407**	**23,008,362**	**(251,045)**	**-1.08%**	**138,249,278**	**126,657,399**	**(11,591,878)**	**-8.38%**
Government					-			
Small_Non Demand	336,337	356,541	20,204	6.01%	1,980,258	2,033,559	53,300	2.69%
Small-Demand	2,390,385	2,224,973	(165,412)	-6.92%	13,745,415	12,493,608	(1,251,808)	-9.11%
Large	1,732,043	1,707,269	(24,774)	-1.43%	10,160,050	9,644,575	(515,474)	-5.07%
Public St. Lites	462,255	455,729	(6,526)	-1.41%	2,619,097	2,604,959	(14,138)	-0.54%
Sub-total	**4,921,020**	**4,744,512**	**(176,508)**	**-3.59%**	**28,504,821**	**26,776,701**	**(1,728,120)**	**-6.06%**
Total-Civilian	**28,180,426**	**27,752,874**	**(427,553)**	**-1.52%**	**166,754,098**	**153,434,100**	**(13,319,998)**	**-7.99%**
USN	5,722,974	5,202,943	(520,031)	-9.09%	33,830,816	28,140,109	(5,690,707)	-16.82%
Grand Total	**33,903,401**	**32,955,817**	**(947,584)**	**-2.79%**	**200,584,914**	**181,574,210**	**(19,010,705)**	**-9.48%**
	-	-	-					

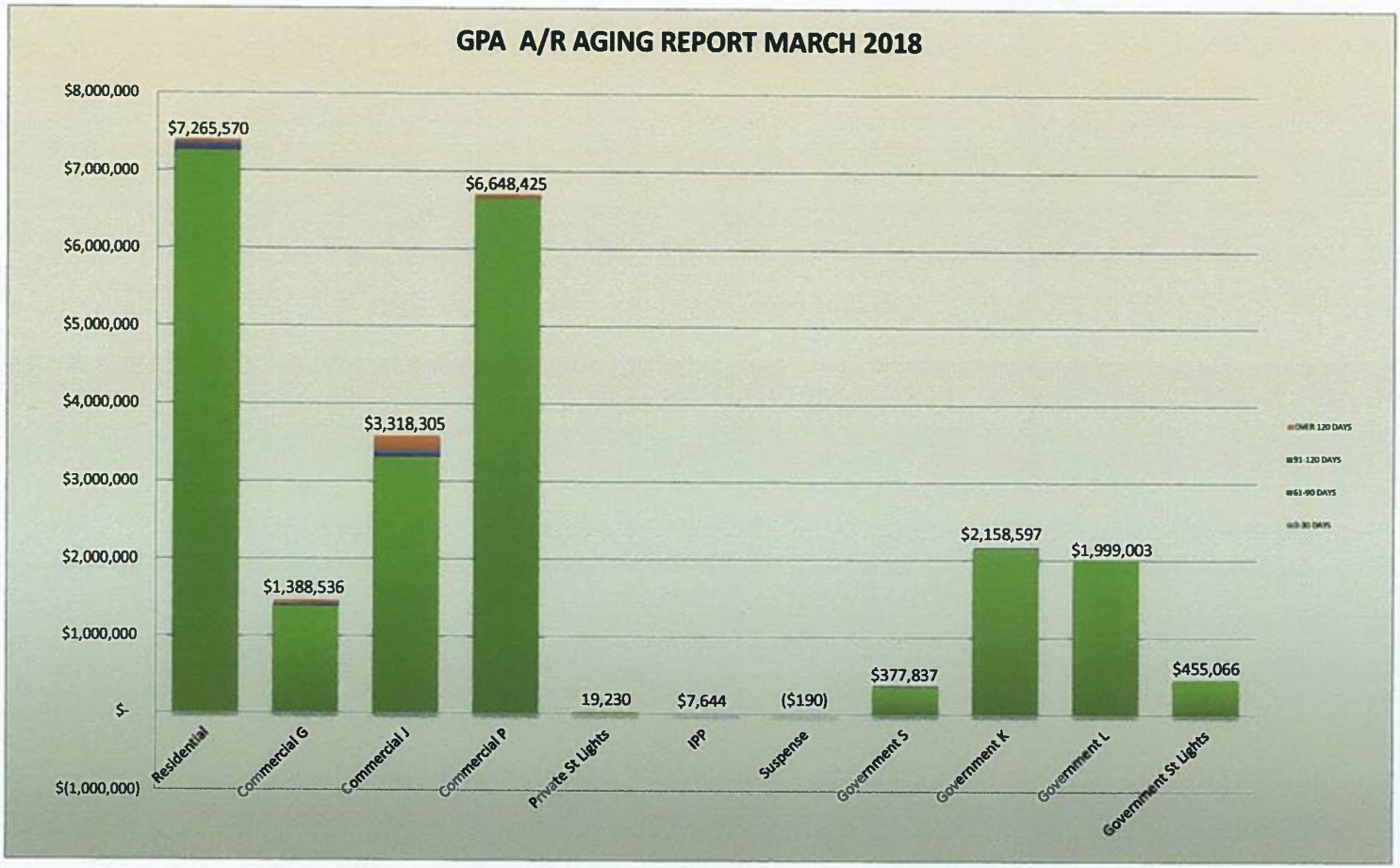
	YTD REVENUES - CURRENT YEAR VS PRIOR YEAR				MTD REVENUES - CURRENT YEAR VS PRIOR YEAR			
	ACTUALS - 6 MONTHS ENDED MARCH 31				ACTUALS - MONTH ENDED MARCH 31			
	2018	2017	VARIANCE	% VARIANCE	2018	2017	VARIANCE	% VARIANCE
KWH								
Residential	248,796,200	240,570,451	8,225,749	3.42%	41,541,824	40,911,781	630,043	1.54%
Small General-Non-Demand	41,058,895	40,594,512	464,383	1.14%	6,976,607	6,767,505	209,102	3.09%
Small General-Demand	93,074,431	93,306,665	(232,234)	-0.25%	15,917,309	16,300,307	(382,998)	-2.35%
Large	156,408,481	155,603,304	805,177	0.52%	26,155,199	26,173,462	(18,263)	-0.07%
Independent Power Producers	310,730	518,040	(207,310)	-40.02%	28,536	83,841	(55,306)	-65.96%
Private St. Lites	201,578	244,710	(43,131)	-17.63%	32,791	34,097	(1,306)	-3.83%
Sub-total	**539,850,315**	**530,837,682**	**9,012,633**	**1.70%**	**90,652,265**	**90,270,993**	**381,272**	**0.42%**
Government								
Small_Non Demand	7,340,385	6,641,796	698,589	10.52%	1,193,794	1,123,675	70,119	6.24%
Small-Demand	47,815,508	48,438,749	(623,243)	-1.29%	7,889,205	8,171,598	(282,393)	-3.46%
Large	38,228,791	38,763,223	1,465,568	3.99%	6,226,210	6,340,287	(114,077)	-1.80%
Public St. Lites	4,308,590	4,966,126	(657,536)	-13.24%	743,499	829,968	(86,469)	-10.42%
Sub-total	**97,693,272**	**98,809,894**	**883,378**	**0.91%**	**16,052,709**	**16,465,529**	**(412,820)**	**-2.51%**
Total-Civilian	**637,543,587**	**627,647,576**	**9,896,011**	**1.58%**	**106,704,974**	**106,736,522**	**(31,548)**	**-0.03%**
USN	156,166,216	158,051,383	(1,885,167)	-1.19%	25,988,485	28,394,970	(2,406,485)	-8.48%
Grand Total	**793,709,803**	**785,698,959**	**8,010,844**	**1.02%**	**132,693,459**	**135,131,492**	**(2,438,033)**	**-1.80%**
Non-Oil Yield								
Residential	0.096268	0.096793	-0.000525	-0.54%	0.097178	0.096741	0.000438	0.45%
Small General-Non-Demand	0.136795	0.137734	-0.000939	-0.68%	0.137700	0.138446	-0.000746	-0.54%
Small General-Demand	0.120073	0.120794	-0.000720	-0.60%	0.120839	0.120398	0.000441	0.37%
Large	0.103637	0.102927	0.000710	0.69%	0.104462	0.100708	0.003754	3.73%
Independent Power Producers	0.000000	0.112478	-0.112478	-100.00%	0.117182	0.106449	0.010733	10.08%
Private St. Lites	0.631364	0.548446	0.082918	15.12%	0.639091	0.628506	0.010585	1.68%
Sub-total	**0.105796**	**0.106164**	**-0.000368**	**-0.35%**	**0.106755**	**0.105499**	**0.001256**	**1.19%**
Government								
Small_Non Demand	0.150002	0.152667	-0.002665	-1.75%	0.151396	0.152342	-0.000946	-0.62%
Small-Demand	0.134136	0.135159	-0.001024	-0.76%	0.134782	0.134397	0.000385	0.27%
Large	0.126724	0.126570	0.000154	0.12%	0.128692	0.125590	0.003102	2.47%
Public St. Lites	0.477187	0.460370	0.016817	3.65%	0.465686	0.433924	0.031762	7.32%
Sub-total	**0.147557**	**0.149781**	**-0.002224**	**-1.48%**	**0.148972**	**0.147328**	**0.001643**	**1.12%**
Total-Civilian	**0.112195**	**0.112891**	**-0.000696**	**-0.62%**	**0.113106**	**0.111952**	**0.001154**	**1.03%**
USN	0.062257	0.063020	-0.000762	-1.21%	0.065669	0.076548	-0.010878	-14.21%
Grand Total	**0.102370**	**0.102859**	**-0.000490**	**-0.48%**	**0.103816**	**0.104512**	**-0.000697**	**-0.67%**
Non-Oil Revenues								
Residential	23,951,125	23,285,429	665,696	2.86%	4,036,961	3,957,834	79,127	2.00%
Small General-Non-Demand	5,616,839	5,591,231	25,408	0.45%	960,680	936,936	23,744	2.53%
Small General-Demand	11,175,765	11,270,877	(95,112)	-0.84%	1,923,433	1,962,520	(39,087)	-1.99%
Large	16,209,732	16,015,737	193,995	1.21%	2,732,228	2,635,873	96,355	3.66%
Independent Power Producers	33,462	58,268	(24,806)	-42.57%	3,344	8,925	(5,581)	-62.53%
Private St. Lites	127,269	134,210	(6,941)	-5.17%	20,956	21,430	(473)	-2.21%
Sub-total	**57,113,992**	**56,355,751**	**758,241**	**1.35%**	**9,677,603**	**9,523,517**	**154,086**	**1.62%**
Government								
Small_Non Demand	1,101,071	1,013,984	87,088	8.59%	180,736	171,183	9,553	5.58%
Small-Demand	6,413,759	6,546,948	(133,189)	-2.03%	1,063,161	1,098,235	(35,074)	-3.19%
Large	4,844,492	4,653,113	191,379	4.11%	801,265	796,279	4,986	0.63%
Public St. Lites	2,056,004	2,286,254	(230,250)	-10.07%	346,237	360,143	(13,906)	-3.86%
Sub-total	**14,415,326**	**14,500,299**	**(84,973)**	**-0.59%**	**2,391,399**	**2,425,840**	**(34,441)**	**-1.42%**
Total-Civilian	**71,529,318**	**70,856,051**	**673,267**	**0.95%**	**12,069,002**	**11,949,357**	**119,645**	**1.00%**
USN	9,722,486	9,960,343	(237,857)	-2.39%	1,706,643	2,173,566	(466,923)	-21.48%
Grand Total	**81,251,804**	**80,816,394**	**435,410**	**0.54%**	**13,775,645**	**14,122,923**	**(347,278)**	**-2.46%**
% of Total Revenues								
Oil Revenues								
Residential	32,243,564	22,587,883	9,655,681	42.75%	6,117,698	4,297,823	1,819,875	42.34%
Small General-Non-Demand	5,330,406	3,817,706	1,512,700	39.62%	1,027,417	710,933	316,484	44.52%
Small General-Demand	12,038,910	8,748,761	3,290,150	37.61%	2,343,297	1,711,784	631,513	36.89%
Large	19,867,884	14,452,591	5,415,293	37.47%	3,833,455	2,734,412	1,099,043	40.19%
Independent Power Producers	36,988	48,064	(11,076)	-23.04%	4,062	8,526	(4,464)	-52.35%
Private St. Lites	25,656	22,420	3,236	14.43%	4,829	3,582	1,247	34.82%
Sub-total	**69,543,407**	**49,677,424**	**19,865,983**	**39.99%**	**13,330,758**	**9,467,060**	**3,863,698**	**40.81%**
Government								
Small_Non Demand	932,488	614,360	318,128	51.78%	175,805	118,043	57,762	48.93%
Small-Demand	6,079,849	4,482,213	1,597,636	35.64%	1,161,812	858,435	303,377	35.34%
Large	4,800,083	3,413,304	1,386,780	40.63%	906,004	658,411	247,592	37.60%
Public St. Lites	548,956	458,479	90,476	19.73%	109,492	87,189	22,303	25.58%
Sub-total	**12,361,375**	**8,968,355**	**3,393,020**	**37.83%**	**2,353,113**	**1,722,078**	**631,035**	**36.64%**
Total-Civilian	**81,904,782**	**58,645,779**	**23,259,004**	**39.66%**	**15,683,871**	**11,189,138**	**4,494,733**	**40.17%**
USN	18,417,623	15,366,119	3,051,504	19.86%	3,496,300	3,058,942	437,358	14.30%
Grand Total	**100,322,406**	**74,011,898**	**26,310,507**	**35.55%**	**19,180,172**	**14,248,081**	**4,932,091**	**34.62%**
% of Total Revenues								
Grand Total								
Residential	56,194,689	45,873,312	10,321,377	22.50%	10,154,660	8,255,658	1,899,002	23.00%
Small General-Non-Demand	10,947,044	9,408,937	1,538,107	16.35%	1,988,097	1,647,869	340,228	20.65%
Small General-Demand	23,214,676	20,019,638	3,195,038	15.96%	4,266,730	3,674,304	592,426	16.12%
Large	36,077,615	30,468,327	5,609,288	18.41%	6,565,683	5,370,285	1,195,398	22.26%
Independent Power Producers	70,450	106,332	(35,882)	-33.75%	7,406	17,451	(10,045)	-57.56%
Private St. Lites	152,925	156,630	(3,705)	-2.37%	25,785	25,012	774	3.09%
Sub-total	**126,657,399**	**106,033,175**	**20,624,224**	**19.45%**	**23,008,362**	**18,990,578**	**4,017,784**	**21.16%**
Government								
Small_Non Demand	2,033,559	1,628,343	405,216	24.89%	356,541	289,226	67,315	23.27%
Small-Demand	12,493,608	11,029,161	1,464,447	13.28%	2,224,973	1,956,670	268,303	13.71%
Large	9,644,575	8,066,417	1,578,158	19.56%	1,707,269	1,454,690	252,578	17.36%
Public St. Lites	2,604,959	2,744,733	(139,774)	-5.09%	455,729	447,332	8,397	1.88%
Sub-total	**26,776,701**	**23,468,654**	**3,308,047**	**14.10%**	**4,744,512**	**4,147,918**	**596,594**	**14.38%**
Total-Civilian	**153,434,100**	**129,501,829**	**23,932,271**	**18.48%**	**27,752,874**	**23,138,496**	**4,614,378**	**19.94%**
USN	28,140,109	25,326,463	2,813,647	11.11%	5,202,943	5,232,508	(29,564)	-0.57%
Grand Total	**181,574,210**	**154,828,292**	**26,745,918**	**17.27%**	**32,955,817**	**28,371,004**	**4,584,813**	**16.16%**


GPA - T and D Losses (MWH) Without Renewables and Aggreko
For the Last 7 Years thru 03.31.18 -Moving 12 Months
130,000
120,000
110,000
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
-
8.00%
7.00%
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
7.02%
7.26%
6.31%
5.20%
4.88%
5.44%
5.67%
5.75%
113,279
117,269
103,049
85,295
79,267
78,281
83,949
84,108
FY 11
FY 12
FY 13
FY 14
FY 15
FY 16
FY 17
FY 18
T and D Losses (MWH)
T and D Losses (% to Net Generation)


GPA - T and D Losses (MWH) With Renewables
For the Last 8 Years thru 03.31.18 -Moving 12 Months
130,000
120,000
110,000
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
-
7.00%
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
7.02%
7.26%
6.31%
5.20%
4.88%
4.73%
4.95%
4.93%
113,279
117,269
103,049
85,295
79,267
78,281
83,949
84,103
FY 11
FY 12
FY 13
FY 14
FY 15
FY 16
FY 17
FY 18
T and D Losses (MWH)
T and D Losses (% to Net Gen.)


GPA - Station Usage(MWH) Without Renewables and Aggreko
For the Last 7 Years Thru 03.31.18-Moving 12 Months
110,000
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
5.66%
5.71%
5.05%
4.86%
4.87%
4.32%
4.26%
4.14%
96,872
97,739
86,765
83,701
83,060
64,952
65,895
63,193
FY 11
FY 12
FY 13
FY 14
FY 15
FY 16
FY 17
FY 18
Station Use (MWH)
% to Gross Generation


GPA - Station Usage(MWH) With Renewables
For the Last 8 Years Thru 03.31.18 -Moving 12 Months
110,000
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
5.66%
5.71%
5.05%
4.86%
4.87%
3.77%
3.74%
3.57%
96,872
97,739
86,765
83,701
83,050
64,952
65,895
63,193
FY 11
FY 12
FY 13
FY 14
FY 15
FY 16
FY 17
FY 18
Station Use (MWH)
% to Gross Generation


GPA A/R AGING REPORT MARCH 2018
$8,000,000
$7,000,000
$6,000,000
$5,000,000
$4,000,000
$3,000,000
$2,000,000
$1,000,000
$-
$(1,000,000)
$7,265,570
$1,388,536
$3,318,305
$6,648,425
19,230
$7,644
($190)
$377,837
$2,158,597
$1,999,003
$455,066
Residential
Commercial G
Commercial J
Commercial P
Private St Lights
IPP
Suspense
Government S
Government K
Government L
Government St Lights
OVER 120 DAYS
91-120 DAYS
61-90 DAYS
31-60 DAYS

GUAM POWER AUTHORITY

GOVERNMENT ACCOUNTS RECEIVABLE

BILLING UP TO 04/30/2018 and Payment Applied as of 05/11/2018

Current (12/17 Billing due 01/31/18
30 days Arrears (11/17 due 12/15/17)
60 days and over Arrears (10/17 billing due 11/15/17)

CC&B ACCT NUMBER	DEPARTMENT	BALANCE 3/31/2018	CANCEL/REBILL/ SPEC CHARGE 4/30/2018	BILLING 4/30/2018	PAYMENT 4/30/2018	BALANCE 4/30/2018	
	Line Agencies						
0237100000	Dept. of Corrections	$ 78,962.97	$ -	$ 84,211.65	$ (78,962.97)	$ 84,211.65	
0437100000	Dept. of Parks & Rec.	$ 17,595.10	$ 125.00	$ 17,167.88	$ (17,595.10)	$ 17,292.88	
0537100000	Guam Fire Department	$ 16,345.53	$ -	$ 17,949.62	$ (16,345.53)	$ 17,949.62	
6995000000	DOA Supply Mgmt	$ 1,490.30	$ -	$ 1,661.53	$ (1,490.30)	$ 1,661.53	
7895000000	Dept. of Administration	$ 3,616.58	$ -	$ 3,738.09	$ (3,616.58)	$ 3,738.09	
1337100000	Nieves Flores Library	$ 9,753.22	$ -	$ 10,140.05	$ (9,753.22)	$ 10,140.05	
2206200000	General Services Agency	$ 262.27	$ -	$ 259.84	$ (262.27)	$ 259.84	
2237100000	DOA-Data Processing	$ 7,940.77	$ -	$ 8,499.94	$ (7,940.77)	$ 8,499.94	
2337100000	Dept. of PH&SS	$ 68,993.14	$ -	$ 72,161.11	$ (68,993.14)	$ 72,161.11	
3237100000	Dept. of Education	$ 1,043,552.69	$ 277.38	$ 1,126,728.21	$ (1,006,568.70)	$ 1,163,989.58	
3337100000	Guam Police Department	$ 36,200.15	$ -	$ 38,402.79	$ (36,200.15)	$ 38,402.79	
3569100000	Dept of Youth Affairs (Federal)	$ 963.21	$ (9.56)	$ 972.74	$ (963.21)	$ 963.18	
4437100000	Dept. of Youth Affair* (Local)	$ 11,309.39	$ -	$ 11,968.68	$ (11,309.39)	$ 11,968.68	
4737100000	Guam Environmental Protect	$ 6,421.34	$ -	$ 6,712.26	$ (6,421.34)	$ 6,712.26	
5437100000	Mental Health/Subst.	$ 40,358.46	$ -	$ 43,933.04	$ (40,358.46)	$ 43,933.04	
7200300000	Veteran Affairs	$ 839.65	$ -	$ 918.33	$ (839.65)	$ 918.33	
7437100000	Civil Defense (Military Affairs)	$ 29,802.12	$ -	$ 11,104.99	$ (29,802.12)	$ 11,104.99	
7463300000	Pacific Energy Resource Center	$ 657.22	$ -	$ 664.44	$ (657.22)	$ 664.44	
8137100000	Dept. of Agriculture	$ 10,125.19	$ -	$ 10,322.02	$ (10,125.19)	$ 10,322.02	
8337100000	DPW-FAC Adm Account	$ 23,551.99	$ -	$ 24,233.71	$ (23,551.99)	$ 24,233.71	
8437100000	Guam Visitors Bureau	$ 4,304.05	$ -	$ 4,717.98	$ (9,022.03)	$ -	
8446300000	Yona Senior Citizen Center	$ 831.98	$ -	$ 925.87	$ (831.98)	$ 925.87	
9437100000	Dept of Chamorro Affairs/Chamorro Village	$ 4,243.90	$ -	$ 4,387.01	$ (4,243.90)	$ 4,387.01	
5247210000	Mayors Council	$ 2,486.43	$ -	$ 2,506.16	$ (2,486.43)	$ 2,506.16	
6293410000	Office of the Governor	$ 21,948.85	$ -	$ 22,901.52	$ (21,948.85)	$ 22,901.52	
8555858369	Dept of Chamorro Affairs (Guam Museum)	$ 21,387.60		$ 22,657.10	$ (21,387.60)	$ 22,657.10	
	Sub Total	**$ 1,463,944.10**	**$ 392.82**	**$ 1,549,846.56**	**$ (1,431,678.09)**	**$ 1,582,505.39**	
	MAYORS						
0637100000	Santa Rita Mayor	$ 3,634.62	$ -	$ 3,998.76	$ (3,634.62)	$ 3,998.76	
0737100000	Ordot/Chalan Pago Mayor	$ 1,794.43	$ -	$ 1,801.81	$ (1,794.43)	$ 1,801.81	
1537100000	Hagatna Mayor	$ 1,509.34	$ -	$ 1,491.41	$ (1,509.34)	$ 1,491.41	
1637100000	Piti Mayor	$ 1,299.62	$ -	$ 1,280.51	$ (1,299.62)	$ 1,280.51	
1737100000	Mongmong/Toto/Maite Mayor	$ 1,016.33	$ -	$ 1,040.96	$ (1,016.33)	$ 1,040.96	
2637100000	Asan/Maina/Adelup Mayor	$ 907.71	$ -	$ 989.76	$ (907.71)	$ 989.76	
2737100000	Sinajana Mayor	$ 4,624.88	$ -	$ 4,495.20	$ (4,624.88)	$ 4,495.20	
3637100000	Dededo Mayor	$ 6,053.70	$ -	$ 6,685.01	$ (6,053.70)	$ 6,685.01	
4637100000	Yigo Mayor	$ 3,898.60	$ -	$ 3,412.88	$ (3,898.60)	$ 3,412.88	
5637100000	Umatac Mayor	$ 1,741.55	$ -	$ 1,161.78	$ (1,741.55)	$ 1,161.78	
6537100000	Agana Hts. Mayor	$ 5,343.60	$ -	$ 6,126.12	$ (5,343.60)	$ 6,126.12	
6637100000	Merizo Mayor	$ 972.83	$ -	$ 802.25	$ (972.83)	$ 802.25	
6737100000	Barrigada Mayors Office	$ 2,165.37	$ -	$ 2,256.41	$ (2,165.37)	$ 2,256.41	
7537100000	Agat Mayor	$ 2,112.30	$ -	$ 2,257.30	$ (2,112.30)	$ 2,257.30	
7637100000	Inarajan Mayor	$ 1,694.72	$ 25.00	$ 1,897.81	$ (1,694.72)	$ 1,922.81	
8537100000	Tamuning Mayor	$ 5,757.46	$ -	$ 5,859.90	$ (5,757.46)	$ 5,859.90	
8637100000	Talofofo Mayor	$ 1,904.08	$ 1,637.04	$ 2,840.06	$ (1,904.08)	$ 4,477.10	
9537100000	Mangilao Mayor	$ 4,845.57	$ -	$ 4,645.92	$ (4,845.57)	$ 4,645.92	
9637100000	Yona Mayor	$ 742.66	$ -	$ 884.18	$ (742.66)	$ 884.18	
	Sub Total	**$ 52,019.37**	**$ 1,662.04**	**$ 53,928.03**	**$ (52,019.37)**	**$ 55,590.07**	
	DPW ACCOUNTS						
4337100000	DPW-Village St. Lights	$ 339,323.00	$ 19,444.69	$ 337,450.06	$ (339,323.00)	$ 356,894.75	
5337100000	DPW- Primary St. Lights	$ 84,801.41		$ 84,088.60	$ (84,801.41)	$ 84,088.60	
6337100000	DPW-Sec/Coll St. Lights	$ 25,914.58	$ -	$ 25,657.76	$ (25,914.58)	$ 25,657.76	
7337100000	DPW-Signal Lights	$ 10,511.81		$ 10,684.00	$ (10,511.81)	$ 10,684.00	
	Sub Total	**$ 460,550.80**	**$ 19,444.69**	**$ 457,880.42**	**$ (460,550.80)**	**$ 477,325.11**	

	(B) AUTONOMOUS/PUBLIC CORP						
1437100000	Retirement Fund	$ 4,540.90		$ 4,414.53	$ (4,540.90)	$ 4,414.53	
1915500000	Guam Housing Corp Rental Division	$ 4,021.38	$ 16.00	$ 1,486.46	$ (1,887.88)	$ 3,635.96	1
2437100000	University of Guam	$ 185,927.98	$ -	$ 192,911.80	$ (378,839.78)	$ -	
4237100000	Guam Airport Authority	$ 523,858.31	$ -	$ 515,837.37	$ (523,858.31)	$ 515,837.37	
5357510000	University of Guam (NET METERED)	$ 81,823.87	$ -	$ 83,286.94	$ (165,110.81)	$ -	
6237100000	G H U R A	$ 12,822.30	$ -	$ 25,617.66	$ (24,866.65)	$ 13,573.31	
6437100000	Guam Community College	$ 53,872.27	$ 404.07	$ 52,072.39	$ (53,872.27)	$ 52,476.46	
7237100000	Guam Memorial Hospital	$ 502,518.36	$ 1,334.25	$ 175,777.16	$ (331,284.37)	$ 348,345.40	1
9137100000	Port Authority of Guam	$ 94,969.84	$ 0.75	$ 103,753.38	$ (94,869.84)	$ 103,854.13	
9157510000	Guam Community College (NET METERED)	$ 38,490.54	$ 288.68	$ 39,732.19	$ (38,490.54)	$ 40,020.87	
9173210000	Guam Solid Waste Authority	$ 5,752.47	$ -	$ 6,089.48	$ (5,752.47)	$ 6,089.48	
9337100000	Guam Waterworks Authority	$ 1,275,114.98	$ -	$ 1,275,268.46	$ (1,275,114.98)	$ 1,275,268.46	
8237100000	GPA	$ -			$ -	$ -	
	Sub Total	**$ 2,783,713.20**	**$ 2,043.75**	**$ 2,476,247.82**	**$ (2,898,488.80)**	**$ 2,363,515.97**	
	(C) OTHERS						
0337100000	Guam Legislature	$ 100.79		$ 69.49	$ (100.79)	$ 69.49	
9503154359	Guam Legislature (NET METER)	$ 5,924.79		$ 6,211.94	$ (5,924.79)	$ 6,211.94	
1237100000	Superior Court of Guam	$ 72,583.33		$ 75,914.82	$ (72,583.33)	$ 75,914.82	
2537100000	Agana (Guam) Post Office	$ 5,790.49		$ 6,090.40	$ (5,790.49)	$ 6,090.40	
2570200000	Customs & Quarantine Agency	$ 935.66		$ 1,068.24	$ (935.66)	$ 1,068.24	
3537100000	U.S. Post Office	$ 43,722.50		$ 45,129.94	$ (43,722.50)	$ 45,129.94	
5537100000	Dept. of Military Affairs	$ 73,447.37		$ 76,193.64	$ (73,447.37)	$ 76,193.64	
3209463043	Dept. of Military Affairs	$ 15,675.05		$ 15,813.42	$ (15,675.05)	$ 15,813.42	
5737100000	KGTF	$ 7,787.92		$ 6,679.40	$ (7,787.92)	$ 6,679.40	
7281000000	Tamuning Post Office	$ 4,596.59		$ 5,286.69	$ (4,596.59)	$ 5,286.69	
	Sub Total	**$ 230,564.49**	**$ -**	**$ 238,457.98**	**$ (230,564.49)**	**$ 238,457.98**	
	GRAND TOTAL	**$ 4,990,791.96**	**$ 23,543.30**	**$ 4,776,360.81**	**$ (5,073,301.55)**	**$ 4,717,394.52**	

GPA Communications/PIO KPI Status

Week of 14 May 2018

Ratepayer Newsletter

Overall Status	Risks & Issues	Schedule	Scope	Financial
G	G	G	G	G

Status

1. Compiling June newsletter;
2. GPA 50th Anniversary Proclamation Signing event highlight on cover; and featured every month for next 12 months-include 50th logo
3. Standard features of recipe and village fiesta schedule remain for newsletter content;
4. Inclusion of story updates: in coordination with GM Update(s) and focus on GPA's plans and additions to IWPS and progress with projects that lead toward controlling costs of energy to ratepayer homes, highlighting bid progress, results, award to build Guam's New 180MW Power Plant,

Accomplishments

1. Completed January, February, March, April and May - Insights Ratepayer Newsletter
2. June issue under construction; will meet deadline

Risks and Issues	Resolution
1. None to report;	

Financial	
Budgeted for FY1	

Legend:

No corrective action required

Near-term corrective action required

Requires immediate attention

2017 Annual Report

Overall Status	Risks & Issues	Schedule	Scope	Financial
G	G	G	G	G

Status

1. Bid Awarded for FY17 Annual Report to Card & Card Advertising
2. Writing, first-round edits in progress.
3. Card & Card Advertising compiling final design.
4. Complete date is August 2018

Accomplishments

1. The is 'Power for All'
2. Audited financials forwarded to vendor.
3. Call for information/FY2017 updates of information by each GPA division
4. Agreements on photo image selections

Risks and Issues	Resolution
1. None to Report	

Financial

None to report	Within Budget	

Legend:

No corrective action required

Near-term corrective action required

Requires immediate attention

Special Projects – Social Media

Overall Status	Risks & Issues	Schedule	Scope	Financial
G	G	G	G	G

Status

1. Ongoing coordination with various departments for any updates to share on social media;

Accomplishments

1. Achieved Fiscal Year Goal of 2,500 “Likes” information exchanges and postings ongoing;

Risks and Issues

1. Timely Updates on Forced Outages and Scheduled Outages ;

Resolution

1. Close monitoring of outages and trouble desk for updates;

Financial

Within budget		

Legend:

No corrective action required

Near-term corrective action required

Requires immediate attention

Energy Sense Marketing

Overall Status	Risks & Issues	Schedule	Scope	Financial
G	G	G	G	G

Status

1. Adztech Advertising continuing Phase II DSM Marketing Plan Goals & Objectives;
2. Awaiting final coordination with UOG – Office of Sustainability on Dean's Circle House 25 retrofit. Plan to conduct ribbon cutting ceremony at site, feature GPA's involvement and call attention to GPA 50th Anniversary milestone.

Accomplishments

1. On track to with DSM Phase II Marketing Goals & Objectives
2. Completed participation at 2018 UOG CIS Conference featuring 'Guam Energy Sense' to include information table, CSR staffing, promotional items and display of GPA Electric Vehicle. Panel discussion presentations by John Cruz, Jr.

Risks and Issues	Resolution
1. SPORD support pending additional funding;	PIO supporting DSM marketing in pending additional SPORD funding

Financial

Budget Support for SPORD for Phase II	

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

Prepaid & SMS (text) Project

Overall Status	Risks & Issues	Schedule	Scope	Financial
G	G	G	G	G

Status

1. Text texting still in progress. No new information to report.

Accomplishments

1. Completed coordination with local carriers (GTA, Docomo & IT&E for SMS Texting test);

Risks and Issues	Resolution
1. Pending review and acceptance from PSCC for testing and eventual rollout;	

Financial	
None to report	

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

Live Streaming of CCU Meetings & Work Sessions

Overall Status	Risks & Issues	Schedule	Scope	Financial
G	G	G	G	G

Status

1. GPA-016-18 issued and re-issued with zero bid packets received.
2. GPA will proceed with solicitation to support with suggested resource.

Accomplishments

1. Technical specifications are detailed and team will continue forward with next steps following zero bid responses.

Risks and Issues	Resolution
1. None to report at this time	

Financial

Funding with IT Division & GWA for audio & video equipment & training	

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

50th Anniversary Activities

Overall Status	Risks & Issues	Schedule	Scope	Financial
G	G	G	G	G

Status

1. List of events and programs connected to milestone 2018 GPA planned programs/business objectives already in place is under construction: PPA Signing, LEED Plaque on GBN Building Unveiling; UOG House 25 Retrofit Ribbon Cutting; 4th Cycle GPA Apprentice Recognition Ceremony; 07 July Fadian Employee-Family Fun Day; 2018 Liberation Day Float(s); Ribbon Cutting for Battery Project(s) August 2018, 2018 Labor Day; 2018 Public Power Week, 180MW Bid Award; 2018 GPEA-GPA Year End Celebration
2. A GPA 50th Anniversary Steering Committee meeting weekly, with Communications-PIO serving as advisors.
3. Revisit budget items, (subject to change) to be presented to GM for approval.

Accomplishments

1. 50th logo design to be approved.
2. Theme to be approved.
3. Proclamation Signing Event completed on 08 May 2018.
4. GPA will partner with GPA Employees Association for coordination of year-end (holiday party) event to promote GPA 50th Anniversary as theme; as well as additional events.

Risks and Issues	Resolution
1. None to report at this time	

Financial	
None to report	

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

Miscellaneous Activities

Overall Status	Risks & Issues	Schedule	Scope	Financial
G	G	G	G	G

Status

1. 'Acting' Communications Manager-PIO appointment remains indefinitely
2. GPA Web page redesign work in progress
3. Monitoring of CS Business Centers
4. Standard Media Releases for scheduled and emergency outage reporting is on-going
5. Education Outreach – random requests; ongoing

Accomplishments

1. GPA (volunteer) Employees participated in Guam public school Career Day event at Astumbo Middle School featuring Finance (Cora Montellano and Pam Aguigui; and IT (Jacob Muna Barnes)
2. Cable television installation and services completed with two drops in Employee Fitness Center

Risks and Issues	Resolution
1. None to report at this time;	

Financial	
None to report	

Legend:

- No corrective action required
- Near-term corrective action required
- Requires immediate attention

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671) 648-3002 | guamccu.org

GUAM POWER AUTHORITY WORK SESSION

CCU Conference Room
4:30 p.m., Tuesday, July 17, 2018

AGENDA

1. GM PRESENTATION

2. ISSUES FOR DECISION
   - 2.1 OLD BUSINESS
     - 2.1.1 Generation Financing
   - 2.2 NEW BUSINESS
     - 2.2.1 IT Policy Initiatives / GPA Resolution 2018-014 & GWA Resolution 38-FY2 0 1 8
     - 2.2.2 Multi-Step Bid BOT Specs for New 120-180MW Generation Capacity / Resolution 2018- 0 1 5

3. GM REPORT
   - 3.1 GM Summa r y

4. ISSUES FOR DISCUSSION
   - 4.1 Tropical Storm Maria

5. DIVISION REPORTS
   - 5.1 Administration: Customer Service, HR, Procurement, Safety
   - 5.2 Engineering & Technical: Engineering, IT, Planning & Regulatory, SPORD
   - 5.3 Finance Reports
   - 5.4 Operations: Facilities, Generation, PSCC, T&D, Transportation
   - 5.5 Public Information Office

6. ANNOUNCEMENTS
   - 6.1 Next Meeting: GWA Work Session – July 19; CCU Meeting – July 24

7. ADJOURNMENT

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

Issues for Decision

Resolution No. GPA 2018-14 & GWA 38-FY2018:

Relative to CCU CYBERSECURITY POLICIES AND PROCEDURES

What is the project's objective and is it necessary and urgent?

The CCU instituted the Cybersecurity Committee in 2017 to serve as the advisory and oversight group regarding information technology, infrastructure, and cybersecurity. The committee's responsibilities include the Guam Power Authority and Guam Waterworks Authority (GPWA) information technology systems, which includes policies, controls, risk mitigation, and infrastructure asset protection. A network security assessment recommended that GPWA develop common objectives and controls by establishing common policies, procedures, and business processes to manage risks.

The Cybersecurity initiative resulted in the formation of guidelines to ensure consistency and adequate protection and safeguards to GPWA systems, and resulted in the Password Creation and Protection Policy, the Computer, Software, License, E-mail, Internet, and Standard of Conduct policy, and the Network and Data System Access Policy.

Where is it located or covers?

This will cover all GPWA infrastructure, assets and information technology systems.

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

GPA RESOLUTION NO. 2018-14
GWA RESOLUTION NO. 38-FY2018

CCU CYBERSECUITY POLICIES AND PROCEDURES

WHEREAS, the CCU instituted the Cybersecurity Committee in 2017 to serve as the advisory and oversight group regarding information technology, infrastructure, and cybersecurity. The committee's responsibilities include the Guam Power Authority and Guam Waterworks Authority (GPWA) information technology systems, which includes policies, controls, risk mitigation, and infrastructure asset protection; and

WHEREAS, a network security assessment recommended that GPWA develop common objectives and controls by establishing common policies, procedures, and business processes to manage risks; and

WHEREAS, the Cybersecurity initiative resulted in the formation of guidelines to ensure consistency and adequate protection and safeguards to GPWA systems, and resulted in the Password Creation and Protection Policy, the Computer, Software, License, E-mail, Internet, and Standard of Conduct policy, and the Network and Data System Access Policy.

NOW THEREFORE, BE IT RESOLVED, by the Consolidated Commission on Utilities, as follows:

1. The Guam Power Authority and Guam Waterworks Authority General Managers are hereby authorized to implement and update the Cybersecurity policies for GPWA as required.

RESOLVED, that the Chairman of the Commission certifies and the Secretary of the Commission attests the adoption of this Resolution.

DULY and REGULARLY ADOPTED this 24th day of July, 2018.

Certified by: **Attested by:**

JOSEPH T. DUENAS
CHAIRMAN

J. GEORGE BAMBA
SECRETARY

I, J. GEORGE BAMBA, Secretary for the Consolidated Commission on Utilities do hereby certify that the foregoing is a full, true, and correct copy of the resolution duly adopted at a regular meeting of the members of Guam's Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

Ayes: _____

Nays: _____

Absent: _____

Abstain: _____

New Power Plant
Technical Bid Documents

John M. Benavente, P.E.
General Manager
July 17, 2018


VIEW FROM GUAM REGIONAL MEDICAL CENTER

IFB documents key points

- Technology Neutral
  - Allows Combined Cycle, Reciprocating Engines, renewable and any type of flexible generation
- Size range 120-180 MW
- Property Site Purchased by GPA; Site to be a Portion of 60 Acres
- IPP BOT model 25 years – with additional 5 year option (30 years total)
- Four months bid development time allowed for the selected seven (7) prequalified proponents

Risks

- Schedule delays – compliance date
  - CCU & PUC approval of IFB documents
- Insufficient number of IPP bids
  - Withdrawal
  - Non responsive or non compliant
- RFQ protests
- Complex proposals with varied options
- EPA Consent decree details unknown

Risks - continued

- Complications due to GPA equity position desired
- Permitting delays
- Property unknown issues
  - Sinkholes – poor geotechnical
  - Endangered species found
  - Cultural artifacts found
- PUC funding approval
- Easements for pipeline and transmission line rights of way
- System studies and upgrades may be required

Technical Proposal Requirements

- 120-180 MW
- Dual fuel capable with ULSD initially; Natural Gas Burning Capability
- Fully dispatchable base and Intermediate load
- Project Company will complete a Grid Study to show Technology Proposed meet Reliability Requirement:
  - Steady state and dynamics modeling using Positive Sequence Load Flow (PSLF) software
- Meet GPA Reliability Standards; Works well with Renewables
- Transient response
  - 5% within 1 second. 10% within 2 seconds
  - 25 MW per minute regulation

Technical Proposal Requirements - continued

- Capable of providing the full Dependable Capacity at any given time regardless of the weather conditions.
- Capable of withstanding and continuing to operate during all weather conditions.
- The loss of a single generating unit should not cause loss of capacity of more than __MW (Being Determined)
- GPA will provide rights of way for the ULSD pipeline and the 115 KV transmission interconnection from the GPA procured property to the Harmon substation
- Project Company will provide environmental permitting

Technical Proposal Requirements - continued

- Synchronous condenser requirement
- High Voltage transmission line and pipelines transferred to GPA after Commissioning Operating Date (COD)
- Provisions for optional partial commissioning
- Natural gas pipeline installed into same right of way as ULSD pipeline
  - Pipeline protection while not in use
  - Natural gas pipeline complies with FERC requirements
- Noise level at the site boundary shall not exceed 45 dB(A)
- Utilize GWA grey water for makeup – if cooling tower is required

Technical Proposal Requirements - continued

- Discharge to GWA or Zero Liquid Discharge system
- Potable water supplied from GWA
- Sea water makeup not allowed
- Architectural requirements
  - Building designs approved by GPA
  - Style, colors and finishes compatible with Guam's island heritage
  - Exterior colors and finishes blend in with surrounding
  - Low-rise buildings unless taller required for equipment enclosure
- Buffer zone around plant
- Utilize only part of provided property (~25 acres for plant)
- On site fuel storage 30 days
- Transfer facility for loading and unloading fuel delivery trucks (for resiliency)
- Water storage on site 7 days

Technical Proposal Requirements - continued

- Proponent proposal requirement
  - One original and five copies
  - Complete Section D Forms
  - Provide separate technical and commercial proposals in two separate envelopes
  - Proposal security required
    - GPA required **$3M** bid bond
  - Maximum debt to equity ratio of 80% to 20%
  - Equity required by lead developer at least 35% of the total equity
  - Responsive test Section B Appendix A
  - Optional GPA Financing Submittal Requirement

Technical Proposal Requirements - continued

- Successful proponent requirements
  - GPA employee hiring opportunity to address positions that will be impacted by the retirement of Cabras 1&2
  - Construction security of $75M at financial closing; released 3 months after COD – Section B 7.3 and ECA Section 9.6
  - **Transfer Security of approximately $ 6.3M** – to replace Operational Security and released 1 year after transfer
  - **Liquidated damages**
    - Delay in achieving COD
    - Failure to meet Contracted Capacity
    - Excessive outages
    - Failure to meet guaranteed renewable generation – in case of a hybrid plant

Technical Proposal Requirements - continued

- Successful proponent requirements
  - OSHA safety conformance
  - Monthly reports
  - Schedule updates
  - Progress meetings
  - Reliability test 7 days with 72 hours at maximum dependable capacity
  - Annual dependable capacity test
  - Maintenance and testing prior to transfer at the end of the Term.

Technical Proposal Requirements - continued

- Financing Option
  - Evaluate Option with Lowest Bidder Only
  - IPP provides 20% minimum equity
  - GPA Financing up to 75% of Project Amount (less Cabras Insurance Fund)
  - Require future capitalization to be in Fixed O&M Charges.
  - Lowest Bidder to provide details of Financing for evaluation if GPA financing would reduce Annual Capacity Fee Charge.
  - Determine if Financing Risk acceptable in return for Lower Capacity Fee

Evaluation

- Technical compliance
  - Size and Reserve evaluation (Being Determined)
- Price proposal
  - Opened only for bidders who passed technical requirements
  - Cost evaluation using Net Present Value (Being Determined)
    - Capacity Fee
    - Fixed O&M
    - Variable O&M
    - Fuel Efficiency
  - Lowest Net Present Value is Lowest Bidder

Next steps

- Complete revision of IFB documents to be completed by Monday 7/23/18.
- CCU review and approval IFB documents Tuesday 7/24/18
- Petition PUC for approval IFB documents 7/31/18
- GPA considering issuing CCU approved documents to IPP subject to amended changes ordered by PUC

Revised Schedule:

No.	Activity	Duration	Cumulative Duration	Expected Completion	Best Case Completion
1	**CCU worksession**			7/17/2018	
2	**CCU Meeting**			7/24/2018	
3	**PUC Meeting**			8/30/2018	
4	IFB Issued to Potential Bidders			9/10/2018	7/31/2018
5	Pre-Bid Meeting with Bidders	30	30	10/10/2018	8/31/2018
6	Bid Date - Proposals (Envelopes I and II) submitted to GPA. Envelope I Public Opening	82	112	12/31/2018	11/26/2018
7	Complete Evaluation of Envelope I; Invite Responsive Bidders to Envelope II Opening	44	156	2/13/2019	1/14/2019
8	Conduct Envelope II Public Bid Opening Meeting	1	157	2/14/2019	1/15/2019
9	Complete Evaluation of Envelope II; Invite the First-Ranked Bidder to Clarification Meeting	46	203	4/1/2019	2/26/2019
10	Conduct Clarification Meeting(s) with First-Ranked Bidder and other top-ranked Bidders as required and selection of the Selected Bidder.	35	238	5/20/2018	3/28/2019
11	Complete Negotiations of ECA with the Selected Bidder.	57	295	7/30/2019	5/24/2019
12	**GPA Rate Impact Study**		295	7/30/2019	5/31/2019
13	**CCU Worksession**		295	8/8/2019	
14	**CCU Meeting**		295	8/27/2019	6/4/2019
15	**PUC Meeting**		323	9/24/2019	6/27/2019
16	Obtain CCU and PUC approval		379	9/24/2019	6/27/2019
17	Sign the ECA with the Selected Bidder.	1	380	9/25/2019	6/28/2019
18	IPP achieves financial close and starts construction.	180	560	3/23/2020	12/28/2019
19	Phase 1 Commercial Operation Date	600	1,160	11/13/2021	8/19/2021
20	Phase 2 Commercial Operation Date	300	1,460	9/9/2022	6/15/2022

Questions?

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

Issues for Decision

Resolution No. 2018-15:

RELATIVE TO AUTHORIZING THE MANAGEMENT OF THE GUAM POWER AUTHORITY (GPA) TO PETITION THE PUBLIC UTILITES COMMISSION FOR THE APPROVAL OF THE MULTI-STEP BID BOT SPECIFICATION FOR NEW 120-180MW GENERATION CAPACITY

What is the project's objective? Is it necessary and urgent?

Multi-Step Bid GPA-034-18 is for a Build, Own/Operate and Transfer (BOT) contract for 120-180MW New Generation Capacity. GPA was provided conditional approval by the PUC in November 2017 to initiate the solicitation to establish a qualified bidders list through Docket 18-02. The technical specifications are required and requires PUC approval when completed. GPA has completed these technical specifications and seeks approval to continue with the bid for new capacity.

Where is the location?
Harmon

How much will it cost?
New Power Plant construction is estimated up to $400M. The BOT would recover costs over a 25-30 year term

When will it be completed?
Complete plant by September 2022.

What is its funding source?
Insurance Proceeds (Cabras 3&4) and Revenue Generated Funds

The RFP/BID responses:

GPA has completed Step 1 of this three-step multi-step bid. A qualified bidders list has been selected and will be provided the technical bid specifications upon PUC approval.

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

RESOLUTION NO. 2018-015

AUTHORIZING THE MANAGEMENT OF THE GUAM POWER AUTHORITY (GPA) TO PETITION THE PUBLIC UTILITES COMMISSION FOR THE APPROVAL OF THE MULTI-STEP BID BOT SPECIFICATION FOR NEW 120-180MW GENERATION CAPACITY

WHEREAS, on November 30, 2017, the PUC approved (Docket 18-02) a multi-step procurement process and authorized GPA to issue the Request for Qualifications for the 120-180MW new power plant; and

WHEREAS, on January 16, 2018 GPA issued Multi-Step Bid GPA-034-18 for Build, Own/Operate & Transfer Contract for 120-180MW of New Generation Capacity; and

WHEREAS, in June 2018, GPA selected seven (7) firms to establish a Qualified Bidders list that will participate in the next phases of the multi-step bid which includes the development and submittal of a technical proposal and a price proposal; and

WHEREAS, GPA has completed the technical specification documents for the Step 2 of the 120-180MW New Generation Capacity bid which address the following:

- Build, Own/Operate and Transfer (BOT) contract
- Specifications for 120MW – 180MW flexible generation to meet renewable integration requirements
- Architectural requirements and GPA involvement during design process
- Federal Environmental and Safety requirements
- GPA Employee Hiring Opportunity
- Bond & Security Requirements during bid and construction periods
- Draft contract; and

WHEREAS, PUC Docket 18-02 requires GPA to submit and obtain approval of the technical bid documents from PUC; and

NOW THEREFORE, BE IT RESOLVED, by the Consolidated Commission on Utilities, subject to the review and approval of the Public Utilities Commission, as follows:

1. GPA is hereby authorized to petition the PUC for approval of the Technical Bid documents for Multi-Step Bid GPA-034-18 for the Build, Own/Operate & Transfer (BOT) Contract for 120-180MW of New Generation Capacity.

RESOLVED, that the Chairman of the Commission certifies and the Secretary of the Commission attests the adoption of this Resolution.

DULY and REGULARLY ADOPTED this 24th day of July, 2018.

Certified by: **Attested by:**

JOSEPH T. DUENAS
CHAIRMAN

J. GEORGE BAMBA
SECRETARY

I, J. GEORGE BAMBA, Secretary for the Consolidated Commission on Utilities do hereby certify that the foregoing is a full, true, and correct copy of the resolution duly adopted at a regular meeting of the members of Guam's Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

Ayes: _____

Nays: _____

Absent: _____

Abstain: _____

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

TO: **Consolidated Commission on Utilities**

FROM: **General Manager**

DATE: **July 17, 2018**

SUBJECT: **General Manager's Report**

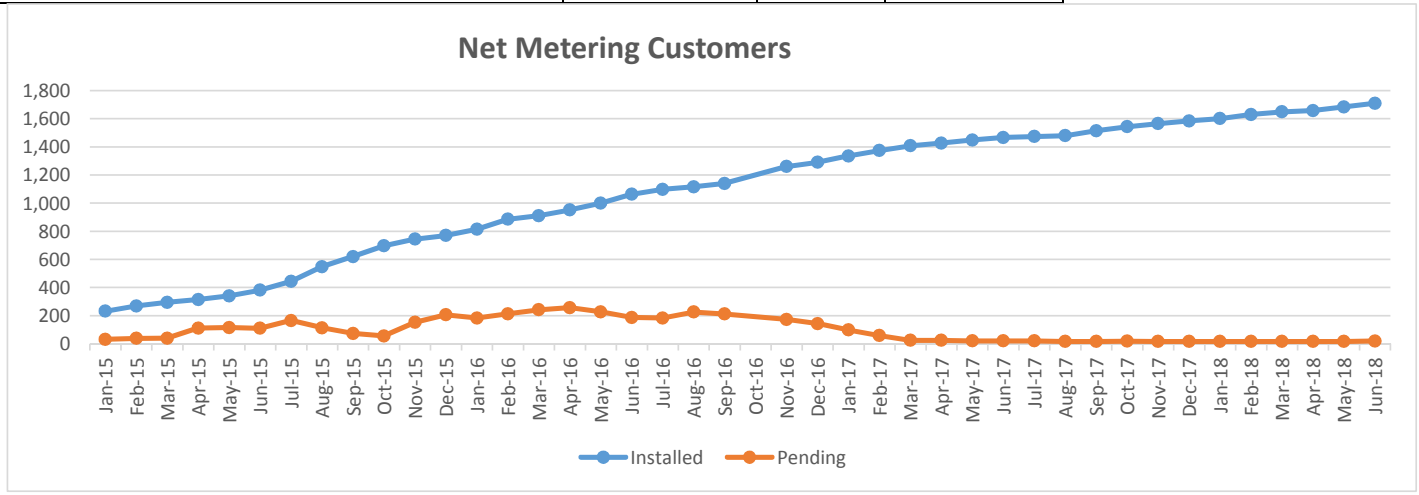
1. **Generation System Update:** The following summarizes the expected generation capacity projection for July 2018. All base load units are expected to be in operation for the month. The Cabras steam units are currently limited to 50 MW each to minimize the potential for boiler tube leaks which is a common occurrence for them.

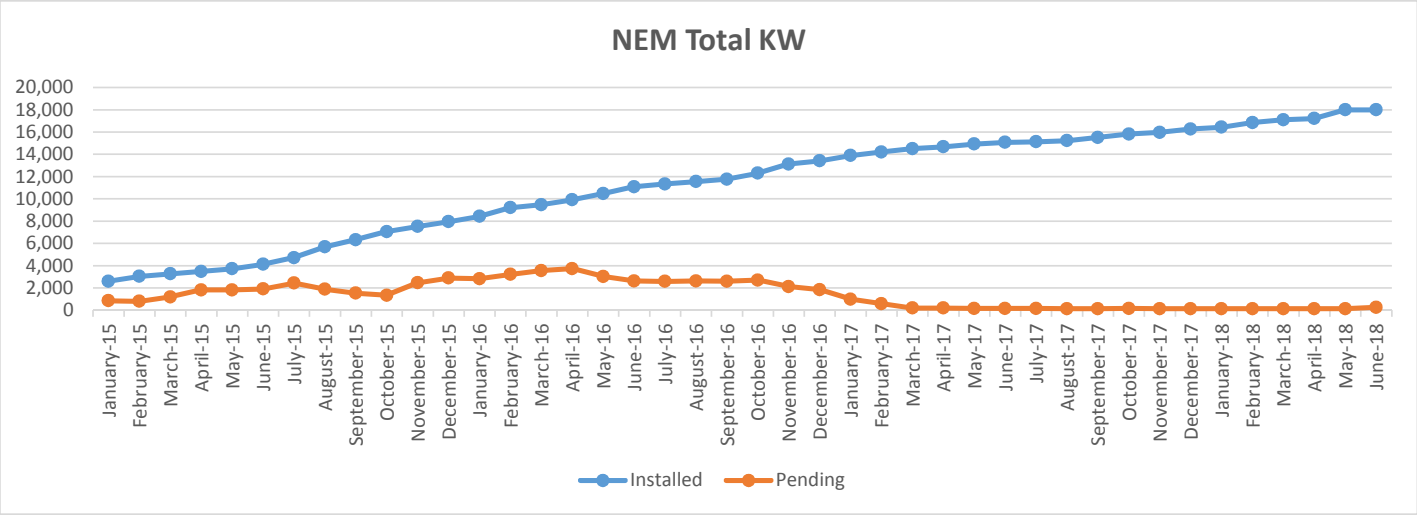
July 2018 Projected Capacity:	**360 MW**
July 2018 Projected Demand	**250 MW**
Projected Reserve Margin	**110 MW**

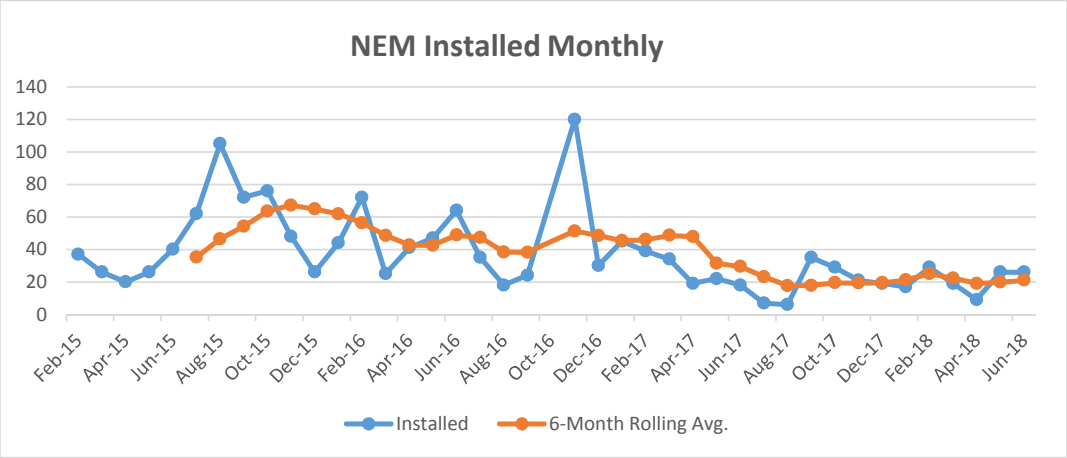
2. Net Metering Summary Ending June 2018:

Description:	**Count**	**Kw**
Active	**1,710**	**16,849**
Pending	20	129
Totals:	1,730	16,978

Service:	**Count**	**KW**	**Kw/Customer**
Residential	1,620	14,806	9.1
Others	90	2,043	22.7
Total:	1,710	16,849	9.9
% Residential	**94.7%**	**87.9%**	
Estimated 12 Months Revenue Impact:	**$3,360,697**		




NEM Total KW
20,000
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
January-15
February-15
March-15
April-15
May-15
June-15
July-15
August-15
September-15
October-15
November-15
December-15
January-16
February-16
March-16
April-16
May-16
June-16
July-16
August-16
September-16
October-16
November-16
December-16
January-17
February-17
March-17
April-17
May-17
June-17
July-17
August-17
September-17
October-17
November-17
December-17
January-18
February-18
March-18
April-18
May-18
June-18
Installed
Pending


NEM Installed Monthly
140
120
100
80
60
40
20
0
Feb-15
Apr-15
Jun-15
Aug-15
Oct-15
Dec-15
Feb-16
Apr-16
Jun-16
Aug-16
Oct-16
Dec-16
Feb-17
Apr-17
Jun-17
Aug-17
Oct-17
Dec-17
Feb-18
Apr-18
Jun-18
Installed
6-Month Rolling Avg.

3. Demand Side Management (DSM) Program Expenses Thru June 2018.

All Expenses – Fiscal Year

Description	FY16	FY17	FY18 as of June 30	Total to Date
Regular/OT Pay	$11,348.80	$22,256.00	$17,423.89	$51,028.69
Other Contractual	$28,278.50	$73,010.05	$38,992.25	$152,820.80
Bank Fees	$155.00	$1,032.06	$315.00	1,502.06
Paid Rebates-Split AC	$154,700.00	$557,275.00	$854,875.00	$1,566,850.00
Paid Rebates-Central AC	$3,400.00	$8,200.00	$1,300.00	$12,900.00
Paid Rebates-Washer/Dryer	$2,800.00	$7,425.00	$20,000.00	$30,225.00
Total Expenses	**$200,682.30**	**$669,198.11**	**$932,906.14**	**$1,815,326.55**

SUMMARY

DESCRIPTION	AMOUNT
Initial DSM Budget FY'16	$1,806,014.00
Interest Income as of June 18	$4,231.57
Total Expense	**$1,815,326.55**
Ending Balance as of June 18	$(5,080.98)
Addtl. Budget: Approved (FY'18)	$1,139,189.00
Total Ending Balance as of June 18:	**$1,134,108.02**

4. **Net Metering Customer Credit Recommendation:** GPA has schedule a public hearing for Wednesday July 18th at 5:30pm here at Fadian. The public hearing is for GPA to present its recommendation which it made to the CCU on the phased reduction of net metering credits. GPA will report to the CCU on July 24th the results of the public hearing and any changes it desires to make based on the public's input. Once the CCU approves GPA's recommendation, GPA could petition the PUC for their approval.

5. **PUC Dockets: The PUC approved the recommendation to hold LEAC at its current rate thru January 31, 2019.**

6. **New Power Plant Procurement:**

    - GPA completed the transaction for the Ukudu land on Friday July 13, 2018. GPA now owns the 60 acres.
    - Multi-Step Bid Invitation No. 034-18 qualified bidder list has been established and consist of seven (7) proponents. These proponents will be provided the bid specifications once CCU approves the package subject to PUC approval.

7. **Supervisory Control and Data Acquisition (SCADA) Commissioning:** The installation of the new SCADA system is now underway. The targeted commissioning date is October 2018. The SCAWA system is designed for Power, Water and Wastewater operations.

8. **Liberation Day Parade:** The parade is this weekend, Saturday July 21, 2018. GPWA is participating in the parade and will also have a food tent in Hagatna across the entrance to the Hagatna Waste Water treatment Plant. Please join us for this celebration.

9. **Apprentice Graduation:** The graduation ceremony for fifteen (15) apprentices occurred on Friday July 13, 2018 and received excellent media coverage. The next cycle of twenty (20) apprentices mostly in the T&D area is targeted to begin in October 2018. There are 314 qualified applicants vying for the program.

10. **Tropical Storm Maria:** The storm passed over Guam on July 5th, 2018. Storm blacked out the island for about half an hour. All customers were restored within two days. The estimated damage is about $234K.

11. **Senator Nelson Informational Hearing:** GPA provided an informational hearing to Senator Nelson on July 12, 2018. The informational briefing focused on LEAC, New Power Plant, and System Status. The presentation is attached for your perusal.

12. **GMH Main Electrical Panel Maintenance:** GPA has completed its task of conducting preventive maintenance on the GMH electrical panels. The maintenance was done between 6am to 2pm this past Sunday, July 15, 2018. GMH operated on standby generator power during the outage and there was no interruption of power to GMH. GPA has now completed its work with GMH. GPA is preparing a standard operating procedure for GMH for use in the event of an emergency. Please see the attached presentation of the work done.

13. **Key Performance Indicators:** The following are updated indicators thru June 2018.

John M. Benavente, P.E.

Informational Briefing to Senator Telena Nelson

July 12, 2018

I Liheslaturan Guahan Public Hearing Room

Briefing Topics:

- Levelized Energy Adjustment Clause (LEAC)
- Status of Current Power Systems
- Update on the 180 MW Power Plant

LEAC

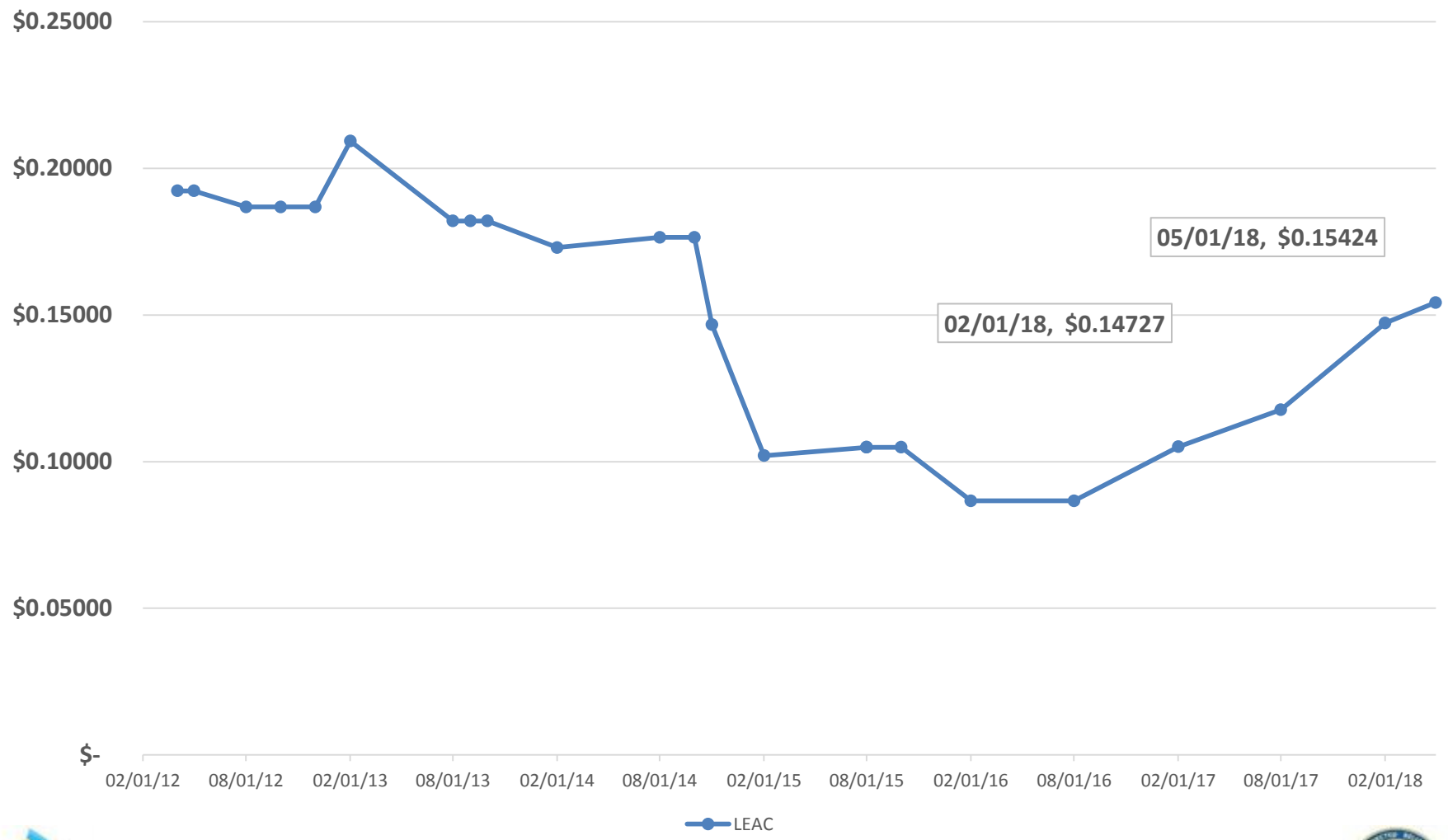
Power Rate Increases

- GPA base rate has been about the same since October 1, 2013.
- The decreases and increases in power rates have been due to adjustments to the Levelized Energy Adjustment Clause (LEAC) which are directly related to fuel oil expenses. The LEAC Clause is adjusted to be revenue neutral.

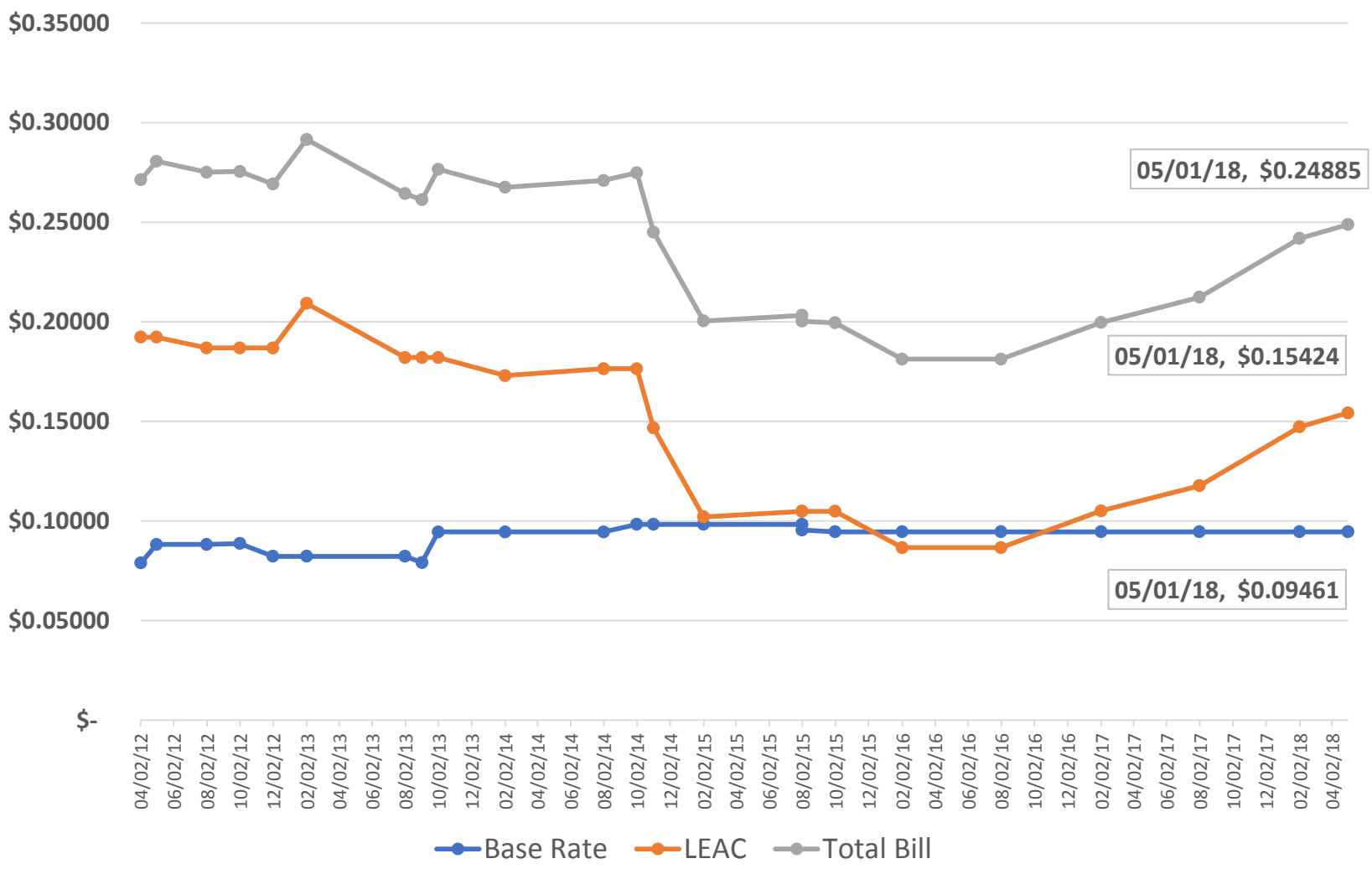
LEAC Update – GPA Fuel Purchases (Per Barrel)



Historical Residential LEAC Rate



Historical Residential Rate



Historical LEAC Over (Under) Recovery

LEAC Period		Approved LEAC Rate	Actual Over (Under) Recovery	
From	To			
4/1/2012	7/31/2012	$ 0.192310	$ (3,040,418)	
8/1/2012	1/31/2013	$ 0.186834	$ (2,494,052)	
2/1/2013	7/31/2013	$ 0.209271	$ 1,345,259	
8/1/2013	10/31/2013	$ 0.182054	$ 1,300,093	
2/1/2014	7/31/2014	$ 0.172986	$ (1,137,034)	
8/1/2014	10/31/2014	$ 0.176441	$ (4,646,872)	
11/1/2014	1/31/2015	$ 0.146666	$ 661,428	
2/1/2015	7/31/2015	$ 0.102054	$ 1,757,878	
8/1/2015	1/31/2016	$ 0.104871	$ (2,467,151)	
2/1/2016	7/31/2016	$ 0.086613	$ (2,668,603)	
8/1/2016	1/31/2017	$ 0.086613	$ (9,915,360)	
			$ (5,315,360)	a
2/1/2017	7/31/2017	$ 0.105051	$ (14,050,504)	
8/1/2017	01/31/1018	$ 0.117718	$ (16,775,982)	
2/1/2018	4/30/2018	$ 0.147266	$ (13,005,689)	
5/1/2018	7/31/2018	$ 0.154242	$ (9,460,187)	

a) Under-recovery Balance after applying the $4.6 million from Insurance.

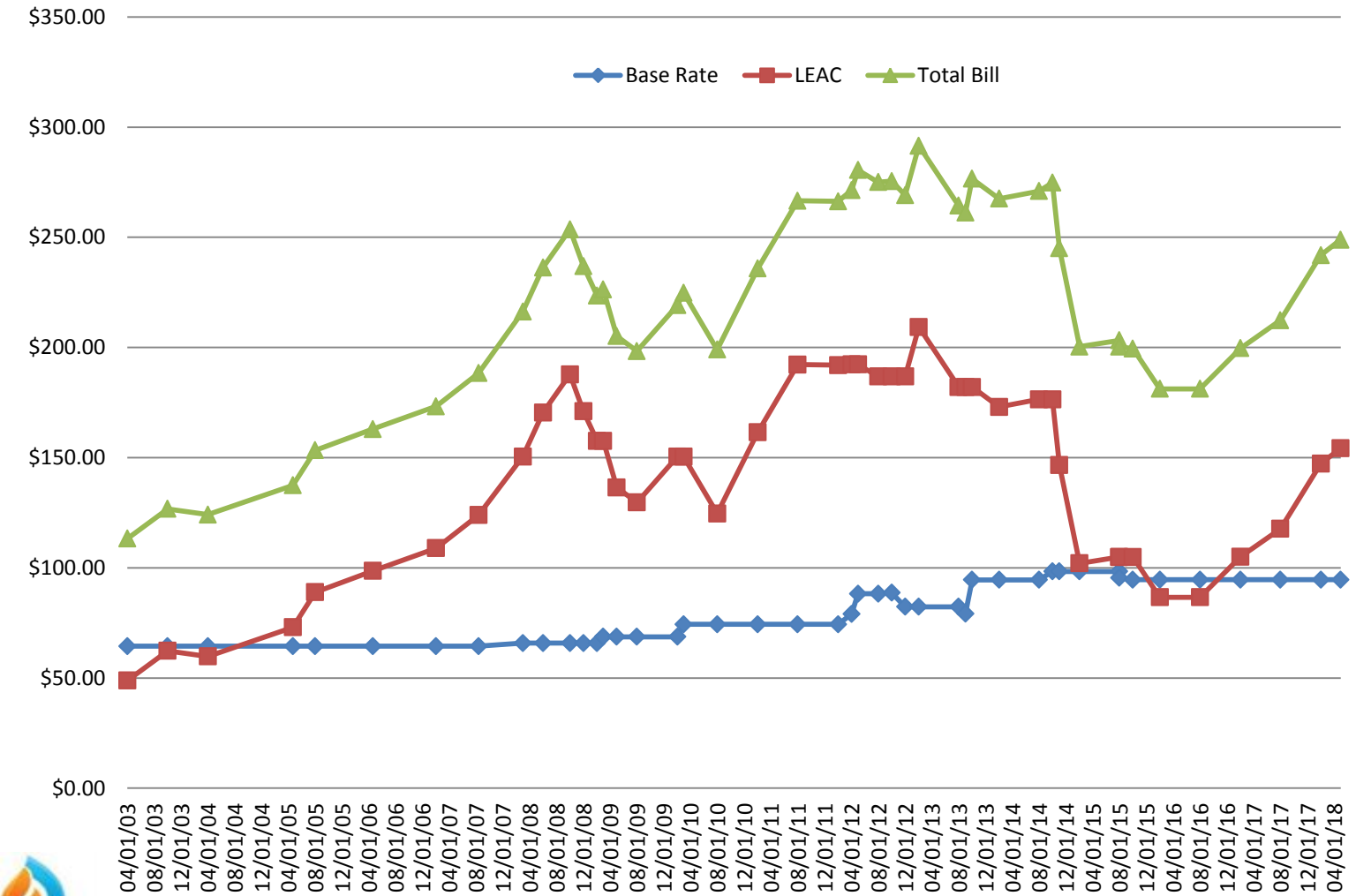
LEAC Update – Scenario Model Runs

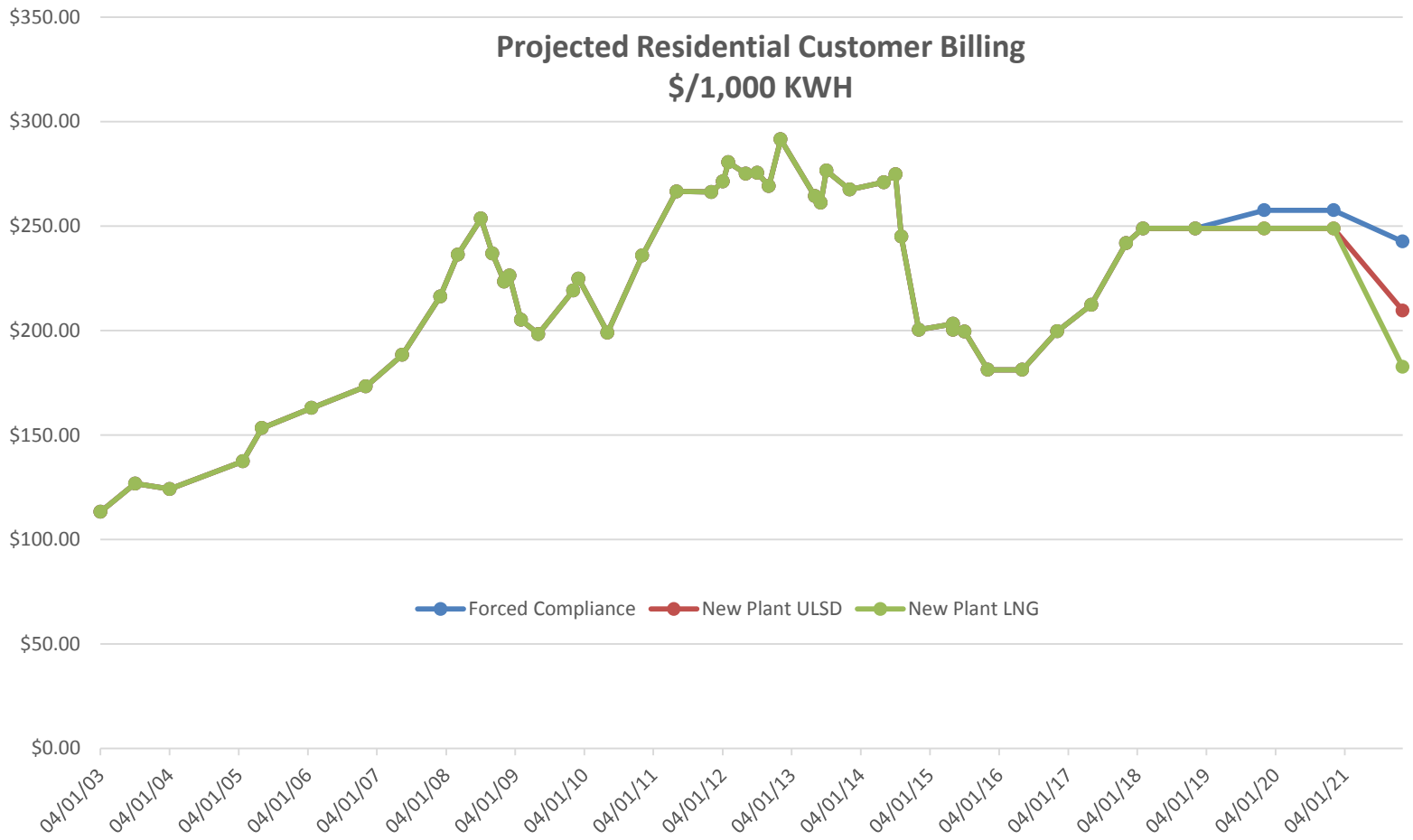
	Proposed Effective 8/01/2018	Scenario 1 Fuel Price (May 7-11, 2018)		
		No Change in Fuel Price	@ Zero Cost Recovery	@ Full Cost Recovery
1	Average Price per Bbl-RFO	$ 65.23	$ 74.59	$ 74.59
2	Average Price per Gal-Diesel	$ 9.86	$ 97.05	$ 97.05
3	Proposed LEAC Rate	**$ 0.154242**	**$ 0.154242**	**$ 0.165100**
4	Monthly Increase/(Decrease) - 1000 kWh	$ -	$ -	$ 10.86
5	% Increase/(Decrease) in LEAC	0.00%	0.00%	7.04%
6	% Increase/(Decrease) in Total Bill	0.00%	0.00%	4.36%
7	Fuel Cost (Over) Under Recovery at the end of the period	**($3.0M)**	**$7.1M**	$ -

LEAC Update – Scenario Model Runs

	Proposed Effective 8/01/2018	Scenario 2 Fuel Price (May 24-June 1, 2018)		
		No Change in Fuel Price	@ Zero Cost Recovery	@ Full Cost Recovery
1	Average Price per Bbl-RFO	$ 65.23	$ 77.13	$ 77.13
2	Average Price per Gal-Diesel	$ 89.86	$ 98.54	$ 98.54
3	Proposed LEAC Rate	**$ 0.154242**	**$ 0.154242**	**$ 0.169464**
4	Monthly Increase/(Decrease) - 1000 kWh	$ -	$ -	$ 15.22
5	% Increase/(Decrease) in LEAC	0.00%	0.00%	9.87%
6	% Increase/(Decrease) in Total Bill	0.00%	0.00%	6.12%
7	Fuel Cost (Over) Under Recovery at the end of the period	**($3.0M)**	**$10.1M**	$ -

Historical Residential Bill
$/1,000 KWH




Projected Residential Customer Billing
$/1,000 KWH
$350.00
$300.00
$250.00
$200.00
$150.00
$100.00
$50.00
$0.00
Forced Compliance
New Plant ULSD
New Plant LNG
04/01/03
04/01/04
04/01/05
04/01/06
04/01/07
04/01/08
04/01/09
04/01/10
04/01/11
04/01/12
04/01/13
04/01/14
04/01/15
04/01/16
04/01/17
04/01/18
04/01/19
04/01/20
04/01/21

Summary

- GPA petitioned the PUC on Jun 15, 2018 to maintain the Fuel Recovery Factor at $.154242/kWh effective for the period from August 1, 2018 thru January 31. 2019. The PUC has approved the petition.
- The change reflects no increase in the LEAC factor and no increase for a residential customer utilizing an average of 1,000 kilowatt hours per month up to January 31, 2019.
- GPA could file an interim petition should fuel prices rise substantially above $77/Barrel.
- The highest monthly residential bill for the average 1,000 KWH consumer was about $291 in Feb 2013.
- Implementation of GPA near term (within 4 years) plans could drop the average bill as low as $182 per month with the completion of about 160 MW of utility scale renewable projects and the new power plant burning ULSD and natural gas.

Status of Current Power Systems

Generation System Update

Generation System Update for June 2018

The expected generation capacity situation for June 2018 is as follows:

- The peak demand for June is projected to be 255 MW.
- The system is now heading into the higher peak months of the summer. Last year, the peak demand was 261 MW on August 1st 2017. It is anticipated peak demand for CY 2018 may be 265 MW.

June 2018 Projected Capacity:	**385 MW**
June 2018 Projected Demand:	**255 MW**
Projected Reserve Margin:	**130 MW**

GPA Will Not Be Able To Meet Demand Without New Power Plant By 2021

This table is provided to show that without a new power plant, GPA will not be able to meet load growth by 2022. Furthermore, as shown, because we lack adequate base load capacity, GPA's fuel related cost to provide additional energy to new customers will continue to drive its total energy cost higher because energy production would come from costlier less efficient standby units. The lack of new units which could work with intermittent renewables will result in limited solar PV additions into the grid thereby limiting cost saving opportunities.

Summary of System Generating Capacity With No New Baseload					**With New 180MW**
Description (MW)	**FY 2015**	**FY2017**	**FY2018**	**FY2021**	**FY2022**
Baseload Capacity	299	208	208	208	268
Emergency/Standby Capacity	120	200	200	200	200
Total Capacity	**419**	**408**	**408**	**408**	**468**
Peak Demand (Customer Requirement)	249	261	266	283	283
Reserve Margin (Balance between Capacity and Requirement)	170	147	142	125	185
Loss of Two Largest Units (Overhaul + Forced Outage)	(132)	(120)	(120)	(120)	(88)
Reserve After Loss of Two Largest Units	**38**	**27**	**22**	**5**	***97**
Utility Scale Renewables Capacity (MW)	**0**	**25**	**25**	**185**	**185**
% Energy from Baseload	98.0%	80.0%	62.2%	62.2%	**72.6%**
% Energy from Renewables	**0.0%**	**3.5%**	**3.5%**	**26.4%**	**26.4%**
% Energy from Emergency/Peaker	2.0%	16.5%	16.5%	11.4%	1.0%

Status of New Power Plant Procurement

New Power Plant Procurement:

- **Acceptable Bidder List of Qualified Proponents has been Established.**
- **Final specifications will be submitted to CCU and PUC approval this month.**

Bid Submittals (Step 1) were opened on April 5, 2018.
Eighteen (18) submittals were received.

1. APTIM
2. Green Globe Solutions
3. Guam Power Partners
4. Hanwha Energy
5. Karpower International
6. KEPCO/EWP
7. Korea Midland Power
8. Korea Southern Power
9. Osaka Gas Co.
10. POSCO Energy
11. Proman Global Dev.
12. Samsung C&T Corp.
13. Shanghai Electric Power
14. Sojitz
15. Summit Power Group
16. TEMES
17. Toyota Tsusho Corp.
18. Wartsila

Qualified Proponents will proceed to **Step 2 (Technical and Price Bid)**

1. Hanwha Energy
2. KEPCO/EWP
3. Osaka Gas Company
4. POSCO Energy
5. Samsung C&T Corporation
6. Toyota Tsusho Corporation
7. Wartsila

180 MW Plant Projected Schedule (Update)

Land Purchase Price: *$10,788,653*

Land Rezoning Efforts: *Done*

Land PUC Approval: *Done*

IFB Qualification Period: *Done (7 Proponents Acceptable)*

Bid Technical Specifications Approval *3Q 2018*

Bid Submittal Date: *4Q 2018*

Contract Award: *1Q 2019*

Construction Commences: *2Q 2019*

Plant Commissioned: *2Q 2022*

Milestone	2017			2018												2019												2020-2022					
	4Q			1Q			2Q			3Q			4Q			1Q			2Q			3Q			4Q			1Q			2Q		
	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6
Land Acquisition & Rezoning																																	
IPP IFB Qualification Period																																	
IPP IFB Technical Specification Period																																	
Technical Bid Docs Review/Approval																																	
Bid Solicitation/Submittals/Review																																	
Approval of IPP Award																																	
Construction Period																																	

Summary

- GPA plants have aged significantly and the Cabras units are constantly having boiler tube leaks. We will need to spent millions to keep units running.
- GPA needs new base load units to provide reliable and low cost energy. A new power plant up to 180 MW of capacity has been approved and under bid.
- GPA manages an island-wide power delivery system; significant and continuous effort underway to strengthen the system.

T&D System Update

Tropical Storm Maria

July 5, 2018

Pre-Storm and Post-Storm Recovery

Pre-Storm Inspection & Clearing

UMATAC



BARRIGADA



DEDEDO



Response During Storm

TALOFOFO



MANGILAO



MTM



Post-Storm Clearing & Restoration



Tarzan Falls

Ypao Beach Road



Vegetation and high winds blew down several spans of power lines

Post-Storm Clearing & Restoration





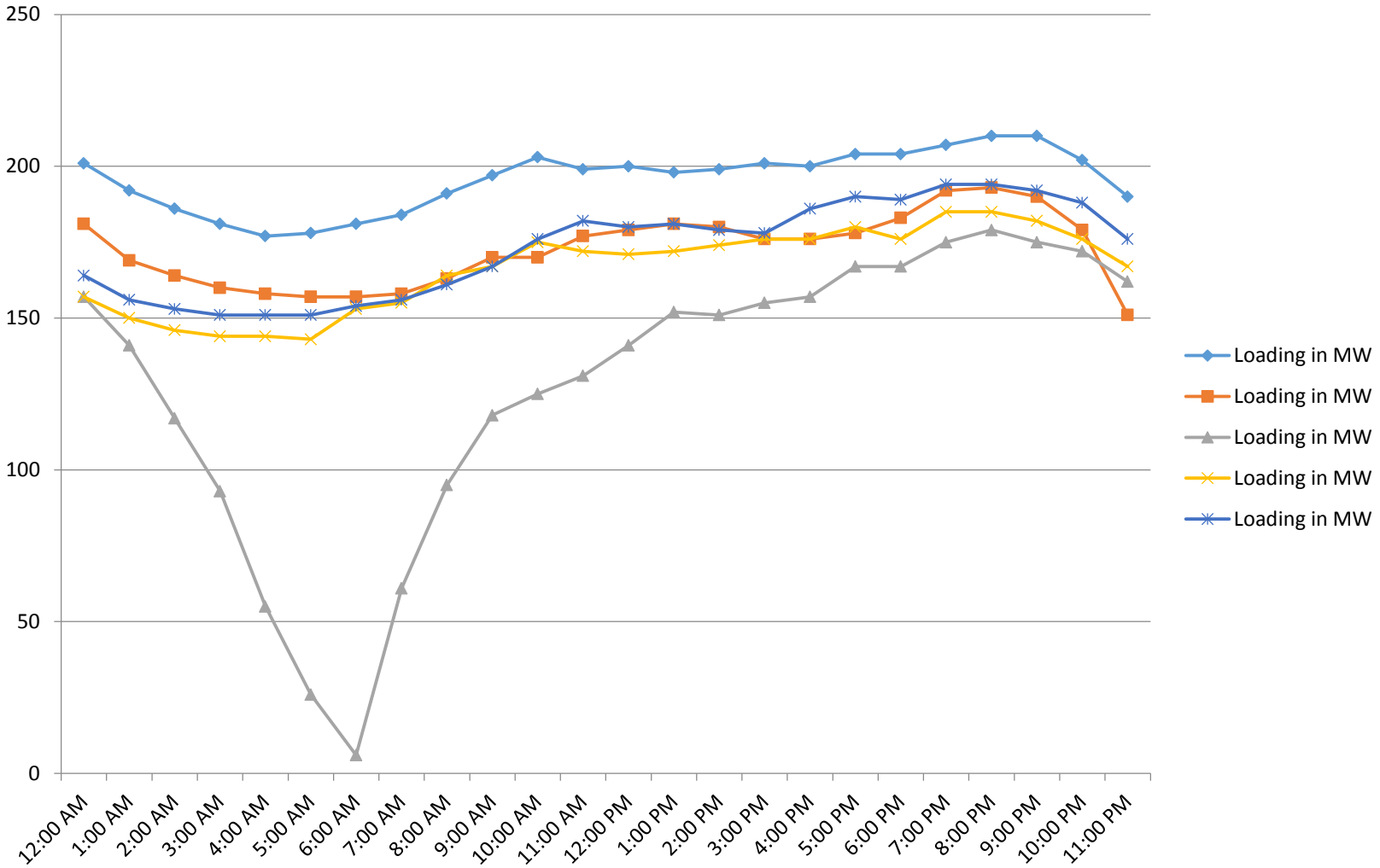
GPA received numerous trouble calls concerning trees falling into power lines. Many of these areas were within residential neighborhoods. Crews took great care to ensure the safety of residents before restoring the power lines.

Community Support





MW Loading of Storm versus Normal Day



Tropical Storm Maria Damage

- Preliminary Damage Assessment:
- T&D Damages: $203,104
- Generation Damages: $31,690
- TOTAL ESTIMATED Damages: $234,794

Transmission & Distribution System

- 29 Substations connected through 189 miles of 115 kV and 34.5 kV lines
- Substations supply 67 distribution feeders with 1,638 miles of primary and secondary distribution lines
- GPA delivery system is managed through the Power System Control Center located adjacent to the Cabras Power Plant
- New Supervisory Control and Data Acquisition (SCADA) Center being installed at Fadian facility and expected to be operational by October 2018
- GPA has placed vital power transmission lines underground that connect system to key components of Guam's economy
- 60% of system load is served through new underground infrastructure
- GPA continues to harden its overhead system by replacing wood poles with concrete (about 90% hardened to date)
- GPA continues its village underground hybrid system which places secondary lines underground (24.4% of customers completed)

T&D SYSTEM

Description	Overhead Miles	Underground Miles	TOTAL Miles
Transmission Lines	154	35	189
Distribution Lines	1,331	307	1,638
Substations	29		
Distribution Feeders	67		
GPA Customers Served	50,763		

Sector	# of Feeders	Transmission Lines (mi)	Distribution Lines (mi)	# of Crews
North	33	72	790	4
Central	23	47	552	2
South	11	70	296	2

UNDERGROUND SYSTEMS

Customers Served by Underground Systems

Underground Systems	# of Customers
GPA Hybrid Projects	2,037
Underground Subdivisions	10,359
TOTAL CUSTOMERS	12,396
% of All (50,763 Customers)	**24.4%**

Hybrid – Overhead primary lines, pole mounted transformers, secondary underground lines

Underground – Underground primary lines, padmount transformers, secondary underground lines

UNDERGROUND SYSTEMS

Customers Served by Underground Systems

Hybrid Capital Improvement Projects	# of Customers
Agat	422
Santa Rita	244
Dededo Village	868
Dededo Kaiser	274
Talofofo	229
TOTAL CUSTOMERS	2,037

UNDERGROUND SYSTEMS

Customers Served by Underground Systems

Underground Subdivisions	# of Customers
Agana Heights	258
Agat	575
Asan	264
Barrigada	452
Dededo	3,527
Hagatna	91
Inarajan	32
Mangilao	229
Merizo	38

Underground Subdivisions	# of Customers
Ordot/Chalan Pago	373
Santa Rita	268
Sinajana	665
Tamuning	2,321
Umatac	29
Yigo	505
Yona	732
TOTAL CUSTOMERS	**10,359**

STAFFING

Transmission & Distribution

Section	FY2016	FY2017
Overhead	48	48
Underground	11	12
Substation	18	17
Meter	12	8
Relay	7	7
Administration	7	5
TOTAL FTE	103	97
Eligible Retirees (30+ years)		**9**
Eligible Retirees (25-29 years)		**11**
Apprenticeship Program *(Commencing FY 2018)*		10-15

Transmission & Distribution
ACTIVITIES

- Customer Work Orders
- 24/7 Troubleshooting
- Streetlight Repairs/Installation
- Line Hardware Maintenance
- Wood Pole Replacements/Pole Painting
- Vegetation Management

CUSTOMER WORK ORDERS

- Line Extensions
- New Installation – OH, UG, Hybrid
- GPA Plant Improvements
- Work Clearances
- Temporary Power
- Reconnections/Removals/Relocations
- Approximately 400 work orders received monthly

TROUBLESHOOTING

- Daily trouble calls
- 5 2-man crews of journeymen linemen handle trouble shooting activities -24/7
- Approximately 200 trouble calls monthly
- Most efforts today are reactive to customer complaints
- Plan is to eventually use smart grid data to identify and make needed repairs proactively

STREETLIGHTS

- Over 10,000 lights remaining to upgrade from HPS to LED
- Re-bid for more LED in process
- New rate for LED lights established and approved by CCU and PUC

LINE HARDWARE MAINTENANCE

- Line Inspection
- Infrared/Thermal Vision – discovers hot spots
- Predictive Line maintenance - detect signature anomalies on Electrical Equipment before any failures occur
- Hardware change outs of crossarms, insulators, fuse cutouts, static wire ongoing
- Much of the grid is several decades old and hardware such as cross arms, fuse cutouts, insulators need replacement in some areas

WOODEN POLE REPLACEMENT PROGRAM

POLE TYPE	COUNT
Wood	4,443
Concrete	29,751
Steel	2,086
TOTAL POLES	36,280
% Concrete/Steel	87.8%

– Replacement program on-going and crews prioritize hollow/rotten poles for replacement

POLE PAINTING PROGRAM WITH MAYORS

- Mayors paint poles 8 feet from ground level with Reflective Paint
- Mayors receive credit for poles painted every 2-3 years as necessary – based on normal wear
- Credit estimated at $10 per pole
- Budgeted for paint supplies in FY 2018

VEGETATION MANAGEMENT PROGRAM

Vegetation Management Activities

- Vegetation Management Contractor to focus on Main Routes/Main Lines
- Policy/Agreement with Village Mayors
- In-House Trimming
- Program Goals
  - 2 to 3-year program to achieve consistent maintenance and get ahead of vegetation growth

Vegetation Management Activities

Policy with Village Mayors

- Crews trim vegetation away from energized lines
- Mayors maintain vegetation below the “Critical Area”
- Obtain assistance from Mayors to cut down trees which grow high enough to reach lines. Helps avoid damages during storms and expedites power recovery
- GPA credits mayors based on linear footage cleared on a monthly/annual basis
- Credits can apply towards GPA T&D Services (lighting for ball field, electrical assistance, etc.)
- Credit amount will be based on similar costs paid to existing contractors ~ $2/per linear foot

Policy with Village Mayors

- Crews trim vegetation away from energized lines – the Critical Area
- Mayors maintain vegetation below the Critical Area

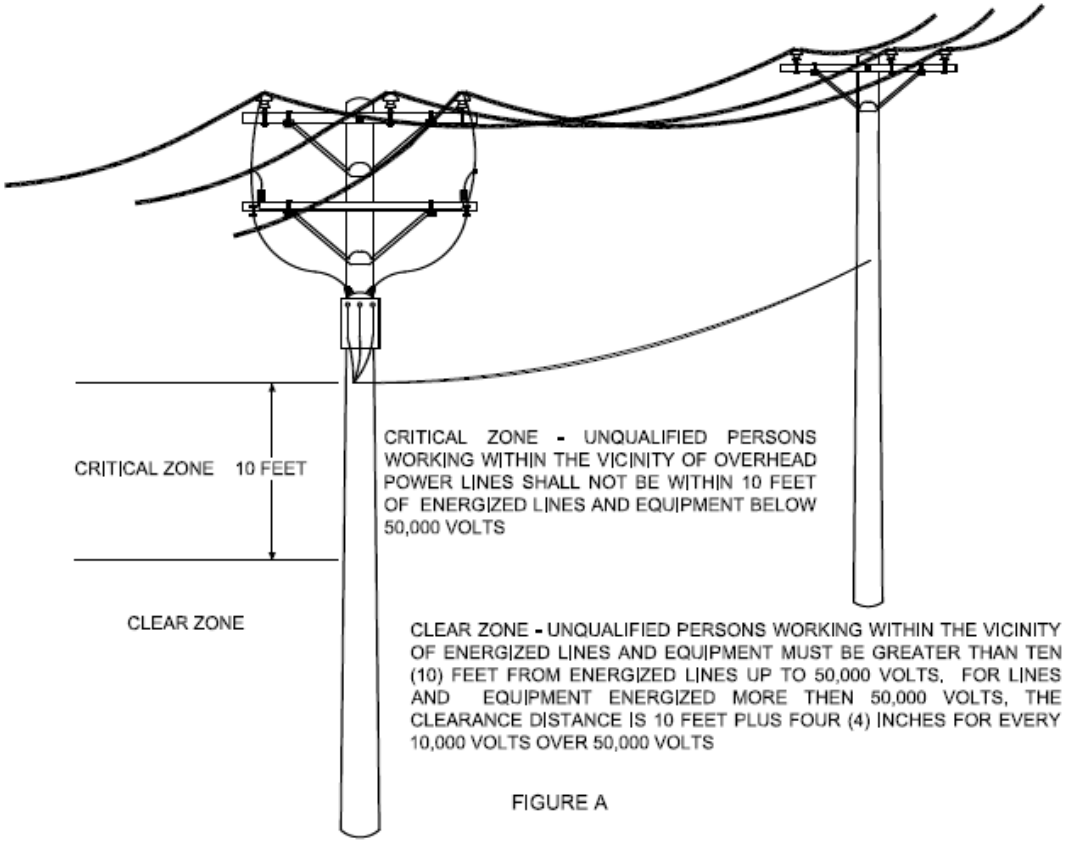


FIGURE A

- Worked with Village Mayors to finalize program – 11 Mayors interested in participating
- Formal launching targeted for Oct 1, 2018

Vegetation Management Activities

T&D to establish Tree Trimming Team

- Team consists of Operators and Tree Trimmers
- One crew for each Sector – North, Central, South
- Operators & Tree Trimmers to be hired FY 2018

Equipment Purchases

- 3 Mulchers – Delivered
- 3 Boom Mowers-Telescoping Trimmer
- 3 Dump Trucks

} Arrived February 2018

VEGETATION MANAGEMENT

MULCHERS - Delivered







Telescoping Trimmer

- Delivered







Summary

- The grid is substantially improved and reliable. Work continues towards a fully underground system.
- Programs are being implemented to continue to improve reliability.
- Vegetation management is a significant challenge, but programs are being implemented to establish a sustainable program. The public's help will be needed in order to substantially eliminate vegetation outages.
- Manpower is being added in order to keep up with the system's and customer needs. Apprenticeship program is being continued in order to have an adequate experienced workforce for many years.
- Questions? Thank you!

Assessment & Maintenance of Guam Memorial Hospital (GMH) Main Distribution Panel

July 15, 2018



Sequence of Events

- Initial assessment conducted by GPA on June 27th
- Thermal Vision conducted by GPA on June 29th
- GMH approved Scope of Work July 9th
- Outage Taken on July 15th to conduct preventive maintenance and to correct discrepancies shown in following page found through a thermal vision inspection.
  - These are the highest points of possible failure
- Outage also allowed for upgrading of the GPA pad mount switch which was planned earlier

SCOPE OF GPA WORK

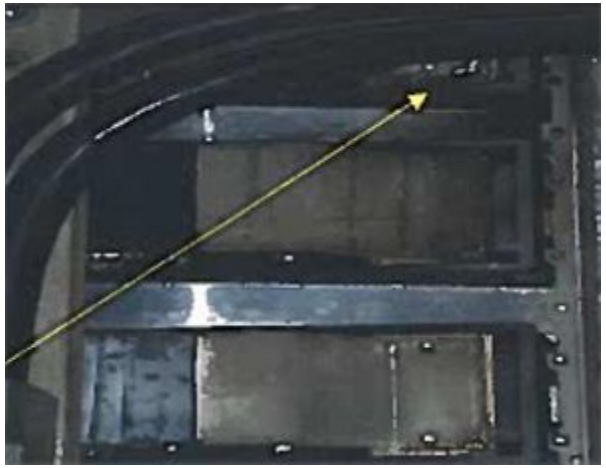
- Wipe down all equipment and remove all dust
- Cover and seal exposed, unused conduits
- Create labels for all equipment
- Clean all mating surfaces and apply a light coat of corrosion grease
- Wire brush secondary conductor ends or cut and re-terminate if necessary
- Upgrade GPA Pad mounted Switch

HOT SPOTS IDENTIFIED









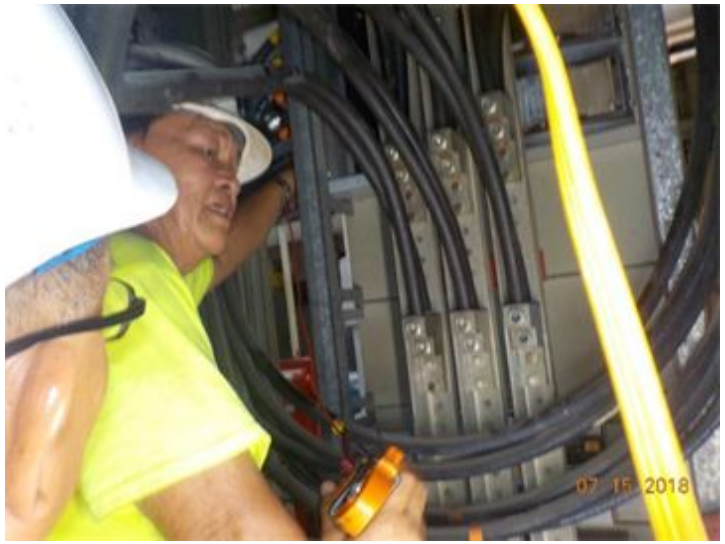
Bus and Disconnect Removed

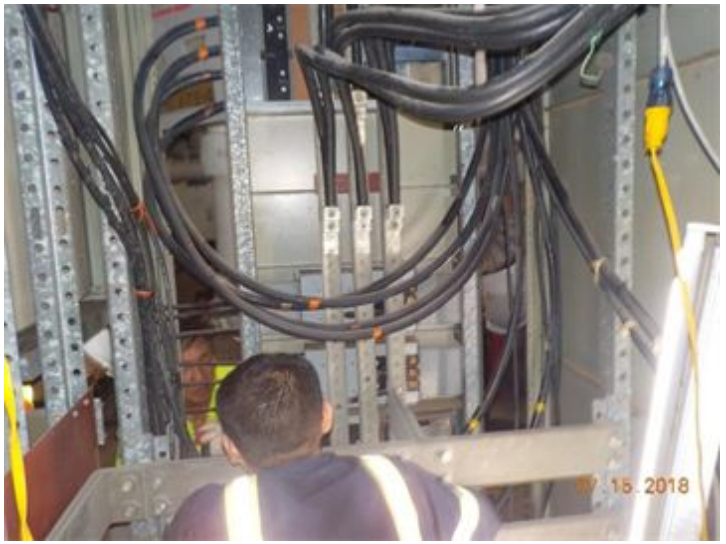




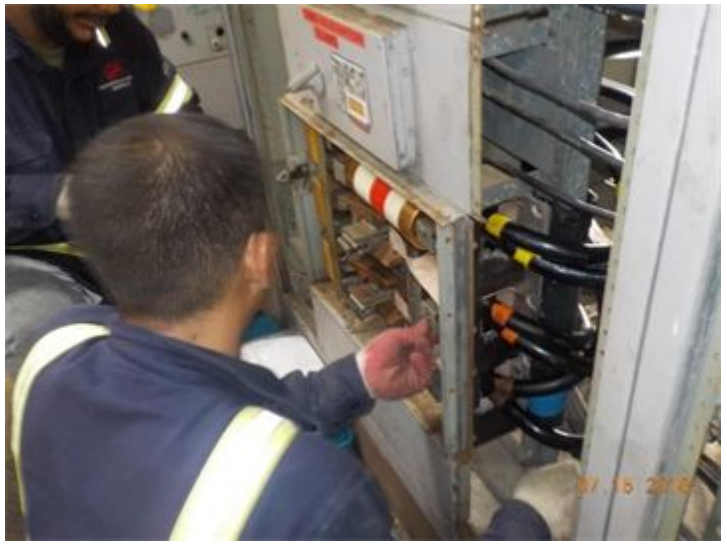


Route conductors to Spare Disconnect









Cleaned mating surface & provided a light coat of corrosion grease. Install new 500A fuses



Before



After



Tighten Terminal Lugs







GMH PERSONNEL VACUUMED INSIDE THE COMPARTMENTS AND WIPED BUS BARS AND CABLES





COVERED UNUSED CONDUITS

GPA PAD MOUNT SWITCH REPLACEMENT









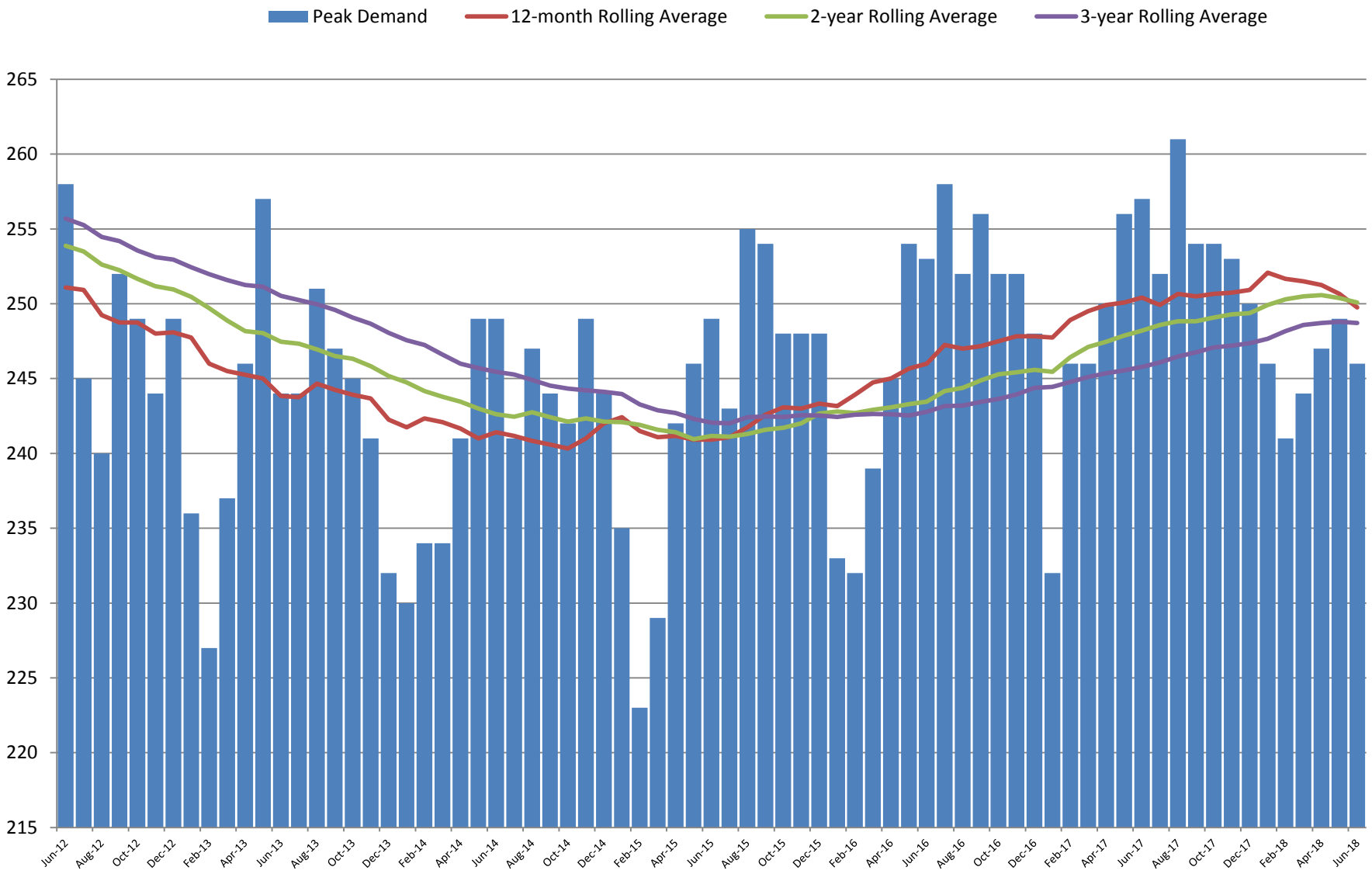
GPA PAD MOUNT SWITCH REPLACEMENT



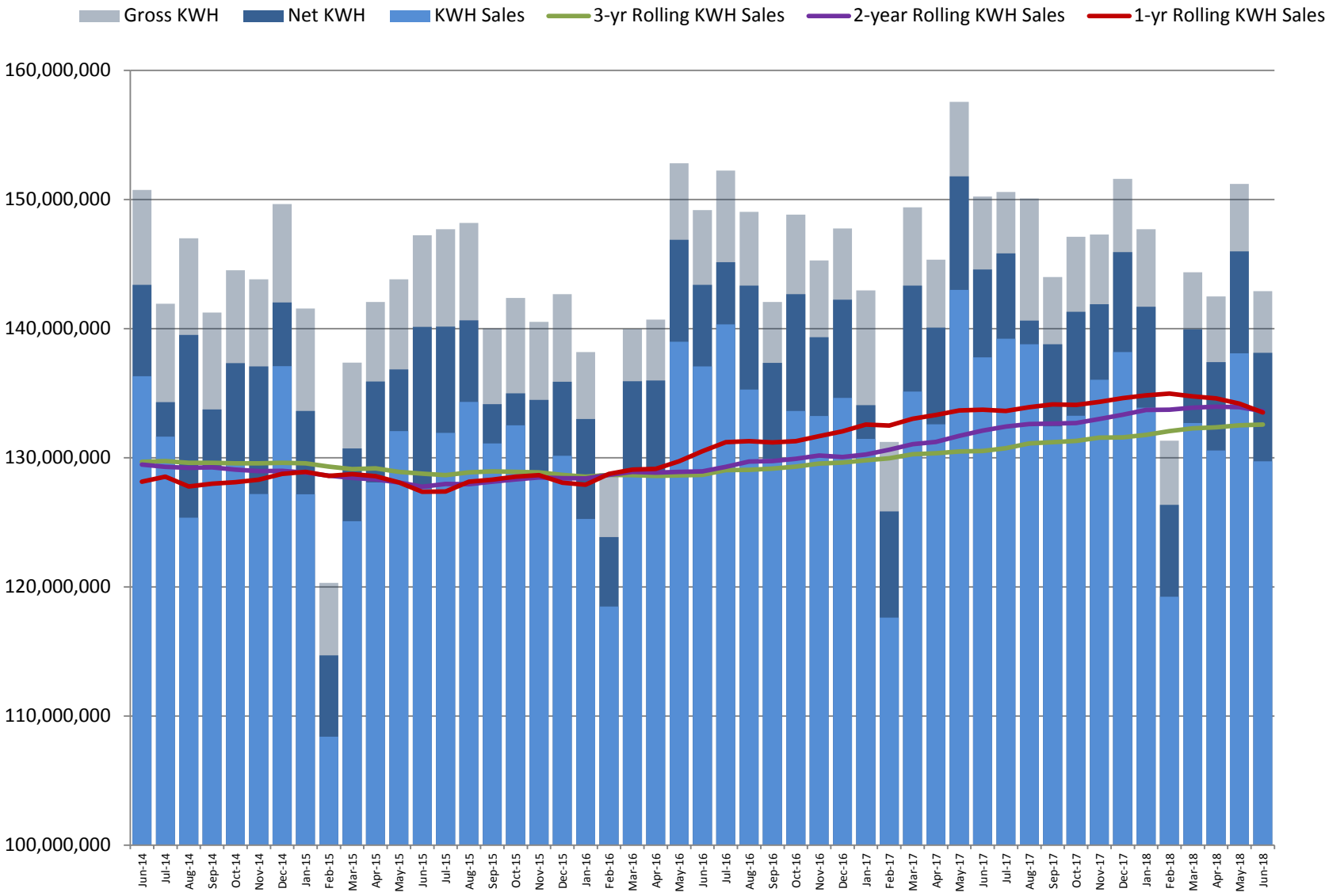




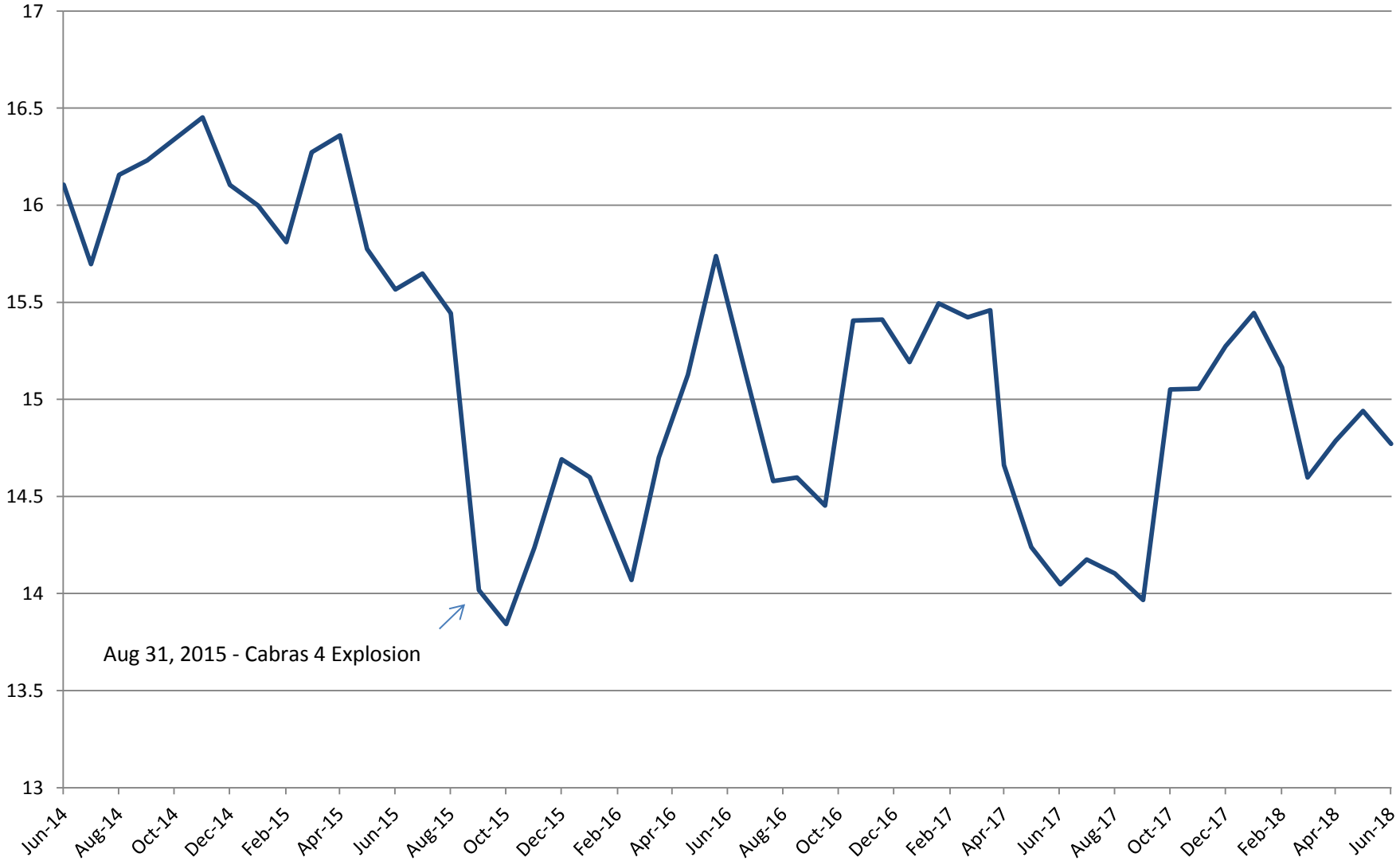
Historical Monthly Peak Demand
June 2012 - June 2018



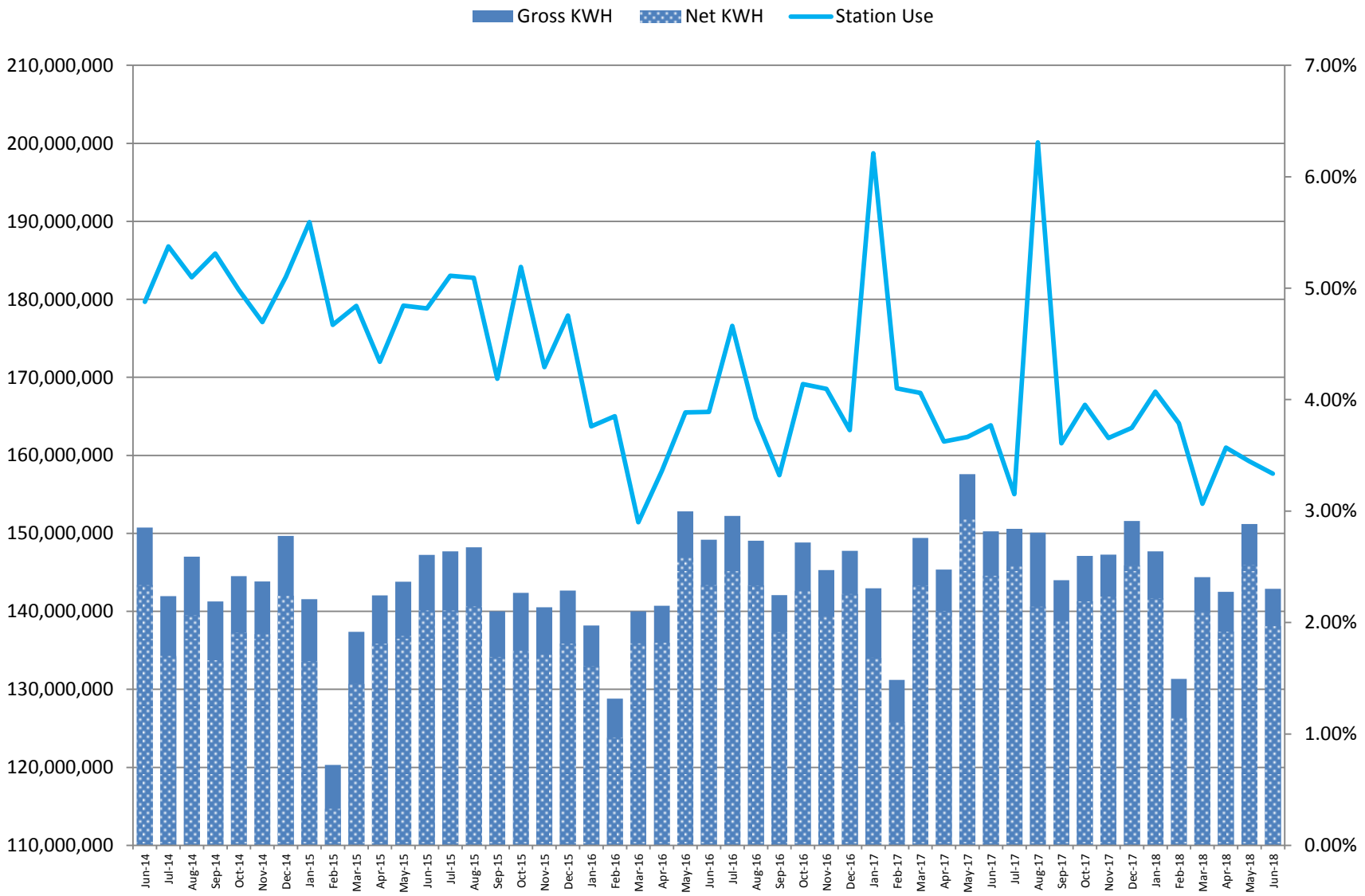
Historical KWH Sales
June 2014 - June 2018



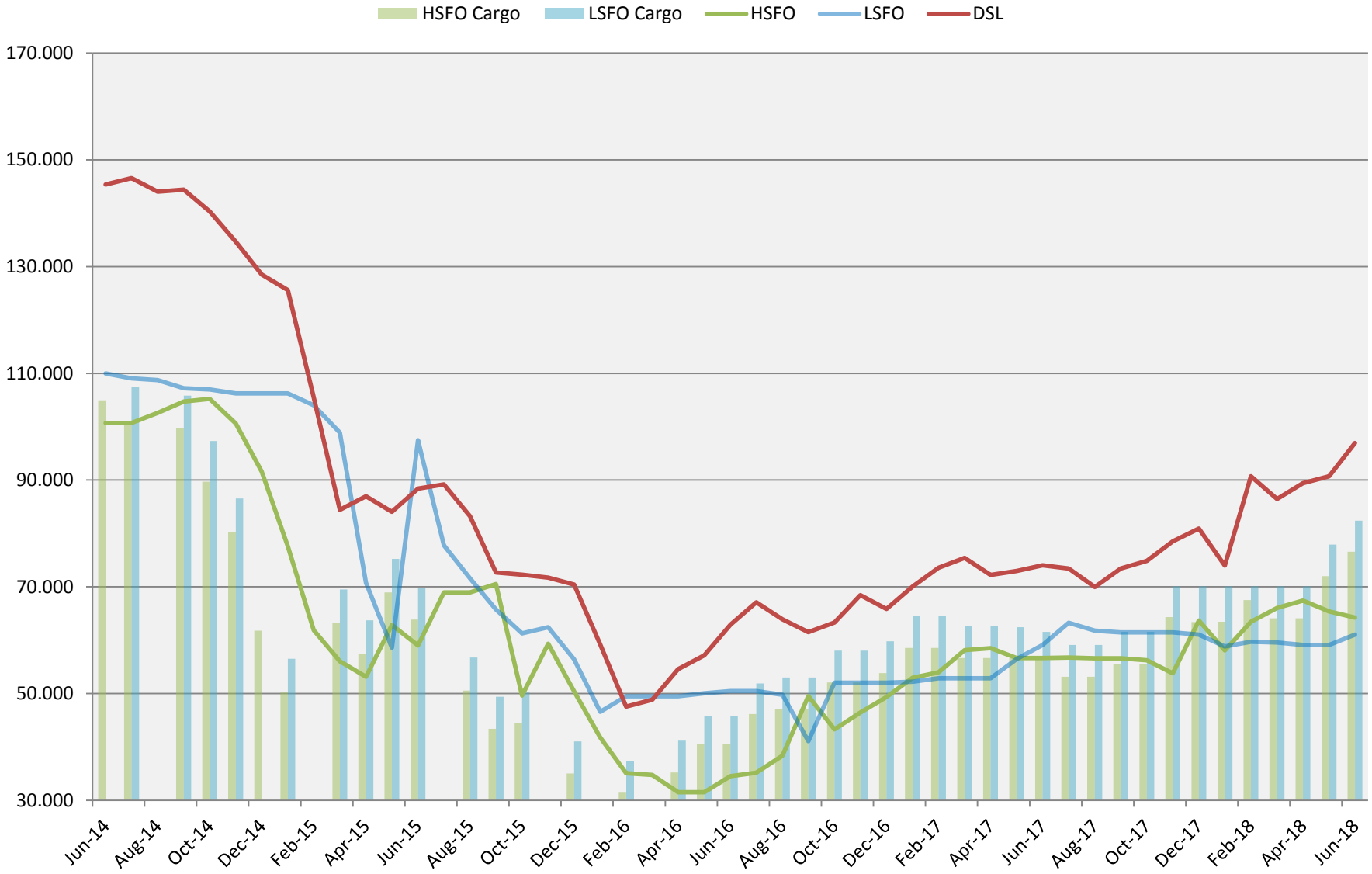
SYSTEM GROSS HEAT RATE
(KWH/Gal)
June 2014 - June 2018



Gross and Net Generation (KWH)
June 2014- June 2018



Fuel Cargo and Fuel Consumption Costs ($/bbl)
June 2014 - June 2018



GUAM POWER AUTHORITY
ATURIDAD ILEKTRESEDAT GUAHAN
P.O. BOX 2977 • HAGATNA, GUAM, USA 96932-2977

MEMORANDUM

TO: Safety Administrator June 6, 2018

FROM: Utility Administrative Aide

SUBJECT: **Vehicle Accident/Injury Cases for the Month of May 2018**

INJURY: One (1)
An employee from Generation was operating an electric 4-1/2 inch Bosch Angle Grinder. Employee stated he was cutting a spanner nut for the CWP 1A pump when the cutting disc shattered. As he was pulling his hand towards him the cutting disc made contact with his right index finger sustaining a ½ inch abrasion through his cotton glove. Due to the discrepancies found with the grinder, it was taken out of service. Employee declined and signed the medical treatment form and standard first aid was administrated for his injury. No lost work days was incurred as a result of this injury.

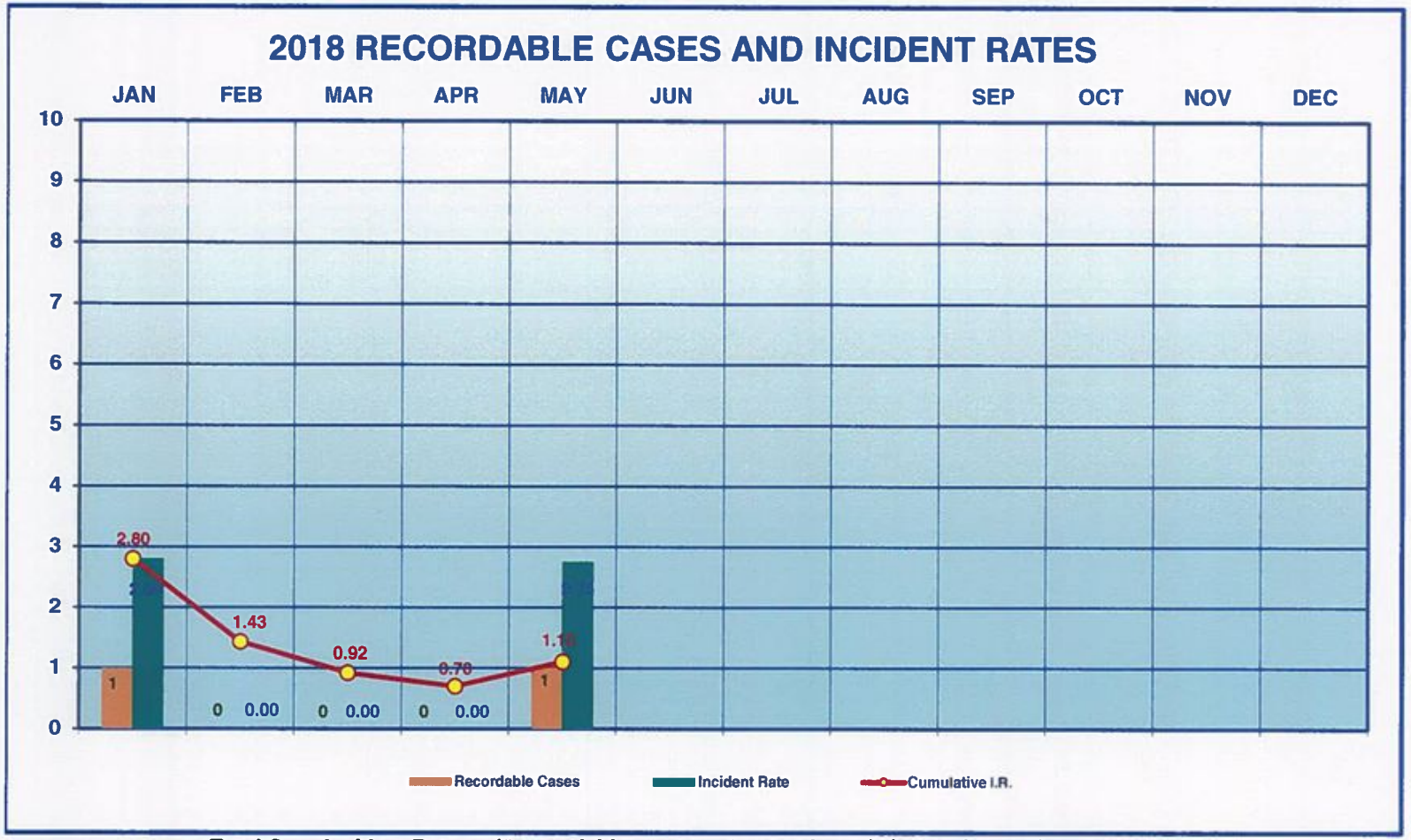
VEHICULAR ACCIDENT/DAMAGE: One (1)
An employee from T&D was assigned to change out a meter at the Flora Pago Gardens Complex. After completing his assigned task he proceeded to reverse out of the parking stall and had made contact with a black Ford F-150. The F-150, License # ME 2070 sustain minor scratches, GPA Official #5045 is a White 2001 Ford Ranger Pick Up with no damage, assigned to T&D Meter Shop.

If you should have any question(s), please contact me at the Safety Office.

Gabina Q. Ignacio

cc: General Manager
AGMA
Safety Files

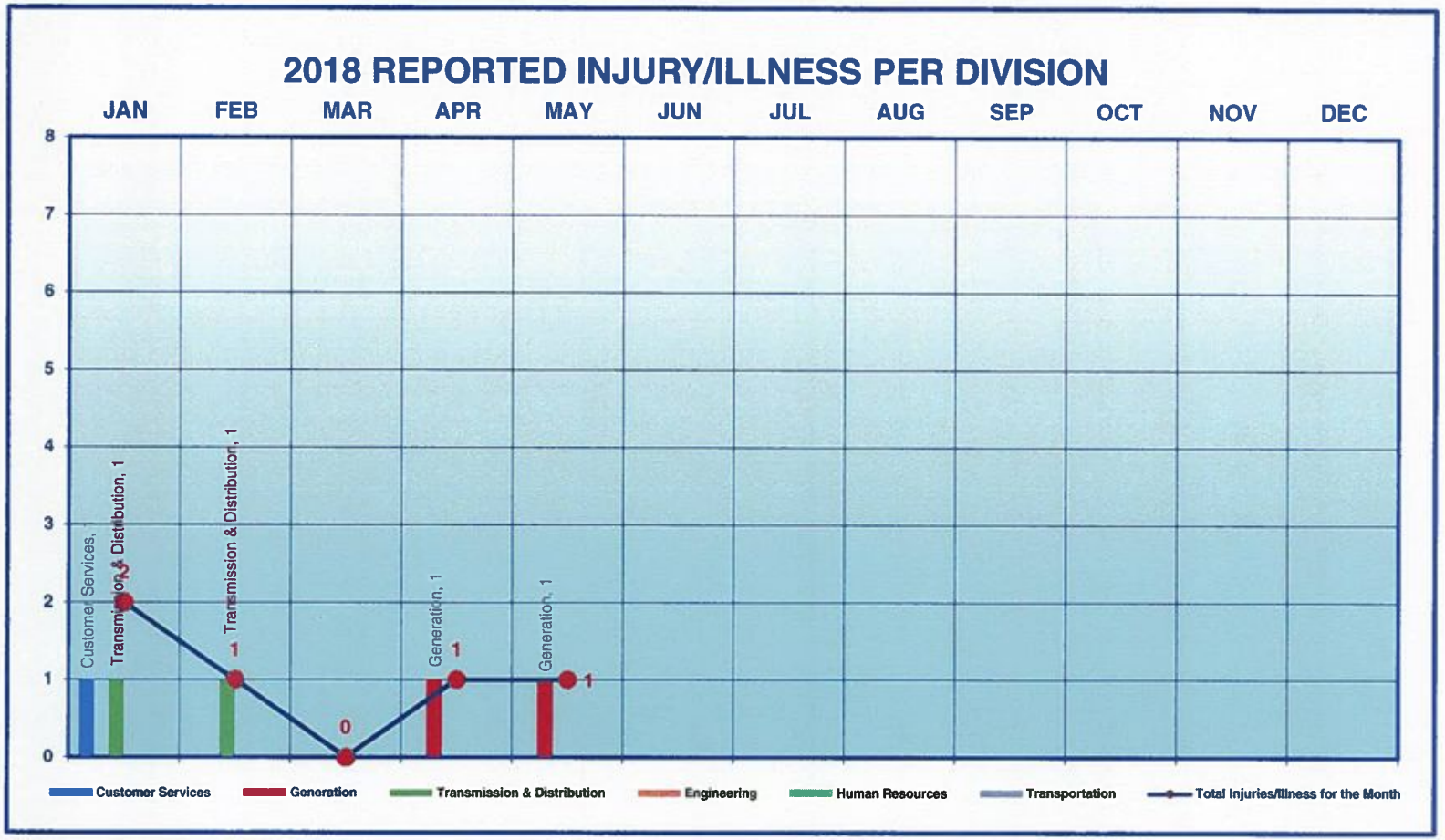
SAFETY DIVISION MONTHLY REPORT



Total Case Incident Rates = (# recordable cases x 200,000 hours) / # total annual work hours

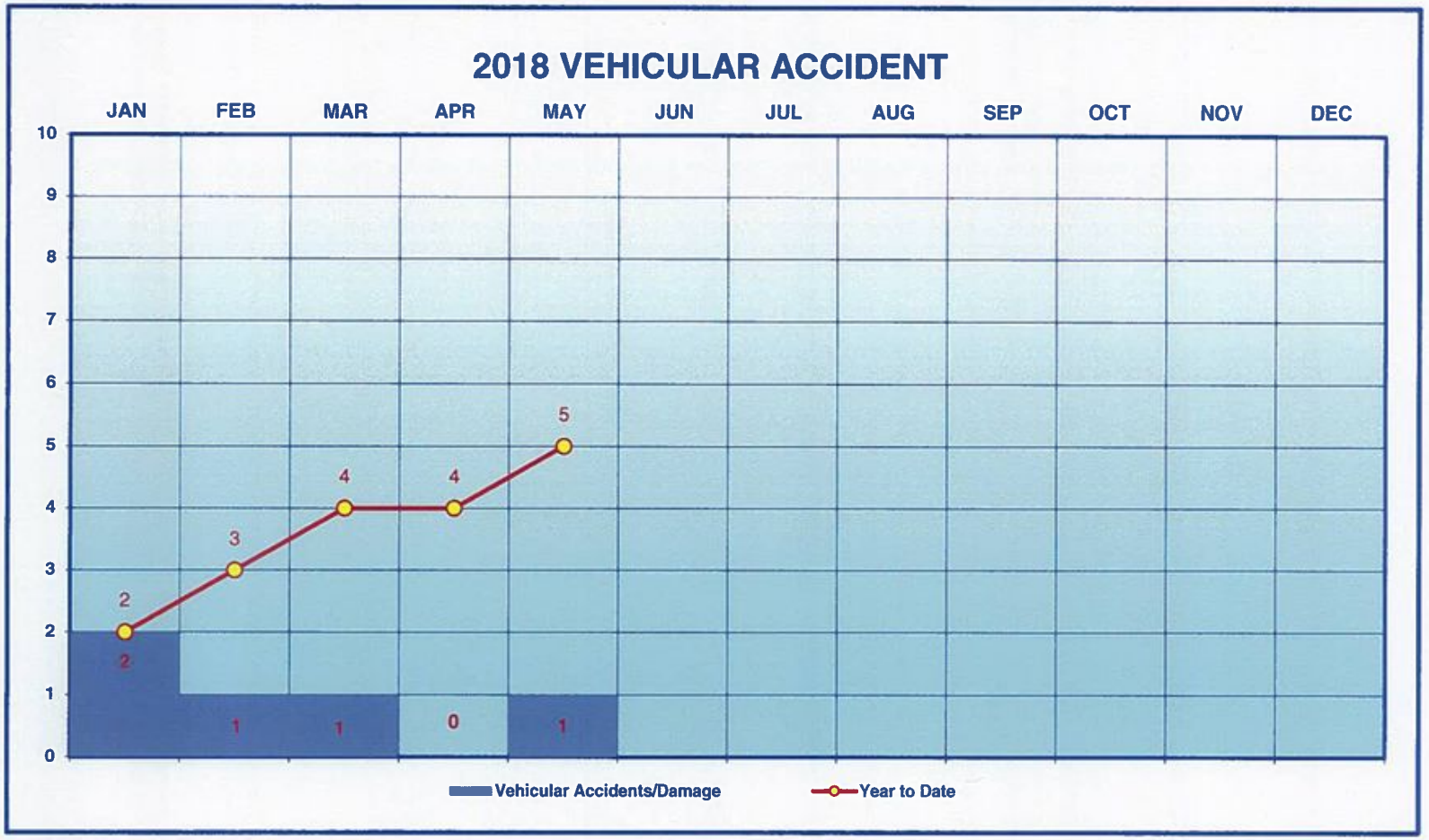
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Recordable Cases	1	0	0	0	1							
Incident Rate	2.80	0.00	0.00	0.00	2.75							
Cumulative I.R.	2.80	1.43	0.92	0.70	1.10							

SAFETY DIVISION MONTHLY REPORT



	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Customer Services	1											
Generation				1	1							
Transmission & Distribution	1	1										
Human Resources												
Engineering												
Transportation												
Total Injuries/Illness for the Month	2	1	0	1	1							

SAFETY DIVISION MONTHLY REPORT



	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Vehicular Accidents/Damage	2	1	1	0	1							
Year to Date	2	3	4	4	5							

Accidents attributed to Employee fault	1	0	1	0	1							

GUAM POWER AUTHORITY
ATURIDAD ILEKTRESEDAT GUAHAN
P.O. BOX 2977 • HAGATNA, GUAM, USA 96932-2977

MEMORANDUM

TO: Safety Administrator July 12, 2018

FROM: Utility Administrative Aide

SUBJECT: **Vehicle Accident/Injury Cases for the Month of June 2018**

INJURY: Zero (0)

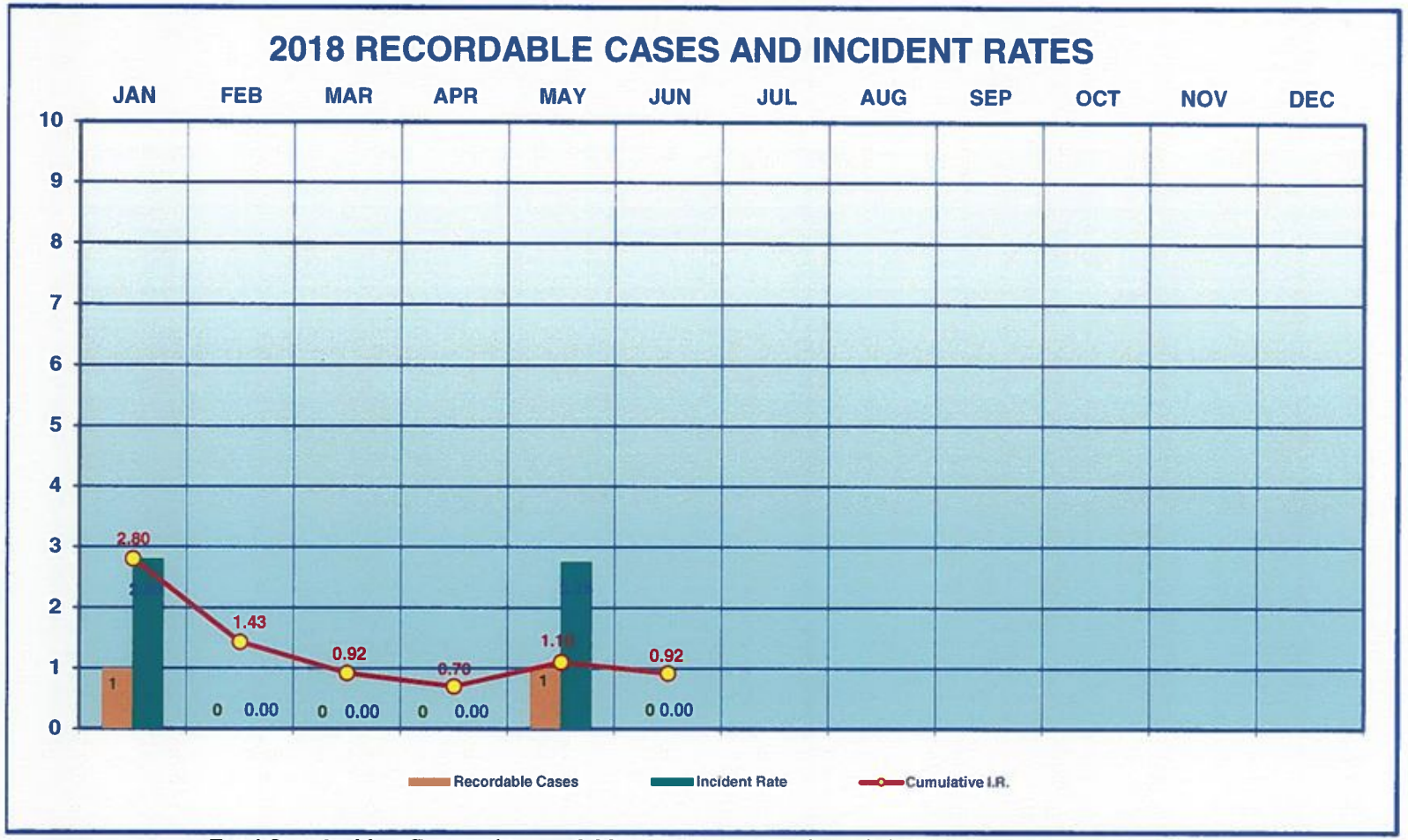
VEHICULAR ACCIDENT/DAMAGE: One (1)
An employee from T&D, Equipment Operator Leader II, was following the traffic flow alongside an auto accident scene in Agat. As he came to a stop, a vehicle behind him made contact with the rear of his Official # 5409, damaging the rear bumper.

If you should have any question(s), please contact me at the Safety Office.

Gabina Q. Ignacio

cc: General Manager
AGMA
Safety Files

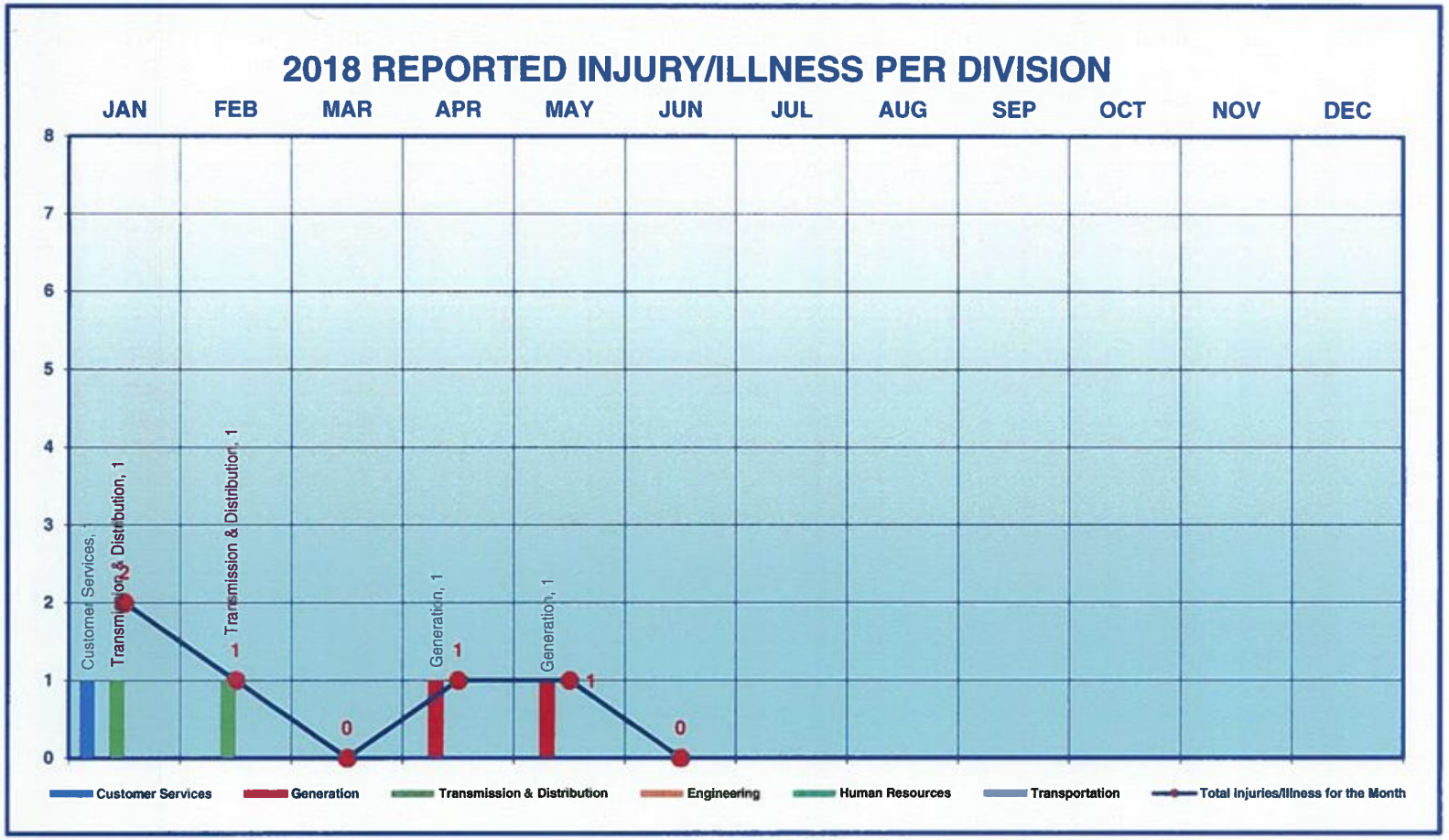
SAFETY DIVISION MONTHLY REPORT



Total Case Incident Rates = (# recordable cases x 200,000 hours) / # total annual work hours

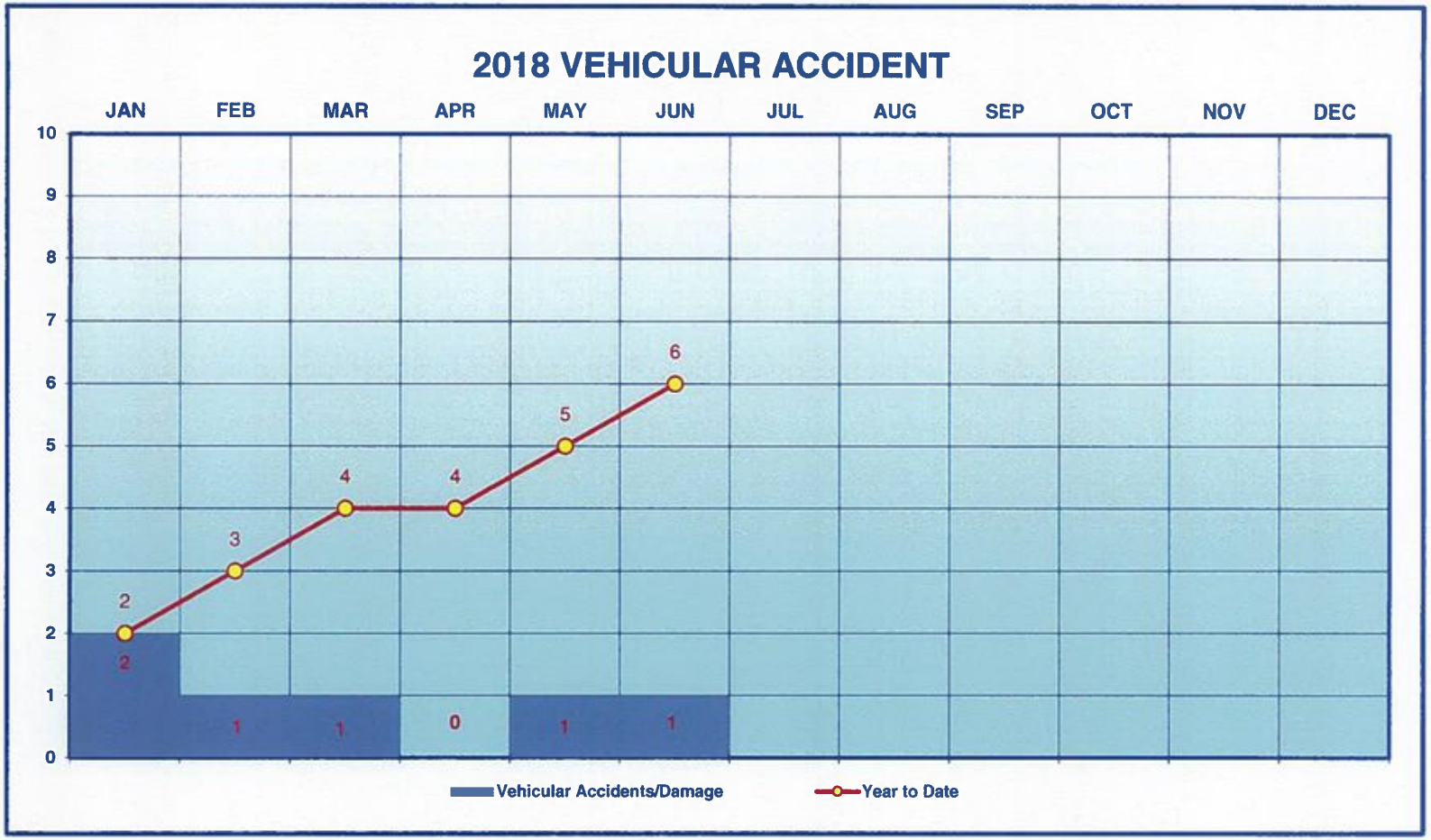
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Recordable Cases	1	0	0	0	1	0						
Incident Rate	2.80	0.00	0.00	0.00	2.75	0.00						
Cumulative I.R.	2.80	1.43	0.92	0.70	1.10	0.92						

SAFETY DIVISION MONTHLY REPORT

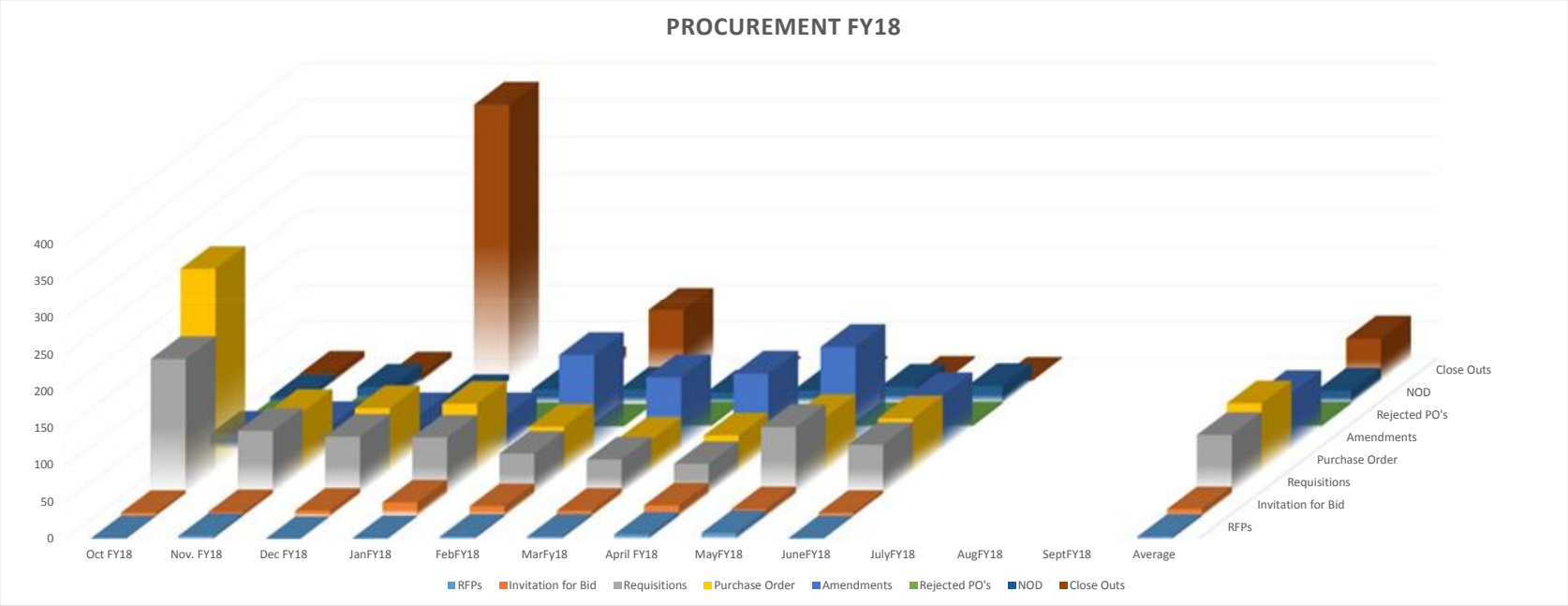


	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Customer Services	1											
Generation				1	1							
Transmission & Distribution	1	1										
Human Resources												
Engineering												
Transportation												
Total Injuries/Illness for the Month	2	1	0	1	1	0						

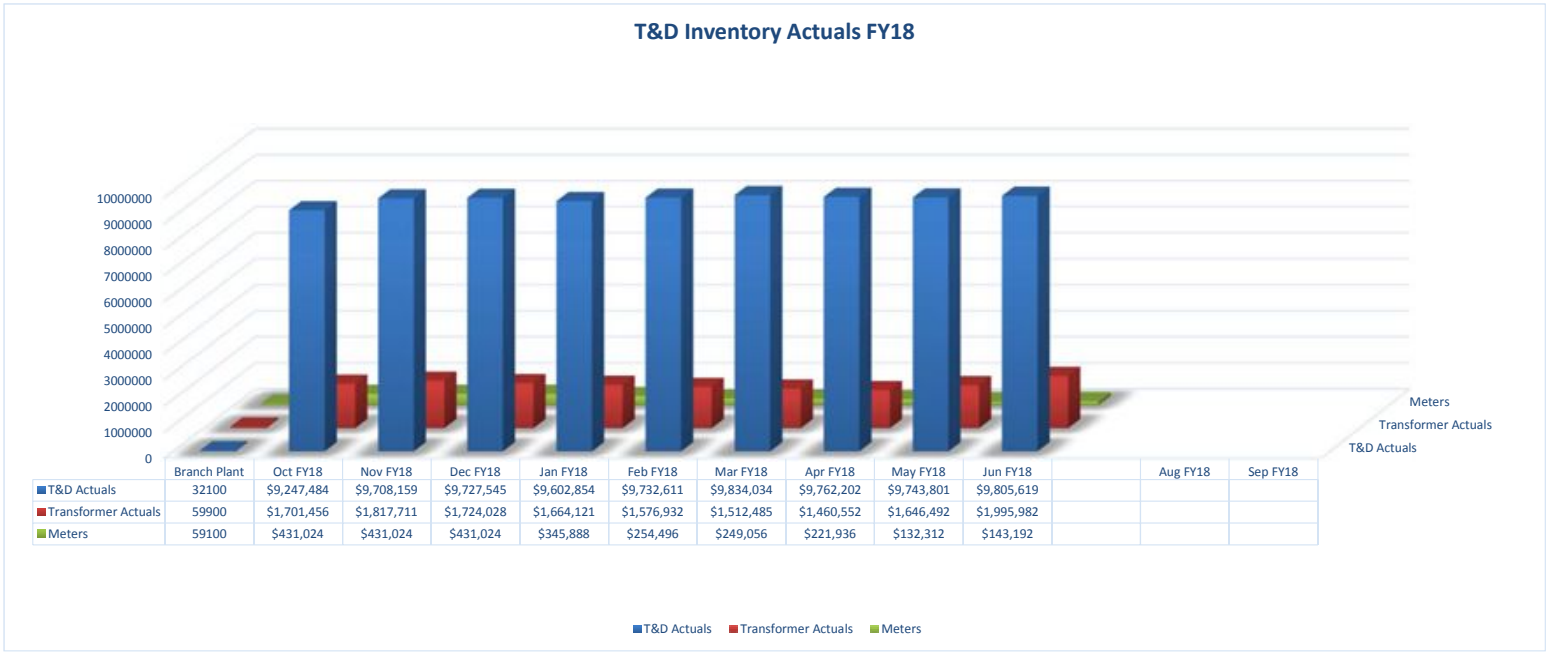
SAFETY DIVISION MONTHLY REPORT



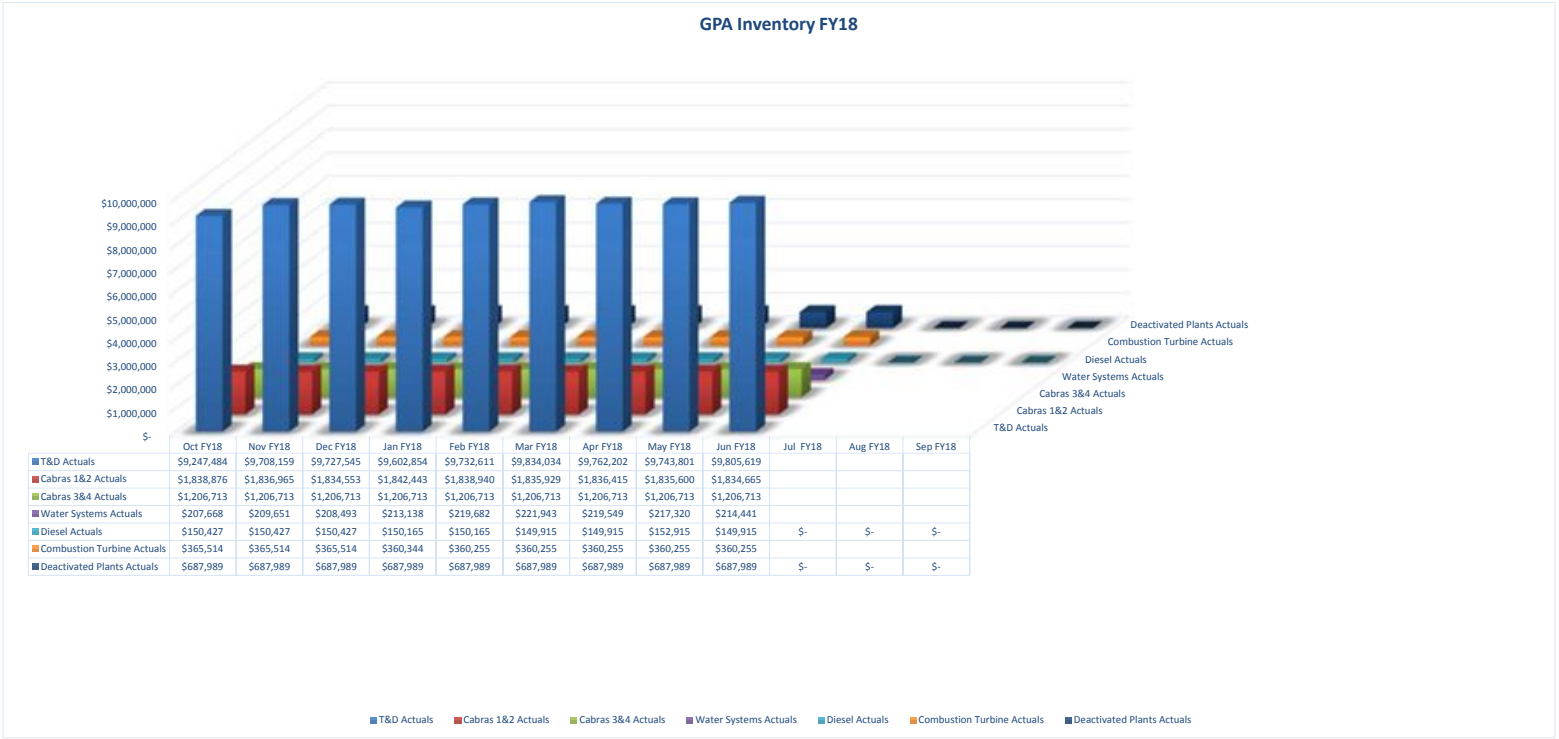
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Vehicular Accidents/Damage	2	1	1	0	1	1						
Year to Date	2	3	4	4	5	6						
Accidents attributed to Employee fault	1	0	1	0	1	0						



	Oct FY18	Nov. FY18	Dec FY18	JanFY18	FebFY18	MarFy18	April FY18	MayFY18	JuneFY18	JulyFY18	AugFY18	SeptFY18	Average
RFPs	1	4	0	1	3	3	6	8	1				3
Invitation for Bid	5	6	8	19	14	8	15	10	5				10
Requisitions	183	86	78	77	55	47	41	91	67				80.5555556
Purchase Order	275	81	86	92	61	43	49	74	72				92.5555556
Amendments	**21**	**34**	**46**	**46**	**127**	**97**	**102**	**138**	**73**				76
Rejected PO's	4	9	0	2	0	3	0	2	3				2.55555556
NOD	9	23	9	19	19	15	18	23	24				17.6666667
Close Outs	10	9	374	16	96	3	3	3	2				57.3333333



	Branch Plant	Oct FY18	Nov FY18	Dec FY18	Jan FY18	Feb FY18	Mar FY18	Apr FY18	May FY18	Jun FY18		Aug FY18	Sep FY18
T&D Actuals	32100	$9,247,484	$9,708,159	$9,727,545	$9,602,854	$9,732,611	$9,834,034	$9,762,202	$9,743,801	$9,805,619			
Transformer Actuals	59900	$1,701,456	$1,817,711	$1,724,028	$1,664,121	$1,576,932	$1,512,485	$1,460,552	$1,646,492	$1,995,982			
Meters	59100	$431,024	$431,024	$431,024	$345,888	$254,496	$249,056	$221,936	$132,312	$143,192			



	Oct FY18	Nov FY18	Dec FY18	Jan FY18	Feb FY18	Mar FY18	Apr FY18	May FY18	Jun FY18	Jul FY18	Aug FY18	Sep FY18
T&D Actuals	$9,247,484	$9,708,159	$9,727,545	$9,602,854	$9,732,611	$9,834,034	$9,762,202	$9,743,801	$9,805,619			
Cabras 1&2 Actuals	$1,838,876	$1,836,965	$1,834,553	$1,842,443	$1,838,940	$1,835,929	$1,836,415	$1,835,600	$1,834,665			
Cabras 3&4 Actuals	$1,206,713	$1,206,713	$1,206,713	$1,206,713	$1,206,713	$1,206,713	$1,206,713	$1,206,713	$1,206,713			
Water Systems Actuals	$207,668	$209,651	$208,493	$213,138	$219,682	$221,943	$219,549	$217,320	$214,441			
Diesel Actuals	$150,427	$150,427	$150,427	$150,165	$150,165	$149,915	$149,915	$152,915	$149,915	$-	$-	$-
Combustion Turbine Actuals	$365,514	$365,514	$365,514	$360,344	$360,255	$360,255	$360,255	$360,255	$360,255			
Deactivated Plants Actuals	$687,989	$687,989	$687,989	$687,989	$687,989	$687,989	$687,989	$687,989	$687,989	$-	$-	$-

Run Date: 7/10/2018
Run Time: 8:00:14PM

Report ID: DELRATIO
Page 77 of 7

Guam Power Authority
Delinquent Active Accounts Summary Report
As of - 07/10/2018

Rate Classification	Total Cust	Del Cust	Del 28-45	Del 46-60	Del 61-90	Over-90	Current Balance	28-45 Days	46-60 Days	61-90 Days	>90 Days	Total Arrears	Total Due
Residential(ERES-R)	42,548	2,527	2,503	82	20	34	5,776,752.04	575,983.24	12,483.68	4,251.05	21,174.95	613,892.92	6,390,644
		5.94%	5.88%	0.19%	0.05%	0.08%							
Small Gen Non Demand(EGEN-G)	4,137	195	192	27	2	7	1,299,176.95	111,824.94	10,674.62	1,389.96	19,361.78	143,251.30	1,442,428
		4.71%	4.64%	0.65%	0.05%	0.17%							
Small Gen Demand(EGEND-J)	981	76	76	27	3	6	2,967,315.46	235,670.16	25,793.27	13,046.03	86,787.03	361,296.49	3,328,611
		7.75%	7.75%	2.75%	0.31%	0.61%							
Large General(ELPS-P)	119	10	10	4	0	0	6,119,175.02	630,465.95	156,191.61	0.00	0.00	786,657.56	6,905,832
		8.40%	8.40%	3.36%	0.00%	0.00%							
Private Streetlight(EPOL-H)	532	21	21	7	1	0	11,917.97	676.57	218.88	36.66	0.00	932.11	12,850
		3.95%	3.95%	1.32%	0.19%	0.00%							
Sub-Total (Private)	**48,317**	**2,829**	**2,802**	**147**	**26**	**47**	**16,174,337.44**	**1,554,620.86**	**205,362.06**	**18,723.70**	**127,323.76**	**1,906,030.38**	**18,080,367**
		5.86%	**5.80%**	**0.30%**	**0.05%**	**0.10%**							
Small Gov Non Demand(ESGS-S)	700	29	29	1	0	0	379,884.82	10,069.12	888.91	0.00	0.00	10,958.03	390,842
		4.14%	4.14%	0.14%	0.00%	0.00%							
Small Gov Demand(ESGSD-K)	340	5	5	1	0	1	2,055,914.51	5,466.61	2,037.64	0.00	60.89	7,565.14	2,063,479
		1.47%	1.47%	0.29%	0.00%	0.29%							
Large Government(ELGS-L)	46	1	1	1	0	1	1,536,468.85	33,909.85	33,017.38	0.00	718.39	67,645.62	1,604,114
		2.17%	2.17%	2.17%	0.00%	2.17%							
Gov Streetlight(ESTL-F)	559	65	65	1	0	0	519,420.74	41,116.35	29.74	0.00	0.00	41,146.09	560,566
		12%	11.63%	0.18%	0.00%	0.00%							
Sub-Total (Government)	**1,645**	**100**	**100**	**4**	**0**	**2**	**4,491,688.92**	**90,561.93**	**35,973.67**	**0.00**	**779.28**	**127,314.88**	**4,619,003**
		6.08%	**6.08%**	**0.24%**	**0.00%**	**0.12%**							
GRAND TOTAL	**49,962**	**2,929**	**2,902**	**151**	**26**	**49**	**20,666,026.36**	**1,645,182.79**	**241,335.73**	**18,723.70**	**128,103.04**	**2,033,345.26**	**22,699,371**
		5.86%	**5.81%**	**0.30%**	**0.05%**	**0.10%**							

CUSTOMER SERVICE DIVISION – June 2018

SUMMARY REPORT

SITE	Less than 10 Mins.	%	10-15 Mins.	%	15-30 Mins.	%	30-45 Mins.	%	TOTAL	Location %
GBN	1,892	78%	394	16%	86	4%	29	2%	2,401	28%
HAGATNA	2,187	76%	652	23%	50	1%	----	----	2,889	33%
UPPER TUMON	2,723	82%	532	16%	44	1%	24	1%	3,323	39%
TOTAL:	6,802	79%	1,578	18%	180	2%	53	1%	8,613	100%

Government Accounts Receivable: CSD reports invoices for the month of May 2018, for 72 active government accounts with an overall total of $5,369,498.57. 68 accounts were current (94%), 4 accounts arrears (6%). 7 fax/emails issued to government accounts totaling $460,293.63. May 2018 invoices, 68 accounts paid in full.

CREDIT AND COLLECTION

Delinquent Ratio: As of June 2018 the authority reported a total 48,317 active customers. The "Delinquent Ratio" was recorded at 5.86% with 2,829 total delinquent accounts, total arrears of 1,906,030.38; 1,554,620.86; 2,802 (5.80% / 28-45 days) category; 205,362.06; 147 (0.30% / 46-60 days); 18,723.70; 26 (0.05% 61-90 days); and 127,323.76; 47 (0.10% / Over 90 days).

Bankruptcy: During June 2018 the Bankruptcy reports two (2) customer accounts filed, totaling $837.47 Chapter 7.

Damage Claim: The Damage claim committee received one (1) Damage claim at $250.00 for the month of June 2018.

ACTIVE DELINQUENT – NON PAYMENT

COMMAND CENTER /DISCONNECTIONS/RECONNECTIONS

Single Phase Meters: Credit and Collection issued orders to Command Center to perform remote disconnect/reconnect for a total of 2,047 customers; 1028(50%) were disconnected; 1019(50%) deferred; 0(0%) incompletes.

3 Phase Meters: Credit and Collection issued orders to Disconnect Reconnect crew to perform truck roll out disconnect/reconnect for a total of 44 customers; 35(80%) were disconnected; 9(20%) deferred; 0(%) incompletes.

FY 2018 (June 01-30,2018)

	Scheduled	Disc	Deferred	Complete Vs. Scheduled	Incomplete Disconnections	Disc Vs. Scheduled	Deferred Vs. Scheduled	Incomplete Vs. Scheduled
Jun-18	2,091	1,063	1,028	2,091 100%	0	51%	49%	0%
May-18	1,834	1,003	830	1,833 100%	1	55%	45%	0%
Apr-18	899	569	309	878 98%	21	63%	34%	2%
2nd	4,092	2,010	2,032	4,042 99%	50	49%	50%	1%
1st	3,890	2,237	1,646	3,883 100%	7	58%	42%	0%
TOTAL:	12,806	6,882	5,845	12,727 99%	79	54%	46	0%

FY 2017 (October 01, 2016 – September 30, 2017)

QTR	Scheduled	Disc	Deferred	Complete Vs. Scheduled	Incomplete Disconnections	Disc Vs. Scheduled	Deferred Vs. Scheduled	Incomplete Vs. Scheduled
4th	3,621	2,067	1,553	3,620 100%	1	57%	43%	0%
3rd	4,021	2,683	1,332	4,015 100%	6	67%	33%	0%
2nd	5,125	3,053	2,055	5,108 100%	17	60%	40%	0%
1st	10,187	5,462	4,689	10,151 100%	36	54%	46%	0%
TOTAL:	22,954	13,265	9,629	22,894 100%	60	58%	42%	0%

This concludes the Summary Report for Customer Service Division for the month of June 2018.

Respectfully submitted,

Marissa Fernandez, Admin. Officer

Reviewed / Approved by:

Richard J. Bersamin, USA (A)

DATA: CSD PERSONNEL WORK ACTIVITIES
COMPILED BY: V.CEPEDA (CSR)

REPORTING MONTH: JUNE 2018

MTD CONSOLIDATED REPORT

APPROVED BY:
E.D.MENDIOLA (CSS)

BUSINESS OFFICE/ SATELLITE EMPLOYEE MTD (CONSOLIDATED) REPORT TRANSACTION (TYPE)	GLORIA B. NELSON	% MTD	HAGATNA	% MTD	UPPER TUMON	% MTD	MTD TOTAL
APPLICATION							
NEW INSTALL-PERMANENT (NI1)	8	73%	3	27%	0	0%	11
NEW INSTALL- TEMP (NI2)	13	72%	4	22%	1	6%	18
NEW INSTALL - ST LIGHT (NI3)	58	100%	0	0%	0	0%	58
REC W/OUT METER (NI4)	2	18%	2	18%	7	64%	11
REC W/METER (NI5)	128	27%	125	27%	216	46%	469
NON METERED ACCT (NI6)	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0
NAME CHANGE (NC1)	70		126	33%	184	48%	380
NAME CHANGE ST LIGHT (NC2)	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0
TERMINIATION							
TERMINATION REGULAR (TE1)	123	27%	112	24%	224	49%	459
TERMINATION N/C (TE2)	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0
TERMINATION NON/PAYMENT (TE3)	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0
TERMINATION TYPHOON (TE4)	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0
TERMINATION REMOVAL (TE5)	0	0%	1	50%	1	50%	2
TERM (TE6)	9	90%	0	0%	1	10%	10
OTHER(S)							
WORK CLEARANCE (WC)	26	76%	1	3%	7	21%	34
INVESTIGATION (INV)	6	50%	2	17%	4	33%	12
METER C/O - CALIBRATION (MC1)	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0
METER UP/DOWN GRADE (MC3)	4	100%	0	0%	0	0%	4
MTR RDR FIELD INVESTIGATION (MF1)	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0
MISC PUBLIC SRVC (MPS)	52	72%	5	7%	15	21%	72
REFUND (RFD)	14	29%	19	39%	16	33%	49
RELOCATE METER (RM1)	9	60%	3	20%	3	20%	15
ST LIGHT REPAIR (ST1)	28	100%	0	0%	0	0%	28
OFFICIAL RECEIPT (OR)	43	17%	87	34%	124	49%	254
UPDATE SPECIAL CHARGE (USC)	43	18%	38	16%	153	65%	234
INSPECTION REPORT (IR)	12	41%	6	21%	11	38%	29
COPY OF BILL (COB)	451	23%	574	29%	942	48%	1967
BILL INQUIRY (BILL INQ)	286	17%	450	27%	958	57%	1694
BILL ADJUSTMENT (BILL ADJ)	1	33%	1	33%	1	33%	3
ADDRESS CHANGE (ADDR CHG)	63	26%	81	34%	97	40%	241
DEFERRED PAYMENT AGREEMENT (DPA)	1	50%	0	0%	1	50%	2
ACTIVE DELINQUENTS							
INQUIRY (INQ)	472	30%	619	39%	489	31%	1580
PAYMENT (PYMT)	347	31%	338	31%	421	38%	1106
DO NOT DISCONNECT (DND)	3	100%	0	0%	0	0%	3
EXTENSION (EXT)	175	29%	204	34%	217	36%	596
RECONNECT(REC)	124	33%	93	24%	163	43%	380
RETURNED CHECKS	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0
INACTIVES							0
INQUIRY (INQ)	23	17%	83	61%	30	22%	136
PAYMENT (PYMT)	9	21%	13	31%	20	48%	42
TRANSFER BALANCE (TRF BAL)	6	18%	7	21%	20	61%	33
SMALL CLAIMS	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0
TOTAL TRANSACTION(S)	2609		2997		4326		9932
						192	
VISIT (V)	1813	30%	1951	32%	2310	38%	6074
TELEPHONE (T)	119	12%	500	50%	376	38%	995
MAIL (M)	197	29%	200	29%	283	42%	680
FAX (F)	34	100%	0	0%	0	0%	34
TRANSFER CALL (TRF CALL)	57	25%	100	45%	67	30%	224
OTHER (OTHER)	181	30%	138	23%	287	47%	606
TOTAL INQUIRIES	2401		2889		3323		8613
SERVICE LEVEL							
LESS THAN 10 MINUTES	1892	28%	2187	32%	2723	40%	6802
10-15 MINUTES	394	25%	652	41%	532	34%	1578
16-30 MINUTES	86	48%	50	28%	44	24%	180
> 30 MINUTES	29	55%	0	0%	24	45%	53
TOTAL SERVICE LEVEL	2401		2889		3323		8613

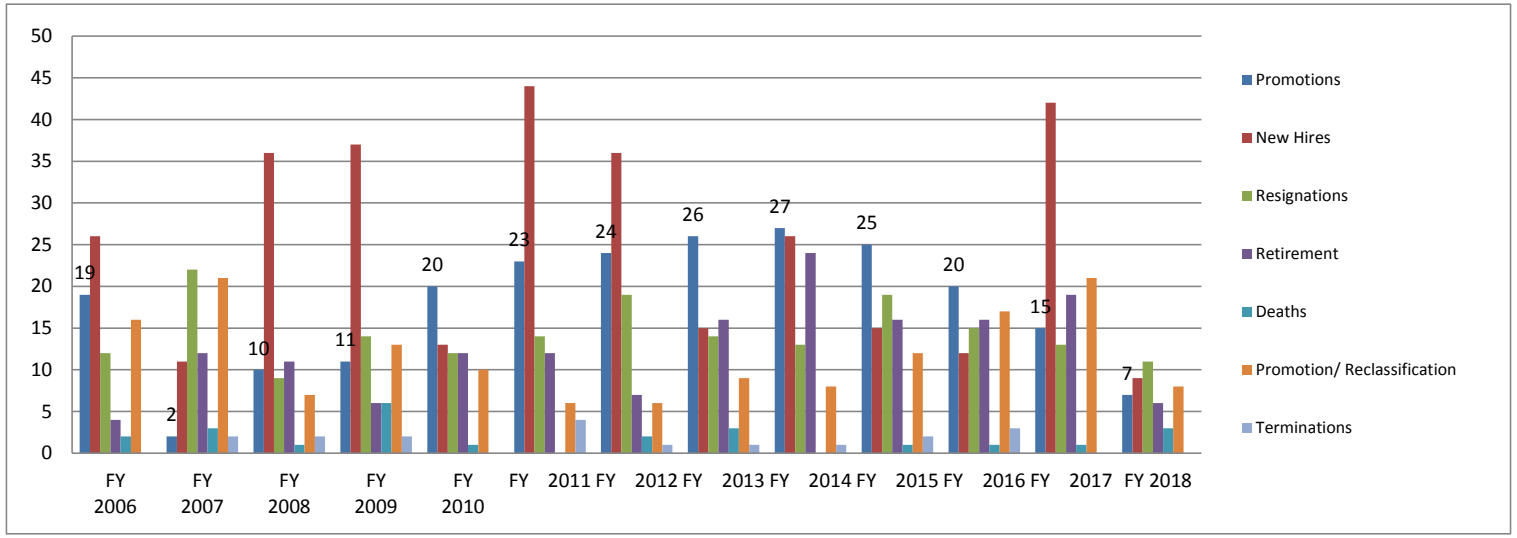
NOTE: INQUIRY TYPE (OTHERS) = INCLUSIVE OF DESK WORK (E.G., NON PAYMENT COMPLETIONS, COMMERCIAL COMPLETIONS, ETC.)

RECRUITMENT ANALYSIS

Fiscal Year	Promotions	New Hires	Resignations	Retirement	Deaths	Promotion/ Reclassifi-cation	Termina-tions	Total Author-ized FTE	Attrition Rate	Total Filled FTE at end of Fiscal Year	Percentage of Filled FTE at end of Fiscal Year
2006	19	26	12	4	2	16	0	584	3.3%	536	91.8%
2007	2	11	22	12	3	21	2	584	7.2%	510	87.3%
2008	10	36	9	11	1	7	2	592	4.5%	525	88.7%
2009	11	37	14	6	6	13	2	592	5.3%	534	90.2%
2010	20	13	12	12	1	10	0	592	4.7%	522	88.2%
2011	23	44	14	12	0	6	4	592	5.7%	536	90.5%
2012	24	36	19	7	2	6	1	568	5.4%	543	95.6%
2013	26	15	14	16	3	9	1	568	6.3%	524	92.3%
2014	27	26	13	24	0	8	1	568	7.3%	512	90.1%
2015	25	15	19	16	1	12	2	539	7.4%	489	90.7%
2016	20	12	15	16	1	17	3	510	7.2%	466	91.4%
2017	15	42	13	19	1	21	0	510	7.1%	476	93.3%
2018	7	9	11	6	3	8	0	510	4.2%	465	91.2%

Recruitment Analysis (FY 2018) ..1 of 2

as of 06/30/18



	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Promotions	19	2	10	11	20	23	24	26	27	25	20	15	7
New Hires	26	11	36	37	13	44	36	15	26	15	12	42	9
Resignations	12	22	9	14	12	14	19	14	13	19	15	13	11
Retirement	4	12	11	6	12	12	7	16	24	16	16	19	6
Deaths	2	3	1	6	1	0	2	3	0	1	1	1	3
Promotion/ Reclassification	16	21	7	13	10	6	6	9	8	12	17	21	8
Terminations	0	2	2	2	0	4	1	1	1	2	3	0	0

TOTAL NO. OF EMPLOYEES	**536**	**510**	**525**	**534**	**522**	**536**	**543**	**524**	**512**	**489**	**466**	**476**	**465**

Recruitment Analysis (FY 2018) .. 2 of 2

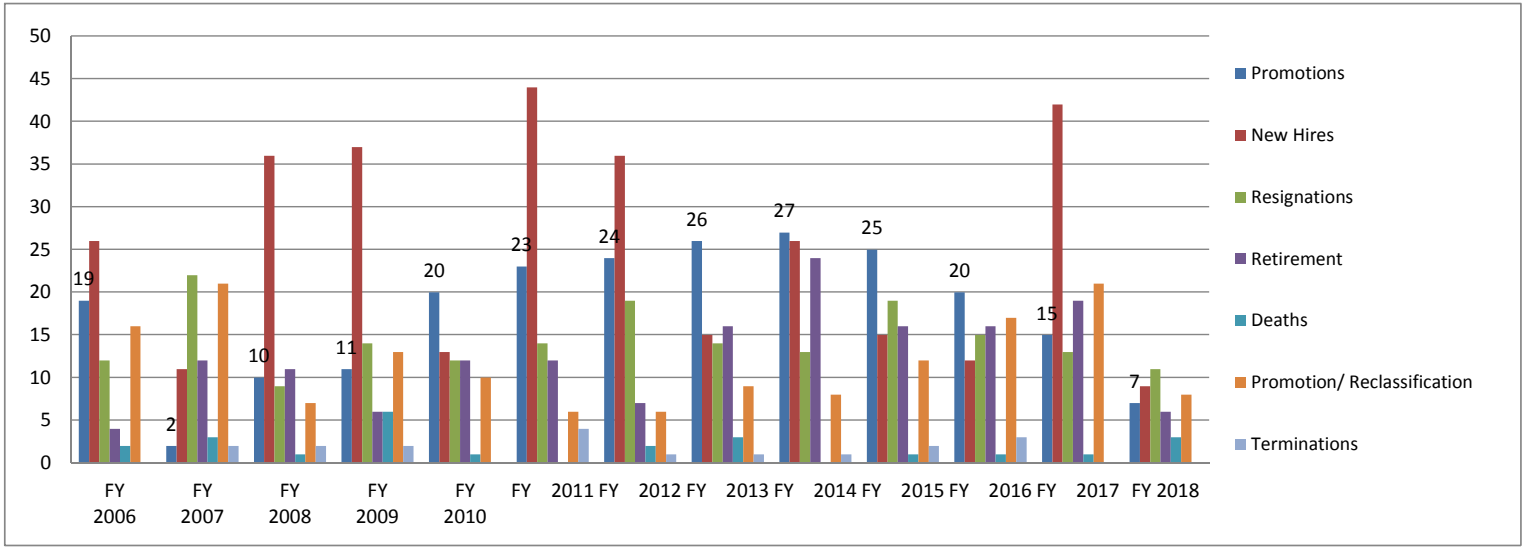
as of 06/30/18

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Recruitment Analysis (FY 2018) ..1 of 2

as of 06/30/18



	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Promotions	19	2	10	11	20	23	24	26	27	25	20	15	7
New Hires	26	11	36	37	13	44	36	15	26	15	12	42	9
Resignations	12	22	9	14	12	14	19	14	13	19	15	13	11
Retirement	4	12	11	6	12	12	7	16	24	16	16	19	6
Deaths	2	3	1	6	1	0	2	3	0	1	1	1	3
Promotion/ Reclassification	16	21	7	13	10	6	6	9	8	12	17	21	8
Terminations	0	2	2	2	0	4	1	1	1	2	3	0	0

TOTAL NO. OF EMPLOYEES	**536**	**510**	**525**	**534**	**522**	**536**	**543**	**524**	**512**	**489**	**466**	**476**	**465**

Recruitment Analysis (FY 2018) .. 2 of 2

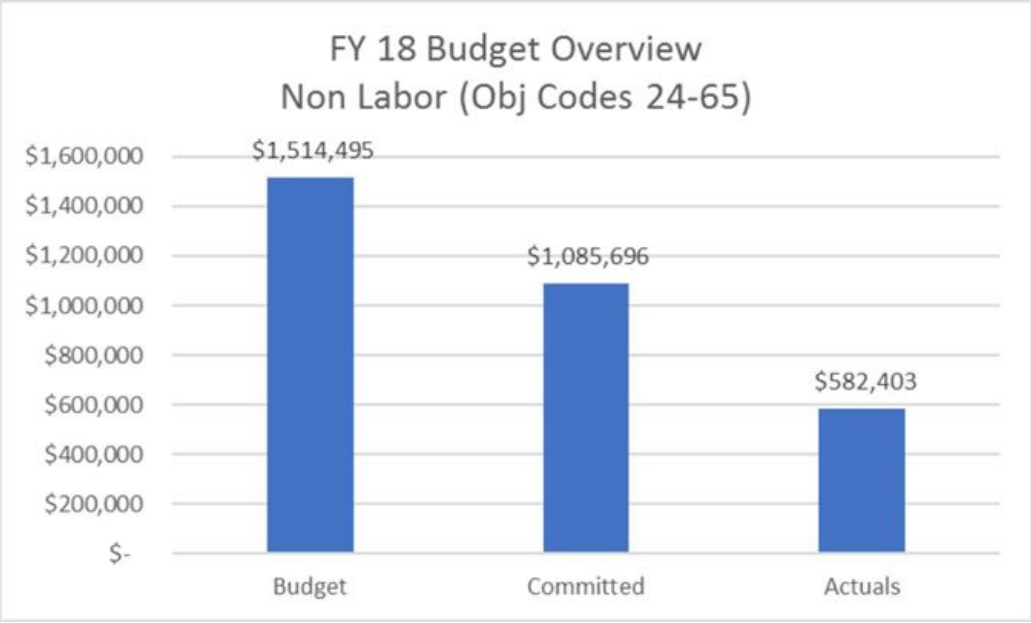
as of 06/30/18

SPORD CCU Report

June 2018

SPORD FY 2018 Budget Status

- SPORD O&M:



SPORD FY 2018 Budget Status

- Major Contracts (Non-O&M) thru June 2018

	Annual Contract Amount	Actuals	Balance
Aggreko Contract	$ 10,983,096	$ 7,783,691	$ 3,199,405
Fuel Contracts	$ 218,241,844	$ 149,297,637	$ 68,944,207
MEC IPP (Piti 8&9)	$ 31,909,347	$ 23,883,468	$ 8,025,879
NRG Contract (Renewable)	$ 10,170,682	$ 7,239,644	$ 2,931,038

SPORD FY 2018 Budget Status

- DSM Expenses

Description	FY16	FY17	FY18 as of June 30	Total to Date
Regular/OT Pay	$11,348.80	$22,256.00	$17,423.89	$51,028.69
Other Contractual	$28,278.50	$73,010.05	$38,992.25	$152,820.80
Bank Fees	$155.00	$1,032.06	$315.00	1,502.06
Paid Rebates-Split AC	$154,700.00	$557,275.00	$854,875.00	$1,566,850.00
Paid Rebates-Central AC	$3,400.00	$8,200.00	$1,300.00	$12,900.00
Paid Rebates-Washer/Dryer	$2,800.00	$7,425.00	$20,000.00	$30,225.00
Total Expenses	$200,682.30	$669,198.11	$932,906.14	$1,815,326.55

Ongoing Activities

- Contract Performance Management (IPP, PMC, Agrekko)
- Generation Fuel Supply & Fuel Farm Management
- DSM Rebate Processing
- Renewables (Wind Turbine Maint & DOAg MOA, NRG Invoicing)
- Smart Grid/Network Support
- Project Management
  - Procurement
  - *June Project Activities*

PROCUREMENT ACTIVITIES

PENDING AWARD / NTP

Responsible	PROJECT	Description	CCU Date Approved (Resolution No.)	PUC Date Approved (Docket No.)	Projected Start*	Projected Completion	Status
SPORD (FJI)	RENEWABLES	Phase II - KEPCO/LG CNS	1/23/18 (2018-01)	(18-06)	4/30/2021	4/24/2046	Pending contract signature & ntp scheduled for July-Aug 2018
SPORD (FJI)	RENEWABLES	Phase II - Hanwha	2/27/18 (2018-04)	PENDING	8/15/2021	8/9/2046	Pending contract signature & ntp scheduled for July-Aug 2018

ONGOING PROCUREMENT

Responsible	PROJECT	Description	Bid or RFP	Bid/RFP No	Announced	Bid Opening / Due	Notes
SPORD (RAC)	SCADA	SCADA Workstations	Bid	GPA-049-18	2/13/2018	3/14/2018	Monitors Delivered - June 2018 Computer Systems Delivery Extenson to July 2018 requested by Vendor
SPORD (FJI)	NEW POWER PLANT	Geotechnical Services	RFP	Resolicitation GPA-RFP-18-002	(2/6/2018) 3/20/18	4/20/2018	Bid resolicited due to no proposals received in original solicitation.
SPORD (RAC)	SMART GRID	MV90 Integration Services	RFP	GPA-RFP-18-001	1/30/2018	3/6/2018	Negotiations Ongoing - June 2018
SPORD (RAC)	PLANNING	Milsoft Systems Software Services	RFP	GPA-RFP-18-003	2/1/2018	3/7/2018	Negotiations Ongoing - June 2018
SPORD (ANF)	FUEL	Petroleum Inspection Services	MS Bid	GPA-014-18	1/30/2018	5/2/2018	Evaluation/contract negotation ongoing - June 2018
SPORD (FJI)	NEW POWER PLANT	Build, Operate & Transfer Contract for 120-180MW of New Generation Capacity. **(PHASE I - REQUEST FOR QUALIFICATIONS)**	MS Bid	GPA-034-18	1/16/2018	4/5/2018	Step I - Closing of Qualifications. Notice of selection issued to all bidders. Total of 7 Qualified bidders selected.

ONGOING PROCUREMENT (continued)

Responsible	PROJECT	Description	Bid or RFP	Bid/RFP No	Announced	Bid Opening / Due	Notes
SPORD (ANF)	FUEL	Supply of Residual Fuel Oil No. 6	MS Bid	GPA-009-18	11/16/2017	5/25/2018 (Phase I) 7/26/18 (Phase II)	Phase I evaluation complete. Phase II Price Opening scheduled for 7/26/18.
SPORD (ANF)	FUEL	Supply of Diesel Fuel Oil No. 2	MS Bid	GPA-008-18	11/16/2017	7/27/2018 (Phase I) 8/27/18 (Phase II)	Bid specs changed to include delivery- awaiting final review by Fuel Committee and Legal. Phase I- Closing of Technical Proposal extended to July 27, 2018.
SPORD (JTL)	RENEWABLES	Renewable Energy Resource Phase III	MS Bid	GPA-007-18	11/16/2017	10/4/2018	Step I - Closing of Technical Proposal
SPORD (RAC)	SMART GRID	Mobile Workforce Management System (MWMS) **RE-BID**	MS Bid	GPA-023-17	10/5/2017	3/20/2018	Procurement processing Purchase Order - June 2018
ENGINEERING	FUEL	GPA Tank Farm RFO Pipeline Upgrade - Design / Build	Bid	GPA-047-18	2/8/2018	9/30/2018	To repair existing RFO lines at the Bulk Fuel Farm

DEVELOPING PROCUREMENT

Responsible	PROJECT	Description	Bid or RFP	CCU Meeting	Projected Start	Projected Completion	Status
SPORD (MAT)	IPP Contract	Piti #8&9 IPP Contract	MS Bid				PENDING. Extension of current ECA approved by CCU and under PUC review. Bid document preparation for a new contract in-progress.
SPORD (FJI)	NEW POWER PLANT	Build, Operate & Transfer Contract for 120-180MW of New Generation Capacity. **(PHASE II - TECHNICAL SPECIFICATIONS)**	MS Bid				Pending final bid documents.
ENGINEERING	FUEL	GPA Tank Farm DFO Pipeline Upgrade - Design / Build	Bid		2/8/2018	11/30/2018	Preparation of bid specs in progress. To install new diesel line from Navy Tie-in to the Bulk Fuel Tanks and replace diesel line to TEMES CT
ENGINEERING	FUEL	Tank 1935 API 653 Internal Inspection	Bid		5/1/2018	5/31/2019	Preparation of bid specs in progress. Budgeted for FY 2018.
ENGINEERING	FUEL	OWS Upgrading	Bid		5/1/2018	5/31/2019	Preparing IFB bid specs.
ENGINEERING	FUEL	LD System Upgrading	Bid		5/1/2018	5/31/2019	Preparing IFB bid specs.
SPORD (RAC)	ELECTRIC VEHICLE	Electric Vehicle Charging Stations	Bid		Jul-18	Sep-18	Developing Specifications
SPORD (RAC)	SCADA	DNP3 SA training	RFP		Jul-18	Dec-18	Developing RFP
SPORD (RAC)	ELECTRIC VEHICLE	Electric Vehicle Infrastructure	RFP		Aug-18	Dec-18	Developing RFP
SPORD (RAC)	STUDIES	Consulting Services for Distribution Study using Smart Grid Analytics	RFP		Jul-18	May-19	Procurement Processing Documents
SPORD (RAC)	SMARTWORK SYSTEMS	Smartworks Systems Software Services	RFP		Aug-18	Continous	Developing RFP

Project Activities

No.	Project Description	June 2018 Activities	Status / Est. Completion	RFP/Bid No
1	Energy Storage System (Phase I)	GPA reviewing revised 100% design. Clearing and grading permit work commenced in November 2017. Foundation permit work commenced in January 2018. Construction is 32% completed.	September 2018 (Schedule is being updated)	MS Bid GPA-082-15
2	Renewable Energy Resource Phase II	PUC ratifies KEPCO contract (Docket 18-06) and approves HANWHA contract (Docket 18-08) on March 29, 2018. Projected signing dates are end of July or early August 2018.	KEPCO PV plant COD is APR 2021. Hanwha's COD is anticipated for 1st qtr of 2020.	MS Bid GPA-070-16
3	New Power Plant Bid (EPCM)	RFQ	Apr 2018 (	MS GPA-034-18
4	DSM Marketing	Supported the 2018UOG Sustainability Conference at the Hyatt.	Continuous	
5	DSM Rebate Program	Processed over 540 equipment in applications for rebates totaling ~ $117K	Continuous	
6	Wireless Network Expansion	Commenced Southern Expansion in collaboration with GWA: 30% Assessment of GWA Well Locations: Completed Assessment of Existing Tropos Units: 100% Router Equiqment and Accessories purchase Routers programming	Dec-18 Completed Completed Received routers - May 2018 Completed - June 2018 Accessories - May 2018	GPA-019-18
7	Performance Metrics Automation Project	Presentation on iDashboard provided to GM. GPA contiues to work with consultant on automating reports and formating.	Mar-18	
8	Electric Grid Analysis Software	Additional training for users Training on Planning and Analysis Cases	Completed Jul-18	GPA-064-16
9	Services to Develop Business Performance Indices using iDashboards	Dashboard builds 95%	Ongoing	GPA-RFP-16-008

Project Activities

No.	Project Description	June 2018 Activities	Status / Est. Completion	RFP/Bid No
10	Supervisory Control and Data Acquisition (SCADA) System	Change Order Approved for October 2018 Completion and hardware costs Factory Acceptance Test	Oct 2018 (SCADA COD) June 2018 (Factory Acceptance Test Completed)	GPA-066-16
11	Mobile Workforce Management System	Bid Evaluation Completed, Clevest recommendation memo submitted for approval March 21, 2018 Purchase Order being Processed	May 2018 (Bid Award) June 2018	GPA-023-17
12	Consulting Services for Smart Grid Analytics Enabled Distribution System Planning, Technical, and Economic Feasibility Studies	RFP evaluation completed for sole bidder. Bidder did not qualifiy. Committee recommendation to rebid. Sole-bidder Acknowledgement. Rebid Documents process by PMM	July 30, 2018 (Rebid) June 2018	RFP-17-005
13	TEMES Piti # 7 ECA Expiration & Transition to GPA	Transition completed. Environmental Assessment Report & Condition Assessment Report completed. Reports provided to Executive Management and Key Managers.	[Completed] [Completed] [Completed]	RFP-17-002
14	MEC Piti &8 and #9 - ECA Expiration	Environmental Assessment Report completed. Condition Assessment past due from Consultant.	[Completed] OVERDUE	RFP-17-002
15	MEC Piti &8 and #9 - ECA Extension	CCU approval received. PUC approval received, pending review of contract amendment. Amendment discussions w/ MEC on-going.	[Completed] In progress	
16	Generation Software (GADS open software)	Pending data entry from Generation & SPORD.	[On-going work]	
17	IFB for ULSD Supply for Baseloads and Peaking Units	Solicitation in progress. Bid package revised to include delivery requirements.	Start Date: Nov 2017 Est. completion: FY2018	IFB GPA-008-18
18	Contract for Lease of Bulk ULSD Storage	196KB tank repairs completed	27-Feb-18	TTGI-SA-2018-001

Project Activities

No.	Project Description	June 2018 Activities	Status / Est. Completion	RFP/Bid No
19	EV Infrastructure	Fast charge station scope for Mangilao offices. Developing fast charge station scope for Mangilao offices.	Dec 2018 June 2018	
20	Consulting Support, new procurements for Piti 7,8,9	Piti 7 - Management Contract (under Generation) awarded. No IPP bid. Piti 8&9 - Bid documents in progress, awaiting decision on Extension of ECA. If extended - will revise bid scope accordingly; if extension disapproved, will proceed with filing for approval of Bid.	[Commenced] Bid documents completion: June 2018 Bid Process Start Date: 3rd quarter of 2018 if Extension Not Approved	
21	Fuel Conversion Plan	Discussions on-going; additional budget needed. New Scope: Additional Support as Owner's Engineer	[On-going work, 6/2018 deadline] [thru FY 19 and 20, if approved]	
22	Fuel Bulk Storage Facility Assessment	ESA past due, pending approval from GPA CA past due, pending from Leidos	Start: Sept 2017 End: June 2018	
23	Renewable Energy Resource Phase III	Completed pre-bid conference and site visits January 23-24 2018.	(Mar 2018) Tech Proposal Due	
24	Utility Energy Services Contract (UESC)	Kicked off discussions with UOG, Guam Energy Office, Dept. of Navy, and GPA team on project development and opportunities. Discusssed DSM Model House. UOG Campus Assessment, Discussion on Solar Rooftop on DOE campuses.		
25	IFB for Delivery Services for GPA Plants	Bid canceled. Requirements to be included in the ULSD Supply solicitation	IFB Canceled Feb 2018	IFB GPA-006-18
26	IFB for RFO Supply to Baseload Plants	Solicitation in progress. Note: PUC approves 3-month extension of existing contract on June 26, 2018.	Start: November 2017 Est. Completion: FY2018 Contract Start: Sep 1, 2018	IFB GPA-009-18
27	IFB for Petroleum Inspection Services	Re-Solicitation in progress	Start: November 2017 Est. Completion: FY2018 Contract Start: Jun 01, 2018	IFB GPA-014-18

Project Activities

No.	Project Description	June 2018 Activities	Status / Est. Completion	RFP/Bid No
28	RFO Storage Lease Agreement w/ Tristar	4-Year Lease extension Approved by CCU. Disapproved by PUC - requested for clarification on Index referenced. (Docket 18-10)	Start: November 2017 Est. Completion: May 2018 Contract Start: Aug 1, 2018	TTGI-SA-2013-001
29	GPA Fuel Farm RFO Pipeline Repair & Upgrade	c/o Engineering Project Mgt	Solicitation in progress (for award) Est. Completion: FY2019 (1st Qtr)	IFB GPA-047-18
30	GPA Fuel Farm ULSD Pipeline Upgrade	c/o Engineering Project Mgt	Estimated Start: Oct 2019 Est. Completion: Sep 2019	For IFB Solicitation
31	Tk 1934 & Tk1935 API 653 Internal Inspection	c/o Engineering Project Mgt	Estimated Start: Jun 2018 Est. Completion: FY2019	For IFB Solicitation
32	Milsoft Systems Software Services	Negotiations - June 2018	Continuous	GPA-RFP-18-003
33	MV90 Integration Services	Negotiations ongoing - June 2018	Dec-18	GPA-RFP-18-001
34	SCADA Workstations and Monitors	Award Recommendation memo for approval submitted 3/27/2018	June 2018 (Monitors Delivered) July 2018 (Computer Systems Delivery)	GPA-049-18
35	Grant Proposal Development and Proposal Application Management Services	GPA submitted a grant request for the Department of Interior funding opportunity which includes partnered projects with GDOE(Best Schools Program), Public-Access Parking Lot Solar Canopy, Demand-Side Management Expansion, Electric Vehicle (EV) Infrastructure, Employees-Access Parking Lot Solar Canopy, Wind Turbine Battery Storage, and Geothermal Studies and Exploration.	Feb 2018 (Contract signed)	Re-Solicitation GPA-RFP-16-011
36	Pipeline Lease Agreement w/ Tristar	4-Year Lease extension Approved by CCU. Disapproved by PUC - requested for clarification on Index referenced. (Docket 18-10)	Start: November 2017 Est. Completion: May 2018 Contract Start: Aug 1, 2018	TTGI-PA-2013-001

Project Activities

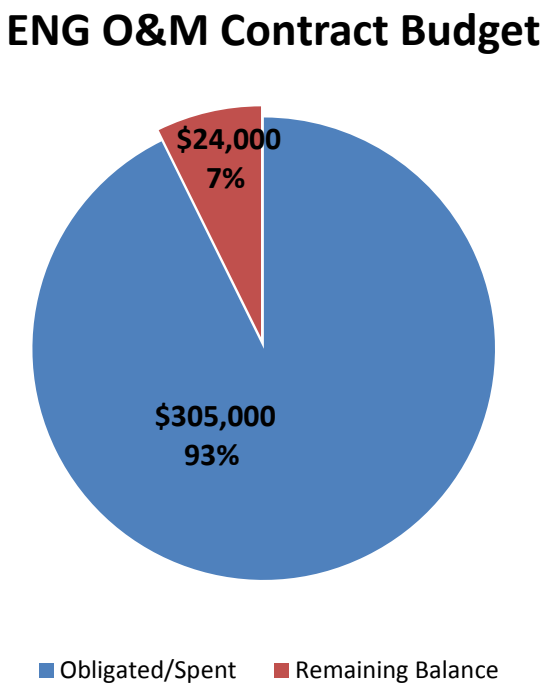
No.	Project Description	June 2018 Activities	Status / Est. Completion	RFP/Bid No
37	Dock Use Agreement w/ Tristar	4-Year Lease extension Approved by CCU. Approved by PUC on March 29, 2018. (Docket 18-10)	Start: November 2017 Est. Completion: Mar 2018 Contract Start: Aug 1, 2018	TTGI-DA-2013-001
38	Redesignation of Cabras-Piti / Guam	Re-designation received 12/2018. TRC standing by to assist GPA w/ State Implementation Plan, pending P&R review of Task Order. AAQM Installation/Implementation on hold, will depend on USEPA approval of SIP after submission on/before July 2019	Start: October 2011 Est. Completion: July 2019 *Submitted to EPA by completion date	RFP-11-001
39	Environmental Strategic Planning	Commenced discussions for update of 2012/2013 ESP.	Start: April 2018 Est. Completion: December 2018	RFP-11-001
40	GPA Fuel Farm- OWS Upgrading	c/o Engineering Project Mgt	Estimated Start: Jun 2018 Est. Completion: FY2019	For IFB Solicitation
41	GPA Fuel Farm- LD System Upgrading	c/o Engineering Project Mgt	Estimated Start: Jun 2018 Est. Completion: FY2019	For IFB Solicitation

ENG Budget Execution Performance

June 30, 2018

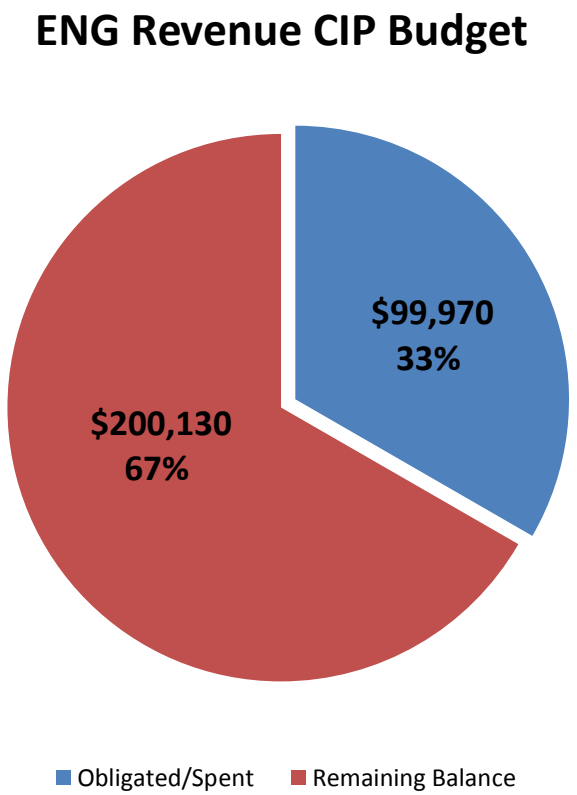
ENG Revenue CIP Budget

- Revenue Funded
- Target
  - 50% CIP Obligation by June 1, 2018
  - 100% CIP Spend by September 30, 2018



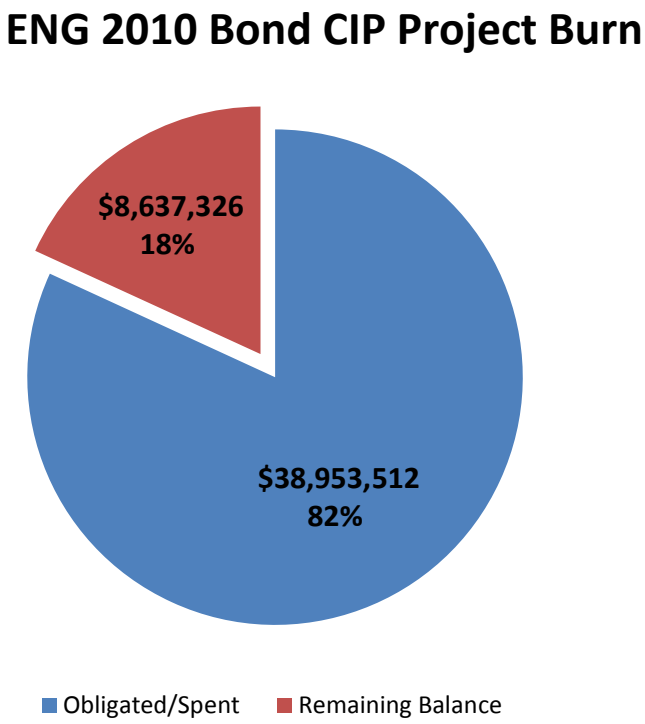
ENG O&M Contract Budget

- Revenue Funded
- Target
  - 25% CIP Obligated by April 30, 2018
  - 75% CIP Obligation by August 30, 2018
  - 100% CIP Spend by September 30, 2018



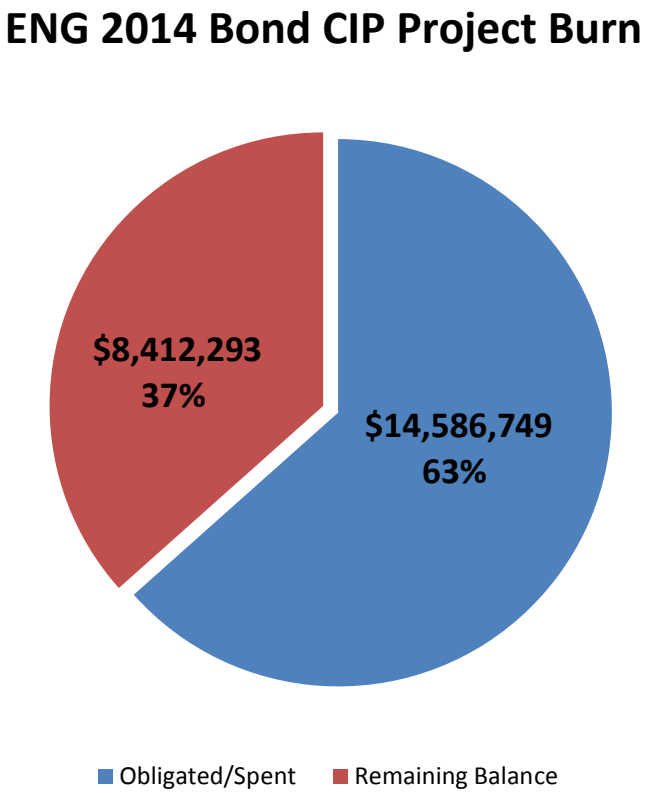
ENG 2010 Bond Series CIP Budget

- Bond Funded
- Target
  - Pending

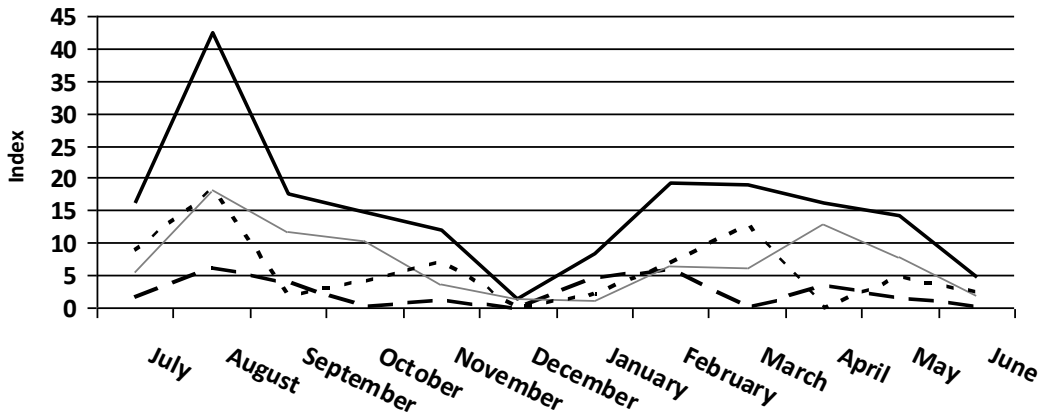


ENG 2014 Bond Series CIP Budget

- Bond Funded
- Target
  - Pending



(Item 1.1,1.2,1.5) June 2018 SAIDI = 186.15 ↓ (206.39)



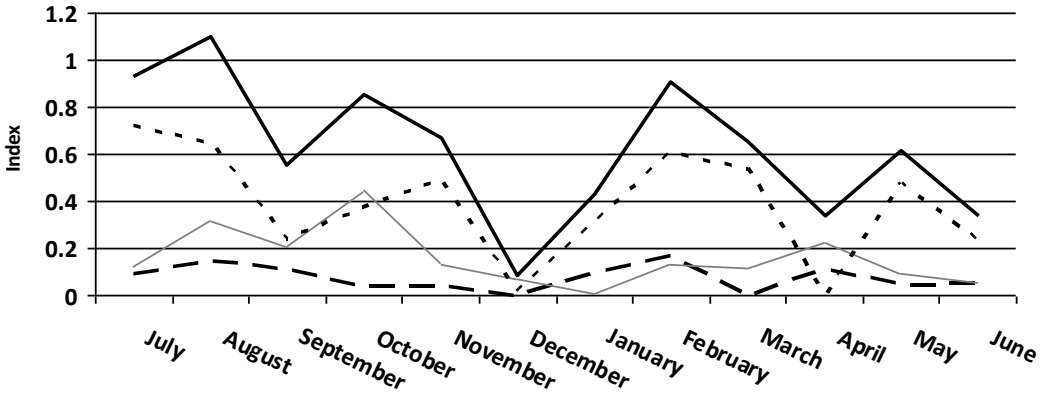
ALL

GEN=69.59 ↑ (67.42)

TRANS=29.21 ↓ (29.89)

DIST=87.35 ↓ (109.08)

(Item 1.1,1.2,1.5) June 2018 SAIFI = 7.48 ↓ (7.51)



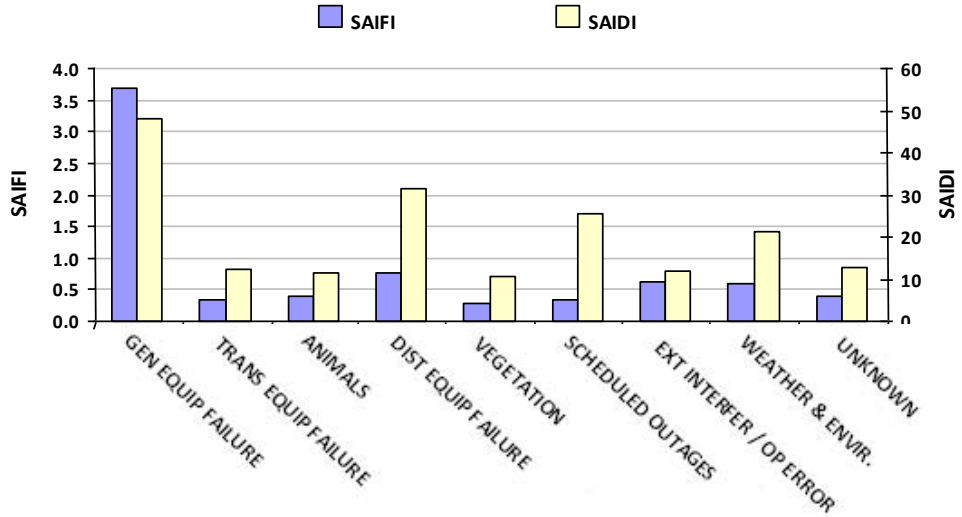
ALL

GEN=4.65 ↑ (4.46)

TRANS=0.91 ↓ (0.93)

DIST=1.91 ↓ (2.12)

(Item 1.9) 12-Month Cause Contributions to Reliability

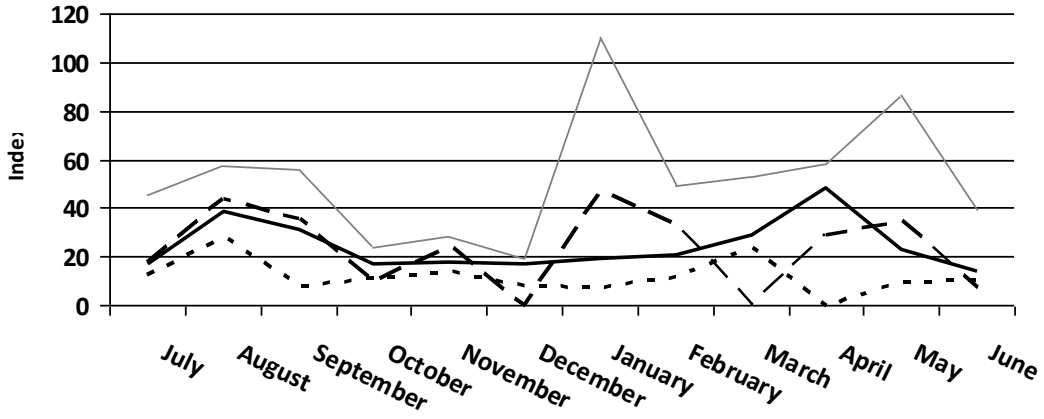


GEN EQUIP FAILURE
F:49.9% D:25.9%
TRANS EQUIP FAILURE
F:5.6% D:6.6%
ANIMALS
F:6.5% D:6.2%
DIST EQUIP FAILURE
F:8.8% D:17.0%
VEGETATION
F:2.8% D:5.7%
SCHEDULED OUTAGES
F:7.7% D:13.8%
EXT INTERFER./OP. ERROR
F:7.3% D:6.4%
WEATHER & ENVIR.
F:6.5% D:11.4%
UNKNOWN
F:4.9% D:7.0%

ATTACHMENT #1

As of June 30, 2018

(Item 1.1,1.2,1.5) June 2018 CAIDI = 24.89 ↓ (27.48)



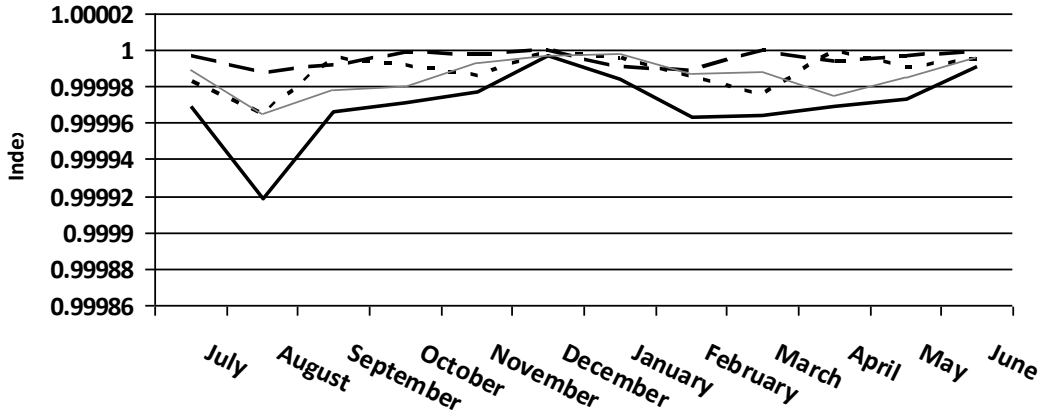
ALL

GEN=14.96 ↓ (15.13)

TRANS=32.04 ↓ (32.14)

DIST=45.62 ↓ (51.36)

(Item 1.1,1.2,1.5) June 2018 ASAI = 0.9996 UNC* (0.9996)



ALL

GEN=0.9999 UNC* (0.9999)

TRANS=0.9999 UNC* (0.9999)

DIST=0.9998 UNC* (0.9998)

(Item 1.4) Top 5 Worst Feeders Distribution Causes

#	Feeder	Outage Count
1	P046	7
2	P221	7
3	P330	4
4	P280	4
5	P250	4

(Item 1.4) Top 5 Distribution Outage Causes

#	Outage Cause	Count
1	Overhead Equipment	30
2	Underground Equipment	11
3	Vegetation	9
4	Customer Equipment Failures	5
5	Snakes	4

(Item 1.3) Outage Count

TOTAL	UFLS	Non-UFLS
466	265	201

(Item 1.3) UFLS Contribution to Reliability

SAIDI	SAIFI	CAIDI
65.65	4.50	14.60

ATTACHMENT #2

As of June 30, 2018

UNC* - Unchanged

Report Prepared Using Smart Grid Advanced Analytics

AGA Transformer Overload Report

Asset	Device Type	Feeder	Substation	Rating (kVA)	Load (kVA)	Load %	Overload Count
17787	Distribution Transformer	P-253	AGANA	100.0	20.5	136.5	12
18459	Distribution Transformer	P-251	AGANA	100.0	71.5	143.1	10
18491	Distribution Transformer	P-252	AGANA	15.0	20.9	139.0	11
21730	Distribution Transformer	P-253	AGANA	25.0	33.7	135.0	9
19570	Distribution Transformer	P-067	ANDERSEN	15.0	24.4	162.8	10
18295	Distribution Transformer	P-210	BARRIGADA	25.0	36.5	145.8	12
18309	Distribution Transformer	P-210	BARRIGADA	25.0	34.2	137.0	12
18815	Distribution Transformer	P-212	BARRIGADA	37.5	43.8	116.8	7
19786	Distribution Transformer	P-212	BARRIGADA	75.0	92.9	123.9	9
20082	Distribution Transformer	P-210	BARRIGADA	75.0	146.8	195.7	12
29415	Distribution Transformer	P-212	BARRIGADA	25.0	28.9	115.4	5
30218	Distribution Transformer	P-212	BARRIGADA	25.0	54.5	217.9	12
30587	Distribution Transformer	P-212	BARRIGADA	50.0	65.3	130.6	13
16255	Distribution Transformer	P-089	DEDEDO	37.5	45.5	121.2	9
17342	Distribution Transformer	P-087	DEDEDO	15.0	23.1	154.3	10
28263	Distribution Transformer	P-089	DEDEDO	50.0	100.8	201.7	12
8433	Distribution Transformer	P-087	DEDEDO	15.0	21.5	143.0	6
9381	Distribution Transformer	P-089	DEDEDO	25.0	31.9	127.4	6
18027	Distribution Transformer	P-311	GAA	25.0	46.6	186.5	12
31416	Distribution Transformer	P-311	GAA	37.5	66.5	177.3	12
8622	Distribution Transformer	P-310	GAA	50.0	66.5	133.0	12
8678	Distribution Transformer	P-311	GAA	15.0	34.7	231.5	9
9208	Distribution Transformer	P-310	GAA	25.0	49.0	196.1	12
8869	Distribution Transformer	P-272	MACHECHE	50.0	72.6	145.2	12

Day Count: Number of times XFMR was Overloaded over the past 5 days

GPA INFORMATION TECHNOLOGY

June 2018

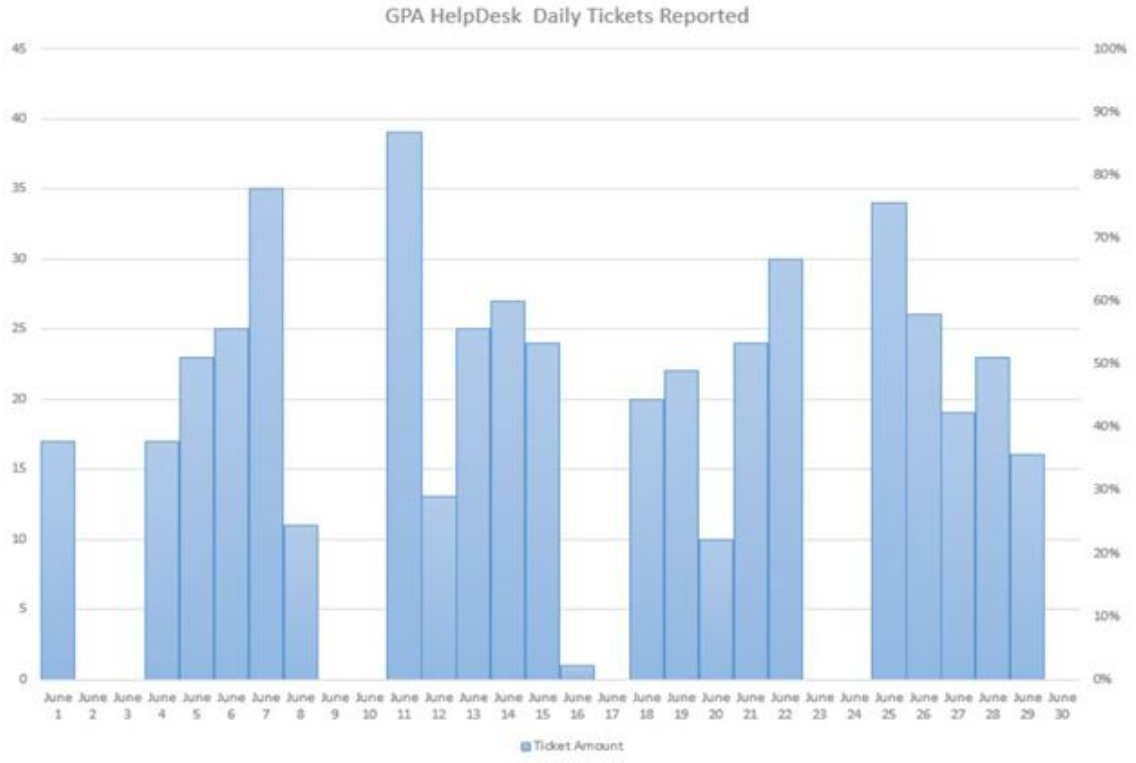
SUMMARY:

The Information Technology Department continues to improve services, monitoring processes and system infrastructure utilization as guided by Cyber-Security initiatives and regulatory compliance. We strive and continue to improve all areas. Computer Services continues to seek new technology with networking, system access and utilization. We also strive to meet target levels of uptime, to include the IBM i-Series AS400, Virtual Machine environment, (VMware V-Sphere), (Blade Servers and Disk Array Storage), and Physical Servers, (non-Virtual Machines).

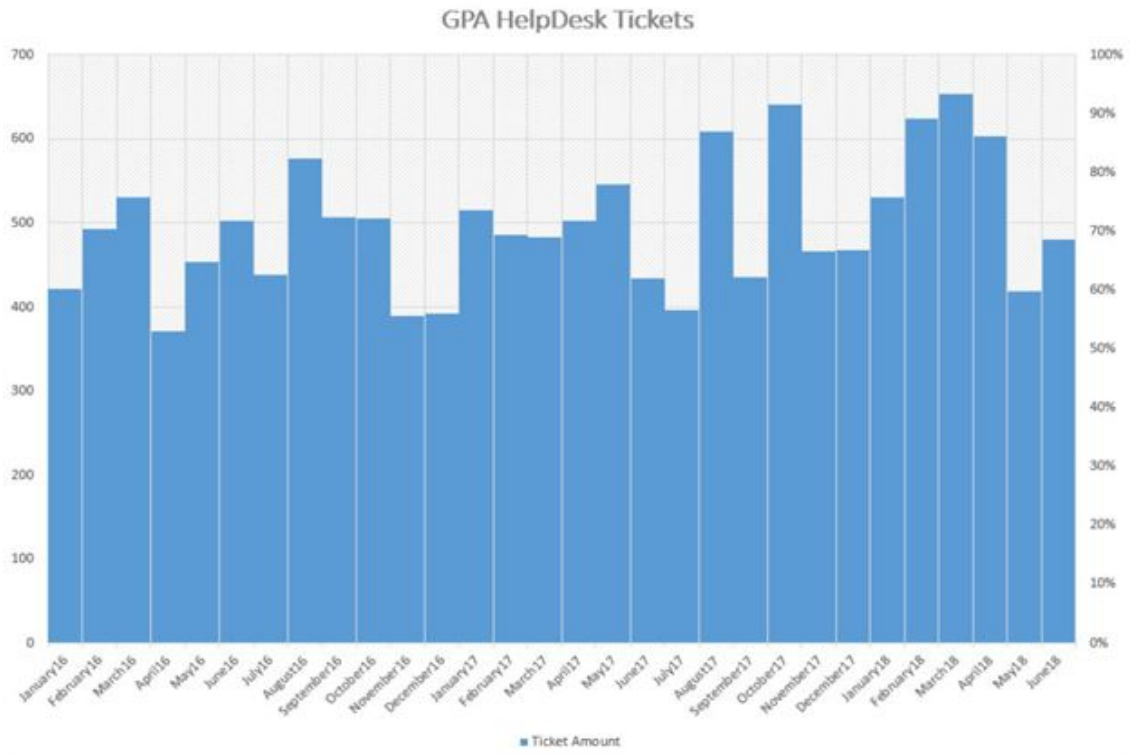
INCIDENT CALL SUMMARY:

The significance to record and utilize the Helpdesk Incident Handling Tool (ChangeGear) is to manage, track and measure workloads and assignments of customer reported IT incidents. The tracking of incidents is paramount. Measurements will be used for IT Customer Feedback survey in the future.

June 2018 TICKETS



22 MONTH COMPARATIVE

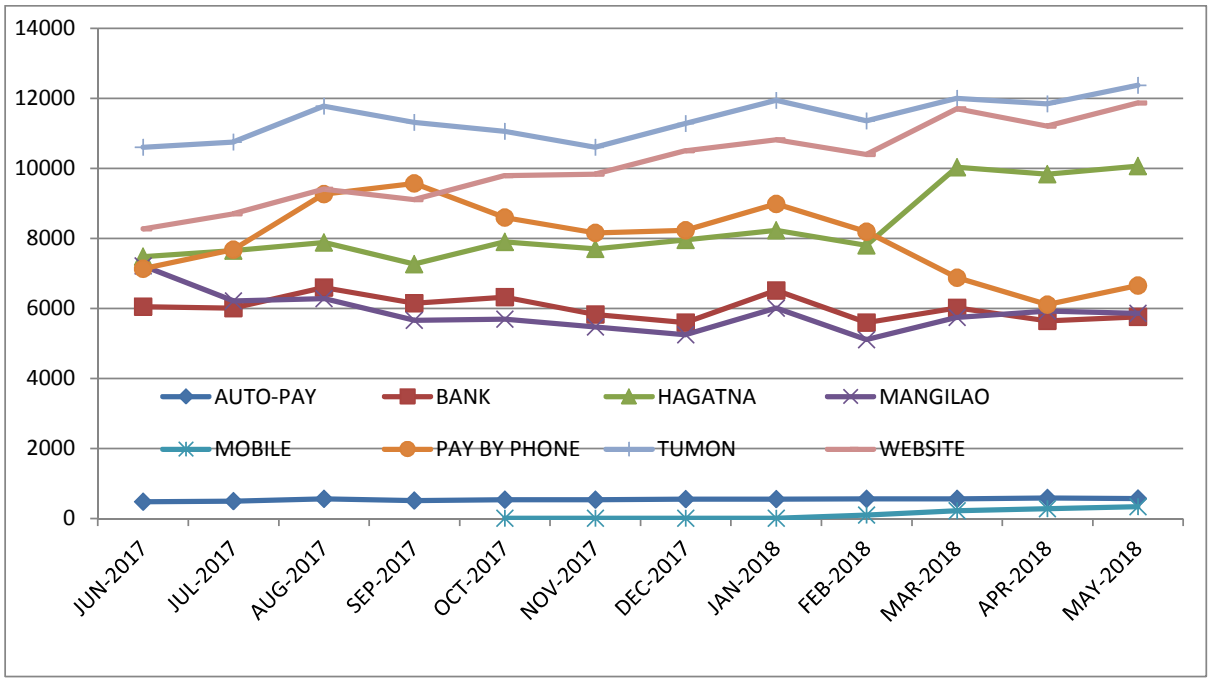


For June 2018, Computer Services responded to 481 help desk calls from GPA internal and external customers. Breakdown as follows:

CLOSED TICKETS			
Low	Medium	High	Critical
237	129	113	2
TICKET TYPES			
End User	Hardware	Software	Network
405	20	35	21
OPEN TICKETS			
Low	Medium	High	Critical
13	15	23	0
TICKET TYPES			
End User	Hardware	Software	Network
29	4	11	7

CC&B PAYMENT SUMMARY TRANSACTIONS:

Payment Transactions by On Site/Website/Auto-Pay/BANK/Mobile



Payment Transactions by Count:

Row Labels	AUTO-PAY	BANK	HAGATNA	MANGILAO	MOBILE	PAY BY PHONE	TUMON	WEBSITE
JUN-2017	474	6046	7480	7213		7131	10599	8269
JUL-2017	497	6004	7654	6216		7678	10753	8702
AUG-2017	560	6592	7884	6283		9268	11774	9401
SEP-2017	509	6151	7267	5662		9571	11317	9109
OCT-2017	537	6318	7904	5693	5	8596	11056	9789
NOV-2017	535	5827	7702	5467	5	8160	10599	9837
DEC-2017	547	5593	7957	5244	8	8231	11277	10505
JAN-2018	554	6512	8229	6004	6	8983	11946	10814
FEB-2018	559	5597	7802	5106	94	8188	11358	10400
MAR-2018	560	6019	10032	5744	217	6875	12003	11704
APR-2018	583	5646	9831	5921	276	6102	11845	11203
MAY-2018	566	5757	10062	5860	336	6649	12374	11870
Grand Total	**6481**	**72062**	**99804**	**70413**	**947**	**95432**	**136901**	**121603**

MAJOR APPLICATION ISSUES FOR JUNE 2018

1. ORACLE CUSTOMER CARE & BILLING
   No system issue reported.

2. LANDIS & GYR AMI METERS (SMART METERS)
   No system issue reported.

3. ORACLE JDE
   No system issue reported.

4. METER DATA MANAGEMENT SYSTEM (MDMS)
   No system issue reported.

5. SHORETEL VOIP PHONE SYSTEM
   No system issue reported.

6. EMAIL EXCHANGE SERVER
   No system issue reported.

7. ONLINE PAYMENT SYSTEM (PAYGPA.COM)
   No system issue reported.

8. GEOGRAPHIC INFORMATION SYSTEM (GIS)
   No system issue reported.

9. MILSOFT OUTAGE MANAGEMENT SYSTEM (OMS)
   No system issue reported.

10. ADVANCED GRID ANALYTICS (AGA)
    No system issue reported.

11. ORACLE BUSINESS INTELLIGENCE REPORTING
    No system issue reported.

12. Mobile APP Payment Program
    No system issue reported.

ONGOING PROJECT UPDATES:

SMS Emergency Outage Notification: Project to provide SMS text alerts for Emergency Outages notification for customers and emergency response agencies. Awaiting next steps from operations. In testing process at the moment with PSCC.

Pay by Phone Project: Working with vendor for Pay by Phone system to allow customers to call after hours and make automated payments to their GPA account. Changes to the call script and ongoing testing.

Customer Care & Billing (CC&B) Upgrade: Upgrade of the current Oracle CC&B program from version 2.4 to version 2.6. The current version of CC&B 2.4 will be end of life by Sept. 30, 2017 and support thereafter will be limited. Expected completion by September 2018.

Disaster Recovery- Cloud Solution: Project to turn up a backup site on the Oracle Cloud for GPWA's CC&B Application. The Oracle Cloud service has been provisioned and backup replication is online. Completed as of June 15 with full backup of CC&B being replicated to the Oracle Cloud.

Disaster Recovery Site: Project to procure a Disaster Recovery (DR) site to provide redundancy for critical GPA applications and databases in case of disruption of the primary Fadian Data Center. Incorporating GWA requirements into proposal.

Physical Security: Project to provide additional surveillance monitoring for Fadian, T&D, Dededo CT and Transportation Warehouse. IFB has been reviewed and awarding of project is pending.

GPWA Website Upgrades: Project to revamp GPA and GWA websites for the following, GUAMPOWERAUTHORITY.COM, PAYGPA.COM, GUAMWETERWORKS.ORG and PAYGWA.COM. RFP Responses has been reviewed and awaiting clarification of proposals.

Oracle CHAT-BOT: Project to provide Oracle Chat Bot services to GPA's PAYGPA.COM, Mobile APP and Facebook Program. This will allow customers to utilize a CHAT program to make inquiries to frequently asked questions and inquiries on their account. Project has been awarded and expect project to start by July 2018.

Landis & Gyr Command Center upgrade from ver. 6.5 to 7.2: Project to upgrade GPA AMI Smart Meter Program to the latest version of 7.2. This will allow new functionality for the Command Center and Smart Meter Integration. Expected completion by August 2018.

Submitted by:
Melvyn Kwek
Chief Information Technology Officer

GPWA SCADA 23344OP - Multistep Bid GPA-066-16

Overall Status	G

Burn Rate	This Month	Last Month	Incremental
Scope (%)			
Budget (%)	13.2%		
Milestones Achieved	1, 3-7 of 18		

Resources

1. Benson/Siemens
2. GPWA

Risks & Issues	G	Schedule	G	Scope	G	Financial	G

Updates & Accomplishments -- Month of June 2018	Resource	Upcoming Tasks / Open Items	TCD/ECD
6/10/18 – Completed Factory Acceptance Test in Taiwan	1. Benson/ Siemens 2. Benson/ Siemens 3. Benson/ Siemens 4. Benson/ Siemens/ GPA	Non-Disclosure agreement submissions for all Benson/Siemens personnel accessing the system Delivery of SCADA Equipment Installation of SCADA Equipment Site Commissioning Start (Point to Point Testing)	7/3/18 7/6/18 7/12/18 7/28/19

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE

Legend:

G No corrective action required

Y Near-term corrective action required

R Requires immediate attention

GPWA SCADA EMS Project
Bid No. GPA 066-16

Project Director: Charles Wu
Project Manager: Jonathan Chargualaf
Contract Administrator: Monito Co

Overall Status

G

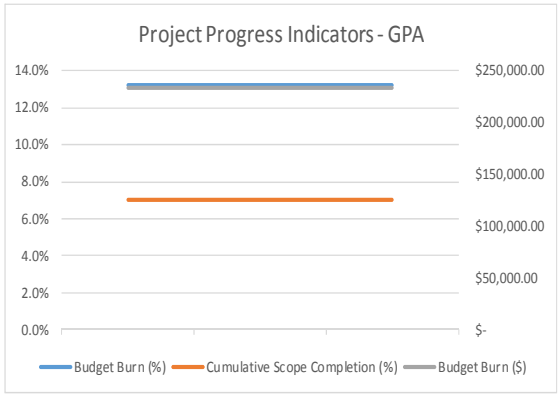
Burn Rate	This Month	Last Month	Incremental
Scope (%)			
Budget (%)	13.2%		
Milestones Achieved	1, 3-7 of 18		

Resources

1. Benson/Siemens
2. GPWA

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Project Progress Indicators



Project Phase	Original Contract Budget	Increase	Current Budget	# Change Orders
Phase I	$ 1,518,769.00		$ 1,518,769.00	4
Phase I	$ 1,518,769.00	$ 250,537.38	$ 1,769,306.38	4

Project Schedule & Budget Performance Indicators

Project Milestone	Planned Completion Date	To be updated: Actual Completion Date	Performance (Days Over/Under)
Contract Start Date	14-Dec-16	14-Dec-16	0
GPWA SCADA/EMS Project	1-Oct-18	1-Oct-18	0
Factory Activities (In Taiwan / Germany)	9-Jul-18	9-Jul-18	0
Approval of revised documentation	4-Dec-17	4-Dec-17	0
Preliminary Factory Acceptance Test (Pre-FAT) in Taiwan	2-May-18	2-May-18	0
- Base Applications	27-Apr-18	27-Apr-18	0
- Advanced Applications	2-May-18	2-May-18	0
Factory Acceptance Test (FAT) in Taiwan	7-May-18	7-May-18	0
- Advanced Applications	7-May-18	7-May-18	0
- Hardware delivery to Site	31-May-18	31-May-18	0
Site Activities (In Guam)	1-Oct-18	1-Oct-18	0
Site Commissioning (Point to point testing)	29-Aug-18	29-Aug-18	0
Site Commissioning (GPA - Point to point testing)	28-Aug-18	28-Aug-18	0
Issuance of Site Commissioning Completion Certificate	28-Aug-18	28-Aug-18	0
Site Acceptance Test (SAT)	3-Sep-18	3-Sep-18	0
- Advanced Applications	2-Sep-18	2-Sep-18	0
Investigation of variance / bug (SAT if any - Advanced Applications)	3-Sep-18	3-Sep-18	0
Issuance of Site Acceptance Certificate	3-Sep-18	3-Sep-18	0
Availability Test (AVT) - 1000hrs (42 Calindar Day, 28 working day)	1-Oct-18	1-Oct-18	0
Issuance of AVT Certificate	1-Oct-18	1-Oct-18	0
Handover of System to end customer	1-Oct-18	1-Oct-18	0
Commencement of warranty (12 months)	1-Oct-19	1-Oct-19	0
Issuance of Final Acceptance Certificates (FAC)	1-Oct-19	1-Oct-19	0

Legend:

G No corrective action required

Y Near-term corrective action required

R Requires immediate attention

7/16/2018

2

GPWA SCADA EMS Project
Bid No. GPA 066-16

Project Director: Charles Wu
Project Manager: Jonathan Chargualaf
Contract Administrator: Monito Co

Overall Status	G

Burn Rate	This Month	Last Month	Incremental
Scope (%)			
Budget (%)			
Milestones Achieved	1, 3-7 of 18		
1. Mobilization			
2. Project Management			
3. Permits, Bonds and Codes			
4. Project Installation Site Survey			
5. Interconnection and Integration Design			
6. Communications and Networking Design and Execution Plan			
7. Installation Design			
8. Software Cost, Procurement and Delivery			
9. Third Party Software Cost, Procurement and Delivery			
10. Software Installation			
11. Equipment Cost, Procurement and Delivery			
12. Construction, Equipment Installation and Interconnection			
13. Commissioning, Quality Assurance and Performance Testing			
14. Training			
15. Demobilization			
16. Warranty			
17. Documentation			
18. Annual Maintenance			

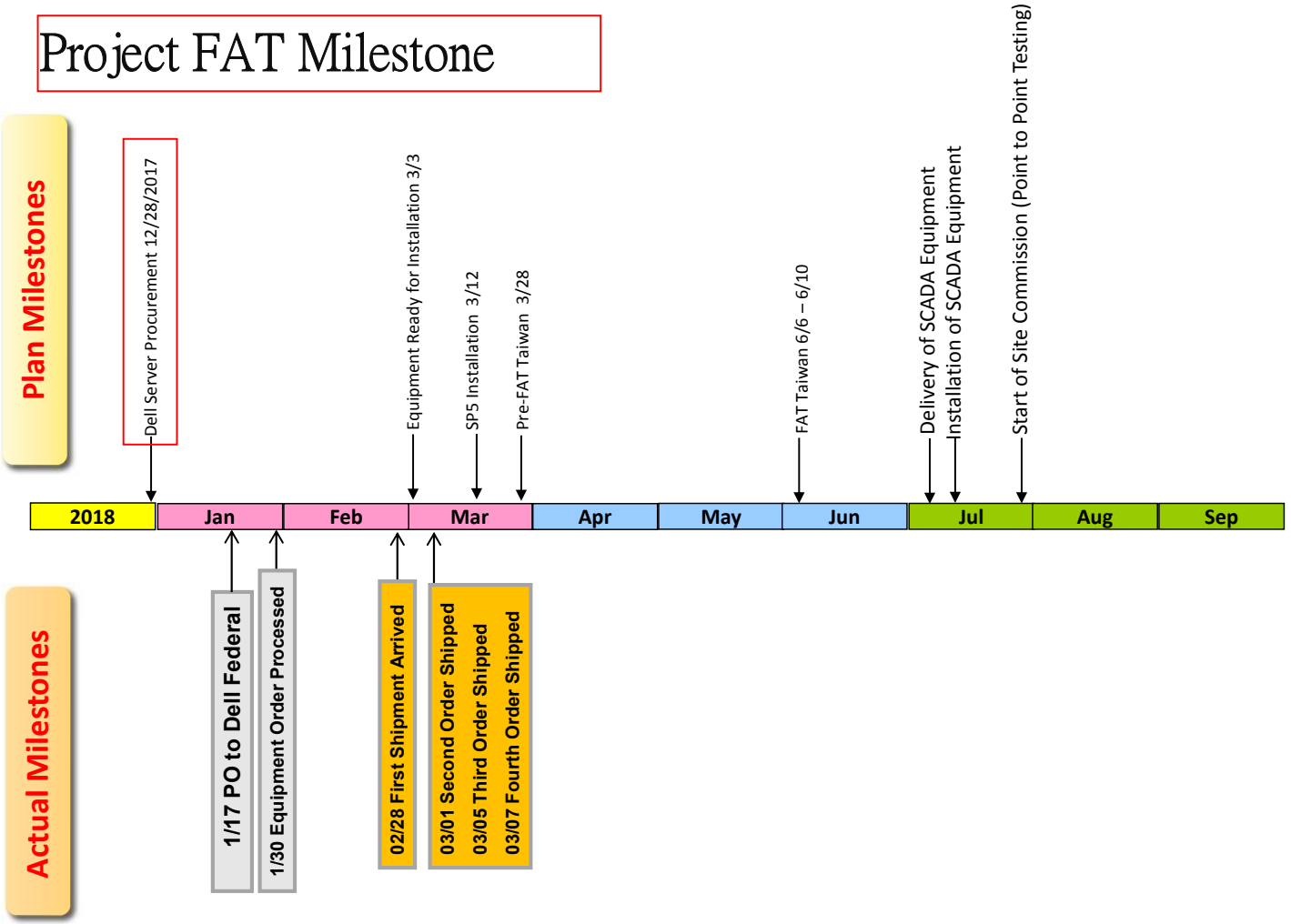
Legend:

G — No corrective action required

Y — Near-term corrective action required

R — Requires immediate attention

7/16/2018


Project FAT Milestone
Plan Milestones
Dell Server Procurement 12/28/2017
Equipment Ready for Installation 3/3
SP5 Installation 3/12
Pre-FAT Taiwan 3/28
FAT Taiwan 6/6 – 6/10
Delivery of SCADA Equipment
Installation of SCADA Equipment
Start of Site Commission (Point to Point Testing)
2018
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Actual Milestones
1/17 PO to Dell Federal
1/30 Equipment Order Processed
02/28 First Shipment Arrived
03/01 Second Order Shipped
03/05 Third Order Shipped
03/07 Fourth Order Shipped

Infrared Inspection Worksheet

	Circuit	Last Infrared Inspection	
		Fiscal Year	Quarter
1	X065-X183	FY2017	4
2	X038-X124	FY2017	4
3	X123-X143	FY2017	4
4	H710/H760 - H502	FY2017	4
5	X023-X043	FY2017	4
6	X087-X073	FY2018	1
7	X247-X140		
8	X082-X160	FY2017	4
9	X020-X311-X336	FY2017	4
10	X039-X250	FY2018	1
11	X161-X070		
12	X006-X015/X016		
13	X024-X110	FY2017	4
14	X054-X246	FY2017	4
15	X056-X185		
16	X394-X126		
17	X173-X245		
18	H322/H326 - H401/H404		
19	H342/H346 - H402/H403		
20	H362/H366 - H750/H760		
21	H403/H404 - H602	FY2017	4
22	H612 - H501	FY2017	4
23	X021-X315-X334		
24	X022-X037-X190	FY2017	4
25	X036-X305		
26	X040-X112	FY2017	4
27	X045-X055		
28	X053-X209	FY2017	4
29	X081-X178		
30	X088-X151/X154	FY2017	4
31	X134-X180		
32	X150/X152-X221		
33	X214-X263		
34	X222-X067	FY2017	4
35	X150/X155-X071		
36	X080-X260		
37	X086-X101		
38	X093-X103		
39	X097-X227		
40	X098-X130		
41	X133-X170		
42	X174-X175		
43	X210-X226		
44	X301-X324		
45	X309-X326		

Top 10 Worst Circuits
Underground Circuits

Infrared Inspection Worksheet

	Sector	Circuit	Last Infrared Inspection	
			Fiscal Year	Quarter
1	North	P332		
2		P403		
3		P089		
4		P244		
5		P111		
6		P271	FY2017	4
7		P330		
8		P322		
9		P270		
10		P046	FY2018	1
11		P087		
12		P321		
13		P088	FY2017	4
14		P331		
15		P323		
16		P245		
17		P272		
18		P240		
19		P242		
20	Central	P212		
21		P213		
22		P202	FY2017	4
23		P201		
24		P210	FY2017	4
25		P007		
26		P250		
27		P205		
28		P206		
29		P203		
30		P253	FY2017	4
31		P283	FY2017	4
32		P280	FY2017	4
33		P311		
34		P007		
35		P211		
36		P202		
37		P251		
38		P252		
39		P201		
40		P282	FY2017	4
41		P310		
42		P204		
43		P312		
44		P281	FY2017	4
45		P400		
46	South	P340	FY2018	1
47		P261		
48		P221	FY2018	1
49		P294		
50		P341	FY2018	1
51		P005		
52		P260		
53		P003		
54		P220		
55		P298		
56		P262		
57		P223		
58		P301		
59		P005		
60		P260		

Top 10 Worst Circuits

ENGINEERING WORK ORDERS

Engineering Work Order Summary - June 2018	
Work Orders Received from CSR	266
Work Orders Processed & Released to T&D	211
Work Orders Processed & Released to CSR	107
Work Orders Cancelled	22
Work Orders Pending Survey	23
Total Pending WO at Engineering	440

Engineering Large Customer and Net Metering Tracking

Date Received	Customer Name	Work Worder Numbers	Location	KVA	Meter Qty	Status
5/7/2014	Port Authority of Guam	412337	Piti			Upgrades of existing facilities, includes line relocations and service conversions from overhead to undergrounc 75% completed. Currently on hold pending Port Authorty direction for final removal.
12/20/2013	CoreTech International	Multiple	Dededo	300	64	Lada Estates, 450 kVA, Phase I and II are 100% Completed - 242 units energized. Phase III, 66 Units, 2 completed, 64 Pending, 30% Completed, 300 kVA. Phase III delayed due to Labor issues.
1/27/2015	TG Engineers	422182-85, 90-93, 96-98	Agana Heights	100	11	10 Unit Apartment, 100 kVA, 80% Completed. Work currently on hold.
5/13/2015	CoreTech International Towers	426021	Tamuning	3300	1	New condominiums, 2-1500kVA and 1 300 kVA, Tower 101 100% Completed, Tower 102, 103, and 104 are 45% completed, currently on hold. Temporary power pending for Community Center, 100% Completed. First 52 Service Orders for Tower 101 is 100% completed.
5/11/2016	Korando Corp (DPW Bile Pigua Bridge)	437716	Merizo			Bile and Pigua Bridge Reconstruction - 100% Completed, Route 25/26 Road Widening. Pending submission of final acceptance documents.
12/9/2016	Maeda Pacific	443952	Harmon			Route 1 and Route 3 road improvements - 100% completed, involves new underground 34.5kV and 13.8kV lines and the removal of overhead ples and lines. Pulling of wires intiated 10/9/17. Final Termination and testing Completed. Energizing of new underground 13.8kV and 34.5 kV lines completed. Pending return of materials and completion of minor punchlist items..
Pending	New Nikko Expansion	Pending	Tumon	1500		New Nikko Expansion, pending submittal of work order application. Redesign of primary feed ongoing. New primary underground work was started in May 2018.
3/10/2017	Best Housing Corp Ltd	446924-30	Mangilao	60	6	New 6-Unit Townhome, 80% completed
6/1/2017	GWA Pump Stations 2 and 3	450278-9	Santa Rita	150	2	New GWA Pump Stations. 100% Completed released to T&D.
8/7/2017	Matsumoto, Akiyoshi	452146-49, 51, 4, 6	Tumon	60	7	New 6 Unit Apartment with Common Meter. 60% Completed.
10/2/2017	Sumitomo Mitsui (Baza Gardens Waste water)	453369	Yona	300	1	Baza Gardens Wastewater Treatment Plant Improvements, 75% Completed, 300 kVA
1/9/2018	Baluyut, Isaganio B	456406, 7	Yigo	225	1	New McDonalds Restaurant Yigo, 90% Completed 225 kVA
02/13/18	TNN Guam (Staff Housing)	457427-9, 32	Tumon	500	1	50 Unit Staff Housing, 20% Completed, 500 kVA
02/27/18	Propacific Builders (GCC)	457959, 60	Mangilao	150	0	New GCC Building 100, 85% Completed, Existing meter and source, New Switch Gear Only
3/1/2018	Docomo Pacific Inc., New Data Center	Pending Application	Talafofo	3000	1	New Data Center. Planned to come off P-260 and P-262. 0% Completed. Still in Design Phase.
3/1/2018	KUAM	Pending	Chalan Pago			GPI to reroute poles to existing easement. Requires the ground clearing of an existing easement.
3/7/2018	Navy PV Sites					Pending final coordination with Surveyor and Navy approval
3/8/2018	Harmon Power Plant					Pending final Clearing permit from DPW. Clearing required along perimeter (10' x 6655 feet) to recover retrace boundary points.
03/12/18	Pernix Guam, LLC (GWA)	458313	Yigo	150	1	New GWA Water Reservoir, 90% Completed, 150 kVA
04/01/18	HG Northeast Inc	459085	Mangilao	100	14	New 14 Unit Subdivision, 5% Completed, 100 kVA, Pending Applications
4/30/2018	Rex International	459698	Sinajana	225	1	New Central Police Precinct, 30% Completed, 225 kVA
2/28/2018	Black Construction (Route 3 Road Improvements)	458020	Dededo			Route 3 Road Improvements. Involves the relocation of upto 54 ea. 45' concrete poles. 25% Completed.
05/12/18	Bestry Corporation	450085		500	8	Hamilton Hotel Renovation and Rehabilitation, 8 Meters, 85% Completed, 500 kVA
06/06/18	Goodwind Development Corporation	461159		225	1	New JolliBee Restaurant, 25% Completed, 225 kVA
06/14/18	Guam Waterworks Authority	461363		300	1	New Umatac-Merizo Wastewater Treatment, 10% Completed, 300 kVA
Varies	Pending Net Metering Customers	Varies	Various Locations Islandwide		20	Pending Net Metering Customers as of June 30, 2018.
			Total	**11145**	**141**	

NET METERING
June 2018

	Quantity	Connected kVA
Completed	1,710	17,995
Pending	20	256
Grand Total	1,730	18,250

Rate Class and Technology

Technology	Schedule	Count	Total kW
Solar Energy	R - Residential	1,620	14,806.49
	J - Gen Service Dmd	33	1,746.51
	K - Small Gov Dmd	9	317.80
	L - Large Government	2	122.80
	P - Large Power	3	240.70
	G - Gen Serv Non-Dmd	34	677.97
	S - Sm Gov Non-Dmd	7	78.80
Wind Turbine	R - Residential	2	3.60
Grand Total		**1,710**	**17,994.67**

Projected FY 2018 Non-Fuel Revenue Loss

Customer Rate Class	Renewable Energy Capacity (kW)	Annual kWh Generated (@5.092 hours/day)*	Average Non-Fuel Yield $/kWh	Estimated Annual Revenue Loss
R	14,810.09	27,523,935.2	0.09293	$ 2,557,826.82
J	1,746.51	3,245,816.1	0.13112	$ 425,594.65
K	317.80	590,618.1	0.13932	$ 82,286.09
L	122.80	228,218.7	0.13525	$ 30,866.12
P	240.70	447,330.9	0.11539	$ 51,617.07
G	677.97	1,259,979.0	0.15084	$ 190,050.19
S	78.80	146,446.5	0.15334	$ 22,456.26
Grand Total	**17,994.67**	**33,442,344.4**		**$ 3,360,697.19**

*Estimated number of hours from NREL for Guam (13.4 degrees North and 144 degrees East).

Estimated Annual Revenue Loss

Description	Estimated kWh	*Total Estimated Cost
FY17	28,242,917	$ 2,828,834.71
FY16	21,867,383	$ 2,200,794.56
FY15	7,383,621	$ 856,921.27
FY14	3,137,212	$ 410,558.94
FY13	1,556,949	$ 178,996.00
FY12	494,672	$ 58,545.89
FY11	170,070	$ 18,177.13
FY10	98,830	$ 8,483.27
FY09	23,912	$ 1,656.87

*Source for effective yield rate from the Year End Revenue Reports (12 month Average Yield)

NET METERING

June 2018

Customer Count and Connected kW by Feeder

Status	Feeder	Net Metering Connected kW	Customer Count	% of Feeder Maximum kW	% of Feeder Minimum Daytime kW
Completed	P-005	254.37	24	14.7%	29.6%
	P-046	257.06	31	6.1%	9.3%
	P-088	635.19	70	10.5%	16.7%
	P-089	495.02	62	11.1%	26.6%
	P-111	90.00	2	1.7%	2.9%
	P-203	413.11	32	5.5%	15.7%
	P-204	120.58	15	2.6%	5.3%
	P-205	36.40	4	0.8%	1.3%
	P-210	493.79	51	9.7%	13.1%
	P-212	891.20	84	21.5%	55.8%
	P-213	295.33	11	11.3%	15.2%
	P-220	175.14	19	28.8%	90.3%
	P-221	527.79	55	12.0%	23.9%
	P-223	516.20	56	21.7%	30.9%
	P-240	58.55	2	0.9%	7.9%
	P-245	25.00	1	0.5%	1.1%
	P-250	970.29	96	14.9%	26.2%
	P-251	145.50	7	5.9%	9.0%
	P-253	478.86	51	10.6%	16.8%
	P-262	987.81	101	25.9%	62.2%
	P-270	318.92	27	6.3%	12.6%
	P-271	119.78	11	2.0%	4.3%
	P-272	228.03	17	8.9%	20.2%
	P-280	311.59	25	17.3%	32.2%
	P-281	189.70	4	6.8%	18.9%
	P-282	21.00	2	0.6%	1.7%
	P-283	550.18	51	15.2%	26.1%
	P-294	1,025.84	99	23.7%	46.9%
	P-301	199.26	22	14.1%	25.1%
	P-311	649.83	48	16.3%	27.9%
	P-322	823.99	89	10.9%	21.6%
	P-323	274.41	17	5.8%	18.0%
	P-330	563.72	71	10.4%	20.8%
	P-331	728.08	82	11.5%	18.7%
	P-332	470.71	53	8.3%	12.2%
	P-340	509.87	44	28.1%	61.9%
	P-087	1,134.75	122	28.9%	45.3%
	P-252	572.69	30	13.6%	27.7%
	P-321	275.66	26	4.9%	5.5%
	P-260	70.96	7	10.3%	35.5%
	P-067	86.20	10	1.0%	1.3%
	P-312	68.90	4	4.1%	4.8%
	P-206	18.33	2	1.9%	3.4%
	P-242	23.75	2	0.4%	1.1%
	P-310	181.57	8	6.6%	12.1%
	P-261	395.32	43	14.3%	24.5%
	P-201	45.00	6	1.3%	2.3%
	P-007	81.11	7	11.2%	23.9%
	P-244	36.56	2	2.1%	2.1%
	P-202	34.50	2	1.1%	2.6%
	P-341	4.30	1	0.4%	1.6%
	P-401	100.00	1	8.8%	14.8%
	P-400	13.00	1	1.4%	1.4%
Completed Total		**17,994.67**	**1,710**		
Pending	P-204	15.05	1	0.3%	0.7%
	P-322	100.00	1	1.3%	2.6%
	Pending	129.41	17	0.0%	0.0%
	P-341	11.25	1	1.0%	4.3%
Pending Total		**255.71**	**20**	**2.6%**	**7.5%**
Grand Total		**18,250.38**	**1,730**		

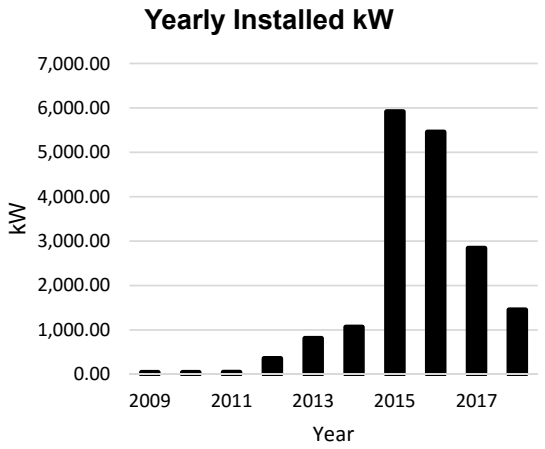
NET METERING
JUNE 2018

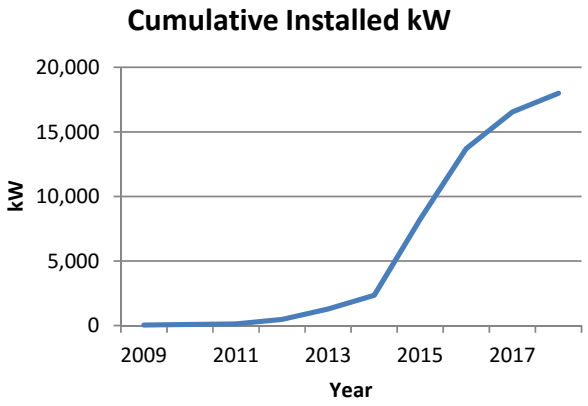
Installed kW by Year

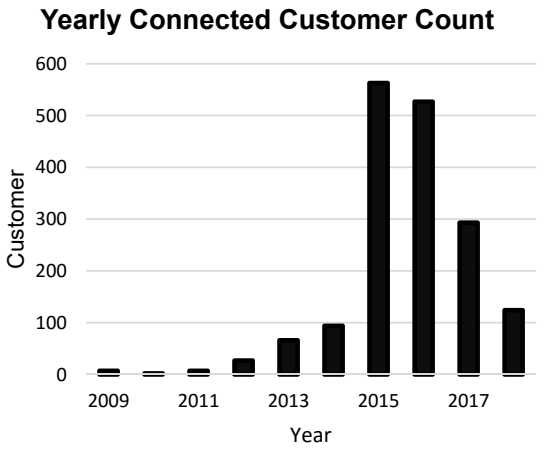
Year	Total	Cumulative
2009	39.46	39.46
2010	39.20	78.66
2011	43.61	122.27
2012	354.61	476.88
2013	805.45	1,282.33
2014	1,060.04	2,342.37
2015	5,912.28	8,254.65
2016	5,454.45	13,709.09
2017	2,836.10	16,545.19
2018	1,449.48	17,994.67
Grand Total	17,994.67	

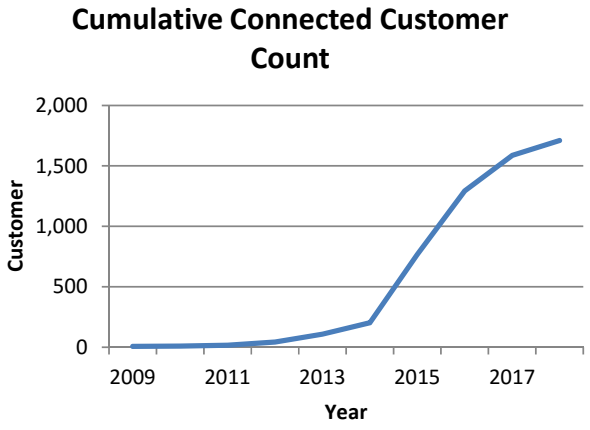
Customer Count by Year

Year	Total	Cumulative
2009	7	7
2010	2	9
2011	7	16
2012	27	43
2013	66	109
2014	94	203
2015	563	766
2016	527	1,293
2017	293	1,586
2018	124	1,710
Grand Total	1,710	







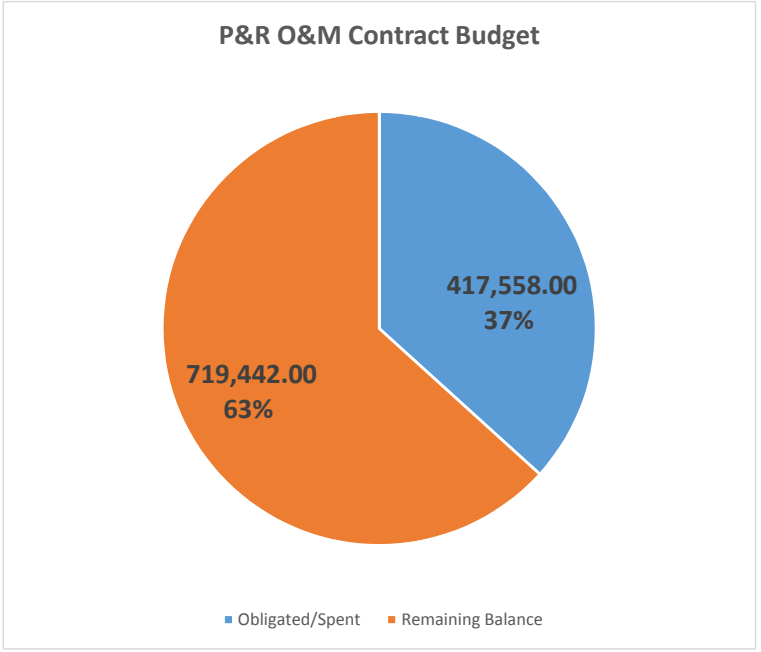


Planning & Regulatory CCU Report

June 30, 2018

Planning & Regulatory O&M Contract Budget

- Revenue Funded
- Target
  - 7.41% O&M Obligated by November 16, 2017
  - 19.28 O&M Obligated as of Nov. 30, 2017 (actual)
  - 19.36 O&M Obligated as of Dec. 31, 2017 (actual)
  - 25.60 O&M Obligated as of Apr. 30, 2018 (actual)
  - 36.72% O&M Obligation by June 30, 2018 (actual)
  - 54.31% O&M Obligation by July 31, 2018
  - 65% O&M Obligation by Aug. 30, 2018



P&R Weekly & Monthly Inspection Reports

- Best Management Practices (BMP) Report Summary [Weekly]
- Generation Spill Prevention, Control, and Countermeasures (SPCC) Report Summary [Monthly]
- T&D Spill Prevention, Control, and Countermeasures (SPCC) Report Summary [Monthly]

- GPA is responsible to employees, the island environment, and the community to take all reasonable steps necessary to prevent spills from its facilities in order to protect human health and the environment

P&R Inspection Report Purpose

- The purpose of these inspections is to catch discrepancies and violations internally and correct them before inspections by Guam EPA and US EPA
- Regulatory Agencies can conduct scheduled or un-scheduled (surprise) inspections any time
- Any major discrepancies or violations cited can lead to issuance of a Notice of Violation (NOV), possible fines, and/or other enforcement action
- P&R conducts routine SPCC inspections in compliance with the requirements of 40CFR 112.7(a)(3)(ii), Discharge Prevention Measures

Weekly BMP Report

WEEKLY BMP REPORT SUMMARY
CABRAS POWER PLANT
MONTH OF JUNE, 2018

LEGEND OF TRACKING

- Notification Date
- Within Scheduled Remediation Period
- Completed
- Deadline is Past Due

INSPECTOR: LORINA SABANGAN

LOCATION	WE 06/08/18 FINDINGS	WE 06/15/18 FINDINGS	WE 06/22/18 FINDINGS	WE 06/29/18 FINDINGS	RECOMMENDATION/ REMARKS	DATES			RESPONSE
						initial Findings	Due	Completed	
OWS next to Outfall (Cabras 3&4)	Repair stopped	Repair stopped	Repair stopped	Repair stopped	Repair was stopped. Draining and transfer of oil to WOF should be continuous.	12/11/2015			*OWS no longer in operation*
Cabras 1&2 Basement	Water leak	Water leak	Water leak	Water leak	Continuous visual monitoring and clean-up	1/10/2014	Dec. 2018		*Major repair by end of 2018*
Pavillion	Stored metal and various debris	Stored metal and various debris	Stored metal and various debris	Stored metal and various debris	Per Francis Cruz on 2/7/8, Cabras 3&4 will send list to Procurement for bid disposal	2/8/2013	ASAP		
Refilling valve pit (Cabras 1, 2, 3, & 4)	Sign of oil leak on Cabras 3&4 refilling valve. Repair stopped	Sign of oil leak on Cabras 3&4 refilling valve. Repair stopped	Clean	Clean	Repair ongoing	April 2018	ASAP		
Central Maintenance	Miscellaneous debris of drums	Miscellaneous debris of drums	Miscellaneous debris of drums	Miscellaneous debris of drums	Ongoing cleanup	April 2016	ASAP		
PSCC Dispatch Front Yard	Stored metal debris	Stored metal debris	Stored metal debris	Stored metal debris	Conduct cleanup	2/2/2018	Until cooling water pump is repaired		

T&D SPCC Inspection Report

SUMMARY OF SPCC INSPECTION REPORT
MONTH OF JUNE, 2018

LEGEND OF TRACKING

- Notification Date
- Completed
- Within Scheduled Remediation
- Deadline is Past Due

SUBSTATIONS

LOCATIONS	Findings		Recommendation/Remarks	Status	Responsible	Completion Date	Due Date	Initial Findings Date
DEDEDO SUBSTATION	*Facility Area*	NO CORRECTIVE ACTION						
DEDEDO SUBSTATION WAREHOUSE	*OWS*	NO CORRECTIVE ACTION						
MACHECHE SUBSTATION	*Facility Area*	NO CORRECTIVE ACTION						
TALOFOFO SUBSTATION	*Secondary Containment*	Oil sheen	Remove and conduct clean up					April 2018
		Algae accumulation	Conduct clean up					April 2018
		Water accumulation	Drain water	Corrective action completed				June 2018
TENJO SUBSTATION	*Facility Area*	NO CORRECTIVE ACTION						
YIGO SUBSTATION	*Facility Area*	NO CORRECTIVE ACTION						

Generation SPCC Inspection Report

SUMMARY OF SPCC INSPECTION REPORT
MONTH OF JUNE, 2018

LEGEND OF TRACKING

- Notification Date
- Completed
- Within Scheduled Remediation
- Deadline is Past Due

POWER PLANT

Location	Findings		Recommendation/Remarks	Status	Responsible	Completion Date	Due Date	Initial Findings Date
CABRAS UNITS 1 & 2	*Suply line 8" from tank farm*	No secondary containment	Provide secondary containment. Regular monitoring recommended				ASAP	November 2015
	Secondary Containment	Exposed/worn out insulation and corroded flanges on tank no.2	Repair	Repair ongoing			ASAP	July 2017
	Basement	Sign of oil leak and continuous water leak	Verify and repair	Repair ongoing			ASAP	July 2017
CABRAS UNITS 3 & 4	*FODST Nos. 3&4 Secondary Containment*	Metal and pipe debris in the area	Remove and clear area.	Cleared with John Kim and Joven. Debris is OK for removal. No longer needed for Insurance claim.				June 2016
	MOV	Broken wheel and corroded pipe	Repair/replace wheel and pipe				ASAP	March 2018
	Day Tank 3&4	Overgrown vegetation around tank seams on day tank 3&4	Remove vegetation				ASAP	February 2018
	Secondary Containment (service tank HS & LS)	Rainwater	Drain water and conduct cleanup				ASAP	February 2018
DEDEDO CT	*Secondary Containment*	Rainwater accumulation	Drain water				ASAP	June 2018
MACHECHE CT	Facility Area	Corrosion at tanks T-130/140 (paint applied over rust only)	Remove rust and repaint				ASAP	October 2015
		Corroded tank support T-130/140 (paint applied over rust only)	Remove rust and repaint				ASAP	October 2015
		Rust buildup on seam and tank belly	Remove rust and paint,				ASAP	November 2015
		Corroded tank shell, algae buildup on T-130/140	Remove rust and repaint, remove algae				ASAP	June 2018
		Corroded tank rivets/bolts (loose, missing) T-130/140	Replace				July 2018	May 2018
		Bubbled paint coating (cracked, damaged, faded) T130/140	Repaint				ASAP	June 2018
		Corroded tank roof on Tank-130/140	Conduct cleanup				ASAP	June 2018
YIGO CT	*Facility Area*	Fuel storage tank 140	Rust buildup on shell	Remove rust, re-paint			ASAP	April 2018

Generation SPCC Inspection Report (cont.)

SUMMARY OF SPCC INSPECTION REPORT
MONTH OF JUNE, 2018

LEGEND OF TRACKING

- Notification Date
- Completed
- Within Scheduled Remediation
- Deadline is Past Due

POWER PLANT

Location	Findings		Recommendation/Remarks	Status	Responsible	Completion Date	Due Date	Initial Findings Date
MANENGGON DIESEL	*Tank No. 3*	Corroded tank shell	Chip and recoat				ASAP	April 2018
	Secondary Containment	Worn out sealant on the cracks on secondary containment	Replace sealant	Re-sealing is ongoing			ASAP	May 2017
		Algae and dried leaves accumulation in sec. containment	Conduct clean up				ASAP	November 2017
		Corroded fuel supply line	Chip corrosion and recoat				February 2018	December 2017
		Accumulated trash and debris in the parking area	Conduct cleanup				ASAP	March 2018
TALOFOFO DIESEL	*Facility Area*	Loose fire suppressant wires on the tank	Secure wires				ASAP	June 2018
		Metal debris stored along the plant ground near the bank	Dispose metal debris				ASAP	June 2018
TENJO DIESEL	*Facility Area*	Worn out gap seal on the secondary containment floor	Seal floor gaps				ASAP	August 2017
		Corroded tank shell on tank #2	Chip and recoat				ASAP	March 2018
		Corroded supply pipe	Chip and recoat				ASAP	March 2018
		Oil spill and various used materials stored in work area	Schedule disposal of materials				ASAP	May 2018
		Improper storage of chemicals	Transfer in proper chemical storage				ASAP	May 2018
PITI #7	*Main Fuel Tank, Day Tank # 1 & 2*	No integrity test	Conduct integrity test				ASAP	January 2018

8

Production Data
30-Jun-18

SYSTEM											
YEAR	MONTH	# of DAYS	GROSS GENERATION	FUEL CONSUMPTION		GROSS FUEL EFFICIENCY (Target ≥ 15.99 kWh/gal)	COST per GROSS kWh	GROSS HEAT RATE (Baseloads) PUC Target less than 9,600	GROSS HEAT RATE (Peaking) PUC Target less than 13,600	Ave. MW	Peak MW
				(gal)	(bbl)						
2016	Jan	31	138,191,484	9,446,289	224,912	14.63	$ 0.0676	9,662.86	13,413.90	186	233
	Feb	29	128,816,826	8,860,399	210,962	14.54	$ 0.0706	9,692.42	12,038.19	185	232
	Mar	31	139,991,832	9,522,573	226,728	14.70	$ 0.0732	9,172.99	11,597.00	188	239
	Apr	30	140,706,546	9,301,856	221,473	15.13	$ 0.0734	9,368.24	11,041.70	195	245
	May	31	152,815,417	9,751,521	232,179	15.67	$ 0.0681	9,459.10	11,388.57	205	254
	June	30	149,191,844	9,851,575	234,561	15.14	$ 0.0805	9,666.70	11,074.48	207	253
	July	31	151,248,202	10,443,028	248,644	14.48	$ 0.0920	9,477.71	12,208.87	203	258
	Aug	31	149,051,031	10,210,429	243,105	14.60	$ 0.0935	9,431.70	11,155.10	200	252
	Sept	30	142,069,206	9,829,773	234,042	14.45	$ 0.0956	9,509.75	11,393.73	197	256
	Oct	31	148,824,965	9,660,319	230,008	15.41	$ 0.0729	9,749.38	10,738.69	200	252
	Nov	30	145,293,562	9,427,636	224,468	15.41	$ 0.0901	9,714.47	10,786.30	202	252
	Dec	31	147,753,552	9,725,521	231,560	15.19	$ 0.0934	9,661.13	10,645.44	199	248
2017	Jan	31	142,960,618	9,226,278	219,673	15.49	$ 0.0913	9,620.29	10,965.71	192	234
	Feb	28	113,499,400	7,270,830	173,115	15.61	$ 0.0900	9,609.08	11,503.12	195	246
	Mar	31	149,402,182	9,664,440	230,106	15.46	$ 0.1014	9,719.35	11,440.45	201	246
	Apr	30	145,351,026	9,913,757	236,042	14.66	$ 0.1101	9,750.73	11,392.12	202	250
	May	31	157,573,506	11,065,930	263,475	14.24	$ 0.1170	10,067.14	11,323.20	212	256
	June	30	150,240,751	10,654,196	253,671	14.10	$ 0.1101	10,209.74	11,248.62	209	257
	July	31	150,580,050	10,622,458	252,916	14.18	$ 0.1169	9,544.54	11,837.62	202	252
	Aug	31	150,084,827	10,642,044	253,382	14.10	$ 0.1177	9,206.15	11,917.58	202	261
	Sept	30	143,990,208	10,309,304	245,460	13.97	$ 0.1152	9,541.20	13,107.05	200	254
	Oct	31	147,122,071	9,774,857	232,735	15.05	$ 0.1079	9,590.71	11,375.81	198	254
	Nov	30	147,284,781	9,783,352	232,937	15.05	$ 0.1061	9,563.85	11,257.17	205	253
	Dec	31	151,600,064	9,925,003	236,310	15.27	$ 0.1122	9,607.13	11,035.82	204	250
2018	Jan	31	147,704,057	9,563,641	227,706	15.44	$ 0.1078	9,755.40	11,029.21	199	246
	Feb	28	131,329,470	8,660,044	206,192	15.16	$ 0.1150	9,763.94	11,125.15	195	241
	Mar	31	144,370,550	9,889,634	235,467	14.60	$ 0.1345	9,183.77	11,853.09	194	244
	Apr	30	142,493,891	9,636,757	229,447	14.79	$ 0.1232	9,558.86	11,901.02	198	247
	May	31	151,201,454	10,120,017	240,953	14.94	$ 0.1342	9,549.70	11,703.13	203	249
	June	30	142,902,259	9,674,924	230,355	14.77	$ 0.1399	9,563.51	11,494.36	198	246

T&D Vegetation Management

Percent Completion (per Sector Feeder)

Note: Feeders priority listing based on outages due to vegetation

Northern Sector

Feeder	Esitmated Distance (LF)	Distance Trimmed by T&D Crew (LF)	Distance Trimmed by Contractor (LF)	% Completion
P332	6,830	11,470	9,561	308%
P322	7,265	500	4,800	73%
P330	2,635		12,599	478%
P087	4,245	4,450		105%
P046	1,245	200		
P321	4,045			
P088	3,310			
P089	670	160		24%
P331	1,925	50		3%
P323	2,810			
P271	50	1,405		2810%
P270	300	1,595		532%
P245	1,660	1,200		72%
P272	150	430		287%
P111	500	475		95%
P244	920	940		102%
P240	430	430		100%
P242	290	160		55%
Total	39,280	23,465	26,960	128%

Central Sector

Feeder	Esitmated Distance (LF)	Distance Trimmed by T&D Crew (LF)	Distance Trimmed by Contractor (LF)	% Completion
P250	33,290	13,340	10,392	71%
P212	17,560	100		1%
P253	15,240			
P283	2,230		7,000	314%
P210	10,120	40		0%
P280	1,675	310		19%
P311	1,360			
P007	778			
P211	6,050			
P202	420			
P251	280			
P213	3,500			
P252	1,520		4,586	302%
P201	100			
P203	370			
P282	525			
P310	370	100		27%
P205	350			
P206	140			
P204	530			
P312	200			
P281	525			
P400	150			
Total	97,283	13,890	21,978	37%

Southern Sector

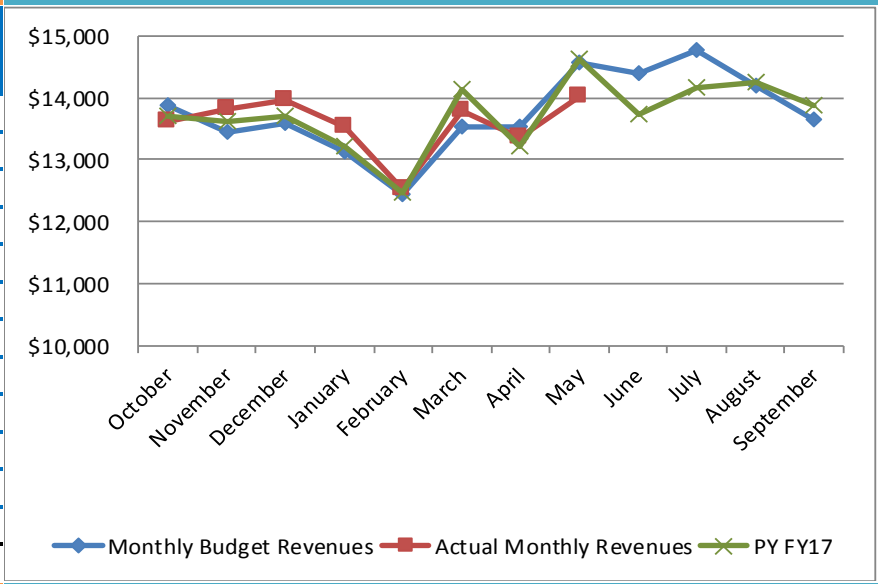
Feeder	Esitmated Distance (LF)	Distance Trimmed by T&D Crew (LF)	Distance Trimmed by Contractor (LF)	% Completion
P294	9,430	45	22,801	242%
P261	4,930	980	9,939	221%
P340	13,240	715	27,675	214%
P262	5,185	420	19,236	379%
P221	1,570	795		51%
P223	2,500	1,875		75%
P341	880	250	450	80%
P301	19,915	1,999	1,675	18%
P005	990	150		15%
P220	1,250	185		15%
P260	12,630	100		1%
Total	72,520	7,514	81,776	123%

May 2018 Monthly Financial Highlight

Base Rate Through May 31, 2018

$000	Monthly Budget Revenues	Actual Monthly Revenues	Variance		PY FY17	CY vs PY Variance	
October	$ 13,873	$ 13,625	$ (248)	↓	$ 13,702	$ (77)	↓
November	13,451	13,827	$ 376	↑	13,622	$ 205	↑
December	13,599	13,968	$ 369	↑	13,695	$ 273	↑
January	13,114	13,534	$ 420	↑	13,220	$ 314	↑
February	12,422	12,522	$ 100	↑	12,454	$ 68	↑
March	13,534	13,776	$ 242	↑	14,123	$ (347)	↓
April	13,525	13,351	$ (174)	↓	13,224	$ 127	↑
May	14,568	14,011	$ (557)	↓	14,617	$ (606)	↓
June	14,386				13,722		
July	14,759				14,151		
August	14,183				14,244		
September	13,651				$ 13,874		
Total	**$ 165,064**	**$ 108,614**	**$ 529**		**$ 164,649**	**$ (44)**	

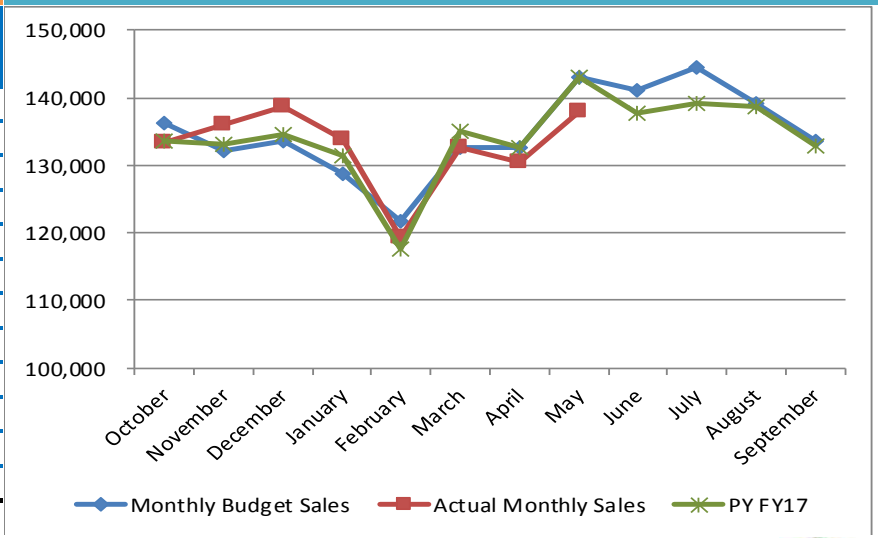
Base Rate Revenue $000



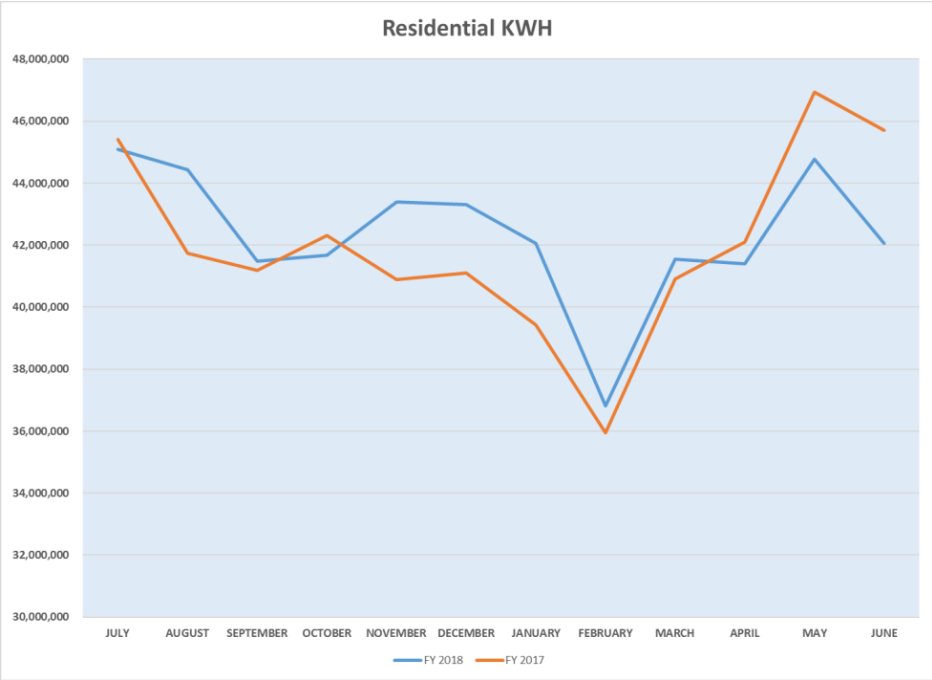
Mwh Sales Through May 31, 2018

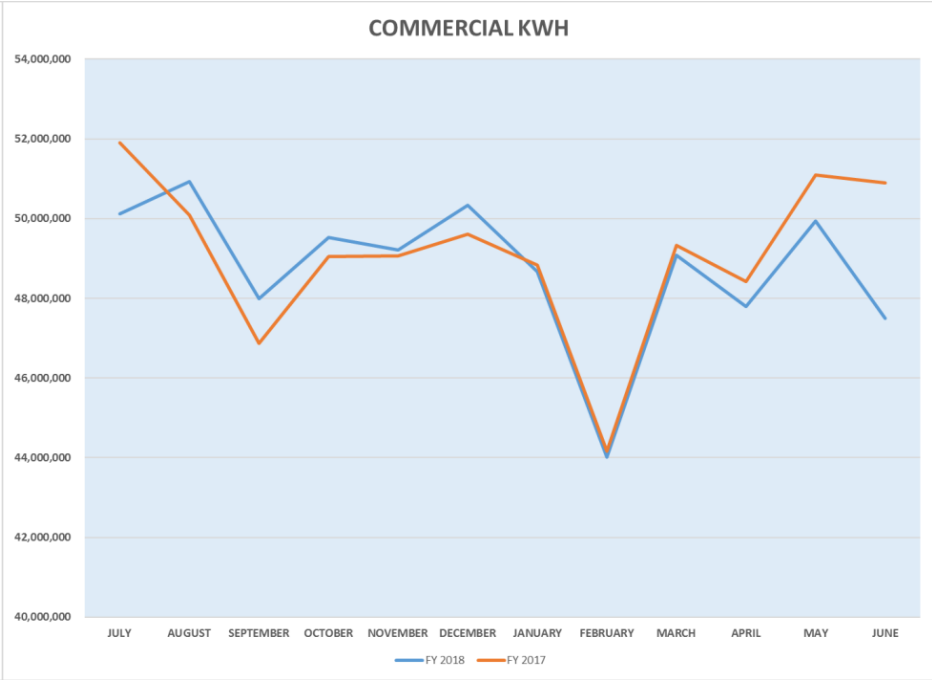
	Monthly Budget Sales	Actual Monthly Sales	Variance		PY FY17	CY vs PY Variance	
October	136,219	133,262	(2,957)	↓	133,620	(358)	↓
November	132,132	136,044	3,912	↑	133,235	2,809	↑
December	133,625	138,587	4,962	↑	134,634	3,953	↑
January	128,711	133,882	5,170	↑	131,461	2,421	↑
February	121,668	119,241	(2,426)	↓	117,617	1,624	↑
March	132,587	132,693	106	↑	135,131	(2,438)	↓
April	132,532	130,565	(1,967)	↓	132,587	(2,022)	↓
May	142,956	138,085	(4,871)	↓	143,013	(4,928)	↓
June	141,064				137,777		
July	144,404				139,227		
August	139,093				138,797		
September	133,658				132,993		
Total	**1,618,650**	**1,062,360**	**1,930**		**1,610,093**	**1,061**	

MWh Sales

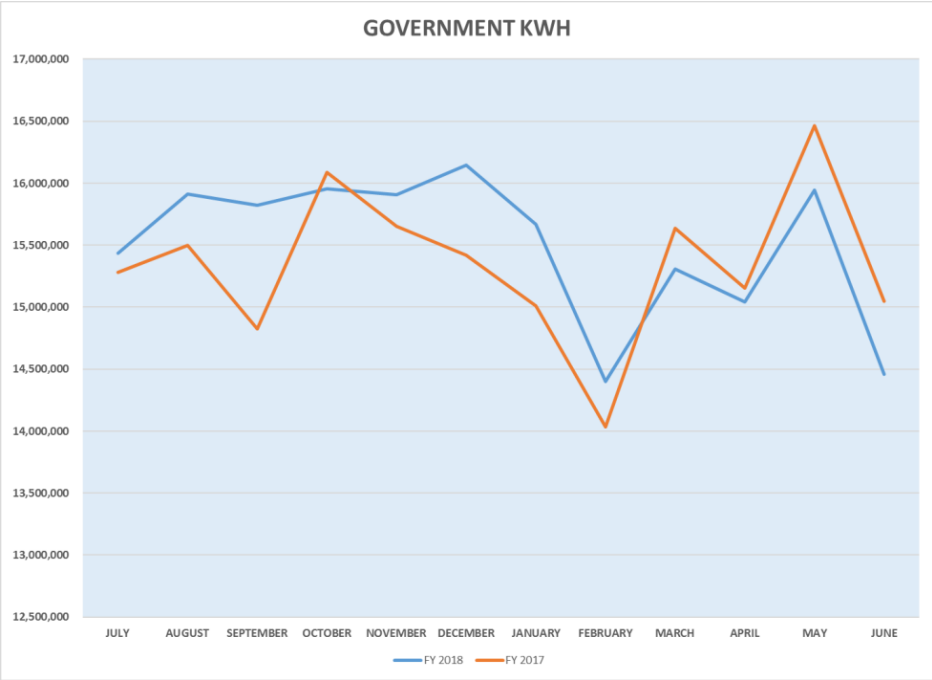


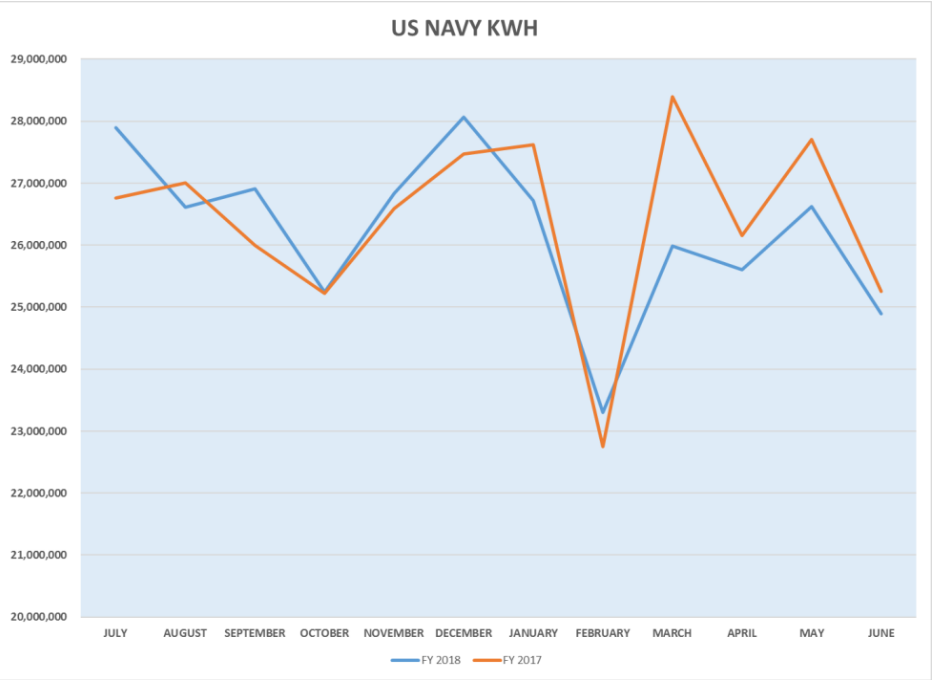
May 2018 Monthly Financial Highlight (Continued)





May 2018 Monthly Financial Highlight (Continued)



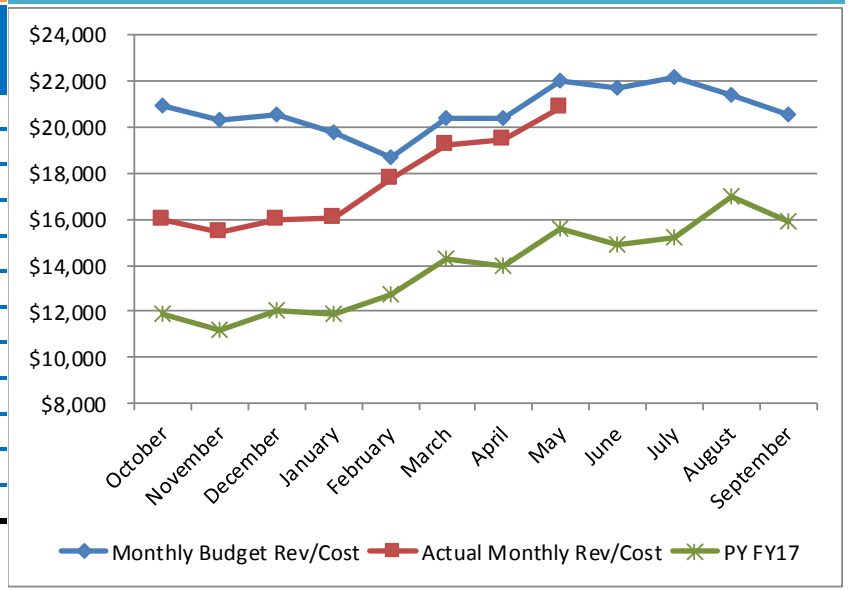


May 2018 Monthly Financial Highlight (Continued)

Fuel Revenue Through May 31, 2018

$000	Monthly Budget Rev/Cost	Actual Monthly Rev/Cost	Variance		PY FY17	CY vs PY Variance	
October	$ 20,928	$ 15,936	$ (4,992)	↓	$ 11,894	$ 4,042	↑
November	20,300	15,400	$ (4,899)	↓	11,215	$ 4,185	↑
December	20,529	16,007	$ (4,522)	↓	12,036	$ 3,971	↑
January	19,774	16,036	$ (3,738)	↓	11,867	$ 4,169	↑
February	18,692	17,763	$ (930)	↓	12,751	$ 5,012	↑
March	20,370	19,180	$ (1,190)	↓	14,248	$ 4,932	↑
April	20,361	19,441	(920)	↓	13,940	5,500	↑
May	21,963	20,854	(1,109)	↓	15,596	5,258	↑
June	21,672				14,859		
July	22,185				15,175		
August	21,369				16,947		
September	20,534				15,895		
Total	**$ 248,677**	**$ 140,617**	**$ (22,300)**		**$ 166,425**	**$ 37,069**	

Fuel Revenue/ Cost $000

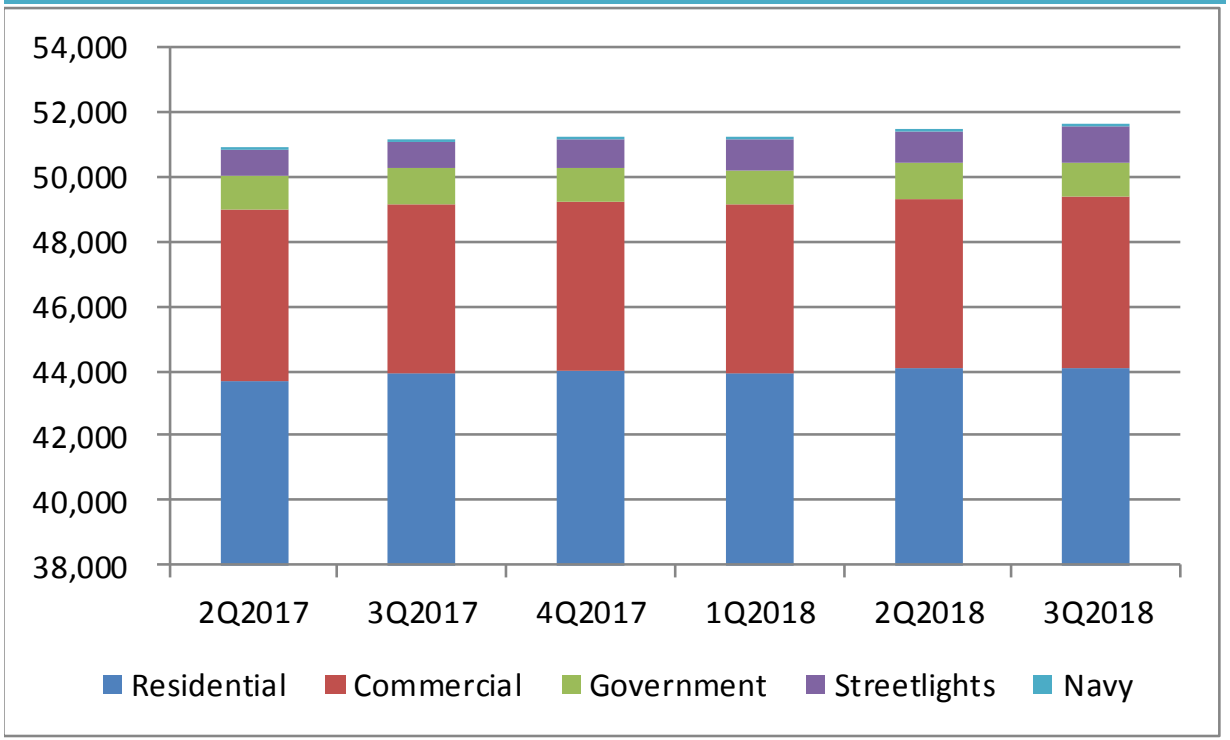


- Under recovery of LEAC - $10.6 million

May 2018 Monthly Financial Highlight (Continued)

Number of Customers Through May 31, 2018							
	2Q2017	3Q2017	4Q2017	1Q2018	2Q2018	3Q2018	
Residential	43,718	43,902	43,991	43,898	44,065	44,086	
Commercial	5,236	5,252	5,226	5,231	5,262	5,281	
Government	1,077	1,071	1,073	1,076	1,086	1,088	
Streetlights	800	824	823	908	1,005	1,059	
Navy	1	1	1	1	1	1	
	50,832	51,050	51,114	51,114	51,419	51,515	

Number of Customers

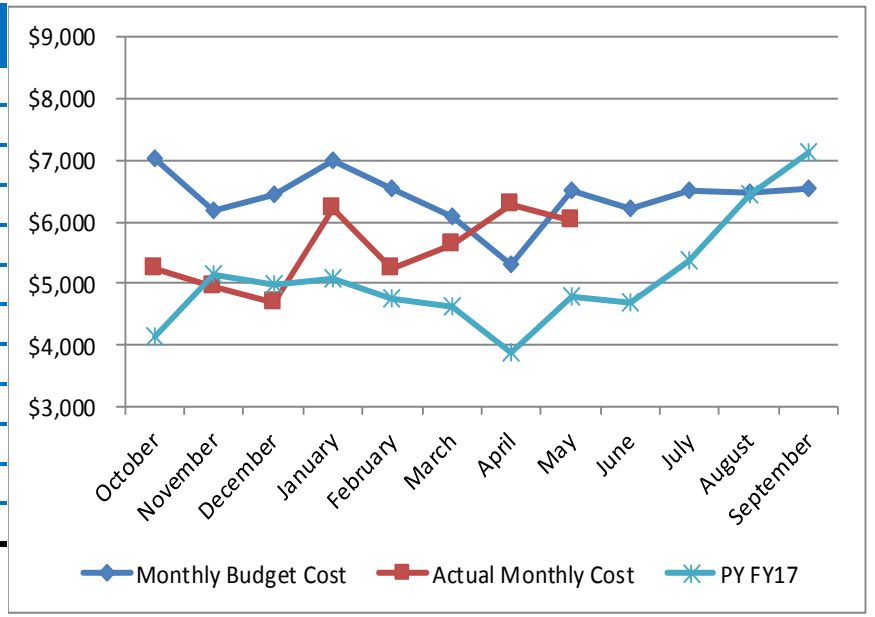


May 2018 Monthly Financial Highlight (Continued)

O&M Cost Through May 31, 2018

$000	Monthly Budget Cost	Actual Monthly Cost	Variance		PY FY17	CY vs PY Variance	
October	$ 7,040	5,239	1,801	↑	4,135	(1,103)	↓
November	6,182	4,941	1,240	↑	5,158	217	↑
December	6,428	4,694	1,735	↑	4,966	273	↑
January	7,001	6,204	797	↑	5,092	(1,112)	↓
February	6,522	5,252	1,270	↑	4,748	(504)	↓
March	6,091	5,638	453	↑	4,612	(1,026)	↓
April	5,320	6,269	(949)	↓	3,892	(2,378)	↓
May	6,495	6,005	491	↑	4,772	(1,233)	↓
June	6,221				4,702		
July	6,508				5,385		
August	6,462				6,445		
September	6,526				7,138		
Total	**$ 76,796**	**$ 44,242**	**$ 6,838**		**$ 61,045**	**$ (6,866)**	

O&M Cost $000



- DSC greater than target of 1.75

Debt service coverage (DSC) calculation-indentu	2013	2014	2015	2016	2017	YTD May 2018
Senior lien coverage	3.36	3.16	3.62	3.28	2.65	2.68
Aggregate debt service coverage	1.88	1.98	2.62	3.28	2.65	2.68
Debt service coverage (DSC) calculation-IPP as O&M						
Senior lien coverage	2.16	2.25	2.56	2.45	1.79	1.80
Aggregate debt service coverage	1.21	1.41	1.85	2.45	1.79	1.80

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

GUAM POWER AUTHORITY
FINANCIAL STATEMENT OVERVIEW
May 2018

Attached are the financial statements and supporting schedules for the month and fiscal year ended May 31, 2018.

Summary
The increase in net assets for the month ended was $1.5 million as compared to the anticipated net increase of $0.9 million projected at the beginning of the year. The total kWh sales for the month were 3.41% less than projected and non-fuel revenues were $0.6 million less than the estimated amount. O & M expenses for the month were $5.9 million which was $0.5 million less than our projections for the month. Other expenses for the month such as interest expense, IPP costs, (net of interest income and other income) totaled to $3.6 million, which was $0.4 million less than the projected amounts. There were no other significant departures from the budget during the period.

Analysis

Description	Previous Month	Current Month	Target
Quick Ratio	2.75	2.95	2
Days in Receivables	38	41	52
Days in Payables	22	21	30
LEAC (Over)/Under Recovery Balance -YTD	$13,005,690	$10,642,841	$12,413,898
T&D Losses	4.91%	4.90%	<7.00%
Debt Service Coverage	1.80	1.80	1.75
Long-term equity ratio	16%	17%	30 – 40%
Days in Cash	185	175	60

The Quick Ratio has been a challenge for GPA historically. However, over the last two fiscal years, the influx of cash from insurance proceeds continued to improve this ratio. GPA has current obligations of approximately $62 million and approximately $182 million in cash and current receivables. Debt Service Coverage ratio is calculated using the methodology in use before the Fiscal Year 2002 change in accounting practice.

Financial Statement
May 2018
Significant Assumptions

The significant assumptions in the financial statements are as follows:

- Accrual cutoff procedures were performed at month end
- An inventory valuation is performed at year-end only
- Accounts Receivable includes accruals based on prior months' usage.

Prepared by:	Reviewed by:	Approved by:
_____	_____	_____
Lenora M. Sanz	John J.E. Kim	John M. Benavente, P.E.
Controller	Chief Financial Officer	General Manager

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)
Statements of Net Position
May 31, 2018 and September 30, 2017

	Unaudited May 2018	Audited September 2017	Change from Sept 30 2017
ASSETS AND DEFERRED OUTFLOWS OF RESOURCES			
Current assets:			
Cash and cash equivalents:			
Held by trustee for restricted purposes:			
Interest and principal funds	7,856,241	18,061,879	(10,205,638)
Bond indenture funds	52,353,537	56,907,535	(4,553,998)
Held by Guam Power Authority:			
Bond indenture funds	141,238,461	132,579,889	8,658,572
Self insurance fund-restricted	19,255,426	19,251,372	4,054
Energy sense fund	1,422,419	1,074,491	347,928
Total cash and cash equivalents	222,126,084	227,875,166	(5,749,082)
Accounts receivable, net	39,149,125	77,826,132	(38,677,007)
Total current receivables	39,149,125	77,826,132	(38,677,007)
Materials and supplies inventory	12,746,821	11,989,745	757,076
Fuel inventory	51,176,543	52,387,369	(1,210,826)
Prepaid expenses	4,837,380	629,586	4,207,794
Total current assets	330,035,953	370,707,998	(40,672,045)
Utility plant, at cost:			
Electric plant in service	1,043,421,617	1,038,121,362	5,300,255
Construction work in progress	23,761,974	18,480,173	5,281,801
Total	1,067,183,591	1,056,601,535	10,582,056
Less: Accumulated depreciation	(586,146,363)	(561,829,334)	(24,317,029)
Total utility plant	481,037,228	494,772,201	(13,734,973)
Other non-current assets:			
Investment - bond reserve funds held by trustee	48,461,349	48,576,863	(115,514)
Unamortized debt issuance costs	2,598,116	4,267,305	(1,669,189)
Total other non-current assets	51,059,465	52,844,168	(1,784,703)
Total assets	862,132,646	918,324,367	(56,191,721)
Deferred outflow of resources:			
Deferred fuel revenue	10,642,841	16,751,048	(6,108,207)
Unamortized loss on debt refunding	28,010,300	11,076,064	16,934,236
Pension	8,698,853	8,698,853	0
Unamortized forward delivery contract costs	531,118	637,358	(106,240)
Total deferred outflows of resources	47,883,112	37,163,323	10,719,789
	910,015,758	955,487,690	(45,471,932)

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)
Statement of Net Position, Continued
May 31, 2018 and September 30, 2017

	Unaudited May 2018	Audited September 2017	Change from Sept 30 2017
LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION			
Current liabilities:			
Current maturities of long-term debt	1,630,000	1,780,000	(150,000)
Current obligations under capital leases	18,126,544	23,330,193	(5,203,649)
Accounts payable			
Operations	21,419,977	56,723,139	(35,303,162)
Others	3,960,189	7,597,801	(3,637,612)
Accrued payroll and employees' benefits	702,264	1,546,860	(844,596)
Current portion of employees' annual leave	2,284,459	2,045,201	239,258
Interest payable	5,345,925	15,065,830	(9,719,905)
Customer deposits	8,283,415	8,209,228	74,187
Total current liabilities	61,752,773	116,298,252	(54,545,479)
Regulatory liabilities:			
Provision for self insurance	19,550,977	19,550,977	0
Total regulatory liabilities	19,550,977	19,550,977	0
Long term debt, net of current maturities	606,044,689	590,568,862	15,475,827
Obligations under capital leases, net of current portion	14,333,278	24,428,832	(10,095,554)
Net Pension liability	82,863,526	85,875,217	(3,011,691)
DCRS sick leave liability	4,008,397	4,008,397	0
Employees' annual leave net of current portion	1,086,456	1,086,456	0
Customer advances for construction	385,500	369,180	16,320
Total liabilities	790,025,596	842,186,173	(52,160,577)
Deferred inflows of resources:			
Unearned forward delivery contract revenue	1,946,726	2,336,071	(389,345)
Pension	788,894	788,894	0
Total deferred inflows of resources	2,735,620	3,124,965	(389,345)
Commitments and contigencies			
Net Position:			
Net investment in capital assets	(58,824,189)	(40,220,468)	(18,603,721)
Restricted	10,422,199	15,232,832	(4,810,633)
Unrestricted	165,656,531	135,164,187	30,492,344
Total net position	117,254,541	110,176,552	7,077,989
	910,015,758	955,487,690	(45,471,932)

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM
Statement of Revenues, Expenses and Changes in Net Assets

	May 31			Eight Months Ended May 31		
	Unaudited 2018	Audited 2017	% of change Inc (dec)	Unaudited 2018	Audited 2017	% of change Inc (dec)
Revenues						
Sales of electricity	34,865,003	30,213,220	15	249,231,087	212,206,156	17
Miscellaneous	173,842	256,403	(32)	1,256,765	1,630,506	(23)
Total	35,038,845	30,469,623	15	250,487,852	213,836,662	17
Bad debt expense	(86,583)	(93,433)	(7)	(692,667)	(696,966)	(1)
Total revenues	34,952,262	30,376,190	15	249,795,185	213,139,696	17
Operating and maintenance expenses						
Production fuel	20,853,541	15,595,840	34	140,622,284	103,548,130	36
Other production	1,494,243	1,098,598	36	11,044,059	9,667,780	14
	22,347,784	16,694,438	34	151,666,343	113,215,910	34
Depreciation	2,947,511	7,375,681	(60)	25,580,227	32,316,527	(21)
Energy conversion cost	1,436,403	1,710,763	(16)	11,970,389	12,820,984	(7)
Transmission & distribution	1,085,365	952,077	14	8,634,551	7,741,044	12
Customer accounting	491,008	274,381	79	3,479,030	2,669,566	30
Administrative & general	2,847,590	2,353,353	21	20,391,525	16,600,299	23
Total operating and maintenance expenses	31,155,661	29,360,693	6	221,722,065	185,364,330	20
Operating income	3,796,601	1,015,497	274	28,073,120	27,775,366	1
Other income (expenses)						
Interest income	373,878	117,128	219	1,687,508	934,743	81
Interest expense and amortization	(2,606,335)	(2,833,791)	(8)	(21,460,093)	(22,700,698)	(5)
Bond issuance costs	67,464	76,827	(12)	(1,979,129)	614,616	(422)
Assets written off	0	0		0	0	
Allowance for funds used during construction	190,759	305,095	(37)	1,180,090	2,529,395	(53)
Other expense	(298,846)	(201,691)	0	(526,183)	(394,040)	34
Total other income (expenses)	(2,273,080)	(2,536,432)	(10)	(21,097,807)	(19,015,984)	11
Income (loss) before capital contributions	1,523,521	(1,520,935)	(200)	6,975,313	8,759,382	(20)
Capital contributions	7,906	1,861	0	102,672	38,422	167
Increase (decrease) in net assets	1,531,427	(1,519,074)	(201)	7,077,985	8,797,804	(20)
Total net assets at beginning of period (restated)	115,723,115	72,139,708	60	110,176,557	61,822,830	78
Total net assets at end of period	117,254,542	70,620,634	66	117,254,542	70,620,634	66

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)
Statements of Cash Flows
Period Ended May 31, 2018

	Month Ended 5/31/2018	YTD Ended 5/31/2018
Increase(decrease) in cash and cash equivalents		
Cash flows from operating activities:		
Cash received from customers	$33,108,313	$ 288,404,387
Cash payments to suppliers and employees for goods and services	32,926,999	254,588,558
Net cash provided by operating activities	$181,314	33,815,829
Cash flows from investing activities:		
Interest and dividends on investments and bank accounts	373,878	1,687,508
Net cash provided by investing activities	373,878	1,687,508
Cash flows from non-capital financing activities		
Interest paid on short term debt	(6,352)	(50,935)
Provision for self insurance funds	-	(4,054)
Net cash provided by noncapital financing activities	(6,352)	(54,989)
Cash flows from capital and related financing activities		
Acquisition of utility plant	(1,374,249)	(11,845,250)
Principal paid on bonds and other long-term debt	-	(3,550,000)
Interest paid on bonds(net of capitalized interest)	190,759	(27,597,196)
Interest paid on capital lease obligations	(241,250)	(2,351,775)
Interest & principal funds held by trustee	(2,483,991)	10,205,638
Reserve funds held by trustee	(43,299)	115,514
Bond funds held by trustee	(56,218)	4,553,998
Principal payment on capital lease obligations	(1,902,848)	(15,299,203)
Grant from DOI/FEMA	7,906	102,672
Debt issuance costs/loss on defeasance	(333,577)	18,875,827
Net cash provided by (used in) capital and related financing activities	(6,236,767)	(26,789,776)
Net (decrease) increase in cash and cash equivalents	(5,687,926.39)	8,658,572
Cash and cash equivalents, beginning	146,926,387	132,579,889
Cash and cash equivalents-Funds held by GPA, May 31, 2018	**$ 141,238,461**	**$ 141,238,461**

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)
Statements of Cash Flows, continued
Period Ended May 31, 2018

	Month Ended 5/31/2018	YTD Ended 5/31/2018
Reconciliation of operating earnings to net cash provided by operating activities:		
Operating earnings net of depreciation expense and excluding interest income	$3,796,601	$28,073,120
Adjustments to reconcile operating earnings to net cash provided by operating activities:		
Depreciation and amortization	2,947,511	25,580,227
Other expense	(231,372)	(2,505,312)
(Increase) decrease in assets:		
Accounts receivable	(1,804,748)	38,677,007
Materials and inventory	32,732	(757,076)
Fuel inventory	(4,338,691)	1,210,826
Prepaid expenses	988,508	(4,207,794)
Unamortized debt issuance cost	23,667	1,669,189
Deferred fuel revenue	2,362,849	6,108,207
Unamortized loss on debt refunding	229,166	(16,934,236)
Unamortized forward delivery contract costs	13,280	106,240
Increase (decrease) in liabilities:		
Accounts payable-operations	(2,105,974)	(35,303,162)
Accounts payable-others	(677,497)	(3,985,540)
Accrued payroll and employees' benefits	(1,095,907)	(844,596)
Net pension liability	(292,833)	(3,011,691)
Employees' annual leave	62,414	239,258
Customers deposits	320,276	74,187
Customer advances for construction	-	16,320
Unearned forward delivery contract revenue	(48,668)	(389,345)
Net cash provided by operating activities	**$181,314**	**$ 33,815,829**

GUAM POWER AUTHORITY
Financial Analysis
5/31/2018

Quick Ratio

Reserve Funds Held by GPA	141,238,461
Current Accounts Receivable	40,943,576
Total Cash and A/R (A+B)	182,182,037
Total Current Liabilities	61,752,773
Quick Ratio (F/G)	**2.95**

Days in Receivables

FY 18 Moving 12 Mos.-Actual	368,098,985
No. of Days	365
Average Revenues per day (A/B)	1,008,490
Current Accounts Receivable	40,943,576
Days in Receivables (D/C)	**41**

Days in Payables

FY 18 Moving 12 Months-Actual	450,263,654
No. of Days	365
Average Payables per day (A/B)	1,233,599
Current Accounts Payables	25,380,166
Days in Payables (D/C)	**21**

Long term equity ratio

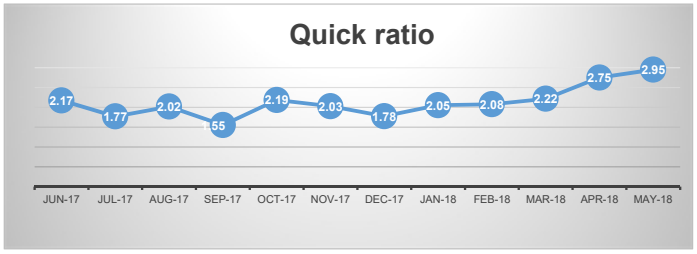
Equity	$	117,254,541.00
Total Long term Liability	$	589,162,846.00
Total Equity and liability	$	706,417,387.00
Long term equity ratio (A/C)		**17%**

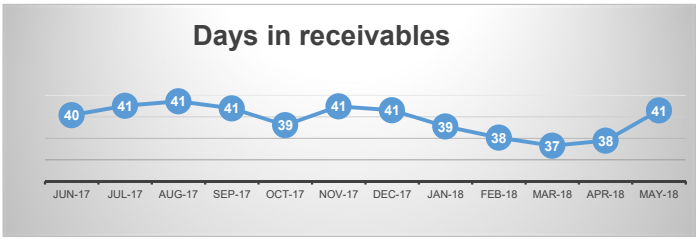
Days cash on hand

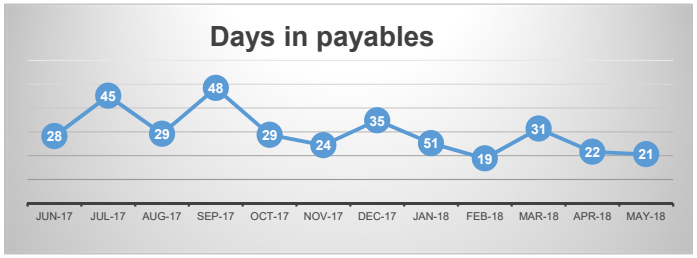
Unresctricted cash & cash equivalents	141,238
No. of Days -YTD	243
A x B	34,320,946
Total Operating expenses excluding depreci	196,142
Days cash on hand	**175**

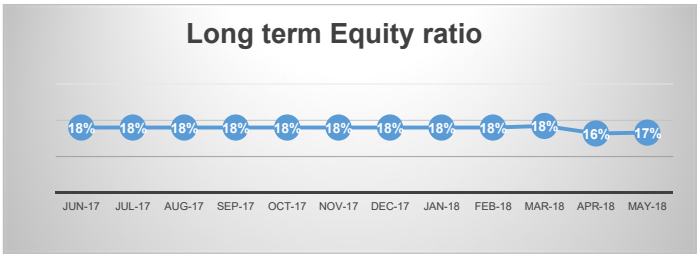
Days' Liquidity

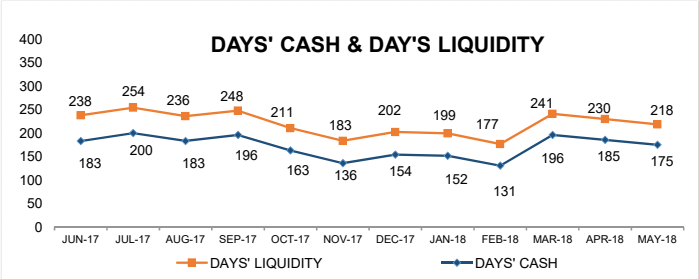
Unresctricted cash , cash equivalents & revc	176,238
No. of Days -YTD	243
A x B	42,825,946
Total Operating expenses excluding depreci	196,142
Days liquidity	**218**











GUAM POWER AUTHORITY
ACCRUED REVENUE
MAY 2018

	FOR THE MONTH ENDED MAY		SEVEN MONTHS ENDED MAY	
	2018	2017	2018	2017
KWH SALES:				
Residential	44,782,019	46,940,445	334,973,180	329,615,950
Small Gen. Non Demand	7,216,684	7,375,238	54,969,964	54,896,103
Small Gen. Demand	16,316,998	16,415,592	124,781,697	125,360,434
Large General	26,377,222	27,209,329	208,467,322	208,584,456
Independent Power Producer	26,295	97,039	364,430	693,237
Private St. Lights	34,126	31,956	263,236	310,941
Sub-total	94,753,344	98,069,599	723,819,828	719,461,121
Government Service:				
Small Non Demand	1,224,286	1,242,514	9,745,582	9,003,048
Small Demand	8,098,401	8,507,100	63,634,757	64,836,553
Large	6,622,597	6,712,069	50,993,697	49,620,504
Street Lighting	761,901	771,506	5,770,092	6,457,688
Sub-total	16,707,185	17,233,190	130,144,128	129,917,793
Total	111,460,529	115,302,789	853,963,956	849,378,914
U. S. Navy	26,624,376	27,710,121	208,396,216	211,920,311
GRAND TOTAL	138,084,906	143,012,910	1,062,360,172	1,061,299,225
REVENUE:				
Residential	$ 11,371,498	$ 9,464,539	$ 77,648,495	$ 63,785,583
Small Gen. Non Demand	$ 2,127,563	$ 1,782,557	$ 14,978,149	$ 12,853,312
Small Gen. Demand	$ 4,513,787	$ 3,828,208	$ 31,836,542	$ 27,181,234
Large General	$ 6,798,955	$ 5,621,797	$ 49,276,449	$ 41,473,123
Independent Power Producer	$ 7,068	$ 20,386	$ 84,575	$ 142,724
Private St. Lights	$ 26,776	$ 24,432	$ 202,614	$ 206,075
Sub-total	$ 24,845,648	$ 20,741,919	$ 174,026,823	$ 145,642,052
Government Service:				
Small Non Demand	$ 372,707	$ 313,817	$ 2,757,215	$ 2,231,439
Small Demand	$ 2,323,025	$ 1,985,615	$ 16,981,217	$ 14,933,916
Large	$ 1,840,797	$ 1,572,201	$ 13,161,573	$ 11,013,100
Street Lighting	$ 477,272	$ 439,403	$ 3,535,184	$ 3,615,895
Sub-total	$ 5,013,801	$ 4,311,036	$ 36,435,189	$ 31,794,349
Total	$ 29,859,448	$ 25,052,955	$ 210,462,012	$ 177,436,401
U. S. Navy	$ 5,005,555	$ 5,160,265	$ 38,769,075	$ 34,769,756
GRAND TOTAL	$ 34,865,003	$ 30,213,220	$ 249,231,087	$ 212,206,157
NUMBER OF CUSTOMERS:				
Residential	44,086	43,803	44,013	43,669
Small Gen. Non Demand	4,172	4,130	4,150	4,124
Small Gen. Demand	988	988	985	988
Large General	119	117	119	116
Independent Power Producer	2	3	2	3
Private St. Lights	533	530	530	525
Sub-total	49,900	49,571	49,798	49,425
Government Service:				
Small Non Demand	691	684	684	683
Small Demand	350	346	351	347
Large	47	45	47	45
Street Lighting	526	293	433	232
Sub-total	1,614	1,368	1,515	1,306
Total	51,514	50,939	51,312	50,731
US Navy	1	1	1	1
	51,515	50,940	51,313	50,732

GUAM POWER AUTHORITY
ACCRUED REVENUE

	TWELVE MONTHS ENDING	MAY 2018	APRIL 2018	MARCH 2018	FEBRUARY 2018	JANUARY 2018	DECEMBER 2017	NOVEMBER 2017	OCTOBER 2017	SEPTEMBER 2017	AUGUST 2017	JULY 2017	JUNE 2017
KWH SALES:													
Residential	511,692,832	44,782,019	41,394,961	41,541,824	36,809,815	42,067,765	43,307,944	43,386,853	41,682,000	41,491,015	44,434,719	45,094,364	45,699,553
Small General Non Demand	83,973,560	7,216,684	6,694,385	6,976,607	6,154,115	6,844,713	6,956,278	7,060,041	7,067,142	7,022,092	7,347,440	7,087,373	7,546,692
Small General Demand	189,472,188	16,316,998	15,390,268	15,917,309	14,164,319	15,562,774	15,848,505	15,789,397	15,792,127	15,509,408	16,488,257	15,839,125	16,853,701
Large General	314,456,097	26,377,222	25,681,619	26,155,199	23,674,407	26,242,185	27,485,887	26,267,661	26,583,141	25,432,034	27,038,013	27,119,633	26,399,095
Private Outdoor Lighting	444,702	34,126	27,531	32,791	32,408	32,358	35,129	35,042	33,851	76,532	33,324	35,412	36,199
Independent Power Producer	633,016	26,295	27,405	28,536	28,976	27,011	40,140	93,823	92,244	34,586	57,754	82,800	93,447
Sub-Total	1,100,672,395	94,753,344	89,216,169	90,652,265	80,864,040	90,776,805	93,673,883	92,632,817	91,250,505	89,565,666	95,399,508	95,258,706	96,628,687
Government Service:													
Small Non Demand	14,644,779	1,224,286	1,180,911	1,193,794	1,119,571	1,248,251	1,272,026	1,255,131	1,251,612	1,246,106	1,243,487	1,254,979	1,154,625
Small Demand	95,676,806	8,098,401	7,720,850	7,889,205	7,377,578	8,102,981	8,063,549	8,098,974	8,283,218	8,084,368	8,147,386	7,962,644	7,847,651
Large	76,271,161	6,622,597	6,142,309	6,226,210	5,905,830	6,315,619	6,812,255	6,550,623	6,418,254	6,493,449	6,520,699	6,219,351	6,043,966
Street Lighting (Agencies)	8,827,010	761,901	699,601	743,499	669,689	716,067	697,921	668,464	812,949	697,002	877,130	638,971	843,815
Sub-Total	195,419,757	16,707,185	15,743,671	16,052,709	15,072,669	16,382,918	16,845,750	16,573,193	16,766,033	16,520,925	16,788,702	16,075,944	15,890,058
Total	1,296,092,152	111,460,529	104,959,840	106,704,974	95,936,708	107,159,724	110,519,633	109,206,010	108,016,537	106,086,591	112,188,210	111,334,651	112,518,745
U.S. Navy	315,061,806	26,624,376	25,605,624	25,988,485	23,304,608	26,722,147	28,067,673	26,837,883	25,245,420	26,906,320	26,608,721	27,892,205	25,258,344
Grand Total	1,611,153,958	138,084,906	130,565,464	132,693,459	119,241,316	133,881,870	138,587,306	136,043,893	133,261,957	132,992,911	138,796,930	139,226,856	137,777,089
REVENUE:													
Residential	$ 114,464,890	$ 11,371,498	$ 10,082,308	$ 10,154,660	$ 9,633,432	$ 8,985,179	$ 9,238,911	$ 9,263,463	$ 8,919,044	$ 8,887,320	$ 9,762,810	$ 9,056,344	$ 9,109,920
Small General Non Demand	$ 22,165,569	$ 2,127,563	$ 1,903,541	$ 1,988,097	$ 1,869,658	$ 1,741,922	$ 1,765,223	$ 1,789,263	$ 1,792,881	$ 1,783,997	$ 1,902,660	$ 1,709,931	$ 1,790,832
Small General Demand	$ 46,724,824	$ 4,513,787	$ 4,108,079	$ 4,266,730	$ 4,006,949	$ 3,714,258	$ 3,769,415	$ 3,699,298	$ 3,758,026	$ 3,692,273	$ 3,964,157	$ 3,527,191	$ 3,704,661
Large General	$ 71,981,386	$ 6,798,955	$ 6,399,879	$ 6,565,683	$ 6,086,686	$ 5,762,313	$ 6,067,740	$ 5,793,817	$ 5,801,375	$ 5,643,059	$ 6,028,539	$ 5,589,484	$ 5,443,855
Private Outdoor Lighting	$ 303,495	$ 26,776	$ 22,912	$ 25,785	$ 25,733	$ 25,133	$ 25,553	$ 25,471	$ 25,250	$ 25,361	$ 25,094	$ 25,099	$ 25,329
Independent Power Producer	$ 152,882	$ 7,068	$ 7,057	$ 7,406	$ 7,969	$ 6,029	$ 9,249	$ 20,053	$ 19,744	$ 17,076	$ 14,804	$ 17,270	$ 19,157
Sub-Total	$ 255,793,046	$ 24,845,648	$ 22,523,776	$ 23,008,362	$ 21,630,428	$ 20,234,834	$ 20,876,091	$ 20,591,366	$ 20,316,320	$ 20,049,087	$ 21,698,063	$ 19,925,320	$ 20,093,753
Government Service:													
Small Non Demand	$ 4,038,785	$ 372,707	$ 350,949	$ 356,541	$ 335,126	$ 332,434	$ 341,017	$ 334,963	$ 333,478	$ 333,079	$ 332,325	$ 319,135	$ 297,031
Small Demand	$ 24,877,380	$ 2,323,025	$ 2,164,585	$ 2,224,973	$ 2,094,220	$ 2,016,922	$ 2,046,340	$ 2,043,720	$ 2,067,433	$ 2,050,292	$ 2,052,253	$ 1,907,628	$ 1,885,990
Large	$ 19,127,838	$ 1,840,797	$ 1,676,200	$ 1,707,269	$ 1,628,297	$ 1,525,771	$ 1,652,805	$ 1,583,988	$ 1,546,446	$ 1,575,080	$ 1,573,445	$ 1,424,292	$ 1,393,449
Street Lighting (Agencies)	$ 5,357,984	$ 477,272	$ 452,952	$ 455,729	$ 439,995	$ 427,482	$ 416,951	$ 419,351	$ 445,451	$ 436,808	$ 516,047	$ 418,012	$ 451,933
Sub-Total	$ 53,401,987	$ 5,013,801	$ 4,644,687	$ 4,744,512	$ 4,497,638	$ 4,302,609	$ 4,457,113	$ 4,382,022	$ 4,392,807	$ 4,395,259	$ 4,474,070	$ 4,069,066	$ 4,028,403
Total	$ 309,195,033	$ 29,859,448	$ 27,168,463	$ 27,752,874	$ 26,128,065	$ 24,537,443	$ 25,333,204	$ 24,973,388	$ 24,709,127	$ 24,444,346	$ 26,172,133	$ 23,994,386	$ 24,122,156
U.S. Navy	$ 58,903,953	$ 5,005,555	$ 5,623,411	$ 5,202,943	$ 4,155,974	$ 5,033,103	$ 4,642,130	$ 4,254,065	$ 4,851,893	$ 5,325,383	$ 5,019,382	$ 5,331,702	$ 4,458,411
Grand Total	$ 368,098,985	$ 34,865,003	$ 32,791,874	$ 32,955,817	$ 30,284,040	$ 29,570,546	$ 29,975,334	$ 29,227,453	$ 29,561,020	$ 29,769,728	$ 31,191,516	$ 29,326,087	$ 28,580,567
NUMBER OF CUSTOMERS:													
Residential	43,986	44,086	43,991	44,065	43,995	44,119	43,898	43,996	43,950	43,991	43,969	43,866	43,902
Small General Non Demand	4,145	4,172	4,183	4,154	4,153	4,142	4,129	4,131	4,134	4,127	4,134	4,131	4,145
Small General Demand	984	988	988	987	991	981	981	982	982	980	981	984	988
Large General	118	119	119	119	118	119	118	117	119	116	115	116	116
Private Outdoor Lighting	529	533	536	526	527	527	530	527	530	526	527	526	527
Independent Power Producer	3	2	2	2	2	2	3	3	3	3	3	3	3
Sub-Total	49,763	49,900	49,819	49,853	49,786	49,890	49,659	49,756	49,718	49,743	49,729	49,626	49,681
Government Service:													
Small Non Demand	682	691	692	689	684	686	679	678	676	675	678	678	677
Small Demand	351	350	350	350	351	350	350	354	351	353	351	352	349
Large	46	47	47	47	47	47	47	47	46	45	45	45	45
Street Lighting (Agencies)	387	526	513	479	421	389	378	378	377	297	297	297	297
Sub-Total	1,467	1,614	1,602	1,565	1,503	1,472	1,454	1,457	1,450	1,370	1,371	1,372	1,368
Total	51,230	51,514	51,421	51,418	51,289	51,362	51,113	51,213	51,168	51,113	51,100	50,998	51,049
U.S. Navy	1	1	1	1	1	1	1	1	1	1	1	1	1
Grand Total	51,231	51,515	51,422	51,419	51,290	51,363	51,114	51,214	51,169	51,114	51,101	50,999	51,050

GUAM POWER AUTHORITY
ACCRUED REVENUE
MAY 2018

RATE	NUMBER OF CUSTOMERS	KWH SALES	TOTAL REVENUE AMOUNT	TOTAL REVENUE C/KWH	BASE RATE REVENUE C/KWH	BASE RATE REVENUE AMOUNT	AVERAGE PER CUSTOMER KWH	AVERAGE PER CUSTOMER REVENUE	NON-FUEL C/KWH	NON-FUEL AMOUNT	FUEL C/KWH	FUEL AMOUNT
Month									$ 14.7266			
R Residential	44,086	44,782,019	$ 11,371,498	$ 25.39	$ 25.39	$ 11,371,498	1,016	$ 257.94	$ 9.6207	$ 4,308,342	$ 15.7723	$ 7,063,156
G Small Gen. Non Demand	4,172	7,216,684	$ 2,127,563	$ 29.48	$ 29.48	$ 2,127,563	1,730	$ 509.96	$ 13.7053	$ 989,072	$ 15.7758	$ 1,138,492
J Small Gen. Demand	988	16,316,998	$ 4,513,787	$ 27.66	$ 27.66	$ 4,513,787	16,515	$ 4,568.61	$ 11.9560	$ 1,950,862	$ 15.7071	$ 2,562,926
P Large General	119	26,377,222	$ 6,798,955	$ 25.78	$ 25.78	$ 6,798,955	221,657	$ 57,134.08	$ 10.3537	$ 2,731,023	$ 15.4221	$ 4,067,932
I Independent Power Producer	2	26,295	$ 7,068	$ 26.88	$ 26.88	$ 7,068	13,148	$ 3,533.84	$ 11.9682	$ 3,147	$ 14.9098	$ 3,921
H Private St. Lights	533	34,126	$ 26,776	$ 78.46	$ 78.46	$ 26,776	64	$ 50.24	$ 63.0365	$ 21,512	$ 15.4242	$ 5,264
Sub-Total	49,900	94,753,344	$ 24,845,648	$ 26.22	$ 26.22	$ 24,845,648	1,899	$ 497.91	$ 26.0741	$ 10,003,958	$ 15.6635	$ 14,841,690
Government Service:												
S Small Non Demand	691	1,224,286	$ 372,707	$ 30.44	$ 30.44	$ 372,707	1,772	$ 539.37	$ 15.0180	$ 183,864	$ 15.4248	$ 188,843
K Small Demand	350	8,098,401	$ 2,323,025	$ 28.68	$ 28.68	$ 2,323,025	23,138	$ 6,637.21	$ 13.2608	$ 1,073,911	$ 15.4242	$ 1,249,114
L Large	47	6,622,597	$ 1,840,797	$ 27.80	$ 27.80	$ 1,840,797	140,906	$ 39,165.90	$ 12.5484	$ 831,027	$ 15.2473	$ 1,009,770
F Street Lighting (Agencies)	526	761,901	$ 477,272	$ 62.64	$ 62.64	$ 477,272	1,448	$ 907.36	$ 47.2181	$ 359,755	$ 15.4242	$ 117,517
Sub-Total	1,614	16,707,185	$ 5,013,801	$ 30.01	$ 30.01	$ 5,013,801	10,351	$ 3,106.44	$ 29.8626	$ 2,448,557	$ 15.3541	$ 2,565,244
	51,514	111,460,529	$ 29,859,448	$ 56.23	$ 56.23	$ 29,859,448	2,164	$ 579.64	$ 11.1721	$ 12,452,514	$ 15.6171	$ 17,406,934
U.S. Navy	1	26,624,376	$ 5,005,555	$ 18.80	$ 18.80	$ 5,005,555			$ 5.8553	$ 1,558,948	$ 12.9453	$ 3,446,607
TOTAL	51,515	138,084,906	$ 34,865,003	$ 25.25	$ 25.25	$ 34,865,003	2,680	$ 676.79	$ 10.1470	$ 14,011,462	$ 15.1020	$ 20,853,541
Eight Months Ended May 2018												
R Residential	44,013	334,973,180	$ 77,648,495	$ 23.18	$ 23.18	$ 77,648,495	7,611	$ 1,764.24	$ 9.6264	$ 32,245,704	$ 13.5542	$ 45,402,791
G Small Gen. Non Demand	4,150	54,969,964	$ 14,978,149	$ 27.25	$ 27.25	$ 14,978,149	13,247	$ 3,609.41	$ 13.6864	$ 7,523,396	$ 13.5615	$ 7,454,753
J Small Gen. Demand	985	124,781,697	$ 31,836,542	$ 25.51	$ 25.51	$ 31,836,542	126,682	$ 32,321.36	$ 11.9962	$ 14,969,052	$ 13.5176	$ 16,867,490
P Large General	119	208,467,322	$ 49,276,449	$ 23.64	$ 23.64	$ 49,276,449	1,759,218	$ 415,835.02	$ 10.3509	$ 21,578,149	$ 13.2866	$ 27,698,300
I Independent Power Producer	2	364,430	$ 84,575	$ 23.21	$ 23.21	$ 84,575	153,444	$ 35,610.40	$ 10.9135	$ 39,772	$ 12.2939	$ 44,803
H Private St. Lights	530	263,236	$ 202,614	$ 76.97	$ 76.97	$ 202,614	497	$ 382.65	$ 63.6841	$ 167,639	$ 13.2862	$ 34,974
Sub-Total	49,798	723,819,828	$ 174,026,823	$ 24.04	$ 24.04	$ 174,026,823	14,535	$ 3,494.68	$ 10.5722	$ 76,523,713	$ 13.4706	$ 97,503,110
Government Service:												
S Small Non Demand	684	9,745,582	$ 2,757,215	$ 28.29	$ 28.29	$ 2,757,215	14,240	$ 4,028.81	$ 15.0014	$ 1,461,976	$ 13.2905	$ 1,295,239
K Small Demand	351	63,634,757	$ 16,981,217	$ 26.69	$ 26.69	$ 16,981,217	181,425	$ 48,414.02	$ 13.3814	$ 8,515,236	$ 13.3040	$ 8,465,981
L Large	47	50,993,697	$ 13,161,573	$ 25.81	$ 25.81	$ 13,161,573	1,087,866	$ 280,780.22	$ 12.6643	$ 6,458,002	$ 13.1459	$ 6,703,571
F Street Lighting (Agencies)	433	5,770,092	$ 3,535,184	$ 61.27	$ 61.27	$ 3,535,184	13,337	$ 8,171.47	$ 47.9314	$ 2,765,683	$ 13.3360	$ 769,500
Sub-Total	1,515	130,144,128	$ 36,435,189	$ 28.00	$ 28.00	$ 36,435,189	85,925	$ 24,055.58	$ 14.7536	$ 19,200,897	$ 13.2425	$ 17,234,291
U.S. Navy	1	208,396,216	$ 38,769,075	$ 18.60	$ 18.60	$ 38,769,075			$ 6.1825	$ 12,884,194	$ 12.4210	$ 25,884,881
TOTAL	51,313	1,062,360,172	$ 249,231,087	$ 23.46	$ 23.46	$ 249,231,087	20,703	$ 4,857.05	$ 10.2234	$ 108,608,805	$ 13.2368	$ 140,622,282
Twelve Months Ended May 2018												
R Residential	43,986	511,692,832	$ 114,464,890	$ 22.37	$ 22.37	$ 114,464,890	11,633	$ 2,602.32	$ 9.6020	$ 49,132,827	$ 12.7678	$ 65,332,063
G Small Gen. Non Demand	4,145	83,973,560	$ 22,165,569	$ 26.40	$ 26.40	$ 22,165,569	20,261	$ 5,348.08	$ 13.6203	$ 11,437,421	$ 12.7756	$ 10,728,148
J Small Gen. Demand	984	189,472,188	$ 46,724,824	$ 24.66	$ 24.66	$ 46,724,824	192,472	$ 47,464.48	$ 11.9153	$ 22,576,109	$ 12.7453	$ 24,148,715
P Large General	118	314,456,097	$ 71,981,386	$ 22.89	$ 22.89	$ 71,981,386	2,674,325	$ 612,173.38	$ 10.3389	$ 32,511,171	$ 12.5519	$ 39,470,215
I Independent Power Producer	3	633,016	$ 152,882	$ 24.15	$ 24.15	$ 152,882	245,038	$ 59,180.08	$ 11.8279	$ 253,004	$ 12.3234	$ 78,009
H Private St. Lights	529	444,702	$ 303,495	$ 68.25	$ 68.25	$ 303,495	841	$ 574.26	$ 56.8929	$ 74,874	$ 11.3539	$ 50,491
Sub-Total	49,763	1,100,672,395	$ 255,793,046	$ 23.24	$ 23.24	$ 255,793,046	22,118	$ 5,140.19	$ 10.5377	$ 115,985,405	$ 12.7020	$ 139,807,642
Government Service:												
S Small Non Demand	682	14,644,779	$ 4,038,785	$ 27.58	$ 27.58	$ 4,038,785	21,476	$ 5,922.70	$ 15.0043	$ 2,197,345	$ 12.5740	$ 1,841,440
K Small Demand	351	95,676,806	$ 24,877,380	$ 26.00	$ 26.00	$ 24,877,380	272,648	$ 70,892.56	$ 13.4199	$ 12,839,742	$ 12.5816	$ 12,037,638
L Large	46	76,271,161	$ 19,127,838	$ 25.08	$ 25.08	$ 19,127,838	1,649,106	$ 413,574.88	$ 12.6373	$ 9,638,621	$ 12.4414	$ 9,489,217
F Street Lighting (Agencies)	387	8,827,010	$ 5,357,984	$ 60.70	$ 60.70	$ 5,357,984	22,784	$ 13,830.03	$ 48.1184	$ 4,247,412	$ 12.5815	$ 1,110,572
Sub-Total	1,467	195,419,757	$ 53,401,987	$ 27.33	$ 27.33	$ 53,401,987	133,256	$ 36,414.58	$ 14.8005	$ 28,923,120	$ 12.5263	$ 24,478,867
	51,230	1,296,092,152	$ 309,195,033	$ 23.86	$ 23.86	$ 309,195,033	25,300	$ 41,554.77	$ 11.1804	$ 144,908,525	$ 12.6755	$ 164,286,509
U.S. Navy	1	315,061,806	$ 58,903,953	$ 18.70	$ 18.70	$ 58,903,953			$ 6.2501	$ 19,691,526	$ 12.4459	$ 39,212,427
TOTAL	51,231	1,611,153,958	$ 368,098,985	$ 22.85	$ 22.85	$ 368,098,985	31,449	$ 7,185.11	$ 10.2163	$ 164,600,051	$ 12.6306	$ 203,498,936

GPA-318 **ENERGY ACCOUNT** **FOR INTERNAL USE ONLY**

318May18 **FY 2018 Versus FY 2017**

	May 2018		May 2017		Y T D 2018		Y T D 2017		MOVING TWELVE MONTHS	
Gross Generation										
Number of days in Period	**31**		**31**		**212**		**212**		**365**	
Peak demand	**249**		**256**		**254**		**256**		**261**	
Date	**05/14/18**		**05/23/17**		**10/30/17**		**05/23/17**		**08/01/17**	
	KWH	**% change**	**KWH**	**% change**	**KWH**	**% change**	**KWH**	**% change**	**KWH**	**% change**
Energy Account:										
Kilowatt hours GPA:										
Cabras 1 & 2	56,512,000		67,382,000		453,754,000		524,689,000		624,058,000	
Cabras No. 3	0		0		0		0		0	
Cabras No. 4	0		0		0		0		0	
MEC (ENRON) Piti 8 (IPP)	27,409,700		18,030,100		212,560,900		216,610,300		315,584,300	
MEC (ENRON) Piti 9 (IPP)	29,215,300		21,998,400		222,460,200		200,694,900		329,827,600	
TEMES Piti 7 (IPP)	2,215,440		4,081,245		16,148,831		11,645,122		51,485,077	
Tanguisson 2	0		0		0		0		0	
Tanguisson 1	0		0		0		0		0	
Diesels/CT's & Others:							0			
MDI 10MW	0		0		946,580		2,244,937		959,270	
NRG Solar Dandan	4,537,268		3,889,309		32,346,595		28,438,891		47,098,506	
Dededo CT #1	543,500		415,410		5,696,850		415,410		12,404,740	
Dededo CT #2	713,680		524,580		4,568,900		1,148,032		9,253,460	
Macheche CT	6,000,136		7,113,638		36,364,273		26,138,368		65,793,462	
Yigo CT (Leased)	5,203,060		4,358,727		28,050,249		21,240,384		48,185,812	
Tenjo	3,061,560		5,320,820		30,371,570		24,557,140		51,271,910	
Talofofo 10 MW	1,125,490		2,391,400		10,527,260		9,284,230		20,014,420	
Aggreko	15,031,436		21,925,167		109,724,453		99,110,537		184,060,456	
Wind Turbine*	9,594		43,325		293,593		334,289		346,499	
Orote	0		0		0		0		0	
Marbo	0		0		0		0		0	
	151,578,165		**157,474,122**		**1,163,814,253**		**1,166,551,539**		**1,760,343,511**	
Ratio to last year		96.26		103.03		99.77		**103.10**		**100.25**
Station use	5,209,578		5,775,757		42,597,775		46,092,445		62,400,326	
Ratio to Gross generation		3.44		3.67		3.66		3.95		**3.54**
Net send out	146,368,586		151,698,365		1,121,216,478		1,120,459,094		1,697,943,185	
Ratio to last year		96.49		103.26		100.07		**103.01**		**100.55**
KWH deliveries:										
Sales to Navy (@34.5kv)	**26,624,376**		**27,710,121**		**208,396,216**		**211,920,313**		**315,061,806**	
Ratio to last year		96.08		100.02		98.34		**100.06**		**99.01**
GPA-metered	**119,744,210**		**123,988,244**		**912,820,262**		**908,538,781**		**1,382,881,379**	
Ratio to last year		96.58		104.01		100.47		**103.72**		**100.91**
Power factor adj.	0		0		0		0		0	
Adjusted	119,744,210		123,988,244		912,820,262		908,538,781		1,382,881,379	
GPA KWH Accountability:										
Sales to civilian customers-										
accrual basis	**111,460,529**		**115,302,789**		**853,963,955**		**849,378,915**		**1,296,092,152**	
Ratio to last year		96.67		103.61		100.54		**103.59**		**100.81**
GPA use-KWH	369,108		297,622		2,557,628		2,066,802		3,635,064	
Unaccounted For	7,914,573		8,387,833		56,298,679		57,093,064		83,154,162	
Ratio to deliveries		6.61		6.77		6.17		6.28		6.01
Ratio to Gross Generation		5.22		5.33		4.84		4.89		4.72
Ratio to Net Send Out		5.41		5.53		5.02		5.10		4.90

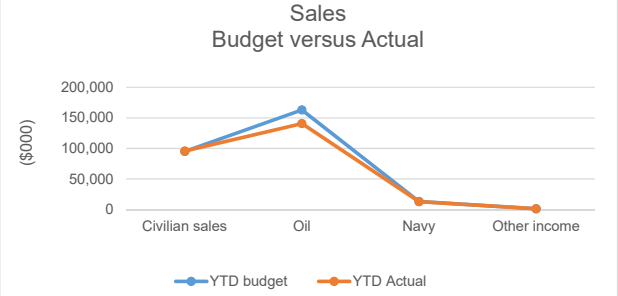
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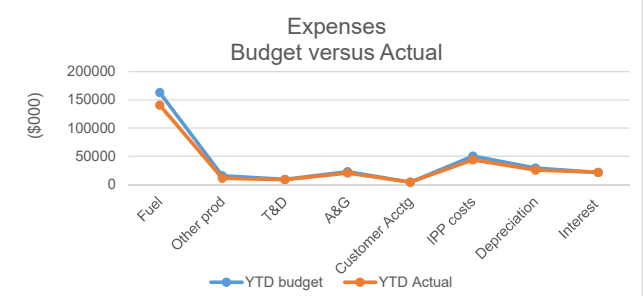
Guam Power Authority
Fuel Consumption
FY 2018

Description	May 2018 BARRELS	May 2018 AMOUNT	YEAR-TO-DATE BARRELS	YEAR-TO-DATE AMOUNT	MOVING 12 MONTHS BARREL S	MOVING 12 MONTHS AMOUNT
FUEL FURNISHED:						
NAVY:						
Diesel	0	0	0	0	0	0
Low Sulfur	0	0	0	0	0	0
	0	**0**	**0**	**0**	**0**	**0**
GPA:						
RFO	109,749	$7,176,017	1,175,114	$ 73,378,177	1,524,795	$ 93,194,042
Diesel	69,394	$6,294,987	486,012	$ 41,184,260	901,435	$ 71,197,272
Low Sulfur	61,202	$3,618,024	159,632	$ 9,593,911	385,531	$ 23,389,878
Deferred Fuel Costs	0	$2,362,849	0	$ 6,108,207	0	$ (1,556,198)
Fuel Adjustments	0	$2,468		$ (18,514)	0	$ (221,894)
Fuel Handling Costs	0	$1,399,197	0	$ 10,376,242	0	$ 17,495,835
	240,345	**$20,853,541**	**1,820,759**	**$ 140,622,283**	**2,811,761**	**$ 203,498,935**
IWPS:						
GPA RFO	109,749	$7,176,017	1,175,114	$ 73,378,177	1,524,795	$ 93,194,042
Diesel	69,394	$6,294,987	486,012	$ 41,184,260	901,435	$ 71,197,272
Low Sulfur	61,202	$3,618,024	159,632	$ 9,593,911	385,531	$ 23,389,878
Deferred Fuel Costs	0	$2,362,849	0	$ 6,108,207	0	$ (1,556,198)
Fuel Variance	0	$2,468	0	$ (18,514)		$ (221,894)
Fuel Handling Costs	0	$1,399,197	0	$ 10,376,242	0	$ 17,495,835
	240,345	**$20,853,541**	**1,820,759**	**$ 140,622,283**	**2,811,761**	**$ 203,498,935**
AVERAGE COST/Bbl.						
GPA RFO		**$65.39**		**$62.44**		**$61.12**
Diesel		**$90.71**		**$84.74**		**$78.98**
Low Sulfur		**$59.12**		**$60.10**		**$60.67**
AS BURNED						
Cabras 1 & 2						
RFO	59,123	$ 3,847,117	655,550	$ 40,883,467	874,503	$ 53,284,646
Low Sulfur	36,553	$ 2,160,882	93,991	$ 5,649,549	169,441	$ 10,234,224
Diesel	56	$ 4,985	1,265	$ 96,381	2,625	$ 186,061
	95,732	$ 6,012,983	750,806	$ 46,629,397	1,046,569	$ 63,704,931
Cabras 3 & 4						
RFO	0	$ -	0	$ -	0	$ -
Low Sulfur	0	$ -	0	$ -	0	$ -
Diesel	0	$ -	0	$ -	0	$ -
	0	$ -	0	$ -	0	$ -
MEC (Piti Units 8&9)						
RFO	50,625	$ 3,328,900	519,563	$ 32,494,710	650,292	$ 39,909,397
Low Sulfur	24,649	$ 1,457,142	65,641	$ 3,944,363	216,090	$ 13,155,654
Diesel	0	$ -	38	$ 2,127	38	$ 2,127
	75,274	$ 4,786,042	585,242	$ 36,441,199	866,420	$ 53,067,178
Diesel & CT's - GPA:						
MDI Dsl	0	$ -	1,521	$ 105,771	1,541	$ 107,108
Macheche CT	12,859	$ 1,172,829	78,425	$ 6,611,701	141,824	$ 11,226,092
Yigo CT	11,247	$ 1,019,668	58,479	$ 4,977,590	99,128	$ 7,911,205
Talofofo 10 MW	1,962	$ 168,452	18,123	$ 1,554,885	34,655	$ 2,745,408
Aggreko	27,287	$ 2,434,927	201,736	$ 16,960,745	336,126	$ 26,575,131
Tenjo	6,569	$ 626,374	53,760	$ 4,739,432	90,158	$ 7,404,020
TEMES (IPP)	5,813	$ 525,928	42,011	$ 3,473,865	130,403	$ 9,881,328
GWA Generators	13	$ 1,518	325	$ 38,167	679	$ 79,915
	69,338	$ 6,290,002	484,710	$ 41,085,752	898,772	$ 71,009,084
Deferred Fuel Costs	0	$ 2,362,849		$ 6,108,207		$ (1,556,198)
Adjustment		$ 2,468		$ (18,514)		$ (221,894)
Fuel Handling Costs	0	$ 1,399,197		$ 10,376,242		$ 17,495,835
TOTAL	**240,345**	**$ 20,853,541**	**1,820,759**	**$ 140,622,283**	**2,811,761**	**$ 203,498,935**

Statement of operations
Comparison-Budget versus Actual
For the month and year to date ended May 31, 2018

	Budget	Actual May-18	Variance	YTD Budget	YTD Actual	Variance
KwH Sales-Civilian	115,412	111,461	3,951	849,871	853,964	-4,093
Non-fuel yield	$ 0.105526	$ 0.111725	$ (0.006199)	$ 0.111874	$ 0.112096	$ (0.000222)
KwH Sales-Navy	27,544	26,624	920	210,558	208,396	2,162
Non-fuel yield	$ 0.061774	$ 0.058556	$ 0.003218	$ 0.061774	$ 0.061825	$ (0.000051)
Operating revenue						
Civilian sales	$ 12,867	$ 12,453	$ 414	$ 95,079	$ 95,726	$ (647)
Oil	21,963	20,854	1,109	162,916	140,622	22,294
Navy	1,702	1,559	143	13,007	12,884	123
Other income	169	174	(5)	1,353	1,257	97
	36,700	35,040	1,660	272,355	250,489	21,866
Bad debts expense	87	87	0	693	693	0
Total operating revenues	$ 36,613	$ 34,953	$ 1,660	$ 271,662	$ 249,796	$ 21,866
Operating expenses:						
Production fuel	$ 21,963	$ 20,854	$ 1,109	$ 162,916	$ 140,622	$ 22,294
O & M expenses:						
Other production	2,253	1,494	758	15,446	11,044	4,402
Transmission distribution	1,026	1,085	(59)	9,058	8,635	424
Administrative expense	2,794	2,848	(53)	22,557	20,392	2,165
Customer accounting	336	491	(155)	3,326	3,479	(153)
	6,409	5,918	491	50,387	43,549	6,838
IPP costs	1,383	1,436	(53)	11,822	11,970	(149)
Depreciation	3,635	2,948	687	29,079	25,580	3,499
	$ 33,390	$ 31,156	$ 2,234	$ 254,204	$ 221,722	$ 32,482
Operating income	$ 3,224	$ 3,798	$ (574)	$ 17,458	$ 28,074	$ (10,616)
Other revenue (expenses):						
Investment income	99	374	(275)	789	1,688	(898)
Interest expense	(2,654)	(2,606)	(48)	(21,241)	(21,460)	219
AFUDC	61	191	(130)	487	1,180	(693)
Bond issuance costs/Other expenses	135	(231)	366	1,077	(2,505)	3,582
Net income before capital contribution	864	1,525	(661)	(1,430)	6,976	(8,406)
Grants from the U.S. Government	-	8	(8)	-	103	(103)
Increase (decrease) in net assets	$ 864	$ 1,532	$ (669)	$ (1,430)	$ 7,079	$ (8,509)





Guam Power Authority
Debt service coverage
May 31, 2018

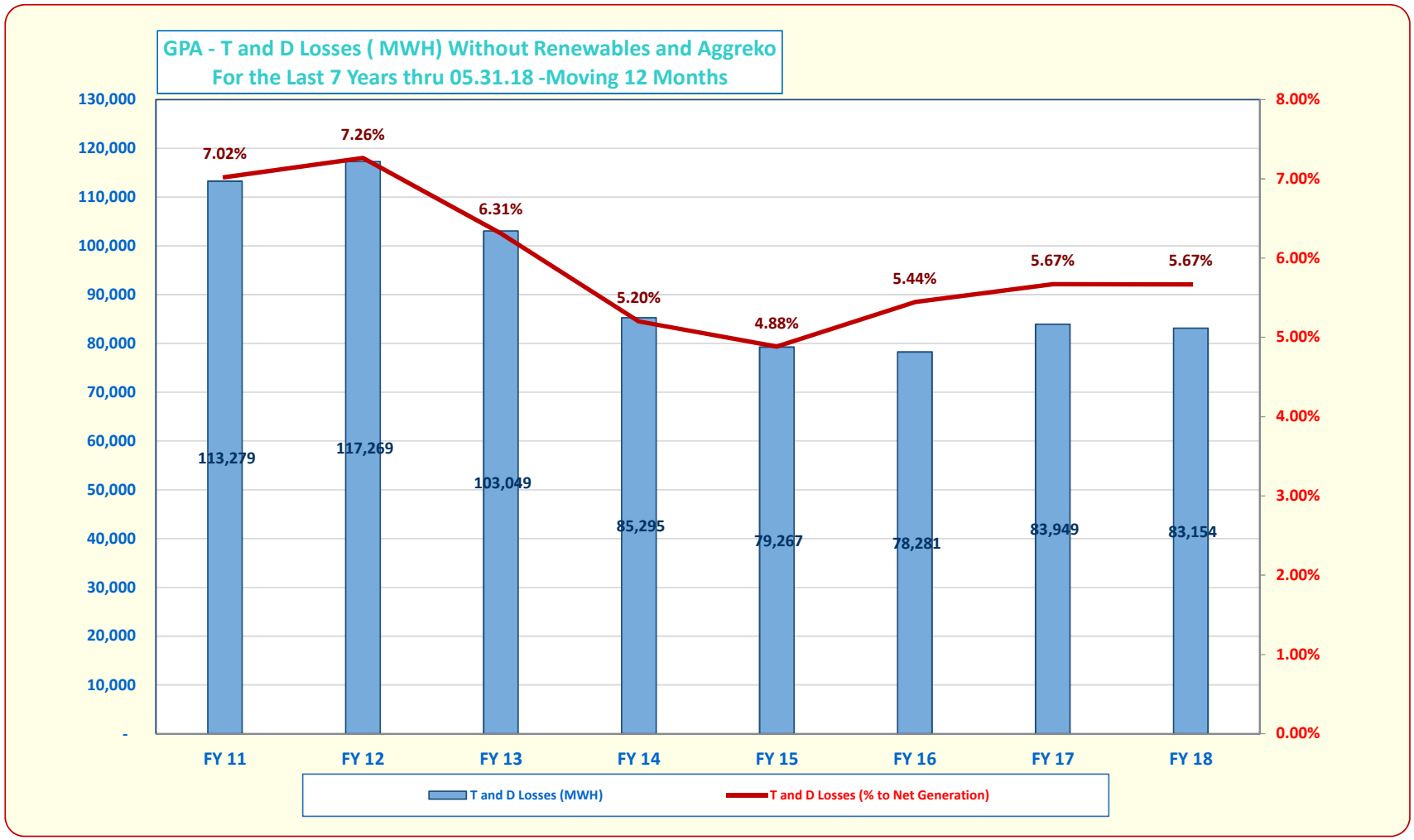
	2014	2015	Restated 2016	2017	YTD 2018
Funds Available for Debt Service					
Earnings from Operations	$40,895	$48,758	$37,981	$36,522	$28,073
Interest Income	$333	$368	$1,227	($32)	446
Depreciation Expense	36,989	41,766	44,240	44,292	25,580
Balance Available for Debt Service	$ 78,217	$ 90,892	$ 83,448	$ 80,782	$ 54,100
IPP - Capital Costs					
Principal	$13,064	$18,144	$14,819	$21,263	$15,681
Interest	10,020	8,478	5,970	5,137	2,108
Total IPP Payments	$ 23,084	$ 26,622	$ 20,789	$ 26,400	$ 17,789
Bond Debt Service					
Principal (1993 & 1999 Revenue Bond)	$0	$0	$0	$0	$0
Interest (1993 & 1999 Revenue Bond)	0	0	0	0	0
Principal and Interest (2010 Subordinate Bond)	15,193	9,605	0	0	0
Principal and Interest (2010 Senior TE Bond)	7,999	7,999	7,999	7,999	2,000
Principal and Interest (2012 Senior TE Bond)	17,455	17,096	17,098	17,449	11,391
Principal and Interest (2014 Senior TE Bond)		0	10	5,084	3,389
Principal and Interest (2017 Senior TE Bond)					3,370
Total	$ 40,647	$ 34,700	$ 25,107	$ 30,532	$ 20,150
Debt Service Coverage (DSC) Calculation					
Existing DSC Methodology (Senior)	2.17 x	2.56 x	2.50 x	1.78 x	1.80 x
Existing DSC Methodology (Senior+Subordinate)	1.36 x	1.85 x	2.50 x	1.78 x	1.80 x
Bond Covenant DSC	1.92 x	2.62 x	3.32 x	2.65 x	2.68 x
Debt Service Coverage Requirements					
Existing Ratemaking DSC Target	1.75 x	1.75 x	1.75 x	1.75 x	1.75 x
Minimum Bond Covenant Requirement (Senior Bond)	1.30 x	1.30 x	1.30 x	1.30 x	1.30 x
Minimum Bond Covenant Requirement (Subordinate Bond	1.20 x	1.20 x	1.20 x	1.20 x	1.20 x

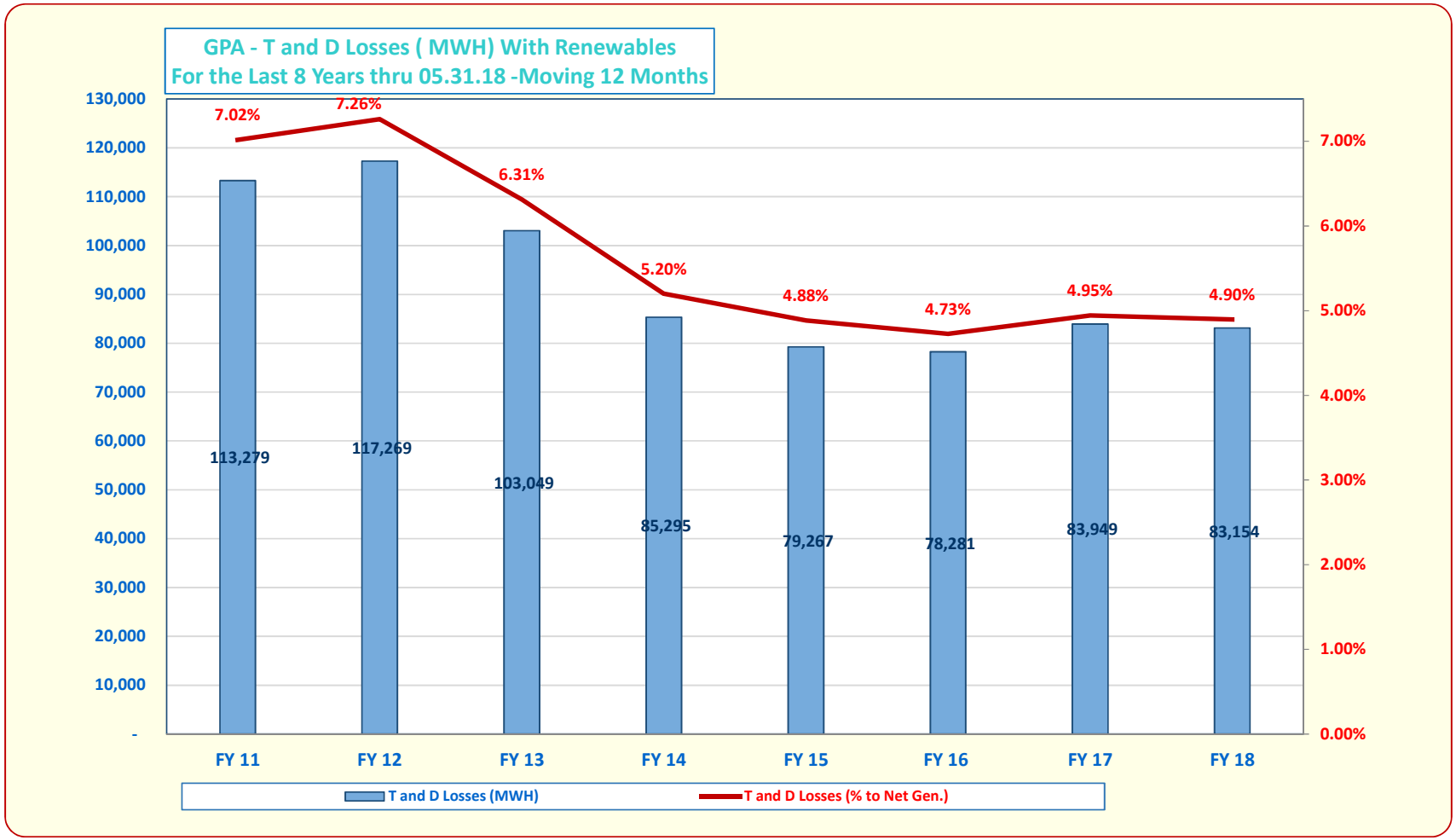
Notes:
(1) Source: Guam Power Authority, 2014 - 2017 Audited Financial Statements
(2) Interest income is net of interest earnings in the Construction Fund and the amortization of deferred credit.
(3) Existing DSC Methodology (Rating Agency Method):
(Operating Earnings + Depreciation Expense - IPP Principal & Interest Payments)/
(Senior and Subordinate Bond Principal & Interest Payments)
(4) Bond Covenant DSC Methodology: (Operating Earnings + Depreciation Expense)/
(Senior and Subordinate Bond Principal & Interest Payments)

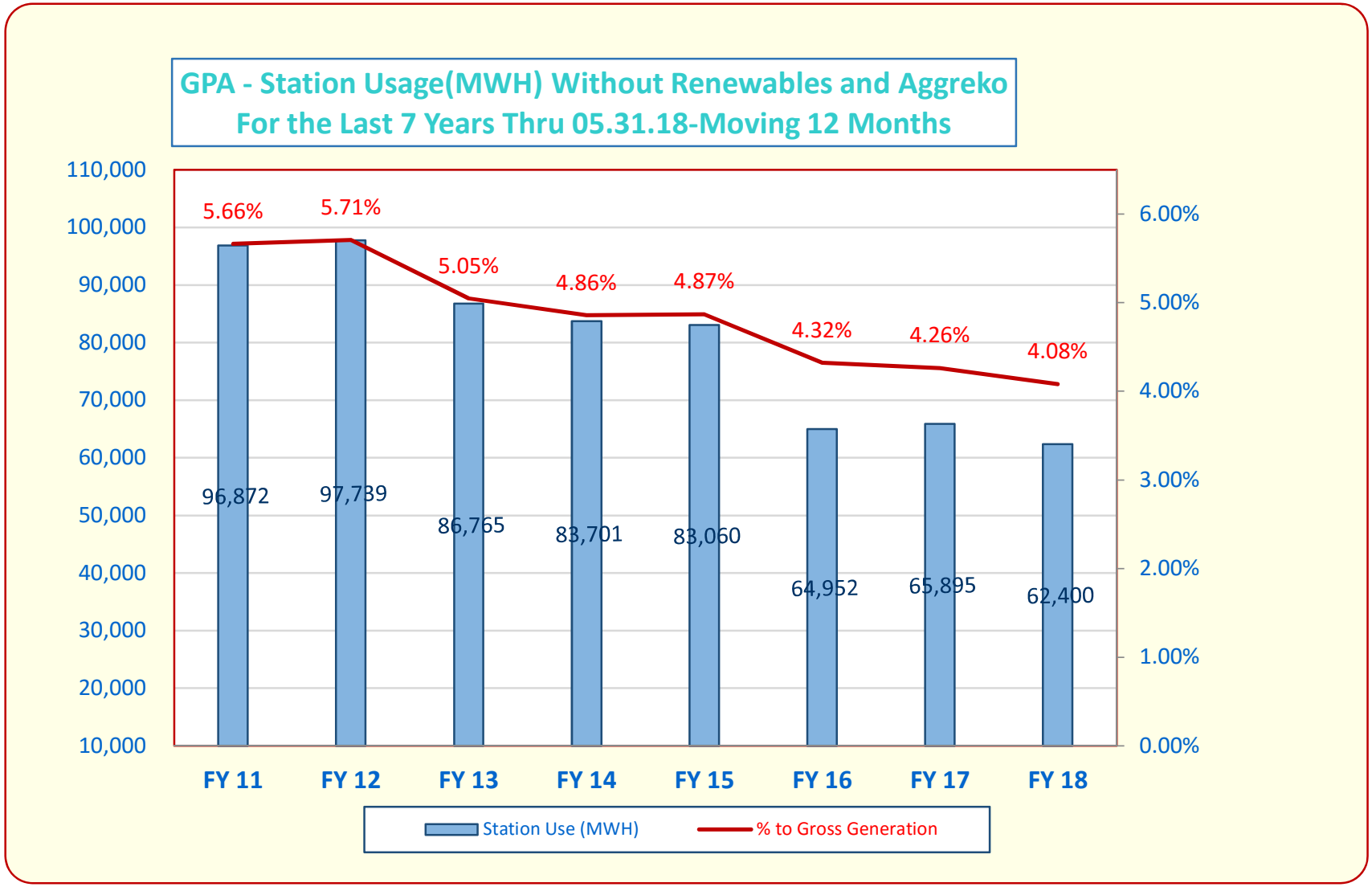
REVENUES-ACTUAL VS PROJECTIONS

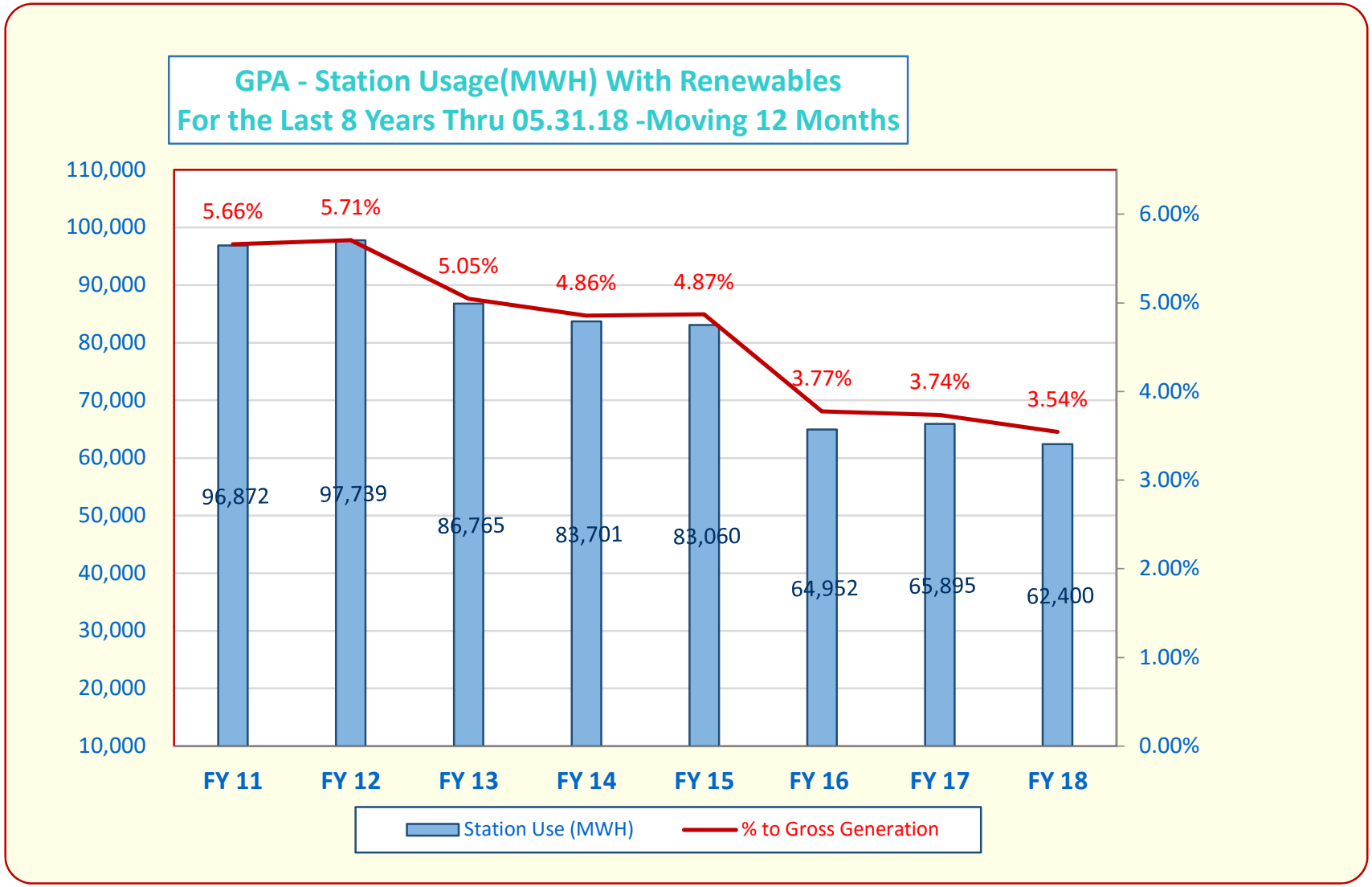
	MONTHLY - MAY 2018				YTD THRU 05/31/2018			
	PROJECTIONS	ACTUAL	VARIANCE	% VARIANCE	PROJECTIONS	ACTUAL	VARIANCE	% VARIANCE
KWH								
Residential	47,031,422	44,782,019	(2,249,403)	-4.78%	329,127,934	334,973,180	5,845,247	1.78%
Small General-Non-Demand	7,858,347	7,216,684	(641,664)	-8.17%	56,175,418	54,969,964	(1,205,454)	-2.15%
Small General-Demand	16,312,028	16,316,998	4,970	0.03%	125,106,867	124,781,697	(325,170)	-0.26%
Large	27,228,940	26,377,222	(851,719)	-3.13%	210,641,309	208,467,322	(2,173,987)	-1.03%
Independent Power Producers	34,061	26,295	(7,765)	-22.80%	263,490	364,430	100,940	38.31%
Private St. Lites	53,382	34,126	(19,255)	-36.07%	441,987	263,236	(178,751)	-40.44%
Sub-total	**98,518,180**	**94,753,344**	**(3,764,836)**	**-3.82%**	**721,757,004**	**723,819,828**	**2,062,824**	**0.29%**
Government								
Small_Non Demand	1,190,653	1,224,286	33,633	2.82%	8,784,457	9,745,582	961,125	10.94%
Small-Demand	8,568,859	8,098,401	(470,458)	-5.49%	64,273,134	63,634,757	(638,377)	-0.99%
Large	6,272,612	6,622,597	349,985	5.58%	48,465,394	50,993,697	2,528,302	5.22%
Public St. Lites	861,472	761,901	(99,571)	-11.56%	6,591,989	5,770,092	(821,897)	-12.47%
Sub-total	**16,893,596**	**16,707,185**	**(186,410)**	**-1.10%**	**128,114,975**	**130,144,128**	**2,029,153**	**1.58%**
Total-Civilian	**115,411,776**	**111,460,529**	**(3,951,246)**	**-3.42%**	**849,871,979**	**853,963,956**	**4,091,977**	**0.48%**
USN	27,544,388	26,624,376	(920,012)	-3.34%	210,558,477	208,396,216	(2,162,261)	-1.03%
Grand Total	**142,956,163**	**138,084,906**	**(4,871,258)**	**-3.41%**	**1,060,430,456**	**1,062,360,172**	**1,929,716**	**0.18%**
					-	-		
Non-Oil Yield								
Residential	0.096203	0.096207	0.000004	0.00%	0.096203	0.096264	0.000060	0.06%
Small General-Non-Demand	0.136364	0.137053	0.000689	0.51%	0.136364	0.136864	0.000500	0.37%
Small General-Demand	0.119423	0.119560	0.000137	0.11%	0.119423	0.119962	0.000539	0.45%
Large	0.103705	0.103537	(0.000167)	-0.16%	0.103705	0.103509	(0.000196)	-0.19%
Independent Power Producers	0.117983	0.119682	0.001699	0.00%	0.117983	0.109135	(0.008848)	0.00%
Private St. Lites	0.454278	0.630365	0.176087	38.76%	0.454278	0.636841	0.182563	40.19%
Sub-total	**0.105526**	**0.105579**	**0.000053**	**0.05%**	**0.105770**	**0.105722**	**(0.000048)**	**-0.05%**
Government					-			
Small_Non Demand	0.152255	0.150180	(0.002074)	-1.36%	0.152255	0.150014	(0.002240)	-1.47%
Small-Demand	0.135082	0.132608	(0.002474)	-1.83%	0.135082	0.133814	(0.001268)	-0.94%
Large	0.128102	0.125484	(0.002618)	-2.04%	0.128102	0.126643	(0.001459)	-1.14%
Public St. Lites	0.380746	0.472181	0.091434	24.01%	0.380746	0.479314	0.098567	25.89%
Sub-total	**0.146228**	**0.146557**	**0.000329**	**0.23%**	**0.146259**	**0.147536**	**0.001276**	**0.87%**
Total-Civilian	**0.111484**	**0.111721**	**0.000237**	**0.21%**	**0.111874**	**0.112094**	**0.000220**	**0.20%**
USN	0.061774	0.058553	(0.003221)	-5.21%	0.061774	0.061825	0.000052	0.08%
Grand Total	**0.101906**	**0.101470**	**(0.000436)**	**-0.43%**	**0.101926**	**0.102234**	**0.000307**	**0.30%**
Non-Oil Revenues								
Residential	4,524,582	4,308,342	(216,241)	-4.78%	31,663,223	32,245,704	582,482	1.84%
Small General-Non-Demand	1,071,598	989,072	(82,526)	-7.70%	7,660,319	7,523,396	(136,923)	-1.79%
Small General-Demand	1,948,034	1,950,862	2,828	0.15%	14,940,655	14,969,052	28,397	0.19%
Large	2,823,767	2,731,023	(92,744)	-3.28%	21,844,480	21,578,149	(266,331)	-1.22%
Independent Power Producers	4,019	3,147	(871)	-21.69%	31,087	39,772	8,685	27.94%
Private St. Lites	24,250	21,512	(2,738)	-11.29%	200,785	167,639	(33,146)	-16.51%
Sub-total	**10,396,249**	**10,003,958**	**(392,292)**	**-3.77%**	**76,340,549**	**76,523,713**	**183,164**	**0.24%**
Government								
Small_Non Demand	181,282	183,864	2,581	1.42%	1,337,473	1,461,976	124,503	9.31%
Small-Demand	1,157,497	1,073,911	(83,586)	-7.22%	8,682,130	8,515,236	(166,894)	-1.92%
Large	803,534	831,027	27,493	3.42%	6,208,516	6,458,002	249,486	4.02%
Public St. Lites	328,002	359,755	31,753	9.68%	2,509,875	2,765,683	255,808	10.19%
Sub-total	**2,470,316**	**2,448,557**	**(21,759)**	**-0.88%**	**18,737,995**	**19,200,897**	**462,903**	**2.47%**
Total-Civilian	**12,866,565**	**12,452,514**	**(414,051)**	**-3.22%**	**95,078,543**	**95,724,611**	**646,067**	**0.68%**
USN	1,701,526	1,558,948	(142,578)	-8.38%	13,007,031	12,884,194	(122,837)	-0.94%
Grand Total	**14,568,091**	**14,011,462**	**(556,629)**	**-3.82%**	**108,085,574**	**108,608,805**	**523,230**	**0.48%**
% of Total Revenues	39.88%	40.19%			39.88%	43.58%		
Oil Revenues								
Residential	7,225,544	7,063,156	(162,388)	-2.25%	50,564,670	45,402,791	(5,161,879)	-10.21%
Small General-Non-Demand	1,207,296	1,138,492	(68,804)	-5.70%	8,630,357	7,454,753	(1,175,604)	-13.62%
Small General-Demand	2,506,054	2,562,926	56,872	2.27%	19,220,451	16,867,490	(2,352,962)	-12.24%
Large	4,183,244	4,067,932	(115,312)	-2.76%	32,361,301	27,698,300	(4,663,001)	-14.41%
Independent Power Producers	5,233	3,921	(1,312)	-25.08%	40,481	44,803	4,322	10.68%
Private St. Lites	8,201	5,264	(2,937)	-35.82%	67,904	34,974	(32,929)	-48.49%
Sub-total	**15,135,571**	**14,841,690**	**(293,881)**	**-1.94%**	**110,885,163**	**97,503,110**	**(13,382,053)**	**-12.07%**
Government								
Small_Non Demand	182,923	188,843	5,921	3.24%	1,349,576	1,295,239	(54,337)	-4.03%
Small-Demand	1,316,453	1,249,114	(67,340)	-5.12%	9,874,427	8,465,981	(1,408,446)	-14.26%
Large	963,676	1,009,770	46,095	4.78%	7,445,848	6,703,571	(742,277)	-9.97%
Public St. Lites	132,350	117,517	(14,833)	-11.21%	1,012,742	769,500	(243,242)	-24.02%
Sub-total	**2,595,401**	**2,565,244**	**(30,157)**	**-1.16%**	**19,682,594**	**17,234,291**	**(2,448,303)**	**-12.44%**
Total-Civilian	**17,730,973**	**17,406,934**	**(324,038)**	**-1.83%**	**130,567,757**	**114,737,401**	**(15,830,356)**	**-12.12%**
USN	4,231,707	3,446,607	(785,100)	-18.55%	32,348,576	25,884,881	(6,463,695)	-19.98%
Grand Total	**21,962,679**	**20,853,541**	**(1,109,138)**	**-5.05%**	**162,916,333**	**140,622,282**	**(22,294,051)**	**-13.68%**
% of Total Revenues	60.12%	59.81%			60.12%	56.42%		
Grand Total								
Residential	11,750,126	11,371,498	(378,628)	-3.22%	82,227,893	77,648,495	(4,579,398)	-5.57%
Small General-Non-Demand	2,278,893	2,127,563	(151,330)	-6.64%	16,290,675	14,978,149	(1,312,526)	-8.06%
Small General-Demand	4,454,087	4,513,787	59,700	1.34%	34,161,106	31,836,542	(2,324,564)	-6.80%
Large	7,007,011	6,798,955	(208,056)	-2.97%	54,205,782	49,276,449	(4,929,332)	-9.09%
Independent Power Producers	9,251	7,068	(2,184)	-23.60%	71,568	84,575	13,007	18.17%
Private St. Lites	32,451	26,776	(5,676)	-17.49%	268,689	202,614	(66,075)	-24.59%
Sub-total	**25,531,821**	**24,845,648**	**(686,173)**	**-2.69%**	**187,225,712**	**174,026,823**	**(13,198,889)**	**-7.05%**
Government					-			
Small_Non Demand	364,205	372,707	8,502	2.33%	2,687,049	2,757,215	70,166	2.61%
Small-Demand	2,473,950	2,323,025	(150,926)	-6.10%	18,556,558	16,981,217	(1,575,341)	-8.49%
Large	1,767,210	1,840,797	73,587	4.16%	13,654,364	13,161,573	(492,791)	-3.61%
Public St. Lites	460,352	477,272	16,920	3.68%	3,522,617	3,535,184	12,566	0.36%
Sub-total	**5,065,717**	**5,013,801**	**(51,916)**	**-1.02%**	**38,420,588**	**36,435,189**	**(1,985,400)**	**-5.17%**
Total-Civilian	**30,597,538**	**29,859,448**	**(738,089)**	**-2.41%**	**225,646,301**	**210,462,012**	**(15,184,289)**	**-6.73%**
USN	5,933,233	5,005,555	(927,678)	-15.64%	45,355,607	38,769,075	(6,586,532)	-14.52%
Grand Total	**36,530,770**	**34,865,003**	**(1,665,767)**	**-4.56%**	**271,001,907**	**249,231,087**	**(21,770,821)**	**-8.03%**
	-	-	-					

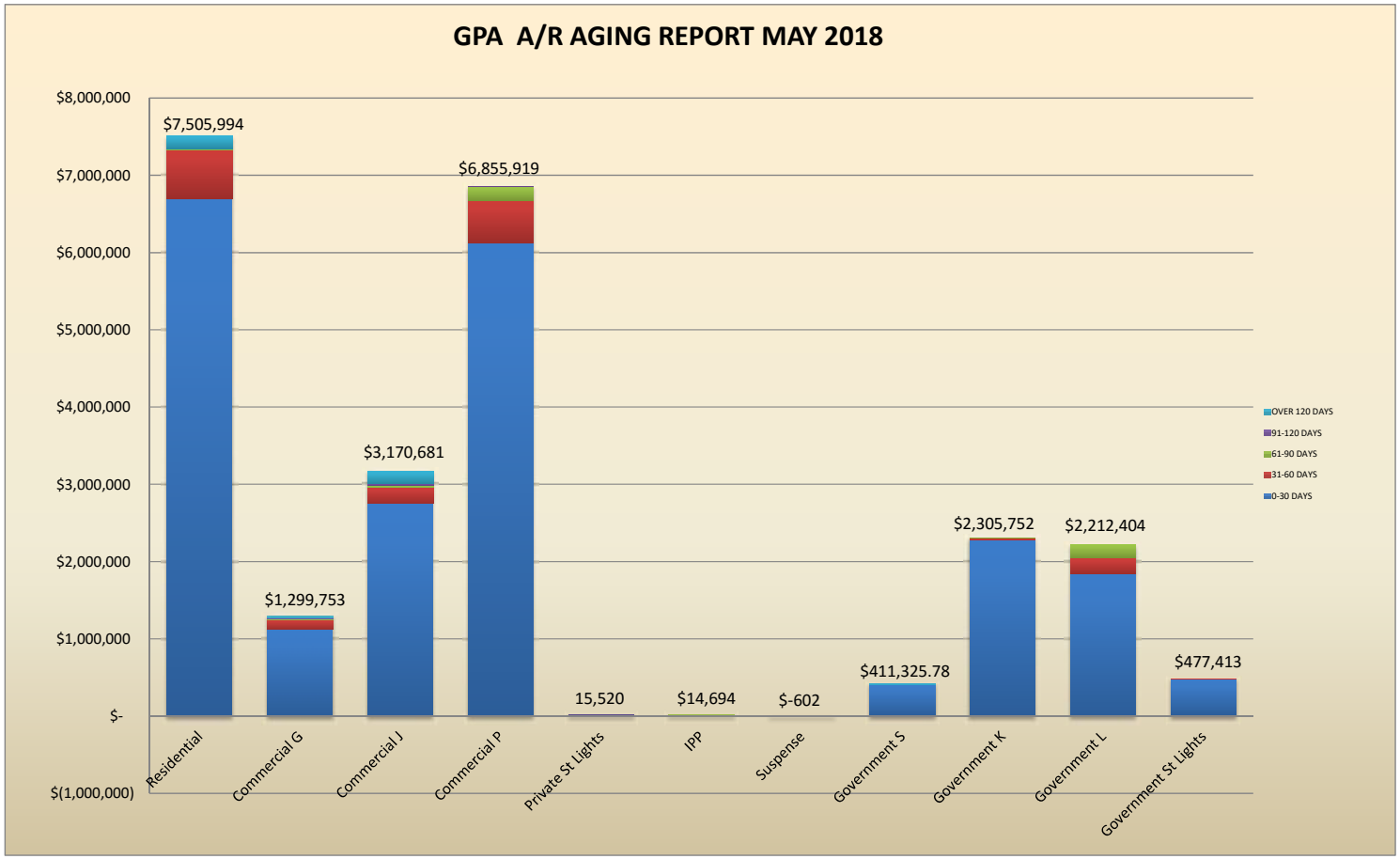
	YTD REVENUES - CURRENT YEAR VS PRIOR YEAR				MTD REVENUES - CURRENT YEAR VS PRIOR YEAR			
	ACTUALS - 8 MONTHS ENDED MAY 31				ACTUALS - MONTH ENDED MAY 31			
	2018	2017	VARIANCE	% VARIANCE	2018	2017	VARIANCE	% VARIANCE
KWH								
Residential	334,973,180	329,615,950	5,357,231	1.63%	44,782,019	46,940,445	(2,158,426)	-4.60%
Small General-Non-Demand	54,969,964	54,896,104	73,860	0.13%	7,216,684	7,375,238	(158,555)	-2.15%
Small General-Demand	124,781,697	125,360,434	(578,737)	-0.46%	16,316,998	16,415,592	(98,594)	-0.60%
Large	208,467,322	208,584,455	(117,134)	-0.06%	26,377,222	27,209,329	(832,107)	-3.06%
Independent Power Producers	364,430	693,237	(328,807)	-47.43%	26,295	97,039	(70,744)	-72.90%
Private St. Lites	263,236	310,941	(47,705)	-15.34%	34,126	31,956	2,170	6.79%
Sub-total	**723,819,828**	**719,461,121**	**4,358,707**	**0.61%**	**94,753,344**	**98,069,599**	**(3,316,255)**	**-3.38%**
Government								
Small_Non Demand	9,745,582	9,003,049	742,534	8.25%	1,224,286	1,242,514	(18,228)	-1.47%
Small-Demand	63,634,757	64,836,552	(1,201,795)	-1.85%	8,098,401	8,507,100	(408,699)	-4.80%
Large	50,993,697	49,620,504	1,373,192	2.77%	6,622,597	6,712,069	(89,472)	-1.33%
Public St. Lites	5,770,092	6,457,688	(687,596)	-10.65%	761,901	771,506	(9,605)	-1.24%
Sub-total	**130,144,128**	**129,917,794**	**226,334**	**0.17%**	**16,707,185**	**17,233,190**	**(526,004)**	**-3.05%**
Total-Civilian	**853,963,956**	**849,378,915**	**4,585,042**	**0.54%**	**111,460,529**	**115,302,789**	**(3,842,260)**	**-3.33%**
USN	208,396,216	211,920,311	(3,524,096)	-1.66%	26,624,376	27,710,121	(1,085,745)	-3.92%
Grand Total	**1,062,360,172**	**1,061,299,226**	**1,060,946**	**0.10%**	**138,084,906**	**143,012,910**	**(4,928,004)**	**-3.45%**
Non-Oil Yield								
Residential	0.096264	0.096608	-0.000344	-0.36%	0.096207	0.096578	-0.000371	-0.38%
Small General-Non-Demand	0.136864	0.137227	-0.000363	-0.26%	0.137053	0.136644	0.000410	0.30%
Small General-Demand	0.119962	0.120185	-0.000223	-0.19%	0.119560	0.128198	-0.008638	-6.74%
Large	0.103509	0.102988	0.000520	0.51%	0.103537	0.102108	0.001429	1.40%
Independent Power Producers	0.000000	0.111000	-0.111000	-100.00%	0.119682	0.108680	0.011003	10.12%
Private St. Lites	0.636841	0.568268	0.068573	12.07%	0.630365	0.659493	-0.029128	-4.42%
Sub-total	**0.105722**	**0.105883**	**-0.000161**	**-0.15%**	**0.105579**	**0.106613**	**-0.001034**	**-0.97%**
Government								
Small_Non Demand	0.150014	0.152063	-0.002048	-1.35%	0.150180	0.147515	0.002665	1.81%
Small-Demand	0.133814	0.134632	-0.000818	-0.61%	0.132608	0.128356	0.004252	3.31%
Large	0.126643	0.126254	0.000389	0.31%	0.125484	0.130406	-0.004923	-3.77%
Public St. Lites	0.479314	0.464675	0.014639	3.15%	0.472181	0.464488	0.007692	1.66%
Sub-total	**0.147536**	**0.149045**	**-0.001510**	**-1.01%**	**0.146557**	**0.145584**	**0.000973**	**0.67%**
Total-Civilian	**0.112094**	**0.112485**	**-0.000390**	**-0.35%**	**0.111721**	**0.112438**	**-0.000717**	**-0.64%**
USN	0.061825	0.061891	-0.000066	-0.11%	0.058553	0.059652	-0.001099	-1.84%
Grand Total	**0.102234**	**0.102382**	**-0.000149**	**-0.15%**	**0.101470**	**0.102210**	**-0.000740**	**-0.72%**
Non-Oil Revenues								
Residential	32,245,704	31,843,381	402,323	1.26%	4,308,342	4,533,398	(225,057)	-4.96%
Small General-Non-Demand	7,523,396	7,533,209	(9,813)	-0.13%	989,072	1,007,781	(18,709)	-1.86%
Small General-Demand	14,969,052	15,066,432	(97,380)	-0.65%	1,950,862	2,104,448	(153,586)	-7.30%
Large	21,578,149	21,481,790	96,359	0.45%	2,731,023	2,778,283	(47,259)	-1.70%
Independent Power Producers	39,772	76,949	(37,177)	-48.31%	3,147	10,546	(7,399)	-70.16%
Private St. Lites	167,639	176,698	(9,059)	-5.13%	21,512	21,075	437	2.07%
Sub-total	**76,523,713**	**76,178,460**	**345,253**	**0.45%**	**10,003,958**	**10,455,531**	**(451,573)**	**-4.32%**
Government								
Small_Non Demand	1,461,976	1,369,027	92,949	6.79%	183,864	183,289	574	0.31%
Small-Demand	8,515,236	8,729,097	(213,861)	-2.45%	1,073,911	1,091,936	(18,025)	-1.65%
Large	6,458,002	6,264,794	193,207	3.08%	831,027	875,295	(44,268)	-5.06%
Public St. Lites	2,765,683	3,000,726	(235,042)	-7.83%	359,755	358,356	1,399	0.39%
Sub-total	**19,200,897**	**19,363,645**	**(162,747)**	**-0.84%**	**2,448,557**	**2,508,875**	**(60,319)**	**-2.40%**
Total-Civilian	**95,724,611**	**95,542,104**	**182,506**	**0.19%**	**12,452,514**	**12,964,406**	**(511,892)**	**-3.95%**
USN	12,884,194	13,116,056	(231,862)	-1.77%	1,558,948	1,652,973	(94,025)	-5.69%
Grand Total	**108,608,805**	**108,658,160**	**(49,356)**	**-0.05%**	**14,011,462**	**14,617,379**	**(605,917)**	**-4.15%**
% of Total Revenues								
Oil Revenues								
Residential	45,402,791	31,942,202	13,460,589	42.14%	7,063,156	4,931,141	2,132,016	43.24%
Small General-Non-Demand	7,454,753	5,320,102	2,134,650	40.12%	1,138,492	774,776	363,716	46.94%
Small General-Demand	16,867,490	12,114,803	4,752,687	39.23%	2,562,926	1,723,760	839,166	48.68%
Large	27,698,300	19,991,333	7,706,967	38.55%	4,067,932	2,843,514	1,224,418	43.06%
Independent Power Producers	44,803	65,775	(20,972)	-31.88%	3,921	9,840	(5,919)	-60.16%
Private St. Lites	34,974	29,377	5,597	19.05%	5,264	3,357	1,907	56.80%
Sub-total	**97,503,110**	**69,463,592**	**28,039,518**	**40.37%**	**14,841,690**	**10,286,388**	**4,555,302**	**44.28%**
Government								
Small_Non Demand	1,295,239	862,412	432,828	50.19%	188,843	130,527	58,316	44.68%
Small-Demand	8,465,981	6,204,818	2,261,163	36.44%	1,249,114	893,679	355,434	39.77%
Large	6,703,571	4,748,306	1,955,266	41.18%	1,009,770	696,906	312,864	44.89%
Public St. Lites	769,500	615,169	154,331	25.09%	117,517	81,048	36,470	45.00%
Sub-total	**17,234,291**	**12,430,705**	**4,803,587**	**38.64%**	**2,565,244**	**1,802,160**	**763,084**	**42.34%**
Total-Civilian	**114,737,401**	**81,894,297**	**32,843,105**	**40.10%**	**17,406,934**	**12,088,548**	**5,318,386**	**44.00%**
USN	25,884,881	21,653,700	4,231,181	19.54%	3,446,607	3,507,292	(60,686)	-1.73%
Grand Total	**140,622,282**	**103,547,997**	**37,074,286**	**35.80%**	**20,853,541**	**15,595,841**	**5,257,700**	**33.71%**
% of Total Revenues								
Grand Total								
Residential	77,648,495	63,785,583	13,862,912	21.73%	11,371,498	9,464,539	1,906,959	20.15%
Small General-Non-Demand	14,978,149	12,853,312	2,124,837	16.53%	2,127,563	1,782,557	345,006	19.35%
Small General-Demand	31,836,542	27,181,234	4,655,307	17.13%	4,513,787	3,828,208	685,580	17.91%
Large	49,276,449	41,473,123	7,803,326	18.82%	6,798,955	5,621,797	1,177,158	20.94%
Independent Power Producers	84,575	142,724	(58,149)	-40.74%	7,068	20,386	(13,318)	-65.33%
Private St. Lites	202,614	206,075	(3,462)	-1.68%	26,776	24,432	2,344	9.59%
Sub-total	**174,026,823**	**145,642,052**	**28,384,771**	**19.49%**	**24,845,648**	**20,741,919**	**4,103,728**	**19.78%**
Government								
Small_Non Demand	2,757,215	2,231,439	525,777	23.56%	372,707	313,817	58,890	18.77%
Small-Demand	16,981,217	14,933,916	2,047,301	13.71%	2,323,025	1,985,615	337,409	16.99%
Large	13,161,573	11,013,100	2,148,473	19.51%	1,840,797	1,572,201	268,597	17.08%
Public St. Lites	3,535,184	3,615,895	(80,711)	-2.23%	477,272	439,403	37,869	8.62%
Sub-total	**36,435,189**	**31,794,349**	**4,640,839**	**14.60%**	**5,013,801**	**4,311,035**	**702,765**	**16.30%**
Total-Civilian	**210,462,012**	**177,436,401**	**33,025,611**	**18.61%**	**29,859,448**	**25,052,955**	**4,806,494**	**19.19%**
USN	38,769,075	34,769,756	3,999,319	11.50%	5,005,555	5,160,265	(154,711)	-3.00%
Grand Total	**249,231,087**	**212,206,157**	**37,024,930**	**17.45%**	**34,865,003**	**30,213,220**	**4,651,783**	**15.40%**


GPA - T and D Losses (MWH) Without Renewables and Aggreko
For the Last 7 Years thru 05.31.18 -Moving 12 Months
130,000
120,000
110,000
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
-
8.00%
7.00%
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
7.02%
7.26%
6.31%
5.20%
4.88%
5.44%
5.67%
5.67%
113,279
117,269
103,049
85,295
79,267
78,281
83,949
83,154
FY 11
FY 12
FY 13
FY 14
FY 15
FY 16
FY 17
FY 18
T and D Losses (MWH)
T and D Losses (% to Net Generation)


GPA - T and D Losses (MWH) With Renewables
For the Last 8 Years thru 05.31.18 -Moving 12 Months
130,000
120,000
110,000
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
-
7.00%
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
7.02%
7.26%
6.31%
5.20%
4.88%
4.73%
4.95%
4.90%
113,279
117,269
103,049
85,295
79,267
78,281
83,949
83,154
FY 11
FY 12
FY 13
FY 14
FY 15
FY 16
FY 17
FY 18
T and D Losses (MWH)
T and D Losses (% to Net Gen.)


GPA - Station Usage(MWH) Without Renewables and Aggreko
For the Last 7 Years Thru 05.31.18-Moving 12 Months
110,000
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
5.66%
5.71%
5.05%
4.86%
4.87%
4.32%
4.26%
4.08%
96,872
97,739
86,765
83,701
83,060
64,952
65,895
62,400
FY 11
FY 12
FY 13
FY 14
FY 15
FY 16
FY 17
FY 18
Station Use (MWH)
% to Gross Generation


GPA - Station Usage(MWH) With Renewables
For the Last 8 Years Thru 05.31.18 -Moving 12 Months
110,000
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
5.66%
5.71%
5.05%
4.86%
4.87%
3.77%
3.74%
3.54%
96,872
97,739
86,765
83,701
83,060
64,952
65,895
62,400
FY 11
FY 12
FY 13
FY 14
FY 15
FY 16
FY 17
FY 18
Station Use (MWH)
% to Gross Generation


GPA A/R AGING REPORT MAY 2018
$8,000,000
$7,000,000
$6,000,000
$5,000,000
$4,000,000
$3,000,000
$2,000,000
$1,000,000
$-
$(1,000,000)
$7,505,994
$1,299,753
$3,170,681
$6,855,919
15,520
$14,694
$-602
$411,325.78
$2,305,752
$2,212,404
$477,413
Residential
Commercial G
Commercial J
Commercial P
Private St Lights
IPP
Suspense
Government S
Government K
Government L
Government St Lights
OVER 120 DAYS
91-120 DAYS
61-90 DAYS
31-60 DAYS
0-30 DAYS

GUAM POWER AUTHORITY

GOVERNMENT ACCOUNTS RECEIVABLE

BILLING UP TO 06/30/2018 and Payment Applied as of 07/16/2018

Current (06/18 Billing due 07/31/18
30 days Arrears (05/18 due 06/15/18)
60 days and over Arrears (04/18 billing due 05/15/18)

CC&B ACCT NUMBER	DEPARTMENT	BALANCE 5/31/2018	CANCEL/REBILL/ SPEC CHARGE 6/30/2018	BILLING 6/30/2018	PAYMENT 7/16/2018	BALANCE 7/16/2018	
	Line Agencies						
0237100000	Dept. of Corrections	$ 85,531.34		$ 81,163.13	$ (85,531.34)	$ 81,163.13	
0437100000	Dept. of Parks & Rec.	$ 23,927.08	$ 79.83	$ 26,175.52	$ (13,289.38)	$ 36,893.05	1
0537100000	Guam Fire Department	$ 17,759.42		$ 17,369.62	$ (17,759.42)	$ 17,369.62	
6995000000	DOA Supply Mgmt	$ 1,603.17		$ 1,224.12	$ (1,603.17)	$ 1,224.12	
7895000000	Dept. of Administration	$ 3,852.38		$ 3,746.35	$ (3,852.38)	$ 3,746.35	
1337100000	Nieves Flores Library	$ 11,093.61		$ 10,366.73	$ (11,093.61)	$ 10,366.73	
2206200000	General Services Agency	$ 264.93		$ 267.48	$ (264.93)	$ 267.48	
2237100000	DOA-Data Processing	$ 8,942.41		$ 8,659.23	$ (8,942.41)	$ 8,659.23	
2337100000	Dept. of PH&SS	$ 76,465.42		$ 72,522.35	$ (76,465.42)	$ 72,522.35	
3237100000	Dept. of Education	$ 1,271,384.23		$ 893,951.41	$ (1,271,384.23)	$ 893,951.41	
3337100000	Guam Police Department	$ 40,301.25		$ 42,386.17	$ (40,301.25)	$ 42,386.17	
3569100000	Dept of Youth Affairs (Federal)	$ 968.31		$ 971.68	$ (968.31)	$ 971.68	
4437100000	Dept. of Youth Affair* (Local)	$ 12,143.86		$ 11,310.87	$ (12,143.86)	$ 11,310.87	
4737100000	Guam Environmental Protect	$ 7,151.97		$ 6,689.68	$ (7,151.97)	$ 6,689.68	
5437100000	Mental Health/Subst.	$ 48,544.15		$ 46,016.37	$ (48,544.15)	$ 46,016.37	
7200300000	Veteran Affairs	$ 1,002.79		$ 1,004.22	$ (1,002.79)	$ 1,004.22	
7437100000	Civil Defense (Military Affairs)	$ 11,994.85		$ 10,896.78	$ (11,994.85)	$ 10,896.78	
7463300000	Pacific Energy Resource Center	$ 792.23		$ 744.46	$ (792.23)	$ 744.46	
8137100000	Dept. of Agriculture	$ 10,493.12		$ 9,768.47	$ (10,493.12)	$ 9,768.47	
8337100000	DPW-FAC Adm Account	$ 26,180.77		$ 26,199.75	$ (26,180.77)	$ 26,199.75	
8437100000	Guam Visitors Bureau	$ 4,544.51		$ 4,324.34	$ (8,868.85)	$ -	
8446300000	Yona Senior Citizen Center	$ 1,066.65		$ 986.93	$ (1,066.65)	$ 986.93	
9437100000	Dept of Chamorro Affairs/Chamorro Village	$ 4,574.84		$ 4,221.99	$ (4,574.84)	$ 4,221.99	
5247210000	Mayors Council	$ 2,425.01		$ 2,204.47	$ (2,425.01)	$ 2,204.47	
6293410000	Office of the Governor	$ 25,477.17		$ 23,482.55	$ (25,477.17)	$ 23,482.55	
8555858369	Dept of Chamorro Affairs (Guam Museum)	$ 24,417.22		$ 21,891.77	$ (24,417.22)	$ 21,891.77	
	Sub Total	**$ 1,722,902.69**	**$ 79.83**	**$ 1,328,546.44**	**$ (1,716,589.33)**	**$ 1,334,939.63**	
	MAYORS						
0637100000	Santa Rita Mayor	$ 4,178.66	$ 198.26	$ 3,734.90	$ (4,376.92)	$ 3,734.90	
0737100000	Ordot/Chalan Pago Mayor	$ 2,022.76		$ 1,669.23	$ (2,022.76)	$ 1,669.23	
1537100000	Hagatna Mayor	$ 1,596.56		$ 1,462.68	$ (1,596.56)	$ 1,462.68	
1637100000	Piti Mayor	$ 1,287.74		$ 1,397.17	$ (1,287.74)	$ 1,397.17	
1737100000	Mongmong/Toto/Maite Mayor	$ 1,139.73		$ 1,177.04	$ (1,139.73)	$ 1,177.04	
2637100000	Asan/Maina/Adelup Mayor	$ 971.02	$ 25.00	$ 986.62	$ (971.02)	$ 1,011.62	
2737100000	Sinajana Mayor	$ 4,922.90		$ 5,111.83	$ (4,922.90)	$ 5,111.83	
3637100000	Dededo Mayor	$ 7,045.08		$ 6,691.56	$ (7,045.08)	$ 6,691.56	
4637100000	Yigo Mayor	$ 3,872.84		$ 3,579.19	$ (3,872.84)	$ 3,579.19	
5637100000	Umatac Mayor	$ 1,872.45		$ 1,197.26	$ (1,872.45)	$ 1,197.26	
6537100000	Agana Hts. Mayor	$ 6,103.46	$ (655.71)	$ 7,998.20	$ (6,103.46)	$ 7,342.49	
6637100000	Merizo Mayor	$ 997.25		$ 1,194.05	$ (997.25)	$ 1,194.05	
6737100000	Barrigada Mayors Office	$ 2,253.24		$ 2,065.05	$ (2,253.24)	$ 2,065.05	
7537100000	Agat Mayor	$ 3,048.23	$ 468.61	$ 2,195.81	$ (3,082.23)	$ 2,630.42	
7637100000	Inarajan Mayor	$ 2,549.23		$ 2,030.85	$ (2,549.23)	$ 2,030.85	
8537100000	Tamuning Mayor	$ 6,165.41		$ 5,792.57	$ (6,165.41)	$ 5,792.57	
8637100000	Talofofo Mayor	$ 8,189.54		$ 2,356.97	$ (8,189.54)	$ 2,356.97	
9537100000	Mangilao Mayor	$ 4,753.50		$ 4,677.92	$ (4,753.50)	$ 4,677.92	
9637100000	Yona Mayor	$ 981.64		$ 832.41	$ (981.64)	$ 832.41	
	Sub Total	**$ 63,951.24**	**$ 36.16**	**$ 56,151.31**	**$ (64,183.50)**	**$ 55,955.21**	
	DPW ACCOUNTS						
4337100000	DPW-Village St. Lights	$ 326,984.01	$ (30,673.55)	$ 424,876.20	$ (326,984.01)	$ 394,202.65	
5337100000	DPW- Primary St. Lights	$ 81,414.79	$ (280.90)	$ 92,728.72	$ (81,414.79)	$ 92,447.82	
6337100000	DPW-Sec/Coll St. Lights	$ 26,212.87		$ 26,467.31	$ (26,212.87)	$ 26,467.31	
7337100000	DPW-Signal Lights	$ 10,729.13	$ (67.08)	$ 10,227.14	$ (10,729.13)	$ 10,160.06	
	Sub Total	**$ 445,340.80**	**$ (31,021.53)**	**$ 554,299.37**	**$ (445,340.80)**	**$ 523,277.84**	

	(B) AUTONOMOUS/PUBLIC CORP						
1437100000	Retirement Fund	$ 4,609.62		$ 5,099.93	$ (9,709.55)	$ -	
1915500000	Guam Housing Corp Rental Division	$ 2,091.48	$ 104.93	$ 1,473.82	$ (1,537.47)	$ 2,132.76	1
2437100000	University of Guam	$ 200,367.26		$ 184,158.69	$ (384,525.95)	$ -	
4237100000	Guam Airport Authority	$ 542,326.86	$ (25.00)	$ 519,079.36	$ (542,301.86)	$ 519,079.36	
5357510000	University of Guam (NET METERED)	$ 85,759.38		$ 76,371.49	$ (162,130.87)	$ -	
6237100000	G H U R A	$ 14,957.05	$ 19.02	$ 26,033.46	$ (26,973.08)	$ 14,036.45	
6437100000	Guam Community College	$ 51,781.41		$ 48,020.75	$ (51,781.41)	$ 48,020.75	
7237100000	Guam Memorial Hospital	$ 537,009.07	$ 2,742.94	$ 161,652.82	$ (171,283.99)	$ 530,120.84	2
9137100000	Port Authority of Guam	$ 105,215.30		$ 93,329.98	$ (198,545.28)	$ -	
9157510000	Guam Community College (NET METERED)	$ 40,612.72		$ 38,401.21	$ (40,612.72)	$ 38,401.21	
9173210000	Guam Solid Waste Authority	$ 6,300.25		$ 6,023.69	$ (6,300.25)	$ 6,023.69	
9337100000	Guam Waterworks Authority	$ 1,298,329.85	$ 150.00	$ 1,242,598.95	$ (1,298,479.85)	$ 1,242,598.95	
8237100000	GPA	$ -				$ -	
	Sub Total	**$ 2,889,360.25**	**$ 2,991.89**	**$ 2,402,244.15**	**$ (2,894,182.28)**	**$ 2,400,414.01**	
	(C) OTHERS						
0337100000	Guam Legislature	$ 183.89		$ 222.89	$ (406.78)	$ -	
9503154359	Guam Legislature (NET METER)	$ 7,321.73		$ 7,077.49	$ (7,321.73)	$ 7,077.49	
1237100000	Superior Court of Guam	$ 80,328.61		$ 72,140.79	$ (80,328.61)	$ 72,140.79	
2537100000	Agana (Guam) Post Office	$ 6,611.07		$ 6,093.38	$ (12,704.45)	$ -	
2570200000	Customs & Quarantine Agency	$ 1,011.11		$ 925.40	$ (1,011.11)	$ 925.40	
3537100000	U.S. Post Office	$ 47,226.10		$ 44,110.02	$ (91,336.12)	$ -	
5537100000	Dept. of Military Affairs	$ 75,538.61		$ 76,414.35	$ (75,538.61)	$ 76,414.35	
3209463043	Dept. of Military Affairs	$ 17,220.71		$ 16,501.13	$ (17,220.71)	$ 16,501.13	
5737100000	KGTF	$ 7,020.80		$ 6,438.99	$ (7,020.80)	$ 6,438.99	
7281000000	Tamuning Post Office	$ 5,280.86		$ 4,957.04	$ (10,237.90)	$ -	
	Sub Total	**$ 247,743.49**	**$ -**	**$ 234,881.48**	**$ (303,126.82)**	**$ 179,498.15**	
	GRAND TOTAL	**$ 5,369,298.47**	**$ (27,913.65)**	**$ 4,576,122.75**	**$ (5,423,422.73)**	**$ 4,494,084.84**	

GPA Communications/PIO KPI Status

Week of 14 May 2018

Ratepayer Newsletter

Overall Status	Risks & Issues	Schedule	Scope	Financial
G	G	G	G	G

Status

1. Compiling August newsletter;
2. Inclusion of Tropical Storm Maria Recovery
3. Standard features of recipe and village fiesta schedule remain for newsletter content;
4. Inclusion of story updates: in coordination with GM Update(s) and focus on GPA's plans and additions to IWPS and progress with projects that lead toward controlling costs of energy to ratepayer homes, highlighting bid progress, results, award to build Guam's New 180MW Power Plant,

Accomplishments

1. Completed January, February, March, April, May, June and July - Insights Ratepayer Newsletter
2. August issue under construction; will meet deadline

Risks and Issues	Resolution
1. None to report;	

Financial	
Budgeted for FY1	

Legend:

No corrective action required

Near-term corrective action required

Requires immediate attention

2017 Annual Report

Overall Status	Risks & Issues	Schedule	Scope	Financial
G	G	G	G	G

Status

1. Bid Awarded for FY17 Annual Report to Card & Card Advertising
2. Review of final version for print in progress.
3. Card & Card Advertising compiling final design.
4. Complete date is August 2018

Accomplishments

1. All letters, financials and write up have been submitted and are being reviewed;

Risks and Issues	Resolution
1. None to Report	

Financial

None to report	Within Budget	

Legend:

No corrective action required

Near-term corrective action required

Requires immediate attention

Special Projects – Social Media

Overall Status	Risks & Issues	Schedule	Scope	Financial
G	G	G	G	G

Status

1. Ongoing coordination with various departments for any updates to share on social media;
2. Posted updates on Tropical Storm Maria along with public service advisories for safety

Accomplishments

1. Achieved over 3,000 “Likes” during past storm activity (TS Maria)

Risks and Issues

1. Timely Updates on Forced Outages and Scheduled Outages ;

Resolution

1. Close monitoring of outages and trouble desk for updates;

Financial

Within budget		

Legend:

No corrective action required

Near-term corrective action required

Requires immediate attention

Energy Sense Marketing

Overall Status	Risks & Issues	Schedule	Scope	Financial
G	G	G	G	G

Status

1. Adztech Advertising continuing Phase II DSM Marketing Plan Goals & Objectives;
2. Review ongoing of DSM Customer Service Survey and Focus Group Discussion for Energy Sense Marketing as part of Phase III implementation.

Accomplishments

1. On track to with DSM Phase II Marketing Goals & Objectives
2. Completed coordination with UOG – Office of Sustainability on Dean's Circle House 25 retrofit. Promoted ribbon cutting ceremony at site, featuring GPA's involvement and called attention to GPA 50th Anniversary milestone.

Risks and Issues	Resolution
1. SPORD support pending additional funding;	PIO supporting DSM marketing in pending additional SPORD funding

Financial

Budget Support for SPORD for Phase II	

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

Prepaid & SMS (text) Project

Overall Status	Risks & Issues	Schedule	Scope	Financial
G	G	G	G	G

Status

1. Text texting still in progress. No new information to report.

Accomplishments

1. Completed coordination with local carriers (GTA, Docomo & IT&E for SMS Texting test);

Risks and Issues	Resolution
1. Pending review and acceptance from PSCC for testing and eventual rollout;	

Financial	
None to report	

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

Live Streaming of CCU Meetings & Work Sessions

Overall Status	Risks & Issues	Schedule	Scope	Financial
G	G	G	G	G

Status

1. GPA-016-18 sole source memorandum signed by GM and forwarded to Procurement for processing and award.

Accomplishments

1. Technical specifications are detailed and team will continue forward with next steps following zero bid responses.
2. Team to meet for final review of specifications

Risks and Issues	Resolution
1. None to report at this time	

Financial

Funding with IT Division & GWA for audio & video equipment & training	

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

50th Anniversary Activities

Overall Status	Risks & Issues	Schedule	Scope	Financial
G	G	G	G	G

Status

1. List of events and programs connected to milestone 2018 GPA planned programs/business objectives already in place is under construction: PPA Signing, LEED Plaque on GBN Building Unveiling; Fadian Employee-Family Fun Day rescheduled due to TS Maria; 2018 Liberation Day Float(s) ongoing;
2. A GPA 50th Anniversary Steering Committee meeting weekly, with Communications-PIO serving as advisors.
3. Revisit budget items, (subject to change) to be presented to GM for approval.

Accomplishments

1. Completed UOG House 25 Retrofit Ribbon Cutting;
2. Promoted 4th Cycle GPA Apprentice Recognition Ceremony;
3. Highlighted LEED Plaque on GBN Building;

Risks and Issues	Resolution
1. None to report at this time	

Financial	
None to report	

Legend:

No corrective action required

Near-term corrective action required

Requires immediate attention

Miscellaneous Activities

Overall Status	Risks & Issues	Schedule	Scope	Financial
G	G	G	G	G

Status

1. GPA Web page redesign work online and updated as necessary
2. Monitoring of CS Business Centers
3. Standard Media Releases for scheduled and emergency outage reporting is on-going
4. Education Outreach – random requests; ongoing

Accomplishments

1. Redesigned GPA website online;

Risks and Issues	Resolution
1. None to report at this time;	

Financial	
None to report	

Legend:

No corrective action required

Near-term corrective action required

Requires immediate attention

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671) 648-3002 | guamccu.org

GUAM POWER AUTHORITY WORK SESSION

CCU Conference Room
4:30 p.m., Thursday, August 23, 2018

AGENDA

1. **ISSUES FOR DECISION**
   - 1.1 Residual Fuel Oil #6 Contract / Resolution 2018-16
   - 1.2 NET Metering Credit Recommendation / Resolution 2018-17
   - 1.3 Organizational Realignment / Resolution 2018-18
   - 1.4 Unarmed Security Guard Services / Resolution 2018-19

2. **GM REPORT**
   - 2.1 GM Summary

3. **ISSUES FOR DISCUSSION**

4. **DIVISION REPORTS**
   - 4.1 Administration: Customer Service, HR, Procurement, Safety
   - 4.2 Engineering & Technical: Engineering, IT, Planning & Regulatory, SPORD
   - 4.3 Finance Reports
   - 4.4 Operations: Facilities, Generation, PSCC, T&D, Transportation
   - 4.5 Public Information Office

5. **ANNOUNCEMENTS**
   - 5.1 Next Meeting: CCU Meeting – August 28

6. **ADJOURNMENT**

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

Issues for Decision

Resolution No. 2018-16:

Relative to: Authorizing the Management of Guam Power Authority to Award the Contract for the Supply of Residual Fuel Oil No.6 to **Mobil Oil Guam**.

What is the project's objective? Is it necessary and urgent?

The Guam Power Authority's current contract for Supply of Residual Fuel Oil No.6 for the Baseload Plants is expiring in November 30, 2018. The new fuel supply contract is necessary to provide uninterrupted supply of fuel for the Baseload plants.

Where is the location?

Residual Fuel Oil No.6 will be supplied to the baseload plants

1. Cabras 1&2
2. MEC 8&9

How much will it cost?

The 2-year contract is estimated to cost approximately $230M requiring prior approval from the PUC.

When will it be completed?

The contract is planned for an initial period of two (2) years to commence on or about December 01, 2018 and to expire on November 30, 2020, with the option to extend for three (3) additional one-year terms.

What is its funding source?

Fuel revenue funds

The RFP/BID responses:

Five bidders responded to the solicitation under IFB GPA-009-18. **Mobil Oil Guam** was determined to the the lowest responsive and responsible bidder.

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

RESOLUTION NO. 2018-16

AUTHORIZING THE MANAGEMENT OF THE GUAM POWER AUTHORITY TO ENTER INTO A TWO YEAR CONTRACT FOR THE SUPPLY OF RESIDUAL FUEL OIL NO.6

WHEREAS, GPA's current contract extension with Hyundai Corporation for the supply of Residual Fuel Oil No.6 (RFO No. 6) is expiring in November 30, 2018; and

WHEREAS, in anticipation of this expiration date, GPA was authorized by the CCU under CCU Resolution No. 2017-40 and approved by the PUC under Docket 18-01 to issue bids for the procurement of a new residual fuel oil supply contract; and

WHEREAS, the Procurement Officer has provided adequate public announcement for the need for such fuel supply services through Invitation for Re-Bid No. GPA-009-18 describing the type of services required and specifying the type of information and data required of each offeror; and

WHEREAS, Hyundai Corporation, Mobil Oil Guam, Hanwa Corporation, Freepoint Commodities (LLC), and Vitol Inc., submitted bids for GPA consideration; and

WHEREAS, the results and evaluation of the bids are provided in Exhibits A, B, and C; and

WHEREAS, Mobil Oil Guam was determined to be the lowest, most responsive bidder meeting the requirements of the bid solicitation; and

WHEREAS, the average Fixed Premium Fee for Mobil Oil Guam of $54.700/MT (8.614/bbl) is approximately 3% higher than the current contract average Fixed Premium Fee of $53.090/MT ($8.361/bbl) as shown in **Exhibit B.** The estimated Fixed Premium Fee cost based on estimated supply quantities has a value of approximately $15,728,580.00 for the first year and $18,480,300.00 for the second year for a total of $34,208,880.00 for the two-year contract base period. The estimated cost increase in Fixed Premium for the 2-year period is approximately $1,006,879.00; and

WHEREAS, the Residual Fuel Oil No.6 Supply Contract with Mobil Oil Guam shall be for a period of two years and is anticipated to commence in December 1, 2018 and expire in November 30, 2020 with three one-year extension options renewable annually upon mutual agreement of both parties; and

WHEREAS, the award of the contract to Mobil Oil Guam based on estimated supply quantities has a value of approximately $113,345,841.00 for the first year and $116,097,561.00 for the second year for a total of $229,443,402.00 for the two-year contract period (**Exhibit C**).

NOW THEREFORE, BE IT RESOLVED, by the Consolidated Commission on Utilities, subject to the review and approval of the Guam Public Utilities Commission, as follows:

1. The General Manager of the Guam Power Authority is hereby authorized to enter into a two (2) year contract with Mobil Oil Guam for the supply of Residual Fuel Oil No.6.

2. The General Manager of the Guam Power Authority is hereby authorized an increase in obligating authority to the annual value of the contract and execute such agreements and documents necessary for a contract with **Mobil Oil Guam**.

RESOLVED, that the Chairman of the Commission certifies and the Secretary of the Commission attests the adoption of this Resolution.

DULY and REGULARLY ADOPTED this 28th day of August 2018.

Certified by: **Attested by:**

JOSEPH T. DUENAS
CHAIRMAN

J. GEORGE BAMBA
SECRETARY

SECRETARY'S CERTIFICATE

I, **J. George Bamba**, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

EXHIBIT A

Basis: API 12.1 | bbl/MT 6.396 | (Reference: Petroleum Table 13)

	bbls/yr	bbl/MT	mt/yr
LSFO	600,000	6.396	93,809
HSFO	1,400,000	6.396	218,887
Total RFO	2,000,000		312,695

MS IFB GPA-009-18: RFO Supply Contract
STEP 2- BID PRICE ANALYSIS

2 year Base Contract	CURRENT	BASE CONTRACT- 1st of 2 YEARS					BASE CONTRACT- 2nd of 2 YEARS					TOTAL- 2-YEAR BASE CONTRACT PERIOD				
	Hyundai Corp.	Bidder #1 Hyundai Corp.	Bidder #2 Mobil Oil Guam	Bidder #3 Hanwa	Bidder #4 FreePoint	Bidder #5 Vitol, Inc.	Bidder #1 Hyundai Corp.	Bidder #2 Mobil Oil Guam	Bidder #3 Hanwa	Bidder #4 FreePoint	Bidder #5 Vitol, Inc.	Bidder #1 Hyundai Corp.	Bidder #2 Mobil Oil Guam	Bidder #3 Hanwa	Bidder #4 FreePoint	Bidder #5 Vitol, Inc.
1. LSFO, 1.19% Sulfur max.																
Quantity (mt/yr)	93,809	93,809	93,809	93,809	93,809	93,809	93,809	93,809	93,809	93,809	93,809	187,617	187,617	187,617	187,617	187,617
A. Bid Price ($/mt)	$822.000	$613.180	$387.680	$399.390	$411.980	$478.880	$613.180	$400.680	$497.040	$411.980	$478.880	$613.180	$394.180	$448.215	$411.980	$478.880
ESTIMATED CONTRACT COST / YR	$77,110,694.18	$57,521,575.98	$36,367,729.83	$37,466,228.89	$38,647,279.55	$44,923,076.92	$57,521,575.98	$37,587,242.03	$46,626,641.65	$38,647,279.55	$44,923,076.92	$115,043,151.97	$73,954,971.86	$84,092,870.54	$77,294,559.10	$89,846,153.85
B. Bid Reference Price ($/mt)	$742.31	$312.180	$312.180	$312.180	$312.180	$312.180	$312.180	$312.180	$312.180	$312.180	$312.180	$312.180	$312.180	$312.180	$312.180	$312.180
C. Premium Fee ($/mt) : A-B	$79.690	$301.000	$75.500	$87.210	$99.800	$166.700	$301.000	$88.500	$184.860	$99.800	$166.700	$301.000	$82.000	$136.035	$99.800	$166.700
Variance with Current Premium Fees		($221.310)	$4.190	($7.520)	($20.110)	($87.010)	($221.310)	($8.810)	($105.170)	($20.110)	($87.010)	($221.310)	($2.310)	($56.345)	($20.110)	($87.010)
		-278%	5%	-9%	-25%	-109%	-278%	-11%	-132%	-25%	-109%	-278%	-3%	-71%	-25%	-109%
Premium Fee ($/bbl)	$12.550	$47.402	$11.800	$13.734	$15.717	$26.252	$47.402	$13.937	$29.112	$15.717	$26.252	$47.402	$12.913	$21.423	$15.717	$26.252
Variance with Current Premium Fees		($34.852)	$0.660	($1.184)	($3.167)	($13.702)	($34.852)	($1.387)	($16.562)	($3.167)	($13.702)					
% of Reference Price	26%	96%	24%	28%	32%	53%	96%	28%	59%	32%	53%					
Premium Fee Cost ($/yr)	$7,475,610	$28,236,398	$7,082,552	$8,181,051	$9,362,101	$15,637,899	$28,236,398	$8,302,064	$17,341,463	$9,362,101	$15,637,899	$56,472,795	$15,384,615	$25,522,514	$18,724,203	$31,275,797
(Premium fee in $/MT x Quantity in MT/yr)																
Savings (Additional Expense)		($20,760,788)	$393,058	($705,441)	($1,886,492)	($8,162,289)	($20,760,788)	($826,454)	($9,865,854)	($1,886,492)	($8,162,289)	($41,521,576)	($433,396)	($10,571,295)	($3,772,983)	($16,324,578)
(Current vs. Bidder's Annual Premium Fee)		Expense	Savings	Expense	Expense	Expense	Expense	Expense	Expense	Expense	Expense	Expense	Expense	Expense	Expense	Expense
2. HSFO, 2.00% Sulfur max.																
Quantity (mt/yr)	218,887	218,887	218,887	218,887	218,887	218,887	218,887	218,887	218,887	218,887	218,887	437,774	437,774	437,774	437,774	437,774
A. Bid Price ($/mt)	$784.000	$413.180	$351.680	$390.640	$379.960	$424.880	$413.180	$358.680	$458.540	$379.960	$424.880	$413.180	$355.180	$424.590	$379.960	$424.880
ESTIMATED CONTRACT COST / YR	$171,607,254.53	$90,439,649.78	$76,978,111.32	$85,505,941.21	$83,168,230.14	$93,000,625.39	$90,439,649.78	$78,510,318.95	$100,368,355.22	$83,168,230.14	$93,000,625.39	$180,879,299.56	$155,488,430.27	$185,874,296.44	$166,336,460.29	$186,001,250.78
B. Bid Reference Price ($/mt)	$742.310	$312.180	$312.180	$312.180	$312.180	$312.180	$312.180	$312.180	$312.180	$312.180	$312.180	$312.180	$312.180	$312.180	$312.180	$312.180
C. Premium Fee ($/mt) : A-B	$41.690	$101.000	$39.500	$78.460	$67.780	$112.700	$101.000	$46.500	$146.360	$67.780	$112.700	$101.000	$43.000	$112.410	$67.780	$112.700
Variance with Current Premium Fees		($59.310)	$2.190	($36.770)	($26.090)	($71.010)	($59.310)	($4.810)	($104.670)	($26.090)	($71.010)	($59.310)	($1.310)	($70.720)	($26.090)	($71.010)
		-142%	5%	-88%	-63%	-170%	-142%	-12%	-251%	-63%	-170%	-142%	-3%	-170%	-63%	-170%
Premium Fee ($/bbl)	$6.565	$15.906	$6.220	$12.356	$10.674	$17.748	$15.906	$7.323	$23.049	$10.674	$17.748	$15.906	$6.772	$17.702	$10.674	$17.748
Variance with Current Premium Fees		$9.340	($0.345)	$5.791	$4.109	$11.183	$9.340	$0.757	$16.483	$4.109	$11.183					
% of Reference Price	13%	32%	13%	25%	22%	36%	32%	15%	47%	22%	36%	32%	14%	36%	22%	36%
Premium Fee Cost ($/yr)	$9,125,391	$22,107,567	$8,646,029	$17,173,859	$14,836,148	$24,668,543	$22,107,567	$10,178,236	$32,036,273	$14,836,148	$24,668,543	$30,753,596	$25,819,887	$32,010,006	$39,504,690	$24,668,543
(Premium fee in $/MT x Quantity in MT/yr)																
Savings (Additional Expense)		($12,982,176)	$479,362	($8,048,468)	($5,710,757)	($15,543,152)	($12,982,176)	($1,052,846)	($22,910,882)	($5,710,757)	($15,543,152)	($25,964,353)	($573,483)	($30,959,350)	($11,421,513)	($31,086,304)
(Current vs. Bidder's Annual Premium Fee)		Expense	Savings	Expense	Expense	Expense	Expense	Expense	Expense	Expense	Expense	Expense	Expense	Expense	Expense	Expense
3. Total RFO (LSFO + HSFO)																
Quantity (mt/yr)	312,695	312,695	312,695	312,695	312,695	312,695	312,695	312,695	312,695	312,695	312,695	625,391	625,391	625,391	625,391	625,391
ESTIMATED CONTRACT COST ($/YR)	$248,717,948.72	$147,961,225.77	$113,345,841.15	$122,972,170.11	$121,815,509.69	$137,923,702.31	$147,961,225.77	$116,097,560.98	$146,994,996.87	$121,815,509.69	$137,923,702.31	$295,922,451.53	$229,443,402.13	$269,967,166.98	$243,631,019.39	$275,847,404.63
A. LEVELIZED UNIT COST ($/mt)	$795.400	$473.180	$362.480	$393.265	$389.566	$441.080	$473.180	$371.280	$470.090	$389.566	$441.080	$473.180	$366.880	$431.678	$389.566	$441.080
B. Bid Reference Price ($/mt)	$742.310	$312.180	$312.180	$312.180	$312.180	$312.180	$312.180	$312.180	$312.180	$312.180	$312.180	$312.180	$312.180	$312.180	$312.180	$312.180
C. Average Premium Fee ($/mt)	$53.090	$161.000	$50.300	$81.085	$77.386	$128.900	$161.000	$59.100	$157.910	$77.386	$128.900	$161.000	$54.700	$119.498	$77.386	$128.900
Variance with Current Premium Fees		($107.910)	$2.790	($27.995)	($24.296)	($75.810)	($107.910)	($6.010)	($104.820)	($24.296)	($75.810)	($107.910)	($1.610)	($66.408)	($24.296)	($75.810)
		-203%	5%	-53%	-46%	-143%	-203%	-11%	-197%	-46%	-143%	-203%	-3%	-125%	-46%	-143%
Premium Fee ($/bbl)	$8.361	$25.354	$7.921	$12.769	$12.187	$20.299	$25.354	$9.307	$24.868	$12.187	$20.299	$25.354	$8.614	$18.819	$12.187	$20.299
Premium Fee Cost ($/yr)	$16,601,001	$50,343,965	$15,728,580	$25,354,909	$24,198,249	$40,306,442	$50,343,965	$18,480,300	$49,377,736	$24,198,249	$40,306,442	$100,687,929.96	$34,208,880.55	$74,732,645.40	$48,396,497.81	$80,612,883.05
Savings (Additional Expense)		($33,742,964)	$872,420	($8,753,909)	($7,597,248)	($23,705,441)	($33,742,964)	($1,879,300)	($32,776,735)	($7,597,248)	($23,705,441)	($67,485,928.71)	($1,006,879.30)	($41,530,644.15)	($15,194,496.56)	($47,410,881.80)
(Current vs. Bidder's Annual Premium Fee)		Expense	Savings	Expense	Expense	Expense	Expense	Expense	Expense	Expense	Expense	Expense	Expense	Expense	Expense	Expense
											Ranking (1 as the Lowest Bidder)	5	1	4	2	3

EXHIBIT B

MS IFB GPA-009-18: RFO Supply Contract

PREMIUM FEE ANALYSIS

Basis:	API	bbl/MT	(Reference: Petroleum Table 13)
	12.1	6.396	

	bbls/yr	bbl/MT	mt/yr
LSFO	600,000	6.396	93,809
HSFO	1,400,000	6.396	218,887
Total RFO	2,000,000		312,695

RFO Supply contract	CURRENT CONTRACT Hyundai Corp.	MS IFB GPA-009-18: RFO Supply Contract LOWEST BIDDER (MOBIL OIL GUAM)		
		2-YEAR BASE PERIOD		
		FIRST YEAR	SECOND YEAR	2-Year TOTAL
1. LSFO, 1.19% Sulfur max.				
Quantity (mt/yr)	93,809	93,809	93,809	187,617
Premium Fee ($/mt)	**$79.690**	**$75.500**	**$88.500**	**$82.000** (AVG)
Variance with Current Premium Fees		$4.190 5%	($8.810) -11%	($2.310) -3%
Premium Fee Cost ($/yr)	**$7,475,610**	**$7,082,552**	**$8,302,064**	**$15,384,615**
Savings (Additional Expense) (Current vs. Bidder's Annual Premium Fee Cost)		**$393,058** Savings	**($826,454)** Expense	**($433,396)** Expense
2. HSFO, 2.00% Sulfur max.				
Quantity (mt/yr)	218,887	218,887	218,887	437,774
Premium Fee ($/mt) (Bid Price less reference Price)	**$41.690**	**$39.500**	**$46.500**	**$43.000** (AVG)
Variance with Current Premium Fees		$2.190 5%	($4.810) -12%	($1.310) -3%
Premium Fee Cost ($/yr)	**$9,125,391**	**$8,646,029**	**$10,178,236**	**$18,824,265**
Savings (Additional Expense) (Current vs. Bidder's Annual Premium Fee Cost)		**$479,362** Savings	**($1,052,846)** Expense	**($573,483)** Expense
3. Total RFO (LSFO + HSFO)				
Quantity (mt/yr)	312,695	312,695	312,695	625,391
Avg Premium Fee ($/mt)	**$53.090**	**$50.300**	**$59.100**	**$54.700** (AVG)
Variance with Current Premium Fees		$2.790 5%	($6.010) -11%	($1.610) **-3%**
Premium Fee Cost ($/yr)	**$16,601,001**	**$15,728,580**	**$18,480,300**	**$34,208,880.55**
Savings (Additional Expense) (Current vs. Bidder's Annual Premium Fee Cost)		**$872,420** Savings	**($1,879,300)** Expense	**($1,006,879.30)** Expense

EXHIBIT C

MS IFB GPA-009-18: RFO Supply Contract

ESTIMATED CONTRACT COST

Basis: bbl/MT (Reference: Petroleum Table 13)
6.396

bbls/yr	bbl/MT	mt/yr
600,000	6.396	93,809
1,400,000	6.396	218,887
2,000,000		312,695

RFO Supply contract	MS IFB GPA-009-18: RFO Supply Contract LOWEST BIDDER (MOBIL OIL GUAM)		
	2-YEAR BASE PERIOD		
	FIRST YEAR	SECOND YEAR	2-Year TOTAL
1. LSFO, 1.19% Sulfur max.			
Quantity (mt/yr)	93,809	93,809	187,617
Bid Price ($/mt)	**$387.680**	**$400.680**	**$394.180** (AVG)
ESTIMATED CONTRACT COST / YR	$36,367,729.83	$37,587,242.03	**$73,954,971.86**
2. HSFO, 2.00% Sulfur max.			
Quantity (mt/yr)	218,887	218,887	437,774
Bid Price ($/mt)	**$351.680**	**$358.680**	**$355.180** (AVG)
ESTIMATED CONTRACT COST / YR	$76,978,111.32	$78,510,318.95	**$155,488,430.27**
3. Total RFO (LSFO + HSFO)			
Quantity (mt/yr)	312,695	312,695	625,391
ESTIMATED CONTRACT COST ($/YR)	**$113,345,841.15**	**$116,097,560.98**	**$229,443,402.13**
LEVELIZED UNIT COST ($/mt)	$362.480	$371.280	$366.880 (AVG)

Exhibit C- Estimated Contract Cost

MS IFB GPA-009-18: RFO Supply Contract

STEP 2- BID PRICE ANALYSIS

Basis:

	API	bbl/MT	(Reference: Petroleum Table 13)
	12.1	6.396	

	bbls/yr	bbl/MT	mt/yr
LSFO	600,000	6.396	93,809
HSFO	1,400,000	6.396	218,887
Total RFO	2,000,000		312,695

2 year Base Contract	CURRENT	BASE CONTRACT- 1st of 2 YEARS					BASE CONTRACT- 2nd of 2 YEARS					TOTAL- 2-YEAR BASE CONTRACT PERIOD				
	Hyundai Corp.	Bidder #1 Hyundai Corp.	Bidder #2 Mobil Oil Guam	Bidder #3 Hanwa	Bidder #4 FreePoint	Bidder #5 Vitol, Inc.	Bidder #1 Hyundai Corp.	Bidder #2 Mobil Oil Guam	Bidder #3 Hanwa	Bidder #4 FreePoint	Bidder #5 Vitol, Inc.	Bidder #1 Hyundai Corp.	Bidder #2 Mobil Oil Guam	Bidder #3 Hanwa	Bidder #4 FreePoint	Bidder #5 Vitol, Inc.
1. LSFO, 1.19% Sulfur max.																
Quantity (mt/yr)	93,809	93,809	93,809	93,809	93,809	93,809	93,809	93,809	93,809	93,809	93,809	187,617	187,617	187,617	187,617	187,617
Bid Price ($/mt)	**$822.000**	**$613.180**	**$387.680**	**$399.390**	**$411.980**	**$478.880**	**$613.180**	**$400.680**	**$497.040**	**$411.980**	**$478.880**	**$613.180**	**$394.180**	**$448.215**	**$411.980**	**$478.880**
ESTIMATED CONTRACT COST / YR	$77,110,694.18	$57,521,575.98	$36,367,729.83	$37,466,228.89	$38,647,279.55	$44,923,076.92	$57,521,575.98	$37,587,242.03	$46,626,641.65	$38,647,279.55	$44,923,076.92	$115,043,151.97	$73,954,971.86	$84,092,870.54	$77,294,559.10	$89,846,153.85
2. HSFO, 2.00% Sulfur max.																
Quantity (mt/yr)	218,887	218,887	218,887	218,887	218,887	218,887	218,887	218,887	218,887	218,887	218,887	437,774	437,774	437,774	437,774	437,774
Bid Price ($/mt)	$784.000	**$413.180**	**$351.680**	**$390.640**	**$379.960**	**$424.880**	**$413.180**	**$358.680**	**$458.540**	**$379.960**	**$424.880**	**$413.180**	**$355.180**	**$424.590**	**$379.960**	**$424.880**
ESTIMATED CONTRACT COST / YR	$171,607,254.53	$90,439,649.78	$76,978,111.32	$85,505,941.21	$83,168,230.14	$93,000,625.39	$90,439,649.78	$78,510,318.95	$100,368,355.22	$83,168,230.14	$93,000,625.39	$180,879,299.56	$155,488,430.27	$185,874,296.44	$166,336,460.29	$186,001,250.78
3. Total RFO																
Quantity (mt/yr)	312,695	312,695	312,695	312,695	312,695	312,695	312,695	312,695	312,695	312,695	312,695	625,391	625,391	625,391	625,391	625,391
ESTIMATED CONTRACT COST ($/YR)	**$248,717,948.72**	**$147,961,225.77**	**$113,345,841.15**	**$122,972,170.11**	**$121,815,509.69**	**$137,923,702.31**	**$147,961,225.77**	**$116,097,560.98**	**$146,994,996.87**	**$121,815,509.69**	**$137,923,702.31**	**$295,922,451.53**	**$229,443,402.13**	**$269,967,166.98**	**$243,631,019.39**	**$275,847,404.63**
											Ranking (1 as the Lowest Bidder)	**5**	**1**	**4**	**2**	**3**

EXHIBIT D- RFO CONTRACT HISTORY

RESIDUAL FUEL OIL NO. 6 (RFO)

CONTRACT NO.	CONTRACTOR	CONTRACT PERIOD	REMARKS	PREMIUM FEE COST *			
				HSFO		LSFO	
				$/bbl	$/MT	$/bbl	$/MT
N/A	GORCO	1981 - 1986		N/A		**	
N/A	PETROMAR	1986 - 1991		$2.230	$14.718	**	
N/A	PEDCO	1986 - 1991		$3.570	$23.562	**	
N/A	PEDCO	1991 - 1994		$3.070	$20.262	**	
N/A	VITOL (Singapore)	1995 - 1996		$2.646	$17.464	$3.570	$23.562
N/A	Daxin (Singapore)	1996 - 1998		$2.230	$14.718	$3.150	$20.790
GPA-105-98	BP (Singapore)	AUG 01, 1998 - JUL 31, 2001	AUG 01, 2001 - JUL 31, 2003	$1.970	$13.002	$2.990	$19.734
GPA-007-03	BP (Singapore)	AUG 01, 2003 - JUL 31, 2006	AUG 01, 2006 - JAN 31, 2007	$2.432	$16.051	$3.946	$26.044
GPA-028-06	BP (Singapore)	Feb 01, 2007- Jan 31, 2010	2 Yrs Extension not exercised	$5.303	$35.000	$8.788	$58.001
GPA-001-10	Petrobras (Singapore)	3 Yrs (Mar 01, 2010- Feb 28, 2013)	2 Yrs Renewable annually	$4.499	$29.828	$6.501	$42.452
GPA-001-10	Petrobras (Singapore)	DEC 01, 2012 - DEC 31, 2014	6 Months Extension	$14.211	$92.800	$18.040	$117.800
GPA-068-12	Hyundai Corporation	Sep 01, 2013-Aug31, 2015	2 Years base period	$6.691	$43.690	$12.816	$83.690
GPA-068-12	Hyundai Corporation	Sep 01, 2015-Nov 30, 2018	3 Years Extension Option	$6.555	$41.690	$12.530	$79.690
GPA-009-18	Mobil Oil Guam	Dec 01, 2018 - NOV 30, 2020	2 Years base period	$6.772	$43.000	$12.913	$82.000

* Per Contract Premium Fee Schedule (In addition to direct fuel cost based on RFO MOPS average)

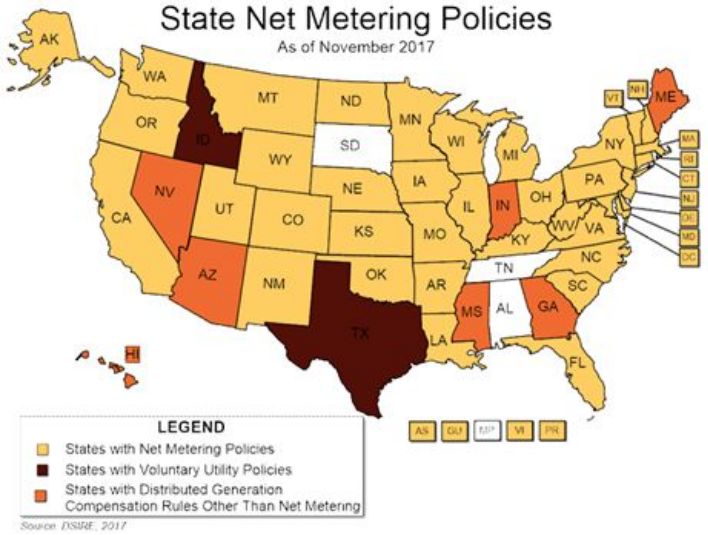
** LSFO supplied by the USN/PWC under Customer Service Agreement.

ISSUE FOR DECISION

Net Metering (NEM) Credit Recommendation

OVERVIEW – NET METERING POLICIES

- Thirty Eight (38) States, Washington D.C., and Four (4) Territories Offer Net Metering and utilities in two additional states (Idaho and Texas adopted Net Metering (Full Retail Credit).
- Arizona, Georgia, Hawaii, Indiana, Maine and Mississippi have compensation other than net metering.
- The Value of Solar (VOS) is an alternative to net metering. Customers buy from the grid at retail rate and sell to the grid at an established VOS rate. Only Minnesota and Austin Energy (Texas) has adopted a VOS rate.



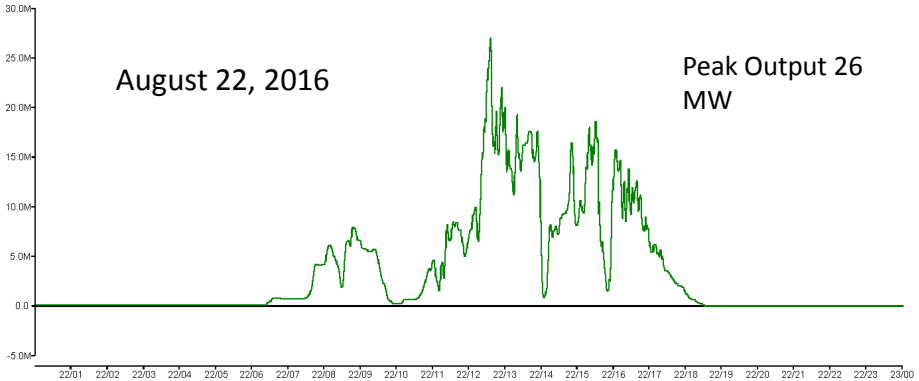
Source: National Council of State Legislatures: 11/20/17

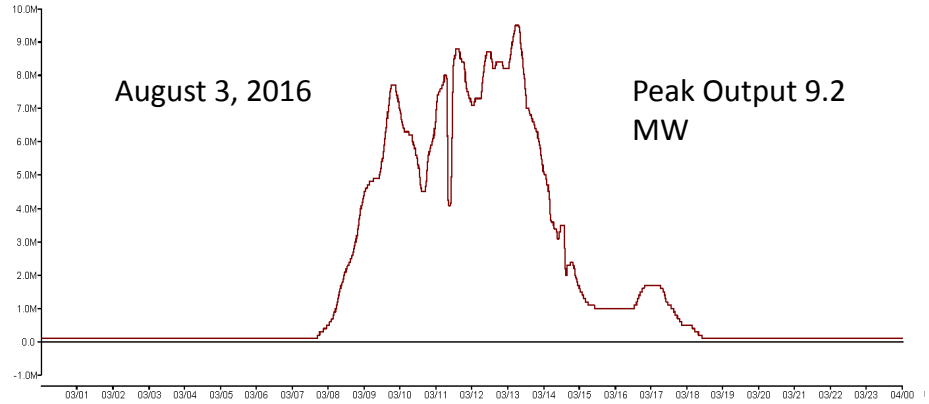
Guam NEM Program

- Program Mandated in 2004. Guam has been crediting NEM customers full retail rate over the past 13 years. Excess credit carried over or paid out annually at full retail rate.
- PUC to evaluate program and credits provided when GPA has 1,000 NEM Customers which occurred in June 2016.
- As of July 2018, GPA has 1,733 NEM Customers (94.7% Residential), with 18,315 KW of capacity. The revenue impact on non-NEM ratepayers is estimated at $3.4M annually.
- CCU/GPA conducted its first public hearing on NEM in August 2016 to gather input from stakeholders in order to prepare its filing to the PUC for changes in rate credits in order to achieve parity amongst all ratepayers.

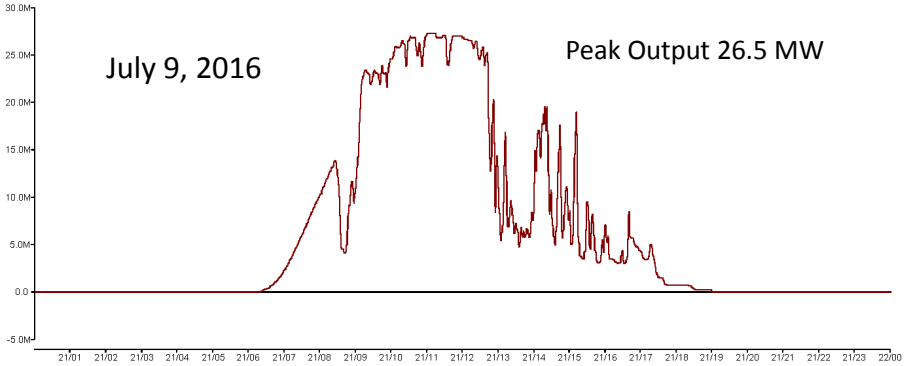
Solar PV Energy Production Characteristics

Utility Scale PV Output Look Like This …





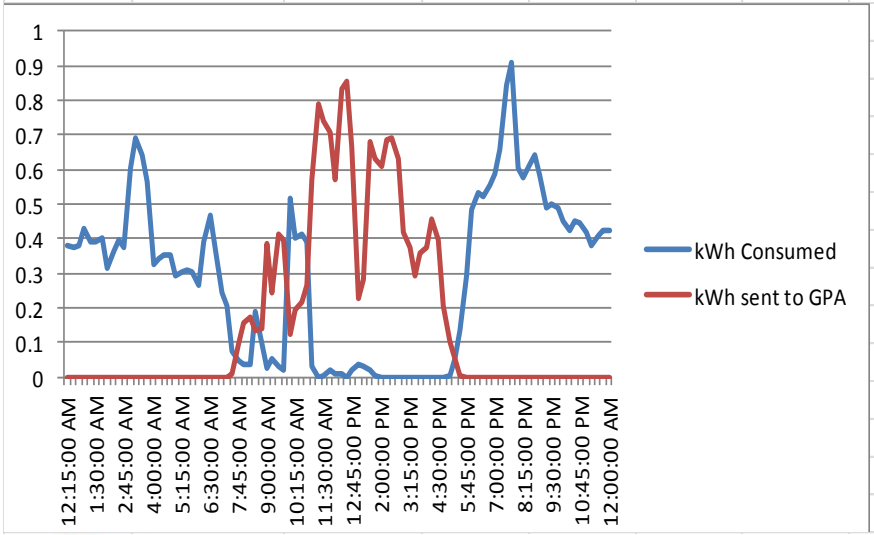
NEM does not eliminate need for capacity



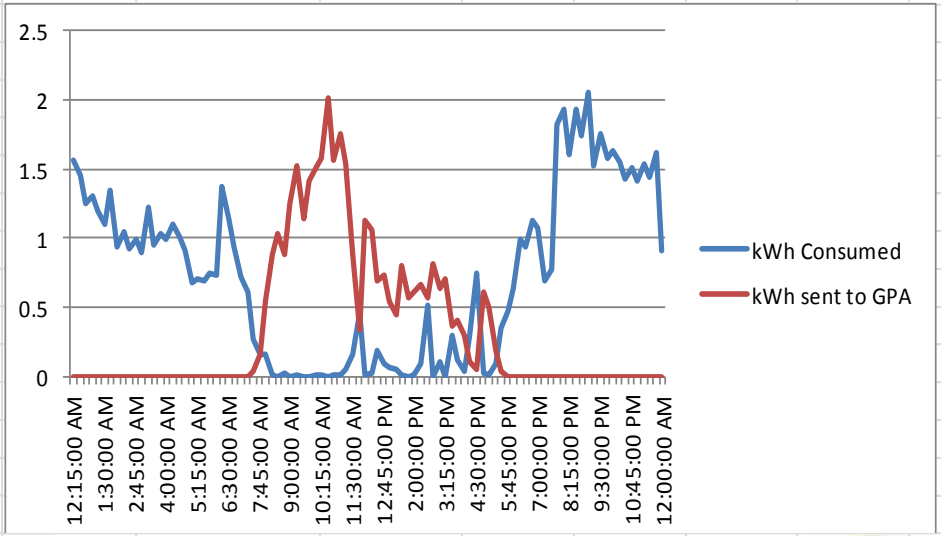
PV without adequate storage is not a capacity benefit. It is an energy benefit.

NEM Customer Profiles

Date:	14-Jun-16		
PV System KW Size	5.0		
GPA KWH 12am to 7am	11.05		
GPA KWH 7am to 6pm	3.66		
GPA KWH 6pm to 12am	**12.92**	**Evening Peak**	
NEM KWH 7am to 6pm	16.14		
Net GPA KWH	11.49		



Date:	14-Jun-16		
PV System KW Size	12.4		
GPA KWH 12am to 7am	28.9		
GPA KWH 7am to 6pm	6.1		
GPA KWH 6pm to 12am	**34.6**	**Evening Peak**	
NEM KWH 7am to 6pm	32.5		
Net GPA KWH	37.1		

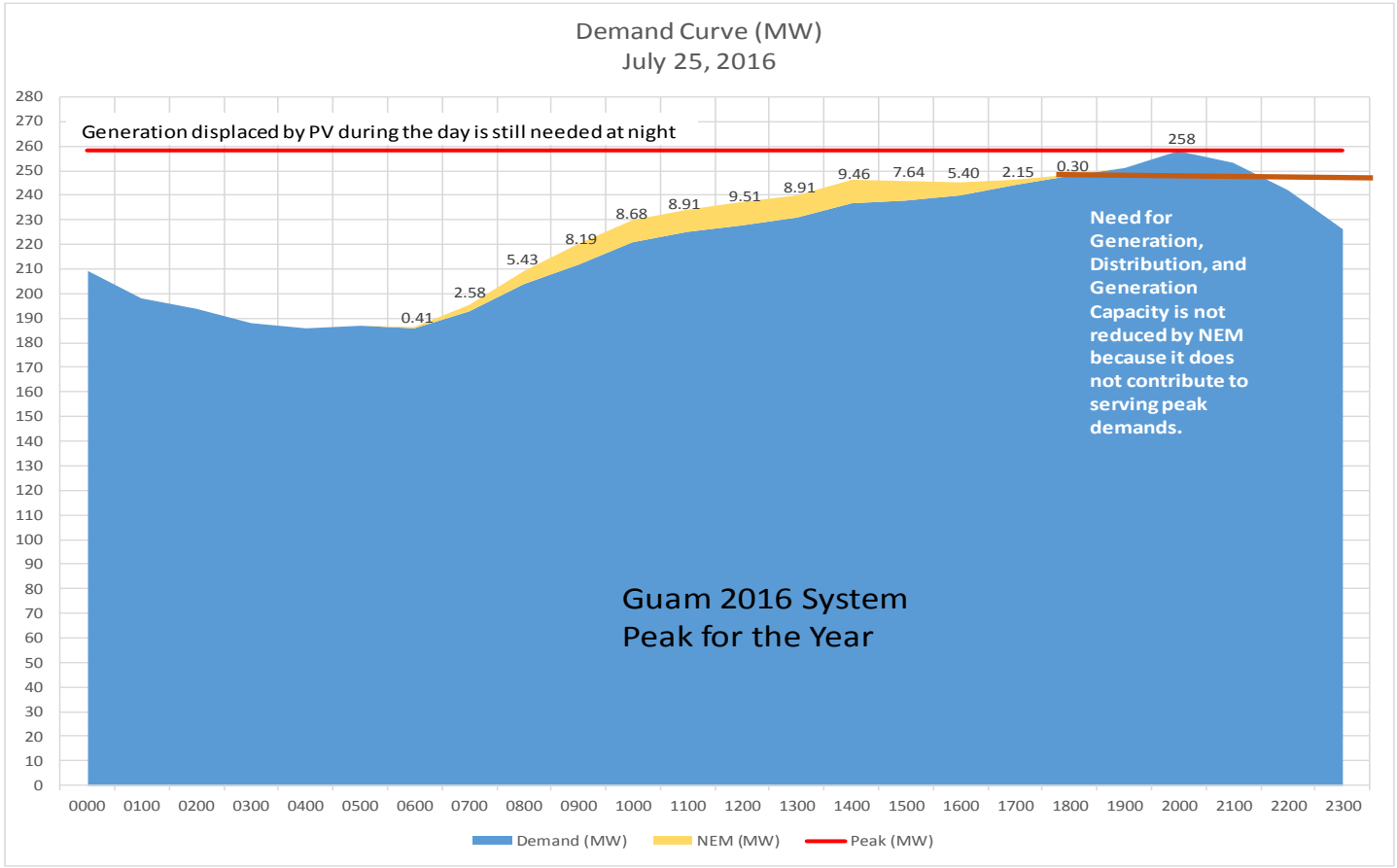


Does NEM Lower Guam Generation Capacity Requirements?

No. NEM Solar PV systems in Guam does not reduce peak demand and therefore does not eliminate conventional capacity needs

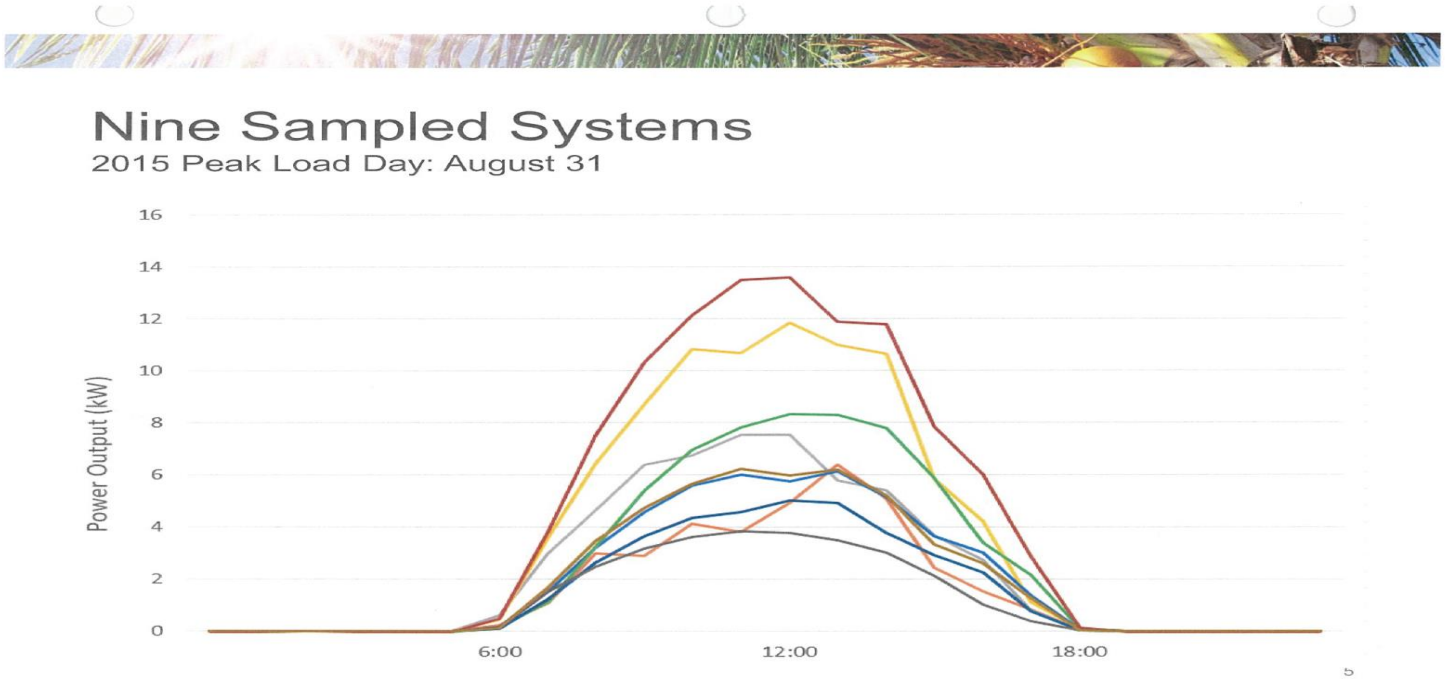
Transmission, Distribution, or Generation Capacity for Guam Not Reduced by PV

8



NEM Peak Production not at GPA Peak Demand Period

Source: Clean Power Resource Report



Net Metering Policy Issues

- Replacement for Net Metering Program
- Grandfathering existing registered NEM customers
  - Allow customers who own system to recover investment
  - Phase in to avoided cost rates over a 5 to 8 year period
- GPA files for PUC approval:
  - Reassessed NEM rates each LEAC for Avoided Fuel Value
  - Reassessed NEM rates for other components
    - Annually
    - Periodically over a set number of years
    - When GPA's generation mix changes

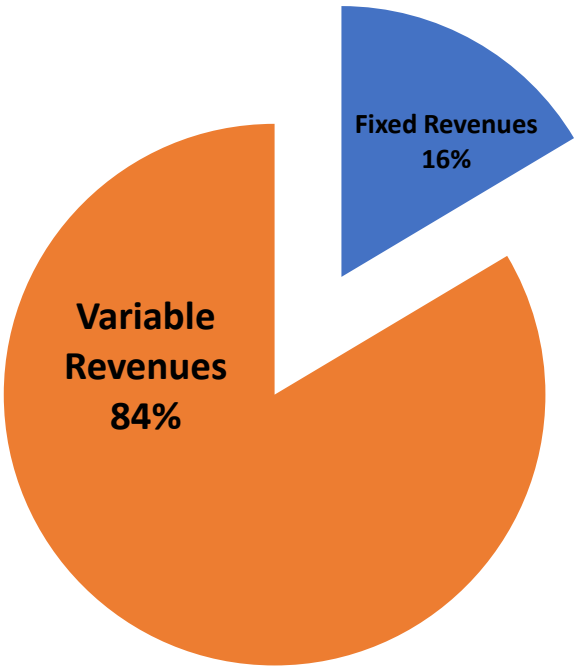
Value of the Grid to NEM Customers

- NEM customers receive services from the grid including:
  - Use the grid to sell power (get credit at full retail rate for excess production)
  - Use the grid to energize their homes at night, but credited back from their production (Uses GPA Grid as storage)
  - Using Grid at night results in increased fuel cost to non-NEM Customers because costlier less efficient generation is used to generate their energy needs
  - Frequency regulation absorbed by grid for intermittencies
  - Reactive power supply
  - Voltage regulation
  - Stand-by power on overcast days when the sun does not shine

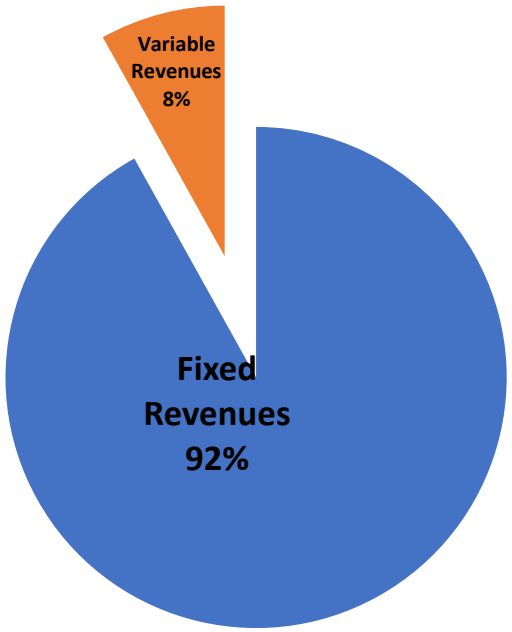
- Monthly fixed charge of $15 does not recover cost to serve from grid
  - Most of GPA fixed cost is recovered in the energy use (kWh) rate component which is typically zero for NEM customers

Rate Structure & Fixed Cost Recovery

Civilian Fixed vs Variable Revenues



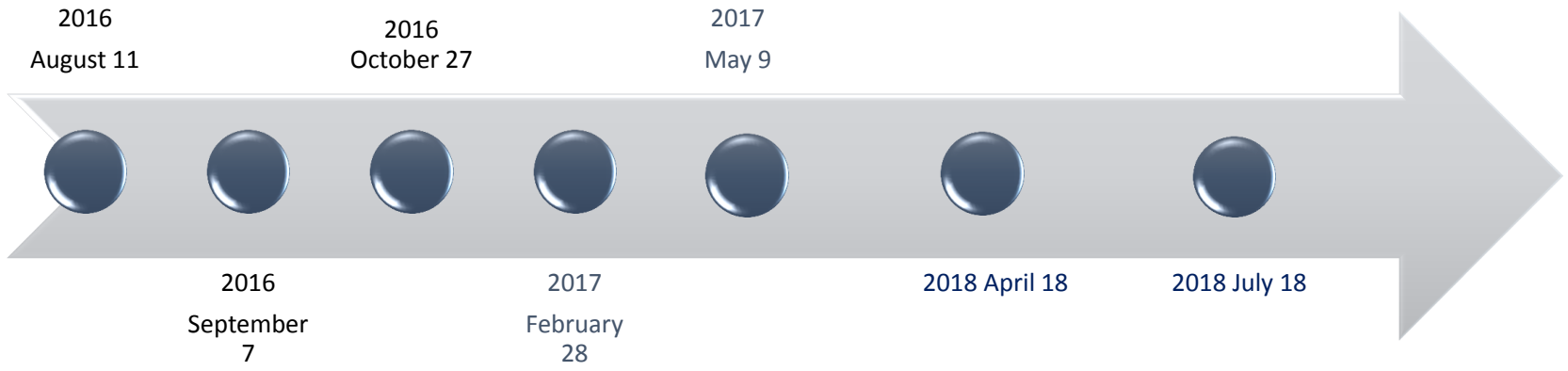
Navy Fixed vs Variable Revenues



GPA Rate Structure Should Move Towards Recovering More Fixed Costs Through Fixed Charges.

- Civilian rate structure
  - Most of GPA fixed costs recovered in the variable rate
- Navy rate structure
  - Most of GPA fixed costs recovered in the fixed rate
- Hawaii has moved to fixed cost recovery predominantly through its fixed rate

Net Metering Public Meetings Held to Gather Input from Stakeholders



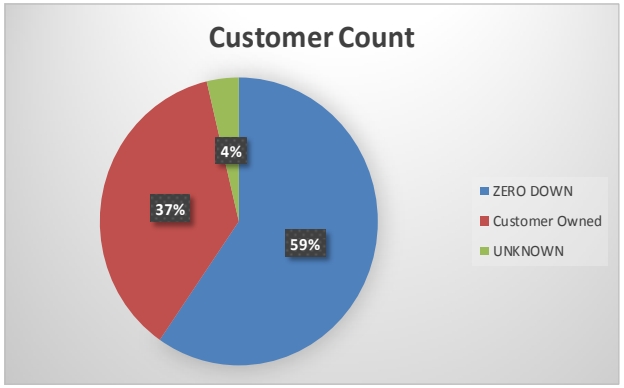
Key Points from Public Meetings

- Solar PV providers opined the B&V report provides all the gain to GPA and did not represent true value of solar
- NEM Owner wants to recover his investment. Asked for grandfathering until he does so. He said it will take 7 years to recover his $60K investment
- NEM not meant to be money making business but a fair exchange of trade energy…some customers making money from units sized beyond their needs
- The applicability of NEM program to 3rd party providers need to be clarified
- Solar PV provider wants NEM program to continue up to 20% penetration similar to Hawaii
- Solar PV provider wanted more time to provide a report on Value of Solar and bring to GPA for information. Report was completed and presented by Clean Power Research on April 18, 2018

Key Points from Public Meetings (continued)

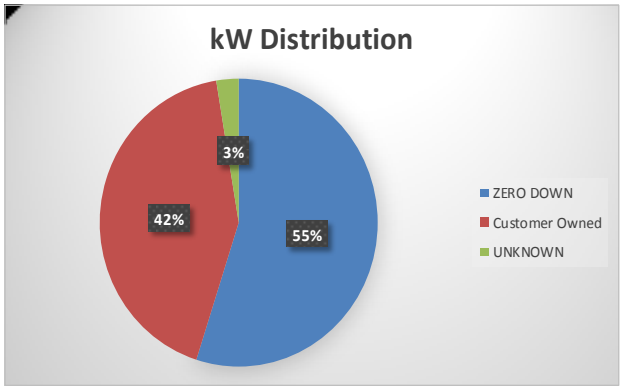
- Solar PV provider commented the NEM energy saves the utility cost on:
  - Maintenance cost for generations, poles, labor, lines, substations, transformers, etc.
  - Reduction of line losses because energy is near customers
  - Costs associated with fuel and fuel shipments
  - Helps GPA achieve energy portfolio reducing need for more renewable projects
  - Savings to environment; lessens carbon foot print
- Solar PV Provider-GPA should consider subsidies for home energy storage systems
- Solar PV Provider-GPA should consider grandfathering NEM customers through a phased approach
- No new points placed forward at the July 18, 2018 public meeting where the GM presented his recommendations which were previously presented to CCU

NEM – PV Statistics



Customer Count

Description	Number of Customers
ZERO DOWN	979
Customer Owned	602
UNKNOWN	61
Grand Total	**1,642**



kW Distribution

Description	kW
ZERO DOWN	9,326
Customer Owned	7,212
UNKNOWN	440
Grand Total	**16,978**

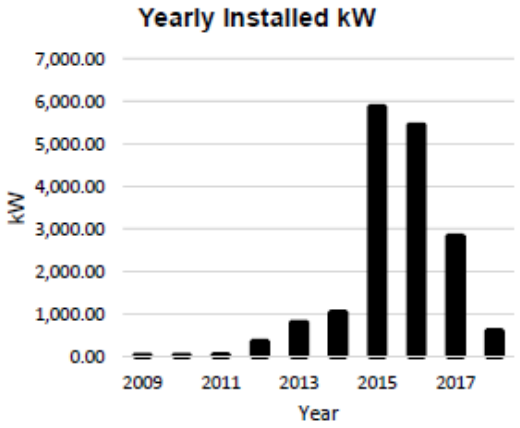
March 2018

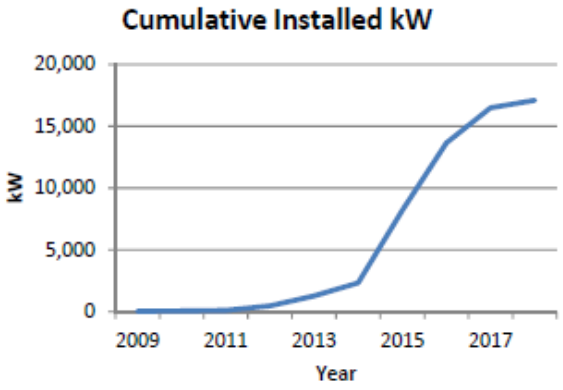
Customer Class	KW	NEM	Customers	Percent of Customer Class
R - Residential	14,119	1,562	43,756	3.6%
J - Small General Service Demand	1,647	32	987	3.2%
K - Small Government Demand	318	9	348	2.6%
L - Large Government Demand	23	1	45	2.2%
P - Large General Demand	241	3	116	2.6%
G - Small General Non Demand	666	33	4,127	0.8%
S - Small Government Non-Demand	79	7	681	1.0%
Total	**17,092**	**1,647**	**50,060**	

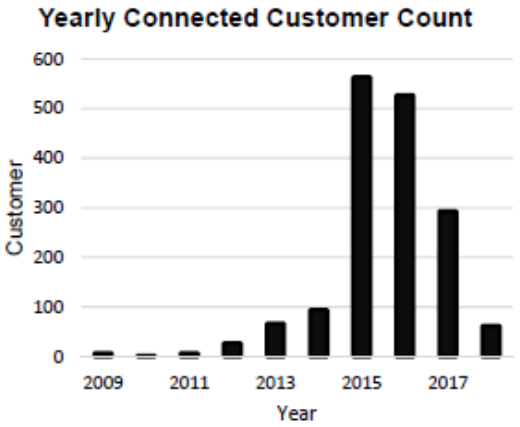
Projected FY 2018 Non-Fuel Revenue Loss

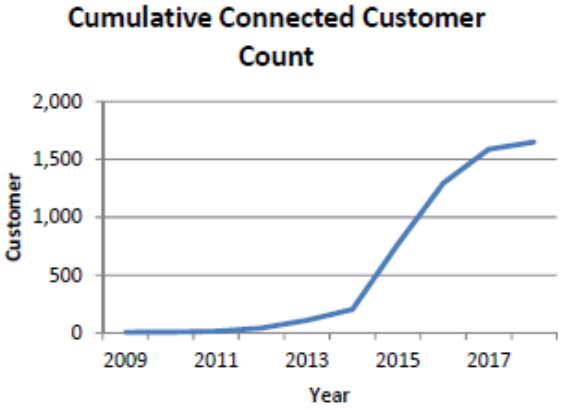
Customer Rate Class	Renewable Energy Capacity (kW)	Annual kWh Generated (@5.092 hours/day)*	Average Non-Fuel Yield $/kWh	Estimated Annual Revenue Loss
R	13,693	25,447,071	0.09293	$ 2,364,822
J	1,647	3,059,970	0.13112	401,226
K	318	590,618	0.13932	82,286
L	23	42,373	0.13525	5,731
P	241	447,331	0.11539	51,617
G	636	1,182,853	0.15084	178,417
S	79	146,447	0.15334	22,456
Grand Total	**16,636**	**30,916,662**		**$ 3,106,555**

*Estimated number of hours from NREL for Guam (13.4° North and 144° East).









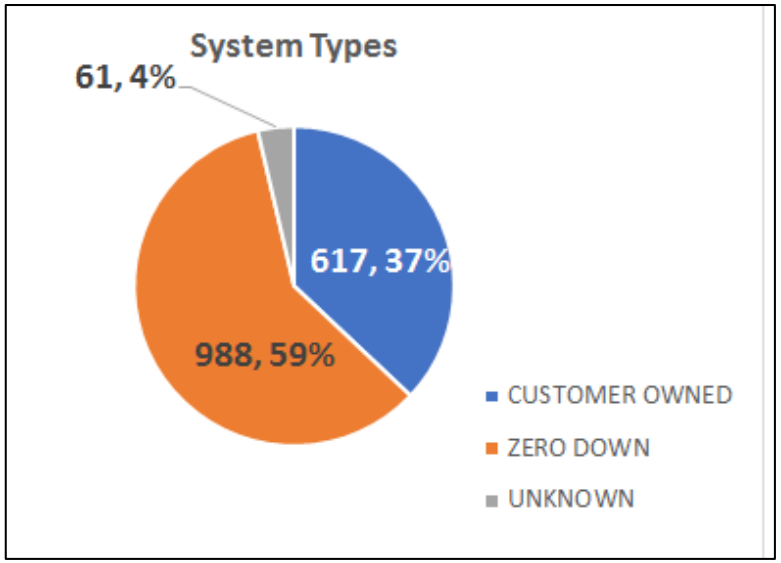
NEM Market Analysis

- Product Lifecycle Stages
  - 2009 -2011 Introduction
  - 2012 – 2014 Growth
  - 2015 – 2016 Maturity
  - 2017 – Present Decline



Market Share of Competitors

Firm	Count	Capacity (KW)	% of Installed System
Company A	747	6,882	40.3%
Company B	271	2,337	13.7%
Company C	229	2,426	14.2%
Company D	147	2,410	14.1%
Owner Installed	90	1,088	6.4%
Company E	29	470	2.7%
Company F	26	357	2.1%
Company G	13	100	0.6%
All Other Companies/Self Constructed Combined	35	576	3.4%
Unknown	62	449	2.6%
Totals:	1,649	17,095	100.0%



GPA Value of Solar from an Avoided Cost Perspective

Cost Category	FY 2017	Cost per kWh Sold	GPA Avoided Cost ($/kWh)
Generation + IPP Costs			
Other Production - Fixed O&M	$ 17,783,917	$ 0.0110	
IPP Costs - Fixed O&M	$ 16,958,770	$ 0.0105	
IPP Costs - Variable O&M	$ 2,976,564	$ 0.0018	$ 0.0018
Transmission & Distribution	$ 11,703,969	$ 0.0073	
Admin and General			
Payroll, benefits, retirement	$ 12,862,412	$ 0.0080	
Insurance	$ 7,252,504	$ 0.0045	
Contracts	$ 4,024,943	$ 0.0025	
Utilities	$ 1,817,009	$ 0.0011	
Office supplies & Others	$ 844,349	$ 0.0005	
Customer Accounting	$ 4,756,213	$ 0.0030	
Debt Service	$ 56,937,000	$ 0.0354	
CIPs/Others	$ 26,731,639	$ 0.0166	
Total (Base Rate Revenues)	$ 164,649,289	$ 0.1023	
Fuel Costs	$ 181,683,506	$ 0.1128	
Fuel Consumption, plus the under recovery of $15.3 M)	$ 165,692,714	$ 0.1029	$ 0.1029
Fuel Handling	$ 7,128,512	$ 0.0044	
Renewables	$ 8,862,280	$ 0.0055	
Total	346,332,795	$ 0.2151	
Energy losses at 3.5%		$ 0.0054	$ 0.0054
Environmental cost		$ 0.000039	$ 0.000039
Total Avoided Cost			**$ 0.1102**
Average cost in 2017 per kWh		$ 0.2151	$ 0.2151
Credit Beyond Avoided Cost			**$ 0.1049**

Energy Storage System (ESS) Cost Frequency Control

FY2019	
Total KWH Sales Projected:	1,610,093,011
ESS Annual Debt Service & O&M:	$ 2,829,348
$/kWh:	$0.0018

GPA provides low cost energy storage

New 40 MW Energy Storage System Commissioning December 2018

Value of Solar Comparison

Only Minnesota and Austin Energy (Texas) adopted VOS Model

Cost Category	Minnesota	Austin Energy	Clean Power Research (MRE)	GPA Avoided Cost FY 2017	Comments
Fuel Cost	X	X	$0.1260	$0.1029	Close Agreement
Energy Losses	X	X	$0.0054	$0.0054	In Agreement
Plant O&M-Fixed	X	X			
Plant O&M-Variable	X	X		$0.0018	Minor Cost Impact
Generation Capacity Cost	X	X	$0.0490		No Capacity Avoided
Reserve Capacity Cost	X				
Transmission Capacity Cost	X	X			
Distribution Capacity Cost	X	X			
Environmental Cost	X	X		$0.0001	Minor Cost Impact
Voltage Control Cost	X				
Solar Integration Cost	X				
Avoided Fuel Hedging Uncertainty Cost			$0.0590		N/A - GPA Does Not Hedge
Avoided Mandated RPS Cost			$0.0310		GPA meeting RPS at Savings not Cost
Total:			**$0.2704**	**$0.1102**	**Variance Subsidized by Non-NEM Ratepayers**

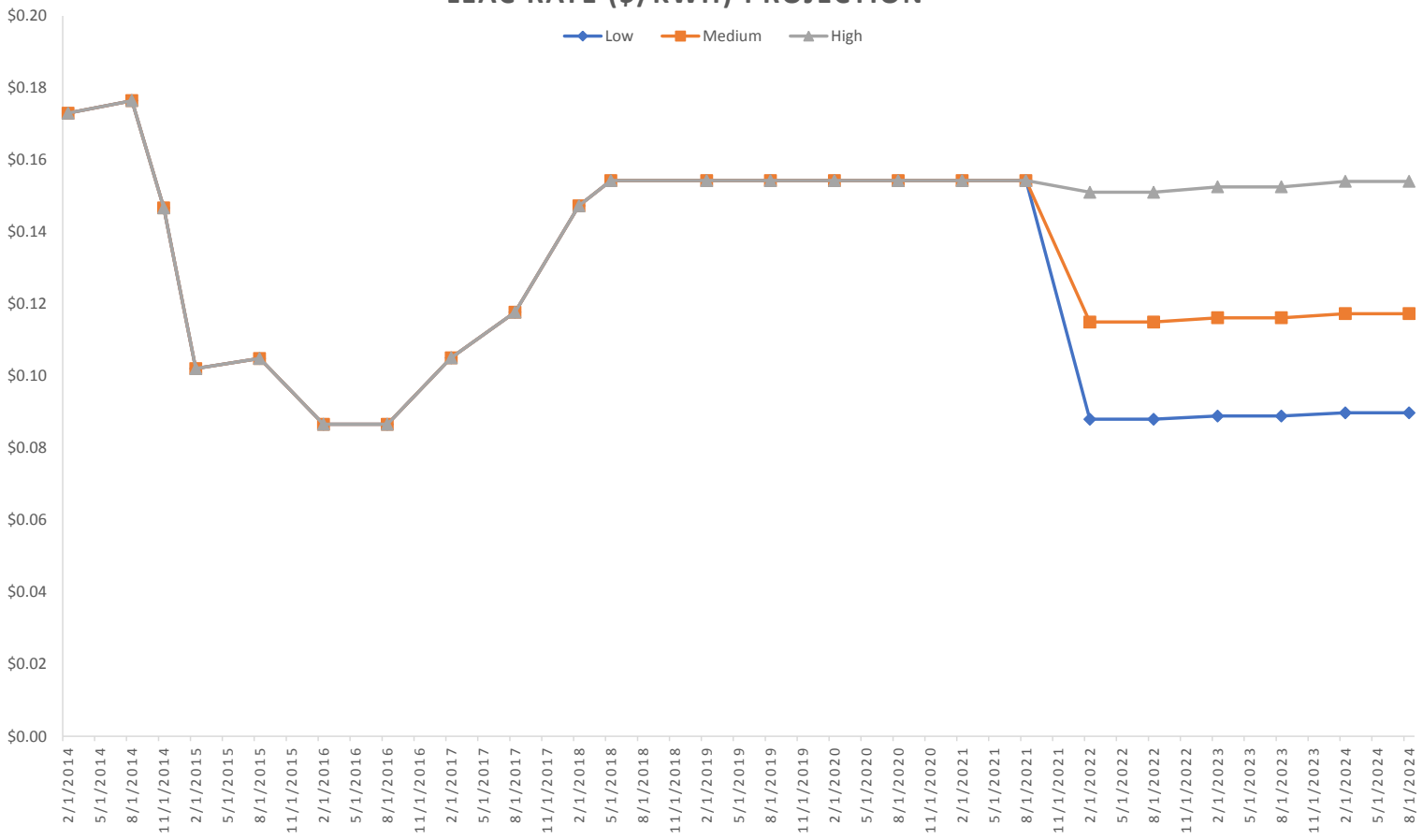
Value of Solar Comparison

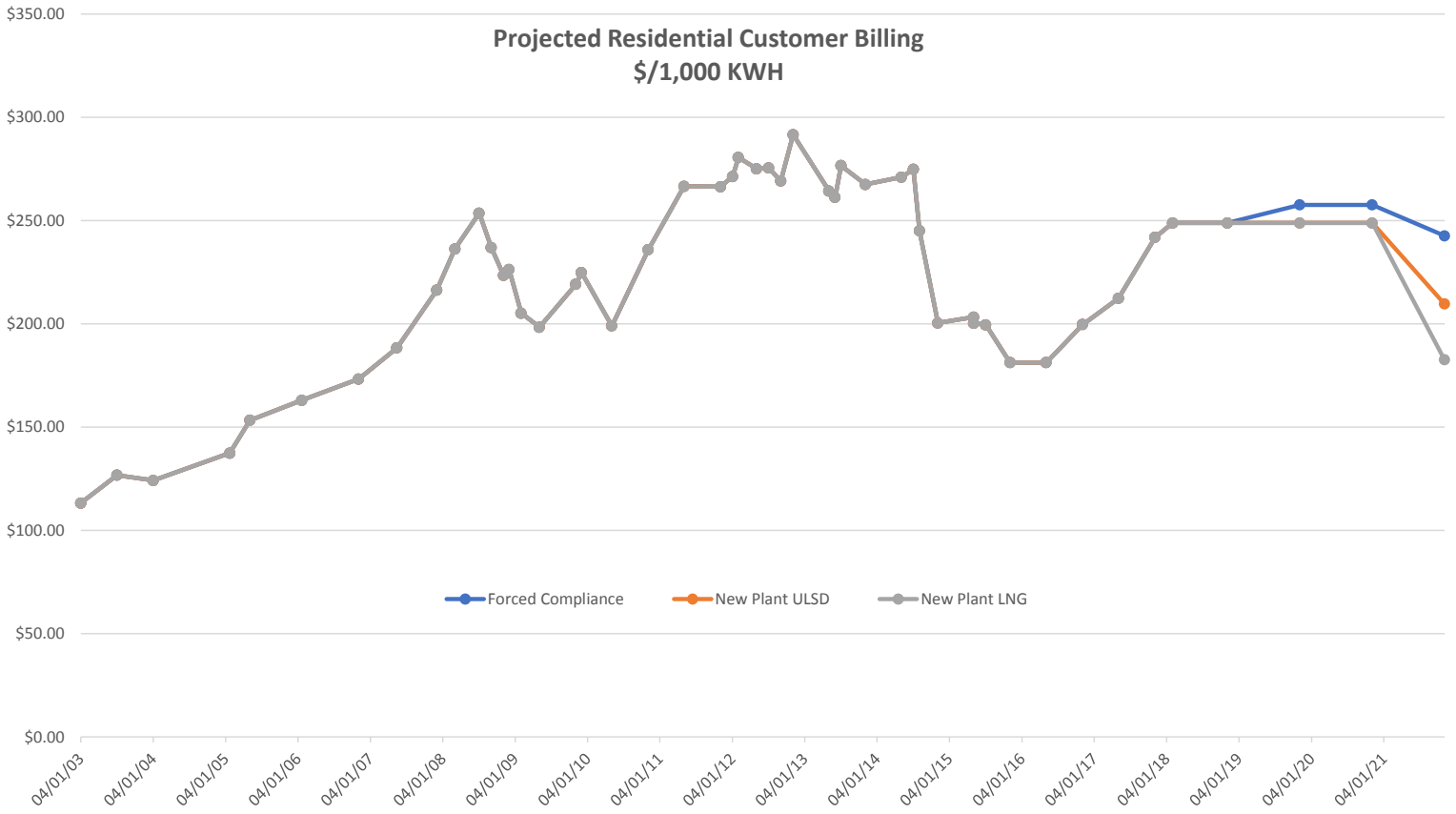
Adjusted to GPA Actual Cost

Cost Category	Clean Power Research (MRE)	Revised CPR/MRE Based on Comments	GPA Avoided Cost FY 2017	Comments
Fuel Cost	$0.1260	$0.1029	$0.1029	Adjusted based on LEAC for Similar FY 2017 Period
Energy Losses 4.6%	$0.0054	$0.0047	$0.0047	In Agreement
Plant O&M-Variable			$0.0018	GPA Determined Minor Cost Impact
Generation Capacity Cost	$0.0490	$0.0000	$0.0000	No Capacity Avoided because does not Reduce Peak Demand
Environmental Cost			$0.0001	GPA Determined Minor Cost Impact
Avoided Fuel Hedging Uncertainty Cost	$0.0590	$0.0000	$0.0000	Not Applicable - GPA Does Not Hedge, Therefore No Cost
Avoided Mandated RPS Cost	$0.0310	$0.0000	$0.0000	GPA meeting RPS at a Savings not a Cost
Total:	**$0.2704**	**$0.1076**	**$0.1095**	

25

LEAC RATE ($/KWH) PROJECTION




Projected Residential Customer Billing
$/1,000 KWH
$350.00
$300.00
$250.00
$200.00
$150.00
$100.00
$50.00
$0.00
Forced Compliance
New Plant ULSD
New Plant LNG
04/01/03
04/01/04
04/01/05
04/01/06
04/01/07
04/01/08
04/01/09
04/01/10
04/01/11
04/01/12
04/01/13
04/01/14
04/01/15
04/01/16
04/01/17
04/01/18
04/01/19
04/01/20
04/01/21

Net Metering Economics

When Do Customer-Owned NEM Recover their Investment?

Value of Solar Payment Versus Simple Payback						
$/Kwh Credit	$0.10		$0.12		$0.27	
ITC Valid	2018-2019		2018-2019		2018-2019	
Solar PV All-In Cost ($/W)	30.0% ITC		30.0% ITC		30.0% ITC	
	Simple Payback (years)	IRR (%)	Simple Payback (years)	IRR (%)	Simple Payback (years)	IRR (%)
1.00	6	18.8%	5	23.9%	2	53.0%
1.25	7	14.6%	6	18.8%	3	42.2%
1.50	8	11.6%	7	15.3%	3	35.0%
1.75	10	9.5%	8	12.7%	4	29.8%
2.00	11	7.8%	9	10.7%	4	25.9%
2.25	12	6.4%	10	9.1%	5	22.9%
2.50	**14**	**5.2%**	**11**	**7.8%**	**5**	**20.4%**
2.75	15	4.2%	12	6.6%	**6**	18.4%
3.00	17	3.4%	13	5.7%	**6**	16.7%
3.25	18	2.6%	14	4.8%	**7**	15.2%
3.50	20	1.9%	16	4.1%	**7**	13.9%
3.75	21	1.3%	17	3.4%	**8**	12.8%
4.00	**23**	**0.8%**	**18**	**2.8%**	**8**	**11.8%**
4.25	25	0.3%	19	2.2%	9	10.9%

NEM Customer Owned Solar PV

At GPA Retail Rate Credit Recovers Investment in 5 to 8 Years

GPA Residential Retail Rate Credit:			
Average $/W Installed	**$3.25/Watt**	**Annual Savings**	**Simple Payback Years**
PV KW Capacity	7.69		
Annual Capacity Factor	20.0%		
Annual Kwh Production	13,473		
Average LEAC	$0.147		
Average Base Rate	$0.093		
Total Average rate	**$0.240**		
Annual Energy Cost Avoided	$3,233.49		
Installation Cost - No Tax Credit	$24,993		**7.7**
15 Year Loan Annual Payment, 8%, 15 years	$2,919	$314.49	
With Tax Credit	$17,495		**5.4**
15 Year Loan Annual Payment, 8%, 15 years	$2,043	$1,190.49	

NEM Customer Owned Solar PV

At GPA 2018 LEAC Rate Credit Recovers Investment in 8 to 12 Years

GPA 2018 LEAC Rate Credit:			
Average $/W Installed	**$3.25/Watt**	**Annual Savings**	**Simple Payback Years**
PV KW Capacity	7.69		
Annual Capacity Factor	20.0%		
Annual Kwh Production	13,473		
Average LEAC	$0.154		
Average Base Rate	$0.000		
Total Average rate	**$0.154**		
Annual Energy Cost Avoided	$2,074.82		
Installation Cost - No Tax Credit	$24,993		**12.0**
15 Year Loan Annual Payment, 8%, 15 years	$2,919	-$844.18	
With Tax Credit	$17,495		**8.4**
15 Year Loan Annual Payment, 8%, 15 years	$2,043	$31.82	

Summary

- Net Metering was established 13 years ago in 2004. Substantial Changes has occurred on GPA delivery cost and more changes expected by 2022.
- Customer Owned NEM System recovers its investment within 5 to 8 years from installation at GPA full Retail Rate Credit.
- Customer Owned NEM System recovers its investment within 8 to 12 years from installation at GPA LEAC Avoided Cost Rate Credit.
- It appears Zero Down Customers with 2.9% escalators will incur higher cost over the life of their 25 year contract. A $0.18/KWH rate in 2018 becomes $0.357/KWH in 2042.

Additional Information on Net Metering

Estimated Cost Impact to Non-Net Metering Ratepayers:			
NEM Credit above avoided cost	**Estimated Kwh**	**Estimated Subsidy**	**$/Kwh**
FY 2009	23,912	$1,657	$0.0693
FY 2010	98,830	$8,483	$0.0858
FY 2011	170,070	$18,177	$0.1069
FY 2012	494,672	$58,546	$0.1184
FY 2013	1,556,949	$178,996	$0.1150
FY 2014	3,137,212	$410,559	$0.1309
FY 2015	7,383,621	$856,921	$0.1161
FY 2016	21,867,383	$2,200,795	$0.1006
FY 2017	28,242,917	$2,828,834	$0.1002
FY 2018	**33,921,230**	**$3,411,623**	$0.1006
Totals:	**96,896,796**	**$9,974,591**	
Net Metering Customers July 2018	1,733		
Total GPA Customers	51,515		
% NEM Customers	3.36%		
Non-NEM Customers	49,782		
% Non-NEM Customers	96.64%		

Jurisdiction	Years	Notes
Arkansas	20	
Neveda	20	
Utah	18	Until 2035
California	5	Residential, require application
	10	Other, require application
Arizona	20	Require application by June 12, 2018
Florida	20	March 31, 2018 final inspection, JEA
New Hampshire	22	Until 2040
Indiana	29	NEM customers prior to July 1, 2017 have until July 1, 2047
	14	NEM customers signing up prior to July 1, 2022 or their utility reaching a 1.5% peak summer load cap can continue net metering until July 1, 2032
Maine	15	Existing 2017 customers
Michigan	10	Limited to NEM that is already in the system
Hawaii (HECO, MECO, HELCO, Molakai, Lanai)	∞	NEM application was submitted to the utility postmarked 10/12/15 or earlier
Vermont	10	Net metering systems with a complete Certificate of Public Good application filed with the PSB prior to January 1, 2017 (as long as the application was filed at a time when the electric company was accepting net metering systems, based on the state's former aggregate capacity limit) are grandfathered

- Utilities and States Differ on Grandfathering NEM Customers
- Many Jurisdictions are Ending Net Metering

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Maine

- In early 2017, Maine became the fourth state to more appropriately compensate net metering. The Public Utilities Commission adopted a ramp-down policy, which gradually harmonizes the transmission and distribution charges for net metering customers, aligned with true avoided costs.
- The rules grandfather existing customers for 15 years.

Source: Tanton, Thomas. (April 2018) Net Metering in the States: Moving Toward Equitable and Sustainable Policies for Electric Customers. URL at http://sglf.org/wp-content/uploads/sites/2/2018/04/SGLF-Net-Metering-In-the-States-by-Thomas-Tanton-April-2018.pdf (August 17, 2018).

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Hawaii

- Marco Mangelsdor, president of installer ProVision Solar.
  - "... Hawaii's net energy metering (NEM) policy has "88% of the utility's ratepayers subsidizing the 12% who have net energy metered systems."
  - He believes utility's concern about that shift of costs for system maintenance is reasonable.
  - "The cost of NEM was $38 million in 2013 and it is estimated at $53 million in 2014. These are not trivial dollars."

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California

- One of the first studies to quantify the magnitude of the NEM subsidy was conducted by Energy+Environmental Economics (E3) for the California Public Utilities Commission (CPUC) in 2013.
- The E3 study estimated that NEM would result in a cost shift of $1.1 billion annually by 2020 from NEM to non-NEM customers if current NEM policies were not reformed in California.
- A cost shift of this magnitude–paid for by non-NEM customers–was unacceptable to California regulators.
- As a result, California regulators set to work to reform rates in their state; many other states followed suit and conducted similar investigations of the magnitude of the NEM subsidy.

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Nevada

- Recently, Arizona Public Service (APS), the state's largest utility, found that solar customers avoid on average around $1,000 annually in costs for operating the electric grid, costing the average power user, who must make up the cost, a $16.80 premium per year.

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Louisiana

- Overall, the state found that its net metering structure resulted in an $89 million negative net benefits to electricity rate payers, meaning the net metering program costs are greater than program benefits, and that over $2 million of utility costs per year were being subsidized by non-solar consumers.

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See attached Article of May 18, 2018 by Institute for Energy Research (IER)

Subsidies uncheck will continue to impact Non-Net Metering substantially:

Guam is at 3.36%; Hawaii is at 12 % NEM;

Description:	**Jul-18**	**Future**	**Future**	**Future**
% of All Customers	3.36%	5.00%	10.00%	15.00%
NEM Customers	1,733	2,576	5,152	7,727
Energy Produced	33,921,230	50,416,970	100,833,939	151,250,909
Annual Subsidy	$3,411,623	$5,071,652	$10,143,304	$15,214,955
Non-Nem Customers	49,782	48,939	46,364	43,788
Cost to each Non-NEM	**$68.53**	**$103.63**	**$218.78**	**$347.47**

Recommendation

1. CCU approve GPA filing a petition to the PUC as shown herein to consider changes to the existing net metering credit
2. Recommend an implementation plan for billing NEM customers on net billing: Buy All/Sell All or similar billing models
3. GPA files with GPUC for adjustment of net metering credits from retail to avoided cost
4. It is recommended that for existing NEM Customers, implement a Grandfather phase-in approach over 5 to 8 years to the GPA avoided cost credit. Adjustments for LEAC, line loss and variable cost changes done annually.
5. For future NEM customers, credit set at the GPA avoided cost

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

Issues for Decision

Resolution No. 2018-17:

Relative to Approving GPA's Net Metering Recommendation

What is the project's objective? Is it necessary and urgent?

The necessary and urgent objective of this resolution seeks approval to file and respond to the Guam Public Utilities Commission (PUC) order under Docket No. 08-10 (December 29, 2008), Exhibit A:

> **"The NM Rider is available to all customers without limitation as to the aggregate capacity of Customer-Generator installations on the GPA System. However, at the time the number of Customer-Generators exceeds one-thousand (1000) customers this issue will be reviewed by the PUC and a determination made as to the continued offering of the NM Rider for new 'net metering' customers."**

GPA achieved the milestone of 1000 net metering customers in June 2016. As of July 31, 2018, GPA has 1,733 net metering customers resulting in an approximate $3,411,623.29 annual subsidy by non-net metering customers. Additionally, GPA has conducted and completed as ordered by the Consolidated Commission on Utilities (CCU) several public meetings to:

- **Address net metering stakeholders' concerns and obtain feedback;**
- **Evaluate stakeholder feedback;**
- **Perform analysis regarding net metering impacts on the GPA especially on non-net metering customers;**
- **Propose recommendations on whether or not changing the current net metering program is in the best interests of customers while insofar as practical alleviating net metering customer concerns.**

Where is the location?

the Territory of Guam

How much will it cost?

This recommendation will save non-net metering customers approximately $3,411,623.29 annually.

When will it be completed?

Upon approval of the Guam Public Utilities Commission

What is its funding source?

The Levelized Energy Adjustment Clause

CONSOLIDATED
COMMISSION ON UTILITIES
Guam Power Authority • Guam Waterworks Authority
P.O.BOX 2977 • Agana,Guam 96932

RESOLUTION NO. 2018–17

AUTHORIZING MANAGEMENT OF THE GUAM POWER AUTHORITY (GPA) TO FILE NET METERING PROGRAM RECOMMENDATIONS ADDRESSING THE GUAM PUBLIC UTILITIES COMMISSION (PUC) ORDER (DOCKET NO. 08-10 (DECEMBER 29, 2008), EXHIBIT A, PARAGRAPH 3

WHEREAS, Guam Public Law 27-132 (2004) created Net Metering for Guam and assigned the Guam Public Utilities Commission (PUC) the responsibility for setting the Net Metering Rate for excess renewable energy fed into GPA's Distribution System; and

WHEREAS, the Guam Public Utilities Commission (PUC) ordered GPA to execute the Interim Net Metering (NM) Rider under Docket No. 08-10 (December 29, 2008); and

WHEREAS, under Docket 08-10, Exhibit A (paragraph 1), the PUC states: "The NM Rider may be amended or modified in the future by GPA, with the approval of the Guam Public Utilities Commission (PUC)"; and

WHEREAS, under Docket 08-10, Exhibit A (paragraph 3), the PUC orders: "The NM Rider is available to all customers without limitation as to the aggregate capacity of Customer-Generator installations on the GPA System. However, at the time the number of Customer-Generators exceeds one-thousand (1000) customers this issue will be reviewed by the PUC and a determination made as to the continued offering of the NM Rider for new 'net metering' customers."; and

WHEREAS, GPA achieved the milestone of 1000 net metering (NEM) customers in June 2016; and

WHEREAS, NEM customers receive services from the grid subsidized by non-NEM customers including but not limited to: 1) Use of the grid to sell power (get credit at full retail rate for excess production); 2) Use of the grid to energize their homes at night; 3) Frequency regulation absorbed by grid for intermittencies; 4) Reactive power supply; 5) Voltage regulation; and 6) Stand-by power on overcast days when the sun does not shine.

WHEREAS, GPA has 1,733 net metering customers (July 31, 2018) resulting in an approximate $3,411,623 annual subsidy going forward and from 2009 to 2017 a total subsidy of approximately $6,562,968.64 paid for by non-net metering customers; and

WHEREAS, as ordered by the Consolidated Commission on Utilities (CCU), GPA has conducted and completed several public meetings to: 1) Address net metering stakeholders' concerns and obtain feedback; 2) Evaluate stakeholder feedback; 3) Perform analysis regarding net metering impacts on the GPA especially on non-net metering customers; and, 4) Propose recommendations on whether or not changing the current net metering program is in the best interests of customers while insofar as possible alleviating net metering customer concerns; and

WHEREAS, the GPA General Manager presented the Authority's Net Metering (NEM) Credit Recommendation (Exhibit A) at the July 18, 2018 CCU Working Session held publicly; and

WHEREAS, GPA recommends the following Value of Solar (VOS) Policies as a replacement for the existing Net Metering Program including: 1) Grandfathering existing registered NEM customers for a period of 5 to 8 years allowing customers who own NEM systems to recover their investment while phasing in VOS rates over this extended 5 to 8 year time period; and filing for PUC approval a process to establish Value of Solar (VOS) rates;

WHEREAS, the process to establish Value of Solar (VOS) rates would: 1) Reassess VOS rates each LEAC for Avoided Energy Value; 2) Reassess VOS rates for other VOS components as applies on a) an annual basis; b) periodic basis over a set number of years; and 3) whenever there are material changes to GPA's generation mix; and

NOW, THEREFORE, BE IT RESOLVED, by the CONSOLIDATED COMMISSION ON UTILITIES subject to the review and approval of the Public Utilities Commission as follows:

1. The General Manager is authorized to file a petition of its Value of Solar Policy Recommendations to the Guam Public Utilities Commission.
2. The General Manager is authorized to conduct an information campaign supporting these recommendations.

RESOLVED, that the Chairman of the Commission certifies and the Secretary of the Commission attests the adoption of this Resolution.

DULY and REGULARY ADOPTED this XXth day of March 2018.

Certified by:	**Attested by:**
JOSEPH T. DUENAS	**J. GEORGE BAMBA**
CHAIRMAN	**SECRETARY**

SECRETARY'S CERTIFICATE

I, J. George Bamba, Secretary for the Consolidated Commission on Utilities do hereby certify that the foregoing is a full, true, and correct copy of the resolution duly adopted at a regular meeting of the members of Guam's Consolidated Commission on Utilities, duly and legally held at the meeting place thereof on August XX, 2018, at which meeting of all said members had due notice and at which at least a majority thereof were present, and

At said meeting said resolution was adopted by the following vote:

Ayes: _____

Nays: _____

Absent: _____

Abstain: _____

As of the date of this certification, said original resolution has not been amended, modified, or rescinded since the date of its adoption, and the same is now in full force and effect.

SO CERTIFIED this XXth day August 2018.

J. GEORGE BAMBA
Secretary
Consolidated Commission on Utilities

We Told You So: Another Net Metering Solar Subsidy Bites the Dust

naturalgasnow.org/told-another-net-metering-solar-subsidy-bites-dust/

By Natural Gas Now Guest Blogger May 18, 2018

Institute for
Energy Research

IER

....

....

Net metering solar subsidies in Michigan are being ended because they're unaffordable and unfair, something that should have been apparent to all long ago.

Michigan has joined other states in realizing that net metering rules as originally designed are biased against consumers without rooftop solar, raising their electricity rates. Michigan will now charge rooftop solar customers at the retail price of electricity for electricity that they consume and pay them a lower price for the electricity that the utility purchases from them thereby charging them for the use of the electrical wires (i.e., transmission and distribution) that non-solar consumers hitherto have had to subsidize. Customers already in the net metering program will be grandfathered for 10 years. By changing the rules on net metering, Michigan will join several other states that have recognized the bias.



Michigan rooftop solar system that has had a hidden subsidy with net metering

Beginning June 1, Michigan customers who provide solar power to utility companies will be paid an avoided-cost tariff based on how much their utility pays to produce electricity, ensuring solar rooftop customers are "assessed for their fair and equitable use of the

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electrical grid."

Under the current rules, solar panel customers are often able to avoid much of the cost of maintaining the electric grid, which they continue to use, resulting in the non-net metering customers paying more than their share to maintain the grid. This is because utilities were required to buy electricity from solar rooftops at retail prices, even though it was a wholesale product, and other ratepayers would end up subsidizing their neighbors' solar systems by paying the utility more than the product was worth.

States That Have Changed Net Metering Rules

At least five states have implemented alternative compensation methods for solar rooftop customers, including Arizona, Hawaii, Indiana, Maine, and Nevada. While these states have implemented widely-varying alternative compensation methods, all five states have grandfathered existing customers, allowing them to continue under the previous net metering rules for a set number of years.

In December 2016, the Arizona Corporation Commission lowered the credit residential solar customers receive for excess energy sent back to the grid and limited how long customers can keep their rates. The new rate is based on the cost of energy from large solar farms, which is much lower than the retail rate.

In October 2015, Hawaii closed its net metering program to new solar owners, and provided two options: self-supply and grid-supply. Under the self-supply option, solar customers with energy storage in areas of high solar penetration are limited in the amount of electricity they can send back to the grid and do not receive any compensation for it. Under the grid-supply option, solar customers are compensated at the wholesale rate for electricity supplied to the grid. In Hawaii, wholesale prices range from roughly 15 cents per kilowatt-hour to 28 cents per kilowatt-hour, which is about half of the state's average retail electricity rates. To help cover fixed costs, residential solar customers connected to the grid will pay a minimum monthly bill of $25.

In May 2017, Indiana Governor Eric Holcomb signed into law a measure that lowers the rate of compensation for customers who install solar or wind power, phasing out retail net metering. Systems installed by the end of 2017 were to get the retail rate for 30 years, but the rate will be lowered over a series of years for other customers after 2022. After 2022, solar and wind customers will be compensated at their utility's marginal cost, plus 25 percent.

Last year, Maine approved new solar rules that would gradually decrease the compensation to customers with solar panels on their homes, grandfathering an existing customer's rate for 15 years. Regulators agreed to delay implementation until April 30, as technical aspects of the new rules were sorted out.

On December 23, 2015, the Public Utility Commission of Nevada established an alternate compensation method for rooftop solar customers that creates new classes of net metering customers and a structured process for transitioning to the new rules and rates. Over five years, the basic service charge will increase in gradual increments accompanied by a related decrease in the energy charge that net metering customers pay for each unit of

energy delivered by the utility and a decrease in the credit that the utility provides for energy delivered by rooftop solar customers to the grid. The rates and credits are to be reset periodically by the Public Utility Commission.

Other states have discovered that their net metering programs have overcompensated solar panel owners at the expense of their other energy consumers. Montana's largest utility company found that it was overpaying net metering customers by about three times the market value. The value of the rooftop solar energy that was being delivered back to the grid was about four cents per kilowatt hour, but the net metering customers were getting paid about 12 cents per kilowatt hour for that power. In New Hampshire, Governor Chris Sununu shunned renewable energy subsidies that have artificially supported failing solar energy companies.

Conclusion

Net metering is a boondoggle for residential homeowners who can afford to put solar panel systems on their homes. It also hurts non-solar customers by forcing them to subsidize solar panel homeowners through the purchase of a wholesale product at a retail price and the allowing grid freeriding. States are realizing the bias and are implementing alternate compensation methods. But current net metering beneficiaries tend to be grandfathered for at least a period of time and are still absorbing their new wealth.

Editor's Note: *This article gets at two points we've been making here for a very long time; (1) renewables depend upon unaffordable subsidies that are often hidden, and (2) net metering is incredibly unfair to other ratepayers. State after state is backing away from net metering because it effectively pays producers of solar energy two subsidies that raise the costs for everyone else.*

First, the energy the produced under net metering goes into the system without picking up any of the costs of the grid to deliver it to others, meaning the others have to carry the whole load.

Secondly, the value of energy is based on the need or demand for it. A solar system that produces energy when it's not needed at the same price as when it is needed only raises the price of electricity. Think of it as buying water to sprinkle your lawn. Would you want to pay the water company to sprinkle your lawn when it's already raining? Of course not, and that's what net metering does; it forces others to buy your product when they don't want or need it.

Moreover, by forcing others to buy your product you also make dispatchable energy providers such as natural gas power plants, who are crucial for providing electricity when you can't, that much less economical. You steal the cream of the business and leave others to produce and sell what you can't, which necessarily makes them more expensive. This is why the German Energiewende is such a flop and why New York electricity prices can be expected to increase as far can the eye can see. Michigan knows better.

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PUBLIC HEARING OF NET METERING 7/18/18 MINUTES OF MEETING
GBNPSB, Mangilao

At onset of NEM's work session GM said that the course of this matter will be

1. GM – OVERVIEW OF STATUS OF PUBLIC HEARINGS TO DATE
2. MANAGEMENT'S RECOMMENDATION TO CCU
3. CCU POLICY ON NET METERING CREDITS

MANAGEMENT'S RECOMMENDATION TO CCU
GM Benavente proceeded with his presentation.

COMMENTS
After the presentation, comments were recorded for the record. Synopsis below:

JOE ROSARIO / MRE
Testified in opposition of proposed changes to NEM program
8/11/16 – 1st meeting w/ Black & Veach recommendation; thought it was very aggressive approach that would have negatively impacted an industry that was just starting to gain momentum. At that time 1200 NEM customers made up less than 2.5% of overall GPA customers. Now 2018 customer count 1647 with GPA ratepayer base of 60,010 represents 3.3% of total GPA customer base – less than 1% increase of NEM customers on the grid. Why is such an aggressive change being proposed. Can't be because of loss of revenue – NEM is not "wrecking GPA finances". If there is to be a change why not a negotiated rate that all benefits from – not only the utility but the industry and the consumer. Proposed changes will have serious negative (approved as written) impact to the solar industry and growth of distributed generation – solar DG is good for Guam. It provides good & long term sustainable paying jobs. Changes will discourage homeowners to go solar. Initial intent of Net Metering Law – it enhances power gen system, encourages private investment in renewable resources and stimulation of economic growth. Changes are 100% against the true spirit of the law. All private solar companies encourages use distributed generated solar every day. With 1647 NEM customers $ amount is upwards of $50M of direct investment and trickles down and benefits the economy not to mention savings. PPA saves customers money 7 cents per kWh hour – translates to annually $1000 x 979 PPA customers is $1M savings per year. Recommends that CCU do not approve the recommended changes – its way too soon and too much at stake. Asks PUC to vote it down if CCU moves forward. Second – work with solar industry to benefit utility and the industry – coming together can only result in good.

Chairman – what triggered CCU to look at NEMS is mandate of PUC to review program after reaching 1,000 customers. Just want people to understand that GPA did not take this on – PUC was the one who mandated GPA to look into this program after hitting the 1,000 threshold. Decision is not rushed have been having meetings since 2016 and been very accommodating to give everyone a chance to give input. Input is very important.

Rosario – talked again about grid penetration; only less that 1% and why change now

Chairman – that is where the PUC comes in – they are the ones who are asking for this study. All we are doing is to give PUC GPA's input and it's up to them what to do. We are taking every opportunity to look at the other side and not kill the program. Wants to make sure that there is a balance. Wants to give those who invested in their system to recover their cost. CCU may make changes to what the GM recommends too . We want our records accurate, we haven't put anybody off

GM – why is the benchmark 1% such an important base. If you look at the total MW in system solar represents 20% during the daytime. Response – 10% is the average. In the US the penetration to the system is varied but they have thousands of generation that are absorbing the intermittency allowing for more penetration. It was said that Guam could have 15% penetration and the system would still be stable. NRG was put on and system fell apart. Those that said 15% have since backed off. Benchmarks from other places cannot be used on Guam. 120MW of renewable will be coming online with batteries to stabilize the system ; Phase III navy renewables is going to take all the energy of the daytime and store it and shave the peak because GPA cannot take anymore in the daytime. GPA is moving forward a step at a time to understand the system. GPA is not saying there's no opportunity for Net Metering. Just want to make it known that understanding the GPA system is a better way because it is a real world scenario.

Jeff Voacolo / MRE

Submitted written testimony from solar energy customers; Chairman would like to have submittal electronically; give to GPA and they will do the CCU distribution. Premature for GPA to make any change to net metering program. DG is changing quickly and independent study conducted by 3rd party says that Value of Solar (VOS) study contemplated multiple scenarios and utilization of solar to Guam's grid that most important consideration so to couple solar production with battery storage. NEM customers do not benefit the need for capacity. This year, MRE will be offering solar energy systems with battery storage. In 2019 existing customers will be retrofitted with storage systems. Now NEM customers will help GPA's grid more resilient and will assist GPA with peak loads at night when any excess energy can be deployed. With penetration so low there is no need to change the program now. To say that fixed cost should be recovered via fixed charges – he disagrees. To stay competitive, rates cannot be changes to stay competitive. According to CCU/GPA operations are in fine shape financially – they did not have to reduce work hours or to cut costs that other govguam agency have to do because of their efficient management of resources. With very low NEM penetration right now, there is no need to make any changes at this time. Slide 21 is very concerning to industry and have asked for calculations and data supporting the report. Cannot understand why GPA had segregated difference classes of finance structure while calculating NEM customers. NEM is a policy issue not a finance structure issue. GPA states that with 16636 kWh it will receive 30M kwh hours – 1,858 kwh hours per kwh installed this is impossible on Guam. They ran this report through PBWatts and PBSysReports and it comes closer to 23M 700 kWh hours roughly and actually matches MRE's systems. An average MRE system produces 1425kwh hours per kwh installed. Per report solar energy DG is declining. If so why is there a need to change NEM at this time especially with GPA's forecasted decline of LEAC rates by 2021. Slide 23/34 there's an intent to discredit PPA program or zero down structure by GPA. Does not see relevance – NEM is policy issue and not finance issue. On PPA's MRE can provide rate adjustment – they offer an energy production guarantee over a 20-25 year term. On Slide 35, bullet point #4 - "zero down customers with 2.9 escalators will occur higher costs over the life of their 25 year contract" – MRE believes this is an incorrect statement by the utility and should be taken out of the report. There's been a fallacy among all utilities of a cost shift from solar energy customers to non solar energy customers. Voacolo provided from Lawrence Berkeley National Laboratory disputing this fact – when solar energy is below 10% in any market there is no load shift. MRE suggests to CCU should extend any changes to the NEM program for 3 years and collect data to present their findings at that time. Slide 36 re sunsetting customers at a phased in approach. There was never mention of any sunsetting approach. This would hurt the industry at large. MRE wholehearted disagrees to change NEM at this time.

Chairman
Next CCU meeting is 7/24 and not sure if CCU will take this matter up. Anyone can send further comments to GPA via the Communication Office. This will be posted on the website.

Q&A
A couple of other questions were asked but the speakers were not at the conference table and their questions were inaudible.

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GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • HAGÅTÑA, GUAM U.S.A. 96932-2977

GPA NET Metering - 18 July 2018/CCU 3rd Floor Board Conference Room/5:30p.m.
GPA GM
GPA Management Team
Public
Media
CCU Chairman – joins the meeting

John M. Benavente, P.E., GPA General Manager opened meeting at 5:30p.m.
GM provides information via a PowerPoint Presentation

21¢ - the avoided cost was 11.02¢
Approximately .10¢ kWh

ESS projects coming online will take care of intermittency issues currently impacting the system.
-$0.0018 cost
-signing of contracts 2nd week of August 2018
-approximately 8.25¢/kwh
-this is of a 'utility scale' [meets RPS public law]

120 megawatt New plant
40 megawatt on Navy property
… the addition of renewable and the new power plant will help mitigate LEAC rates:
- There will be a drop in the LEAC
- New plant will burn efficient fuel: ULSD and LNG
- This will hedge against future rising fuel prices

Solar production with battery storage

Public:

"Penetration" – use real world scenario according to GPA's existing system.
Slide 21 – NEM is a policy issue, not a financial structure issue

MRE + 14.25¢ kWh

Slides 23 and 24 – are to 'discredit' the solar industry today

JB: explains
25¢
.9¢ - Base rate
15.4¢ - LEAC

9.4¢ kWh - Base rate pays debt, IPP
All GPA customers pay a portion of this
In short, other customers have to pay more

1500
-1000
500 = GPA credits them the full 500 x .25¢

GPA, non-solar PV customers pay for/subsidize the full credit
All solar PV generated x .9¢ is approximately $3.1M per year

3.1M x X years = goes to NM customers over the years and it will add up

GPA's role is to provide the CCU with all information on the issue
Policy call? – it could be
"avoided cost" is for GPA to present on behalf of all GPA customers

DSM helps everyone

"Balance" – GPA is looking to find a balance
Part of finding the "balance" is being open to the numbers and analyses

GPA to 'phase in' over 5-8 years to recoup the avoided cost
⬇
⬇
Discussion:
An example: in the late 1980s everyone was promoting for GPA to change all wooden poles to concrete poles. Concrete poles were costing 3x as much and to put all underground it would cost 10x as much
-People still said, "Just put it all underground!"

However, then GPA would have to raise its Base rate.
GPA continued with changing out wooden poles to concrete and adding secondary lines w/hybrid system
Approximately 90% of the system is hardened
25% of homes are on/in the hybrid system – key areas with load demand/higher density

Depends on cash flow, but also for GPA to not increase its debt
GPA's business planning is to not impact the rates, if possible.

*Hard copy binder reports provided to GPA.
GPA Communications will receive emails or other public comments or testimony.

/pld

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

30 March 2018

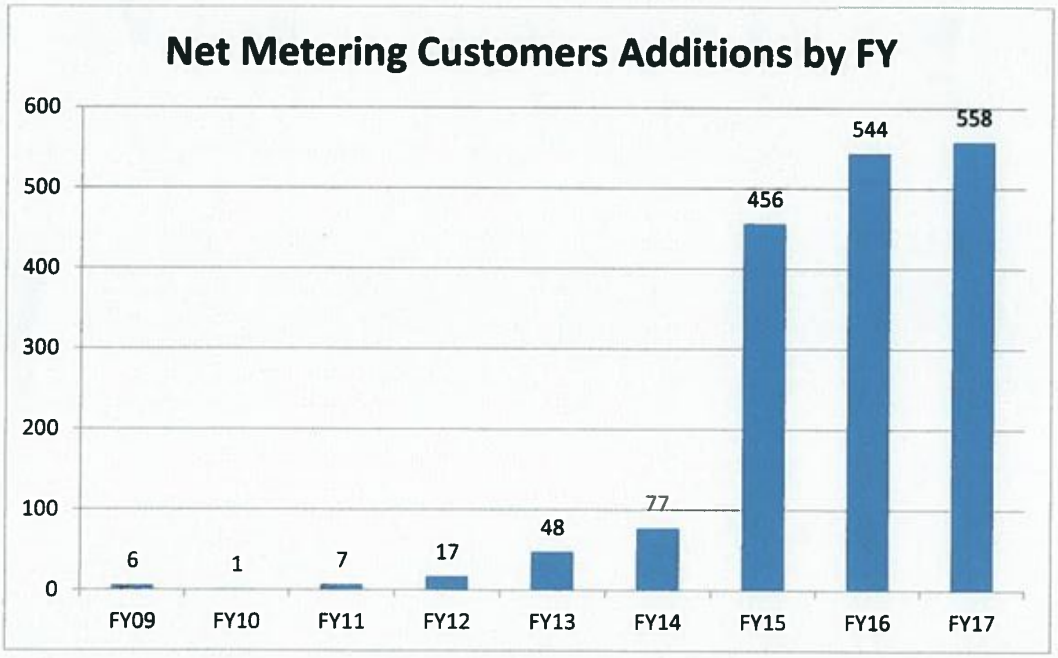
Mr. Frederick J. Horecky
Administrative Law Judge
Public Utilities Commission
643 Chalan San Antonio, Suite 102B
Tamuning, Guam 96913

Subject: Docket 08-10 – Filing of Net Metering Data

Dear Judge Horecky:

Attached herewith is a copy of the Guam Power Authority Net Metering report for the period ending September 30, 2017 as stipulated in the Interim Net Metering Rider.

The total amount of estimated negative impact on revenue from Net Metering for FY17 was $3.29 million annualized representing about 2% of GPA's base rate revenues for the year. The graph below depicts the growth in the number of Net Metering customers in the last nine (9) fiscal years.



There were 558 additional customers added in Fiscal Year 2017 for a total of 1,714 customers to-date. The cumulative negative total base rate revenue impact is already at $6.5 million from the inception of Net Metering.

Although, the Authority intended to file a new structure for NM last year, GPA took time to conduct a series of public hearings in order to receive concerns and issues from Net Metering customers and Solar PV providers. We plan to pursue this matter in the coming months and to file a petition relative to the rate design, customer equity and revenue impact.

Please do not hesitate to contact our office should you require further information regarding this filing. Thank you.

JMB JOHN M. BENAVENTE, P.E.
GENERAL MANAGER

cc: CFO 084 18
Mr. John J.E. Kim, CFO

Net Metering Customers
As of September 30 2017

Year	Count	Accumulated
FY09	6	
FY10	1	7
FY11	7	14
FY12	17	31
FY13	48	79
FY14	77	156
FY15	456	612
FY16	544	1156
FY17	558	1714
Total	**1,714**	

ESTIMATED REVENUE LOSS
As of September 30, 2017

Year	ESTIMATED REVENUE LOSS	Accumulated
FY09	$ 1,656.87	$ 1,656.87
FY10	$ 8,483.27	$ 10,140.14
FY11	$ 18,177.13	$ 28,317.27
FY12	$ 58,545.89	$ 86,863.16
FY13	$ 178,996.09	$ 265,859.25
FY14	$ 410,558.94	$ 676,418.20
FY15	$ 856,921.27	$ 1,533,339.46
FY16	$ 1,831,315.25	$ 3,364,654.71
FY17	$ 3,167,570.13	$ 6,532,224.84
Total	**$ 6,532,224.84**	

Rate Class	Customer Number	Service Agreement Number	Sum of Size (KW)	Sum of Days to FY 17	Estimated Annual Revenue Loss $	FY 17 Estimated Revenue Loss $	Net Credit to Grid (kWh)
	9157510000	9157510206	29.4	364	$ 7,425.07	$ 7,404.73	-
	9157510000	9157510208	20	364	$ 5,051.07	$ 5,037.23	-
	9157510000	9157510207	20	364	$ 5,051.07	$ 5,037.23	-
	9157510000	9157510209	20	364	$ 5,051.07	$ 5,037.23	-
	9503154359	9503154228	60	219	$ 15,153.20	$ 9,091.92	-
ESGS-S	5357510000	5357510480	2	364	$ 555.97	$ 554.45	-
(Rate Schedule S)	5357510000	5357510475	2	364	$ 555.97	$ 554.45	
	5357510000	5357510474	6	364	$ 1,667.91	$ 1,663.34	(401.71)
	6995000000	6995000430	16	364	$ 4,447.75	$ 4,435.57	-
Grand Totals	**1714**				**$ 3,287,729.07**	**$ 3,167,570.13**	**(971,870.01)**

Total Accumulated Revenue Loss From Inception	**$ 6,532,224.84**

164,649,406.00

2.00%

GPA NET METERING CUSTOMERS (NMC)
AS OF SEPTEMBER 30, 2017

Rate Class	Customer Number	Service Agreement Number	Sum of Size (KW)	Sum of Days to FY 17	Estimated Annual Revenue Loss $	FY 17 Estimated Revenue Loss $	Net Credit to Grid (kWh)
EGEND-J	6103010000	6103010930	19.56	364	$ 4,376.28	$ 4,364.29	-
(Rate Schedule J)	5808510000	5808510737	45	364	$ 10,068.12	$ 10,040.54	-
	4270010000	4270010010	84	364	$ 18,793.83	$ 18,742.34	-
	433210000	0433210663	22	364	$ 4,922.19	$ 4,908.71	-
	8720000000	8720000575	58.5	364	$ 13,088.56	$ 13,052.70	(17,322.88)
	1321300000	1321300640	75	364	$ 16,780.21	$ 16,734.23	(15,421.20)
	6624100000	6624100235	48	364	$ 10,739.33	$ 10,709.91	(4,367.82)
	2004600000	2004600112	55.5	364	$ 12,417.35	$ 12,383.33	(816.16)
	4105000000	4105000098	34.4	364	$ 7,696.52	$ 7,675.43	(204.56)
	8180000000	8180000874	100	364	$ 22,373.61	$ 22,312.31	(74.04)
	4717100000	4717100850	3	364	$ 671.21	$ 669.37	-
	7909500000	7909500964	5.75	364	$ 1,286.48	$ 1,282.96	-
	9900510000	9900510974	10	364	$ 2,237.36	$ 2,231.23	-
	7650410000	7650410444	18	364	$ 4,027.25	$ 4,016.22	-
	6008510000	6008510549	19	364	$ 4,250.99	$ 4,239.34	-
	4187410000	4187410649	77	364	$ 17,227.68	$ 17,180.48	-
	4031400000	4031400472	20	364	$ 4,474.72	$ 4,462.46	-
	4960000000	4960000731	21	364	$ 4,698.46	$ 4,685.59	-
	2117200000	2117200519	25.15	364	$ 5,626.96	$ 5,611.55	-
	4190000000	4190000986	50	364	$ 11,186.80	$ 11,156.16	-
	452600000	0452600785	53.55	364	$ 11,981.07	$ 11,948.24	-
	6982500000	6982500001	60	364	$ 13,424.16	$ 13,387.39	-
	2347110000	2347110964	75	364	$ 16,780.21	$ 16,734.23	-
	5238100000	5238100291	100	364	$ 22,373.61	$ 22,312.31	-
	1853000000	1853000134	100	364	$ 22,373.61	$ 22,312.31	-
	5961000000	5961000288	20	364	$ 4,474.72	$ 4,462.46	-
	9717210000	9717210719	25	364	$ 5,593.40	$ 5,578.08	-
	9920400000	9920400369	100	364	$ 22,373.61	$ 22,312.31	-
	3423500000	3423500788	100	364	$ 22,373.61	$ 22,312.31	-
	5353310000	5353310193	100	364	$ 22,373.61	$ 22,312.31	-
	9903000000	9903000135	11.4	364	$ 2,550.59	$ 2,543.60	-
	3137100000	3137100200	30	364	$ 6,712.08	$ 6,693.69	-
	2315200000	2315200806	49.7	364	$ 11,119.68	$ 11,089.22	-
	2560310000	2560310529	20	364	$ 4,474.72	$ 4,462.46	-
	3560310000	3560310530	10	364	$ 2,237.36	$ 2,231.23	-
	354997358	0354997362	60	364	$ 13,424.16	$ 13,387.39	-
	8901870472	8901870860	27	303	$ 6,040.87	$ 5,014.75	-
	9925218337	9925218882	23	287	$ 5,145.93	$ 4,046.25	-
EGEN-G	9860210000	9860210280	14.62	364	$ 3,704.37	$ 3,694.22	-
(Rate Schedule G)	7103010000	7103010931	4.73	364	$ 1,198.47	$ 1,195.19	(325.84)
	8103010000	8103010932	6.02	368	$ 1,525.33	$ 1,537.86	(77.17)
	7750300000	7750300210	50	364	$ 12,668.83	$ 12,634.12	(12,513.42)
	30400000	0030400096	14	364	$ 3,547.27	$ 3,537.55	(11,438.79)
	4685200000	4685200387	15	364	$ 3,800.65	$ 3,790.24	(5,699.28)
	2585100000	2585100074	21	364	$ 5,320.91	$ 5,306.33	(5,469.41)
	3458700000	3458700138	25	364	$ 6,334.42	$ 6,317.06	(4,615.08)
	906210000	0906210853	20	364	$ 5,067.53	$ 5,053.65	(2,256.25)
	5554300000	5554300263	8.3	364	$ 2,103.03	$ 2,097.26	(1,837.44)
	1975100000	1975100116	8.75	364	$ 2,217.05	$ 2,210.97	(1,102.39)
	4812110000	4812110018	12	364	$ 3,040.52	$ 3,032.19	(520.75)
	9319210000	9319210024	6	364	$ 1,520.26	$ 1,516.09	(402.58)
	6766100000	6766100668	25	364	$ 6,334.42	$ 6,317.06	(271.58)
	2462010000	2462010963	1	364	$ 253.38	$ 252.68	(69.25)
	1676100000	1676100964	5	364	$ 1,266.88	$ 1,263.41	(59.09)

Rate Class	Customer Number	Service Agreement Number	Sum of Size (KW)	Sum of Days to FY 17	Estimated Annual Revenue Loss $	FY 17 Estimated Revenue Loss $	Net Credit to Grid (kWh)
	3694000000	3694000776	11.4	364	$ 2,888.49	$ 2,880.58	(7.42)
	4697600000	4697600097	1	364	$ 253.38	$ 252.68	-
	3997600000	3997600131	1	364	$ 253.38	$ 252.68	-
	7701000000	7701000173	2.5	364	$ 633.44	$ 631.71	-
	6385310000	6385310862	5	364	$ 1,266.88	$ 1,263.41	-
	1808300000	1808300995	8.92	364	$ 2,260.12	$ 2,253.93	-
	9354300000	9354300245	9	364	$ 2,280.39	$ 2,274.14	-
	4692300000	4692300191	10	364	$ 2,533.77	$ 2,526.82	-
	7386310000	7386310943	10.75	364	$ 2,723.80	$ 2,716.34	-
	7694000000	7694000177	11.45	364	$ 2,901.16	$ 2,893.21	-
	5400500000	5400500773	14.4	364	$ 3,648.62	$ 3,638.63	-
	4494200000	4494200409	14.57	364	$ 3,691.70	$ 3,681.58	-
	8520010000	8520010114	15	364	$ 3,800.65	$ 3,790.24	-
	7763400000	7763400676	19	364	$ 4,814.16	$ 4,800.97	-
	9060410000	9060410497	23.6	364	$ 5,979.69	$ 5,963.31	-
	7932500000	7932500839	25	364	$ 6,334.42	$ 6,317.06	-
	6391000000	6391000553	36	364	$ 9,121.56	$ 9,096.57	-
	2384410000	2384410889	80	364	$ 20,270.13	$ 20,214.60	-
	2513800000	2513800423	1	364	$ 253.38	$ 252.68	-
	1240210000	1240210793	42.5	363	$ 10,768.51	$ 10,709.50	-
	6251100000	6251100079	3.6	335	$ 912.16	$ 837.18	-
ELGS-L (Rate Schedule L)	5357510000	5357510478	22.8	364	$ 5,349.23	$ 5,334.58	-
ELPS-P	7727100000	7727100163	82	364	$ 15,965.67	$ 15,921.92	-
(Rate Schedule P)	3327100000	3327100913	98.7	364	$ 19,217.21	$ 19,164.56	-
	7942200000	7942200411	60	364	$ 11,682.19	$ 11,650.19	-
ERES-R	9544000000	9544000197	4.3	364	$ 771.02	$ 768.90	(199.14)
(Rate Schedule R)	1724500000	1724500979	12.9	364	$ 2,313.05	$ 2,306.71	-
	2188321640	2188321528	23	364	$ 4,124.04	$ 4,112.74	(32.61)
	4120200000	4120200177	9.46	364	$ 1,696.23	$ 1,691.59	-
	4584210000	4584210090	11	364	$ 1,972.37	$ 1,966.96	(2,390.28)
	4959000000	4959000554	6	364	$ 1,075.84	$ 1,072.89	-
	8440100000	8440100480	6.23	364	$ 1,117.08	$ 1,114.02	(89.10)
	9176600000	9176600788	11.39	364	$ 2,042.29	$ 2,036.70	(1.53)
	6063000000	6063000163	10.75	364	$ 1,927.54	$ 1,922.26	(6,808.03)
	7308300000	7308300941	9.89	364	$ 1,773.34	$ 1,768.48	-
	8054500000	8054500451	10	364	$ 1,793.06	$ 1,788.15	-
	3941100000	3941100041	4.08	364	$ 731.57	$ 729.56	-
	1874100000	1874100830	14.62	364	$ 2,621.45	$ 2,614.27	-
	6260100000	6260100291	8.2	364	$ 1,470.31	$ 1,466.28	(12,309.46)
	7335410000	7335410266	4.515	364	$ 809.57	$ 807.35	(299.28)
	5392700000	5392700381	6.4	364	$ 1,147.56	$ 1,144.41	-
	9820100000	9820100291	6.45	364	$ 1,156.52	$ 1,153.35	-
	7870410000	7870410935	7	364	$ 1,255.14	$ 1,251.70	-
	1847522894	1847522226	13.11	364	$ 2,350.70	$ 2,344.26	(13,435.00)
	4938100000	4938100368	14.62	364	$ 2,621.45	$ 2,614.27	(221.81)
	3216010000	3216010036	5.25	364	$ 941.36	$ 938.78	(54.99)
	6372100000	6372100031	10.53	364	$ 1,888.09	$ 1,882.92	-
	5550000000	5550000911	11.18	364	$ 2,004.64	$ 1,999.15	(2,454.85)
	5040000000	5040000735	9.32	364	$ 1,671.13	$ 1,666.55	(2,314.71)
	6887500000	6887500277	17.2	364	$ 3,084.06	$ 3,075.61	(1,930.17)
	5539100000	5539100498	7.74	364	$ 1,387.83	$ 1,384.03	(1,203.88)
	6360000000	6360000668	8.6	364	$ 1,542.03	$ 1,537.81	(688.00)
	7756210000	7756210434	10	364	$ 1,793.06	$ 1,788.15	(396.18)
	6660000000	6660000699	7.31	364	$ 1,310.73	$ 1,307.14	(109.64)
	9335410000	9335410269	4.94	364	$ 885.77	$ 883.34	(61.12)
	3350000000	3350000886	3	364	$ 537.92	$ 536.44	-
	3828300000	3828300868	4.73	364	$ 848.12	$ 845.79	-

Rate Class	Customer Number	Service Agreement Number	Sum of Size (KW)	Sum of Days to FY 17	Estimated Annual Revenue Loss $	FY 17 Estimated Revenue Loss $	Net Credit to Grid (kWh)
	7023210000	7023210323	6.45	364	$ 1,156.52	$ 1,153.35	-
	8140000000	8140000751	7.74	364	$ 1,387.83	$ 1,384.03	-
	5856410000	5856410347	8.6	364	$ 1,542.03	$ 1,537.81	-
	5560000000	5560000621	8.81	364	$ 1,579.69	$ 1,575.36	-
	7010500000	7010500849	9.89	364	$ 1,773.34	$ 1,768.48	-
	8813900000	8813900735	10	364	$ 1,793.06	$ 1,788.15	-
	3140000000	3140000744	8.81	364	$ 1,579.69	$ 1,575.36	-
	3021000000	3021000725	10.75	364	$ 1,927.54	$ 1,922.26	-
	4602400000	4602400310	11.61	364	$ 2,081.74	$ 2,076.04	-
	7842700000	7842700512	8.5	364	$ 1,524.10	$ 1,519.92	-
	6116500000	6116500801	8.81	364	$ 1,579.69	$ 1,575.36	-
	747400000	0747400554	10.32	364	$ 1,850.44	$ 1,845.37	-
	3335410000	3335410260	5.37	364	$ 962.87	$ 960.23	-
	5899200000	5899200765	13.76	364	$ 2,467.25	$ 2,460.49	(9,323.91)
	9001200000	9001200128	6.25	364	$ 1,120.66	$ 1,117.59	(971.45)
	9894310000	9894310841	7.31	364	$ 1,310.73	$ 1,307.14	-
	4466400000	4466400829	8.3	364	$ 1,488.24	$ 1,484.16	-
	7504900000	7504900717	14	364	$ 2,510.28	$ 2,503.41	-
	283100000	0283100721	10.85	364	$ 1,945.47	$ 1,940.14	-
	2335310000	2335310649	15.69	364	$ 2,813.31	$ 2,805.60	-
	1823010000	1823010417	15	364	$ 2,689.59	$ 2,682.22	-
	2067200000	2067200656	6	364	$ 1,075.84	$ 1,072.89	-
	7103000000	7103000043	11.68	364	$ 2,094.29	$ 2,088.56	-
	5283300000	5283300121	7.74	364	$ 1,387.83	$ 1,384.03	-
	4362224516	4362224257	6.45	364	$ 1,156.52	$ 1,153.35	(65,620.39)
	7793510000	7793510314	8.6	364	$ 1,542.03	$ 1,537.81	(1,156.78)
	7097400000	7097400623	2	364	$ 358.61	$ 357.63	-
	6252500000	6252500179	8.17	364	$ 1,464.93	$ 1,460.92	-
	4966444129	4966444733	10.1	364	$ 1,810.99	$ 1,806.03	-
	8312500000	8312500362	14.62	364	$ 2,621.45	$ 2,614.27	-
	2920800000	2920800911	5	364	$ 896.53	$ 894.07	-
	8713000000	8713000226	9.46	364	$ 1,696.23	$ 1,691.59	(7,710.15)
	7723000000	7723000350	6.67	364	$ 1,195.97	$ 1,192.69	(1,784.39)
	7882000000	7882000582	6.66	364	$ 1,194.18	$ 1,190.91	(1,145.26)
	458210000	0458210732	8.6	364	$ 1,542.03	$ 1,537.81	(919.16)
	518210000	0518210547	7.95	364	$ 1,425.48	$ 1,421.58	(467.78)
	5562945100	5562945031	7.95	364	$ 1,425.48	$ 1,421.58	-
	2386200000	2386200582	7.31	364	$ 1,310.73	$ 1,307.14	-
	5113000000	5113000152	6.23	364	$ 1,117.08	$ 1,114.02	-
	4523000000	4523000320	10.53	364	$ 1,888.09	$ 1,882.92	-
	1574000000	1574000540	10.96	364	$ 1,965.19	$ 1,959.81	-
	7841410000	7841410675	14.62	364	$ 2,621.45	$ 2,614.27	(5,467.30)
	4424000000	4424000947	8.6	364	$ 1,542.03	$ 1,537.81	(2,517.47)
	2721200000	2721200626	12.04	364	$ 2,158.84	$ 2,152.93	(2,098.91)
	4447110000	4447110977	6.02	364	$ 1,079.42	$ 1,076.46	(1,976.72)
	4632010000	4632010477	10.1	364	$ 1,810.99	$ 1,806.03	(1,810.11)
	3925200000	3925200174	5.37	364	$ 962.87	$ 960.23	(1,675.69)
	7024000000	7024000900	7.52	364	$ 1,348.38	$ 1,344.69	(1,661.84)
	2854000000	2854000339	5.8	364	$ 1,039.97	$ 1,037.13	(1,506.78)
	824300000	0824300765	8.17	364	$ 1,464.93	$ 1,460.92	(1,489.36)
	3744000000	3744000213	10.97	364	$ 1,966.99	$ 1,961.60	(1,078.92)
	4040600000	4040600741	9.67	364	$ 1,733.89	$ 1,729.14	(1,013.67)
	9593000000	9593000595	7	364	$ 1,255.14	$ 1,251.70	(864.89)
	3661200000	3661200522	8.17	364	$ 1,464.93	$ 1,460.92	(833.31)
	3263000000	3263000182	7.31	364	$ 1,310.73	$ 1,307.14	(800.25)
	1154000000	1154000257	14.62	364	$ 2,621.45	$ 2,614.27	(499.13)
	2474000000	2474000530	7.09	364	$ 1,271.28	$ 1,267.80	(484.68)
	1105000000	1105000840	6.02	364	$ 1,079.42	$ 1,076.46	(422.95)

Rate Class	Customer Number	Service Agreement Number	Sum of Size (KW)	Sum of Days to FY 17	Estimated Annual Revenue Loss $	FY 17 Estimated Revenue Loss $	Net Credit to Grid (kWh)
	2524000000	2524000956	11.82	364	$ 2,119.40	$ 2,113.59	(403.47)
	6791510000	6791510200	4.94	364	$ 885.77	$ 883.34	(383.36)
	4844000000	4844000226	11.4	364	$ 2,044.09	$ 2,038.49	(218.19)
	6060500000	6060500005	10	364	$ 1,793.06	$ 1,788.15	(160.33)
	7235300000	7235300081	3.65	364	$ 654.47	$ 652.67	(111.51)
	3644000000	3644000202	9.46	364	$ 1,696.23	$ 1,691.59	(45.62)
	5984000000	5984000698	3.44	364	$ 616.81	$ 615.12	-
	4985310000	4985310129	4.51	364	$ 808.67	$ 806.45	-
	6043000000	6043000059	4.94	364	$ 885.77	$ 883.34	-
	8945900000	8945900065	5.16	364	$ 925.22	$ 922.68	-
	7634251318	7634251492	6.23	364	$ 1,117.08	$ 1,114.02	-
	3236310000	3236310061	6.45	364	$ 1,156.52	$ 1,153.35	-
	2715000000	2715000994	11	364	$ 1,972.37	$ 1,966.96	-
	9973410000	9973410524	7.31	364	$ 1,310.73	$ 1,307.14	-
	5484000000	5484000642	7.52	364	$ 1,348.38	$ 1,344.69	-
	3915000000	3915000021	7.52	364	$ 1,348.38	$ 1,344.69	-
	3874210000	3874210819	8.6	364	$ 1,542.03	$ 1,537.81	-
	7074200000	7074200944	9.67	364	$ 1,733.89	$ 1,729.14	-
	7271500000	7271500303	11.18	364	$ 2,004.64	$ 1,999.15	-
	7837310000	7837310219	12.04	364	$ 2,158.84	$ 2,152.93	-
	6845900000	6845900053	12.25	364	$ 2,196.50	$ 2,190.48	-
	9823110000	9823110369	12.68	364	$ 2,273.60	$ 2,267.37	-
	605110000	0605110535	6.45	364	$ 1,156.52	$ 1,153.35	-
	3763000000	3763000239	11	364	$ 1,972.37	$ 1,966.96	-
	3022500000	3022500433	12.68	364	$ 2,273.60	$ 2,267.37	-
	498984712	0498984286	9.03	364	$ 1,619.13	$ 1,614.70	-
	654000000	0654000312	9.89	364	$ 1,773.34	$ 1,768.48	-
	2481310000	2481310162	14.19	364	$ 2,544.35	$ 2,537.38	-
	973000000	0973000382	9.67	364	$ 1,733.89	$ 1,729.14	(226.25)
	243300000	0243300285	12.47	364	$ 2,235.94	$ 2,229.82	-
	7470020072	7470020807	11.82	364	$ 2,119.40	$ 2,113.59	(824.52)
	9854000000	9854000347	12.47	364	$ 2,235.94	$ 2,229.82	-
	7800200000	7800200042	17.63	364	$ 3,161.16	$ 3,152.50	(2,912.99)
	888300000	0888300328	10.1	364	$ 1,810.99	$ 1,806.03	(2,180.97)
	7856200000	7856200398	5.8	364	$ 1,039.97	$ 1,037.13	(102.60)
	6455000000	6455000428	6.23	364	$ 1,117.08	$ 1,114.02	-
	3610800000	3610800579	7.09	364	$ 1,271.28	$ 1,267.80	-
	3634350304	3634350638	7.95	364	$ 1,425.48	$ 1,421.58	-
	8625000000	8625000109	8.6	364	$ 1,542.03	$ 1,537.81	-
	8505800000	8505800685	10.1	364	$ 1,810.99	$ 1,806.03	-
	2206600000	2206600265	7.52	364	$ 1,348.38	$ 1,344.69	-
	1335841942	1335841337	8.17	364	$ 1,464.93	$ 1,460.92	-
	2347700000	2347700077	10.75	364	$ 1,927.54	$ 1,922.26	-
	9243010000	9243010774	6.88	364	$ 1,233.62	$ 1,230.24	(638.01)
	4131310177	4131310359	12.68	364	$ 2,273.60	$ 2,267.37	(1,026.85)
	7536000000	7536000314	13.76	364	$ 2,467.25	$ 2,460.49	(780.10)
	8625510000	8625510809	5.37	364	$ 962.87	$ 960.23	(344.99)
	9027600000	9027600919	9.89	364	$ 1,773.34	$ 1,768.48	(64.24)
	5403410000	5403410504	9.67	364	$ 1,733.89	$ 1,729.14	(20.15)
	1795628960	1795628071	1.75	364	$ 313.79	$ 312.93	-
	3536000000	3536000310	6.45	364	$ 1,156.52	$ 1,153.35	-
	6206000000	6206000462	10.1	364	$ 1,810.99	$ 1,806.03	-
	8595000000	8595000387	12.9	364	$ 2,313.05	$ 2,306.71	-
	581300000	0581300922	4.3	364	$ 771.02	$ 768.90	-
	1357410000	1357410817	5.16	364	$ 925.22	$ 922.68	-
	2198200000	2198200404	7.74	364	$ 1,387.83	$ 1,384.03	-
	7154662758	7154662706	5.37	364	$ 962.87	$ 960.23	(691.85)
	7157000000	7157000775	15.69	364	$ 2,813.31	$ 2,805.60	(8,360.93)

Rate Class	Customer Number	Service Agreement Number	Sum of Size (KW)	Sum of Days to FY 17	Estimated Annual Revenue Loss $	FY 17 Estimated Revenue Loss $	Net Credit to Grid (kWh)
	2212400000	2212400376	15.05	364	$ 2,698.55	$ 2,691.16	(1,774.07)
	3945510000	3945510808	3.66	364	$ 656.26	$ 654.46	(633.41)
	4008500000	4008500593	4.73	364	$ 848.12	$ 845.79	-
	7007000000	7007000110	5.35	364	$ 959.29	$ 956.66	-
	3997100000	3997100512	5.37	364	$ 962.87	$ 960.23	-
	5830310000	5830310010	6.88	364	$ 1,233.62	$ 1,230.24	-
	7698100000	7698100659	7.09	364	$ 1,271.28	$ 1,267.80	-
	4728100000	4728100035	7.31	364	$ 1,310.73	$ 1,307.14	-
	9599900000	9599900415	7.5	364	$ 1,344.79	$ 1,341.11	-
	7196000000	7196000993	9.89	364	$ 1,773.34	$ 1,768.48	-
	309010000	0309010803	6.88	364	$ 1,233.62	$ 1,230.24	-
	2126400000	2126400773	7.09	364	$ 1,271.28	$ 1,267.80	-
	5356000000	5356000526	13.3	364	$ 2,384.77	$ 2,378.24	-
	3025500000	3025500843	16.4	364	$ 2,940.62	$ 2,932.56	-
	9565800000	9565800891	8.6	364	$ 1,542.03	$ 1,537.81	-
	8244310000	8244310567	5.37	364	$ 962.87	$ 960.23	-
	817600000	0817600886	8.6	364	$ 1,542.03	$ 1,537.81	(1,289.16)
	1758000000	1758000317	5.59	364	$ 1,002.32	$ 999.57	(976.41)
	8293010000	8293010048	17.84	364	$ 3,198.82	$ 3,190.05	(953.64)
	5321110000	5321110076	28.38	364	$ 5,088.70	$ 5,074.76	(922.37)
	5100110000	5100110802	4.73	364	$ 848.12	$ 845.79	(571.79)
	2077000000	2077000726	6.02	364	$ 1,079.42	$ 1,076.46	(378.29)
	2726200000	2726200405	10	364	$ 1,793.06	$ 1,788.15	(94.37)
	9931010000	9931010288	4.73	364	$ 848.12	$ 845.79	-
	2557300000	2557300816	4.73	364	$ 848.12	$ 845.79	-
	6380770473	6380770629	5.8	364	$ 1,039.97	$ 1,037.13	-
	6876110000	6876110553	6.67	364	$ 1,195.97	$ 1,192.69	-
	7367000000	7367000647	6.88	364	$ 1,233.62	$ 1,230.24	-
	3516400000	3516400708	7.09	364	$ 1,271.28	$ 1,267.80	-
	7967000000	7967000721	7.31	364	$ 1,310.73	$ 1,307.14	-
	3529100000	3529100381	8.6	364	$ 1,542.03	$ 1,537.81	-
	7638000000	7638000048	9.03	364	$ 1,619.13	$ 1,614.70	-
	4090200000	4090200806	9.89	364	$ 1,773.34	$ 1,768.48	-
	8649100000	8649100824	10.53	364	$ 1,888.09	$ 1,882.92	-
	5888100000	5888100565	10.75	364	$ 1,927.54	$ 1,922.26	-
	7178000000	7178000493	14	364	$ 2,510.28	$ 2,503.41	-
	3183900000	3183900964	10.53	364	$ 1,888.09	$ 1,882.92	-
	1997000000	1997000116	11	364	$ 1,972.37	$ 1,966.96	-
	6687000000	6687000947	16.77	364	$ 3,006.96	$ 2,998.72	-
	6239210000	6239210623	9.67	364	$ 1,733.89	$ 1,729.14	-
	6063200000	6063200394	7.74	364	$ 1,387.83	$ 1,384.03	-
	6296300000	6296300607	9	364	$ 1,613.75	$ 1,609.33	-
	5476224825	5476224138	7.74	364	$ 1,387.83	$ 1,384.03	-
	5421010000	5421010940	19.89	364	$ 3,566.39	$ 3,556.62	-
	1149400000	1149400281	8.81	364	$ 1,579.69	$ 1,575.36	-
	2491200000	2491200219	8.17	364	$ 1,464.93	$ 1,460.92	-
	290700000	0290700626	9.25	364	$ 1,658.58	$ 1,654.04	-
	1589100000	1589100659	11.18	364	$ 2,004.64	$ 1,999.15	-
	499300000	0499300576	6.45	364	$ 1,156.52	$ 1,153.35	(2,216.12)
	6461100000	6461100658	9.89	364	$ 1,773.34	$ 1,768.48	(1,243.29)
	1874110000	1874110842	49.7	364	$ 8,911.50	$ 8,887.09	(1,010.46)
	1744200000	1744200301	6.88	364	$ 1,233.62	$ 1,230.24	(563.05)
	7136600000	7136600980	7.31	364	$ 1,310.73	$ 1,307.14	(534.81)
	4610100000	4610100153	11.39	364	$ 2,042.29	$ 2,036.70	(526.31)
	6132500000	6132500754	7.6	364	$ 1,362.72	$ 1,358.99	(174.14)
	760510000	0760510735	9.24	364	$ 1,656.79	$ 1,652.25	(170.88)
	7483200000	7483200040	9.24	364	$ 1,656.79	$ 1,652.25	(158.31)
	8295200000	8295200656	8.6	364	$ 1,542.03	$ 1,537.81	(99.77)

Rate Class	Customer Number	Service Agreement Number	Sum of Size (KW)	Sum of Days to FY 17	Estimated Annual Revenue Loss $	FY 17 Estimated Revenue Loss $	Net Credit to Grid (kWh)
	4000100000	4000100948	1.2	364	$ 215.17	$ 214.58	-
	5989000000	5989000921	4.08	364	$ 731.57	$ 729.56	-
	8379000000	8379000728	4.3	364	$ 771.02	$ 768.90	-
	2159706313	2159706626	5.16	364	$ 925.22	$ 922.68	-
	4994500000	4994500405	5.8	364	$ 1,039.97	$ 1,037.13	-
	6210100000	6210100104	6.45	364	$ 1,156.52	$ 1,153.35	-
	7094600000	7094600084	6.88	364	$ 1,233.62	$ 1,230.24	-
	6182510000	6182510174	7	364	$ 1,255.14	$ 1,251.70	-
	2947100000	2947100303	7.09	364	$ 1,271.28	$ 1,267.80	-
	8401100000	8401100453	7.52	364	$ 1,348.38	$ 1,344.69	-
	6902900000	6902900129	8.17	364	$ 1,464.93	$ 1,460.92	-
	9431100000	9431100850	8.17	364	$ 1,464.93	$ 1,460.92	-
	8930100000	8930100419	11.82	364	$ 2,119.40	$ 2,113.59	-
	9109000000	9109000868	12	364	$ 2,151.67	$ 2,145.78	-
	810100000	0810100171	6	364	$ 1,075.84	$ 1,072.89	-
	8764600000	8764600650	6.88	364	$ 1,233.62	$ 1,230.24	-
	666300000	0666300922	10.75	364	$ 1,927.54	$ 1,922.26	-
	82510000	0082510151	5.59	364	$ 1,002.32	$ 999.57	(622.56)
	288600000	0288600012	4.51	364	$ 808.67	$ 806.45	(131.69)
	9494200000	9494200414	5.37	364	$ 962.87	$ 960.23	-
	7251700000	7251700871	10.75	364	$ 1,927.54	$ 1,922.26	(1,116.83)
	1980600000	1980600214	6.23	364	$ 1,117.08	$ 1,114.02	(566.81)
	3061411209	3061411721	12	364	$ 2,151.67	$ 2,145.78	(361.50)
	3000400000	3000400651	4.08	364	$ 731.57	$ 729.56	(21.30)
	1508600000	1508600381	1.5	364	$ 268.96	$ 268.22	-
	9384200000	9384200093	4.08	364	$ 731.57	$ 729.56	-
	3668400000	3668400155	4.73	364	$ 848.12	$ 845.79	-
	9123110000	9123110292	4.73	364	$ 848.12	$ 845.79	-
	1950100000	1950100451	4.94	364	$ 885.77	$ 883.34	-
	3370200000	3370200405	7.52	364	$ 1,348.38	$ 1,344.69	-
	3751510000	3751510179	9.24	364	$ 1,656.79	$ 1,652.25	-
	9160100000	9160100487	10.75	364	$ 1,927.54	$ 1,922.26	-
	9770100000	9770100702	10.75	364	$ 1,927.54	$ 1,922.26	-
	7255400000	7255400215	11.39	364	$ 2,042.29	$ 2,036.70	-
	7611100000	7611100609	11.39	364	$ 2,042.29	$ 2,036.70	-
	6281400000	6281400662	12	364	$ 2,151.67	$ 2,145.78	-
	151100000	0151100062	5.16	364	$ 925.22	$ 922.68	-
	2092510000	2092510520	7.5	364	$ 1,344.79	$ 1,341.11	-
	3192600000	3192600750	9.24	364	$ 1,656.79	$ 1,652.25	-
	3900200000	3900200048	12.47	364	$ 2,235.94	$ 2,229.82	-
	5675700000	5675700570	14.62	364	$ 2,621.45	$ 2,614.27	-
	6469414557	6469414014	7	364	$ 1,255.14	$ 1,251.70	-
	5032100000	5032100497	11.18	364	$ 2,004.64	$ 1,999.15	(10,504.53)
	5792100000	5792100331	9.03	364	$ 1,619.13	$ 1,614.70	(1,626.92)
	6881116550	6881116100	6.66	364	$ 1,194.18	$ 1,190.91	(1,309.24)
	8764400000	8764400896	11.18	364	$ 2,004.64	$ 1,999.15	(1,113.91)
	6582100000	6582100183	16.4	364	$ 2,940.62	$ 2,932.56	(883.32)
	2953900000	2953900544	6.88	364	$ 1,233.62	$ 1,230.24	(44.51)
	2015510000	2015510349	3	364	$ 537.92	$ 536.44	-
	5991100000	5991100100	4.73	364	$ 848.12	$ 845.79	-
	7378010000	7378010879	6.02	364	$ 1,079.42	$ 1,076.46	-
	5006900000	5006900995	6.45	364	$ 1,156.52	$ 1,153.35	-
	5942100000	5942100732	6.45	364	$ 1,156.52	$ 1,153.35	-
	9062100000	9062100878	8	364	$ 1,434.45	$ 1,430.52	-
	5352100000	5352100782	8	364	$ 1,434.45	$ 1,430.52	-
	9905510000	9905510345	8	364	$ 1,434.45	$ 1,430.52	-
	6092100000	6092100248	9.03	364	$ 1,619.13	$ 1,614.70	-
	8888210000	8888210862	9.24	364	$ 1,656.79	$ 1,652.25	-

Rate Class	Customer Number	Service Agreement Number	Sum of Size (KW)	Sum of Days to FY 17	Estimated Annual Revenue Loss $	FY 17 Estimated Revenue Loss $	Net Credit to Grid (kWh)
	6788110000	6788110259	11.39	364	$ 2,042.29	$ 2,036.70	-
	5594400000	5594400492	11.39	364	$ 2,042.29	$ 2,036.70	-
	6742100000	6742100709	13.97	364	$ 2,504.90	$ 2,498.04	-
	8062100000	8062100877	20	364	$ 3,586.12	$ 3,576.29	-
	9548288262	9548288455	24.5	364	$ 4,393.00	$ 4,380.96	-
	1112100000	1112100248	9.24	364	$ 1,656.79	$ 1,652.25	-
	1710200000	1710200132	8.6	364	$ 1,542.03	$ 1,537.81	-
	2941900000	2941900901	10	364	$ 1,793.06	$ 1,788.15	-
	3417200000	3417200557	11.82	364	$ 2,119.40	$ 2,113.59	-
	6100073303	6100073932	13.54	364	$ 2,427.80	$ 2,421.15	-
	5036310000	5036310016	12.9	364	$ 2,313.05	$ 2,306.71	-
	7559800000	7559800007	5.16	364	$ 925.22	$ 922.68	-
	5500000	0005500412	6.45	364	$ 1,156.52	$ 1,153.35	-
	524400000	0524400919	8.81	364	$ 1,579.69	$ 1,575.36	-
	1892100000	1892100339	13.51	364	$ 2,422.42	$ 2,415.79	-
	362100000	0362100902	12.68	364	$ 2,273.60	$ 2,267.37	(1,327.86)
	3662200000	3662200305	13.76	364	$ 2,467.25	$ 2,460.49	(4,961.49)
	5514200000	5514200759	11.18	364	$ 2,004.64	$ 1,999.15	(2,665.36)
	9853100000	9853100441	13.76	364	$ 2,467.25	$ 2,460.49	(515.31)
	4051510000	4051510079	8.81	364	$ 1,579.69	$ 1,575.36	(242.75)
	7055300000	7055300482	10.53	364	$ 1,888.09	$ 1,882.92	(147.01)
	4632310000	4632310390	6.66	364	$ 1,194.18	$ 1,190.91	-
	3159100000	3159100873	7.31	364	$ 1,310.73	$ 1,307.14	-
	8563100000	8563100528	7.31	364	$ 1,310.73	$ 1,307.14	-
	9439100000	9439100492	7.74	364	$ 1,387.83	$ 1,384.03	-
	7123100000	7123100418	8.17	364	$ 1,464.93	$ 1,460.92	-
	6621110000	6621110304	9.67	364	$ 1,733.89	$ 1,729.14	-
	9933100000	9933100225	9.89	364	$ 1,773.34	$ 1,768.48	-
	6777300000	6777300461	13.11	364	$ 2,350.70	$ 2,344.26	-
	2608900000	2608900531	17	364	$ 3,048.20	$ 3,039.85	-
	3249300000	3249300528	13.33	364	$ 2,390.15	$ 2,383.60	-
	4328100000	4328100991	4.08	364	$ 731.57	$ 729.56	-
	545510000	0545510675	12.9	364	$ 2,313.05	$ 2,306.71	-
	7388110000	7388110213	7.74	364	$ 1,387.83	$ 1,384.03	(1,208.30)
	5124100000	5124100176	11.82	364	$ 2,119.40	$ 2,113.59	(2,916.77)
	2711510000	2711510140	8.6	364	$ 1,542.03	$ 1,537.81	(1,886.82)
	1648800000	1648800683	15.69	364	$ 2,813.31	$ 2,805.60	(1,236.67)
	3139300000	3139300205	7.09	364	$ 1,271.28	$ 1,267.80	(996.53)
	8183100000	8183100719	4.51	364	$ 808.67	$ 806.45	(972.39)
	9000300000	9000300986	11.61	364	$ 2,081.74	$ 2,076.04	(384.04)
	2798300000	2798300428	15.48	364	$ 2,775.66	$ 2,768.05	(323.69)
	9254100000	9254100536	16.34	364	$ 2,929.86	$ 2,921.83	(228.80)
	3354100000	3354100537	10.32	364	$ 1,850.44	$ 1,845.37	(218.16)
	7544100000	7544100451	8.81	364	$ 1,579.69	$ 1,575.36	(213.69)
	7762400000	7762400470	8.38	364	$ 1,502.58	$ 1,498.47	(122.98)
	806410000	0806410070	9.03	364	$ 1,619.13	$ 1,614.70	(111.98)
	5714100000	5714100128	11.39	364	$ 2,042.29	$ 2,036.70	(67.81)
	1044100000	1044100387	8.6	364	$ 1,542.03	$ 1,537.81	(36.72)
	4096700000	4096700123	10.75	364	$ 1,927.54	$ 1,922.26	(14.33)
	5260310000	5260310499	4.08	364	$ 731.57	$ 729.56	(12.21)
	1977310000	1977310202	4.3	364	$ 771.02	$ 768.90	(9.24)
	5624100000	5624100234	2.58	364	$ 462.61	$ 461.34	-
	8548500000	8548500490	4.3	364	$ 771.02	$ 768.90	-
	3154100000	3154100514	4.6	364	$ 824.81	$ 822.55	-
	8827925567	8827925557	4.73	364	$ 848.12	$ 845.79	-
	3367700000	3367700486	5.2	364	$ 932.39	$ 929.84	-
	8601900000	8601900057	7.6	364	$ 1,362.72	$ 1,358.99	-
	8150210000	8150210901	7.74	364	$ 1,387.83	$ 1,384.03	-

Rate Class	Customer Number	Service Agreement Number	Sum of Size (KW)	Sum of Days to FY 17	Estimated Annual Revenue Loss $	FY 17 Estimated Revenue Loss $	Net Credit to Grid (kWh)
	5034100000	5034100277	7.74	364	$ 1,387.83	$ 1,384.03	-
	4154100000	4154100516	8.38	364	$ 1,502.58	$ 1,498.47	-
	9483500000	9483500924	10	364	$ 1,793.06	$ 1,788.15	-
	4483300000	4483300142	10.32	364	$ 1,850.44	$ 1,845.37	-
	7748049687	7748049352	11.82	364	$ 2,119.40	$ 2,113.59	-
	2563310000	2563310816	8.38	364	$ 1,502.58	$ 1,498.47	-
	4434010000	4434010881	11	364	$ 1,972.37	$ 1,966.96	-
	4975010000	4975010295	11.39	364	$ 2,042.29	$ 2,036.70	-
	7044100000	7044100396	6.02	364	$ 1,079.42	$ 1,076.46	-
	34100000	0034100270	7.09	364	$ 1,271.28	$ 1,267.80	-
	1194700000	1194700692	11.39	364	$ 2,042.29	$ 2,036.70	-
	25600000	0025600190	8.81	364	$ 1,579.69	$ 1,575.36	-
	743600000	0743600939	7.75	364	$ 1,389.62	$ 1,385.81	-
	1302757980	1302757771	5	364	$ 896.53	$ 894.07	-
	5286105267	5286105282	4.73	364	$ 848.12	$ 845.79	-
	4165010000	4165010909	10.32	364	$ 1,850.44	$ 1,845.37	(5,989.80)
	9139800000	9139800565	8.17	364	$ 1,464.93	$ 1,460.92	(2,576.61)
	6759700000	6759700384	7.31	364	$ 1,310.73	$ 1,307.14	(2,097.28)
	3702800000	3702800833	11.18	364	$ 2,004.64	$ 1,999.15	(1,265.72)
	7305100000	7305100147	3.87	364	$ 693.91	$ 692.01	(416.18)
	8206304948	8206304912	6.23	364	$ 1,117.08	$ 1,114.02	-
	8169010000	8169010993	6.88	364	$ 1,233.62	$ 1,230.24	-
	9574100000	9574100804	7.31	364	$ 1,310.73	$ 1,307.14	-
	7494100000	7494100035	7.31	364	$ 1,310.73	$ 1,307.14	-
	8920882833	8920882754	10.32	364	$ 1,850.44	$ 1,845.37	-
	5305100000	5305100144	11.39	364	$ 2,042.29	$ 2,036.70	-
	7899410000	7899410817	12.9	364	$ 2,313.05	$ 2,306.71	-
	4155200000	4155200614	13.11	364	$ 2,350.70	$ 2,344.26	-
	6528400000	6528400304	15.05	364	$ 2,698.55	$ 2,691.16	-
	4645100000	4645100737	7.74	364	$ 1,387.83	$ 1,384.03	-
	574100000	0574100792	9.6	364	$ 1,721.34	$ 1,716.62	-
	133382533	0133382479	9.24	364	$ 1,656.79	$ 1,652.25	-
	155410000	0155410702	10.97	364	$ 1,966.99	$ 1,961.60	-
	2830900000	2830900574	9.03	364	$ 1,619.13	$ 1,614.70	(1,820.48)
	3204200000	3204200419	8.17	364	$ 1,464.93	$ 1,460.92	(221.28)
	6095100000	6095100979	7.09	364	$ 1,271.28	$ 1,267.80	(72.14)
	6783410000	6783410622	1.5	364	$ 268.96	$ 268.22	-
	2485600000	2485600040	4.3	364	$ 771.02	$ 768.90	-
	6776200000	6776200333	6.66	364	$ 1,194.18	$ 1,190.91	-
	7945100000	7945100775	6.67	364	$ 1,195.97	$ 1,192.69	-
	3575100000	3575100071	7.75	364	$ 1,389.62	$ 1,385.81	-
	5875100000	5875100109	8.4	364	$ 1,506.17	$ 1,502.04	-
	3859900000	3859900645	12.5	364	$ 2,241.32	$ 2,235.18	-
	5970000000	5970000844	11.25	364	$ 2,017.19	$ 2,011.67	-
	7659400000	7659400648	10	364	$ 1,793.06	$ 1,788.15	-
	7889861523	7889861140	12.5	364	$ 2,241.32	$ 2,235.18	-
	5895600000	5895600219	11.18	364	$ 2,004.64	$ 1,999.15	-
	1839110000	1839110380	10.75	364	$ 1,927.54	$ 1,922.26	-
	392700000	0392700376	7	364	$ 1,255.14	$ 1,251.70	-
	579100000	0579100540	8	364	$ 1,434.45	$ 1,430.52	-
	4621500000	4621500390	14	364	$ 2,510.28	$ 2,503.41	(25,626.36)
	9343000000	9343000540	15.91	364	$ 2,852.76	$ 2,844.94	(14,959.58)
	5402762192	5402762421	23.45	364	$ 4,204.72	$ 4,193.20	(14,752.37)
	8768000000	8768000450	4.73	364	$ 848.12	$ 845.79	(11,908.66)
	7580410000	7580410239	14	364	$ 2,510.28	$ 2,503.41	(10,101.06)
	8933100000	8933100223	9.46	364	$ 1,696.23	$ 1,691.59	(9,555.20)
	6084000000	6084000600	13.5	364	$ 2,420.63	$ 2,414.00	(9,527.65)
	8502600000	8502600070	18.92	364	$ 3,392.47	$ 3,383.17	(9,099.47)

Rate Class	Customer Number	Service Agreement Number	Sum of Size (KW)	Sum of Days to FY 17	Estimated Annual Revenue Loss $	FY 17 Estimated Revenue Loss $	Net Credit to Grid (kWh)
	8571410000	8571410811	7.74	364	$ 1,387.83	$ 1,384.03	(8,090.48)
	1593000000	1593000584	15.3	364	$ 2,743.38	$ 2,735.86	(8,013.73)
	3774200000	3774200018	8.17	364	$ 1,464.93	$ 1,460.92	(7,786.64)
	3470200000	3470200415	14.62	364	$ 2,621.45	$ 2,614.27	(7,501.36)
	1834100000	1834100365	10.32	364	$ 1,850.44	$ 1,845.37	(7,276.49)
	7593100000	7593100875	6	364	$ 1,075.84	$ 1,072.89	(7,128.35)
	3503300000	3503300479	5	364	$ 896.53	$ 894.07	(7,042.73)
	2862100000	2862100965	10	364	$ 1,793.06	$ 1,788.15	(6,898.14)
	5043310000	5043310845	11.61	364	$ 2,081.74	$ 2,076.04	(6,457.27)
	5407100000	5407100479	8.6	364	$ 1,542.03	$ 1,537.81	(6,418.81)
	3820100000	3820100260	12	364	$ 2,151.67	$ 2,145.78	(6,391.32)
	9339900000	9339900314	14	364	$ 2,510.28	$ 2,503.41	(6,289.58)
	6036000000	6036000259	21.5	364	$ 3,855.08	$ 3,844.52	(6,068.53)
	3696210000	3696210255	8.6	364	$ 1,542.03	$ 1,537.81	(6,032.48)
	5847300000	5847300748	10.97	364	$ 1,966.99	$ 1,961.60	(5,979.35)
	4067600000	4067600752	7	364	$ 1,255.14	$ 1,251.70	(5,714.88)
	7880000000	7880000957	9.67	364	$ 1,733.89	$ 1,729.14	(5,641.07)
	5515110000	5515110648	8.6	364	$ 1,542.03	$ 1,537.81	(5,488.42)
	2956110000	2956110154	13.33	364	$ 2,390.15	$ 2,383.60	(5,173.54)
	4862100000	4862100967	16.77	364	$ 3,006.96	$ 2,998.72	(5,027.28)
	7394100000	7394100022	14	364	$ 2,510.28	$ 2,503.41	(4,894.98)
	8097100000	8097100212	20	364	$ 3,586.12	$ 3,576.29	(4,826.86)
	5625410000	5625410914	4.3	364	$ 771.02	$ 768.90	(4,650.15)
	6640800000	6640800295	12.04	364	$ 2,158.84	$ 2,152.93	(4,633.60)
	3081000000	3081000406	9.24	364	$ 1,656.79	$ 1,652.25	(4,510.18)
	1967400000	1967400188	9.67	364	$ 1,733.89	$ 1,729.14	(4,501.81)
	8466700000	8466700477	6.02	364	$ 1,079.42	$ 1,076.46	(4,475.42)
	7115900000	7115900014	8.6	364	$ 1,542.03	$ 1,537.81	(4,443.18)
	6181900000	6181900174	11.18	364	$ 2,004.64	$ 1,999.15	(4,442.16)
	5464100000	5464100671	15.48	364	$ 2,775.66	$ 2,768.05	(4,379.48)
	478900000	0478900083	7.74	364	$ 1,387.83	$ 1,384.03	(4,298.99)
	5029000000	5029000093	9.89	364	$ 1,773.34	$ 1,768.48	(4,187.12)
	9493000000	9493000582	11.18	364	$ 2,004.64	$ 1,999.15	(4,092.79)
	7400100000	7400100003	4.3	364	$ 771.02	$ 768.90	(4,017.96)
	9351600000	9351600703	6.02	364	$ 1,079.42	$ 1,076.46	(3,977.14)
	1823000000	1823000355	6.45	364	$ 1,156.52	$ 1,153.35	(3,973.00)
	7458310000	7458310003	12.3	364	$ 2,205.46	$ 2,199.42	(3,940.96)
	9189310000	9189310661	12.47	364	$ 2,235.94	$ 2,229.82	(3,866.47)
	6256000000	6256000515	11.2	364	$ 2,008.23	$ 2,002.72	(3,815.18)
	8432210000	8432210757	9.03	364	$ 1,619.13	$ 1,614.70	(3,609.82)
	7408000000	7408000618	14.6	364	$ 2,617.87	$ 2,610.69	(3,497.50)
	1625100000	1625100410	14.5	364	$ 2,599.94	$ 2,592.81	(3,474.34)
	4815000000	4815000008	14	364	$ 2,510.28	$ 2,503.41	(3,367.74)
	4526100000	4526100786	18	364	$ 3,227.51	$ 3,218.66	(3,284.05)
	1318000000	1318000289	13.11	364	$ 2,350.70	$ 2,344.26	(3,179.52)
	6513110000	6513110217	6.45	364	$ 1,156.52	$ 1,153.35	(3,162.60)
	2829410000	2829410278	7	364	$ 1,255.14	$ 1,251.70	(3,033.98)
	7907600000	7907600596	8.6	364	$ 1,542.03	$ 1,537.81	(2,955.26)
	4976410000	4976410832	14	364	$ 2,510.28	$ 2,503.41	(2,909.12)
	687604242	0687604589	9.67	364	$ 1,733.89	$ 1,729.14	(2,852.22)
	4677400000	4677400269	11.18	364	$ 2,004.64	$ 1,999.15	(2,818.61)
	6723000000	6723000349	8	364	$ 1,434.45	$ 1,430.52	(2,811.89)
	4768600000	4768600654	3.5	364	$ 627.57	$ 625.85	(2,802.83)
	8051400000	8051400108	18.5	364	$ 3,317.16	$ 3,308.07	(2,759.78)
	2075100000	2075100016	10.53	364	$ 1,888.09	$ 1,882.92	(2,709.02)
	9670110000	9670110185	24.7	364	$ 4,428.86	$ 4,416.72	(2,704.16)
	7065200000	7065200264	9.89	364	$ 1,773.34	$ 1,768.48	(2,626.48)
	2803100000	2803100250	16	364	$ 2,868.89	$ 2,861.03	(2,536.26)

Rate Class	Customer Number	Service Agreement Number	Sum of Size (KW)	Sum of Days to FY 17	Estimated Annual Revenue Loss $	FY 17 Estimated Revenue Loss $	Net Credit to Grid (kWh)
	983800000	0983800956	9.03	364	$ 1,619.13	$ 1,614.70	(2,520.84)
	7060300000	7060300241	9.5	364	$ 1,703.41	$ 1,698.74	(2,467.51)
	6294310000	6294310768	9	364	$ 1,613.75	$ 1,609.33	(2,438.54)
	7174400000	7174400031	4	364	$ 717.22	$ 715.26	(2,367.15)
	2907600000	2907600591	12.9	364	$ 2,313.05	$ 2,306.71	(2,330.84)
	5484110000	5484110920	9.8	364	$ 1,757.20	$ 1,752.38	(2,329.84)
	2967000000	2967000714	7.74	364	$ 1,387.83	$ 1,384.03	(2,298.03)
	5600807786	5600807355	12.47	364	$ 2,235.94	$ 2,229.82	(2,273.63)
	2865100000	2865100994	15.65	364	$ 2,806.14	$ 2,798.45	(2,250.74)
	3275600000	3275600727	15.05	364	$ 2,698.55	$ 2,691.16	(2,241.87)
	634100000	0634100337	12.25	364	$ 2,196.50	$ 2,190.48	(2,201.85)
	7672100000	7672100070	7.31	364	$ 1,310.73	$ 1,307.14	(2,193.69)
	3960000000	3960000056	7	364	$ 1,255.14	$ 1,251.70	(2,150.05)
	8644000000	8644000207	12	364	$ 2,151.67	$ 2,145.78	(2,148.75)
	5128600000	5128600570	8.17	364	$ 1,464.93	$ 1,460.92	(2,057.51)
	9475000000	9475000158	22.89	364	$ 4,104.31	$ 4,093.07	(2,005.31)
	3261200000	3261200477	10.97	364	$ 1,966.99	$ 1,961.60	(2,002.24)
	9667310000	9667310738	10.32	364	$ 1,850.44	$ 1,845.37	(1,988.52)
	344500000	0344500358	6.23	364	$ 1,117.08	$ 1,114.02	(1,984.33)
	976000000	0976000851	6.62	364	$ 1,187.01	$ 1,183.75	(1,977.90)
	9356400000	9356400516	7.95	364	$ 1,425.48	$ 1,421.58	(1,931.10)
	6323210000	6323210058	7.14	364	$ 1,280.24	$ 1,276.74	(1,923.00)
	2284210000	2284210227	7.3	364	$ 1,308.93	$ 1,305.35	(1,917.08)
	7011310000	7011310517	7.52	364	$ 1,348.38	$ 1,344.69	(1,880.11)
	7955000000	7955000484	14.62	364	$ 2,621.45	$ 2,614.27	(1,806.55)
	8233510000	8233510596	12.9	364	$ 2,313.05	$ 2,306.71	(1,789.00)
	8477010000	8477010691	8.97	364	$ 1,608.37	$ 1,603.97	(1,753.48)
	7721200000	7721200099	12	364	$ 2,151.67	$ 2,145.78	(1,739.54)
	5893600000	5893600092	7.74	364	$ 1,387.83	$ 1,384.03	(1,729.32)
	408300000	0408300945	7.3	364	$ 1,308.93	$ 1,305.35	(1,691.64)
	2265510000	2265510137	5.75	364	$ 1,031.01	$ 1,028.18	(1,677.73)
	7309025228	7309025022	7	364	$ 1,255.14	$ 1,251.70	(1,674.70)
	4608500000	4608500662	14.22	364	$ 2,549.73	$ 2,542.74	(1,642.53)
	7109110000	7109110604	7.31	364	$ 1,310.73	$ 1,307.14	(1,641.12)
	6332621597	6332621090	9.5	364	$ 1,703.41	$ 1,698.74	(1,640.32)
	4016010000	4016010016	7.09	364	$ 1,271.28	$ 1,267.80	(1,638.01)
	4854210000	4854210399	12.5	364	$ 2,241.32	$ 2,235.18	(1,630.41)
	977110862	0977110417	8.8	364	$ 1,577.89	$ 1,573.57	(1,595.38)
	6565100000	6565100966	11.4	364	$ 2,044.09	$ 2,038.49	(1,591.86)
	7297200000	7297200411	7.68	364	$ 1,377.07	$ 1,373.30	(1,590.73)
	5904000000	5904000765	9	364	$ 1,613.75	$ 1,609.33	(1,577.94)
	6898400000	6898400906	6.02	364	$ 1,079.42	$ 1,076.46	(1,563.80)
	3402100000	3402100158	7	364	$ 1,255.14	$ 1,251.70	(1,536.67)
	2777300000	2777300259	12.47	364	$ 2,235.94	$ 2,229.82	(1,531.85)
	4551500000	4551500910	5.59	364	$ 1,002.32	$ 999.57	(1,523.28)
	3033100000	3033100519	6.02	364	$ 1,079.42	$ 1,076.46	(1,511.18)
	2768164967	2768164176	5	364	$ 896.53	$ 894.07	(1,499.29)
	4881700000	4881700013	5.8	364	$ 1,039.97	$ 1,037.13	(1,446.15)
	4194100000	4194100993	6.45	364	$ 1,156.52	$ 1,153.35	(1,444.90)
	6443100000	6443100276	6.3	364	$ 1,129.63	$ 1,126.53	(1,432.34)
	6461200000	6461200502	14.62	364	$ 2,621.45	$ 2,614.27	(1,400.55)
	8805100000	8805100209	4.08	364	$ 731.57	$ 729.56	(1,397.42)
	4514300000	4514300864	7.31	364	$ 1,310.73	$ 1,307.14	(1,397.16)
	5251300000	5251300165	0.81	364	$ 145.24	$ 144.84	(1,391.83)
	3190200000	3190200817	9.89	364	$ 1,773.34	$ 1,768.48	(1,344.42)
	4325100000	4325100376	7.09	364	$ 1,271.28	$ 1,267.80	(1,335.44)
	3058100000	3058100700	12	364	$ 2,151.67	$ 2,145.78	(1,326.41)
	6349010000	6349010618	7.72	364	$ 1,384.24	$ 1,380.45	(1,254.84)

Rate Class	Customer Number	Service Agreement Number	Sum of Size (KW)	Sum of Days to FY 17	Estimated Annual Revenue Loss $	FY 17 Estimated Revenue Loss $	Net Credit to Grid (kWh)
	7624210000	7624210657	14.6	364	$ 2,617.87	$ 2,610.69	(1,246.31)
	9915100000	9915100333	16.34	364	$ 2,929.86	$ 2,921.83	(1,240.37)
	7140000000	7140000561	9	364	$ 1,613.75	$ 1,609.33	(1,231.70)
	7968400000	7968400193	8.38	364	$ 1,502.58	$ 1,498.47	(1,220.38)
	6857200000	6857200270	14.62	364	$ 2,621.45	$ 2,614.27	(1,209.85)
	3263700000	3263700292	8	364	$ 1,434.45	$ 1,430.52	(1,182.54)
	7149900000	7149900281	6.02	364	$ 1,079.42	$ 1,076.46	(1,157.02)
	7463010000	7463010197	6	364	$ 1,075.84	$ 1,072.89	(1,156.69)
	9326310000	9326310943	17.63	364	$ 3,161.16	$ 3,152.50	(1,138.00)
	3380510000	3380510209	14.62	364	$ 2,621.45	$ 2,614.27	(1,105.43)
	6583600000	6583600759	12.9	364	$ 2,313.05	$ 2,306.71	(1,098.35)
	2984100000	2984100967	7.31	364	$ 1,310.73	$ 1,307.14	(1,093.54)
	8325100000	8325100237	10.75	364	$ 1,927.54	$ 1,922.26	(1,048.92)
	6372500000	6372500611	14.4	364	$ 2,582.01	$ 2,574.93	(1,036.55)
	9636000000	9636000327	11	364	$ 1,972.37	$ 1,966.96	(1,027.23)
	5452410000	5452410628	10.97	364	$ 1,966.99	$ 1,961.60	(1,026.02)
	8328728087	8328728350	8.81	364	$ 1,579.69	$ 1,575.36	(1,007.96)
	4371510000	4371510629	9.5	364	$ 1,703.41	$ 1,698.74	(998.13)
	4477300000	4477300226	4.73	364	$ 848.12	$ 845.79	(943.77)
	8754513193	8754513441	10.32	364	$ 1,850.44	$ 1,845.37	(913.52)
	6577700000	6577700617	8.38	364	$ 1,502.58	$ 1,498.47	(911.89)
	4307800000	4307800248	6.45	364	$ 1,156.52	$ 1,153.35	(892.93)
	7431110000	7431110396	12	364	$ 2,151.67	$ 2,145.78	(869.14)
	8703210000	8703210993	7	364	$ 1,255.14	$ 1,251.70	(843.33)
	1773300000	1773300065	5.16	364	$ 925.22	$ 922.68	(822.12)
	3724500000	3724500981	14.6	364	$ 2,617.87	$ 2,610.69	(821.73)
	8837800000	8837800526	3	364	$ 537.92	$ 536.44	(811.36)
	6914300000	6914300212	7	364	$ 1,255.14	$ 1,251.70	(795.09)
	5782700000	5782700314	11.3	364	$ 2,026.16	$ 2,020.61	(771.50)
	8484800000	8484800030	8.6	364	$ 1,542.03	$ 1,537.81	(742.73)
	5831100000	5831100282	3.01	364	$ 539.71	$ 538.23	(723.80)
	2878921530	2878921037	3.44	364	$ 616.81	$ 615.12	(721.17)
	8658310000	8658310030	7.31	364	$ 1,310.73	$ 1,307.14	(705.05)
	8109800000	8109800134	9.46	364	$ 1,696.23	$ 1,691.59	(582.36)
	5405110000	5405110140	3.5	364	$ 627.57	$ 625.85	(569.31)
	7829295916	7829295620	8	364	$ 1,434.45	$ 1,430.52	(554.07)
	3111900000	3111900106	16.98	364	$ 3,044.61	$ 3,036.27	(550.08)
	6621500000	6621500391	16	364	$ 2,868.89	$ 2,861.03	(543.63)
	4441410000	4441410252	7.5	364	$ 1,344.79	$ 1,341.11	(528.81)
	5837210000	5837210146	7	364	$ 1,255.14	$ 1,251.70	(527.49)
	2924000000	2924000006	6.88	364	$ 1,233.62	$ 1,230.24	(505.77)
	3619000000	3619000049	7.31	364	$ 1,310.73	$ 1,307.14	(502.22)
	6373945036	6373945108	9.5	364	$ 1,703.41	$ 1,698.74	(479.45)
	2086078275	2086078277	14.62	364	$ 2,621.45	$ 2,614.27	(448.85)
	9272000000	9272000402	10.97	364	$ 1,966.99	$ 1,961.60	(440.30)
	9225428484	9225428734	7	364	$ 1,255.14	$ 1,251.70	(423.25)
	3493000000	3493000574	9.67	364	$ 1,733.89	$ 1,729.14	(402.93)
	4336200000	4336200473	10.3	364	$ 1,846.85	$ 1,841.79	(400.15)
	2631310000	2631310020	10.53	364	$ 1,888.09	$ 1,882.92	(398.66)
	5839400000	5839400239	8	364	$ 1,434.45	$ 1,430.52	(390.72)
	5970200000	5970200686	10.97	364	$ 1,966.99	$ 1,961.60	(370.37)
	2154300000	2154300215	5.2	364	$ 932.39	$ 929.84	(358.25)
	2957100000	2957100418	11.18	364	$ 2,004.64	$ 1,999.15	(340.99)
	1354010000	1354010271	5.5	364	$ 986.18	$ 983.48	(315.26)
	5630110000	5630110173	13.11	364	$ 2,350.70	$ 2,344.26	(312.23)
	6921510000	6921510316	7.31	364	$ 1,310.73	$ 1,307.14	(303.63)
	3571395388	3571395518	7	364	$ 1,255.14	$ 1,251.70	(303.59)
	5457010000	5457010284	6.7	364	$ 1,201.35	$ 1,198.06	(295.74)

Rate Class	Customer Number	Service Agreement Number	Sum of Size (KW)	Sum of Days to FY 17	Estimated Annual Revenue Loss $	FY 17 Estimated Revenue Loss $	Net Credit to Grid (kWh)
	2825000000	2825000125	9.89	364	$ 1,773.34	$ 1,768.48	(287.61)
	6358100000	6358100740	11	364	$ 1,972.37	$ 1,966.96	(274.87)
	914000000	0914000879	9.46	364	$ 1,696.23	$ 1,691.59	(274.06)
	6904210000	6904210276	9.2	364	$ 1,649.61	$ 1,645.09	(262.93)
	3784300000	3784300992	7.5	364	$ 1,344.79	$ 1,341.11	(249.72)
	3593100000	3593100868	10.97	364	$ 1,966.99	$ 1,961.60	(246.63)
	3960400000	3960400203	5.37	364	$ 962.87	$ 960.23	(234.76)
	3524510000	3524510882	8.5	364	$ 1,524.10	$ 1,519.92	(234.34)
	5558400000	5558400847	7.52	364	$ 1,348.38	$ 1,344.69	(226.19)
	7783100000	7783100782	15.05	364	$ 2,698.55	$ 2,691.16	(223.09)
	1819200000	1819200101	3.87	364	$ 693.91	$ 692.01	(212.42)
	8866000000	8866000731	7.31	364	$ 1,310.73	$ 1,307.14	(200.28)
	4813900000	4813900731	10.9	364	$ 1,954.43	$ 1,949.08	(199.37)
	9013600000	9013600166	4.51	364	$ 808.67	$ 806.45	(154.85)
	9916410000	9916410415	10.97	364	$ 1,966.99	$ 1,961.60	(150.24)
	9840100000	9840100526	10.1	364	$ 1,810.99	$ 1,806.03	(139.53)
	991100000	0991100093	7.31	364	$ 1,310.73	$ 1,307.14	(129.96)
	5201500000	5201500741	9.4	364	$ 1,685.48	$ 1,680.86	(126.79)
	7198100000	7198100601	12	364	$ 2,151.67	$ 2,145.78	(126.30)
	5673300000	5673300059	5.16	364	$ 925.22	$ 922.68	(125.72)
	6764000000	6764000454	14.62	364	$ 2,621.45	$ 2,614.27	(125.45)
	2154100000	2154100513	7.5	364	$ 1,344.79	$ 1,341.11	(122.31)
	1959500000	1959500104	12.9	364	$ 2,313.05	$ 2,306.71	(98.08)
	3987510000	3987510245	13.33	364	$ 2,390.15	$ 2,383.60	(97.01)
	8133000000	8133000399	7	364	$ 1,255.14	$ 1,251.70	(94.79)
	3356771381	3356771615	10.9	364	$ 1,954.43	$ 1,949.08	(93.35)
	3906900000	3906900287	12.68	364	$ 2,273.60	$ 2,267.37	(92.18)
	4914300000	4914300903	12	364	$ 2,151.67	$ 2,145.78	(91.94)
	2756210000	2756210428	6.88	364	$ 1,233.62	$ 1,230.24	(85.87)
	733300000	0733300109	14.62	364	$ 2,621.45	$ 2,614.27	(84.48)
	1725600000	1725600871	18.27	364	$ 3,275.92	$ 3,266.94	(82.85)
	7725310000	7725310581	7.5	364	$ 1,344.79	$ 1,341.11	(76.02)
	2183000000	2183000414	7.31	364	$ 1,310.73	$ 1,307.14	(67.78)
	548100000	0548100434	11	364	$ 1,972.37	$ 1,966.96	(66.76)
	1910310000	1910310593	6.67	364	$ 1,195.97	$ 1,192.69	(57.95)
	9442300000	9442300163	14.69	364	$ 2,634.00	$ 2,626.79	(48.00)
	1452000000	1452000244	6.02	364	$ 1,079.42	$ 1,076.46	(47.12)
	8569100000	8569100240	7.31	364	$ 1,310.73	$ 1,307.14	(44.52)
	3965110000	3965110788	14.62	364	$ 2,621.45	$ 2,614.27	(33.79)
	2314000000	2314000543	7.1	364	$ 1,273.07	$ 1,269.58	(16.09)
	4356110000	4356110894	7.1	364	$ 1,273.07	$ 1,269.58	(14.73)
	5386100000	5386100047	4.08	364	$ 731.57	$ 729.56	(10.16)
	8150100000	8150100356	8.6	364	$ 1,542.03	$ 1,537.81	(9.38)
	1683100000	1683100765	12.25	364	$ 2,196.50	$ 2,190.48	(8.72)
	2061410000	2061410393	9.46	364	$ 1,696.23	$ 1,691.59	(8.28)
	421210000	0421210353	9	364	$ 1,613.75	$ 1,609.33	(0.15)
	6942400000	6942400084	7.31	364	$ 1,310.73	$ 1,307.14	(0.00)
	5715014873	5715014495	0.75	364	$ 134.48	$ 134.11	-
	2108200000	2108200506	0.86	364	$ 154.20	$ 153.78	-
	9712690460	9712690845	1	364	$ 179.31	$ 178.81	-
	3733600000	3733600639	1	364	$ 179.31	$ 178.81	-
	8006010000	8006010711	1.2	364	$ 215.17	$ 214.58	-
	8182400000	8182400821	1.25	364	$ 224.13	$ 223.52	-
	1203100000	1203100178	1.3	364	$ 233.10	$ 232.46	-
	2633400000	2633400020	1.36	364	$ 243.86	$ 243.19	-
	7543000000	7543000566	1.5	364	$ 268.96	$ 268.22	-
	2574010000	2574010895	1.53	364	$ 274.34	$ 273.59	-
	7729200000	7729200212	1.6	364	$ 286.89	$ 286.10	-

Rate Class	Customer Number	Service Agreement Number	Sum of Size (KW)	Sum of Days to FY 17	Estimated Annual Revenue Loss $	FY 17 Estimated Revenue Loss $	Net Credit to Grid (kWh)
	2326600000	2326600691	1.7	364	$ 304.82	$ 303.98	-
	9064900000	9064900091	1.8	364	$ 322.75	$ 321.87	-
	1533800000	1533800822	1.8	364	$ 322.75	$ 321.87	-
	3262100000	3262100892	1.8	364	$ 322.75	$ 321.87	-
	7666010000	7666010413	2	364	$ 358.61	$ 357.63	-
	9014100000	9014100053	2	364	$ 358.61	$ 357.63	-
	8076410000	8076410723	2	364	$ 358.61	$ 357.63	-
	3396110000	3396110906	2	364	$ 358.61	$ 357.63	-
	6162600000	6162600061	2.5	364	$ 448.26	$ 447.04	-
	5628000000	5628000913	2.58	364	$ 462.61	$ 461.34	-
	9514600000	9514600472	2.7	364	$ 484.13	$ 482.80	-
	9458410000	9458410082	2.75	364	$ 493.09	$ 491.74	-
	8172100000	8172100008	3	364	$ 537.92	$ 536.44	-
	5645510000	5645510770	3	364	$ 537.92	$ 536.44	-
	8571800000	8571800118	3	364	$ 537.92	$ 536.44	-
	9216000000	9216000579	3	364	$ 537.92	$ 536.44	-
	1900458726	1900458192	3	364	$ 537.92	$ 536.44	-
	4966410000	4966410492	3.01	364	$ 539.71	$ 538.23	-
	1265700000	1265700218	3.44	364	$ 616.81	$ 615.12	-
	9438000000	9438000021	3.6	364	$ 645.50	$ 643.73	-
	3061200000	3061200456	3.6	364	$ 645.50	$ 643.73	-
	1808000000	1808000676	3.65	364	$ 654.47	$ 652.67	-
	8841300000	8841300122	3.65	364	$ 654.47	$ 652.67	-
	2366200000	2366200175	3.65	364	$ 654.47	$ 652.67	-
	6551500000	6551500913	3.65	364	$ 654.47	$ 652.67	-
	2490410000	2490410349	3.66	364	$ 656.26	$ 654.46	-
	8640100000	8640100504	3.66	364	$ 656.26	$ 654.46	-
	2439000000	2439000257	3.66	364	$ 656.26	$ 654.46	-
	3486410000	3486410889	3.75	364	$ 672.40	$ 670.56	-
	2147400000	2147400488	4	364	$ 717.22	$ 715.26	-
	2796376557	2796376265	4	364	$ 717.22	$ 715.26	-
	7305010000	7305010475	4	364	$ 717.22	$ 715.26	-
	6796210000	6796210270	4	364	$ 717.22	$ 715.26	-
	4024500000	4024500713	4.08	364	$ 731.57	$ 729.56	-
	2034410000	2034410849	4.1	364	$ 735.15	$ 733.14	-
	4213800000	4213800394	4.1	364	$ 735.15	$ 733.14	-
	1172800000	1172800086	4.25	364	$ 762.05	$ 759.96	-
	4324000000	4324000431	4.3	364	$ 771.02	$ 768.90	-
	5036410000	5036410549	4.3	364	$ 771.02	$ 768.90	-
	8532110000	8532110400	4.3	364	$ 771.02	$ 768.90	-
	1615310000	1615310249	4.3	364	$ 771.02	$ 768.90	-
	5198310000	5198310899	4.3	364	$ 771.02	$ 768.90	-
	2296400000	2296400341	4.3	364	$ 771.02	$ 768.90	-
	1304410000	1304410037	4.32	364	$ 774.60	$ 772.48	-
	5911800000	5911800831	4.5	364	$ 806.88	$ 804.67	-
	6538000000	6538000030	4.5	364	$ 806.88	$ 804.67	-
	8946310000	8946310134	4.5	364	$ 806.88	$ 804.67	-
	2170000000	2170000751	4.5	364	$ 806.88	$ 804.67	-
	8295510000	8295510458	4.51	364	$ 808.67	$ 806.45	-
	7173400000	7173400722	4.51	364	$ 808.67	$ 806.45	-
	5950400000	5950400896	4.52	364	$ 810.46	$ 808.24	-
	5739000000	5739000301	4.7	364	$ 842.74	$ 840.43	-
	8090300000	8090300966	4.73	364	$ 848.12	$ 845.79	-
	8769200000	8769200231	4.73	364	$ 848.12	$ 845.79	-
	9305600000	9305600413	4.73	364	$ 848.12	$ 845.79	-
	4282100000	4282100141	9.67	364	$ 1,733.89	$ 1,729.14	-
	4174110000	4174110765	4.75	364	$ 851.70	$ 849.37	-
	5101400000	5101400289	4.9	364	$ 878.60	$ 876.19	-

Rate Class	Customer Number	Service Agreement Number	Sum of Size (KW)	Sum of Days to FY 17	Estimated Annual Revenue Loss $	FY 17 Estimated Revenue Loss $	Net Credit to Grid (kWh)
	4094800000	4094800275	4.92	364	$ 882.19	$ 879.77	-
	3647100000	3647100269	4.94	364	$ 885.77	$ 883.34	-
	1617000000	1617000326	4.94	364	$ 885.77	$ 883.34	-
	6890400000	6890400693	4.94	364	$ 885.77	$ 883.34	-
	7984210000	7984210139	4.94	364	$ 885.77	$ 883.34	-
	1412105427	1412105579	4.94	364	$ 885.77	$ 883.34	-
	7175600000	7175600720	4.95	364	$ 887.56	$ 885.13	-
	6347800000	6347800764	5	364	$ 896.53	$ 894.07	-
	2565306713	2565306506	5	364	$ 896.53	$ 894.07	-
	4365410000	4365410852	5	364	$ 896.53	$ 894.07	-
	9497200000	9497200436	5	364	$ 896.53	$ 894.07	-
	8599300000	8599300600	5	364	$ 896.53	$ 894.07	-
	7751200000	7751200428	5	364	$ 896.53	$ 894.07	-
	1971411832	1971411031	5	364	$ 896.53	$ 894.07	-
	4545100000	4545100723	5	364	$ 896.53	$ 894.07	-
	3470800000	3470800783	5	364	$ 896.53	$ 894.07	-
	4265510000	4265510998	5	364	$ 896.53	$ 894.07	-
	8015500000	8015500528	5	364	$ 896.53	$ 894.07	-
	2886110000	2886110656	5	364	$ 896.53	$ 894.07	-
	4035000000	4035000150	5.1	364	$ 914.46	$ 911.95	-
	5414800000	5414800407	5.16	364	$ 925.22	$ 922.68	-
	5925110000	5925110981	5.16	364	$ 925.22	$ 922.68	-
	5001300000	5001300077	5.16	364	$ 925.22	$ 922.68	-
	7446300000	7446300498	5.16	364	$ 925.22	$ 922.68	-
	6444900000	6444900712	5.16	364	$ 925.22	$ 922.68	-
	1838110000	1838110149	5.16	364	$ 925.22	$ 922.68	-
	1840410000	1840410132	5.16	364	$ 925.22	$ 922.68	-
	8434400000	8434400232	5.2	364	$ 932.39	$ 929.84	-
	6955300000	6955300581	5.37	364	$ 962.87	$ 960.23	-
	6749000000	6749000102	5.37	364	$ 962.87	$ 960.23	-
	3376600000	3376600804	5.37	364	$ 962.87	$ 960.23	-
	3590010000	3590010632	5.37	364	$ 962.87	$ 960.23	-
	6506300000	6506300664	5.375	364	$ 963.77	$ 961.13	-
	4773100000	4773100665	8.31	364	$ 1,490.03	$ 1,485.95	-
	8491100000	8491100037	5.59	364	$ 1,002.32	$ 999.57	-
	9065410000	9065410819	5.6	364	$ 1,004.11	$ 1,001.36	-
	8224000000	8224000927	5.6	364	$ 1,004.11	$ 1,001.36	-
	7083500000	7083500608	5.75	364	$ 1,031.01	$ 1,028.18	-
	6457500000	6457500520	5.8	364	$ 1,039.97	$ 1,037.13	-
	3654410000	3654410078	5.8	364	$ 1,039.97	$ 1,037.13	-
	3743500000	3743500237	5.8	364	$ 1,039.97	$ 1,037.13	-
	4700300000	4700300063	5.8	364	$ 1,039.97	$ 1,037.13	-
	8579110000	8579110173	5.8	364	$ 1,039.97	$ 1,037.13	-
	2426510000	2426510913	5.8	364	$ 1,039.97	$ 1,037.13	-
	6082300000	6082300821	5.8	364	$ 1,039.97	$ 1,037.13	-
	3218400000	3218400056	6	364	$ 1,075.84	$ 1,072.89	-
	6540261870	6540261014	6	364	$ 1,075.84	$ 1,072.89	-
	4303500000	4303500352	6	364	$ 1,075.84	$ 1,072.89	-
	6384100000	6384100806	6	364	$ 1,075.84	$ 1,072.89	-
	5517000000	5517000320	6	364	$ 1,075.84	$ 1,072.89	-
	5497310000	5497310599	6	364	$ 1,075.84	$ 1,072.89	-
	4417600000	4417600653	6	364	$ 1,075.84	$ 1,072.89	-
	4454310000	4454310907	6	364	$ 1,075.84	$ 1,072.89	-
	6446510000	6446510203	6	364	$ 1,075.84	$ 1,072.89	-
	7614410000	7614410435	6	364	$ 1,075.84	$ 1,072.89	-
	6129200000	6129200142	6	364	$ 1,075.84	$ 1,072.89	-
	7754700000	7754700860	6.02	364	$ 1,079.42	$ 1,076.46	-
	6646600000	6646600330	6.02	364	$ 1,079.42	$ 1,076.46	-

Rate Class	Customer Number	Service Agreement Number	Sum of Size (KW)	Sum of Days to FY 17	Estimated Annual Revenue Loss $	FY 17 Estimated Revenue Loss $	Net Credit to Grid (kWh)
	8557600000	8557600699	6.02	364	$ 1,079.42	$ 1,076.46	-
	4720100000	4720100278	6.02	364	$ 1,079.42	$ 1,076.46	-
	5613310000	5613310356	6.02	364	$ 1,079.42	$ 1,076.46	-
	9125511488	9125511812	6.02	364	$ 1,079.42	$ 1,076.46	-
	8145100000	8145100681	6.02	364	$ 1,079.42	$ 1,076.46	-
	3926510000	3926510983	6.02	364	$ 1,079.42	$ 1,076.46	-
	3928000000	3928000950	6.2	364	$ 1,111.70	$ 1,108.65	-
	9071100000	9071100733	6.23	364	$ 1,117.08	$ 1,114.02	-
	8699300000	8699300610	6.23	364	$ 1,117.08	$ 1,114.02	-
	3222400000	3222400692	6.23	364	$ 1,117.08	$ 1,114.02	-
	3559800000	3559800001	6.23	364	$ 1,117.08	$ 1,114.02	-
	8724100000	8724100247	6.23	364	$ 1,117.08	$ 1,114.02	-
	2729900000	2729900243	6.23	364	$ 1,117.08	$ 1,114.02	-
	7819100000	7819100109	6.25	364	$ 1,120.66	$ 1,117.59	-
	8243510000	8243510979	6.4	364	$ 1,147.56	$ 1,144.41	-
	7060100000	7060100473	6.45	364	$ 1,156.52	$ 1,153.35	-
	4130100000	4130100322	6.45	364	$ 1,156.52	$ 1,153.35	-
	5170800000	5170800752	6.45	364	$ 1,156.52	$ 1,153.35	-
	9404000000	9404000699	6.45	364	$ 1,156.52	$ 1,153.35	-
	3596600000	3596600234	6.45	364	$ 1,156.52	$ 1,153.35	-
	3326410000	3326410458	6.45	364	$ 1,156.52	$ 1,153.35	-
	3565010000	3565010950	6.45	364	$ 1,156.52	$ 1,153.35	-
	3424100000	3424100207	6.5	364	$ 1,165.49	$ 1,162.30	-
	2964883136	2964883475	6.5	364	$ 1,165.49	$ 1,162.30	-
	4794200000	4794200442	6.66	364	$ 1,194.18	$ 1,190.91	-
	7248000000	7248000127	6.66	364	$ 1,194.18	$ 1,190.91	-
	8454010000	8454010478	6.66	364	$ 1,194.18	$ 1,190.91	-
	7952210000	7952210216	6.715	364	$ 1,204.04	$ 1,200.74	-
	3652210000	3652210178	6.75	364	$ 1,210.31	$ 1,207.00	-
	7110010000	7110010770	6.88	364	$ 1,233.62	$ 1,230.24	-
	7182000000	7182000498	6.88	364	$ 1,233.62	$ 1,230.24	-
	8390010000	8390010616	6.88	364	$ 1,233.62	$ 1,230.24	-
	7540000000	7540000801	6.88	364	$ 1,233.62	$ 1,230.24	-
	6133310000	6133310741	6.88	364	$ 1,233.62	$ 1,230.24	-
	5414000000	5414000825	6.89	364	$ 1,235.42	$ 1,232.03	-
	2885600000	2885600091	6.9	364	$ 1,237.21	$ 1,233.82	-
	5231200000	5231200806	6.92	364	$ 1,240.80	$ 1,237.40	-
	5549110000	5549110459	7	364	$ 1,255.14	$ 1,251.70	-
	8568700000	8568700161	7	364	$ 1,255.14	$ 1,251.70	-
	3016800000	3016800925	7	364	$ 1,255.14	$ 1,251.70	-
	6698799551	6698799675	7	364	$ 1,255.14	$ 1,251.70	-
	9490800000	9490800198	7.09	364	$ 1,271.28	$ 1,267.80	-
	6683400000	6683400090	7.1	364	$ 1,273.07	$ 1,269.58	-
	6002100000	6002100114	7.3	364	$ 1,308.93	$ 1,305.35	-
	7607900000	7607900300	7.3	364	$ 1,308.93	$ 1,305.35	-
	6605210000	6605210522	7.3	364	$ 1,308.93	$ 1,305.35	-
	7013310000	7013310291	7.3	364	$ 1,308.93	$ 1,305.35	-
	6588410000	6588410979	7.31	364	$ 1,310.73	$ 1,307.14	-
	9830010000	9830010261	7.31	364	$ 1,310.73	$ 1,307.14	-
	6163600000	6163600291	7.31	364	$ 1,310.73	$ 1,307.14	-
	8183510000	8183510459	7.31	364	$ 1,310.73	$ 1,307.14	-
	9592200000	9592200500	7.31	364	$ 1,310.73	$ 1,307.14	-
	8925300000	8925300051	7.31	364	$ 1,310.73	$ 1,307.14	-
	5803310000	5803310065	7.31	364	$ 1,310.73	$ 1,307.14	-
	3453410000	3453410745	7.31	364	$ 1,310.73	$ 1,307.14	-
	3971900000	3971900611	7.31	364	$ 1,310.73	$ 1,307.14	-
	5068800000	5068800035	7.31	364	$ 1,310.73	$ 1,307.14	-
	3780300000	3780300930	7.31	364	$ 1,310.73	$ 1,307.14	-

Rate Class	Customer Number	Service Agreement Number	Sum of Size (KW)	Sum of Days to FY 17	Estimated Annual Revenue Loss $	FY 17 Estimated Revenue Loss $	Net Credit to Grid (kWh)
	8561900000	8561900275	7.31	364	$ 1,310.73	$ 1,307.14	-
	6300100000	6300100988	7.31	364	$ 1,310.73	$ 1,307.14	-
	7379000000	7379000726	7.31	364	$ 1,310.73	$ 1,307.14	-
	7510510000	7510510297	7.31	364	$ 1,310.73	$ 1,307.14	-
	8708000000	8708000671	7.31	364	$ 1,310.73	$ 1,307.14	-
	6880010000	6880010375	7.31	364	$ 1,310.73	$ 1,307.14	-
	7368800000	7368800071	7.31	364	$ 1,310.73	$ 1,307.14	-
	8847510000	8847510167	7.31	364	$ 1,310.73	$ 1,307.14	-
	9041400000	9041400193	7.31	364	$ 1,310.73	$ 1,307.14	-
	9934400000	9934400287	7.31	364	$ 1,310.73	$ 1,307.14	-
	9498410000	9498410350	7.31	364	$ 1,310.73	$ 1,307.14	-
	2770100000	2770100693	7.31	364	$ 1,310.73	$ 1,307.14	-
	3466200000	3466200186	7.31	364	$ 1,310.73	$ 1,307.14	-
	4321100000	4321100689	7.31	364	$ 1,310.73	$ 1,307.14	-
	2823900000	2823900839	7.31	364	$ 1,310.73	$ 1,307.14	-
	3206510000	3206510600	7.31	364	$ 1,310.73	$ 1,307.14	-
	3445500000	3445500295	7.31	364	$ 1,310.73	$ 1,307.14	-
	6891400000	6891400037	7.31	364	$ 1,310.73	$ 1,307.14	-
	3774510000	3774510666	7.31	364	$ 1,310.73	$ 1,307.14	-
	5423300000	5423300890	7.31	364	$ 1,310.73	$ 1,307.14	-
	6993100000	6993100921	7.31	364	$ 1,310.73	$ 1,307.14	-
	4594505222	4594505303	7.31	364	$ 1,310.73	$ 1,307.14	-
	5599600000	5599600421	7.5	364	$ 1,344.79	$ 1,341.11	-
	6233310000	6233310753	7.5	364	$ 1,344.79	$ 1,341.11	-
	9320900000	9320900241	7.52	364	$ 1,348.38	$ 1,344.69	-
	3062500000	3062500266	7.52	364	$ 1,348.38	$ 1,344.69	-
	8228600000	8228600777	7.52	364	$ 1,348.38	$ 1,344.69	-
	2892300000	2892300211	7.52	364	$ 1,348.38	$ 1,344.69	-
	7547100000	7547100262	7.7	364	$ 1,380.66	$ 1,376.87	-
	9499010000	9499010729	7.7	364	$ 1,380.66	$ 1,376.87	-
	3116600000	3116600558	7.7	364	$ 1,380.66	$ 1,376.87	-
	8285300000	8285300225	7.74	364	$ 1,387.83	$ 1,384.03	-
	7902300000	7902300394	7.74	364	$ 1,387.83	$ 1,384.03	-
	3756300000	3756300827	7.74	364	$ 1,387.83	$ 1,384.03	-
	3718210000	3718210469	7.74	364	$ 1,387.83	$ 1,384.03	-
	6045100000	6045100666	7.74	364	$ 1,387.83	$ 1,384.03	-
	8663310000	8663310833	7.75	364	$ 1,389.62	$ 1,385.81	-
	6353100000	6353100382	7.95	364	$ 1,425.48	$ 1,421.58	-
	4690700000	4690700675	7.95	364	$ 1,425.48	$ 1,421.58	-
	4749000000	4749000412	7.95	364	$ 1,425.48	$ 1,421.58	-
	7512210000	7512210342	7.95	364	$ 1,425.48	$ 1,421.58	-
	9303200000	9303200587	7.95	364	$ 1,425.48	$ 1,421.58	-
	5622200000	5622200960	7.95	364	$ 1,425.48	$ 1,421.58	-
	8780210000	8780210679	8	364	$ 1,434.45	$ 1,430.52	-
	5340110000	5340110445	8	364	$ 1,434.45	$ 1,430.52	-
	8632100000	8632100572	8	364	$ 1,434.45	$ 1,430.52	-
	4835400000	4835400358	8	364	$ 1,434.45	$ 1,430.52	-
	8618000000	8618000791	8	364	$ 1,434.45	$ 1,430.52	-
	9253000000	9253000077	8	364	$ 1,434.45	$ 1,430.52	-
	8658210000	8658210762	8	364	$ 1,434.45	$ 1,430.52	-
	4454000000	4454000296	8	364	$ 1,434.45	$ 1,430.52	-
	3905407308	3905407338	8	364	$ 1,434.45	$ 1,430.52	-
	7860400000	7860400196	8	364	$ 1,434.45	$ 1,430.52	-
	3756200000	3756200925	8.01	364	$ 1,436.24	$ 1,432.31	-
	8027000000	8027000389	8.17	364	$ 1,464.93	$ 1,460.92	-
	8600410000	8600410198	8.17	364	$ 1,464.93	$ 1,460.92	-
	7437310000	7437310172	8.17	364	$ 1,464.93	$ 1,460.92	-
	8148200000	8148200547	8.17	364	$ 1,464.93	$ 1,460.92	-

Rate Class	Customer Number	Service Agreement Number	Sum of Size (KW)	Sum of Days to FY 17	Estimated Annual Revenue Loss $	FY 17 Estimated Revenue Loss $	Net Credit to Grid (kWh)
	8774000000	8774000570	8.25	364	$ 1,479.27	$ 1,475.22	-
	8356500000	8356500489	8.38	364	$ 1,502.58	$ 1,498.47	-
	6518000000	6518000774	8.38	364	$ 1,502.58	$ 1,498.47	-
	8010100000	8010100083	8.38	364	$ 1,502.58	$ 1,498.47	-
	9346200000	9346200590	8.38	364	$ 1,502.58	$ 1,498.47	-
	4658652336	4658652176	8.38	364	$ 1,502.58	$ 1,498.47	-
	9875100000	9875100114	8.4	364	$ 1,506.17	$ 1,502.04	-
	5423110000	5423110323	8.6	364	$ 1,542.03	$ 1,537.81	-
	4706310000	4706310542	8.6	364	$ 1,542.03	$ 1,537.81	-
	5043100000	5043100233	8.6	364	$ 1,542.03	$ 1,537.81	-
	6156500000	6156500627	8.6	364	$ 1,542.03	$ 1,537.81	-
	7334510000	7334510366	8.6	364	$ 1,542.03	$ 1,537.81	-
	7887510000	7887510397	8.6	364	$ 1,542.03	$ 1,537.81	-
	3387900000	3387900084	12.9	364	$ 2,313.05	$ 2,306.71	-
	4708100000	4708100606	8.6	364	$ 1,542.03	$ 1,537.81	-
	4357400000	4357400812	8.6	364	$ 1,542.03	$ 1,537.81	-
	5192100000	5192100258	8.6	364	$ 1,542.03	$ 1,537.81	-
	9881100000	9881100963	8.8	364	$ 1,577.89	$ 1,573.57	-
	7441310000	7441310320	8.8	364	$ 1,577.89	$ 1,573.57	-
	8908100000	8908100638	8.81	364	$ 1,579.69	$ 1,575.36	-
	7484400000	7484400173	8.81	364	$ 1,579.69	$ 1,575.36	-
	9176200000	9176200271	8.82	364	$ 1,581.48	$ 1,577.15	-
	4600510000	4600510924	9	364	$ 1,613.75	$ 1,609.33	-
	7907000000	7907000235	9	364	$ 1,613.75	$ 1,609.33	-
	9882310000	9882310627	11.36	364	$ 2,036.92	$ 2,031.33	-
	7208900000	7208900494	9	364	$ 1,613.75	$ 1,609.33	-
	3850400000	3850400882	9.03	364	$ 1,619.13	$ 1,614.70	-
	6505400000	6505400802	9.03	364	$ 1,619.13	$ 1,614.70	-
	5085302137	5085302224	9.24	364	$ 1,656.79	$ 1,652.25	-
	4803500000	4803500407	9.25	364	$ 1,658.58	$ 1,654.04	-
	9342900000	9342900872	9.36	364	$ 1,678.30	$ 1,673.71	-
	5191000000	5191000531	9.46	364	$ 1,696.23	$ 1,691.59	-
	7281400000	7281400663	9.5	364	$ 1,703.41	$ 1,698.74	-
	8333100000	8333100560	9.5	364	$ 1,703.41	$ 1,698.74	-
	9424010000	9424010775	9.5	364	$ 1,703.41	$ 1,698.74	-
	8411700000	8411700067	9.5	364	$ 1,703.41	$ 1,698.74	-
	6978200000	6978200278	9.5	364	$ 1,703.41	$ 1,698.74	-
	8983100000	8983100804	9.54	364	$ 1,710.58	$ 1,705.89	-
	5684500000	5684500067	9.6	364	$ 1,721.34	$ 1,716.62	-
	7259000000	7259000468	9.67	364	$ 1,733.89	$ 1,729.14	-
	9989500000	9989500811	9.67	364	$ 1,733.89	$ 1,729.14	-
	9279800000	9279800377	9.67	364	$ 1,733.89	$ 1,729.14	-
	4206110000	4206110770	9.67	364	$ 1,733.89	$ 1,729.14	-
	5183010000	5183010566	9.67	364	$ 1,733.89	$ 1,729.14	-
	4467300000	4467300121	9.67	364	$ 1,733.89	$ 1,729.14	-
	9664100000	9664100699	9.7	364	$ 1,739.27	$ 1,734.50	-
	4000000000	4000000270	9.7	364	$ 1,739.27	$ 1,734.50	-
	7511700000	7511700077	9.75	364	$ 1,748.23	$ 1,743.44	-
	8973310000	8973310198	9.89	364	$ 1,773.34	$ 1,768.48	-
	5528000000	5528000899	9.89	364	$ 1,773.34	$ 1,768.48	-
	6275110000	6275110823	9.89	364	$ 1,773.34	$ 1,768.48	-
	8523200000	8523200636	9.89	364	$ 1,773.34	$ 1,768.48	-
	5280000000	5280000884	9.89	364	$ 1,773.34	$ 1,768.48	-
	6194100000	6194100997	9.89	364	$ 1,773.34	$ 1,768.48	-
	9690000000	9690000049	10	364	$ 1,793.06	$ 1,788.15	-
	9272008664	9272008190	10	364	$ 1,793.06	$ 1,788.15	-
	6452010000	6452010858	10	364	$ 1,793.06	$ 1,788.15	-
	7275310000	7275310729	10.1	364	$ 1,810.99	$ 1,806.03	-

Rate Class	Customer Number	Service Agreement Number	Sum of Size (KW)	Sum of Days to FY 17	Estimated Annual Revenue Loss $	FY 17 Estimated Revenue Loss $	Net Credit to Grid (kWh)
	8520400000	8520400324	10.1	364	$ 1,810.99	$ 1,806.03	-
	5665200000	5665200975	10.1	364	$ 1,810.99	$ 1,806.03	-
	6673100000	6673100653	10.1	364	$ 1,810.99	$ 1,806.03	-
	9530000000	9530000680	10.3	364	$ 1,846.85	$ 1,841.79	-
	6560100000	6560100537	10.3	364	$ 1,846.85	$ 1,841.79	-
	9758210000	9758210679	10.31	364	$ 1,848.64	$ 1,843.58	-
	5006400000	5006400341	10.32	364	$ 1,850.44	$ 1,845.37	-
	9589800000	9589800711	10.32	364	$ 1,850.44	$ 1,845.37	-
	7949900000	7949900368	10.32	364	$ 1,850.44	$ 1,845.37	-
	9633100000	9633100187	10.32	364	$ 1,850.44	$ 1,845.37	-
	7532100000	7532100557	10.5	364	$ 1,882.71	$ 1,877.55	-
	8209110000	8209110595	10.5	364	$ 1,882.71	$ 1,877.55	-
	9825700000	9825700477	10.5	364	$ 1,882.71	$ 1,877.55	-
	6643200000	6643200247	10.535	364	$ 1,888.99	$ 1,883.81	-
	7419410000	7419410849	10.7	364	$ 1,918.57	$ 1,913.32	-
	8858500000	8858500829	10.75	364	$ 1,927.54	$ 1,922.26	-
	4814000000	4814000871	10.75	364	$ 1,927.54	$ 1,922.26	-
	9605210000	9605210526	10.75	364	$ 1,927.54	$ 1,922.26	-
	8869110000	8869110096	10.75	364	$ 1,927.54	$ 1,922.26	-
	4494000000	4494000755	10.75	364	$ 1,927.54	$ 1,922.26	-
	7339010000	7339010326	10.75	364	$ 1,927.54	$ 1,922.26	-
	6165600000	6165600612	10.75	364	$ 1,927.54	$ 1,922.26	-
	7271584720	7271584909	10.96	364	$ 1,965.19	$ 1,959.81	-
	5778200000	5778200256	10.96	364	$ 1,965.19	$ 1,959.81	-
	9736300000	9736300425	10.97	364	$ 1,966.99	$ 1,961.60	-
	7602100000	7602100188	10.97	364	$ 1,966.99	$ 1,961.60	-
	5388700000	5388700898	10.97	364	$ 1,966.99	$ 1,961.60	-
	9978210000	9978210242	10.97	364	$ 1,966.99	$ 1,961.60	-
	7413100000	7413100334	10.97	364	$ 1,966.99	$ 1,961.60	-
	7382670673	7382670345	10.97	364	$ 1,966.99	$ 1,961.60	-
	8557500000	8557500532	10.97	364	$ 1,966.99	$ 1,961.60	-
	5663778877	5663778066	10.97	364	$ 1,966.99	$ 1,961.60	-
	7474100000	7474100787	10.97	364	$ 1,966.99	$ 1,961.60	-
	5721500000	5721500404	10.97	364	$ 1,966.99	$ 1,961.60	-
	8116500000	8116500803	10.97	364	$ 1,966.99	$ 1,961.60	-
	8560010000	8560010940	10.97	364	$ 1,966.99	$ 1,961.60	-
	9320686594	9320686965	10.97	364	$ 1,966.99	$ 1,961.60	-
	9714700000	9714700043	10.97	364	$ 1,966.99	$ 1,961.60	-
	9522010000	9522010175	10.97	364	$ 1,966.99	$ 1,961.60	-
	6489400000	6489400349	10.97	364	$ 1,966.99	$ 1,961.60	-
	9790300000	9790300048	10.97	364	$ 1,966.99	$ 1,961.60	-
	7803400000	7803400519	10.97	364	$ 1,966.99	$ 1,961.60	-
	5210200000	5210200081	10.97	364	$ 1,966.99	$ 1,961.60	-
	9581100000	9581100926	11	364	$ 1,972.37	$ 1,966.96	-
	8976000000	8976000862	11	364	$ 1,972.37	$ 1,966.96	-
	8433000000	8433000436	11	364	$ 1,972.37	$ 1,966.96	-
	8584100000	8584100927	11	364	$ 1,972.37	$ 1,966.96	-
	6208510000	6208510574	11	364	$ 1,972.37	$ 1,966.96	-
	6578500000	6578500212	11.18	364	$ 2,004.64	$ 1,999.15	-
	8571200000	8571200816	11.18	364	$ 2,004.64	$ 1,999.15	-
	6390500000	6390500641	11.2	364	$ 2,008.23	$ 2,002.72	-
	6744000000	6744000216	11.6	364	$ 2,079.95	$ 2,074.25	-
	9037800000	9037800440	11.8	364	$ 2,115.81	$ 2,110.01	-
	8908200000	8908200803	11.83	364	$ 2,121.19	$ 2,115.38	-
	6888000000	6888000694	11.83	364	$ 2,121.19	$ 2,115.38	-
	9819400000	9819400316	12	364	$ 2,151.67	$ 2,145.78	-
	5791900000	5791900999	12	364	$ 2,151.67	$ 2,145.78	-
	6744100000	6744100472	12.04	364	$ 2,158.84	$ 2,152.93	-

Rate Class	Customer Number	Service Agreement Number	Sum of Size (KW)	Sum of Days to FY 17	Estimated Annual Revenue Loss $	FY 17 Estimated Revenue Loss $	Net Credit to Grid (kWh)
	5945600000	5945600298	12.04	364	$ 2,158.84	$ 2,152.93	-
	8907600000	8907600597	12.04	364	$ 2,158.84	$ 2,152.93	-
	6151110000	6151110761	12.15	364	$ 2,178.57	$ 2,172.60	-
	6996000000	6996000091	12.47	364	$ 2,235.94	$ 2,229.82	-
	9714000000	9714000865	12.9	364	$ 2,313.05	$ 2,306.71	-
	9429200000	9429200180	17	364	$ 3,048.20	$ 3,039.85	-
	6795100000	6795100056	13.11	364	$ 2,350.70	$ 2,344.26	-
	6596000000	6596000039	13.11	364	$ 2,350.70	$ 2,344.26	-
	9814210000	9814210573	13.25	364	$ 2,375.80	$ 2,369.29	-
	8893100000	8893100911	13.3	364	$ 2,384.77	$ 2,378.24	-
	9264000000	9264000394	13.32	364	$ 2,388.35	$ 2,381.81	-
	9861300000	9861300537	13.97	364	$ 2,504.90	$ 2,498.04	-
	7772000000	7772000453	14	364	$ 2,510.28	$ 2,503.41	-
	9647310000	9647310389	14.6	364	$ 2,617.87	$ 2,610.69	-
	8125800000	8125800049	14.62	364	$ 2,621.45	$ 2,614.27	-
	7848000000	7848000208	14.62	364	$ 2,621.45	$ 2,614.27	-
	8598200000	8598200652	14.62	364	$ 2,621.45	$ 2,614.27	-
	8011400000	8011400063	14.62	364	$ 2,621.45	$ 2,614.27	-
	9925100000	9925100538	14.62	364	$ 2,621.45	$ 2,614.27	-
	9701000000	9701000176	14.62	364	$ 2,621.45	$ 2,614.27	-
	7800410000	7800410222	14.62	364	$ 2,621.45	$ 2,614.27	-
	8492110000	8492110611	14.62	364	$ 2,621.45	$ 2,614.27	-
	9115900000	9115900019	14.62	364	$ 2,621.45	$ 2,614.27	-
	9079900000	9079900777	14.62	364	$ 2,621.45	$ 2,614.27	-
	9208410000	9208410187	14.62	364	$ 2,621.45	$ 2,614.27	-
	7952510000	7952510618	14.62	364	$ 2,621.45	$ 2,614.27	-
	7043187679	7043187684	14.62	364	$ 2,621.45	$ 2,614.27	-
	6994410000	6994410341	14.62	364	$ 2,621.45	$ 2,614.27	-
	8508400000	8508400987	14.62	364	$ 2,621.45	$ 2,614.27	-
	8674900000	8674900451	15.05	364	$ 2,698.55	$ 2,691.16	-
	8410900000	8410900949	15.7	364	$ 2,815.10	$ 2,807.39	-
	8401200000	8401200170	16.34	364	$ 2,929.86	$ 2,921.83	-
	8092100000	8092100251	17	364	$ 3,048.20	$ 3,039.85	-
	9165010000	9165010915	18	364	$ 3,227.51	$ 3,218.66	-
	8858200000	8858200853	1.5	364	$ 268.96	$ 268.22	-
	9846600000	9846600351	7	364	$ 1,255.14	$ 1,251.70	-
	8839200000	8839200534	4.5	364	$ 806.88	$ 804.67	-
	9310200000	9310200095	3.82	364	$ 684.95	$ 683.07	-
	9720600000	9720600603	7	364	$ 1,255.14	$ 1,251.70	-
	8624486606	8624486670	12.5	364	$ 2,241.32	$ 2,235.18	-
	8768900000	8768900017	5.4	364	$ 968.25	$ 965.60	-
	9274110000	9274110783	4.3	364	$ 771.02	$ 768.90	-
	9883700000	9883700554	2	364	$ 358.61	$ 357.63	-
	9291600000	9291600504	3	364	$ 537.92	$ 536.44	-
	9768800000	9768800115	14.62	364	$ 2,621.45	$ 2,614.27	-
	9128100000	9128100974	7.5	364	$ 1,344.79	$ 1,341.11	-
	9247200000	9247200265	6	364	$ 1,075.84	$ 1,072.89	-
	9059110000	9059110519	9.4	364	$ 1,685.48	$ 1,680.86	-
	9724000000	9724000992	3.86	364	$ 692.12	$ 690.22	-
	9778110000	9778110960	8.81	364	$ 1,579.69	$ 1,575.36	-
	8978110000	8978110982	7	364	$ 1,255.14	$ 1,251.70	-
	9366300000	9366300900	8.6	364	$ 1,542.03	$ 1,537.81	-
	9364000000	9364000148	7.31	364	$ 1,310.73	$ 1,307.14	-
	9273940367	9273940327	7.31	364	$ 1,310.73	$ 1,307.14	-
	9646100000	9646100235	17.84	364	$ 3,198.82	$ 3,190.05	-
	653100000	0653100411	1.62	364	$ 290.48	$ 289.68	-
	370939757	0370939838	2.79	364	$ 500.26	$ 498.89	-
	389302610	0389302972	3	364	$ 537.92	$ 536.44	-

Rate Class	Customer Number	Service Agreement Number	Sum of Size (KW)	Sum of Days to FY 17	Estimated Annual Revenue Loss $	FY 17 Estimated Revenue Loss $	Net Credit to Grid (kWh)
	859500000	0859500093	3.6	364	$ 645.50	$ 643.73	-
	77200000	0077200961	4.08	364	$ 731.57	$ 729.56	-
	944900000	0944900764	4.3	364	$ 771.02	$ 768.90	-
	447800000	0447800769	5	364	$ 896.53	$ 894.07	-
	1234010000	1234010856	5	364	$ 896.53	$ 894.07	-
	1055510000	1055510818	5	364	$ 896.53	$ 894.07	-
	1066700000	1066700425	5	364	$ 896.53	$ 894.07	-
	502100000	0502100167	5.16	364	$ 925.22	$ 922.68	-
	1486000000	1486000914	5.16	364	$ 925.22	$ 922.68	-
	794966648	0794966458	5.38	364	$ 964.67	$ 962.02	-
	1738310000	1738310571	6	364	$ 1,075.84	$ 1,072.89	-
	735513300	0735513917	6	364	$ 1,075.84	$ 1,072.89	-
	1805200000	1805200746	6	364	$ 1,075.84	$ 1,072.89	-
	603000000	0603000090	6	364	$ 1,075.84	$ 1,072.89	-
	594000000	0594000761	6	364	$ 1,075.84	$ 1,072.89	-
	421100000	0421100695	6.02	364	$ 1,079.42	$ 1,076.46	-
	1914100000	1914100148	6.23	364	$ 1,117.08	$ 1,114.02	-
	1767410000	1767410245	6.23	364	$ 1,117.08	$ 1,114.02	-
	1647100000	1647100267	6.4	364	$ 1,147.56	$ 1,144.41	-
	411310000	0411310552	6.45	364	$ 1,156.52	$ 1,153.35	-
	996200000	0996200384	6.45	364	$ 1,156.52	$ 1,153.35	-
	1964510000	1964510350	6.45	364	$ 1,156.52	$ 1,153.35	-
	1066310000	1066310460	6.45	364	$ 1,156.52	$ 1,153.35	-
	1330410000	1330410950	6.45	364	$ 1,156.52	$ 1,153.35	-
	676210000	0676210830	6.7	364	$ 1,201.35	$ 1,198.06	-
	2134200000	2134200938	7	364	$ 1,255.14	$ 1,251.70	-
	1891210000	1891210953	7	364	$ 1,255.14	$ 1,251.70	-
	927200000	0927200914	7	364	$ 1,255.14	$ 1,251.70	-
	2053210000	2053210036	7.05	364	$ 1,264.11	$ 1,260.64	-
	1888010000	1888010228	7.09	364	$ 1,271.28	$ 1,267.80	-
	1836010000	1836010500	7.3	364	$ 1,308.93	$ 1,305.35	-
	1714010000	1714010495	7.31	364	$ 1,310.73	$ 1,307.14	-
	1572300000	1572300761	7.31	364	$ 1,310.73	$ 1,307.14	-
	2558816867	2558816283	7.31	364	$ 1,310.73	$ 1,307.14	-
	1597000000	1597000061	7.31	364	$ 1,310.73	$ 1,307.14	-
	1759000000	1759000529	7.31	364	$ 1,310.73	$ 1,307.14	-
	1374800000	1374800901	7.31	364	$ 1,310.73	$ 1,307.14	-
	2189100000	2189100615	7.31	364	$ 1,310.73	$ 1,307.14	-
	2009584529	2009584743	7.31	364	$ 1,310.73	$ 1,307.14	-
	1678010000	1678010907	7.31	364	$ 1,310.73	$ 1,307.14	-
	2019000000	2019000970	7.31	364	$ 1,310.73	$ 1,307.14	-
	1723473604	1723473111	7.31	364	$ 1,310.73	$ 1,307.14	-
	1656310000	1656310412	7.31	364	$ 1,310.73	$ 1,307.14	-
	2325010000	2325010944	7.5	364	$ 1,344.79	$ 1,341.11	-
	2762100000	2762100953	7.52	364	$ 1,348.38	$ 1,344.69	-
	1598000000	1598000774	7.52	364	$ 1,348.38	$ 1,344.69	-
	1803510000	1803510003	7.7	364	$ 1,380.66	$ 1,376.87	-
	2911873768	2911873056	7.7	364	$ 1,380.66	$ 1,376.87	-
	2061900000	2061900210	7.74	364	$ 1,387.83	$ 1,384.03	-
	2376210000	2376210609	7.74	364	$ 1,387.83	$ 1,384.03	-
	2549310000	2549310581	7.74	364	$ 1,387.83	$ 1,384.03	-
	2811010000	2811010874	8	364	$ 1,434.45	$ 1,430.52	-
	2066700000	2066700426	8	364	$ 1,434.45	$ 1,430.52	-
	2096200000	2096200664	8	364	$ 1,434.45	$ 1,430.52	-
	2326510000	2326510899	8	364	$ 1,434.45	$ 1,430.52	-
	2535410000	2535410287	8.17	364	$ 1,464.93	$ 1,460.92	-
	3111100000	3111100535	8.17	364	$ 1,464.93	$ 1,460.92	-
	2353310000	2353310190	8.17	364	$ 1,464.93	$ 1,460.92	-

Rate Class	Customer Number	Service Agreement Number	Sum of Size (KW)	Sum of Days to FY 17	Estimated Annual Revenue Loss $	FY 17 Estimated Revenue Loss $	Net Credit to Grid (kWh)
	2392310000	2392310885	8.17	364	$ 1,464.93	$ 1,460.92	-
	3085100000	3085100129	8.2	364	$ 1,470.31	$ 1,466.28	-
	3158210000	3158210701	8.5	364	$ 1,524.10	$ 1,519.92	-
	2911800000	2911800827	8.6	364	$ 1,542.03	$ 1,537.81	-
	2823010000	2823010418	8.8	364	$ 1,577.89	$ 1,573.57	-
	3034410000	3034410850	9	364	$ 1,613.75	$ 1,609.33	-
	3018410000	3018410496	9	364	$ 1,613.75	$ 1,609.33	-
	3394700000	3394700715	9	364	$ 1,613.75	$ 1,609.33	-
	3248000000	3248000123	9.3	364	$ 1,667.55	$ 1,662.98	-
	3552800000	3552800259	9.89	364	$ 1,773.34	$ 1,768.48	-
	968110000	0968110859	7.31	364	$ 1,310.73	$ 1,307.14	-
	983210000	0983210868	7.31	364	$ 1,310.73	$ 1,307.14	-
	1142100000	1142100630	7.31	364	$ 1,310.73	$ 1,307.14	-
	987300000	0987300592	7.31	364	$ 1,310.73	$ 1,307.14	-
	1119000000	1119000985	10	364	$ 1,793.06	$ 1,788.15	-
	1217410000	1217410703	7.74	364	$ 1,387.83	$ 1,384.03	-
	1017510000	1017510135	8	364	$ 1,434.45	$ 1,430.52	-
	1688200000	1688200347	8.17	364	$ 1,464.93	$ 1,460.92	-
	1847100000	1847100290	8.38	364	$ 1,502.58	$ 1,498.47	-
	2434800000	2434800106	8.4	364	$ 1,506.17	$ 1,502.04	-
	1734510000	1734510418	8.6	364	$ 1,542.03	$ 1,537.81	-
	2603410000	2603410523	8.6	364	$ 1,542.03	$ 1,537.81	-
	2336000000	2336000288	9.46	364	$ 1,696.23	$ 1,691.59	-
	2442336083	2442336432	9.5	364	$ 1,703.41	$ 1,698.74	-
	2988600000	2988600103	9.89	364	$ 1,773.34	$ 1,768.48	-
	2462310000	2462310126	10	364	$ 1,793.06	$ 1,788.15	-
	3559410000	3559410900	10.1	364	$ 1,810.99	$ 1,806.03	-
	3250100000	3250100364	10.3	364	$ 1,846.85	$ 1,841.79	-
	2605010000	2605010575	10.32	364	$ 1,850.44	$ 1,845.37	-
	3911300000	3911300486	10.75	364	$ 1,927.54	$ 1,922.26	-
	3024900000	3024900071	10.75	364	$ 1,927.54	$ 1,922.26	-
	3958210000	3958210792	10.9	364	$ 1,954.43	$ 1,949.08	-
	3899010000	3899010767	10.97	364	$ 1,966.99	$ 1,961.60	-
	3985100000	3985100962	10.97	364	$ 1,966.99	$ 1,961.60	-
	3304100000	3304100961	10.97	364	$ 1,966.99	$ 1,961.60	-
	3027684156	3027684986	10.97	364	$ 1,966.99	$ 1,961.60	-
	3959000000	3959000553	10.97	364	$ 1,966.99	$ 1,961.60	-
	2174100000	2174100743	10.97	364	$ 1,966.99	$ 1,961.60	-
	3481400000	3481400680	10.97	364	$ 1,966.99	$ 1,961.60	-
	2688210000	2688210514	10.97	364	$ 1,966.99	$ 1,961.60	-
	2713200000	2713200545	10.97	364	$ 1,966.99	$ 1,961.60	-
	2690500000	2690500671	10.97	364	$ 1,966.99	$ 1,961.60	-
	4253400085	4253400203	10.97	364	$ 1,966.99	$ 1,961.60	-
	4549300000	4549300569	10.97	364	$ 1,966.99	$ 1,961.60	-
	2720200000	2720200447	10.97	364	$ 1,966.99	$ 1,961.60	-
	4353000000	4353000083	10.97	364	$ 1,966.99	$ 1,961.60	-
	3120200000	3120200176	10.97	364	$ 1,966.99	$ 1,961.60	-
	2207800000	2207800945	10.97	364	$ 1,966.99	$ 1,961.60	-
	1894400000	1894400521	10.97	364	$ 1,966.99	$ 1,961.60	-
	2914100000	2914100149	10.97	364	$ 1,966.99	$ 1,961.60	-
	3163500000	3163500455	11	364	$ 1,972.37	$ 1,966.96	-
	3167900000	3167900646	11	364	$ 1,972.37	$ 1,966.96	-
	2557100000	2557100370	11	364	$ 1,972.37	$ 1,966.96	-
	3663985122	3663985351	11	364	$ 1,972.37	$ 1,966.96	-
	4398000000	4398000748	11	364	$ 1,972.37	$ 1,966.96	-
	3006310000	3006310255	11	364	$ 1,972.37	$ 1,966.96	-
	2833900000	2833900136	11.59	364	$ 2,078.16	$ 2,072.46	-
	4195410000	4195410653	11.6	364	$ 2,079.95	$ 2,074.25	-

Rate Class	Customer Number	Service Agreement Number	Sum of Size (KW)	Sum of Days to FY 17	Estimated Annual Revenue Loss $	FY 17 Estimated Revenue Loss $	Net Credit to Grid (kWh)
	3801100000	3801100495	11.61	364	$ 2,081.74	$ 2,076.04	-
	2540200000	2540200878	11.61	364	$ 2,081.74	$ 2,076.04	-
	5124200000	5124200828	11.8	364	$ 2,115.81	$ 2,110.01	-
	5290210000	5290210923	12	364	$ 2,151.67	$ 2,145.78	-
	2517010000	2517010486	12	364	$ 2,151.67	$ 2,145.78	-
	4578100000	4578100198	12.02	364	$ 2,155.26	$ 2,149.35	-
	4466000000	4466000671	12.04	364	$ 2,158.84	$ 2,152.93	-
	3727200000	3727200896	12.25	364	$ 2,196.50	$ 2,190.48	-
	2512200000	2512200644	12.47	364	$ 2,235.94	$ 2,229.82	-
	4553100000	4553100403	12.47	364	$ 2,235.94	$ 2,229.82	-
	4204100000	4204100950	12.47	364	$ 2,235.94	$ 2,229.82	-
	2839000000	2839000311	12.5	364	$ 2,241.32	$ 2,235.18	-
	5070100000	5070100597	13	364	$ 2,330.98	$ 2,324.59	-
	4260100000	4260100496	13.3	364	$ 2,384.77	$ 2,378.24	-
	2772271223	2772271712	13.76	364	$ 2,467.25	$ 2,460.49	-
	5466000000	5466000673	13.97	364	$ 2,504.90	$ 2,498.04	-
	3767000000	3767000689	14	364	$ 2,510.28	$ 2,503.41	-
	3500400000	3500400704	14.62	364	$ 2,621.45	$ 2,614.27	-
	2843210000	2843210015	14.62	364	$ 2,621.45	$ 2,614.27	-
	4369800000	4369800094	14.62	364	$ 2,621.45	$ 2,614.27	-
	3194100000	3194100992	14.62	364	$ 2,621.45	$ 2,614.27	-
	4567100000	4567100685	14.62	364	$ 2,621.45	$ 2,614.27	-
	6228400000	6228400267	14.62	364	$ 2,621.45	$ 2,614.27	-
	6440510000	6440510932	14.62	364	$ 2,621.45	$ 2,614.27	-
	4634900000	4634900436	14.62	364	$ 2,621.45	$ 2,614.27	-
	3715100000	3715100307	14.62	364	$ 2,621.45	$ 2,614.27	-
	4696600000	4696600247	14.62	364	$ 2,621.45	$ 2,614.27	-
	4479300000	4479300166	14.62	364	$ 2,621.45	$ 2,614.27	-
	3475000000	3475000152	14.62	364	$ 2,621.45	$ 2,614.27	-
	6253100000	6253100370	14.62	364	$ 2,621.45	$ 2,614.27	-
	6347600000	6347600372	14.62	364	$ 2,621.45	$ 2,614.27	-
	3224400000	3224400890	14.62	364	$ 2,621.45	$ 2,614.27	-
	4656210000	4656210418	14.62	364	$ 2,621.45	$ 2,614.27	-
	2946600000	2946600357	14.62	364	$ 2,621.45	$ 2,614.27	-
	5278223506	5278223856	15.7	364	$ 2,815.10	$ 2,807.39	-
	4435000000	4435000194	16	364	$ 2,868.89	$ 2,861.03	-
	4519100000	4519100072	16.77	364	$ 3,006.96	$ 2,998.72	-
	4876310000	4876310886	16.98	364	$ 3,044.61	$ 3,036.27	-
	7083000000	7083000408	17	364	$ 3,048.20	$ 3,039.85	-
	3379210000	3379210482	17.2	364	$ 3,084.06	$ 3,075.61	-
	5143023232	5143023157	18.5	364	$ 3,317.16	$ 3,308.07	-
	3836000000	3836000341	18.9	364	$ 3,388.88	$ 3,379.60	-
	3490600000	3490600271	18.92	364	$ 3,392.47	$ 3,383.17	-
	4675310000	4675310774	19.35	364	$ 3,469.57	$ 3,460.06	-
	7032100000	7032100499	8.4	364	$ 1,506.17	$ 1,502.04	-
	7642500000	7642500116	1	364	$ 179.31	$ 178.81	-
	4137800000	4137800446	6	364	$ 1,075.84	$ 1,072.89	-
	8003900000	8003900360	13	364	$ 2,330.98	$ 2,324.59	-
	7504100000	7504100989	5	364	$ 896.53	$ 894.07	-
	6923000000	6923000371	9.5	364	$ 1,703.41	$ 1,698.74	-
	7795200000	7795200709	10.97	364	$ 1,966.99	$ 1,961.60	-
	7626500000	7626500154	21.5	364	$ 3,855.08	$ 3,844.52	-
	6206600000	6206600269	7	364	$ 1,255.14	$ 1,251.70	-
	4401010000	4401010728	9	364	$ 1,613.75	$ 1,609.33	-
	7860900000	7860900092	5	364	$ 896.53	$ 894.07	-
	6327400000	6327400093	5.25	364	$ 941.36	$ 938.78	-
	7008100000	7008100530	9.25	364	$ 1,658.58	$ 1,654.04	-
	5813200000	5813200560	9.24	364	$ 1,656.79	$ 1,652.25	-

Rate Class	Customer Number	Service Agreement Number	Sum of Size (KW)	Sum of Days to FY 17	Estimated Annual Revenue Loss $	FY 17 Estimated Revenue Loss $	Net Credit to Grid (kWh)
	7078210000	7078210131	10.1	364	$ 1,810.99	$ 1,806.03	-
	7732100000	7732100582	5	364	$ 896.53	$ 894.07	-
	6810900000	6810900183	6	364	$ 1,075.84	$ 1,072.89	-
	6333000000	6333000420	5	364	$ 896.53	$ 894.07	-
	8061000000	8061000183	10	364	$ 1,793.06	$ 1,788.15	-
	6413000000	6413000189	3	364	$ 537.92	$ 536.44	-
	8424840332	8424840483	14	364	$ 2,510.28	$ 2,503.41	-
	8313110000	8313110004	7	364	$ 1,255.14	$ 1,251.70	-
	7499300000	7499300586	4.94	364	$ 885.77	$ 883.34	-
	7844000000	7844000229	10.75	364	$ 1,927.54	$ 1,922.26	-
	8666000000	8666000525	11	364	$ 1,972.37	$ 1,966.96	-
	3943300000	3943300368	4.73	364	$ 848.12	$ 845.79	-
	3999128980	3999128436	9.5	364	$ 1,703.41	$ 1,698.74	-
	5077510000	5077510921	18.72	364	$ 3,356.61	$ 3,347.41	-
	4375310000	4375310738	10.97	364	$ 1,966.99	$ 1,961.60	-
	4522300000	4522300762	5	364	$ 896.53	$ 894.07	-
	5765000000	5765000077	5.6	364	$ 1,004.11	$ 1,001.36	-
	4033500000	4033500859	8	364	$ 1,434.45	$ 1,430.52	-
	4842210000	4842210093	6.75	364	$ 1,210.31	$ 1,207.00	-
	4145300000	4145300186	8.81	364	$ 1,579.69	$ 1,575.36	-
	3960100000	3960100582	11	364	$ 1,972.37	$ 1,966.96	-
	4991900000	4991900020	7.31	364	$ 1,310.73	$ 1,307.14	-
	6028100000	6028100959	5	364	$ 896.53	$ 894.07	-
	7518000000	7518000776	8.17	364	$ 1,464.93	$ 1,460.92	-
	4193100000	4193100823	10.97	364	$ 1,966.99	$ 1,961.60	-
	6952110000	6952110854	6.5	364	$ 1,165.49	$ 1,162.30	-
	5108110000	5108110365	10.5	364	$ 1,882.71	$ 1,877.55	-
	5171100000	5171100740	8.38	364	$ 1,502.58	$ 1,498.47	-
	7088900000	7088900161	2	364	$ 358.61	$ 357.63	-
	7279800000	7279800373	9.89	364	$ 1,773.34	$ 1,768.48	-
	6787000000	6787000960	10.97	364	$ 1,966.99	$ 1,961.60	-
	7385700000	7385700855	7.74	364	$ 1,387.83	$ 1,384.03	-
	8715200000	8715200857	5.3	364	$ 950.32	$ 947.72	-
	6285010000	6285010329	6	364	$ 1,075.84	$ 1,072.89	-
	8189815898	8189815608	5	364	$ 896.53	$ 894.07	-
	4179200000	4179200267	10.97	364	$ 1,966.99	$ 1,961.60	-
	6635310000	6635310888	8.4	364	$ 1,506.17	$ 1,502.04	-
	8902400000	8902400348	4	364	$ 717.22	$ 715.26	-
	8225100000	8225100368	10.75	364	$ 1,927.54	$ 1,922.26	-
	5839000000	5839000314	10.97	364	$ 1,966.99	$ 1,961.60	-
	5492410000	5492410373	8.6	364	$ 1,542.03	$ 1,537.81	-
	4941500000	4941500055	7.31	364	$ 1,310.73	$ 1,307.14	-
	4851310000	4851310300	7	364	$ 1,255.14	$ 1,251.70	-
	7318600000	7318600477	5.16	364	$ 925.22	$ 922.68	-
	5260300000	5260300262	6	364	$ 1,075.84	$ 1,072.89	-
	8494900000	8494900835	10.97	364	$ 1,966.99	$ 1,961.60	-
	4360100000	4360100510	10.97	364	$ 1,966.99	$ 1,961.60	-
	8126310000	8126310688	6.7	364	$ 1,201.35	$ 1,198.06	-
	5009000000	5009000850	10.4	364	$ 1,864.78	$ 1,859.67	-
	6440010000	6440010514	8.81	364	$ 1,579.69	$ 1,575.36	-
	4550600000	4550600464	2.2	364	$ 394.47	$ 393.39	-
	7332000000	7332000017	14.62	364	$ 2,621.45	$ 2,614.27	-
	5717000000	5717000345	10.97	364	$ 1,966.99	$ 1,961.60	-
	8742100000	8742100711	7.31	364	$ 1,310.73	$ 1,307.14	-
	8441110000	8441110686	10.97	364	$ 1,966.99	$ 1,961.60	-
	7558310000	7558310017	12.6	364	$ 2,259.25	$ 2,253.06	-
	5093800000	5093800971	6	364	$ 1,075.84	$ 1,072.89	-
	25010000	0025010912	5.8	364	$ 1,039.97	$ 1,037.13	-

Rate Class	Customer Number	Service Agreement Number	Sum of Size (KW)	Sum of Days to FY 17	Estimated Annual Revenue Loss $	FY 17 Estimated Revenue Loss $	Net Credit to Grid (kWh)
	129212737	0129212980	7.1	364	$ 1,273.07	$ 1,269.58	-
	842310000	0842310734	7.31	364	$ 1,310.73	$ 1,307.14	-
	79410000	0079410335	7.31	364	$ 1,310.73	$ 1,307.14	-
	338000000	0338000175	7.5	364	$ 1,344.79	$ 1,341.11	-
	124100000	0124100171	7.7	364	$ 1,380.66	$ 1,376.87	-
	971100000	0971100828	7.74	364	$ 1,387.83	$ 1,384.03	-
	667800000	0667800194	8	364	$ 1,434.45	$ 1,430.52	-
	337600000	0337600062	8.4	364	$ 1,506.17	$ 1,502.04	-
	1002200000	1002200286	8.6	364	$ 1,542.03	$ 1,537.81	-
	928400000	0928400341	9	364	$ 1,613.75	$ 1,609.33	-
	1249000000	1249000357	9	364	$ 1,613.75	$ 1,609.33	-
	212210000	0212210320	9	364	$ 1,613.75	$ 1,609.33	-
	994510000	0994510188	10	364	$ 1,793.06	$ 1,788.15	-
	1045100000	1045100658	10.1	364	$ 1,810.99	$ 1,806.03	-
	714400000	0714400832	10.32	364	$ 1,850.44	$ 1,845.37	-
	1343100000	1343100261	10.53	364	$ 1,888.09	$ 1,882.92	-
	559010000	0559010920	10.9	364	$ 1,954.43	$ 1,949.08	-
	818000000	0818000808	10.97	364	$ 1,966.99	$ 1,961.60	-
	1604110000	1604110157	10.97	364	$ 1,966.99	$ 1,961.60	-
	1400100000	1400100995	10.97	364	$ 1,966.99	$ 1,961.60	-
	479000000	0479000730	10.97	364	$ 1,966.99	$ 1,961.60	-
	1154400000	1154400609	10.97	364	$ 1,966.99	$ 1,961.60	-
	921510000	0921510308	11	364	$ 1,972.37	$ 1,966.96	-
	1028400000	1028400142	11	364	$ 1,972.37	$ 1,966.96	-
	454100000	0454100548	11.18	364	$ 2,004.64	$ 1,999.15	-
	1553100000	1553100398	11.18	364	$ 2,004.64	$ 1,999.15	-
	783100000	0783100774	11.4	364	$ 2,044.09	$ 2,038.49	-
	1713310000	1713310365	11.54	364	$ 2,069.19	$ 2,063.52	-
	2048300000	2048300208	11.61	364	$ 2,081.74	$ 2,076.04	-
	1667100000	1667100695	11.78	364	$ 2,112.22	$ 2,106.44	-
	1777000000	1777000821	12	364	$ 2,151.67	$ 2,145.78	-
	1994000000	1994000813	12	364	$ 2,151.67	$ 2,145.78	-
	2049000000	2049000332	12	364	$ 2,151.67	$ 2,145.78	-
	1385510000	1385510314	12.04	364	$ 2,158.84	$ 2,152.93	-
	921600000	0921600049	12.25	364	$ 2,196.50	$ 2,190.48	-
	1373600000	1373600431	12.4	364	$ 2,223.39	$ 2,217.30	-
	2056200000	2056200844	12.47	364	$ 2,235.94	$ 2,229.82	-
	1668800000	1668800095	12.68	364	$ 2,273.60	$ 2,267.37	-
	2363100000	2363100494	13.11	364	$ 2,350.70	$ 2,344.26	-
	884110000	0884110145	13.54	364	$ 2,427.80	$ 2,421.15	-
	671300000	0671300822	13.86	364	$ 2,485.18	$ 2,478.37	-
	2048110000	2048110173	14.2	364	$ 2,546.14	$ 2,539.17	-
	771100000	0771100806	14.62	364	$ 2,621.45	$ 2,614.27	-
	655210000	0655210697	14.62	364	$ 2,621.45	$ 2,614.27	-
	2038210000	2038210252	14.62	364	$ 2,621.45	$ 2,614.27	-
	1524410000	1524410544	14.62	364	$ 2,621.45	$ 2,614.27	-
	1458000000	1458000276	14.62	364	$ 2,621.45	$ 2,614.27	-
	1590100000	1590100908	14.62	364	$ 2,621.45	$ 2,614.27	-
	2119000000	2119000987	14.62	364	$ 2,621.45	$ 2,614.27	-
	1123000000	1123000264	14.62	364	$ 2,621.45	$ 2,614.27	-
	1352410000	1352410612	14.62	364	$ 2,621.45	$ 2,614.27	-
	1624000000	1624000968	14.62	364	$ 2,621.45	$ 2,614.27	-
	804749807	0804749894	15	364	$ 2,689.59	$ 2,682.22	-
	1865200000	1865200993	15.05	364	$ 2,698.55	$ 2,691.16	-
	1408800000	1408800039	17.3	364	$ 3,101.99	$ 3,093.49	-
	925510000	0925510442	21	364	$ 3,765.42	$ 3,755.11	-
	2086600000	2086600064	24	364	$ 4,303.34	$ 4,291.55	-
	2895200000	2895200715	7	364	$ 1,255.14	$ 1,251.70	-

Rate Class	Customer Number	Service Agreement Number	Sum of Size (KW)	Sum of Days to FY 17	Estimated Annual Revenue Loss $	FY 17 Estimated Revenue Loss $	Net Credit to Grid (kWh)
	1504400000	1504400497	7	364	$ 1,255.14	$ 1,251.70	-
	2036600000	2036600964	7.31	364	$ 1,310.73	$ 1,307.14	-
	2887010000	2887010020	3	364	$ 537.92	$ 536.44	-
	2233310000	2233310748	10.97	364	$ 1,966.99	$ 1,961.60	-
	3795400000	3795400306	9	364	$ 1,613.75	$ 1,609.33	-
	3986210000	3986210976	7.3	364	$ 1,308.93	$ 1,305.35	-
	3968300000	3968300925	8.6	364	$ 1,542.03	$ 1,537.81	-
	1853700000	1853700857	6.5	364	$ 1,165.49	$ 1,162.30	-
	2617210000	2617210702	13	364	$ 2,330.98	$ 2,324.59	-
	1389100000	1389100637	2.5	364	$ 448.26	$ 447.04	-
	1583510000	1583510898	14.6	364	$ 2,617.87	$ 2,610.69	-
	2599400000	2599400466	7.8	364	$ 1,398.59	$ 1,394.75	-
	1875110000	1875110311	6.5	364	$ 1,165.49	$ 1,162.30	-
	3418100000	3418100882	5	364	$ 896.53	$ 894.07	-
	3548900000	3548900388	8.6	364	$ 1,542.03	$ 1,537.81	-
	2616110000	2616110110	6.45	364	$ 1,156.52	$ 1,153.35	-
	3555800000	3555800593	3.6	364	$ 645.50	$ 643.73	-
	1873100000	1873100675	8.61	364	$ 1,543.82	$ 1,539.59	-
	3980410000	3980410283	3	364	$ 537.92	$ 536.44	-
	3250000000	3250000873	11.61	364	$ 2,081.74	$ 2,076.04	-
	1864100000	1864100504	7.09	364	$ 1,271.28	$ 1,267.80	-
	3027100000	3027100883	5	364	$ 896.53	$ 894.07	-
	2277310000	2277310912	2	364	$ 358.61	$ 357.63	-
	2205310000	2205310083	8.77	364	$ 1,572.51	$ 1,568.20	-
	3191600000	3191600485	9.67	364	$ 1,733.89	$ 1,729.14	-
	2715210000	2715210646	7.5	364	$ 1,344.79	$ 1,341.11	-
	2905100000	2905100213	25	364	$ 4,482.65	$ 4,470.37	-
	4573300000	4573300047	20	364	$ 3,586.12	$ 3,576.29	-
	28900000	0028900864	7.31	364	$ 1,310.73	$ 1,307.14	-
	697400000	0697400680	8	364	$ 1,434.45	$ 1,430.52	(10,401.49)
	822500000	0822500091	6	364	$ 1,075.84	$ 1,072.89	(6,673.46)
	148400000	0148400682	9.46	364	$ 1,696.23	$ 1,691.59	(2,502.88)
	263000000	0263000179	20.4	364	$ 3,657.84	$ 3,647.82	(1,720.64)
	30100000	0030100025	10	364	$ 1,793.06	$ 1,788.15	(1,412.87)
	1116200000	1116200047	1	364	$ 179.31	$ 178.81	(1,364.20)
	363200000	0363200614	14.62	364	$ 2,621.45	$ 2,614.27	(1,239.72)
	535800000	0535800185	5.6	364	$ 1,004.11	$ 1,001.36	(427.39)
	943010000	0943010841	5	364	$ 896.53	$ 894.07	(103.17)
	357010000	0357010269	6	364	$ 1,075.84	$ 1,072.89	(26.14)
	43410000	0043410360	7.74	364	$ 1,387.83	$ 1,384.03	-
	48110000	0048110170	8.6	364	$ 1,542.03	$ 1,537.81	-
	96110000	0096110676	9	364	$ 1,613.75	$ 1,609.33	-
	284100000	0284100881	10.97	364	$ 1,966.99	$ 1,961.60	-
	130500000	0130500274	10.97	364	$ 1,966.99	$ 1,961.60	-
	361200000	0361200486	10.97	364	$ 1,966.99	$ 1,961.60	-
	105310000	0105310070	10.97	364	$ 1,966.99	$ 1,961.60	-
	116800000	0116800932	11	364	$ 1,972.37	$ 1,966.96	-
	217410000	0217410702	12.2	364	$ 2,187.53	$ 2,181.54	-
	301000000	0301000113	13.33	364	$ 2,390.15	$ 2,383.60	-
	632110000	0632110402	14.6	364	$ 2,617.87	$ 2,610.69	-
	458100000	0458100745	14.62	364	$ 2,621.45	$ 2,614.27	-
	408310000	0408310716	18.27	364	$ 3,275.92	$ 3,266.94	-
	274100000	0274100753	18.3	364	$ 3,281.30	$ 3,272.31	-
	139300000	0139300202	25	364	$ 4,482.65	$ 4,470.37	-
	692400000	0692400174	6.5	364	$ 1,165.49	$ 1,162.30	-
	499000000	0499000971	8.7	364	$ 1,559.96	$ 1,555.69	-
	742400000	0742400050	8.6	364	$ 1,542.03	$ 1,537.81	-
	960100000	0960100579	9	364	$ 1,613.75	$ 1,609.33	-

Rate Class	Customer Number	Service Agreement Number	Sum of Size (KW)	Sum of Days to FY 17	Estimated Annual Revenue Loss $	FY 17 Estimated Revenue Loss $	Net Credit to Grid (kWh)
	1347510000	1347510100	3	364	$ 537.92	$ 536.44	-
	853600000	0853600060	10.1	364	$ 1,810.99	$ 1,806.03	-
	392210000	0392210639	11	364	$ 1,972.37	$ 1,966.96	-
	574000000	0574000539	5	364	$ 896.53	$ 894.07	-
	643600000	0643600926	7.31	364	$ 1,310.73	$ 1,307.14	-
	425310000	0425310537	14.58	364	$ 2,614.28	$ 2,607.12	-
	429500000	0429500314	5	364	$ 896.53	$ 894.07	-
	2510000	0002510232	7.31	364	$ 1,310.73	$ 1,307.14	-
	19310000	0019310713	12	364	$ 2,151.67	$ 2,145.78	(912.53)
	46200000	0046200545	14.2	364	$ 2,546.14	$ 2,539.17	(415.07)
	44100000	0044100386	14.62	364	$ 2,621.45	$ 2,614.27	-
	89000000	0089000810	14.62	364	$ 2,621.45	$ 2,614.27	-
	24110000	0024110506	16	364	$ 2,868.89	$ 2,861.03	-
	145400000	0145400082	15.48	364	$ 2,775.66	$ 2,768.05	-
	12800000	0012800864	3.6	364	$ 645.50	$ 643.73	
	301500000	0301500162	14	364	$ 2,510.28	$ 2,503.41	(954.97)
	5743100000	5743100310	10.75	364	$ 1,927.54	$ 1,922.26	(6,766.01)
	3269310000	3269310000	6.4	364	$ 1,147.56	$ 1,144.41	(6,706.68)
	1939000000	1939000320	10.75	364	$ 1,927.54	$ 1,922.26	(5,746.29)
	2860100000	2860100569	10.97	364	$ 1,966.99	$ 1,961.60	(4,762.72)
	6256300000	6256300585	9.67	364	$ 1,733.89	$ 1,729.14	(3,521.29)
	3595210000	3595210508	9.46	364	$ 1,696.23	$ 1,691.59	(3,454.54)
	9035700000	9035700686	7.1	364	$ 1,273.07	$ 1,269.58	(2,957.59)
	6484100000	6484100912	8.4	364	$ 1,506.17	$ 1,502.04	(1,600.16)
	1465700000	1465700238	11.825	364	$ 2,120.29	$ 2,114.48	(892.12)
	939900000	0939900251	4	364	$ 717.22	$ 715.26	(703.34)
	4082000000	4082000483	13.5	364	$ 2,420.63	$ 2,414.00	(291.53)
	4553300000	4553300627	4	364	$ 717.22	$ 715.26	-
	8642100000	8642100700	5	364	$ 896.53	$ 894.07	-
	9083400000	9083400024	5	364	$ 896.53	$ 894.07	-
	8916410000	8916410414	7.31	364	$ 1,310.73	$ 1,307.14	-
	6423100000	6423100454	7.31	364	$ 1,310.73	$ 1,307.14	-
	3182000000	3182000492	7.31	364	$ 1,310.73	$ 1,307.14	-
	3249200000	3249200570	8	364	$ 1,434.45	$ 1,430.52	-
	7660400000	7660400174	10.97	364	$ 1,966.99	$ 1,961.60	-
	7580600000	7580600175	14.62	364	$ 2,621.45	$ 2,614.27	-
	3070210000	3070210295	14.62	364	$ 2,621.45	$ 2,614.27	-
	6268110000	6268110602	14.62	364	$ 2,621.45	$ 2,614.27	-
	1310100000	1310100111	10.5	364	$ 1,882.71	$ 1,877.55	(152.83)
	90310000	0090310067	5	364	$ 896.53	$ 894.07	-
	8465400000	8465400559	10.75	363	$ 1,927.54	$ 1,916.98	-
	8268200000	8268200896	11.18	363	$ 2,004.64	$ 1,993.66	-
	8518700000	8518700612	6.6	363	$ 1,183.42	$ 1,176.93	-
	8408300000	8408300955	3	363	$ 537.92	$ 534.97	-
	9869410000	9869410322	7.75	363	$ 1,389.62	$ 1,382.01	-
	9716300000	9716300802	9.25	363	$ 1,658.58	$ 1,649.49	-
	6600468720	6600468147	4.94	363	$ 885.77	$ 880.92	-
	5056510000	5056510521	4.51	363	$ 808.67	$ 804.24	-
	4302100000	4302100148	4.15	363	$ 744.12	$ 740.04	-
	7327010000	7327010582	7	363	$ 1,255.14	$ 1,248.26	-
	6694210000	6694210217	9.45	363	$ 1,694.44	$ 1,685.16	-
	7100110000	7100110804	4.08	363	$ 731.57	$ 727.56	-
	3728000000	3728000922	9.24	363	$ 1,656.79	$ 1,647.71	-
	6557700000	6557700209	7.25	363	$ 1,299.97	$ 1,292.84	-
	7234410000	7234410881	6.6	363	$ 1,183.42	$ 1,176.93	-
	6366600000	6366600692	18.72	363	$ 3,356.61	$ 3,338.21	-
	8149100000	8149100769	11.82	363	$ 2,119.40	$ 2,107.78	-
	7459017427	7459017987	6	363	$ 1,075.84	$ 1,069.94	-

Rate Class	Customer Number	Service Agreement Number	Sum of Size (KW)	Sum of Days to FY 17	Estimated Annual Revenue Loss $	FY 17 Estimated Revenue Loss $	Net Credit to Grid (kWh)
	4431600000	4431600304	12.75	363	$ 2,286.15	$ 2,273.62	-
	5423210000	5423210365	8.75	363	$ 1,568.93	$ 1,560.33	-
	6423210000	6423210366	5.25	363	$ 941.36	$ 936.20	-
	5347500000	5347500399	11.75	363	$ 2,106.84	$ 2,095.30	-
	6124000000	6124000911	9	363	$ 1,613.75	$ 1,604.91	-
	3947740032	3947740528	10.53	363	$ 1,888.09	$ 1,877.75	-
	7090010000	7090010396	9	363	$ 1,613.75	$ 1,604.91	-
	2466410000	2466410420	6.45	363	$ 1,156.52	$ 1,150.19	-
	1505300000	1505300386	8.81	363	$ 1,579.69	$ 1,571.03	-
	2663110000	2663110151	11.4	363	$ 2,044.09	$ 2,032.89	-
	2432900000	2432900765	7.5	363	$ 1,344.79	$ 1,337.43	-
	1075200000	1075200016	4.5	363	$ 806.88	$ 802.46	-
	1620900000	1620900264	5.37	363	$ 962.87	$ 957.60	-
	1615200000	1615200840	4.94	363	$ 885.77	$ 880.92	-
	2635000000	2635000215	9	363	$ 1,613.75	$ 1,604.91	-
	2768110000	2768110839	10.75	363	$ 1,927.54	$ 1,916.98	-
	1503510000	1503510729	5.59	363	$ 1,002.32	$ 996.83	-
	1521900000	1521900447	13.33	363	$ 2,390.15	$ 2,377.05	-
	3502567229	3502567317	11	363	$ 1,972.37	$ 1,961.56	-
	606941728	0606941569	5.37	363	$ 962.87	$ 957.60	-
	371110000	0371110171	12.9	363	$ 2,313.05	$ 2,300.37	-
	42510000	0042510099	5.5	363	$ 986.18	$ 980.78	-
	35163515	0035163111	4.73	363	$ 848.12	$ 843.47	-
	9016100000	9016100420	10.32	362	$ 1,850.44	$ 1,835.23	-
	8960400000	8960400209	10.5	362	$ 1,882.71	$ 1,867.24	-
	9345100000	9345100705	11.75	362	$ 2,106.84	$ 2,089.53	-
	7891914768	7891914699	6.5	362	$ 1,165.49	$ 1,155.91	-
	3494100000	3494100030	14	362	$ 2,510.28	$ 2,489.65	-
	3539800000	3539800603	12.5	362	$ 2,241.32	$ 2,222.90	-
	7360200000	7360200296	7.75	362	$ 1,389.62	$ 1,378.20	-
	5440600000	5440600346	4.5	362	$ 806.88	$ 800.24	-
	5475449001	5475449791	13	362	$ 2,330.98	$ 2,311.82	-
	5098757190	5098757958	11.61	362	$ 2,081.74	$ 2,064.63	-
	4764100000	4764100704	9.89	362	$ 1,773.34	$ 1,758.76	-
	6755100000	6755100870	7	362	$ 1,255.14	$ 1,244.83	-
	3444410000	3444410540	9.03	362	$ 1,619.13	$ 1,605.82	-
	2844700000	2844700756	7	362	$ 1,255.14	$ 1,244.83	-
	3326010000	3326010154	6.66	362	$ 1,194.18	$ 1,184.36	-
	1905100000	1905100212	6.25	362	$ 1,120.66	$ 1,111.45	-
	450136389	0450136893	4.5	362	$ 806.88	$ 800.24	-
	390004380	0390004820	6.25	362	$ 1,120.66	$ 1,111.45	-
	40510000	0040510869	7	362	$ 1,255.14	$ 1,244.83	-
	8298000000	8298000740	14	361	$ 2,510.28	$ 2,482.77	-
	4619100000	4619100084	7	361	$ 1,255.14	$ 1,241.39	-
	4837100000	4837100407	10.53	361	$ 1,888.09	$ 1,867.40	-
	5448110000	5448110217	9.46	361	$ 1,696.23	$ 1,677.65	-
	6024100000	6024100166	10	361	$ 1,793.06	$ 1,773.41	-
	6479000000	6479000740	4.75	361	$ 851.70	$ 842.37	-
	7734688864	7734688414	18.92	361	$ 3,392.47	$ 3,355.29	-
	7156310000	7156310157	12	361	$ 2,151.67	$ 2,128.09	-
	3496180063	3496180196	16.5	361	$ 2,958.55	$ 2,926.13	-
	7163200000	7163200600	7	361	$ 1,255.14	$ 1,241.39	-
	3809000000	3809000945	13.5	361	$ 2,420.63	$ 2,394.10	-
	2583100000	2583100756	8.81	361	$ 1,579.69	$ 1,562.37	-
	1617600000	1617600864	6.45	361	$ 1,156.52	$ 1,143.85	-
	1711500000	1711500098	7.25	361	$ 1,299.97	$ 1,285.72	-
	1239310000	1239310423	5.75	361	$ 1,031.01	$ 1,019.71	-
	960210000	0960210281	15.91	361	$ 2,852.76	$ 2,821.49	-

Rate Class	Customer Number	Service Agreement Number	Sum of Size (KW)	Sum of Days to FY 17	Estimated Annual Revenue Loss $	FY 17 Estimated Revenue Loss $	Net Credit to Grid (kWh)
	554300000	0554300258	11.61	360	$ 2,081.74	$ 2,053.22	-
	1072000000	1072000370	1.93	359	$ 346.06	$ 340.37	(361.47)
	1562000000	1562000313	7.09	359	$ 1,271.28	$ 1,250.38	-
	7946510000	7946510437	8.17	357	$ 1,464.93	$ 1,432.82	(486.87)
	1295891814	1295891274	10	357	$ 1,793.06	$ 1,753.76	-
	8750100000	8750100432	15	353	$ 2,689.59	$ 2,601.16	-
	6402417383	6402417072	9.9	352	$ 1,775.13	$ 1,711.90	(2,539.65)
	8990967853	8990967232	9.25	350	$ 1,658.58	$ 1,590.42	-
	9833986408	9833986836	5.37	343	$ 962.87	$ 904.84	(1,699.34)
	759210000	0759210083	14.19	342	$ 2,544.35	$ 2,384.02	-
	7174266813	7174266259	5	340	$ 896.53	$ 835.12	-
	798516764	0798516681	7.74	340	$ 1,387.83	$ 1,292.77	-
	4864110000	4864110391	7.52	339	$ 1,348.38	$ 1,252.33	-
	4361076952	4361076039	7.05	339	$ 1,264.11	$ 1,174.06	-
	3442415635	3442415468	3.87	336	$ 693.91	$ 638.78	-
	431607753	0431607447	7.75	336	$ 1,389.62	$ 1,279.21	-
	7874144222	7874144695	12.47	328	$ 2,235.94	$ 2,009.29	-
	2674899857	2674899986	10.53	325	$ 1,888.09	$ 1,681.18	-
	8594313520	8594313930	6.45	324	$ 1,156.52	$ 1,026.61	-
	9238015492	9238015080	13.5	315	$ 2,420.63	$ 2,089.04	-
	8560400000	8560400164	7	315	$ 1,255.14	$ 1,083.20	-
	1076097383	1076097165	12.9	315	$ 2,313.05	$ 1,996.19	-
	2466016702	2466016531	8	312	$ 1,434.45	$ 1,226.16	(1,985.49)
	3196700000	3196700133	8.17	308	$ 1,464.93	$ 1,236.16	-
	7087230861	7087230836	5.8	307	$ 1,039.97	$ 874.72	-
	6095356509	6095356744	5.5	294	$ 986.18	$ 794.35	-
	4429010000	4429010226	14.62	291	$ 2,621.45	$ 2,089.98	-
	7578527440	7578527545	2.4	291	$ 430.33	$ 343.09	-
	3056132162	3056132803	15.2	286	$ 2,725.45	$ 2,135.56	-
	2571174725	2571174318	7.52	284	$ 1,348.38	$ 1,049.15	(4,553.88)
	8812110000	8812110023	4.3	284	$ 771.02	$ 599.91	-
	9448400000	9448400723	9.46	283	$ 1,696.23	$ 1,315.16	-
	262025635	0262025419	7	280	$ 1,255.14	$ 962.85	-
	2636579859	2636579806	5.59	274	$ 1,002.32	$ 752.43	(715.04)
	8319745544	8319745246	3	274	$ 537.92	$ 403.81	-
	5645410000	5645410415	7	274	$ 1,255.14	$ 942.22	-
	1021903131	1021903765	5.8	273	$ 1,039.97	$ 777.84	-
	2771210000	2771210522	5.16	273	$ 925.22	$ 692.01	-
	1738829185	1738829523	3.01	267	$ 539.71	$ 394.80	-
	7378151482	7378151605	10.5	265	$ 1,882.71	$ 1,366.90	-
	7877900000	7877900034	19	265	$ 3,406.81	$ 2,473.44	-
	3702228367	3702228548	6.66	261	$ 1,194.18	$ 853.92	-
	6272926871	6272926419	8.17	259	$ 1,464.93	$ 1,039.50	-
	3174080907	3174080235	11.39	255	$ 2,042.29	$ 1,426.81	(546.09)
	4629310000	4629310137	11	248	$ 1,972.37	$ 1,340.13	-
	9536675819	9536675009	4.08	247	$ 731.57	$ 495.06	-
	5351798570	5351798562	13.5	232	$ 2,420.63	$ 1,538.59	-
	3824510000	3824510197	4.3	231	$ 771.02	$ 487.96	-
	6111000000	6111000630	9.46	231	$ 1,696.23	$ 1,073.51	-
	4975936639	4975936657	12.75	231	$ 2,286.15	$ 1,446.85	-
	5690327705	5690327556	2.5	225	$ 448.26	$ 276.33	-
	2508037332	2508037743	7.31	225	$ 1,310.73	$ 807.98	-
	3165560614	3165560744	4.51	225	$ 808.67	$ 498.50	-
	9273300000	9273300016	4.25	220	$ 762.05	$ 459.32	-
	1406791632	1406791808	5.75	220	$ 1,031.01	$ 621.43	-
	6750292283	6750292667	9.03	218	$ 1,619.13	$ 967.04	-
	9597295066	9597295461	9.25	217	$ 1,658.58	$ 986.06	-
	9411300000	9411300431	10.75	217	$ 1,927.54	$ 1,145.96	-

Rate Class	Customer Number	Service Agreement Number	Sum of Size (KW)	Sum of Days to FY 17	Estimated Annual Revenue Loss $	FY 17 Estimated Revenue Loss $	Net Credit to Grid (kWh)
	9891452004	9891452832	8	214	$ 1,434.45	$ 841.02	-
	8389410000	8389410367	7.7	203	$ 1,380.66	$ 767.87	-
	13000000	0013000136	7	201	$ 1,255.14	$ 691.19	
	5682110000	5682110520	11	193	$ 1,972.37	$ 1,042.92	-
	4850110000	4850110789	4	192	$ 717.22	$ 377.28	-
	275086999	0275086758	8.17	191	$ 1,464.93	$ 766.58	-
	2658118736	2658118128	4.73	186	$ 848.12	$ 432.19	-
	522100000	0522100432	9.67	180	$ 1,733.89	$ 855.07	-
	7189000000	7189000831	4.73	178	$ 848.12	$ 413.60	-
	6724112436	6724112118	4	172	$ 717.22	$ 337.98	-
	458833930	0458833326	6	172	$ 1,075.84	$ 506.97	-
	6537662741	6537662525	11	171	$ 1,972.37	$ 924.04	-
	8026300000	8026300181	5	168	$ 896.53	$ 412.65	(196.37)
	6487054355	6487054849	3.65	166	$ 654.47	$ 297.65	-
	2883781434	2883781075	11.8	158	$ 2,115.81	$ 915.88	(3,127.24)
	6103488146	6103488887	6.45	154	$ 1,156.52	$ 487.96	-
	3643290457	3643290179	8	153	$ 1,434.45	$ 601.29	-
	197856062	0197856033	6.02	152	$ 1,079.42	$ 449.51	-
	9235100000	9235100573	12.9	146	$ 2,313.05	$ 925.22	-
	4046210000	4046210596	5.75	144	$ 1,031.01	$ 406.75	-
	805398081	0805398349	7.7	144	$ 1,380.66	$ 544.70	-
	5193309294	5193309848	7	141	$ 1,255.14	$ 484.86	-
	2218057940	2218057794	4.25	141	$ 762.05	$ 294.38	-
	8236622848	8236622507	6	140	$ 1,075.84	$ 412.65	-
	9439151337	9439151027	9.03	139	$ 1,619.13	$ 616.60	-
	8611300000	8611300321	11.8	139	$ 2,115.81	$ 805.75	-
	7770410000	7770410921	7.31	138	$ 1,310.73	$ 495.56	-
	2419900000	2419900900	12.75	130	$ 2,286.15	$ 814.25	-
	8236059370	8236059336	2.5	124	$ 448.26	$ 152.29	-
	6667310000	6667310843	11.39	120	$ 2,042.29	$ 671.44	-
	9755510000	9755510417	9.25	119	$ 1,658.58	$ 540.74	-
	6526000000	6526000204	6.66	119	$ 1,194.18	$ 389.33	-
	6671112680	6671112273	10.75	118	$ 1,927.54	$ 623.15	-
	4197130658	4197130318	11	116	$ 1,972.37	$ 626.83	(684.94)
	6846800000	6846800705	4.08	110	$ 731.57	$ 220.47	-
	7439156294	7439156280	4.51	109	$ 808.67	$ 241.49	-
	3389872131	3389872664	7.31	102	$ 1,310.73	$ 366.29	-
	5220328668	5220328999	3.01	96	$ 539.71	$ 141.95	-
	1203510000	1203510687	2.4	94	$ 430.33	$ 110.83	-
	7094068337	7094068094	19	89	$ 3,406.81	$ 830.70	-
	3920178961	3920178390	9.46	81	$ 1,696.23	$ 376.42	-
	1228783075	1228783836	7.31	81	$ 1,310.73	$ 290.87	-
	325518254	0325518071	4.3	80	$ 771.02	$ 168.99	(45.46)
	38300000	0038300887	5.59	75	$ 1,002.32	$ 205.96	-
	7454038485	7454038709	9.46	73	$ 1,696.23	$ 339.25	(11,153.46)
	1528300000	1528300117	14.62	73	$ 2,621.45	$ 524.29	(1,063.08)
	5795510000	5795510523	7.52	72	$ 1,348.38	$ 265.98	-
	5918540489	5918540442	5.5	70	$ 986.18	$ 189.13	-
	8510416576	8510416788	7.05	64	$ 1,264.11	$ 221.65	-
	1047844428	1047844006	4.94	61	$ 885.77	$ 148.03	-
	5366982566	5366982243	5.16	59	$ 925.22	$ 149.56	-
	2996215620	2996215500	8.17	56	$ 1,464.93	$ 224.76	(11,920.20)
	1501016306	1501016921	7	53	$ 1,255.14	$ 182.25	-
	6328210000	6328210966	8	52	$ 1,434.45	$ 204.36	-
	8992410000	8992410447	5.8	52	$ 1,039.97	$ 148.16	-
	1359541688	1359541372	6	52	$ 1,075.84	$ 153.27	-
	9564795680	9564795857	7.31	51	$ 1,310.73	$ 183.14	(3,514.44)
	5574636599	5574636570	10.53	49	$ 1,888.09	$ 253.47	-

Rate Class	Customer Number	Service Agreement Number	Sum of Size (KW)	Sum of Days to FY 17	Estimated Annual Revenue Loss $	FY 17 Estimated Revenue Loss $	Net Credit to Grid (kWh)
	7513100000	7513100345	6.45	48	$ 1,156.52	$ 152.09	-
	1251287099	1251287263	5.8	46	$ 1,039.97	$ 131.07	-
	6388704085	6388704412	3.65	43	$ 654.47	$ 77.10	-
	9491410000	9491410270	3.87	32	$ 693.91	$ 60.84	-
	4490018683	4490018110	6.02	29	$ 1,079.42	$ 85.76	-
	3814700000	3814700048	10	29	$ 1,793.06	$ 142.46	-
	63800000	0063800272	4.51	29	$ 808.67	$ 64.25	-
	605512195	0605512892	9.25	28	$ 1,658.58	$ 127.23	-
	6133022308	6133022507	3	25	$ 537.92	$ 36.84	-
	8333700000	8333700216	5	24	$ 896.53	$ 58.95	-
	2331600000	2331600290	12.47	23	$ 2,235.94	$ 140.90	-
	9346837510	9346837837	2.5	15	$ 448.26	$ 18.42	-
	8964917713	8964917192	4.94	14	$ 885.77	$ 33.97	-
	2451600000	2451600707	10.5	14	$ 1,882.71	$ 72.21	-
	9565989799	9565989069	4.3	12	$ 771.02	$ 25.35	-
	9451410000	9451410318	9.9	12	$ 1,775.13	$ 58.36	-
	8354609772	8354609057	12.47	11	$ 2,235.94	$ 67.38	-
	6387081397	6387081586	7.74	10	$ 1,387.83	$ 38.02	-
	5942326985	5942326913	10	7	$ 1,793.06	$ 34.39	-
	5319390428	5319390035	6.45	6	$ 1,156.52	$ 19.01	-
ESGSD-K	337100000	0337100814	60	169	$ 15,153.20	$ 7,016.14	-
(Rate Schedule K)	3209463043	3209463715	10	220	$ 2,525.53	$ 1,522.24	-
	5357510000	5357510479	22.8	364	$ 5,758.22	$ 5,742.44	-
	5357510000	5357510477	22.8	364	$ 5,758.22	$ 5,742.44	-
	5357510000	5357510476	22.8	364	$ 5,758.22	$ 5,742.44	-
	5537100000	5537100556	10	220	$ 2,525.53	$ 1,522.24	-
	5537100000	5537100267	100	364	$ 25,255.33	$ 25,186.14	-
	9157510000	9157510210	20	364	$ 5,051.07	$ 5,037.23	-
	9157510000	9157510206	29.4	364	$ 7,425.07	$ 7,404.73	-
	9157510000	9157510208	20	364	$ 5,051.07	$ 5,037.23	-
	9157510000	9157510207	20	364	$ 5,051.07	$ 5,037.23	-
	9157510000	9157510209	20	364	$ 5,051.07	$ 5,037.23	-
	9503154359	9503154228	60	219	$ 15,153.20	$ 9,091.92	-
ESGS-S	5357510000	5357510480	2	364	$ 555.97	$ 554.45	-
(Rate Schedule S)	5357510000	5357510475	2	364	$ 555.97	$ 554.45	
	5357510000	5357510474	6	364	$ 1,667.91	$ 1,663.34	(401.71)
	6995000000	6995000430	16	364	$ 4,447.75	$ 4,435.57	-
Grand Totals	**1714**				**$ 3,287,729.07**	**$ 3,167,570.13**	**(971,870.01)**

Total Accumulated Revenue Loss From Inception	**$ 6,532,224.84**

GPA Resolution No. 2018-18

RELATIVE TO THE APPROVAL OF THE CREATION OF THE ADVANCED METER INFRASTRUCTURE (AMI) TECHNICIAN SERIES OF POSITIONS

What is the project's objective and is it necessary and urgent?

The installation and utilization of GPA's advanced meter infrastructure (AMI) beginning in 2011, including smart meters, significantly changed the Authority's processes and structure. Current employees holding Meter Reader and Customer Service Electrician series positions are performing AMI or other work generally unrelated to their position titles. The Authority seeks to create new positions, abolish unnecessary positions, and eliminate overlap of similar functions in order to gain efficiencies and reflect its current processes and structure.

Where is it at?

The AMI Technician series will be initially utilized by Customer Service, PSCC, and Meter Shop but may be used by other divisions. The Meter Reader and Customer Service Electrician series recommended for abolishment are under the Customer Service division organizational structure.

How much will it cost?

The reorganization is not expected to exceed the current budget.

When will it be completed?

No later than October 28, 2018

What is its funding source?

Revenue funds.

The RFP/BID responses:

Not applicable.

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

Issues for Decision

Resolution No. 2018-18:

RELATIVE TO THE APPROVAL OF THE CREATION OF THE ADVANCED METER INFRASTRUCTURE (AMI) TECHNICIAN SERIES OF POSITIONS

What is the project's objective and is it necessary and urgent?
The installation and utilization of GPA's advanced meter infrastructure (AMI) beginning in 2011, including smart meters, significantly changed the Authority's processes and structure. Current employees holding Meter Reader and Customer Service Electrician series positions are performing AMI or other work generally unrelated to their position titles. The Authority seeks to create new positions, abolish unnecessary positions, and eliminate overlap of similar functions in order to gain efficiencies and reflect its current processes and structure.

Where is it at?
The AMI Technician series will be initially utilized by Customer Service, PSCC, and Meter Shop but may be used by other divisions. The Meter Reader and Customer Service Electrician series recommended for abolishment are under the Customer Service division organizational structure.

How much will it cost?
The reorganization is not expected to exceed the current budget.

When will it be completed?
No later than October 28, 2018

What is its funding source?
Revenue funds.

The RFP/BID responses:
Not applicable.

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

Resolution No. 2018-18

RELATIVE TO THE APPROVAL OF THE CREATION OF THE ADVANCED METER INFRASTRUCTURE (AMI) TECHNICIAN SERIES OF POSITIONS

WHEREAS, under 12 G.C.A. § 8104, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Power Authority; and

WHEREAS, the Guam Power Authority ("GPA") is a Public Corporation established and existing under the laws of Guam; and

WHEREAS, the GPA General Manager requests the CCU to approve the creation of the Advanced Meter Infrastructure ("AMI") Technician series positions (Exhibit A); and

WHEREAS, the GPA General Manager requests the CCU to approve the classification standards of the AMI Technician series positions in the classified status; and

WHEREAS, the GPA General Manager requests the CCU to abolish the Meter Reader and Customer Service Electrician series of positions; and

WHEREAS, Public Law 28-112 and 4 G.C.A. § 6303(d) authorizes the creation of positions in Autonomous Agencies and Public Corporations; and

WHEREAS, GPA Personnel Rules & Regulations as amended by Public Law 28-159 authorizes the CCU to amend, modify or add a position to the list of certified, technical and professional positions; and

WHEREAS, regulatory notification requirements have been satisfied and GPA continues to conduct outreach with potentially affected employees.

NOW, THEREFORE, BE IT RESOLVED, the Consolidated Commission on Utilities, as the Governing Body of the Guam Power Authority, does hereby approve and authorize the following**:**

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The creation and the job classification standards for the AMI Technician series of positions in the classified status are hereby approved and attached herein as Exhibit A.
3. The AMI Technician series of positions are hereby added to the Certified, Technical and Professional list of positions at GPA.
4. The Meter Reader and Customer Service Electrician series are hereby abolished and removed from the Certified, Technical and Professional list of positions at GPA effective October 28, 2018.
5. The authorization of the AMI Technician series of positions shall become effective September 29, 2018.

RESOLVED, that the Chairman of the Commission certifies and the Secretary of the Commission attests the adoption of this Resolution.

DULY AND REGULARLY ADOPTED AND APPROVED THIS 28th DAY OF AUGUST 2018.

Certified by:	Attested by:
_____	_____
JOSEPH T. DUENAS	**J. GEORGE BAMBA**
Chairperson	Secretary
Consolidated Commission on Utilities	Consolidated Commission on Utilities

SECRETARY'S CERTIFICATE

I, J. George Bamba, Secretary for the Consolidated Commission on Utilities (CCU), as evidenced by my signature above do certify as follows:

The foregoing is a full, true, and accurate copy of the resolution duly adopted at a regular meeting of the members of Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

Ayes: _____

Nays: _____

Absent: _____

Abstain: _____

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • HAGÅTÑA, GUAM U.S.A. 96932-2977

STAFF REPORT

REQUEST:

The General Manager of the Guam Power Authority petitions the Consolidated Commission on Utilities (CCU) to create the following positions in the classified service pursuant to Public Law 28-112:

- AMI Technician (Proposed Creation)
- AMI Technician Leader (Proposed Creation)

AUTHORITY:

Public Law 28-159, Section 3(c) Amendment of Certified, Technical, and Professional Positions. Section 9, 4 GCA §6303 (d) states:

"Creation of positions in the Autonomous Agencies and Public Corporations.

(1) The petition of the head of an agency, department or public corporation listed in the first paragraph of 4 GCA §4105(a) of this Title to create a position shall include:

A. the justification for the new and amended positions;

Creation of the AMI Technician positions and amendment to the existing Meter Electrician series of positions are critical towards the Authority's vision of efficiency and system reliability in the transformation of Smart Grid initiatives that has modernize our Island Wide Power System. Although, Smart Grid is a cornerstone of GPA's transformation, GPA replaced many of its old analog meters with digital smart meters for both residential and commercial customers. GPA is now able fulfill remote service connection and disconnection orders in a matter of hours instead of days.

B. the essential details concerning the creation of the position; (see classification review below)

C. an analysis of the similarities and differences between the position to be created and positions listed pursuant to Title 4 GCA §4101.1.(d);

The Smart Grid is a digitally-enhanced network that uses computer-based remote control and automation to increase the efficiency of the Authority's Island-Wide Power System (IWPS). Smart meters employ two-way radio communication technology and computer processing. This allows GPA to read meters remotely, start and stop meters remotely, receive outage alert notifications and monitor power quality. The duties and responsibilities associated with the AMI Technician positions is to ensure accurate day-to-day monitoring, analysis and control of the Command Center, which is the head end of the AMI network. The major function of the AMI Command Center Supervisor is to oversee the monitoring the AMI Command Center and determine appropriate courses of action; coordinates with the Internal Audit's Revenue Protection Section, Power System Control Center (PSCC), and other divisions regarding network issues, meter investigation, metering failure and tampering issues. These positions are much needed towards the strategic goals of the Authority and fulfillment of its mission towards modernizing our Island Wide Power System.

D. the position description; (see attached)

E. the proposed pay ranges and demonstration of compliance with §6301 of this Title;

The GPA's compensation plan was authorized by P.L. 28-159 and approved by the CCU in October 2007. The proposed compensation is in accordance with the Strategic Pay Plan Methodology.

F. a fiscal note as that term in described in 2 GCA §9101 et seq.; and any other pertinent information.

The Guam Power Authority is responsible for the funding availability for these positions and is in compliance with all applicable laws, rules and regulations regarding the creation, filling and retention of positions in certified, technical and professional positions. The funding of these positions has no financial impact to the General Fund.

(2) The petition shall be posted on the agency, department or public corporation's website for ten (10) days (Saturdays, Sundays and government of Guam holidays excepted). After the posting, the head shall forward the petition along with evidence of his compliance with 5 GCA §6303.1(a), to the governing board or commission who, if they approve the same, shall approve the petition by resolution and file the petition and resolution for records with the Director of Administration and the Legislative Secretary.

(3) No new position may be filled until after compliance with the provision of this section and thirty (30) days has elapsed from the date of filing with the Legislative Secretary."

METHODOLOGY:

Information was gathered from various public utilities associated with the American Public Power Association (APPA) and other utilities with comparable positions within the U.S. mainland. The information collected were used to analyze and develop the proposed job standards as they apply to the work performed at GPA. The staff reviewed the duties associated with the proposed creations as indicated in the position description forms. In evaluating these positions, the Strategic Pay Job Evaluation Methodology was utilized to determine the job evaluation points based on a total of twelve (12) measurement factors; Education, Experience, Complexity, Scope of Work, Problem Solving, Freedom to Act/Supervision Received, Work Environment, Physical Demands, Impact of Discretionary Decisions, Human Relations Skills/Contact, Authority Exercised, and Supervisory/Managerial Responsibility.

CLASSIFICATION REVIEW:

In 2011, GPA embarked in a Smart Grid project towards modernizing our IWPS. GPA replaced most of its old analog meters with digital smart meters for both residential and commercial customers. Thus, resulting in the installation and utilization of advanced meter infrastructure (AMI), which includes smart meters. As a result, this significantly changed the Authority's processes and structure. GPA personnel can now communicate with meters remotely, start and stop power remotely, receive outage alert notifications and to monitor power quality. The AMI network reads and processes real time power consumption in homes and businesses on Guam and transmit data back to GPA. It's a tremendous technological change in GPA to constantly monitor electricity flow and adjust its distribution for maximum efficiency.

The AMI Command Center integrated system is currently located within the Customer Services Division and is currently supervised by a Customer Service Supervisor. The proposed AMI Technician positions will be assigned within the Customer Services Division and will be responsible for:

- Monitoring radio frequency network for all collectors, routers and meters for status with regards to network health and productivity on Command Center system.
- Monitoring Advanced Metering Infrastructure (AMI) Command Center head end system and dashboard.
- Monitoring meter and endpoint alerts on AMI dashboard (i.e. lost, not logging, tamper reverse, stuck switch, power outages).
- Performing all remote reconnects and disconnects on AMI meters for new and existing customers as well as non-payment/delinquent accounts on field activity reports and validation.
- Monitoring Meter Data Management System (MDMS).
- Performing AMI send and receive command prompts as needed.
- Processing work order requests & input data into the Customer Information System (CIS) of the Customer Care & Billing (CC&B) System.
- Monitoring outage tracking reporting and coordinates with PSCC and/or other divisions.

The impact to the implementation of Smart Grid initiatives and the replacement of analog electric meters with AMI smart meters eliminated and replaced functions in various positions within the Customer Services Division, specifically, Electric Meter Readers series and Customer Service Electrician series. This type of automation of meter reading and real-time day metering inclusive of installation, disconnection and reconnection has caused the Authority to eliminate these positions. Out of the 51,000 customers, there are only less than 30 "opt out" customers requiring manual reading of the analog meters. However, this task is very minimal and does not justify a full-time Electric Meter Reader to perform this task. Manual meter reading, meter installation, removal and troubleshooting tasks have been absorbed into duties of Meter Electrician series with the Authority's Meter Shop section.

Based on the proposed job standards for the AMI Technician and Leader positions, the nature of work and minimum experience and training consist of:

AMI Technician:

This positions are responsible for assisting with and supporting the day-to-day monitoring, analysis and control of the Command Center for the Advanced Metering Infrastructure (AMI) operations and Radio Frequency (RF) networking for the Guam Power Authority. The proposed position requires:

1) One (1) year experience in Advanced Metering Infrastructure (AMI) dashboard alerts and endpoint status monitoring and graduation from high school or GED equivalency; or
2) Any equivalent combination of experience and training which provides the minimum knowledge, abilities and skills.

AMI Technician Leader:

This position leads and supports the day-to-day monitoring, analysis and control of the Command Center for the Advanced Metering Infrastructure (AMI) operations and Radio Frequency (RF) networking for the Guam Power Authority. The proposed position requires:

1) Four (4) years of experience in Advanced Metering Infrastructure (AMI) dashboard alerts and endpoint status monitoring and graduation from high school or GED equivalency; or
2) Any equivalent combination of experience and training which provides the minimum knowledge, abilities and skills.

RECOMMENDATION:

1) To approve the creation of the following positions in the classified service and add these positions to list of the certified, technical and professionals (CTP) category of positions:

   - AMI Technician
   - AMI Technician Leader

The proposed minimum and maximum range of compensation will be in accordance with the Strategic Pay Methodology, as follows:

2017 MARKET DATA (15th Market Percentile)	JE Points	Structural Adjustment - MIN				Structural Adjustment - MAX			
		Base Salary	Grade	Step	Sub Step	Base Salary	Grade	Step	Sub Step
AMI Technician	414	32,706	F	4	C	34,034	F	5	C
AMI Technician Leader	640	46,933	J	4	B	48,839	J	5	B

2) To abolish and remove the following positions from GPA's list of positions:

   - Electric Meter Reader I
   - Electric Meter Reader II
   - Electric Meter Reader Leader
   - Electric Meter Reader Supervisor
   - Customer Service Electrician I
   - Customer Service Electrician II
   - Customer Service Electrician Leader
   - Customer Service Electrician Supervisor

Prepared by:

SANDRA D. PEREZ
Personnel Services Administrator (A)

Concurred by:

BEATRICE P. LIMTIACO
Assistant General Manager, Administration

Approved by:

JOHN M. BENAVENTE, P.E.
General Manager

00.000

AMI Technician (Proposed)

NATURE OF WORK IN THIS CLASS:

This position is responsible for assisting with and supporting the day-to-day monitoring, analysis and control of the Command Center for the Advanced Metering Infrastructure (AMI) operations and Radio Frequency (RF) networking for the Guam Power Authority.

ILLUSTRATIVE EXAMPLES OF WORK: *(Any one position may not include all the duties listed, nor do the examples cover all the duties which may be performed.)*

Monitors the dashboard system for status of AMI meters, radio frequency (RF) connectivity and outage tracking.

Performs remote connections/disconnections for 2s and 12s smart meters for move-in/move-out customers as well as delinquent accounts.

Sends and receives various commands, e.g. On Demand Reads (ODR) as needed to AMI meters and RF network for operations and troubleshooting.

Enters latitude/longitude, service location ID, date and time of installation, customer information file (customer ID, billing cycle, book number) on spreadsheet and provide to IT for import to update records in Command Center.

Validates and reviews field activity work order for successful completion on Command Center and Customer Information System (CIS).

Coordinates customer inquiries for meter troubleshooting.

Assists in conducting AMI meter investigations for non-responding meters and makes proper repairs using meter software application programs.

Prepares documents for field investigations, energy surveys, and meter testing (i.e. interval data, consumption load break down, snap shots, and readings).

Monitor unscheduled power outages and report locations to the Power System Control Center (PSCC) and/or other departments.

Performs other related duties as required.

MINIMUM KNOWLEDGE, ABILITIES AND SKILLS:

Knowledge of Landis+Gyr Command Center applications.

Knowledge of 132Comm, End Point Test Manager (ETM) and radio shop software applications.

Knowledge of optical probes utilized to obtain data directly from smart meters.

Knowledge of the customer information system.

Knowledge of the different AMI meter types and forms including GPA legacy meter types and forms.

EXHIBIT A

Knowledge of AMI Network operations and Radio Frequency (RF) Networking.

Ability to make arithmetic computations.

Ability to work effectively with the public and employees.

Ability to follow oral and written instructions.

Ability to maintain records and prepare reports.

Ability to interpret and apply pertinent laws, rules, regulations and other program guidelines.

Ability to lean and apply computer system application utilized by the utility, to include but not limited to Landis+Gyr Command Center; MeterSense MDMS; Customer Care & Billing (CC&B); and JD Edwards.

Skill in the safe operation of a motor vehicle.

MINIMUM EXPERIENCE AND TRAINING:

1) One (1) year experience in Advanced Metering Infrastructure (AMI) dashboard alerts and endpoint status monitoring and graduation from high school or GED equivalency; or

2) Any equivalent combination of experience and training which provides the minimum knowledge, abilities and skills.

NECESSARY SPECIAL QUALIFICATION:

Possession of a valid driver's license may be required.

Established:

_____
JOSEPH T. DUENAS, Chairman
Consolidated Commission on Utilities

EXHIBIT A

00.000

AMI Technician Leader (Proposed)

NATURE OF WORK IN THIS CLASS:

This position leads and supports the day-to-day monitoring, analysis and control of the Command Center for the Advanced Metering Infrastructure (AMI) operations and Radio Frequency (RF) networking for the Guam Power Authority.

ILLUSTRATIVE EXAMPLES OF WORK: *(Any one position may not include all the duties listed, nor do the examples cover all the duties which may be performed.)*

Leads in the monitoring of the dashboard system for status of AMI meters, radio frequency (RF) connectivity and outage tracking.

Leads in remote connections/disconnections for 2s and 12s smart meters for move-in/move-out customers as well as delinquent accounts.

Leads in sending and receiving of various commands, e.g. On Demand Reads (ODR) as needed to AMI meters and RF network for operations and troubleshooting.

Enters latitude/longitude, service location ID, date and time of installation, customer information file (customer ID, billing cycle, book number) on spreadsheet and provide to IT for import to update records in Command Center.

Leads in validating and reviewing field activity work orders for successful completion on Command Center and Customer Information System (CIS).

Coordinates customer inquiries for meter troubleshooting.

Leads in the preparation of documents for field investigations, energy surveys, and meter testing (i.e. interval data, consumption load break down, snap shots, and readings).

Leads in monitoring of unscheduled power outages and report locations to the Power System Control Center (PSCC) and/or other departments.

Performs other related duties as required.

MINIMUM KNOWLEDGE, ABILITIES AND SKILLS:

Knowledge of Landis+Gyr Command Center applications.

Knowledge of 132Comm, End Point Test Manager (ETM) and radio shop software applications.

Knowledge of optical probes utilized to obtain data directly from smart meters.

Knowledge of the customer information system.

Knowledge of different AMI meter types and forms including GPA legacy meter types and forms.

Knowledge of AMI Network operations and Radio Frequency (RF) Networking.

EXHIBIT A

Ability to lead the work of others.

Ability to make arithmetic computations.

Ability to work effectively with the public and employees.

Ability to follow oral and written instructions.

Ability to maintain records and prepare reports.

Ability to interpret and apply pertinent laws, rules, regulations and other program guidelines.

Ability to lean and apply computer system application utilized by the utility, to include but not limited to Landis+Gyr Command Center; MeterSense MDMS; Customer Care & Billing (CC&B); and JD Edwards.

Skill in the safe operation of a motor vehicle.

MINIMUM EXPERIENCE AND TRAINING:

1) Four (4) years of experience in Advanced Metering Infrastructure (AMI) dashboard alerts and endpoint status monitoring, and graduation from high school or GED equivalency; or

2) Any equivalent combination of experience and training which provides the minimum knowledge, abilities and skills.

NECESSARY SPECIAL QUALIFICATION:

Possession of a valid driver's license may be required.

Established:

_____
JOSEPH T. DUENAS, Chairman
Consolidated Commission on Utilities

EXHIBIT A

POSITION DESCRIPTION QUESTIONNAIRE INSTRUCTIONS

WHO SHOULD COMPLETE THE QUESTIONNAIRE?

(1) The employee occupying the position (jobholder) completes the first six (I-VI) sections of the questionnaire.

(2) The employee completes Section VII if he/she chooses to do so. If the employee decides not to complete Section VII, mark the box provided. The direct supervisor will then complete Section VII for the employee.

(3) The direct supervisor completes Section VIII. It is to add or clarify any of the information provided by the employee/jobholder or to provide different information.

(4) The direct supervisor completes the questionnaire for vacant positions.

(5) Section IX is completed by the Human Resources Office.

(6) The completed questionnaire is subject to post-audit by the Civil Service Commission.

I. JOB IDENTIFICATION:

Position Title: Show the official (payroll) title only.

Official Position No.: Show the official number provided in the staffing pattern for the job. Although the employee/jobholder may change from time to time, the position number does not change. It is a position management tool.

Job Location: Show the exact location of the position within the organization.

Direct Supervisor: Show the official position title and name of supervisor or manager to whom the jobholder must report.

II. JOB DESCRIPTION:

ESSENTIAL FUNCTIONS: These are the required job duties of the position that a qualified person must perform. Under the Americans with Disability Act, the duties are performed either with or without a "reasonable accommodation." Without one of the essential functions, the need for the job is changed.

The description of functions performed must be short, clear and correct. It should tell what is done and its purpose or why. It should not tell how it is done. The duties are specific. Do not use unclear, general statements. Do not use additional papers.

Organize and list the job functions in one of the formats selected below. Mark the format selected. The format selected is only for the purpose of organizing the description of the job. It will not determine the job's classification and pay.

(1) Daily work assignments – proper for job functions that are repetitive and have specific work operations and procedures. List the functions beginning with the first daily work assignment and ending with the last work assignment.

(2) Percentage of time – proper for jobs that have varied functions and responsibilities. List the functions by percentage of time spent, beginning with the highest percentage. The total % should equal 100%.

(3) Order of importance – proper for job functions that provide levels of importance. List the functions beginning with the most important function and ending with the least important. All functions are performed, however.

NONESSENTIAL FUNCTIONS: Nonessential functions are tasks that are minor, or not required to the completion of the essential functions. In addition, nonessential functions are those that could be performed by other workers. The phrase, "performs related duties as assigned" is normally listed here.

III. MINIMUM QUALIFICATION REQUIREMENTS:

These are the minimum requirements needed to qualify for the job. They are necessary for satisfactory performance of the job's essential functions. It is not to show the employee's (jobholder's) qualifications. They are used further in the job analysis necessary for the creation of position classification standards.

Experience – Show the type and length (months or years) of experience needed by a qualified applicant to perform the essential functions of the job.

Education – Show the formal schooling or training required for a qualified applicant to perform the essential functions of the job.

EXHIBIT A

Revised: 05/97 Class Code

POSITION DESCRIPTION QUESTIONNAIRE

I. IDENTIFICATION

Official Position Title: **AMI TECHNICIAN LEADER** Official Position No.:

Job Location: Guam Power Authority (Department/Agency) Customer Services (Division) (Section/Unit)

Name: _____ (Last) (First) (Middle Initial)

Pay Grade: [X] Classified [ ] Unclassified [ ] Position Vacant

Supervisor: (Name of Direct Supervisor) Title of Supervisor

II. DESCRIPTION OF DUTIES

Duty NO. or % of Time	
	ESSENTIAL FUNCTIONS: Organize and list duties and responsibilities that **MUST** be performed. List duties in one of the formats below. (1) The daily work assignments, beginning with the first duty and ending with the last duty for the day. (2) Percentage of time and show % for each (total % equals 100%). (3) Order of importance, beginning with the most important. Mark (√ or X) one format only: [ ] (1), [ ] (2), [X] (3)
	AMI OPERATIONS/RF NETWORKING: Leads and assist personnel in day to day operations related to collector status. Perform Collector connectivity tests/ping. Prepare for remote disconnection and reconnection on command center. Send command via command center and record. Respond to client safety alerts for reconnection of customers properly. Validate field activity work order for successful completion on Command Center and CIS.; Monitor meter and endpoint alerts on AMI dashboard (i.e. lost, not logging, tamper reverse, stuck switch, power outages); Prepare documents for field investigations, energy audits, and meter testing (i.e. interval data, consumption load break down, snap shots, and readings); Monitor all reporting associated with network connectivity and meter data. Review and analyze daily midnight reads, interval data, meter history, event logs for irregularities and voltage quality; Assist with meter inquiries from all divisions; Monitor and update meter group types and user defined group; Edit and update smart meter information on command center (i.e. service address, latitude/longitude location, billing cycles, and book numbers); Monitor for unscheduled power outages and report locations to PSCC and/or other departments.
	CUSTOMER SERVICE DUTIES: Interacting and assisting customers on a daily basis regarding their power bill inquiries, while in the office or out on the field. Whether in person or by phone. Perform various task with CIS system. Assist business office personnel with manpower augmentation when needed. Complete and lock all daily customer work order requests for commercial, residential, and government accounts to include same day services. Process and lock AMI meter exchange, AMI meter investigations and Emergency work clearance work orders. Create work orders on CIS system when necessary and submit to proper departments. Provide excellent customer service when dealing with customers directly or by phone. Provide good customer relations by providing customers the knowledge to understand the operations, advantages, and benefits of the smart meter. program.
	ADMINISTRATIVE: Performs as auxiliary payroll time entry clerk for personnel. Performs vehicle time entry and monitors vehicle preventive maintenance schedules. Prepares weekly rotational work schedule for approval. Performs account billing adjustments related to error reads and work order completions.
	NON-ESSENTIAL OR ADDITIONAL FUNCTIONS: List duties and responsibilities not listed above that **may be** performed, as assigned.
	Assist other divisions on providing information on customer accounts, locations, readings etc.

	Assist various sections throughout in the monitoring of the AMI real time outage tracker during pre-and post-storm restorations.
	Conduct preventive maintenance on all assigned vehicles.
	Follow all departmental rules and policies.
	Perform good housekeeping.

III. CONTACTS: Departments, agencies and individuals you deal with during the course of your daily activities.

A. Within your department / agency. Mark (X or √) one box:

[ ] None [ ] Up to 15% of total working hours

[ ] 15 – 50% of total working hours [X] Over 50%

B. Outside your department / agency. Mark (X or √)

[ ] None [ ] Up to 15% of total working hours

[ ] 15 – 50% of total working hours [X] Over 50%

IV. SUPERVISION RECEIVED: How closely is the employee's/jobholder's work reviewed by the direct supervisor? Mark (X or √) one correct response.

[ ]	Detailed and specific instructions / procedures received or followed for each assignment.
[ ]	General Supervision – Routine duties are performed with minimal supervision. Standard practices or procedures allow employee to function alone at routine work. Supervisor makes occasional check of work while in progress. Work is reviewed upon completion.
[X]	Direction – Receives guidance about general objectives in most of the tasks and projects assigned; determines methods, work sequence, scheduling and how to achieve objectives of assignments; operates within policy guidelines. (Generally applicable to skilled professionals, supervisors and managers.)
[ ]	General Direction – Receives very general guidance about overall objectives; work is usually quite independent of others; operates within division or department policy guidelines, using independent judgment in achieving assigned objectives. (Generally applicable to managers / administrators in large and complex organizations and to department / agency heads and their first assistants.)

V. SUPERVISION EXERCISED: The employee/jobholder supervises other employees. List the number of employees supervised, their position titles, and a brief description of their responsibilities.

Number Supervised	Position Title	Description of Responsibilities

VI. EQUIPMENT: List the equipment (pickup truck, welder, crane, etc.), office machines (word processor, calculator, copying machine, etc.), or any other machines, tools or devices that are used on a regular and continuing basis. Show what percentage of the regular workday is spent using each.

TOOLS / EQUIPMENT	PERCENT (%) OF TIME FOR EACH
Desk Top Computer	35
Lap Top Computer	15
Printer/ Copier Machine	2
Calculator	2
Shoretel Telephone	1
Push To Talk Radio	1
Optical Probe	10
Thermal Tester	1
Integrated Wan Radio (IWR)	5
Volt Meter	5
Various Personal Protective Equipment (PPE)	5
Government Official Vehicle	15

VII. JOB REQUIREMENTS

[ ] Mark (√ or X) here if jobholder is unable to complete this section. The direct supervisor will then complete this section for the jobholder.

A. MINIMUM QUALIFICATION REQUIREMENTS: List the minimum experience and training a qualified applicant must have before employment.

1. WORK EXPERIENCE: List the general, specialized and/or supervisory / management work experience needed and how much (in months and/or years). If none, mark (√ or X) "No work experience required."	
[ ] No work experience is required.	
Computer Knowledge**:** Demonstrated ability with regard to computer skills, including excellent word processing capabilities, proficiency with e-mail and internet applications and data base applications and experience using programs such as (for example: MS Word, Access and Excel).	
Analytical Thinking Skills**:** Proven ability to work in complex frameworks, analyze and prioritize elevated levels of information and convert ideas and objectives into actions. Problem Solving Skills: Ability to appropriately prioritize problems, gather and analyze the right information to identify symptoms and causes and identify the right people to involve reaching better conclusions.	
Specialized: Advanced Metering Infrastructure and Radio Frequency network/meter/router/collector; Radio Shop, Command Center, and Endpoint Test Management (ETM) advance operations training by Landis & Gyr.	
Semi-skilled in the electrical trade or equivalent.	
Four (4) years of experience in Advanced Metering Infrastructure (AMI) dashboard alerts and endpoint status monitoring and graduation from high school or GED equivalency; or Any equivalent combination of experience and training which provides the minimum knowledge, abilities and skills.	
Supervisor / Management:	
If no work experience is required, list the knowledge, abilities and skills a qualified applicant needs before employment to perform the essential job functions.	

2. FORMAL EDUCATION OR TRAINING: Mark (√ or X) the **most** applicable education level required.
a. [ ] Below High School – Show Number of Years
b. [X] High School Graduation / GED

c. [ ] Vocational / Technical School

Show specific training that is required by this position.

Advanced Metering Infrastructure and Radio Frequency Networking.

Knowledge and training of Customer information systems related

d. [ ] Some College

Show number of [ ] Semester Hours _____ or [ ] Quarter Hours _____.

Show specific courses required by the essential functions of this job.

e. College Degree (Show major area of study required.)

[ ] Associate's : _____

[ ] Bachelor's: _____

[ ] Master's: _____

[ ] Beyond Masters: _____

3. CRITICAL SKILLS / EXPERTISE: List specialized skills or specialization needed to perform essential functions.

Advanced Metering Infrastructure Operations and Radio Frequency networking.

4. LICENSE, REGISTRATION OR CERTIFICATION:
List possession of required license, professional registration/certification needed to perform essential functions.

B. MENTAL / VISUAL, PHYSICAL, AND ENVIRONMENTAL JOB REQUIREMENTS:

1. Mark (√ or X) the most appropriate physical requirement(s) for the job.

[X]	Sitting	The job requires the employee to sit in a comfortable position most of the time. The employee can move about.
[X]	Sitting	Employee is required to sit for extended periods or time without being able to leave the work area.
[X]	Sitting/Standing/Walking	The employee is required to sit, stand, and walk most of the time.
[X]	Climbing	Employee is required to climb ladders or scaffolding or to climb and work in overhead areas.
[X]	Lifting	Employee is required to raise or lower objects from one level to another regularly.
[X]	Pulling and/or Pushing	The job requires exerting force up to _____ pounds on a regular basis to move

		the object to or away from the employee.
[X]	Carrying	The employee is required, on a regular basis, to carry objects in his or her arms or on the shoulder(s).
[X]	Reaching	The employee is regularly required to use the hands and arms to reach for objects.
[X]	Stooping and Crouching	The employee is regularly required to bend forward by bending at the waist or by bending legs and spine.
[X]	Crawling	Employee is required to work in a confined space and/or to crawl and move about on his or her hands and knees.
[X]	Speaking	The job requires expressing ideas by the spoken word.
[X]	Listening	The job requires the perception of speech or the nature of sounds in the air.
[ ]	Other	Describe the requirement.

_____

_____

_____

2. Mark (√ or X) the most appropriate mental / visual requirement for the job.

[X] General Intelligence (typical requirement for machine operators, office staff, etc.)

[ ] Motor Coordination Skills (typical for automotive mechanic, painter, etc.)

[X] Coordination of Eyes, Hands, and Feet (typical for tractor trailer driver, fire fighter, line electrician, etc.)

[X] Verbal Intelligence (typical for counselors, customer service representatives, etc.)

[ ] Numerical Intelligence (typical for an accounting clerk, cargo checker, etc.)

[ ] Other:

_____

_____

_____

3. The job's most appropriate work environment and the weather exposure.

Show what percent of a typical workday is spent.
(Select one response only)

__60_% Indoors in a comfortable temperature-controlled environment (for instance, in an office).

__5_% Indoors in a non-temperature-controlled environment (such as an open garage, storerooms and warehouses, etc.)

__10_% Outdoors exposed to changing weather conditions (for instance, rain, sun, wind, etc.)

__25_% Outdoors but in an enclosed vehicle protected from extreme weather conditions.

4. Other physical working conditions

[ ] Mark (X or √) if none of the following is applicable.

Show what percent of a typical workday this position is exposed to:

_5_% Air contamination (i.e., dust, fumes, smoke, toxic conditions, disagreeable odors).

_____% Vibration (i.e., operating jackhammer, impact wrench).

__5_% Noise (Exposure at a level enough to cause bearing loss or fatigue).

_____% An improperly illuminated or awkward and confining work space.

_ 5_% Working above ground level where the chance of falling exists (i.e., on ladders, rooftops, bucket trucks, scaffolding).

__10_% Lifting or carrying items or objects. Describe item/object and weight:

_____

_____

__25_% Heat. Describe source and degree of high temperature.

Outdoors Temperatures

_____

_____

__25_% Cold. Describe source and degree of cold temperature: Indoor Office Temperatures

_____

_____

_ 25_% Other hazards. Describe:

Electrical, Extreme Weather, and Vicious Animals

_____

_____

5. Describe the working conditions that are irregular or unusual for the job and show frequency of exposure.

[ ] Mark (X or √) if not applicable.

CONDITION	FREQUENCY OF EXPOSURE

C. Work Schedule/Hours – Mark (√ or X) the most appropriate work schedule/hours for the job.

[ ] Regular – Standard Eight (8) hours daily, Monday – Friday
[ ] Irregular – Shift work – A 24-hour work operation.
[X] Regular / Irregular – Overtime hours with overtime pay entitlement

State Purpose and Total Hours required per pay period:

40 hours a week and overtime if required in an event of non-communication issues or other issues pertaining to a smart meter and or command center and emergency situations.

The information given on this position is complete and correct.

_____ _____

Signature of Employee Date

VIII. SUPERVISOR'S REVIEW

IMPORTANT: This Block to Be Filled Out Only By The Direct Supervisor

a.	(1)	Has the employee correctly stated his or her official payroll position title? [ ] Yes] No
	(2)	If not, what is the correct title? _____
b.	(1)	Are the employee's statements about the duties of his/her position and the supplementary information complete and accurate? [ ] Yes [ ] No
	(2)	If not, what additions, deletions or corrections should be made? (Refer to block and page) _____ _____ _____
c.		What positions under your supervision perform the same essential functions Give name and title: Name Title _____ _____ _____
d.		Does this position require (mark one) [ ] Immediate supervision on a regular basis, [ ] Immediate supervision only for new/complex tasks, or [ ] Little immediate supervision.
e.		Does the employee participate in (mark those appropriate) the [ ] Formulation, [ ] Interpretation, and/or [ ] Application of Agency/Department policy. Give examples: _____ _____ _____
f.		The employee (mark one) [ ] Performs routine, well-defined tasks, [ ] Performs moderately complex tasks requiring moderate knowledge of Agency's/Department's work; or [ ] Performs complex tasks requiring extensive knowledge of Agency's/Department's work.

I certify to the accuracy of the description of duties, responsibilities and organizational relationships provided herein; further, that the position is necessary to carry out government functions for which I am responsible. This certification is made with the knowledge that this information is to be used for statutory purposes on the use of public funds. The false or misleading statement may constitute violations of such statutes or their implementing regulations.

X _____

Beatrice P. Limtiaco
Assistant General Manager, Administration

IX.

Human Resources Office Review:

Date: _____

Reviewed by: _____ _____
Position Title Name

Classification Correct: [ ] Yes [ ] No

If not, corrective action taken: (Attach copy of review made)

Approved by: _____ _____
Personnel Services Administrator Date

Civil Service Commission Post-Audit:

Date: _____

Reviewed by: _____ _____
Position Title Name

Classification Correct: [ ] Yes [ ] No

If not, corrective action taken: (Attach copy of review made)

POSITION DESCRIPTION QUESTIONNAIRE INSTRUCTIONS

WHO SHOULD COMPLETE THE QUESTIONNAIRE?

(1) The employee occupying the position (jobholder) completes the first six (I-VI) sections of the questionnaire.

(2) The employee completes Section VII if he/she chooses to do so. If the employee decides not to complete Section VII, mark the box provided. The direct supervisor will then complete Section VII for the employee.

(3) The direct supervisor completes Section VIII. It is to add or clarify any of the information provided by the employee/jobholder or to provide different information.

(4) The direct supervisor completes the questionnaire for vacant positions.

(5) Section IX is completed by the Human Resources Office.

(6) The completed questionnaire is subject to post-audit by the Civil Service Commission.

I. JOB IDENTIFICATION:

Position Title: Show the official (payroll) title only.

Official Position No.: Show the official number provided in the staffing pattern for the job. Although the employee/jobholder may change from time to time, the position number does not change. It is a position management tool.

Job Location: Show the exact location of the position within the organization.

Direct Supervisor: Show the official position title and name of supervisor or manager to whom the jobholder must report.

II. JOB DESCRIPTION:

ESSENTIAL FUNCTIONS: These are the required job duties of the position that a qualified person must perform. Under the Americans with Disability Act, the duties are performed either with or without a "reasonable accommodation." Without one of the essential functions, the need for the job is changed.

The description of functions performed must be short, clear and correct. It should tell what is done and its purpose or why. It should not tell how it is done. The duties are specific. Do not use unclear, general statements. Do not use additional papers.

Organize and list the job functions in one of the formats selected below. Mark the format selected. The format selected is only for the purpose of organizing the description of the job. It will not determine the job's classification and pay.

(1) Daily work assignments – proper for job functions that are repetitive and have specific work operations and procedures. List the functions beginning with the first daily work assignment and ending with the last work assignment.

(2) Percentage of time – proper for jobs that have varied functions and responsibilities. List the functions by percentage of time spent, beginning with the highest percentage. The total % should equal 100%.

(3) Order of importance – proper for job functions that provide levels of importance. List the functions beginning with the most important function and ending with the least important. All functions are performed, however.

NONESSENTIAL FUNCTIONS: Nonessential functions are tasks that are minor, or not required to the completion of the essential functions. In addition, nonessential functions are those that could be performed by other workers. The phrase, "performs related duties as assigned" is normally listed here.

III. MINIMUM QUALIFICATION REQUIREMENTS:

These are the minimum requirements needed to qualify for the job. They are necessary for satisfactory performance of the job's essential functions. It is not to show the employee's (jobholder's) qualifications. They are used further in the job analysis necessary for the creation of position classification standards.

Experience – Show the type and length (months or years) of experience needed by a qualified applicant to perform the essential functions of the job.

Education – Show the formal schooling or training required for a qualified applicant to perform the essential functions of the job.

EXHIBIT A

Revised: 05/97 Class Code

POSITION DESCRIPTION QUESTIONNAIRE

I. IDENTIFICATION

Official Position Title: **AMI TECHNICIAN** Official Position No.:

Job Location: Guam Power Authority (Department/Agency) Customer Services (Division) (Section/Unit)

Name: _____ (Last) (First) (Middle Initial)

Pay Grade: [X] Classified [ ] Unclassified [ ] Position Vacant

Supervisor: (Name of Direct Supervisor) Title of Supervisor

II. DESCRIPTION OF DUTIES

Duty NO. or % of Time	
	ESSENTIAL FUNCTIONS: Organize and list duties and responsibilities that **MUST** be performed. List duties in one of the formats below. (1) The daily work assignments, beginning with the first duty and ending with the last duty for the day. (2) Percentage of time and show % for each (total % equals 100%). (3) Order of importance, beginning with the most important. Mark (√ or X) one format only: [ ] (1), [ ] (2), [X] (3)
	AMI OPERATIONS/RF NETWORKING: Check collector status and ping each collector for status confirmation. Monitor the AMI dashboard real time outage tracker. Prepare for remote disconnection and reconnection on command center. Send command via command center and record. Respond to client safety alerts for reconnection of customers properly. Validate field activity work order for successful completion on Command Center and CIS.; Monitor meter and endpoint alerts on AMI dashboard (i.e. lost, not logging, tamper reverse, stuck switch, power outages); Prepare documents for field investigations, energy audits, and meter testing (i.e. interval data, consumption load break down, snap shots, and readings); Monitor all reporting associated with network connectivity and meter data. Review and analyze daily midnight reads, interval data, meter history, event logs for irregularities and voltage quality. Assist with meter inquiries from all divisions. Monitor and update meter group types and user defined group. Edit and update AMI meter information on command center (i.e. service address, latitude/longitude location, billing cycles, and book numbers); Monitor for unscheduled power outages and report locations to PSCC and/or other departments.
	CUSTOMER SERVICE DUTIES: Interacting and assisting customers on a daily basis regarding their power bill inquiries, while in the office or out on the field. Whether in person or by phone. Perform various task with CIS system. Assist business office personnel with manpower augmentation when needed. Complete and lock all daily customer work order requests for commercial, residential, and government accounts to include same day services. Process and lock AMI meter exchange, AMI meter investigations and Emergency work clearance work orders. Create work orders on CIS system when necessary and submit to proper departments. Provide excellent customer service when dealing with customers directly or by phone. Provide good customer relations by providing customers the knowledge to understand the operations, advantages, and benefits of the smart meter. program.
	NON-ESSENTIAL OR ADDITIONAL FUNCTIONS: List duties and responsibilities not listed above that **may be** performed, as assigned.
	Assist other divisions on providing information on customer accounts, locations, readings etc.
	Assist various sections throughout in the monitoring of the AMI real time outage tracker during pre-and post-storm restorations.
	Conduct preventive maintenance on all assigned vehicles.

	Follow all departmental rules and policies.
	Perform good housekeeping.

III. CONTACTS: Departments, agencies and individuals you deal with during the course of your daily activities.

A. Within your department / agency. Mark (X or √) one box: [ ] None [ ] Up to 15% of total working hours [ ] 15 – 50% of total working hours [X] Over 50%
B. Outside your department / agency. Mark (X or √) [ ] None [ ] Up to 15% of total working hours [ ] 15 – 50% of total working hours [X] Over 50%

IV. SUPERVISION RECEIVED: How closely is the employee's/jobholder's work reviewed by the direct supervisor? Mark (X or √) one correct response.

[ ]	Detailed and specific instructions / procedures received or followed for each assignment.
[ ]	General Supervision – Routine duties are performed with minimal supervision. Standard practices or procedures allow employee to function alone at routine work. Supervisor makes occasional check of work while in progress. Work is reviewed upon completion.
[X]	Direction – Receives guidance about general objectives in most of the tasks and projects assigned; determines methods, work sequence, scheduling and how to achieve objectives of assignments; operates within policy guidelines. (Generally applicable to skilled professionals, supervisors and managers.)
[ ]	General Direction – Receives very general guidance about overall objectives; work is usually quite independent of others; operates within division or department policy guidelines, using independent judgment in achieving assigned objectives. (Generally applicable to managers / administrators in large and complex organizations and to department / agency heads and their first assistants.)

V. SUPERVISION EXERCISED: The employee/jobholder supervises other employees. List the number of employees supervised, their position titles, and a brief description of their responsibilities.

Number Supervised	Position Title	Description of Responsibilities

VI. EQUIPMENT: List the equipment (pickup truck, welder, crane, etc.), office machines (word processor, calculator, copying machine, etc.), or any other machines, tools or devices that are used on a regular and continuing basis. Show what percentage of the regular workday is spent using each.

TOOLS / EQUIPMENT	PERCENT (%) OF TIME FOR EACH
Desk Top Computer	35
Lap Top Computer	15
Printer/ Copier Machine	5
Calculator	2
Shoretel Telephone	1
Push To Talk Radio	1
Optical Probe	10
Thermal Tester	1
Integrated Wan Radio (IWR)	5
Volt Meter	5
Various Personal Protective Equipment (PPE)	5
Government Official Vehicle	15

VII. JOB REQUIREMENTS

[ ] Mark (√ or X) here if jobholder is unable to complete this section. The direct supervisor will then complete this section for the jobholder.

A. MINIMUM QUALIFICATION REQUIREMENTS: List the minimum experience and training a qualified applicant must have before employment.

1. WORK EXPERIENCE: List the general, specialized and/or supervisory / management work experience needed and how much (in months and/or years). If none, mark (√ or X) "No work experience required."

[ ] No work experience is required.

General: . One (1) year experience in Advanced Metering Infrastructure (AMI) dashboard alerts and endpoint status monitoring and graduation from high school or GED equivalency; or
Any equivalent combination of experience and training which provides the minimum knowledge, abilities and skills.

Supervisor / Management:

If no work experience is required, list the knowledge, abilities and skills a qualified applicant needs before employment to perform the essential job functions.

- Computer Knowledge**:** Demonstrated ability with regard to computer skills, including excellent word processing capabilities, proficiency with e-mail and internet applications and data base applications and experience using programs such as (for example: MS Word, Access and Excel).
- Analytical Thinking Skills**:** Proven ability to work in complex frameworks, analyze and prioritize elevated levels of information and convert ideas and objectives into actions.
- Problem Solving**:** Ability to appropriately prioritize problems, gather and analyze the right information to identify symptoms and causes and identify the right people to involve reaching better conclusions.
- Knowledge of Basic Electricity

2. FORMAL EDUCATION OR TRAINING:
Mark (√ or X) the **most** applicable education level required.

a. [ ] Below High School – Show Number of Years
b. [X] High School Graduation / GED

c. [ ] Vocational / Technical School

Show specific training that is required by this position.

Basic knowledge of AMI meters and Radio Frequency Networking or equivalent.

Semi-skilled in the electrical trade or equivalent.

2 years' experience in the installation and removal of electrical power meters or equivalent.

d. [ ] Some College

Show number of [ ] Semester Hours _____ or [ ] Quarter Hours _____.

Show specific courses required by the essential functions of this job.

e. College Degree (Show major area of study required.)

[ ] Associate's : _____

[ ] Bachelor's: _____

[ ] Master's: _____

[ ] Beyond Masters: _____

3. CRITICAL SKILLS / EXPERTISE: List specialized skills or specialization needed to perform essential functions.

4. LICENSE, REGISTRATION OR CERTIFICATION:
List possession of required license, professional registration/certification needed to perform essential functions.

B. MENTAL / VISUAL, PHYSICAL, AND ENVIRONMENTAL JOB REQUIREMENTS:

1. Mark (√ or X) the most appropriate physical requirement(s) for the job.

[X]	Sitting	The job requires the employee to sit in a comfortable position most of the time. The employee can move about.
[X]	Sitting	Employee is required to sit for extended periods or time without being able to leave the work area.
[X]	Sitting/Standing/Walking	The employee is required to sit, stand, and walk most of the time.
[X]	Climbing	Employee is required to climb ladders or scaffolding or to climb and work in overhead areas.
[X]	Lifting	Employee is required to raise or lower objects from one level to another regularly.
[X]	Pulling and/or Pushing	The job requires exerting force up to _____ pounds on a regular basis to move the object to or away from the employee.

[X]	Carrying	The employee is required, on a regular basis, to carry objects in his or her arms or on the shoulder(s).
[X]	Reaching	The employee is regularly required to use the hands and arms to reach for objects.
[X]	Stooping and Crouching	The employee is regularly required to bend forward by bending at the waist or by bending legs and spine.
[X]	Crawling	Employee is required to work in a confined space and/or to crawl and move about on his or her hands and knees.
[X]	Speaking	The job requires expressing ideas by the spoken word.
[X]	Listening	The job requires the perception of speech or the nature of sounds in the air.
[ ]	Other	Describe the requirement.

_____

_____

_____

2. Mark (√ or X) the most appropriate mental / visual requirement for the job.

[X] General Intelligence (typical requirement for machine operators, office staff, etc.)

[ ] Motor Coordination Skills (typical for automotive mechanic, painter, etc.)

[X] Coordination of Eyes, Hands, and Feet (typical for tractor trailer driver, fire fighter, line electrician, etc.)

[X] Verbal Intelligence (typical for counselors, customer service representatives, etc.)

[X] Numerical Intelligence (typical for an accounting clerk, cargo checker, etc.)

[ ] Other:

_____

_____

_____

3. The job's most appropriate work environment and the weather exposure.

Show what percent of a typical workday is spent.
(Select one response only)

__60_% Indoors in a comfortable temperature-controlled environment (for instance, in an office).

__5_% Indoors in a non-temperature-controlled environment (such as an open garage, storerooms and warehouses, etc.)

__10_% Outdoors exposed to changing weather conditions (for instance, rain, sun, wind, etc.)

__25_% Outdoors but in an enclosed vehicle protected from extreme weather conditions.

4. Other physical working conditions

[ ] Mark (X or √) if none of the following is applicable.

Show what percent of a typical workday this position is exposed to:

_5_% Air contamination (i.e., dust, fumes, smoke, toxic conditions, disagreeable odors).

_____% Vibration (i.e., operating jackhammer, impact wrench).

__5_% Noise (Exposure at a level enough to cause bearing loss or fatigue).

_____% An improperly illuminated or awkward and confining work space.

_ 5_% Working above ground level where the chance of falling exists (i.e., on ladders, rooftops, bucket trucks, scaffolding).

__10_% Lifting or carrying items or objects. Describe item/object and weight:

_____

_____

__25_% Heat. Describe source and degree of high temperature.

Outdoors Temperatures

_____

_____

__25_% Cold. Describe source and degree of cold temperature: Indoor Office Temperatures

_____

_____

_ 25_% Other hazards. Describe:

Electrical, Extreme Weather, and Vicious Animals

_____

_____

5. Describe the working conditions that are irregular or unusual for the job and show frequency of exposure.

[ ] Mark (X or √) if not applicable.

CONDITION **FREQUENCY OF EXPOSURE**

C. Work Schedule/Hours – Mark (√ or X) the most appropriate work schedule/hours for the job.

[ ] Regular – Standard Eight (8) hours daily, Monday – Friday
[ ] Irregular – Shift work – A 24-hour work operation.
[X] Regular / Irregular – Overtime hours with overtime pay entitlement

State Purpose and Total Hours required per pay period:

40 hours a week and overtime if required in an event of non-communication issues or other issues pertaining to a smart meter and or command center and emergency situations.

The information given on this position is complete and correct.

N/A

_____ _____

Signature of Employee Date

VIII. SUPERVISOR'S REVIEW

IMPORTANT: This Block to Be Filled Out Only By The Direct Supervisor

a.	(1)	Has the employee correctly stated his or her official payroll position title? [X] Yes] No
	(2)	If not, what is the correct title? _____
b.	(1)	Are the employee's statements about the duties of his/her position and the supplementary information complete and accurate? [X] Yes [ ] No
	(2)	If not, what additions, deletions or corrections should be made? (Refer to block and page) _____ _____ _____
c.		What positions under your supervision perform the same essential functions Give name and title: Name Title _____ _____ _____
d.		Does this position require (mark one) [ ] Immediate supervision on a regular basis, [ ] Immediate supervision only for new/complex tasks, or [X] Little immediate supervision.
e.		Does the employee participate in (mark those appropriate) the [ ] Formulation, [X] Interpretation, and/or [X] Application of Agency/Department policy. Give examples: _____ _____ _____
f.		The employee (mark one) [ ] Performs routine, well-defined tasks, [ ] Performs moderately complex tasks requiring moderate knowledge of Agency's/Department's work; or [ ] Performs complex tasks requiring extensive knowledge of Agency's/Department's work.

I certify to the accuracy of the description of duties, responsibilities and organizational relationships provided herein; further, that the position is necessary to carry out government functions for which I am responsible. This certification is made with the knowledge that this information is to be used for statutory purposes on the use of public funds. The false or misleading statement may constitute violations of such statutes or their implementing regulations.

X_____

Beatrice P. Limtiaco
Assistant General Manager, Administration

IX. Human Resources Office Review:

Date: _____

Reviewed by: _____ _____
Position Title Name

Classification Correct: [ ] Yes [ ] No

If not, corrective action taken: (Attach copy of review made)

Approved by: _____ _____
Personnel Services Administrator Date

Civil Service Commission Post-Audit:

Date: _____

Reviewed by: _____ _____
Position Title Name

Classification Correct: [ ] Yes [ ] No

If not, corrective action taken: (Attach copy of review made)

GPA WORK SESSION

Presentation To:

Consolidated Commission on Utilities

August 23, 2018

ISSUES FOR DECISION

RESOLUTIONS

GPA Resolution No. 2018-016

Authorizing Management to award a Two Year Contract for the Supply of Residual Fuel Oil No. 6 to Mobil Oil Guam

What is the project's objective? Is it necessary and urgent?

The Guam Power Authority's current contract for Supply of Residual Fuel Oil No.6 for the Baseload Plants is expiring in November 30, 2018. The new fuel supply contract is necessary to provide uninterrupted supply of fuel for the Baseload plants.

Where is the location?

Residual Fuel Oil No.6 will be supplied to the baseload plants:
Cabras 1&2
MEC 8&9

How much will it cost?

The 2-year contract is estimated to cost approximately $230M requiring prior approval from the PUC.

When will it be completed?

The contract is planned for an initial period of two (2) years to commence on or about December 01, 2018 and to expire on November 30, 2020, with the option to extend for three (3) additional one-year terms.

What is its funding source?

Fuel revenue funds

The RFP/BID responses:

Five bidders responded to the solicitation under IFB GPA-009-18. **Mobil Oil Guam** was determined to the lowest responsive and responsible bidder.

GPA Resolution No. 2018-017
Relative to Approving GPA's NET Metering Credit Recommendation

What is the project's objective? Is it necessary and urgent?
The necessary and urgent objective of this resolution seeks approval to file and respond to the Guam Public Utilities Commission (PUC) order under Docket No. 08-10 (December 29, 2008), Exhibit A:

> "The NM Rider is available to all customers without limitation as to the aggregate capacity of Customer-Generator installations on the GPA System. However, at the time the number of Customer-Generators exceeds one-thousand (1000) customers this issue will be reviewed by the PUC and a determination made as to the continued offering of the NM Rider for new 'net metering' customers."

GPA achieved the milestone of 1000 net metering customers in June 2016. As of July 31, 2018, GPA has 1,733 net metering customers resulting in an approximate $3,411,623.29 annual subsidy by non-net metering customers. Additionally, GPA has conducted and completed as ordered by the Consolidated Commission on Utilities (CCU) several public meetings to:

- Address net metering stakeholders' concerns and obtain feedback;
- Evaluate stakeholder feedback;
- Perform analysis regarding net metering impacts on the GPA especially on non-net metering customers;
- Propose recommendations on whether or not changing the current net metering program is in the best interests of customers while insofar as practical alleviating net metering customer concerns.

Where is the location? The Territory of Guam

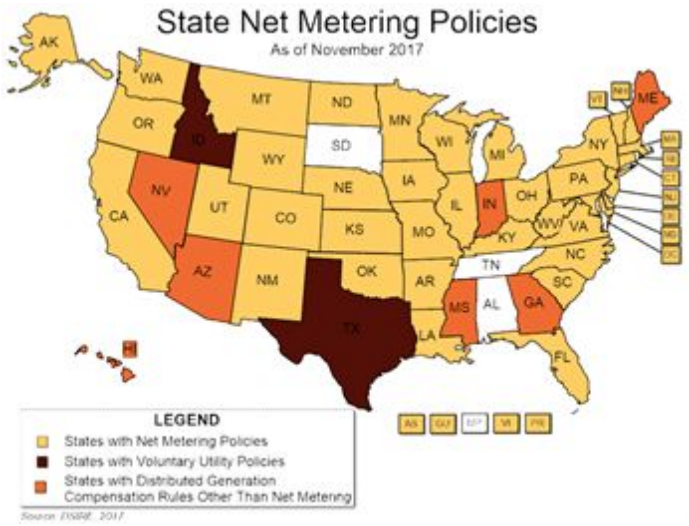
How much will it cost? This recommendation will save non-net metering customers approximately $3,411,623.29 annually.

When will it be completed? Upon approval of the Guam Public Utilities Commission

What is its funding source? The Levelized Energy Adjustment Clause

OVERVIEW – NET METERING POLICIES

- Thirty Eight (38) States, Washington D.C., and Four (4) Territories Offer Net Metering and utilities in two additional states (Idaho and Texas adopted Net Metering (Full Retail Credit).
- Arizona, Georgia, Hawaii, Indiana, Maine and Mississippi have compensation other than net metering.
- The Value of Solar (VOS) is an alternative to net metering. Customers buy from the grid at retail rate and sell to the grid at an established VOS rate. Only Minnesota and Austin Energy (Texas) has adopted a VOS rate.



Source: National Council of State Legislatures: 11/20/17

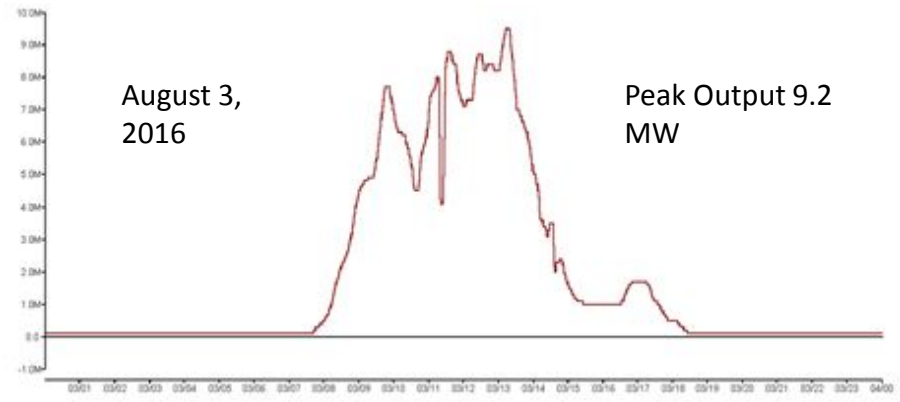
Guam NEM Program

- Program Mandated in 2004. Guam has been crediting NEM customers full retail rate over the past 13 years. Excess credit carried over or paid out annually at full retail rate.
- PUC to evaluate program and credits provided when GPA has 1,000 NEM Customers which occurred in June 2016.
- As of July 2018, GPA has 1,733 NEM Customers (94.7% Residential), with 18,315 KW of capacity. The revenue impact on non-NEM ratepayers is estimated at $3.4M annually.
- CCU/GPA conducted its first public hearing on NEM in August 2016 to gather input from stakeholders in order to prepare its filing to the PUC for changes in rate credits in order to achieve parity amongst all ratepayers.

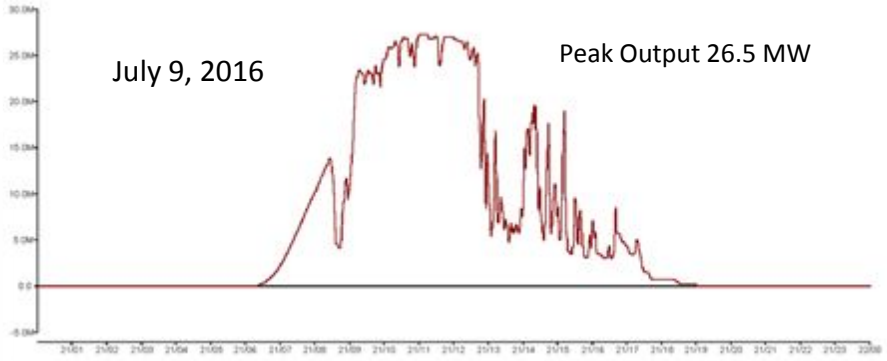
Solar PV Energy Production Characteristics

Utility Scale PV Output Look Like This …





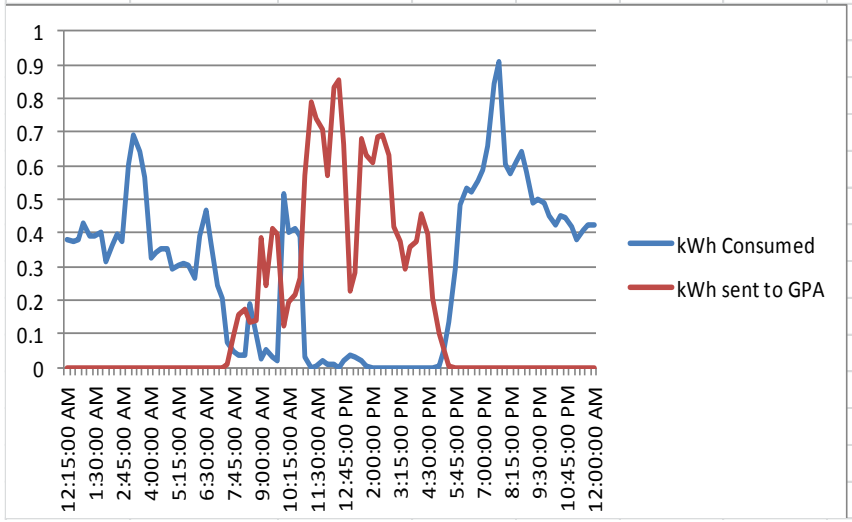
NEM does not eliminate need for capacity



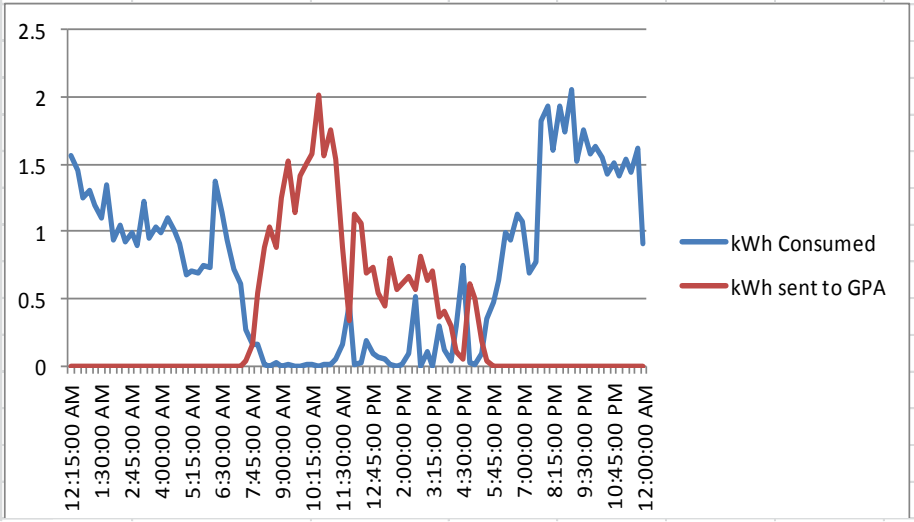
PV without adequate storage is not a capacity benefit. It is an energy benefit.

NEM Customer Profiles

Date:	14-Jun-16		
PV System KW Size	5.0		
GPA KWH 12am to 7am	11.05		
GPA KWH 7am to 6pm	3.66		
GPA KWH 6pm to 12am	**12.92**	**Evening Peak**	
NEM KWH 7am to 6pm	16.14		
Net GPA KWH	11.49		



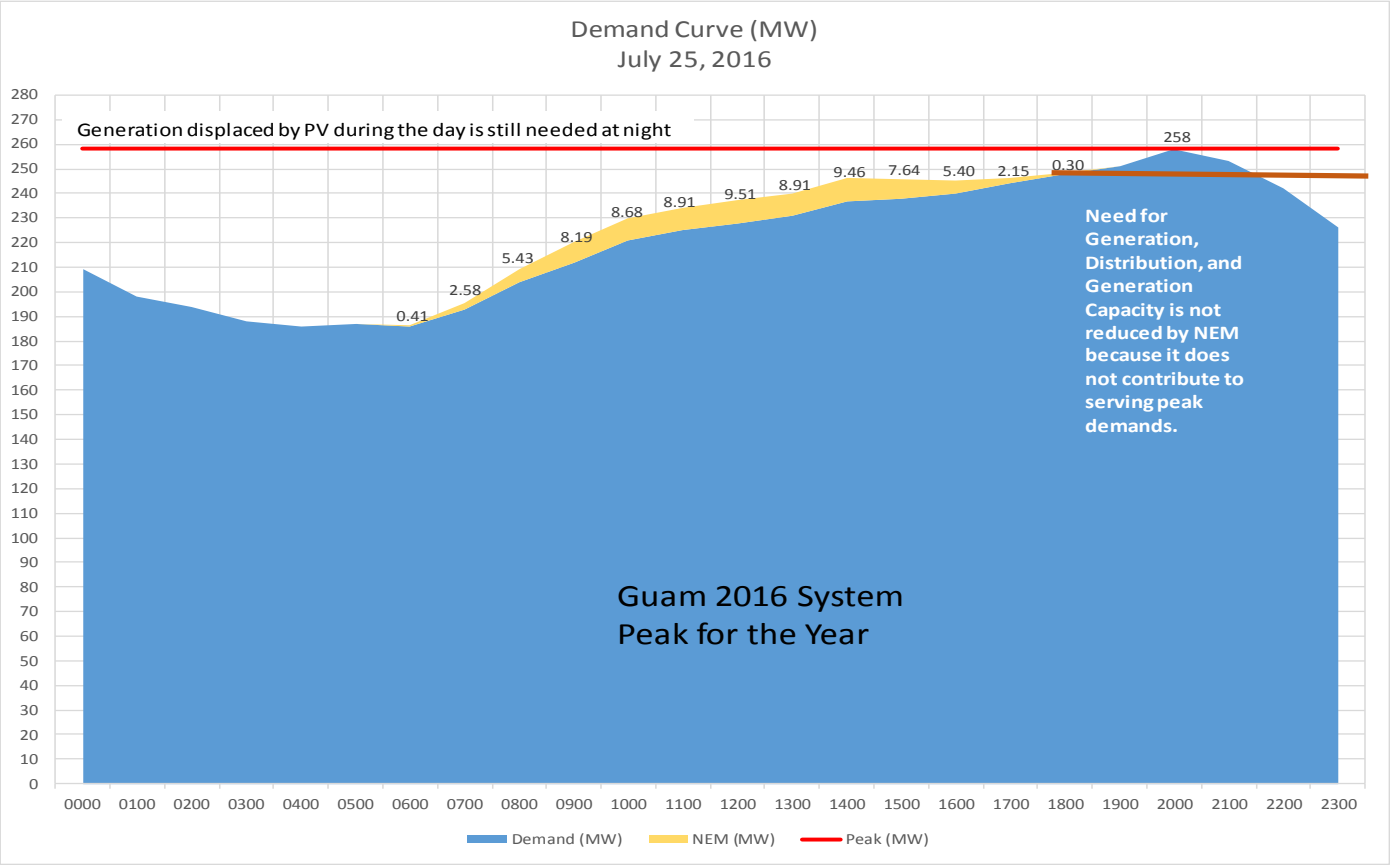
Date:	14-Jun-16		
PV System KW Size	12.4		
GPA KWH 12am to 7am	28.9		
GPA KWH 7am to 6pm	6.1		
GPA KWH 6pm to 12am	**34.6**	**Evening Peak**	
NEM KWH 7am to 6pm	32.5		
Net GPA KWH	37.1		



Does NEM Lower Guam Generation Capacity Requirements?

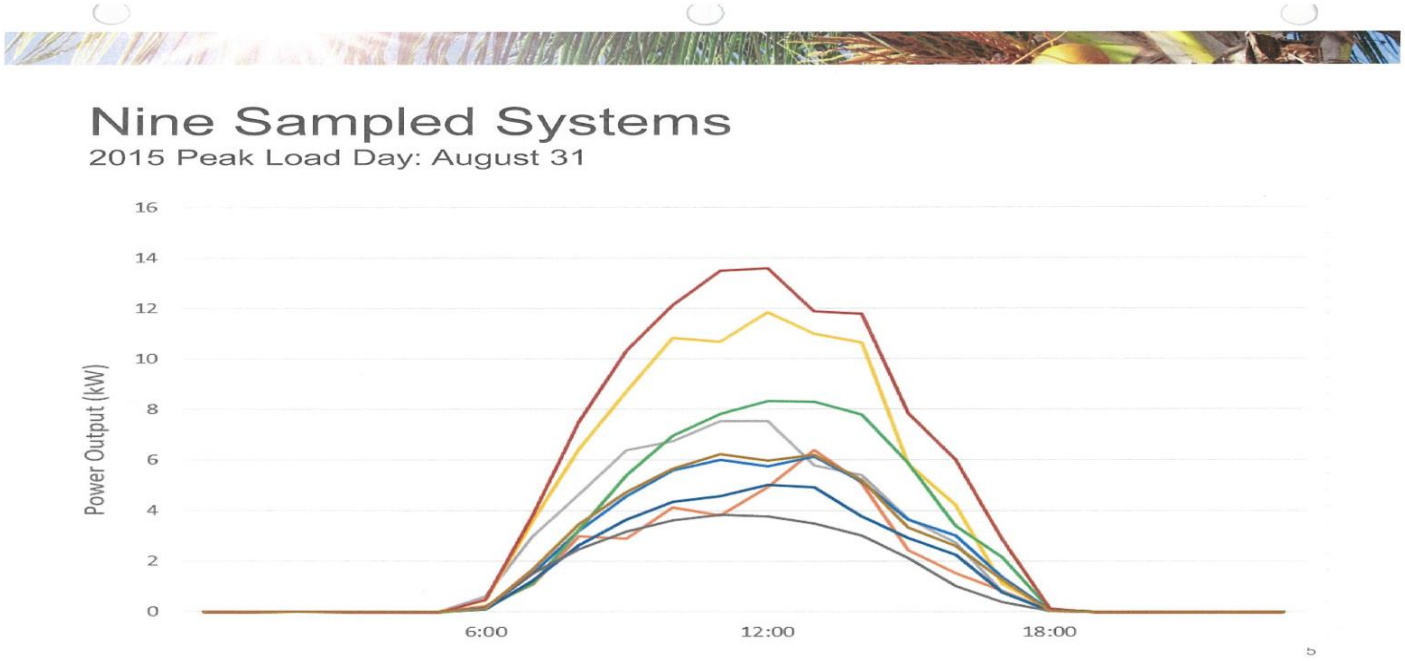
No. NEM Solar PV systems in Guam does not reduce peak demand and therefore does not eliminate conventional capacity needs

Transmission, Distribution, or Generation Capacity for Guam Not Reduced by PV



NEM Peak Production not at GPA Peak Demand Period

Source: Clean Power Resource Report



Net Metering Policy Issues

- Replacement for Net Metering Program
- Grandfathering existing registered NEM customers
  - Allow customers who own system to recover investment
  - Phase in to avoided cost rates over a 5 to 8 year period
- GPA files for PUC approval:
  - Reassessed NEM rates each LEAC for Avoided Fuel Value
  - Reassessed NEM rates for other components
    - Annually
    - Periodically over a set number of years
    - When GPA's generation mix changes

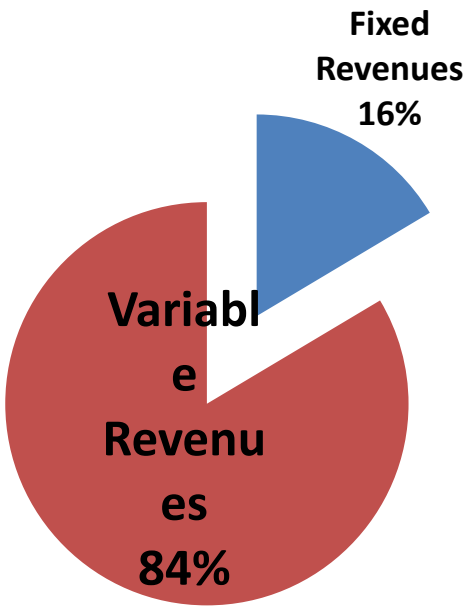
Value of the Grid to NEM Customers

- NEM customers receive services from the grid including:
  - Use the grid to sell power (get credit at full retail rate for excess production)
  - Use the grid to energize their homes at night, but credited back from their production (Uses GPA Grid as storage)
  - Using Grid at night results in increased fuel cost to non-NEM Customers because costlier less efficient generation is used to generate their energy needs
  - Frequency regulation absorbed by grid for intermittencies
  - Reactive power supply
  - Voltage regulation
  - Stand-by power on overcast days when the sun does not shine

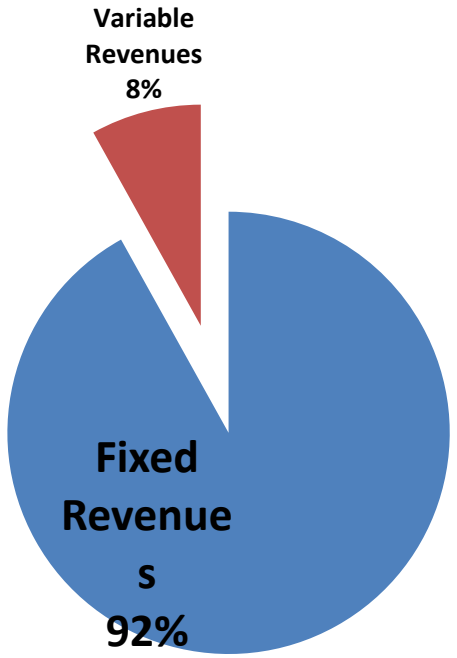
- Monthly fixed charge of $15 does not recover cost to serve from grid
  - Most of GPA fixed cost is recovered in the energy use (kWh) rate component which is typically zero for NEM customers

Rate Structure & Fixed Cost Recovery

Civilian Fixed vs Variable Revenues



Navy Fixed vs Variable Revenues



GPA Rate Structure Should Move Towards Recovering More Fixed Costs Through Fixed Charges.

- Civilian rate structure
  - Most of GPA fixed costs recovered in the variable rate
- Navy rate structure
  - Most of GPA fixed costs recovered in the fixed rate
- Hawaii has moved to fixed cost recovery predominantly through its fixed rate

Net Metering Public Meetings Held to Gather Input from Stakeholders



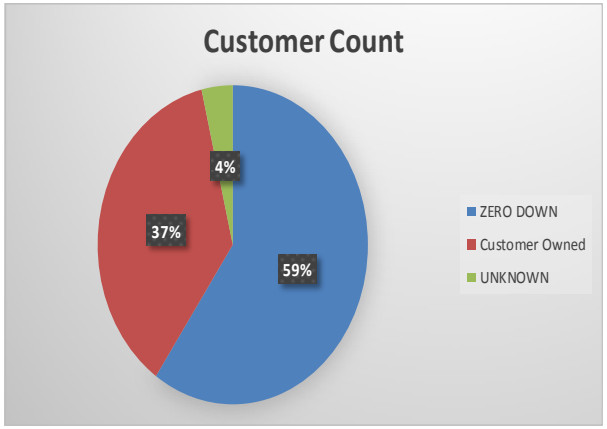
Key Points from Public Meetings

- Solar PV providers opined the B&V report provides all the gain to GPA and did not represent true value of solar
- NEM Owner wants to recover his investment. Asked for grandfathering until he does so. He said it will take 7 years to recover his $60K investment
- NEM not meant to be money making business but a fair exchange of trade energy…some customers making money from units sized beyond their needs
- The applicability of NEM program to 3rd party providers need to be clarified
- Solar PV provider wants NEM program to continue up to 20% penetration similar to Hawaii
- Solar PV provider wanted more time to provide a report on Value of Solar and bring to GPA for information. Report was completed and presented by Clean Power Research on April 18, 2018

Key Points from Public Meetings (continued)

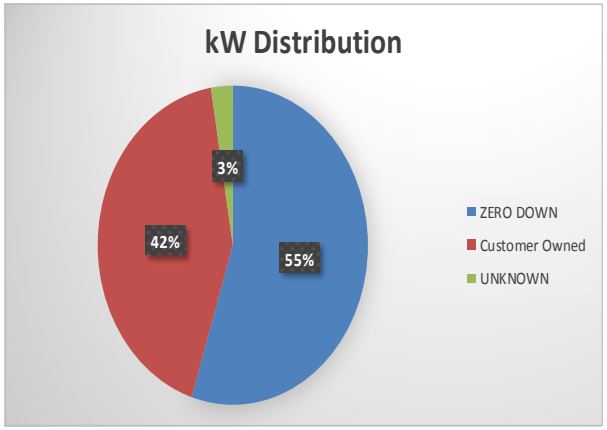
- Solar PV provider commented the NEM energy saves the utility cost on:
  - Maintenance cost for generations, poles, labor, lines, substations, transformers, etc.
  - Reduction of line losses because energy is near customers
  - Costs associated with fuel and fuel shipments
  - Helps GPA achieve energy portfolio reducing need for more renewable projects
  - Savings to environment; lessens carbon foot print
- Solar PV Provider-GPA should consider subsidies for home energy storage systems
- Solar PV Provider-GPA should consider grandfathering NEM customers through a phased approach
- No new points placed forward at the July 18, 2018 public meeting where the GM presented his recommendations which were previously presented to CCU

NEM – PV Statistics



Customer Count

Description	Number of Customers
ZERO DOWN	979
Customer Owned	602
UNKNOWN	61
Grand Total	**1,642**



kW Distribution

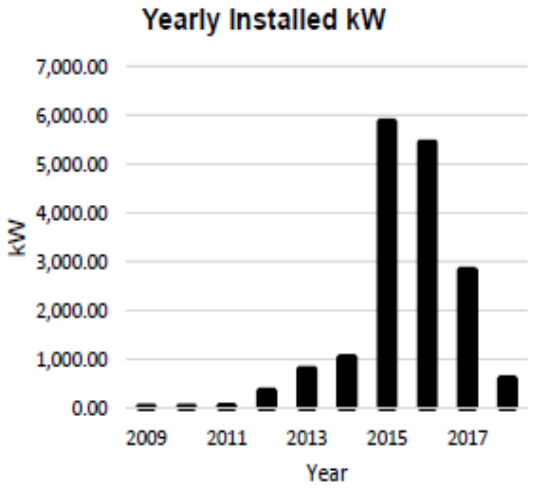
Description	kW
ZERO DOWN	9,326
Customer Owned	7,212
UNKNOWN	440
Grand Total	**16,978**

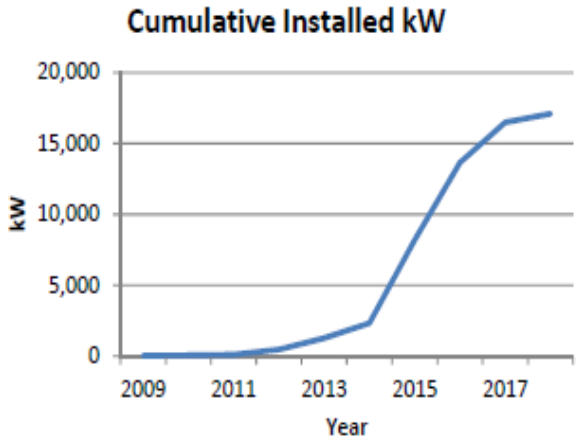
March 2018

Customer Class	KW	NEM	Customers	Percent of Customer Class
R - Residential	14,119	1,562	43,756	3.6%
J - Small General Service Demand	1,647	32	987	3.2%
K - Small Government Demand	318	9	348	2.6%
L - Large Government Demand	23	1	45	2.2%
P - Large General Demand	241	3	116	2.6%
G - Small General Non Demand	666	33	4,127	0.8%
S - Small Government Non-Demand	79	7	681	1.0%
Total	**17,092**	**1,647**	**50,060**	

Projected FY 2018 Non-Fuel Revenue Loss				
Customer Rate Class	Renewable Energy Capacity (kW)	Annual kWh Generated (@5.092 hours/day)*	Average Non-Fuel Yield $/kWh	Estimated Annual Revenue Loss
R	13,693	25,447,071	0.09293	$ 2,364,822
J	1,647	3,059,970	0.13112	401,226
K	318	590,618	0.13932	82,286
L	23	42,373	0.13525	5,731
P	241	447,331	0.11539	51,617
G	636	1,182,853	0.15084	178,417
S	79	146,447	0.15334	22,456
Grand Total	**16,636**	**30,916,662**		**$ 3,106,555**

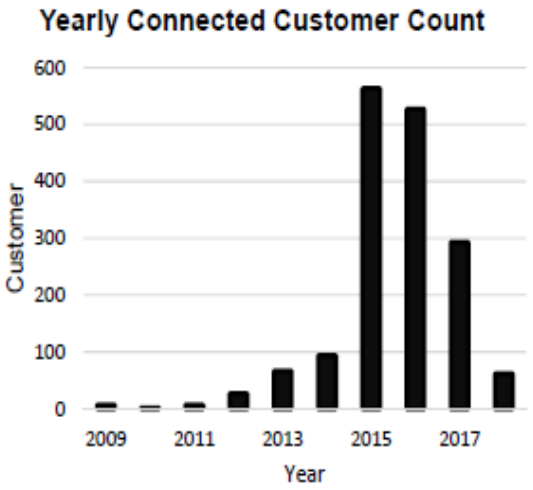
*Estimated number of hours from NREL for Guam (13.4° North and 144° East).

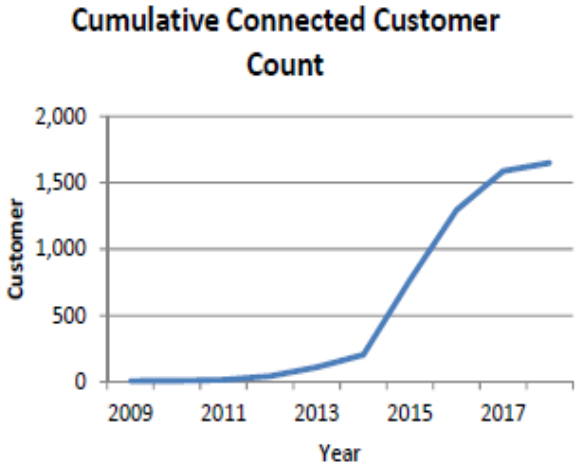


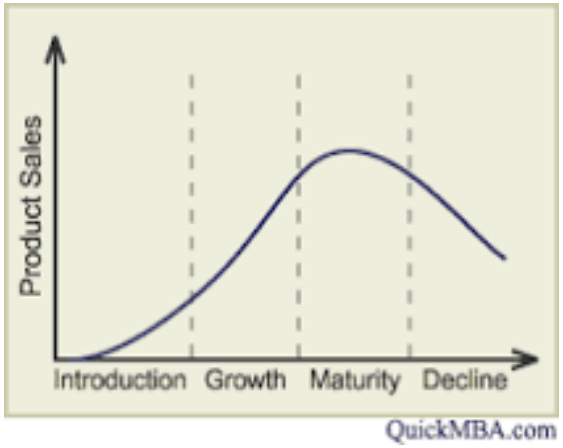


NEM Market Analysis

- Product Lifecycle Stages
  - 2009 -2011 Introduction
  - 2012 – 2014 Growth
  - 2015 – 2016 Maturity
  - 2017 – Present Decline

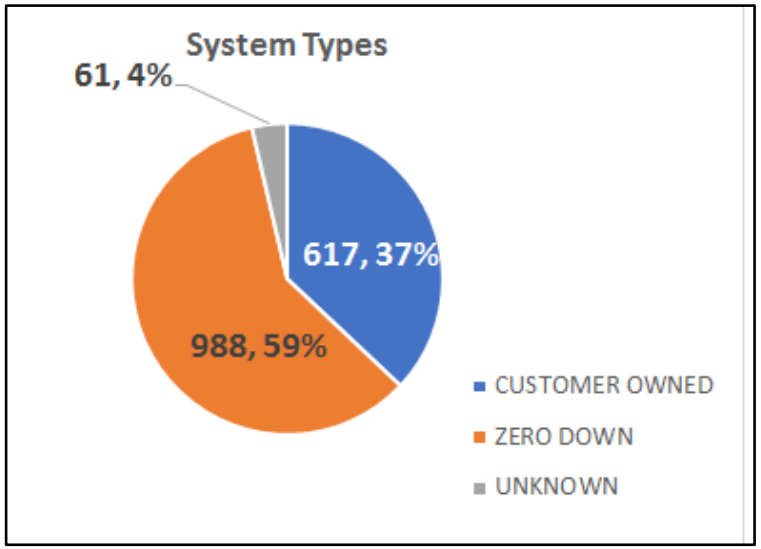






Market Share of Competitors

Firm	Count	Capacity (KW)	% of Installed System
Company A	747	6,882	40.3%
Company B	271	2,337	13.7%
Company C	229	2,426	14.2%
Company D	147	2,410	14.1%
Owner Installed	90	1,088	6.4%
Company E	29	470	2.7%
Company F	26	357	2.1%
Company G	13	100	0.6%
All Other Companies/Self Constructed Combined	35	576	3.4%
Unknown	62	449	2.6%
Totals:	1,649	17,095	100.0%



GPA Value of Solar from an Avoided Cost Perspective

Cost Category	FY 2017	Cost per kWh Sold	GPA Avoided Cost ($/kWh)
Generation + IPP Costs			
Other Production - Fixed O&M	$ 17,783,917	$ 0.0110	
IPP Costs - Fixed O&M	$ 16,958,770	$ 0.0105	
IPP Costs - Variable O&M	$ 2,976,564	$ 0.0018	$ 0.0018
Transmission & Distribution	$ 11,703,969	$ 0.0073	
Admin and General			
Payroll, benefits, retirement	$ 12,862,412	$ 0.0080	
Insurance	$ 7,252,504	$ 0.0045	
Contracts	$ 4,024,943	$ 0.0025	
Utilities	$ 1,817,009	$ 0.0011	
Office supplies & Others	$ 844,349	$ 0.0005	
Customer Accounting	$ 4,756,213	$ 0.0030	
Debt Service	$ 56,937,000	$ 0.0354	
CIPs/Others	$ 26,731,639	$ 0.0166	
Total (Base Rate Revenues)	$ 164,649,289	$ 0.1023	
Fuel Costs	$ 181,683,506	$ 0.1128	
Fuel Consumption, plus the under recovery of $15.3 M)	$ 165,692,714	$ 0.1029	$ 0.1029
Fuel Handling	$ 7,128,512	$ 0.0044	
Renewables	$ 8,862,280	$ 0.0055	
Total	346,332,795	$ 0.2151	
Energy losses at 3.5%		$ 0.0054	$ 0.0054
Environmental cost		$ 0.000039	$ 0.000039
Total Avoided Cost			**$ 0.1102**
Average cost in 2017 per kWh		$ 0.2151	$ 0.2151
Credit Beyond Avoided Cost			**$ 0.1049**

Energy Storage System (ESS) Cost Frequency Control

FY2019	
Total KWH Sales Projected:	1,610,093,011
ESS Annual Debt Service & O&M:	$ 2,829,348
$/kWh:	$0.0018

GPA provides low cost energy storage

New 40 MW Energy Storage System Commissioning December 2018

Value of Solar Comparison

Only Minnesota and Austin Energy (Texas) adopted VOS Model

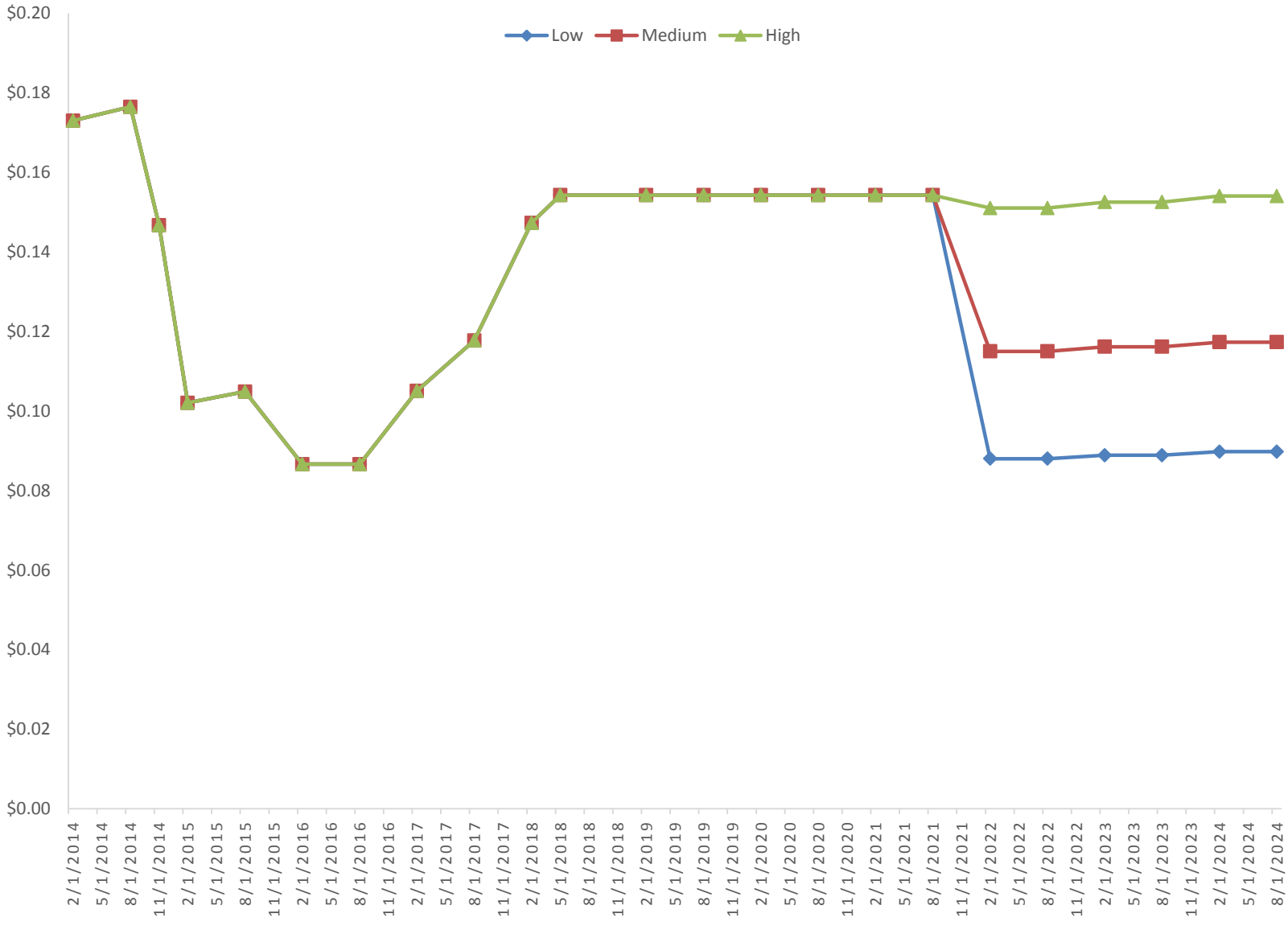
Cost Category	Minnesota	Austin Energy	Clean Power Research (MRE)	GPA Avoided Cost FY 2017	Comments
Fuel Cost	X	X	$0.1260	$0.1029	Close Agreement
Energy Losses	X	X	$0.0054	$0.0054	In Agreement
Plant O&M-Fixed	X	X			
Plant O&M-Variable	X	X		$0.0018	Minor Cost Impact
Generation Capacity Cost	X	X	$0.0490		No Capacity Avoided
Reserve Capacity Cost	X				
Transmission Capacity Cost	X	X			
Distribution Capacity Cost	X	X			
Environmental Cost	X	X		$0.0001	Minor Cost Impact
Voltage Control Cost	X				
Solar Integration Cost	X				
Avoided Fuel Hedging Uncertainty Cost			$0.0590		N/A - GPA Does Not Hedge
Avoided Mandated RPS Cost			$0.0310		GPA meeting RPS at Savings not Cost
Total:			**$0.2704**	**$0.1102**	**Variance Subsidized by Non-NEM Ratepayers**

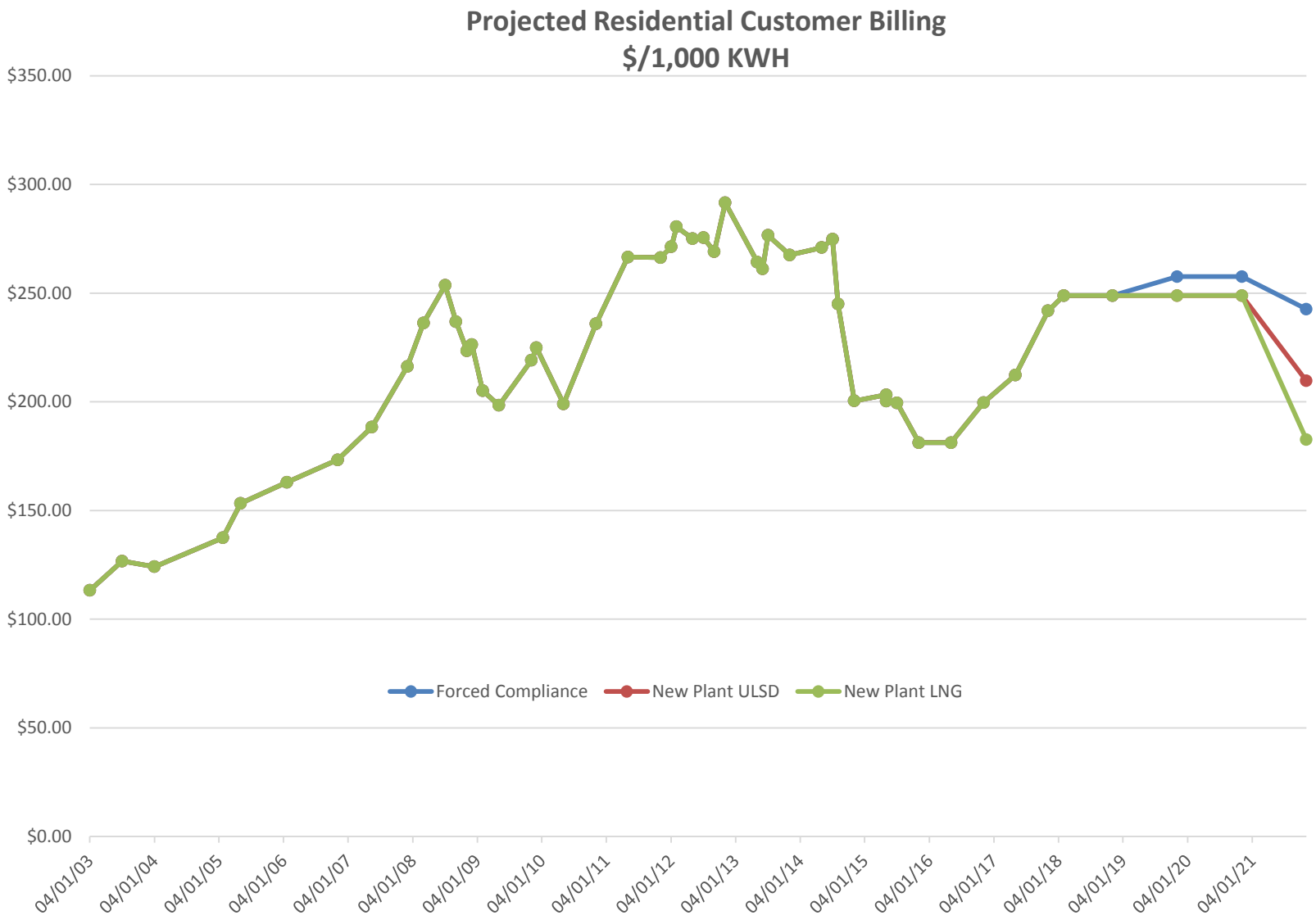
Value of Solar Comparison

Adjusted to GPA Actual Cost

Cost Category	Clean Power Research (MRE)	Revised CPR/MRE Based on Comments	GPA Avoided Cost FY 2017	Comments
Fuel Cost	$0.1260	$0.1029	$0.1029	Adjusted based on LEAC for Similar FY 2017 Period
Energy Losses 4.6%	$0.0054	$0.0047	$0.0047	In Agreement
Plant O&M-Variable			$0.0018	GPA Determined Minor Cost Impact
Generation Capacity Cost	$0.0490	$0.0000	$0.0000	No Capacity Avoided because does not Reduce Peak Demand
Environmental Cost			$0.0001	GPA Determined Minor Cost Impact
Avoided Fuel Hedging Uncertainty Cost	$0.0590	$0.0000	$0.0000	Not Applicable - GPA Does Not Hedge, Therefore No Cost
Avoided Mandated RPS Cost	$0.0310	$0.0000	$0.0000	GPA meeting RPS at a Savings not a Cost
Total:	**$0.2704**	**$0.1076**	**$0.1095**	

LEAC RATE ($/KWH) PROJECTION




Projected Residential Customer Billing
$/1,000 KWH
$350.00
$300.00
$250.00
$200.00
$150.00
$100.00
$50.00
$0.00
Forced Compliance
New Plant ULSD
New Plant LNG
04/01/03
04/01/04
04/01/05
04/01/06
04/01/07
04/01/08
04/01/09
04/01/10
04/01/11
04/01/12
04/01/13
04/01/14
04/01/15
04/01/16
04/01/17
04/01/18
04/01/19
04/01/20
04/01/21

Net Metering Economics

When Do Customer-Owned NEM Recover their Investment?

Value of Solar Payment Versus Simple Payback						
$/Kwh Credit	$0.10		$0.12		$0.27	
ITC Valid	2018-2019		2018-2019		2018-2019	
Solar PV All-In Cost ($/W)	30.0% ITC		30.0% ITC		30.0% ITC	
	Simple Payback (years)	IRR (%)	Simple Payback (years)	IRR (%)	Simple Payback (years)	IRR (%)
1.00	6	18.8%	5	23.9%	2	53.0%
1.25	7	14.6%	6	18.8%	3	42.2%
1.50	8	11.6%	7	15.3%	3	35.0%
1.75	10	9.5%	8	12.7%	4	29.8%
2.00	11	7.8%	9	10.7%	4	25.9%
2.25	12	6.4%	10	9.1%	5	22.9%
2.50	**14**	**5.2%**	**11**	**7.8%**	**5**	**20.4%**
2.75	15	4.2%	12	6.6%	**6**	18.4%
3.00	17	3.4%	13	5.7%	**6**	16.7%
3.25	18	2.6%	14	4.8%	**7**	15.2%
3.50	20	1.9%	16	4.1%	**7**	13.9%
3.75	21	1.3%	17	3.4%	**8**	12.8%
4.00	**23**	**0.8%**	**18**	**2.8%**	**8**	**11.8%**
4.25	25	0.3%	19	2.2%	9	10.9%

NEM Customer Owned Solar PV

At **GPA Retail Rate Credit** Recovers Investment in 5 to 8 Years

GPA Residential Retail Rate Credit:			
Average $/W Installed	**$3.25/Watt**	**Annual Savings**	**Simple Payback Years**
PV KW Capacity	7.69		
Annual Capacity Factor	20.0%		
Annual Kwh Production	13,473		
Average LEAC	$0.147		
Average Base Rate	$0.093		
Total Average rate	**$0.240**		
Annual Energy Cost Avoided	$3,233.49		
Installation Cost - No Tax Credit	$24,993		**7.7**
15 Year Loan Annual Payment, 8%, 15 years	$2,919	$314.49	
With Tax Credit	$17,495		**5.4**
15 Year Loan Annual Payment, 8%, 15 years	$2,043	$1,190.49	

NEM Customer Owned Solar PV

At **GPA 2018 LEAC Rate Credit** Recovers Investment in 8 to 12 Years

GPA 2018 LEAC Rate Credit:			
Average $/W Installed	**$3.25/Watt**	**Annual Savings**	**Simple Payback Years**
PV KW Capacity	7.69		
Annual Capacity Factor	20.0%		
Annual Kwh Production	13,473		
Average LEAC	$0.154		
Average Base Rate	$0.000		
Total Average rate	**$0.154**		
Annual Energy Cost Avoided	$2,074.82		
Installation Cost - No Tax Credit	$24,993		**12.0**
15 Year Loan Annual Payment, 8%, 15 years	$2,919	-$844.18	
With Tax Credit	$17,495		**8.4**
15 Year Loan Annual Payment, 8%, 15 years	$2,043	$31.82	

Summary

- Net Metering was established 13 years ago in 2004. Substantial Changes has occurred on GPA delivery cost and more changes expected by 2022.

- Customer Owned NEM System recovers its investment within 5 to 8 years from installation at GPA full Retail Rate Credit.

- Customer Owned NEM System recovers its investment within 8 to 12 years from installation at GPA LEAC Avoided Cost Rate Credit.

- It appears Zero Down Customers with 2.9% escalators will incur higher cost over the life of their 25 year contract. A $0.18/KWH rate in 2018 becomes $0.357/KWH in 2042.

Additional Information on Net Metering

Estimated Cost Impact to Non-Net Metering Ratepayers:

NEM Credit above avoided cost	Estimated Kwh	Estimated Subsidy	$/Kwh
FY 2009	23,912	$1,657	$0.0693
FY 2010	98,830	$8,483	$0.0858
FY 2011	170,070	$18,177	$0.1069
FY 2012	494,672	$58,546	$0.1184
FY 2013	1,556,949	$178,996	$0.1150
FY 2014	3,137,212	$410,559	$0.1309
FY 2015	7,383,621	$856,921	$0.1161
FY 2016	21,867,383	$2,200,795	$0.1006
FY 2017	28,242,917	$2,828,834	$0.1002
FY 2018	**33,921,230**	**$3,411,623**	$0.1006
Totals:	**96,896,796**	**$9,974,591**	

Net Metering Customers July 2018	1,733
Total GPA Customers	51,515
% NEM Customers	3.36%
Non-NEM Customers	49,782
% Non-NEM Customers	96.64%

Jurisdiction	Years	Notes
Arkansas	20	
Neveda	20	
Utah	18	Until 2035
California	5	Residential, require application
	10	Other, require application
Arizona	20	Require application by June 12, 2018
Florida	20	March 31, 2018 final inspection, JEA
New Hampshire	22	Until 2040
Indiana	29	NEM customers prior to July 1, 2017 have until July 1, 2047
	14	NEM customers signing up prior to July 1, 2022 or their utility reaching a 1.5% peak summer load cap can continue net metering until July 1, 2032
Maine	15	Existing 2017 customers
Michigan	10	Limited to NEM that is already in the system
Hawaii (HECO, MECO, HELCO, Molakai, Lanai)	∞	NEM application was submitted to the utility postmarked 10/12/15 or earlier
Vermont	10	Net metering systems with a complete Certificate of Public Good application filed with the PSB prior to January 1, 2017 (as long as the application was filed at a time when the electric company was accepting net metering systems, based on the state's former aggregate capacity limit) are grandfathered

- Utilities and States Differ on Grandfathering NEM Customers
- Many Jurisdictions are Ending Net Metering

5

Maine

- In early 2017, Maine became the fourth state to more appropriately compensate net metering. The Public Utilities Commission adopted a ramp-down policy, which gradually harmonizes the transmission and distribution charges for net metering customers, aligned with true avoided costs.
- The rules grandfather existing customers for 15 years.

Source: Tanton, Thomas. (April 2018) Net Metering in the States: Moving Toward Equitable and Sustainable Policies for Electric Customers. URL at http://sglf.org/wp-content/uploads/sites/2/2018/04/SGLF-Net-Metering-In-the-States-by-Thomas-Tanton-April-2018.pdf (August 17, 2018).

7

Hawaii

- Marco Mangelsdor, president of installer ProVision Solar.
  - "… Hawaii's net energy metering (NEM) policy has "88% of the utility's ratepayers subsidizing the 12% who have net energy metered systems."
  - He believes utility's concern about that shift of costs for system maintenance is reasonable.
  - "The cost of NEM was $38 million in 2013 and it is estimated at $53 million in 2014. These are not trivial dollars."

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California

- One of the first studies to quantify the magnitude of the NEM subsidy was conducted by Energy+Environmental Economics (E3) for the California Public Utilities Commission (CPUC) in 2013.
- The E3 study estimated that NEM would result in a cost shift of $1.1 billion annually by 2020 from NEM to non-NEM customers if current NEM policies were not reformed in California.
- A cost shift of this magnitude–paid for by non-NEM customers–was unacceptable to California regulators.
- As a result, California regulators set to work to reform rates in their state; many other states followed suit and conducted similar investigations of the magnitude of the NEM subsidy.

12

Nevada

- Recently, Arizona Public Service (APS), the state's largest utility, found that solar customers avoid on average around $1,000 annually in costs for operating the electric grid, costing the average power user, who must make up the cost, a $16.80 premium per year.

13

Louisiana

- Overall, the state found that its net metering structure resulted in an $89 million negative net benefits to electricity rate payers, meaning the net metering program costs are greater than program benefits, and that over $2 million of utility costs per year were being subsidized by non-solar consumers.

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See attached Article of May 18, 2018 by Institute for Energy Research (IER)

Subsidies uncheck will continue to impact Non-Net Metering substantially: Guam is at 3.36%; Hawaii is at 12 % NEM;

Description:	Jul-18	Future	Future	Future
% of All Customers	3.36%	5.00%	10.00%	15.00%
NEM Customers	1,733	2,576	5,152	7,727
Energy Produced	33,921,230	50,416,970	100,833,939	151,250,909
Annual Subsidy	$3,411,623	$5,071,652	$10,143,304	$15,214,955
Non-Nem Customers	49,782	48,939	46,364	43,788
Cost to each Non-NEM	**$68.53**	**$103.63**	**$218.78**	**$347.47**

Recommendation

1. CCU approve GPA filing a petition to the PUC as shown herein to consider changes to the existing net metering credit

2. Recommend an implementation plan for billing NEM customers on net billing: Buy All/Sell All or similar billing models

3. GPA files with GPUC for adjustment of net metering credits from retail to avoided cost

4. It is recommended that for existing NEM Customers, implement a Grandfather phase-in approach over 5 to 8 years to the GPA avoided cost credit. Adjustments for LEAC, line loss and variable cost changes done annually.

5. For future NEM customers, credit set at the GPA avoided cost

GPA Resolution No. 2018-18

RELATIVE TO THE APPROVAL OF ORGANIZATIONAL REALIGNMENT - CREATION OF THE ADVANCED METER INFRASTRUCTURE (AMI) TECHNICIAN SERIES POSITIONS

What is the project's objective and is it necessary and urgent?
The installation and utilization of GPA's advanced meter infrastructure (AMI) beginning in 2011, including smart meters, significantly changed the Authority's processes and structure. Current employees holding Meter Reader and Customer Service Electrician series positions are performing AMI or other work generally unrelated to their position titles. The Authority seeks to create new positions, abolish unnecessary positions, and eliminate overlap of similar functions in order to gain efficiencies and reflect its current processes and structure.

Where is it at?
The AMI Technician series will be initially utilized by Customer Service, PSCC, and Meter Shop but may be used by other divisions. The Meter Reader and Customer Service Electrician series recommended for abolishment are under the Customer Service division organizational structure.

How much will it cost?
The reorganization is not expected to exceed the current budget.

When will it be completed?
No later than October 28, 2018

What is its funding source?
Revenue funds.

The RFP/BID responses: Not applicable

ORGANIZATIONAL REALIGNMENT

Creation of the AMI Technician Series Positions

August 23, 2018

Summary

- Installation of smart meters and accessories (beginning 2011) significantly changed GPA's processes & structure
- GPA commissioned an analysis of then-current processes and the anticipated changes
- Several recommendations were instituted, including changes to some business processes and organizational structure
- Other changes were instituted, yet not formalized

- Meter Readers & Customer Service Electrician perform the following duties:
  - Monitor smart meters, generate reports and work orders using AMI tools
  - Provide AMI technical assistance
  - Assist Customer Service Representatives
- Meter Shop absorbed the following duties:
  - Manual meter readings
    - 27 opt-out customers *as of July 2018*
  - Manual reconnections & disconnections
  - Meter & streetlight investigations

Outstanding Actions

- Reflect the current processes & structure
- Create new positions
- Eliminate overlap of similar functions
- Abolish unnecessary positions

LIST OF POSITIONS TO BE ABOLISHED	LIST OF POSITIONS TO BE CREATED
Electric Meter Reader I	AMI Technician
Electric Meter Reader II	AMI Technician Leader
Electric Meter Reader Leader	
Electric Meter Reader Supervisor	
Customer Service Electrician I	
Customer Service Electrician II	
Customer Service Electrician Leader	
Customer Service Electrician Supervisor	

Proposed Creation of Positions:

AMI Technician:
Responsible for assisting with and supporting the day-to-day monitoring, analysis and control of the Command Center for the Advanced Metering Infrastructure (AMI) operations and Radio Frequency (RF) networking.

AMI Technician Leader:
Leads and supports the day-to-day monitoring, analysis and control of the Command Center for the Advanced Metering Infrastructure (AMI) operations and Radio Frequency (RF) networking.

RECRUITMENT EFFORTS	Customer Service	Internal Audit	PSCC	Meter Shop
AMI Technician	*3*		*3*	*2*
AMI Technician Leader	*1*			
Meter Electrician I				
Meter Electrician II				*5*
Revenue Protection Utility Investigator		1		
Customer Service Representative	*4*			

AFFECTED POSITIONS	# Employees
Electric Meter Reader I	-
Electric Meter Reader II	1
Electric Meter Reader Leader	1
Electric Meter Reader Supervisor	-
Customer Service Electrician I	3
Customer Service Electrician II	1
Customer Service Electrician Leader	1
Customer Service Electrician Supervisor	1

<u>In-house Job Announcements</u>:
05/18/18 to 05/31/18

- Meter Electrician I
- Meter Electrician II
- Revenue Protection Utility Investigator
- Customer Service Representative

Upcoming

- AMI Technician
- AMI Leader

Benchmark Position	JE	15th Market Percentile (2017 Market Data - 5 sub steps)							
		Structural Adjustment - MIN				Structural Adjustment - MAX			
		Base Salary	Grade	Step	Sub Step	Base Salary	Grade	Step	Sub Step
Electric Meter Reader I	319	26,904	C	3	C	27,997	C	4	C
Electric Meter Reader II	406	31,164	E	4	D	32,429	E	5	D
Electric Meter Reader Leader	553	39,323	H	5	C	40,920	H	6	C
Electric Meter Reader Supervisor	734	49,327	J	5	C	51,330	J	6	C
Customer Service Electrician I	439	33,649	G	3	D	35,015	G	4	D
Customer Service Electrician II	527	41,079	I	3	D	42,747	I	4	D
Customer Service Electrician Leader	660	47,877	J	4	D	49,821	J	5	D
Customer Service Electrician Supervisor	851	62,731	K	6	D	65,278	K	7	D
AMI Technician	414	32,706	F	4	C	34,034	F	5	C
AMI Technician Leader	640	46,933	J	4	B	48,839	J	5	B
Meter Electrician I	478	34,669	G	4	C	36,076	G	5	C
Meter Electrician II	569	42,324	I	4	C	44,042	I	5	C
Revenue Protection Utility Investigator	794	59,686	K	5	C	62,109	K	6	C
Customer Service Representative	461	34,669	G	4	C	36,076	G	5	C

TIMELINE	CREATION AMI Technician AMI Technician Leader	ABOLISHMENT Electric Meter Reader series Customer Service Electrician series
Date of Posting:	8/10/18	
10-Day Timeline:	8/23/18	
GPA CCU Meeting:	8/28/18	
Approval:	*8/28/18*	
Job Announcement:	*8/29/18*	
Employee Notice:	--	*8/29/18*
File with DOA:	*8/29/18*	
File with Legislative Secretary:	*8/29/18*	
Effective Date:	*9/29/18*	*10/28/18*

GM REPORT

TO: **Consolidated Commission on Utilities**

FROM: **General Manager**

DATE: **August 23, 2018**

SUBJECT: **General Manager's Report**

This report provides an update on key issues:

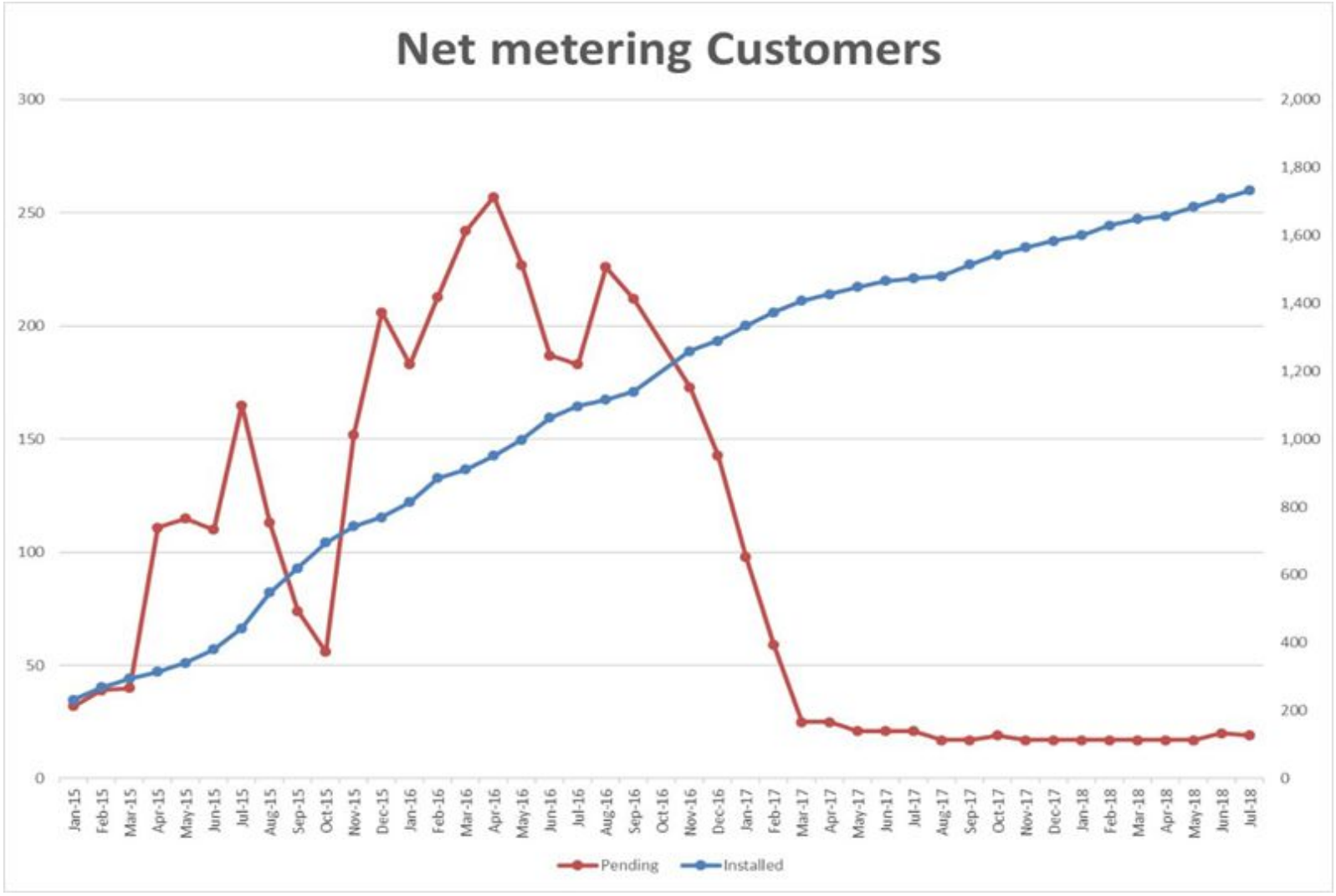
1. **Generation System:** The following summarizes the expected generation capacity projection for **August 2018**. All base load units are expected to be in operation for the month. The Cabras steam units are currently limited to 55 MW each to minimize the potential for boiler tube leaks which is a common occurrence for them.

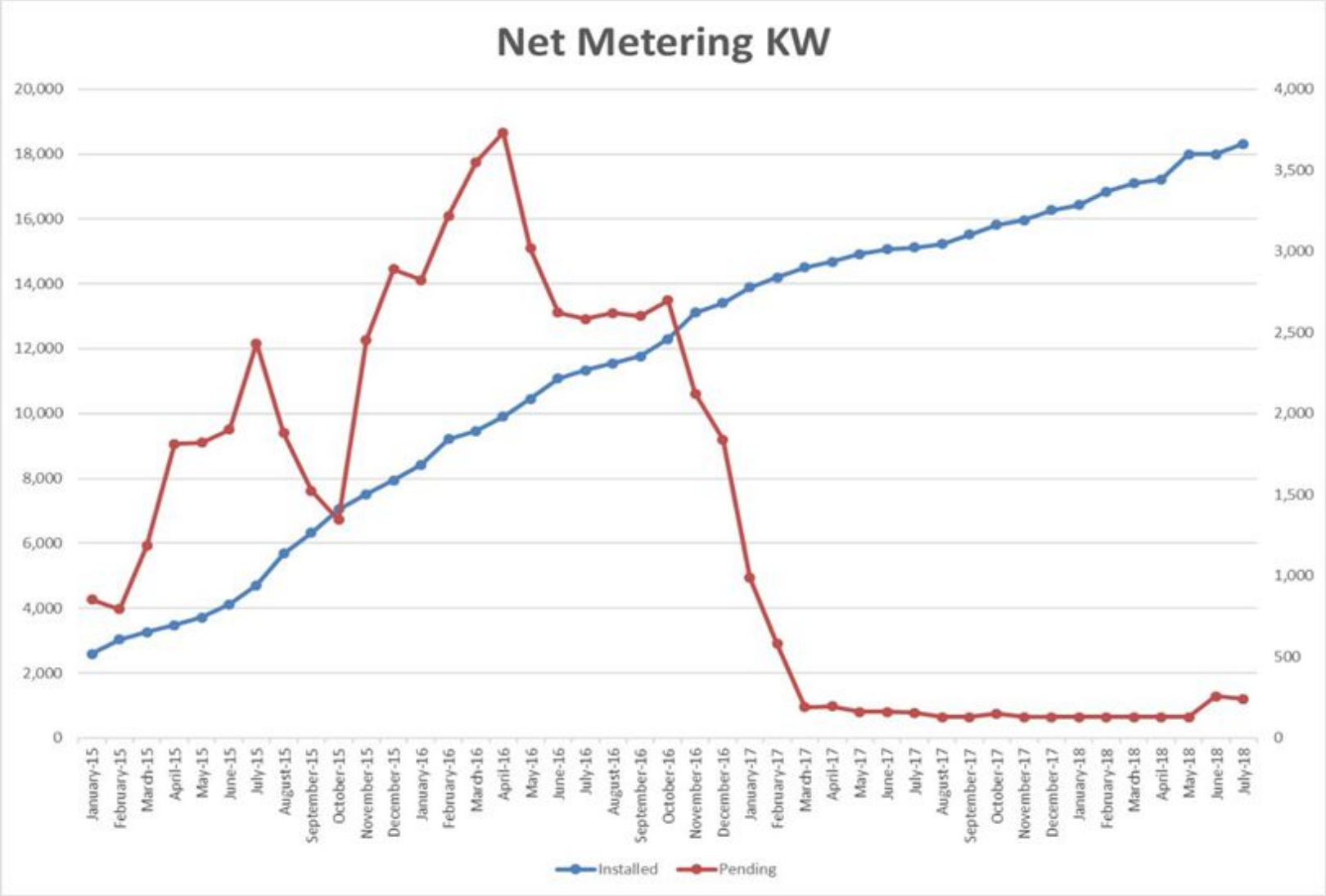
August 2018 Projected Capacity:	**360 MW**
August 2018 Projected Demand:	**250 MW**
Anticipated Reserve Margin:	**110 MW**

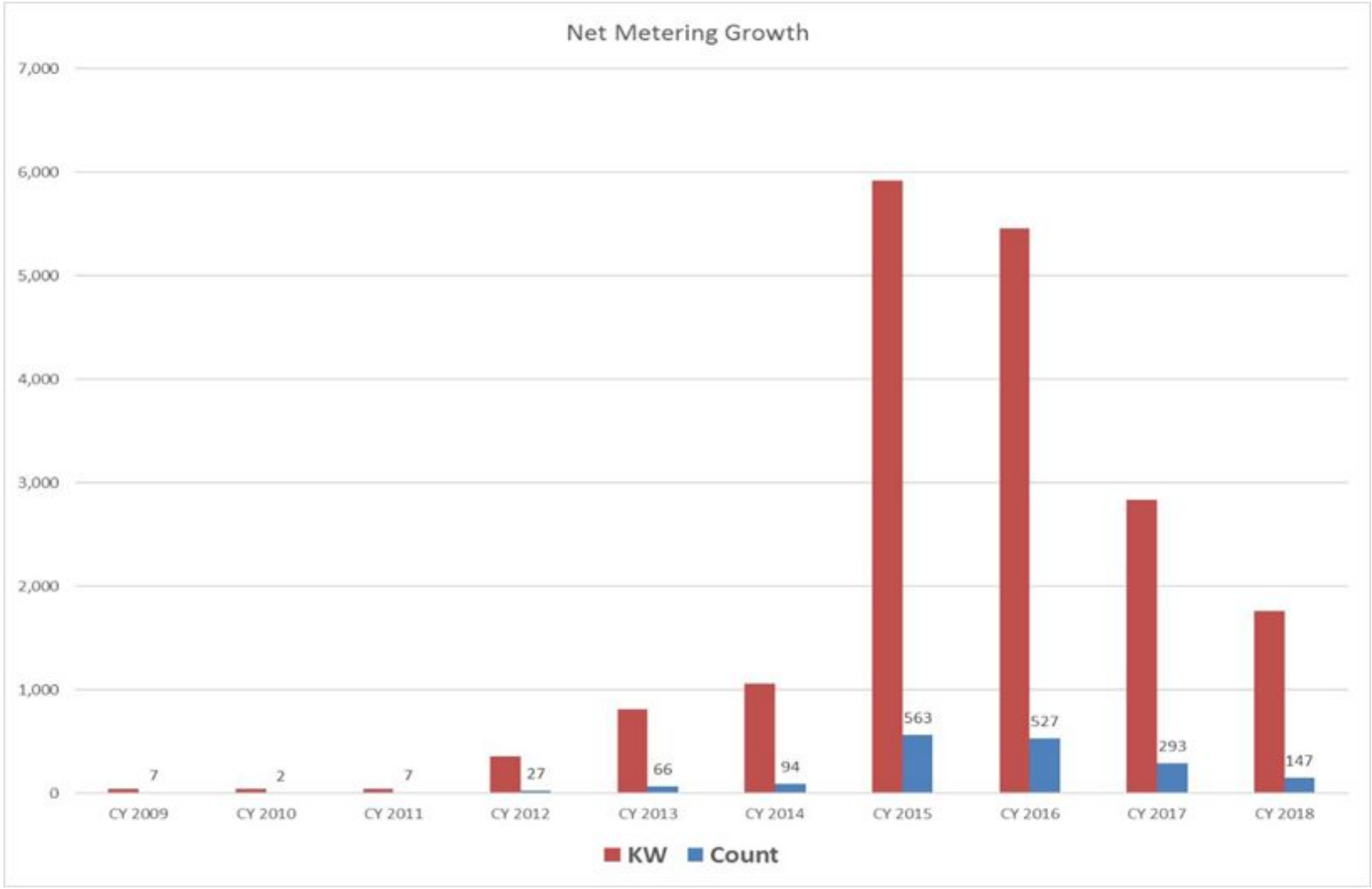
2. Net metering Summary Ending July 2018:

Description:	Count	Kw
Active	**1,733**	**18,315**
Pending	19	241
Totals:	1,752	18,556

Service:	Count	KW	Kw/Customer
Residential	1,642	15,049	9.2
Others	91	3,266	35.9
Total:	1,733	18,315	10.6
% Residential	**94.7%**	**82.2%**	
Estimated 12 Months Revenue Impact:	**$3,411,623**		


Net metering Customers
300
250
200
150
100
50
0
2,000
1,800
1,600
1,400
1,200
1,000
800
600
400
200
0
Jan-15
Feb-15
Mar-15
Apr-15
May-15
Jun-15
Jul-15
Aug-15
Sep-15
Oct-15
Nov-15
Dec-15
Jan-16
Feb-16
Mar-16
Apr-16
May-16
Jun-16
Jul-16
Aug-16
Sep-16
Oct-16
Nov-16
Dec-16
Jan-17
Feb-17
Mar-17
Apr-17
May-17
Jun-17
Jul-17
Aug-17
Sep-17
Oct-17
Nov-17
Dec-17
Jan-18
Feb-18
Mar-18
Apr-18
May-18
Jun-18
Jul-18
Pending
Installed

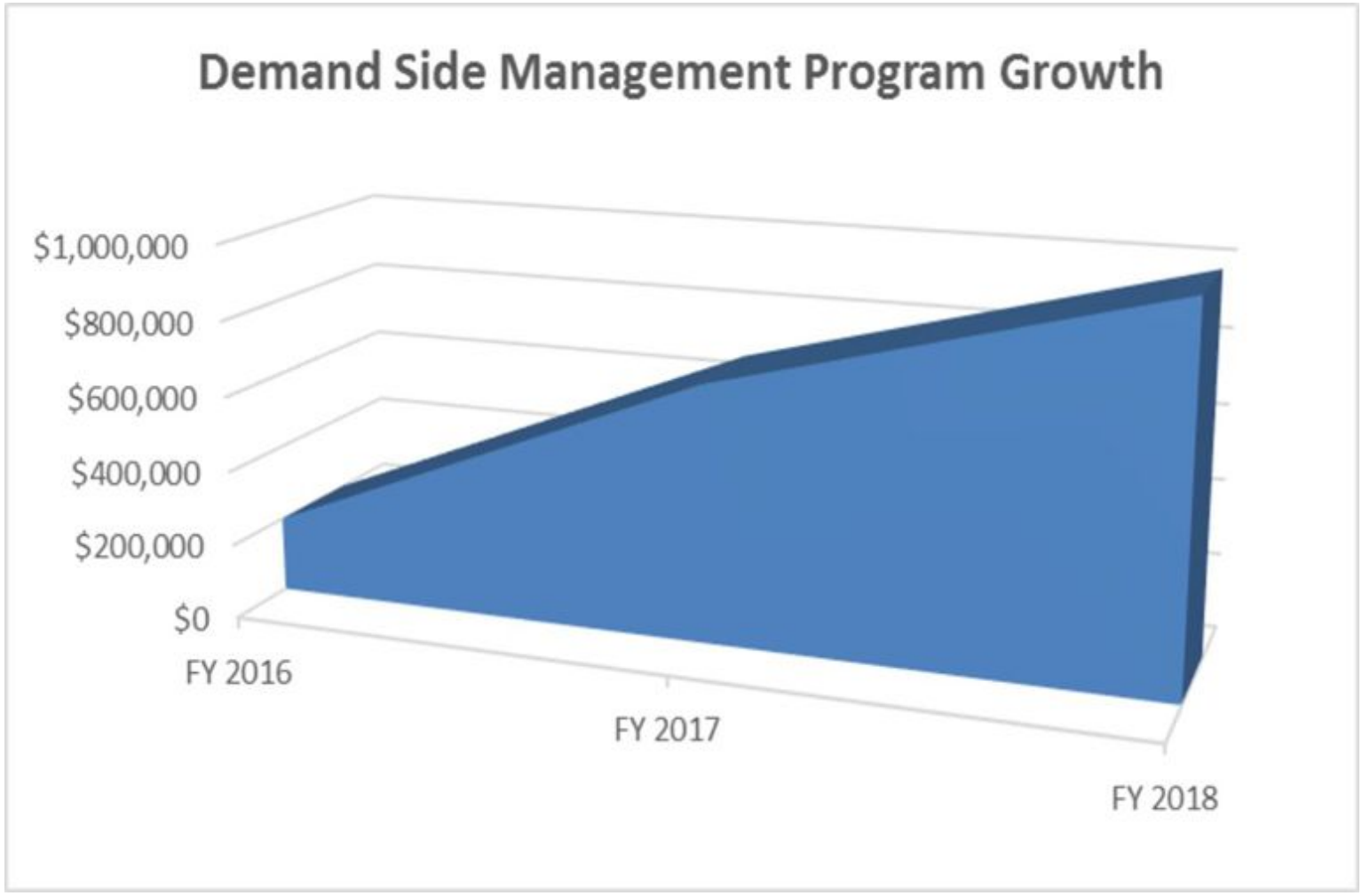

Net Metering KW
20,000
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
January-15
February-15
March-15
April-15
May-15
June-15
July-15
August-15
September-15
October-15
November-15
December-15
January-16
February-16
March-16
April-16
May-16
June-16
July-16
August-16
September-16
October-16
November-16
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August-17
September-17
October-17
November-17
December-17
January-18
February-18
March-18
April-18
May-18
June-18
July-18
Installed
Pending


Net Metering Growth
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
7
2
7
27
66
94
563
527
293
147
CY 2009
CY 2010
CY 2011
CY 2012
CY 2013
CY 2014
CY 2015
CY 2016
CY 2017
CY 2018
KW
Count

Demand Side Management (DSM) Program Expenses Thru July 2018:

All Expenses – Fiscal Year

Description	FY16	FY17	FY18 as of July 31	Total to Date
Regular/OT Pay	$11,348.80	$22,256.00	$19,027.79	$52,632.59
Other Contractual	28,278.50	$85,550.05	$38,992.25	$152,820.80
Bank Fees	$155.00	$1,032.06	$1,055.08	$2,242.14
Paid Rebates-Split AC	$154,700.00	$557,275.00	$911,750.00	$1,623,725.00
Paid Rebates-Central AC	$3,400.00	$8,200.00	$2,300.00	$13,900.00
Paid Rebates-Washer/Dryer	$2,800.00	$7,425.00	$23,000.00	$33,225.00
Total Expenses	$200,682.30	$681,738.11	$996,125.12	$1,878,545.53


Demand Side Management Program Growth
$1,000,000
$800,000
$600,000
$400,000
$200,000
$0
FY 2016
FY 2017
FY 2018

SUMMARY

DESCRIPTION	AMOUNT
Initial DSM Budget FY'16	$1,806,014.00
Interest Income as of July 18	$4,367.24
Total Expense	$1,878,545.53
Ending Balance as of July 18	$(68,164.29)
Addtl. Budget: Approved (FY'18)	$1,139,189.00
Total Ending Balance as of July 18	**$1,071,024.71**

4. New Power Plant Specifications: GPA has submitted the bid specifications for the new power plant to PUC for approval. ALJ Horecky has placed the item on the agenda for the August 30, 2018 regular PUC meeting.

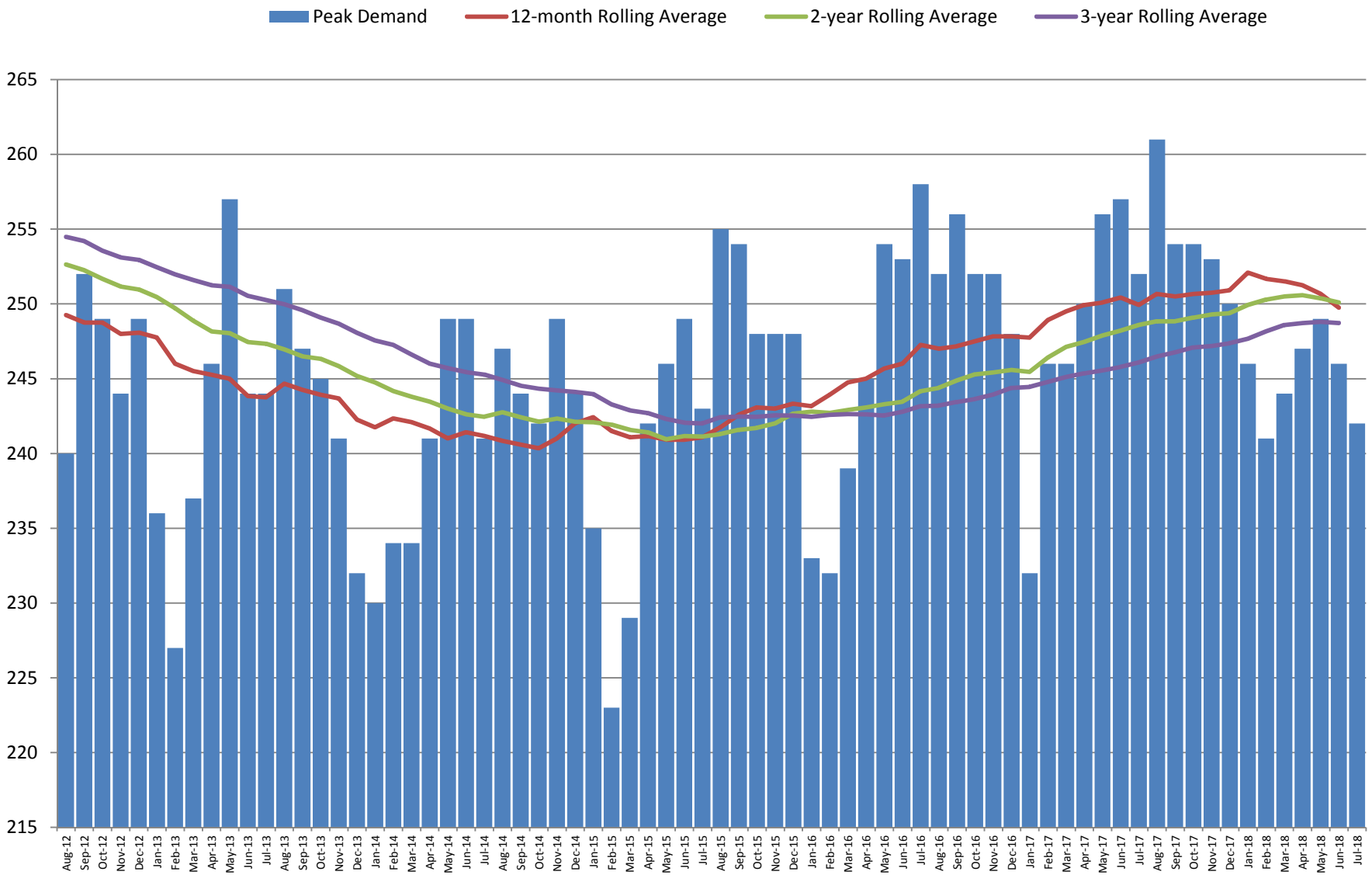
5. Phase II Renewable Contracts:

- **Contract signing for HANWAH 60 MW Renewable project is scheduled for Wednesday August 22nd at 10am here at Fadian.**
- **Contract Signing for KEPCO- LG CNS 60 MW Renewable project is scheduled for Friday August 24th here at Fadian**
- **These two contracts when completed in 2021 will save the ratepayers over $43M over the first 5 years or operations (estimated at a LEAC of $0.11/Kwh)**

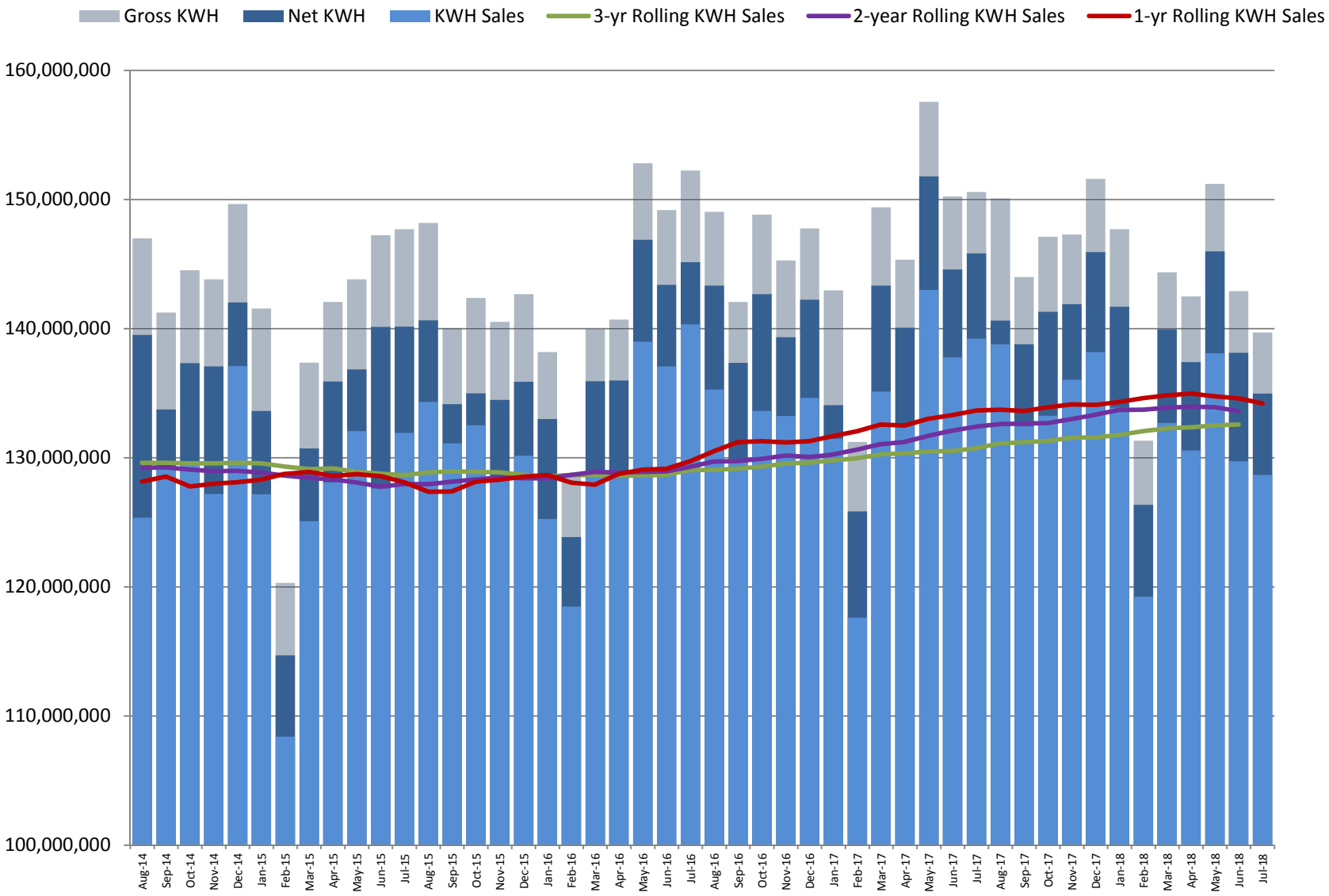
6. Key Performance Indicators: The following are indicators thru July 2018.

Key Performance Indicators: The following are updated indicators thru July 2018.

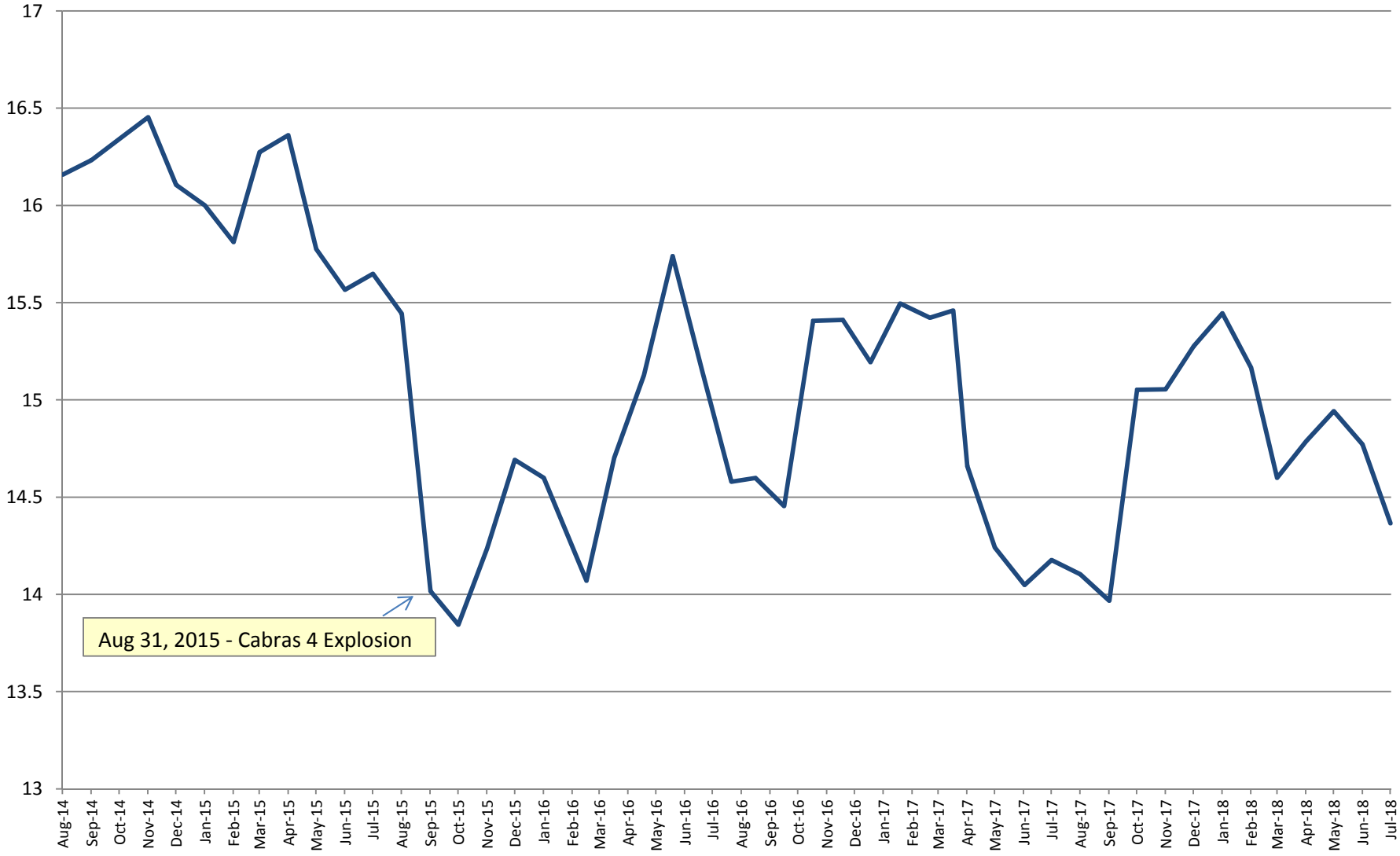
Historical Monthly Peak Demand
Aug 2012 - July 2018



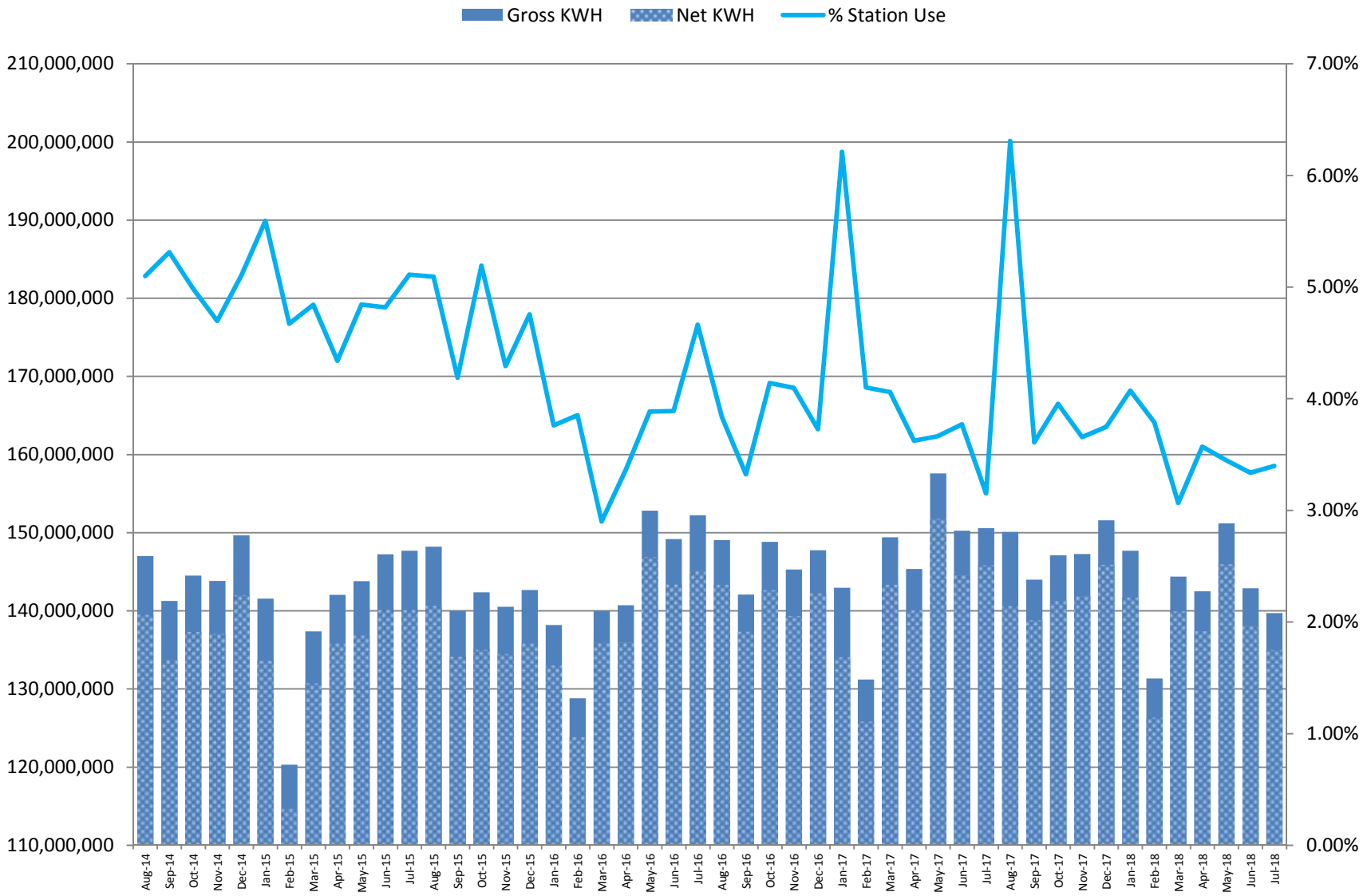
Historical KWH Sales
Aug 2014 - July 2018



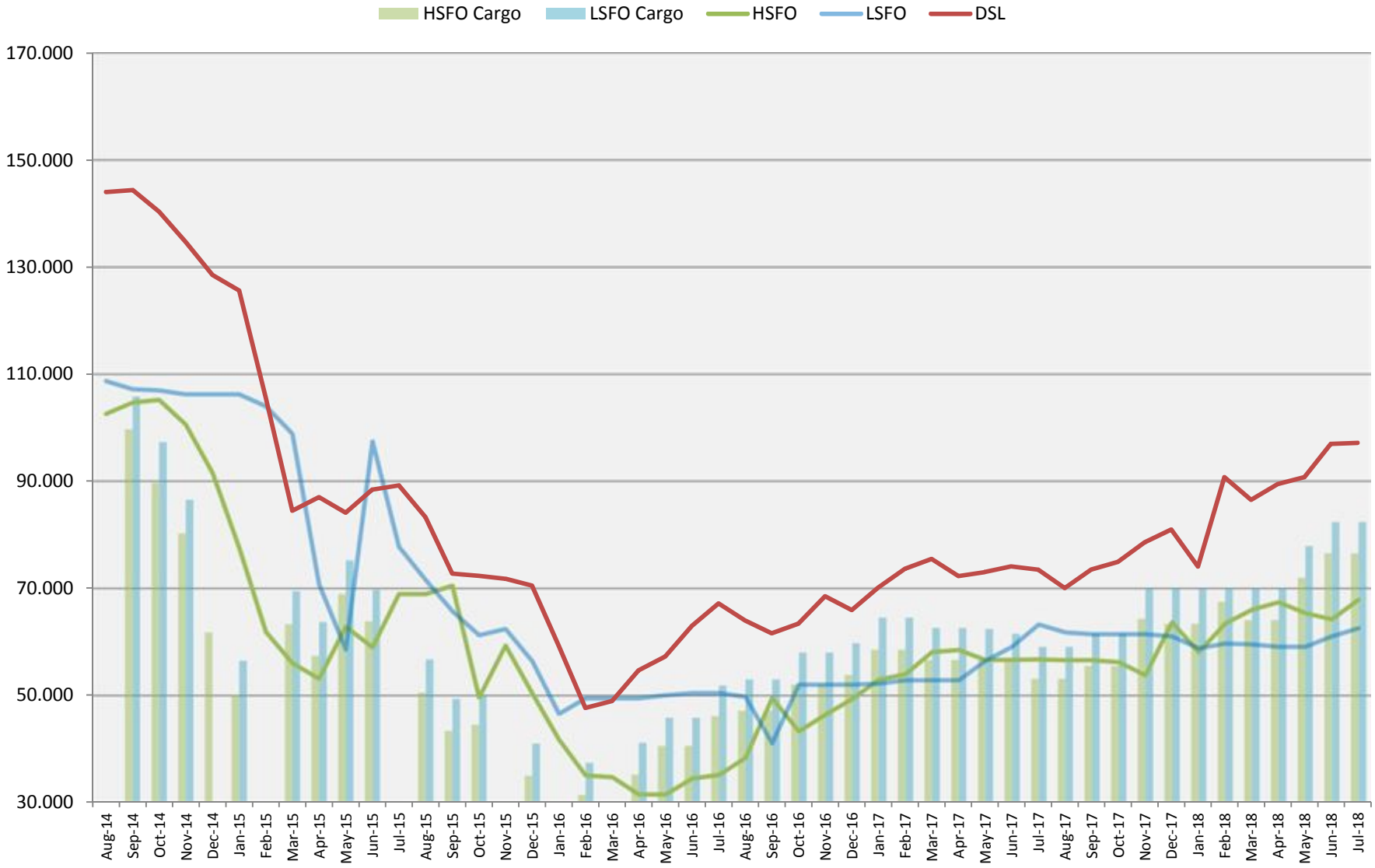
SYSTEM GROSS HEAT RATE
(KWH/Gal)
Aug 2014 - July 2018



Gross and Net Generation (KWH)
Aug 2014 - July 2018



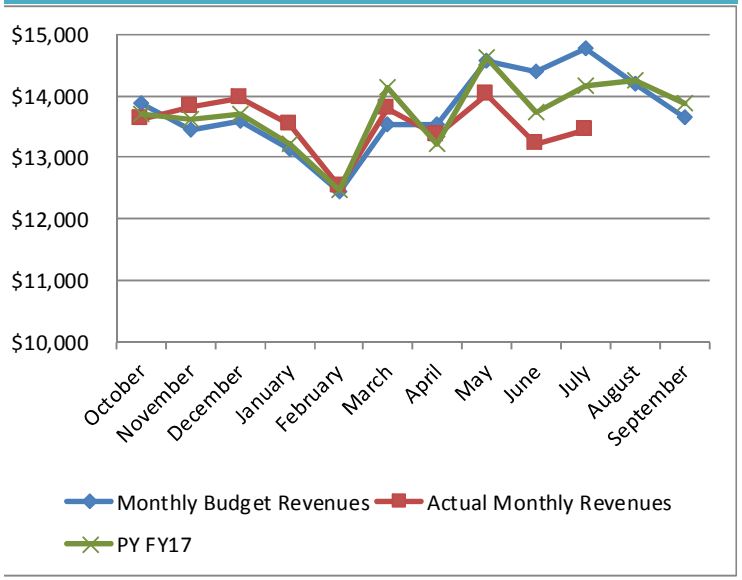
Fuel Cargo and Fuel Consumption Costs ($/bbl)
Aug 2014 - Jul 2018



FINANCIAL HIGHLIGHTS
July 2018

July 2018 Monthly Financial Highlight

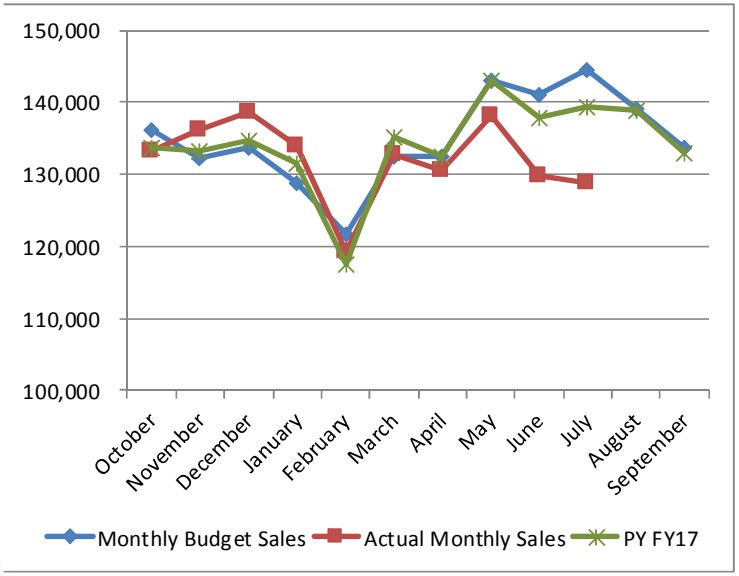
Base Rate Revenue $000



Through July 31, 2018

$000	Monthly Budget Revenues	Actual Monthly Revenues	Variance		PY FY17	CY vs PY Variance	
October	$ 13,873	$ 13,625	$ (248)	↓	$ 13,702	$ (77)	↓
November	13,451	13,827	$ 376	↑	13,622	$ 205	↑
December	13,599	13,968	$ 369	↑	13,695	$ 273	↑
January	13,114	13,534	$ 420	↑	13,220	$ 314	↑
February	12,422	12,522	$ 100	↑	12,454	$ 68	↑
March	13,534	13,776	$ 242	↑	14,123	$ (347)	↓
April	13,525	13,351	$ (174)	↓	13,224	$ 127	↑
May	14,568	14,011	$ (557)	↓	14,617	$ (606)	↓
June	14,386	13,201	$ (1,185)	↓	13,722	$ (521)	↓
July	14,759	13,446	$ (1,313)	↓	14,151	$ (705)	↓
August	14,183				14,244		
September	13,651				13,874		
Total	**$ 165,064**	**$ 135,261**	**$ (1,969)**		**$ 164,649**	**$ (1,269)**	

MWh Sales

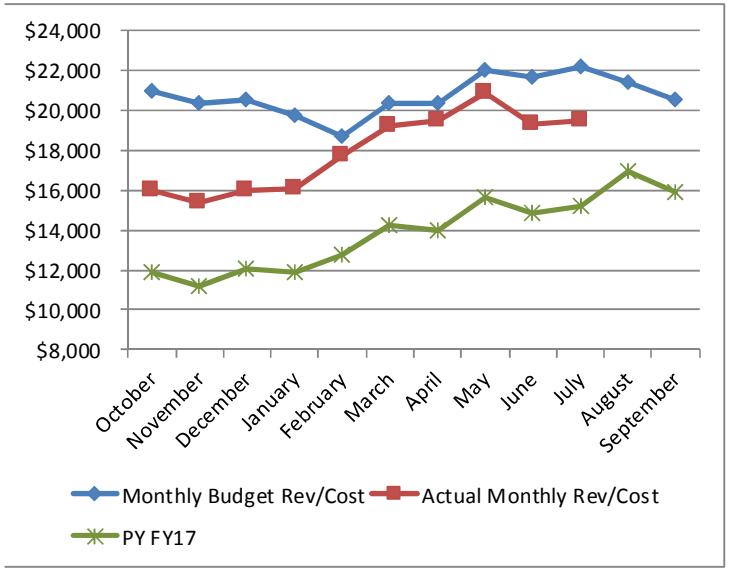


Through July 31, 2018

gwh	Monthly Budget Sales	Actual Monthly Sales	Variance		PY FY17	CY vs PY Variance	
October	136,219	133,262	(2,957)	↓	133,620	(358)	↓
November	132,132	136,044	3,912	↑	133,235	2,809	↑
December	133,625	138,587	4,962	↑	134,634	3,953	↑
January	128,711	133,882	5,170	↑	131,461	2,421	↑
February	121,668	119,241	(2,426)	↓	117,617	1,624	↑
March	132,587	132,693	106	↑	135,131	(2,438)	↓
April	132,532	130,565	(1,967)	↓	132,587	(2,022)	↓
May	142,956	138,085	(4,871)	↓	143,013	(4,928)	↓
June	141,064	129,728	(11,336)	↓	137,777	(8,049)	↓
July	144,404	128,681	(15,723)	↓	139,227	(10,546)	↓
August	139,093				138,797		
September	133,658				132,993		
Total	**1,618,650**	**1,320,769**	**(25,129)**		**1,610,093**	**(17,534)**	

July 2018 Monthly Financial Highlight (Continued)

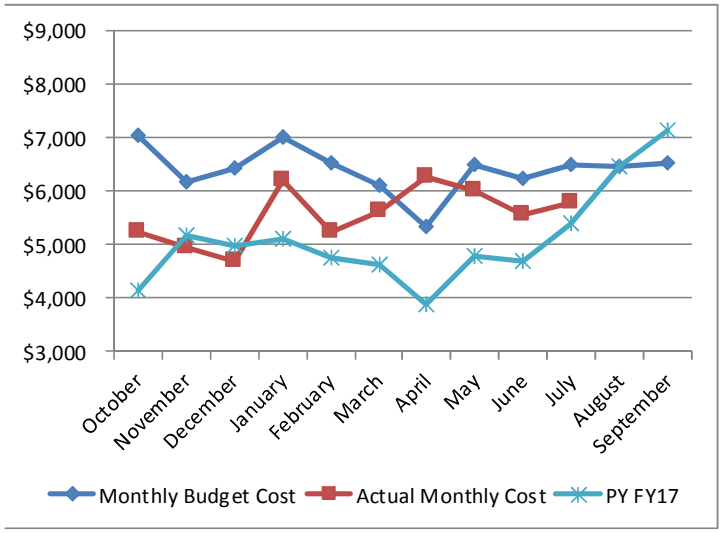
Fuel Revenue/ Cost $000



Through July 31, 2018

$000	Monthly Budget Rev/Cost	Actual Monthly Rev/Cost	Variance		PY FY17	CY vs PY Variance	
October	$ 20,928	$ 15,936	$ (4,992)	↓	$ 11,894	$ 4,042	↑
November	20,300	15,400	$ (4,899)	↓	11,215	$ 4,185	↑
December	20,529	16,007	$ (4,522)	↓	12,036	$ 3,971	↑
January	19,774	16,036	$ (3,738)	↓	11,867	$ 4,169	↑
February	18,692	17,763	$ (930)	↓	12,751	$ 5,012	↑
March	20,370	19,180	$ (1,190)	↓	14,248	$ 4,932	↑
April	20,361	19,441	(920)	↓	13,940	5,500	↑
May	21,963	20,854	(1,109)	↓	15,596	5,258	↑
June	21,672	19,252	(2,420)	↓	14,859	4,393	↑
July	22,185	19,457	(2,728)	↓	15,175	4,282	↑
August	21,369				16,947		
September	20,534				15,895		
Total	**$ 248,677**	**$ 179,326**	**$(27,448)**		**$ 166,425**	**$ 45,744**	

O&M Cost $000



Through July 31, 2018

$000	Monthly Budget Cost	Actual Monthly Cost	Variance		PY FY17	CY vs PY Variance	
October	$ 7,040	5,239	1,801	↑	4,135	(1,103)	↓
November	6,182	4,941	1,240	↑	5,158	217	↑
December	6,428	4,694	1,735	↑	4,966	273	↑
January	7,001	6,204	797	↑	5,092	(1,112)	↓
February	6,522	5,252	1,270	↑	4,748	(504)	↓
March	6,091	5,638	453	↑	4,612	(1,026)	↓
April	5,320	6,269	(949)	↓	3,892	(2,378)	↓
May	6,495	6,005	491	↑	4,772	(1,233)	↓
June	6,221	5,558	662	↑	4,702	(856)	↓
July	6,508	5,797	711	↑	5,385	(412)	↓
August	6,462				6,445		
September	6,526				7,138		
Total	**$ 76,796**	**$ 55,597**	**$ 8,211**		**$ 61,045**	**$ (8,134)**	

July 2018 Monthly Financial Highlight (Continued)

Through July 31, 2018							
	3Q2017	4Q2017	1Q2018	2Q2018	3Q2018	4Q2018	
Residential	43,902	43,991	43,898	44,065	44,074	44,003	
Commercial	5,252	5,226	5,231	5,262	5,278	5,286	
Government	1,071	1,073	1,076	1,086	1,092	1,088	
Streetlights	824	823	908	1,005	1,091	1,143	
Navy	1	1	1	1	1	1	
Total	51,050	51,114	51,114	51,419	51,536	51,521	

Debt service coverage (DSC) calculation-indenture	2013	2014	2015	2016	2017	YTD July 2018
Senior lien coverage	3.36	3.16	3.62	3.28	2.65	2.68
Aggregate debt service coverage	1.88	1.98	2.62	3.28	2.65	2.68
Debt service coverage (DSC) calculation-IPP as O&M						
Senior lien coverage	2.16	2.55	2.56	2.45	1.79	1.80
Aggregate debt service coverage	1.21	1.41	1.85	2.45	1.79	1.80

- Under recovery of LEAC - $8.4 million

CUSTOMER SERVICE DIVISION – July 2018

SUMMARY REPORT

SITE	Less than 10 Mins.	%	10-15 Mins.	%	15-30 Mins.	%	30-45 Mins.	%	TOTAL	Location %
GBN	1,800	76%	418	18%	114	5%	27	1%	2,359	25%
HAGATNA	2,700	77%	455	13%	245	7%	85	3%	3,485	36%
UPPER TUMON	2,763	74%	584	16%	282	8%	87	2%	3,716	39%
TOTAL:	7,263	76%	1,457	15%	641	7%	199	2%	9,560	100%

Government Accounts Receivable: CSD reports invoices for the month of June 2018, for 71 active government accounts with an overall total of $4,915,895.26. 67 accounts were current (94%), 4 accounts arrears (6%). 6 fax/emails issued to government accounts totaling $1,485,496.34. June 2018 invoices, 65 accounts paid in full.

CREDIT AND COLLECTION

Delinquent Ratio: As of July 2018 the authority reported a total 48,251 active customers. The "Delinquent Ratio" was recorded at 5.93% with 2,871 total delinquent accounts, total arrears of 1,955,102.18; 1,447,335.45; 2,851 (5.89% / 28-45 days) category; 234,664.87; 178 (0.37% / 46-60 days); 36,372.97; 32 (0.07% 61-90 days); and 236,728.89; 54 (0.11% / Over 90 days).

Bankruptcy: During July 2018 the Bankruptcy reports one (1) customer accounts filed, totaling $679.83 Chapter 13.

Damage Claim: No Damage claims reported for the month of July 2018.

ACTIVE DELINQUENT – NON PAYMENT

COMMAND CENTER /DISCONNECTIONS/RECONNECTIONS

Single Phase Meters: Credit and Collection issued orders to Command Center to perform remote disconnect/reconnect for a total of 1,423 customers; 1,049(74%) were disconnected; 365(26%) deferred; 9(0%) incompletes.

3 Phase Meters: Credit and Collection issued orders to Disconnect Reconnect crew to perform truck roll out disconnect/reconnect for a total of 62 customers; 37(60%) were disconnected; 25(40%) deferred; 0(%) incompletes.

FY 2018 (July 01-31,2018)

	Scheduled	Disc	Deferred	Complete Vs. Scheduled	Incomplete Disconnections	Disc Vs. Scheduled	Deferred Vs. Scheduled	Incomplete Vs. Scheduled
July	1,485	1,086	390	1,476 99%	9	73%	26%	1%
3rd	4,824	2,635	2,167	4,802 100%	22	55%	45%	0%
2nd	4,092	2,010	2,032	4,042 99%	50	49%	50%	1%
1st	3,890	2,237	1,646	3,883 100%	7	58%	42%	0%
TOTAL:	14,291	7,968	6,235	14,203 99%	88	56%	44%	0%

FY 2017 (October 01, 2016 – September 30, 2017)

QTR	Scheduled	Disc	Deferred	Complete Vs. Scheduled	Incomplete Disconnections	Disc Vs. Scheduled	Deferred Vs. Scheduled	Incomplete Vs. Scheduled
4th	3,621	2,067	1,553	3,620 100%	1	57%	43%	0%
3rd	4,021	2,683	1,332	4,015 100%	6	67%	33%	0%
2nd	5,125	3,053	2,055	5,108 100%	17	60%	40%	0%
1st	10,187	5,462	4,689	10,151 100%	36	54%	46%	0%
TOTAL:	22,954	13,265	9,629	22,894 100%	60	58%	42%	0%

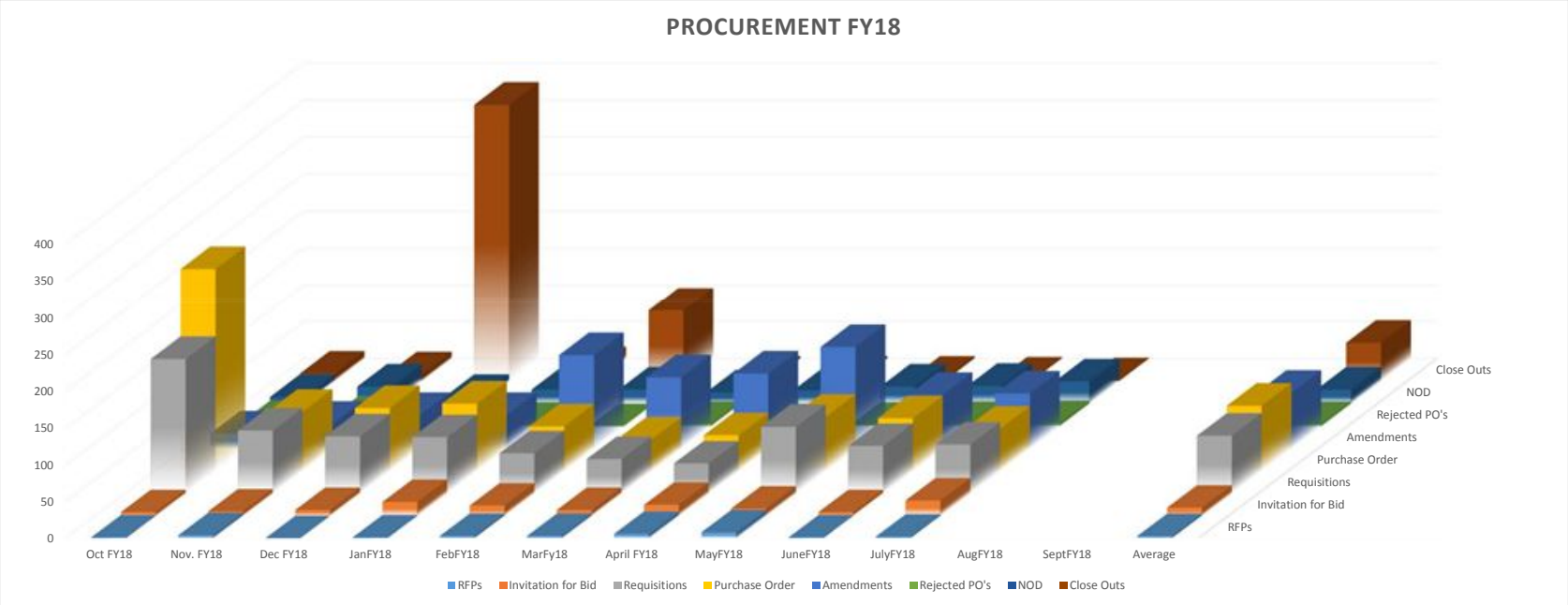
This concludes the Summary Report for Customer Service Division for the month of July 2018.

Respectfully submitted,

Marissa Fernandez, Admin. Officer

Reviewed / Approved by:

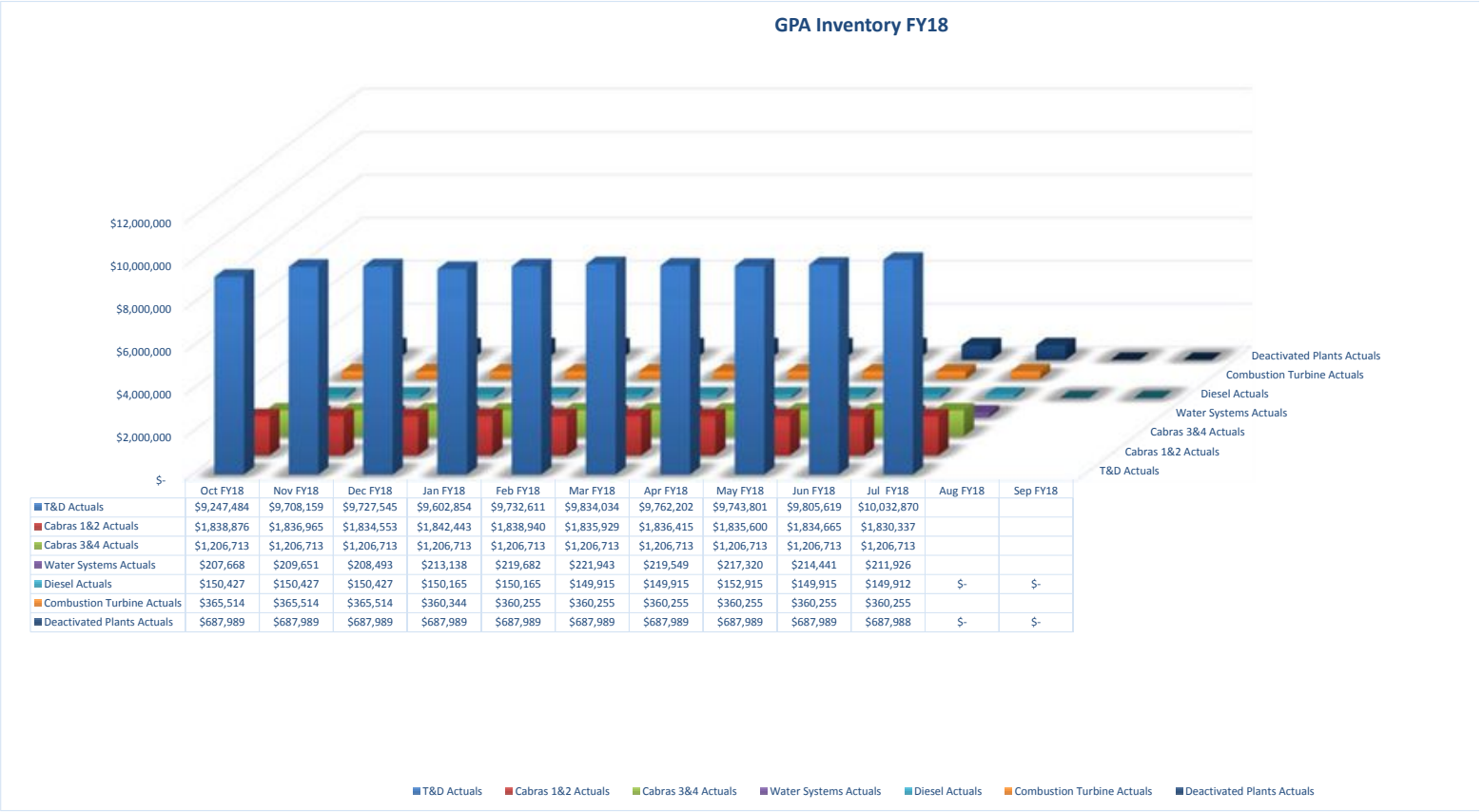
Richard J. Bersamin, ACSM



	Oct FY18	Nov. FY18	Dec FY18	JanFY18	FebFY18	MarFy18	April FY18	MayFY18	JuneFY18	JulyFY18	AugFY18	SeptFY18	Average
RFPs	1	4	0	1	3	3	6	8	1	2			2.9
Invitation for Bid	5	6	8	19	14	8	15	10	5	21			11.1
Requisitions	183	86	78	77	55	47	41	91	65	67			79
Purchase Order	275	81	86	92	61	43	49	74	72	58			89.1
Amendments	**21**	**34**	**46**	**46**	**127**	**97**	**102**	**138**	**73**	**75**			75.9
Rejected PO's	4	9	0	2	0	3	0	2	3	4			2.7
NOD	9	23	9	19	19	15	18	23	24	30			18.9
Close Outs	10	9	374	16	96	3	3	3	2	1			51.7



	Branch Plant	Oct FY18	Nov FY18	Dec FY18	Jan FY18	Feb FY18	Mar FY18	Apr FY18	May FY18	Jun FY18	Jul FY18	Aug FY18	Sep FY18
T&D Actuals	32100	$9,247,484	$9,708,159	$9,727,545	$9,602,854	$9,732,611	$9,834,034	$9,762,202	$9,743,801	$9,805,619	$10,032,870		
Transformer Actuals	59900	$1,701,456	$1,817,711	$1,724,028	$1,664,121	$1,576,932	$1,512,485	$1,460,552	$1,646,492	$1,995,982	$1,980,581		
Meters	59100	$431,024	$431,024	$431,024	$345,888	$254,496	$249,056	$221,936	$132,312	$143,192	$143,192		



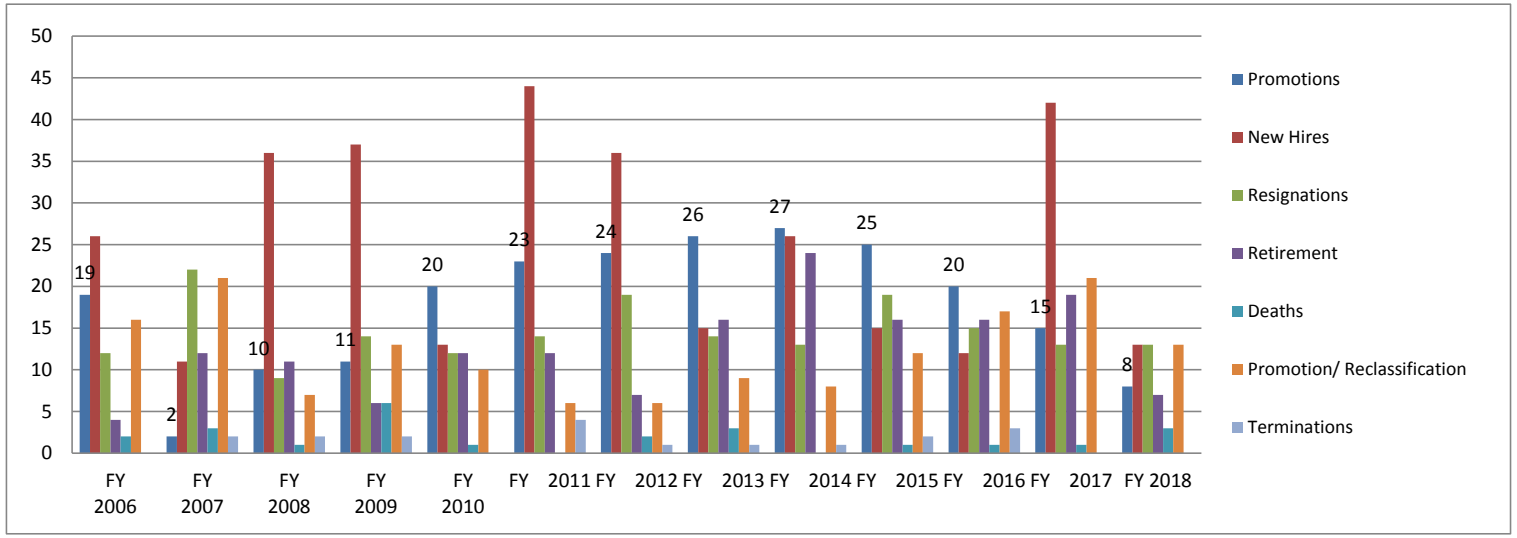
	Oct FY18	Nov FY18	Dec FY18	Jan FY18	Feb FY18	Mar FY18	Apr FY18	May FY18	Jun FY18	Jul FY18	Aug FY18	Sep FY18
T&D Actuals	$9,247,484	$9,708,159	$9,727,545	$9,602,854	$9,732,611	$9,834,034	$9,762,202	$9,743,801	$9,805,619	$10,032,870		
Cabras 1&2 Actuals	$1,838,876	$1,836,965	$1,834,553	$1,842,443	$1,838,940	$1,835,929	$1,836,415	$1,835,600	$1,834,665	$1,830,337		
Cabras 3&4 Actuals	$1,206,713	$1,206,713	$1,206,713	$1,206,713	$1,206,713	$1,206,713	$1,206,713	$1,206,713	$1,206,713	$1,206,713		
Water Systems Actuals	$207,668	$209,651	$208,493	$213,138	$219,682	$221,943	$219,549	$217,320	$214,441	$211,926		
Diesel Actuals	$150,427	$150,427	$150,427	$150,165	$150,165	$149,915	$149,915	$152,915	$149,915	$149,912	$-	$-
Combustion Turbine Actuals	$365,514	$365,514	$365,514	$360,344	$360,255	$360,255	$360,255	$360,255	$360,255	$360,255		
Deactivated Plants Actuals	$687,989	$687,989	$687,989	$687,989	$687,989	$687,989	$687,989	$687,989	$687,989	$687,988	$-	$-

RECRUITMENT ANALYSIS

Fiscal Year	Promotions	New Hires	Resignations	Retirement	Deaths	Promotion/ Reclassifi-cation	Termina-tions	Total Author-ized FTE	Attrition Rate	Total Filled FTE at end of Fiscal Year	Percentage of Filled FTE at end of Fiscal Year
2006	19	26	12	4	2	16	0	584	3.3%	536	91.8%
2007	2	11	22	12	3	21	2	584	7.2%	510	87.3%
2008	10	36	9	11	1	7	2	592	4.5%	525	88.7%
2009	11	37	14	6	6	13	2	592	5.3%	534	90.2%
2010	20	13	12	12	1	10	0	592	4.7%	522	88.2%
2011	23	44	14	12	0	6	4	592	5.7%	536	90.5%
2012	24	36	19	7	2	6	1	568	5.4%	543	95.6%
2013	26	15	14	16	3	9	1	568	6.3%	524	92.3%
2014	27	26	13	24	0	8	1	568	7.3%	512	90.1%
2015	25	15	19	16	1	12	2	539	7.4%	489	90.7%
2016	20	12	15	16	1	17	3	510	7.2%	466	91.4%
2017	15	42	13	19	1	21	0	510	7.1%	476	93.3%
2018	8	13	13	7	3	13	0	510	4.8%	466	91.4%

Recruitment Analysis (FY 2018) ..1 of 2

as of 07/31/18

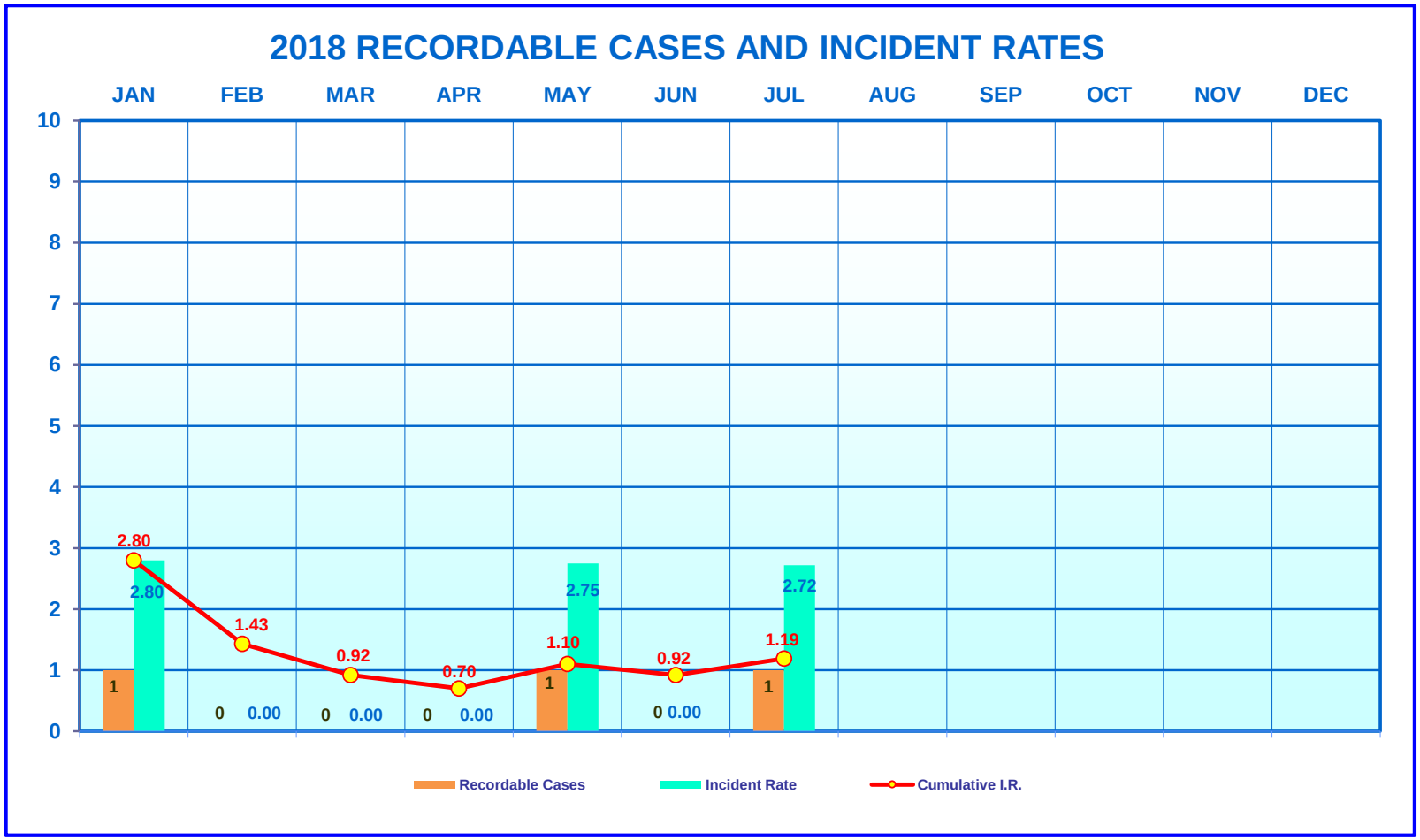


	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Promotions	19	2	10	11	20	23	24	26	27	25	20	15	8
New Hires	26	11	36	37	13	44	36	15	26	15	12	42	13
Resignations	12	22	9	14	12	14	19	14	13	19	15	13	13
Retirement	4	12	11	6	12	12	7	16	24	16	16	19	7
Deaths	2	3	1	6	1	0	2	3	0	1	1	1	3
Promotion/ Reclassification	16	21	7	13	10	6	6	9	8	12	17	21	13
Terminations	0	2	2	2	0	4	1	1	1	2	3	0	0
TOTAL NO. OF EMPLOYEES	**536**	**510**	**525**	**534**	**522**	**536**	**543**	**524**	**512**	**489**	**466**	**476**	**466**

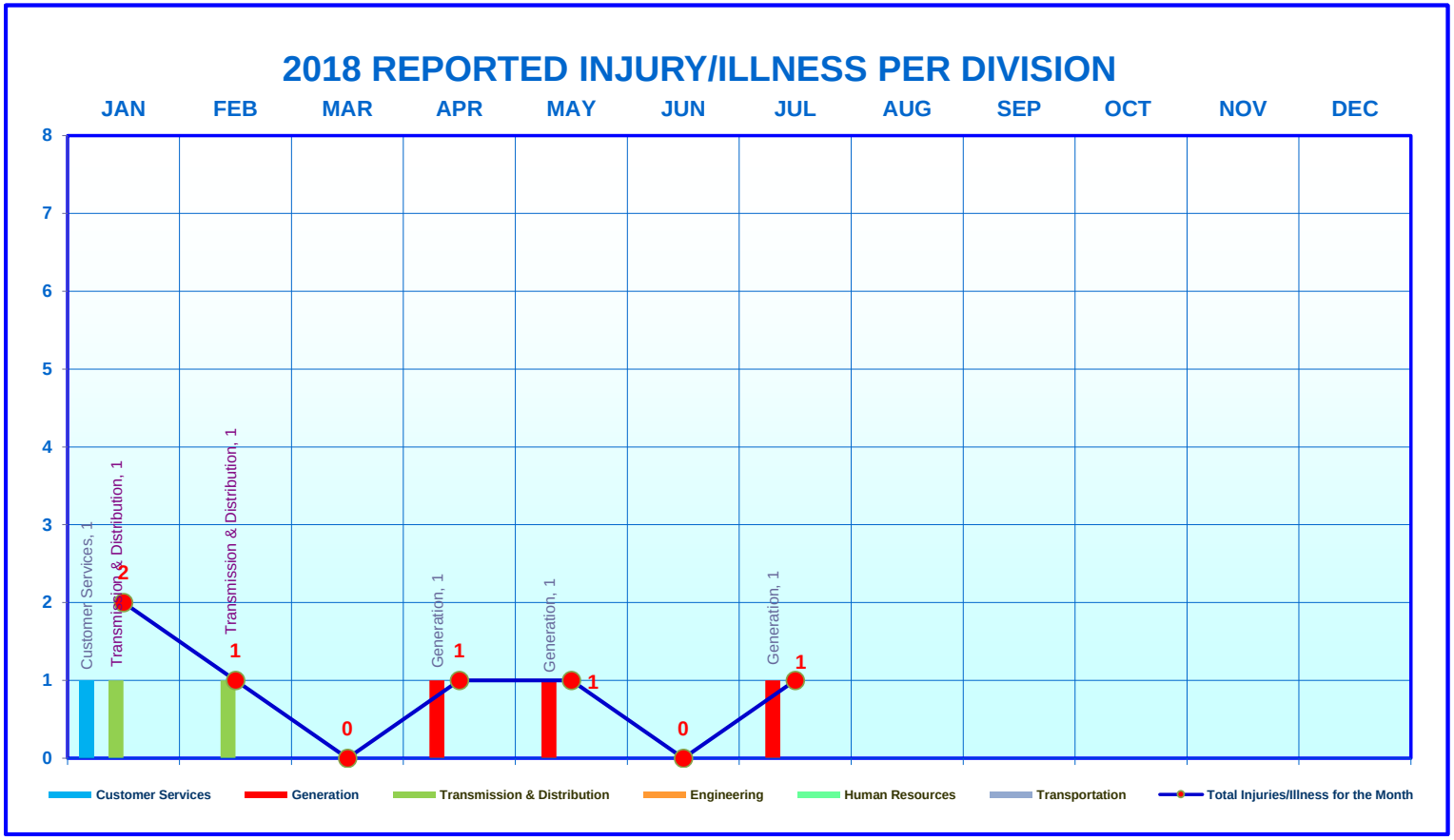
Recruitment Analysis (FY 2018) .. 2 of 2

as of 07/31/18

2018 Incident Rate

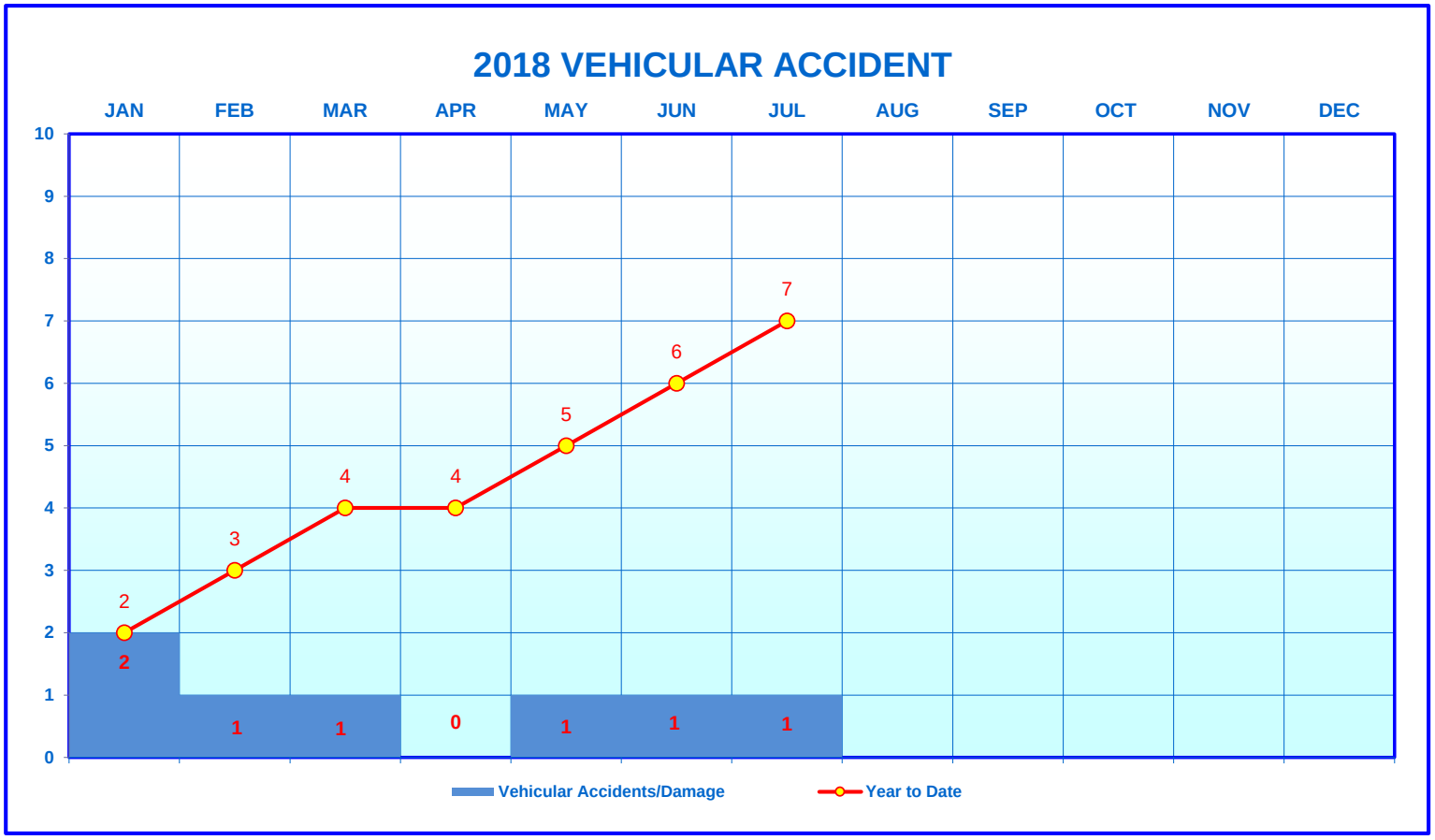


SAFETY DIVISION MONTHLY REPORT



	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Customer Services	1											
Generation				1	1		1					
Transmission & Distribution	1	1										
Human Resources												
Engineering												
Transportation												
Total Injuries/Illness for the Month	2	1	0	1	1	0	1					

SAFETY DIVISION MONTHLY REPORT



	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Vehicular Accidents/Damage	2	1	1	0	1	1	1					
Year to Date	2	3	4	4	5	6	7					

Accidents attributed to Employee fault	1	0	1	0	1	0	1					

GUAM POWER AUTHORITY
HUMAN RESOURCES DIVISION
STAFFING REPORT (FY 2018)
AS OF JULY 31, 2018

DIVISION	B1 ACTIVE EMP	B2 LAST EMP	C PROMOTE /TRANS	D PROM. RECLASS	E NEW HIRES	F RESIGN/ TERM	G RETIRE	H CURR VAC	I LAST VAC	(B1+H=K) TOTAL STAFFING
INTERNAL AUDIT/REVENUE PROTECTION	2	2	0	0	0	0	0	2	2	4
BOARD(10200)	2	2	0	0	0	0	0	0	0	2
GENERAL MANAGER (CUS) [10100]	0	0	0	0	0	0	0	0	0	0
GENERAL MANAGER (20500)	4	4	0	0	0	0	0	0	0	4
PUBLIC INFORMATION OFFICE	2	2	0	0	0	0	0	0	0	2
ASSIST GM-ENG/TECH SVCS (30500)	1	1	0	0	0	0	0	0	0	1
ASSISTANT GENERAL MGR (30800)	1	1	0	0	0	0	0	1	1	2
ASSISTANT GENERAL MGR (AGMO) 50900	2	2	0	0	0	0	0	0	0	2
STRAT PLANN & OPTNS RESEARCH DIV	9	9	0	0	0	0	0	2	2	11
FACILITIES	9	9	0	0	0	0	0	0	0	9
HUMAN RESOURCES	8	10	0	0	0	0	1	2	0	10
CUSTOMER SERVICES	37	36	1	0	0	0	0	3	4	40
INFORMATION TECHNOLOGY	14	14	0	0	1	1	0	2	2	16
FINANCE	42	42	0	0	1	1	0	4	4	46
PROCUREMENT	21	21	1	1	0	0	0	1	1	22
TRANSPORTATION	11	11	0	0	0	0	0	0	0	11
SAFETY	5	5	0	1	0	0	0	2	2	7
PLANNING & REG	8	8	0	0	0	0	0	0	0	8
ENGINEERING	38	38	0	0	0	0	0	1	1	39
GENERATION	131	131	0	2	0	0	0	7	9	138
TRANSMISSION/DISTRIBUTION	97	95	0	1	2	0	0	12	12	109
POWER SYSTEM CONTROL CENTER	22	22	0	0	0	0	0	5	5	27
	466	465	2	5	4	2	1	44	45	510
JOBS/SCSEP/GETP PARTICIPANTS	2	2								2
WORK EXPERIENCE PROGRAM	5	6								
APPRENTICESHIP PROGRAM	0	0								0
SUMMER ENGINEERING INTERNS	9	0								9
TEMPORARY (P.L. 34-32)	1	1								1
GRAND TOTAL WORKFORCE:	483	474	2	5	4	2	1	44	45	522

FTE Count per FY18 FMP: 510

Current vacancies adjusted to reflect FTE of 510

** JOBS = Job Opportunities and Basic Skills (individuals under the Public Health assistance program)

** GETP = Guam Employment & Training Program (individuals under the Public Health assistance program)

** SCSEP = Senior Community Service Employment Program

** APPRENTICESHIP TRAINING PROGRAM - Generation, PSCC and T&D combined total

** JOBS/SCSEP/GETP and Apprentice program participants are not included in the total annual budgeted FTE (Full-Time Employee) count.

** P.L. 34-32 -Temporary employee(s)

Staffing Report as of July 31, 2018 - PREPARED BY: J.Aguigui

PLANNING & REGULATORY DIVISION REPORT

The following summarizes P&R's activities for the month of July 2018

INSPECTIONS/MONITORING

- Best Management Practices (BMP) Weekly Inspection/Report – Cabras Power Plant
- Monthly Spill Prevention, Control and Countermeasures (SPCC) Inspection/Report – Cabras Power Plant, Macheche, Dededo, Yigo CT, Talofofo, MDI, Tenjo Diesel, Piti 7 Power Plants, IP&E fuel Farm.
- Reviews monthly Continuous Emissions Monitoring System (CEMS) report and monitors TRC's O&M for Tenjo Diesel
- Monitoring of used oil disposal to the WOF from UNITEK Environmental

REPORTING

- New Source Performance Standards (NSPS) Monthly and Quarterly Report– Submitted reports to GEPA/USEPA for Macheche CT, Yigo CT, Piti #7 CT, Talofofo, Manenggon and Tenjo Diesel Plants.
- Quarterly Discharge Monitoring Report (NetDMR) submitted to USEPA
- Quarterly Fuel Switching Report submitted to USEPA
- Submitted Annual Toxic Release Inventory Report (TRI) RY2017 via EPA online reporting tool
- Gathered spill reports and absorbent pad PO's as part of a request for public records pursuant to sunshine reform act of 1999 5 GCA S10101

SPILL/ENVIRONMENTAL RESPONSE

- Responded to a leaking transformer along Route 3 in Finegayan

PROCUREMENT

- GPA-RFP-18-007 Annual Emission Testing – Requested for Best and Final Offer
- GPA RFP-18-008 CEMS and RICE MACT O&M – Evaluating bid proposal from two Contractors
- IFMSB GPA-068-18 – Hazardous Material Removal and Disposal for Tanguisson and Dededo Diesel. Bid currently on hold.
- Processed RFQ bid for the tank bottom sampling of Tanks 1934 and 1935
- Assisted Meganum Inc, in conducting site inspection for the Tanks 1934 and 1935 tank bottom sampling

TRAINING

- Attended Procurement Training on Creating Requisitions
- Attended Accident & Injury Reporting and Safety Orientation Training; July 19, 2018.

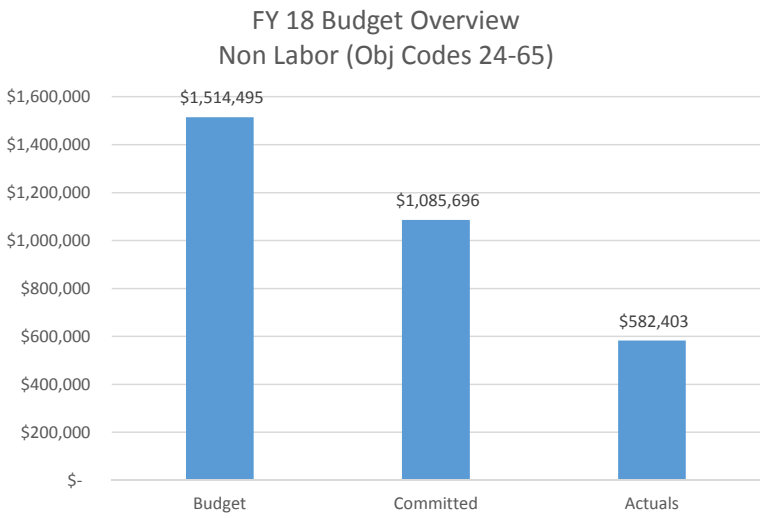
OTHER PROJECTS:

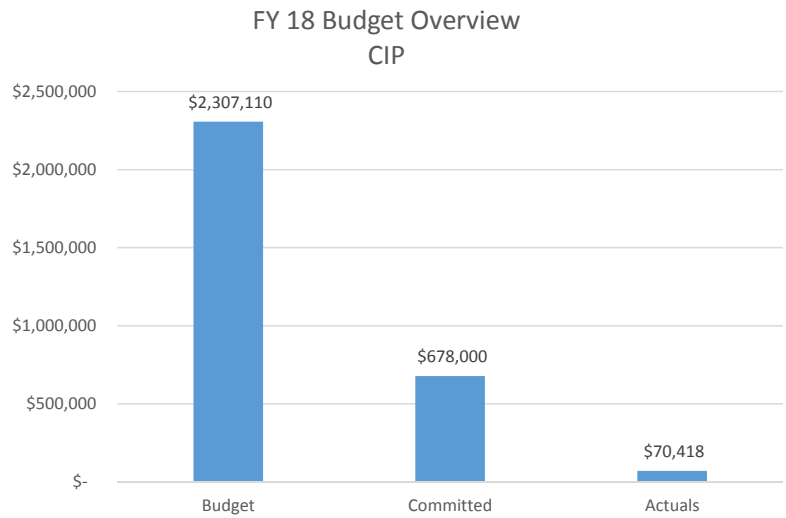
- Prepare the WOF energy recovery SOP in Cabras for final review and signature
- Meeting with SPORDS regarding the following:
    - 1934 and 1935 Tank bottom sampling
    - API Tank out of service inspection and repair
    - Disposal soil and metal structure in the Tank Farm
- Environmental Strategic Plan – assisting SPORD in updating the ESP
- Talofofo Excedance to Permit Limit – coordinated with Operations to reduce use of Talofofo Diesel Plant
- Piti Sub Soil Remediation (Navy Project) – Part of information dissemination list and POC along with Engineering
- GPA Employee Family Fun Day
    - Event has been postponed until further notice
    - Assisted as Members of Committee and 3rd Floor Sub-Committee
    - Participant in Static Display Competition
- Engineering Internship Program – our group has 1 intern for this summer

SPORD CCU Report

July 2018

SPORD FY 2018 Budget Status





2

SPORD FY 2018 Budget Status

- Major Contracts (Non-O&M) thru July 2018

	Annual Contract Amount	Actuals	Balance
Aggreko Contract	$ 11,751,171	$ 8,812,708	$ 2,938,463
Fuel Contracts	$ 229,805,548	$ 167,470,217	$ 62,335,331
MEC IPP (Piti 8&9)	$ 31,909,347	$ 23,883,468	$ 8,025,879
NRG Contract (Renewable)	$ 10,170,682	$ 7,239,644	$ 2,931,038

SPORD FY 2018 Budget Status

- Bond Funded Projects:

No.	Bond Funds	Project Name	Approved Budget ($000)	Commited Amount ($000)	Balance ($000)	Transfers ($000)	Restated Balance ($000)	Amount Paid ($000)*	Status
1	2014	Energy Storage and Renewable Energy Mitigation	$ 35,000	$ 35,556	$ (556)	$ 600	$ 44	$ 5,642	Contract with LG CNS America. Construction ongoing. Completed anticipated by end of 2018.
2	2014	LNG Initial Startup	$ 3,000	$ 2,565	$ 435	$ -	$ 435	$ 2,486	Completed Gen Ops (dispatching software) purchase & installation, MEC Assessment, demand side management feasibility and program implementation scope, Integrated Renewable study (GPA/Navy), and funded initial portion of Engineering, Procurement and Construction Management services for New Power Plant procurement development and support. Balance to be used for LNG studies/procurement.
3	2014	Mobile Workforce Management	$ 500	$ 494	$ 6	$ -	$ 6	$ -	Pending insurance requirements from vendor for NTP.
4	2014	SGIG (not covered by grant)	$ 630	$ -	$ 630	$ -	$ 630	$ 630	Pending service contract procurement/award
5	2014	Fadian SCADA System	$ 1,800	$ -	$ 1,800	$ -	$ 1,800	$ 1,142	Contract with Benson/Siemens. System commissioning expected by October 2018.

** Amount paid are contract or purchase order costs only and excludes any GPA labor.*

SPORD FY 2018 Budget Status

- DSM Expenses

Description	FY16	FY17	FY18 (as of July 31)	Total to Date
Regular/OT Pay	$ 11,349	$ 22,256	$ 19,028	$ 52,633
Other Contractual	$ 28,279	$ 85,550	$ 38,992	$ 152,821
Bank Fees	$ 155	$ 1,032	$ 1,055	$ 2,242
Paid Rebates-Split AC	$ 154,700	$ 557,275	$ 911,750	$ 1,623,725
Paid Rebates- Central AC	$ 3,400	$ 8,200	$ 2,300	$ 13,900
Paid Rebates- Washer/Dryer	$ 2,800	$ 7,425	$ 23,000	$ 33,225
Total Expenses	$ 200,682	$ 681,738	$ 996,125	$1,878,546

Approved DSM Funding:	**$**	**2,949,570**
Initial DSM Budget FY'16	*$*	*1,806,014*
Interest Income as of July 18	*$*	*4,367*
Addtl. Budget: Approved (FY'18)	*$*	*1,139,189*
Funding Balance:	**$**	**1,071,025**

Ongoing Activities

- Contract Performance Management (IPP, PMC, Agrekko)
- Generation Fuel Supply & Fuel Farm Management
- DSM Rebate Processing
- Renewables (Wind Turbine Maint & DOAg MOA, NRG Invoicing)
- Smart Grid/Network Support
- Project Management
  - Procurement
  - *July Project Activities*

PROCUREMENT ACTIVITIES

PENDING AWARD / NTP

Responsible	PROJECT	Description	CCU Date Approved (Resolution No.)	PUC Date Approved (Docket No.)	Projected Start*	Projected Completion	Status
SPORD (FJI)	RENEWABLES	Phase II - KEPCO/LG CNS	1/23/18 (2018-01)	18-06	4/30/2021	4/24/2046	Pending contract signature & ntp scheduled for Aug 24, 2018
SPORD (FJI)	RENEWABLES	Phase II - Hanwha	2/27/18 (2018-04)	18-08	8/15/2021	8/9/2046	Pending contract signature & ntp scheduled for Aug 22,2018
SPORD (ANF)	FUEL	Petroleum Inspection Services			8/1/2018	7/31/2020	Procurement Completed. 2-yr Contract commenced Aug 1, 2018.
SPORD (ANF)	FUEL	Supply of Residual Fuel Oil No. 6	(2018-16)	Pending	11/16/2017	5/25/2018 (Phase I)	Phase II evaluation complete. Notice of Intent to Award issued (14 day protest period)
ENGINEERING	FUEL	GPA Tank Farm RFO Pipeline Upgrade - Design / Build			7/31/2018	TBD	NTP issued in Jul 2018. To repair existing RFO lines at the Bulk Fuel Farm

ONGOING PROCUREMENT

Responsible	PROJECT	Description	Bid or RFP	Bid/RFP No	Announced	Bid Opening / Due	Notes
SPORD (RAC)	SCADA	SCADA Workstations	Bid	GPA-049-18	2/13/2018	3/14/2018	Delivered July 2018
SPORD (FJI)	NEW POWER PLANT	Geotechnical Services	RFP	Resolicitation GPA-RFP-18-002	(2/6/2018) 3/20/18	4/20/2018	Bid resolicited due to no proposals received in original solicitation.
SPORD (RAC)	SMART GRID	MV90 Integration Services	RFP	GPA-RFP-18-001	1/30/2018	3/6/2018	Negotiations Ongoing - August 2018
SPORD (RAC)	PLANNING	Milsoft Systems Software Services	RFP	GPA-RFP-18-003	2/1/2018	3/7/2018	Negotiations Ongoing - August 2018
SPORD (FJI)	NEW POWER PLANT	Build, Operate & Transfer Contract for 120-180MW of New Generation Capacity. **(PHASE I - REQUEST FOR QUALIFICATIONS)**	MS Bid	GPA-034-18	1/16/2018	4/5/2018	Step I - Qualifications completed. Total of 7 Qualified bidders selected. Obtained CCU approval to petition PUC for approval of technical bid documents in July 2018.

ONGOING PROCUREMENT (continued)

Responsible	PROJECT	Description	Bid or RFP	Bid/RFP No	Announced	Bid Opening / Due	Notes
SPORD (ANF)	FUEL	Supply of Diesel Fuel Oil No. 2	MS Bid	GPA-008-18	11/16/2017	TBD (Phase I) TBD (Phase II)	Procurement Stay in place since 07/27/18. Bid specs revised- awaiting final review by Fuel Committee and Legal (TBD) Under Mgt Fuel Committee review (TBD)
SPORD (JTL)	RENEWABLES	Renewable Energy Resource Phase III	MS Bid	GPA-007-18	11/16/2017	10/4/2018	Lease modifications ongoing to address bidders' concerns/questions. Completed lease discussions in July.
SPORD (RAC)	SMART GRID	Mobile Workforce Management System (MWMS) **RE-BID**	MS Bid	GPA-023-17	10/5/2017	3/20/2018	Procurement processing Insurance -August 2018
SPORD (MAT)	PLANNING	Planning Software Consulting Services	RFP	GPA-RFP-18-010	7/26/2018	8/30/2018	Consulting Services for GPA's ABB Software utilized in planning and operations research activities.

DEVELOPING PROCUREMENT

Responsible	PROJECT	Description	Bid or RFP	Projected Start	Projected Completion	Status
SPORD (FJI)	NEW POWER PLANT	Build, Operate & Transfer Contract for 120-180MW of New Generation Capacity. **(PHASE II - TECHNICAL SPECIFICATIONS)**	MS Bid			Pending final bid documents.
ENGINEERING	FUEL	GPA Tank Farm DFO Pipeline Upgrade - Design / Build	Bid	2/8/2018	11/30/2018	Preparation of bid specs in progress. To install new diesel line from Navy Tie-in to the Bulk Fuel
ENGINEERING	FUEL	Tank 1935 API 653 Internal Inspection	Bid	5/1/2018	5/31/2019	Preparation of bid specs in progress. Budgeted for FY 2018.
ENGINEERING	FUEL	OWS Upgrading	Bid	5/1/2018	5/31/2019	Preparing IFB bid specs.
ENGINEERING	FUEL	LD System Upgrading	Bid	5/1/2018	5/31/2019	Preparing IFB bid specs.

DEVELOPING PROCUREMENT (continued)

Responsible	PROJECT	Description	Bid or RFP	Projected Start	Projected Completion	Status
SPORD (RAC)	ELECTRIC VEHICLE	Electric Vehicle Charging Stations	Bid	Jul-18	Sep-18	Developing Specifications
SPORD (RAC)	SCADA	DNP3 SA training	RFP	Jul-18	Dec-18	Submitted to Procurement (August 2018)
SPORD (RAC)	ELECTRIC VEHICLE	Electric Vehicle Infrastructure	RFP	Aug-18	Dec-18	Developing RFP
SPORD (RAC)	STUDIES	Consulting Services for Distribution Study using Smart Grid Analytics	RFP	Jul-18	May-19	Submitted to Procurement (July 2018)
SPORD (RAC)	SMARTWORK SYSTEMS	Smartworks Systems Software Services	RFP	Aug-18	Continous	Developing RFP
SPORD (ANF)	FUEL	Bulk ULSD Supply	Bid	Aug-18	Dec-18	Draft Bid review by Mgt Fuel Committee
SPORD (ANF)	FUEL	ULSD supply for WSD and other plant sites	Bid	Sep-18	Mar-19	Developing Specifications
SPORD (ANF)	FUEL	GPA Bulk Fuel Storage Facility PMC	Bid	Sep-18	Sep-19	Developing Specifications to convert to PMC
ENGINEERING	FUEL	Guatali Bridge for ULSD Tankertruck access from Tristar	Bid	FY2018	FY2019	Developing Specifications w/ DPW Consultant (WSP)
SPORD (MAT)	FUEL / OPERATIONS	IFB for the Supply of Reprocessed Waste Oil Meeting GPA's ULSD Specifications	Bid	FY2018	FY2019	Bid Documents, Scope of Work, Bid Price Structure under review by Management
SPORD (LOS)	STUDIES	Power System Analyses and Studies	RFP	FY2018	FY2019	Pending RFP No. and announcement date from
SPORD (LOS)	WIND TURBINE	Wind Turbine O&M Supervision and Materials	RFP	FY2019	FY2019	Developing RFP documents

Project Activities

No.	Project Description	July 2018 Activities	Status / Est. Completion	RFP/Bid No
1	Energy Storage System (Phase I)	GPA reviewing Pre-Final design. Clearing and grading permit work commenced in November 2017. Foundation permit work commenced in January 2018. Construction is 42% completed.	September 30, 2018 (Request to extend completion date is pending)	MS Bid GPA-082-15
2	Renewable Energy Resource Phase II	PUC ratifies KEPCO contract (Docket 18-06) and approves HANWHA contract (Docket 18-08) on March 29, 2018. Signing dates are scheduled for the end of August 2018.	KEPCO PV plant COD is APR 2021. Hanwha's COD is anticipated for 1st qtr of 2020.	MS Bid GPA-070-16
3	New Power Plant Bid (EPCM)	Completed technical bid documents and obtained CCU approval to petition PUC for approval	Award (2019 Q3) COD (2022 Q2)	MS GPA-034-18
4	DSM Marketing	Represented GPA (presenter) at the Energy Outreach Session at Pacific Star Resort hosted by GEO and supported the 2018 Home and Lifestyles Expo at the Agana Shopping Center.	Continuous	
5	DSM Rebate Program	Processed over 270 equipment in applications for rebates totaling ~ $60K	Continuous	
6	Wireless Network Expansion	Commenced Southern Expansion in collaboration with GWA: 30% Assessment of GWA Well Locations: Completed Assessment of Existing Tropos Units: 100% Router Equiqment and Accessories purchase Routers programming Preparing next router order and installation documents	Dec-18 Completed Completed Received routers - May 2018 Completed - June 2018 Accessories - May 2018 August 2018	GPA-019-18
7	Performance Metrics Automation Project	Presentation on iDashboard provided to GM. GPA contiues to work with consultant on automating reports and formating.	Mar-18	
8	Electric Grid Analysis Software	Additional training for users Realtime Voltage Module Training on Planning and Analysis Cases	Completed Completed (July 2018) November 2018	GPA-064-16
9	Services to Develop Business Performance Indices using iDashboards	Dashboard builds 95%	Ongoing	GPA-RFP-16-008

Project Activities

No.	Project Description	July 2018 Activities	Status / Est. Completion	RFP/Bid No
10	Supervisory Control and Data Acquisition (SCADA) System	Change Order Approved for October 2018 Completion and hardware costs Servers; Programs, & Workstations Installed Point to Point Test Ongoing	Oct 2018 (SCADA COD) Completed 'Sept 2018 (Estimated Completion)	GPA-066-16
11	Mobile Workforce Management System	Bid Evaluation Completed, Clevest recommendation memo submitted for approval March 21, 2018 Purchase Order being Processed Pending Vendor Insurance	May 2018 (Bid Award) August 2018 September 2018	GPA-023-17
12	Consulting Services for Smart Grid Analytics Enabled Distribution System Planning, Technical, and Economic Feasibility Studies	New Bid	August 2018 (Announcement)	RFP-18-XXX
13	MEC Piti &8 and #9 - ECA Expiration	Environmental Assessment Report completed. Condition Assessment past due from Consultant.	[Completed] OVERDUE	RFP-17-002
14	MEC Piti &8 and #9 - ECA Extension	CCU approval received. PUC approval received, pending review of contract amendment. Amendment discussions w/ MEC on-going.	[Completed] In progress	
15	Generation Software (GADS open software)	Pending data entry from Generation & SPORD.	[On-going work]	
16	IFB for ULSD Supply for Baseloads and Peaking Units	Solicitation in progress. Bid package revised to include delivery requirements.	Start Date: Nov 2017 Est. completion: FY2019	IFB GPA-008-18
17	Contract for Lease of Bulk ULSD Storage	196KB tank repairs completed. Lease commenced January 01, 2018 until December 31, 2018 with annual extension option up to 4 years as approved by PUC	Start: November 2017 Est. Completion: FY2018 Contract Start: Jan 1, 2018	TTGI-SA-2018-001
18	EV Infrastructure	Fast charge station scope for Mangilao offices. Developing fast charge station scope for Mangilao offices.	Dec 2018 September 2018	

Project Activities

No.	Project Description	July 2018 Activities	Status / Est. Completion	RFP/Bid No
19	Fuel Conversion Plan	Condition Assessment & Transition Plan completed, submitted to Executive Mgmt and Key Employees Additional Support as Owner's Engineer - not needed at this time, per Engr Proj Mgmt Supv & Team, and Spord Fuel Mgmt Engr III	[Completed] Cancelled	
20	Fuel Bulk Storage Facility Assessment	ESA completed, RECs being addressed by GPA/IP&E CA completed	Start: Sept 2017 End: June 2018	
	Renewable Energy Resource Phase III	Completed pre-bid conference and site visits January 23-24 2018.	(Mar 2018) Tech Proposal Due	
21	Utility Energy Services Contract (UESC)	Conducted Best Schools program site assessments. Continued discussions with Navy.		
22	IFB for Delivery Services for GPA Plants	Bid canceled. Requirements to be included in the ULSD Supply solicitation	IFB Canceled Feb 2018	IFB GPA-006-18
	IFB for RFO Supply to Baseload Plants	Solicitation for a 2-Year Contract in progress. Note: PUC approves a 3-month extension of existing contract until November 30, 2018.	Solicitation in progress (for award) Est. Completion: FY2019 (1st Qtr)	IFB GPA-009-18
23	IFB for Petroleum Inspection Services	Solicitation completed. 2-Year contract to commence August 1, 2018 and will expire on July 31, 20120 with three (3) annual extension options	(Contract signed)	IFB GPA-014-18
27	RFO Storage Lease Agreement w/ Tristar	4-Year Lease extension (Sep 2018-Aug 2022) Approved by CCU. Disapproved by PUC - requested for clarification on Index referenced. (Docket 18-10)	Included in the August 2018 PUC meeting Contract Start: Sep 1, 2018	TTGI-SA-2013-001
28	GPA Fuel Farm RFO Pipeline Repair & Upgrade	c/o Engineering Project Mgt	Completed. Project Implementation in progress (Design phase)	IFB GPA-047-18
29	GPA Fuel Farm ULSD Pipeline Upgrade	c/o Engineering Project Mgt	Estimated Start: Oct 2019 Est. Completion: Sep 2019	For CCU/PUC approval for IFB Solicitation

Project Activities

No.	Project Description	July 2018 Activities	Status / Est. Completion	RFP/Bid No
30	Tk 1934 & Tk1935 API 653 Internal Inspection	c/o Engineering Project Mgt	Estimated Start: Jun 2018 Est. Completion: FY2019	For CCU/PUC approval for IFB Solicitation
31	Milsoft Systems Software Services	Negotiations - June 2018	Continuous	GPA-RFP-18-003
32	MV90 Integration Services	Negotiations ongoing - June 2018	Dec-18	GPA-RFP-18-001
33	SCADA Workstations and Monitors	Delivered	July 2018 Completed	GPA-049-18
34	Grant Proposal Development and Proposal Application Management Services	GPA submitted a grant request for the Department of Interior funding opportunity which includes partnered projects with GDOE(Best Schools Program), Public-Access Parking Lot Solar Canopy, Demand-Side Management Expansion, Electric Vehicle (EV) Infrastructure, Employees-Access Parking Lot Solar Canopy, Wind Turbine Battery Storage, and Geothermal Studies and Exploration.	Feb 2018 (Contract signed)	Re-Solicitation GPA-RFP-16-011
35	Pipeline Lease Agreement w/ Tristar	4-Year Lease extension Approved by CCU. Disapproved by PUC - requested for clarification on Index referenced. (Docket 18-10)	Start: November 2017 Est. Completion: May 2018 Contract Start: Aug 1, 2018	TTGI-PA-2013-001
36	Dock Use Agreement w/ Tristar	4-Year Lease extension Approved by CCU. Approved by PUC on March 29, 2018. (Docket 18-10)	Start: November 2017 Est. Completion: Mar 2018 Contract Start: Aug 1, 2018	TTGI-DA-2013-001
37	Redesignation of Cabras-Piti / Guam	Re-designation received 12/2018. TRC standing assisting with SIP Modeling, SIP draft. AAQM Installation/Implementation on hold, will depend on USEPA approval of SIP after submission on/before July 2019	Start: October 2011 Est. Completion: July 2019 *Submitted to EPA by completion date	RFP-11-001
38	Environmental Strategic Planning	Draft review and finalization on-going.	Start: April 2018 Est. Completion: September 2018	RFP-11-001

Project Activities

No.	Project Description	July 2018 Activities	Status / Est. Completion	RFP/Bid No
39	GPA Fuel Farm- OWS Upgrading	c/o Engineering Project Mgt	Estimated Start: Jun 2018 Est. Completion: FY2019	For IFB Solicitation
40	GPA Fuel Farm- LD System Upgrading	c/o Engineering Project Mgt	Estimated Start: Jun 2018 Est. Completion: FY2019	For IFB Solicitation
41	Planning Software Consulting Services	Request for Proposal for Consulting Services for GPA's Planning Software	RFP Start: Jul 26 2018 RFP Due: Aug 30 2018	RFP-18-010
42	IFB for Supply of Reprocessed Waste Oil Meeting GPA's ULSD Specifications	Bid for the Supply of Reprocessed Waste Oil Meeting GPA's ULSD Specifications. Supplier will haul Waste Oil from GPA WOF, reprocess waste oil to meet GPA's ULSD Specifications, and supply to designated GPA Power Plants	[Bid Documents currently under review by management]	For IFB Solicitation

No.	Project Description
1	Energy Storage System (Phase I)
2	Renewable Energy Resource Phase II
3	New Power Plant Bid (EPCM)
4	DSM Marketing
5	DSM Rebate Program
6	Wireless Network Expansion
7	Performance Metrics Automation Project
8	Electric Grid Analysis Software
9	Services to Develop Business Performance Indices using iDashboards
No.	**Project Description**
10	Supervisory Control and Data Acquisition (SCADA) System
11	Mobile Workforce Management System
12	Consulting Services for Smart Grid Analytics Enabled Distribution System Planning, Technical, and Economic Feasibility Studies
13	MEC Piti &8 and #9 - ECA Expiration
14	MEC Piti &8 and #9 - ECA Extension
15	Generation Software (GADS open software)
16	IFB for ULSD Supply for Baseloads and Peaking Units

17	Contract for Lease of Bulk ULSD Storage
18	EV Infrastructure
No.	**Project Description**
19	Fuel Conversion Plan
20	Fuel Bulk Storage Facility Assessment
	Renewable Energy Resource Phase III
21	Utility Energy Services Contract (UESC)
22	IFB for Delivery Services for GPA Plants
	IFB for RFO Supply to Baseload Plants
23	IFB for Petroleum Inspection Services
27	RFO Storage Lease Agreement w/ Tristar
28	GPA Fuel Farm RFO Pipeline Repair & Upgrade
29	GPA Fuel Farm ULSD Pipeline Upgrade
No.	**Project Description**
30	Tk 1934 & Tk1935 API 653 Internal Inspection
31	Milsoft Systems Software Services
32	MV90 Integration Services
33	SCADA Workstations and Monitors
34	Grant Proposal Development and Proposal Application Management Services
35	Pipeline Lease Agreement w/ Tristar

36	Dock Use Agreement w/ Tristar
37	Redesignation of Cabras-Piti / Guam
38	Environmental Strategic Planning
No.	**Project Description**
39	GPA Fuel Farm- OWS Upgrading
40	GPA Fuel Farm- LD System Upgrading
41	Planning Software Consulting Services
42	IFB for Supply of Reprocessed Waste Oil Meeting GPA's ULSD Specifications

July 2018 Activities
GPA reviewing Pre-Final design. Clearing and grading permit work commenced in November 2017. Foundation permit work commenced in January 2018. Construction is 42% completed.
PUC ratifies KEPCO contract (Docket 18-06) and approves HANWHA contract (Docket 18-08) on March 29, 2018. Signing dates are scheduled for the end of August 2018.
Completed technical bid documents and obtained CCU approval to petition PUC for approval
Represented GPA (presenter) at the Energy Outreach Session at Pacific Star Resort hosted by GEO and supported the 2018 Home and Lifestyles Expo at the Agana Shopping Center.
Processed over 270 equipment in applications for rebates totaling ~ $60K
Commenced Southern Expansion in collaboration with GWA: 30% Assessment of GWA Well Locations: Completed Assessment of Existing Tropos Units: 100% Router Equiqment and Accessories purchase Routers programming Preparing next router order and installation documents
Presentation on iDashboard provided to GM. GPA contiues to work with consultant on automating reports and formating.
Additional training for users Realtime Voltage Module Training on Planning and Analysis Cases
Dashboard builds 95%

July 2018 Activities
Change Order Approved for October 2018 Completion and hardware costs Servers; Programs, & Workstations Installed Point to Point Test Ongoing
Bid Evaluation Completed, Clevest recommendation memo submitted for approval March 21, 2018 Purchase Order being Processed Pending Vendor Insurance
New Bid
Environmental Assessment Report completed. Condition Assessment past due from Consultant.
CCU approval received. PUC approval received, pending review of contract amendment. Amendment discussions w/ MEC on-going.
Pending data entry from Generation & SPORD.
Solicitation in progress. Bid package revised to include delivery requirements.

196KB tank repairs completed. Lease commenced January 01, 2018 until December 31, 2018 with annual extension option up to 4 years as approved by PUC
Fast charge station scope for Mangilao offices. Developing fast charge station scope for Mangilao offices.
July 2018 Activities
Condition Assessment & Transition Plan completed, submitted to Executive Mgmt and Key Employees Additional Support as Owner's Engineer - not needed at this time, per Engr Proj Mgmt Supv & Team, and Spord Fuel Mgmt Engr III
ESA completed, RECs being addressed by GPA/IP&E CA completed
Completed pre-bid conference and site visits January 23-24 2018.
Conducted Best Schools program site assessments. Continued discussions with Navy.
Bid canceled. Requirements to be included in the ULSD Supply solicitation
Solicitation for a 2-Year Contract in progress. Note: PUC approves a 3-month extension of existing contract until November 30, 2018.
Solicitation completed. 2-Year contract to commence August 1, 2018 and will expire on July 31, 20120 with three (3) annual extension options
4-Year Lease extension (Sep 2018-Aug 2022) Approved by CCU. Disapproved by PUC - requested for clarification on Index referenced. (Docket 18-10)
c/o Engineering Project Mgt
c/o Engineering Project Mgt
July 2018 Activities
c/o Engineering Project Mgt
Negotiations - June 2018
Negotiations ongoing - June 2018
Delivered
GPA submitted a grant request for the Department of Interior funding opportunity which includes partnered projects with GDOE(Best Schools Program), Public-Access Parking Lot Solar Canopy, Demand-Side Management Expansion, Electric Vehicle (EV) Infrastructure, Employees-Access Parking Lot Solar Canopy, Wind Turbine Battery Storage, and Geothermal Studies and Exploration.
4-Year Lease extension Approved by CCU. Disapproved by PUC - requested for clarification on Index referenced. (Docket 18-10)

4-Year Lease extension Approved by CCU. Approved by PUC on March 29, 2018. (Docket 18-10)
Re-designation received 12/2018. TRC standing assisting with SIP Modeling, SIP draft. AAQM Installation/Implementation on hold, will depend on USEPA approval of SIP after submission on/before July 2019
Draft review and finalization on-going.
July 2018 Activities
c/o Engineering Project Mgt
c/o Engineering Project Mgt
Request for Proposal for Consulting Services for GPA's Planning Software
Bid for the Supply of Reprocessed Waste Oil Meeting GPA's ULSD Specifications. Supplier will haul Waste Oil from GPA WOF, reprocess waste oil to meet GPA's ULSD Specifications, and supply to designated GPA Power Plants

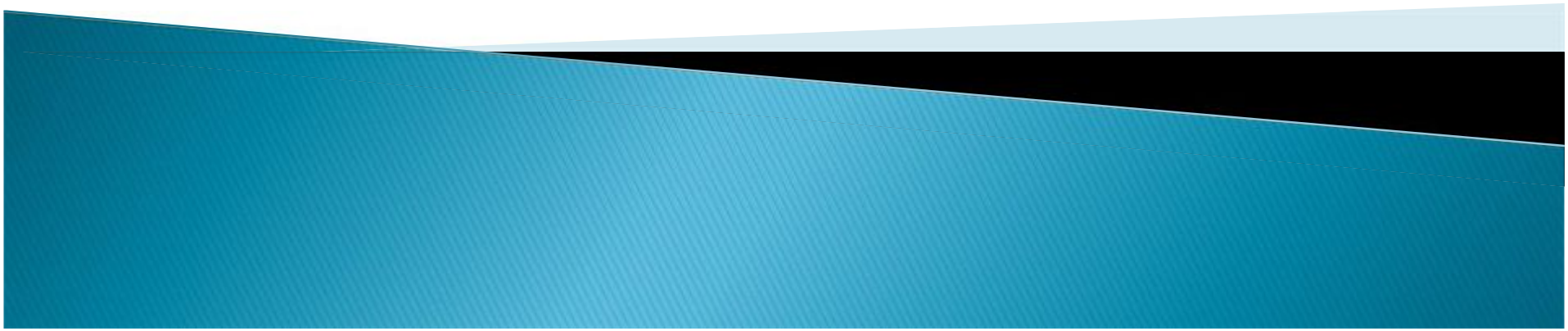
Status / Est. Completion	RFP/Bid No
September 30, 2018 (Request to extend completion date is pending)	MS Bid GPA-082-15
KEPCO PV plant COD is APR 2021. Hanwha's COD is anticipated for 1st qtr of 2020.	MS Bid GPA-070-16
Award (2019 Q3) COD (2022 Q2)	MS GPA-034-18
Continuous	
Continuous	
Dec-18 Completed Completed Received routers - May 2018 Completed - June 2018 Accessories - May 2018 August 2018	GPA-019-18
Mar-18	
Completed Completed (July 2018) November 2018	GPA-064-16
Ongoing	GPA-RFP-16-008
Status / Est. Completion	**RFP/Bid No**
Oct 2018 (SCADA COD) Completed 'Sept 2018 (Estimated Completion)	GPA-066-16
May 2018 (Bid Award) August 2018 September 2018	GPA-023-17
August 2018 (Announcement)	RFP-18-XXX
[Completed] OVERDUE	RFP-17-002
[Completed] In progress	
[On-going work]	
Start Date: Nov 2017 Est. completion: FY2019	IFB GPA-008-18

Start: November 2017 Est. Completion: FY2018 Contract Start: Jan 1, 2018	TTGI-SA-2018-001
Dec 2018 September 2018	
Status / Est. Completion	**RFP/Bid No**
[Completed] Cancelled	
Start: Sept 2017 End: June 2018	
(Mar 2018) Tech Proposal Due	
IFB Canceled Feb 2018	IFB GPA-006-18
Solicitation in progress (for award) Est. Completion: FY2019 (1st Qtr)	IFB GPA-009-18
(Contract signed)	IFB GPA-014-18
Included in the August 2018 PUC meeting Contract Start: Sep 1, 2018	TTGI-SA-2013-001
Completed. Project Implementation in progress (Design phase)	IFB GPA-047-18
Estimated Start: Oct 2019 Est. Completion: Sep 2019	For CCU/PUC approval for IFB Solicitation
Status / Est. Completion	**RFP/Bid No**
Estimated Start: Jun 2018 Est. Completion: FY2019	For CCU/PUC approval for IFB Solicitation
Continuous	GPA-RFP-18-003
Dec-18	GPA-RFP-18-001
July 2018 Completed	GPA-049-18
Feb 2018 (Contract signed)	Re-Solicitation GPA-RFP-16-011
Start: November 2017 Est. Completion: May 2018 Contract Start: Aug 1, 2018	TTGI-PA-2013-001

Start: November 2017 Est. Completion: Mar 2018 Contract Start: Aug 1, 2018	TTGI-DA-2013-001
Start: October 2011 Est. Completion: July 2019 *Submitted to EPA by completion date	RFP-11-001
Start: April 2018 Est. Completion: September 2018	RFP-11-001
Status / Est. Completion	**RFP/Bid No**
Estimated Start: Jun 2018 Est. Completion: FY2019	For IFB Solicitation
Estimated Start: Jun 2018 Est. Completion: FY2019	For IFB Solicitation
RFP Start: Jul 26 2018 RFP Due: Aug 30 2018	RFP-18-010
[Bid Documents currently under review by management]	For IFB Solicitation

CCU Report– DSM

As of July 31, 2018



All Expenses – Fiscal Year

Description	FY16	FY17	FY18 as of July 31	Total to Date
Regular/OT Pay	$11,348.80	$22,256.00	$19,027.79	$52,632.59
Other Contractual	28,278.50	$85,550.05	$38,992.25	$152,820.80
Paid Rebates-Split AC	$154,700.00	$557,275.00	$911,750.00	$1,623,725.00
Paid Rebates-Central AC	$3,400.00	$8,200.00	$2,300.00	$13,900.00
Paid Rebates-Washer/Dryer	$2,800.00	$7,425.00	$23,000.00	$33,225.00
Total Expenses	200,527.30	$681,738.11	$996,125.12	$1,878,545.53
Bank Interest/Fees	-$1,676.42/ $155.00	-$1,722.74/ $1,032.06	-$968.08/ $1,055.08	-$4,367.24/ $2,242.14
Ending Balance				$(68,164.29)

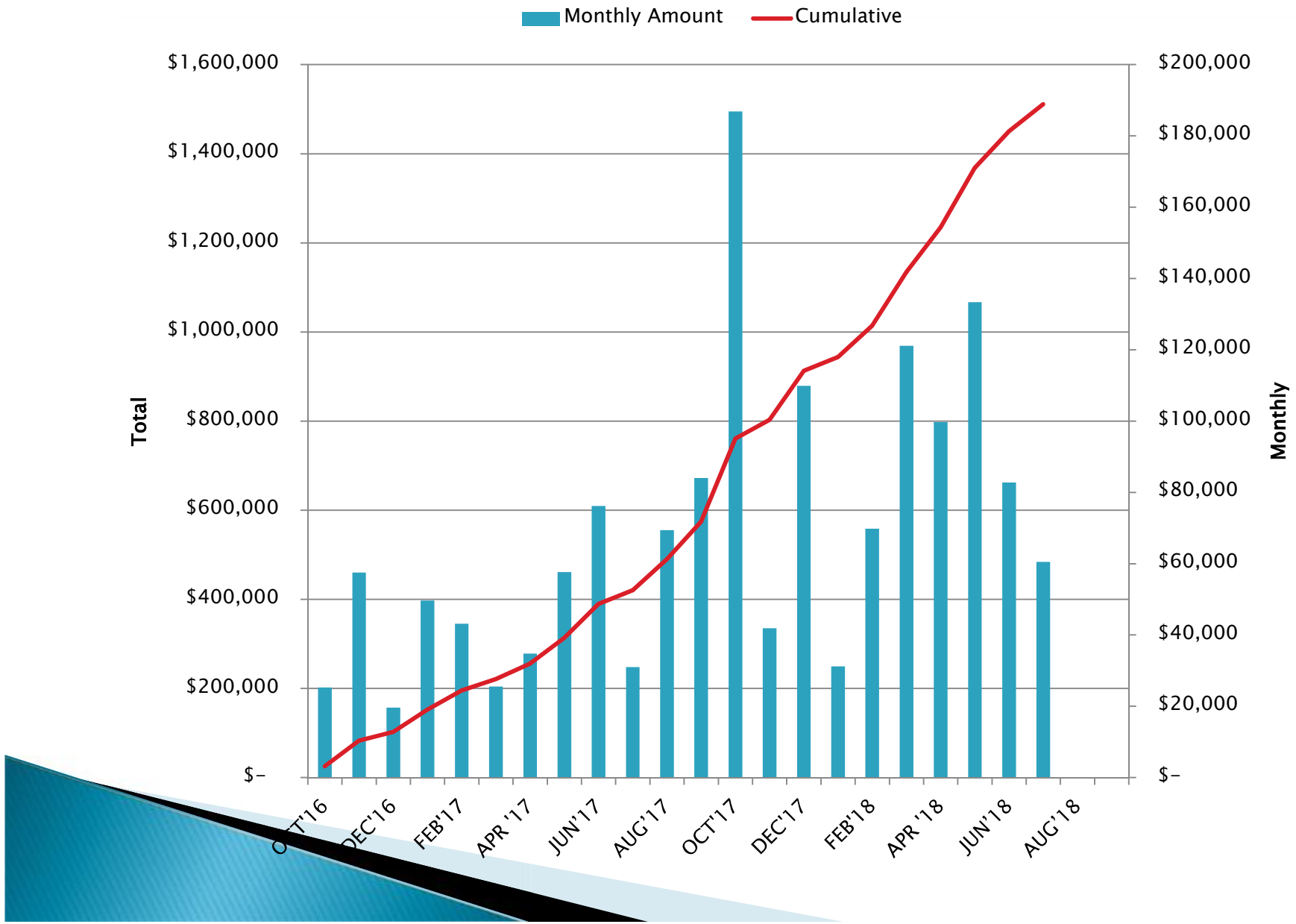
FY 2017– Rebate Amount Paid Monthly

Month	Total	Split A/C Units	Central A/C Units	Washers/Dryers
OCTOBER'16	$25,250.00	$23,450.00	$800.00	$1,000.00
NOVEMBER'16	$57,525.00	$55,625.00	$1,600.00	$300.00
DECEMBER'16	$19,625.00	$18,225.00	$800.00	$600.00
JANUARY'17	$49,650.00	$48,050.00	–	$1,600.00
FEBRUARY'17	$43,175.00	$43,175.00		–
MARCH'17	$25,550.00	$25,550.00	–	–
APRIL '17	$34,800.00	$30,950.00	$800.00	$2,125.00
MAY'17	$57,675.00	$54,275.00	$2,400.00	$1,000.00
JUNE'17	$76,175.00	$74,675.00	$1,300.00	$200.00
JUL'17	$30,975.00	$30,975.00	–	–
AUG'17	$69,400.00	$69,200.00	–	$200.00
SEP'17	$84,025.00	$83,125.00	$500.00	$400.00
TOTALS	$572,900.00	$557,275.00	$8,200.00	$7,425.00

FY 2018– Rebate Amount Paid Monthly

Month	Total	Split A/C Units	Central A/C Units	Washers/ Dryers
OCTOBER'17	$186,850.00	$185,850.00	$800.00	$200.00
NOVEMBER'17	$41,900.00	$41,700.00		$200.00
DECEMBER'17	$109,875.00	$108,475.00		$1,400.00
JANUARY '18	$31,175.00	$31,175.00		
FEBRUARY '18	$69,825.00	$68,825.00		$1,000.00
MARCH '18	$121,100.00	$120,100.00		$1,000.00
APRIL '18	$99,700.00	$94,400.00	$500.00	$4,800.00
May '18	$133,350.00	$127,150.00		$6,200.00
June '18	$82,400.00	$77,200.00		$5,200.00
July'18	$60,475.00	$56,475.00	$1,000.00	$3,000.00
TOTALS	$936,650.00	$911,350.00	$2,300.00	$23,000.00

FY 2017- 2018 Rebate Amount Paid



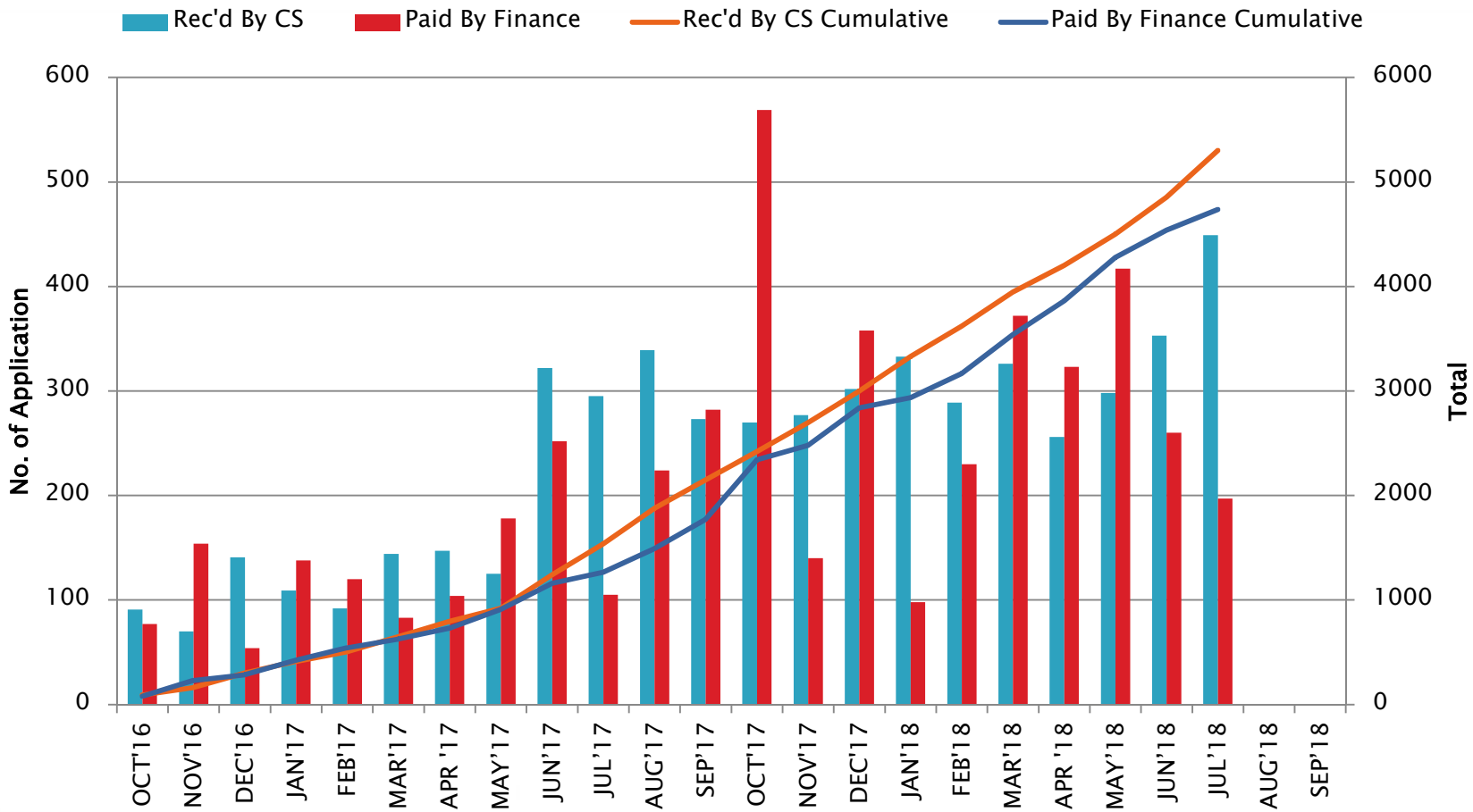
FY 2017- Number of Applications Received By Customer Service and Paid Monthly

Month	Rec'd By CS	Paid By Finance
OCTOBER '16	92	77
NOVEMBER '16	68	154
DECEMBER '16	141	54
JANUARY '17	109	138
FEBRUARY '17	92	120
MARCH '17	144	83
APRIL '17	147	104
MAY '17	215	178
JUNE '17	322	252
JULY '17	295	105
AUGUST '17	339	224
SEPTEMBER '17	270	282

FY 2018- Number of Applications Received By Customer Service and Paid Monthly

Month	Rec'd By CS	Paid By Finance
OCTOBER '17	270	569
NOVEMBER '17	277	140
DECEMBER '17	302	358
JANUARY '18	333	98
FEBRUARY '18	289	230
MARCH '18	326	372
APRIL '18	256	323
MAY '18	298	417
JUNE '18	353	260
JULY '18	449	197
AUGUST '18		
SEPTEMBER '18		

FY 2017– 2018 Number of Applications Received By Customer Service and Paid



Guam GPA & GWA EMS/SCADA System

SIEMENS



GUAM POWER AUTHORITY
Bringing Energy Solutions to You

GUAM WATERWORKS AUTHORITY

Monthly Project Report

July 2018

Grow together and WIN

Unrestricted

Project Progression Summary

Equipment Delivery

- July 6, 2018 – Arrival of SCADA Servers
- July 11, 2018 – Arrival of SCADA Cisco Switches
- Pending – Delivery of UPS/Printers, estimated DOA: End of August

Installation and Interconnection

- July 12, 2018 – Installation and Interconnection Phase commences
    - SCADA Servers and Switches installed IAW cabinet layout as provide by GPWA

- Change in 3rd party communication infrastructure
    - Due to unsupported technology, the conversion of analog to IP based communication from GTA was necessary to facilitate end-to-end connectivity between field and control sites

Disaster Recovery

- Secondary site (DR) discussed further and a solution is currently under review

GPWA SCADA EMS Project Bid No. GPA 066-16

Project Director: Charles Wu
Project Manager: Jonathan Chargualaf
Contract Administrator: Monito Co

Overall Status	G

Burn Rate	This Month	Last Month	Incremental
Scope (%)			
Budget (%)	13.2%		
Milestones Achieved	1, 3-11 of 18		

Resources

1. Benson/Siemens
2. GPWA

Risks & Issues	G	Schedule	G	Scope	G	Financial	G

Updates & Accomplishments -- Month of July 2018

1. Delivery of primary hardware components

2. Installation and Interconnection phase commenced

3. Disaster Recovery Solution discussions

Resource	Upcoming Tasks / Open Items	TCD/ECD
GPWA Benson/Siemens	Equipment installation and Interconnection (continued)	August 31, 2018
GPWA Benson/Siemens	Substation Point-to-Point Testing (concurrent)	August 31, 2018
GPWA Benson/Siemens	System Commissioning, Quality Assurance, Site Acceptance Testing	September 30, 2018
GPWA Benson/Siemens	GWA – Pending installation of communication distribution infrastructure to SCC; GPA has agreed to assist, pending procurement of additional materials	TBD

Risks and Issues	DATE IDENTIFIED	Resolution	RESOLUTION DEADLINE

Legend:

G No corrective action required

Y Near-term corrective action required

R Requires immediate attention

GPWA SCADA EMS Project
Bid No. GPA 066-16

Project Director: Charles Wu
Project Manager: Jonathan Chargualaf
Contract Administrator: Monito Co

Overall Status — G

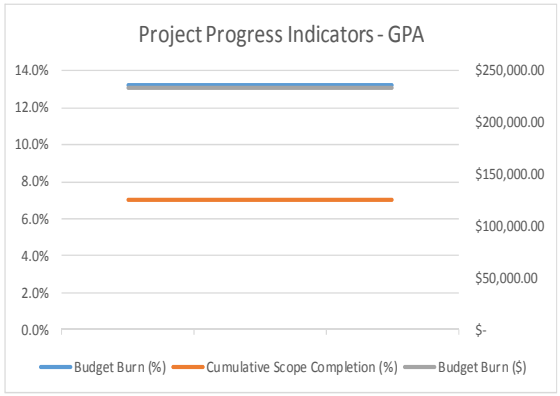
Burn Rate	This Month	Last Month	Incremental
Scope (%)			
Budget (%)	13.2%		
Milestones Achieved	1, 3-11 of 18		

Resources

1. Benson/Siemens
2. GPWA

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Project Progress Indicators



Phase I	$ 1,518,769.00		$ 1,518,769.00	5
Phase I	$ 1,518,769.00	$ 250,537.38	$ 1,769,306.38	5

Project Schedule & Budget Performance Indicators

Project Milestone	Planned Completion Date	To be updated: Actual Completion Date	Performance (Days Over/Under)
Contract Start Date	14-Dec-16	14-Dec-16	0
GPWA SCADA/EMS Project	1-Oct-18	1-Oct-18	0
Factory Activities (In Taiwan / Germany)	9-Jul-18	9-Jul-18	0
Approval of revised documentation	4-Dec-17	4-Dec-17	0
Preliminary Factory Acceptance Test (Pre-FAT) in Taiwan	2-May-18	2-May-18	0
- Base Applications	27-Apr-18	27-Apr-18	0
- Advanced Applications	2-May-18	2-May-18	0
Factory Acceptance Test (FAT) in Taiwan	10-Jun-18	10-Jun-18	0
- Advanced Applications	7-May-18	7-May-18	0
- Hardware delivery to Site	31-May-18	31-May-18	0
Site Activities (In Guam)	1-Oct-18	1-Oct-18	0
Site Commissioning (Point to point testing)	29-Aug-18	29-Aug-18	0
Site Commissioning (GPA - Point to point testing)	28-Aug-18	28-Aug-18	0
Issuance of Site Commissioning Completion Certificate	28-Aug-18	28-Aug-18	0
Site Acceptance Test (SAT)	3-Sep-18	3-Sep-18	0
- Advanced Applications	2-Sep-18	2-Sep-18	0
Investigation of variance / bug (SAT if any - Advanced Applications)	3-Sep-18	3-Sep-18	0
Issuance of Site Acceptance Certificate	3-Sep-18	3-Sep-18	0
Availability Test (AVT) - 1000hrs (42 Calindar Day, 28 working day)	1-Oct-18	1-Oct-18	0
Issuance of AVT Certificate	1-Oct-18	1-Oct-18	0
Handover of System to end customer	1-Oct-18	1-Oct-18	0
Commencement of warranty (12 months)	1-Oct-19	1-Oct-19	0
Issuance of Final Acceptance Certificates (FAC)	1-Oct-19	1-Oct-19	0

Legend:

G — No corrective action required

Y — Near-term corrective action required

R — Requires immediate attention

8/22/2018

4

GPWA SCADA EMS Project
Bid No. GPA 066-16

Project Director: Charles Wu
Project Manager: Jonathan Chargualaf
Contract Administrator: Monito Co

Overall Status: G

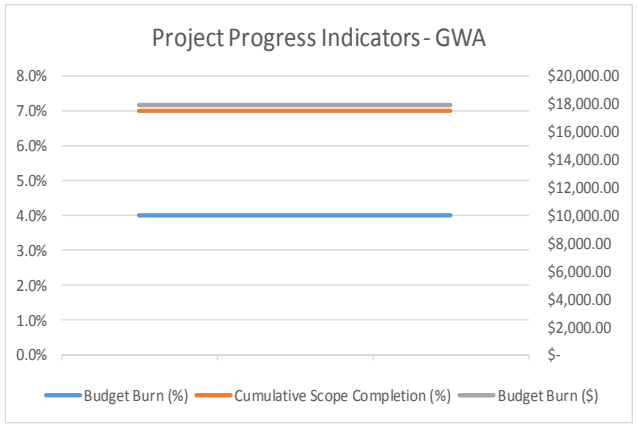
Burn Rate	This Month	Last Month	Incremental
Scope (%)			
Budget (%)	13.2%		
Milestones Achieved	1, 3-11 of 18		

Resources

1. Benson/Siemens
2. GPWA

Risks & Issues	Schedule	Scope	Financial
G	G	G	G

Project Progress Indicators



Phase I	$ 432,705.00		$ 432,705.00	5
		$ 18,000.00	$ 450,705.00	5

Project Schedule & Budget Performance Indicators

Project Milestone	Planned Completion Date	To be updated: Actual Completion Date	Performance (Days Over/Under)
Contract Start Date	14-Dec-16	14-Dec-16	0
GPWA SCADA/EMS Project	1-Oct-18	1-Oct-18	0
Factory Activities (In Taiwan / Germany)	9-Jul-18	9-Jul-18	0
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Site Commissioning (GPA - Point to point testing)	28-Aug-18	28-Aug-18	0
Issuance of Site Commissioning Completion Certificate	28-Aug-18	28-Aug-18	0
Site Acceptance Test (SAT)	3-Sep-18	3-Sep-18	0
- Advanced Applications	2-Sep-18	2-Sep-18	0
Investigation of variance / bug (SAT if any - Advanced Applications)	3-Sep-18	3-Sep-18	0
Issuance of Site Acceptance Certificate	3-Sep-18	3-Sep-18	0
Availability Test (AVT) - 1000hrs (42 Calindar Day, 28 working day)	1-Oct-18	1-Oct-18	0
Issuance of AVT Certificate	1-Oct-18	1-Oct-18	0
Handover of System to end customer	1-Oct-18	1-Oct-18	0
Commencement of warranty (12 months)	1-Oct-19	1-Oct-19	0
Issuance of Final Acceptance Certificates (FAC)	1-Oct-19	1-Oct-19	0

Legend:

G No corrective action required
Y Near-term corrective action required
R Requires immediate attention

8/22/2018

5

GPWA SCADA EMS Project
Bid No. GPA 066-16

Project Director: Charles Wu
Project Manager: Jonathan Chargualaf
Contract Administrator: Monito Co

Overall Status	G

Burn Rate	This Month	Last Month
Scope (%)		
Budget (%)		
Milestones Achieved	1, 3-11 of 18	
1. Mobilization		
2. Project Management		
3. Permits, Bonds and Codes		
4. Project Installation Site Survey		
5. Interconnection and Integration Design		
6. Communications and Networking Design and Execution Plan		
7. Installation Design		
8. Software Cost, Procurement and Delivery		
9. Third Party Software Cost, Procurement and Delivery		
10. Software Installation		
11. Equipment Cost, Procurement and Delivery		
12. Construction, Equipment Installation and Interconnection		
13. Commissioning, Quality Assurance and Performance Testing		
14. Training		
15. Demobilization		
16. Warranty		
17. Documentation		
18. Annual Maintenance		

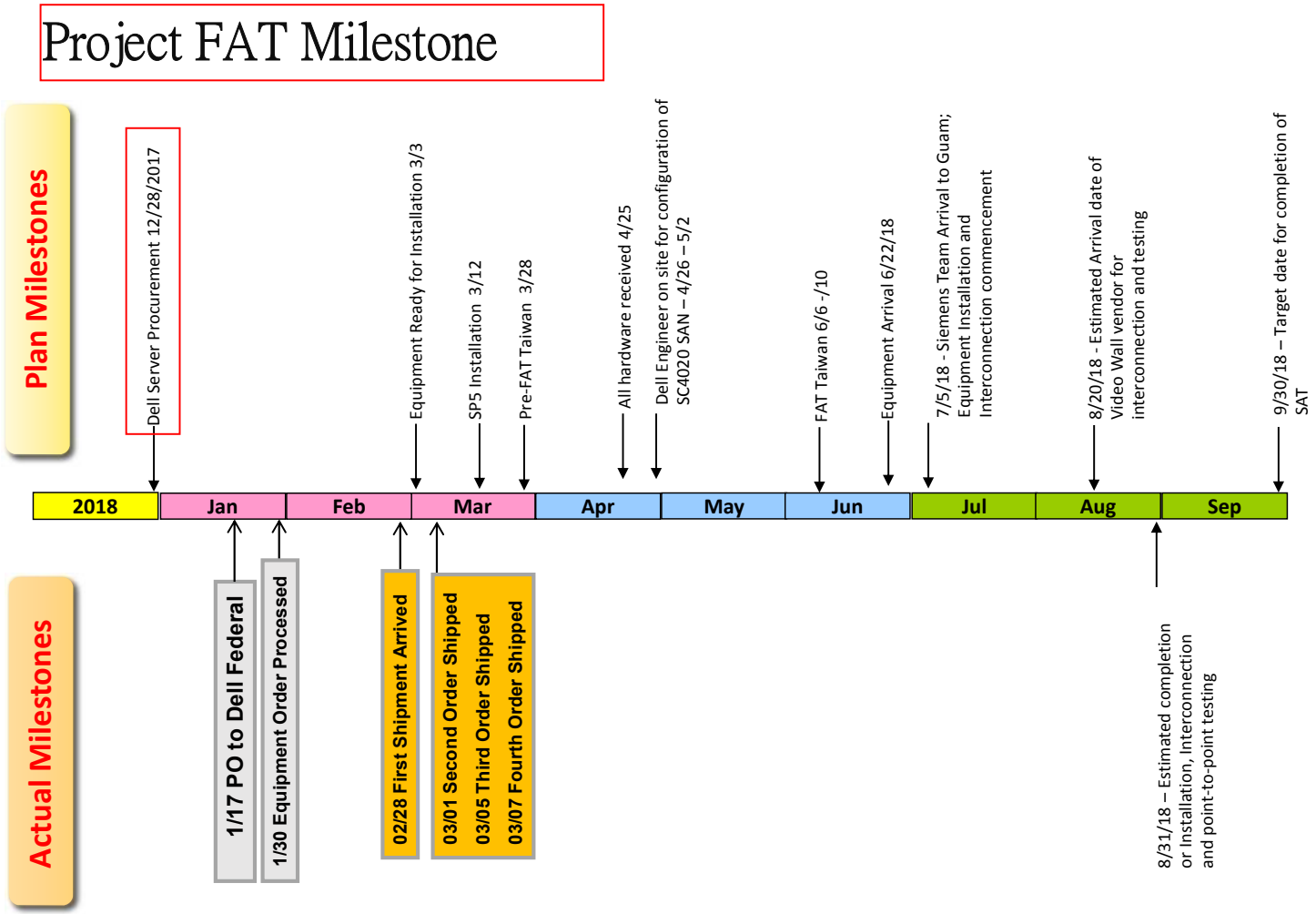
Legend:

G — No corrective action required

Y — Near-term corrective action required

R — Requires immediate attention

8/22/2018

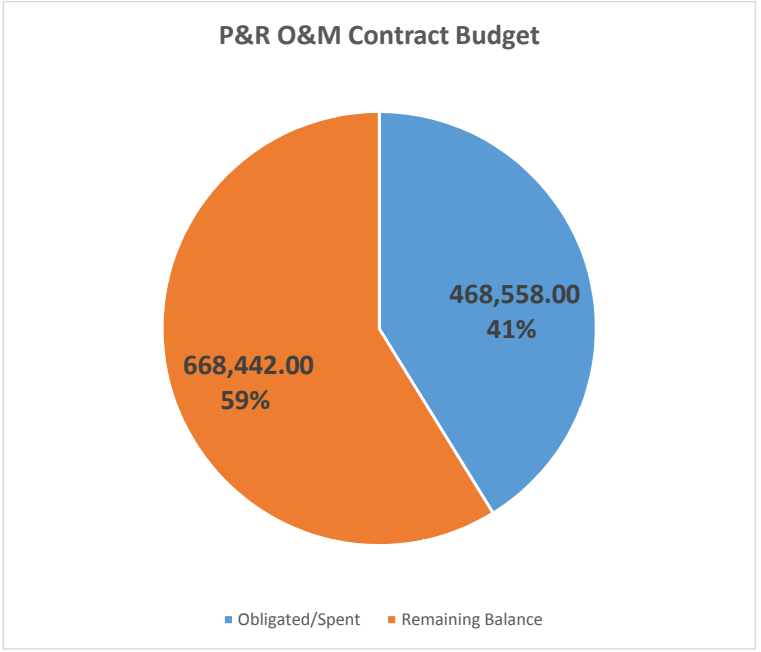

Project FAT Milestone
Plan Milestones
Dell Server Procurement 12/28/2017
Equipment Ready for Installation 3/3
SP5 Installation 3/12
Pre-FAT Taiwan 3/28
All hardware received 4/25
Dell Engineer on site for configuration of SC4020 SAN – 4/26 – 5/2
FAT Taiwan 6/6 -/10
Equipment Arrival 6/22/18
7/5/18 - Siemens Team Arrival to Guam; Equipment Installation and Interconnection commencement
8/20/18 - Estimated Arrival date of Video Wall vendor for interconnection and testing
9/30/18 – Target date for completion of SAT
2018
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Actual Milestones
1/17 PO to Dell Federal
1/30 Equipment Order Processed
02/28 First Shipment Arrived
03/01 Second Order Shipped
03/05 Third Order Shipped
03/07 Fourth Order Shipped
8/31/18 – Estimated completion or Installation, Interconnection and point-to-point testing

Planning & Regulatory CCU Report

July 31, 2018

Planning & Regulatory O&M Contract Budget

- Revenue Funded
- Target
  - 7.41% O&M Obligated by November 16, 2017
  - 19.28 O&M Obligated as of Nov. 30, 2017 (actual)
  - 19.36 O&M Obligated as of Dec. 31, 2017 (actual)
  - 25.60 O&M Obligated as of Apr. 30, 2018 (actual)
  - 36.72% O&M Obligation by June 30, 2018 (actual)
  - 41.21% O&M Obligation by July 31, 2018
  - 65% O&M Obligation by Aug. 30, 2018



P&R Weekly & Monthly Inspection Reports

- Best Management Practices (BMP) Report Summary [Weekly]
- Generation Spill Prevention, Control, and Countermeasures (SPCC) Report Summary [Monthly]
- T&D Spill Prevention, Control, and Countermeasures (SPCC) Report Summary [Monthly]

- GPA is responsible to employees, the island environment, and the community to take all reasonable steps necessary to prevent spills from its facilities in order to protect human health and the environment

P&R Inspection Report Purpose

- The purpose of these inspections is to catch discrepancies and violations internally and correct them before inspections by Guam EPA and US EPA
- Regulatory Agencies can conduct scheduled or un-scheduled (surprise) inspections any time
- Any major discrepancies or violations cited can lead to issuance of a Notice of Violation (NOV), possible fines, and/or other enforcement action
- P&R conducts routine SPCC inspections in compliance with the requirements of 40CFR 112.7(a)(3)(ii), Discharge Prevention Measures

Weekly BMP Report

WEEKLY BMP REPORT SUMMARY
CABRAS POWER PLANT
MONTH OF JULY, 2018

LEGEND OF TRACKING

- Notification Date
- Within Scheduled Remediation Period
- Completed
- Deadline is Past Due

INSPECTOR: LORINA SABANGAN

LOCATION	WE 07/06/18 FINDINGS	WE 07/13/18 FINDINGS	WE 07/20/18 FINDINGS	WE 07/27/18 FINDINGS	RECOMMENDATION/ REMARKS	DATES			RESPONSE
						initial Findings	Due	Completed	
OWS next to Outfall (Cabras 3&4)	Repair stopped	Repair stopped	Repair stopped	Repair stopped	Repair was stopped. Draining and transfer of oil to WOF should be continuous.	12/11/2015			*OWS no longer in operation*
Cabras 1&2 Basement	Water leak	Water leak	Water leak	Water leak	Continuous visual monitoring and clean-up	1/10/2014	Dec. 2018		*Major repair by end of 2018*
Infiltration Pond Cabras 3&4			Broken absorbent booms located at the area	Broken absorbent booms located at the area	Remove	7/20/2018	ASAP		
Pavillion	Stored metal and various debris	Stored metal and various debris	Stored metal and various debris	Stored metal and various debris	Per Francis Cruz on 2/7/8, Cabras 3&4 will send list to Procurement for bid disposal	2/8/2013	ASAP		
Refilling valve pit (Cabras 1, 2, 3, & 4)			Algae and rainwater in sec. containment		Repair ongoing	7/20	ASAP		
Central Maintenance	Miscellaneous debris of drums	Corrective action completed			Corrective action completed on July 3, 2018	April 2018	ASAP	7/3/18	
PSCC Dispatch Front Yard	Stored metal debris	Corrective action completed			Corrective action completed on July 3, 2019	2/2/2018	Until cooling water pump is repaired	7/3/18	

T&D SPCC Inspection Report

SUMMARY OF SPCC INSPECTION REPORT
MONTH OF JULY, 2018

LEGEND OF TRACKING

- Notification Date
- Completed
- Within Scheduled Remediation
- Deadline is Past Due

SUBSTATIONS

LOCATIONS	Findings		Recommendation/Remarks	Status	Responsible	Completion Date	Due Date	Initial Findings Date
DEDEDO SUBSTATION	*Facility Area*	NO CORRECTIVE ACTION						
DEDEDO SUBSTATION WAREHOUSE	*OWS*	Rainwater inside containment	Drain and clean				ASAP	May 2018
	Transformer Storage Areq	Rainwater accumulation	Drain and clean				ASAP	July 2018
MACHECHE SUBSTATION	*Facility Area*	NO CORRECTIVE ACTION						
TALOFOFO SUBSTATION	*Secondary Containment*	Water accumulation	Drain and clean					July 2018
TENJO SUBSTATION	*Facility Area*	NO CORRECTIVE ACTION						
YIGO SUBSTATION	*Facility Area*	NO CORRECTIVE ACTION						

Generation SPCC Inspection Report

SUMMARY OF SPCC INSPECTION REPORT
MONTH OF JULY, 2018

LEGEND OF TRACKING

- Notification Date
- Completed
- Within Scheduled Remediation
- Deadline is Past Due

POWER PLANT

Location	Findings		Recommendation/Remarks	Status	Responsible	Completion Date	Due Date	Initial Findings Date
CABRAS UNITS 1 & 2	*Suply line 8" from tank farm*	No secondary containment	Provide secondary containment. Regular monitoring				ASAP	November 2015
	Secondary Containment	Exposed/worn out insulation and corroded flanges on tank no.2	Repair	Repair ongoing			ASAP	July 2017
	Basement	Sign of oil leak and continuous water leak	Verify and repair	Repair ongoing			ASAP	July 2017
CABRAS UNITS 3 & 4	*FODST Nos. 3&4 Secondary Containment*	Metal and pipe debris in the area	Remove and clear area.	Joven. Debris is OK for removal. No longer needed for Insurance				June 2016
	MOV	Broken wheel and corroded pipe	Repair/replace wheel and pipe				ASAP	March 2018
	Day Tank 3&4	Overgrown vegetation around tank seams on day tank 3&4	Remove vegetation				ASAP	February 2018
	Secondary Containment - sludge tank	Rainwater	Drain water and conduct cleanup				ASAP	February 2018
DEDEDO CT	*OWS*	Algae buildup	Remove algae				ASAP	July 2018
	Cooling Tower	Algae buildup in containment	Remove algae				**ASAP**	July 2018

Generation SPCC Inspection Report (cont.)

SUMMARY OF SPCC INSPECTION REPORT
MONTH OF JULY, 2018

LEGEND OF TRACKING

- Notification Date
- Completed
- Within Scheduled Remediation
- Deadline is Past Due

POWER PLANT

Location	Findings		Recommendation/Remarks	Status	Responsible	Completion Date	Due Date	Initial Findings Date
MACHECHE CT	Facility Area	Corrosion at tanks T-130/140 (paint applied over rust only)	Remove rust and repaint				ASAP	October 2015
		Corroded tank support T-130/140 (paint applied over rust only)	Remove rust and repaint				ASAP	October 2015
		Rust buildup on seam and tank belly	Remove rust and paint,				ASAP	November 2015
		Oil leak observed in oil purifier room	Fix leak and conduct cleanup				ASAP	July 2018
		Housekeeping	Need to utilize drum storage area for drums found inside generator room				ASAP	July 2018
		Corroded tank shell, algae buildup on T-130/140	Remove rust and repaint, remove algae				ASAP	June 2018
		Corroded tank rivets/bolts (loose, missing) T-130/140	Replace				July 2018	May 2018
		Bubbled paint coating (cracked, damaged, faded) T130/140	Repaint				ASAP	June 2018
		Corroded tank roof on Tank-130/140	Conduct cleanup				ASAP	June 2018
YIGO CT	*Facility Area*	Fuel storage tank 140	Rust buildup on shell	Remove rust, re-paint				April 2018
MANENGGON DIESEL	*Tank No. 3*	Corroded tank shell	Chip and recoat				ASAP	April 2018
	Secondary Containment	Worn out sealant on the cracks on secondary containment	Replace sealant	Re-sealing is ongoing			ASAP	May 2017
		Algae and dried leaves accumulation in sec. containment	Conduct clean up				ASAP	November 2017
		Buckets with no covers are filled with oil in generator room	Transfer oil in used oil drum				ASAP	July 2018
		Oil spill in generator room	Conduct cleanup				ASAP	July 2018

Generation SPCC Inspection Report (cont.)

SUMMARY OF SPCC INSPECTION REPORT
MONTH OF JULY, 2018

LEGEND OF TRACKING

- Notification Date
- Completed
- Within Scheduled Remediation
- Deadline is Past Due

POWER PLANT

Location	Findings		Recommendation/Remarks	Status	Responsible	Completion Date	Due Date	Initial Findings Date
TALOFOFO DIESEL	*Facility Area*	Loose fire suppressant wires on the tank	Secure wires				ASAP	June 2018
		Improper storage of drums	Drum 1 - transfer drum to storage area; Drum 2 - Remove drum on top of drain valve cover				ASAP	July 2018
TENJO DIESEL	*Facility Area*	Worn out gap seal on the secondary containment floor	Seal floor gaps				ASAP	August 2017
		Corroded tank shell on tank #2	Chip and recoat				ASAP	March 2018
		Oil spill in OWS sec. containment	Conduct cleanup				ASAP	July 2018
		Corroded supply pipe	Chip and recoat				ASAP	March 2018
		Oil spill and various used materials stored in work area	Schedule disposal of materials				ASAP	May 2018
		Improper storage of chemicals	Transfer in proper chemical storage				ASAP	May 2018
PITI #7	*Main Fuel Tank, Day Tank # 1 & 2*	No integrity test	Conduct integrity test				ASAP	January 2018
	Valve leaking bucket	Bucket is full of mixed water and oil	Verify and replace bucket				ASAP	July 2018

GUAM POWER AUTHORITY
ATURIDAT ILEKTRESEDAT GUAHAN
P O BOX 2977, AGANA, GUAM 96932-2977
Telephone: (671) 648-3066 Fax: (671) 648-3168

GUAM POWER AUTHORITY
FINANCIAL STATEMENT OVERVIEW
July 2018

Attached are the financial statements and supporting schedules for the month and fiscal year ended July 31, 2018.

Summary
The increase in net assets for the month ended was $0.8 million as compared to the anticipated net increase of $1.0 million projected at the beginning of the year. The total kWh sales for the month were 10.89% less than projected and non-fuel revenues were $1.3 million less than the estimated amount. O & M expenses for the month were $5.7 million which was $0.7 million less than our projections for the month. Other expenses for the month such as interest expense, IPP costs, (net of interest income and other income) totaled to $3.4 million, which was $0.5 million less than the projected amounts. There were no other significant departures from the budget during the period.

Analysis

Description	Previous Month	Current Month	Target
Quick Ratio	2.34	2.48	2
Days in Receivables	45	39	52
Days in Payables	35	29	30
LEAC (Over)/Under Recovery Balance -YTD	$8,904,873	$8,422,674	$9,142,210
T&D Losses	4.99%	5.03%	<7.00%
Debt Service Coverage	1.80	1.80	1.75
Long-term equity ratio	17%	17%	30 – 40%
Days in Cash	185	172	60

The Quick Ratio has been a challenge for GPA historically. However, over the last two fiscal years, the influx of cash from insurance proceeds continued to improve this ratio. GPA has current obligations of approximately $73 million and approximately $181 million in cash and current receivables. Debt Service Coverage ratio is calculated using the methodology in use before the Fiscal Year 2002 change in accounting practice.

Financial Statements
July 2018

Significant Assumptions

The significant assumptions in the financial statements are as follows:

- Accrual cutoff procedures were performed at month end
- An inventory valuation is performed at year-end only
- Accounts Receivable includes accruals based on prior months' usage.

Prepared by:	Reviewed by:	Approved by:
Lenora M. Sanz	John J.E. Kim	John M. Benavente, P.E.
Controller	Chief Financial Officer	General Manager

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)
Statements of Net Position
July 31, 2018 and September 30, 2017

	Unaudited July 2018	Audited September 2017	Change from Sept 30 2017
ASSETS AND DEFERRED OUTFLOWS OF RESOURCES			
Current assets:			
Cash and cash equivalents:			
Held by trustee for restricted purposes:			
Interest and principal funds	12,824,898	18,061,879	(5,236,981)
Bond indenture funds	50,976,310	56,907,535	(5,931,225)
Held by Guam Power Authority:			
Bond indenture funds	140,713,203	132,579,889	8,133,314
Self insurance fund-restricted	19,257,186	19,251,372	5,814
Energy sense fund	1,279,123	1,074,491	204,632
Total cash and cash equivalents	225,050,720	227,875,166	(2,824,446)
Accounts receivable, net	37,457,520	77,826,132	(40,368,612)
Total current receivables	37,457,520	77,826,132	(40,368,612)
Materials and supplies inventory	12,920,837	11,989,745	931,092
Fuel inventory	55,977,110	52,387,369	3,589,741
Prepaid expenses	2,908,264	629,586	2,278,678
Total current assets	334,314,451	370,707,998	(36,393,547)
Utility plant, at cost:			
Electric plant in service	1,047,252,881	1,038,121,362	9,131,519
Construction work in progress	35,549,932	18,480,173	17,069,759
Total	1,082,802,813	1,056,601,535	26,201,278
Less: Accumulated depreciation	(592,655,919)	(561,829,334)	(30,826,585)
Total utility plant	490,146,894	494,772,201	(4,625,307)
Other non-current assets:			
Investment - bond reserve funds held by trustee	48,530,594	48,576,863	(46,269)
Unamortized debt issuance costs	2,550,782	4,267,305	(1,716,523)
Total other non-current assets	51,081,376	52,844,168	(1,762,792)
Total assets	875,542,721	918,324,367	(42,781,646)
Deferred outflow of resources:			
Deferred fuel revenue	8,422,674	16,751,048	(8,328,374)
Unamortized loss on debt refunding	27,551,968	11,076,064	16,475,904
Pension	8,698,853	8,698,853	0
Unamortized forward delivery contract costs	504,558	637,358	(132,800)
Total deferred outflows of resources	45,178,053	37,163,323	8,014,730
	920,720,774	955,487,690	(34,766,916)

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)
Statement of Net Position, Continued
July 31, 2018 and September 30, 2017

	Unaudited July 2018	Audited September 2017	Change from Sept 30 2017
LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION			
Current liabilities:			
Current maturities of long-term debt	1,630,000	1,780,000	(150,000)
Current obligations under capital leases	15,319,211	23,330,193	(8,010,982)
Accounts payable			
Operations	31,895,486	56,723,139	(24,827,653)
Others	3,364,031	7,597,801	(4,233,770)
Accrued payroll and employees' benefits	1,196,816	1,546,860	(350,044)
Current portion of employees' annual leave	2,083,469	2,045,201	38,268
Interest payable	10,014,069	15,065,830	(5,051,761)
Customer deposits	7,273,181	8,209,228	(936,047)
Total current liabilities	72,776,263	116,298,252	(43,521,989)
Regulatory liabilities:			
Provision for self insurance	19,550,977	19,550,977	0
Total regulatory liabilities	19,550,977	19,550,977	0
Long term debt, net of current maturities	605,377,535	590,568,862	14,808,673
Obligations under capital leases, net of current portion	13,290,216	24,428,832	(11,138,616)
Net Pension liability	82,249,297	85,875,217	(3,625,920)
DCRS sick leave liability	4,008,397	4,008,397	0
Employees' annual leave net of current portion	1,086,456	1,086,456	0
Customer advances for construction	385,293	369,180	16,113
Total liabilities	798,724,435	842,186,173	(43,461,738)
Deferred inflows of resources:			
Unearned forward delivery contract revenue	1,849,389	2,336,071	(486,682)
Pension	788,894	788,894	0
Total deferred inflows of resources	2,638,283	3,124,965	(486,682)
Commitments and contigencies			
Net Position:			
Net investment in capital assets	(46,348,458)	(40,220,468)	(6,127,990)
Restricted	29,346,314	15,232,832	14,113,482
Unrestricted	136,360,199	135,164,187	1,196,012
Total net position	119,358,055	110,176,552	9,181,503
	920,720,774	955,487,690	(34,766,916)

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM
Statement of Revenues, Expenses and Changes in Net Assets

	July 31			Ten Months Ended July 31		
	Unaudited 2018	Audited 2017	% of change Inc (dec)	Unaudited 2018	Audited 2017	% of change Inc (dec)
Revenues						
Sales of electricity	32,903,643	29,326,087	12	314,587,560	270,112,810	16
Miscellaneous	308,251	211,937	45	1,808,644	1,847,933	(2)
Total	33,211,894	29,538,024	12	316,396,204	271,960,743	16
Bad debt expense	(86,583)	(103,532)	(16)	(865,833)	(893,930)	(3)
Total revenues	33,125,311	29,434,492	13	315,530,371	271,066,813	16
Operating and maintenance expenses						
Production fuel	19,457,438	15,175,139	28	179,331,515	133,582,176	34
Other production	1,425,830	1,539,270	(7)	14,024,616	12,487,432	12
	20,883,268	16,714,409	25	193,356,131	146,069,608	32
Depreciation	3,479,274	3,526,137	(1)	32,174,360	39,741,207	(19)
Energy conversion cost	1,325,326	1,751,588	(24)	14,759,986	16,375,468	(10)
Transmission & distribution	1,128,694	925,682	22	10,805,873	9,704,842	11
Customer accounting	442,536	459,293	(4)	4,381,963	3,409,093	29
Administrative & general	2,713,341	2,356,791	15	25,518,839	20,967,363	22
Total operating and maintenance expenses	29,972,439	25,733,900	16	280,997,152	236,267,581	19
Operating income	3,152,872	3,700,592	(15)	34,533,219	34,799,232	(1)
Other income (expenses)						
Interest income	317,765	147,271	116	2,363,398	1,209,044	95
Interest expense and amortization	(2,553,542)	(2,796,910)	(9)	(26,582,184)	(28,316,956)	(6)
Bond issuance costs	67,464	76,827	(12)	(1,844,201)	768,270	(340)
Assets written off	0	0		0	0	
Allowance for funds used during construction	128,957	294,990	(56)	1,439,407	3,129,480	(54)
Other expense	(300,336)	(4,291)	0	(830,810)	(535,363)	55
Total other income (expenses)	(2,339,692)	(2,282,113)	3	(25,454,390)	(23,745,525)	7
Income (loss) before capital contributions	813,180	1,418,479	(43)	9,078,829	11,053,707	(18)
Capital contributions	0	4,884	0	102,672	43,306	137
Increase (decrease) in net assets	813,180	1,423,363	(43)	9,181,501	11,097,013	(17)
Total net assets at beginning of period (restated)	118,544,878	71,496,480	66	110,176,557	61,822,830	78
Total net assets at end of period	119,358,058	72,919,843	64	119,358,058	72,919,843	64

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)
Statements of Cash Flows
Period Ended July 31, 2018

	Month Ending 7/31/2018	YTD Ending 7/31/2018
Increase(decrease) in cash and cash equivalents		
Cash flows from operating activities:		
Cash received from customers	($3,304,810)	$ 313,935,339
Cash payments to suppliers and employees for goods and services	30,002,896	299,086,586
Net cash provided by operating activities	$8,536,636	14,848,753
Cash flows from investing activities:		
Interest and dividends on investments and bank accounts	317,765	2,363,398
Net cash provided by investing activities	317,765	2,363,398
Cash flows from non-capital financing activities		
Proceeds from Cabras 3&4 insurance claims	-	41,844,342
Interest paid on short term debt	(8,904)	(67,084)
Provision for self insurance funds	(593)	(5,814)
Net cash provided by noncapital financing activities	(9,497)	41,771,444
Cash flows from capital and related financing activities		
Acquisition of utility plant	(14,322,559)	(27,549,050)
Principal paid on bonds and other long-term debt	-	(3,550,000)
Interest paid on bonds(net of capitalized interest)	128,957	(27,337,879)
Interest paid on capital lease obligations	(211,396)	(2,789,575)
Interest & principal funds held by trustee	(2,484,412)	5,236,981
Reserve funds held by trustee	(34,366)	46,269
Bond funds held by trustee	459,841	5,931,225
Principal payment on capital lease obligations	(1,932,700)	(19,149,597)
Grant from DOI/FEMA	-	102,672
Debt issuance costs/loss on defeasance	(333,577)	18,208,673
Net cash provided by (used in) capital and related financing activities	(18,730,212)	(50,850,281)
Net (decrease) increase in cash and cash equivalents	(9,885,308.45)	8,133,314
Cash and cash equivalents, beginning	150,598,511	132,579,889
Cash and cash equivalents-Funds held by GPA, July 31, 2018	**$ 140,713,203**	**$ 140,713,203**

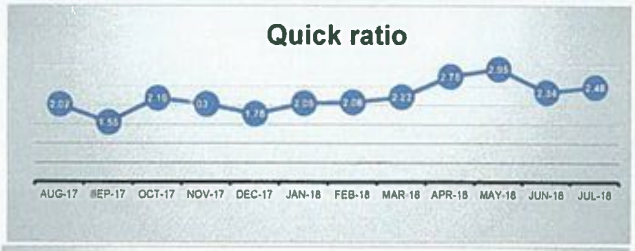
GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)
Statements of Cash Flows, continued
Period Ended July 31, 2018

	Month Ending 7/31/2018	YTD Ending 7/31/2018
Reconciliation of operating earnings to net cash provided by operating activities:		
Operating earnings net of depreciation expense and excluding interest income	$3,152,872	$34,533,219
Adjustments to reconcile operating earnings to net cash provided by operating activities:		
Depreciation and amortization	3,479,274	32,174,360
Other expense	(232,872)	(2,675,011)
(Increase) decrease in assets:		
Accounts receivable	5,407,363	(1,475,730)
Materials and inventory	(109,365)	(931,092)
Fuel inventory	5,850,975	(3,589,741)
Prepaid expenses	959,455	(2,278,678)
Unamortized debt issuance cost	23,667	1,716,523
Deferred fuel revenue	482,199	8,328,374
Unamortized loss on debt refunding	229,166	(16,475,904)
Unamortized forward delivery contract costs	13,280	132,800
Increase (decrease) in liabilities:		
Accounts payable-operations	(9,817,426)	(24,827,653)
Accounts payable-others	312,613	(4,438,402)
Accrued payroll and employees' benefits	350,007	(350,044)
Net pension liability	(316,862)	(3,625,920)
Employees' annual leave	(81,800)	38,268
Customers deposits	(1,117,241)	(936,047)
Customer advances for construction	-	16,113
Unearned forward delivery contract revenue	(48,669)	(486,682)
Net cash provided by operating activities	**$8,536,636**	**$ 14,848,753**

Guam Power Authority
Financial Analysis
7/31/2018

Quick Ratio

A	Reserve Funds Held by GPA	140,713,203
B	Current Accounts Receivable	40,102,688
C	Total Cash and A/R (A+B)	180,815,891
D	Total Current Liabilities	72,776,263
E	**Quick Ratio (F/G)**	**2.48**



Days in Receivables

A	FY 18 Moving 12 Mos.-Actual	375,548,803
B	No. of Days	365
C	Average Revenues per day (A/B)	1,028,901
D	Current Accounts Receivable	40,102,688
E	**Days in Receivables (D/C)**	**39**



Days in Payables

A	FY 18 Moving 12 Months-Actual	446,017,577
B	No. of Days	365
C	Average Payables per day (A/B)	1,221,966
D	Current Accounts Payables	35,259,517
E	**Days in Payables (D/C)**	**29**



Long term equity ratio

A	Equity	$	119,358,055.05
B	Total Long term Liability	$	584,275,539.95
C	Total Equity and liability	$	703,633,595.00
D	**Long term equity ratio (A/C)**		**17%**

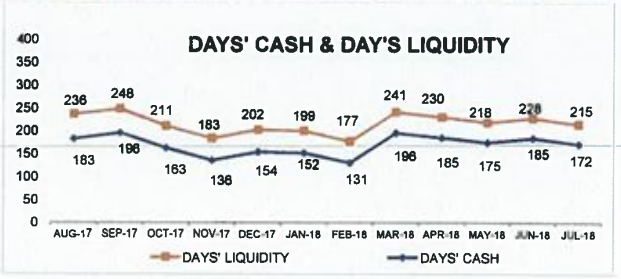


Days cash on hand

A	Unresctricted cash & cash equivalents	140,713
B	No. of Days -YTD	304
C	A x B	42,776,814
D	Total Operating expenses excluding depreci	248,823
E	**Days cash on hand**	**172**

Days' Liquidity

A	Unresctricted cash , cash equivalents & revo	175,713
B	No. of Days -YTD	304
C	A x B	53,416,814
D	Total Operating expenses excluding depreci	248,823
E	**Days liquidity**	**215**



GPA 302
13-Aug-18

GUAM POWER AUTHORITY
ACCRUED REVENUE
JULY 2018

	FOR THE MONTH ENDED JULY		TEN MONTHS ENDED JULY	
	2018	2017	2018	2017
KWH SALES:				
Residential	41,361,122	45,094,364	418,390,923	420,409,867
Small Gen. Non Demand	6,743,157	7,087,373	68,553,439	69,530,168
Small Gen. Demand	15,161,689	15,839,125	155,303,386	158,053,260
Large General	25,339,577	27,119,633	259,070,026	262,103,184
Independent Power Producer	30,088	82,800	419,755	869,484
Private St. Lights	34,288	35,412	334,612	382,552
Sub-total	88,669,920	95,258,706	902,072,142	911,348,514
Government Service:				
Small Non Demand	1,128,046	1,254,979	12,031,467	11,412,652
Small Demand	7,182,975	7,962,644	78,222,446	80,646,847
Large	5,707,305	6,219,351	62,597,150	61,883,821
Street Lighting	903,135	638,971	7,468,888	7,940,475
Sub-total	14,921,461	16,075,944	160,319,952	161,883,795
Total	103,591,381	111,334,651	1,062,392,094	1,073,232,309
U. S. Navy	25,089,942	27,892,205	258,377,165	265,070,860
GRAND TOTAL	128,681,323	139,226,856	1,320,769,259	1,338,303,169
REVENUE:				
Residential	10,379,963	9,056,344	98,516,278	81,951,847
Small Gen. Non Demand	1,975,429	1,709,931	18,922,871	16,354,075
Small Gen. Demand	4,181,623	3,527,191	40,168,823	34,413,087
Large General	6,510,707	5,589,484	62,321,065	52,506,462
Independent Power Producer	9,619	17,270	100,794	179,151
Private St. Lights	26,302	25,099	256,458	256,503
Sub-total	23,083,643	19,925,320	220,286,289	185,661,124
Government Service:				
Small Non Demand	343,795	319,135	3,455,544	2,847,605
Small Demand	2,081,391	1,907,628	21,222,070	18,727,533
Large	1,609,173	1,424,292	16,438,532	13,830,841
Street Lighting	568,447	418,012	4,580,813	4,485,840
Sub-total	4,602,806	4,069,066	45,696,960	39,891,819
Total	27,686,449	23,994,386	265,983,249	225,552,943
U. S. Navy	5,217,194	5,331,702	48,604,311	44,559,869
GRAND TOTAL	32,903,643	29,326,087	314,587,559	270,112,812
NUMBER OF CUSTOMERS:				
Residential	44,003	43,866	44,018	43,712
Small Gen. Non Demand	4,183	4,131	4,155	4,127
Small Gen. Demand	982	984	985	988
Large General	119	116	119	116
Independent Power Peoducer	2	3	3	4
Private St. Lights	531	526	530	525
Sub-total	49,820	49,626	49,809	49,471
Government Service:				
Small Non Demand	690	678	686	682
Small Demand	351	352	351	347
Large	47	45	47	45
Street Lighting	612	297	463	245
Sub-total	1,700	1,372	1,547	1,319
Total	51,520	50,998	51,356	50,790
US Navy	1	1	1	1
	51,521	50,999	51,357	50,791

GPA403
13-Aug-18

GUAM POWER AUTHORITY
ACCRUED REVENUE

	TWELVE MONTHS ENDING	July 2018	June 2018	May 2018	APRIL 2018	MARCH 2018	FEBRUARY 2018	JANUARY 2018	DECEMBER 2017	NOVEMBER 2017	OCTOBER 2017	SEPTEMBER 2017	AUGUST 2017
KWH SALES:													
Residential	504,316,658	41,361,122	42,056,621	44,782,019	41,394,961	41,541,824	36,809,815	42,067,765	43,307,944	43,386,853	41,682,000	41,491,015	44,434,719
Small General Non Demand	82,922,971	6,743,157	6,840,318	7,216,684	6,694,385	6,976,607	6,154,115	6,844,713	6,956,276	7,060,041	7,067,142	7,022,092	7,347,440
Small General Demand	187,301,051	15,161,689	15,360,000	16,316,998	15,390,268	15,917,309	14,164,319	15,562,774	15,848,505	15,789,397	15,792,127	15,509,408	16,488,257
Large General	311,540,074	25,339,577	25,263,128	26,377,222	25,681,619	26,155,199	23,674,407	26,242,185	27,485,887	26,267,661	26,583,141	25,432,034	27,038,013
Private Outdoor Lighting	444,468	34,288	37,088	34,126	27,531	32,791	32,408	32,358	35,129	35,042	33,851	76,532	33,324
Independent Power Producer	512,094	30,088	25,238	26,295	27,405	28,536	28,976	27,011	40,140	93,823	92,244	34,586	57,754
Sub-Total	1,087,037,316	88,669,920	89,582,394	94,753,344	89,216,169	90,652,265	80,864,040	90,776,805	93,673,883	92,632,817	91,250,505	89,565,666	95,399,508
Government Service:													
Small Non Demand	14,521,060	1,128,046	1,157,839	1,224,286	1,180,911	1,193,794	1,119,571	1,248,251	1,272,026	1,255,131	1,251,612	1,246,106	1,243,487
Small Demand	94,454,200	7,182,975	7,404,715	8,098,401	7,720,850	7,889,205	7,377,578	8,102,881	8,063,549	8,098,974	8,283,218	8,084,368	8,147,386
Large	75,611,298	5,707,305	5,896,149	6,822,597	6,142,309	6,226,210	5,905,830	6,315,619	6,812,255	6,550,623	6,418,254	6,493,449	6,520,699
Street Lighting (Agencies)	9,043,021	903,135	795,661	761,901	699,601	743,499	669,689	716,067	697,921	668,464	812,949	697,002	877,130
Sub-Total	193,629,579	14,921,461	15,254,364	16,707,185	15,743,671	16,052,709	15,072,669	16,382,918	16,845,750	16,573,193	16,766,033	16,520,925	16,788,702
Total	1,280,666,895	103,591,381	104,836,757	111,460,529	104,959,840	106,704,974	95,936,708	107,159,724	110,519,633	109,206,010	108,016,537	106,086,591	112,188,210
U.S. Navy	311,892,206	25,089,942	24,891,007	26,624,376	25,605,624	25,988,485	23,304,608	26,722,147	26,067,673	26,837,883	25,245,420	26,906,320	26,808,721
Grand Total	1,592,559,101	128,681,323	129,727,764	138,084,906	130,565,464	132,693,459	119,241,316	133,881,870	136,587,306	136,043,893	133,261,957	132,992,911	138,796,930
REVENUE:													
Residential	$ 117,166,408	$ 10,379,963	$ 10,487,819	$ 11,371,498	$ 10,082,308	$ 10,154,660	$ 9,633,432	$ 8,985,179	$ 9,238,911	$ 9,263,463	$ 8,919,044	$ 8,887,320	$ 9,762,810
Small General Non Demand	$ 22,609,528	$ 1,975,429	$ 1,969,294	$ 2,127,563	$ 1,903,541	$ 1,988,097	$ 1,869,658	$ 1,741,922	$ 1,765,223	$ 1,789,263	$ 1,792,881	$ 1,783,997	$ 1,902,660
Small General Demand	$ 47,825,253	$ 4,181,623	$ 4,150,658	$ 4,513,787	$ 4,108,079	$ 4,266,730	$ 4,006,949	$ 3,714,258	$ 3,769,415	$ 3,699,298	$ 3,758,026	$ 3,692,273	$ 3,964,157
Large General	$ 73,992,663	$ 6,510,707	$ 6,533,909	$ 6,798,955	$ 6,399,879	$ 6,565,683	$ 6,086,686	$ 5,762,313	$ 6,067,740	$ 5,793,817	$ 5,801,375	$ 5,643,059	$ 6,028,539
Private Outdoor Lighting	$ 306,912	$ 26,302	$ 27,542	$ 26,776	$ 22,912	$ 25,785	$ 25,733	$ 25,133	$ 25,553	$ 25,471	$ 25,250	$ 25,361	$ 25,094
Independent Power Producer	$ 132,674	$ 9,619	$ 6,601	$ 7,068	$ 7,057	$ 7,406	$ 7,969	$ 6,029	$ 9,249	$ 20,053	$ 19,744	$ 17,076	$ 14,804
Sub-Total	$ 262,033,439	$ 23,083,643	$ 23,175,823	$ 24,845,648	$ 22,523,776	$ 23,008,362	$ 21,630,428	$ 20,234,834	$ 20,876,091	$ 20,591,366	$ 20,316,320	$ 20,049,087	$ 21,698,063
Government Service:													
Small Non Demand	$ 4,120,948	$ 343,795	$ 354,533	$ 372,707	$ 350,949	$ 356,541	$ 335,126	$ 332,434	$ 341,017	$ 334,963	$ 333,476	$ 333,079	$ 332,325
Small Demand	$ 25,324,616	$ 2,081,391	$ 2,159,463	$ 2,323,025	$ 2,164,585	$ 2,224,973	$ 2,094,220	$ 2,016,922	$ 2,046,340	$ 2,043,720	$ 2,067,433	$ 2,050,292	$ 2,052,253
Large	$ 19,587,057	$ 1,609,173	$ 1,667,786	$ 1,840,797	$ 1,676,200	$ 1,707,269	$ 1,628,297	$ 1,525,771	$ 1,652,805	$ 1,583,988	$ 1,546,446	$ 1,575,080	$ 1,573,445
Street Lighting (Agencies)	$ 5,533,669	$ 568,447	$ 477,183	$ 477,272	$ 452,952	$ 455,729	$ 439,995	$ 427,482	$ 416,951	$ 419,351	$ 445,451	$ 436,808	$ 516,047
Sub-Total	$ 54,566,288	$ 4,602,806	$ 4,658,965	$ 5,013,801	$ 4,644,687	$ 4,744,512	$ 4,497,638	$ 4,302,609	$ 4,457,113	$ 4,382,022	$ 4,392,807	$ 4,395,259	$ 4,474,070
Total	$ 316,599,728	$ 27,686,449	$ 27,834,788	$ 29,859,448	$ 27,168,463	$ 27,752,874	$ 26,128,065	$ 24,537,443	$ 25,333,204	$ 24,973,388	$ 24,709,127	$ 24,444,346	$ 26,172,133
U.S. Navy	$ 58,949,076	$ 5,217,194	$ 4,618,042	$ 5,005,555	$ 5,623,411	$ 5,202,943	$ 4,155,974	$ 5,033,103	$ 4,642,130	$ 4,254,065	$ 4,851,893	$ 5,325,383	$ 5,019,382
Grand Total	$ 375,548,803	$ 32,903,643	$ 32,452,830	$ 34,865,003	$ 32,791,874	$ 32,955,817	$ 30,284,040	$ 29,570,546	$ 29,975,334	$ 29,227,453	$ 29,561,020	$ 29,769,728	$ 31,191,516
NUMBER OF CUSTOMERS:													
Residential	44,011	44,003	44,074	44,086	43,991	44,065	43,995	44,119	43,888	43,996	43,950	43,991	43,969
Small General Non Demand	4,151	4,183	4,173	4,172	4,183	4,154	4,153	4,142	4,129	4,131	4,134	4,127	4,134
Small General Demand	984	982	984	988	988	987	991	981	981	982	982	980	981
Large General	118	119	119	119	119	119	118	119	118	117	119	116	115
Private Outdoor Lighting	529	531	532	533	536	526	527	527	530	527	530	526	527
Independent Power Producer	3	2	2	2	2	2	2	2	3	3	3	3	3
Sub-Total	49,797	49,820	49,884	49,900	49,819	49,853	49,786	49,890	49,659	49,756	49,718	49,743	49,729
Government Service:													
Small Non Demand	684	690	694	691	692	689	684	686	679	678	676	675	678
Small Demand	351	351	351	350	350	350	351	350	350	354	351	353	351
Large	47	47	47	47	47	47	47	47	47	47	46	45	45
Street Lighting (Agencies)	436	612	559	526	513	479	421	389	378	378	377	297	297
Sub-Total	1,517	1,700	1,651	1,614	1,602	1,565	1,503	1,472	1,454	1,457	1,450	1,370	1,371
Total	51,314	51,520	51,535	51,514	51,421	51,418	51,289	51,362	51,113	51,213	51,168	51,113	51,100
U.S. Navy	1	1	1	1	1	1	1	1	1	1	1	1	1
Grand Total	51,315	51,521	51,536	51,515	51,422	51,419	51,290	51,363	51,114	51,214	51,169	51,114	51,101

GPA303

GUAM POWER AUTHORITY
ACCRUED REVENUE
JULY 2017

RATE	NUMBER OF CUSTOMERS	KWH SALES	TOTAL REVENUE AMOUNT	TOTAL REVENUE C/KWH	BASE RATE REVENUE C/KWH	BASE RATE REVENUE AMOUNT	AVERAGE PER CUSTOMER KWH	AVERAGE PER CUSTOMER REVENUE	NON-FUEL C/KWH (0.154242)	NON-FUEL AMOUNT	FUEL C/KWH (0.154242)	FUEL AMOUNT
Month												
R Residential	44,003	41,361,122	10,379,963	25.10	25.10	10,379,963	940	236	9.6717	4,000,341	15.4242	6,379,622
G Small Gen. Non Demand	4,183	6,743,157	1,975,429	29.30	29.30	1,975,429	1,612	472	13.8711	935,351	15.4242	1,040,078
J Small Gen. Demand	982	15,161,689	4,181,623	27.58	27.58	4,181,623	15,440	4,258	12.1615	1,843,889	15.4187	2,337,734
P Large General	119	25,339,577	6,510,707	25.69	25.69	6,510,707	212,938	54,712	10.3339	2,618,565	15.3599	3,892,141
I Independent Power Produce	2	30,088	9,619	31.97	31.97	9,619	15,044	4,809	17.1053	5,147	14.8639	4,472
H Private St. Lights	531	34,288	26,302	76.71	76.71	26,302	65	50	61.2850	21,013	15.4242	5,289
Sub-Total	49,820	88,669,920	23,083,643	26.03	26.03	23,083,643	1,780	463	10.6090	9,424,306	15.4242	13,659,337
Government Service:												
S Small Non Demand	690	1,128,046	343,795	30.48	30.48	343,795	1,635	498	15.0529	169,803	15.4242	173,992
K Small Demand	351	7,182,975	2,081,391	28.98	28.98	2,081,391	20,464	5,930	13.5525	973,474	15.4242	1,107,916
L Large	47	5,707,305	1,609,173	28.19	28.19	1,609,173	121,432	34,238	12.9702	740,250	15.2247	868,923
F Street Lighting (Agencies)	612	903,135	568,447	62.94	62.94	568,447	1,476	929	47.5173	429,146	15.4242	139,301
Sub-Total	1,700	14,921,461	4,602,806	30.85	30.85	4,602,806	8,777	2,708	15.4227	2,312,674	15.4242	2,290,132
	51,520	103,591,381	27,686,449	26.73	26.73	27,686,449	2,011	537	11.3024	11,736,980	15.4242	15,949,469
U.S. Navy	1	25,089,942	5,217,194	20.79	20.79	5,217,194			6.8124	1,709,225	13.9816	3,507,969
TOTAL	51,521	128,681,323	32,903,643	25.57	25.57	32,903,643	2,498	639	10.4492	13,446,204	15.1206	19,457,438
Ten Months Ended July 2018												
R Residential	44,018	418,390,923	98,516,278	23.55	23.55	98,516,278	9,505	2,238	9.6195	40,246,967	13.9270	58,269,310
G Small Gen. Non Demand	4,155	68,553,439	18,922,871	27.60	27.60	18,922,871	16,497	4,554	13.6725	9,372,976	13.9306	9,549,895
J Small Gen. Demand	985	155,303,388	40,168,823	25.86	25.86	40,168,823	157,732	40,797	11.9735	18,595,284	13.8912	21,573,539
P Large General	119	259,070,026	62,321,065	24.06	24.06	62,321,065	2,184,402	525,473	10.3647	26,851,829	13.6910	35,469,236
I Independent Power Produce	3	419,755	100,794	24.01	24.01	100,794	144,743	34,757	11.3770	47,756	12.6356	53,039
H Private St. Lights	530	334,612	256,458	76.64	76.64	256,458	631	484	62.9012	210,475	13.7422	45,983
Sub-Total	49,809	902,072,142	220,286,289	24.42	24.42	220,286,289	18,111	4,423	10.5674	95,325,287	13.8527	124,961,002
Government Service:												
S Small Non Demand	684	12,031,467	3,455,544	28.72	28.72	3,455,544	17,581	5,050	15.0250	1,807,725	13.6959	1,647,819
K Small Demand	351	78,222,446	21,222,070	27.13	27.13	21,222,070	222,856	60,462	13.4310	10,506,055	13.6994	10,716,015
L Large	47	62,597,150	16,438,532	26.26	26.26	16,438,532	1,343,767	352,884	12.7286	7,967,732	13.5322	8,470,800
F Street Lighting (Agencies)	436	7,468,888	4,580,813	61.33	61.33	4,580,813	17,150	10,519	47.5210	3,549,287	13.8110	1,031,526
Sub-Total	1,517	160,319,952	45,696,960	28.50	28.50	45,696,960	105,653	30,115	14.8645	23,830,800	13.6391	21,866,160
	51,327	1,062,392,094	265,983,249	25.04	25.04	265,983,249	20,699	5,182	11.2158	119,156,087	13.8204	146,827,162
U.S. Navy	1	258,377,165	48,604,311	18.81	18.81	48,604,311			6.2312	16,099,964	12.5802	32,504,347
TOTAL	51,328	1,320,769,259	314,587,559	23.82	23.82	314,587,559	25,732	6,129	10.2407	135,256,051	13.5778	179,331,508
Twelve Months Ended July 2018												
R Residential	44,011	504,316,658	117,166,408	23.23	23.23	117,166,408	11,459	2,662	9.6181	48,505,818	13.6146	68,660,590
G Small Gen. Non Demand	4,151	82,922,971	22,609,528	27.27	27.27	22,609,528	19,975	5,446	13.6555	11,323,561	13.6102	11,285,967
J Small Gen. Demand	984	187,301,051	47,825,253	25.53	25.53	47,825,253	190,363	48,607	11.9614	22,403,851	13.5725	25,421,402
P Large General	118	311,540,074	73,992,663	23.75	23.75	73,992,663	2,638,307	626,614	10.3827	32,346,228	13.3679	41,646,435
I Independent Power Produce	3	512,094	132,674	25.91	25.91	132,674	176,584	45,750	12.5651	64,345	13.3431	68,329
H Private St. Lights	529	444,468	306,912	69.05	69.05	306,912	840	580	56.9074	252,935	12.1443	53,977
Sub-Total	49,797	1,087,037,316	262,033,439	24.11	24.11	262,033,439	21,829	5,262	10.5697	114,896,738	13.5356	147,136,701
Government Service:												
S Small Non Demand	684	14,521,060	4,120,948	28.38	28.38	4,120,948	21,219	6,022	15.0131	2,180,059	13.3660	1,940,888
K Small Demand	351	94,454,200	25,324,616	26.81	26.81	25,324,616	269,100	72,150	13.4434	12,697,831	13.3682	12,626,785
L Large	47	75,611,298	19,587,057	25.90	25.90	19,587,057	1,623,141	420,473	12.7001	9,602,730	13.2048	9,984,326
F Street Lighting (Agencies)	436	9,043,021	5,533,669	61.19	61.19	5,533,669	20,765	12,706	47.7367	4,316,839	13.4560	1,216,830
Sub-Total	1,517	193,629,579	54,566,288	28.18	28.18	54,566,288	127,605	35,960	14.8724	28,797,459	13.3083	25,768,829
	51,314	1,280,666,895	316,599,728	24.72	24.72	316,599,728	24,957	41,222	11.2203	143,694,197	13.5012	172,905,530
U.S. Navy	1	311,892,206	58,949,076	18.90	18.90	58,949,076			6.3100	19,680,492	12.5904	39,268,583
TOTAL	51,315	1,592,559,101	375,548,803	23.58	23.58	375,548,803	31,035	7,318	10.2586	163,374,689	13.3228	212,174,114

GPA-318

318Jul18

ENERGY ACCOUNT

FY 2018 Versus FY 2017

FOR INTERNAL USE ONLY

	July 2018		July 2017		Y T D 2018		Y T D 2017		MOVING TWELVE MONTHS	
Gross Generation										
Number of days in Period	31		31		304		273		365	
Peak demand	242		252		254		257		261	
Date	07/02/18		07/31/17		10/30/17		06/13/17		08/01/17	
	KWH	**% change**	**KWH**	**% change**	**KWH**	**% change**	**KWH**	**% change**	**KWH**	**% change**
Energy Account:										
Kilowatt hours GPA:										
Cabras 1 & 2	44,590,000		40,003,000		544,441,000		624,349,000		615,085,000	
Cabras No. 3	0		0		0		0		0	
Cabras No. 4	0		0		0		0		0	
MEC (ENRON) Piti 8 (IPP)	27,134,300		24,376,400		267,891,400		261,987,200		325,537,900	
MEC (ENRON) Piti 9 (IPP)	24,960,900		29,047,100		273,050,200		251,300,300		329,812,200	
TEMES Piti 7 (IPP)	6,556,185		8,613,974		23,175,648		25,716,301		44,440,715	
Tanguisson 2	0		0		0		0		0	
Tanguisson 1	0		0		0		0		0	
Diesels/CT's & Others:							0			
MDI 10MW	16,756		0		971,636		2,244,937		984,326	
NRG Solar Dandan	3,216,552		3,514,247		39,687,744		35,410,781		47,467,765	
Dededo CT #1	585,620		1,125,760		7,223,220		1,780,740		12,565,780	
Dededo CT #2	1,016,520		1,264,600		7,067,930		2,886,382		10,014,140	
Macheche CT	4,305,002		7,016,044		45,356,134		39,488,332		61,435,358	
Yigo CT (Leased)	5,806,500		6,165,242		39,009,900		29,908,466		50,477,381	
Tenjo	3,015,110		4,404,660		38,375,730		34,166,030		49,667,180	
Talofofo 10 MW	493,350		2,473,110		13,297,320		13,963,250		18,105,460	
Aggreko	18,222,263		22,288,912		146,721,699		143,656,067		176,512,171	
Wind Turbine*	3,836		25,042		311,968		370,772		328,390	
Orote	0		0		0		0		0	
Marbo	0		0		0		0		0	
	139,922,894		**150,318,091**		**1,446,581,528**		**1,467,228,558**		**1,742,433,766**	
Ratio to last year		93.08		99.71		98.59		**102.49**		**99.20**
Station use	4,743,461		4,731,976		52,110,922		56,413,456		61,592,462	
Ratio to Gross generation		3.39		3.15		3.60		3.84		**3.53**
Net send out	135,179,434		145,586,114		1,394,470,606		1,410,815,102		1,680,841,304	
Ratio to last year		92.85		100.01		98.84		**102.46**		**99.47**
KWH deliveries:										
Sales to Navy (@34.5kv)	**25,089,942**		**27,892,205**		**258,377,165**		**265,070,862**		**311,892,206**	
Ratio to last year		89.95		104.23		97.47		**100.00**		**98.06**
GPA-metered	**110,089,492**		**117,693,909**		**1,136,093,441**		**1,145,744,240**		**1,368,949,098**	
Ratio to last year		93.54		99.06		99.16		**103.05**		**99.79**
Power factor adj.	0		0		0		0		0	
Adjusted	110,089,492		117,693,909		1,136,093,441		1,145,744,240		1,368,949,098	
GPA KWH Accountability:										
Sales to civilian customers-accrual basis	**103,591,381**		**111,334,651**		**1,062,392,093**		**1,073,232,311**		**1,280,666,894**	
Ratio to last year		93.05		98.03		98.99		**102.79**		**99.63**
GPA use-KWH	356,321		274,614		3,265,724		2,616,925		3,793,037	
Unaccounted For	6,141,790		6,084,644		70,435,624		69,895,005		84,489,167	
Ratio to deliveries		5.58		5.17		6.20		6.10		6.17
Ratio to Gross Generation		4.39		4.05		4.87		4.76		4.85
Ratio to Net Send Out		4.54		4.18		5.05		4.95		5.03

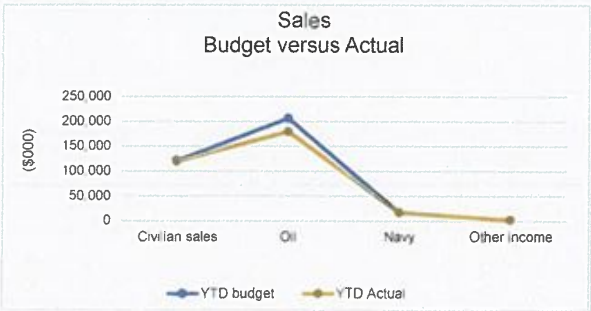
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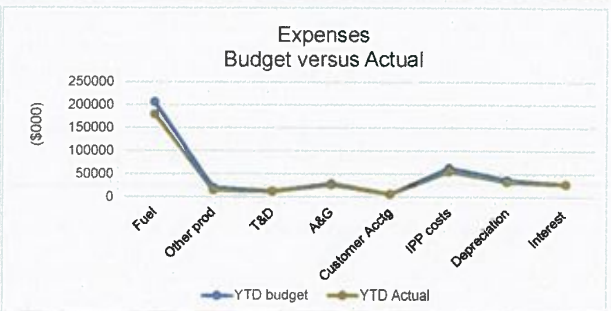
Guam Power Authority
Fuel Consumption
FY 2018

Description	July 2018 BARRELS	July 2018 AMOUNT	YEAR-TO-DATE BARRELS	YEAR-TO-DATE AMOUNT	MOVING 12 MONTHS BARREL S	MOVING 12 MONTHS AMOUNT
FUEL FURNISHED:						
NAVY:						
Diesel	0	0	0	0	0	0
Low Sulfur	0	0	0	0	0	0
	0	**0**	**0**	**0**	**0**	**0**
GPA:						
RFO	114,304	$7,759,879	1,402,759	$ 88,417,395	1,552,667	$ 96,903,472
Diesel	81,611	$7,928,405	643,206	$ 56,440,797	861,572	$ 72,028,469
Low Sulfur	34,092	$2,133,165	229,822	$ 13,930,230	350,030	$ 21,338,345
Deferred Fuel Costs	0	$482,199	0	$ 8,328,374	0	$ 5,627,830
Fuel Adjustments	0	$16,218		$ (747,541)	0	$ (886,136)
Fuel Handling Costs	0	$1,137,573	0	$ 12,962,259	0	$ 17,162,138
	230,007	**$19,457,438**	**2,275,786**	**$ 179,331,513**	**2,764,269**	**$ 212,174,118**
IWPS:						
GPA RFO	114,304	$7,759,879	1,402,759	$ 88,417,395	1,552,667	$ 96,903,472
Diesel	81,611	$7,928,405	643,206	$ 56,440,797	861,572	$ 72,028,469
Low Sulfur	34,092	$2,133,165	229,822	$ 13,930,230	350,030	$ 21,338,345
Deferred Fuel Costs	0	$482,199	0	$ 8,328,374	0	$ 5,627,830
Fuel Variance	0	$16,218	0	$ (747,541)		$ (886,136)
Fuel Handling Costs	0	$1,137,573	0	$ 12,962,259	0	$ 17,162,138
	230,007	**$19,457,438**	**2,275,786**	**$ 179,331,513**	**2,764,269**	**$ 212,174,118**
AVERAGE COST/Bbl.						
GPA RFO		**$67.89**		**$63.03**		**$62.41**
Diesel		**$97.15**		**$87.75**		**$83.60**
Low Sulfur		**$62.57**		**$60.61**		**$60.96**
AS BURNED						
Cabras 1 & 2						
RFO	57,137	$ 3,922,829	769,696	$ 48,467,660	830,883	$ 51,931,380
Low Sulfur	21,008	$ 1,314,498	136,003	$ 8,247,588	193,810	$ 11,800,102
Diesel	306	$ 27,310	1,987	$ 160,806	3,011	$ 225,261
	78,451	$ 5,264,637	907,685	$ 56,876,054	1,027,704	$ 63,956,743
Cabras 3 & 4						
RFO	0	$ -	0	$ -	0	$ -
Low Sulfur	0	$ -	0	$ -	0	$ -
Diesel	0	$ -	0	$ -	0	$ -
	0	$ -	0	$ -	0	$ -
MEC (Piti Units 8&9)						
RFO	57,167	$ 3,837,050	633,063	$ 39,949,734	721,784	$ 44,972,092
Low Sulfur	13,084	$ 818,667	93,819	$ 5,682,642	156,220	$ 9,538,243
Diesel	0	$ -	38	$ 2,127	38	$ 2,127
	70,251	$ 4,655,717	726,919	$ 45,634,503	878,041	$ 54,512,462
Diesel & CT's - GPA:						
MDI Dsl	27	$ 2,004	1,561	$ 108,767	1,582	$ 110,103
Macheche CT	8,828	$ 868,510	97,356	$ 8,420,350	131,831	$ 10,898,860
Yigo CT	11,737	$ 1,141,991	81,938	$ 7,248,407	105,248	$ 8,920,152
Talofofo 10 MW	857	$ 84,897	22,451	$ 1,982,147	30,831	$ 2,575,932
Aggreko	33,525	$ 3,253,595	270,119	$ 23,605,057	324,638	$ 27,422,789
Tenjo	5,409	$ 553,433	65,831	$ 5,977,637	85,548	$ 7,433,348
TEMES (IPP)	15,613	$ 1,454,850	58,845	$ 5,052,649	110,935	$ 8,757,772
GWA Generators	429	$ 50,385	758	$ 89,092	1,099	$ 129,238
	81,305	$ 7,901,095	641,182	$ 56,277,864	858,524	$ 71,801,081
Deferred Fuel Costs	0	$ 482,199		$ 8,328,374		$ 5,627,830
Adjustment		$ 16,218		$ (747,541)		$ (886,136)
Fuel Handling Costs	0	$ 1,137,573		$ 12,962,259		$ 17,162,138
TOTAL	**230,007**	**$ 19,457,438**	**2,275,786**	**$ 179,331,513**	**2,764,269**	**$ 212,174,118**

Statement of operations
Comparison-Budget versus Actual
For the month and year to date ended July 31, 2018

	Budget	Actual July-18	Variance	YTD Budget	YTD Actual	Variance
KwH Sales-Civilian	117,800	103,591	14,209	1,082,364	1,062,392	19,972
Non-fuel yield	$ 0.105655	$ 0.113301	$ (0.007647)	$ 0.111747	$ 0.112159	$ (0.000412)
KwH Sales-Navy	26,604	25,090	1,514	263,534	258,377	5,157
Non-fuel yield	$ 0.061774	$ 0.068115	$ (0.006341)	$ 0.061774	$ 0.062308	$ (0.000534)
Operating revenue						
Civilian sales	$ 13,115	$ 11,737	$ 1,378	$ 120,951	$ 119,157	$ 1,794
Oil	22,185	19,457	2,728	206,773	179,331	27,442
Navy	1,643	1,709	(66)	16,280	16,099	181
Other income	169	308	(139)	1,692	1,809	(117)
	37,113	33,211	3,902	345,695	316,396	29,300
Bad debts expense	87	87	0	866	866	0
Total operating revenues	$ 37,027	$ 33,125	$ 3,902	$ 344,829	$ 315,530	$ 29,299
Operating expenses:						
Production fuel	$ 22,185	$ 19,457	$ 2,728	$ 206,773	$ 179,332	$ 27,442
O & M expenses:						
Other production	1,899	1,426	474	19,434	14,025	5,409
Transmission distribution	1,216	1,129	87	11,459	10,806	653
Administrative expense	2,875	2,713	162	27,977	25,519	2,459
Customer accounting	431	443	(12)	4,072	4,382	(310)
	6,421	5,710	711	62,942	54,731	8,211
IPP costs	1,383	1,325	58	14,588	14,760	(172)
Depreciation	3,635	3,479	156	36,349	32,174	4,175
	$ 33,625	$ 29,972	$ 3,652	$ 320,653	$ 280,997	$ 39,656
Operating income	$ 3,402	$ 3,152	$ 250	$ 24,176	$ 34,533	$ (10,357)
Other revenue (expenses):						
Investment income	99	318	(219)	987	2,363	(1,377)
Interest expense	(2,654)	(2,554)	(100)	(26,549)	(26,582)	34
AFUDC	61	129	(68)	608	1,439	(831)
Bond issuance costs/Other expenses	135	(233)	367	1,346	(2,675)	4,021
Net income before capital contribution	1,042	813	229	568	9,078	(8,511)
Grants from the U.S. Government	-	-	-	-	103	(103)
Increase (decrease) in net assets	$ 1,042	$ 813	$ 229	$ 568	$ 9,181	$ (8,614)





Guam Power Authority
Debt service coverage
July 31, 2018

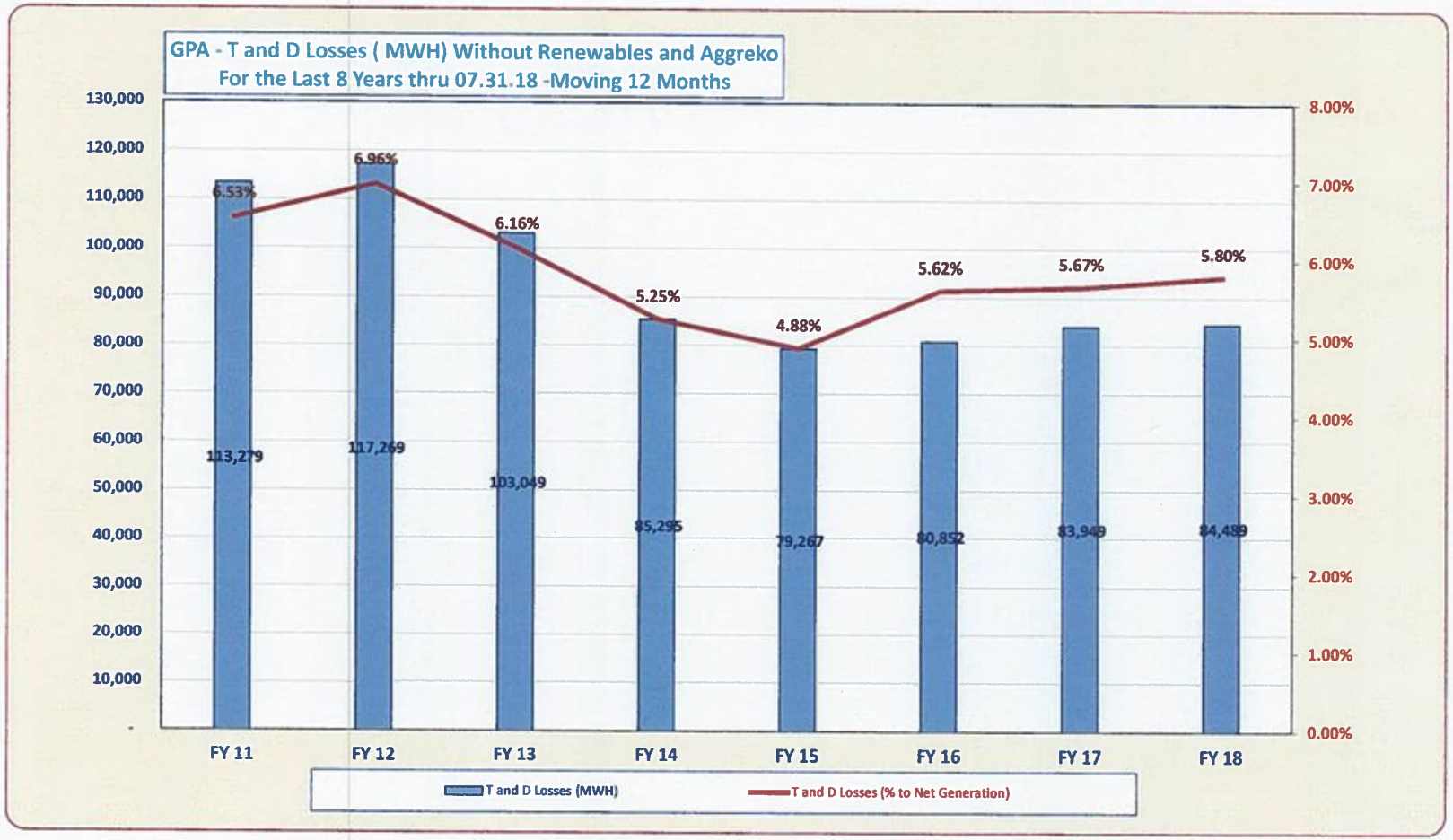
	2014	2015	Restated 2016	2017	YTD 2018
Funds Available for Debt Service					
Earnings from Operations	$ 40,895	$ 48,758	$ 37,981	$ 36,522	$ 34,533
Interest Income	333	368	1,227	(32)	598
Depreciation Expense	36,989	41,766	44,240	44,292	32,174
Balance Available for Debt Service	$ 78,217	$ 90,892	$ 83,448	$ 80,782	$ 67,305
IPP - Capital Costs					
Principal	$ 13,064	$ 18,144	$ 14,819	$ 21,263	$ 19,445
Interest	10,020	8,478	5,970	5,137	2,634
Total IPP Payments	$ 23,084	$ 26,622	$ 20,789	$ 26,400	$ 22,079
Bond Debt Service					
Principal (1993 & 1999 Revenue Bond)	$ -	$ -	$ -	$ -	$ -
Interest (1993 & 1999 Revenue Bond)	-	-	-	-	-
Principal and Interest (2010 Subordinate Bond)	15,193	9,605	-	-	-
Principal and Interest (2010 Senior TE Bond)	7,999	7,999	7,999	7,999	2,000
Principal and Interest (2012 Senior TE Bond)	17,455	17,096	17,098	17,449	14,238
Principal and Interest (2014 Senior TE Bond)		-	10	5,084	4,236
Principal and Interest (2017 Senior TE Bond)					4,642
Total	$ 40,647	$ 34,700	$ 25,107	$ 30,532	$ 25,117
Debt Service Coverage (DSC) Calculation					
Existing DSC Methodology (Senior)	2.17 x	2.56 x	2.50 x	1.78 x	1.80 x
Existing DSC Methodology (Senior+Subordinate)	1.36 x	1.85 x	2.50 x	1.78 x	1.80 x
Bond Covenant DSC	1.92 x	2.62 x	3.32 x	2.65 x	2.68 x
Debt Service Coverage Requirements					
Existing Ratemaking DSC Target	1.75 x	1.75 x	1.75 x	1.75 x	1.75 x
Minimum Bond Covenant Requirement (Senior Bond)	1.30 x	1.30 x	1.30 x	1.30 x	1.30 x
Minimum Bond Covenant Requirement (Subordinate Bond	1.20 x	1.20 x	1.20 x	1.20 x	1.20 x

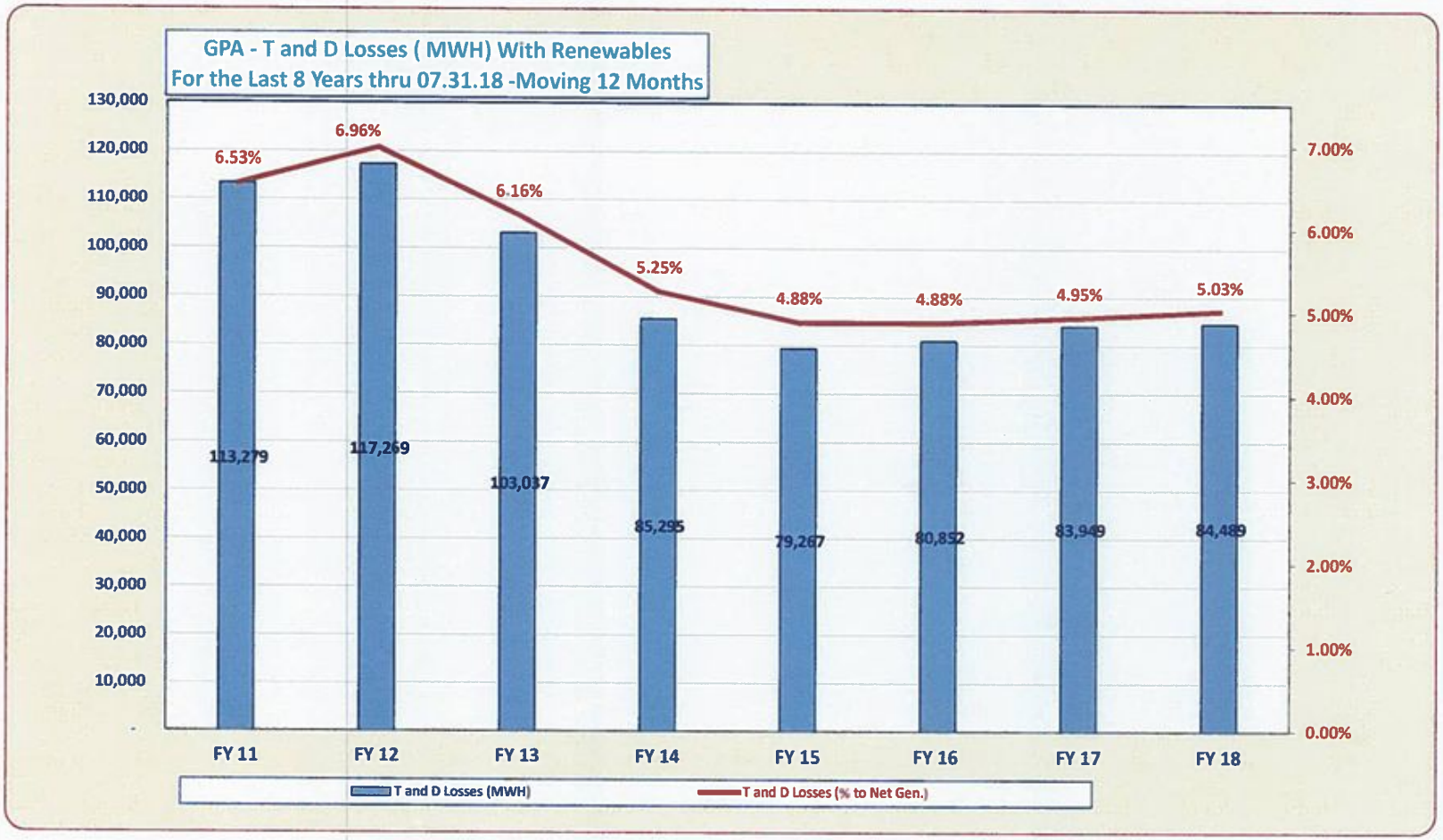
Notes:
(1) Source: Guam Power Authority, 2014 - 2017 Audited Financial Statements
(2) Interest income is net of interest earnings in the Construction Fund and the amortization of deferred credit.
(3) Existing DSC Methodology (Rating Agency Method):
(Operating Earnings + Depreciation Expense - IPP Principal & Interest Payments)/
(Senior and Subordinate Bond Principal & Interest Payments)
(4) Bond Covenant DSC Methodology: (Operating Earnings + Depreciation Expense)/
(Senior and Subordinate Bond Principal & Interest Payments)

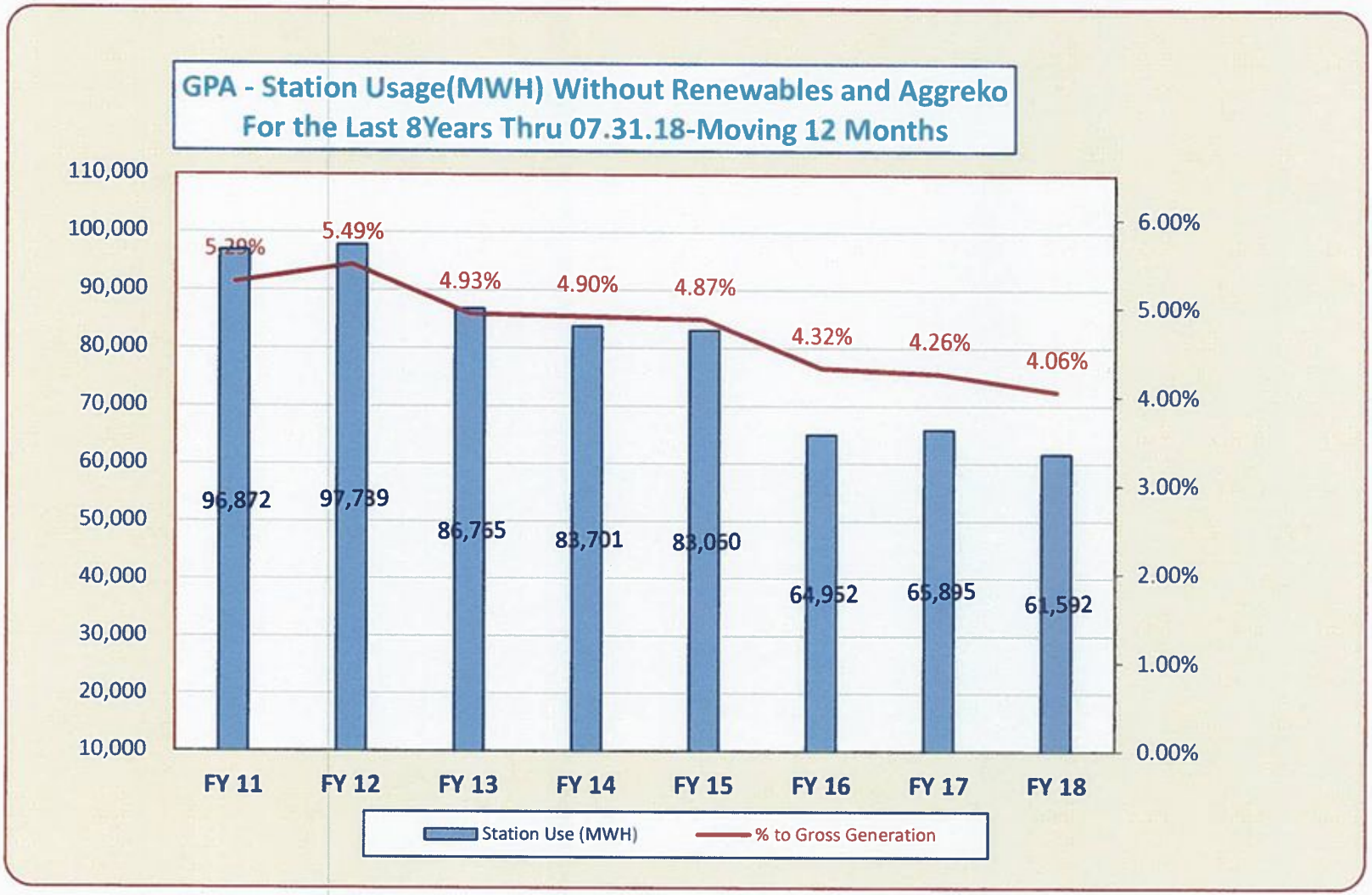
REVENUES-ACTUAL VS PROJECTIONS

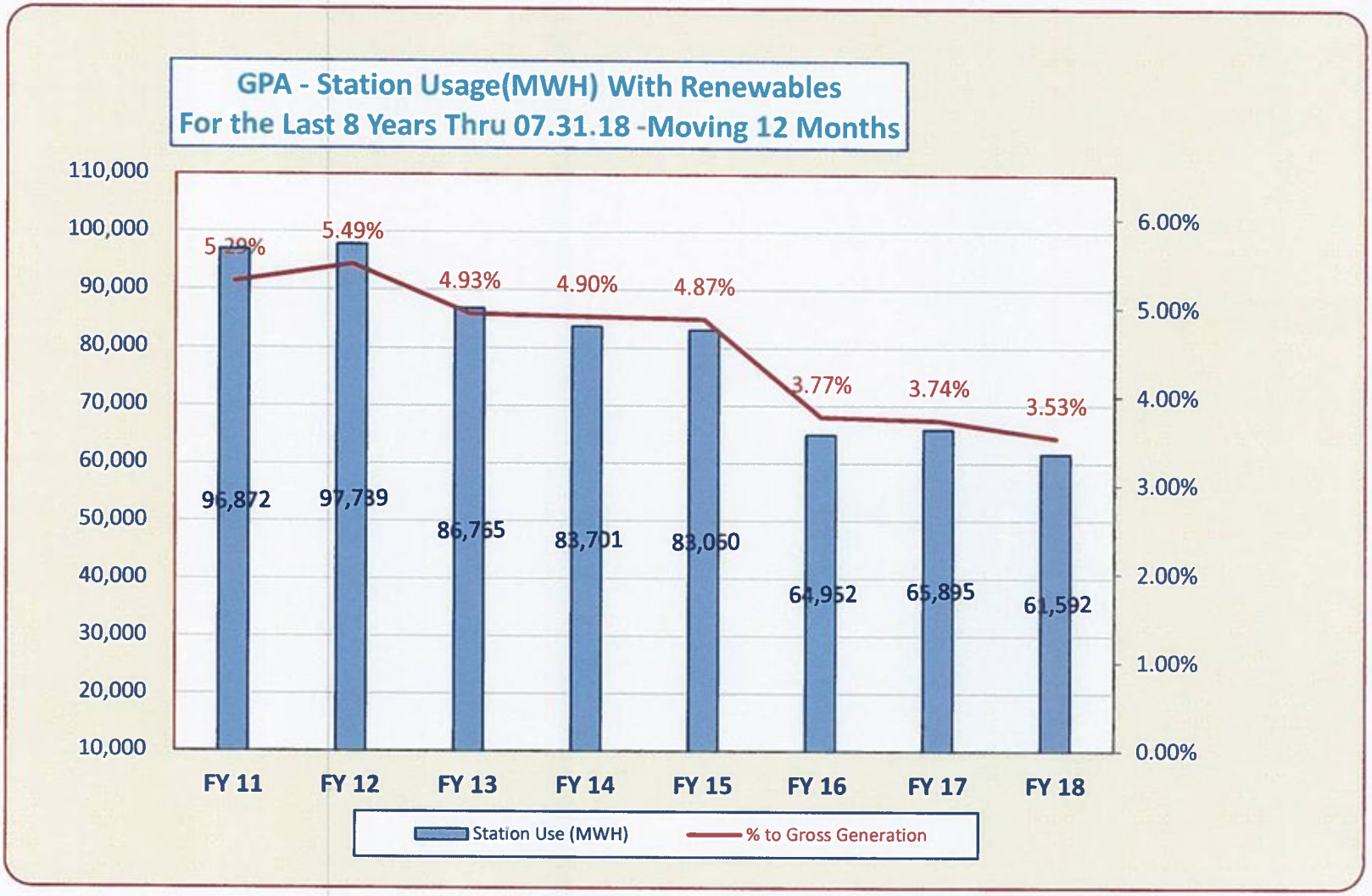
	MONTHLY - JULY 2018				YTD THRU 07/31/2018			
	PROJECTIONS	ACTUAL	VARIANCE	% VARIANCE	PROJECTIONS	ACTUAL	VARIANCE	% VARIANCE
KWH								
Residential	47,629,041	41,361,122	(6,267,919)	-13.16%	423,877,930	418,390,923	(5,487,008)	-1.29%
Small General-Non-Demand	7,912,022	6,743,157	(1,168,865)	-14.77%	72,105,558	68,553,439	(3,552,119)	-4.93%
Small General-Demand	17,481,265	15,161,689	(2,319,576)	-13.27%	158,702,555	155,303,386	(3,399,169)	-2.14%
Large	27,916,519	25,339,577	(2,576,942)	-9.23%	265,615,260	259,070,026	(6,545,234)	-2.46%
Independent Power Producers	34,921	30,088	(4,833)	-13.84%	332,257	419,755	87,499	26.33%
Private St. Lites	58,751	34,288	(24,463)	-41.64%	556,474	334,612	(221,862)	-39.87%
Sub-total	**101,032,518**	**88,669,920**	**(12,362,597)**	**-12.24%**	**921,190,034**	**902,072,142**	**(19,117,891)**	**-2.08%**
Government								
Small_Non Demand	1,234,935	1,128,046	(106,889)	-8.66%	11,239,678	12,031,467	791,789	7.04%
Small-Demand	8,472,670	7,182,975	(1,289,696)	-15.22%	80,859,708	78,222,446	(2,637,262)	-3.26%
Large	6,252,382	5,707,305	(545,078)	-8.72%	60,895,341	62,597,150	1,701,810	2.79%
Public St. Lites	807,579	903,135	95,556	11.83%	8,179,936	7,468,888	(711,048)	-8.69%
Sub-total	**16,767,567**	**14,921,461**	**(1,846,106)**	**-11.01%**	**161,174,664**	**160,319,952**	**(854,712)**	**-0.53%**
Total-Civilian	**117,800,085**	**103,591,381**	**(14,208,704)**	**-12.06%**	**1,082,364,697**	**1,062,392,094**	**(19,972,603)**	**-1.85%**
USN	26,603,917	25,089,942	(1,513,974)	-5.69%	263,533,988	258,377,165	(5,156,823)	-1.96%
Grand Total	**144,404,001**	**128,681,323**	**(15,722,678)**	**-10.89%**	**1,345,898,685**	**1,320,769,259**	**(25,129,426)**	**-1.87%**
					-	-		
Non-Oil Yield								
Residential	0.096203	0.096717	0.000514	0.53%	0.096203	0.096195	(0.000009)	-0.01%
Small General-Non-Demand	0.136364	0.138711	0.002347	1.72%	0.136364	0.136725	0.000361	0.26%
Small General-Demand	0.119423	0.121615	0.002192	1.84%	0.119423	0.119735	0.000312	0.26%
Large	0.103705	0.103339	(0.000366)	-0.35%	0.103705	0.103647	(0.000058)	-0.06%
Independent Power Producers	0.117983	0.171053	0.053070	0.00%	0.117983	0.113770	(0.004213)	0.00%
Private St. Lites	0.454278	0.612850	0.158572	34.91%	0.454278	0.629012	0.174734	38.46%
Sub-total	**0.105655**	**0.106285**	**0.000631**	**0.60%**	**0.105734**	**0.105674**	**(0.000061)**	**-0.06%**
Government					-			
Small_Non Demand	0.152255	0.150529	(0.001726)	-1.13%	0.152255	0.150250	(0.002005)	-1.32%
Small-Demand	0.135082	0.135525	0.000443	0.33%	0.135082	0.134310	(0.000772)	-0.57%
Large	0.128102	0.129702	0.001600	1.25%	0.128102	0.127286	(0.000816)	-0.64%
Public St. Lites	0.380746	0.475173	0.094427	24.80%	0.380746	0.475210	0.094463	24.81%
Sub-total	**0.145576**	**0.154990**	**0.009414**	**6.47%**	**0.146110**	**0.148645**	**0.002535**	**1.74%**
Total-Civilian	**0.111337**	**0.113301**	**0.001964**	**1.76%**	**0.111747**	**0.112158**	**0.000412**	**0.37%**
USN	0.061774	0.068124	0.006350	10.28%	0.061774	0.062312	0.000538	0.87%
Grand Total	**0.102206**	**0.104492**	**0.002286**	**2.24%**	**0.101962**	**0.102407**	**0.000445**	**0.44%**
Non-Oil Revenues								
Residential	4,582,075	4,000,341	(581,734)	-12.70%	40,778,494	40,246,967	(531,526)	-1.30%
Small General-Non-Demand	1,078,917	935,351	(143,566)	-13.31%	9,832,620	9,372,976	(459,644)	-4.67%
Small General-Demand	2,087,668	1,843,889	(243,779)	-11.68%	18,952,758	18,595,284	(357,473)	-1.89%
Large	2,895,072	2,618,565	(276,507)	-9.55%	27,545,534	26,851,829	(693,705)	-2.52%
Independent Power Producers	4,120	5,147	1,027	24.92%	39,201	47,756	8,555	21.82%
Private St. Lites	26,689	21,013	(5,676)	-21.27%	252,794	210,475	(42,319)	-16.74%
Sub-total	**10,674,541**	**9,424,306**	**(1,250,235)**	**-11.71%**	**97,401,399**	**95,325,287**	**(2,076,112)**	**-2.13%**
Government								
Small_Non Demand	188,024	169,803	(18,221)	-9.69%	1,711,292	1,807,725	96,434	5.64%
Small-Demand	1,144,504	973,474	(171,029)	-14.94%	10,922,675	10,506,055	(416,619)	-3.81%
Large	800,943	740,250	(60,693)	-7.58%	7,800,817	7,967,732	166,914	2.14%
Public St. Lites	307,483	429,146	121,663	39.57%	3,114,480	3,549,287	434,807	13.96%
Sub-total	**2,440,954**	**2,312,674**	**(128,280)**	**-5.26%**	**23,549,264**	**23,830,800**	**281,536**	**1.20%**
Total-Civilian	**13,115,495**	**11,736,980**	**(1,378,515)**	**-10.51%**	**120,950,663**	**119,156,087**	**(1,794,576)**	**-1.48%**
USN	1,643,429	1,709,225	65,796	4.00%	16,279,538	16,099,964	(179,574)	-1.10%
Grand Total	**14,758,924**	**13,446,204**	**(1,312,720)**	**-8.89%**	**137,230,201**	**135,256,051**	**(1,974,150)**	**-1.44%**
% of Total Revenues	39.95%	40.87%			39.89%	42.99%		
Oil Revenues								
Residential	7,317,357	6,379,622	(937,735)	-12.82%	65,121,326	58,269,310	(6,852,016)	-10.52%
Small General-Non-Demand	1,215,542	1,040,078	(175,464)	-14.44%	11,077,740	9,549,895	(1,527,845)	-13.79%
Small General-Demand	2,685,686	2,337,734	(347,952)	-12.96%	24,381,833	21,573,539	(2,808,295)	-11.52%
Large	4,288,878	3,892,141	(396,737)	-9.25%	40,807,074	35,469,236	(5,337,838)	-13.08%
Independent Power Producers	5,365	4,472	(893)	-16.64%	51,045	53,039	1,993	3.90%
Private St. Lites	9,026	5,289	(3,737)	-41.41%	85,492	45,983	(39,509)	-46.21%
Sub-total	**15,521,855**	**13,659,337**	**(1,862,518)**	**-12.00%**	**141,524,511**	**124,961,002**	**(16,563,510)**	**-11.70%**
Government								
Small_Non Demand	189,726	173,992	(15,734)	-8.29%	1,726,777	1,647,819	(78,959)	-4.57%
Small-Demand	1,301,676	1,107,916	(193,759)	-14.89%	12,422,660	10,716,015	(1,706,645)	-13.74%
Large	960,568	868,923	(91,645)	-9.54%	9,355,489	8,470,800	(884,689)	-9.46%
Public St. Lites	124,070	139,301	15,231	12.28%	1,256,702	1,031,526	(225,176)	-17.92%
Sub-total	**2,576,039**	**2,290,132**	**(285,907)**	**-11.10%**	**24,761,629**	**21,866,160**	**(2,895,469)**	**-11.69%**
Total-Civilian	**18,097,894**	**15,949,469**	**(2,148,425)**	**-11.87%**	**166,286,140**	**146,827,162**	**(19,458,978)**	**-11.70%**
USN	4,087,220	3,507,969	(579,251)	-14.17%	40,487,324	32,504,347	(7,982,977)	-19.72%
Grand Total	**22,185,114**	**19,457,438**	**(2,727,675)**	**-12.30%**	**206,773,464**	**179,331,508**	**(27,441,955)**	**-13.27%**
% of Total Revenues	60.05%	59.13%			60.11%	57.01%		
Grand Total								
Residential	11,899,433	10,379,963	(1,519,470)	-12.77%	105,899,820	98,516,278	(7,383,543)	-6.97%
Small General-Non-Demand	2,294,459	1,975,429	(319,030)	-13.90%	20,910,360	18,922,871	(1,987,489)	-9.50%
Small General-Demand	4,773,354	4,181,623	(591,731)	-12.40%	43,334,591	40,168,823	(3,165,768)	-7.31%
Large	7,183,950	6,510,707	(673,244)	-9.37%	68,352,608	62,321,065	(6,031,543)	-8.82%
Independent Power Producers	9,485	9,619	134	1.41%	90,246	100,794	10,548	11.69%
Private St. Lites	35,715	26,302	(9,413)	-26.36%	338,286	256,458	(81,828)	-24.19%
Sub-total	**26,196,396**	**23,083,643**	**(3,112,753)**	**-11.88%**	**238,925,911**	**220,286,289**	**(18,639,622)**	**-7.80%**
Government					-			
Small_Non Demand	377,750	343,795	(33,955)	-8.99%	3,438,069	3,455,544	17,475	0.51%
Small-Demand	2,448,179	2,081,391	(364,788)	-14.91%	23,345,335	21,222,070	(2,123,264)	-9.10%
Large	1,761,511	1,609,173	(152,338)	-8.65%	17,156,308	16,438,532	(717,775)	-4.18%
Public St. Lites	431,553	568,447	136,894	31.72%	4,371,182	4,580,813	209,631	4.80%
Sub-total	**5,018,993**	**4,602,806**	**(414,187)**	**-8.26%**	**48,310,892**	**45,696,960**	**(2,613,933)**	**-5.41%**
Total-Civilian	**31,213,389**	**27,686,449**	**(3,526,940)**	**-11.30%**	**287,236,803**	**265,983,249**	**(21,253,555)**	**-7.40%**
USN	5,730,649	5,217,194	(513,455)	-8.96%	56,766,862	48,604,311	(8,162,551)	-14.38%
Grand Total	**36,944,038**	**32,903,643**	**(4,040,395)**	**-10.94%**	**344,003,665**	**314,587,559**	**(29,416,106)**	**-8.55%**
	-	-	-					

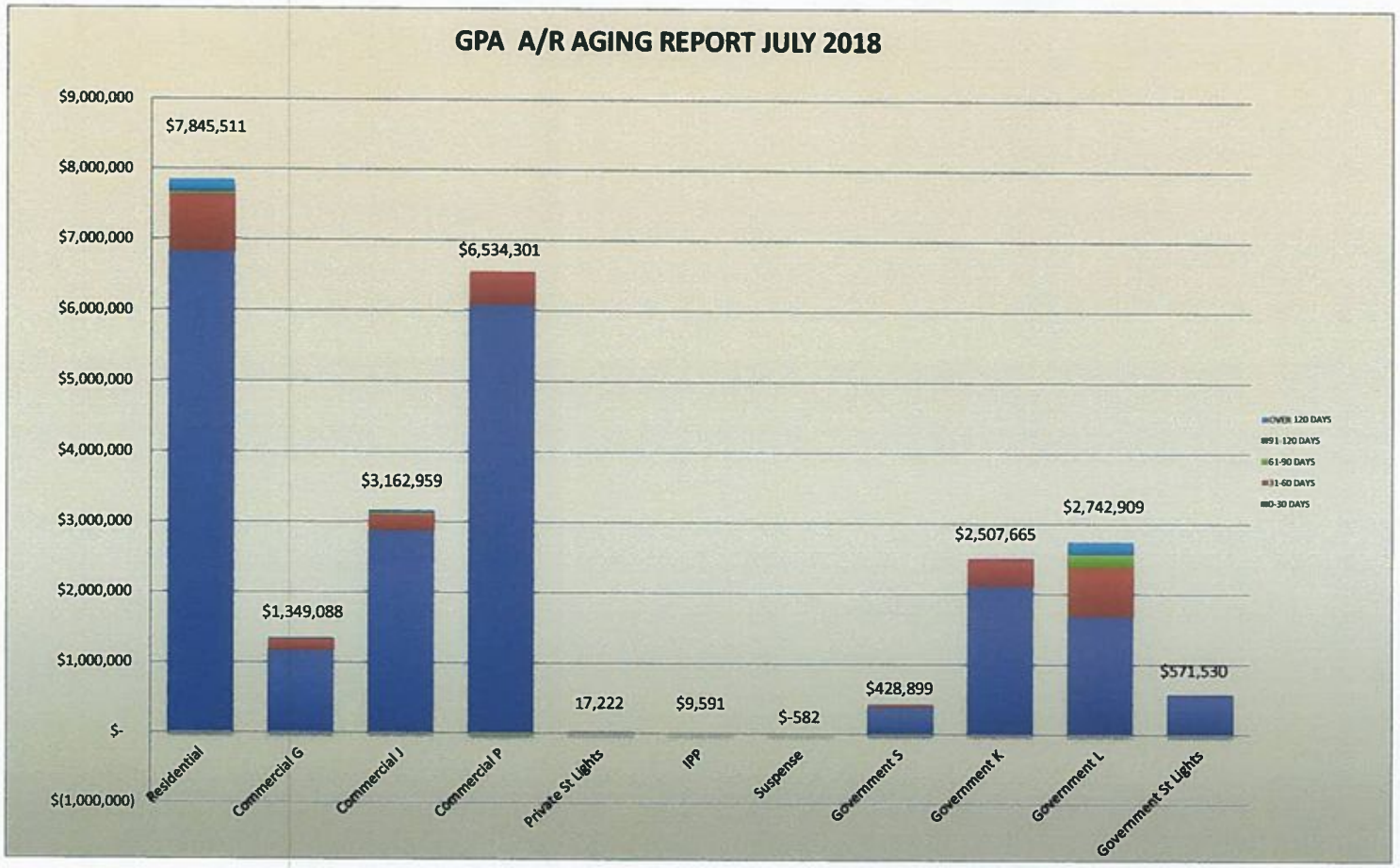
	YTD REVENUES - CURRENT YEAR VS PRIOR YEAR				MTD REVENUES - CURRENT YEAR VS PRIOR YEAR			
	ACTUALS - 10 MONTHS ENDED JULY 31				ACTUALS - MONTH ENDED JULY 31			
	2018	2017	VARIANCE	% VARIANCE	2018	2017	VARIANCE	% VARIANCE
KWH								
Residential	418,390,923	420,409,867	(2,018,943)	-0.48%	41,361,122	45,094,364	(3,733,242)	-8.28%
Small General-Non-Demand	68,553,439	69,530,169	(976,730)	-1.40%	6,743,157	7,087,373	(344,216)	-4.86%
Small General-Demand	155,303,386	158,053,260	(2,749,874)	-1.74%	15,161,689	15,839,125	(677,436)	-4.28%
Large	259,070,026	262,103,183	(3,033,157)	-1.16%	25,339,577	27,119,633	(1,780,057)	-6.56%
Independent Power Producers	419,755	869,484	(449,729)	-51.72%	30,088	82,800	(52,712)	-63.66%
Private St. Lites	334,812	382,552	(47,940)	-12.53%	34,288	35,412	(1,124)	-3.17%
Sub-total	**902,072,142**	**911,348,514**	**(9,276,372)**	**-1.02%**	**88,669,920**	**95,258,706**	**(6,588,786)**	**-6.92%**
Government								
Small_Non Demand	12,031,467	11,412,653	618,814	5.42%	1,128,048	1,254,979	(126,933)	-10.11%
Small-Demand	78,222,446	80,646,847	(2,424,401)	-3.01%	7,182,975	7,962,644	(779,669)	-9.79%
Large	62,597,150	61,883,821	713,330	1.15%	5,707,305	6,219,351	(512,046)	-8.23%
Public St. Lites	7,468,888	7,940,474	(471,586)	-5.94%	903,135	638,971	264,164	41.34%
Sub-total	**160,319,952**	**161,883,796**	**(1,563,843)**	**-0.97%**	**14,921,461**	**16,075,944**	**(1,154,484)**	**-7.18%**
Total-Civilian	**1,062,392,094**	**1,073,232,310**	**(10,840,216)**	**-1.01%**	**103,591,381**	**111,334,651**	**(7,743,270)**	**-6.95%**
USN	258,377,165	265,070,861	(6,693,696)	-2.53%	25,089,942	27,892,205	(2,802,263)	-10.05%
Grand Total	**1,320,769,259**	**1,338,303,170**	**(17,533,911)**	**-1.31%**	**128,681,323**	**139,226,856**	**(10,545,533)**	**-7.57%**
Non-Oil Yield								
Residential	0.096195	0.096267	-0.000072	-0.08%	0.096717	0.095780	0.000937	0.98%
Small General-Non-Demand	0.138725	0.138583	0.000142	0.10%	0.138711	0.136213	0.002498	1.83%
Small General-Demand	0.119735	0.119358	0.000377	0.32%	0.121615	0.117671	0.003944	3.35%
Large	0.103647	0.102709	0.000938	0.91%	0.103339	0.101565	0.001774	1.75%
Independent Power Producers	0.000000	0.109790	-0.109790	-100.00%	0.171053	0.106916	0.064138	59.99%
Private St. Lites	0.629012	0.574047	0.054965	9.58%	0.612850	0.603716	0.009134	1.51%
Sub-total	**0.105674**	**0.105414**	**0.000260**	**0.25%**	**0.106285**	**0.104274**	**0.002012**	**1.93%**
Government								
Small_Non Demand	0.150250	0.151767	-0.001517	-1.00%	0.150529	0.149244	0.001285	0.86%
Small-Demand	0.134310	0.134684	-0.000374	-0.28%	0.135525	0.134521	0.001004	0.75%
Large	0.127286	0.126211	0.001075	0.85%	0.129702	0.125276	0.004426	3.53%
Public St. Lites	0.475210	0.467844	0.007366	1.57%	0.475173	0.549144	-0.073971	-13.47%
Sub-total	**0.148645**	**0.148991**	**-0.000346**	**-0.23%**	**0.154990**	**0.148574**	**0.006416**	**4.32%**
Total-Civilian	**0.112158**	**0.111987**	**0.000171**	**0.15%**	**0.113301**	**0.110670**	**0.002630**	**2.38%**
USN	0.062312	0.061655	0.000657	1.07%	0.068124	0.059154	0.008970	15.16%
Grand Total	**0.102407**	**0.102018**	**0.000389**	**0.38%**	**0.104492**	**0.100350**	**0.004143**	**4.13%**
Non-Oil Revenues								
Residential	40,246,967	40,471,654	(224,686)	-0.56%	4,000,341	4,319,136	(318,796)	-7.38%
Small General-Non-Demand	9,372,976	9,496,649	(123,673)	-1.30%	935,351	965,396	(30,045)	-3.11%
Small General-Demand	18,595,284	18,864,922	(269,638)	-1.43%	1,843,889	1,863,810	(19,921)	-1.07%
Large	26,851,829	26,920,413	(68,583)	-0.25%	2,618,565	2,754,395	(135,830)	-4.93%
Independent Power Producers	47,756	95,460	(47,705)	-49.97%	5,147	8,853	(3,706)	-41.86%
Private St. Lites	210,475	219,603	(9,128)	-4.16%	21,013	21,378	(365)	-1.71%
Sub-total	**95,325,287**	**96,068,700**	**(743,413)**	**-0.77%**	**9,424,306**	**9,932,968**	**(508,662)**	**-5.12%**
Government								
Small_Non Demand	1,807,725	1,732,062	75,664	4.37%	169,803	187,298	(17,495)	-9.34%
Small-Demand	10,506,055	10,861,828	(355,773)	-3.28%	973,474	1,071,144	(97,670)	-9.12%
Large	7,967,732	7,810,415	157,316	2.01%	740,250	779,135	(38,884)	-4.99%
Public St. Lites	3,549,287	3,714,903	(165,615)	-4.46%	429,146	350,887	78,258	22.30%
Sub-total	**23,830,800**	**24,119,207**	**(288,408)**	**-1.20%**	**2,312,674**	**2,388,464**	**(75,791)**	**-3.17%**
Total-Civilian	**119,156,087**	**120,187,908**	**(1,031,821)**	**-0.86%**	**11,736,980**	**12,321,432**	**(584,453)**	**-4.74%**
USN	16,099,964	16,342,860	(242,895)	-1.49%	1,709,225	1,649,939	59,286	3.59%
Grand Total	**135,256,051**	**136,530,767**	**(1,274,716)**	**-0.93%**	**13,446,204**	**13,971,371**	**(525,166)**	**-3.76%**
% of Total Revenues								
Oil Revenues								
Residential	58,269,310	41,480,194	16,789,117	40.48%	6,379,622	4,737,208	1,642,414	34.67%
Small General-Non-Demand	9,549,895	6,857,426	2,692,470	39.26%	1,040,078	744,536	295,542	39.69%
Small General-Demand	21,573,539	15,548,165	6,025,374	38.75%	2,337,734	1,663,381	674,353	40.54%
Large	35,469,236	25,586,050	9,883,187	38.63%	3,892,141	2,835,089	1,057,052	37.28%
Independent Power Producers	53,039	83,691	(30,652)	-36.63%	4,472	8,417	(3,945)	-46.87%
Private St. Lites	45,983	36,900	9,083	24.62%	5,289	3,720	1,569	42.17%
Sub-total	**124,961,002**	**89,592,424**	**35,368,578**	**39.48%**	**13,659,337**	**9,992,351**	**3,666,985**	**36.70%**
Government								
Small_Non Demand	1,647,819	1,115,543	532,276	47.71%	173,992	131,837	42,155	31.98%
Small-Demand	10,716,015	7,865,706	2,850,310	36.24%	1,107,916	836,484	271,433	32.45%
Large	8,470,800	6,020,425	2,450,375	40.70%	868,923	645,157	223,766	34.68%
Public St. Lites	1,031,526	770,937	260,588	33.80%	139,301	67,125	72,177	107.53%
Sub-total	**21,866,160**	**15,772,611**	**6,093,549**	**38.63%**	**2,290,132**	**1,680,602**	**609,531**	**36.27%**
Total-Civilian	**146,827,162**	**105,365,035**	**41,462,126**	**39.35%**	**15,949,469**	**11,672,953**	**4,276,516**	**36.64%**
USN	32,504,347	28,217,009	4,287,337	15.19%	3,507,969	3,681,763	(173,794)	-4.72%
Grand Total	**179,331,508**	**133,582,045**	**45,749,464**	**34.25%**	**19,457,438**	**15,354,716**	**4,102,722**	**26.72%**
% of Total Revenues								
Grand Total								
Residential	98,516,278	81,951,847	16,564,430	20.21%	10,379,963	9,056,344	1,323,619	14.62%
Small General-Non-Demand	18,922,871	16,354,075	2,568,796	15.71%	1,975,429	1,709,931	265,497	15.53%
Small General-Demand	40,168,823	34,413,087	5,755,736	16.73%	4,181,623	3,527,191	654,432	18.55%
Large	62,321,065	52,506,462	9,814,603	18.69%	6,510,707	5,589,484	921,222	16.48%
Independent Power Producers	100,794	179,151	(78,357)	-43.74%	9,619	17,270	(7,651)	-44.30%
Private St. Lites	256,458	256,503	(45)	-0.02%	26,302	25,099	1,203	4.79%
Sub-total	**220,286,289**	**185,661,124**	**34,625,165**	**18.65%**	**23,083,643**	**19,925,320**	**3,158,323**	**15.85%**
Government								
Small_Non Demand	3,455,544	2,847,605	607,939	21.35%	343,795	319,135	24,660	7.73%
Small-Demand	21,222,070	18,727,533	2,494,537	13.32%	2,081,391	1,907,628	173,763	9.11%
Large	16,438,532	13,830,841	2,607,691	18.85%	1,609,173	1,424,292	184,881	12.98%
Public St. Lites	4,580,813	4,485,840	94,973	2.12%	568,447	418,012	150,435	35.99%
Sub-total	**45,696,960**	**39,891,819**	**5,805,141**	**14.55%**	**4,602,806**	**4,069,066**	**533,740**	**13.12%**
Total-Civilian	**265,983,249**	**225,552,943**	**40,430,306**	**17.92%**	**27,686,449**	**23,994,386**	**3,692,063**	**15.39%**
USN	48,604,311	44,559,869	4,044,442	9.08%	5,217,194	5,331,702	(114,508)	-2.15%
Grand Total	**314,587,559**	**270,112,812**	**44,474,748**	**16.47%**	**32,903,643**	**29,326,087**	**3,577,556**	**12.20%**


GPA - T and D Losses (MWH) Without Renewables and Aggreko
For the Last 8 Years thru 07.31.18 -Moving 12 Months
130,000
120,000
110,000
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
-
8.00%
7.00%
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
6.53%
6.96%
6.16%
5.25%
4.88%
5.62%
5.67%
5.80%
113,279
117,269
103,049
85,295
79,267
80,852
83,949
84,489
FY 11
FY 12
FY 13
FY 14
FY 15
FY 16
FY 17
FY 18
T and D Losses (MWH)
T and D Losses (% to Net Generation)


GPA - T and D Losses (MWH) With Renewables
For the Last 8 Years thru 07.31.18 -Moving 12 Months
130,000
120,000
110,000
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
-
7.00%
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
6.53%
6.96%
6.16%
5.25%
4.88%
4.88%
4.95%
5.03%
113,279
117,269
103,037
85,295
79,267
80,852
83,949
84,489
FY 11
FY 12
FY 13
FY 14
FY 15
FY 16
FY 17
FY 18
T and D Losses (MWH)
T and D Losses (% to Net Gen.)


GPA - Station Usage(MWH) Without Renewables and Aggreko
For the Last 8Years Thru 07.31.18-Moving 12 Months
110,000
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
5.29%
5.49%
4.93%
4.90%
4.87%
4.32%
4.26%
4.06%
96,872
97,739
86,755
83,701
83,050
64,952
65,895
61,592
FY 11
FY 12
FY 13
FY 14
FY 15
FY 16
FY 17
FY 18
Station Use (MWH)
% to Gross Generation


GPA - Station Usage(MWH) With Renewables
For the Last 8 Years Thru 07.31.18 -Moving 12 Months
110,000
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
5.29%
5.49%
4.93%
4.90%
4.87%
3.77%
3.74%
3.53%
96,872
97,739
86,755
83,701
83,050
64,952
65,895
61,592
FY 11
FY 12
FY 13
FY 14
FY 15
FY 16
FY 17
FY 18
Station Use (MWH)
% to Gross Generation


GPA A/R AGING REPORT JULY 2018
$9,000,000
$8,000,000
$7,000,000
$6,000,000
$5,000,000
$4,000,000
$3,000,000
$2,000,000
$1,000,000
$-
$(1,000,000)
$7,845,511
$1,349,088
$3,162,959
$6,534,301
17,222
$9,591
$-582
$428,899
$2,507,665
$2,742,909
$571,530
OVER 120 DAYS
91-120 DAYS
61-90 DAYS
31-60 DAYS
0-30 DAYS
Residential
Commercial G
Commercial J
Commercial P
Private St Lights
IPP
Suspense
Government S
Government K
Government L
Government St Lights

GUAM POWER AUTHORITY
ATURIDAT ILEKTRESEDAT GUAHAN
P O BOX 2977, AGANA, GUAM 96932-2977
Telephone: (671) 648-3066 Fax: (671) 648-3168

GUAM POWER AUTHORITY
FINANCIAL STATEMENT OVERVIEW
July 2018

Attached are the financial statements and supporting schedules for the month and fiscal year ended July 31, 2018.

Summary
The increase in net assets for the month ended was $0.8 million as compared to the anticipated net increase of $1.0 million projected at the beginning of the year. The total kWh sales for the month were 10.89% less than projected and non-fuel revenues were $1.3 million less than the estimated amount. O & M expenses for the month were $5.7 million which was $0.7 million less than our projections for the month. Other expenses for the month such as interest expense, IPP costs, (net of interest income and other income) totaled to $3.4 million, which was $0.5 million less than the projected amounts. There were no other significant departures from the budget during the period.

Analysis

Description	**Previous Month**	**Current Month**	**Target**
Quick Ratio	2.34	2.48	2
Days in Receivables	45	39	52
Days in Payables	35	29	30
LEAC (Over)/Under Recovery Balance -YTD	$8,904,873	$8,422,674	$9,142,210
T&D Losses	4.99%	5.03%	<7.00%
Debt Service Coverage	1.80	1.80	1.75
Long-term equity ratio	17%	17%	30 – 40%
Days in Cash	185	172	60

The Quick Ratio has been a challenge for GPA historically. However, over the last two fiscal years, the influx of cash from insurance proceeds continued to improve this ratio. GPA has current obligations of approximately $73 million and approximately $181 million in cash and current receivables. Debt Service Coverage ratio is calculated using the methodology in use before the Fiscal Year 2002 change in accounting practice.

Financial Statements
July 2018

Significant Assumptions

The significant assumptions in the financial statements are as follows:

- Accrual cutoff procedures were performed at month end
- An inventory valuation is performed at year-end only
- Accounts Receivable includes accruals based on prior months' usage.

Prepared by:	Reviewed by:	Approved by:
Lenora M. Sanz	John J.E. Kim	John M. Benavente, P.E.
Controller	Chief Financial Officer	General Manager

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)
Statements of Net Position
July 31, 2018 and September 30, 2017

	Unaudited July 2018	Audited September 2017	Change from Sept 30 2017
ASSETS AND DEFERRED OUTFLOWS OF RESOURCES			
Current assets:			
Cash and cash equivalents:			
Held by trustee for restricted purposes:			
Interest and principal funds	12,824,898	18,061,879	(5,236,981)
Bond indenture funds	50,976,310	56,907,535	(5,931,225)
Held by Guam Power Authority:			
Bond indenture funds	140,713,203	132,579,889	8,133,314
Self insurance fund-restricted	19,257,186	19,251,372	5,814
Energy sense fund	1,279,123	1,074,491	204,632
Total cash and cash equivalents	225,050,720	227,875,166	(2,824,446)
Accounts receivable, net	37,457,520	77,826,132	(40,368,612)
Total current receivables	37,457,520	77,826,132	(40,368,612)
Materials and supplies inventory	12,920,837	11,989,745	931,092
Fuel inventory	55,977,110	52,387,369	3,589,741
Prepaid expenses	2,908,264	629,586	2,278,678
Total current assets	334,314,451	370,707,998	(36,393,547)
Utility plant, at cost:			
Electric plant in service	1,047,252,881	1,038,121,362	9,131,519
Construction work in progress	35,549,932	18,480,173	17,069,759
Total	1,082,802,813	1,056,601,535	26,201,278
Less: Accumulated depreciation	(592,655,919)	(561,829,334)	(30,826,585)
Total utility plant	490,146,894	494,772,201	(4,625,307)
Other non-current assets:			
Investment - bond reserve funds held by trustee	48,530,594	48,576,863	(46,269)
Unamortized debt issuance costs	2,550,782	4,267,305	(1,716,523)
Total other non-current assets	51,081,376	52,844,168	(1,762,792)
Total assets	875,542,721	918,324,367	(42,781,646)
Deferred outflow of resources:			
Deferred fuel revenue	8,422,674	16,751,048	(8,328,374)
Unamortized loss on debt refunding	27,551,968	11,076,064	16,475,904
Pension	8,698,853	8,698,853	0
Unamortized forward delivery contract costs	504,558	637,358	(132,800)
Total deferred outflows of resources	45,178,053	37,163,323	8,014,730
	920,720,774	955,487,690	(34,766,916)

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)
Statement of Net Position, Continued
July 31, 2018 and September 30, 2017

	Unaudited July 2018	Audited September 2017	Change from Sept 30 2017
LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION			
Current liabilities:			
Current maturities of long-term debt	1,630,000	1,780,000	(150,000)
Current obligations under capital leases	15,319,211	23,330,193	(8,010,982)
Accounts payable			
Operations	31,895,486	56,723,139	(24,827,653)
Others	3,364,031	7,597,801	(4,233,770)
Accrued payroll and employees' benefits	1,196,816	1,546,860	(350,044)
Current portion of employees' annual leave	2,083,469	2,045,201	38,268
Interest payable	10,014,069	15,065,830	(5,051,761)
Customer deposits	7,273,181	8,209,228	(936,047)
Total current liabilities	72,776,263	116,298,252	(43,521,989)
Regulatory liabilities:			
Provision for self insurance	19,550,977	19,550,977	0
Total regulatory liabilities	19,550,977	19,550,977	0
Long term debt, net of current maturities	605,377,535	590,568,862	14,808,673
Obligations under capital leases, net of current portion	13,290,216	24,428,832	(11,138,616)
Net Pension liability	82,249,297	85,875,217	(3,625,920)
DCRS sick leave liability	4,008,397	4,008,397	0
Employees' annual leave net of current portion	1,086,456	1,086,456	0
Customer advances for construction	385,293	369,180	16,113
Total liabilities	798,724,435	842,186,173	(43,461,738)
Deferred inflows of resources:			
Unearned forward delivery contract revenue	1,849,389	2,336,071	(486,682)
Pension	788,894	788,894	0
Total deferred inflows of resources	2,638,283	3,124,965	(486,682)
Commitments and contigencies			
Net Position:			
Net investment in capital assets	(46,348,458)	(40,220,468)	(6,127,990)
Restricted	29,346,314	15,232,832	14,113,482
Unrestricted	136,360,199	135,164,187	1,196,012
Total net position	119,358,055	110,176,552	9,181,503
	920,720,774	955,487,690	(34,766,916)

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM
Statement of Revenues, Expenses and Changes in Net Assets

	July 31			Ten Months Ended July 31		
	Unaudited 2018	Audited 2017	% of change Inc (dec)	Unaudited 2018	Audited 2017	% of change Inc (dec)
Revenues						
Sales of electricity	32,903,643	29,326,087	12	314,587,560	270,112,810	16
Miscellaneous	308,251	211,937	45	1,808,644	1,847,933	(2)
Total	33,211,894	29,538,024	12	316,396,204	271,960,743	16
Bad debt expense	(86,583)	(103,532)	(16)	(865,833)	(893,930)	(3)
Total revenues	33,125,311	29,434,492	13	315,530,371	271,066,813	16
Operating and maintenance expenses						
Production fuel	19,457,438	15,175,139	28	179,331,515	133,582,176	34
Other production	1,425,830	1,539,270	(7)	14,024,616	12,487,432	12
	20,883,268	16,714,409	25	193,356,131	146,069,608	32
Depreciation	3,479,274	3,526,137	(1)	32,174,360	39,741,207	(19)
Energy conversion cost	1,325,326	1,751,588	(24)	14,759,986	16,375,468	(10)
Transmission & distribution	1,128,694	925,682	22	10,805,873	9,704,842	11
Customer accounting	442,536	459,293	(4)	4,381,963	3,409,093	29
Administrative & general	2,713,341	2,356,791	15	25,518,839	20,967,363	22
Total operating and maintenance expenses	29,972,439	25,733,900	16	280,997,152	236,267,581	19
Operating income	3,152,872	3,700,592	(15)	34,533,219	34,799,232	(1)
Other income (expenses)						
Interest income	317,765	147,271	116	2,363,398	1,209,044	95
Interest expense and amortization	(2,553,542)	(2,796,910)	(9)	(26,582,184)	(28,316,956)	(6)
Bond issuance costs	67,464	76,827	(12)	(1,844,201)	768,270	(340)
Assets written off	0	0		0	0	
Allowance for funds used during construction	128,957	294,990	(56)	1,439,407	3,129,480	(54)
Other expense	(300,336)	(4,291)	0	(830,810)	(535,363)	55
Total other income (expenses)	(2,339,692)	(2,282,113)	3	(25,454,390)	(23,745,525)	7
Income (loss) before capital contributions	813,180	1,418,479	(43)	9,078,829	11,053,707	(18)
Capital contributions	0	4,884	0	102,672	43,306	137
Increase (decrease) in net assets	813,180	1,423,363	(43)	9,181,501	11,097,013	(17)
Total net assets at beginning of period (restated)	118,544,878	71,496,480	66	110,176,557	61,822,830	78
Total net assets at end of period	119,358,058	72,919,843	64	119,358,058	72,919,843	64

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)
Statements of Cash Flows
Period Ended July 31, 2018

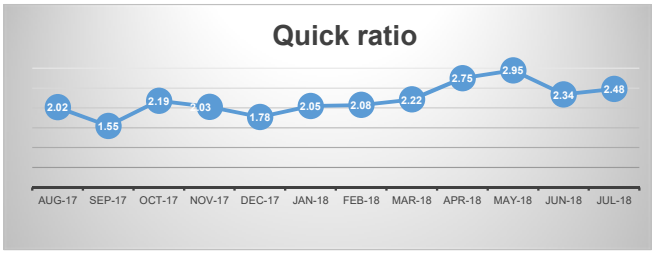
	Month Ending 7/31/2018	YTD Ending 7/31/2018
Increase(decrease) in cash and cash equivalents		
Cash flows from operating activities:		
Cash received from customers	($3,304,810)	$ 313,935,339
Cash payments to suppliers and employees for goods and services	30,002,896	299,086,586
Net cash provided by operating activities	$8,536,636	14,848,753
Cash flows from investing activities:		
Interest and dividends on investments and bank accounts	317,765	2,363,398
Net cash provided by investing activities	317,765	2,363,398
Cash flows from non-capital financing activities		
Proceeds from Cabras 3&4 insurance claims	-	41,844,342
Interest paid on short term debt	(8,904)	(67,084)
Provision for self insurance funds	(593)	(5,814)
Net cash provided by noncapital financing activities	(9,497)	41,771,444
Cash flows from capital and related financing activities		
Acquisition of utility plant	(14,322,559)	(27,549,050)
Principal paid on bonds and other long-term debt	-	(3,550,000)
Interest paid on bonds(net of capitalized interest)	128,957	(27,337,879)
Interest paid on capital lease obligations	(211,396)	(2,789,575)
Interest & principal funds held by trustee	(2,484,412)	5,236,981
Reserve funds held by trustee	(34,366)	46,269
Bond funds held by trustee	459,841	5,931,225
Principal payment on capital lease obligations	(1,932,700)	(19,149,597)
Grant from DOI/FEMA	-	102,672
Debt issuance costs/loss on defeasance	(333,577)	18,208,673
Net cash provided by (used in) capital and related financing activities	(18,730,212)	(50,850,281)
Net (decrease) increase in cash and cash equivalents	(9,885,308.45)	8,133,314
Cash and cash equivalents, beginning	150,598,511	132,579,889
Cash and cash equivalents-Funds held by GPA, July 31, 2018	**$ 140,713,203**	**$ 140,713,203**

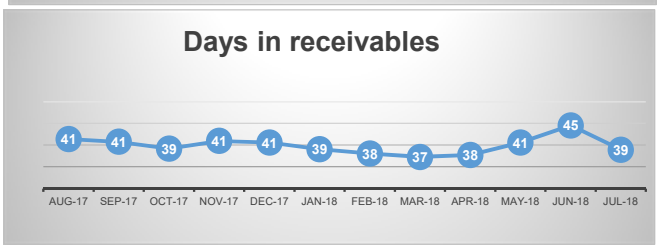
GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)
Statements of Cash Flows, continued
Period Ended July 31, 2018

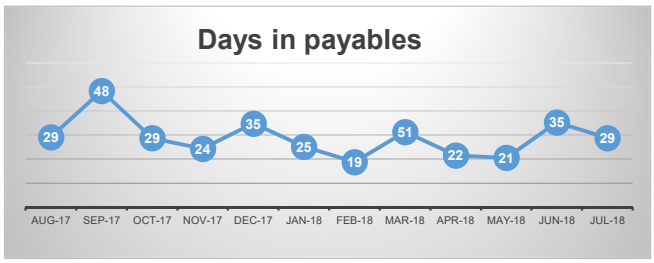
	Month Ending 7/31/2018	YTD Ending 7/31/2018
Reconciliation of operating earnings to net cash provided by operating activities:		
Operating earnings net of depreciation expense and excluding interest income	$3,152,872	$34,533,219
Adjustments to reconcile operating earnings to net cash provided by operating activities:		
Depreciation and amortization	3,479,274	32,174,360
Other expense	(232,872)	(2,675,011)
(Increase) decrease in assets:		
Accounts receivable	5,407,363	(1,475,730)
Materials and inventory	(109,365)	(931,092)
Fuel inventory	5,850,975	(3,589,741)
Prepaid expenses	959,455	(2,278,678)
Unamortized debt issuance cost	23,667	1,716,523
Deferred fuel revenue	482,199	8,328,374
Unamortized loss on debt refunding	229,166	(16,475,904)
Unamortized forward delivery contract costs	13,280	132,800
Increase (decrease) in liabilities:		
Accounts payable-operations	(9,817,426)	(24,827,653)
Accounts payable-others	312,613	(4,438,402)
Accrued payroll and employees' benefits	350,007	(350,044)
Net pension liability	(316,862)	(3,625,920)
Employees' annual leave	(81,800)	38,268
Customers deposits	(1,117,241)	(936,047)
Customer advances for construction	-	16,113
Unearned forward delivery contract revenue	(48,669)	(486,682)
Net cash provided by operating activities	**$8,536,636**	**$ 14,848,753**

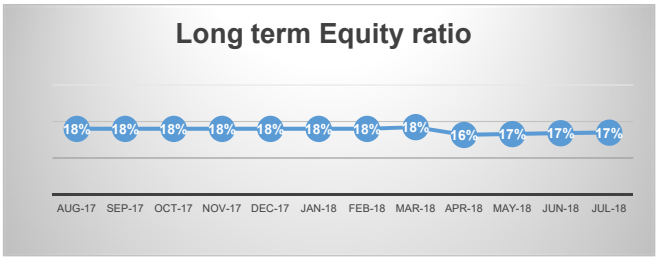
Guam Power Authority
Financial Analysis
7/31/2018

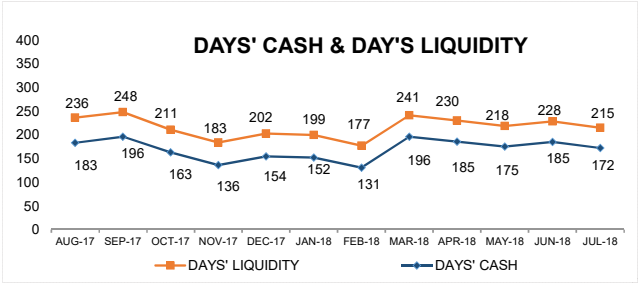
	Quick Ratio		
A	Reserve Funds Held by GPA		140,713,203
B	Current Accounts Receivable		40,102,688
C	Total Cash and A/R (A+B)		180,815,891
D	Total Current Liabilities		72,776,263
E	**Quick Ratio (F/G)**		**2.48**
	Days in Receivables		
A	FY 18 Moving 12 Mos.-Actual		375,548,803
B	No. of Days		365
C	Average Revenues per day (A/B)		1,028,901
D	Current Accounts Receivable		40,102,688
E	**Days in Receivables (D/C)**		**39**
	Days in Payables		
A	FY 18 Moving 12 Months-Actual		446,017,577
B	No. of Days		365
C	Average Payables per day (A/B)		1,221,966
D	Current Accounts Payables		35,259,517
E	**Days in Payables (D/C)**		**29**
	Long term equity ratio		
A	Equity	$	119,358,055.05
B	Total Long term Liability	$	584,275,539.95
C	Total Equity and liability	$	703,633,595.00
D	**Long term equity ratio (A/C)**		**17%**
	Days cash on hand		
A	Unrestricted cash & cash equivalents		140,713
B	No. of Days -YTD		304
C	A x B		42,776,814
D	Total Operating expenses excluding depreci		248,823
E	**Days cash on hand**		**172**
	Days' Liquidity		
A	Unresctricted cash , cash equivalents & revo		175,713
B	No. of Days -YTD		304
C	A x B		53,416,814
D	Total Operating expenses excluding depreci		248,823
E	**Days liquidity**		**215**











GPA 302
13-Aug-18

GUAM POWER AUTHORITY
ACCRUED REVENUE
JULY 2018

	FOR THE MONTH ENDED JULY		TEN MONTHS ENDED JULY	
	2018	**2017**	**2018**	**2017**
KWH SALES:				
Residential	41,361,122	45,094,364	418,390,923	420,409,867
Small Gen. Non Demand	6,743,157	7,087,373	68,553,439	69,530,168
Small Gen. Demand	15,161,689	15,839,125	155,303,386	158,053,260
Large General	25,339,577	27,119,633	259,070,026	262,103,184
Independent Power Producer	30,088	82,800	419,755	869,484
Private St. Lights	34,288	35,412	334,612	382,552
Sub-total	88,669,920	95,258,706	902,072,142	911,348,514
Government Service:				
Small Non Demand	1,128,046	1,254,979	12,031,467	11,412,652
Small Demand	7,182,975	7,962,644	78,222,446	80,646,847
Large	5,707,305	6,219,351	62,597,150	61,883,821
Street Lighting	903,135	638,971	7,468,888	7,940,475
Sub-total	14,921,461	16,075,944	160,319,952	161,883,795
Total	103,591,381	111,334,651	1,062,392,094	1,073,232,309
U. S. Navy	25,089,942	27,892,205	258,377,165	265,070,860
GRAND TOTAL	128,681,323	139,226,856	1,320,769,259	1,338,303,169
REVENUE:				
Residential	10,379,963	9,056,344	98,516,278	81,951,847
Small Gen. Non Demand	1,975,429	1,709,931	18,922,871	16,354,075
Small Gen. Demand	4,181,623	3,527,191	40,168,823	34,413,087
Large General	6,510,707	5,589,484	62,321,065	52,506,462
Independent Power Producer	9,619	17,270	100,794	179,151
Private St. Lights	26,302	25,099	256,458	256,503
Sub-total	23,083,643	19,925,320	220,286,289	185,661,124
Government Service:				
Small Non Demand	343,795	319,135	3,455,544	2,847,605
Small Demand	2,081,391	1,907,628	21,222,070	18,727,533
Large	1,609,173	1,424,292	16,438,532	13,830,841
Street Lighting	568,447	418,012	4,580,813	4,485,840
Sub-total	4,602,806	4,069,066	45,696,960	39,891,819
Total	27,686,449	23,994,386	265,983,249	225,552,943
U. S. Navy	5,217,194	5,331,702	48,604,311	44,559,869
GRAND TOTAL	32,903,643	29,326,087	314,587,559	270,112,812
NUMBER OF CUSTOMERS:				
Residential	44,003	43,866	44,018	43,712
Small Gen. Non Demand	4,183	4,131	4,155	4,127
Small Gen. Demand	982	984	985	988
Large General	119	116	119	116
Independent Power Peoducer	2	3	3	4
Private St. Lights	531	526	530	525
Sub-total	49,820	49,626	49,809	49,471
Government Service:				
Small Non Demand	690	678	686	682
Small Demand	351	352	351	347
Large	47	45	47	45
Street Lighting	612	297	463	245
Sub-total	1,700	1,372	1,547	1,319
Total	51,520	50,998	51,356	50,790
US Navy	1	1	1	1
	51,521	50,999	51,357	50,791

GPA403
13-Aug-18

GUAM POWER AUTHORITY
ACCRUED REVENUE

	TWELVE MONTHS ENDING	July 2018	June 2018	May 2018	APRIL 2018	MARCH 2018	FEBRUARY 2018	JANUARY 2018	DECEMBER 2017	NOVEMBER 2017	OCTOBER 2017	SEPTEMBER 2017	AUGUST 2017
KWH SALES:													
Residential	504,316,658	41,361,122	42,056,621	44,782,019	41,394,961	41,541,824	36,809,815	42,067,765	43,307,944	43,386,853	41,682,000	41,491,015	44,434,719
Small General Non Demand	82,922,971	6,743,157	6,840,318	7,216,684	6,694,385	6,976,607	6,154,115	6,844,713	6,956,278	7,060,041	7,067,142	7,022,092	7,347,440
Small General Demand	187,301,051	15,161,689	15,360,000	16,316,998	15,390,268	15,917,309	14,164,319	15,562,774	15,848,505	15,789,397	15,792,127	15,509,408	16,488,257
Large General	311,540,074	25,339,577	25,263,128	26,377,222	25,681,619	26,155,199	23,674,407	26,242,185	27,485,887	26,267,661	26,583,141	25,432,034	27,038,013
Private Outdoor Lighting	444,468	34,288	37,088	34,126	27,531	32,791	32,408	32,358	35,129	35,042	33,851	76,532	33,324
Independent Power Producer	512,094	30,088	25,238	26,295	27,405	28,536	28,976	27,011	40,140	93,823	92,244	34,586	57,754
Sub-Total	1,087,037,316	88,669,920	89,582,394	94,753,344	89,216,169	90,652,265	80,864,040	90,776,805	93,673,883	92,632,817	91,250,505	89,565,666	95,399,508
Government Service:													
Small Non Demand	14,521,060	1,128,046	1,157,839	1,224,286	1,180,911	1,193,794	1,119,571	1,248,251	1,272,026	1,255,131	1,251,612	1,246,106	1,243,487
Small Demand	94,454,200	7,182,975	7,404,715	8,098,401	7,720,850	7,889,205	7,377,578	8,102,981	8,063,549	8,098,974	8,283,218	8,084,368	8,147,386
Large	75,611,298	5,707,305	5,896,149	6,622,597	6,142,309	6,226,210	5,905,830	6,315,619	6,812,255	6,550,623	6,418,254	6,493,449	6,520,699
Street Lighting (Agencies)	9,043,021	903,135	795,661	761,901	699,601	743,499	669,689	716,067	697,921	668,464	812,949	697,002	877,130
Sub-Total	193,629,579	14,921,461	15,254,364	16,707,185	15,743,671	16,052,709	15,072,669	16,382,918	16,845,750	16,573,193	16,766,033	16,520,925	16,788,702
Total	1,280,666,895	103,591,381	104,836,757	111,460,529	104,959,840	106,704,974	95,936,708	107,159,724	110,519,633	109,206,010	108,016,537	106,086,591	112,188,210
U.S. Navy	311,892,206	25,089,942	24,891,007	26,624,376	25,605,624	25,988,485	23,304,608	26,722,147	28,067,673	26,837,883	25,245,420	26,906,320	26,608,721
Grand Total	1,592,559,101	128,681,323	129,727,764	138,084,906	130,565,464	132,693,459	119,241,316	133,881,870	138,587,306	136,043,893	133,261,957	132,992,911	138,796,930
REVENUE:													
Residential	$ 117,166,408	$ 10,379,963	$ 10,487,819	$ 11,371,498	$ 10,082,308	$ 10,154,660	$ 9,633,432	$ 8,985,179	$ 9,238,911	$ 9,263,463	$ 8,919,044	$ 8,887,320	$ 9,762,810
Small General Non Demand	$ 22,609,528	$ 1,975,429	$ 1,969,294	$ 2,127,563	$ 1,903,541	$ 1,988,097	$ 1,869,658	$ 1,741,922	$ 1,765,223	$ 1,789,263	$ 1,792,881	$ 1,783,997	$ 1,902,660
Small General Demand	$ 47,825,253	$ 4,181,623	$ 4,150,658	$ 4,513,787	$ 4,108,079	$ 4,266,730	$ 4,006,949	$ 3,714,258	$ 3,769,415	$ 3,699,298	$ 3,758,026	$ 3,692,273	$ 3,964,157
Large General	$ 73,992,663	$ 6,510,707	$ 6,533,909	$ 6,798,955	$ 6,399,879	$ 6,565,683	$ 6,086,686	$ 5,762,313	$ 6,067,740	$ 5,793,817	$ 5,801,375	$ 5,643,059	$ 6,028,539
Private Outdoor Lighting	$ 306,912	$ 26,302	$ 27,542	$ 26,776	$ 22,912	$ 25,785	$ 25,733	$ 25,133	$ 25,553	$ 25,471	$ 25,250	$ 25,361	$ 25,094
Independent Power Producer	$ 132,674	$ 9,619	$ 6,601	$ 7,068	$ 7,057	$ 7,406	$ 7,969	$ 6,029	$ 9,249	$ 20,053	$ 19,744	$ 17,076	$ 14,804
Sub-Total	$ 262,033,439	$ 23,083,643	$ 23,175,823	$ 24,845,648	$ 22,523,776	$ 23,008,362	$ 21,630,428	$ 20,234,834	$ 20,876,091	$ 20,591,366	$ 20,316,320	$ 20,049,087	$ 21,698,063
Government Service:													
Small Non Demand	$ 4,120,948	$ 343,795	$ 354,533	$ 372,707	$ 350,949	$ 356,541	$ 335,126	$ 332,434	$ 341,017	$ 334,963	$ 333,478	$ 333,079	$ 332,325
Small Demand	$ 25,324,616	$ 2,081,391	$ 2,159,463	$ 2,323,025	$ 2,164,585	$ 2,224,973	$ 2,094,220	$ 2,016,922	$ 2,046,340	$ 2,043,720	$ 2,067,433	$ 2,050,292	$ 2,052,253
Large	$ 19,587,057	$ 1,609,173	$ 1,667,786	$ 1,840,797	$ 1,676,200	$ 1,707,269	$ 1,628,297	$ 1,525,771	$ 1,652,805	$ 1,583,988	$ 1,546,446	$ 1,575,080	$ 1,573,445
Street Lighting (Agencies)	$ 5,533,669	$ 568,447	$ 477,183	$ 477,272	$ 452,952	$ 455,729	$ 439,995	$ 427,482	$ 416,951	$ 419,351	$ 445,451	$ 436,808	$ 516,047
Sub-Total	$ 54,566,288	$ 4,602,806	$ 4,658,965	$ 5,013,801	$ 4,644,687	$ 4,744,512	$ 4,497,638	$ 4,302,609	$ 4,457,113	$ 4,382,022	$ 4,392,807	$ 4,395,259	$ 4,474,070
Total	$ 316,599,728	$ 27,686,449	$ 27,834,788	$ 29,859,448	$ 27,168,463	$ 27,752,874	$ 26,128,065	$ 24,537,443	$ 25,333,204	$ 24,973,388	$ 24,709,127	$ 24,444,346	$ 26,172,133
U.S. Navy	$ 58,949,076	$ 5,217,194	$ 4,618,042	$ 5,005,555	$ 5,623,411	$ 5,202,943	$ 4,155,974	$ 5,033,103	$ 4,642,130	$ 4,254,065	$ 4,851,893	$ 5,325,383	$ 5,019,382
Grand Total	$ 375,548,803	$ 32,903,643	$ 32,452,830	$ 34,865,003	$ 32,791,874	$ 32,955,817	$ 30,284,040	$ 29,570,546	$ 29,975,334	$ 29,227,453	$ 29,561,020	$ 29,769,728	$ 31,191,516
NUMBER OF CUSTOMERS:													
Residential	44,011	44,003	44,074	44,086	43,991	44,065	43,995	44,119	43,898	43,996	43,950	43,991	43,969
Small General Non Demand	4,151	4,183	4,173	4,172	4,183	4,154	4,153	4,142	4,129	4,131	4,134	4,127	4,134
Small General Demand	984	982	984	988	988	987	991	981	981	982	982	980	981
Large General	118	119	119	119	119	119	118	119	118	117	119	116	115
Private Outdoor Lighting	529	531	532	533	536	526	527	527	530	527	530	526	527
Independent Power Producer	3	2	2	2	2	2	2	2	3	3	3	3	3
Sub-Total	49,797	49,820	49,884	49,900	49,819	49,853	49,786	49,890	49,659	49,756	49,718	49,743	49,729
Government Service:													
Small Non Demand	684	690	694	691	692	689	684	686	679	678	676	675	678
Small Demand	351	351	351	350	350	350	351	350	350	354	351	353	351
Large	47	47	47	47	47	47	47	47	47	47	46	45	45
Street Lighting (Agencies)	436	612	559	526	513	479	421	389	378	378	377	297	297
Sub-Total	1,517	1,700	1,651	1,614	1,602	1,565	1,503	1,472	1,454	1,457	1,450	1,370	1,371
Total	51,314	51,520	51,535	51,514	51,421	51,418	51,289	51,362	51,113	51,213	51,168	51,113	51,100
U.S. Navy	1	1	1	1	1	1	1	1	1	1	1	1	1
Grand Total	51,315	51,521	51,536	51,515	51,422	51,419	51,290	51,363	51,114	51,214	51,169	51,114	51,101

GPA303

GUAM POWER AUTHORITY
ACCRUED REVENUE
JULY 2017

RATE	NUMBER OF CUSTOMERS	KWH SALES	TOTAL REVENUE AMOUNT	TOTAL REVENUE C/KWH	BASE RATE REVENUE C/KWH	BASE RATE REVENUE AMOUNT	AVERAGE PER CUSTOMER KWH	AVERAGE PER CUSTOMER REVENUE	NON-FUEL C/KWH	NON-FUEL AMOUNT	0.154242 FUEL C/KWH	0.154242 FUEL AMOUNT
Month									0.154242			
R Residential	44,003	41,361,122	10,379,963	25.10	25.10	10,379,963	940	236	9.6717	4,000,341	15.4242	6,379,622
G Small Gen. Non Demand	4,183	6,743,157	1,975,429	29.30	29.30	1,975,429	1,612	472	13.8711	935,351	15.4242	1,040,078
J Small Gen. Demand	982	15,161,689	4,181,623	27.58	27.58	4,181,623	15,440	4,258	12.1615	1,843,889	15.4187	2,337,734
P Large General	119	25,339,577	6,510,707	25.69	25.69	6,510,707	212,938	54,712	10.3339	2,618,565	15.3599	3,892,141
I Independent Power Produce	2	30,088	9,619	31.97	31.97	9,619	15,044	4,809	17.1053	5,147	14.8639	4,472
H Private St. Lights	531	34,288	26,302	76.71	76.71	26,302	65	50	61.2850	21,013	15.4242	5,289
Sub-Total	49,820	88,669,920	23,083,643	26.03	26.03	23,083,643	1,780	463	10.6090	9,424,306	15.4242	13,659,337
Government Service:												
S Small Non Demand	690	1,128,046	343,795	30.48	30.48	343,795	1,635	498	15.0529	169,803	15.4242	173,992
K Small Demand	351	7,182,975	2,081,391	28.98	28.98	2,081,391	20,464	5,930	13.5525	973,474	15.4242	1,107,916
L Large	47	5,707,305	1,609,173	28.19	28.19	1,609,173	121,432	34,238	12.9702	740,250	15.2247	868,923
F Street Lighting (Agencies)	612	903,135	568,447	62.94	62.94	568,447	1,476	929	47.5173	429,146	15.4242	139,301
Sub-Total	1,700	14,921,461	4,602,806	30.85	30.85	4,602,806	8,777	2,708	15.4227	2,312,674	15.4242	2,290,132
	51,520	103,591,381	27,686,449	26.73	26.73	27,686,449	2,011	537	11.3024	11,736,980	15.4242	15,949,469
U.S. Navy	1	25,089,942	5,217,194	20.79	20.79	5,217,194			6.8124	1,709,225	13.9816	3,507,969
TOTAL	51,521	128,681,323	32,903,643	25.57	25.57	32,903,643	2,498	639	10.4492	13,446,204	15.1206	19,457,438
Ten Months Ended July 2018												
R Residential	44,018	418,390,923	98,516,278	23.55	23.55	98,516,278	9,505	2,238	9.6195	40,246,967	13.9270	58,269,310
G Small Gen. Non Demand	4,155	68,553,439	18,922,871	27.60	27.60	18,922,871	16,497	4,554	13.6725	9,372,976	13.9306	9,549,895
J Small Gen. Demand	985	155,303,386	40,168,823	25.86	25.86	40,168,823	157,732	40,797	11.9735	18,595,284	13.8912	21,573,539
P Large General	119	259,070,026	62,321,065	24.06	24.06	62,321,065	2,184,402	525,473	10.3647	26,851,829	13.6910	35,469,236
I Independent Power Produce	3	419,755	100,794	24.01	24.01	100,794	144,743	34,757	11.3770	47,756	12.6356	53,039
H Private St. Lights	530	334,612	256,458	76.64	76.64	256,458	631	484	62.9012	210,475	13.7422	45,983
Sub-Total	49,809	902,072,142	220,286,289	24.42	24.42	220,286,289	18,111	4,423	10.5674	95,325,287	13.8527	124,961,002
Government Service:												
S Small Non Demand	684	12,031,467	3,455,544	28.72	28.72	3,455,544	17,581	5,050	15.0250	1,807,725	13.6959	1,647,819
K Small Demand	351	78,222,446	21,222,070	27.13	27.13	21,222,070	222,856	60,462	13.4310	10,506,055	13.6994	10,716,015
L Large	47	62,597,150	16,438,532	26.26	26.26	16,438,532	1,343,767	352,884	12.7286	7,967,732	13.5322	8,470,800
F Street Lighting (Agencies)	436	7,468,888	4,580,813	61.33	61.33	4,580,813	17,150	10,519	47.5210	3,549,287	13.8110	1,031,526
Sub-Total	1,517	160,319,952	45,696,960	28.50	28.50	45,696,960	105,653	30,115	14.8645	23,830,800	13.6391	21,866,160
	51,327	1,062,392,094	265,983,249	25.04	25.04	265,983,249	20,699	5,182	11.2158	119,156,087	13.8204	146,827,162
U.S. Navy	1	258,377,165	48,604,311	18.81	18.81	48,604,311			6.2312	16,099,964	12.5802	32,504,347
TOTAL	51,328	1,320,769,259	314,587,559	23.82	23.82	314,587,559	25,732	6,129	10.2407	135,256,051	13.5778	179,331,508
Twelve Months Ended July 2018												
R Residential	44,011	504,316,658	117,166,408	23.23	23.23	117,166,408	11,459	2,662	9.6181	48,505,818	13.6146	68,660,590
G Small Gen. Non Demand	4,151	82,922,971	22,609,528	27.27	27.27	22,609,528	19,975	5,446	13.6555	11,323,561	13.6102	11,285,967
J Small Gen. Demand	984	187,301,051	47,825,253	25.53	25.53	47,825,253	190,363	48,607	11.9614	22,403,851	13.5725	25,421,402
P Large General	118	311,540,074	73,992,663	23.75	23.75	73,992,663	2,638,307	626,614	10.3827	32,346,228	13.3679	41,646,435
I Independent Power Produce	3	512,094	132,674	25.91	25.91	132,674	176,584	45,750	12.5651	64,345	13.3431	68,329
H Private St. Lights	529	444,468	306,912	69.05	69.05	306,912	840	580	56.9074	252,935	12.1443	53,977
Sub-Total	49,797	1,087,037,316	262,033,439	24.11	24.11	262,033,439	21,829	5,262	10.5697	114,896,738	13.5356	147,136,701
Government Service:												
S Small Non Demand	684	14,521,060	4,120,948	28.38	28.38	4,120,948	21,219	6,022	15.0131	2,180,059	13.3660	1,940,888
K Small Demand	351	94,454,200	25,324,616	26.81	26.81	25,324,616	269,100	72,150	13.4434	12,697,831	13.3682	12,626,785
L Large	47	75,611,298	19,587,057	25.90	25.90	19,587,057	1,623,141	420,473	12.7001	9,602,730	13.2048	9,984,326
F Street Lighting (Agencies)	436	9,043,021	5,533,669	61.19	61.19	5,533,669	20,765	12,706	47.7367	4,316,839	13.4560	1,216,830
Sub-Total	1,517	193,629,579	54,566,288	28.18	28.18	54,566,288	127,605	35,960	14.8724	28,797,459	13.3083	25,768,829
	51,314	1,280,666,895	316,599,728	24.72	24.72	316,599,728	24,957	41,222	11.2203	143,694,197	13.5012	172,905,530
U.S. Navy	1	311,892,206	58,949,076	18.90	18.90	58,949,076			6.3100	19,680,492	12.5904	39,268,583
TOTAL	51,315	1,592,559,101	375,548,803	23.58	23.58	375,548,803	31,035	7,318	10.2586	163,374,689	13.3228	212,174,114

GPA-318 **ENERGY ACCOUNT** **FOR INTERNAL USE ONLY**

318Jul18 **FY 2018 Versus FY 2017**

	July 2018		July 2017		Y T D 2018		Y T D 2017		MOVING TWELVE MONTHS	
Gross Generation										
Number of days in Period	**31**		**31**		**304**		**273**		**365**	
Peak demand	**242**		**252**		**254**		**257**		**261**	
Date	**07/02/18**		**07/31/17**		**10/30/17**		**06/13/17**		**08/01/17**	
	KWH	**% change**	**KWH**	**% change**	**KWH**	**% change**	**KWH**	**% change**	**KWH**	**% change**
Energy Account:										
Kilowatt hours GPA:										
Cabras 1 & 2	44,590,000		40,003,000		544,441,000		624,349,000		615,085,000	
Cabras No. 3	0		0		0		0		0	
Cabras No. 4	0		0		0		0		0	
MEC (ENRON) Piti 8 (IPP)	27,134,300		24,376,400		267,891,400		261,987,200		325,537,900	
MEC (ENRON) Piti 9 (IPP)	24,960,900		29,047,100		273,050,200		251,300,300		329,812,200	
TEMES Piti 7 (IPP)	6,556,185		8,613,974		23,175,648		25,716,301		44,440,715	
Tanguisson 2	0		0		0		0		0	
Tanguisson 1	0		0		0		0		0	
Diesels/CT's & Others:							0			
MDI 10MW	16,756		0		971,636		2,244,937		984,326	
NRG Solar Dandan	3,216,552		3,514,247		39,687,744		35,410,781		47,467,765	
Dededo CT #1	585,620		1,125,760		7,223,220		1,780,740		12,565,780	
Dededo CT #2	1,016,520		1,264,600		7,067,930		2,886,382		10,014,140	
Macheche CT	4,305,002		7,016,044		45,356,134		39,488,332		61,435,358	
Yigo CT (Leased)	5,806,500		6,165,242		39,009,900		29,908,466		50,477,381	
Tenjo	3,015,110		4,404,660		38,375,730		34,166,030		49,667,180	
Talofofo 10 MW	493,350		2,473,110		13,297,320		13,963,250		18,105,460	
Aggreko	18,222,263		22,288,912		146,721,699		143,656,067		176,512,171	
Wind Turbine*	3,836		25,042		311,968		370,772		328,390	
Orote	0		0		0		0		0	
Marbo	0		0		0		0		0	
	139,922,894		**150,318,091**		**1,446,581,528**		**1,467,228,558**		**1,742,433,766**	
Ratio to last year		93.08		99.71		98.59		**102.49**		**99.20**
Station use	4,743,461		4,731,976		52,110,922		56,413,456		61,592,462	
Ratio to Gross generation		3.39		3.15		3.60		3.84		**3.53**
Net send out	135,179,434		145,586,114		1,394,470,606		1,410,815,102		1,680,841,304	
Ratio to last year		92.85		100.01		98.84		**102.46**		**99.47**
KWH deliveries:										
Sales to Navy (@34.5kv)	**25,089,942**		**27,892,205**		**258,377,165**		**265,070,862**		**311,892,206**	
Ratio to last year		89.95		104.23		97.47		**100.00**		**98.06**
GPA-metered	**110,089,492**		**117,693,909**		**1,136,093,441**		**1,145,744,240**		**1,368,949,098**	
Ratio to last year		93.54		99.06		99.16		**103.05**		**99.79**
Power factor adj.	0		0		0		0		0	
Adjusted	110,089,492		117,693,909		1,136,093,441		1,145,744,240		1,368,949,098	
GPA KWH Accountability:										
Sales to civilian customers-accrual basis	**103,591,381**		**111,334,651**		**1,062,392,093**		**1,073,232,311**		**1,280,666,894**	
Ratio to last year		93.05		98.03		98.99		**102.79**		**99.63**
GPA use-KWH	356,321		274,614		3,265,724		2,616,925		3,793,037	
Unaccounted For	6,141,790		6,084,644		70,435,624		69,895,005		84,489,167	
Ratio to deliveries		5.58		5.17		6.20		6.10		6.17
Ratio to Gross Generation		4.39		4.05		4.87		4.76		4.85
Ratio to Net Send Out		4.54		4.18		5.05		4.95		5.03

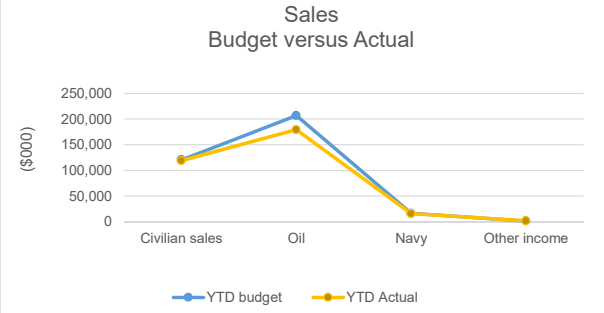
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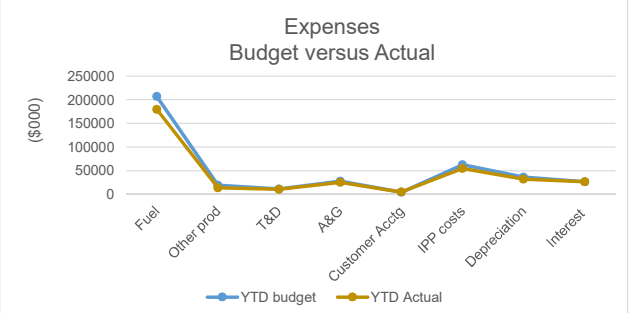
Guam Power Authority
Fuel Consumption
FY 2018

Description	July 2018 BARRELS	July 2018 AMOUNT	YEAR-TO-DATE BARRELS	YEAR-TO-DATE AMOUNT	MOVING 12 MONTHS BARREL S	MOVING 12 MONTHS AMOUNT
FUEL FURNISHED:						
NAVY:						
Diesel	0	0	0	0	0	0
Low Sulfur	0	0	0	0	0	0
	0	**0**	**0**	**0**	**0**	**0**
GPA:						
RFO	114,304	$7,759,879	1,402,759	$ 88,417,395	1,552,667	$ 96,903,472
Diesel	81,611	$7,928,405	643,206	$ 56,440,797	861,572	$ 72,028,469
Low Sulfur	34,092	$2,133,165	229,822	$ 13,930,230	350,030	$ 21,338,345
Deferred Fuel Costs	0	$482,199	0	$ 8,328,374	0	$ 5,627,830
Fuel Adjustments	0	$16,218		$ (747,541)	0	$ (886,136)
Fuel Handling Costs	0	$1,137,573	0	$ 12,962,259	0	$ 17,162,138
	230,007	**$19,457,438**	**2,275,786**	**$ 179,331,513**	**2,764,269**	**$ 212,174,118**
IWPS:						
GPA RFO	114,304	$7,759,879	1,402,759	$ 88,417,395	1,552,667	$ 96,903,472
Diesel	81,611	$7,928,405	643,206	$ 56,440,797	861,572	$ 72,028,469
Low Sulfur	34,092	$2,133,165	229,822	$ 13,930,230	350,030	$ 21,338,345
Deferred Fuel Costs	0	$482,199	0	$ 8,328,374	0	$ 5,627,830
Fuel Variance	0	$16,218	0	$ (747,541)		$ (886,136)
Fuel Handling Costs	0	$1,137,573	0	$ 12,962,259	0	$ 17,162,138
	230,007	**$19,457,438**	**2,275,786**	**$ 179,331,513**	**2,764,269**	**$ 212,174,118**
AVERAGE COST/Bbl.						
GPA RFO		**$67.89**		**$63.03**		**$62.41**
Diesel		**$97.15**		**$87.75**		**$83.60**
Low Sulfur		**$62.57**		**$60.61**		**$60.96**
AS BURNED						
Cabras 1 & 2						
RFO	57,137	$ 3,922,829	769,696	$ 48,467,660	830,883	$ 51,931,380
Low Sulfur	21,008	$ 1,314,498	136,003	$ 8,247,588	193,810	$ 11,800,102
Diesel	306	$ 27,310	1,987	$ 160,806	3,011	$ 225,261
	78,451	$ 5,264,637	907,685	$ 56,876,054	1,027,704	$ 63,956,743
Cabras 3 & 4						
RFO	0	$ -	0	$ -	0	$ -
Low Sulfur	0	$ -	0	$ -	0	$ -
Diesel	0	$ -	0	$ -	0	$ -
	0	$ -	0	$ -	0	$ -
MEC (Piti Units 8&9)						
RFO	57,167	$ 3,837,050	633,063	$ 39,949,734	721,784	$ 44,972,092
Low Sulfur	13,084	$ 818,667	93,819	$ 5,682,642	156,220	$ 9,538,243
Diesel	0	$ -	38	$ 2,127	38	$ 2,127
	70,251	$ 4,655,717	726,919	$ 45,634,503	878,041	$ 54,512,462
Diesel & CT's - GPA:						
MDI Dsl	27	$ 2,004	1,561	$ 108,767	1,582	$ 110,103
Macheche CT	8,828	$ 868,510	97,356	$ 8,420,350	131,831	$ 10,898,860
Yigo CT	11,737	$ 1,141,991	81,938	$ 7,248,407	105,248	$ 8,920,152
Talofofo 10 MW	857	$ 84,897	22,451	$ 1,982,147	30,831	$ 2,575,932
Aggreko	33,525	$ 3,253,595	270,119	$ 23,605,057	324,638	$ 27,422,789
Tenjo	5,409	$ 553,433	65,831	$ 5,977,637	85,548	$ 7,433,348
TEMES (IPP)	15,613	$ 1,454,850	58,845	$ 5,052,649	110,935	$ 8,757,772
GWA Generators	429	$ 50,385	758	$ 89,092	1,099	$ 129,238
	81,305	$ 7,901,095	641,182	$ 56,277,864	858,524	$ 71,801,081
Deferred Fuel Costs	0	$ 482,199		$ 8,328,374		$ 5,627,830
Adjustment		$ 16,218		$ (747,541)		$ (886,136)
Fuel Handling Costs	0	$ 1,137,573		$ 12,962,259		$ 17,162,138
TOTAL	**230,007**	**$ 19,457,438**	**2,275,786**	**$ 179,331,513**	**2,764,269**	**$ 212,174,118**

Statement of operations
Comparison-Budget versus Actual
For the month and year to date ended July 31, 2018

	Budget	Actual July-18	Variance	YTD Budget	YTD Actual	Variance
KwH Sales-Civilian	117,800	103,591	14,209	1,082,364	1,062,392	19,972
Non-fuel yield	$ 0.105655	$ 0.113301	$ (0.007647)	$ 0.111747	$ 0.112159	$ (0.000412)
KwH Sales-Navy	26,604	25,090	1,514	263,534	258,377	5,157
Non-fuel yield	$ 0.061774	$ 0.068115	$ (0.006341)	$ 0.061774	$ 0.062308	$ (0.000534)
Operating revenue						
Civilian sales	$ 13,115	$ 11,737	$ 1,378	$ 120,951	$ 119,157	$ 1,794
Oil	22,185	19,457	2,728	206,773	179,331	27,442
Navy	1,643	1,709	(66)	16,280	16,099	181
Other income	169	308	(139)	1,692	1,809	(117)
	37,113	33,211	3,902	345,695	316,396	29,300
Bad debts expense	87	87	0	866	866	0
Total operating revenues	$ 37,027	$ 33,125	$ 3,902	$ 344,829	$ 315,530	$ 29,299
Operating expenses:						
Production fuel	$ 22,185	$ 19,457	$ 2,728	$ 206,773	$ 179,332	$ 27,442
O & M expenses:						
Other production	1,899	1,426	474	19,434	14,025	5,409
Transmission distribution	1,216	1,129	87	11,459	10,806	653
Administrative expense	2,875	2,713	162	27,977	25,519	2,459
Customer accounting	431	443	(12)	4,072	4,382	(310)
	6,421	5,710	711	62,942	54,731	8,211
IPP costs	1,383	1,325	58	14,588	14,760	(172)
Depreciation	3,635	3,479	156	36,349	32,174	4,175
	$ 33,625	$ 29,972	$ 3,652	$ 320,653	$ 280,997	$ 39,656
Operating income	$ 3,402	$ 3,152	$ 250	$ 24,176	$ 34,533	$ (10,357)
Other revenue (expenses):						
Investment income	99	318	(219)	987	2,363	(1,377)
Interest expense	(2,654)	(2,554)	(100)	(26,549)	(26,582)	34
AFUDC	61	129	(68)	608	1,439	(831)
Bond issuance costs/Other expenses	135	(233)	367	1,346	(2,675)	4,021
Net income before capital contribution	1,042	813	229	568	9,078	(8,511)
Grants from the U.S. Government	-	-	-	-	103	(103)
Increase (decrease) in net assets	$ 1,042	$ 813	$ 229	$ 568	$ 9,181	$ (8,614)





Guam Power Authority
Debt service coverage
July 31, 2018

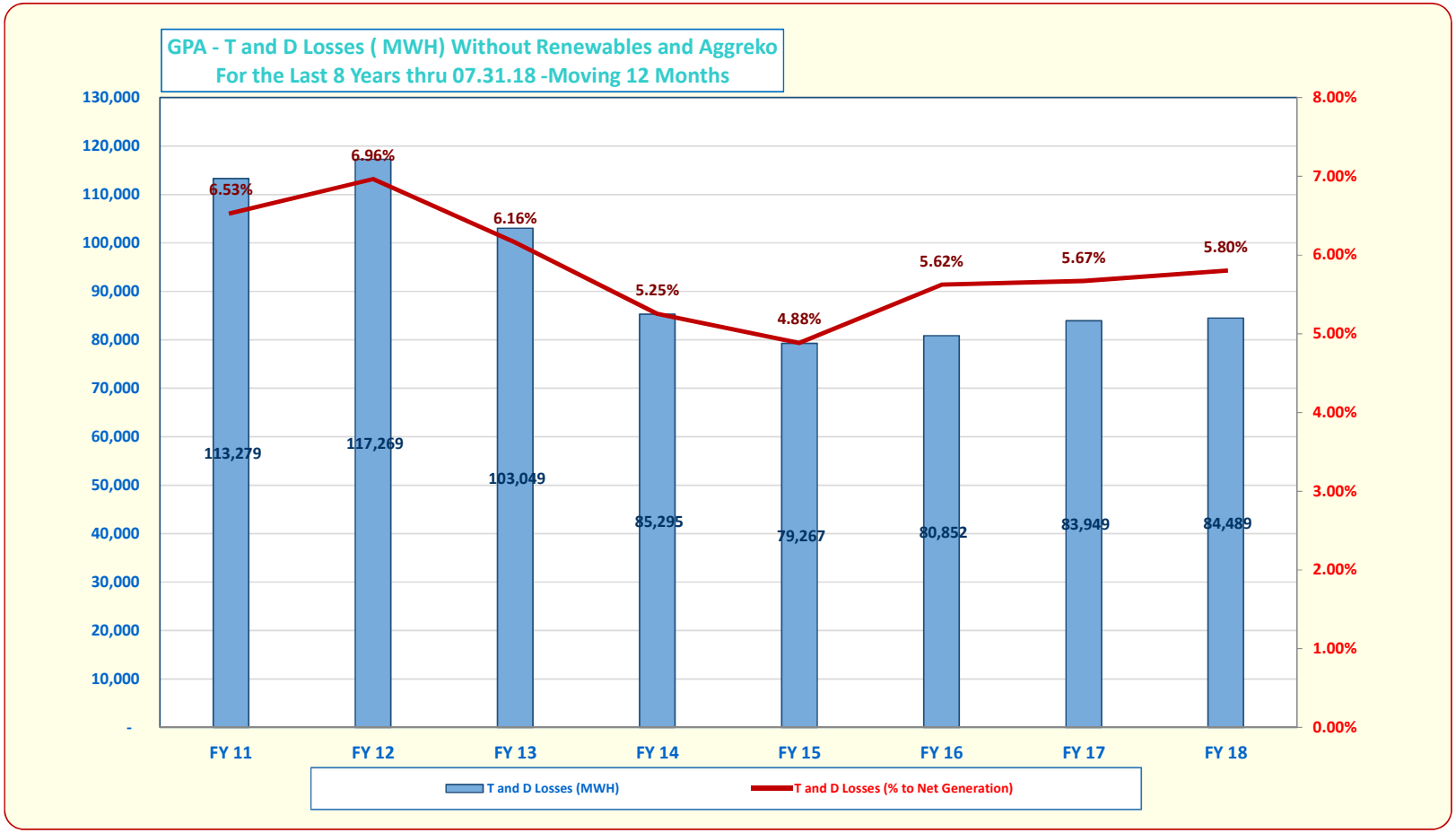
	2014	2015	Restated 2016	2017	YTD 2018
Funds Available for Debt Service					
Earnings from Operations	$ 40,895	$ 48,758	$ 37,981	$ 36,522	$ 34,533
Interest Income	333	368	1,227	(32)	598
Depreciation Expense	36,989	41,766	44,240	44,292	32,174
Balance Available for Debt Service	$ 78,217	$ 90,892	$ 83,448	$ 80,782	$ 67,305
IPP - Capital Costs					
Principal	$ 13,064	$ 18,144	$ 14,819	$ 21,263	$ 19,445
Interest	10,020	8,478	5,970	5,137	2,634
Total IPP Payments	$ 23,084	$ 26,622	$ 20,789	$ 26,400	$ 22,079
Bond Debt Service					
Principal (1993 & 1999 Revenue Bond)	$ -	$ -	$ -	$ -	$ -
Interest (1993 & 1999 Revenue Bond)	-	-	-	-	-
Principal and Interest (2010 Subordinate Bond)	15,193	9,605	-	-	-
Principal and Interest (2010 Senior TE Bond)	7,999	7,999	7,999	7,999	2,000
Principal and Interest (2012 Senior TE Bond)	17,455	17,096	17,098	17,449	14,238
Principal and Interest (2014 Senior TE Bond)		-	10	5,084	4,236
Principal and Interest (2017 Senior TE Bond)					4,642
Total	$ 40,647	$ 34,700	$ 25,107	$ 30,532	$ 25,117
Debt Service Coverage (DSC) Calculation					
Existing DSC Methodology (Senior)	2.17 x	2.56 x	2.50 x	1.78 x	1.80 x
Existing DSC Methodology (Senior+Subordinate)	1.36 x	1.85 x	2.50 x	1.78 x	1.80 x
Bond Covenant DSC	1.92 x	2.62 x	3.32 x	2.65 x	2.68 x
Debt Service Coverage Requirements					
Existing Ratemaking DSC Target	1.75 x	1.75 x	1.75 x	1.75 x	1.75 x
Minimum Bond Covenant Requirement (Senior Bond)	1.30 x	1.30 x	1.30 x	1.30 x	1.30 x
Minimum Bond Covenant Requirement (Subordinate Bond	1.20 x	1.20 x	1.20 x	1.20 x	1.20 x

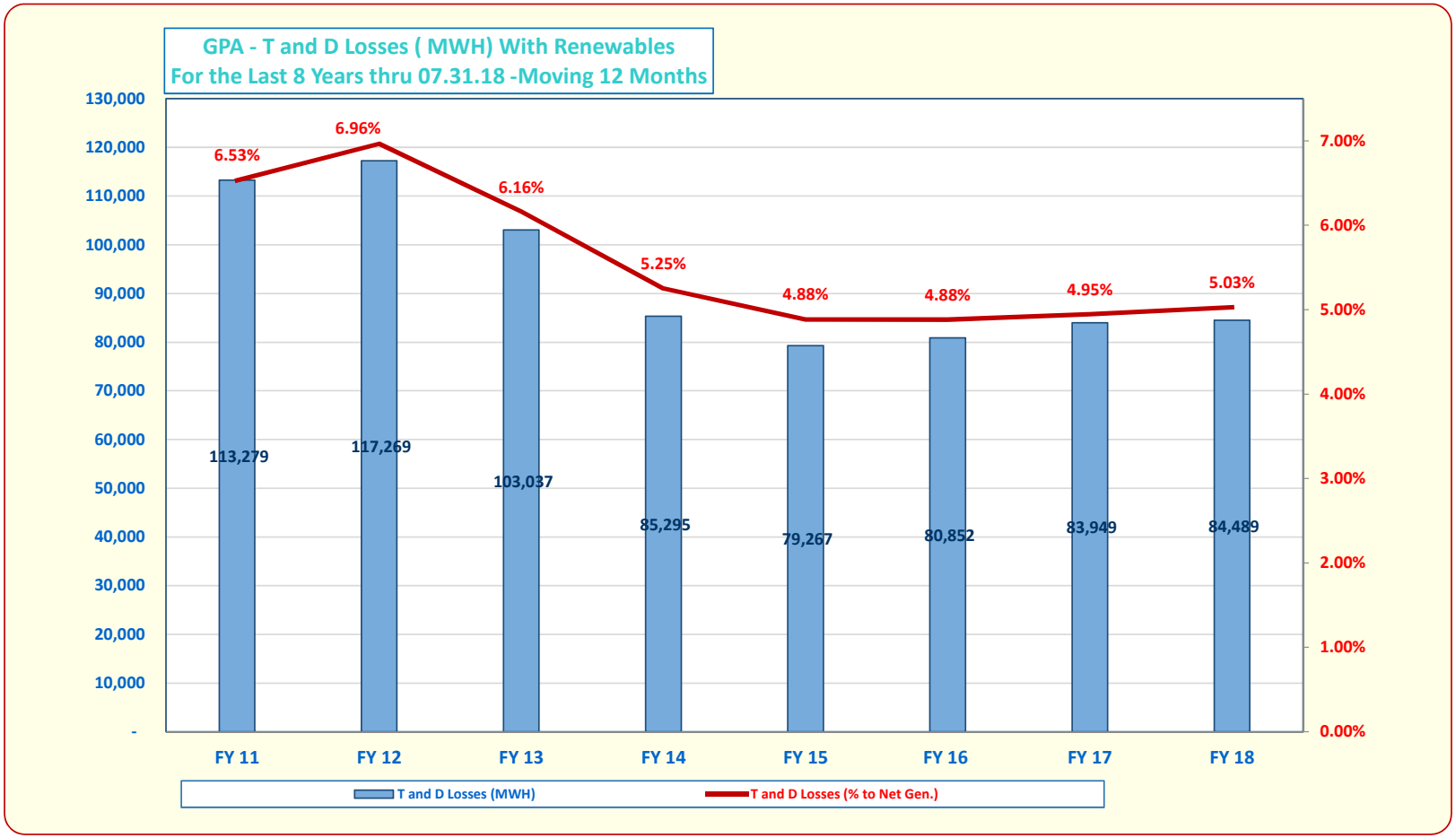
Notes:
(1) Source: Guam Power Authority, 2014 - 2017 Audited Financial Statements
(2) Interest income is net of interest earnings in the Construction Fund and the amortization of deferred credit.
(3) Existing DSC Methodology (Rating Agency Method):
(Operating Earnings + Depreciation Expense - IPP Principal & Interest Payments)/
(Senior and Subordinate Bond Principal & Interest Payments)
(4) Bond Covenant DSC Methodology: (Operating Earnings + Depreciation Expense)/
(Senior and Subordinate Bond Principal & Interest Payments)

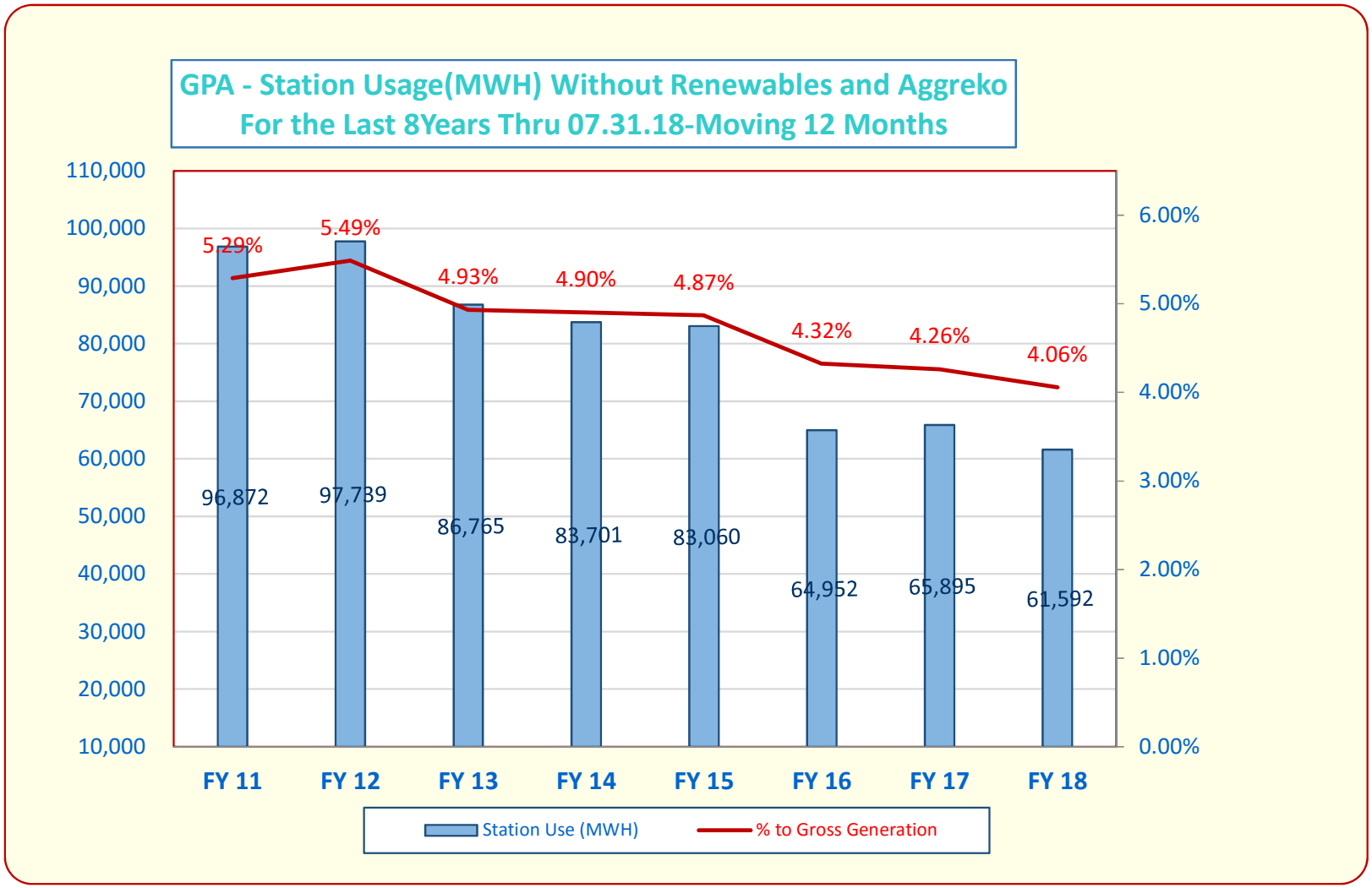
REVENUES-ACTUAL VS PROJECTIONS

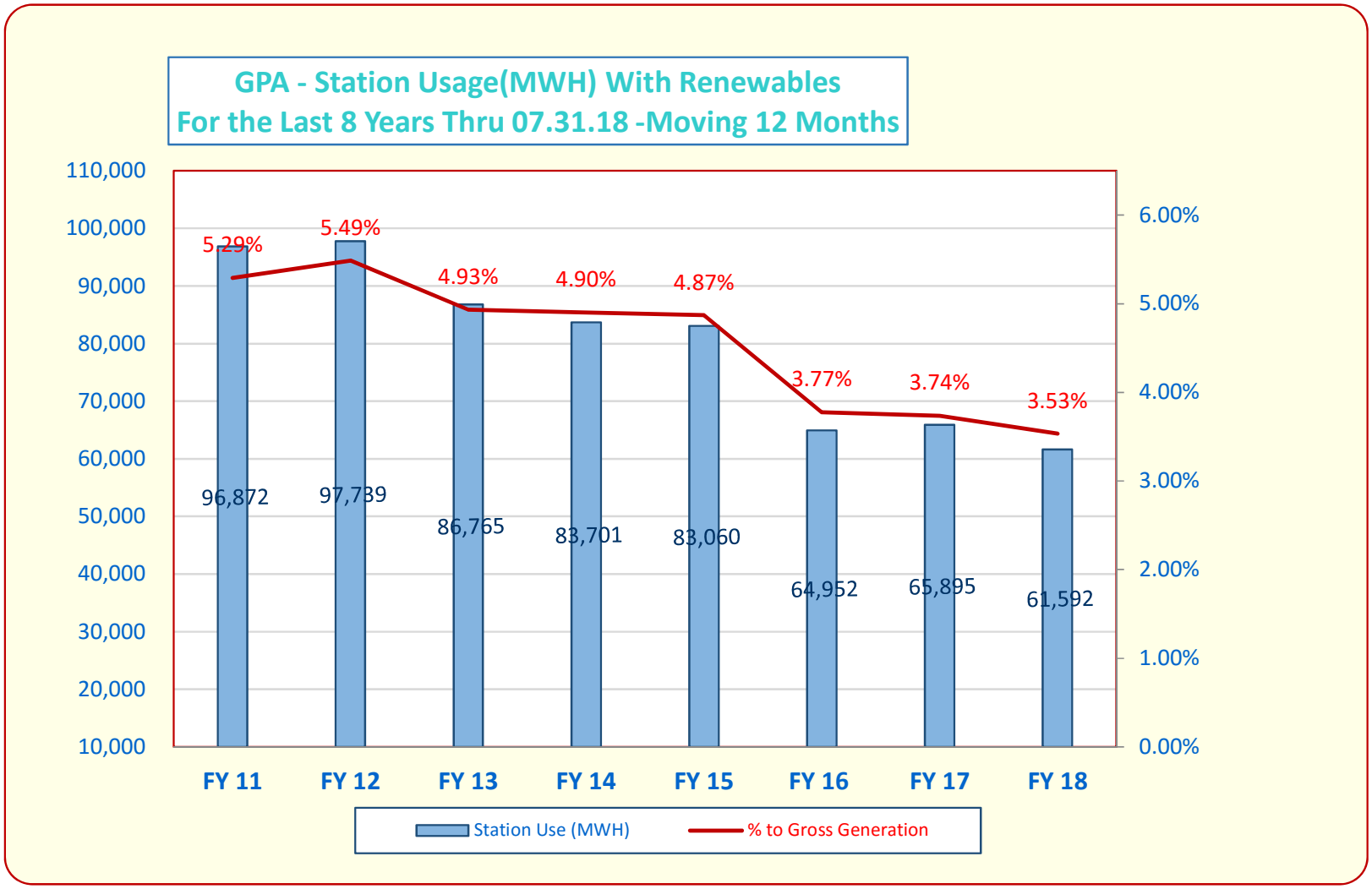
	MONTHLY - JULY 2018				YTD THRU 07/31/2018			
	PROJECTIONS	ACTUAL	VARIANCE	% VARIANCE	PROJECTIONS	ACTUAL	VARIANCE	% VARIANCE
KWH								
Residential	47,629,041	41,361,122	(6,267,919)	-13.16%	423,877,930	418,390,923	(5,487,006)	-1.29%
Small General-Non-Demand	7,912,022	6,743,157	(1,168,865)	-14.77%	72,105,558	68,553,439	(3,552,119)	-4.93%
Small General-Demand	17,481,265	15,161,689	(2,319,576)	-13.27%	158,702,555	155,303,386	(3,399,169)	-2.14%
Large	27,916,519	25,339,577	(2,576,942)	-9.23%	265,615,260	259,070,026	(6,545,234)	-2.46%
Independent Power Producers	34,921	30,088	(4,833)	-13.84%	332,257	419,755	87,499	26.33%
Private St. Lites	58,751	34,288	(24,463)	-41.64%	556,474	334,612	(221,862)	-39.87%
Sub-total	**101,032,518**	**88,669,920**	**(12,362,597)**	**-12.24%**	**921,190,034**	**902,072,142**	**(19,117,891)**	**-2.08%**
Government								
Small_Non Demand	1,234,935	1,128,046	(106,889)	-8.66%	11,239,678	12,031,467	791,789	7.04%
Small-Demand	8,472,670	7,182,975	(1,289,696)	-15.22%	80,859,708	78,222,446	(2,637,262)	-3.26%
Large	6,252,382	5,707,305	(545,078)	-8.72%	60,895,341	62,597,150	1,701,810	2.79%
Public St. Lites	807,579	903,135	95,556	11.83%	8,179,936	7,468,888	(711,048)	-8.69%
Sub-total	**16,767,567**	**14,921,461**	**(1,846,106)**	**-11.01%**	**161,174,664**	**160,319,952**	**(854,712)**	**-0.53%**
Total-Civilian	**117,800,085**	**103,591,381**	**(14,208,704)**	**-12.06%**	**1,082,364,697**	**1,062,392,094**	**(19,972,603)**	**-1.85%**
USN	26,603,917	25,089,942	(1,513,974)	-5.69%	263,533,988	258,377,165	(5,156,823)	-1.96%
Grand Total	**144,404,001**	**128,681,323**	**(15,722,678)**	**-10.89%**	**1,345,898,685**	**1,320,769,259**	**(25,129,426)**	**-1.87%**
					-	-		
Non-Oil Yield								
Residential	0.096203	0.096717	0.000514	0.53%	0.096203	0.096195	(0.000009)	-0.01%
Small General-Non-Demand	0.136364	0.138711	0.002347	1.72%	0.136364	0.136725	0.000361	0.26%
Small General-Demand	0.119423	0.121615	0.002192	1.84%	0.119423	0.119735	0.000312	0.26%
Large	0.103705	0.103339	(0.000366)	-0.35%	0.103705	0.103647	(0.000058)	-0.06%
Independent Power Producers	0.117983	0.171053	0.053070	0.00%	0.117983	0.113770	(0.004213)	0.00%
Private St. Lites	0.454278	0.612850	0.158572	34.91%	0.454278	0.629012	0.174734	38.46%
Sub-total	**0.105655**	**0.106285**	**0.000631**	**0.60%**	**0.105734**	**0.105674**	**(0.000061)**	**-0.06%**
Government					-			
Small_Non Demand	0.152255	0.150529	(0.001726)	-1.13%	0.152255	0.150250	(0.002005)	-1.32%
Small-Demand	0.135082	0.135525	0.000443	0.33%	0.135082	0.134310	(0.000772)	-0.57%
Large	0.128102	0.129702	0.001600	1.25%	0.128102	0.127286	(0.000816)	-0.64%
Public St. Lites	0.380746	0.475173	0.094427	24.80%	0.380746	0.475210	0.094463	24.81%
Sub-total	**0.145576**	**0.154990**	**0.009414**	**6.47%**	**0.146110**	**0.148645**	**0.002535**	**1.74%**
Total-Civilian	**0.111337**	**0.113301**	**0.001964**	**1.76%**	**0.111747**	**0.112158**	**0.000412**	**0.37%**
USN	0.061774	0.068124	0.006350	10.28%	0.061774	0.062312	0.000538	0.87%
Grand Total	**0.102206**	**0.104492**	**0.002286**	**2.24%**	**0.101962**	**0.102407**	**0.000445**	**0.44%**
Non-Oil Revenues								
Residential	4,582,075	4,000,341	(581,734)	-12.70%	40,778,494	40,246,967	(531,526)	-1.30%
Small General-Non-Demand	1,078,917	935,351	(143,566)	-13.31%	9,832,620	9,372,976	(459,644)	-4.67%
Small General-Demand	2,087,668	1,843,889	(243,779)	-11.68%	18,952,758	18,595,284	(357,473)	-1.89%
Large	2,895,072	2,618,565	(276,507)	-9.55%	27,545,534	26,851,829	(693,705)	-2.52%
Independent Power Producers	4,120	5,147	1,027	24.92%	39,201	47,756	8,555	21.82%
Private St. Lites	26,689	21,013	(5,676)	-21.27%	252,794	210,475	(42,319)	-16.74%
Sub-total	**10,674,541**	**9,424,306**	**(1,250,235)**	**-11.71%**	**97,401,399**	**95,325,287**	**(2,076,112)**	**-2.13%**
Government								
Small_Non Demand	188,024	169,803	(18,221)	-9.69%	1,711,292	1,807,725	96,434	5.64%
Small-Demand	1,144,504	973,474	(171,029)	-14.94%	10,922,675	10,506,055	(416,619)	-3.81%
Large	800,943	740,250	(60,693)	-7.58%	7,800,817	7,967,732	166,914	2.14%
Public St. Lites	307,483	429,146	121,663	39.57%	3,114,480	3,549,287	434,807	13.96%
Sub-total	**2,440,954**	**2,312,674**	**(128,280)**	**-5.26%**	**23,549,264**	**23,830,800**	**281,536**	**1.20%**
Total-Civilian	**13,115,495**	**11,736,980**	**(1,378,515)**	**-10.51%**	**120,950,663**	**119,156,087**	**(1,794,576)**	**-1.48%**
USN	1,643,429	1,709,225	65,796	4.00%	16,279,538	16,099,964	(179,574)	-1.10%
Grand Total	**14,758,924**	**13,446,204**	**(1,312,720)**	**-8.89%**	**137,230,201**	**135,256,051**	**(1,974,150)**	**-1.44%**
% of Total Revenues	39.95%	40.87%			39.89%	42.99%		
Oil Revenues								
Residential	7,317,357	6,379,622	(937,735)	-12.82%	65,121,326	58,269,310	(6,852,016)	-10.52%
Small General-Non-Demand	1,215,542	1,040,078	(175,464)	-14.44%	11,077,740	9,549,895	(1,527,845)	-13.79%
Small General-Demand	2,685,686	2,337,734	(347,952)	-12.96%	24,381,833	21,573,539	(2,808,295)	-11.52%
Large	4,288,878	3,892,141	(396,737)	-9.25%	40,807,074	35,469,236	(5,337,838)	-13.08%
Independent Power Producers	5,365	4,472	(893)	-16.64%	51,045	53,039	1,993	3.90%
Private St. Lites	9,026	5,289	(3,737)	-41.41%	85,492	45,983	(39,509)	-46.21%
Sub-total	**15,521,855**	**13,659,337**	**(1,862,518)**	**-12.00%**	**141,524,511**	**124,961,002**	**(16,563,510)**	**-11.70%**
Government								
Small_Non Demand	189,726	173,992	(15,734)	-8.29%	1,726,777	1,647,819	(78,959)	-4.57%
Small-Demand	1,301,676	1,107,916	(193,759)	-14.89%	12,422,660	10,716,015	(1,706,645)	-13.74%
Large	960,568	868,923	(91,645)	-9.54%	9,355,489	8,470,800	(884,689)	-9.46%
Public St. Lites	124,070	139,301	15,231	12.28%	1,256,702	1,031,526	(225,176)	-17.92%
Sub-total	**2,576,039**	**2,290,132**	**(285,907)**	**-11.10%**	**24,761,629**	**21,866,160**	**(2,895,469)**	**-11.69%**
Total-Civilian	**18,097,894**	**15,949,469**	**(2,148,425)**	**-11.87%**	**166,286,140**	**146,827,162**	**(19,458,978)**	**-11.70%**
USN	4,087,220	3,507,969	(579,251)	-14.17%	40,487,324	32,504,347	(7,982,977)	-19.72%
Grand Total	**22,185,114**	**19,457,438**	**(2,727,675)**	**-12.30%**	**206,773,464**	**179,331,508**	**(27,441,955)**	**-13.27%**
% of Total Revenues	60.05%	59.13%			60.11%	57.01%		
Grand Total								
Residential	11,899,433	10,379,963	(1,519,470)	-12.77%	105,899,820	98,516,278	(7,383,543)	-6.97%
Small General-Non-Demand	2,294,459	1,975,429	(319,030)	-13.90%	20,910,360	18,922,871	(1,987,489)	-9.50%
Small General-Demand	4,773,354	4,181,623	(591,731)	-12.40%	43,334,591	40,168,823	(3,165,768)	-7.31%
Large	7,183,950	6,510,707	(673,244)	-9.37%	68,352,608	62,321,065	(6,031,543)	-8.82%
Independent Power Producers	9,485	9,619	134	1.41%	90,246	100,794	10,548	11.69%
Private St. Lites	35,715	26,302	(9,413)	-26.36%	338,286	256,458	(81,828)	-24.19%
Sub-total	**26,196,396**	**23,083,643**	**(3,112,753)**	**-11.88%**	**238,925,911**	**220,286,289**	**(18,639,622)**	**-7.80%**
Government					-			
Small_Non Demand	377,750	343,795	(33,955)	-8.99%	3,438,069	3,455,544	17,475	0.51%
Small-Demand	2,446,179	2,081,391	(364,788)	-14.91%	23,345,335	21,222,070	(2,123,264)	-9.10%
Large	1,761,511	1,609,173	(152,338)	-8.65%	17,156,306	16,438,532	(717,775)	-4.18%
Public St. Lites	431,553	568,447	136,894	31.72%	4,371,182	4,580,813	209,631	4.80%
Sub-total	**5,016,993**	**4,602,806**	**(414,187)**	**-8.26%**	**48,310,892**	**45,696,960**	**(2,613,933)**	**-5.41%**
Total-Civilian	**31,213,389**	**27,686,449**	**(3,526,940)**	**-11.30%**	**287,236,803**	**265,983,249**	**(21,253,555)**	**-7.40%**
USN	5,730,649	5,217,194	(513,455)	-8.96%	56,766,862	48,604,311	(8,162,551)	-14.38%
Grand Total	**36,944,038**	**32,903,643**	**(4,040,395)**	**-10.94%**	**344,003,665**	**314,587,559**	**(29,416,106)**	**-8.55%**
	-	-	-					

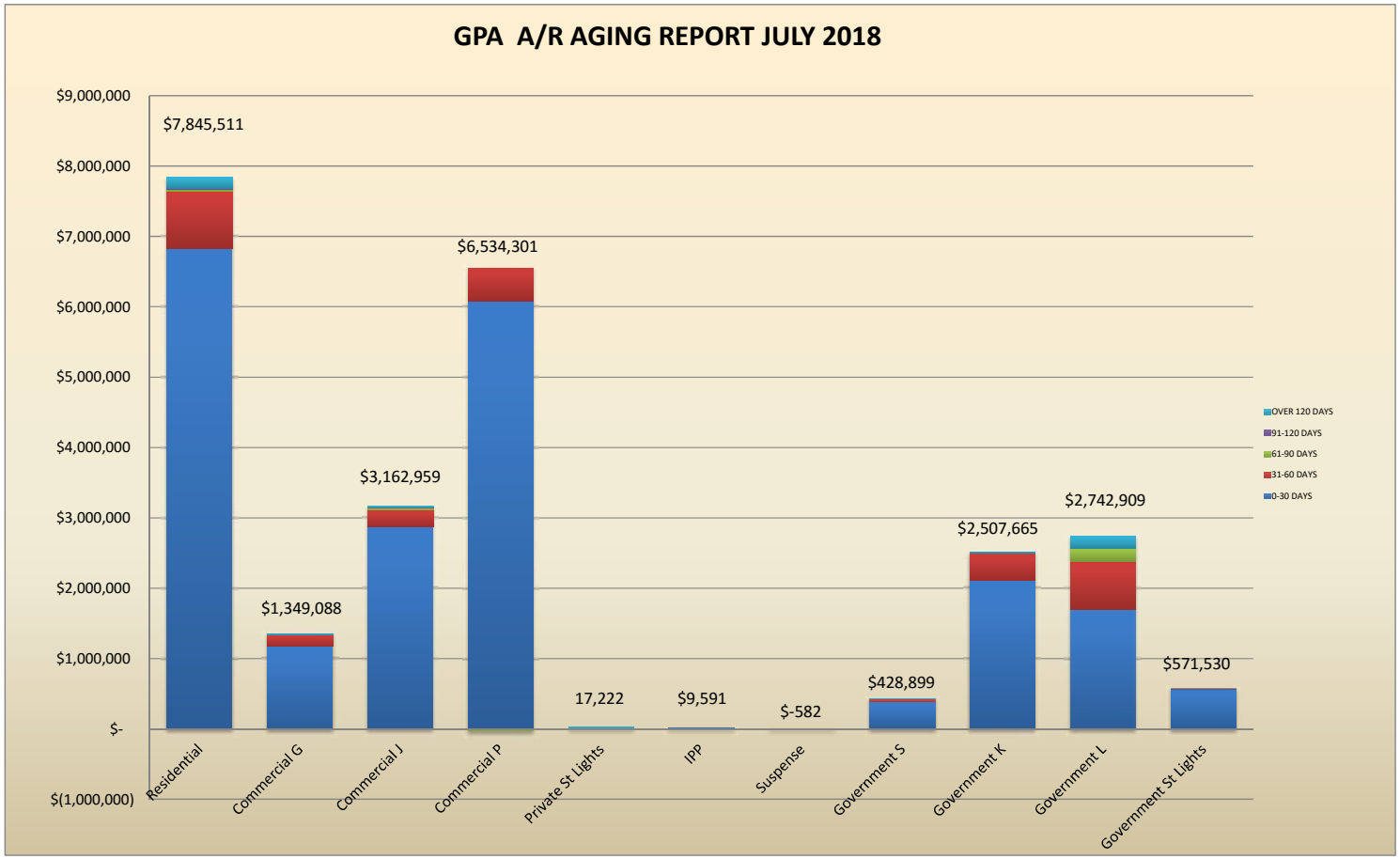
	YTD REVENUES - CURRENT YEAR VS PRIOR YEAR				MTD REVENUES - CURRENT YEAR VS PRIOR YEAR			
	ACTUALS - 10 MONTHS ENDED JULY 31				ACTUALS - MONTH ENDED JULY 31			
	2018	2017	VARIANCE	% VARIANCE	2018	2017	VARIANCE	% VARIANCE
KWH								
Residential	418,390,923	420,409,867	(2,018,943)	-0.48%	41,361,122	45,094,364	(3,733,242)	-8.28%
Small General-Non-Demand	68,553,439	69,530,169	(976,730)	-1.40%	6,743,157	7,087,373	(344,216)	-4.86%
Small General-Demand	155,303,386	158,053,260	(2,749,874)	-1.74%	15,161,689	15,839,125	(677,436)	-4.28%
Large	259,070,026	262,103,183	(3,033,157)	-1.16%	25,339,577	27,119,633	(1,780,057)	-6.56%
Independent Power Producers	419,755	869,484	(449,729)	-51.72%	30,088	82,800	(52,712)	-63.66%
Private St. Lites	334,612	382,552	(47,940)	-12.53%	34,288	35,412	(1,124)	-3.17%
Sub-total	**902,072,142**	**911,348,514**	**(9,276,372)**	**-1.02%**	**88,669,920**	**95,258,706**	**(6,588,786)**	**-6.92%**
Government								
Small_Non Demand	12,031,467	11,412,653	618,814	5.42%	1,128,046	1,254,979	(126,933)	-10.11%
Small-Demand	78,222,446	80,646,847	(2,424,401)	-3.01%	7,182,975	7,962,644	(779,669)	-9.79%
Large	62,597,150	61,883,821	713,330	1.15%	5,707,305	6,219,351	(512,046)	-8.23%
Public St. Lites	7,468,888	7,940,474	(471,586)	-5.94%	903,135	638,971	264,164	41.34%
Sub-total	**160,319,952**	**161,883,796**	**(1,563,843)**	**-0.97%**	**14,921,461**	**16,075,944**	**(1,154,484)**	**-7.18%**
Total-Civilian	**1,062,392,094**	**1,073,232,310**	**(10,840,216)**	**-1.01%**	**103,591,381**	**111,334,651**	**(7,743,270)**	**-6.95%**
USN	258,377,165	265,070,861	(6,693,696)	-2.53%	25,089,942	27,892,205	(2,802,263)	-10.05%
Grand Total	**1,320,769,259**	**1,338,303,170**	**(17,533,911)**	**-1.31%**	**128,681,323**	**139,226,856**	**(10,545,533)**	**-7.57%**
Non-Oil Yield								
Residential	0.096195	0.096267	-0.000072	-0.08%	0.096717	0.095780	0.000937	0.98%
Small General-Non-Demand	0.136725	0.136583	0.000142	0.10%	0.138711	0.136213	0.002498	1.83%
Small General-Demand	0.119735	0.119358	0.000377	0.32%	0.121615	0.117671	0.003944	3.35%
Large	0.103647	0.102709	0.000938	0.91%	0.103339	0.101565	0.001774	1.75%
Independent Power Producers	0.000000	0.109790	-0.109790	-100.00%	0.171053	0.106916	0.064138	59.99%
Private St. Lites	0.629012	0.574047	0.054965	9.58%	0.612850	0.603716	0.009134	1.51%
Sub-total	**0.105674**	**0.105414**	**0.000260**	**0.25%**	**0.106285**	**0.104274**	**0.002012**	**1.93%**
Government								
Small_Non Demand	0.150250	0.151767	-0.001517	-1.00%	0.150529	0.149244	0.001285	0.86%
Small-Demand	0.134310	0.134684	-0.000374	-0.28%	0.135525	0.134521	0.001004	0.75%
Large	0.127286	0.126211	0.001075	0.85%	0.129702	0.125276	0.004426	3.53%
Public St. Lites	0.475210	0.467844	0.007366	1.57%	0.475173	0.549144	-0.073971	-13.47%
Sub-total	**0.148645**	**0.148991**	**-0.000346**	**-0.23%**	**0.154990**	**0.148574**	**0.006416**	**4.32%**
Total-Civilian	**0.112158**	**0.111987**	**0.000171**	**0.15%**	**0.113301**	**0.110670**	**0.002630**	**2.38%**
USN	0.062312	0.061655	0.000657	1.07%	0.068124	0.059154	0.008970	15.16%
Grand Total	**0.102407**	**0.102018**	**0.000389**	**0.38%**	**0.104492**	**0.100350**	**0.004143**	**4.13%**
Non-Oil Revenues								
Residential	40,246,967	40,471,654	(224,686)	-0.56%	4,000,341	4,319,136	(318,796)	-7.38%
Small General-Non-Demand	9,372,976	9,496,649	(123,673)	-1.30%	935,351	965,396	(30,045)	-3.11%
Small General-Demand	18,595,284	18,864,922	(269,638)	-1.43%	1,843,889	1,863,810	(19,921)	-1.07%
Large	26,851,829	26,920,413	(68,583)	-0.25%	2,618,565	2,754,395	(135,830)	-4.93%
Independent Power Producers	47,756	95,460	(47,705)	-49.97%	5,147	8,853	(3,706)	-41.86%
Private St. Lites	210,475	219,603	(9,128)	-4.16%	21,013	21,379	(365)	-1.71%
Sub-total	**95,325,287**	**96,068,700**	**(743,413)**	**-0.77%**	**9,424,306**	**9,932,968**	**(508,662)**	**-5.12%**
Government								
Small_Non Demand	1,807,725	1,732,062	75,664	4.37%	169,803	187,298	(17,495)	-9.34%
Small-Demand	10,506,055	10,861,828	(355,773)	-3.28%	973,474	1,071,144	(97,670)	-9.12%
Large	7,967,732	7,810,415	157,316	2.01%	740,250	779,135	(38,884)	-4.99%
Public St. Lites	3,549,287	3,714,903	(165,615)	-4.46%	429,146	350,887	78,258	22.30%
Sub-total	**23,830,800**	**24,119,207**	**(288,408)**	**-1.20%**	**2,312,674**	**2,388,464**	**(75,791)**	**-3.17%**
Total-Civilian	**119,156,087**	**120,187,908**	**(1,031,821)**	**-0.86%**	**11,736,980**	**12,321,432**	**(584,453)**	**-4.74%**
USN	16,099,964	16,342,860	(242,895)	-1.49%	1,709,225	1,649,939	59,286	3.59%
Grand Total	**135,256,051**	**136,530,767**	**(1,274,716)**	**-0.93%**	**13,446,204**	**13,971,371**	**(525,166)**	**-3.76%**
% of Total Revenues								
Oil Revenues								
Residential	58,269,310	41,480,194	16,789,117	40.48%	6,379,622	4,737,208	1,642,414	34.67%
Small General-Non-Demand	9,549,895	6,857,426	2,692,470	39.26%	1,040,078	744,536	295,542	39.69%
Small General-Demand	21,573,539	15,548,165	6,025,374	38.75%	2,337,734	1,663,381	674,353	40.54%
Large	35,469,236	25,586,050	9,883,187	38.63%	3,892,141	2,835,089	1,057,052	37.28%
Independent Power Producers	53,039	83,691	(30,652)	-36.63%	4,472	8,417	(3,945)	-46.87%
Private St. Lites	45,983	36,900	9,083	24.62%	5,289	3,720	1,569	42.17%
Sub-total	**124,961,002**	**89,592,424**	**35,368,578**	**39.48%**	**13,659,337**	**9,992,351**	**3,666,985**	**36.70%**
Government								
Small_Non Demand	1,647,819	1,115,543	532,276	47.71%	173,992	131,837	42,155	31.98%
Small-Demand	10,716,015	7,865,706	2,850,310	36.24%	1,107,916	836,484	271,433	32.45%
Large	8,470,800	6,020,425	2,450,375	40.70%	868,923	645,157	223,766	34.68%
Public St. Lites	1,031,526	770,937	260,588	33.80%	139,301	67,125	72,177	107.53%
Sub-total	**21,866,160**	**15,772,611**	**6,093,549**	**38.63%**	**2,290,132**	**1,680,602**	**609,531**	**36.27%**
Total-Civilian	**146,827,162**	**105,365,035**	**41,462,126**	**39.35%**	**15,949,469**	**11,672,953**	**4,276,516**	**36.64%**
USN	32,504,347	28,217,009	4,287,337	15.19%	3,507,969	3,681,763	(173,794)	-4.72%
Grand Total	**179,331,508**	**133,582,045**	**45,749,464**	**34.25%**	**19,457,438**	**15,354,716**	**4,102,722**	**26.72%**
% of Total Revenues								
Grand Total								
Residential	98,516,278	81,951,847	16,564,430	20.21%	10,379,963	9,056,344	1,323,619	14.62%
Small General-Non-Demand	18,922,871	16,354,075	2,568,796	15.71%	1,975,429	1,709,931	265,497	15.53%
Small General-Demand	40,168,823	34,413,087	5,755,736	16.73%	4,181,623	3,527,191	654,432	18.55%
Large	62,321,065	52,506,462	9,814,603	18.69%	6,510,707	5,589,484	921,222	16.48%
Independent Power Producers	100,794	179,151	(78,357)	-43.74%	9,619	17,270	(7,651)	-44.30%
Private St. Lites	256,458	256,503	(45)	-0.02%	26,302	25,099	1,203	4.79%
Sub-total	**220,286,289**	**185,661,124**	**34,625,165**	**18.65%**	**23,083,643**	**19,925,320**	**3,158,323**	**15.85%**
Government								
Small_Non Demand	3,455,544	2,847,605	607,939	21.35%	343,795	319,135	24,660	7.73%
Small-Demand	21,222,070	18,727,533	2,494,537	13.32%	2,081,391	1,907,628	173,763	9.11%
Large	16,438,532	13,830,841	2,607,691	18.85%	1,609,173	1,424,292	184,881	12.98%
Public St. Lites	4,580,813	4,485,840	94,973	2.12%	568,447	418,012	150,435	35.99%
Sub-total	**45,696,960**	**39,891,819**	**5,805,141**	**14.55%**	**4,602,806**	**4,069,066**	**533,740**	**13.12%**
Total-Civilian	**265,983,249**	**225,552,943**	**40,430,306**	**17.92%**	**27,686,449**	**23,994,386**	**3,692,063**	**15.39%**
USN	48,604,311	44,559,869	4,044,442	9.08%	5,217,194	5,331,702	(114,508)	-2.15%
Grand Total	**314,587,559**	**270,112,812**	**44,474,748**	**16.47%**	**32,903,643**	**29,326,087**	**3,577,556**	**12.20%**


GPA - T and D Losses (MWH) Without Renewables and Aggreko
For the Last 8 Years thru 07.31.18 -Moving 12 Months
130,000
120,000
110,000
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
-
8.00%
7.00%
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
6.53%
6.96%
6.16%
5.25%
4.88%
5.62%
5.67%
5.80%
113,279
117,269
103,049
85,295
79,267
80,852
83,949
84,489
FY 11
FY 12
FY 13
FY 14
FY 15
FY 16
FY 17
FY 18
T and D Losses (MWH)
T and D Losses (% to Net Generation)


GPA - T and D Losses (MWH) With Renewables
For the Last 8 Years thru 07.31.18 -Moving 12 Months
130,000
120,000
110,000
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
-
7.00%
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
6.53%
6.96%
6.16%
5.25%
4.88%
4.88%
4.95%
5.03%
113,279
117,269
103,037
85,295
79,267
80,852
83,949
84,489
FY 11
FY 12
FY 13
FY 14
FY 15
FY 16
FY 17
FY 18
T and D Losses (MWH)
T and D Losses (% to Net Gen.)


GPA - Station Usage(MWH) Without Renewables and Aggreko
For the Last 8Years Thru 07.31.18-Moving 12 Months
110,000
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
5.29%
5.49%
4.93%
4.90%
4.87%
4.32%
4.26%
4.06%
96,872
97,739
86,765
83,701
83,060
64,952
65,895
61,592
FY 11
FY 12
FY 13
FY 14
FY 15
FY 16
FY 17
FY 18
Station Use (MWH)
% to Gross Generation


GPA - Station Usage(MWH) With Renewables
For the Last 8 Years Thru 07.31.18 -Moving 12 Months
110,000
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
5.29%
5.49%
4.93%
4.90%
4.87%
3.77%
3.74%
3.53%
96,872
97,739
86,765
83,701
83,060
64,952
65,895
61,592
FY 11
FY 12
FY 13
FY 14
FY 15
FY 16
FY 17
FY 18
Station Use (MWH)
% to Gross Generation


GPA A/R AGING REPORT JULY 2018
$9,000,000
$8,000,000
$7,000,000
$6,000,000
$5,000,000
$4,000,000
$3,000,000
$2,000,000
$1,000,000
$-
$(1,000,000)
$7,845,511
$1,349,088
$3,162,959
$6,534,301
17,222
$9,591
$-582
$428,899
$2,507,665
$2,742,909
$571,530
Residential
Commercial G
Commercial J
Commercial P
Private St Lights
IPP
Suspense
Government S
Government K
Government L
Government St Lights
OVER 120 DAYS
91-120 DAYS
61-90 DAYS
31-60 DAYS
0-30 DAYS

GUAM POWER AUTHORITY
GOVERNMENT ACCOUNTS RECEIVABLE
BILLING UP TO 07/31/2018 and Payment Applied as of 08/22/2018

Current (07/18 Billing due 08/31/18
30 days Arrears (06/18 due 07/15/18)
60 days and over Arrears (05/18 billing due 06/15/18)

CC&B ACCT NUMBER	DEPARTMENT	BALANCE 6/30/2018	CANCEL/REBILL/ SPEC CHARGE 7/31/2018	BILLING 7/31/2018	PAYMENT 8/22/2018	BALANCE 8/22/2018	
	Line Agencies						
0237100000	Dept. of Corrections	81,163.13	-	85,217.89	(166,381.02)	-	
0437100000	Dept. of Parks & Rec.	36,893.05	-	26,652.10	(63,545.15)	-	
0537100000	Guam Fire Department	17,369.62	-	17,553.75	(34,923.37)	-	
6995000000	DOA Supply Mgmt	1,224.12	-	1,584.32	(2,808.44)	-	
7895000000	Dept. of Administration	3,746.35	-	4,327.30	(8,073.65)	-	
1337100000	Nieves Flores Library	10,366.73	-	10,349.00	(20,715.73)	-	
2206200000	General Services Agency	267.48	-	262.38	(529.86)	-	
2237100000	DOA-Data Processing	8,659.23	-	9,002.37	(17,661.60)	-	
2337100000	Dept. of PH&SS	72,522.35	1,091.92	72,482.02	(145,004.37)	1,091.92	
3237100000	Dept. of Education	893,951.41	13,458.97	892,753.80	-	1,800,164.18	1
3337100000	Guam Police Department	42,386.17	-	52,708.77	(95,094.94)	-	
3569100000	Dept of Youth Affairs (Federal)	971.68	-	1,002.20	(1,973.88)	-	
4437100000	Dept. of Youth Affair* (Local)	11,310.87	-	12,297.28	(23,608.15)	-	
4737100000	Guam Environmental Protect	6,689.68	-	6,666.56	(13,356.24)	-	
5437100000	Mental Health/Subst.	46,016.37	-	46,301.70	(92,318.07)	-	
7200300000	Veteran Affairs	1,004.22	-	968.97	(1,973.19)	-	
7437100000	Civil Defense (Military Affairs)	10,896.78	-	11,746.18	(22,642.96)	-	
7463300000	Pacific Energy Resource Center	744.46	-	698.81	(1,443.27)	-	
8137100000	Dept. of Agriculture	9,768.47	-	10,032.65	(9,768.47)	10,032.65	
8337100000	DPW-FAC Adm Account	26,199.75	-	27,167.62	(53,367.37)	-	
8437100000	Guam Visitors Bureau	4,324.34	-	4,689.93	(9,014.27)	-	
8446300000	Yona Senior Citizen Center	986.93	-	937.51	(1,924.44)	-	
9437100000	Dept of Chamorro Affairs/Chamorro Village	4,221.99	-	4,980.22	(9,202.21)	-	
5247210000	Mayors Council	2,204.47	-	2,114.02	(4,318.49)	-	
6293410000	Office of the Governor	23,482.55	-	24,573.36	(48,055.91)	-	
8555858369	Dept of Chamorro Affairs (Guam Museum)	21,891.77	-	24,356.43	(46,248.20)	-	
	Sub Total	**1,339,263.97**	**14,550.89**	**1,351,427.14**	**(893,953.25)**	**1,811,288.75**	
	MAYORS						
0637100000	Santa Rita Mayor	3,734.90	-	3,960.64	(7,695.54)	-	
0737100000	Ordot/Chalan Pago Mayor	1,669.23	-	1,256.08	(2,925.31)	-	
1537100000	Hagatna Mayor	1,462.68	-	1,523.61	(2,986.29)	-	
1637100000	Piti Mayor	1,397.17	-	1,754.24	(3,151.41)	-	
1737100000	Mongmong/Toto/Maite Mayor	1,177.04	-	1,220.51	(2,397.55)	-	
2637100000	Asan/Maina/Adelup Mayor	1,011.62	-	941.98	(1,953.60)	-	
2737100000	Sinajana Mayor	5,111.83	-	4,992.05	(10,103.88)	-	
3637100000	Dededo Mayor	6,691.56	-	6,785.70	(13,477.26)	-	
4637100000	Yigo Mayor	3,579.19	-	3,411.93	(6,991.12)	-	
5637100000	Umatac Mayor	1,197.26	-	1,295.24	(2,492.50)	-	
6537100000	Agana Hts. Mayor	7,998.20	-	5,768.65	(13,766.85)	-	
6637100000	Merizo Mayor	1,194.05	-	993.30	(2,187.35)	-	
6737100000	Barrigada Mayors Office	2,065.05	-	2,099.67	(4,164.72)	-	
7537100000	Agat Mayor	5,712.65	-	2,684.40	(8,431.05)	(34.00)	
7637100000	Inarajan Mayor	2,030.85	-	1,997.34	(4,028.19)	-	
8537100000	Tamuning Mayor	5,792.57	-	5,978.79	(11,771.36)	-	
8637100000	Talofofo Mayor	2,356.97	-	2,640.32	(4,997.29)	-	
9537100000	Mangilao Mayor	4,677.92	-	4,593.49	(9,271.41)	-	
9637100000	Yona Mayor	832.41	-	796.00	(1,628.41)	-	
	Sub Total	**59,693.15**	**-**	**54,693.94**	**(114,421.09)**	**(34.00)**	
	DPW ACCOUNTS				-		
4337100000	DPW-Village St. Lights	394,202.65	97,247.23	366,195.01	(857,644.89)	-	
5337100000	DPW- Primary St. Lights	92,447.82	8,029.69	86,294.98	(186,772.49)	-	
6337100000	DPW-Sec/Coll St. Lights	26,467.31	-	25,948.00	(52,415.31)	-	
7337100000	DPW-Signal Lights	10,160.06	-	11,009.24	(21,169.30)	-	
	Sub Total	**523,277.84**	**105,276.92**	**489,447.23**	**(1,118,001.99)**	**-**	
	(B) AUTONOMOUS/PUBLIC CORP						
1437100000	Retirement Fund	5,099.93	-	5,987.69	(11,087.62)	-	
1915500000	Guam Housing Corp Rental Division	2,103.60	89.08	1,512.83	(1,553.75)	2,151.76	1
2437100000	University of Guam	184,158.69	(170.62)	187,765.12	(371,753.19)	-	
4237100000	Guam Airport Authority	519,079.36	-	528,352.49	(519,079.36)	528,352.49	
5357510000	University of Guam (NET METERED)	76,371.49	-	80,750.45	(157,121.94)	-	
6237100000	G H U R A	14,036.45		27,216.97	(53,234.07)	(11,980.65)	
6437100000	Guam Community College	48,020.75	-	47,560.24	(95,580.99)	-	
7237100000	Guam Memorial Hospital	530,120.84	815.16	35,567.08	(566,553.08)	(50.00)	
8426836906	Guam Memorial Hospital (NET METERED)	-	-	171,078.51	(171,078.51)	-	
9137100000	Port Authority of Guam	93,329.98	-	100,386.79	(193,716.77)	-	
9157510000	Guam Community College (NET METERED)	38,401.21	-	39,074.48	(77,475.69)	-	
9173210000	Guam Solid Waste Authority	6,023.69	-	6,341.68	(12,365.37)	-	
9337100000	Guam Waterworks Authority	1,242,598.95	-	1,308,739.63	(1,239,675.37)	1,311,663.21	
8237100000	GPA					-	

	Sub Total	**2,759,344.94**	**733.62**	**2,540,333.96**	**(3,470,275.71)**	**1,830,136.81**	
	(C) OTHERS						
0337100000	Guam Legislature	222.89	-	108.62	(331.51)	-	
9503154359	Guam Legislature (NET METER)	7,077.49	-	7,701.50	(14,778.99)	-	
1237100000	Superior Court of Guam	72,140.79	-	72,513.19	(72,140.79)	72,513.19	
2537100000	Agana (Guam) Post Office	6,093.38	-	6,252.50	(12,345.88)	-	
2570200000	Customs & Quarantine Agency	925.40	-	889.05	(1,814.45)	-	
3537100000	U.S. Post Office	44,110.02	-	43,020.83	(87,130.85)	-	
5537100000	Dept. of Military Affairs	76,414.35	-	77,668.33	(154,082.68)	-	
3209463043	Dept. of Military Affairs	16,501.13	-	17,683.61	(34,184.74)	-	
5737100000	KGTF	6,438.99	-	7,015.40	(13,454.39)	-	
7281000000	Tamuning Post Office	4,957.04	-	5,406.76	(10,363.80)	-	
	Sub Total	**234,881.48**	**-**	**238,259.79**	**(400,628.08)**	**72,513.19**	
	GRAND TOTAL	**4,916,461.38**	**120,561.43**	**4,674,162.06**	**(5,997,280.12)**	**3,713,904.75**	

GPA Communications/PIO KPI Status

10 August 2018

Ratepayer Newsletter



Overall Status	Risks & Issues	Schedule	Scope	Financial
G	G	G	G	G

Status

1. Completed August newsletter;
2. Inclusion of Vegetation Management program plans
3. Standard features of recipe and village fiesta schedule remain for newsletter content;
4. Inclusion of story updates in coordination with GM. Update focus on GPA's current and near-future plans and additions to IWPS; progress on projects that lead toward controlling costs of energy to ratepayer homes, highlighting bid progress, results, award to build Guam's New 180MW Power Plant,
5. Compiling September newsletter;

Accomplishments

1. Completed January, February, March, April, May, June and July and August *Insights* Ratepayer Newsletter
2. September issue planning; will meet deadline

Risks and Issues	Resolution
1. None to report;	

Financial

Budgeted for FY18	

Legend:

No corrective action required

Near-term corrective action required

Requires immediate attention

2017 Annual Report

Overall Status	Risks & Issues	Schedule	Scope	Financial
G	G	G	G	G

Status

1. Expected to approve for print on 10 August 2018
2. Completion date is August 2018

Accomplishments

1. Bid Awarded for FY17 Annual Report to Card & Card Advertising;
2. Final edits in progress

Risks and Issues	Resolution
1. None to Report	

Financial

None to report	Within Budget	

Legend:

No corrective action required

Near-term corrective action required

Requires immediate attention

Special Projects – Web and Social Media



Overall Status	Risks & Issues	Schedule	Scope	Financial
G	G	G	G	G

Status

1. Ongoing coordination with various departments for any updates to share on social media;

Accomplishments

1. Customers citing recent Typhoon Maria recovery efforts and communication updates expressing their appreciation of GPA to have taken responsible actions to address issues or crises and for acknowledging the issues openly and honestly.

Risks and Issues

1. Timely Updates on Forced Outages and Scheduled Outages ;

Resolution

1. Close monitoring of outages and trouble desk for updates;

Financial

Within budget		

Legend:

No corrective action required

Near-term corrective action required

Requires immediate attention

Energy Sense Marketing

Overall Status	Risks & Issues	Schedule	Scope	Financial
G	G	G	G	G

Status

1. Review ongoing of DSM Customer Service Survey and Focus Group Discussion for Energy Sense Marketing as part of Phase III implementation.
2. On track to with DSM Phase II Marketing Goals & Objectives
3. Adztech Advertising continuing Phase II DSM Marketing Plan Goals & Objectives;

Accomplishments

1. Ad placements in print, radio and television as part of Phase II Marketing campaign.
2. DSM ad placement in SHRM-Guam Chapter publication.
3. Completed coordination with paid sponsorship and representation at Sorensen Media Group/Agana Shopping Center 2018 Home & Lifestyles Expo on 28 July 2018, promoting DSM and Guam Energy Sense; also featuring GPA 50th Anniversary logo. Collected customer inquiry cards for follow-up with CSRs and engaged public in promotion item giveaway opportunities.

Risks and Issues	Resolution
1. SPORD support pending additional funding;	PIO supporting DSM marketing in pending additional SPORD funding

Financial

Budget Support for SPORD for Phase II	

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

Prepaid & SMS (text) Project



Overall Status	Risks & Issues	Schedule	Scope	Financial
G	G	G	G	G

Status

1. Text texting still in progress. No new information to report.

Accomplishments

1. Completed coordination with local carriers (GTA, Docomo & IT&E for SMS Texting test);

Risks and Issues

1. Pending review and acceptance from PSCC for testing and eventual rollout;

Resolution

Financial

None to report

Legend:

No corrective action required

Near-term corrective action required

Requires immediate attention

Live Streaming of CCU Meetings & Work Sessions



Overall Status	Risks & Issues	Schedule	Scope	Financial
G	G	G	G	G

Status

1. GPA-016-18 sole source memorandum signed by GM and forwarded to Procurement for processing and award.

Accomplishments

1. Technical specifications are detailed and team will continue forward with next steps following zero bid responses.
2. Team to meet for final review of specifications

Risks and Issues	Resolution
1. None to report at this time	

Financial	
Funding with IT Division & GWA for audio & video equipment & training	

Legend:

No corrective action required

Near-term corrective action required

Requires immediate attention

50th Anniversary Activities



Overall Status	Risks & Issues	Schedule	Scope	Financial
G	G	G	G	G

Status

1. List of events and programs connected to milestone 2018 GPA planned programs/business objectives already in place is under construction: PPA Signing, LEED Plaque on GBN Building Unveiling; Fadian Employee-Family Fun Day rescheduled due to TS Maria; 2018 Liberation Day Float(s) ongoing;
2. A GPA 50th Anniversary Steering Committee meeting weekly, with Communications-PIO serving as advisors.
3. Revisit budget items, (subject to change) to be presented to GM for approval.

Accomplishments

1. GPA 50th Anniversary t-shirts distributed to all GPA employees and IPP partners (500 shirts)
2. Highlighted GPA 50th Anniversary Milestone on 2018 Liberation Day Float – GPA's entry won 3rd Place. Media photos, video and mention in print publications, electronic and social media. Photo and caption featured in August *Insights* ratepayer newsletter
3. LIVE coverage promotion via PBS live (television) streaming of Liberation Day Parade. Included 50th anniversary logo imprinted on t-shirt giveaways.
4. LIVE coverage promotion via KStero live (radio) broadcast of Liberation Day Parade. Included 50th anniversary logo and Guam Energy Sense logo imprinted on 500 t-shirt giveaways.

Risks and Issues	Resolution
1. None to report at this time	

Financial	
None to report	

Legend:

No corrective action required | Near-term corrective action required | Requires immediate attention

Award Nomination Opportunities (various)

Overall Status	Risks & Issues	Schedule	Scope	Financial
G	G	G	G	G

Status

1. 2018 GovGuam MagPRO Awards – (1) Department of the Year (large agency); (5) Photo of the Year; and (7) National Recognition Citation nominations
2. APPA 2018 Excellence in Public Power Communications Awards – for Web and Social Media, Video and Print and Digital nominations
3. Guam Daily Post and 2018 MagPRO Awards Committee added 'Department of the Decade' category to 2018 GovGuam MagPRO awards – details only released 06 August 2018; GPA nomination write up pending

Accomplishments

1. GPA is Gold $5,000 sponsor
2. (13) GovGuam MagPRO Award nominations submitted in advance of deadline
3. (3) APPA Award nominations submitted in advance of deadline
4. Attended meeting on 08 August 2018 regarding 'Department of the Decade' category added to 2018 GovGuam MagPRO awards

Risks and Issues

1. Missed opportunity if GPA does not submit entries
2. APPA – high level competition across USA
3. Department of the Decade – combines agency accomplishments judged by panel of 3; AND reader's choice (Guam Daily Post)

Resolution

1. GPA will participate and is worthy of recognition(s)

Financial

1. GovGuam awards - $5000 Gold MagPRO Sponsorship
2. APPA - $35 per entry; $105 total
3. Department of the Decade-none

Legend:

No corrective action required

Near-term corrective action required

Requires immediate attention

Miscellaneous Activities

Overall Status	Risks & Issues	Schedule	Scope	Financial
G	G	G	G	G

Status

1. GPA Web page redesign work online and updated as necessary
2. Monitoring of CS Business Centers
3. Completed 'Net Metering' Public Meeting advertisements to announce; public meeting completed on 18 July 2018. GM recommendation planned for August CCU Meeting; anticipate further information dissemination with public(s) and posting of recommendation/plan of action
4. Standard Media Releases for scheduled and emergency outage reporting is on-going
5. Support for Sagua Managu Children's Carnival on 18 August 2018 - outreach
6. Education Outreach – random requests; ongoing

Accomplishments

1. 4th Cycle GPA Apprentices Graduate to Journeymen photo with story caption in Construction News Bulletin Magazine (CNB) July issue
2. Completed draft, editing and print production of FY17 Citizen Centric Report (CCR). Update announcement in *Insights* newsletter to advise ratepayers they can request/receive a copy; nominated for APPA Excellence in Public Power Communications Award (Print category)
3. Redesigned GPA website online; nominated for APPA Excellence in Public Power Communications Award (Web and Social Media category)
4. Updated GPA 50th Anniversary Prelude video; ; nominated for APPA Excellence in Public Power Communications Award (Video category)

Risks and Issues	Resolution
1. None to report at this time;	

Financial	
None to report	

Legend:

No corrective action required

Near-term corrective action required

Requires immediate attention

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671) 648-3002 | guamccu.org

GUAM POWER AUTHORITY WORK SESSION

CCU Conference Room
4:30 p.m., Thursday, September 20, 2018

*** AMENDED AGENDA**

1. **ISSUES FOR DECISION**
   - 1.1 NET Metering Recommendation / Resolution 2018-17
   - 1.2 Bid for Bulk Storage Fuel tanks Internal Inspection & Refurbishment / Resolution 2018- 2 0
   - 1.3 Relative to Constructing New ULSD Line for Bulk Storage Tanks / Resolution 2018- 2 1
   - * 1.4 Relative to Award of Property Insurance Policy / Resolution 2018- 2 2
2. **GM REPORT**
   - 2.1 GM Summa r y
3. **ISSUES FOR DISCUSSION**
4. **DIVISION REPORTS**
   - 4.1 Administration: Customer Service, HR, Procurement, Safety
   - 4.2 Engineering & Technical: Engineering, IT, Planning & Regulatory, SPORD
   - 4.3 Finance Reports
   - 4.4 Operations: Facilities, Generation, PSCC, T&D, Transportation
   - 4.5 Public Information Office
5. **ANNOUNCEMENTS**
   - 5.1 Next Meeting: CCU Meeting – September 25, 2018
6. **ADJOURNMENT**

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • HAGÅTÑA, GUAM U.S.A. 96932-2977

Issues for Decision

Resolution No. 2018-17:

Relative to Approving GPA's Net Metering Recommendation

What is the project's objective? Is it necessary and urgent?

The necessary and urgent objective of this resolution seeks approval to file and respond to the Guam Public Utilities Commission (PUC) order under Docket No. 08-10 (December 29, 2008), Exhibit A:

> **"The NM Rider is available to all customers without limitation as to the aggregate capacity of Customer-Generator installations on the GPA System. However, at the time the number of Customer-Generators exceeds one-thousand (1000) customers this issue will be reviewed by the PUC and a determination made as to the continued offering of the NM Rider for new 'net metering' customers."**

GPA achieved the milestone of 1000 net metering customers in June 2016. As of July 31, 2018, GPA has 1,733 net metering customers resulting in an approximate $3,411,623.29 annual subsidy by non-net metering customers. Additionally, GPA has conducted and completed as ordered by the Consolidated Commission on Utilities (CCU) several public meetings to:

- **Address net metering stakeholders' concerns and obtain feedback;**
- **Evaluate stakeholder feedback;**
- **Perform analysis regarding net metering impacts on the GPA especially on non-net metering customers;**
- **Propose recommendations on whether or not changing the current net metering program is in the best interests of customers while insofar as practical alleviating net metering customer concerns.**

The petition is to decrease net metering subsidy evenly over a 5-year period beginning CY'2019.

How much will it cost?

This recommendation will save non-net metering customers approximately $3,411,623.29 annually.

When will it be completed?

Upon approval of the Guam Public Utilities Commission

What is its funding source?

The Levelized Energy Adjustment Clause

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

RESOLUTION NO. 2018–17

AUTHORIZING MANAGEMENT OF THE GUAM POWER AUTHORITY (GPA) TO FILE NET METERING PROGRAM RECOMMENDATIONS ADDRESSING THE GUAM PUBLIC UTILITIES COMMISSION (PUC) ORDER DOCKET NO. 08-10 (DECEMBER 29, 2008), EXHIBIT A, PARAGRAPH 3

WHEREAS, Guam Public Law 27-132 (2004) created Net Metering for Guam and assigned the Guam Public Utilities Commission (PUC) the responsibility for setting the Net Metering Rate for excess renewable energy fed into GPA's Distribution System; and

WHEREAS, the Guam Public Utilities Commission (PUC) ordered GPA to execute the Interim Net Metering (NM) Rider under Docket No. 08-10 (December 29, 2008); and

WHEREAS, under Docket 08-10, Exhibit A (paragraph 1), the PUC states: "The NM Rider may be amended or modified in the future by GPA, with the approval of the Guam Public Utilities Commission (PUC)"; and

WHEREAS, under Docket 08-10, Exhibit A (paragraph 3), the PUC orders: "The NM Rider is available to all customers without limitation as to the aggregate capacity of Customer-Generator installations on the GPA System. However, at the time the number of Customer-Generators exceeds one-thousand (1000) customers this issue will be reviewed by the PUC and a determination made as to the continued offering of the NM Rider for new 'net metering' customers."; and

WHEREAS, GPA achieved the milestone of 1000 net metering (NEM) customers in June 2016; and

WHEREAS, NEM customers receive services from the grid subsidized by non-NEM customers including but not limited to: 1) Use of the grid to sell power (get credit at full retail rate for excess production); 2) Use of the grid to energize their homes at night; 3) Frequency regulation absorbed by grid for intermittencies; 4) Reactive power supply; 5) Voltage regulation; and 6) Stand-by power on overcast days when the sun does not shine.

WHEREAS, GPA has 1,733 net metering customers (July 31, 2018) resulting in an approximate $3,411,623 annual subsidy going forward and from 2009 to 2017 a total subsidy of approximately $6,562,968.64 paid for by non-net metering customers; and

WHEREAS, as ordered by the Consolidated Commission on Utilities (CCU), GPA has conducted and completed several public meetings to: 1) Address net metering stakeholders' concerns and obtain feedback; 2) Evaluate stakeholder feedback; 3) Perform analysis regarding net metering impacts on the GPA especially on non-net metering customers; and, 4) Propose recommendations on whether or not changing the current net metering program is in the best interests of customers while insofar as possible alleviating net metering customer concerns; and

WHEREAS, the GPA General Manager presented the Authority's Net Metering (NEM) Credit Recommendation **(Exhibit A)** at the August 28, 2018 CCU Meeting held publicly; and

WHEREAS, GPA recommends the following Value of Solar (VOS) Policies as a replacement for the existing Net Metering Program including: 1) Grandfathering existing registered NEM customers for a period of 5 years allowing customers who own NEM systems to recover their investment while phasing in VOS rates over this extended 5-year time period; and filing for PUC approval a process to establish Value of Solar (VOS) rates;

WHEREAS, the process to establish Value of Solar (VOS) rates would: 1) Reassess VOS rates each LEAC for Avoided Energy Value; 2) Reassess VOS rates for other VOS components as applies on a) an annual basis; b) periodic basis over a set number of years; and 3) whenever there are material changes to GPA's generation mix; and

NOW, THEREFORE, BE IT RESOLVED, by the CONSOLIDATED COMMISSION ON UTILITIES subject to the review and approval of the Public Utilities Commission as follows:

1. The General Manager is authorized to file a petition of its Value of Solar Policy Recommendations as shown in **Exhibit A** to the Guam Public Utilities Commission. The petition is to decrease net metering subsidy evenly over a 5-year period beginning Calendar Year 2019.
2. The General Manager is authorized to conduct an information campaign supporting these recommendations.

RESOLVED, that the Chairman of the Commission certifies and the Secretary of the Commission attests the adoption of this Resolution.

DULY and REGULARY ADOPTED this 25th day of September 2018.

Certified by: **Attested by:**

JOSEPH T. DUENAS
CHAIRMAN

J. GEORGE BAMBA
SECRETARY

SECRETARY'S CERTIFICATE

I, J. GEORGE BAMBA, Secretary for the Consolidated Commission on Utilities do hereby certify that the foregoing is a full, true, and correct copy of the resolution duly adopted at a regular meeting of the members of Guam's Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

Ayes: _____

Nays: _____

Absent: _____

Abstain: _____

Buy-All-Sell-All Sample Billing (Grandfathering)

1year impact after Grandfathering $9.46

	RATE SCHEDULE R	
	Existing Rate	
KWH Utility Delivered (meter 1, register A)		469
KWH Utility Received (meter 1, register B)		531
KWH Solar Production (NA)		NA
KWH Consumption		(62)
	Rate	**Amount**
Monthly Charge	$ 15.00	$ 15.00
Non-Fuel Energy Charge		
First 500 KWH	0.069550	(4.31)
Over 500 KWH	0.086870	-
Emergency Water-well charge	0.002790	-
Insurance Charge	0.000000	-
Working Capital Fund Surcharge	0.000000	-
Total Electric Charge before Fuel Recovery Charges		10.69
Fuel Recovery Charge	0.154242	(9.56)
KWH (VOS) Solar Production Credit	0.161995	-
Total Electric Charge		**$ 1.13**

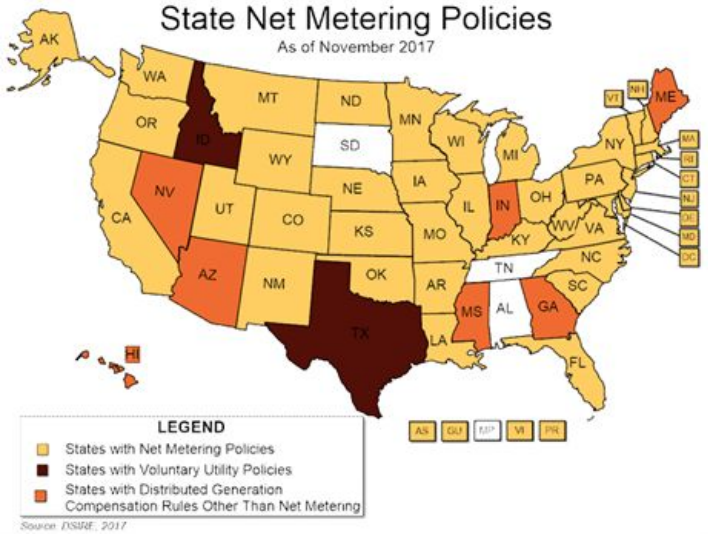
	RATE SCHEDULE R	
	Possible Rate	
KWH Utility Delivered (meter 1, register A)		469
KWH Utility Received (meter 1, register B)		531
KWH Solar Production (meter 2)		1,062
KWH Consumption		1,000
	Rate	**Amount**
Monthly Charge	$ 15.00	$ 15.00
Non-Fuel Energy Charge		
First 500 KWH	0.069550	34.78
Over 500 KWH	0.086870	43.44
Emergency Water-well charge	0.002790	1.40
Insurance Charge	0.000000	-
Working Capital Fund Surcharge	0.000000	-
Total Electric Charge before Fuel Recovery Charges		94.62
Fuel Recovery Charge	0.154242	154.24
KWH (VOS) Solar Production Credit	0.161995	(172.04)
Total Electric Charge		76.82
Grandfather Credit	0.875000	(66.23)
Billing Amount		**$ 10.59**

ISSUE FOR DECISION

Net Metering (NEM) Credit Recommendation

OVERVIEW – NET METERING POLICIES

- Thirty Eight (38) States, Washington D.C., and Four (4) Territories Offer Net Metering and utilities in two additional states (Idaho and Texas adopted Net Metering (Full Retail Credit).
- Arizona, Georgia, Hawaii, Indiana, Maine and Mississippi have compensation other than net metering.
- The Value of Solar (VOS) is an alternative to net metering. Customers buy from the grid at retail rate and sell to the grid at an established VOS rate. Only Minnesota and Austin Energy (Texas) has adopted a VOS rate.



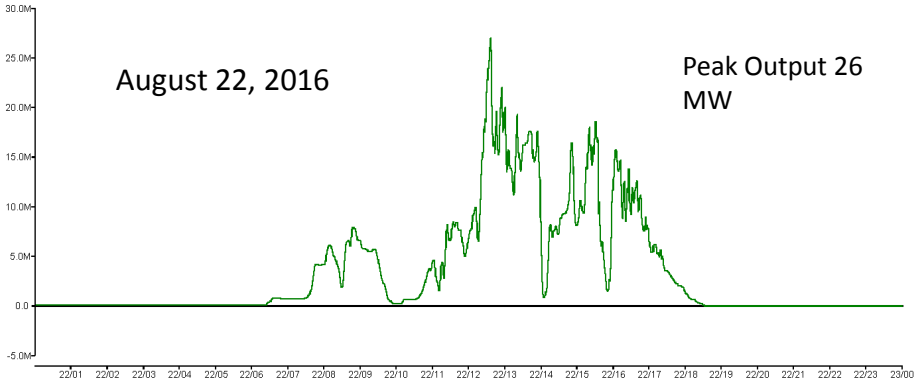
Source: National Council of State Legislatures: 11/20/17

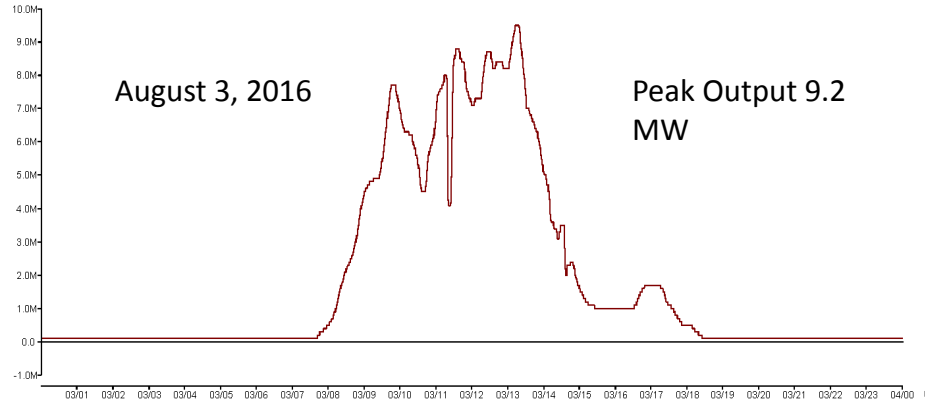
Guam NEM Program

- Program Mandated in 2004. Guam has been crediting NEM customers full retail rate over the past 13 years. Excess credit carried over or paid out annually at full retail rate.
- PUC to evaluate program and credits provided when GPA has 1,000 NEM Customers which occurred in June 2016.
- As of July 2018, GPA has 1,733 NEM Customers (94.7% Residential), with 18,315 KW of capacity. The revenue impact on non-NEM ratepayers is estimated at $3.4M annually.
- CCU/GPA conducted its first public hearing on NEM in August 2016 to gather input from stakeholders in order to prepare its filing to the PUC for changes in rate credits in order to achieve parity amongst all ratepayers.

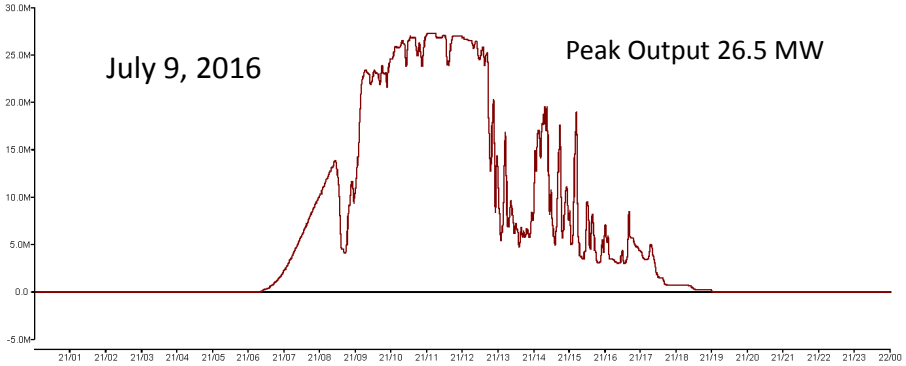
Solar PV Energy Production Characteristics

Utility Scale PV Output Look Like This …





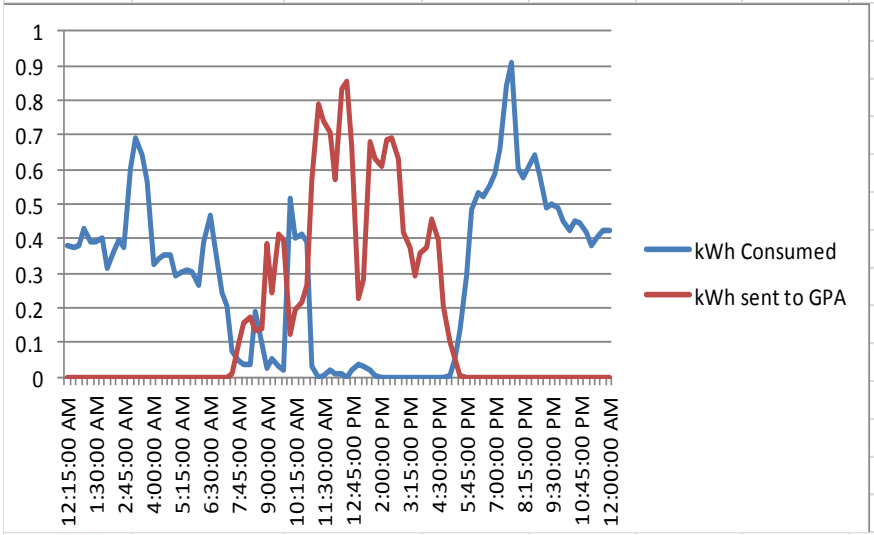
NEM does not eliminate need for capacity



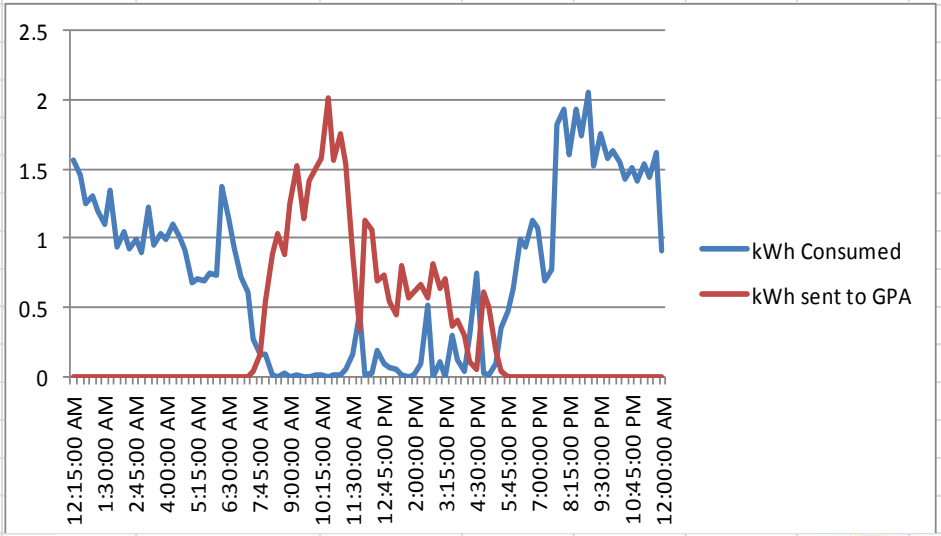
PV without adequate storage is not a capacity benefit. It is an energy benefit.

NEM Customer Profiles

Date:	14-Jun-16		
PV System KW Size	5.0		
GPA KWH 12am to 7am	11.05		
GPA KWH 7am to 6pm	3.66		
GPA KWH 6pm to 12am	**12.92**	**Evening Peak**	
NEM KWH 7am to 6pm	16.14		
Net GPA KWH	11.49		



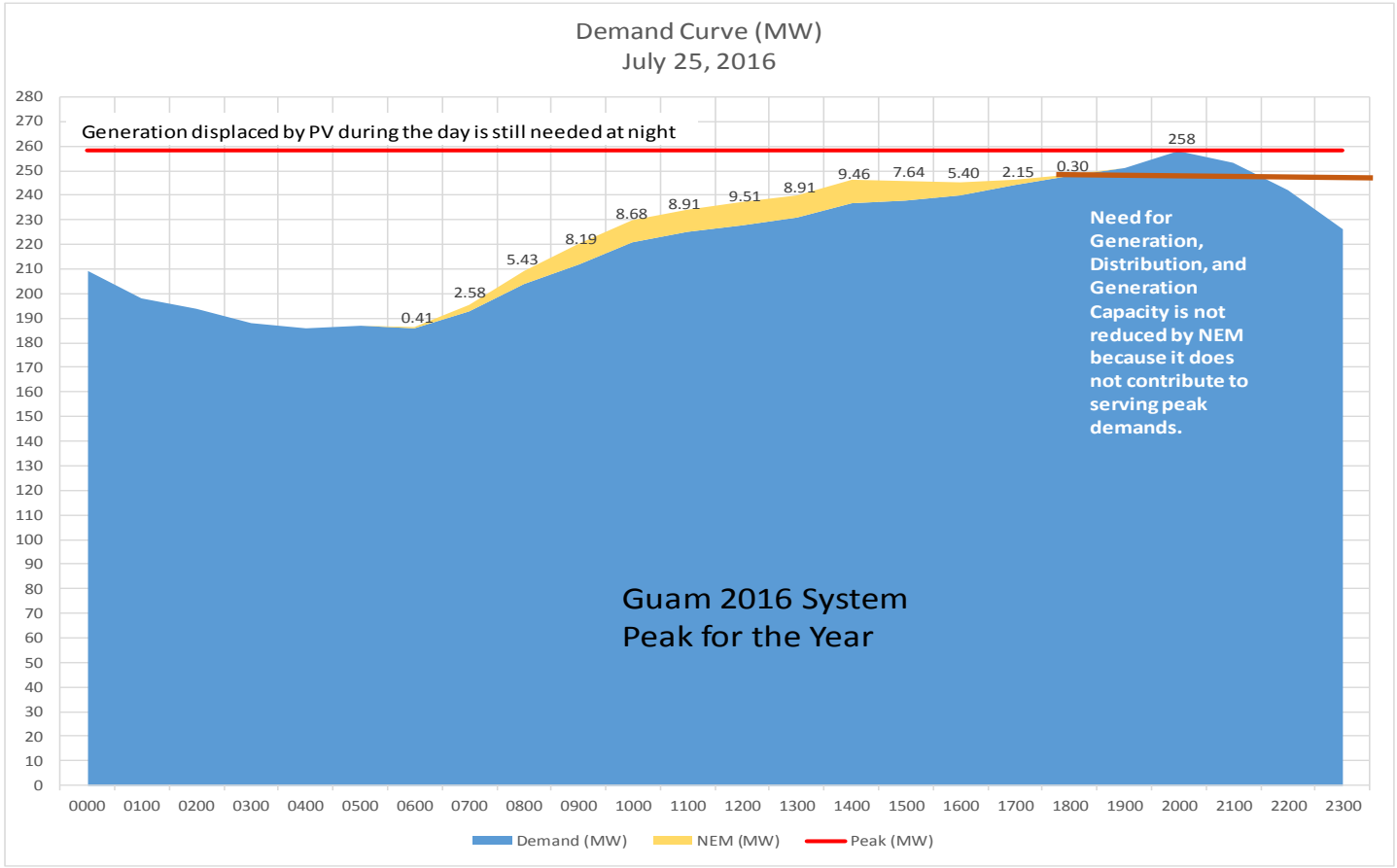
Date:	14-Jun-16		
PV System KW Size	12.4		
GPA KWH 12am to 7am	28.9		
GPA KWH 7am to 6pm	6.1		
GPA KWH 6pm to 12am	**34.6**	**Evening Peak**	
NEM KWH 7am to 6pm	32.5		
Net GPA KWH	37.1		



Does NEM Lower Guam Generation Capacity Requirements?

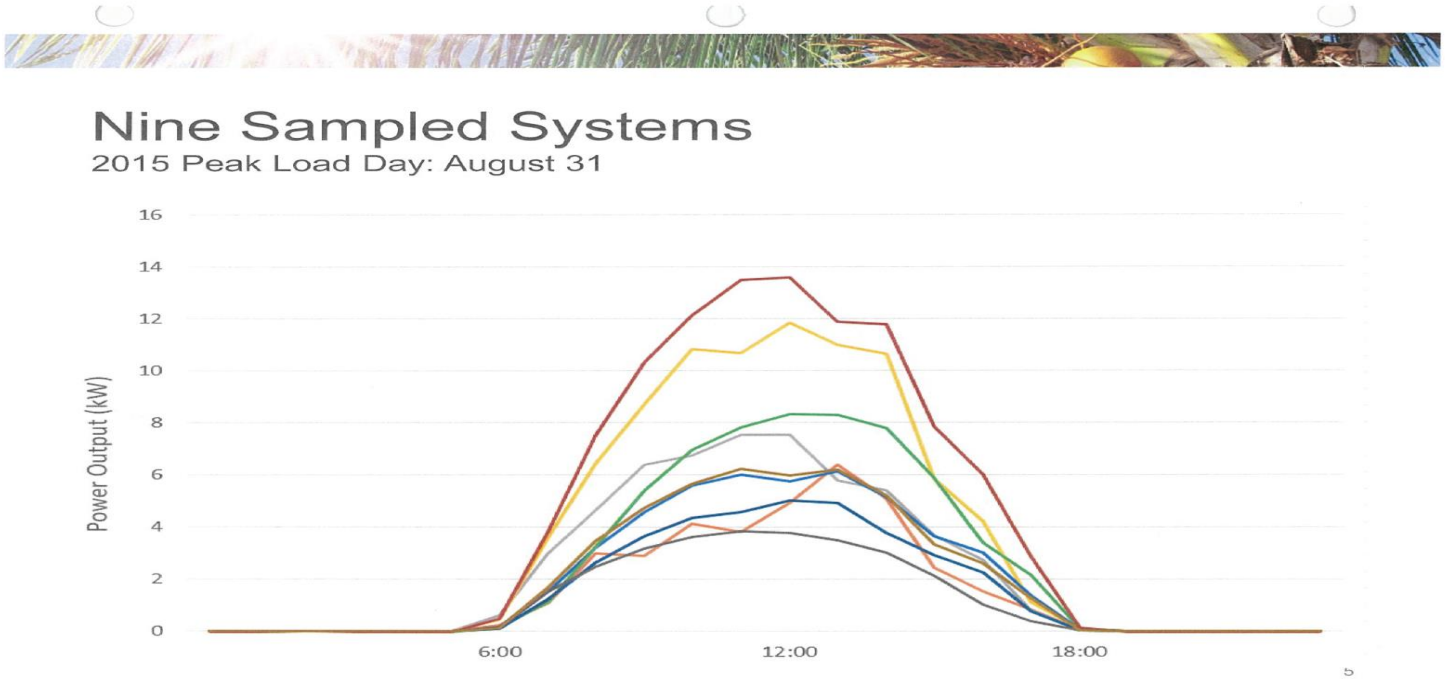
No. NEM Solar PV systems in Guam does not reduce peak demand and therefore does not eliminate conventional capacity needs

Transmission, Distribution, or Generation Capacity for Guam Not Reduced by PV



NEM Peak Production not at GPA Peak Demand Period

Source: Clean Power Resource Report



Net Metering Policy Issues

- Replacement for Net Metering Program
- Grandfathering existing registered NEM customers
  - Allow customers who own system to recover investment
  - Phase in to avoided cost rates over a 5 to 8 year period
- GPA files for PUC approval:
  - Reassessed NEM rates each LEAC for Avoided Fuel Value
  - Reassessed NEM rates for other components
    - Annually
    - Periodically over a set number of years
    - When GPA's generation mix changes

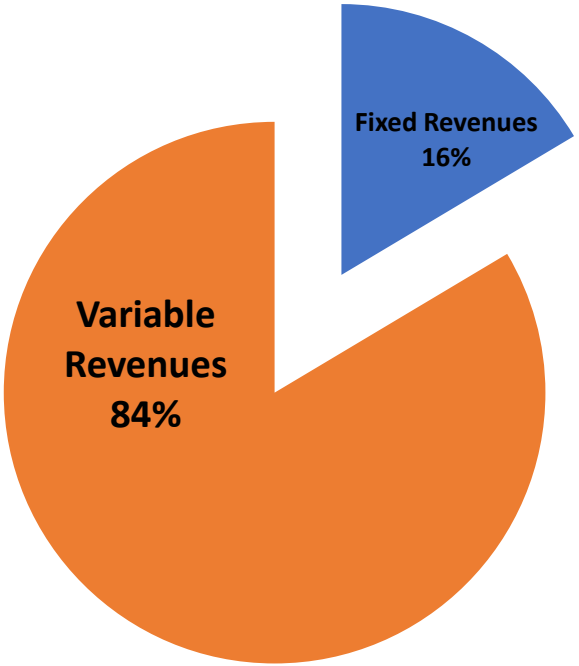
Value of the Grid to NEM Customers

- NEM customers receive services from the grid including:
  - Use the grid to sell power (get credit at full retail rate for excess production)
  - Use the grid to energize their homes at night, but credited back from their production (Uses GPA Grid as storage)
  - Using Grid at night results in increased fuel cost to non-NEM Customers because costlier less efficient generation is used to generate their energy needs
  - Frequency regulation absorbed by grid for intermittencies
  - Reactive power supply
  - Voltage regulation
  - Stand-by power on overcast days when the sun does not shine

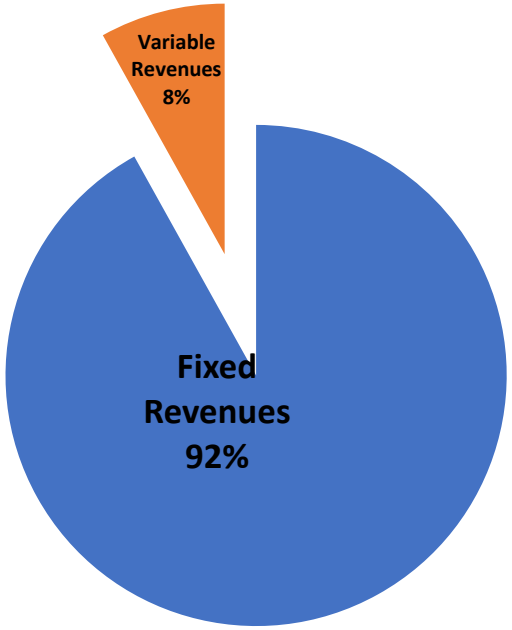
- Monthly fixed charge of $15 does not recover cost to serve from grid
  - Most of GPA fixed cost is recovered in the energy use (kWh) rate component which is typically zero for NEM customers

Rate Structure & Fixed Cost Recovery

Civilian Fixed vs Variable Revenues



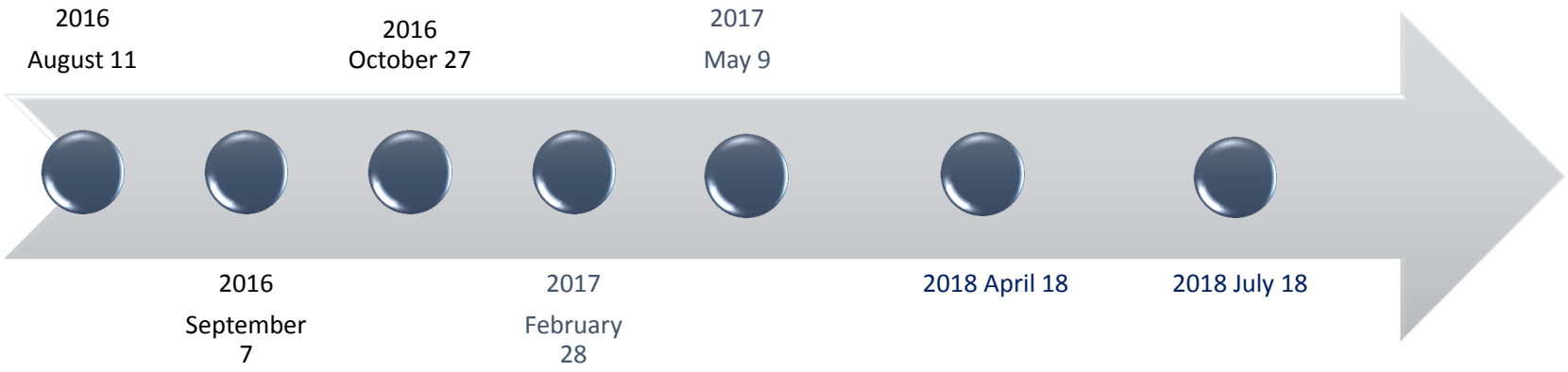
Navy Fixed vs Variable Revenues



GPA Rate Structure Should Move Towards Recovering More Fixed Costs Through Fixed Charges.

- Civilian rate structure
  - Most of GPA fixed costs recovered in the variable rate
- Navy rate structure
  - Most of GPA fixed costs recovered in the fixed rate
- Hawaii has moved to fixed cost recovery predominantly through its fixed rate

Net Metering Public Meetings Held to Gather Input from Stakeholders



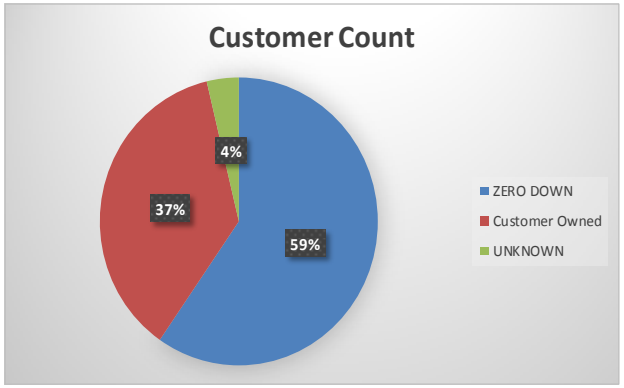
Key Points from Public Meetings

- Solar PV providers opined the B&V report provides all the gain to GPA and did not represent true value of solar
- NEM Owner wants to recover his investment. Asked for grandfathering until he does so. He said it will take 7 years to recover his $60K investment
- NEM not meant to be money making business but a fair exchange of trade energy…some customers making money from units sized beyond their needs
- The applicability of NEM program to 3rd party providers need to be clarified
- Solar PV provider wants NEM program to continue up to 20% penetration similar to Hawaii
- Solar PV provider wanted more time to provide a report on Value of Solar and bring to GPA for information. Report was completed and presented by Clean Power Research on April 18, 2018

Key Points from Public Meetings (continued)

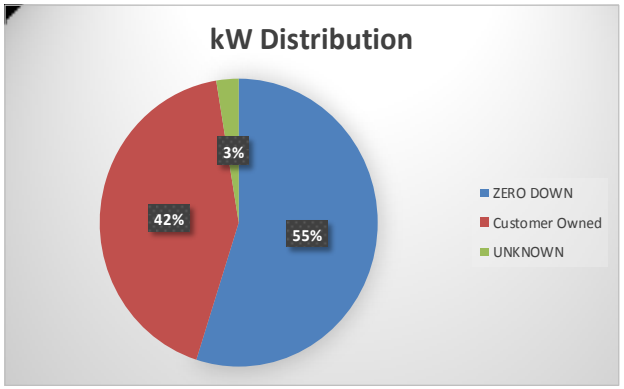
- Solar PV provider commented the NEM energy saves the utility cost on:
  - Maintenance cost for generations, poles, labor, lines, substations, transformers, etc.
  - Reduction of line losses because energy is near customers
  - Costs associated with fuel and fuel shipments
  - Helps GPA achieve energy portfolio reducing need for more renewable projects
  - Savings to environment; lessens carbon foot print
- Solar PV Provider-GPA should consider subsidies for home energy storage systems
- Solar PV Provider-GPA should consider grandfathering NEM customers through a phased approach
- No new points placed forward at the July 18, 2018 public meeting where the GM presented his recommendations which were previously presented to CCU

NEM – PV Statistics



Customer Count

Description	Number of Customers
ZERO DOWN	979
Customer Owned	602
UNKNOWN	61
Grand Total	**1,642**



kW Distribution

Description	kW
ZERO DOWN	9,326
Customer Owned	7,212
UNKNOWN	440
Grand Total	**16,978**

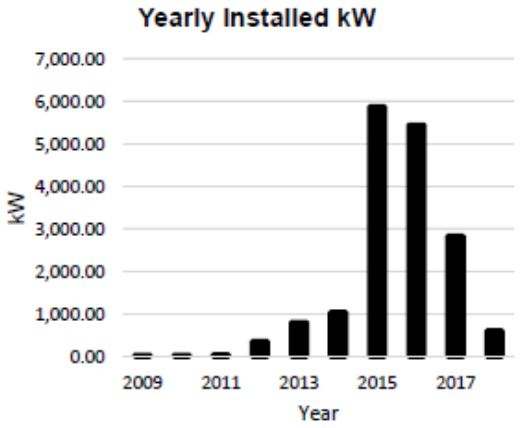
March 2018

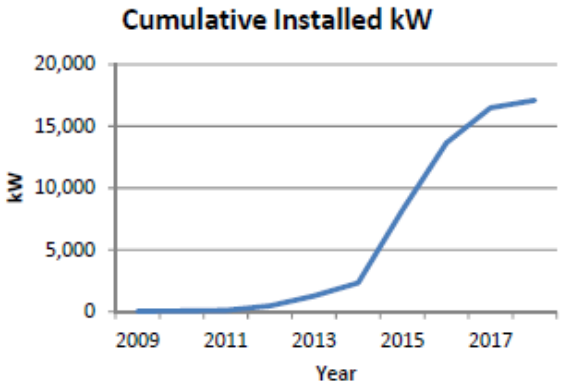
Customer Class	KW	NEM	Customers	Percent of Customer Class
R - Residential	14,119	1,562	43,756	3.6%
J - Small General Service Demand	1,647	32	987	3.2%
K - Small Government Demand	318	9	348	2.6%
L - Large Government Demand	23	1	45	2.2%
P - Large General Demand	241	3	116	2.6%
G - Small General Non Demand	666	33	4,127	0.8%
S - Small Government Non-Demand	79	7	681	1.0%
Total	**17,092**	**1,647**	**50,060**	

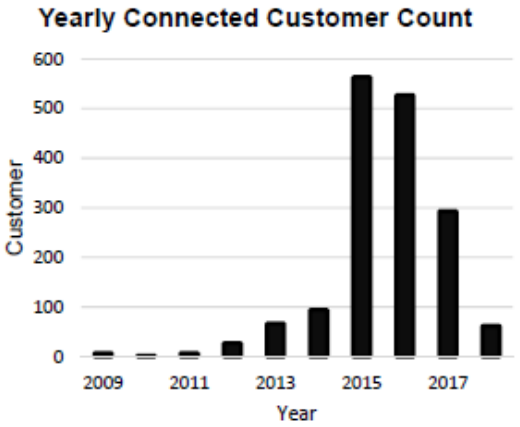
Projected FY 2018 Non-Fuel Revenue Loss

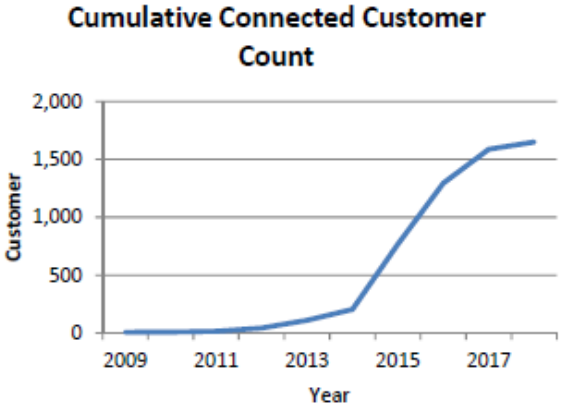
Customer Rate Class	Renewable Energy Capacity (kW)	Annual kWh Generated (@5.092 hours/day)*	Average Non-Fuel Yield $/kWh	Estimated Annual Revenue Loss
R	13,693	25,447,071	0.09293	$ 2,364,822
J	1,647	3,059,970	0.13112	401,226
K	318	590,618	0.13932	82,286
L	23	42,373	0.13525	5,731
P	241	447,331	0.11539	51,617
G	636	1,182,853	0.15084	178,417
S	79	146,447	0.15334	22,456
Grand Total	**16,636**	**30,916,662**		**$ 3,106,555**

*Estimated number of hours from NREL for Guam (13.4° North and 144° East).









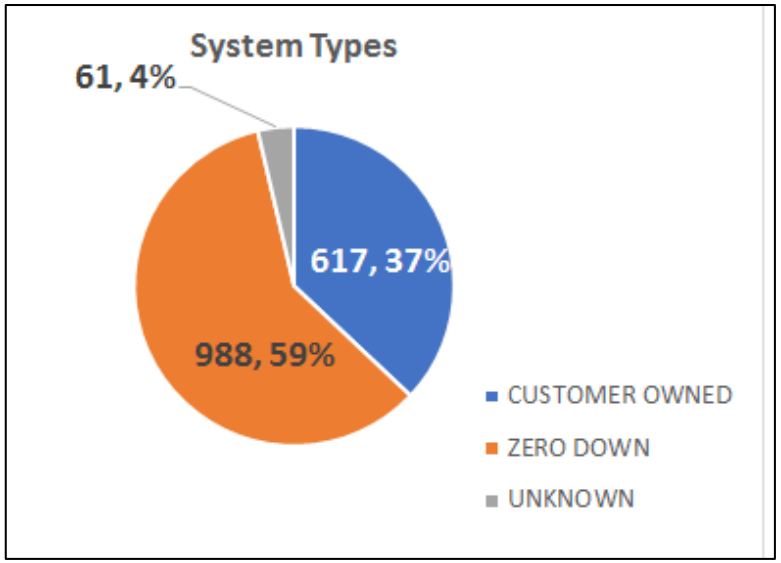
NEM Market Analysis

- Product Lifecycle Stages
  - 2009 -2011 Introduction
  - 2012 – 2014 Growth
  - 2015 – 2016 Maturity
  - 2017 – Present Decline



Market Share of Competitors

Firm	Count	Capacity (KW)	% of Installed System
Company A	747	6,882	40.3%
Company B	271	2,337	13.7%
Company C	229	2,426	14.2%
Company D	147	2,410	14.1%
Owner Installed	90	1,088	6.4%
Company E	29	470	2.7%
Company F	26	357	2.1%
Company G	13	100	0.6%
All Other Companies/Self Constructed Combined	35	576	3.4%
Unknown	62	449	2.6%
Totals:	1,649	17,095	100.0%



GPA Value of Solar from an Avoided Cost Perspective

Cost Category	FY 2017	Cost per kWh Sold	GPA Avoided Cost ($/kWh)
Generation + IPP Costs			
Other Production - Fixed O&M	$ 17,783,917	$ 0.0110	
IPP Costs - Fixed O&M	$ 16,958,770	$ 0.0105	
IPP Costs - Variable O&M	$ 2,976,564	$ 0.0018	$ 0.0018
Transmission & Distribution	$ 11,703,969	$ 0.0073	
Admin and General			
Payroll, benefits, retirement	$ 12,862,412	$ 0.0080	
Insurance	$ 7,252,504	$ 0.0045	
Contracts	$ 4,024,943	$ 0.0025	
Utilities	$ 1,817,009	$ 0.0011	
Office supplies & Others	$ 844,349	$ 0.0005	
Customer Accounting	$ 4,756,213	$ 0.0030	
Debt Service	$ 56,937,000	$ 0.0354	
CIPs/Others	$ 26,731,639	$ 0.0166	
Total (Base Rate Revenues)	$ 164,649,289	$ 0.1023	
Fuel Costs	$ 181,683,506	$ 0.1128	
Fuel Consumption, plus the under recovery of $15.3 M)	$ 165,692,714	$ 0.1029	$ 0.1029
Fuel Handling	$ 7,128,512	$ 0.0044	
Renewables	$ 8,862,280	$ 0.0055	
Total	346,332,795	$ 0.2151	
Energy losses at 3.5%		$ 0.0054	$ 0.0054
Environmental cost		$ 0.000039	$ 0.000039
Total Avoided Cost			**$ 0.1102**
Average cost in 2017 per kWh		$ 0.2151	$ 0.2151
Credit Beyond Avoided Cost			**$ 0.1049**

Energy Storage System (ESS) Cost Frequency Control

FY2019	
Total KWH Sales Projected:	1,610,093,011
ESS Annual Debt Service & O&M:	$ 2,829,348
$/kWh:	$0.0018

GPA provides low cost energy storage

New 40 MW Energy Storage System Commissioning December 2018

Value of Solar Comparison

Only Minnesota and Austin Energy (Texas) adopted VOS Model

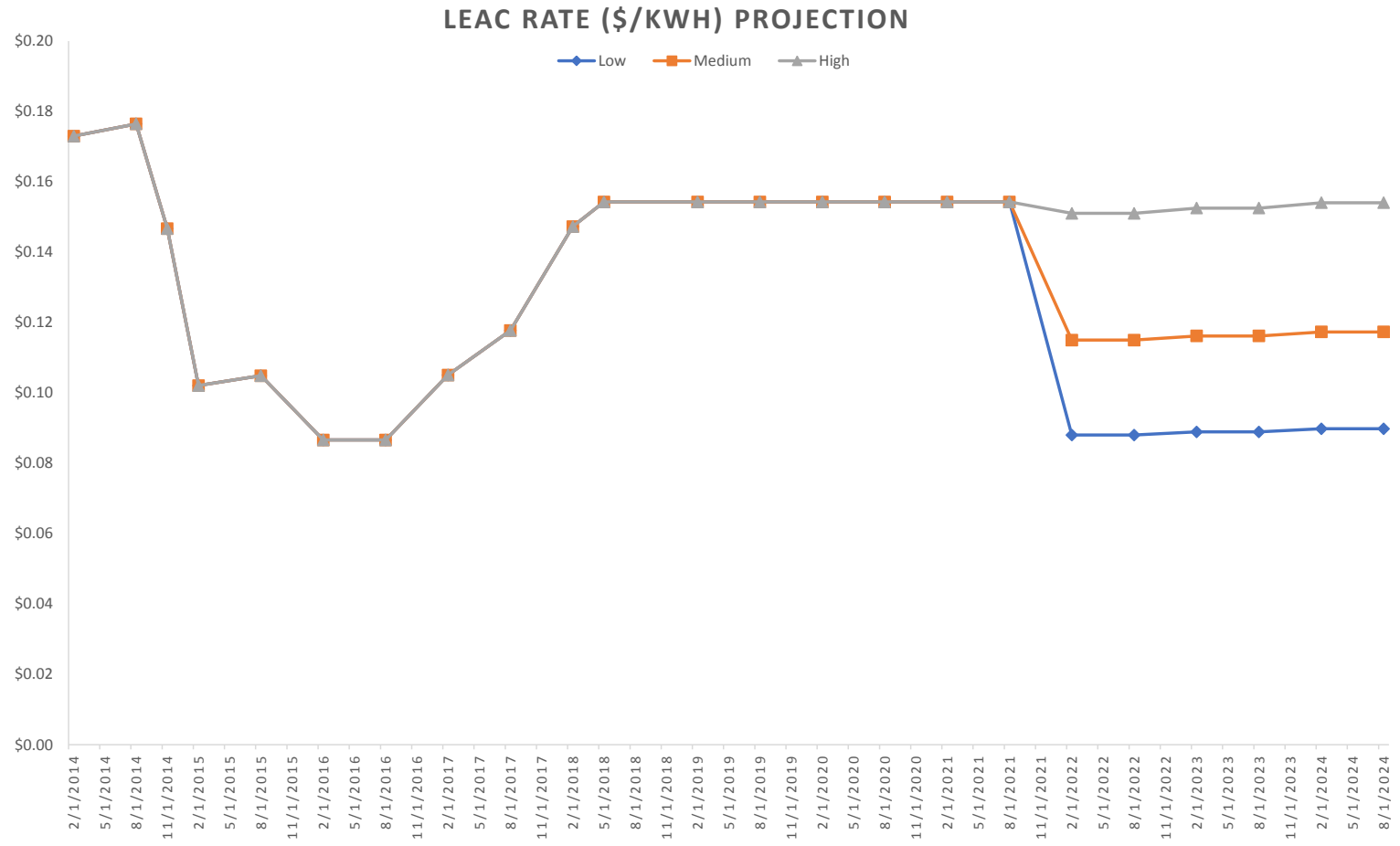
Cost Category	Minnesota	Austin Energy	Clean Power Research (MRE)	GPA Avoided Cost FY 2017	Comments
Fuel Cost	X	X	$0.1260	$0.1029	Close Agreement
Energy Losses	X	X	$0.0054	$0.0054	In Agreement
Plant O&M-Fixed	X	X			
Plant O&M-Variable	X	X		$0.0018	Minor Cost Impact
Generation Capacity Cost	X	X	$0.0490		No Capacity Avoided
Reserve Capacity Cost	X				
Transmission Capacity Cost	X	X			
Distribution Capacity Cost	X	X			
Environmental Cost	X	X		$0.0001	Minor Cost Impact
Voltage Control Cost	X				
Solar Integration Cost	X				
Avoided Fuel Hedging Uncertainty Cost			$0.0590		N/A - GPA Does Not Hedge
Avoided Mandated RPS Cost			$0.0310		GPA meeting RPS at Savings not Cost
Total:			**$0.2704**	**$0.1102**	**Variance Subsidized by Non-NEM Ratepayers**

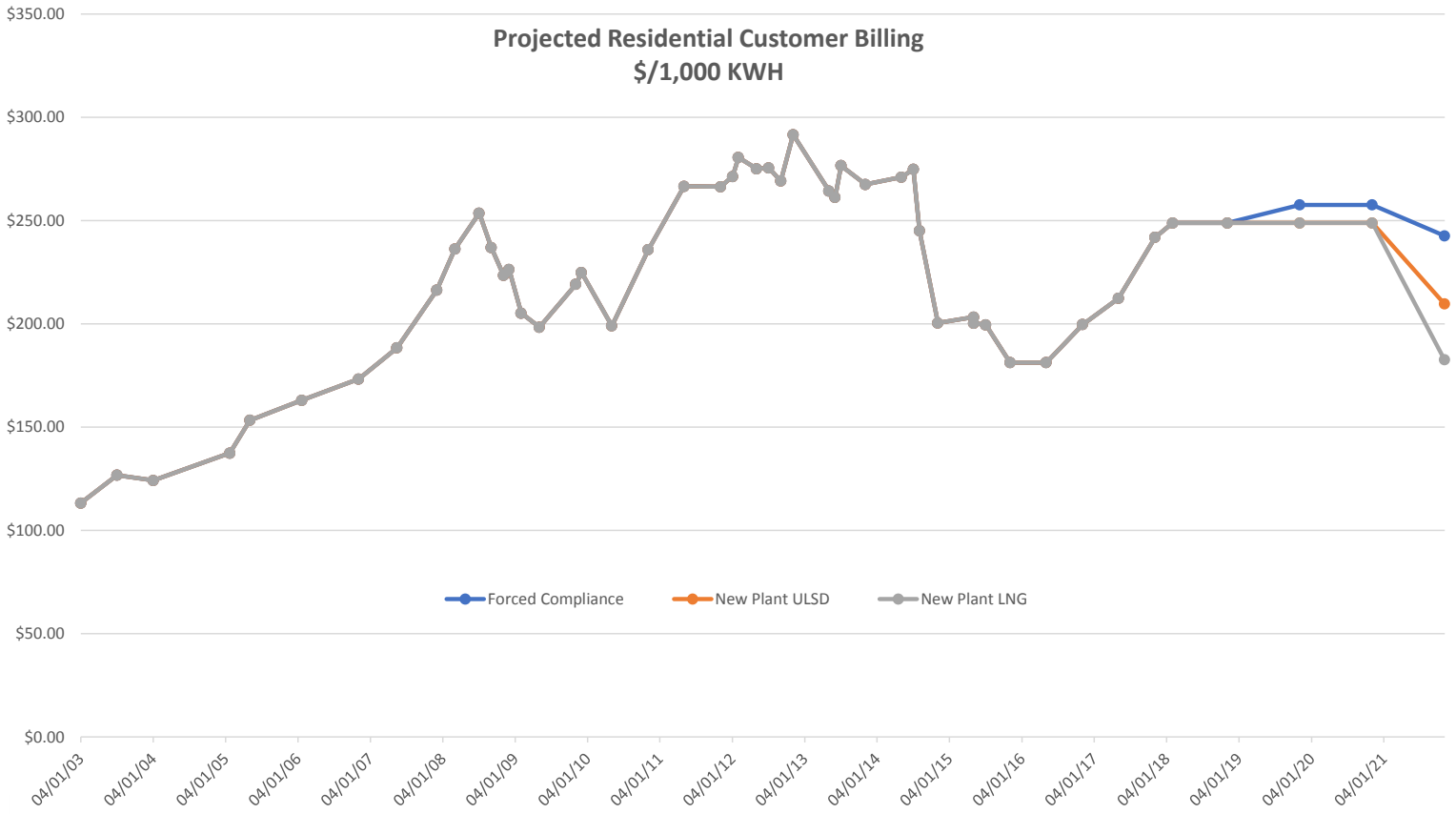
Value of Solar Comparison

Adjusted to GPA Actual Cost

Cost Category	Clean Power Research (MRE)	Revised CPR/MRE Based on Comments	GPA Avoided Cost FY 2017	Comments
Fuel Cost	$0.1260	$0.1029	$0.1029	Adjusted based on LEAC for Similar FY 2017 Period
Energy Losses 4.6%	$0.0054	$0.0047	$0.0047	In Agreement
Plant O&M-Variable			$0.0018	GPA Determined Minor Cost Impact
Generation Capacity Cost	$0.0490	$0.0000	$0.0000	No Capacity Avoided because does not Reduce Peak Demand
Environmental Cost			$0.0001	GPA Determined Minor Cost Impact
Avoided Fuel Hedging Uncertainty Cost	$0.0590	$0.0000	$0.0000	Not Applicable - GPA Does Not Hedge, Therefore No Cost
Avoided Mandated RPS Cost	$0.0310	$0.0000	$0.0000	GPA meeting RPS at a Savings not a Cost
Total:	**$0.2704**	**$0.1076**	**$0.1095**	

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LEAC RATE ($/KWH) PROJECTION
Low
Medium
High
$0.20
$0.18
$0.16
$0.14
$0.12
$0.10
$0.08
$0.06
$0.04
$0.02
$0.00
2/1/2014
5/1/2014
8/1/2014
11/1/2014
2/1/2015
5/1/2015
8/1/2015
11/1/2015
2/1/2016
5/1/2016
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2/1/2023
5/1/2023
8/1/2023
11/1/2023
2/1/2024
5/1/2024
8/1/2024


Projected Residential Customer Billing
$/1,000 KWH
$350.00
$300.00
$250.00
$200.00
$150.00
$100.00
$50.00
$0.00
Forced Compliance
New Plant ULSD
New Plant LNG
04/01/03
04/01/04
04/01/05
04/01/06
04/01/07
04/01/08
04/01/09
04/01/10
04/01/11
04/01/12
04/01/13
04/01/14
04/01/15
04/01/16
04/01/17
04/01/18
04/01/19
04/01/20
04/01/21

Net Metering Economics

When Do Customer-Owned NEM Recover their Investment?

Value of Solar Payment Versus Simple Payback						
$/Kwh Credit	**$0.10**		**$0.12**		**$0.27**	
ITC Valid	**2018-2019**		**2018-2019**		**2018-2019**	
Solar PV All-In Cost ($/W)	**30.0% ITC**		**30.0% ITC**		**30.0% ITC**	
	Simple Payback (years)	**IRR (%)**	**Simple Payback (years)**	**IRR (%)**	**Simple Payback (years)**	**IRR (%)**
1.00	6	18.8%	5	23.9%	2	53.0%
1.25	7	14.6%	6	18.8%	3	42.2%
1.50	8	11.6%	7	15.3%	3	35.0%
1.75	10	9.5%	8	12.7%	4	29.8%
2.00	11	7.8%	9	10.7%	4	25.9%
2.25	12	6.4%	10	9.1%	5	22.9%
2.50	**14**	**5.2%**	**11**	**7.8%**	**5**	**20.4%**
2.75	15	4.2%	12	6.6%	**6**	18.4%
3.00	17	3.4%	13	5.7%	**6**	16.7%
3.25	18	2.6%	14	4.8%	**7**	15.2%
3.50	20	1.9%	16	4.1%	**7**	13.9%
3.75	21	1.3%	17	3.4%	**8**	12.8%
4.00	**23**	**0.8%**	**18**	**2.8%**	**8**	**11.8%**
4.25	25	0.3%	19	2.2%	9	10.9%

NEM Customer Owned Solar PV

At GPA Retail Rate Credit Recovers Investment in 5 to 8 Years

GPA Residential Retail Rate Credit:			
Average $/W Installed	**$3.25/Watt**	**Annual Savings**	**Simple Payback Years**
PV KW Capacity	7.69		
Annual Capacity Factor	20.0%		
Annual Kwh Production	13,473		
Average LEAC	$0.147		
Average Base Rate	$0.093		
Total Average rate	**$0.240**		
Annual Energy Cost Avoided	$3,233.49		
Installation Cost - No Tax Credit	$24,993		**7.7**
15 Year Loan Annual Payment, 8%, 15 years	$2,919	$314.49	
With Tax Credit	$17,495		**5.4**
15 Year Loan Annual Payment, 8%, 15 years	$2,043	$1,190.49	

NEM Customer Owned Solar PV

At GPA 2018 LEAC Rate Credit Recovers Investment in 8 to 12 Years

GPA 2018 LEAC Rate Credit:			
Average $/W Installed	**$3.25/Watt**	**Annual Savings**	**Simple Payback Years**
PV KW Capacity	7.69		
Annual Capacity Factor	20.0%		
Annual Kwh Production	13,473		
Average LEAC	$0.154		
Average Base Rate	$0.000		
Total Average rate	**$0.154**		
Annual Energy Cost Avoided	$2,074.82		
Installation Cost - No Tax Credit	$24,993		**12.0**
15 Year Loan Annual Payment, 8%, 15 years	$2,919	-$844.18	
With Tax Credit	$17,495		**8.4**
15 Year Loan Annual Payment, 8%, 15 years	$2,043	$31.82	

Summary

- Net Metering was established 13 years ago in 2004. Substantial Changes has occurred on GPA delivery cost and more changes expected by 2022.
- Customer Owned NEM System recovers its investment within 5 to 8 years from installation at GPA full Retail Rate Credit.
- Customer Owned NEM System recovers its investment within 8 to 12 years from installation at GPA LEAC Avoided Cost Rate Credit.
- It appears Zero Down Customers with 2.9% escalators will incur higher cost over the life of their 25 year contract. A $0.18/KWH rate in 2018 becomes $0.357/KWH in 2042.

Additional Information on Net Metering

Estimated Cost Impact to Non-Net Metering Ratepayers:			
NEM Credit above avoided cost	**Estimated Kwh**	**Estimated Subsidy**	**$/Kwh**
FY 2009	23,912	$1,657	$0.0693
FY 2010	98,830	$8,483	$0.0858
FY 2011	170,070	$18,177	$0.1069
FY 2012	494,672	$58,546	$0.1184
FY 2013	1,556,949	$178,996	$0.1150
FY 2014	3,137,212	$410,559	$0.1309
FY 2015	7,383,621	$856,921	$0.1161
FY 2016	21,867,383	$2,200,795	$0.1006
FY 2017	28,242,917	$2,828,834	$0.1002
FY 2018	**33,921,230**	**$3,411,623**	$0.1006
Totals:	**96,896,796**	**$9,974,591**	
Net Metering Customers July 2018	1,733		
Total GPA Customers	51,515		
% NEM Customers	3.36%		
Non-NEM Customers	49,782		
% Non-NEM Customers	96.64%		

Jurisdiction	Years	Notes
Arkansas	20	
Neveda	20	
Utah	18	Until 2035
California	5	Residential, require application
	10	Other, require application
Arizona	20	Require application by June 12, 2018
Florida	20	March 31, 2018 final inspection, JEA
New Hampshire	22	Until 2040
Indiana	29	NEM customers prior to July 1, 2017 have until July 1, 2047
	14	NEM customers signing up prior to July 1, 2022 or their utility reaching a 1.5% peak summer load cap can continue net metering until July 1, 2032
Maine	15	Existing 2017 customers
Michigan	10	Limited to NEM that is already in the system
Hawaii (HECO, MECO, HELCO, Molakai, Lanai)	∞	NEM application was submitted to the utility postmarked 10/12/15 or earlier
Vermont	10	Net metering systems with a complete Certificate of Public Good application filed with the PSB prior to January 1, 2017 (as long as the application was filed at a time when the electric company was accepting net metering systems, based on the state's former aggregate capacity limit) are grandfathered

- Utilities and States Differ on Grandfathering NEM Customers
- Many Jurisdictions are Ending Net Metering

5

Maine

- In early 2017, Maine became the fourth state to more appropriately compensate net metering. The Public Utilities Commission adopted a ramp-down policy, which gradually harmonizes the transmission and distribution charges for net metering customers, aligned with true avoided costs.
- The rules grandfather existing customers for 15 years.

Source: Tanton, Thomas. (April 2018) Net Metering in the States: Moving Toward Equitable and Sustainable Policies for Electric Customers. URL at http://sglf.org/wp-content/uploads/sites/2/2018/04/SGLF-Net-Metering-In-the-States-by-Thomas-Tanton-April-2018.pdf (August 17, 2018).

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Hawaii

- Marco Mangelsdor, president of installer ProVision Solar.
  - "... Hawaii's net energy metering (NEM) policy has "88% of the utility's ratepayers subsidizing the 12% who have net energy metered systems."
  - He believes utility's concern about that shift of costs for system maintenance is reasonable.
  - "The cost of NEM was $38 million in 2013 and it is estimated at $53 million in 2014. These are not trivial dollars."

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California

- One of the first studies to quantify the magnitude of the NEM subsidy was conducted by Energy+Environmental Economics (E3) for the California Public Utilities Commission (CPUC) in 2013.
- The E3 study estimated that NEM would result in a cost shift of $1.1 billion annually by 2020 from NEM to non-NEM customers if current NEM policies were not reformed in California.
- A cost shift of this magnitude–paid for by non-NEM customers–was unacceptable to California regulators.
- As a result, California regulators set to work to reform rates in their state; many other states followed suit and conducted similar investigations of the magnitude of the NEM subsidy.

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Nevada

- Recently, Arizona Public Service (APS), the state's largest utility, found that solar customers avoid on average around $1,000 annually in costs for operating the electric grid, costing the average power user, who must make up the cost, a $16.80 premium per year.

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Louisiana

- Overall, the state found that its net metering structure resulted in an $89 million negative net benefits to electricity rate payers, meaning the net metering program costs are greater than program benefits, and that over $2 million of utility costs per year were being subsidized by non-solar consumers.

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See attached Article of May 18, 2018 by Institute for Energy Research (IER)

Subsidies uncheck will continue to impact Non-Net Metering substantially:

Guam is at 3.36%; Hawaii is at 12 % NEM;

Description:	**Jul-18**	**Future**	**Future**	**Future**
% of All Customers	3.36%	5.00%	10.00%	15.00%
NEM Customers	1,733	2,576	5,152	7,727
Energy Produced	33,921,230	50,416,970	100,833,939	151,250,909
Annual Subsidy	$3,411,623	$5,071,652	$10,143,304	$15,214,955
Non-Nem Customers	49,782	48,939	46,364	43,788
Cost to each Non-NEM	**$68.53**	**$103.63**	**$218.78**	**$347.47**

Recommendation

1. CCU approve GPA filing a petition to the PUC as shown herein to consider changes to the existing net metering credit
2. Recommend an implementation plan for billing NEM customers on net billing: Buy All/Sell All or similar billing models
3. GPA files with GPUC for adjustment of net metering credits from retail to avoided cost
4. It is recommended that for existing NEM Customers, implement a Grandfather phase-in approach over 5 years to the GPA avoided cost credit as shown on the following page. Adjustments for LEAC, line loss and variable cost changes done annually.
5. For future NEM customers, credit set at the GPA avoided cost

Migrate to Avoided Cost in Phases as Follows:			
Year	Estimated Kwh	*$/Kwh	Subsidy
CY 2018	33,921,230	$0.1006	$3,411,623
CY 2019	33,921,230	$0.0805	$2,729,298
CY 2020	33,921,230	$0.0603	$2,046,974
CY 2021	33,921,230	$0.0402	$1,364,649
CY 2022	33,921,230	$0.0201	$682,325
CY2023	33,921,230	$0.0000	$0
Total Subsidy:			$10,234,869
*Subsidy decreased evenly over 5 years			
Avoided Cost Credit set annually by PUC in a similar protocol as LEAC			
All excessed credits trued up at the end of each year			

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUÅHAN
P.O. BOX 2977 • HAGATÑA, GUAM U.S.A. 96932-2977

Issues for Decision

Resolution No. 2018 -20:

Relative to Authorizing the Management of Guam Power Authority to solicit bids (IFB) for the GPA Bulk Storage Fuel Tanks Out of Service/Internal Inspection and Refurbishment.

What is the project's objective? Is it necessary and urgent?
The project will involve the internal inspection and refurbishment of the bulk storage fuel tanks and appurtenances. The tanks need to undergo the required internal inspection to comply with regulatory requirements and refurbish as necessary to ensure the structural integrity and safe operations of the tanks. The project also includes upgrading of the facility's auxiliary system to assure uninterrupted supply of fuel for the power plants. The last inspection was conducted in 2007. Inspections are required to be performed every ten (10) years.

Where is the location?
GPA Bulk Storage Tanks Facility at Piti, Guam.

How much will it cost?
The estimated project cost is $ 8,000,000.00 requiring approval from CCU and PUC.

When will it be completed?
The project is anticipated to commence on FY 2019 and the target completion is on FY 2021.

What is its funding source?
The project will utilize Cabras 3&4 Insurance Proceeds.

The RFP/BID responses:
The IFB solicitation will commence immediately after CCU & PUC approval.

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

RESOLUTION NO. 2018 -20

Relative to Authorizing the Bid for Bulk Storage Fuel Tanks and Internal Inspection and Refurbishment

WHEREAS, the Guam Power Authority (GPA) operates and maintains the bulk storage fuel tanks located at Piti, Guam, which are managed by the Performance Management Contractor, Isla Petroleum and Energy Holdings, LLC (IP&E) and are used to supply fuel to GPA's base load units; and

WHEREAS, the bulk storage fuel tanks last underwent internal inspection and refurbishment in 2007; and

WHEREAS, the tanks appurtenances including auxiliary equipment are required to be assessed, recalibrated and refurbished to comply with USEPA regulatory requirements; and

WHEREAS, upon completion of the out of service/internal inspection and refurbishment of the bulk storage fuel tanks, they will be utilized to store ULSD fuel to supply Piti Power Plant 7 and upon ULSD conversion for Piti Power Plants 8 and 9 and the proposed 180 MW power plant; and

WHEREAS, funding for this project will be programmed under the Cabras 3&4 Insurance Proceeds with an estimated total cost of $8,000,000.00 (attached Exhibit "A"); and

WHEREAS, GPA intends to issue an Invitation for Bid for the Bulk Storage Fuel Tanks Out of Service/Internal Inspection and Refurbishment, to commence on FY2019.

WHEREAS, the total cost exceeds the $1.5M threshold requiring GPA to seek procurement authorization from PUC; and

WHEREAS, GPA is requesting the approval of the CCU to petition the PUC for the issuance of an Invitation for Bid; and

NOW, THEREFORE, BE IT RESOLVED, by the Consolidated Commission on Utilities, subject to the review and approval of the Public Utilities Commission, as follows:

1. GPA's request to solicit competitive bids for the Bulk Storage Fuel Tanks Out of Service/ Internal Inspection and Refurbishment through an Invitation for Bid process is reasonable and prudent.

2. GPA is authorized to petition the Public Utilities Commission for approval to issue bids to procure a Contractor for the Bulk Storage Fuel Tanks Out of Service/Internal Inspection and Refurbishment.

RESOLVED, that the Chairman of the Commission certifies and the Secretary of the Commission attests the adoption of this Resolution.

DULY and REGULARLY ADOPTED this 25th day of September 2018.

Certified by: **Attested by:**

JOSEPH T. DUENAS	**J. GEORGE BAMBA**
CHAIRMAN	**SECRETARY**

SECRETARY'S CERTIFICATE

I, J. GEORGE BAMBA, Secretary for the Consolidated Commission on Utilities do hereby certify that the foregoing is a full, true, and correct copy of the resolution duly adopted at a regular meeting of the members of Guam's Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

Ayes: _____

Nays: _____

Absent: _____

Abstain: _____

EXHIBIT "A"

PROJECT COST BREAKDOWN

GPA BULK STORAGE FUEL TANKS
OUT OF SERVICE INSPECTION AND REFURBISHMENT (DESIGN-BUILD)

1.1 PRICE FOR ENTTIRE WORK RELATED TO TANK 1935

Item	Description	Qty.	Total
1	Mobilization	1 LS	$175,100
2	Tank Draining	1 LS	$992,000
3	Interior Tank Cleaning	1 LS	$583,500
4	Tank Surface Preparation	1 LS	$350,100
5	API 653 Integrity Testing/Inspection	1 LS	$87,500
6	Tank Defects Repairs		$0
a	Interior bottom plate and shell defects	100 SF	$110,900
b	Exterior shell wall defects	100 SF	$110,900
c	Roof exterior surface	100 SF	$110,900
d	Bottom projection plate defects	100 SF	$110,900
e	Tank stairway and handrail	100 SF	$110,900
f	Tank external piping	50 LF	$87,500
7	Install Tank New Roof Railing	1 LS	$320,900
8	Tank Hydrostatic Testing	1 LS	$23,300
9	Tank Calibration	1 LS	$17,500
10	Tank Painting	1 LS	$437,600
11	Tank Clean-up	1 LS	$40,800
12	Demobilization	1 LS	$58,400
SUB TOTAL			$3,728,700

1.2 PRICE FOR ENTTIRE WORK RELATED TO TANK 1935

Item	Description	Qty.	Total
1	Mobilization	1 LS	$175,100
2	Tank Draining	1 LS	$992,000
3	Interior Tank Cleaning	1 LS	$583,500
4	Tank Surface Preparation	1 LS	$350,100
5	API 653 Integrity Testing/Inspection	1 LS	$87,500
6	Tank Defects Repairs		
a	Interior bottom plate and shell defects	100 SF	$110,900
b	Exterior shell wall defects	100 SF	$110,900
c	Roof exterior surface	100 SF	$110,900

1

PROJECT COST BREAKDOWN
GPA Bulk Storage Fuel Tanks
Out of Service Inspection & Refurbishment (Design-Build)

d	Bottom projection plate defects	100 SF	$110,900
e	Tank stairway and handrail	100 SF	$110,900
f	Tank external piping	50 LF	$87,500
7	Install Tank New Roof Railing	1 LS	$320,900
8	Tank Hydrostatic Testing	1 LS	$23,300
9	Tank Calibration	1 LS	$17,500
10	Tank Painting	1 LS	$437,600
11	Tank Clean-up	1 LS	$40,800
12	Demobilization	1 LS	$58,400
SUB TOTAL			$3,728,700

1.3 PRICE FOR ENTIRE WORK RELATED TO TANK FARM SYSTEM

Item	Description	Qty.	Total
1	Tank Farm Cathodic Protection System Assessment	1 LS	$58,400
2	Tanks Leak Detection System Assessment	1 LS	$58,400
3	Tanks Liquid Level Sensors Upgrade	1 LS	$93,400
4	Tank Farm Oil Water Separator Repairs	1 LS	$110,900
5	Replace 5,000 Gallon ULSD Tank	1 LS	$204,200
6	Final Completion Report	1 LS	$17,500
SUB TOTAL			$542,800

COST SUMMARY			
1.1	**Tank 1935**		**$3,728,700**
1.2	**Tank 1934**		**$3,728,700**
1.3	**Tank Farm System**		**$542,800**
TOTAL			**$8,000,200**

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUÅHAN
P.O. BOX 2977 • HAGATÑA, GUAM U.S.A. 96932-2977

Issues for Decision

Resolution No. 2018 – 21: IFB New ULSD Pipeline System

Relative to: ***Authorizing the Management of Guam Power Authority to solicit bids (IFB) for the New ULSD Pipeline System.***

What is the project's objective? Is it necessary and urgent?
The project will construct 8-, 12-, and 24-inch diameter pipes with supports/pedestals, pipe manifolds, valves and pumping station appurtenances for ULSD fuel. The pipeline system will connect to Navy Tie-In, Tanks 1934 and 1935, and to Piti Power Plants 7, 8, and 9. USEPA has mandated GPA to utilize ULSD for the power plants by year 2021.

Where is the location?
GPA Bulk Storage Tanks Facility, Navy-Tie-In, and Piti 7, 8, and 9.

How much will it cost?
The estimated project cost is $ 5,900,000.00 requiring approval from CCU and PUC.

When will it be completed?
The project is anticipated to commence on FY 2019 and the target completion is on FY 2020.

What is its funding source?
The project will utilize Cabras 3&4 Insurance Proceeds.

The RFP/BID responses:
The IFB solicitation will commence immediately after CCU & PUC approval.

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

RESOLUTION NO. 2018 – 21

AUTHORIZING THE MANAGEMENT OF GUAM POWER AUTHORITY TO PROCEED WITH THE SOLICITATION FOR THE NEW ULSD PIPELINE SYSTEM

WHEREAS, the Guam Power Authority (GPA) is mandated by United States Environmental Protection Agency (USEPA) to use Ultra Low Sulfur Diesel (ULSD) oil to fuel power plants by 2021; and

WHEREAS, GPA will comply with the USEPA requirements, GPA will build and use a pipeline system to supply ULSD oil to the Piti Tank Farm, Piti Power Plants 7, 8 and 9; and

WHEREAS, the ULSD pipeline system consists of 8-, 12- and 24-inch diameter pipes with supports/pedestals, pipe manifolds, valves, and pumping station to include motor, pumps, concrete roof, berms and pads; and

WHEREAS, the 24-inch ULSD pipeline will be interconnected from the US Navy tie-in to tanks 1934 and 1935, the 12-inch pipeline will be interconnected from tanks 1934 and 1935 to the pumping station and the 6-inch pipeline will be interconnected from pumping station to the Piti Power Plants 7, 8, and 9; and

WHEREAS, the ULSD pipeline system will be operated and maintained under United States Environmental Protection Agency (USEPA) and American Petroleum Institute (API) guidelines and regulations; and

WHEREAS, funding for this project will be programmed under the FY 2019 and FY 2020 Cabras 3&4 Insurance Proceeds with an estimated cost of $5,900,000.00 (Attached Exhibit “A”); and

WHEREAS, GPA intends to issue an Invitation for Bid for the New ULSD Pipeline System, to commence in FY2019.

WHEREAS, the total cost exceeds the $1.5M threshold requiring GPA to seek procurement authorization from PUC; and

WHEREAS, GPA is requesting the approval of the CCU to petition the PUC for the issuance of an Invitation for Bid; and

NOW, THEREFORE, BE IT RESOLVED, by the Consolidated Commission on Utilities, subject to the review and approval of the Public Utilities Commission, as follows:

1. GPA's request to solicit competitive bids for the New ULSD Pipeline System through an Invitation for Bid process is reasonable and prudent.

2. GPA is authorized to petition the Public Utilities Commission for approval to issue bids to procure a Contractor for the construction of the New ULSD Pipeline System.

RESOLVED, that the Chairman of the Commission certifies and the Secretary of the Commission attests the adoption of this Resolution.

DULY and REGULARLY ADOPTED this 25th day of September 2018.

Certified by: **Attested by:**

JOSEPH T. DUENAS
CHAIRMAN

J. GEORGE BAMBA
SECRETARY

SECRETARY'S CERTIFICATE

I, J. GEORGE BAMBA, Secretary for the Consolidated Commission on Utilities do hereby certify that the foregoing is a full, true, and correct copy of the resolution duly adopted at a regular meeting of the members of Guam's Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

Ayes: _____

Nays: _____

Absent: _____

Abstain: _____

EXHIBIT "A"

PROJECT COST BREAKDOWN

GPA TANK FARM NEW ULSD PIPELINE SYSTEM (DESIGN-BUILD)

PRICE FOR ENTIRE WORK

Item No.	Description	Qty.	Total
1	Design	1 LS	$ 875,000.00
2	Construction		
a	Mobilization/Demobilization	1 LS	$ 200,000.00
b	24" Pipeline & Fittings	1 LS	$ 460,000.00
c	12" Pipeline & Fittings	1 LS	$ 435,000.00
d	6" Pipeline & Fittings	1 LS	$ 410,000.00
e	24" Gate Valves & Fittings	1 LS	$ 375,000.00
f	12" Gate Valves & Fittings	1 LS	$ 350,000.00
g	6" Gate Valves & Fittings	1 LS	$ 300,000.00
h	Pipeline Pedestals & Supports	1 LS	$ 350,000.00
i	Pumping Station & Accessories	1 LS	$ 1,700,000.00
j	Painting	1 LS	$ 360,000.00
3	Testing & Commissioning	1 LS	$ 85,000.00
GRAND TOTAL			$5,900,000.00

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUÅHAN
P.O. BOX 2977 • HAGATÑA, GUAM U.S.A. 96932-2977

Issues for Decision

Resolution No. 2018-22

RELATIVE TO THE AUTHORIZATION OF THE GUAM POWER AUTHORITY TO AWARD PROPERTY INSURANCE FOR A THREE-YEAR POLICY

What is the project's objective? Is it necessary and urgent?

The Consolidated Commission on Utilities has determined that it is a prudent and reasonable business practice to maintain insurance coverage on GPA's assets to the extent practical. Guam Power Authority's Bond Indenture agreement requires GPA to "secure and maintain property insurance on all facilities constituting the system against risks of loss or damage to the extent that such insurance is obtainable at reasonable cost." The indenture further requires GPA to carry insurance "of a scope and nature as that usually carried in the industry." GPA's current Property Insurance policy is set to expire on November 1, 2018. The insurance risk manager and the insurance broking team has configured, with the goal in mind of improving, to the greatest extent possible, the terms and conditions of GPA's property insurance policy for the next three years.

How much will it cost?

The next three annual installment premiums will be billed at ***$4,355,000.00***. GPA's premium was reduced from $6,450,000.00 per year to $4,355,000.00 per year for a **savings of $2,095,000.00.**

What is its funding source?

Revenue Funding

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

RESOLUTION NO. 2018-22

RELATIVE TO THE AUTHORIZATION OF THE GUAM POWER AUTHORITY TO AWARD PROPERTY INSURANCE FOR A THREE-YEAR POLICY

WHEREAS, the Consolidated Commission on Utilities has determined that it is a prudent and reasonable business practice to maintain insurance coverage on GPA's assets to the extent practical; and

WHEREAS, the Guam Power Authority's Bond Indenture agreement requires GPA to "secure and maintain property insurance on all facilities constituting the system against risks of loss or damage to the extent that such insurance is obtainable at reasonable cost"; and

WHEREAS, the indenture further requires GPA to carry insurance "of a scope and nature as that usually carried in the industry"; and

WHEREAS, GPA's current Property Insurance policy is set to expire on November 1, 2018; and

WHEREAS, the insurance risk manager and the insurance broking team has configured, with the goal in mind of improving, to the greatest extent possible, the terms and conditions of GPA's property insurance policy for the next three years. GPA's premium was reduced from $6,450,000.00 per year to $4,355,000.00 per year for a savings of $2,095,000.00; and

WHEREAS, GPA is to award new insurance policy from November 1, 2018 to November 1, 2021 for the following premium:

- The next three annual installment premiums will be billed at $4,355,000.00. There's an option to increase the limit from $200M to $300M property policy for an additional $100,000.00 annual premium.

WHEREAS, GPA now brings these matters before the Consolidated Commission on Utilities; and

NOW THEREFORE, BE IT RESOLVED BY THE CONSOLIDATED COMMISSION ON UTILITIES, SUBJECT TO THE APPROVAL OF THE GUAM PUBLIC UTILITES COMMISSION, AS THE GOVERNING BODY OF THE GUAM POWER AUTHORITY, AS FOLLOWS:

1. The GPA General Manager is authorized to accept the terms of the annual premiums offered by the insurance underwriters at a cost of $4,355,000.00 for each of the next three policy periods covered between November 1, 2018 and November 1, 2021.
2. The GPA General Manager is authorized to pay each annual premium as it becomes due without any financing arrangements.

RESOLVED, that the Chairman certifies and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED AND APPROVED THIS 25th **DAY OF SEPTEMBER, 2018.**

Certified by:	Attested by:
_____	_____
JOSEPH T. DUENAS	**J. GEORGE BAMBA**
Chairperson	Secretary
Consolidated Commission on Utilities	Consolidated Commission on Utilities

SECRETARY'S CERTIFICATE

I, J. GEORGE BAMBA, Secretary for the Consolidated Commission on Utilities do hereby certify that the foregoing is a full, true, and correct copy of the resolution duly adopted at a regular meeting of the members of Guam's Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

Ayes: _____

Nays: _____

Absent: _____

Abstain: _____

GM REPORT

TO: **Consolidated Commission on Utilities**

FROM: **General Manager**

DATE: **September 20, 2018**

SUBJECT: **General Manager's Report**

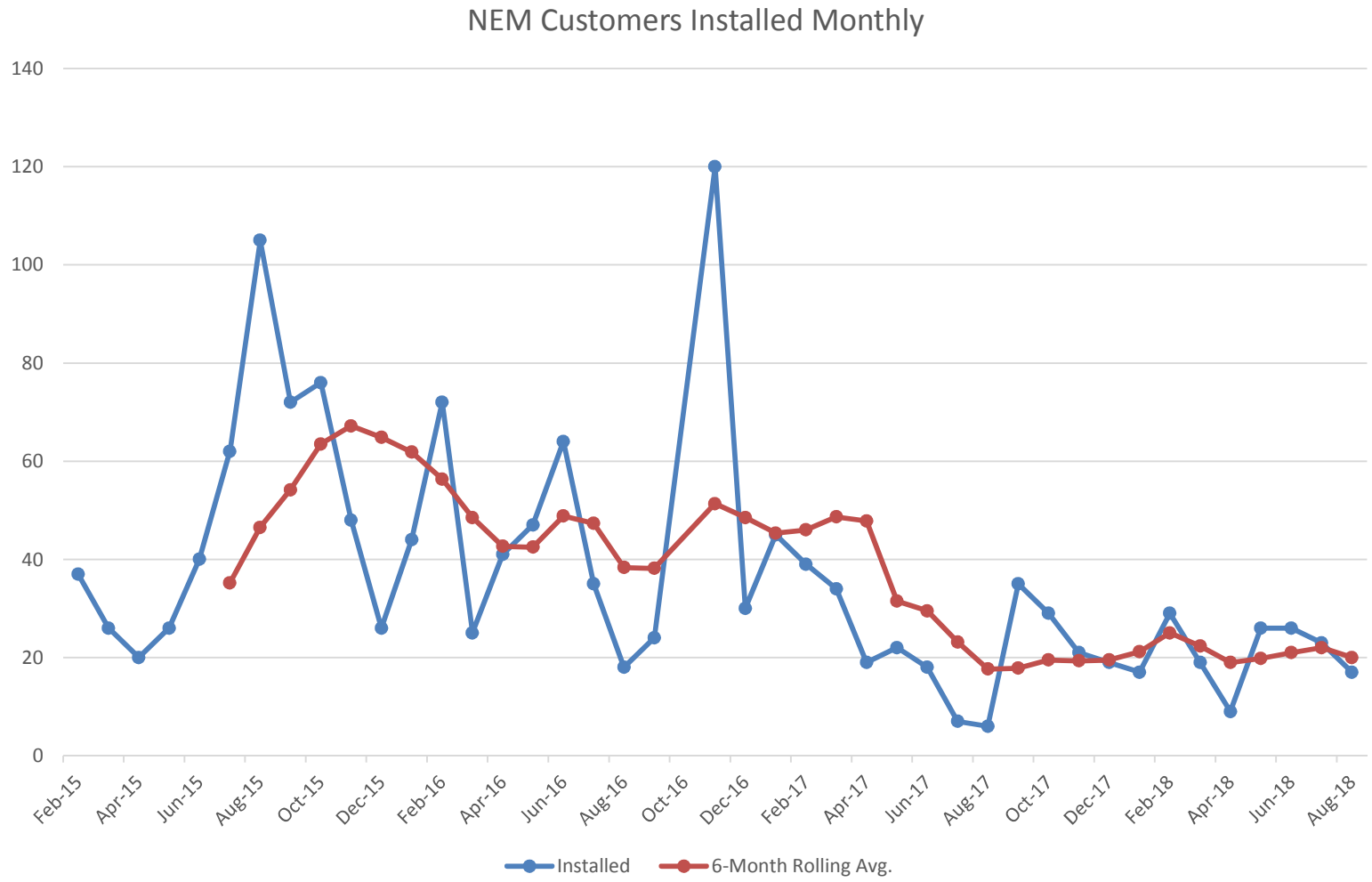
This report provides updates on key issues:

1. **Generation System:** The following summarizes the expected generation capacity projection for **October 2018**. All base load units are expected to be in operation for most of the month. The Cabras steam units are currently limited to 55 MW each to minimize the potential for boiler tube leaks which has been a common occurrence for units.

October 2018 Projected Capacity:	**361 MW**
October 2018 Projected Demand:	**250 MW**
Anticipated Reserve Margin:	**111 MW**

2. Net metering Summary Ending August 2018:

Description:	Count	Kw	
Active	**1,750**	**18,522**	
Pending	19	241	
Totals:	1,769	18,763	
Service:	**Count**	**KW**	**Kw/Customer**
Residential	1,657	15,235	9.2
Others	93	3,287	35.3
Total:	1,750	18,522	10.6
% Residential	**94.7%**	**82.3%**	
Estimated 12 Months Revenue Impact:	**$3,456,653**		


NEM Customers Installed Monthly
140
120
100
80
60
40
20
0
Feb-15
Apr-15
Jun-15
Aug-15
Oct-15
Dec-15
Feb-16
Apr-16
Jun-16
Aug-16
Oct-16
Dec-16
Feb-17
Apr-17
Jun-17
Aug-17
Oct-17
Dec-17
Feb-18
Apr-18
Jun-18
Aug-18
Installed
6-Month Rolling Avg.

3. Demand Side Management Expenses Thru August 2018

Description	FY16	FY17	FY18 as of Aug 31	Total to Date
Regular/OT Pay	$11,348.80	$22,256.00	$20,469.95	$ 54,074.75
Other Contractual	$28,278.50	$85,550.05	$79,752.25	$193,580.80
Bank Fees	$155.00	$1,032.06	$1,070.08	$2,2457.14
Paid Rebates-Split AC	$154,700.00	$557,275.00	$1,039,700.00	$1,751,675.00
Paid Rebates-Central AC	$3,400.00	$8,200.00	$3,600.00	$15,200.00
Paid Rebates-Washer/Dryer	$2,800.00	$7,425.00	$31,800.00	$42,025.00
Total Expenses	$200,682.30	$681,738.11	$176,392.28	$2,058,812.69

DSM PROGRAM SUMMARY

DSM Program reduces peak demand and reduces LEAC cost for all customers at a one time fixed rebate. Program has become very successful and GPA would like to petition the PUC to fund additional rebates under LEAC. DSM eliminates running less efficient peaking units at peak time thereby reducing fuel cost.

DESCRIPTION	AMOUNT
Initial DSM Budget FY'16	$1,806,014.00
Interest Income as of Aug 18	$4,500.36
Total Expense	$2,058,812.69
Ending Balance as of Aug 18	$(248,298.33)
Addtl. Budget: Approved (FY'18)	$1,139,189.00
Total Ending Balance as of Aug 18	**$890,890.67**

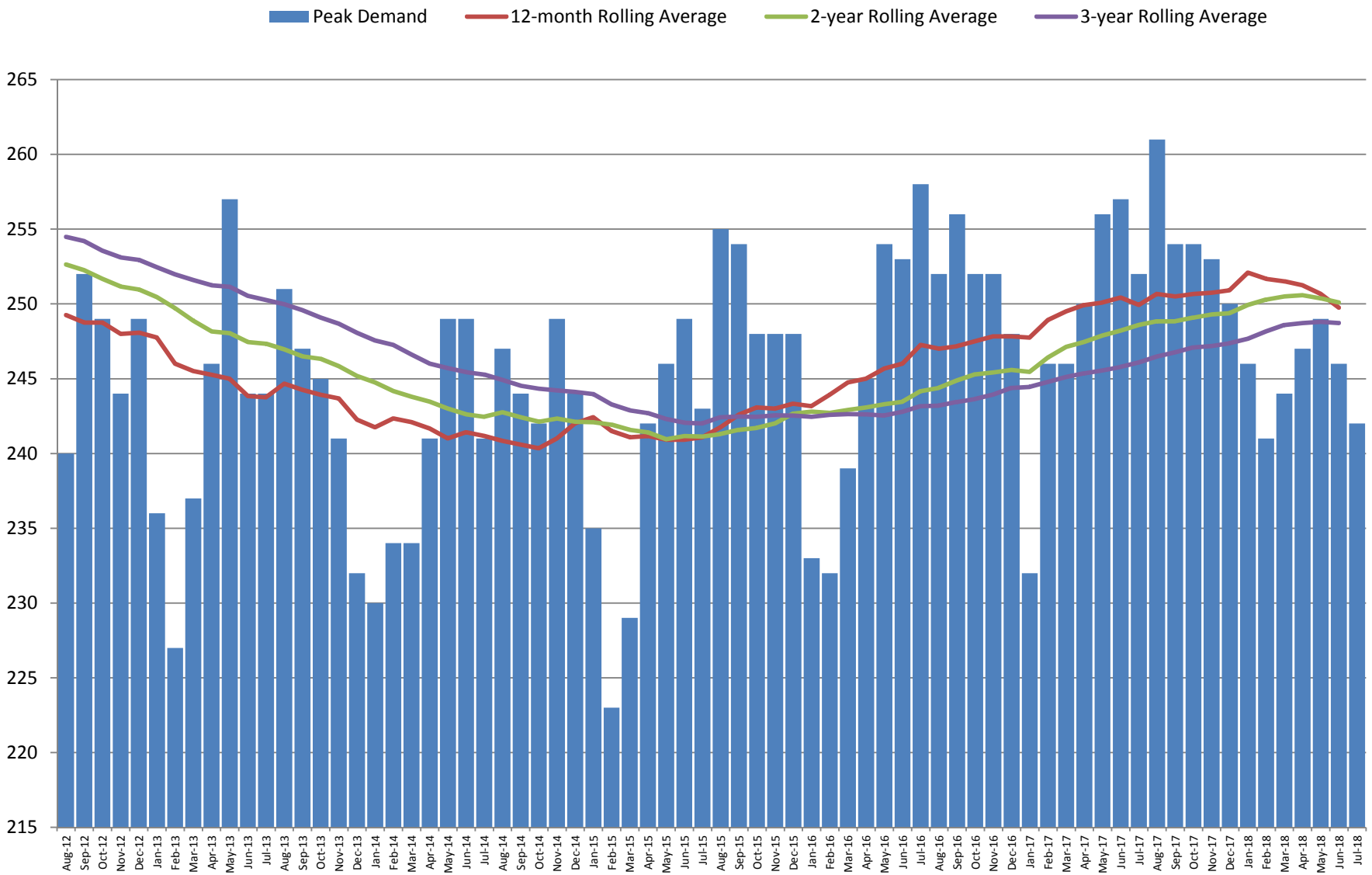
4. **PUC Dockets:**
   - The PUC has approved the technical specifications for the new plant. Thank you PUC for the quick turn around of the petition. The package is being issued to the bid's short listed proponents
   - FY 2019 CIP budget Approval is on their September meeting agenda.

5. **Phase II Renewable Contracts:**
   - Contract for HANWAH 60 MW Renewable project was signed Wednesday August 22nd.
   - Contract for KEPCO- LG CNS 60 MW Renewable project was signed Friday August 24th
   - These two contracts when completed in 2021 will save the ratepayers over $43M over the first 5 years or operations (estimated at a LEAC of $0.11/Kwh)

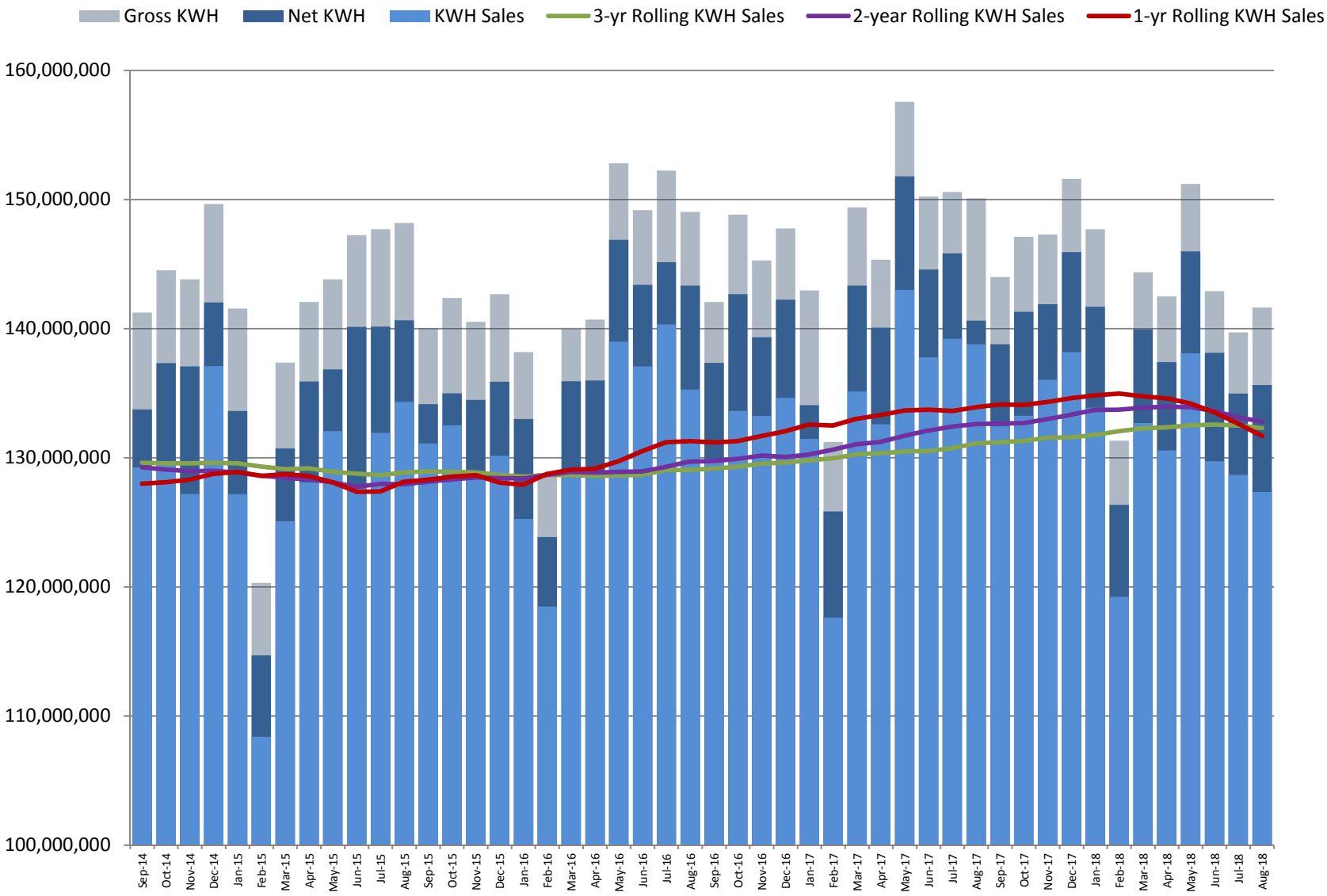
6. **Typhoon Mangkhut Restoration:** A presentation has been prepared to provide an update of the island-wide power restoration efforts from Typhoon Mangkhut.

7. **Key Performance Indicators:** The following are indicators thru August 2018.

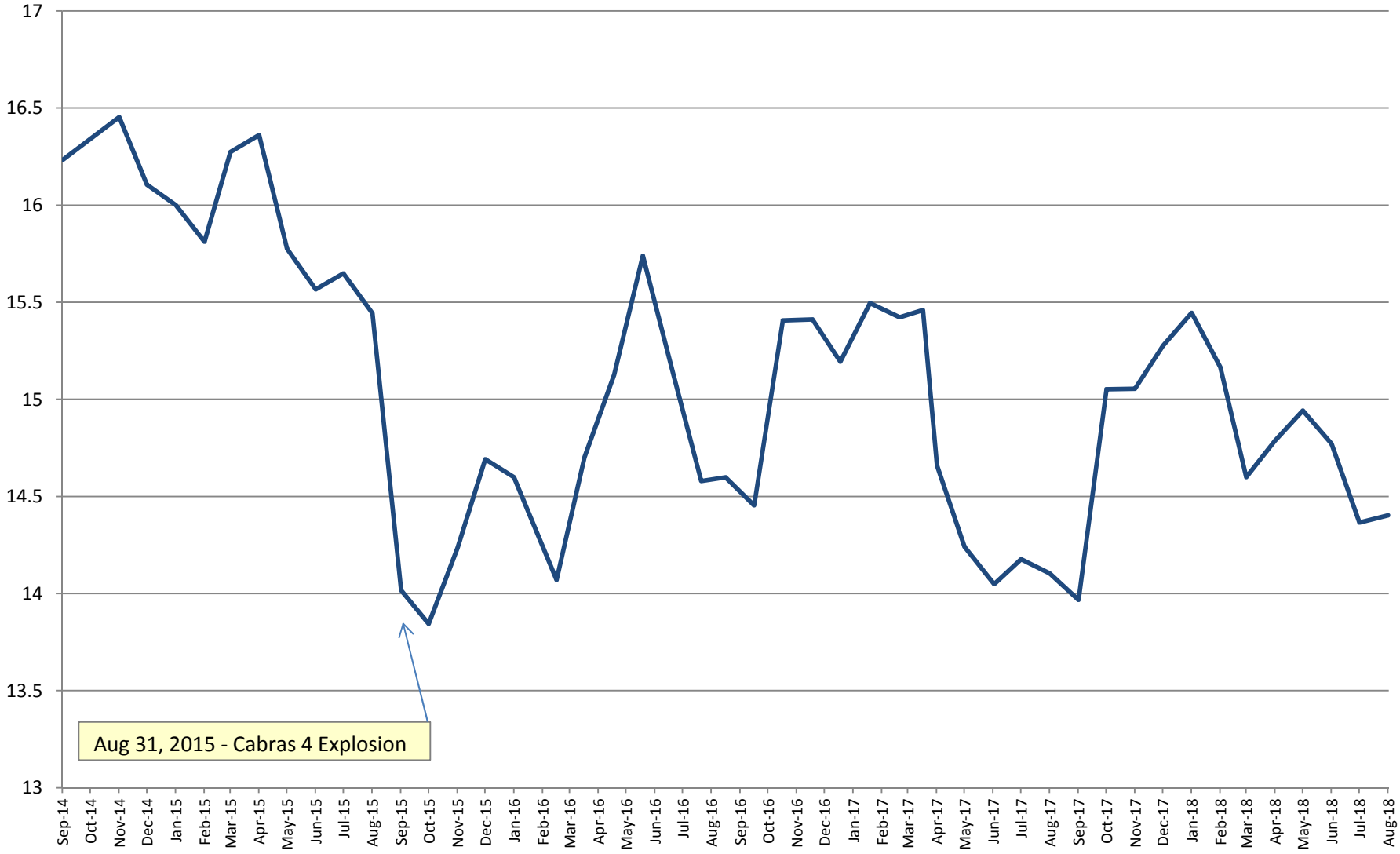
Historical Monthly Peak Demand
Aug 2012 - Aug 2018



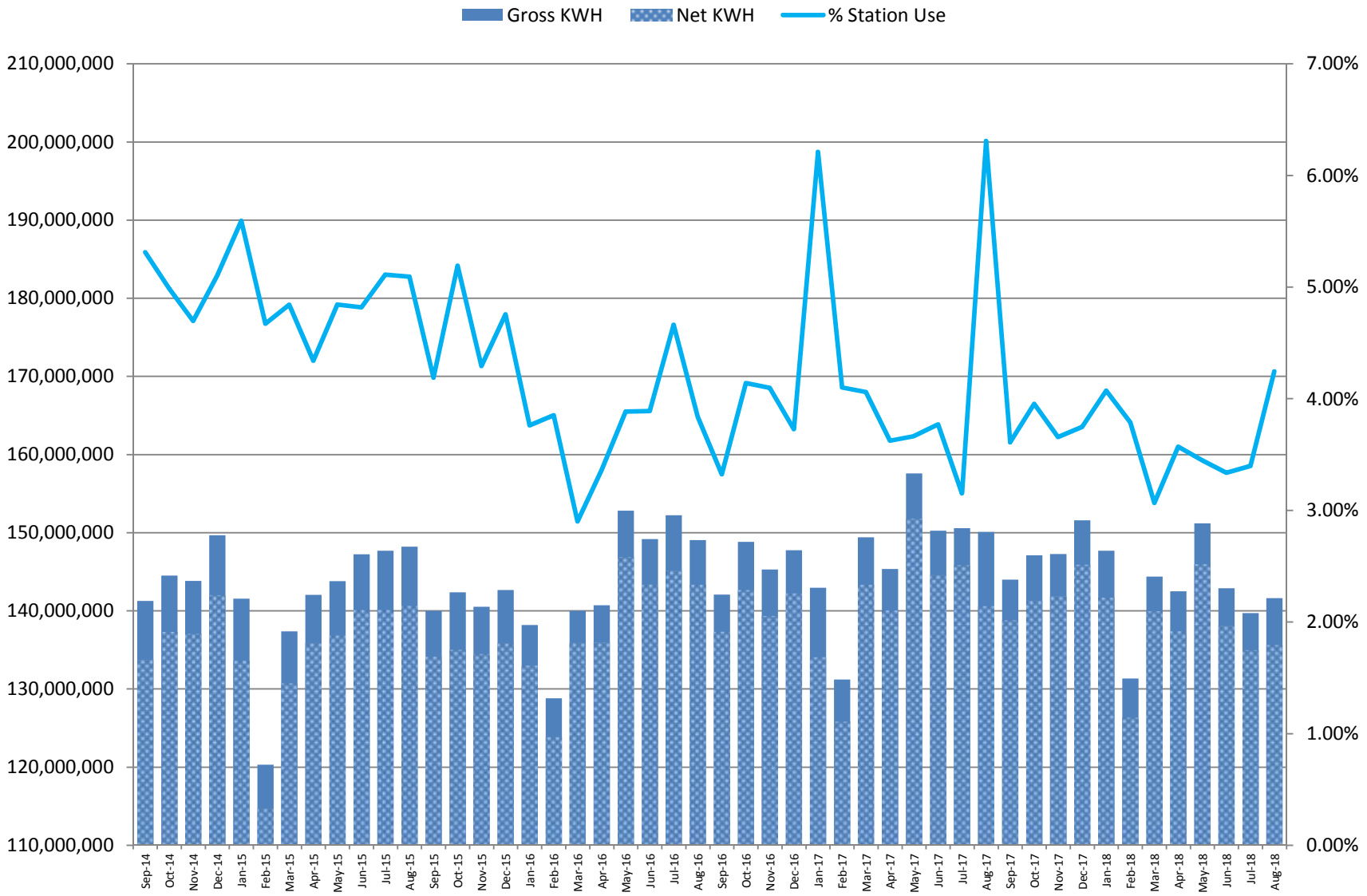
Historical KWH Sales
Sept 2014 - Aug 2018



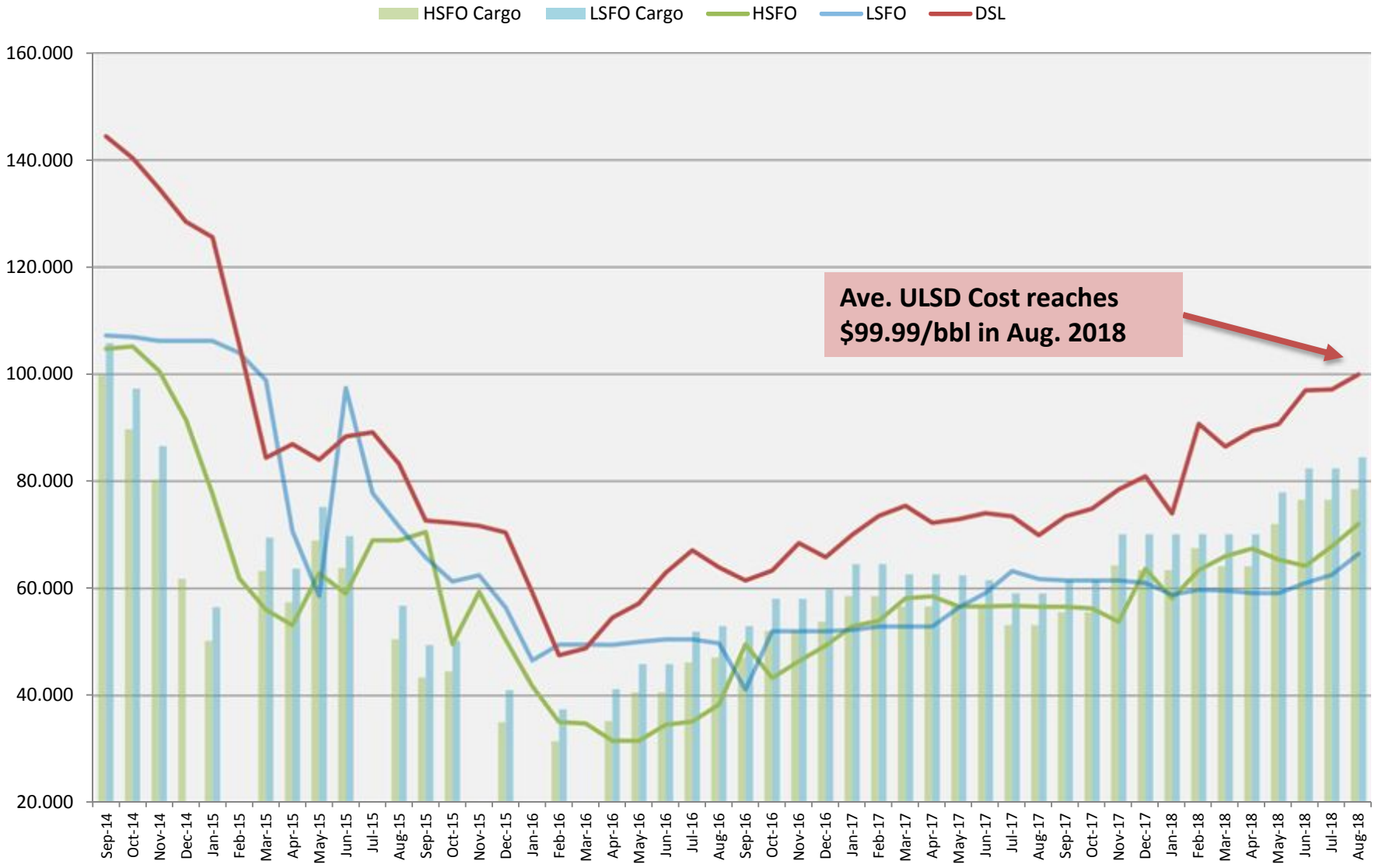
SYSTEM GROSS HEAT RATE
(KWH/Gal)
Sept 2014 - Aug 2018



Gross and Net Generation (KWH)
Sept 2014 - Aug 2018



Fuel Cargo and Fuel Consumption Costs ($/bbl)
Sept 2014 - Aug 2018



TYPHOON MANGKHUT Restoration

Presentation To:

Consolidated Commission on Utilities

September 20, 2018

Storm Summary

- **COR 3** 7:00 pm September 8th Saturday
- **COR 2** 7:00 pm September 9th Sunday

EOC Activated – GPA RACs staff of four (4) placed on 24-7 shift

- **COR 1** 4:00 am September 10th Monday
- **CPA** ~ 7:00 pm
- **COR 4** 12:00 pm September 11th Tuesday

- Damaging winds of 39 mph
  - Monday 1:00 pm to Tuesday 4:00 am
- Destructive winds of 58 mph
  - Monday 4:00 pm – 11:00 pm
- Typhoon force winds of 74 mph
  - Monday 7:00 pm – 10:00 pm

EOC GPA RACs Deactivated – 10:00 am September 17th Monday

T&D Crews active until official stand down
5:14 pm Monday, September 10th

T&D Crews resumed activities
6:00 am Tuesday, September 11th

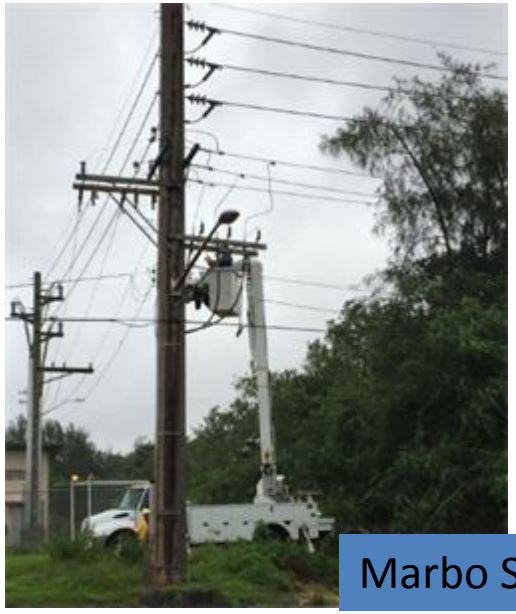
Storm Preparations

- Commenced Friday afternoon, September 7, 2018
- Trimming vegetation away from power lines throughout the island and removing line guards
- Securing power plant buildings, substation buildings, and the GBNPSB
- Topping off all fuel at the power plant tanks, water systems sites, and for the fleet

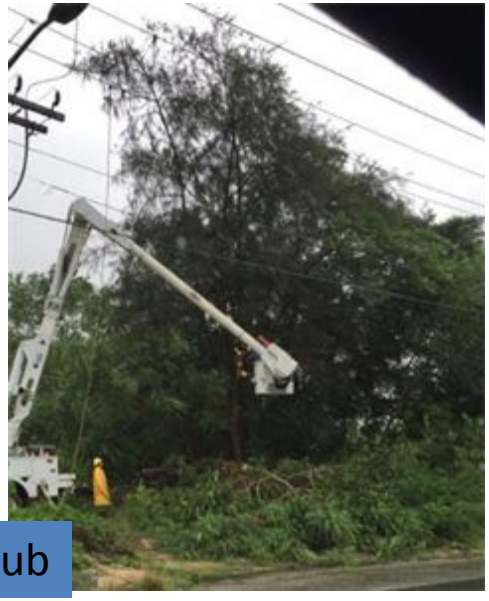


Marbo Sub





Marbo Sub



Storm Preparations

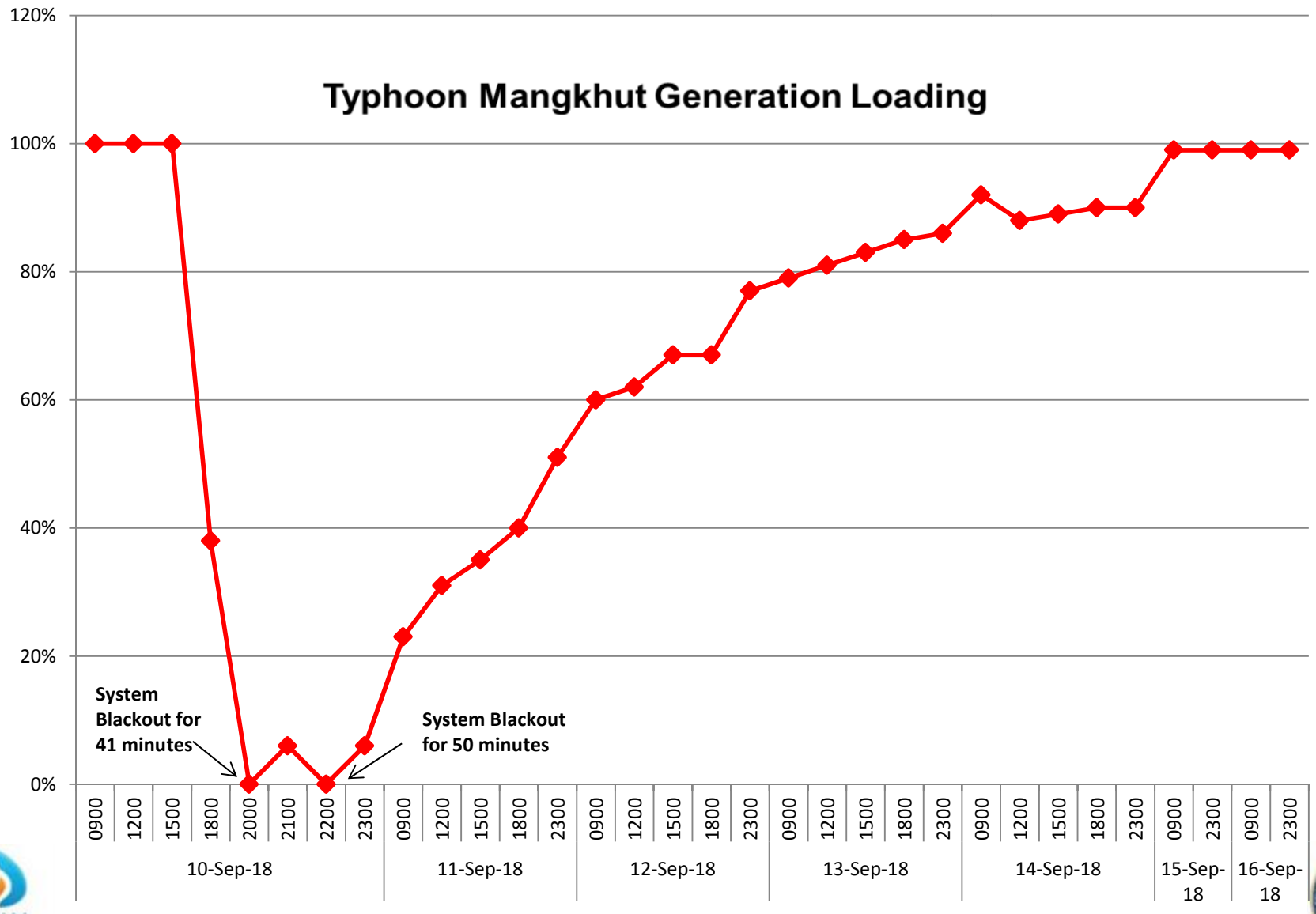

Rte. 3 Dededo


Namo Falls


Nimitz


Dededo

System Loading



Damage Assessment

- Engineering assessment began on Tuesday, September 11, 2018.
- Transmission and Distribution Damages
  - Down and leaning wooden poles; 4 ea. 35', 12 ea. 45', and 1 ea. 55'
  - Down transmission, distribution primary and secondary power lines and static wire
  - Damaged hardware – insulators, cutouts, lightning arrestors, overhead pole top configurations
  - Damaged equipment – transformers
  - Vegetation coming in contact with power lines
  - Severed wires due to flying debris coming in contact with power lines
  - Sagging primary and secondary lines
- Generation Facilities and Substation Damages
  - Cabras Power Plant Unit 1&2 - Damaged wall panels, parapet, cracked awning windows, AC ducts
  - Central Maintenance – Damaged exhaust fan
  - Dededo CT – Damaged chain link fence and gate
  - Yigo CT – Damaged roll-up door and roof (including insulation)
- Various Substations – Damaged chain link fence, roof, doors, damaged perimeter lighting, burnt bus insulator, vegetation

Procurement/Warehouse

CONTRACTS

- 3 line crews to supplement GPA crews
- Food, Water, Gatorade and Fruits
- Safety Supplies: Tools, safety shoes, rain gear, spot lights, safety vests, traffic cones, etc.

LINE MATERIALS ISSUED	QUANTITY
POLES	12
TRANSFORMERS	2 Pad and 8 Pole Mounts
CROSS ARMS	70
FUSE CUTOUTS	200
FUSE LINKS	900
INSULATORS	440
WIRES	20,000 LF
LIGHTNING ARRESTERS	25
Bolts, Clamps, Clevises, Connectors	

Projected Revenue Loss (Base Rate)

Pre-Typhoon Period			Post-Typhoon Period			VARIANCE (KWH)	Projected Sales Loss
Date	**Day**	**Net KWH**	**Date**	**Day**	**Net KWH**		
3-Sep	Mon	4,459,346	**10-Sep**	Mon	3,023,541	1,435,805	$ 136,799
4-Sep	Tue	4,476,709	**11-Sep**	Tue	1,358,717	3,117,992	$ 297,072
5-Sep	Wed	4,505,685	**12-Sep**	Wed	2,878,520	1,627,165	$ 155,031
6-Sep	Thu	4,487,488	**13-Sep**	Thu	3,701,117	786,371	$ 74,923
7-Sep	Fri	4,565,742	**14-Sep**	Fri	4,107,311	458,431	$ 43,678
8-Sep	Sat	4,614,858	**15-Sep**	Sat	4,463,970	150,888	$ 14,376
9-Sep	Sun	4,595,994	**16-Sep**	Sun	4,454,821	141,173	$ 13,450
	TOTAL:	**31,705,821**			**23,987,997**	**7,717,824**	**$ 735,328**

*** Based on the August Revenue Reports average base rate**

Damage Estimate

ITEM	COST
Transmission & Distribution	$729,805
Generation and Substation	$234,000
Water Systems (labor, fuel, repairs)	Pending
Lost Revenue	$735,328
Supplies & Contracts	Pending
TOTAL ESTIMATED COST	~$1,699,133
Total Estimated Loss Most Likely	~$2.5M

Water Systems

Location	# of Sites w/Gens	Sites Without Gens	TOTAL
North	92	3	95
Central	65	5	70
South	46	3	49
Portable Gens	4		4
TOTAL	**207**	**11**	**218**

<u>7 Generator Issues After Storm:</u>
Overheated – AG2, CD17, F15, Machanao, Y15
Flooded & Submerged – ND4, SD4

GPWA to procure in FY 2019 additional portable generators for Booster Pump Stations which serve high elevation customers and for emergencies due to damaged stationary units

Customer Engagement

- Tracking of customer trouble reports received by Customer Service Representatives CSRs, Facebook direct messenger and GPA personnel.

- Trouble calls received by Customer Service Representatives
  - Tuesday, September 11th – 237
  - Wednesday, September 12th – 498
  - Thursday, September 13th – 345
  - Friday, September 14th – 311
  - Saturday, September 15th – 253

- Facebook Direct Messenger - **428** messages received from September 9th to 14th

- 12-hour shifts were implemented for (CSRs) assisting with trouble calls and AMI/Command Center Operations.

- Community updates via social media were successful in keeping our customers engaged and informed. Public sentiment improved with frequent updates and photos of the crew's pre-storm trimming and post-storm restoration.

Customer Engagement

Communications

1. Updated & Distributed Public Service Announcements (PSAs) to various storm related topics:
    - Voltage Fluctuations; Portable Generator Safety; Appliance Safety; Downed Power Lines; Securing Yard Items; Main Breakers;
2. Damaged Weather Head Process
    - Developed Graphic for process; Issued process to press & stakeholders
3. Typhoon Restoration Process
    - Developed Graphic for restoration process
4. Issued Restoration Updates
    - Media, Stakeholders e.g. GDOE, DPW, MCOG, GWA, Joint Information Center, Social Media
5. Coordinated Inter Agency Support via JIC & EOC
    - GDOE restoration coordination for 41 schools
    - Traffic intersection restoration coordination – GUARNG, DPW & GPD
    - Telecommunication
6. Employee Recall Memorandum from GM-COR 4
7. Updated Admin Staff on Restoration Progress;
    a) Trouble Call reporting;
    b) Periodic & Multiple 30 minute outages as necessary

Information Technology

Smart Meter AMI Network

- No damage to the six major collectors in Apra Heights, Barrigada, Dededo, Talofofo, Yigo and Umatac.
- Once power was restored, meter activity was seen.

GPA Network Communications

- All GPA links to substations, Julale, Cabras, T&D, Dededo CT operational
- No reported damage to fiber or related communication equipment.
- The Tier 2 network, GPA's island wide wireless network, was not damaged by the storm.

GPA Customer Billing and Payment Systems

- Operational, online payments available on Tuesday after the storm

GPA Datacenter

- Operational throughout the storm and no issues reported.

Personnel

- **SUPPORT PERSONNEL ACTIVATED TO SUPPORT RECOVERY**

  - ✓ *Safety*
  - ✓ *Procurement – Preparation and Issuance of contracts*
  - ✓ *Customer Services – CSRs staffed at the Dispatch Center, Facebook updates and reporting Facebook messages, tracking trouble reports, and following up with customer inquiries*
  - ✓ *Finance – Certification of purchases, funding, and payments*
  - ✓ *Public Information Office – Joint Information Center (JIC) staffing, liaison with MCOG, GDOE and others*
  - ✓ *Planning & Regulatory – Handled oil spill response, documented transformer damages, and pole installations*
  - ✓ *IT – Maintained network communications, monitored meter communications and health of routers and collectors, coordinated repair and reenergization of routers and collectors with T&D, reported on customers energized*
  - ✓ *SPORD – conducted Fuel inspections and ensured fuel deliveries*

Personnel

- **PERSONNEL ACTIVATED**

  - ✓ *Dispatch – System Dispatching, Generation Dispatching, Trouble Desk, SCADA personnel*
  - ✓ *Transportation – Mechanics in support of heavy equipment and light duty vehicles*
  - ✓ *Engineering – damage assessment (35) + Line Crew Support (26)*
  - ✓ *Generation – all units available except for Aggrekko which required complete securing to prevent damage, all GPA sites manned through the storm*
  - ✓ *Generation Water System Diesel – 9 personnel covered 207 standby Generator sites*
  - ✓ *Facilities – personnel handling GBNPSB, securing GPA facilities, assessing and repairing facility damages*

Personnel

TRANSMISSION & DISTRIBUTION

- *Line Crews*

  Day Shift

  North – 4 crews
  Central – 3 crews
  Southern – 3 crews

  Swing/Graveyard Troubleshooters – 3 Crews

- *Operators = 3 crews*
- *Meter shop = 8 electricians for meter change outs, crew support*
- *Relay shop = 6 electricians for 29 substations*
- *Substation = 10 electricians for 29 substations*
- *4 Safety, 2 HR, 1 IT = Material assembly, traffic control, supply runs*
- *Engineering = 26 personnel for documentation of crew activities, redesign as necessary, line assessment prior to restoration*

Safety

ZERO INJURIES!!!

Two Critical Situations:

- GPD escort in one area of combative residents
- GPD and Mayors assistance for complete road closure and traffic divergence in Talofofo

Damages

Barrigada-Talofofo





Afame, Sinajana



Mangilao



Cross Island Road

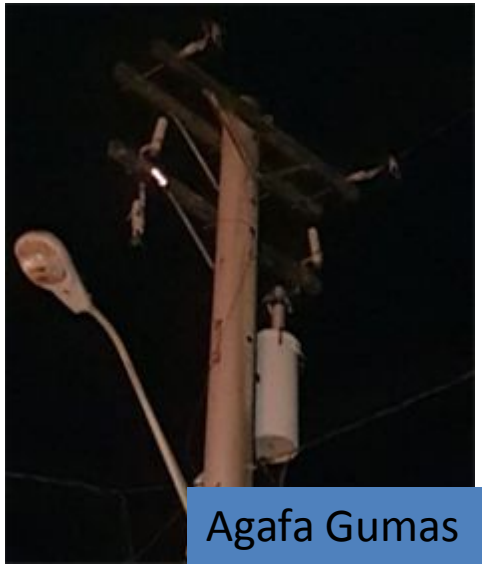
Damages


Pulantat

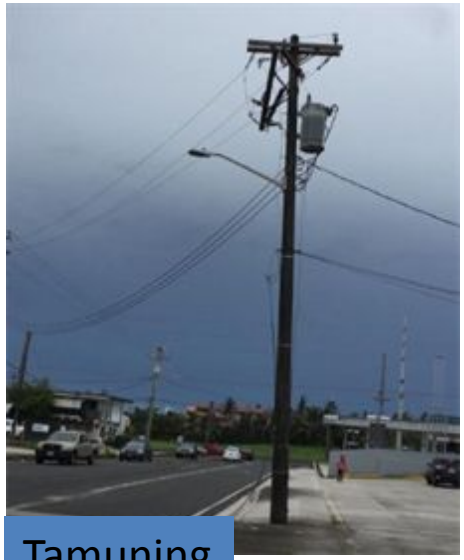

Mangilao


Tiyan


UPI Elementary


Agafa Gumas

Damages



Tamuning



Ypaopao



Mongmong



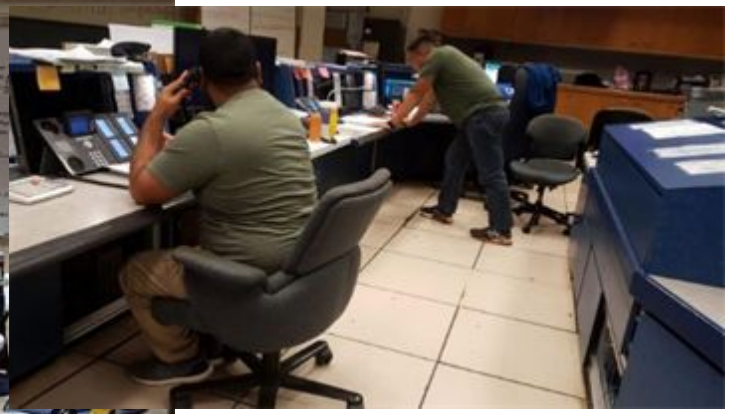
Camp Witek, Yona

Restoration

PSCC



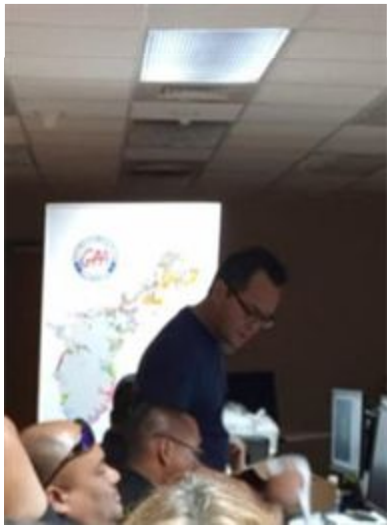




Restoration

Customer Services at PSCC









Restoration

Dededo Substation





Engineering Crew Support





Tiyan Substation

Restoration

Pago Bay





Agana Substation



Tumon

Restoration



Inarajan



Anigua

Yigo



Restoration



Talofofo



Route 16 Near DRT

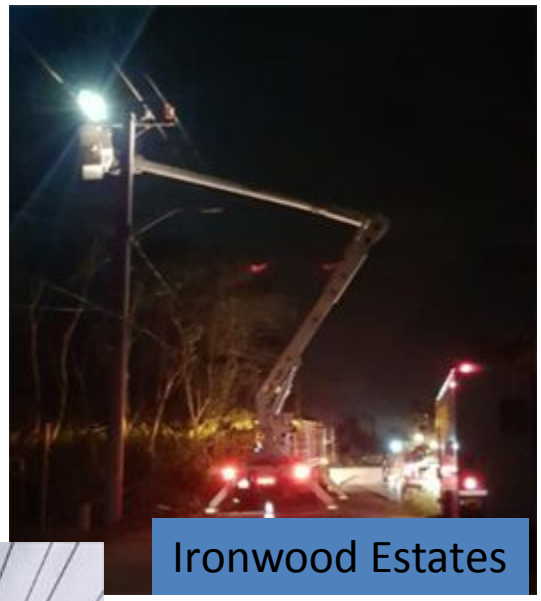


Yigo

Restoration



Ypaopao



Ironwood Estates



Agana Heights



Chalan Irensia, Dededo

Summary

- No Injuries!!! Biggest Accomplishment for Very Dangerous Working Conditions
- Recovery Efforts were Excellent! Thank you Employees of GPA and GWA!!!!
- Thank you to the Ratepayers and Public for their patience and understanding!!!
- Teams will meet to determine system and procedural improvements to improve future recovery efforts
- Great Team Work between GWA and GPA to keep water service flowing. Team to meet to recommend additional future improvements

THANK YOU

CUSTOMER SERVICE DIVISION - Aug 2018

SUMMARY REPORT

SITE	Less than 10 Mins.	%	10-15 Mins.	%	15-30 Mins.	%	30-45 Mins.	%	TOTAL	Location %
GBN	1,859	73%	533	21%	126	5%	29	1%	2,547	28%
HAGATNA	2,408	77%	406	13%	235	7%	85	3%	3,134	34%
UPPER TUMON	2,439	69%	583	16%	428	12%	93	3%	3,543	38%
TOTAL:	6,706	73%	1,522	17%	789	9%	207	1%	9,224	100%

Government Accounts Receivable: CSD reports invoices for the month of July 2018, for 71 active government accounts with an overall total of $6,091,174.02. 65 accounts were current (92%), 6 accounts arrears (8%). 4 fax/emails issued to government accounts totaling $1,813,462.96. July 2018 invoices, 65 accounts paid in full.

CREDIT AND COLLECTION

Delinquent Ratio: As of Aug 2018 the authority reported a total 48,353 active customers. The "Delinquent Ratio" was recorded at 6.12% with 2,957 total delinquent accounts, total arrears of 2,460,682.31; 2,335,628.45; 2,934(6.07% / 28-45 days) category; 77,484.34; 213 (0.44% / 46-60 days); 4,285.17; 24(0.05% 61-90 days); and 43,284.35; 51 (0.11% / Over 90 days).

Bankruptcy: During Aug 2018 the Bankruptcy reports four (4) customer accounts filed, totaling $3,134.07 Chapter 7.

Damage Claim: The Damage claim committee received one (1) Damage claim at $120.00 for the month of August 2018.

ACTIVE DELINQUENT – NON PAYMENT

COMMAND CENTER /DISCONNECTIONS/RECONNECTIONS

Single Phase Meters: Credit and Collection issued orders to Command Center to perform remote disconnect/reconnect for a total of 1,197 customers; 884(74%) were disconnected; 305(25%) deferred; 8(1%) incompletes.

3 Phase Meters: Credit and Collection issued orders to Disconnect Reconnect crew to perform truck roll out disconnect/reconnect for a total of 37 customers; 24(65%) were disconnected; 13(35%) deferred; 0(0%) incompletes.

FY 2018 (Aug 01-31,2018)

	Scheduled	Disc	Deferred	Complete Vs. Scheduled	Incomplete Disconnections	Disc Vs. Scheduled	Deferred Vs. Scheduled	Incomplete Vs. Scheduled
Aug	1,234	908	318	1,226 99%	8	74%	25%	1%
July	1,485	1,086	390	1,476 99%	9	73%	26%	1%
3rd	4,824	2,635	2,167	4,802 100%	22	55%	45%	0%
2nd	4,092	2,010	2,032	4,042 99%	50	49%	50%	1%
1st	3,890	2,237	1,646	3,883 100%	7	58%	42%	0%
TOTAL:	15,525	8,876	6,553	15,429 99%	96	57%	42%	1%

FY 2017 (October 01, 2016 – September 30, 2017)

QTR	Scheduled	Disc	Deferred	Complete Vs. Scheduled	Incomplete Disconnections	Disc Vs. Scheduled	Deferred Vs. Scheduled	Incomplete Vs. Scheduled
4th	3,621	2,067	1,553	3,620 100%	1	57%	43%	0%
3rd	4,021	2,683	1,332	4,015 100%	6	67%	33%	0%
2nd	5,125	3,053	2,055	5,108 100%	17	60%	40%	0%
1st	10,187	5,462	4,689	10,151 100%	36	54%	46%	0%
TOTAL:	22,954	13,265	9,629	22,894 100%	60	58%	42%	0%

This concludes the Summary Report for Customer Service Division for the month of Aug 2018.

Respectfully submitted,
Marissa Fernandez
Marissa Fernandez, Admin. Officer

~~Reviewed / Approved~~ by:
Richard J. Bersamin, ACSM

Run Date: 9/13/2018
Run Time: 8:00:24PM

Guam Power Authority
Delinquent Active Accounts Summary Report
As of - 09/13/2018

Report ID: DELRATIO

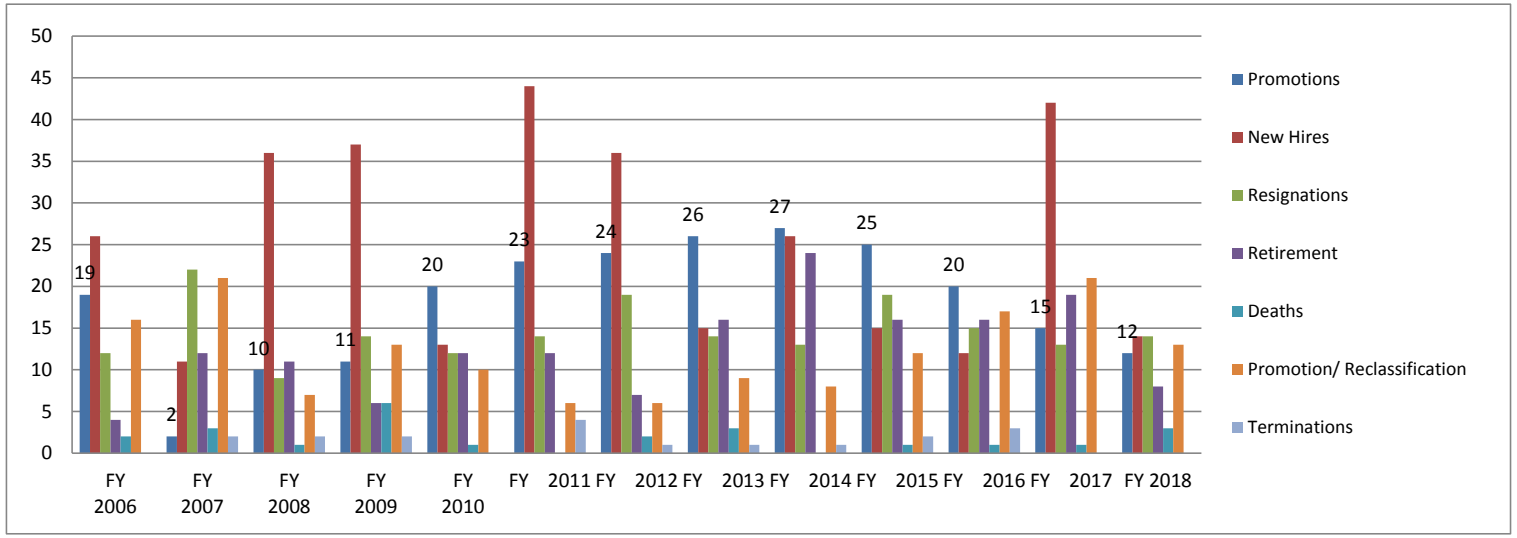
Rate Classification	Total Cust	Del Cust	Del 28-45	Del 46-60	Del 61-90	Over-90	Current Balance	28-45 Days	46-60 Days	61-90 Days	>90 Days	Total Arrears	Total Due
Residential(ERES-R)	42,575	2,690	2,667	156	18	43	6,395,448.37	622,869.24	35,218.77	3,566.77	39,464.46	701,119.24	7,096,567
		6.32%	6.26%	0.37%	0.04%	0.10%							
Small Gen Non Demand(EGEN-G)	4,155	177	177	24	1	2	1,483,441.09	85,182.94	3,272.86	157.62	1,046.85	89,660.27	1,573,101
		4.26%	4.26%	0.58%	0.02%	0.05%							
Small Gen Demand(EGEND-J)	984	64	64	21	1	4	3,385,189.34	166,923.24	28,686.19	425.13	1,656.47	197,691.03	3,582,880
		6.50%	6.50%	2.13%	0.10%	0.41%							
Large General(ELPS-P)	118	10	10	4	0	0	5,833,230.11	1,460,100.52	10,036.20	0.00	0.00	1,470,136.72	7,303,366
		8.47%	8.47%	3.39%	0.00%	0.00%							
Private Streetlight(EPOL-H)	521	16	16	8	4	2	15,825.54	552.51	270.32	135.65	1,116.57	2,075.05	17,900
		3.07%	3.07%	1.54%	0.77%	0.38%							
Sub-Total (Private)	**48,353**	**2,957**	**2,934**	**213**	**24**	**51**	**17,113,134.45**	**2,335,628.45**	**77,484.34**	**4,285.17**	**43,284.35**	**2,460,682.31**	**19,573,816**
		6.12%	**6.07%**	**0.44%**	**0.05%**	**0.11%**							
Small Gov Non Demand(ESGS-S)	696	67	64	45	0	6	457,132.52	26,689.72	20,998.70	0.00	301.59	47,990.01	505,122
		9.63%	9.20%	6.47%	0.00%	0.86%							
Small Gov Demand(ESGSD-K)	338	88	88	77	0	72	2,906,506.17	367,195.68	363,405.82	0.00	10,886.91	741,488.41	3,647,994
		26.04%	26.04%	22.78%	0.00%	21.30%							
Large Government(ELGS-L)	47	26	26	25	0	25	2,771,696.19	512,741.75	509,311.11	0.00	15,388.57	1,037,441.43	3,809,137
		55.32%	55.32%	53.19%	0.00%	53.19%							
Gov Streetlight(ESTL-F)	614	31	31	5	1	1	505,205.00	5,138.62	207.08	30.48	32.02	5,408.20	510,613
		5%	5.05%	0.81%	0.16%	0.16%							
Sub-Total (Government)	**1,695**	**212**	**209**	**152**	**1**	**104**	**6,640,539.88**	**911,765.77**	**893,922.71**	**30.48**	**26,609.09**	**1,832,328.05**	**8,472,867**
		12.51%	**12.33%**	**8.97%**	**0.06%**	**6.14%**							
GRAND TOTAL	**50,048**	**3,169**	**3,143**	**365**	**25**	**155**	**23,753,674.33**	**3,247,394.22**	**971,407.05**	**4,315.65**	**69,893.44**	**4,293,010.36**	**28,046,684**
		6.33%	**6.28%**	**0.73%**	**0.05%**	**0.31%**							

RECRUITMENT ANALYSIS

Fiscal Year	Promotions	New Hires	Resignations	Retirement	Deaths	Promotion/ Reclassifi-cation	Termina-tions	Total Author-ized FTE	Attrition Rate	Total Filled FTE at end of Fiscal Year	Percentage of Filled FTE at end of Fiscal Year
2006	19	26	12	4	2	16	0	584	3.3%	536	91.8%
2007	2	11	22	12	3	21	2	584	7.2%	510	87.3%
2008	10	36	9	11	1	7	2	592	4.5%	525	88.7%
2009	11	37	14	6	6	13	2	592	5.3%	534	90.2%
2010	20	13	12	12	1	10	0	592	4.7%	522	88.2%
2011	23	44	14	12	0	6	4	592	5.7%	536	90.5%
2012	24	36	19	7	2	6	1	568	5.4%	543	95.6%
2013	26	15	14	16	3	9	1	568	6.3%	524	92.3%
2014	27	26	13	24	0	8	1	568	7.3%	512	90.1%
2015	25	15	19	16	1	12	2	539	7.4%	489	90.7%
2016	20	12	15	16	1	17	3	510	7.2%	466	91.4%
2017	15	42	13	19	1	21	0	510	7.1%	476	93.3%
2018	12	14	14	8	3	13	0	510	5.3%	465	91.2%

Recruitment Analysis (FY 2018) ..1 of 2

as of 08/31/18



	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Promotions	19	2	10	11	20	23	24	26	27	25	20	15	12
New Hires	26	11	36	37	13	44	36	15	26	15	12	42	14
Resignations	12	22	9	14	12	14	19	14	13	19	15	13	14
Retirement	4	12	11	6	12	12	7	16	24	16	16	19	8
Deaths	2	3	1	6	1	0	2	3	0	1	1	1	3
Promotion/ Reclassification	16	21	7	13	10	6	6	9	8	12	17	21	13
Terminations	0	2	2	2	0	4	1	1	1	2	3	0	0
TOTAL NO. OF EMPLOYEES	**536**	**510**	**525**	**534**	**522**	**536**	**543**	**524**	**512**	**489**	**466**	**476**	**465**

Recruitment Analysis (FY 2018) .. 2 of 2

as of 08/31/18

GUAM POWER AUTHORITY
HUMAN RESOURCES DIVISION
STAFFING REPORT (FY 2018)
AS OF AUGUST 31, 2018

DIVISION	B1 ACTIVE EMP	B2 LAST EMP	C PROMOTE /TRANS	D PROM. RECLASS	E NEW HIRES	F RESIGN/ TERM	G RETIRE	H CURR VAC	I LAST VAC	(B1+H=K) TOTAL STAFFING
INTERNAL AUDIT/REVENUE PROTECTION	3	2	1	0	0	0	0	1	2	4
BOARD(10200)	2	2	0	0	0	0	0	0	0	2
GENERAL MANAGER (CUS) [10100]	0	0	0	0	0	0	0	0	0	0
GENERAL MANAGER (20500)	4	4	0	0	0	0	0	0	0	4
PUBLIC INFORMATION OFFICE	2	2	0	0	0	0	0	0	0	2
ASSIST GM-ENG/TECH SVCS (30500)	1	1	0	0	0	0	0	0	0	1
ASSISTANT GENERAL MGR (30800)	1	1	0	0	0	0	0	1	1	2
ASSISTANT GENERAL MGR (AGMO) 50900	2	2	0	0	0	0	0	0	0	2
STRAT PLANN & OPTNS RESEARCH DIV	9	9	0	0	0	0	0	2	2	11
FACILITIES	9	9	0	0	0	0	0	0	0	9
HUMAN RESOURCES	8	8	1	0	0	0	0	2	2	10
CUSTOMER SERVICES	36	37	0	0	0	0	0	4	3	40
INFORMATION TECHNOLOGY	15	14	0	0	1	0	0	1	2	16
FINANCE	41	42	0	0	0	1	0	5	4	46
PROCUREMENT	21	21	0	0	0	0	0	1	1	22
TRANSPORTATION	11	11	0	0	0	0	0	0	0	11
SAFETY	5	5	0	0	0	0	0	2	2	7
PLANNING & REG	8	8	0	0	0	0	0	0	0	8
ENGINEERING	38	38	0	0	0	0	0	1	1	39
GENERATION	130	131	0	0	0	1	0	7	7	137
TRANSMISSION/DISTRIBUTION	97	97	0	0	0	0	0	13	12	110
POWER SYSTEM CONTROL CENTER	22	22	3	0	0	0	0	5	5	27
	465	466	5	0	1	2	0	45	44	510
JOBS/SCSEP/GETP PARTICIPANTS	2	2								2
WORK EXPERIENCE PROGRAM	4	5								
APPRENTICESHIP PROGRAM	0	0								0
SUMMER ENGINEERING INTERNS	1	9								1
TEMPORARY (P.L. 34-32)	1	1								1
GRAND TOTAL WORKFORCE:	473	483	5	0	1	2	0	45	44	514

FTE Count per FY18 FMP: 510

Current vacancies adjusted to reflect FTE of 510

** JOBS = Job Opportunities and Basic Skills (individuals under the Public Health assistance program)

** GETP = Guam Employment & Training Program (individuals under the Public Health assistance program)

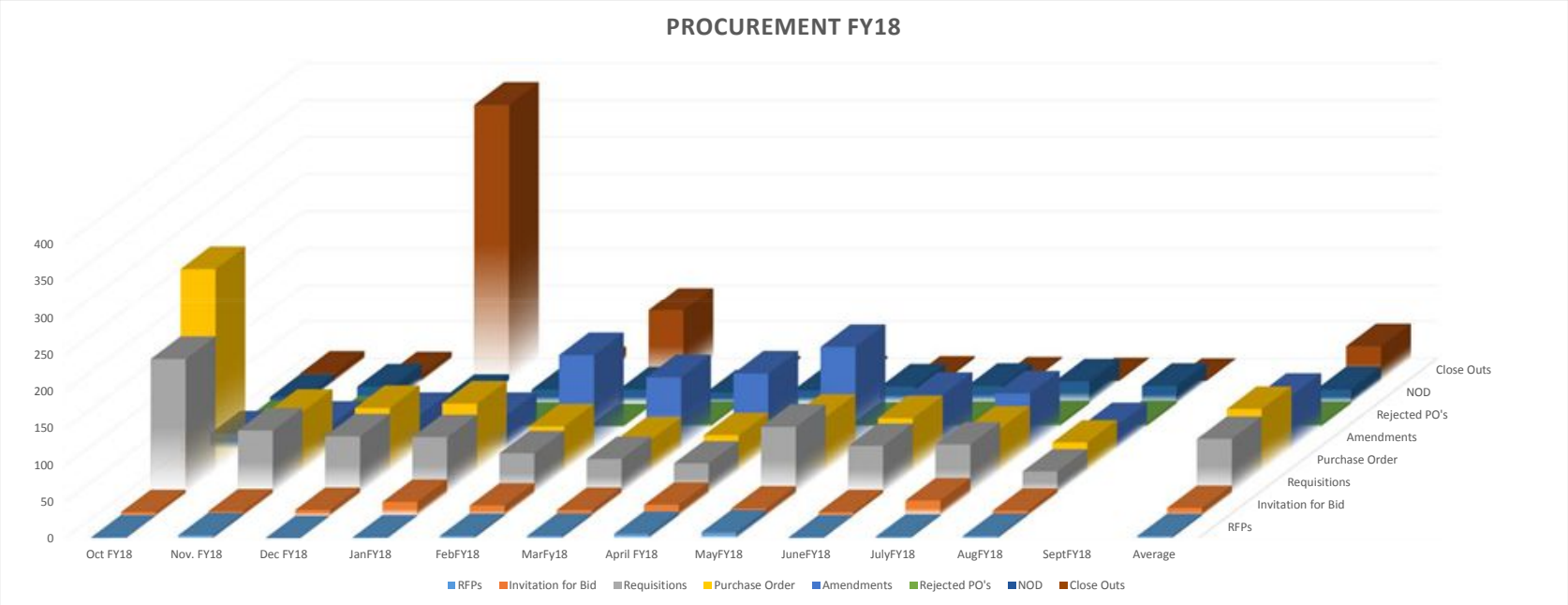
** SCSEP = Senior Community Service Employment Program

** APPRENTICESHIP TRAINING PROGRAM - Generation, PSCC and T&D combined total

** JOBS/SCSEP/GETP and Apprentice program participants are not included in the total annual budgeted FTE (Full-Time Employee) count.

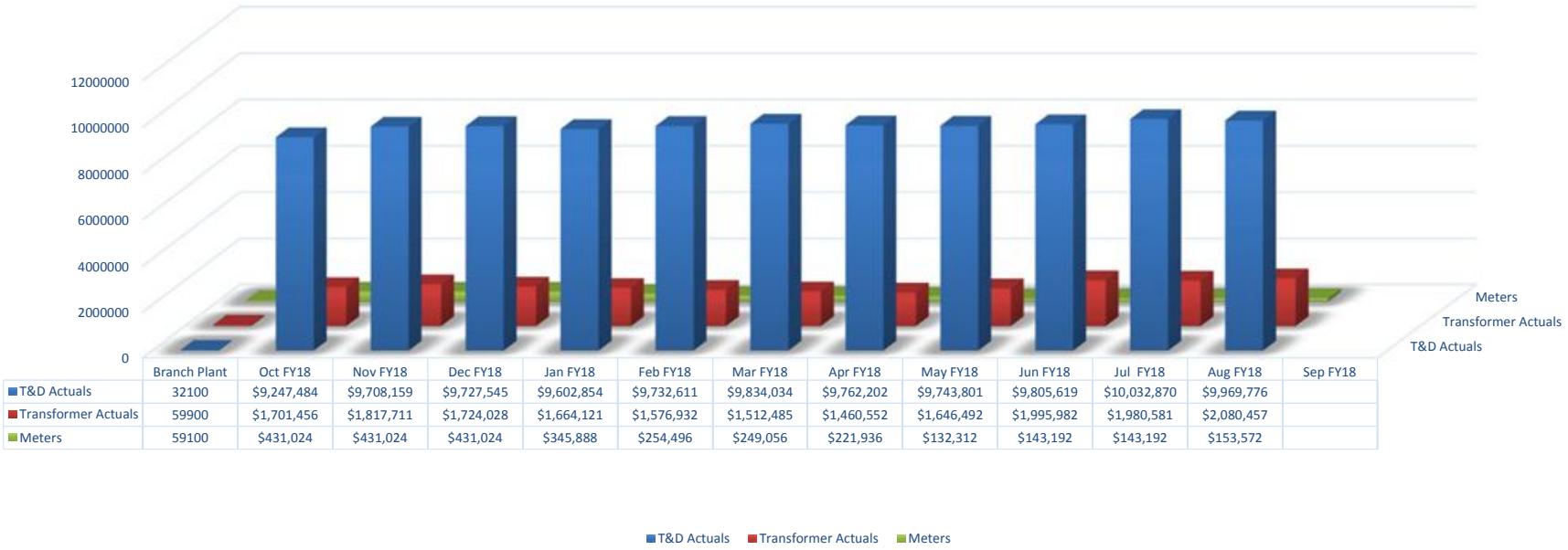
** P.L. 34-32 -Temporary employee(s)

Staffing Report as of August 31, 2018 - PREPARED BY: J.Aguigui

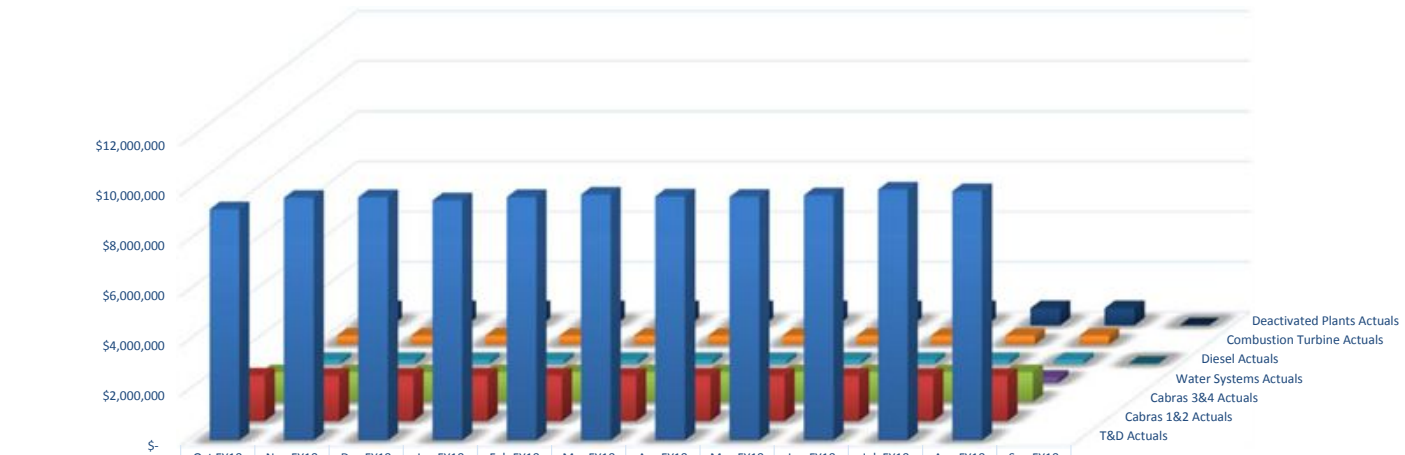


	Oct FY18	Nov. FY18	Dec FY18	JanFY18	FebFY18	MarFy18	April FY18	MayFY18	JuneFY18	JulyFY18	AugFY18	SeptFY18	Average
RFPs	1	4	0	1	3	3	6	8	1	2	3		2.90909091
Invitation for Bid	5	6	8	19	14	8	15	10	5	21	7		10.7272727
Requisitions	183	86	78	77	55	47	41	91	65	67	30		74.5454545
Purchase Order	275	81	86	92	61	43	49	74	72	58	39		84.5454545
Amendments	**21**	**34**	**46**	**46**	**127**	**97**	**102**	**138**	**73**	**75**	**32**		71.9090909
Rejected PO's	4	9	0	2	0	3	0	2	3	4	4		2.81818182
NOD	9	23	9	19	19	15	18	23	24	30	24		19.3636364
Close Outs	10	9	374	16	96	3	3	3	2	1	0		47

T&D Inventory Actuals FY18

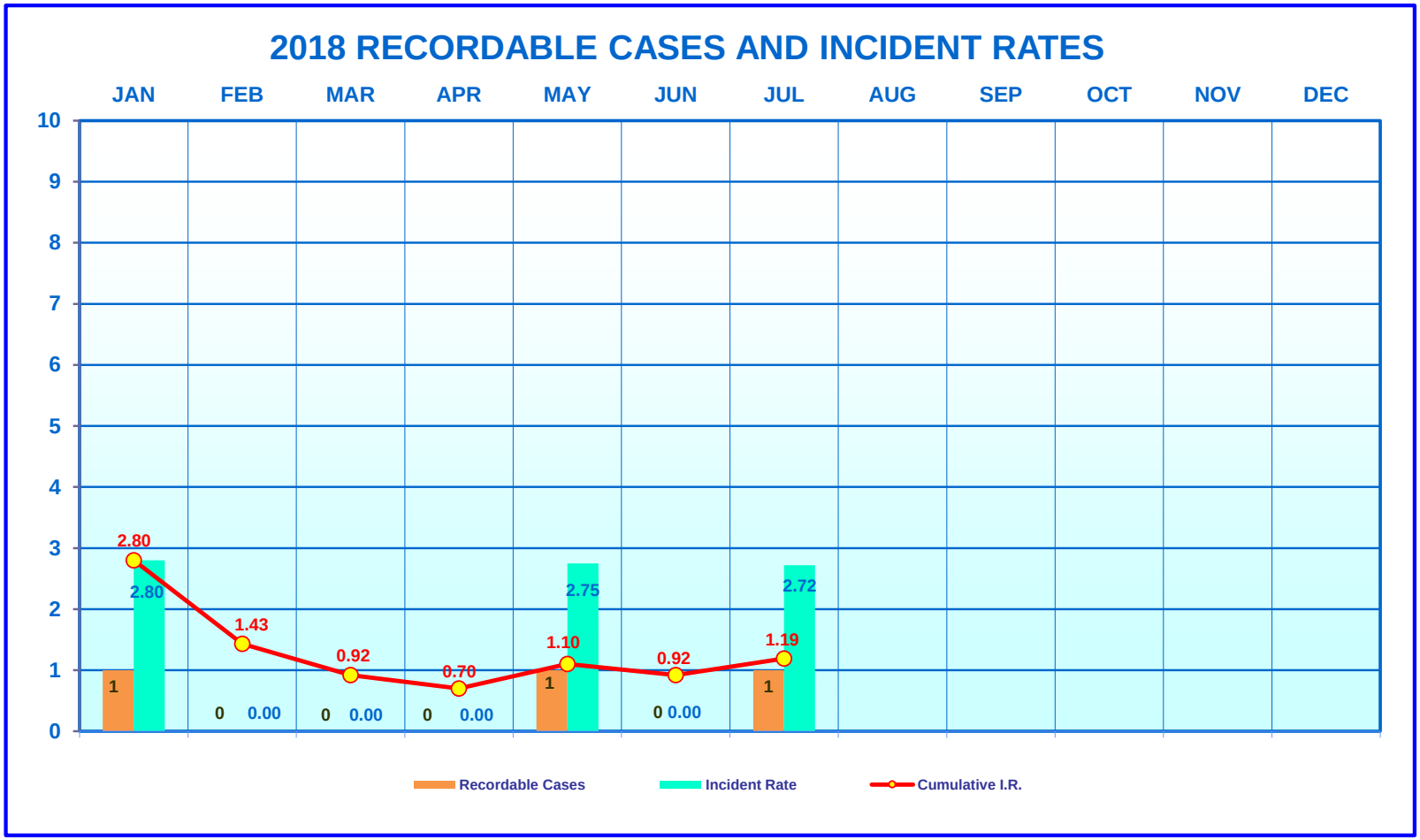


	Branch Plant	Oct FY18	Nov FY18	Dec FY18	Jan FY18	Feb FY18	Mar FY18	Apr FY18	May FY18	Jun FY18	Jul FY18	Aug FY18	Sep FY18
T&D Actuals	32100	$9,247,484	$9,708,159	$9,727,545	$9,602,854	$9,732,611	$9,834,034	$9,762,202	$9,743,801	$9,805,619	$10,032,870	$9,969,776	
Transformer Actuals	59900	$1,701,456	$1,817,711	$1,724,028	$1,664,121	$1,576,932	$1,512,485	$1,460,552	$1,646,492	$1,995,982	$1,980,581	$2,080,457	
Meters	59100	$431,024	$431,024	$431,024	$345,888	$254,496	$249,056	$221,936	$132,312	$143,192	$143,192	$153,572	

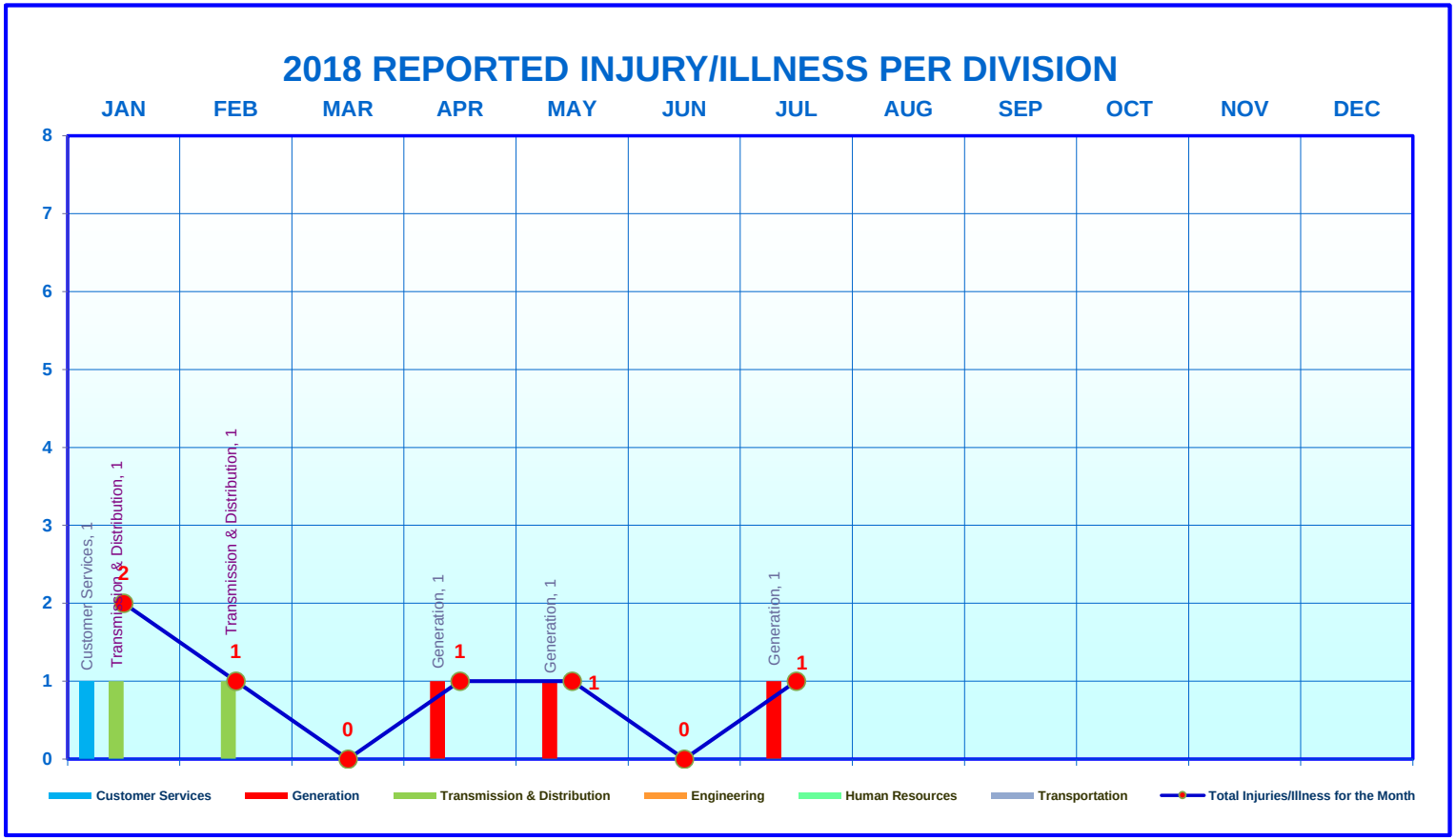


	Oct FY18	Nov FY18	Dec FY18	Jan FY18	Feb FY18	Mar FY18	Apr FY18	May FY18	Jun FY18	Jul FY18	Aug FY18	Sep FY18
T&D Actuals	$9,247,484	$9,708,159	$9,727,545	$9,602,854	$9,732,611	$9,834,034	$9,762,202	$9,743,801	$9,805,619	$10,032,87	$9,969,776	
Cabras 1&2 Actuals	$1,838,876	$1,836,965	$1,834,553	$1,842,443	$1,838,940	$1,835,929	$1,836,415	$1,835,600	$1,834,665	$1,830,337	$1,828,171	
Cabras 3&4 Actuals	$1,206,713	$1,206,713	$1,206,713	$1,206,713	$1,206,713	$1,206,713	$1,206,713	$1,206,713	$1,206,713	$1,206,713	$1,206,713	
Water Systems Actuals	$207,668	$209,651	$208,493	$213,138	$219,682	$221,943	$219,549	$217,320	$214,441	$211,926	$212,022	
Diesel Actuals	$150,427	$150,427	$150,427	$150,165	$150,165	$149,915	$149,915	$152,915	$149,915	$149,912	$149,912	$-
Combustion Turbine Actuals	$365,514	$365,514	$365,514	$360,344	$360,255	$360,255	$360,255	$360,255	$360,255	$360,255	$360,005	
Deactivated Plants Actuals	$687,989	$687,989	$687,989	$687,989	$687,989	$687,989	$687,989	$687,989	$687,989	$687,988	$688,405	$-

2018 Incident Rate

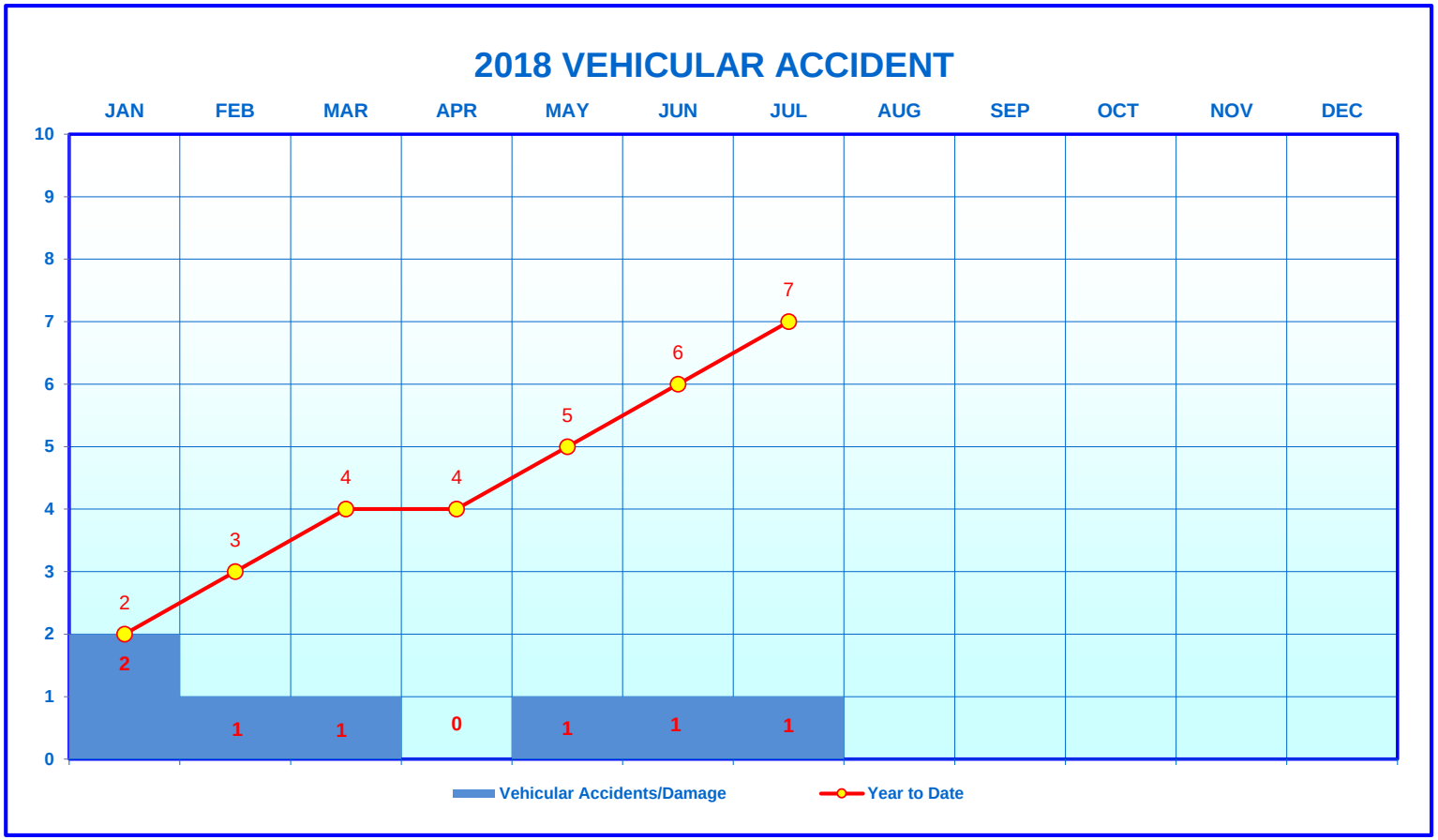


SAFETY DIVISION MONTHLY REPORT



	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Customer Services	1											
Generation				1	1		1					
Transmission & Distribution	1	1										
Human Resources												
Engineering												
Transportation												
Total Injuries/Illness for the Month	2	1	0	1	1	0	1					

SAFETY DIVISION MONTHLY REPORT



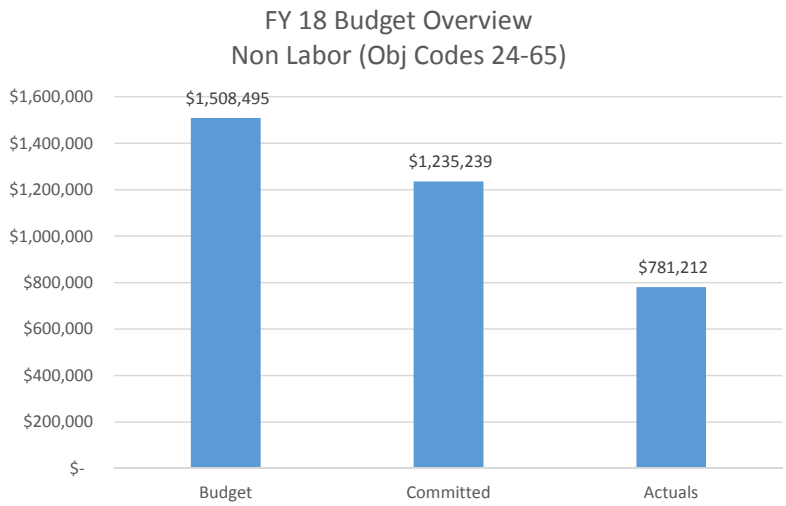
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Vehicular Accidents/Damage	2	1	1	0	1	1	1					
Year to Date	2	3	4	4	5	6	7					

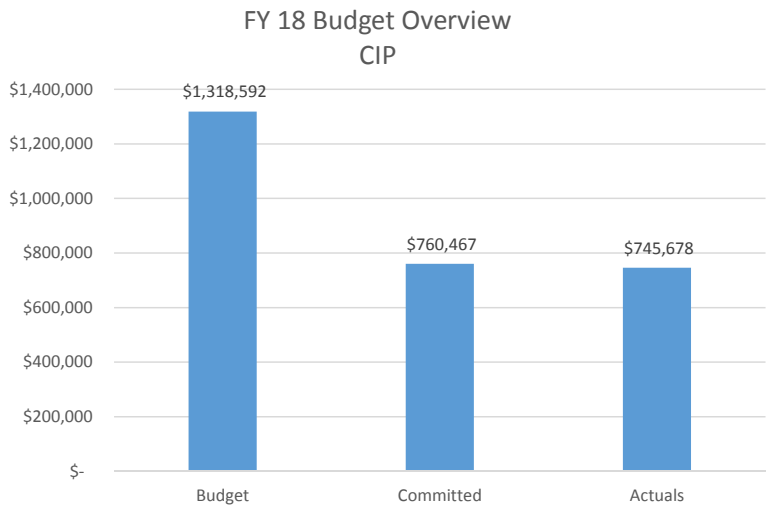
Accidents attributed to Employee fault	1	0	1	0	1	0	1					

SPORD CCU Report

August 2018

SPORD FY 2018 Budget Status





2

SPORD FY 2018 Budget Status

- Major Contracts (Non-O&M) thru August 2018

	Annual Contract Amount	Actuals	Balance
Aggreko Contract	$ 11,751,171	$ 9,834,273	$ 1,916,898
Fuel Contracts	$ 229,805,548	$ 190,286,861	$ 39,518,687
MEC IPP (Piti 8&9)	$ 31,909,347	$ 29,201,479	$ 2,707,868
NRG Contract (Renewable)	$ 10,170,682	$ 7,875,041	$ 2,295,641

SPORD FY 2018 Budget Status

- DSM Expenses

Description	FY16	FY17	FY18 as of Aug 31	Total to Date
Regular/OT Pay	$11,348.80	$22,256.00	$20,469.95	$ 54,074.75
Other Contractual	$28,278.50	$85,550.05	$79,752.25	$193,580.80
Bank Fees	$155.00	$1,032.06	$1,070.08	$2,2457.14
Paid Rebates-Split AC	$154,700.00	$557,275.00	$1,039,700.00	$1,751,675.00
Paid Rebates-Central AC	$3,400.00	$8,200.00	$3,600.00	$15,200.00
Paid Rebates-Washer/Dryer	$2,800.00	$7,425.00	$31,800.00	$42,025.00
Total Expenses	**$200,682.30**	**$681,738.11**	**$176,392.28**	**$2,058,812.69**

Ongoing Activities

- Contract Performance Management (IPP, PMC, Agrekko)
- Generation Fuel Supply & Fuel Farm Management
- DSM Rebate Processing
- Renewables (Wind Turbine Maint & DOAg MOA, NRG Invoicing)
- Smart Grid/Network Support
- Project Management
  - Procurement
  - *August Project Activities*

PROCUREMENT ACTIVITIES

PENDING AWARD / NTP

Responsible	PROJECT	Description	CCU Date Approved (Resolution No.)	PUC Date Approved (Docket No.)	Projected Start*	Projected Completion	Status
SPORD (FJI)	RENEWABLES	Phase II - KEPCO/LG CNS	1/23/18 (2018-01)	18-06	4/30/2021	4/24/2046	Pending contract signature & ntp scheduled for Aug 24, 2018
SPORD (FJI)	RENEWABLES	Phase II - Hanwha	2/27/18 (2018-04)	18-08	8/15/2021	8/9/2046	Pending contract signature & ntp scheduled for Aug 22,2018
SPORD (ANF)	FUEL	Petroleum Inspection Services			8/1/2018	7/31/2020	Procurement Completed. 2-yr Contract commenced Aug 1, 2018.
SPORD (ANF)	FUEL	Supply of Residual Fuel Oil No. 6	(2018-16)	Pending	12/1/2018	2 yrs	Phase II evaluation complete. Notice of Intent to Award issued (14 day protest period)
SPORD (FJI)	NEW POWER PLANT	Geotechnical Services	RFP	Resolicitation GPA-RFP-18-002	pending permit	TBD	Contracted awarded.
ENGINEERING	FUEL	GPA Tank Farm RFO Pipeline Upgrade - Design / Build			7/31/2018	TBD	NTP issued in Jul 2018. To repair existing RFO lines at the Bulk Fuel Farm

ONGOING PROCUREMENT

Responsible	PROJECT	Description	Bid or RFP	Bid/RFP No	Announced	Bid Opening / Due	Notes
SPORD (RAC)	SCADA	SCADA Workstations	Bid	GPA-049-18	2/13/2018	3/14/2018	Completed
SPORD (RAC)	SMART GRID	MV90 Integration Services	RFP	GPA-RFP-18-001	1/30/2018	3/6/2018	Negotiations Ongoing -September 2018
SPORD (RAC)	PLANNING	Milsoft Systems Software Services	RFP	GPA-RFP-18-003	2/1/2018	3/7/2018	Negotiations Ongoing -September 2018
SPORD (FJI)	NEW POWER PLANT	Build, Operate & Transfer Contract for 120-180MW of New Generation Capacity. **(PHASE I - REQUEST FOR QUALIFICATIONS)**	MS Bid	GPA-034-18	1/16/2018	4/5/2018	Step I - Qualifications completed. Total of 7 Qualified bidders selected. Obtained CCU approval to petition PUC for approval of technical bid documents in July 2018.

ONGOING PROCUREMENT (continued)

Responsible	PROJECT	Description	Bid or RFP	Bid/RFP No	Announced	Bid Opening / Due	Notes
SPORD (ANF)	FUEL	Supply of Diesel Fuel Oil No. 2	MS Bid	GPA-008-18	11/16/2017	9/18/18 (Phase I) 10/15,10/22, 10/29, 11/05	Price per Site Location (4 Total)
SPORD (JTL)	RENEWABLES	Renewable Energy Resource Phase III	MS Bid	GPA-007-18	11/16/2017	10/4/2018	Lease modifications ongoing to address bidders' concerns/questions. Completed lease discussions in July.
SPORD (RAC)	SMART GRID	Mobile Workforce Management System (MWMS) **RE-BID**	MS Bid	GPA-023-17	10/5/2017	3/20/2018	GPA Review of Insurance -September 2018
SPORD (MAT)	PLANNING	Planning Software Consulting Services	RFP	GPA-RFP-18-010	7/26/2018	8/30/2018	Consulting Services for GPA's ABB Software utilized in planning and operations research activities.

DEVELOPING PROCUREMENT

Responsible	PROJECT	Description	Bid or RFP	Projected Start	Projected Completion	Status
SPORD (FJI)	NEW POWER PLANT	Build, Operate & Transfer Contract for 120-180MW of New Generation Capacity. **(PHASE II - TECHNICAL SPECIFICATIONS)**	MS Bid			Pending final bid documents.
ENGINEERING	FUEL	GPA Tank Farm DFO Pipeline Upgrade - Design / Build	Bid	2/8/2018	11/30/2018	Preparation of bid specs in progress. To install new diesel line from Navy Tie-in to the Bulk
ENGINEERING	FUEL	Tank 1935 API 653 Internal Inspection	Bid	5/1/2018	5/31/2019	Preparation of bid specs in progress. Budgeted for FY 2018.
ENGINEERING	FUEL	OWS Upgrading	Bid	5/1/2018	5/31/2019	Preparing IFB bid specs.
ENGINEERING	FUEL	LD System Upgrading	Bid	5/1/2018	5/31/2019	Preparing IFB bid specs.

DEVELOPING PROCUREMENT (continued)

Responsible	PROJECT	Description	Bid or RFP	Projected Start	Projected Completion	Status
SPORD (RAC)	ELECTRIC VEHICLE	Electric Vehicle Charging Stations	Bid	Jul-18	Sep-18	Cancelled
SPORD (RAC)	SCADA	DNP3 SA training	RFP	Jul-18	Dec-18	Announced Closing (October 5, 2018)
SPORD (RAC)	ELECTRIC VEHICLE	Electric Vehicle Infrastructure	RFP	Aug-18	Dec-18	Cancelled
SPORD (RAC)	STUDIES	Consulting Services for Distribution Study using Smart Grid Analytics	RFP	Jul-18	May-19	Submitted to Procurement (July 2018)
SPORD (RAC)	SMARTWORK SYSTEMS	Smartworks Systems Software Services	RFP	Aug-18	Continous	Developing RFP
SPORD (ANF)	FUEL	Bulk ULSD Supply	Bid	Aug-18	Dec-18	Draft Bid review by Mgt Fuel Committee
SPORD (ANF)	FUEL	ULSD supply for WSD and other plant sites	Bid	Sep-18	Mar-19	Developing Specifications
SPORD (ANF)	FUEL	GPA Bulk Fuel Storage Facility PMC	Bid	Sep-18	Sep-19	Developing Specifications to convert to PMC
ENGINEERING	FUEL	Guatali Bridge for ULSD Tankertruck access from Tristar	Bid	FY2018	FY2019	Developing Specifications w/ DPW Consultant (WSP)
SPORD (MAT)	FUEL / OPERATIONS	IFB for the Supply of Reprocessed Waste Oil Meeting GPA's ULSD Specifications	Bid	FY2018	FY2019	Bid Documents, Scope of Work, Bid Price Structure under review by Management
SPORD (LOS)	STUDIES	Power System Analyses and Studies	RFP	FY2018	FY2019	Pending RFP No. and announcement date from Procurement
SPORD (LOS)	WIND TURBINE	Wind Turbine O&M Supervision and Materials	RFP	FY2019	FY2019	Developing RFP documents

Project Activities

No.	Project Description	August 2018 Activities	Status / Est. Completion	RFP/Bid No
1	Energy Storage System (Phase I)	GPA reviewing Pre-Final design. Clearing and grading permit work commenced in November 2017. Foundation permit work commenced in January 2018. Construction is 45% completed.	December 31, 2018	MS Bid GPA-082-15
2	Renewable Energy Resource Phase II	GPA and the Contractors signed both contracts at the end of August 2018.	KEPCO PV plant COD is APR 2021. Hanwha's COD is anticipated for 1st qtr of 2020.	MS Bid GPA-070-16
3	New Power Plant Bid (EPCM)	PUC has given approval of the technical bid documents to GPA.	Award (2019 Q3) COD (2022 Q2)	MS GPA-034-18
4	DSM Marketing	None	Continuous	
5	DSM Rebate Program	Processed over 600 equipment in applications for rebates totaling ~ $138K	Continuous	
6	Wireless Network Expansion	Commenced Southern Expansion in collaboration with GWA: 30% Assessment of GWA Well Locations: Completed Assessment of Existing Tropos Units: 100% Router Equiqment and Accessories purchase Routers programming Preparing next router order and installation documents	Dec-18 Completed Completed Received routers - May 2018 Completed - June 2018 Accessories - May 2018 October 2018	GPA-019-18
7	Performance Metrics Automation Project	Presentation on iDashboard provided to GM. GPA contiues to work with consultant on automating reports and formating.	Mar-18	
8	Electric Grid Analysis Software	Additional training for users Realtime Voltage Module Training on Planning and Analysis Cases	Completed Completed (July 2018) November 2018	GPA-064-16
9	Services to Develop Business Performance Indices using iDashboards	Dashboard builds 95%	Ongoing	GPA-RFP-16-008

Project Activities

No.	Project Description	August 2018 Activities	Status / Est. Completion	RFP/Bid No
10	Supervisory Control and Data Acquisition (SCADA) System	Change Order Approved for October 2018 Completion and hardware costs Servers; Programs, & Workstations Installed Point to Point Test Ongoing Training	Oct 2018 (SCADA COD) Completed 'Sept 2018 (Estimated Completion) September 2018	GPA-066-16
11	Mobile Workforce Management System	Bid Evaluation Completed, Clevest recommendation memo submitted for approval March 21, 2018 Purchase Order being Processed Pending GPA legal comment on Insurance	May 2018 (Bid Award) August 2018 September 2018	GPA-023-17
12	Consulting Services for Smart Grid Analytics Enabled Distribution System Planning, Technical, and Economic Feasibility Studies	New Bid	Sepember 2018 (Announcement)	RFP-18-XXX
13	MEC Piti &8 and #9 - ECA Expiration	Environmental Assessment Report completed. Condition Assessment being finalized by consultant.	[Completed] OVERDUE	RFP-17-002
14	MEC Piti &8 and #9 - ECA Extension	CCU approval received. PUC approval received, pending review of contract amendment. Amendment discussions w/ MEC on-going.	[Completed] In progress	
15	Generation Software (GADS open software)	Pending data entry from Generation & SPORD.	[On-going work]	
16	IFB for ULSD Supply for Baseloads and Peaking Units	Solicitation in progress. Bid package revised to include delivery requirements.	Start Date: Nov 2017 Est. completion: FY2019	IFB GPA-008-18
17	Contract for Lease of Bulk ULSD Storage	196KB tank repairs completed. Lease commenced January 01, 2018 until December 31, 2018 with annual extension option up to 4 years as approved by PUC	Start: November 2017 Est. Completion: FY2018 Contract Start: Jan 1, 2018	TTGI-SA-2018-001
18	EV Infrastructure	Fast charge station scope for Mangilao offices. Developing fast charge station scope for Mangilao offices.	Cancelled	

Project Activities

No.	Project Description	August 2018 Activities	Status / Est. Completion	RFP/Bid No
19	Fuel Conversion Plan	Condition Assessment & Transition Plan completed, submitted to Executive Mgmt and Key Employees Additional Support as Owner's Engineer - not needed at this time, per Engr Proj Mgmt Supv & Team, and Spord Fuel Mgmt Engr III	[Completed] Cancelled	
20	Fuel Bulk Storage Facility Assessment	ESA completed, RECs being addressed by GPA/IP&E CA completed	Start: Sept 2017 End: June 2018	
	Renewable Energy Resource Phase III	Completed pre-bid conference and site visits January 23-24 2018.	(Mar 2018) Tech Proposal Due	
21	Utility Energy Services Contract (UESC)	Conducted Best Schools program site assessments. Continued discussions with Navy.		
22	IFB for Delivery Services for GPA Plants	Bid canceled. Requirements to be included in the ULSD Supply solicitation	IFB Canceled Feb 2018	IFB GPA-006-18
	IFB for RFO Supply to Baseload Plants	Solicitation for a 2-Year Contract in progress. Note: PUC approves a 3-month extension of existing contract until November 30, 2018.	Solicitation in progress (for award) Est. Completion: FY2019 (1st Qtr)	IFB GPA-009-18
23	IFB for Petroleum Inspection Services	Solicitation completed. 2-Year contract to commence August 1, 2018 and will expire on July 31, 20120 with three (3) annual extension options	(Contract signed)	IFB GPA-014-18
27	RFO Storage Lease Agreement w/ Tristar	4-Year Lease extension (Sep 2018-Aug 2022) Approved by CCU.	Included in the August 2018 PUC meeting Contract Start: Sep 1, 2018	TTGI-SA-2013-001
28	GPA Fuel Farm RFO Pipeline Repair & Upgrade	c/o Engineering Project Mgt	Completed. Project Implementation in progress (Design phase)	IFB GPA-047-18
29	GPA Fuel Farm ULSD Pipeline Upgrade	c/o Engineering Project Mgt	Estimated Start: Oct 2019 Est. Completion: Sep 2019	For CCU/PUC approval for IFB Solicitation

Project Activities

No.	Project Description	August 2018 Activities	Status / Est. Completion	RFP/Bid No
30	Tk 1934 & Tk1935 API 653 Internal Inspection	c/o Engineering Project Mgt	Estimated Start: Jun 2018 Est. Completion: FY2019	For CCU/PUC approval for IFB Solicitation
31	Milsoft Systems Software Services	Negotiations - June 2018	Continuous	GPA-RFP-18-003
32	MV90 Integration Services	Negotiations ongoing - June 2018	Dec-18	GPA-RFP-18-001
33	SCADA Workstations and Monitors	Delivered	July 2018 Completed	GPA-049-18
34	Grant Proposal Development and Proposal Application Management Services	GPA submitted a grant request for the Department of Interior funding opportunity which includes partnered projects with GDOE(Best Schools Program), Public-Access Parking Lot Solar Canopy, Demand-Side Management Expansion, Electric Vehicle (EV) Infrastructure, Employees-Access Parking Lot Solar Canopy, Wind Turbine Battery Storage, and Geothermal Studies and Exploration.	Feb 2018 (Contract signed)	Re-Solicitation GPA-RFP-16-011
35	Pipeline Lease Agreement w/ Tristar	4-Year Lease extension Approved by CCU. Disapproved by PUC - requested for clarification on Index referenced. (Docket 18-10)	Start: November 2017 Est. Completion: May 2018 Contract Start: Aug 1, 2018	TTGI-PA-2013-001
36	Dock Use Agreement w/ Tristar	4-Year Lease extension Approved by CCU. Approved by PUC on March 29, 2018. (Docket 18-10)	Start: November 2017 Est. Completion: Mar 2018 Contract Start: Aug 1, 2018	TTGI-DA-2013-001
37	Redesignation of Cabras-Piti / Guam	Re-designation received 12/2018. TRC standing assisting with SIP Modeling, SIP draft. AAQM Installation/Implementation on hold, will depend on USEPA approval of SIP after submission on/before July 2019	Start: October 2011 Est. Completion: July 2019 *Submitted to EPA by completion date	RFP-11-001
38	Environmental Strategic Planning	Draft review and finalization on-going.	Start: April 2018 Est. Completion: September 2018	RFP-11-001

Project Activities

No.	Project Description	August 2018 Activities	Status / Est. Completion	RFP/Bid No
39	GPA Fuel Farm- OWS Upgrading	c/o Engineering Project Mgt	Estimated Start: Jun 2018 Est. Completion: FY2019	For IFB Solicitation
40	GPA Fuel Farm- LD System Upgrading	c/o Engineering Project Mgt	Estimated Start: Jun 2018 Est. Completion: FY2019	For IFB Solicitation
41	Planning Software Consulting Services	Request for Proposal for Consulting Services for GPA's Planning Software	RFP from Proponent under review by Legal Counsel & Procurement.	RFP-18-010
42	IFB for Supply of Reprocessed Waste Oil Meeting GPA's ULSD Specifications	Bid for the Supply of Reprocessed Waste Oil Meeting GPA's ULSD Specifications. Supplier will haul Waste Oil from GPA WOF, reprocess waste oil to meet GPA's ULSD Specifications, and supply to designated GPA Power Plants	Scheduled for Announcement late September 2018	For IFB Solicitation
43	Energy Storage Development Support	Consultant preparing proposal for third-party commissioning services	December 31, 2018	GPA-RFP-13-007
44	Wind Turbine Post-Construction Biologist Services (Grant Funds)	Consultant concluded two-year monitoring and is preparing final report	September 30, 2018	GPA-RFP-14-003
45	Wind Turbine Maintenance Supervision and Materials	Consultant scheduled to supervise the semi-annual preventive maintenance in Septemer 2018 and bring required materials	December 31, 2018	Sole Source

PLANNING & REGULATORY DIVISION REPORT

The following summarizes P&R's activities for the month of Aug 2018

INSPECTIONS/MONITORING

- Best Management Practices (BMP) Weekly Inspection/Report – Cabras Power Plant
- Monthly Spill Prevention, Control and Countermeasures (SPCC) Inspection/Report – Cabras Power Plant, Macheche, Dededo, Yigo CT, Talofofo, MDI, Tenjo Diesel, Piti 7 Power Plants, IP&E fuel Farm.
- Reviews monthly Continuous Emissions Monitoring System (CEMS) report and monitors TRC's O & M for Tenjo Diesel
- Monitoring of used oil disposal to the WOF from UNITEK Environmental
- Inspection of Pit Tank Farm regarding request to discharge stormwater. Inspection conducted by Guam EPA, P&R, and IP&E.

REPORTING

- New Source Performance Standards (NSPS) Monthly and Quarterly Report– Submitted reports to GEPA for Macheche CT, Yigo CT, Talofofo, Manenggon and Tenjo Diesel Plants.

SPILL/ENVIRONMENTAL RESPONSE

- Making Scope of work for disposal of PCB Quantifiable and PCB contaminated transformers sored at Substation Warehouse
- Waste oil sampling for laboratory analysis –
    - Tank 2 Used Transformer Oil (Dededo Substation Warehouse);
    - Dededo Trailer Tank (Dededo Sustation Warehouse);
    - Mobile Tank (Dededo Sustation Warehouse);
    - 8 each- 55-gal drums for composite sampling at Delta

PROCUREMENT

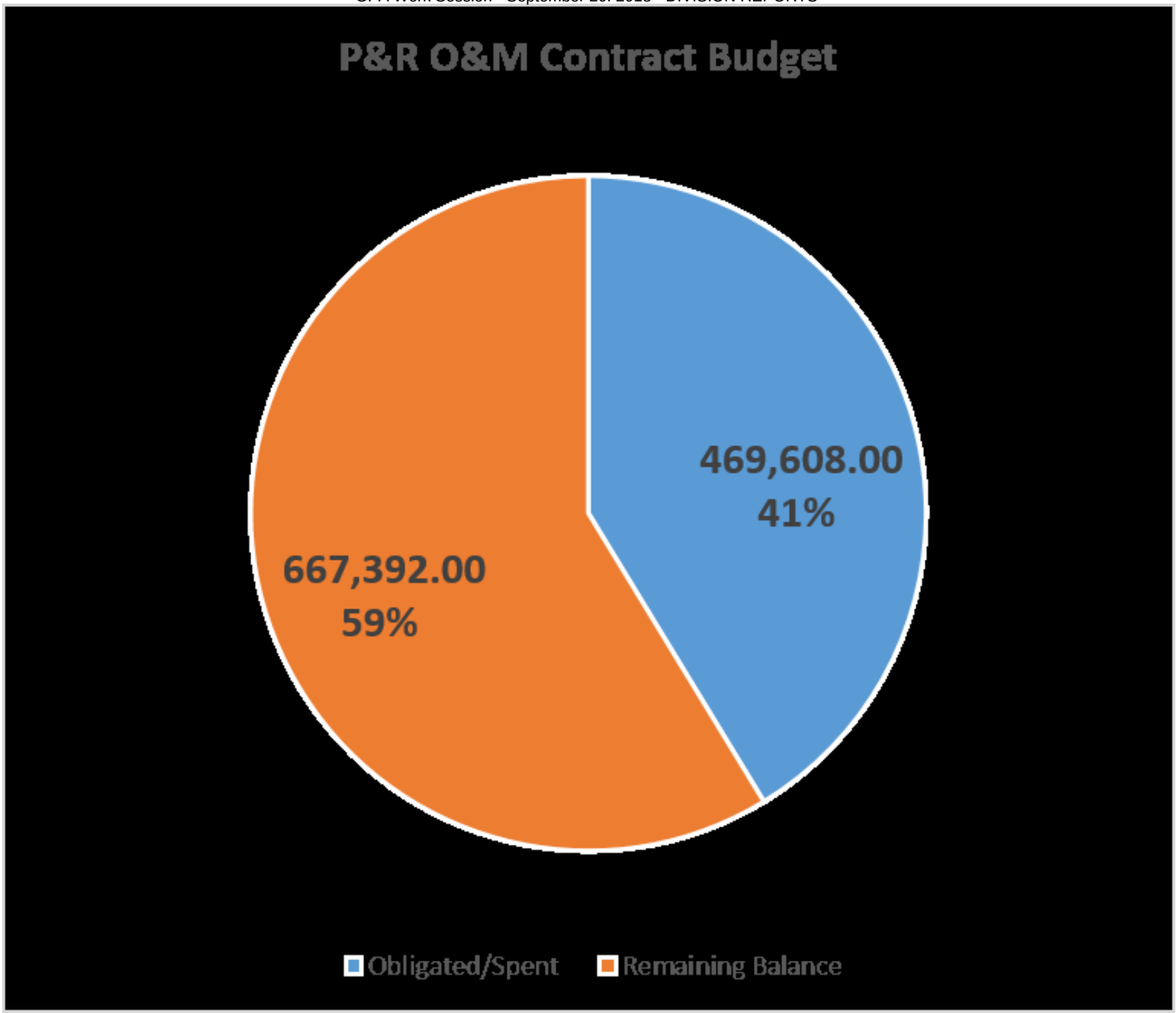
- GPA-RFP-18-007 Annual Emission Testing – Committee Accepted Best and Final Offer
- GPA RFP-18-008 CEMS and RICE MACT O&M – Committee determined most qualified bidder and requested and reviewed price proposal. Clarification Letter and Counter Proposal was submitted to Procurement for bidder action.
- Attended Site Visit at Piti Fuel Farm for Leak Detection Calibration RFQ
-
- IFMSB GPA-068-18 – Hazardous Material Removal and Disposal for Tanguisson and Dededo Diesel. Bid currently on hold.
- Processed RFQ bid for the tank bottom sampling of Tanks 1934 and 1935

TRAINING

- Attended HAZWOPER 8-hour Refresher Course

OTHER PROJECTS:

- Coordinated with Generation to restrict operation of Tenjo Unit #6 pending repairs of Breaching Duct
- Coordinated Limiting of Aggreko use due to unexpectedly high CO emissions as determined in the June air compliance test
- Investigation of missing drain valve and down fence at Tanguisson Power Plant reported by WSD Supervisor
- Piti Fuel Farm Leak Detection Data Logger repaired by Test Machines, Inc. Coordinated with them to have logger shipped back to GPA
- Tanguisson Power Plant – coordinated with Central Maintenance on their request to transfer Air Pre-Heater seals to Cabras 1 & 2
- Coordination meeting with US EPA Region9 to confer with Mr. Norwood Scott regarding SPCC Environmental Equivalence and other environmental issue re: Piti Tank Farm
- Environmental Strategic Plan – assisting SPORD in updating the ESP


P&R O&M Contract Budget
469,608.00
41%
667,392.00
59%
Obligated/Spent
Remaining Balance

GPA INFORMATION TECHNOLOGY

AUGUST 2018

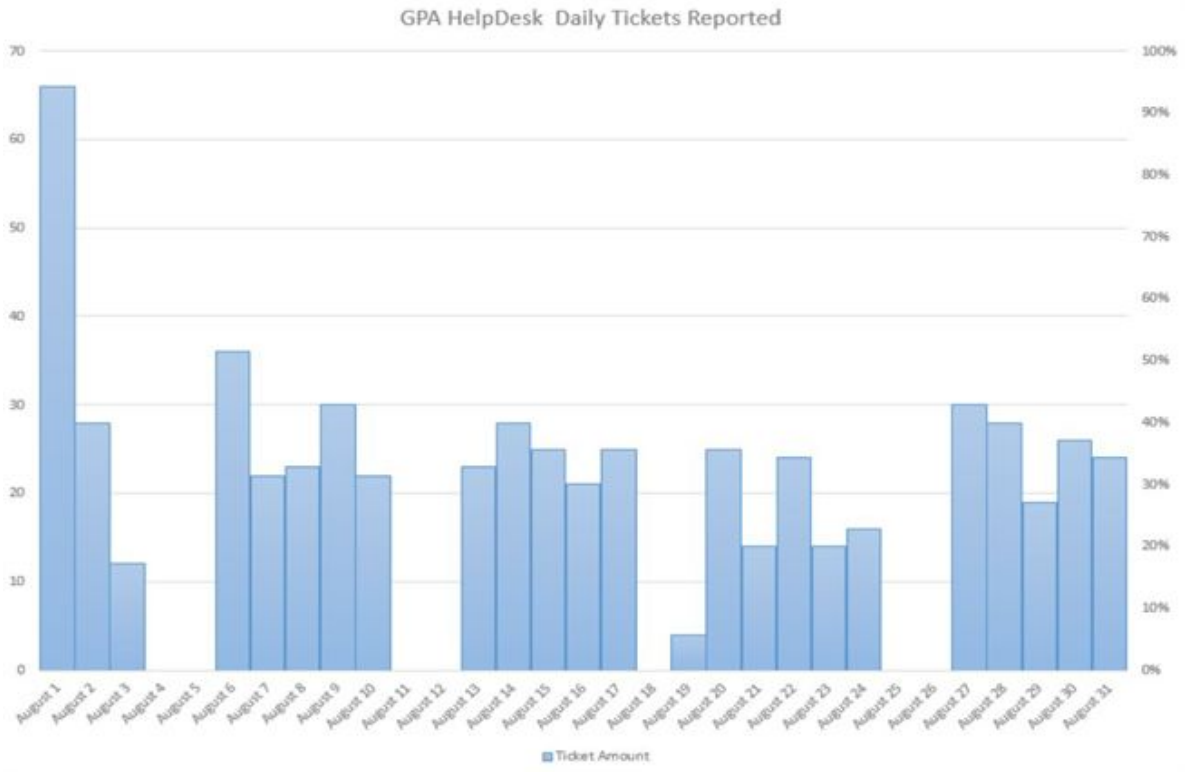
SUMMARY:

The Information Technology Department continues to improve services, monitoring processes and system infrastructure utilization as guided by Cyber-Security initiatives and regulatory compliance. We strive and continue to improve all areas. Computer Services continues to seek new technology with networking, system access and utilization. We also strive to meet target levels of uptime, to include the IBM i-Series AS400, Virtual Machine environment, (VMware V-Sphere), (Blade Servers and Disk Array Storage), and Physical Servers, (non-Virtual Machines).

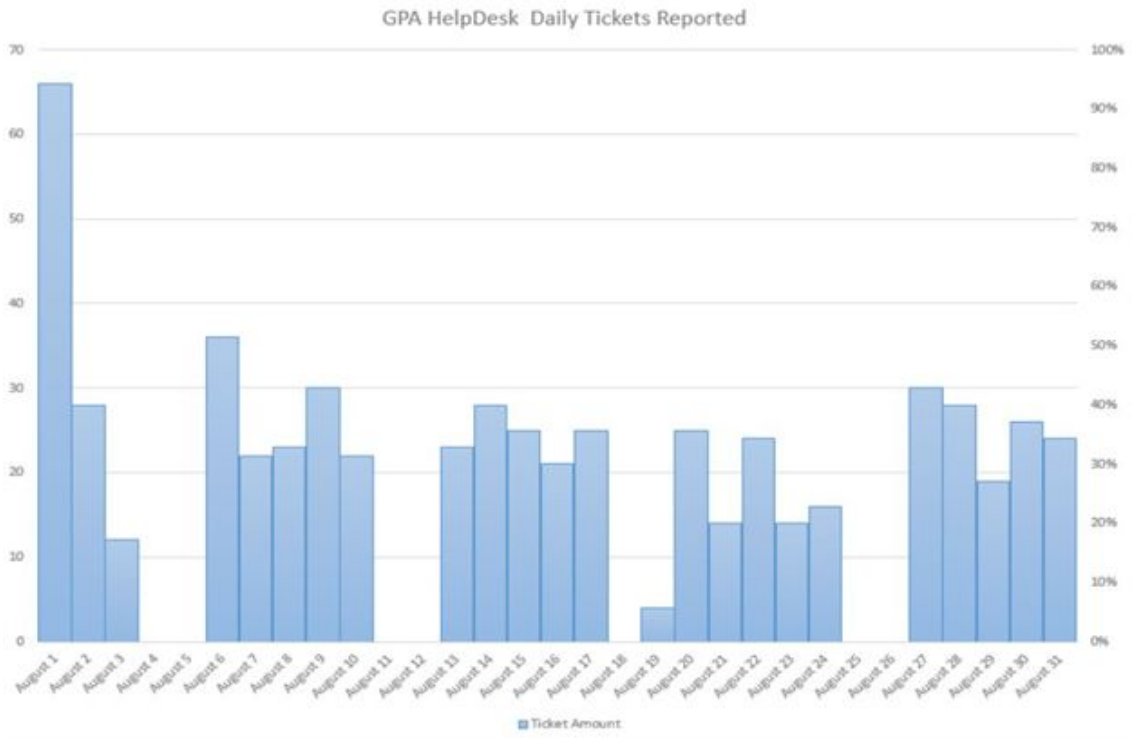
INCIDENT CALL SUMMARY:

The significance to record and utilize the Helpdesk Incident Handling Tool (ChangeGear) is to manage, track and measure workloads and assignments of customer reported IT incidents. The tracking of incidents is paramount. Measurements will be used for IT Customer Feedback survey in the future.

AUGUST 2018 TICKETS



22 MONTH COMPARATIVE



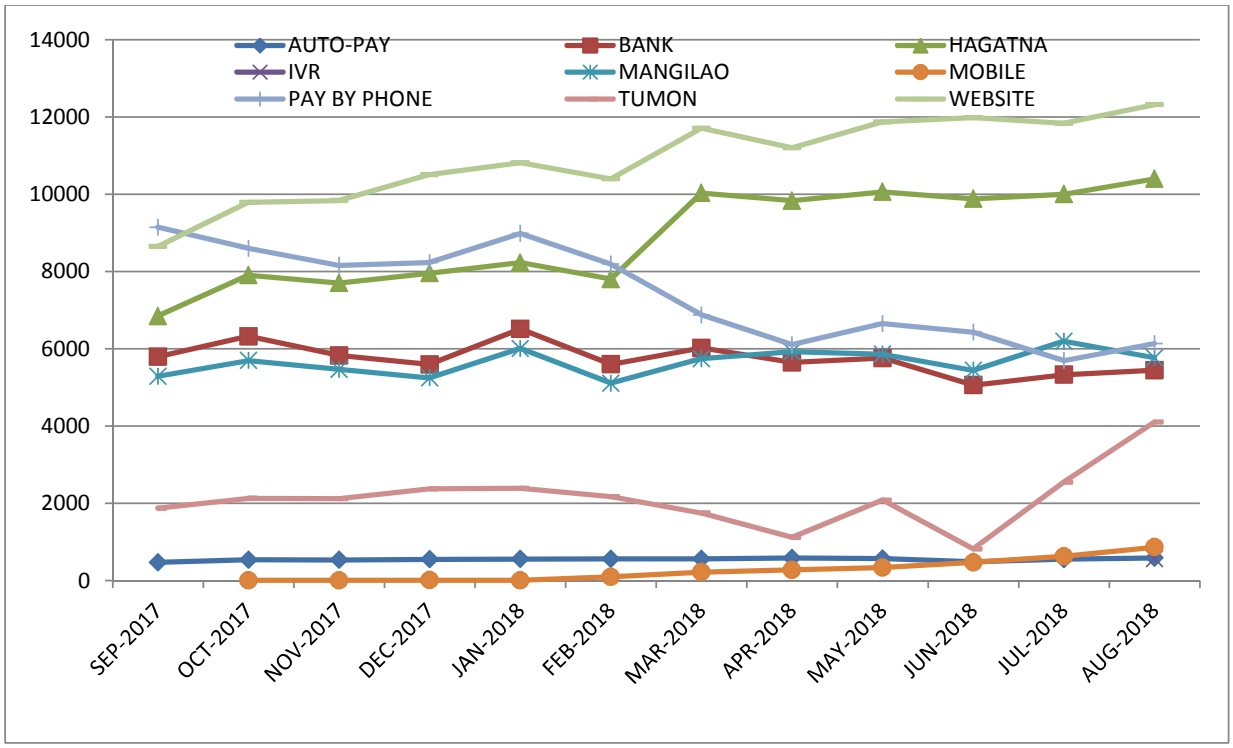
For August 2018, Computer Services responded to 585 help desk calls from GPA internal and external customers. Breakdown as follows:

CLOSED TICKETS			
Low	Medium	High	Critical
303	153	122	7
TICKET TYPES			
End User	Hardware	Software	Network
487	27	51	20

OPEN TICKETS			
Low	Medium	High	Critical
7	14	18	0
TICKET TYPES			
End User	Hardware	Software	Network
22	4	8	5

CC&B PAYMENT SUMMARY TRANSACTIONS:

Payment Transactions by On Site/Website/Auto-Pay/BANK/Mobile



Payment Transactions by Count:

Sum of COUNT	Column Labels								
Row Labels	AUTO-PAY	BANK	HAGATNA	IVR	MANGILAO	MOBILE	PAY BY PHONE	TUMON	WEBSITE
SEP-2017	471	5792	6843		5285		9144	1872	8646
OCT-2017	537	6318	7904		5693	5	8596	2128	9789
NOV-2017	535	5827	7702		5467	5	8160	2117	9837
DEC-2017	547	5593	7957		5244	8	8231	2371	10505
JAN-2018	554	6512	8229		6004	6	8983	2386	10814
FEB-2018	559	5597	7802		5106	94	8188	2171	10400
MAR-2018	560	6019	10032		5744	217	6875	1747	11704
APR-2018	583	5646	9831		5921	276	6102	1114	11201
MAY-2018	566	5757	10062		5860	336	6649	2081	11869
JUN-2018	486	5057	9882		5439	468	6427	816	11982
JUL-2018	551	5326	10002		6191	628	5693	2543	11832
AUG-2018	585	5443	10398	567	5764	862	6131	4097	12315
Grand Total	**6534**	**68887**	**106644**	**567**	**67718**	**2905**	**89179**	**25443**	**130894**

MAJOR APPLICATION ISSUES FOR AUGUST 2018

1. ORACLE CUSTOMER CARE & BILLING
   No system issue reported.

2. LANDIS & GYR AMI METERS (SMART METERS)
   No system issue reported.

3. ORACLE JDE
   No system issue reported.

4. METER DATA MANAGEMENT SYSTEM (MDMS)
   No system issue reported.

5. SHORETEL VOIP PHONE SYSTEM
   No system issue reported.

6. EMAIL EXCHANGE SERVER
   No system issue reported.

7. ONLINE PAYMENT SYSTEM (PAYGPA.COM)
   No system issue reported.

8. GEOGRAPHIC INFORMATION SYSTEM (GIS)
   No system issue reported.

9. MILSOFT OUTAGE MANAGEMENT SYSTEM (OMS)
   No system issue reported.

10. ADVANCED GRID ANALYTICS (AGA)
    No system issue reported.

11. ORACLE BUSINESS INTELLIGENCE REPORTING
    No system issue reported.

12. Mobile APP Payment Program
    No system issue reported.

ONGOING PROJECT UPDATES:

Pay by Phone Project: Working with vendor for Pay by Phone system to allow customers to call after hours and make automated payments to their GPA account. System is live as August 1, 2018.

Customer Care & Billing (CC&B) Upgrade: Upgrade of the current Oracle CC&B program from version 2.4 to version 2.6. The current version of CC&B 2.4 will be end of life by Sept. 30, 2017 and support thereafter will be limited. Completed the Database and Application update as of July 2018. Final part of database merge is currently ongoing. Expected completion by September 2018.

Disaster Recovery- Cloud Solution: Project to turn up a backup site on the Oracle Cloud for GPWA's CC&B Application. The Oracle Cloud service has been provisioned and backup replication is online. Completed as of June 15 with full backup of CC&B being replicated to the Oracle Cloud.

Disaster Recovery Site: Project to procure a Disaster Recovery (DR) site to provide redundancy for critical GPA applications and databases in case of disruption of the primary Fadian Data Center. Incorporating GWA requirements into proposal.

Physical Security: Project to provide additional surveillance monitoring for Fadian, T&D, Dededo CT and Transportation Warehouse. Vendor has been awarded and PO is expected to be released.

GPWA Website Upgrades: Project to revamp GPA and GWA websites for the following, GUAMPOWERAUTHORITY.COM, PAYGPA.COM, GUAMWETERWORKS.ORG and PAYGWA.COM. RFP Responses has been reviewed and awaiting clarification of proposals. Price negotiation is ongoing.

Oracle CHAT-BOT: Project to provide Oracle Chat Bot services to GPA's PAYGPA.COM, Mobile APP and Facebook Program. This will allow customers to utilize a CHAT program to make inquiries to frequently asked questions and inquiries on their account. Project has started and expected completion by Sept. 30.

Landis & Gyr Command Center upgrade from ver. 6.5 to 7.2: Project to upgrade GPA AMI Smart Meter Program to the latest version of 7.2. This will allow new functionality for the Command Center and Smart Meter Integration. Revised completion by October 2018.

Submitted by:
Melvyn Kwek
Chief Information Technology Officer

NET METERING
August 2018

	Quantity	Connected kVA
Completed	1,750	18,522
Pending	19	241
Grand Total	1,769	18,763

Rate Class and Technology

Technology	Schedule	Count	Total kW
Solar Energy	R - Residential	1,657	15,234.99
	J - Gen Service Dmd	34	1,823.91
	K - Small Gov Dmd	9	317.80
	L - Large Government	2	122.80
	P - Large Power	3	240.70
	G - Gen Serv Non-Dmd	35	688.99
	S - Sm Gov Non-Dmd	7	78.80
Wind Turbine	R - Residential	2	3.60
(blank)	(blank)		10.53
Grand Total		**1,749**	**18,522.12**

Projected FY 2018 Non-Fuel Revenue Loss

Customer Rate Class	Renewable Energy Capacity (kW)	Annual kWh Generated (@5.092 hours/day)*	Average Non-Fuel Yield $/kWh	Estimated Annual Revenue Loss
R	15,238.59	28,320,284.6	0.09293	$ 2,631,832.37
J	1,823.91	3,389,660.7	0.13112	$ 444,455.71
K	317.80	590,618.1	0.13932	$ 82,286.09
L	122.80	228,218.7	0.13525	$ 30,866.12
P	240.70	447,330.9	0.11539	$ 51,617.07
G	688.99	1,280,459.2	0.15084	$ 193,139.34
S	78.80	146,446.5	0.15334	$ 22,456.26
Grand Total	**18,511.59**	**34,403,018.7**		**$ 3,456,652.95**

*Estimated number of hours from NREL for Guam (13.4 degrees North and 144 degrees East).

Estimated Annual Revenue Loss

Description	Estimated kWh	*Total Estimated Cost
FY17	28,242,917	$ 2,828,834.71
FY16	21,867,383	$ 2,200,794.56
FY15	7,383,621	$ 856,921.27
FY14	3,137,212	$ 410,558.94
FY13	1,556,949	$ 178,996.00
FY12	494,672	$ 58,545.89
FY11	170,070	$ 18,177.13
FY10	98,830	$ 8,483.27
FY09	23,912	$ 1,656.87

*Source for effective yield rate from the Year End Revenue Reports (12 month Average Yield)

NET METERING

August 2018

Customer Count and Connected kW by Feeder

Status	Feeder	Net Metering Connected kW	Customer Count	% of Feeder Maximum kW	% of Feeder Minimum Daytime kW
Completed	P-005	254.37	24	14.7%	29.6%
	P-046	257.06	31	6.1%	9.3%
	P-088	649.29	71	10.8%	17.1%
	P-089	510.61	64	11.4%	27.5%
	P-111	90.00	2	1.7%	2.9%
	P-203	438.47	34	5.9%	16.6%
	P-204	135.63	16	2.9%	6.0%
	P-205	36.40	4	0.8%	1.3%
	P-210	507.55	52	9.9%	13.5%
	P-212	891.20	84	21.5%	55.8%
	P-213	295.33	11	11.3%	15.2%
	P-220	175.14	19	28.8%	90.3%
	P-221	554.15	57	12.6%	25.1%
	P-223	523.94	57	22.0%	31.4%
	P-240	58.55	2	0.9%	7.9%
	P-245	35.00	2	0.7%	1.5%
	P-250	994.27	98	15.3%	26.9%
	P-251	145.50	7	5.9%	9.0%
	P-253	489.61	52	10.9%	17.2%
	P-262	1,036.42	105	27.2%	65.3%
	P-270	340.47	29	6.7%	13.5%
	P-271	129.78	12	2.2%	4.7%
	P-272	228.03	17	8.9%	20.2%
	P-280	326.71	26	18.2%	33.8%
	P-281	189.70	4	6.8%	18.9%
	P-282	21.00	2	0.6%	1.7%
	P-283	550.18	51	15.2%	26.1%
	P-294	1,053.18	101	24.3%	48.2%
	P-301	199.26	22	14.1%	25.1%
	P-311	657.57	49	16.5%	28.2%
	P-322	920.39	92	12.1%	24.1%
	P-323	293.35	19	6.2%	19.3%
	P-330	563.72	71	10.4%	20.8%
	P-331	733.03	83	11.6%	18.8%
	P-332	510.69	57	9.1%	13.2%
	P-340	515.46	45	28.4%	62.6%
	P-087	1,159.85	123	29.5%	46.3%
	P-252	599.13	32	14.2%	29.0%
	P-321	275.66	26	4.9%	5.5%
	P-260	70.96	7	10.3%	35.5%
	P-067	86.20	10	1.0%	1.3%
	P-312	68.90	4	4.1%	4.8%
	P-206	18.33	2	1.9%	3.4%
	P-242	23.75	2	0.4%	1.1%
	P-310	181.57	8	6.6%	12.1%
	P-261	395.32	43	14.3%	24.5%
	P-201	45.00	6	1.3%	2.3%
	P-007	81.11	7	11.2%	23.9%
	P-244	36.56	2	2.1%	2.1%
	P-202	34.50	2	1.1%	2.6%
	P-341	4.30	1	0.4%	1.6%
	P-401	117.00	2	10.3%	17.3%
	P-400	13.00	1	1.4%	1.4%
Completed Total		**18,522.12**	**1,750**		
Pending	P-322	100.00	1	1.3%	2.6%
	Pending	129.41	17	0.0%	0.0%
	P-341	11.25	1	1.0%	4.3%
Pending Total		**240.66**	**19**	**2.3%**	**6.9%**
Grand Total		**18,762.78**	**1,769**		
	Feeders highlighted in red indicates renewable energy capacity has exceeded 25% of minimum daytime load.				
	Feeders highlighted in yellow indicates renewable energy capacity has reached 15% to 24% of minimum daytime load.				

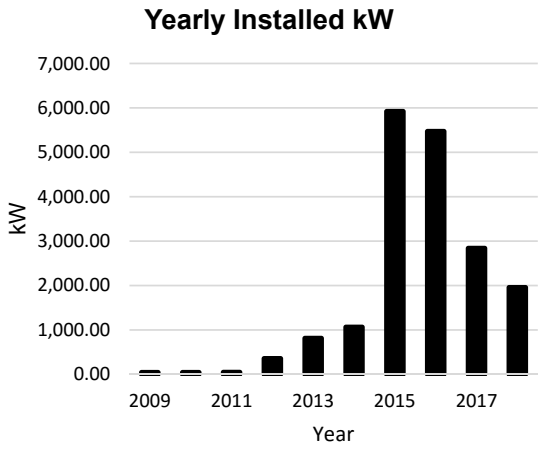
NET METERING
AUGUST 2018

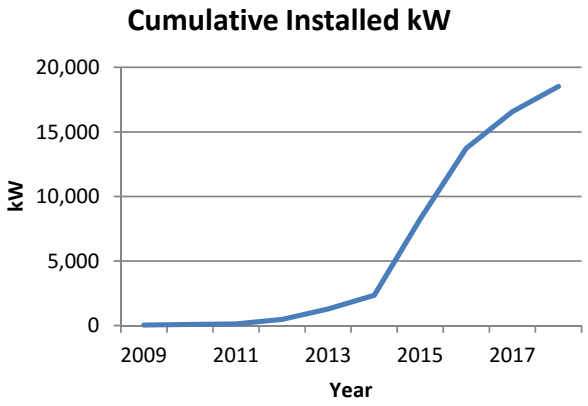
Installed kW by Year

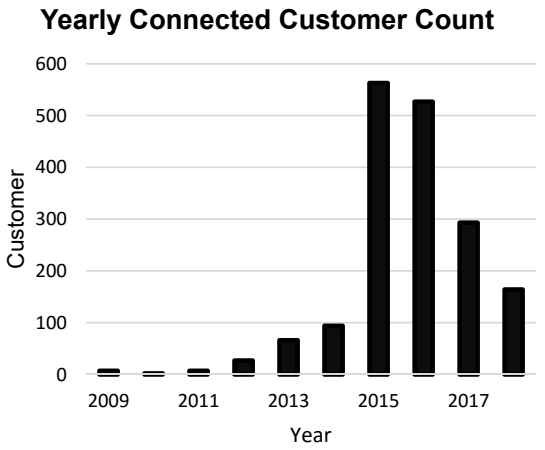
Year	Total	Cumulative
2009	39.46	39.46
2010	39.20	78.66
2011	43.61	122.27
2012	354.61	476.88
2013	808.15	1,285.03
2014	1,060.04	2,345.07
2015	5,920.39	8,265.46
2016	5,468.49	13,733.94
2017	2,836.10	16,570.04
2018	1,952.08	18,522.12
Grand Total	18,522.12	

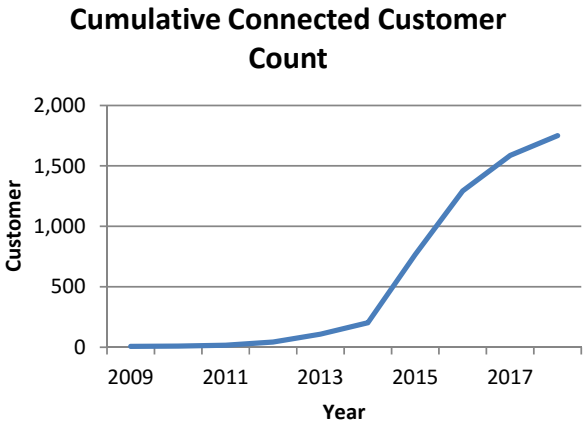
Customer Count by Year

Year	Total	Cumulative
2009	7	7
2010	2	9
2011	7	16
2012	27	43
2013	66	109
2014	94	203
2015	563	766
2016	527	1,293
2017	293	1,586
2018	164	1,750
Grand Total	1,750	









Procurements Ongoing in FY 2018

Business Unit	Current Type					Current Status			Planned			
	RFP	Bid	Multistep Bid	Total	Resolicited	QBL Established	Evaluation Completed	Award/NTP	RFP	Bid	Multistep Bid	Total
SPORD	3	1	8	12	1	1	4	2	4	1	2	7
Engineering												
SPORD/Engineering		1		1						4		4
IT	2	3	2	7	2	0	0	0	3	4	0	7
P&R	3			3			1				1	1
Total	**8**	**5**	**10**	**23**	**3**	**1**	**5**	**2**	**7**	**9**	**3**	**19**

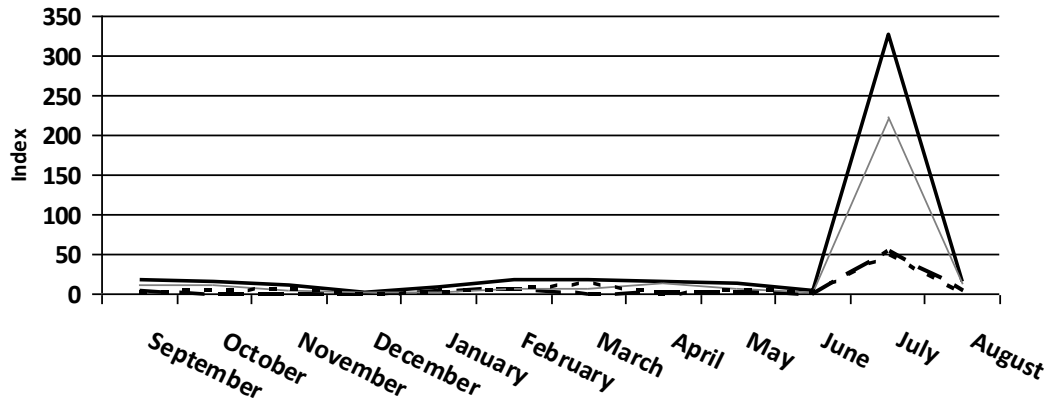
All Expenses – Fiscal Year

Description	FY16	FY17	FY18 as of Aug 31	Total to Date
Regular/OT Pay	$11,348.80	$22,256.00	$20,469.95	$ 54,074.75
Other Contractual	$28,278.50	$85,550.05	$79,752.25	$193,580.80
Bank Fees	$155.00	$1,032.06	$1,070.08	$2,2457.14
Paid Rebates-Split AC	$154,700.00	$557,275.00	$1,039,700.00	$1,751,675.00
Paid Rebates-Central AC	$3,400.00	$8,200.00	$3,600.00	$15,200.00
Paid Rebates-Washer/Dryer	$2,800.00	$7,425.00	$31,800.00	$42,025.00
Total Expenses	$200,682.30	$681,738.11	$176,392.28	$2,058,812.69

SUMMARY

DESCRIPTION	AMOUNT
Initial DSM Budget FY'16	$1,806,014.00
Interest Income as of Aug 18	$4,500.36
Total Expense	$2,058,812.69
Ending Balance as of Aug 18	$(248,298.33)
Addtl. Budget: Approved (FY'18)	$1,139,189.00
Total Ending Balance as of Aug 18	**$890,890.67**

(Item 1.1,1.2,1.5) August 2018 SAIDI = 472.43 ↓ (498.23)



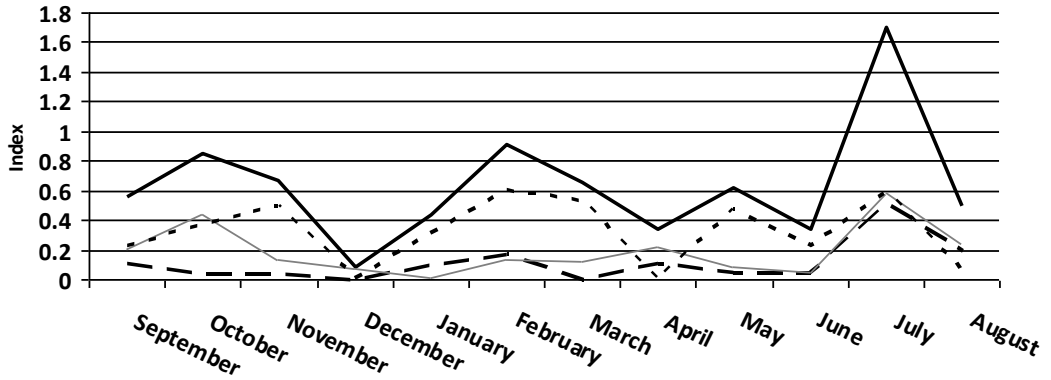
ALL

GEN=92.78 ↓
(110.29)

TRANS=80.04 ↓
(82.69)

DIST=299.62 ↓
(305.25)

(Item 1.1,1.2,1.5) August 2018 SAIFI = 7.64 ↓ (8.24)



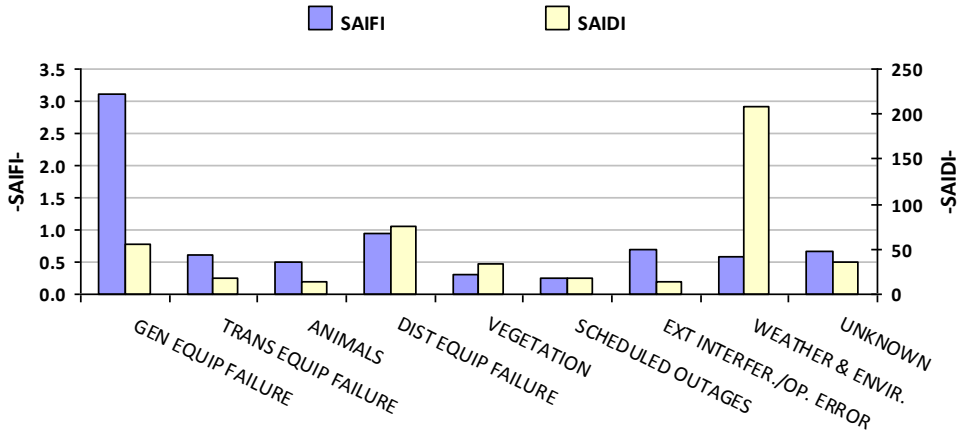
ALL

GEN=3.95 ↓
(4.53)

TRANS=1.39 ↑
(1.34)

DIST=2.30 ↓
(2.38)

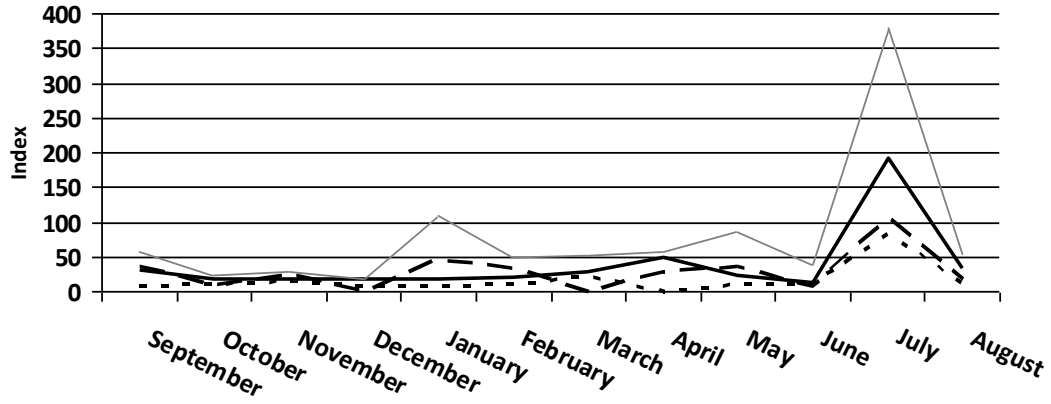
(Item 1.9) 12-Month Cause Contributions to Reliability



GEN EQUIP FAILURE
F:41.8% D:11.7%
TRANS EQUIP FAILURE
F:8.2% D:3.7%
ANIMALS
F:7.1% D:3.0%
DIST EQUIP FAILURE
F:9.8% D:16.0%
VEGETATION
F:3.1% D:7.1%
SCHEDULED OUTAGES
F:6.5% D:3.6%
EXT INTERFER./OP. ERROR
F:7.1% D:2.8%
WEATHER & ENVIR.
F:7.1% D:44.3%
UNKNOWN
F:9.4% D:7.7%

As of August 31, 2018

(Item 1.1,1.2,1.5) August 2018 CAIDI = 61.82 ↑ (60.44)



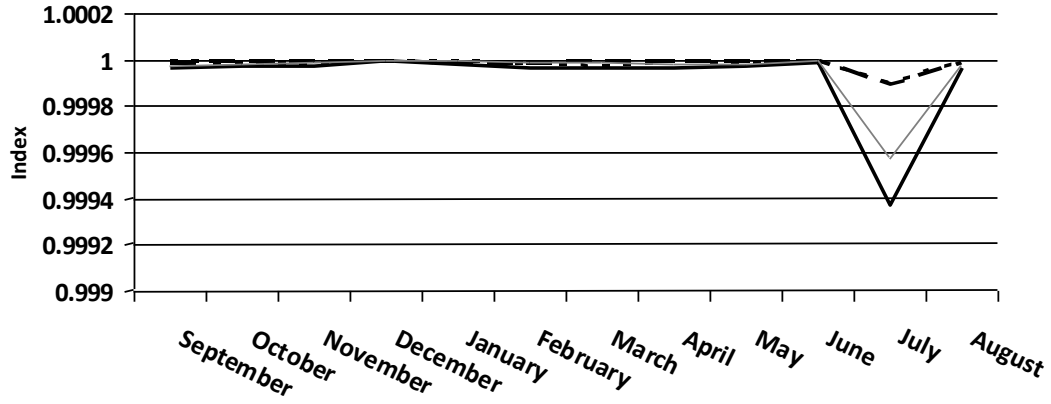
ALL

GEN=23.49 ↓ (24.36)

TRANS=57.47 ↓ (61.9)

DIST=130.24 ↑ (128.25)

(Item 1.1,1.2,1.5) August 2018 ASAI = 0.9991 UNC* (0.9991)



ALL

GEN=0.9998 UNC* (0.9998)

TRANS=0.9998 UNC* (0.9998)

DIST=0.9994 UNC* (0.9994)

(Item 1.4) Top 5 Worst Feeders Distribution Causes

#	Feeder	Outage Count
1	P046	8
2	P221	8
3	P294	6
4	P330	5
5	P340	4

(Item 1.4) Top 5 Distribution Outage Causes

#	Outage Cause	Count
1	Overhead Equipment	33
2	Wind	15
3	Underground Equipment	11
4	Vegetation	10
5	Substation Equipment	7

(Item 1.3) Outage Count

TOTAL	UFLS	Non-UFLS
523	260	263

(Item 1.3) UFLS Contribution to Reliability

SAIDI	SAIFI	CAIDI
67.92	3.87	17.54

As of August 31, 2018

Production Data

31-Aug-18

SYSTEM											
YEAR	MONTH	# of DAYS	GROSS GENERATION	FUEL CONSUMPTION		GROSS FUEL EFFICIENCY (Target ≥ 15.99 kWh/gal)	COST per GROSS kWh	GROSS HEAT RATE (Baseloads) PUC Target less than 9,600	GROSS HEAT RATE (Peaking) PUC Target less than 13,600	Ave. MW	Peak MW
				(gal)	(bbl)						
2016	Jan	31	138,191,484	9,446,289	224,912	14.63	$ 0.0676	9,662.86	13,413.90	186	233
	Feb	29	128,816,826	8,860,399	210,962	14.54	$ 0.0706	9,692.42	12,038.19	185	232
	Mar	31	139,991,832	9,522,573	226,728	14.70	$ 0.0732	9,172.99	11,597.00	188	239
	Apr	30	140,706,546	9,301,856	221,473	15.13	$ 0.0734	9,368.24	11,041.70	195	245
	May	31	152,815,417	9,751,521	232,179	15.67	$ 0.0681	9,459.10	11,388.57	205	254
	June	30	149,191,844	9,851,575	234,561	15.14	$ 0.0805	9,666.70	11,074.48	207	253
	July	31	151,248,202	10,443,028	248,644	14.48	$ 0.0920	9,477.71	12,208.87	203	258
	Aug	31	149,051,031	10,210,429	243,105	14.60	$ 0.0935	9,431.70	11,155.10	200	252
	Sept	30	142,069,206	9,829,773	234,042	14.45	$ 0.0956	9,509.75	11,393.73	197	256
	Oct	31	148,824,965	9,660,319	230,008	15.41	$ 0.0729	9,749.38	10,738.69	200	252
	Nov	30	145,293,562	9,427,636	224,468	15.41	$ 0.0901	9,714.47	10,786.30	202	252
	Dec	31	147,753,552	9,725,521	231,560	15.19	$ 0.0934	9,661.13	10,645.44	199	248
2017	Jan	31	142,960,618	9,226,278	219,673	15.49	$ 0.0913	9,620.29	10,965.71	192	234
	Feb	28	113,499,400	7,270,830	173,115	15.61	$ 0.0900	9,609.08	11,503.12	195	246
	Mar	31	149,402,182	9,664,440	230,106	15.46	$ 0.1014	9,719.35	11,440.45	201	246
	Apr	30	145,351,026	9,913,757	236,042	14.66	$ 0.1101	9,750.73	11,392.12	202	250
	May	31	157,573,506	11,065,930	263,475	14.24	$ 0.1170	10,067.14	11,323.20	212	256
	June	30	150,240,751	10,654,196	253,671	14.10	$ 0.1101	10,209.74	11,248.62	209	257
	July	31	150,580,050	10,622,458	252,916	14.18	$ 0.1169	9,544.54	11,837.62	202	252
	Aug	31	150,084,827	10,642,044	253,382	14.10	$ 0.1177	9,206.15	11,917.58	202	261
	Sept	30	143,990,208	10,309,304	245,460	13.97	$ 0.1152	9,541.20	13,107.05	200	254
	Oct	31	147,122,071	9,774,857	232,735	15.05	$ 0.1079	9,590.71	11,375.81	198	254
	Nov	30	147,284,781	9,783,352	232,937	15.05	$ 0.1061	9,563.85	11,257.17	205	253
	Dec	31	151,600,064	9,925,003	236,310	15.27	$ 0.1122	9,607.13	11,035.82	204	250
2018	Jan	31	147,704,057	9,563,641	227,706	15.44	$ 0.1078	9,755.40	11,029.21	199	246
	Feb	28	131,329,470	8,660,044	206,192	15.16	$ 0.1150	9,763.94	11,125.15	195	241
	Mar	31	144,370,550	9,889,634	235,467	14.60	$ 0.1345	9,183.77	11,853.09	194	244
	Apr	30	142,493,891	9,636,757	229,447	14.79	$ 0.1232	9,558.86	11,901.02	198	247
	May	31	151,201,454	10,120,017	240,953	14.94	$ 0.1342	9,549.70	11,703.13	203	249
	June	30	142,902,259	9,674,924	230,355	14.77	$ 0.1399	9,563.51	11,494.36	198	246
	July	31	139,718,862	9,726,750	231,589	14.36	$ 0.1468	9,647.53	11,909.20	188	242
	Aug	31	141,640,237	9,834,936	234,165	14.40	$ 0.1437	9,817.09	13,623.96	190	238

GUAM POWER AUTHORITY
GOVERNMENT ACCOUNTS RECEIVABLE
BILLING UP TO 08/31/2018 and Payment Applied as of 09/18/2018

Current (07/18 Billing due 08/31/18
30 days Arrears (06/18 due 07/15/18)
60 days and over Arrears (05/18 billing due 06/15/18)

CC&B ACCT NUMBER	DEPARTMENT	BALANCE 7/31/2018	CANCEL/REBILL/ SPEC CHARGE 8/31/2018	BILLING 8/31/2018	PAYMENT 8/31/2018	BALANCE 8/31/2018	
	Line Agencies						
0237100000	Dept. of Corrections	85,217.89	(716.34)	79,400.02	(85,217.89)	78,683.68	
0437100000	Dept. of Parks & Rec.	40,160.15	949.92	25,103.16	(40,160.15)	26,053.08	
0537100000	Guam Fire Department	17,553.75		16,296.41	(17,553.75)	16,296.41	
6995000000	DOA Supply Mgmt	1,584.32		1,707.08	(1,584.32)	1,707.08	
7895000000	Dept. of Administration	4,327.30		5,073.70	(4,327.30)	5,073.70	
1337100000	Nieves Flores Library	10,349.00		10,094.44	(10,349.00)	10,094.44	
2206200000	General Services Agency	262.38		272.57	(262.38)	272.57	
2237100000	DOA-Data Processing	9,002.37		8,844.61	(9,002.37)	8,844.61	
2337100000	Dept. of PH&SS	118,012.39	885.09	73,403.57	(116,920.47)	75,380.58	
3237100000	Dept. of Education	1,800,164.18	13,500.96	1,074,338.05		2,888,003.19	1
3337100000	Guam Police Department	52,708.77		53,777.30	(52,708.77)	53,777.30	
3569100000	Dept of Youth Affairs (Federal)	1,002.20		1,007.33	(1,002.20)	1,007.33	
4437100000	Dept. of Youth Affair* (Local)	12,297.28		10,135.30	(12,297.28)	10,135.30	
4737100000	Guam Environmental Protect	6,666.56		6,980.55	(6,666.56)	6,980.55	
5437100000	Mental Health/Subst.	46,301.70		43,112.07	(46,301.70)	43,112.07	
7200300000	Veteran Affairs	968.97		1,085.29	(968.97)	1,085.29	
7437100000	Civil Defense (Military Affairs)	11,746.18		12,321.77	(11,746.18)	12,321.77	
7463300000	Pacific Energy Resource Center	698.81		713.50	(698.81)	713.50	
8137100000	Dept. of Agriculture	10,032.65	75.24	9,997.97		20,105.86	1
8337100000	DPW-FAC Adm Account	27,167.62	(705.04)	26,820.20	(27,167.62)	26,115.16	
8437100000	Guam Visitors Bureau	4,689.93		4,989.99	(4,689.93)	4,989.99	
8446300000	Yona Senior Citizen Center	937.51		890.78	(937.51)	890.78	
9437100000	Dept of Chamorro Affairs/Chamorro Village	4,980.22		4,219.38	(4,980.22)	4,219.38	
5247210000	Mayors Council	2,114.02		2,179.04	(2,114.02)	2,179.04	
6293410000	Office of the Governor	24,573.36		23,817.87	(24,573.36)	23,817.87	
8555858369	Dept of Chamorro Affairs (Guam Museum)	24,356.43		22,630.45	(24,356.43)	22,630.45	
	Sub Total	**2,317,875.94**	**13,989.83**	**1,519,212.40**	**(506,587.19)**	**3,344,490.98**	
	MAYORS						
0637100000	Santa Rita Mayor	3,960.64		3,643.41	(3,960.64)	3,643.41	
0737100000	Ordot/Chalan Pago Mayor	1,256.08		1,150.50	(1,256.08)	1,150.50	
1537100000	Hagatna Mayor	1,523.61		1,576.90	(1,523.61)	1,576.90	
1637100000	Piti Mayor	1,754.24		1,156.18	(1,754.24)	1,156.18	
1737100000	Mongmong/Toto/Maite Mayor	1,220.51		1,374.38	(1,220.51)	1,374.38	
2637100000	Asan/Maina/Adelup Mayor	941.98		962.86	(941.98)	962.86	
2737100000	Sinajana Mayor	4,992.05		4,565.33	(4,992.05)	4,565.33	
3637100000	Dededo Mayor	6,785.70		6,400.78	(6,785.70)	6,400.78	
4637100000	Yigo Mayor	3,411.93		3,539.52	(3,411.93)	3,539.52	
5637100000	Umatac Mayor	1,295.24		1,367.42	(1,295.24)	1,367.42	
6537100000	Agana Hts. Mayor	5,768.65		4,787.48	(5,768.65)	4,787.48	
6637100000	Merizo Mayor	993.30		1,056.35	(993.30)	1,056.35	
6737100000	Barrigada Mayors Office	2,099.67		2,058.75	(2,099.67)	2,058.75	
7537100000	Agat Mayor	2,650.40		2,520.99	(2,684.40)	2,486.99	
7637100000	Inarajan Mayor	1,997.34		1,844.90	(1,997.34)	1,844.90	
8537100000	Tamuning Mayor	5,978.79		5,812.12	(5,978.79)	5,812.12	
8637100000	Talofofo Mayor	2,640.32		2,433.83	(2,640.32)	2,433.83	
9537100000	Mangilao Mayor	4,593.49		4,492.74	(4,593.49)	4,492.74	
9637100000	Yona Mayor	796.00		794.72	(796.00)	794.72	
	Sub Total	**54,659.94**	**-**	**51,539.16**	**(54,693.94)**	**51,505.16**	
	DPW ACCOUNTS				-		
4337100000	DPW-Village St. Lights	463,442.24	12,306.76	381,624.58	(463,442.24)	393,931.34	
5337100000	DPW- Primary St. Lights	94,324.67		85,176.47	(94,324.67)	85,176.47	
6337100000	DPW-Sec/Coll St. Lights	25,948.00		27,048.36	(25,948.00)	27,048.36	
7337100000	DPW-Signal Lights	11,009.24	50.00	10,823.14	(11,009.24)	10,873.14	
	Sub Total	**594,724.15**	**12,356.76**	**504,672.55**	**(594,724.15)**	**517,029.31**	
	(B) AUTONOMOUS/PUBLIC CORP						
1437100000	Retirement Fund	5,987.69		6,033.79	(5,987.69)	6,033.79	
1915500000	Guam Housing Corp Rental Division	2,170.05	(4.02)	1,378.30	(1,601.91)	1,942.42	1
2437100000	University of Guam	187,594.50		184,976.74	(187,594.50)	184,976.74	
4237100000	Guam Airport Authority	528,352.49	-	530,179.93	(528,352.49)	530,179.93	
5357510000	University of Guam (NET METERED)	80,750.45		79,947.98	(80,750.45)	79,947.98	
6237100000	G H U R A	15,236.56	94.18	25,228.43	(27,240.81)	13,318.36	
6437100000	Guam Community College	47,560.24		49,153.79	(96,714.03)	-	
7237100000	Guam Memorial Hospital	566,503.08		33,628.21	(566,553.08)	33,578.21	

8426836906	Guam Memorial Hospital (NET METERED)	171,078.51		148,667.00	(171,078.51)	148,667.00	
9137100000	Port Authority of Guam	100,386.79		96,817.83	(100,386.79)	96,817.83	
9157510000	Guam Community College (NET METERED)	39,074.48		38,932.40	(78,006.88)	-	
9173210000	Guam Solid Waste Authority	6,341.68		6,738.72	(6,341.68)	6,738.72	
9337100000	Guam Waterworks Authority	1,311,663.21	10,266.85	1,305,654.40	(1,311,663.21)	1,315,921.25	
8237100000	GPA						
	Sub Total	**3,062,699.73**	**10,357.01**	**2,507,337.52**	**(3,162,272.03)**	**2,418,122.23**	
	(C) OTHERS						
0337100000	Guam Legislature	108.62		140.31	(108.62)	140.31	
9503154359	Guam Legislature (NET METER)	7,701.50		7,332.85	(7,701.50)	7,332.85	
1237100000	Superior Court of Guam	72,513.19		70,587.60	(72,513.19)	70,587.60	
2537100000	Agana (Guam) Post Office	6,252.50		5,572.25	(11,824.75)	-	
2570200000	Customs & Quarantine Agency	889.05		976.13	(889.05)	976.13	
3537100000	U.S. Post Office	43,020.83		41,008.35	(84,029.18)	-	
5537100000	Dept. of Military Affairs	77,668.33		75,668.74	(77,668.33)	75,668.74	
3209463043	Dept. of Military Affairs	17,683.61		17,859.37	(17,683.61)	17,859.37	
5737100000	KGTF	7,015.40		6,722.11	(7,015.40)	6,722.11	
7281000000	Tamuning Post Office	5,406.76		5,248.23	(10,654.99)	-	
	Sub Total	**238,259.79**	**-**	**231,115.94**	**(290,088.62)**	**179,287.11**	
	GRAND TOTAL	**6,268,219.55**	**36,703.60**	**4,813,877.57**	**(4,608,365.93)**	**6,510,434.79**	

GPA Communications/PIO Typhoon Mangkhut Support

20 September 2018

Communications Products

1. Updated & Distributed Public Service Announcements (PSAs) to various storm related topics:
    a) Voltage Fluctuations;
    b) Portable Generator Safety;
    c) Appliance Safety;
    d) Downed Power Lines;
    e) Securing Yard Items;
    f) Main Breakers;
2. Damaged Weather Head Process
    a) Developed Graphic for process;
    b) Issued process to press & stakeholders;
3. Typhoon Restoration Process
    a) Developed Graphic for restoration process;
    b) Included on outgoing communications;
4. Issued Restoration Updates
    a) Media
    b) Stakeholders e.g. GDOE, DPW, MCOG, GWA
    c) Joint Information Center
    d) Social Media
5. Coordinated Inter Agency Support via JIC & EOC
    a) GDOE restoration updates with 41 schools to include repairs
        i. Repairs to sporting facilities
    b) Traffic Intersection Recovery Coordination
        i. GUARNG, DPW & GPD
    c) Tele Communication Update Coordination
6. Crisis Management
    a) Constant Messaging on Key Points

Risks and Issues	Resolution
1. Changing field conditions & restoration priorities; 2. Post Recovery Update for MCOG 3. Post Recovery Update for ratepayers	1 Constant contact with PSCC and Opns Coordination Planning Activities; 2 Report on proposed changes & emphasis on restoration process; 3 Village meeting at all three sectors

9/19/2018

Internal Communications

Communications Products

1. Distributed Public Service Announcements (PSAs) to various storm related topics to employees:
    a) Voltage Fluctuations;
    b) Portable Generator Safety;
    c) Appliance Safety;
    d) Downed Power Lines;
    e) Securing Yard Items;
    f) Main Breakers;
2. Employee Recall Memorandum from GM-COR 4
3. Customer Services
    a) Updated on Restoration Locations;
    b) Periodic & Multiple 30 minute outages as necessary;
4. Updated Admin Staff on Restoration Progress;
    a) Trouble Call reporting;
    b) Periodic & Multiple 30 minute outages as necessary;

Risks and Issues	Resolution
1. Changing field conditions & restoration priorities; 2. Recording of disaster recovery	1 Constant contact with PSCC and Opns Coordination Planning Activities; 2 Procurement of support services for digital recording of disaster recovery.

Legend:

No corrective action required

Near-term corrective action required

Requires immediate attention

CONSOLIDATED
COMMISSION ON UTILITIES
Guam Power Authority • Guam Waterworks Authority
P.O.BOX 2977 • Agana,Guam 96932

GUAM WATERWORKS AUTHORITY WORK SESSION

CCU Conference Room
4:30 p.m.., January 16, 2018

AGENDA

1. **ISSUES FOR DECISION**
   - 1.1 Creation of the Leak Detection Technician Series of Positions / Resolution No. 11-FY2018
   - 1.2 Change Order No. 4 for the Northern and Southern Guam Reservoir Design Services / Resolution No. 12-FY2018
   - 1.3 Construction Management Contract for Santa Rosa, Sinifa, and Santa Rita Tank and System Upgrades / Resolution No. 13-FY2018
   - 1.4 Change Order for the Design Services for the Agat-Santa Rita Wastewater Treatment Plant / Resolution No. 14-FY2018
   - 1.5 Change Order for the Line Replacement Phase IV Project / Resolution No. 15-FY2018
2. **GM REPORT**
3. **ISSUES FOR DISCUSSION**
4. **DIVISION REPORTS**
   - 4.1 Communications
   - 4.2 Compliance & Safety
   - 4.3 Customer Service
   - 4.4 Engineering
   - 4.5 Finance
   - 4.6 Operations
5. **ANNOUNCEMENTS**
   - 5.1 Next CCU Meetings: GPA Work Session: 01/18/18; CCU Meeting: 01/23/18
6. **ADJOURNMENT**

GUAM WATERWORKS AUTHORITY
"Better Water. Better Lives."
Gloria B. Nelson Public Service Building | 688 Route 15, Mangilao, Guam 96913
P.O. Box 3010, Hagatna, Guam 96932
Tel. No. (671) 300-6846/48 Fax No. (671) 648-3290

Issues for Decision

Resolution No. 11-FY2018:
Relative to the Approval of the Creation of the Leak Detection Technician I, Leak Detection Technician II, Leak Detection Technician Leader and Leak Detection Technician Supervisor positions at the Guam Waterworks Authority.

What is the project's objective and is it necessary and urgent?
The Guam Waterworks Authority (GWA) has determined a need to create the Leak Detection Technician I, Leak Detection Technician II, Leak Detection Technician Leader and Leak Detection Technician Supervisor to identify and reduce non-revenue water through minimizing water leaks affecting services to the community thus increasing revenues. These positions will allow the Water Operations Divisions to efficiently locate and repair all water leaks within the distribution system island-wide.

Currently, employees from the Pressure Line (leak repair) Unit are assigned to leak detection duties in addition to their normal repair responsibilities. There are no dedicated employees assigned to perform water leak detection on a full-time basis. This results in more focus given to reported/observable leaks, and less focus on pro-active background leak detection. Further, the smaller number of leak detections with accompanying repairs as may be required, are addressed only by requests made through other sections via customer reports/complaints of low pressure, and not systematically using a full-time leak detection crew based on system-generated data from the Systems Control Center or Engineering. This work is currently an ancillary responsibility- performed by Water Sewer Maintenance Workers, Pumping Stations Operators, or Trades Helpers within the Water Operations Divisions.

Guam's drinking water supply and delivery is dependent on the agency's distribution system and our ability to properly maintain it to provide safe drinking water throughout the community. Undetected leaks within the distribution system pose a threat to the continued supply and delivery of Guam's safe drinking water to the community and contribute significantly to GWA's water loss: It is the agency's goal to identify, and repair these leaks through the creation of these positions as a key component of GWA's water loss control program.

Where is the location?
The Leak Detection Technician series will be organizationally located within the Water Operations (Distribution) Division under the direct supervision and management of the Operations & Maintenance Manager for Water Distribution.

How much will it cost?
There is no cost to create the position.

When will it be completed?
Public Law 28-159, Section 7.0.3 (c) requires GWA to post a petition on their websites for ten (10) days (not including Saturdays, Sundays and government of Guam holidays). After the 10 days posting, the petition can then be forwarded to the CCU for their disposition at any regularly scheduled meeting. GWA has met the posting requirements.

Additionally, Guam law requires notice of such posting to each newspaper of general circulation and broadcasting station which airs regular news programs within Guam.

What is the funding source?
GWA will certify funding for the position available for the filling and retention of its certified, technical and professional newly created position. The funding of this position does not have an impact on the General Fund.

The RFP/BID responses (if applicable): N/A

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

RESOLUTION NO. 11-FY2018

RELATIVE TO THE APPROVAL OF THE CREATION OF THE LEAK DETECTION TECHNICIAN SERIES OF POSITIONS

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, the GWA General Manager requests the CCU to approve the creation of the Leak Detection Technician series of positions (Exhibit A); and

WHEREAS, the GWA General Manager requests the CCU to approve the classification standards of the Leak Detection series of positions in the classified status; and

WHEREAS, Public Law 28-112 and 4 GCA §6303 (d) authorizes the creation of positions in Autonomous Agencies and Public Corporations; and

WHEREAS, GWA Personnel Rules and Regulations as amended by Public Law 28-159 Section 3 (C) authorizes the CCU to amend, modify or add a position to the list of certified, technical and professional positions;

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities, as the Governing Body of the Guam Waterworks Authority, does hereby approve and authorize the following:

1. The recitals set forth above hereby constitute the findings of the CCU.

2. The creation and the job classification standards for the Leak Detection Technician series of positions in the classified status is hereby approved and attached herein as Exhibit A.
3. The Leak Detection Technician series of positions is hereby added to the certified, technical and professional list of positions at GWA.

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 23rd day of January, 2018.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS **J. GEORGE BAMBA**
Chairperson Secretary

I, **J. George Bamba**, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

DRAFT

Exhibit A

LEAK DETECTION TECHNICIAN I

NATURE OF WORK IN THIS CLASS:

Performs routine leak detection monitoring duties independently after initial training and works under close supervision on a variety of more semi-skilled developmental assignments.

ILLUSTRATIVE EXAMPLES OF WORK: (These examples do not list all the duties which may be assigned; any one position may not include all the duties listed)

Performs water leak survey and pinpointing using leak detection equipment to find hidden, unreported leaks in the water distribution system.

Provide report of all locations where water use, meter sounds or possible leak sounds exist.

Review detailed distribution system maps and locate Pressure Reducing Valves (PRVs), forgotten valves, or other system apparatus that might make the suspect sound.

If possible cause of the sound is found, the sound should be isolated and identified.

Create and record found leaks on Computerized Maintenance Management System (CMMS).

Provide GWA Systems Control Center (SCC) and Geographic Information System (GIS) a record of found leaks, utilizing leak detection form and Global Positioning System (GPS) technology.

Assist water maintenance operators, leak repair crews and contractors in locating water leaks daily or during emergency situations.

Responsible for job safety, traffic control, cleanliness and security.

Responsible for maintenance and calibration of all leak detection equipment.

Perform sequential actions to locate leaks by applying knowledge of leak detection practices.

Prepare field reports and documentation of completed tasks.

MINIMUM KNOWLEDGE, ABILITIES AND SKILLS:

Knowledge of water meters, distribution system, valves, hydrants, PRVs, air release valves, distribution system maps and curb stops on customer service connection piping.

Ability to estimate leak flows.

Ability to apply safe work practices on the job.

Ability to work effectively with the public and employees.

Ability to understand and follow oral and written instructions.

Leak Detection Technician I – page 2 of 2

Ability to perform arduous physical tasks and work in strained and awkward positions.

Skill in operating leak detection equipment (acoustic listeners and correlators)

MINIMUM EXPERIENCE AND TRAINING:

A) One (1) year of experience in the water construction, maintenance and repair of water lines and related systems; or

B) Any equivalent combination of experience and training which provides the minimum knowledge, abilities and skills.

NECESSARY SPECIAL QUALIFICATIONS:

Must possess a valid Guam Driver's License

ESTABLISHED: January 2018

JOB EVALUATION POINTS: 363
PAYGRADE: MINIMUM: G2-D $32,336
MAXIMUM: G3-D $33,649

JOSEPH T. DUENAS, Chairman
Consolidated Commission on Utilities

LEAK DETECTION TECHNICIAN II

NATURE OF WORK IN THIS CLASS:

Performs skilled work in the leak detection monitoring.

Employees in this class perform full range of skilled tasks under general supervision a

ILLUSTRATIVE EXAMPLES OF WORK: (These examples do not list all the duties which may be assigned; any one position may not include all the duties listed)

Perform water leak survey and pinpointing using leak detection equipment to find hidden, unreported leaks in the water distribution system.

Provide report of all locations where water use, meter sounds or possible leak sounds exist.

Review detailed distribution system maps and locate Pressure Reducing Valves (PRVs), forgotten valves, or other system apparatus that might make the suspect sound.

If possible cause of the sound is found, the sound should be isolated and identified.

Create and record found leaks on Computerized Maintenance Management System (CMMS).

Provide GWA Systems Control Center (SCC) and Geographic Information System (GIS) a record of found leaks, utilizing leak detection form and Global Positioning System (GPS) technology.

Assist water maintenance operators, leak repair crews and contractors in locating water leaks daily or during emergency situations.

Responsible for job safety, traffic control, cleanliness and security.

Responsible for maintenance and calibration of all leak detection equipment.

Perform sequential actions to locate leaks by applying knowledge of leak detection practices.

Prepare field reports and documentation of tasks completed.

Coordinate with GIS for updates of the plotted leak detection areas and develop programs for infrastructure rehabilitation.

May provide guidance with less skilled workers on assigned tasks.

MINIMUM KNOWLEDGE, ABILITIES AND SKILLS:

Knowledge of water meters, distribution system, valves, hydrants, PRVs, air release valves, distribution system maps and curb stops on customer service connection piping.

Leak Detection Technician II – page 2 of 2

Knowledge of maintenance and calibration of leak detection equipment.

Ability to estimate leak flows.

Ability to pinpoint water losses and points of water loss using leak detection equipment to find hidden, unreported leaks in the water distribution system.

Ability to apply safe work practices on the job.

Ability to work effectively with the public and employees.

Ability to understand and follow oral and written instructions.

Ability to perform arduous physical tasks and work in strained and awkward positions.

Skill in operating leak detection equipment (acoustic listeners and correlators)

Skill in the use and maintenance of mechanical equipment, including pumps, power generators, drills, motors, valves and hydrants.

MINIMUM EXPERIENCE AND TRAINING:

A) Two (2) years of experience in the water construction, maintenance and repair of water lines and related systems; or

B) Any equivalent combination of experience and training which provides the minimum knowledge, abilities and skills.

NECESSARY SPECIAL QUALIFICATIONS:

Must possess a valid Guam Driver's License

ESTABLISHED: January 2018

JOB EVALUATION POINTS: 421
PAYGRADE: MINIMUM: I3-A $39,871
MAXIMUM: I4-A $41,490

JOSEPH T. DUENAS, Chairman
Consolidated Commission on Utilities

LEAK DETECTION TECHNICIAN LEADER

NATURE OF WORK IN THIS CLASS:

Leads crew and performs complex skilled work in the leak detection monitoring.

Employees perform full range of complex skilled tasks under general supervision and leads less skilled workers on assigned tasks.

ILLUSTRATIVE EXAMPLES OF WORK: (These examples do not list all the duties which may be assigned; any one position may not include all the duties listed)

Leads in water leak survey and pinpointing using leak detection equipment to find hidden, unreported leaks in the water distribution system.

Provide report of all locations where water use, meter sounds or possible leak sounds exist.

Lead the review detailed distribution system maps and locate Pressure Reducing Valves (PRV's), forgotten valves, or other system apparatus that might make the suspect sound.

If possible cause of the sound is found, the sound should be isolated and identified.

Lead the creation and recording of found leaks on Computerized Maintenance Management System (CMMS).

Provide GWA Systems Control Center (SCC) and Geographic Information System (GIS) a record of found leaks, utilizing leak detection form and Global Positioning System (GPS) technology.

Coordinate the assistance required by water maintenance operators, leak repair crews and contractors in locating water leaks daily or during emergency situations.

Lead job site safety, traffic control, cleanliness and security.

Lead maintenance and calibration of all leak detection equipment.

Perform sequential actions to locate leaks by applying knowledge of leak detection practices.

Lead the preparation of field reports and documentation of completed tasks.

Prepares and provides reports of assigned and completed reports of lower level technicians as requested.

Lead the coordination with GIS for updates of the plotted leak detection areas and develop programs for infrastructure rehabilitation.

MINIMUM KNOWLEDGE, ABILITIES AND SKILLS:

Knowledge of water meters, distribution system, valves, hydrants, PRVs (Pressure Reducing Valve), air release valves, distribution system maps and curb stops on customer service connection piping.

Leak Detection Technician Leader – page 2 of 2

Ability to estimate leak flows.

Knowledge in operating leak detection equipment (acoustic listeners and correlators)

Knowledge in the use and basic maintenance of mechanical equipment, including pumps, power generators, drills, motors, valves and hydrants.

Knowledge to pinpoint water losses and points of water loss using leak detection equipment to find hidden, unreported leaks in the water distribution system.

Ability to maintain leak detection database for water losses and reporting.

Knowledge of maintenance and calibration of leak detection equipment.

Ability to apply safe work practices on the job.

Ability to work effectively with the public and employees.

Ability to understand and follow oral and written instructions.

Ability to perform arduous physical tasks and work in strained and awkward positions.

MINIMUM EXPERIENCE AND TRAINING:

A) Three (3) years of experience in the water construction, maintenance and repair of water lines and related systems; or

B) Any equivalent combination of experience and training which provides the minimum knowledge, abilities and skills.

NECESSARY SPECIAL QUALIFICATIONS:

Possession of a valid Water Distribution or Water Treatment Operator's Certificate Level I; ***and***

Possession of a valid Guam Driver's License;

ESTABLISHED:
JOB EVALUATION POINTS: 553
PAYGRADE: MINIMUM: J5-D $49,821
MAXIMUM: J6-D $51,843

JOSEPH T. DUENAS, Chairman
Consolidated Commission on Utilities

LEAK DETECTION TECHNICIAN SUPERVISOR

NATURE OF WORK IN THIS CLASS:

Supervises lower level leak detection technicians, performs and participates in the leak detection monitoring of the water distribution systems.

ILLUSTRATIVE EXAMPLES OF WORK: (These examples do not list all the duties which may be assigned; any one position may not include all the duties listed)

Provide leadership, supervision and guidance for the line and leak detection section of the Guam Waterworks Authority.

Supervise and implement leak detection projects.

Coach and train assigned staff on leak detection tools, techniques, procedures and best practices.

Communicate scope of work, project milestones and project findings with staff.

Supervise the creation and recording of found leaks on Computerized Maintenance Management System (CMMS).

Provide GWA Systems Control Center (SCC) and Geographic Information System (GIS) a record of found leaks, utilizing leak detection form and Global Positioning System (GPS) technology.

Coordinate the assistance required by water maintenance operators, leak repair crews and contractors in locating water leaks daily or during emergency situations.

Supervise job site safety, traffic control, cleanliness and security.

Supervise maintenance and calibration of all leak detection equipment.

Supervise the preparation of field reports and documentation.

Perform sequential actions to locate leaks by applying knowledge of leak detection practices.

Supervise the coordination with GIS for updates of the plotted leak detection areas and develop programs for infrastructure rehabilitation.

MINIMUM KNOWLEDGE, ABILITIES AND SKILLS:

Knowledge of water meters, distribution system, valves, hydrants, PRVs (Pressure Reducing Valve), air release valves, distribution system maps and curb stops on customer service connection piping.

Ability to estimate leak flows.

Knowledge in operating leak detection equipment (acoustic listeners and correlators)

Leak Detection Technician Supervisor – page 2 of 2

Knowledge in the use and basic maintenance of mechanical equipment, including pumps, power generators, drills, motors, valves and hydrants.

Knowledge to pinpoint water losses and points of water loss using leak detection equipment to find hidden, unreported leaks in the water distribution system.

Knowledge to maintain leak detection database for water losses and reporting.

Knowledge of maintenance and calibration of leak detection equipment.

Ability to apply safe work practices on the job.

Ability to work effectively with the public and employees.

Ability to understand and follow oral and written instructions.

Ability to perform arduous physical tasks and work in strained and awkward positions.

Ability to evaluate operational effectiveness and recommend/implement changes to enhance improvements.

Ability to make work decisions in accordance with appropriate program guidelines.

MINIMUM EXPERIENCE AND TRAINING:

A) Five (5) years of experience in the water construction, maintenance and repair of water lines and related systems, including two (2) years as a leak detection technician leader.

NECESSARY SPECIAL QUALIFICATIONS:

Possession of a valid Water Distribution or Water Treatment Operator's Certificate Level II; ***and***

Possession of a valid Guam Driver's License;

ESTABLISHED: January 2018

JOB EVALUATION POINTS: 734
PAYGRADE: MINIMUM: L3-A $63,219
MAXIMUM: L4-A $65,785

JOSEPH T. DUENAS, Chairman
Consolidated Commission on Utilities

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 12-FY2018
Relative to Approval of Change Order No. 4 for the Northern and Southern Guam Reservoir Design Services

What is the project's objective and is it necessary and urgent?
The project is part of the 2011 Court Order Paragraph 29 – Storage Tank/Reservoir Repair, Replacement, and Relocation Program. As a Court Order project, it is necessary and urgent to work towards meeting the Court Order deadlines. The project's objective is to provide design services for the Northern and Southern reservoirs, which include the Santa Rosa, Santa Rita, Sinifa, Ugum, and Inarajan.

The Change Order proposal is for the following work:

(1) Santa Rosa: design of new 4,120 LF of 12-inch pipe along Route No. 1 in Yigo.
(2) Santa Rosa: Identification and survey of easements for agreements with DoD.
(3) Agfayan Booster Pump Station: design of pressure reducing valve near original bps site.
(4) Agfayan Booster Pump Station: Investigate 4 lots as new alternatives for the new booster pump station location.
(5) Ugum Reservoir: Investigate a new alternative for the reservoir location. The new alternative involves consolidating 2 lots adjacent and south of the existing plant to provide the site needed for the new reservoir and facilities.
(6) Ugum Reservoir: Existing water treatment plant drainage will be corrected in the new design and plans.
(7) Santa Rita: Incorporate roadway repair in the design. New design to replace existing culvert.
(8) Sinifa: Prepare construction easements and construction support documents for 2 lots.

Where is the location?
Santa Rosa reservoir: located off Route 15 in Yigo
Santa Rita reservoir: located off Obispo Olaiz Street in Santa Rita
Sinifa reservoir: located off Cross Island Road in Santa Rita
Ugum: located off Paulino Street in Inarajan
Inarajan: located off Belen Avenue in Inarajan

How much will it cost?
The fee proposal is for $537,880.25.

When will it be completed?
Santa Rosa work: 90 days
Agfayan BPS: dependent on outcome of investigations
Ugum: dependent on outcome of land owner responses
Santa Rita: 30 days
Sinifa: 60 days

What is the funding source?
The funding shall be from PW 09-11: Water System Reservoirs 2005 Improvements.

The RFP/BID responses (if applicable):
Not Applicable)

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

GWA RESOLUTION NO. 12–FY2018

RELATIVE TO APPROVAL OF CHANGE ORDER NO. 4 FOR THE NORTHERN AND SOUTHERN GUAM RESERVOIR DESIGN SERVICES

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA is currently working on critical reservoir projects under the 2011 Court Order ("CO") Paragraph 29 – Storage Tank/Reservoir Repair, Replacement, and Relocation Program; and

WHEREAS, The CCU approved via Resolution No. 20-FY2015 (Exhibit A) for GWA management to enter into contract with TG Engineers, P.C. to provide design services for the Northern and Southern Guam Reservoirs, as well as Resolution No. 56-FY2016 (Exhibit B) that approved a Change Order to TG Engineers, P.C. for additional design services that totaled Three Million Eighty-Seven Thousand Thirty-Two Dollars ($3,087,032.00); and

WHEREAS, GWA issued Change Order No. 1 to No. 3 to TG Engineers, P.C. for additional services that were not identified in the original scope of work but subsequently required due to the following:

(1) land acquisition for various project sites;

(2) design for several additions and revisions to the pipe system to complete the pressure zone realignment which includes surveying and environmental service for Santa Rita and Santa Rosa Reservoirs;

(3) design for the new Unified Facilities Criteria ("UFC") structural code requirements for Ugum, Santa Rosa, Santa Rita, and Sinifa Reservoirs, and Inarajan Booster Pump Station that was not in effect at the time of contract execution;

(4) additional land acquisition support for the Government of Guam Chamorro Land Trust (CLTC) property, additional Archaeological and Unexploded Ordinances (UXO) monitoring, and design to include the new GWA-AAFB tank interconnection system for the Santa Rosa Reservoir;

(5) design for new Booster Pump Station and a new Pressure Reducing Valve (PRV) to be added into the system in the vicinity of Agfayan Subdivision in Inarajan as part of the Pressure Zone Realignment plan;

(6) percolation tests to be included at each project site location for drainage basins,

(7) design to incorporate the Siemens controls from the existing Ugum plant to be extended to the new Ugum Reservoir and facilities; and

WHEREAS, in the ongoing design and analysis of the reservoirs and the water system served by the noted reservoirs, further design services listed below were identified as being above and beyond original scope requirements but necessary to move forward with improving the functionality of the water system:

(1) Santa Rosa: design of new 4,120 LF of 12-inch pipe along Route No. 1 in Yigo;

(2) Santa Rosa: Identification and survey of easements for agreements with DoD;

(3) Agfayan Booster Pump Station: design of pressure reducing valve near original bps site;

(4) Agfayan Booster Pump Station: Investigate 4 lots as new alternatives for the new booster pump station location;

(5) Ugum Reservoir: Investigate a new alternative for the reservoir location. The new alternative involves consolidating 2 lots adjacent and south of the existing plant to provide the site needed for the new reservoir and facilities;

(6) Ugum Reservoir: Existing water treatment plant drainage will be corrected in the new design and plans;

(7) Santa Rita: Incorporate roadway repair in the design. New design to replace existing culvert;

(8) Sinifa: Prepare construction easements and construction support documents for 2 lots; and

WHEREAS, GWA engineering and TG Engineers, P.C. negotiated the price for the above services to be provided in the amount of Five Hundred Thirty-Seven Thousand Eight Hundred Eighty Dollars and Twenty-Five Cents ($537,880.25) (See Exhibit C); and

WHEREAS, GWA management is seeking CCU approval of additional funding in the amount of Five Hundred Thirty-Seven Thousand Eight Hundred Eighty Dollars and Twenty-Five Cents ($537,880.25); and

WHEREAS, the approval of the Five Hundred Thirty-Seven Thousand Eight Hundred Eighty Dollars and Twenty-Five Cents ($537,880.25), along with the prior authorized contract value of Three Million Eighty-Seven Thousand Thirty-Two Dollars ($3,087,032.00) will bring the total authorized funding for the design contract with TG Engineers, P.C. to Three Million Six Hundred Twenty-Four Thousand Nine Hundred Twelve Dollars and Twenty-Five Cents ($3,624,912.25); and

WHEREAS, funding for this change order will be from the Bond Funds under the line item "PW 09-11 Water System Reservoirs 2005 Improvements"; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms of the fee proposal submitted by TG Engineers, P.C. are fair and reasonable (Exhibit C).
3. The CCU authorizes GWA management to execute Change Order No. 4 in the amount of Five Hundred Thirty-Seven Thousand Eight Hundred Eighty Dollars and Twenty-Five Cents ($537,880.25).
4. The CCU hereby further approves increasing the total authorized funding for the design contract with TG Engineers, P.C. to Three Million Six Hundred

Twenty-Four Thousand Nine Hundred Twelve Dollars and Twenty-Five Cents ($3,624,912.25).

5. The CCU hereby further authorizes the funding source to be from bond funds under the CIP line Item PW 09-11 "Water System Reservoirs 2005 Improvements".

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED this 23rd day of January 2018.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS **J. GEORGE BAMBA**
Chairperson Secretary

SECRETARY'S CERTIFICATE

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

Exhibit A (1 of 4)

GUAM CONSOLIDATED COMMISSION ON UTILITIES
RESOLUTION NO. 20 – FY2015

RELATIVE TO CONTRACT APPROVAL FOR THE
NORTHERN AND SOUTHERN GUAM RESERVOIRS DESIGN SERVICES

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA is currently working on critical reservoir projects under the 2011 Court Order ("CO") Paragraph 29 – Storage Tank/Reservoir Repair, Replacement, and Relocation Program; and

WHEREAS, GWA has advertised the Request For Proposals (RFP-09-ENG-2014) soliciting statement of qualifications from experienced and qualified engineering firms for the preparation of design plans and specifications for the Northern and Southern Guam Reservoirs; and

WHEREAS, the Northern and Southern Guam Reservoir design project includes site investigations and system evaluations at the Santa Rita, Santa Rosa, Inarajan, Sinifa, and Ugum reservoir sites, development of design plans and specifications for various sized concrete reservoirs ranging from 0.2 MG to 2.0 MG nominal capacities, booster station upgrades, instrumentation and control upgrades, control valves upgrades, pipe upgrades, and other general site upgrades; and

WHEREAS, RFP packages were downloaded by forty five (45) interested parties, from which GWA received proposal submittals from ten (10) firms before the RFP submittal deadline; and

Exhibit A (2 of 4)

WHEREAS, the GWA A-E Selection committee reviewed and evaluated the ten (10) proposals (see EXHIBIT A – Evaluation Score) and generated a short list of the top four (4) firms with a recommendation to award a contract to the firm TG Engineers, P.C. and any successor at interest thereto (see EXHIBIT B – Evaluation Summary and GM Determination); and

WHEREAS, TG Engineers, P.C. and GWA negotiated the price for the services to be provided in the amount of Two Million Five Hundred Thirty Two Thousand Five Hundred Eighty Dollars ($2,532,580.00) (see EXHIBIT C – Fee Proposal); and

WHEREAS, GWA management seeks approval of the fee proposal amount of Two Million Five Hundred Thirty Two Thousand Five Hundred Eighty Dollars ($2,532,580.00), plus a ten percent (10%) contingency of Two Hundred Fifty Three Thousand Two Hundred Fifty Eight Dollars ($253,258.00) to bring the total authorized funding amount to a maximum of Two Million Seven Hundred Eighty Five Thousand Eight Hundred Thirty Eight Dollars ($2,785,838.00); and

WHEREAS, funding for this project will be from the 2010 and 2013 Bond Funds under the line items CIP PW 09-11 Water System Reservoirs 2005 Improvements and CIP PW 11-02 Ugum Water Treatment Plant Reservoir Replacement; and

WHEREAS, GWA management recommends that a contract be entered into with TG Engineers, P.C. in the aforementioned base contract amount.

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms of the fee proposal submitted by TG Engineers, P.C. is fair and reasonable.

Exhibit A (3 of 4)

3. The CCU finds that the terms of the conditions set by GWA relative to commencement of subsequent work activities are fair and reasonable and serve as a measure of Quality Assurance/Quality Control (QA/QC).
4. The CCU hereby authorizes the management of GWA to enter into a contract with TG Engineers, P.C., in the amount of Two Million Five Hundred Thirty Two Thousand Five Hundred Eighty Dollars ($2,532,580.00).
5. The CCU hereby further approves the total funding amount for this project of Two Million Five Hundred Thirty Two Thousand Five Hundred Eighty Dollars ($2,532,580.00), plus a ten percent (10%) contingency of Two Hundred Fifty Three Thousand Two Hundred Fifty Eight Dollars ($253,258.00) to bring the total authorized funding amount to a maximum of Two Million Seven Hundred Eighty Five Thousand Eight Hundred Thirty Eight Dollars ($2,785,838.00).

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 24th day of March 2015.

Certified by:

JOSEPH T. DUENAS
Chairperson

Attested by:

J. GEORGE BAMBA
Secretary

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

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Exhibit A (4 of 4)

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: 5

NAYS: 0

ABSTENTIONS: 0

ABSENT: 0

4

Exhibit B (1 of 4)

GUAM CONSOLIDATED COMMISSION ON UTILITIES

RESOLUTION NO. 56-FY2016

RELATIVE TO APPROVAL OF CHANGE ORDER NO. 2 FOR THE NORTHERN AND SOUTHERN GUAM RESERVOIR DESIGN SERVICES

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA is currently working on critical reservoir projects under the 2011 Court Order ("CO") Paragraph 29 – Storage Tank/Reservoir Repair, Replacement, and Relocation Program; and

WHEREAS, Resolution No. 20-FY2015 (See Exhibit A) authorized GWA management to enter into a contract with TG Engineers, P.C. in the amount of Two Million Five Hundred Thirty Two Thousand Five Hundred Eighty Dollars ($2,532,580.00) to provide design services for the Northern and Southern Guam Reservoirs, which includes:

(1) site investigations and system evaluations at Santa Rosa, Santa Rita, Sinifa, Inarajan, and Ugum reservoir sites, and

(2) development of design plans and specifications for various sized concrete reservoirs ranging from 1.0 MG to 2.0 MG nominal capacities, instrumentation and control upgrades, control valves upgrades, pipe upgrades, new booster station, and other general site and system upgrades; and

WHEREAS, Resolution No. 20–FY2015 further authorized on top of the contract amount a ten percent (10%) contingency of Two Hundred Fifty Three Thousand Two Hundred Fifty Eight Dollars ($253,258.00) bringing the total authorized funding to a maximum of Two

Exhibit B (2 of 4)

Million Seven Hundred Eighty Five Thousand Eight Hundred Thirty Eight Dollars ($2,785,838.00); and

WHEREAS, GWA issued Change Order No. 1 to TG Engineers, P.C. for additional services that were required due to needs for land acquisition for various project sites using the approved contingency funding in the amount of Fifty One Thousand Three Hundred Forty One Dollars and Fifty Cents ($51,341.50) in which the total value of the Contract was increased to Two Million Five Hundred Eighty Three Thousand Nine Hundred Twenty One Dollars and Fifty Cents ($2,583,921.50); and

WHEREAS, in the course of the design and analysis of the reservoirs and the water system served by the noted reservoirs additional design services listed below was identified as being necessary to meet new building code requirement and to improve the functionality of the water systems (See Exhibit B – Scope of Work and Fees):

(1) design for several additions and revisions to the pipe system to complete the pressure zone realignment which includes surveying and environmental services for Santa Rita and Santa Rosa Reservoirs,

(2) design for the new UFC structural code requirements for Ugum, Santa Rosa, Santa Rita and Sinifa Reservoirs; and Inarajan Booster Pump Station,

(3) additional land acquisition support for the Government of Guam Chamorro Land Trust Commission (CLTC) property, additional Archaeological and Unexploded Ordinance (UXO) monitoring, and design to include the new GWA-AAFB tank interconnection system for the Santa Rosa Reservoir,

(4) design for new Booster Pump Station and a new Pressure Reducing Valve (PRV) to be added into the system in the vicinity of Agfayan Subdivision in Inarajan as part of the pressure zone realignment plan,

(5) percolation tests to be included at each project site location for drainage basins,

(6) design to incorporate the Siemens controls from the existing Ugum plant to be extended to the new Ugum Reservoir and facilities; and

Exhibit B (3 of 4)

WHEREAS, GWA engineering and TG Engineers, P.C. negotiated the price for the services to be provided in the amount of Five Hundred Three Thousand One Hundred Ten Dollars and Fifty Cents ($503,110.50); and

WHEREAS, GWA Management is seeking CCU approval of additional funding in the amount of Three Hundred One Thousand One Hundred Ninety Four Dollars ($301,194.00) which is the balance needed above the remaining contingency that will fund Change Order No. 2; and

WHEREAS, GWA Management further seeks CCU approval of the total authorized funding for the design contract with TG Engineers, P.C. to Three Million Eighty Seven Thousand Thirty Two Dollars ($3,087,032.00); and

WHEREAS, funding for this project will be from 2013 and/or 2015 Bond Funds under CIP line item PW 09-11 Water System Reservoirs 2005 Improvements; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve and authorize the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms of the fee proposal submitted by TG Engineers, P.C. are fair and reasonable.
3. The CCU finds that the terms of the conditions set by GWA relative to commencement of subsequent work activities are fair and reasonable and serve as a measure of Quality Assurance/Quality Control (QA/QC).
4. The CCU hereby authorizes GWA management to execute Change Order No. 2 in the amount of Five Hundred Three Thousand One Hundred Ten Dollars and Fifty Cents ($503,110.50) (Exhibit B).
5. The CCU further approves increasing the total authorized funding for the design contract with TG Engineers, P.C to Three Million Eighty Seven Thousand Thirty Two Dollars ($3,087,032.00);

Exhibit B (4 of 4)

6. Funding source will be CIP PW 09-11 Water System Reservoir 2005 Improvements.

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 23rd day of August, 2016.

Certified by:

JOSEPH T. DUENAS
Chairperson

Attested by:

J. GEORGE BAMBA
Secretary

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: 4

NAYS: 0

ABSTENTIONS: 0

ABSENT: 1

///

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///

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 12-FY2018
Relative to Approval of Change Order No. 4 for the Northern and Southern Guam Reservoir Design Services

What is the project's objective and is it necessary and urgent?
The project is part of the 2011 Court Order Paragraph 29 – Storage Tank/Reservoir Repair, Replacement, and Relocation Program. As a Court Order project, it is necessary and urgent to work towards meeting the Court Order deadlines. The project's objective is to provide design services for the Northern and Southern reservoirs, which include the Santa Rosa, Santa Rita, Sinifa, Ugum, and Inarajan.

The Change Order proposal is for the following work:

(1) Santa Rosa: design of new 4,120 LF of 12-inch pipe along Route No. 1 in Yigo.
(2) Santa Rosa: Identification and survey of easements for agreements with DoD.
(3) Agfayan Booster Pump Station: design of pressure reducing valve near original bps site.
(4) Agfayan Booster Pump Station: Investigate 4 lots as new alternatives for the new booster pump station location.
(5) Ugum Reservoir: Investigate a new alternative for the reservoir location. The new alternative involves consolidating 2 lots adjacent and south of the existing plant to provide the site needed for the new reservoir and facilities.
(6) Ugum Reservoir: Existing water treatment plant drainage will be corrected in the new design and plans.
(7) Santa Rita: Incorporate roadway repair in the design. New design to replace existing culvert.
(8) Sinifa: Prepare construction easements and construction support documents for 2 lots.

Where is the location?
Santa Rosa reservoir: located off Route 15 in Yigo
Santa Rita reservoir: located off Obispo Olaiz Street in Santa Rita
Sinifa reservoir: located off Cross Island Road in Santa Rita
Ugum: located off Paulino Street in Inarajan
Inarajan: located off Belen Avenue in Inarajan

How much will it cost?
The fee proposal is for $537,880.25.

When will it be completed?
Santa Rosa work: 90 days
Agfayan BPS: dependent on outcome of investigations
Ugum: dependent on outcome of land owner responses
Santa Rita: 30 days
Sinifa: 60 days

What is the funding source?
The funding shall be from PW 09-11: Water System Reservoirs 2005 Improvements.

The RFP/BID responses (if applicable):
Not Applicable)

GUAM WATERWORKS AUTHORITY
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Tel: (671) 300-6846

Issues for Decision

Resolution No. 13-FY2018
Relative to Santa Rosa, Sinifa, and Santa Rita Tank and System Upgrades Construction Management Contract

What is the project's objective and is it necessary and urgent?
The project is part of the 2011 Court Order Paragraph 29 – Storage Tank/Reservoir Repair, Replacement, and Relocation Program. As a Court Order project, it is necessary and urgent to work towards meeting the Court Order deadlines. The project's objective is to provide construction management services for the construction of the Santa Rosa, Sinifa, and Santa Rita Tank and System Upgrade project, which includes new PRV's.

Where is the location?
Santa Rosa, Sinifa, and Santa Rita reservoir sites. The Santa Rosa reservoir is located in Yigo. Sinifa and Santa Rita reservoirs are located in Santa Rita village.

How much will it cost?
The fee proposal is for Two Million Nine Hundred Seventy-Seven Thousand Two Hundred Thirty-Four Dollars and Sixty-Nine Cents ($2,977,234.69). GWA management further seeks CCU approval of a 10% contingency or Two Hundred Ninety-Seven Thousand Seven Hundred Twenty-Three Dollars and Forty-Seven Cents ($297,723.47) which would bring the total authorized funding requested to Three Million Two Hundred Seventy-Four Thousand Nine Hundred Fifty-Eight Dollars and Sixteen Cents ($3,274,958.16).

When will it be completed?
Santa Rosa site: 365 calendar days
Sinifa site: 365 calendar days
Santa Rita site: 410 calendar days

CM start is dependent on the construction NTP.

What is the funding source?
The funding shall be from PW 09-11: Water System Reservoirs 2005 Improvements.

The RFP/BID responses (if applicable):
- RFP-06-ENG-2017
- 19 firms picked up RFP
- 8 firms submitted
- GHD recommended for award

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

GWA RESOLUTION NO. 13–FY2018

RELATIVE TO APPROVAL OF THE CONSTRUCTION MANAGEMENT CONTRACT FOR SANTA ROSA, SINIFA, AND SANTA RITA TANK AND SYSTEM UPGRADES

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA is currently working on critical reservoir projects under the 2011 Court Order ("CO") Paragraph 29 – Storage Tank/Reservoir Repair, Replacement, and Relocation Program; and

WHEREAS, the design of Santa Rosa, Sinifa, and Santa Rita Tank designs (RFP-09-ENG-2014) have been completed; and

WHEREAS, GWA has advertised the Request for Proposals (RFP-06-ENG-2017) soliciting statement of qualifications from experienced and qualified engineering firms to provide construction management services for the Santa Rosa, Sinifa, and Santa Rita Tank and System Upgrades project; and

WHEREAS, RFP packages were picked up by 19 interested parties, from which GWA received proposal submittals from 8 firms before the RFP submittal deadline; and

WHEREAS, the GWA A-E Selection committee reviewed and evaluated the 8 proposals (See Exhibit A – Score Summary) and generated a short list of the top 3 firms with a

recommendation to award a contract to the firm GHD (See Exhibit B – GM's Determination); and

WHEREAS, GHD and GWA negotiated the price for the construction management services (Santa Rosa, Sinifa, and Santa Rita tank and off-site system upgrades related to all three tank sites) to be provided in the total amount of Two Million Nine Hundred Seventy-Seven Thousand Two Hundred Thirty-Four Dollars and Sixty-Nine Cents ($2,977,234.69) (See Exhibit C – Scope of Work and Fees); and

WHEREAS, GWA management seeks approval of the fee proposal amount of Two Million Nine Hundred Seventy-Seven Thousand Two Hundred Thirty-Four Dollars and Sixty-Nine Cents ($2,977,234.69), along with a 10% contingency of Two Hundred Ninety-Seven Thousand Seven Hundred Twenty Three Dollars and Forty Seven Cents ($297,723.47), to bring the total authorized funding amount to a maximum of Three Million Two Hundred Seventy-Four Thousand Nine Hundred Fifty-Eight Dollars and Sixteen Cents ($3,274,958.16); and

WHEREAS, funding for this project will be from the Bond Funds under the line item "PW 09-11 Water System Reservoirs 2005 Improvements"; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms of the fee proposal submitted by GHD are fair and reasonable (Exhibit C).
3. The CCU hereby authorizes the management to accept the fee proposal from GHD, which is also incorporated into this Resolution in its entirety.
4. The CCU hereby further authorizes the management of GWA to enter into a contract with GHD, in the amount of Two Million Nine Hundred Seventy-Seven Thousand Two Hundred Thirty-Four Dollars and Sixty-Nine Cents ($2,977,234.69).

5. The CCU hereby further approves the total funding amount for this project of Two Million Nine Hundred Seventy-Seven Thousand Two Hundred Thirty-Four Dollars and Sixty-Nine Cents ($2,977,234.69), along with a 10% contingency of Two Hundred Ninety-Seven Thousand Seven Hundred Twenty-Three Dollars and Forty-Seven Cents ($297,723.47), to bring the total authorized funding amount to Three Million Two Hundred Seventy-Four Thousand Nine Hundred Fifty-Eight Dollars and Sixteen Cents ($3,274,958.16).
6. The CCU hereby further authorizes the funding source to be from bond funds under the CIP line Item PW 09-11 "Water System Reservoirs 2005 Improvements".

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 23rd day of January 2018.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS
Chairperson

J. GEORGE BAMBA
Secretary

DRAFT

SECRETARY'S CERTIFICATE

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

DRAFT

Exhibit A (1 of 1)

GUAM WATERWORKS AUTHORITY
Gloria B. Nelson Public Service Building • 688 Route 15 • Mangilao, Guam 96913

June 19, 2017

To: Thomas F. Cruz, P.E., Chief Engineer

From: Gloria P. Bensan
Chairperson, Consultant Selection Board9

Subject: RFP-06-ENG-2017
Construction Management Services for the Northern and Southern Guam Reservoirs (Santa Rosa, Sinifa, and Santa Rita) Tank and System Upgrades
GWA Project No. W14-007-BND

The following information is intended to document the evaluation process undertaken for the referenced solicitation.

EVALUATION COMMITTEE MEMBERS	
Name	**Title**
Brett Railey, P.E.	CIP Water Engineer Supervisor
Garrett Yeoh	Senior Engineer
Delfyn Quitlong	Engineer II
Vincent Pangelinan	Operations Manager

Consultant	Evaluation Score				Total	Rank
1. EMPSCO Engineering Consultants	75	65	90	74	304	7
2. HDR	90	80	95	86	351	2
3. LYON	65	72	89	80	306	6
4. SSFM International	86	82	94	85	347	3
5. Duenas, Camacho & Associates	79	74	92	80	325	4
6. E.M. Chen & Associates	71	67	88	70	296	8
7. AECOM	74	74	93	81	322	5
8. GHD	90	94	91	91	366	1

Scores were evaluated based on sum of the individual scores. The recommendation of the evaluation committee is shown in the ranking above.

Please review and approve at your earliest convenience so that we may proceed with the notification letters.

Exhibit B (1 of 1)

GUAM WATERWORKS AUTHORITY
"Better Water. Better Lives."
Gloria B. Nelson Public Service Building
688 Route 15, Mangilao, Guam 96913

MEMORANDUM

To: Miguel C. Bordallo, General Manager

From: Thomas F. Cruz, P.E., Chief Engineer

Subject: RFP-06-ENG-2017
Construction Management Services for the Northern and Southern Guam Reservoirs (Santa Rosa, Sinifa, and Santa Rita) Tank and System Upgrades
GWA Project No. W14-007-BND

Date: June 19, 2017

The Selection Committee has completed all necessary actions for selecting the most qualified consultant for the referenced solicitation. All proposals were reviewed and scored according to the conditions established in the solicitation. The evaluation summary sheet is attached for your information.

The committee recommends the following top three (3) firms in order of preference for the project:

1. GHD
2. HDR
3. SSFM International

Concurred:

VINCENT E. GUERRERO
Supply Management Administrator

6/20/2017
Date

GENERAL MANAGER'S DETERMINATION

Consultant Firm Selected:

GHD

Remarks:

MIGUEL C. BORDALLO, P.E.
General Manager

6.21.17
Date

Exhibit C

September 22, 2017

Mr. Miguel Bordallo
General Manager
688 Route 15
Mangilao, GU 96913

SUBJECT: FORMAL SUBMITTAL OF FINAL SCOPE OF WORK AND FEE PROPOSAL FOR NORTHERN AND SOUTHERN GUAM RESERVOIRS (SANTA ROSA, SINIFA, AND SANTA RITA) TANK AND SYSTEM UPGRADES CONSTRUCTION MANAGEMENT SERVICES RFP-06-ENG-2017, PROJECT NO. W14-007-BND

Dear Mr. Bordallo:

GHD is pleased to formally submit our final Scope of Work and Fee Proposal for the above referenced project. The scope of work and fee proposal is based upon detailed meetings we held with GWA staff and we believe it meets GWA's needs in an economically feasible manner by pooling project management and resident engineer resources between the three (3) projects. We look forward to working with GWA on this critical project for Guam. If you have any questions or need additional information, please do not hesitate to contact me directly by email or telephone.

Sincerely,

Paul K. Baron, PE
Principal

Attachments: Scope of Work (15 pages)
Fee Proposal (29 pages)

GHD Inc. 865 South Marine Corps Drive Suite 202 Tamuning Guam 96913

T 1 671 472 6792 **F** 1 671 477 6229 **E** guam@ghd.com **W** www.ghd.com

Guam Northern & Southern GWA Reservoirs
Construction Management Services Scope of Work & Fees

I. GENERAL

GHD, as the Construction Manager (CM) shall provide services relating to the daily field observation, inspection, testing, supervision, management, coordination, and compliance monitoring for the Guam Northern & Southern GWA Reservoirs (Projects) at the following project locations.

- **Santa Rita GWA Reservoir Replacement**
- **Santa Rosa GWA Reservoir Replacement**
- **Sinifa GWA Reservoir Replacement**

The projects generally consists of geo-technical ground improvements, demolition of existing tank structures, construction of pre-stressed concrete tanks conforming to AWWA/ANSI D110 for Type I Wire-and-Strand Wound, Circular Prestressed Concrete Water Tanks (site adapted for each location), installation of new water lines, construction and refurbishment of booster pump stations, chlorination systems, electrical, instrumentation and control, SCADA controls, plus associated utilities for each site. Additionally, the work includes preconstruction services including constructability review and value engineering of the project design.

Reports submitted to GWA by the CM shall be in a form approved by GWA's Chief Engineer.

II. PROJECT OVERVIEW

The construction management, testing, and field observation services for the projects will require general construction management and observation, as well as specialized inspection and testing. In addition to general construction management duties, the specialized inspection and testing will include, but not be limited to:

- Concrete placement
- Concrete anchors/Adhesive anchoring systems/Expansion bolts
- Grading
- Excavation
- Compaction grouting
- Compaction testing
- Pre-stressing operations
- Concrete cylinder testing
- Shotcrete application
- High strength bolting
- Earthwork/Soil analysis
- Instrumentation and SCADA
- Hydrostatic testing
- Disinfection

GHD Inc. 865 South Marine Corps Drive Suite 202 Tamuning Guam 96913
T 1 671 472 6792 **F** 1 671 477 6229 **E** guam@ghd.com **W** www.ghd.com

In general, the CM shall function as Owner's representative whose primary function shall be to:

- Keep GWA advised and informed as to project progress and cost
- Manage the change process
- Disclose any information relevant to GWA's interest
- Make proactive recommendations to GWA for action to maintain progress and achieve the project schedule and budget
- Observing System Commissioning
- Act in the best interest of GWA

The CM shall administer the Contract, except that the CM is not authorized to make any decisions on the behalf of GWA that materially affect the intent of the design or financially obligate GWA in any manner.

III. TASK AND REQUIREMENTS

The following tasks are applicable to and will be provided to each of the Guam Northern & Southern GWA Reservoirs project locations.

A. PRE-CONSTRUCTION PHASE SERVICES:

In accordance with GWA's RFP, the purpose of this task is to obtain "a clear set of construction documents that will allow the perspective bidder to bid competitively, to build or install the designed facility in an efficient and timely manner, and reduce the number of change orders and delays." Under this task the CM will review the design documents; review the Contractor's Construction Management Quality Control Plan; prepare a Construction Quality Assurance Plan and a Construction Management Plan; provide contract bidding support; participate in meetings to discuss design documents; submit comments on design documents; and participate in meetings to discuss responses to comments as detailed in the following paragraphs.

Task A1: Design Document Review. The CM shall perform review of the design documents. The CM will provide redline mark-up of the plans and specifications and annotated comments. The review shall also verify that the design is clearly presented and potential construction related conflicts or deficiencies which may lead to substantive changes to the design, schedule, or cost of the project have been mitigated as practicable. Based upon our understanding of the current status of the design documents, we will undertake this at the 100% design stages.

Deliverables (electronic pdf files and hard copies)**:**

- Final Design Review Report

Task A2: CM Quality Assurance:

Task A2.1: Review Contractor Construction Management Quality Control Plan. The CM shall review, record, and comment on the Construction Management Quality Control Plan submitted by the Construction Contractor.

Task A2.2: Construction Quality Assurance Plan. The CM will develop, implement, and maintain a Quality Assurance Plan for civil, structural, electrical, mechanical, and instrumentation elements including specialized work related to the construction of concrete

GHD Inc. 865 South Marine Corps Drive Suite 202 Tamuning Guam 96913
T 1 671 472 6792 **F** 1 671 477 6229 **E** guam@ghd.com **W** www.ghd.com

water reservoirs conforming to AWWA/ANSI D110 Type I Wire- and Strand- Wound, Circular Pre-stressed Concrete Water Tanks.

Content of the Quality Assurance Plan shall include, but not be limited to the following:

- Documentation of site conditions prior to beginning construction
- Review of approved submittals from the Contractor prior to fabrication or installation of materials and equipment
- Inspection, observation, and documentation of daily field work
- Monitoring of the Contractor's Quality Control Plan
- In-plant fabrication and/or witness testing at place of manufacture (where applicable)
- Reports and record keeping
- Non-conforming and deficient work resolution process
- Monitoring the Construction Contractor's implementation of their Quality Control Plan
- Complete list of specialized inspections for the tank structure and under tank

It is important to note that the CM is responsible for monitoring the Contractor's compliance with the Contract Documents, but is not responsible for the Contractor's means and methods the Contractor elects to use in performance of their work.

Deliverables (electronic pdf files and hardcopies)**:**

- Quality Assurance Plan

Task A3: Construction Management Plan. The CM will develop and implement the Construction Management Plan (CM Plan) including guidelines for project organization and coordination in the field, standard daily operations, change order procedures, quality, schedule, and cost control. The CM Plan sets forth the procedures and approach for the construction of the project. The CM Plan will serve the CM, the Owner's Representative, and Contractors by defining the project, project team members and their roles, coordination among team members, procedure, key milestones, and schedule constraints. By establishing these parameters early in the project, the CM Plan will help control resources and costs, establish communication and coordination between the CM, Contractor, and GWA.

Deliverables (electronic pdf files and hardcopies)**:**

- Construction Management Plan

Task A4: Contract Bidding:

The CM will review and perform an assessment of the 100% contract bid package (Parts A, B, & C) to assess their readiness, completeness, and suitability to solicit competitive bids. We will assist in the management of the bid documents, prepare for and conduct the pre-bid conference and site visit(s), manage and assist with RFI responses and addendums during the bid period.

After receipt of construction bid packages, the CM will perform an overall review of the bids received with a detailed emphasis on the apparent low bidder(s). The CM will work with GWA to perform the necessary follow-up with the bidders until the lowest responsible and responsive bidder is determined. Upon completion of this process, the CM will provide a technical memorandum summarizing the review and recommendation for award, and/or concurrence of

GHD Inc. 865 South Marine Corps Drive Suite 202 Tamuning Guam 96913
T 1 671 472 6792 **F** 1 671 477 6229 **E** guam@ghd.com **W** www.ghd.com

the proposed selected contractor. Recommendation shall include document review to ensure compliance with all bid requirements and procurement regulations, bid analysis, and contractor selection.

Deliverables (electronic pdf files and hardcopies)**:**

- Pre-Bid Meeting Agenda and Minutes
- Technical Memorandum(s) – Document Review, Bid Analysis, and Contractor Selection

B. CONSTRUCTION PHASE SERVICES:

Task B1.0: Project Records & Document Control. The CM shall provide services and tools to ensure that the project is efficiently managed and constructed according to the terms of the Contract. The primary function shall be the proper collection and organization of construction documents, gathering data regarding project progresses, producing progress reports, and monitoring time, cost, and quality.

The CM shall use Bentley EADOC for the Project Management Information System (PMIS) to track communication, design documents, construction documents, finances, and reporting. Our fee proposal shall include up to 15 users.

- Communication Documents: Memos, daily inspector logs for both contractor and CM, meeting minutes, and all other relevant documentation.
- Construction Documents: Submittals, RFIs, testing results, photo logs, special inspection, change orders, corrective actions, punch list, various construction logs, payment applications, wage rate reporting, and all other relevant documentation.
- Contract Documents: Specifications, drawings, permits, bid documents, contract documents, and all other relevant documentation.

Task B2.0: Daily Construction Reports. The onsite inspectors shall maintain daily reports of the general work performed, visitors to the site, daily production, weather and site condition, field orders, progress photos, material testing, special inspections, documentation of delays, non-conformance, punch lists, and other material and work facts and issues regarding the production of the work. The daily reports and logs shall be available to GWA project team for review at any time via the project management software.

Task B3.0: Progress Photo Log and Live Video Feed:

Task B3.1: Progress Photo Log. The CM shall prepare and retain a construction progress photo log in an album organized by year, month, and day. The photo log shall capture the different phases of the project – pre-construction, construction, and post-construction. The photo log shall be digital and provided to GWA at the end of the project.

Task B3.2: Live Video Feed. The CM shall provide 24 hour monitoring camera(s) to be installed at each project site to allow for regular monitoring of the project work. The camera system will allow for remote view and playback functions. A time-lapse video of the entire project shall be provided to GWA at the end of the project.

Task B4.0: Submittal and Shop Drawings. The CM shall review and act on (accept or reject) submittals required by the Contract documents. The CM shall review and provide comments

GHD Inc. 865 South Marine Corps Drive Suite 202 Tamuning Guam 96913
T 1 671 472 6792 **F** 1 671 477 6229 **E** guam@ghd.com **W** www.ghd.com

regarding shop drawings, work drawings, material submittals, traffic control plan, safety plan, demolition plan, and other submittals for conformance with the Contract Documents. The CM reviewer shall be a competent person. In the event of a Contractor request for a time extension or material or equipment substitution, the CM shall make a recommendation to GWA regarding the substitution. The GWA Chief Engineer or his authorized representative will approve the substitution.

Task B5.0: Contractor Project Schedules. The CM shall review the Contractor's work schedule for accuracy and for efficient sequencing of the work. The CM shall provide recommendations to the Contractor to make changes deemed necessary and coordinate approval of the revised (recovery) schedule with GWA. Any delays shall be documented and notified to GWA and the Contractor when actual progress is behind schedule. The CM shall adhere to the requirements set forth in the Contract document for Contractor project schedule tracking and review.

Task B6.0: Payment Request. The CM shall receive and process payment requests from the Contractor. Payment requests shall be reviewed to be in compliance with the Contract documents and with the actual work completed. Upon completion of the review, the CM shall make any necessary adjustments, certify, and forward the request to GWA for processing of the payment. The CM shall submit their review, recommendation, acceptance, or rejection within five (5) working days of receipt from the Contractor. We assume the payment application will be a standard AIA or EJCDC.

Task B7.0: Payroll Report. The CM shall review any payroll submittals required by the Contract Documents including prevailing wage submissions. At the minimum, the Contractor and its subcontractors shall provide bi-weekly pay records for each of its employees on the project. The CM shall conduct two (2) random employee interviews every two (2) weeks to verify the pay request information. Upon completion of the review, the CM shall require the Contractor to make any necessary adjustments, certify, and forward the Payroll report along with the pay request to GWA for processing. Our review will be based on the wage rates provided in the bid package.

Task B8.0: Project Meetings. The CM shall schedule, arrange, and conduct conferences and meetings as required for clear communication of the Contract requirements and adherence to project schedules.

Task B8.1: Pre-construction Conference. The CM shall prepare for, chair, and provide meeting minutes for the pre-construction conference. The preconstruction conference shall be arranged to discuss mobilization, prosecution of work, safety, environmental protection, historic preservation, processing payments, material submittals, testing procedure, project schedules, inspections, and all other contract issues as necessary.

Task B8.2: Weekly Progress Meetings. The CM shall arrange for a weekly progress meeting with the Contractor and GWA to discuss progress of work, Contract requirements, and other issues related to the administration and prosecution of work. The CM shall prepare meeting minutes for all progress meetings with contractors, sub-contractors, GWA, and all other parties. The meeting minutes shall include action items from week to week until it has been completed.

Task B8.3: Special/Stakeholder Coordination Meetings. The CM shall arrange meetings between the Contractor and GWA, and other parties such as GEPA, DPW, GPA, etc. and other

GHD Inc. 865 South Marine Corps Drive Suite 202 Tamuning Guam 96913
T 1 671 472 6792 **F** 1 671 477 6229 **E** guam@ghd.com **W** www.ghd.com

Stakeholders as necessary to address project issues that require decisions that cannot be made by the CM or to resolve regulatory concerns.

Task B9.0: As-Built Drawings:

Task B9.1: As-Built Drawing Review. After each weekly meeting, the CM shall review the Contractor's review drawings to ensure that they are current and capture any deviations from the original plan set.

Task B9.2: Maintain As-Built Drawing. The CM shall maintain a separate set of red-line as-built drawings on site. Drawings shall be available for GWA at any time. Monthly as-built documents shall be uploaded to the project management software system.

Task B10.0: Request for Information. The CM shall track Requests for Information (RFI) and maintain an RFI log; coordinate receipt of answers from other sources; and provide RFI responses with GWA's input regarding any aspect of the Contract documents, which includes the plans and technical specifications.

Task B11.0: General Compliance Monitoring. The CM shall evaluate and ensure Contractor compliance with all local and federal labor laws applicable to the Project. Any violations shall be immediately reported to GWA. Compliance monitoring shall include but not limited to the following:

Task B11.1: Regulations and Laws. The CM shall monitor compliance with Territorial and/or Federal laws, regulations, and rules.

Task B11.2: Labor Laws. The CM shall monitor Contractor and subcontractor procedures to verify legal status of employees on site. Verify bi-weekly compliance with labor requirements for federally funded projects including posting of wage rate schedules at the job site and safety requirements.

Task B11.3: Licensure. To the best of our ability, the CM shall confirm that the Contractor and its subcontractors and their workers have all required licenses and ensure that said licenses are valid throughout the terms of the Contract.

Task B11.4: Permit Compliance. To the best of our ability, the CM shall monitor and track Contractor's compliance in obtaining required permits and approvals.

Task B11.5: Insurance. To the best of our ability, the CM shall review the Contactor's insurance documents that are submitted to GWA for compliance with Contractor requirements. The CM shall track insurance documents, ensure insurance is valid throughout the term of Contract and maintain an insurance certificate log.

Task B12.0: Claims and Disputes. The CM shall promptly notify GWA regarding any issues that arise during construction of the project that could result in claims and/or disputes. The CM shall provide the following services to assist GWA with the resolution of claims and disputes:

Task B12.1: Claim Records. Maintain copies of all verbal and written communications, submittals, testimony, photos, and meetings regarding a potential dispute and promptly submit all originals to the Chief Engineer and Attorney for GWA.

GHD Inc. 865 South Marine Corps Drive Suite 202 Tamuning Guam 96913
T 1 671 472 6792 **F** 1 671 477 6229 **E** guam@ghd.com **W** www.ghd.com

Task B12.2: Claims Reviews & Interpretation. Review claims submitted by the Contractor. Provide GWA with interpretation of Contract drawings and specifications and provide written recommendations to GWA regarding the solution of the dispute. At the outset of the Contract, the CM shall work with the Contractor to provide pricing for equipment, material, personnel, and other relevant considerations as specified in the bid. Prices agreed upon shall be used in any subsequent Change Order. No amounts shall be paid except for actual losses incurred by the Contractor through no fault of their own or for risks not allocated to the Contractor under the bid.

Task B13.0: Change Order Negotiations and Review:

Task B13.1: Change Order Review. Track all change orders and maintain a change order log. Provide change order evaluations, negotiations, and recommendations for approval by GWA. Change orders shall not be made when the Contractor has assumed such risk in the bid. Change orders may include requests for additional payments for differing site conditions and the CM shall utilize the bid documents to determine if a change order is warranted. The CM shall submit change order requests and supporting documentation to GWA for approval within ten (10) working days of receipt from the Contractor wherever practical.

Task B13.2: Change Order Negotiations with Contractor. Prepare independent cost estimates and negotiate change orders with the Contractor subject to GWA approval (final approval of negotiated change orders can only be made by the GWA General Manager).

Task B13.3: Change Order Documentation and Administration.
The CM shall maintain copies for all approved change orders (originals to be provided to GWA) and ensure that subsequent pay requests accurately represent these change orders. Approved change orders shall be administered by the CM along with other work elements according to the provisions of this scope of work.

Task B14.0: Design Changes and Verification Request:

As directed by GWA, prepare changes to the Contract technical documents (design and specifications) required to address a change order. GWA will direct the CM to make design changes only when changes are deemed by the GWA Chief Engineer and the Engineer of Record to have no material effect on the original intent of the design. All other design changes shall be forwarded to the Engineer of Record for processing.

If the request for change will materially change the original design, the CM shall coordinate with the Engineer of Record to accomplish the necessary design changes. The CM shall prepare a design change/verification request (DCVR) for submission to and for the approval of the Engineer of Record. If the required changes to the design are not covered within the original design scope of service, the CM will prepare a design scope amendment; solicit a fee proposal for the amendment on behalf of GWA, and assist with the negotiations.

Task B15.0: Construction Monitoring, Special Inspection, and Quality Control Monitoring.
The CM shall provide construction management and onsite inspection observation services to ensure that the work is accomplished in accordance with the Contract documents.
Project field staff shall review project documents, conduct daily observations, special inspections (where applicable), prepare and submit daily observation and special inspection reports; communicate deficiency issues and resolve with Contractor; and update a non-

GHD Inc. 865 South Marine Corps Drive Suite 202 Tamuning Guam 96913
T 1 671 472 6792 **F** 1 671 477 6229 **E** guam@ghd.com **W** www.ghd.com

compliance log. It is anticipated that during peak construction as many as four (4) field staff may be present at the site during normal working hours.

Task B15.1: Project Manager. The CM will assign a part time Project Manager (PM) to the Guam Northern and Southern GWA Reservoir project. The PM will be responsible for general over-sight of the project, formal correspondence with GWA and the Contractor, and the professional and technical accuracy of all work and materials of the project.

Task B15.2: Resident Engineer. A full time Resident Engineer (RE) shall be assigned to manage all three (3) sites and will be at one (1) of the sites during normal working hours unless attending project related meetings or during holidays, vacation, or sick days. The Resident Engineer (RE) will determine along with the Project Manager (PM), which field staff will be onsite but it may be comprised of civil, structural, electrical, or mechanical field staff with the intent that there will be at least one (1) of them on site during normal working hours and will be supported by additional Special Inspectors as described in Task 15.4.

Task B15.3: Onsite Construction Inspector. The CM shall provide construction inspector staff at each of the three (3) sites to monitor the construction. The Resident Engineer and onsite field staff shall have demonstrable experience (satisfactory to GWA) relative to the discipline and type of work being performed. Project field staff shall review project documents, conduct daily observations, special inspections (where applicable), prepare and submit daily observation and special inspection reports, communicate deficiency issues and resolve with Contractor, and update a non-compliance log.

Task B15.4: Special Inspector. In addition to general compliance inspections, the CM shall provide special inspections services in accordance with IBC 2009, Chapter 17 by a person with demonstrable experience (satisfactory to GWA) related to concrete placement, structural field welding, field welding of reinforcement, concrete anchoring, expansion bolts, shotcrete application, high strength bolting, reinforcing steel placement, pre-stressing operations, grading, excavation, backfilling, foundation probing and injection, and other operations that require special inspections. The Special Inspections staff shall be accepted by DPW and approved by GWA before inspection.

SCADA, mechanical, and electrical inspections will be handled by competent staff on an "on-call" basis to periodically observe these phases of the construction. The same staff will be used to provide discipline specific submittal, shop drawing, and RFI review and response support. The staff shall have demonstrable experience relative to the discipline and type of work being performed.

Task B16.0: Testing (Quality Assurance).

Task B16.1: Contactor Testing. Schedule, observe, approve or reject, and document testing required under the Contract to be performed by the Contractor.

Task B16.2: Construction Quality Assurance Testing. The CM shall provide the following CQA testing to monitor the Contractor's independent testing firm:

SPECIAL TESTING	STANDARD	FREQUENCY
Concrete Compressive Testing: Water tank, structures, encasement, hand holds,	ASTM C-39	See attached QA Summary of Services

GHD Inc. 865 South Marine Corps Drive Suite 202 Tamuning Guam 96913
T 1 671 472 6792 **F** 1 671 477 6229 **E** guam@ghd.com **W** www.ghd.com

electrical and communication vaults, pavement, retaining walls, drilled piles, etc.		
Backfill Compaction Testing: Over-excavation, tank foundation, structure foundations, manholes, vaults, electrical & communication hand holes, pavement, etc.	ASTM D-698 ASTM D-6938	See attached QA Summary of Services
Soil and Aggregate Analysis: Subgrade, limestone, base course, general fill, and structural fill, etc.	ASTM C-136 ASTM C-117 ASTM C-40 ASTM D-1140 ASTM D-1183 ASTM D-4318	See attached QA Summary of Services

Task B16.2: GWA Testing. Coordinate and monitor testing required to be performed by GWA.

Task B17.0: Acceptance. The CM shall promptly reject, orally, or in writing, any construction work that does not fully comply with Contract documents. Within 24 hours of notification to the Contractor that work elements have been rejected, the CM shall provide a written description of the deficiency to the GWA Chief Engineer for his/her concurrence. When concurrence has been obtained, the Contractor shall be directed to correct the work. The CM shall promptly advise the GWA Project Manager or the GWA Chief Engineer if the Contractor fails to correct or remove the defective work.

The CM shall issue written stop work orders to the Contractor and immediately provide GWA with a copy for a portion of or the entire Contract non-compliance issues as follows:

- If condition of work or Contractor actions threaten the health and safety of Contractor personnel, GWA representatives, or the public in such cases, stop work orders may be oral depending on the circumstances with written stop work order to follow.
- With prior notification and approval of the GWA Chief Engineer or Project Manager in all other cases.

Task B18.0: Construction QA Survey Services. The CM shall conduct survey and field measurements as necessary to verify that the work is located according to the plans and specifications. Changes to the horizontal and vertical alignments and elevations shall be made only with the approval of the GWA Chief Engineer.

- Pipeline Alignments and Location of Structures: Spot check Contractor's construction staking to verify the pipeline alignments and structure locations are as called for on the plan and specifications and in order to ensure that the work is in a location within lawful and approved Rights-of-Way and easements.
- Elevations: Spot check with Contractor's elevations for foundations, pads, pipe line inverts, backfill thickness, manholes, and other structures for which vertical elevations is a critical design element.
- Construction Survey Quality Assurance: The CM shall provide, at the minimum, the following CQA survey to monitor the Contractor's independent survey firm.
- See attached QA Summary of Services for a project specific list of those items to be verified. In general, the following work shall be provided: under-tank piping, over-excavation, tank foundation, vaults, pavement, water line, bench marks, etc.

GHD Inc. 865 South Marine Corps Drive Suite 202 Tamuning Guam 96913
T 1 671 472 6792 **F** 1 671 477 6229 **E** guam@ghd.com **W** www.ghd.com

Task B19.0: Project Closeout (Punch List and Project Closeout Inspections). Throughout the construction of the project, the CM shall prepare and maintain a list of defects and deficiencies in the work which must be corrected by the Contractor prior to final acceptance of work. The list shall be provided to all members of the pre-final and final inspection team. The list shall be revised after inspections to reflect additional items identified during the inspection. Coordinate with the Contractor to ensure that all punch list items have been completed. When all items have been completed, inform GWA in writing recommending that the work be accepted.

Schedule, arrange, and conduct preliminary, pre-final, and final inspections of work with Contractor, GWA, GEPA, DPW, and other stakeholders in this project.

Task B19.1: Deficiency Log. Prepare and maintain a list of defects and deficiencies in the work which must be corrected by the Contractor prior to final acceptance of work.

Task B19.2: Preliminary Inspection. Preliminary inspections shall be arranged as necessary for specific work elements that require the certification and approval of other agencies.

Task B19.3: Pre-final Inspection. A pre-final inspection shall be conducted after substantial completion of the work.

Task B19.4: Final Inspection. The final inspection shall be conducted after correction of pre-final inspection punch list items.

Task B20.0: Train and Warranty Periods.

Task B20.1: Startup Training & Maintenance Procedures Coordination. The CM shall coordinate with the Contractor to schedule and conduct startup training and standard maintenance procedures required by the Contract documents.

Task B20.2: Master Warranty Package. The CM shall maintain a copy of the warranties and compile associated Manufacturer and Contractor warranty documents. Warranty information shall be included in the final project report. All original warranty documents shall be provided to GWA along with Lien Release Information from the Contractor.

Task B21.0: Equipment.

Task B21.1: Pressure Data Loggers. The CM shall provide GWA with 15 water pressure data loggers, batteries, lock boxes, chains, padlocks, and associated fittings. The water pressure data loggers shall contain USB downloading, water resistant case, delay start feature, and 0-300 PSI range. For the purposes of this proposal, the cost of five (5) data loggers has been carried in each of the three (3) projects. Product data for the above has been included as an attachment to this document.

Task B21.2: Equipment. The CM shall provide GWA with a Panasonic Toughbook 20 with Windows Pro operating system per the attached product data. For the purposes of this proposal, the cost of Toughbook has been divided equally and 1/3 of the cost was carried in each of the projects.

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T 1 671 472 6792 **F** 1 671 477 6229 **E** guam@ghd.com **W** www.ghd.com

Task B22.0: Expenses. The CM has summarized the costs associated with reports & reproduction, mileage, live video fee, website access & maintenance, project management information system (EADOC), QA soil & aggregate analysis, QA backfill compaction testing, QA concrete compressive strength testing, QA survey verification, etc. as a single total for all three (3) projects and carried the average amount equally in each of the projects.

C. POST-CONSTRUCTION SERVICES:

Task C1.0: Final Report. The CM shall prepare a final report after written acceptance of the work by GWA. The final report shall include a narrative documentation of all significant design and construction events and issues and shall become a historical record for the project. The Final Report shall include:

- All communication documentation
- All design documentation
- All construction documentation
- Warranty information
- Operation and maintenance information
- Asset management registry

Deliverables (electronic pdf files and 5 hard copies)**:**

- CM Final Report

Task C2.0: Record Drawings. After the conclusion of the project, the CM shall review and approve the official record drawings prepared by the Contractor.

Deliverables (electronic pdf files and 5 hard copies)**:**

- As-Built Record Drawings

IV. CLARIFICATIONS AND ASSUMPTIONS:

1) For this project, the CM's onsite presence shall consist of the following:

a) ***One (1) part time Project Manager*** (assumed 45%) equally distributed to each of the three (3) project locations.
b) ***One (1) full time Resident Engineer*** (assumed 100%) equally distributed to each of the three (3) project locations.
c) ***Three (3) full time Civil/Structural Inspector*** (assume 100%), one at each of the three (3) project locations.
d) ***One (1) part time Structural Special Inspector*** (assumed 24%), equally distributed to each of the three (3) project locations.
e) ***One (1) part time SCADA Inspector*** (assume 21%), equally distributed to each of the three (3) project locations.
f) ***One (1) part time equivalent of Mechanical Engineer/ Mechanical Inspector*** (assume 21%), equally distributed to each of the three (3) project locations.
g) ***One (1) part time equivalent of Electrical Engineer/ Electrical Inspector*** (assume 21%), equally distributed to each of the three (3) project locations.

GHD Inc. 865 South Marine Corps Drive Suite 202 Tamuning Guam 96913
T 1 671 472 6792 **F** 1 671 477 6229 **E** guam@ghd.com **W** www.ghd.com

h) ***One (1) part time equivalent of Submittal Manager/Project Manager Assistant*** (assume 45%) at each of the three (3) project locations, and various part time support as needed from the Principal, additional inspectors, engineers, etc.

2) Per the June 27, 2017 CM Services scoping meeting with GWA, the following project durations were used:

a) Santa Rosa GWA Reservoir Replacement ***(365 calendar days).***
b) Santa Rita GWA Reservoir Replacement ***(410 calendar days).***
c) Sinifa GWA Reservoir Replacement ***(365 calendar days).***

As requested by GWA, the CM shall provide limited close-out services for a period of 30 to 60 days after substantial completion provided all the construction work is complete and support is mainly at an administrative level (i.e. does not require full time staff to be assigned to the job site).

3) In an effort to reduce costs, the following assumptions have been made:

a) Preparation of Construction Management Plan (CMP) assumes a single document can be prepared for all three projects. One third effort carried in each fee proposal.
b) Contract Bidding effort assumes preparation if a single Pre-Bid Meeting, Contract Bidding Management effort, Bid Opening, Review of Bid Packages, Preparation of Recommendation Memorandum, and Technical Memorandums for all three (3) projects as a single bid package. One third of the effort has been carried in each fee proposal.
c) At the end of the project, the CM will turn-over each of the EarthCam - Construction Cam Lite HD to GWA. It is our understanding that GWA will have the cameras permanently installed at each of the three (3) sites by others. The cameras have an approximate value of ***$45,000.00*** excluding software support and archiving services which are excluded. Note, GHD access to the EarthCam environment is subject to compliance with their terms of use for the service. GHD is a subscriber to the service only and has no control over the performance of the EarthCam Service but will take all reasonable measures and actions within our power to ensure good performance of the system.

4) Inspection and testing of any existing steel storage reservoirs including draining and cleaning is excluded for this scope of services.

5) An amount of $18,930.00 for the Project Management Information System (PMIS), Bentley's ProjectWise Construction Management Service (EADOC), was budgeted for each project. Our fee assumes a total of 15 users for each project at a cost of approximately $180.00 per user per quarter as follows:

a) Client **– two (2)**
b) Construction Manager **– five (5)**
c) Contractor **– five (5)**
d) Spare **– three (3)**

Additional users can be provided at the request of GWA via Change Order. Note, GHD Access to the ProjectWise Construction Management environment is subject to compliance

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with the Bentley Systems terms of use for the service. GHD is a subscriber to the ProjectWise Construction Management service only and has no control over the performance of Bentley's ProjectWise Construction Management Service but will take all reasonable measures and actions within our power to ensure good performance of the system.

6) The CM will use Primavera P6 project management software to track the Contractor's project schedule, construction cost, resource tracking, and cost management.

7) The CM shall conduct random employee interviews every two (2) weeks for two (2) employees to verify the pay request information.

8) Job Site Safety is the sole responsibility of the Contractor. The CM assumes the Contractor shall perform all work in accordance with the requirements of the Contract Documents, applicable federal and local regulations, compliance with regulations of public agencies having jurisdiction, including safety and health requirements of the Territory of Guam and the Occupational Safety and Health Administration of the US Department of Labor (OSHA) as may be required.

In the event that the GHD believes that the Contractor is not conducting their work in compliance with OSHA requirements, we may request GWA to bring in an independent third party safety expert to determine the extent of the Contractor's compliance and potential mitigation for non-compliance. We recommend that GWA include language in the contract documents requiring the contractor to pay for this additional cost in the event it is necessary.

9) ***Stop Work Orders:*** It is understood that the CM may issue written stop work orders to the Contractor in accordance with GWA policies for a portion of or the entire project for Contract non-compliance issues as follows:

a) If in the opinion of the CM, the condition of work or Contractor actions threaten the health and safety of Contractor's personnel, GWA representatives, CM Staff, or the public in such cases, stop work orders may be oral depending on the circumstances (with written stop work order to follow).

b) With prior notification and approval of the GWA Chief Engineer or GWA Project Manager in all other cases.

10) ***Authority to Direct Contractor Operations:*** The CM shall direct the Contractor's Operations under the following conditions:

a) ***Safety and Public Convenience:*** In order to minimize inconvenience to the public and businesses, and in order to protect the safety of the public.

b) ***Compliance:*** In order to affect compliance with local and federal regulations, such as those dealing with traffic control, environmental protection, cultural protection, and historic protection.

11) No formal Partnering Program will be provided but GHD will incorporate partnering to the extent practicable to ensure that environmental commitments are met; complete the

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project on time by resolving disputes quickly; finish within budget by proactively monitoring costs and facilitating creative solutions when faced with potential cost increases; ensure that quality is met by adequate oversight by the Contractor and CM.

12) An amount has been budgeted as detailed in the attached ***QA Services Summary*** to provide QA Testing. Material laboratory testing, Compaction testing, and Concrete Compressive Strength Testing shall be provided by a licensed geotechnical engineering firm. If additional services are required, it shall be brought to GWA's attention and a fee negotiated.

13) An amount has been budgeted as detailed in the attached ***QA Services Summary*** to provide QA Field Survey verification services. Survey verification services will be provided by a licensed land surveyor. If additional work is required it will be brought to GWA's attention and a fee negotiated.

14) No generator, fuel storage or pump systems are part of the project.

15) No project specific permitting services are included in this scope of work, but GHD will assist GWA, the designer, and the Contractor on a limited basis to help facilitate procurement of permits as expeditiously as possible.

16) No Archeological survey, Section 106 Historic Preservation, biological resource monitoring, Section 7 Endangered Species Act or related work is included.

17) Any and all permit fees are excluded.

18) The scope assumes the processing of up to ***100 RFIs*** (Task B10.0) per project, with the understanding that the EOR will provide responses to all design related RFIs. The scope also assumes ***five (5) change orders*** for (Task B13.0) and ***three (3) design changes*** for (Task B14.0). If additional work is required it will be brought to GWA's attention and a fee negotiated.

19) Warranty follow-up is not included in the scope. If required, a fee will be negotiated with GWA.

20) These CM Services are being provided for the construction of improvements shown on the ***90% Design package.*** If additional improvements are added to the construction contract then a fee for additional CM Services will be negotiated with GWA.

21) The Construction contract shall include requirements that the Construction Contractor pay for all overtime for inspection and special inspection requested by the Contractor outside of the normal 40 hour work week and this requirement will be strictly enforced and supported by GWA with payment coming out of the Contractor's Pay Request and then distributed to GHD by GWA via change order.

22) GWA agrees to negotiate with GHD for change orders for additional construction phase services due to construction delays, time extensions, additional work, adverse weather delays ***(in excess of 30 days),*** or any other reason not due to negligent acts of GHD until final acceptance of the project is achieved.

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T 1 671 472 6792 **F** 1 671 477 6229 **E** guam@ghd.com **W** www.ghd.com

VI. FEE SCHEDULE

TABLE 01 - SANTA RITA GWA RESERVOIR

Task Description	Amount
Pre-Construction	$45,820.00
Construction	$905,939.38
Post-Construction	$31,802.00
SUBTOTAL	$983,561.38
GRT	$40,985.00
Santa Rita Total	**$1,024,546.39**

TABLE 02 - SANTA ROSA GWA RESERVOIR

Task Description	Amount
Pre-Construction	$45,820.00
Construction	$859,665.38
Post-Construction	$31,802.00
SUBTOTAL	$937,287.38
GRT	$39,056.77
Santa Rosa Total	**$976,344.15**

TABLE 03 - SINIFA GWA RESERVOIR

Task Description	Amount
Pre-Construction	$45,820.00
Construction	$859,665.38
Post-Construction	$31,802.00
SUBTOTAL	$937,287.38
GRT	$39,056.77
Sinifa Total	**$976,344.15**

TABLE 04 - SANTA RITA SANTA ROSA & SINIFA GWA RESERVOIR

Task Description	Amount
Pre-Construction	$137,460.00
Construction	$2,625,270.15
Post-Construction	$95,406.00
SUBTOTAL	$2,858,136.15
GRT	$119,098.53
GRAND TOTAL	**$2,977,234.69**

See attached spreadsheets for detailed information. Note, work to be invoiced monthly based on prorated effort.

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Santa Rosa, Sinifa, and Santa Rita Tank System Upgrades
Fee Summary
09/22/2017

	Amount
Pre-Construction	$45,820.00
Construction	$905,939.38
Post-Construction	$31,802.00
SUBTOTAL	$983,561.38
GRT	$40,985.00
Santa Rita TOTAL	**$1,024,546.39**

	Amount
Pre-Construction	$45,820.00
Construction	$859,665.38
Post-Construction	$31,802.00
SUBTOTAL	$937,287.38
GRT	$39,056.77
Santa Rosa TOTAL	**$976,344.15**

	Amount
Pre-Construction	$45,820.00
Construction	$859,665.38
Post-Construction	$31,802.00
SUBTOTAL	$937,287.38
GRT	$39,056.77
Sinifa TOTAL	**$976,344.15**

	Amount
Pre-Construction	$137,460.00
Construction	$2,625,270.15
Post-Construction	$95,406.00
SUBTOTAL	$2,858,136.15
GRT	$119,098.53
GRAND TOTAL	**$2,977,234.69**

FEE PROPOSAL **09/22/2017** **SANTA RITA GWA RESERVOIR REPLACEMENT**

Activity Number	Task Description	Principal Engineer	Project Manager	QA Manager/Design Review	Resident Engineer	Civil Inspector	Civil/Structural Inspector	Special Inspector	SCADA Specialty	SR. Mechanical Engineer	Mechanical Inspector	SR. Electrical Engineer	Electrical Inspector	CADD Support	Scheduler Mgmt	Submittal/RFI Manager	Estimating Support	Project Manager Ass't	Amount
	HOURLY LABOR RATES	$246	$166	$226	$126	$126	$136	$196	$175	$155	$125	$155	$125	$121	$150	$126	$110	$96	
A	**PRECONSTRUCTION PHASE SERVICES**																		
A1.0	**Design Document Review**																		
A1.1	Design Document Review **(100% 1 ea.)**	-	8	16	24	-	-	-	-	-	-	-	-	-	-	-	-	-	7,968
A1.4	Final Design Review Report	-	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-	-	2,244
A2.0	**CM Quality Assurance**																		
A2.1	Review Contractor CM Quality Control Plan	-	4	4	4	8	-	-	-	-	-	-	-	-	-	-	-	-	3,080
A2.2	Prepare Construction Quality Assurance Plan	-	8	16	20	60	-	-	-	-	-	-	-	-	-	-	-	-	15,024
A3.0	**Construction Management Plan**																		
A3.1	Prepare Construction Management Plan **(assume 1 for all tanks)**	-	4	4	8	4	-	-	-	-	-	-	-	-	-	-	-	-	3,080
A4.0	**Contract Bidding (assume all tanks bid together)**																		
A4.1	Pre-Bid Meeting Preparation & Conduct	-	2	2	12	8	-	-	-	-	-	-	-	-	-	-	-	-	3,304
A4.2	Contract Bidding Management	-	2	2	20	4	-	-	-	-	-	-	-	-	-	-	-	-	3,808
A4.3	Bid Opening	-	2	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	1,288
A4.4	Review Bid Packages	-	2	2	4	4	-	-	-	-	-	-	-	-	-	-	-	-	1,792
A4.5	Prepare Recommendation Memorandum	-	2		4	4	-	-	-	-	-	-	-	-	-	-	-	-	1,340
A4.6	Prepare Technical Memorandum(s)	-	2	2	4	4	-	-	-	-	-	-	-	-	-	-	-	-	1,792
	PRECONSTRUCTION PHASE HOURS SUBTOTAL	-	38	54	110	98	-	-	-	-	-	-	-	-	-	-	-	-	**300**
	PRECONSTRUCTION PHASE SUBTOTAL	-	6,308	12,204	13,860	12,348	-	-	-	-	-	-	-	-	-	-	-	-	**44,720**
	PRECONSTRUCTION PHASE EXPENSES SUBTOTAL																		**1,100**
	PRECONSTRUCTION PHASE SERVICES & EXPENSES TOTAL	-	6,308	12,204	13,860	12,348	-	-	-	-	-	-	-	-	-	-	-	-	**45,820**
B	**CONSTRUCTION PHASE SERVICES**																		
B1.0	**Project Records & Document Control**																	385	36,960
B2.0	**Daily Construction Reports (assumes 5 days/wk @ 54 weeks = 270 logs)**		68		44		405												71,912
B3.0	**Progress Photo Log & Live Video Feed**																		
B3.1	Progress Photo Log						270												36,720
B3.2	Live Video Feed **(also see expenses)**													54					6,534
B4.0	**Submittal and Shop Drawings**																		
B4.1	Submittal Review **(assume 350)**				29	-	150	-	16	24		24				365			80,284
B4.2	Shop Drawing Review **(assume 75)**				6		75	60	16	24		24				75			42,406
B4.3	Plan Review (Traffic Control, Demolition, Dewatering, etc.)				6	-	40												6,196
B5.0	**Contractor Project Schedules (assume 13)**		13		8										100				18,166
B6.0	**Payment Request (assume 13)**		8		8														2,336
B7.0	**Payroll Report**																		
B7.1	Review Payroll Submittals **(assume 26)**				8		52												8,080
B7.2	Conduct Random Employee Interviews **(assume 2 per week)**						108												14,688
B8.0	**Project Meetings**																		
B8.1	Pre-Construction		4	4	4		4									4			3,120
B8.2	Conduct Weekly Progress Meetings **(54 x 2 hours plus prep & minutes)**		54		108		54									-			29,916
B8.3	Special/ Stakeholder Coordination Meetings **(assume 13 total @ 2.0 hours ea)**		26		26		13												9,360
B9.0	**As-Built Drawing Reviews**																		
B9.1	Weekly Review of Contractor's Red-Line Drawings **(assume 1 hour/week)**					-	54												7,344
B9.2	Maintain CM As-Built Drawings **(assume 2 hours/week)**				9	-	54												8,478
B10.0	**Request for Information (assumes 100 RFI's at 2 hours ea.)**		25		50		-		24	24		24				100			34,690
B11.0	**General Compliance Monitoring**																		
B11.1	Regulations				13														1,638
B11.2	Labor Laws				8														1,008
B11.3	Licensure		4		4														1,168
B11.4	Permit Compliance		16		5														3,286
B11.5	Insurance		4																664
B12.0	**Claims and Disputes**																		

FEE PROPOSAL **09/22/2017** **SANTA RITA GWA RESERVOIR REPLACEMENT**

Activity Number	Task Description	Principal Engineer	Project Manager	QA Manager/Design Review	Resident Engineer	Civil Inspector	Civil/Structural Inspector	Special Inspector	SCADA Specialty	SR. Mechanical Engineer	Mechanical Inspector	SR. Electrical Engineer	Eletrical Inspector	CADD Support	Scheduler Mgmt	Submittal/RFI Manager	Estimating Support	Project Manager Ass't	Amount
B12.1	Claims Records				13	-	20	20											8,278
B12.2	Claims Review & Interpretation		20		13				8	8		8					100		19,838
B13.0	**Change Order Review and Negotiations**																		
B13.1	Change Order Review		20		13	-	20	20											11,598
B13.2	Change Order Negotiations with Contractor		20		13														4,958
B13.3	Change Order Documentation & Administration		20		13														4,958
B14.0	**Design Changes and Verification Request**																		
B14.1	CM Design/Technical Support Effort		20		13		40		6	6		6							13,308
B14.2	Prepare Design Change/Verification Requests (DCVR)													65					7,865
B14.3	Prepare EOR Design SOW Ammendment & Fee Negotiations		20		13		20												7,678
B15.0	**Construction Monitoring, Special Inspection, and Quality Control Monitoring**																		
B15.1	Project Manager		9		239														31,608
B15.2	Resident Engineer **(assume 1/3 Time @ 713 hrs)**																		
B15.3	Onsite Construction Inspector **(assumes Full Time @ 2,160 working hrs)**					-	497												67,592
B15.4	Special Inspections **(Prepare DPW Monthly Report)**			108	13		-	80			40		40					156	66,702
B16.0	**Testing (Quality Assurance)**								12	12		12							5,820
B16.1	Contractor Testing **(part of Task B15.1)**					-	108												14,688
B16.2	CQA Testing & Monitoring **(also see expenses)**					-	108												14,688
B16.3	GWA Testing **(part of Task B15.1)**					-	24												3,264
B17.0	**Acceptance**																		
B17.1	Monitor, Document, & Manage Non-Compliance Issues				18		54												9,612
B18.0	**Construction QA Survey Services (part of Task B22.4)**				18		54												9,612
B19.0	**Project Closeout (Punch List and Project Closeout Inspections)**																		
B19.1	Deficiency Log				18	-	54												9,612
B19.2	Preliminary Inspection				8	-	8		8	8		8							5,976
B19.3	Pre-Final Inspection				8	-	8		8	8		8							5,976
B19.4	Final Inspection				8	-	8		8	8		8							5,976
B20.0	**Train and Warranty Periods**																		
B20.1	Startup Training & Maintenance Procedures Coordination				8	-	20												3,728
B20.2	Master Warranty Package				8		20												3,728
B21.0	**Equipment**																		
B21.1	Data Loggers (15 ea.)																		6,309
B22.2	Panasonic Toughbook 20																		880
B22.0	**Expenses**																		
B22.1	QA Soil & Aggregate Analysis																		3,245
B22.2	QA Backfill Compaction Testing																		3,595
B22.3	QA Concrete Compressive Strength Testing																		28,937
B22.4	QA Survey Verification																		38,638
B22.5	Live Video Feed, Website Access & Maintenance																		32,607
B22.6	Project Management Information System																		18,150
B22.7	Mileage																		8,263
B22.8	Other																		3,300
	CONSTRUCTION PHASE SERVICES HOUR SUBTOTAL	-	351	112	773	-	2,342	180	106	122	40	122	40	119	100	544	100	541	**1,566**
	CONSTRUCTION PHASE HOUR UTILIZATION		15%	5%	33%		100%	8%	5%	5%	2%	5%	2%	5%	4%	23%	4%	23%	
	CONSTRUCTION PHASE SERVICES SUBTOTAL	-	58,266	25,312	97,398	-	318,512	35,280	18,550	18,910	5,000	18,910	5,000	14,399	15,000	68,544	11,000	51,936	**762,017**
	CONSTRUCTION PHASE EXPENSES SUBTOTAL																		**143,922**
	CONSTRUCTION PHASE SERVICES & EXPENSES TOTAL	-	58,266	25,312	97,398	-	318,512	35,280	18,550	18,910	5,000	18,910	5,000	14,399	15,000	68,544	11,000	51,936	**905,939**

FEE PROPOSAL **09/22/2017** **SANTA RITA GWA RESERVOIR REPLACEMENT**

Activity Number	Task Description	Principal Engineer	Project Manager	QA Manager/Design Review	Resident Engineer	Civil Inspector	Civil/Structural Inspector	Special Inspector	SCADA Specialty	SR. Mechanical Engineer	Mechanical Inspector	SR. Electrical Engineer	Electrical Inspector	CADD Support	Scheduler Mgmt	Submittal/RFI Manager	Estimating Support	Project Manager Ass't	Amount
C	**POST CONSTRUCTION SERVICES**																		
C1.0	**Final Report**																		
C1.1	Final Report		8		20		40									-			9,288
C1.2	Asset Management				80														10,080
C2.0	**Record Drawings**																		
C2.1	Signed & Sealed As-built Drawings				4		40							40		-			10,784
	POST CONSTRUCTION PHASE SERVICES HOUR SUBTOTAL	-	8	-	104	-	80	-	-	-	-	-	-	40	-	-	-	-	**232**
	POST CONSTRUCTION PHASE SERVICES SUBTOTAL	-	1,328	-	13,104	-	10,880	-	-	-	-	-	-	4,840	-	-	-	-	**30,152**
	POST CONSTRUCTION PHASE EXPENSES SUBTOTAL																		**1,650**
	POST CONSTRUCTION PHASE SERVICES & EXPENSES TOTAL	-	1,328	-	13,104	-	10,880	-	-	-	-	-	-	4,840	-	-	-	-	**31,802**
ALL	**TOTAL CONSTRUCTION HOURS**	-	397	166	987	98	2,422	180	106	122	40	122	40	159	100	544	100	541	**6,124**
ALL	**TOTAL CONSTRUCTION SERVICES**	-	65,902	37,516	124,362	12,348	329,392	35,280	18,550	18,910	5,000	18,910	5,000	19,239	15,000	68,544	11,000	51,936	**836,889**
ALL	**TOTAL CONSTRUCTION EXPENSES**																		**146,672**
ALL	**TOTAL CONSTRUCTION SERVICES & EXPENSES**	-	65,902	37,516	124,362	12,348	329,392	35,280	18,550	18,910	5,000	18,910	5,000	19,239	15,000	68,544	11,000	51,936	**983,561**
ALL	**SUBTOTAL**																		**983,561**
ALL	**GRT AT 4.167%**																		**40,985**
ALL	**GRAND TOTAL**																		**1,024,546**

FEE PROPOSAL **09/22/2017** **SANTA ROSA GWA RESERVOIR REPLACEMENT**

Activity Number	Task Description	Principal Engineer	Project Manager	QA Manager/Design Review	Resident Engineer	Civil Inspector	Civil/Structural Inspector	Special Inspector	SCADA Specialty	SR. Mechanical Engineer	Mechanical Inspector	SR. Electrical Engineer	Electrical Inspector	CADD Support	Scheduler Mgmt	Submittal/RFI Manager	Estimating Support	Project Manager Ass't	Amount
	HOURLY LABOR RATES	$246	$166	$226	$126	$126	$136	$196	$175	$155	$125	$155	$125	$121	$150	$126	$110	$96	
A	**PRECONSTRUCTION PHASE SERVICES**																		
A1.0	**Design Document Review**																		
A1.1	Design Document Review **(100% 1 ea.)**	-	8	16	24	-	-	-	-	-	-	-	-	-	-	-	-	-	7,968
A1.4	Final Design Review Report	-	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-	-	2,244
A2.0	**CM Quality Assurance**																		0
A2.1	Review Contractor CM Quality Control Plan	-	4	4	4	8	-	-	-	-	-	-	-	-	-	-	-	-	3,080
A2.2	Prepare Construction Quality Assurance Plan	-	8	16	20	60	-	-	-	-	-	-	-	-	-	-	-	-	15,024
A3.0	**Construction Management Plan**																		0
A3.1	Prepare Construction Management Plan **(assume 1 for all tanks)**	-	4	4	8	4	-	-	-	-	-	-	-	-	-	-	-	-	3,080
A4.0	**Contract Bidding (assume all tanks bid together)**																		0
A4.1	Pre-Bid Meeting Preparation & Conduct	-	2	2	12	8	-	-	-	-	-	-	-	-	-	-	-	-	3,304
A4.2	Contract Bidding Management	-	2	2	20	4	-	-	-	-	-	-	-	-	-	-	-	-	3,808
A4.3	Bid Opening	-	2	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	1,288
A4.4	Review Bid Packages	-	2	2	4	4	-	-	-	-	-	-	-	-	-	-	-	-	1,792
A4.5	Prepare Recommendation Memorandum	-	2		4	4	-	-	-	-	-	-	-	-	-	-	-	-	1,340
A4.6	Prepare Technical Memorandum(s)	-	2	2	4	4	-	-	-	-	-	-	-	-	-	-	-	-	1,792
	PRECONSTRUCTION PHASE HOURS SUBTOTAL	-	38	54	110	98	-	-	-	-	-	-	-	-	-	-	-	-	**300**
	PRECONSTRUCTION PHASE SUBTOTAL	-	6,308	12,204	13,860	12,348	-	-	-	-	-	-	-	-	-	-	-	-	**44,720**
	PRECONSTRUCTION PHASE EXPENSES SUBTOTAL																		**1,100**
	PRECONSTRUCTION PHASE SERVICES & EXPENSES TOTAL	-	6,308	12,204	13,860	12,348	-	-	-	-	-	-	-	-	-	-	-	-	**45,820**
B	**CONSTRUCTION PHASE SERVICES**																		
B1.0	**Project Records & Document Control**																	385	36,960
B2.0	**Daily Construction Reports (assumes 5 days/wk @ 54 weeks = 270 logs)**		68		44		405												71,912
B3.0	**Progress Photo Log & Live Video Feed**																		0
B3.1	Progress Photo Log						270												36,720
B3.2	Live Video Feed **(also see expenses)**													54					6,534
B4.0	**Submittal and Shop Drawings**																		0
B4.1	Submittal Review **(assume 350)**				29	-	150	-	16	24		24				365			80,284
B4.2	Shop Drawing Review **(assume 75)**				6		75	60	16	24		24				75			42,406
B4.3	Plan Review (Traffic Control, Demolition, Dewatering, etc.)				6	-	40												6,196
B5.0	**Contractor Project Schedules (assume 13)**		13		8										100				18,166
B6.0	**Payment Request (assume 13)**		8		8														2,336
B7.0	**Payroll Report**																		0
B7.1	Review Payroll Submittals **(assume 26)**				8		52												8,080
B7.2	Conduct Random Employee Interviews **(assume 2 per week)**						108												14,688
B8.0	**Project Meetings**																		0
B8.1	Pre-Construction		4	4	4		4									4			3,120
B8.2	Conduct Weekly Progress Meetings **(54 x 2 hours plus prep & minutes)**		54		108		54									-			29,916
B8.3	Special/ Stakeholder Coordination Meetings **(assume 13 total @ 2.0 hours ea)**		26		26		13												9,360
B9.0	**As-Built Drawing Reviews**																		0
B9.1	Weekly Review of Contractor's Red-Line Drawings **(assume 1 hour/week)**					-	54												7,344
B9.2	Maintain CM As-Built Drawings **(assume 2 hours/week)**				9	-	54												8,478
B10.0	**Request for Information (assumes 100 RFI's at 2 hours ea.)**		25		50		-		24	24		24				100			34,690
B11.0	**General Compliance Monitoring**																		0
B11.1	Regulations				13														1,638
B11.2	Labor Laws				8														1,008
B11.3	Licensure		4		4														1,168
B11.4	Permit Compliance		16		5														3,286
B11.5	Insurance		4																664
B12.0	**Claims and Disputes**																		0

FEE PROPOSAL **09/22/2017** **SANTA ROSA GWA RESERVOIR REPLACEMENT**

B12.1	Claims Records				13	-	20	20											8,278
B12.2	Claims Review & Interpretation		20		13				8	8		8					100		19,838
B13.0	**Change Order Review and Negotiations**																		0
B13.1	Change Order Review		20		13	-	20	20											11,598
B13.2	Change Order Negotiations with Contractor		20		13														4,958
B13.3	Change Order Documentation & Administration		20		13														4,958
B14.0	**Design Changes and Verification Request**																		0
B14.1	CM Design/Technical Support Effort		20		13		40		6	6		6							13,308
B14.2	Prepare Design Change/Verification Requests (DCVR)												65						7,865
B14.3	Prepare EOR Design SOW Ammendment & Fee Negotiations		20		13		20												7,678
B15.0	**Construction Monitoring, Special Inspection, and Quality Control Monitoring**																		0
B15.1	Project Manager		-		161														20,286
B15.2	Resident Engineer **(assume 1/3 Time @ 713 hrs)**																		0
B15.3	Onsite Construction Inspector **(assumes Full Time @ 2,160 working hrs)**					-	240												32,640
B15.4	Special Inspections **(Prepare DPW Monthly Report)**			108	13		-	80			40		40					156	66,702
B16.0	**Testing (Quality Assurance)**								12	12		12							5,820
B16.1	Contractor Testing **(part of Task B15.1)**					-	108												14,688
B16.2	CQA Testing & Monitoring **(also see expenses)**					-	108												14,688
B16.3	GWA Testing **(part of Task B15.1)**					-	24												3,264
B17.0	**Acceptance**																		0
B17.1	Monitor, Document, & Manage Non-Compliance Issues				18		54												9,612
B18.0	**Construction QA Survey Services (part of Task B22.4)**				18		54												9,612
B19.0	**Project Closeout (Punch List and Project Closeout Inspections)**																		0
B19.1	Deficiency Log				18	-	54												9,612
B19.2	Preliminary Inspection				8	-	8		8	8		8							5,976
B19.3	Pre-Final Inspection				8	-	8		8	8		8							5,976
B19.4	Final Inspection				8	-	8		8	8		8							5,976
B20.0	**Train and Warranty Periods**																		0
B20.1	Startup Training & Maintenance Procedures Coordination				8	-	20												3,728
B20.2	Master Warranty Package				8		20												3,728
B21.0	**Equipment**																		0
B21.1	Data Loggers (15 ea.)																		6,309
B22.2	Panasonic Toughbook 20																		880
B22.0	**Expenses**																		
B22.1	QA Soil & Aggregate Analysis																		3,245
B22.2	QA Backfill Compaction Testing																		3,595
B22.3	QA Concrete Compressive Strength Testing																		28,937
B22.4	QA Survey Verification																		38,638
B22.5	Live Video Feed, Website Access & Maintenance																		32,607
B22.6	Project Management Information System																		18,150
B22.7	Mileage																		8,263
B22.8	Other																		3,300
	CONSTRUCTION PHASE SERVICES HOUR SUBTOTAL	-	342	112	695	-	2,085	180	106	122	40	122	40	119	100	544	100	541	**1,566**
	CONSTRUCTION PHASE HOUR UTILIZATION	0%	16%	5%	33%	0%	100%	9%	5%	6%	2%	6%	2%	6%	5%	26%	5%	26%	
	CONSTRUCTION PHASE SERVICES SUBTOTAL	-	56,772	25,312	87,570	-	283,560	35,280	18,550	18,910	5,000	18,910	5,000	14,399	15,000	68,544	11,000	51,936	**715,743**
	CONSTRUCTION PHASE EXPENSES SUBTOTAL																		**143,922**
	CONSTRUCTION PHASE SERVICES & EXPENSES TOTAL	-	56,772	25,312	87,570	-	283,560	35,280	18,550	18,910	5,000	18,910	5,000	14,399	15,000	68,544	11,000	51,936	**859,665**

FEE PROPOSAL **09/22/2017** **SANTA ROSA GWA RESERVOIR REPLACEMENT**

C	**POST CONSTRUCTION SERVICES**																		
C1.0	**Final Report**																		
C1.1	Final Report		8		20		40									-			9,288
C1.2	Asset Management				80														10,080
C2.0	**Record Drawings**																		
C2.1	Signed & Sealed As-built Drawings				4		40							40		-			10,784
	POST CONSTRUCTION PHASE SERVICES HOUR SUBTOTAL	-	8	-	104	-	80	-	-	-	-	-	-	40	-	-	-	-	**232**
	POST CONSTRUCTION PHASE SERVICES SUBTOTAL	-	1,328	-	13,104	-	10,880	-	-	-	-	-	-	4,840	-	-	-	-	**30,152**
	POST CONSTRUCTION PHASE EXPENSES SUBTOTAL																		**1,650**
	POST CONSTRUCTION PHASE SERVICES & EXPENSES TOTAL	-	1,328	-	13,104	-	10,880	-	-	-	-	-	-	4,840	-	-	-	-	**31,802**
																			0
ALL	**TOTAL CONSTRUCTION HOURS**	-	388	166	909	98	2,165	180	106	122	40	122	40	159	100	544	100	541	**5,780**
ALL	**TOTAL CONSTRUCTION SERVICES**	-	64,408	37,516	114,534	12,348	294,440	35,280	18,550	18,910	5,000	18,910	5,000	19,239	15,000	68,544	11,000	51,936	**790,615**
ALL	**TOTAL CONSTRUCTION EXPENSES**																		**146,672**
ALL	**TOTAL CONSTRUCTION SERVICES & EXPENSES**	-	64,408	37,516	114,534	12,348	294,440	35,280	18,550	18,910	5,000	18,910	5,000	19,239	15,000	68,544	11,000	51,936	**937,287**
ALL	**SUBTOTAL**																		**937,287**
ALL	**GRT AT 4.167%**																		**39,057**
ALL	**GRAND TOTAL**																		**976,344**

FEE PROPOSAL **09/22/2017** **SINIFA GWA RESERVOIR REPLACEMENT**

Activity Number	Task Description	Principal Engineer	Project Manager	QA Manager/Design Review	Resident Engineer	Civil Inspector	Civil/Structural Inspector	Special Inspector	SCADA Specialty	SR. Mechanical Engineer	Mechanical Inspector	SR. Electrical Engineer	Electrical Inspector	CADD Support	Scheduler Mgmt	Submittal/RFI Manager	Estimating Support	Project Manager Ass't	Amount
	HOURLY LABOR RATES	$246	$166	$226	$126	$126	$136	$196	$175	$155	$125	$155	$125	$121	$150	$126	$110	$96	
A	**PRECONSTRUCTION PHASE SERVICES**																		
A1.0	**Design Document Review**																		
A1.1	Design Document Review **(100% 1 ea.)**	-	8	16	24	-	-	-	-	-	-	-	-	-	-	-	-	-	7,968
A1.4	Final Design Review Report	-	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-	-	2,244
A2.0	**CM Quality Assurance**																		0
A2.1	Review Contractor CM Quality Control Plan	-	4	4	4	8	-	-	-	-	-	-	-	-	-	-	-	-	3,080
A2.2	Prepare Construction Quality Assurance Plan	-	8	16	20	60	-	-	-	-	-	-	-	-	-	-	-	-	15,024
A3.0	**Construction Management Plan**																		0
A3.1	Prepare Construction Management Plan **(assume 1 for all tanks)**	-	4	4	8	4	-	-	-	-	-	-	-	-	-	-	-	-	3,080
A4.0	**Contract Bidding (assume all tanks bid together)**																		0
A4.1	Pre-Bid Meeting Preparation & Conduct	-	2	2	12	8	-	-	-	-	-	-	-	-	-	-	-	-	3,304
A4.2	Contract Bidding Management	-	2	2	20	4	-	-	-	-	-	-	-	-	-	-	-	-	3,808
A4.3	Bid Opening	-	2	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	1,288
A4.4	Review Bid Packages	-	2	2	4	4	-	-	-	-	-	-	-	-	-	-	-	-	1,792
A4.5	Prepare Recommendation Memorandum	-	2		4	4	-	-	-	-	-	-	-	-	-	-	-	-	1,340
A4.6	Prepare Technical Memorandum(s)	-	2	2	4	4	-	-	-	-	-	-	-	-	-	-	-	-	1,792
	PRECONSTRUCTION PHASE HOURS SUBTOTAL	-	38	54	110	98	-	-	-	-	-	-	-	-	-	-	-	-	**300**
	PRECONSTRUCTION PHASE SUBTOTAL	-	6,308	12,204	13,860	12,348	-	-	-	-	-	-	-	-	-	-	-	-	**44,720**
	PRECONSTRUCTION PHASE EXPENSES SUBTOTAL																		**1,100**
	PRECONSTRUCTION PHASE SERVICES & EXPENSES TOTAL	-	6,308	12,204	13,860	12,348	-	-	-	-	-	-	-	-	-	-	-	-	**45,820**
B	**CONSTRUCTION PHASE SERVICES**																		
B1.0	**Project Records & Document Control**																	385	36,960
B2.0	**Daily Construction Reports (assumes 5 days/wk @ 54 weeks = 270 logs)**		68		44		405												71,912
B3.0	**Progress Photo Log & Live Video Feed**																		0
B3.1	Progress Photo Log						270												36,720
B3.2	Live Video Feed **(also see expenses)**													54					6,534
B4.0	**Submittal and Shop Drawings**																		0
B4.1	Submittal Review **(assume 350)**				29	-	150	-	16	24		24				365			80,284
B4.2	Shop Drawing Review **(assume 75)**				6		75	60	16	24		24				75			42,406
B4.3	Plan Review (Traffic Control, Demolition, Dewatering, etc.)				6	-	40												6,196
B5.0	**Contractor Project Schedules (assume 13)**		13		8										100				18,166
B6.0	**Payment Request (assume 13)**		8		8														2,336
B7.0	**Payroll Report**																		0
B7.1	Review Payroll Submittals **(assume 26)**				8		52												8,080
B7.2	Conduct Random Employee Interviews **(assume 2 per week)**						108												14,688
B8.0	**Project Meetings**																		0
B8.1	Pre-Construction		4	4	4		4									4			3,120
B8.2	Conduct Weekly Progress Meetings **(54 x 2 hours plus prep & minutes)**		54		108		54									-			29,916
B8.3	Special/ Stakeholder Coordination Meetings **(assume 13 total @ 2.0 hours ea)**		26		26		13												9,360
B9.0	**As-Built Drawing Reviews**																		0
B9.1	Weekly Review of Contractor's Red-Line Drawings **(assume 1 hour/week)**					-	54												7,344
B9.2	Maintain CM As-Built Drawings **(assume 2 hours/week)**				9	-	54												8,478
B10.0	**Request for Information (assumes 100 RFI's at 2 hours ea.)**		25		50		-		24	24		24				100			34,690
B11.0	**General Compliance Monitoring**																		0
B11.1	Regulations				13														1,638
B11.2	Labor Laws				8														1,008
B11.3	Licensure		4		4														1,168
B11.4	Permit Compliance		16		5														3,286
B11.5	Insurance		4																664
B12.0	**Claims and Disputes**																		0

FEE PROPOSAL **09/22/2017** **SINIFA GWA RESERVOIR REPLACEMENT**

B12.1	Claims Records				13	-	20	20											8,278
B12.2	Claims Review & Interpretation		20		13				8	8		8					100		19,838
B13.0	**Change Order Review and Negotiations**																		0
B13.1	Change Order Review		20		13	-	20	20											11,598
B13.2	Change Order Negotiations with Contractor		20		13														4,958
B13.3	Change Order Documentation & Administration		20		13														4,958
B14.0	**Design Changes and Verification Request**																		0
B14.1	CM Design/Technical Support Effort		20		13		40		6	6		6							13,308
B14.2	Prepare Design Change/Verification Requests (DCVR)													65					7,865
B14.3	Prepare EOR Design SOW Ammendment & Fee Negotiations		20		13		20												7,678
B15.0	**Construction Monitoring, Special Inspection, and Quality Control Monitoring**																		0
B15.1	Project Manager		-		161														20,286
B15.2	Resident Engineer **(assume 1/3 Time @ 713 hrs)**																		0
B15.3	Onsite Construction Inspector **(assumes Full Time @ 2,160 working hrs)**					-	240												32,640
B15.4	Special Inspections **(Prepare DPW Monthly Report)**			108	13		-	80			40		40					156	66,702
B16.0	**Testing (Quality Assurance)**								12	12		12							5,820
B16.1	Contractor Testing **(part of Task B15.1)**					-	108												14,688
B16.2	CQA Testing & Monitoring **(also see expenses)**					-	108												14,688
B16.3	GWA Testing **(part of Task B15.1)**					-	24												3,264
B17.0	**Acceptance**																		0
B17.1	Monitor, Document, & Manage Non-Compliance Issues				18		54												9,612
B18.0	**Construction QA Survey Services (part of Task B22.4)**				18		54												9,612
B19.0	**Project Closeout (Punch List and Project Closeout Inspections)**																		0
B19.1	Deficiency Log				18	-	54												9,612
B19.2	Preliminary Inspection				8	-	8		8	8		8							5,976
B19.3	Pre-Final Inspection				8	-	8		8	8		8							5,976
B19.4	Final Inspection				8	-	8		8	8		8							5,976
B20.0	**Train and Warranty Periods**																		0
B20.1	Startup Training & Maintenance Procedures Coordination				8	-	20												3,728
B20.2	Master Warranty Package				8		20												3,728
B21.0	**Equipment**																		0
B21.1	Data Loggers (15 ea.)																		6,309
B22.2	Panasonic Toughbook 20																		880
B22.0	**Expenses**																		
B22.1	QA Soil & Aggregate Analysis																		3,245
B22.2	QA Backfill Compaction Testing																		3,595
B22.3	QA Concrete Compressive Strength Testing																		28,937
B22.4	QA Survey Verification																		38,638
B22.5	Live Video Feed, Website Access & Maintenance																		32,607
B22.6	Project Management Information System																		18,150
B22.7	Mileage																		8,263
B22.8	Other																		3,300
	CONSTRUCTION PHASE SERVICES HOUR SUBTOTAL	-	342	112	695	-	2,085	180	106	122	40	122	40	119	100	544	100	541	**1,566**
	CONSTRUCTION PHASE HOUR UTILIZATION	0%	16%	5%	33%	0%	100%	9%	5%	6%	2%	6%	2%	6%	5%	26%	5%	26%	
	CONSTRUCTION PHASE SERVICES SUBTOTAL	-	56,772	25,312	87,570	-	283,560	35,280	18,550	18,910	5,000	18,910	5,000	14,399	15,000	68,544	11,000	51,936	**715,743**
	CONSTRUCTION PHASE EXPENSES SUBTOTAL																		**143,922**
	CONSTRUCTION PHASE SERVICES & EXPENSES TOTAL	-	56,772	25,312	87,570	-	283,560	35,280	18,550	18,910	5,000	18,910	5,000	14,399	15,000	68,544	11,000	51,936	**859,665**

FEE PROPOSAL **09/22/2017** **SINIFA GWA RESERVOIR REPLACEMENT**

C	**POST CONSTRUCTION SERVICES**																		
C1.0	**Final Report**																		
C1.1	Final Report		8		20		40									-			9,288
C1.2	Asset Management				80														10,080
C2.0	**Record Drawings**																		
C2.1	Signed & Sealed As-built Drawings				4		40							40		-			10,784
	POST CONSTRUCTION PHASE SERVICES HOUR SUBTOTAL	-	8	-	104	-	80	-	-	-	-	-	-	40	-	-	-	-	**232**
	POST CONSTRUCTION PHASE SERVICES SUBTOTAL	-	1,328	-	13,104	-	10,880	-	-	-	-	-	-	4,840	-	-	-	-	**30,152**
	POST CONSTRUCTION PHASE EXPENSES SUBTOTAL																		**1,650**
	POST CONSTRUCTION PHASE SERVICES & EXPENSES TOTAL	-	1,328	-	13,104	-	10,880	-	-	-	-	-	-	4,840	-	-	-	-	**31,802**
																			0
ALL	**TOTAL CONSTRUCTION HOURS**	-	388	166	909	98	2,165	180	106	122	40	122	40	159	100	544	100	541	**5,780**
ALL	**TOTAL CONSTRUCTION SERVICES**	-	64,408	37,516	114,534	12,348	294,440	35,280	18,550	18,910	5,000	18,910	5,000	19,239	15,000	68,544	11,000	51,936	**790,615**
ALL	**TOTAL CONSTRUCTION EXPENSES**																		**146,672**
ALL	**TOTAL CONSTRUCTION SERVICES & EXPENSES**	-	64,408	37,516	114,534	12,348	294,440	35,280	18,550	18,910	5,000	18,910	5,000	19,239	15,000	68,544	11,000	51,936	**937,287**
ALL	**SUBTOTAL**																		**937,287**
ALL	**GRT AT 4.167%**																		**39,057**
ALL	**GRAND TOTAL**																		**976,344**

GHD - PROJECT ESTIMATING SHEET - GHD QA SERVICES SUMMARY

Project Name: Santa Rosa, Sinifa, and Santa Rita Tank & System Upgrades
Attachment:
GHD Project Number:
of:
Description: SANTA RITA
Checked By: P.Baron
Prepared by: B.Ryley
Date: 09/22/17

QA SURVEY ESTIMATE

	Quantity
Under Tank Piping:	
Inlet Piping & Top of Flange	$1,200
Outlet Piping & Top of Flange	$1,200
Over-Flow Piping & Top of Flange	$1,200
Drain Line Piping & Top of Flange	$1,200
Wash Down Piping	$1,200
Tank Foundation:	
Top of Formwork	$1,200
Control Building 1	
Subgrade	$800
Footing	$800
Building Corners	$800
FFE	$800
Control Building 2	
Subgrade	$800
Footing	$800
Building Corners	$800
FFE	$800
Manhole:	
Below Base	$800
Top of Manhole	$800
Bottom of Pipe	$800
Ponding Basin 1	
Subgrade	$800
Ponding Basin 2	
Subgrade	$800
Vaults:	
Top Outlet Meter Vault Footing Formwork	$800
Top Outlet Meter Vault Roof Slab Formwork	$800
Top Inlet Meter Vault Footing Formwork	$800
Top Inlet Meter Vault Roof Slab Formwork	$800
Top Electrical Handhole	$800
Pavement:	
Pavement Formwork	$800
Sidewalk Formwork	$800
Fencing	
Corners	$800

Drilled Piles		
Cast In Place Drilled Piles		$5,500
Bench Marks:		
Establish bench marks on top of all vaults, top of retaining wall, top of footing at water height guauge, over-flow, drian, & outlet.		$1,200
	Contingency 25%	$7,675
	TOTAL ESTIMATED BUDGET	**$38,375**

	Rate
Half Day	$800
Full Day	$1,200
Hourly	$150

CQA TESTING ESTIMATE

Material Laboratory Testing:

Procotor & Sieve Analysis:	Unit Cost	Quantity	Cost
Subgrade	$295.00	2	$590.00
Limestone	$295.00	2	$590.00
Base course	$295.00	2	$590.00
General Fill	$295.00	2	$590.00
		Contingency **25%**	$590.00
		TOTAL ESTIMATED BUDGET:	**$2,950.00**

Compaction Testing:

Control Building 1			
Subgrade	$74.00	1	$74.00
Limestone	$74.00	1	$74.00
Base course	$74.00	1	$74.00
Control Building 2			
Subgrade	$74.00	1	$74.00
Limestone	$74.00	1	$74.00
Base course	$74.00	1	$74.00
Reservoir Access Road			
Subgrade	$74.00	1	$74.00
Limestone	$74.00	2	$148.00
Ponding Basin 1 Access Road			
Subgrade	$74.00	1	$74.00
Base course	$74.00	1	$74.00
General Fill	$74.00	1	$74.00
Ponding Basin 2 Access Road			

Subgrade	$74.00	1	$74.00
Base course	$74.00	1	$74.00
Manhole			
Subgrade	$74.00	1	$74.00
Base course	$74.00	3	$222.00
Outlet Meter Vault			
Subgrade	$74.00	1	$74.00
Base course	$74.00	3	$222.00
Inlet Meter Vault			
Subgrade	$74.00	1	$74.00
Base course	$74.00	3	$222.00
Electrical Handhole (estimated)			
Below Foundation	$74.00	1	$74.00
Pavement:			
Subgrade	$74.00	1	$74.00
Limestone	$74.00	2	$148.00
Base course	$74.00	1	$74.00
		Contingency **25%**	$573.50
		TOTAL ESTIMATED BUDGET:	**$2,867.50**

	Rate
1st Test	$55
2nd Test	$19
	$74

Concrete Testing:

Outlet Meter Vault:	Unit Cost	Quantity	Cost
Footing	$305.00	1	$305.00
Walls	$305.00	1	$305.00
Roof Slab	$305.00	1	$305.00
Inlet Meter Vault:			
Footing	$305.00	1	$305.00
Walls	$305.00	1	$305.00
Roof Slab	$305.00	1	$305.00
Encasement:			
Inlet Piping	$305.00	1	$305.00
Outlet Piping	$305.00	1	$305.00
Over-Flow Piping	$305.00	1	$305.00
Drain Line Piping	$305.00	1	$305.00
Wash Down Piping	$305.00	1	$305.00
Electrical & Communications Ducts	$305.00	1	$305.00

Handholes:			
Electrical	$305.00	1	$305.00
Pavement:			
Pavement	$305.00	1	$305.00
Control Building 1			
Footing	$305.00	1	$305.00
Building Corners	$305.00	1	$305.00
Control Building 2			
Footing	$305.00	1	$305.00
Building Corners	$305.00	1	$305.00
Manhole			
Pre-Cast Sections	$305.00	1	$305.00
Drilled Piles			
Cast In Drilled Piles	$305.00	77	$23,485.00
Water Tank:			
Foundation	$305.00	1	$305.00
Core Walls	$305.00	7	$2,135.00
Columns	$305.00	9	$2,745.00
Column Footings	$305.00	9	$2,745.00
Roof Slab	$305.00	1	$305.00
Shotcrete	$305.00	2	$610.00
		170	
		Contingency 15%	$5,718.75
		TOTAL ESTIMATED BUDGET:	**$43,843.75**

DESCRIPTION OF TESTS:

Compressive Strength of Cylindrical Concrete Specimens (4 at $17.00 ea.):		$68.00
Curing and Disposal of Cylindrical Concrete Specimens without test, each:		$12.00
Air Content of Freshly Mixed Concrete by the Pressure/Volumetric Method, per test:		$50.00
Unit Weight and Yield of Fresh Concrete, each:		$50.00
Slump Test & Making Concrete Specimens in the field (2.5 Hours of Labor):		$125.00
	SUBTOTAL:	**$305.00**

QA SPECIAL INSPECTIONS

Special Inspections:

Outlet Meter Vault:				
Footing	hours	2	110	$220
Walls	hours	2	110	$220
Roof Slab	hours	2	110	$220
Inlet Meter Vault:				
Footing	hours	2	110	$220
Walls	hours	2	110	$220

Roof Slab	hours	2	110	$220
Encasement:				
Inlet Piping	hours	2	110	$210
Outlet Piping	hours	2	110	$210
Over-Flow Piping	hours	2	110	$210
Drain Line Piping	hours	2	110	$210
Wash Down Piping	hours	2	110	$210
Electrical & Communications Ducts	hours	2	110	$210
Handholes:				
Electrical	hours	2	110	$210
Pavement:				
Pavement	hours	4	110	$420
Manhole:				
Pre-Cast Sections	hours	2	110	$210
Drilled Piles				
Cast In Drilled Piles	hours	616	110	$67,760
Water Tank:				
Foundation	hours	8	110	$880
Core Walls	hours	14	110	$1,540
Columns	hours	18	110	$1,980
Column Footings	hours	18	110	$1,980
Roof Slab	hours	12	110	$1,320
Shotcrete	hours	24	110	$2,640
Vertical Post-tensioning	hours	8	110	$880
Circumferential Pre-stressing	hours	16	110	$1,760
		766		**$84,160**
		Contingency	10%	$8,416.00
		TOTAL ESTIMATED BUDGET:		**$92,576.00**
		GRAND TOTAL:		**$177,662.25**

GHD - PROJECT ESTIMATING SHEET - GHD QA SERVICES SUMMARY

Project Name: Santa Rosa, Sinifa, and Santa Rita Tank & System Upgrades
Attachment:
GHD Project Number:
of:
Description: SANTA ROSA
Checked By: P.Baron
Prepared by: B.Ryley
Date: 09/22/17

QA SURVEY ESTIMATE

	Quantity
Under Tank Piping:	
Inlet Piping & Top of Flange	$1,200
Outlet Piping & Top of Flange	$1,200
Over-Flow Piping & Top of Flange	$1,200
Drain Line Piping & Top of Flange	$1,200
Wash Down Piping	$1,200
Over Excavation:	
Bottom of Over Excavation	$800
Top of Base course	$800
Top of Limestone	$800
Tank Foundation:	
Top of Formwork	$1,200
Hydropnuematic Tank Pad	
Top of Formwork	$800
Control and Pump Room Building	
Subgrade	$800
Footing	$800
Building Corners	$800
FFE	$800
Manhole:	
Below Base	$800
Top of Manhole	$800
Bottom of Pipe	$800
Ponding Basin	
Subgrade	$800
Vaults:	
Top Outlet Meter Vault Footing Formwork	$800
Top Outlet Meter Vault Roof Slab Formwork	$800
Top Inlet Meter Vault Footing Formwork	$800
Top Inlet Meter Vault Roof Slab Formwork	$800
Top Drain Vault Footing Formwork	$800
Top Drain Vault Roof Slab Formwork	$800
Top Outlet Check Valve Vault Footing Formwork	$800
Top Outlet Check Valve Vault Roof Slab Formwork	$800
Retaining Wall	
Top of Formwork	$1,200
Pavement:	
Pavement Formwork	$800

Sidewalk Formwork	$800
Fencing	
Corners	$800
Bench Marks:	
Establish bench marks on top of all vaults, top of retaining wall, top of footing at water height guauge, over-flow, drian, & outlet.	$1,200
Contingency 25%	$7,000
TOTAL ESTIMATED BUDGET	**$35,000**

	Rate
Half Day	$800
Full Day	$1,200
Hourly	$150

CQA TESTING ESTIMATE

Material Laboratory Testing:

Procotor & Sieve Analysis:	Unit Cost	Quantity	Cost
Subgrade	$295.00	2	$590.00
Limestone	$295.00	2	$590.00
Base course	$295.00	2	$590.00
General Fill	$295.00	2	$590.00
Structural Fill	$295.00	2	$590.00
		Contingency 25%	$737.50
		TOTAL ESTIMATED BUDGET:	**$3,687.50**

Compaction Testing:

Over-Excavation:			
Subgrade	$74.00	1	$74.00
Base course	$74.00	1	$74.00
Limestone	$74.00	1	$74.00
Control and Pump Room Building			
Subgrade	$74.00	1	$74.00
Base course	$74.00	1	$74.00
Limestone	$74.00	1	$74.00
Hydropnuematic Tank Pad			
Subgrade	$74.00	1	$74.00
Base course	$74.00	1	$74.00
Limestone	$74.00	1	$74.00
Access Road			
Subgrade	$74.00	1	$74.00

Structural Fill	$74.00	2	$148.00
Limestone	$74.00	1	$74.00
Pond Access Road			
Subgrade	$74.00	1	$74.00
Base course	$74.00	1	$74.00
Ponding Basin			
General Fill	$74.00	1	$74.00
Off-Site Gravel Road			
Subgrade	$74.00	1	$74.00
General Fill	$74.00	1	$74.00
AC Pavement			
Subgrade	$74.00	1	$74.00
Structural Fill	$74.00	1	$74.00
Limestone	$74.00	1	$74.00
Concrete Sidewalk			
Subgrade	$74.00	1	$74.00
Structural Fill	$74.00	1	$74.00
Limestone	$74.00	1	$74.00
Outlet Meter Vault			
Subgrade	$74.00	1	$74.00
Base course	$74.00	3	$222.00
Inlet Meter Vault			
Subgrade	$74.00	1	$74.00
Base course	$74.00	3	$222.00
Drain Vault			
Subgrade	$74.00	1	$74.00
Base course	$74.00	3	$222.00
Outlet Check Valve Vault			
Subgrade	$74.00	1	$74.00
Base course	$74.00	3	$222.00
Retaining Wall			
Limestone	$74.00	1	$74.00
Electrical Handhole (estimated)			
Below Foundation	$74.00	1	$74.00
		Contingency 25%	$777.00
		TOTAL ESTIMATED BUDGET:	**$3,885.00**

	Rate
1st Test	$55
2nd Test	$19

$74

Concrete Testing:

Outlet Meter Vault:	Unit Cost	Quantity	Cost
Footing	$305.00	1	$305.00
Walls	$305.00	1	$305.00
Roof Slab	$305.00	1	$305.00
Inlet Meter Vault:			
Footing	$305.00	1	$305.00
Walls	$305.00	1	$305.00
Roof Slab	$305.00	1	$305.00
Drain Vault:			
Footing	$305.00	1	$305.00
Walls	$305.00	1	$305.00
Roof Slab	$305.00	1	$305.00
Outlet Check Valve Vault:			
Footing	$305.00	1	$305.00
Walls	$305.00	1	$305.00
Roof Slab	$305.00	1	$305.00
Encasement:			
Inlet Piping	$305.00	1	$305.00
Outlet Piping	$305.00	1	$305.00
Over-Flow Piping	$305.00	1	$305.00
Drain Line Piping	$305.00	1	$305.00
Wash Down Piping	$305.00	1	$305.00
Electrical & Communications Ducts	$305.00	1	$305.00
Handholes:			
Electrical	$305.00	1	$305.00
Pavement:			
Pavement	$305.00	1	$305.00
Retaining Wall			
Footing	$305.00	1	$305.00
Hydropnuematic Tank Pad			
Foundation	$305.00	1	$305.00
Water Tank:			
Foundation	$305.00	1	$305.00
Core Walls	$305.00	7	$2,135.00
Columns	$305.00	9	$2,745.00
Column Footings	$305.00	9	$2,745.00
Roof Slab	$305.00	1	$305.00
Shotcrete	$305.00	2	$610.00
		94	
		Contingency 15%	$2,333.25

TOTAL ESTIMATED BUDGET:	**$17,888.25**

DESCRIPTION OF TESTS:

Compressive Strength of Cylindrical Concrete Specimens (4 at $17.00 ea.):	$68.00
Curing and Disposal of Cylindrical Concrete Specimens without test, each:	$12.00
Air Content of Freshly Mixed Concrete by the Pressure/Volumetric Method, per test:	$50.00
Unit Weight and Yield of Fresh Concrete, each:	$50.00
Slump Test & Making Concrete Specimens in the field (2.5 Hours of Labor):	$125.00
SUBTOTAL:	**$305.00**

QA SPECIAL INSPECTIONS

Special Inspections:

Outlet Meter Vault:				
Footing	hours	2	110	$220
Walls	hours	2	110	$220
Roof Slab	hours	2	110	$220
Inlet Meter Vault:				
Footing	hours	2	110	$220
Walls	hours	2	110	$220
Roof Slab	hours	2	110	$220
Drain Vault:				
Footing	hours	2	110	$220
Walls	hours	2	110	$220
Roof Slab	hours	2	110	$220
Outlet Check Valve Vault:				
Footing	hours	2	110	$220
Walls	hours	2	110	$220
Roof Slab	hours	2	110	$220
Encasement:				
Inlet Piping	hours	2	110	$210
Outlet Piping	hours	2	110	$210
Over-Flow Piping	hours	2	110	$210
Drain Line Piping	hours	2	110	$210
Wash Down Piping	hours	2	110	$210
Electrical & Communications Ducts	hours	2	110	$210
Handholes:				
Electrical	hours	2	110	$210
Pavement:				
Pavement	hours	4	110	$420
Retaining Wall				
Footing	hours	2	110	$210
Walls	hours	2	110	$210
Water Tank:				

Foundation	hours	8	110	$880
Core Walls	hours	14	110	$1,540
Columns	hours	18	110	$1,980
Column Footings	hours	18	110	$1,980
Roof Slab	hours	12	110	$1,320
Shotcrete	hours	24	110	$2,640
Vertical Post-tensioning	hours	8	110	$880
Circumferential Pre-stressing	hours	16	110	$1,760
		164		**$17,930**
		Contingency	10%	$1,793.00
		TOTAL ESTIMATED BUDGET:		**$19,723.00**
		GRAND TOTAL:		**$76,496.25**

GHD - PROJECT ESTIMATING SHEET - GHD QA SERVICES SUMMARY

Project Name: Santa Rosa, Sinifa, and Santa Rita Tank & System Upgrades
GHD Project Number:
Description: SINIFA
Prepared by: B.Ryley

Attachment:
of:
Checked By: P.Baron
Date: 09/22/17

QA SURVEY ESTIMATE

	Quantity
Under Tank Piping:	
Inlet Piping & Top of Flange	$1,200
Outlet Piping & Top of Flange	$1,200
Over-Flow Piping & Top of Flange	$1,200
Drain Line Piping & Top of Flange	$1,200
Wash Down Piping	$1,200
Over Excavation:	
Bottom of Over Excavation	$800
Top of Base course	$800
Top of Limestone	$800
Tank Foundation:	
Top of Formwork	$1,200
Control Room	
Subgrade	$800
Footing	$800
Building Corners	$800
FFE	$800
Manhole:	
Below Base	$800
Top of Manhole	$800
Bottom of Pipe	$800
Ponding Basin	
Subgrade	$800
Vaults:	
Top Outlet Meter Vault Footing Formwork	$800
Top Outlet Meter Vault Roof Slab Formwork	$800
Top Inlet Meter Vault Footing Formwork	$800
Top Inlet Meter Vault Roof Slab Formwork	$800
Top Drain Vault Footing Formwork	$800
Top Drain Vault Roof Slab Formwork	$800
Retaining Wall	
Top of Formwork	$1,200
Pavement:	
Pavement Formwork	$800
Sidewalk Formwork	$800
Fencing	
Corners	$800

Bench Marks:

Establish bench marks on top of all vaults, top of retaining wall, top of footing at water height guauge, over-flow, drian, & outlet.	$1,200
Contingency 25%	$6,400
TOTAL ESTIMATED BUDGET	**$32,000**

	Rate
Half Day	$800
Full Day	$1,200
Hourly	$150

CQA TESTING ESTIMATE

Material Laboratory Testing:

Procotor & Sieve Analysis:	Unit Cost	Quantity	Cost
Subgrade	$295.00	2	$590.00
Limestone	$295.00	2	$590.00
Base course	$295.00	2	$590.00
		Contingency **25%**	$442.50
		TOTAL ESTIMATED BUDGET:	**$2,212.50**

Compaction Testing:

Over-Excavation:			
Base course	$74.00	1	$74.00
Limestone	$74.00	1	$74.00
Control Room			
Subgrade	$74.00	1	$74.00
Base course	$74.00	1	$74.00
Limestone	$74.00	1	$74.00
Ponding Basin Access Road			
Subgrade	$74.00	1	$74.00
Base course	$74.00	1	$74.00
Off-Site Gravel Road			
Subgrade	$74.00	1	$74.00
General Fill	$74.00	1	$74.00
AC Pavement			
Subgrade	$74.00	1	$74.00
Limestone	$74.00	1	$74.00
Base course	$74.00	1	$74.00
Concrete Sidewalk			
Subgrade	$74.00	1	$74.00
Structural Fill	$74.00	1	$74.00

Limestone	$74.00	1	$74.00
Outlet Meter Vault			
Subgrade	$74.00	1	$74.00
Base course	$74.00	3	$222.00
Inlet Meter Vault			
Subgrade	$74.00	1	$74.00
Base course	$74.00	3	$222.00
Drain Vault			
Subgrade	$74.00	1	$74.00
Base course	$74.00	3	$222.00
Retaining Wall			
Limestone	$74.00	1	$74.00
Manhole			
Subgrade	$74.00	1	$74.00
Base course	$74.00	3	$222.00
Electrical Handhole (estimated)			
Below Foundation	$74.00	1	$74.00
		Contingency 25%	$610.50
		TOTAL ESTIMATED BUDGET:	**$3,052.50**

	Rate
1st Test	$55
2nd Test	$19
	$74

Concrete Testing:

Outlet Meter Vault:	Unit Cost	Quantity	Cost
Footing	$305.00	1	$305.00
Walls	$305.00	1	$305.00
Roof Slab	$305.00	1	$305.00
Inlet Meter Vault:			
Footing	$305.00	1	$305.00
Walls	$305.00	1	$305.00
Roof Slab	$305.00	1	$305.00
Drain Vault:			
Footing	$305.00	1	$305.00
Walls	$305.00	1	$305.00
Roof Slab	$305.00	1	$305.00
Control Room			
Footing	$305.00	1	$305.00
Building Corners	$305.00	1	$305.00

Encasement:			
Inlet Piping	$305.00	1	$305.00
Outlet Piping	$305.00	1	$305.00
Over-Flow Piping	$305.00	1	$305.00
Drain Line Piping	$305.00	1	$305.00
Wash Down Piping	$305.00	1	$305.00
Electrical & Communications Ducts	$305.00	1	$305.00
Pavement:			
Pavement	$305.00	1	$305.00
Retaining Wall			
Footing	$305.00	1	$305.00
Fencing			
Posts	$305.00	1	$305.00
Water Tank:			
Foundation	$305.00	1	$305.00
Core Walls	$305.00	7	$2,135.00
Columns	$305.00	9	$2,745.00
Column Footings	$305.00	9	$2,745.00
Roof Slab	$305.00	1	$305.00
Shotcrete	$305.00	2	$610.00
		90	
		Contingency 15%	$2,241.75
		TOTAL ESTIMATED BUDGET:	**$17,186.75**

DESCRIPTION OF TESTS:

Compressive Strength of Cylindrical Concrete Specimens (4 at $17.00 ea.):	$68.00
Curing and Disposal of Cylindrical Concrete Specimens without test, each:	$12.00
Air Content of Freshly Mixed Concrete by the Pressure/Volumetric Method, per test:	$50.00
Unit Weight and Yield of Fresh Concrete, each:	$50.00
Slump Test & Making Concrete Specimens in the field (2.5 Hours of Labor):	$125.00
SUBTOTAL:	**$305.00**

QA SPECIAL INSPECTIONS

Special Inspections:

Outlet Meter Vault:				
Footing	hours	2	110	$220
Walls	hours	2	110	$220
Roof Slab	hours	2	110	$220
Inlet Meter Vault:				
Footing	hours	2	110	$220
Walls	hours	2	110	$220
Roof Slab	hours	2	110	$220
Drain Vault:				

Footing	hours	2	110	$220
Walls	hours	2	110	$220
Roof Slab	hours	2	110	$220
Encasement:				
Inlet Piping	hours	2	110	$210
Outlet Piping	hours	2	110	$210
Over-Flow Piping	hours	2	110	$210
Drain Line Piping	hours	2	110	$210
Wash Down Piping	hours	2	110	$210
Electrical & Communications Ducts	hours	2	110	$210
Control Room				
Footing	hours	2	110	$210
Walls	hours	2	110	$210
Pavement:				
Pavement	hours	4	110	$420
Retaining Wall				
Footing	hours	2	110	$210
Walls	hours	2	110	$210
Water Tank:				
Foundation	hours	8	110	$880
Corewalls	hours	14	110	$1,540
Columns	hours	18	110	$1,980
Column Footings	hours	18	110	$1,980
Roof Slab	hours	12	110	$1,320
Shotcrete	hours	24	110	$2,640
Vertical Post-tensioning	hours	8	110	$880
Circumferential Pre-stressing	hours	16	110	$1,760
		160		**$17,480**
		Contingency	10%	$1,748.00
		TOTAL ESTIMATED BUDGET:		**$19,228.00**
		GRAND TOTAL:		**$71,467.25**

GHD - PROJECT ESTIMATING SHEET- GHD EXPENSES

Project Name: Santa Rosa, Sinifa, and Santa Rita Tank & System Upgrades
Attachment:
GHD Project Number:
of:
Description: EXPENSE SUMMARY
Checked by: P.Baron
Prepared by: B.Ryley
Date: 09/22/17

EXPENSE ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT	MARKUP at 10%	TOTAL
PRECONSTRUCTION PHASE TASKS						
Report Reproduction, misc.	3	lump sum	1,000.00	3,000.00	300.00	3,300.00
					-	
					-	
SUBTOTAL				**3,000.00**	**300.00**	**3,300.00**
CONSTRUCTION PHASE TASKS						
Mileage (1.50 vehicles x 30 miles x 321 days)	43,335	mile	0.52	22,534.20	2,253.42	24,787.62
Report Reproduction, misc	3	lump sum	3,000.00	9,000.00	900.00	9,900.00
Live Video Feed, Website Access & Maintenance	3	each	29,642.54	88,927.61	8,892.76	97,820.37
Project Mangment Information Systems	3	lump sum	16,500.00	49,500.00	4,950.00	54,450.00
Data Logger	3	lump sum	5,735.35	17,206.04	1,720.60	18,926.64
Panasonic Toughbook 20	1	ea.	2,399.00	2,399.00	239.90	2,638.90
QA Soil & Aggregate Analysis	3	lump sum	2,950.00	8,850.00	885.00	9,735.00
QA Compaction Testing	3	lump sum	3,268.33	9,805.00	980.50	10,785.50
QA Concrete Testing	3	lump sum	26,306.25	78,918.75	7,891.88	86,810.63
QA Survey Verification	3	lump sum	35,125.00	105,375.00	10,537.50	115,912.50
SUBTOTAL				**392,515.59**	**39,251.56**	**431,767.15**
POST CONSTRUCTION SERVICES						
Report Reproduction, misc.	3	lump sum	1,500.00	4,500.00	450.00	4,950.00
			-			
			-			
SUBTOTAL				4,500.00	450.00	4,950.00
GRAND TOTAL				**400,015.59**	**40,001.56**	**440,017.15**

GHD - PROJECT ESTIMATING SHEET- GHD EXPENSES

Project Name: Santa Rosa, Sinifa, and Santa Rita Tank & System Upgrades
Attachment:
GHD Project Number:
of:
Description: VIDEO CAMERA EXPENSE BREAKDOWN
Checked by: P.Baron
Prepared by: B.Ryley
Date: 09/22/17

EXPENSE ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT	MARKUP at 10%	TOTAL
PRECONSTRUCTION PHASE TASKS						
SUBTOTAL						
CONSTRUCTION PHASE TASKS						
EarthCam - Construction Cam Lite HD	1	ea.	4,495.00	4,495.00	449.50	4,944.50
Solar Power Upgrade	1	ea.	4,022.00	4,022.00	402.20	4,424.20
Global Modem	1	ea.	1,399.00	1,399.00	139.90	1,538.90
Universal Pole Mount	1	ea.	99.00	99.00	9.90	108.90
Software Support & Archiving Services	1	ea.	575.00	575.00	57.50	632.50
FedEx International Economy S&H	1	ls.	2,722.76	2,722.76	272.28	2,995.04
Weather Station w/shipping	1	ea.	1,200.00	1,200.00	120.00	1,320.00
EarthCam Consulting Services	1	incl.	-	-	-	-
Website Development & MP Image Integration	1	incl.	-	-	-	-
Hand Edited Time-Lapse Move	1	incl.	-	-	-	-
Davis 6250 Weather Station	1	ea.	465.00	465.00	46.50	511.50
Davis 7654 Repeater	1	ea.	353.00	353.00	35.30	388.30
Davis 6555 Weather Link IP software	1	ea.	347.00	347.00	34.70	381.70
Cradlepoint ARC MBR 1400 Series Router	1	ea.	850.00	850.00	85.00	935.00
40GB high-speed HSPA data	18	mth.	140.00	2,520.00	252.00	2,772.00
30" Telescoping Light Mast w/Shipping	1	ea.	4,400.00	4,400.00	440.00	4,840.00
PCC Foundation (5' x 5' x 1') w/single delivery	1	ea.	2,000.00	2,000.00	200.00	2,200.00
Installation & Start up	1	ls.	1,500.00	1,500.00	150.00	1,650.00
SUBTOTAL				**26,947.76**	**2,694.78**	**29,642.54**
POST CONSTRUCTION SERVICES						
SUBTOTAL						
TOTAL				**26,947.76**	**2,694.78**	**29,642.54**

GHD - PROJECT ESTIMATING SHEET- GHD EXPENSES

Project Name: Santa Rosa, Sinifa, and Santa Rita Tank & System Upgrades
Attachment:
GHD Project Number:
of:
Description: DATA LOGGER EXPENSE BREAKDOWN
Checked by: P.Baron
Prepared by: B.Ryley
Date: 09/22/17

EXPENSE ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT	MARKUP at 10%	TOTAL
PRECONSTRUCTION PHASE TASKS						
SUBTOTAL						
CONSTRUCTION PHASE TASKS						
Dickson PR325: Pressure Data Logger	15	ea.	499.00	7,485.00	748.50	8,233.50
Dickson A016: Software w/USB Download Cable	15	ea.	89.00	1,335.00	133.50	1,468.50
Dickson 721: Locking Case	15	ea.	79.00	1,185.00	118.50	1,303.50
Dickson A220: Card Reader Kit	15	ea.	49.00	735.00	73.50	808.50
Dickson R022: Pressure Filter Kit	15	ea.	30.00	450.00	45.00	495.00
Dickson A061: USB Download Cable	15	ea.	19.00	285.00	28.50	313.50
Dickson A125: 3 Volt (3V) Lithium Battery	15	ea.	16.00	240.00	24.00	264.00
Dickson A791: Pressure Kit	15	ea.	149.00	2,235.00	223.50	2,458.50
4 ft. Double Loop Cable w/ Padlock	15	ea.	12.79	191.85	19.19	211.04
Budget for Miscellaneous, Fitting, Tubing, etc.	1	ls.	1,500.00	1,500.00	150.00	1,650.00
				-	-	-
				-	-	-
				-	-	-
				-	-	-
				-	-	-
				-	-	-
				-	-	-
SUBTOTAL				**15,641.85**	**1,564.19**	**17,206.04**
POST CONSTRUCTION SERVICES						
SUBTOTAL						
TOTAL				**15,641.85**	**1,564.19**	**17,206.04**

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 14-FY2018
Relative to Approval of Change Order to the Agat-Santa Rita Wastewater Treatment Plant Design Contract

What is the project's objective and is it necessary and urgent?
The project is part of the of critical Court Order ("CO") projects that GWA is required to complete. The construction activities for WWTP are in the second phase of the project and critical process work is slated to be completed in March 2018 however the expectation of actual final completion, including non-process work and landscaping, etc., is May or June 2018. GWA management desires to continue designer services during construction until overall project completion. Services include A/E designer review and comment for any issues that arise during construction.

Where is the location?
The new Agat-Santa Rita Wastewater Treatment Plant, Agat

How much will it cost?
A portion of the scope and fee from the proposal submitted by Duenas Camacho and Associates was effectuated through Change Order #2 which is pending final signature and which exhausted all the contingency fund therefore GWA Management seeks CCU approval of additional funding for an additional Change Order at a cost of Three Hundred Ninety-Eight Thousand Six Hundred Ninety-Two Dollars and Thirty-Two Cents ($398,692.32).

The total authorized contract value will be Five Million One Hundred Twenty-Seven Thousand Four Hundred Ninety-Seven Dollars and Twenty-Five Cents ($5,127,497.25)

When will it be completed?
The WWTP construction is in the second phase of the project and is slated to be completed in March 2018 however the expectation of actual final completion is May or June 2018.

What is the funding source?
The source of funding for the change order will be from the Bond proceeds under CIP WW 11-08 "Agat/Sta Rita STP Replacement"

The RFP/BID responses (if applicable):
Not Applicable

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

GWA RESOLUTION NO. 14-FY2018

RELATIVE TO APPROVAL OF CHANGE ORDER TO THE AGAT-SANTA RITA WASTEWATER TREATMENT PLANT REPLACEMENT DESIGN CONTRACT

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA currently has a number of critical Court Order ("CO") projects, including Agat-Santa Rita Wastewater Treatment Plant (WWTP) (U.S. Court Order No. 02-00035, Section II.A) which was recommended to require improvements that ultimately resulted in GWA designing and constructing a new WWTP; and

WHEREAS, The CCU approved via Resolution 34-FY2014 for GWA management to enter into contract with Duenas Camacho and Associates to provide professional engineering services for design of the Agat-Santa Rita Wastewater Treatment Plant Replacement project, as well as design services during construction; and

WHEREAS, the above noted resolution approved the contract fee of Four Million Five Hundred Three Thousand Six Hundred Twenty-Three and Seventy-Four Cents ($4,503,623.74), along with a five percent (5%) contingency of Two Hundred Twenty-Five Thousand One Hundred Eighty-One Dollars and Nineteen Cents ($225,181.19) to bring the total authorized funding amount to Four Million Seven Hundred Twenty-Eight Thousand Eight Hundred Four and Ninety-Three Cents ($4,728,804.93).; and

DRAFT

WHEREAS, to date GWA has executed two change orders with Duenas Camacho and Associates for additional services that expended all the approved contingency fund and which is expected to be exhausted by the end of January 2018; and

WHEREAS, to date the construction work for the WWTP in the second phase of the project and is slated to be completed in March 2018 for all critical process related facilities, however the expectation of actual final completion for all site improvements including non-process related construction and landscaping, etc., is May or June 2018 thus GWA desires to continue designer services during construction until overall project completion; and

WHEREAS, GWA management seeks to change order the existing contract with Duenas Camacho and Associates by extending their engineering services during construction to continue to provide designer review and comment for any issues that arise during construction the final stages of construction; and

WHEREAS, GWA engineering negotiated with Duenas Camacho and Associates to provide continued design services during construction from which the scope and fee proposal Five Hundred Fifty Thousand Dollars ($550,00.00) was found to be acceptable to GWA (See Exhibit A); and

WHEREAS, a portion of the above-mentioned scope and fee from the proposal submitted by Duenas Camacho and Associates was effectuated through Change Order #2 which is pending final signatures and which exhausted all the contingency fund as noted above, therefore GWA Management seeks CCU approval of the Change Order to provide continued design services during construction at a cost of the balance of funds required, specifically Three Hundred Ninety-Eight Thousand Six Hundred Ninety-Two Dollars and Thirty-Two Cents ($398,692.32) which would then bring the total authorized contract value to Five Million One Hundred Twenty-Seven Thousand Four Hundred Ninety-Seven Dollars and Twenty-Five Cents ($5,127,497.25); and

WHEREAS, the source of funding for the change order will be from the Bond proceeds under CIP WW 11-08 “Agat/Sta Rita STP Replacement”; and

DRAFT

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve and authorize the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms of the change order proposal submitted by Duenas Camacho and Associates to be fair and reasonable.
3. The CCU finds that the terms of the conditions set by GWA relative to commencement of subsequent work activities are fair and reasonable and serve as a measure of Quality Assurance/Quality Control (QA/QC).
4. The CCU hereby authorizes the management of GWA to accept a balance of the change order proposal from "Duenas Camacho and Associates" attached hereto as Exhibit A, and which is incorporated into this Resolution in its entirety.
5. The CCU hereby further authorizes the management to execute the change order with Duenas Camacho and Associates, in the amount of Three Hundred Ninety-Eight Thousand Six Hundred Ninety-Two Dollars and Thirty-Two Cents ($398,692.32).
6. The CCU hereby further approves the increase contract value of Five Million One Hundred Twenty-Seven Thousand Four Hundred Ninety-Seven Dollars and Twenty-Five Cents ($5,127,497.25).
7. The CCU hereby further approves the source of funding from Bond proceeds under CIP WW 11-08 "Agat/Sta Rita STP Replacement".

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 23rd day of January, 2018.

Certified by:

_____
JOSEPH T. DUENAS
Chairperson

Attested by:

_____
J. GEORGE BAMBA
Secretary

DRAFT

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

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DRAFT

Website: www.dcaguam.com
Email: dca@dcaguam.com

DUEÑAS · CAMACHO

Exhibit A

October 17, 2017

Thomas F. Cruz, P.E.
Chief Engineer
Gloria B. Nelson Public Service Building
688 Route 15
Mangilao, Guam, 96913

Attn: John M. Davis, P.E., Senior Engineering Supervisor

Ref: **Agat-Santa Rita Wastewater Treatment Plant (WWTP) Replacement Design**

Subj: **Change Order Request #2, Contract No. S14-002-BND**

Dear Mr. Cruz:

Duenas, Camacho & Associates, Inc and our design team have been providing continuous post design services for the referenced project. In order for our team to provide and continue the services needed for the ongoing construction efforts and the up coming start up and commissioning of the Agat-Santa Rita WWTP Phase II construction efforts, we are requesting a change order to increase our time and materials (T&M) limit based on the following.

- Addition RFI Review. The total number of RFIs to date for the project is 392, see attachment 1. As the designer of record, our team was asked to review nearly all the submitted RFIs. Our team provided and will continue to provide responses for the RFI's. It should be noted that some of the RFIs submitted were the result of changes to contractor means and methods in an effort to save on time and cost.

- Additional Submittal Review. The review of all the technical submittals was limited in our contract scope. As part of the construction support, the design team has reviewed 590 submittals, see attachment 1.

- Shop Drawing Review. Prompt and quick shop drawing review was needed for the Phase I of construction as well as the ongoing Phase II. Our structural design team has provided over 2,500 hours of shop drawing review to date, attachment 2. There are still more structures that are under construction and will require shop drawing review. In addition, our structural team has reviewed proposals from the contractor for various structural alternatives to the project.

- Focused Meetings. Personnel from our design team attend the weekly meetings and participate in focused weekly meetings. These meetings have resulted in improved construction and response times. Our design team recommends that these weekly meetings continue until substantial completion of the project.

October 17, 2017

- Additional Services: In an effort to expedite compliance and substantial completion the project was split into phases: clearing and grading, Phase I compliance construction and Phase II final construction. Our initial scope of services did not account for these phases and that construction will be complete at the end of 2017. The following services have been provided for as part of the Phase I:

    a. Operation Manuals: Attachment 3a provides a cost breakdown of the services provided for this effort to date. Additional manuals may be needed for final start-up.
    b. Training: Attachment 3b provides a cost breakdown of the services provided for this effort to date. Additional manuals may be needed for final start-up.
    c. Start-up Support: Attachment 3c provides a cost breakdown of the services provided for this effort to date. Additional start-up services may be needed for final start-up.
    d. Witness Testing: The design team used the T&M effort to cover the witness testing for the aerobic aerator. These services were to be provided by the contractor. Based on correspondence with the CM and contractor this service will be reimbursed to GWA by the construction contractor.

- The total cost or the additional services is $170,912.50. Details for this are provided in attachment 3d. These services have been billed as part of our ongoing T&M effort.

In addition to our design team's post design efforts to provide submittal, RFI and shop drawings review, training and attend regular construction meetings, we have also provided the following:

1. Agat Laboratory Equipment. As part of the design team's T&M we have purchased a new spectrophotometer and reactor. This equipment will be used at the new Agat WWTP Lab. The team proposed to advance this purchase so that this equipment may be used for ongoing wastewater characterization. The fee for this service is $10,358.00. A copy of the fee breakdown is enclosed as attachment 4 with this request.

2. Geotechnical Services. Given the sites complex geology and the slope failure located along the proposed site retaining wall, additional geotechnical services were needed. These services were taken out of the the project team T&M effort. The fee for this service is $10,729.51. A copy of this fee is enclosed as attachment 5 with this request.

3. Archeological Support. Monitoring of the new waterline was done as part of DCA's post design T&M effort. This monitoring was required in order to maintain compliance with the permit conditions. This is an ongoing service and will be billed later this year.

Additional Time and Service Request.

It is estimated that the design team services will be needed up to and at least two months past construction completion. We estimate that this will be ten (10) months from August 2017. Based on our past T&M billings the monthly billing used is approximately $50,000. The additional not to exceed effort for our T&M post design services is $500,000.

ENGINEERING * PLANNING * SURVEYING * ENVIRONMENTAL SERVICES * GEOGRAPHIC INFORMATION SYSTEM * CONSTRUCTION MANAGEMENT
GUAM P.O. Box 8900, Tamuning, Guam 96931 / 238 E. Marine Corps Drive, Suite 201 Diamond Plaza, Hagatña, GU 96910 / Tel: (671) 477-7991 / Fax: (671) 479-6315
SAIPAN Caller Box PPP, Suite 164, Saipan, MP 96950 / Chalan Pale Arnold, Ada's Building South Garapan, Saipan 96950 / Tel: (670) 234-9017 / Fax: (670) 234-3842

October 17, 2017

The total amount requested by this change order request:

Additional Time and Services Request:	$500,000.00
Geotechnical Services:	$ 10,729.51
Agat Laboratory Equipment:	$ 10,358.00
Total:	$521,087.51
Suggested NTE amount:	$550,000.00

As part of this request we recommended that our post design services not to exceed amount be increased by **$550,000** in order to account for possible unforeseen conditions. This not to exceed increase request will bring the design team post design services amount to $1,459,661.21. This is less than 3% of the total construction cost to date.

The design team is available to further discuss any comments or questions GWA may have to this change order request.

Thank you,

Kenneth M. Rekdahl, P.E.
Project Manger
Duenas, Camacho & Associates, Inc.

Enclosures (4): Submittal and RFI Summary
Additional Services Detail
Laboratory Details
Geotechnical Services Detail

ENGINEERING * PLANNING * SURVEYING * ENVIRONMENTAL SERVICES * GEOGRAPHIC INFORMATION SYSTEM * CONSTRUCTION MANAGEMENT
GUAM P.O. Box 8900, Tamuning, Guam 96931 / 238 E. Marine Corps Drive, Suite 201 Diamond Plaza, Hagatña, GU 96910 / Tel: (671) 477-7991 / Fax: (671) 479-6315
SAIPAN Caller Box PPP, Suite 164, Saipan, MP 96950 / Chalan Pale Arnold, Ada's Building South Garapan, Saipan 96950 / Tel: (670) 234-9017 / Fax: (670) 234-3842

ATTACHMENT 1



Agat-Santa Rita WWTP Replacement switch project
No Program

Bentley

Duenas Camacho & Associates Ken Rekdahl logout

10/16/2017, 11:22:51 AM Pacific/Guam

Start Memo Dailylog Meeting Calendar Deficiency Log

scheduler

Start
Work
Documents
Report
Finance
Profile
Help

View: Default Customize

Level: project

Inbox
1 CCR (new)
74 CRN Responses (new)
1 Correction Required Notice (new)
5 DCM Responses (new)
4 DCMs (new)
1 Inspection Report (new)
1 Memo (new)
1 Memo Response (new)
392 RFI Responses (new)
17 RFIs (new)
590 Submittal Responses (new)
4 Submittals (new)

Calendar
Overdue

Documents Due
Submittal 01320-10
Submittal 01320-11
Submittal 01782-5

Meetings

Outbox
12 CRN Responses
1 Correction Required Notice
1 RFI
106 RFI Responses
26 Submittal Responses
3 Submittals

Recent Documents
RFI # 275 - RFI Response # 3
RFI # 272 - RFI Response # 1
RFI # 261 - RFI Response # 1
RFI # 261 - RFI Response # 3

Common Tasks
Create Memo
Create Meeting Invitation

Spent:	0.00	**Pay Estimates Pending:**	0.00
CCR Spent:	0.00	**Retention Pending:**	0.00
Contracted:	0.00	**Pay Estimates Approved:**	0.00
Contracted+CO:	0.00	**Retention Approved:**	0.00
Contracted Spent:	0.00%	**CCRs Pending:**	0.00
		CCRSs Approved:	0.00
		CO Pending:	0.00
		CO Approved:	0.00
		Risk Items Pending:	0.00
		Encumbered:	0.00

Project Days Remainin
Completion Date:

Alerts
Submittal Reminder
13 Submittals

Report Report

Additional Services

GS&P Invoice 0698905
Dated October 8, 2016

	Current Amount	Prior Amount	To-Date Amount	Amount Remaining
Scoped Services	$41,448.78	$108,315.61	$164,984.60	$445,926.26
Additional Services	$15,220.21			
	$56,668.99			**$445,926.26**

The following additional services are being tracked and are listed for reference.

Time Associated with Mechanical Submittals

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
9/20/2016	Clae Fuller	0.25	$80.00	$20.00	-	
9/21/2016	Clae Fuller	0.25	$80.00	$20.00	-	
9/20/2016	Ben Luke	2.00	$125.00	$250.00	-	
9/21/2016	Ben Luke	2.00	$125.00	$250.00	-	
				$540.00	**-**	**$540.00**

Time Associated with Contractor Related Changes

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
8/30/2016	Ron Abraham[1]	4.00	$225.00	$900.00	-	
9/21/2016	Ron Abraham[2]	4.00	$225.00	$900.00	-	
8/31/2016	Clae Fuller[1]	0.75	$80.00	$60.00	-	
8/29/2016	Ben Luke[1]	2.00	$125.00	$250.00	-	
9/21/2016	Ben Luke[2]	1.50	$125.00	$187.50	-	
				$2,297.50	**-**	**$2,297.50**

[1] Oxidation Ditch Waterstop
[2] Clarifier Hydraulics

Time Associated with Site Visits

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
8/23/2016	Ron Abraham	4.00	$225.00	$900.00	-	
8/30/2016	Ron Abraham	4.00	$225.00	$900.00	-	
				$1,800.00	**-**	**$1,800.00**

Additional Services

GS&P Invoice 0698905
Dated October 8, 2016

Time Associated with Developing Training Materials

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
9/14/2016	Ron Abraham	4.00	$225.00	$900.00	-	
9/16/2016	Ron Abraham	4.00	$225.00	$900.00	-	
9/19/2016	Ron Abraham	4.00	$225.00	$900.00	-	
9/21/2016	Ron Abraham	4.00	$225.00	$900.00	-	
8/16/2016	Seth Dobyns	1.00	$100.00	$100.00	-	
9/20/2016	Seth Dobyns	8.00	$100.00	$800.00	-	
9/23/2016	Seth Dobyns	8.00	$100.00	$800.00	-	
9/19/2016	David Johnson	1.00	$225.00	$225.00	-	
9/20/2016	David Johnson	2.00	$225.00	$450.00	-	
9/21/2016	David Johnson	2.00	$225.00	$450.00	-	
9/26/2016	David Johnson	3.00	$225.00	$675.00	-	
9/22/2016	Jacob Lampley	7.00	$100.00	$700.00	-	
9/26/2016	Jacob Lampley	2.50	$100.00	$250.00	-	
8/16/2016	Ben Luke	1.00	$125.00	$125.00		
9/19/2016	Ben Luke	3.50	$125.00	$437.50	-	
9/20/2016	Ben Luke	1.25	$125.00	$156.25	-	
9/22/2016	Ben Luke	1.00	$125.00	$125.00	-	
9/23/2016	Ben Luke	2.00	$125.00	$250.00	-	
8/16/2016	Kristi Schnell	1.00	$165.00	$165.00	-	
9/13/2016	Kristi Schnell	0.50	$165.00	$82.50	-	
9/19/2016	Kristi Schnell	1.00	$165.00	$165.00	-	
9/21/2016	Kristi Schnell	3.00	$165.00	$495.00	-	
9/22/2016	Kristi Schnell	0.50	$165.00	$82.50	-	
9/23/2016	Kristi Schnell	1.00	$165.00	$165.00	-	
				$10,298.75	**-**	**$10,298.75**

Operator Training

Expense	Current Amount	Prior Amount	To-Date Amount
Airfare for Dave Fletcher and Ben Barcinas	$283.96		
	$283.96	**-**	**$283.96**

TOTAL $15,220.21 **$15,220.21**

ATTACHMENT 2

Exhibit B (Hourly Summary)
Invoice 16A-22
Phase 2 Time and Materials Services for Duenas, Camacho & Associates
Through January 2, 2016

	Hours	Rate	Amount
Project Manager			
Kenneth Rekdahl	110	$ 106.00	$ 11,660.00
Frankie Susuico	13	$ 78.00	$ 1,014.00
Ed Salanatin	5	$ 113.00	$ 565.00
Civil Engineer			
Jeff Bell	67	$ 62.00	$ 4,154.00
Murel Cabral	53	$ 77.00	$ 4,081.00
Staff Engineer			
Jeremy Mudd	40	$ 47.00	$ 1,880.00
Hana Johnston	21.5	$ 52.00	$ 1,118.00
Celvin Pagcu	33	$ 47.00	$ 1,551.00
Secretary			
Tamera Reyes	16.5	$ 28.00	$ 462.00
Total	359		$ 26,485.00

Expenses

12/16/15	GFD Permit review fee	$ 1,582.00
10/29/15	PEALs Clearance for Building permit fee	$ 15.00
5/13/15	PEALs Clearance for Building permit fee	$ 15.00
Total		$ 1,612.00

Total T&M, DCA (Less GRT) **$ 28,097.00**

1/21/16

Exhibit B (Hourly Summary)
Invoice 16F-04
Phase 2 Time and Materials Services for Duenas, Camacho & Associates
Through April 30, 2016

	Hours	Rate	Amount
Project Manager			
Kenneth Rekdahl	100	$ 117.53	$ 11,753.00
Frankie Susuico	25	$ 84.84	$ 2,121.00
Ed Salanatin	3	$ 124.45	$ 373.35
Civil Engineer			
Jeff Bell	85	$ 66.95	$ 5,690.75
Murel Cabral	45	$ 82.21	$ 3,699.45
Structural Engineer			
Jeff Pangelinan	3	$ 72.61	$ 217.83
Elijah Soto	49	$ 63.27	$ 3,100.23
Inspection/Shop Drawing			
Vincent Pereda	43.5	$ 55.37	$ 2,408.60
Abner Sarmiento	28.75	$ 56.97	$ 1,637.89
Staff Engineer			
Jeremy Mudd	21	$ 54.65	$ 1,147.65
Celvin Pagcu	21	$ 54.65	$ 1,147.65
J.Dean Garcia	32.5	$ 50.33	$ 1,635.73
Secretary			
Tamara Reyes	1.5	$ 29.62	$ 44.43
Cadd/Production			
Arnold Cainguitan	5	$ 44.44	$ 222.20
Thomas Camacho Jr.	15.5	$ 24.45	$ 378.98
Jaelene Crisostomo	22.5	$ 24.45	$ 550.13
Planning/Env			
Claudine Camacho	11.5	$ 89.98	$ 1,034.77
Jessica Gross	9.5	$ 56.97	$ 541.22
Total	522.25		$ 34,977.55
Total T&M, DCA			**$ 34,977.55**

6/1/16

Exhibit B (Hourly Summary)
Invoice 16L-07
Phase 2 Time and Materials Services for Duenas, Camacho & Associates
Through September 30, 2016

	Hours		Rate		Amount
Project Manager					
Kenneth Rekdahl	83	$	117.53	$	9,754.99
Frankie Susuico	55	$	84.04	$	4,622.20
Ed Salanatin	1	$	124.45	$	124.45
Civil Engineer					
Jeff Bell	192	$	66.95	$	12,854.40
Murel Cabral	0	$	82.21	$	-
Structural Engineer					
Jeff Pangelinan	58	$	72.61	$	4,211.38
Elijah Soto	106.5	$	63.27	$	6,738.26
Hernan Bonsembiante	32	$	71.90	$	2,300.80
Inspection/Shop Drawing					
Vincent Pereda	232	$	55.37	$	12,845.84
Abner Sarmiento	202.5	$	56.97	$	11,536.43
Staff Engineer					
Jeremy Mudd	0	$	54.65	$	-
Celvin Pagcu	1.5	$	54.65	$	81.98
J.Dean Garcia	0	$	50.33	$	-
Secretary					
Tamara Reyes	0	$	29.62	$	-
Cadd/Production					
Paul Pangelinan	6	$	53.32	$	319.92
Arnold Cainguitan	0	$	44.44	$	-
Thomas Camacho Jr.	0	$	24.45	$	-
Jaelene Crisostomo	65.5	$	23.73	$	1,554.32
Planning/Env					
Claudine Camacho	13	$	89.88	$	1,168.44
Jessica Gross	12	$	56.97	$	683.64
Survey					
Worthy Basilius	9.85	$	24.45	$	240.83

Exhibit B (Hourly Summary)
Invoice 17F-01
Phase 2 Time and Materials Services for Duenas, Camacho & Associates
Through April 15, 2017

	2016			2017			TOTAL
	Hours	Rate	Amount	Hours	Rate	Amount	
Project Manager							
Kenneth Rekdahl	81.00	$ 121.28	$ 9,823.68	103.00	$ 135.57	$ 13,963.71	$ 23,787.39
Frankie Susuico	55.00	$ 86.72	$ 4,769.60	58.00	$ 91.05	$ 5,280.90	$ 10,050.50
Civil Engineer							
Jeff Bell	93.00	$ 69.08	$ 6,424.44	127.00	$ 76.36	$ 9,697.72	$ 16,122.16
Structural Engineer							
Jeff Pangelinan	57.00	$ 74.93	$ 4,271.01	102.00	$ 81.02	$ 8,264.04	$ 12,535.05
Elijah Soto	158.50	$ 65.29	$ 10,348.47	157.50	$ 68.56	$ 10,798.20	$ 21,146.67
Hernan Bonsembiante	63.50	$ 74.20	$ 4,711.70	109.00	$ 75.68	$ 8,249.12	$ 12,960.82
Inspection/Shop Drawing							
Vincent Pereda	134.00	$ 57.13	$ 7,655.42	120.00	$ 57.13	$ 6,855.60	$ 14,511.02
Abner Sarmiento	236.75	$ 58.78	$ 13,916.17	287.00	$ 60.54	$ 17,374.98	$ 31,291.15
Staff Engineer							
J.Dean Garcia	52.50	$ 51.94	$ 2,726.85	210.00	$ 53.51	$ 11,237.10	$ 13,963.95
Cadd/Production							
Arnold Cainguitan	4.50	$ 45.85	$ 206.33	7.50	$ 48.14	$ 361.05	$ 567.38
Paul Pangelinan	10.00	$ 55.02	$ 550.20	4.00	$ 57.78	$ 231.12	$ 781.32
Planning/Env							
Claudine Camacho	12.50	$ 92.74	$ 1,159.25	8.00	$ 95.62	$ 764.96	$ 1,924.21
Jessica Gross	22.00	$ 59.21	$ 1,302.62	9.50	$ 59.98	$ 569.81	$ 1,872.43
Devin Keogh	9.00	$ 44.52	$ 400.68			$ -	$ 400.68
Survey							
Jacob Cruz		$ -	$ -	2.50	$ 25.97	$ 64.93	$ 64.93
Vander Naputi		$ -	$ -	2.50	$ 33.63	$ 84.08	$ 84.08
Total	989.25		$ 68,266.41	1307.50		$ 93,797.31	$ 162,063.72
Total T&M, DCA							**$ 162,063.72**

Exhibit B (Hourly Summary)

Invoice 17I-12

Phase 2 Time and Materials Services for Duenas, Camacho & Associates

Through June 03, 2017

	2017		
	Hours	Rate	Amount
Project Manager			
Ken Rekdahl	43.00	$ 135.57	$ 5,829.48
Frankie Susuico	32.00	$ 91.05	$ 2,913.67
Civil Engineer			
Jeff Bell	21.00	$ 76.36	$ 1,603.59
Jeff Bell	55.00	$ 78.50	$ 4,317.41
Structural Engineer			
Jeff Pangelinan	95.00	$ 81.02	$ 7,697.00
Elijah Soto	80.00	$ 68.56	$ 5,484.50
Hernan Bonsembiante	34.00	$ 75.68	$ 2,573.09
Inspection/Shop Drawing			
Vincent Pereda	50.00	$ 57.13	$ 2,856.51
Abner Sarmiento	122.50	$ 60.54	$ 7,416.54
Staff Engineer			
J.Dean Garcia	100.50	$ 53.51	$ 5,377.70
Cadd/Production			
Arnold Cainguitan	1.00	$ 48.14	$ 48.14
Paul Pangelinan	1.50	$ 57.78	$ 86.67
Planning/Env			
Jessica Gross	3.00	$ 59.98	$ 179.94
Total	638.50		$ 46,384.24

Additional Services

GS&P Invoice 0699843
Dated November 8, 2016

	Current Amount	Prior Amount	To-Date Amount	Amount Remaining
Scoped Services	$23,528.54	$149,764.39	$173,292.93	-
Additional Services	$45,439.95	$15,220.21	$60,660.16	-
	$68,968.49	**$164,984.60**	**$233,953.09**	**$376,957.77**

The following additional services are being tracked and are listed for reference.

Time Associated with Mechanical Submittals

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
9/28/2016	Clae Fuller	0.25	$80.00	$20.00	-	-
9/28/2016	Ben Luke	2.00	$125.00	$250.00	-	-
10/24/2016	Ben Luke	0.75	$125.00	$93.75	-	-
10/14/2016	Seth Dobyns	1.00	$125.00	$125.00	-	-
				$488.75	**$540.00**	**$1,028.75**

Time Associated with Contractor Related Changes

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
10/13/2016	Ron Abraham[1]	4.00	$225.00	$900.00	-	
10/17/2016	Ron Abraham[1]	4.00	$225.00	$900.00	-	
10/13/2016	Ben Luke[1]	3.00	$125.00	$375.00	-	
10/14/2016	Ben Luke[1]	2.50	$125.00	$312.50	-	
10/13/2016	Andrew Bratcher[1]	4.00	$135.00	$540.00	-	
				$3,027.50	**$2,297.50**	**$5,325.00**

[1] Clarifier and UV

Time Associated with Site Visits

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
				$0.00	**$1,800.00**	**$1,800.00**

Time Associated with Conference Calls

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
10/11/2016	Ron Abraham	2.00	$225.00	$450.00		
10/18/2016	Ron Abraham	2.00	$225.00	$450.00		
				$900.00	**-**	**$900.00**

ATTACHMENT 3 A

Additional Services

GS&P Invoice 0699843
Dated November 8, 2016

Time Associated with Developing Training Materials

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
9/29/2016	Ron Abraham	4.00	$225.00	$900.00	-	
9/27/2016	Kristi Schnell	1.00	$165.00	$165.00	-	
9/28/2016	Kristi Schnell	2.00	$165.00	$330.00	-	
9/27/2016	Seth Dobyns	5.00	$125.00	$625.00	-	
9/28/2016	Seth Dobyns	3.00	$125.00	$375.00	-	
9/29/2016	Seth Dobyns	8.00	$125.00	$1,000.00	-	
9/28/2016	Ben Luke	2.00	$125.00	$250.00	-	
9/29/2016	Ben Luke	4.00	$125.00	$500.00	-	
9/27/2016	Jacob Lampley	1.00	$100.00	$100.00	-	
9/28/2016	Jacob Lampley	1.00	$100.00	$100.00	-	
				$4,345.00	**$10,298.75**	**$14,643.75**

Expense	Current Amount	Prior Amount	To-Date Amount
Training Materials	$107.00	-	$107.00
Printing	$1,369.92	-	$1,369.92
	$1,476.92	**-**	**$1,476.92**

Operator Training

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
10/15/2016	Ken Baker	40.00	$250.00	$10,000.00	-	
9/30/2016	Kristi Schnell	6.00	$165.00	$990.00	-	
10/3/2016	Kristi Schnell	8.00	$165.00	$1,320.00	-	
10/4/2016	Kristi Schnell	3.00	$165.00	$495.00	-	
10/5/2016	Kristi Schnell	7.00	$165.00	$1,155.00	-	
9/30/2016	Dave Johnson	3.00	$225.00	$675.00	-	
10/4/2016	Dave Johnson	2.00	$225.00	$450.00	-	
10/5/2016	Dave Johnson	4.00	$225.00	$900.00	-	
9/29/2016	Ron Abraham	4.00	$225.00	$900.00	-	
9/30/2016	Ron Abraham	8.00	$225.00	$1,800.00	-	
10/3/2016	Ron Abraham	6.00	$225.00	$1,350.00	-	
10/4/2016	Ron Abraham	8.00	$225.00	$1,800.00	-	
10/5/2016	Ron Abraham	8.00	$225.00	$1,800.00	-	
9/30/2016	Seth Dobyns	8.00	$125.00	$1,000.00	-	
10/3/2016	Seth Dobyns	8.00	$125.00	$1,000.00	-	
10/4/2016	Seth Dobyns	8.00	$125.00	$1,000.00	-	
10/5/2016	Seth Dobyns	8.00	$125.00	$1,000.00	-	
9/30/2016	Ben Luke	8.00	$125.00	$1,000.00	-	
10/3/2016	Ben Luke	7.00	$125.00	$875.00	-	

Additional Services

GS&P Invoice 0699843
Dated November 8, 2016

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
10/4/2016	Ben Luke	7.00	$125.00	$875.00	-	
10/5/2016	Ben Luke	5.00	$125.00	$625.00	-	
9/29/2016	Phillip Galbreath	0.25	$85.00	$21.25	-	
9/30/2016	Phillip Galbreath	0.50	$85.00	$42.50	-	
10/3/2016	Phillip Galbreath	0.25	$85.00	$21.25	-	
10/4/2016	Phillip Galbreath	0.25	$85.00	$21.25	-	
				$31,116.25	**-**	**$31,116.25**

Expense	Current Amount	Prior Amount	To-Date Amount
Airfare for Dave Fletcher and Ben Barcinas	-	$283.96	$283.96
Hotel for Dave Fletcher and Ben Barcinas	$2,975.91	-	$2,975.91
Meals	$23.01	-	$23.01
Parking / Taxi	$57.05	-	$57.05
Rental Car / Fuel	$828.14	-	$828.14
Mileage	$201.42	-	$201.42
	$4,085.53	**$283.96**	**$4,369.49**

TOTAL $45,439.95 $15,220.21 $60,660.16

Additional Services

GS&P Invoice 0700739
Dated December 8, 2016

	Current Amount	Prior Amount	To-Date Amount	Amount Remaining
Scoped Services	$15,726.81	$173,292.93	$189,019.74	-
Additional Services	$3,317.36	$60,660.16	$63,977.52	-
	$19,044.17	**$233,953.09**	**$252,997.26**	**$357,913.60**

The following additional services are being tracked and are listed for reference.

Time Associated with Mechanical Submittals

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
11/4/2016	Kristi Schnell	1.00	$165 00	$165.00		
11/1/2016	Ben Luke	0.50	$125.00	$62.50	-	-
11/4/2016	Ben Luke	0.50	$125.00	$62.50	-	-
11/8/2016	William Bennecker	1.00	$125.00	$125.00	-	-
11/4/2016	Clae Fuller	1.50	$80.00	$120.00	-	-
11/7/2016	Clae Fuller	0.50	$80.00	$40.00		
11/8/2016	Clae Fuller	0.75	$80.00	$60.00		
11/9/2016	Clae Fuller	1.00	$80.00	$80.00		
11/11/2016	Clae Fuller	0.25	$80.00	$20.00		
11/12/2016	Clae Fuller	-1.50	$80.00	-$120.00		
11/15/2016	Clae Fuller	1.00	$80.00	$80.00		
				$695.00	**$1,028.75**	**$1,723.75**

Time Associated with Contractor Related Changes

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
11/4/2016	Ron Abraham[1]	3.00	$225.00	$675.00	-	
11/22/2016	Ron Abraham[2]	3.00	$225.00	$675.00	-	
				$1,350.00	**$5,325.00**	**$6,675.00**

[1] Oxidation Ditch
[2] UV Structure

Time Associated with Site Visits

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
				-	-	-
				$0.00	**$1,800.00**	**$1,800.00**

Additional Services

GS&P Invoice 0702251
Dated January 8, 2017

	Current Amount	Prior Amount	To-Date Amount	Amount Remaining
Scoped Services	$11,018.91	$189,019.74	$200,038.65	-
Additional Services	$1,745.00	$63,977.52	$65,722.52	-
	$12,763.91	**$252,997.26**	**$265,761.17**	**$345,149.69**

The following additional services are being tracked and are listed for reference.

Time Associated with Mechanical Submittals

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
12/8/2016	William Bennecker	2.50	$125.00	$312.50	-	-
12/13/2016	William Bennecker	0.50	$125.00	$62.50	-	-
11/28/2016	Clae Fuller	0.25	$80.00	$20.00		
12/6/2016	Clae Fuller	0.25	$80.00	$20.00		
12/8/2016	Clae Fuller	0.25	$80.00	$20.00		
12/15/2016	Clae Fuller	0.75	$80.00	$60.00		
				$495.00	**$1,723.75**	**$2,218.75**

Time Associated with Contractor Related Changes

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
					-	
					$6,675.00	**$6,675.00**

Time Associated with Site Visits

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
				-	-	-
				$0.00	**$1,800.00**	**$1,800.00**

Time Associated with Conference Calls

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
12/15/2016	Ken Baker	2.00	$250.00	$500.00		
12/19/2016	Ken Baker	1.00	$250.00	$250.00		
12/22/2016	Ken Baker	1.00	$250.00	$250.00	-	-
				$1,000.00	**$900.00**	**$1,900.00**

Additional Services

GS&P Invoice 0702607
Dated February 8, 2017

	Current Amount	Prior Amount	To-Date Amount	Amount Remaining
Scoped Services	$9,335.38	$200,038.65	$209,374.03	-
Additional Services	$3,512.50	$65,722.52	$69,235.02	-
	$12,847.88	**$265,761.17**	**$278,609.05**	**$332,301.81**

The following additional services are being tracked and are listed for reference.

Time Associated with Mechanical Submittals

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
1/10/2017	Seth Dobyns	8.00	$125.00	$1,000.00		
1/24/2017	Seth Dobyns	8.00	$125.00	$1,000.00		
1/25/2017	Seth Dobyns	4.00	$125.00	$500.00		
1/14/2017	Clae Fuller	0.50	$80.00	$40.00		
1/23/2017	Clae Fuller	0.25	$80.00	$20.00		
				$2,560.00	**$2,218.75**	**$4,778.75**

Time Associated with Contractor Related Changes

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
1/11/2017	Ben Luke[1]	2.00	$125.00	$250.00	-	
				$250.00	**$6,675.00**	**$6,925.00**

[1]Specification revisions for crack repairs

Time Associated with Site Visits

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
				-	-	-
				-	**$1,800.00**	**$1,800.00**

Time Associated with Conference Calls

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
1/9/2017	Ken Baker	2.00	$250.00	$500.00		
1/9/2017	Kristi Schnell	1.00	$165.00	$165.00		
1/11/2017	David Johnson	1.00	$225.00	$225.00		
1/9/2017	Ben Luke	2.00	$125.00	$250.00	-	-
1/9/2017	Seth Dobyns	2.00	$125.00	$250.00		
				$640.00	**$1,900.00**	**$2,540.00**

ATTACHMENT 3B

Additional Services

GS&P Invoice 0702607
Dated February 8, 2017

Developing Training Materials

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
				-	-	-
				-	**$14,463.75**	**$14,463.75**

Expense	Current Amount	Prior Amount	To-Date Amount
Training Materials	-	$107.00	$107.00
Printing	-	$1,369.92	$1,369.92
	-	**$1,476.92**	**$1,476.92**

Operator Training

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
1/13/2017	Ben Luke	0.50	$125.00	$62.50	-	-
				$62.50	**$31,116.25**	**$31,178.75**

Expense	Current Amount	Prior Amount	To-Date Amount
Airfare for Dave Fletcher and Ben Barcinas	-	$283.96	$283.96
Hotel for Dave Fletcher and Ben Barcinas	-	$2,975.91	$2,975.91
Meals	-	$23.01	$23.01
Parking / Taxi	-	$57.05	$57.05
Rental Car / Fuel	-	$828.14	$828.14
Mileage	-	$273.78	$273.78
	-	**$4,441.85**	**$4,441.85**

Time associated with Witness Testing

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
				-	-	
				-	**$1,450.00**	**$1,450.00**

TOTAL $3,512.50 $65,722.52 $69,235.02

Additional Services

GS&P Invoice 0702251
Dated January 8, 2017

Developing Training Materials

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
				-	-	-
				$0.00	**$14,463.75**	**$14,463.75**

Expense	Current Amount	Prior Amount	To-Date Amount
Training Materials	-	$107.00	$107.00
Printing	-	$1,369.92	$1,369.92
	$0.00	**$1,476.92**	**$1,476.92**

Operator Training

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
				-	-	-
				$0.00	**$31,116.25**	**$31,116.25**

Expense	Current Amount	Prior Amount	To-Date Amount
Airfare for Dave Fletcher and Ben Barcinas	-	$283.96	$283.96
Hotel for Dave Fletcher and Ben Barcinas	-	$2,975.91	$2,975.91
Meals	-	$23.01	$23.01
Parking / Taxi	-	$57.05	$57.05
Rental Car / Fuel	-	$828.14	$828.14
Mileage	-	$273.78	$273.78
	$0.00	**$4,441.85**	**$4,441.85**

Time associated with Witness Testing

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
11/28/2016	Ken Baker	1.00	$250.00	$250.00	-	
				$250.00	**$1,200.00**	**$1,450.00**

TOTAL $1,745.00 $63,977.52 $65,722.52

Additional Services

GS&P Invoice 0700739
Dated December 8, 2016

Time Associated with Conference Calls

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
				-	-	-
				$0.00	**$900.00**	**$900.00**

Developing Training Materials

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
				-	-	-
				$0.00	**$14,463.75**	**$14,463.75**

Expense	Current Amount	Prior Amount	To-Date Amount
Training Materials	-	$107.00	$107.00
Printing	-	$1,369.92	$1,369.92
	$0.00	**$1,476.92**	**$1,476.92**

Operator Training

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
				-	-	-
				$0.00	**$31,116.25**	**$31,116.25**

Expense	Current Amount	Prior Amount	To-Date Amount
Airfare for Dave Fletcher and Ben Barcinas	-	$283.96	$
Hotel for Dave Fletcher and Ben Barcinas	$	$2,975.91	$
Meals	$	$23.01	$
Parking / Taxi	$	$57.05	$
Rental Car / Fuel	$	$828.14	$
Mileage	$72.36	$201.42	$273.78
	$72.36	**$4,369.49**	**$**

Time associated with Witness Testing

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
11/1/2016	Ken Baker	1.00	$250.00	$250.00	-	
11/3/2016	Ken Baker	2.00	$250.00	$500.00	-	
11/1/2016	Ron Abraham	2.00	$225.00	$450.00	-	
				$1,200.00	-	

TOTAL $3,317.36 $60,660.16 $63,977.52

Additional Services

GS&P Invoice 0703530
Dated March 8, 2017

	Current Amount	Prior Amount	To-Date Amount	Amount Remaining
Scoped Services	$9,321.71	$209,374.03	$218,695.74	-
Additional Services	$12,525.75	$69,235.02	$81,760.77	-
	$21,847.46	**$278,609.05**	**$300,456.51**	**$310,454.35**

The following additional services are being tracked and are listed for reference.

Time Associated with Mechanical Submittals

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
1/26/2017	Seth Dobyns	2.00	$125.00	$250.00	-	-
1/27/2017	Seth Dobyns	1.00	$125.00	$125.00	-	-
1/30/2017	Ben Luke	1.00	$125.00	$125.00	-	-
1/31/2017	Ben Luke	0.50	$125.00	$62.50	-	-
1/31/2017	Clae Fuller	0.50	$80.00	$40.00	-	-
				$602.50	**$4,778.75**	**$5,381.25**

Time Associated with Contractor Related Changes

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
02/01/2017	Mike Robertson	4.00	$135.00	$540.00	-	-
02/02/2017	Mike Robertson	2.00	$135.00	$270.00	-	-
02/03/2017	Mike Robertson	8.00	$135.00	$1,080.00	-	-
02/06/2017	Mike Robertson	8.00	$135.00	$1,080.00	-	-
02/07/2017	Mike Robertson	4.00	$135.00	$540.00	-	-
02/08/2017	Dave Johnson	1.00	$225.00	$225.00	-	-
02/09/2017	Dave Johnson	4.00	$225.00	$900.00	-	-
02/01/2017	Ron Abraham	4.00	$225.00	$900.00	-	-
02/08/2017	Ron Abraham	4.00	$225.00	$900.00	-	-
02/08/2017	Ben Luke	5.00	$125.00	$625.00	-	-
				$7,060.00	**$6,925.00**	**$13,985.00**

[1]GWA requested changes for the digesters and sludge piping

Time Associated with Site Visits

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
				-	-	-
				-	**$1,800.00**	**$1,800.00**

GRESHAM
SMITH AND
PARTNERS

Duenas, Camacho & Associates
Attn: Kenneth M. Rekdahl, Chief of Spec. Projects
238 East Marine Corps Drive
P.O. 8900
Hagatna 96910

April 08, 2017
Project No: 41192.00
Invoice No: 0705286

Project 41192.00 Agat - Santa Rita WWTP (Phase 2), GWA Project WW-08

Professional Services for the period ending March 27, 2017

Professional Personnel

	Hours	Rate	Amount	
Principal				
Baker, Kenneth	67.00	250.00	16,750.00	
Sr. Technical Specialist				
Abraham, Ronald	112.00	225.00	25,200.00	
Johnson, David	16.50	225.00	3,712.50	
Sr. Project Manager				
Stewart, Kenneth	6.50	200.00	1,300.00	
Project Manager				
Schnell, Kristi	8.00	165.00	1,320.00	
Engineer II				
Dobyns, Thomas	22.00	125.00	2,750.00	
Luke, Benjamin	118.00	125.00	14,750.00	
Project Accountant				
Duffy, Melissa	3.00	120.00	360.00	
Administration				
Fuller, Claude	16.50	80.00	1,320.00	
Totals	369.50		67,462.50	
Total Labor				**67,462.50**

Reimbursable Expenses

Printing	71.16	
Travel	1,178.15	
Color Copy/Printing	18.50	
Total Reimbursables	**1,267.81**	**1,267.81**

Billing Limits	**Current**	**Prior**	**To-Date**
Total Billings	68,730.31	300,456.51	369,186.82
Limit			610,910.86
Remaining			241,724.04

Total this Invoice **$68,730.31**

If you have any questions concerning this invoice,
please contact Ken Stewart, Project Manager at 615.770.8422.

Design and Consulting Solutions for the Built Environment
Please remit payment along with attached invoice copy to:
Gresham, Smith and Partners / P.O. Box 440029 / Nashville, TN 37244-0029

GRESHAM
SMITH AND
PARTNERS

Duenas, Camacho & Associates
Attn: Kenneth M. Rekdahl, Chief of Spec. Projects
238 East Marine Corps Drive
P.O. 8900
Hagatna 96910

May 8, 2017
Project No: 41192.00
Invoice No: 0705875

Project 41192.00 Agat - Santa Rita WWTP (Phase 2), GWA Project WW-08

Professional Services for the period ending April 25, 2017

Professional Personnel

	Hours	Rate	Amount	
Principal				
Baker, Kenneth	36.00	250.00	9,000.00	
Sr. Technical Specialist				
Abraham, Ronald	52.00	225.00	11,700.00	
Johnson, David	8.00	225.00	1,800.00	
Sr. Project Manager				
Stewart, Kenneth	20.00	200.00	4,000.00	
Engineer II				
Dobyns, Thomas	16.00	125.00	2,000.00	
Luke, Benjamin	87.75	125.00	10,968.75	
Project Accountant				
Duffy, Melissa	3.00	120.00	360.00	
Administration				
Haider, Rebecca	6.25	85.00	531.25	
Administration				
Fuller, Claude	15.00	80.00	1,200.00	
Totals	244.00		41,560.00	
Total Labor				**41,560.00**

Reimbursable Expenses

Printing	16.52	
Office Supplies	33.08	
Travel	4,549.97	
Lodging	9,310.55	
Car Rental	600.00	
Mileage/Fuel	45.00	
Telephone	21.99	
Meals	1,097.36	
Color Copy/Printing	36.50	
Total Reimbursables	**15,710.97**	**15,710.97**

Billing Limits	**Current**	**Prior**	**To-Date**
Total Billings	57,270.97	369,186.82	426,457.79
Limit			610,910.86
Remaining			184,453.07

Design Services for the Built Environment

Please remit payment along with attached invoice copy to:

Gresham, Smith, and Partners / P.O. Box 440029 / Nashville, TN 37244-0029

Project	41192.00	Guam - Agat-Santa Rita WWTP (Phase 2)	Invoice	0705875
		Total this Invoice		**$57,270.97**

If you have any questions concerning this invoice,
please contact Ken Stewart, Project Manager at 615.770.8422.

Ken Stew

Design Services for the Built Environment

Please remit payment along with attached invoice copy to:

Gresham, Smith, and Partners / P.O. Box 440029 / Nashville, TN 37244-0029

Project	41192.00	Guam - Agat-Santa Rita WWTP (Phase 2)	Invoice	0705875

Billing Backup

Thursday, May 4, 2017

Gresham, Smith and Partners — Invoice 0705875 Dated 5/8/2017 — 9:00:33 AM

Professional Personnel

			Hours	Rate	Amount
Principal					
02550	167 - Baker, Kenneth	3/28/2017	4.00	250.00	1,000.00
02550	167 - Baker, Kenneth	3/29/2017	3.00	250.00	750.00
02550	167 - Baker, Kenneth	3/30/2017	6.00	250.00	1,500.00
02550	167 - Baker, Kenneth	3/31/2017	3.00	250.00	750.00
02550	167 - Baker, Kenneth	4/17/2017	4.00	250.00	1,000.00
02550	167 - Baker, Kenneth	4/18/2017	4.00	250.00	1,000.00
02550	167 - Baker, Kenneth	4/19/2017	4.00	250.00	1,000.00
02550	167 - Baker, Kenneth	4/20/2017	4.00	250.00	1,000.00
02550	167 - Baker, Kenneth	4/21/2017	4.00	250.00	1,000.00
Sr. Technical Specialist					
04428	140 - Abraham, Ronald	3/28/2017	8.00	225.00	1,800.00
	Phase 1 Start up not iin original scope				
04428	140 - Abraham, Ronald	3/29/2017	8.00	225.00	1,800.00
	Phase 1 Operator Training not in origiinal scope				
04428	140 - Abraham, Ronald	3/31/2017	4.00	225.00	900.00
	Phase 1 Start up not iin original scope				
04428	140 - Abraham, Ronald	4/3/2017	2.00	225.00	450.00
	Ken Stewart meeting				
04428	140 - Abraham, Ronald	4/12/2017	8.00	225.00	1,800.00
	Change orders requested by GWA				
04428	140 - Abraham, Ronald	4/14/2017	3.00	225.00	675.00
	Phase 1 Startup				
04428	140 - Abraham, Ronald	4/14/2017	3.00	225.00	675.00
	Phase 1 Startup				
04428	140 - Abraham, Ronald	4/20/2017	8.00	225.00	1,800.00
	Phase 1 Startup				
04428	140 - Abraham, Ronald	4/21/2017	8.00	225.00	1,800.00
	Phase 1 Training				
04331	139 - Johnson, David	4/3/2017	1.00	225.00	225.00
	Processing/Checking Shop Drawings				
04331	139 - Johnson, David	4/7/2017	1.00	225.00	225.00
	Processing/Checking Shop Drawings				
04331	139 - Johnson, David	4/21/2017	1.00	225.00	225.00
	Processing/Checking Shop Drawings				
04331	139 - Johnson, David	4/21/2017	2.00	225.00	450.00
	Plant Tk Drain Control Rev				
04331	139 - Johnson, David	4/24/2017	2.00	225.00	450.00
	Plant Tk Drain Control Rev				
04331	139 - Johnson, David	4/25/2017	1.00	225.00	225.00
	Processing/Checking Shop Drawings				
Sr. Project Manager					
02865	139 - Stewart, Kenneth	3/29/2017	.50	200.00	100.00
02865	139 - Stewart, Kenneth	3/30/2017	1.00	200.00	200.00
02865	139 - Stewart, Kenneth	3/31/2017	1.00	200.00	200.00
02865	139 - Stewart, Kenneth	4/11/2017	1.00	200.00	200.00
	Project Update				
02865	139 - Stewart, Kenneth	4/13/2017	2.00	200.00	400.00
	Invoice Revision				

Project	41192.00	Guam - Agat-Santa Rita WWTP (Phase 2)			Invoice	0705875
02865	139 - Stewart, Kenneth Invoice Issues	4/17/2017	2.00	200.00	400.00	
02865	139 - Stewart, Kenneth Invoice Issues	4/19/2017	2.00	200.00	400.00	
02865	139 - Stewart, Kenneth Invoice Revision	4/20/2017	1.00	200.00	200.00	
02865	139 - Stewart, Kenneth Invoice Issues	4/21/2017	4.00	200.00	800.00	
02865	139 - Stewart, Kenneth Review Oxygen Transfer and set-up wtness test trip; invoice issue	4/24/2017	3.50	200.00	700.00	
02865	139 - Stewart, Kenneth Invoice Revision	4/25/2017	2.00	200.00	400.00	
Engineer II						
04423	136 - Dobyns, Thomas submittal	4/5/2017	5.00	125.00	625.00	
04423	136 - Dobyns, Thomas submittal	4/6/2017	8.00	125.00	1,000.00	
04423	136 - Dobyns, Thomas submittal	4/7/2017	3.00	125.00	375.00	
04515	136 - Luke, Benjamin RFIs	3/28/2017	2.00	125.00	250.00	
04515	136 - Luke, Benjamin Operator Training	3/28/2017	6.00	125.00	750.00	
04515	136 - Luke, Benjamin Operator Training	3/29/2017	8.00	125.00	1,000.00	
04515	136 - Luke, Benjamin Operator Training	3/30/2017	7.50	125.00	937.50	
04515	136 - Luke, Benjamin Startup and Commissioning	3/31/2017	6.00	125.00	750.00	
04515	136 - Luke, Benjamin Submittal	3/31/2017	2.00	125.00	250.00	
04515	136 - Luke, Benjamin Startup and Commissioning	4/3/2017	2.00	125.00	250.00	
04515	136 - Luke, Benjamin Submittals	4/3/2017	4.00	125.00	500.00	
04515	136 - Luke, Benjamin Operator Training Manuals	4/3/2017	2.00	125.00	250.00	
04515	136 - Luke, Benjamin Submittals	4/4/2017	8.00	125.00	1,000.00	
04515	136 - Luke, Benjamin Submittals	4/5/2017	4.00	125.00	500.00	
04515	136 - Luke, Benjamin Centrifuge Changes	4/5/2017	2.00	125.00	250.00	
04515	136 - Luke, Benjamin UV, Pump Changes	4/6/2017	4.00	125.00	500.00	
04515	136 - Luke, Benjamin Submittals	4/6/2017	2.00	125.00	250.00	
04515	136 - Luke, Benjamin RFI	4/7/2017	2.00	125.00	250.00	
04515	136 - Luke, Benjamin UV, Pump Changes	4/7/2017	1.50	125.00	187.50	
04515	136 - Luke, Benjamin RFIs	4/10/2017	3.50	125.00	437.50	
04515	136 - Luke, Benjamin RFI	4/11/2017	.50	125.00	62.50	
04515	136 - Luke, Benjamin Submittal	4/11/2017	1.50	125.00	187.50	

Design Services for the Built Environment

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Project	41192.00	Guam - Agat-Santa Rita WWTP (Phase 2)			Invoice	0705875
04515	136 - Luke, Benjamin Guam Meeting	4/11/2017	1.00	125.00	125.00	
04515	136 - Luke, Benjamin Submittal	4/12/2017	1.50	125.00	187.50	
04515	136 - Luke, Benjamin Submittal	4/13/2017	2.00	125.00	250.00	
04515	136 - Luke, Benjamin Witness Testing Coordination	4/13/2017	.50	125.00	62.50	
04515	136 - Luke, Benjamin Submittal	4/17/2017	.50	125.00	62.50	
04515	136 - Luke, Benjamin Witness Testing Coordination	4/18/2017	.25	125.00	31.25	
04515	136 - Luke, Benjamin Mechanical Submittal	4/19/2017	1.00	125.00	125.00	
04515	136 - Luke, Benjamin Submittal	4/19/2017	.50	125.00	62.50	
04515	136 - Luke, Benjamin Submittal	4/20/2017	1.50	125.00	187.50	
04515	136 - Luke, Benjamin Submittal	4/21/2017	4.00	125.00	500.00	
04515	136 - Luke, Benjamin Submittals	4/24/2017	2.50	125.00	312.50	
04515	136 - Luke, Benjamin Witness Testing Coordination	4/24/2017	.50	125.00	62.50	
04515	136 - Luke, Benjamin Submittals	4/25/2017	2.50	125.00	312.50	
04515	136 - Luke, Benjamin RFI	4/25/2017	1.00	125.00	125.00	
Project Accountant						
04622	103 - Duffy, Melissa Billing	3/29/2017	1.00	120.00	120.00	
04622	103 - Duffy, Melissa Review Meeting	4/11/2017	1.00	120.00	120.00	
04622	103 - Duffy, Melissa Invoice JTD Labor Review	4/24/2017	1.00	120.00	120.00	
Administration						
02779	148 - Haider, Rebecca federal expressing marketing materials to Guam	3/28/2017	.25	85.00	21.25	
02779	148 - Haider, Rebecca Expense reports, filing	4/5/2017	4.00	85.00	340.00	
02779	148 - Haider, Rebecca scanning, electronic filing and mailing of monthly invoices	4/13/2017	2.00	85.00	170.00	
Administration						
04885	146 - Fuller, Claude RFI Processing	3/28/2017	.25	80.00	20.00	
04885	146 - Fuller, Claude Submittal Processing/Construction Photo Archiving	3/28/2017	.75	80.00	60.00	
04885	146 - Fuller, Claude Submittal Processing/Construction Photo Archiving	3/30/2017	.75	80.00	60.00	
04885	146 - Fuller, Claude RFI Processing	3/30/2017	.50	80.00	40.00	
04885	146 - Fuller, Claude Submittal Processing	3/31/2017	.50	80.00	40.00	
04885	146 - Fuller, Claude Submittal Processing/Construction Photo Archiving	4/1/2017	1.50	80.00	120.00	
04885	146 - Fuller, Claude Submittal Processing	4/3/2017	1.50	80.00	120.00	

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Project	41192.00	Guam - Agat-Santa Rita WWTP (Phase 2)			Invoice	0705875
04885	146 - Fuller, Claude Submittal Processing	4/4/2017	.50	80.00	40.00	
04885	146 - Fuller, Claude Construction Photo Archiving	4/5/2017	.75	80.00	60.00	
04885	146 - Fuller, Claude Submittal Processing	4/6/2017	.50	80.00	40.00	
04885	146 - Fuller, Claude Submittal Processing/Construction Photo Archiving	4/7/2017	1.25	80.00	100.00	
04885	146 - Fuller, Claude RFI Processing	4/10/2017	.50	80.00	40.00	
04885	146 - Fuller, Claude Submittal Processing	4/11/2017	.25	80.00	20.00	
04885	146 - Fuller, Claude Submittal Processing and Construction Photo Archiving	4/12/2017	1.50	80.00	120.00	
04885	146 - Fuller, Claude Submittal Processing	4/13/2017	.50	80.00	40.00	
04885	146 - Fuller, Claude Submittal Processing	4/17/2017	.25	80.00	20.00	
04885	146 - Fuller, Claude Submittal Processing and Construction Photo Archiving	4/18/2017	1.00	80.00	80.00	
04885	146 - Fuller, Claude Submittal Processing	4/19/2017	1.00	80.00	80.00	
04885	146 - Fuller, Claude Submittal Processing	4/20/2017	.25	80.00	20.00	
04885	146 - Fuller, Claude Submittal Processing	4/25/2017	.75	80.00	60.00	
04885	146 - Fuller, Claude RFI Processing	4/25/2017	.25	80.00	20.00	
	Totals		244.00		41,560.00	
	Total Labor					**41,560.00**

Reimbursable Expenses

Printing				
JE 0004230	4/9/2017	Equitrac / Prints - 3/10/2017 - 04/09/2017		7.88
JE 0004230	4/9/2017	Equitrac / Prints - 3/10/2017 - 04/09/2017		8.64
Office Supplies				
EX 0121808	3/16/2017	Luke, Benjamin / Groceries and Detergent / Groceries, Laundry Detergent, Etc. Itemized Not Available		30.13
EX 0121799	3/25/2017	Abraham, Ronald / In Guam for 18 days - purchased laundry detergent		2.95
Travel				
EX 0121808	3/13/2017	Luke, Benjamin / Lyft to BNA		14.37
EX 0121808	3/14/2017	Luke, Benjamin / Taxi from Guam Airport to Hotel / Transportation. Paid Cash. No Receipt Available. $25 Fare + $5 Tip		30.00
EX 0121799	3/30/2017	Abraham, Ronald		15.00
EX 0121799	3/30/2017	Abraham, Ronald / In Guam for 18 days - spent $24.00 to do laundry. Considerable savings - I've attahced a copy of what the hotel charges to do laundry. Plaid cash - no receipt provided.		24.00
EX 0120323	3/31/2017	Baker, Kenneth / Travel to Guam - project progress meetings & meeting w/the owners		1,178.15
EX 0121792	4/3/2017	Baker, Kenneth / Guam Airfare for Ken Baker and Ron Abraham - WWTP start-up / training		3,288.45

Design Services for the Built Environment

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Project	41192.00	Guam - Agat-Santa Rita WWTP (Phase 2)	Invoice	0705875
Lodging				
EX 0121802	3/15/2017	Abraham, Ronald / operator training	976.80	
EX 0121808	3/17/2017	Luke, Benjamin / Sheraton Stay #1	976.80	
EX 0121808	3/19/2017	Luke, Benjamin / Hyatt Stay #1	521.70	
EX 0121802	3/20/2017	Abraham, Ronald / Agat-Santa Rita - Phase I	1,221.00	
EX 0121808	3/23/2017	Luke, Benjamin / Sheraton Stay #2	1,285.25	
EX 0121802	3/26/2017	Abraham, Ronald / Guam Travel - PHI operator training	1,198.80	
EX 0121802	3/29/2017	Abraham, Ronald / Guam Travel - PHI operator training	1,198.80	
EX 0121808	3/30/2017	Luke, Benjamin / Hyatt Stay #2	1,931.40	
Car Rental				
EX 0121802	4/1/2017	Abraham, Ronald / Phase I start up	300.00	
EX 0121802	4/1/2017	Abraham, Ronald / Phase I start up	300.00	
Mileage/Fuel				
EX 0121800	3/22/2017	Abraham, Ronald / Travel - Guam - Agat-Santa Rita WWTP Operator Training	45.00	
Telephone				
EX 0121808	3/13/2017	Luke, Benjamin / Plane WiFi for Working / Purchased WiFi on Denver-Narita Flight for Working	21.99	
Meals				
EX 0121800	3/10/2017	Abraham, Ronald / Travel - Guam - Agat-Santa Rita WWTP Operator Training	32.50	
EX 0121802	3/13/2017	Abraham, Ronald / Phase 1 Operator and Training	5.95	
EX 0121808	3/13/2017	Luke, Benjamin / 3/13 Dinner	23.00	
EX 0121808	3/13/2017	Luke, Benjamin / 3/13 Breakfast	5.45	
EX 0121800	3/14/2017	Abraham, Ronald / Travel - Guam - Agat-Santa Rita WWTP Operator Training	13.50	
EX 0121800	3/15/2017	Abraham, Ronald / Travel - Guam - Agat-Santa Rita WWTP Operator Training (No itemized receipt was provided - no alcohol beverages were purchased.)	45.13	
EX 0121799	3/15/2017	Abraham, Ronald / Project start up meeting	11.25	
EX 0121808	3/15/2017	Luke, Benjamin / 3/15 Breakfast	8.00	
EX 0121808	3/16/2017	Luke, Benjamin / 3/16 Dinner / Itemized Not Available	42.00	
EX 0121808	3/16/2017	Luke, Benjamin / 3/16 Breakfast	11.00	
EX 0121800	3/16/2017	Abraham, Ronald / Travel - Guam - Agat-Santa Rita WWTP Operator Training (No itemized receipt was provided - no alcohol beverages were purchased.)	13.00	
EX 0121800	3/16/2017	Abraham, Ronald / Travel - Guam - Agat-Santa Rita WWTP Operator Training	15.49	
EX 0121808	3/16/2017	Luke, Benjamin / 3/16 Lunch	14.50	
EX 0121802	3/16/2017	Abraham, Ronald / Start up - Agat WWTP	83.30	
EX 0121808	3/19/2017	Luke, Benjamin / 3/19 Dinner	10.74	
EX 0121808	3/20/2017	Luke, Benjamin / 3/20 Lunch	4.36	
EX 0121808	3/21/2017	Luke, Benjamin / 3/21 Lunch	13.05	
EX 0121801	3/22/2017	Abraham, Ronald / Guam Travel - Guam - Agat-Santa Rita WWTP (Phase 2)	3.58	
EX 0121801	3/22/2017	Abraham, Ronald / Travel - Guam - Agat-Santa Rita WWTP (Phase 2)	27.48	
EX 0121808	3/22/2017	Luke, Benjamin / 3/22 Breakfast	2.48	
EX 0121808	3/22/2017	Luke, Benjamin / 3/22 Lunch	85.00	
EX 0121808	3/23/2017	Luke, Benjamin / 3/23 Lunch	12.68	
EX 0121808	3/23/2017	Luke, Benjamin / 3/23 Breakfast	3.50	

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Project	41192.00	Guam - Agat-Santa Rita WWTP (Phase 2)	Invoice	0705875
EX 0121808	3/24/2017	Luke, Benjamin / 3/24 Breakfast	2.50	
EX 0121808	3/24/2017	Luke, Benjamin / 3/24 Lunch	35.00	
EX 0121802	3/25/2017	Abraham, Ronald / Guam Travel - PHI operator training	75.00	
EX 0121802	3/25/2017	Abraham, Ronald / Guam Travel - PHI operator training	22.00	
EX 0121802	3/26/2017	Abraham, Ronald / Guam Travel - PHI operator training	185.60	
EX 0121800	3/27/2017	Abraham, Ronald / Travel - Guam - Agat-Santa Rita WWTP Operator Training	10.75	
EX 0121800	3/27/2017	Abraham, Ronald / Travel - Guam - Agat-Santa Rita WWTP Operator Training	61.05	
EX 0121808	3/27/2017	Luke, Benjamin / 3/27 Lunch	65.00	
EX 0121808	3/27/2017	Luke, Benjamin / 3/27 Breakfast	5.50	
EX 0121799	3/28/2017	Abraham, Ronald / Project start up meeting discussion	112.87	
EX 0121808	3/29/2017	Luke, Benjamin / 3/29 Breakfast	10.50	
EX 0121801	3/31/2017	Abraham, Ronald / Travel - Guam - Agat-Santa Rita WWTP (Phase 2)	24.65	
Color Copy/Printing				
JE 0004230	4/9/2017	Equitrac / Prints - 3/10/2017 - 04/09/2017	.50	
JE 0004230	4/9/2017	Equitrac / Prints - 3/10/2017 - 04/09/2017	36.00	
	Total Reimbursables		**15,710.97**	**15,710.97**
		Total this Project		**$57,270.97**
		Total this Report		**$57,270.97**

Design Services for the Built Environment

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Job-To-Date Summary

Gresham, Smith and Partners

Transactions for 3/28/2017 through 4/25/2017

		Current Amount	Prior Amount	To-Date Amount	Amount Remaining
Project Number: 41192.00 Guam - Agat-Santa Rita WWTP (Phase 2)					
	Scoped Services	**$16,136.77**	**$236,975.40**	**$253,112.17**	
	Additional Services				
	Labor	**$25,476.25**	**$120,990.00**	**$146,466.25**	
	Expenses	**$15,657.95**	**$11,221.42**	**$26,879.37**	
	Total Additional Services	**$41,134.20**	**$132,211.42**	**$173,345.62**	
	Total Services	**$57,270.97**	**$369,186.82**	**$426,457.79**	**$184,453.07**
Total for 41192.00		**$57,270.97**	**$369,186.82**	**$426,457.79**	**$184,453.07**

Labor Detail

Friday, May 5, 2017
10:26:01 AM

Gresham, Smith and Partners - Prelim-All

Transactions for 3/28/2017 through 4/25/2017

						Additional Services	
		Date	Total Hours	Billing Rate	Total Billing	Prior Amount	To Date Amount
Project Number: 41192.00 Guam - Agat-Santa							
WBS2 Number: 200 Meetings							
WBS3 Number: 202 Internal Progress Meetings							
04428	Abraham, Ronald	4/3/2017	2.00	225.00	450.00		
04515	Luke, Benjamin	4/11/2017	1.00	125.00	125.00		
Total for 202			**3.00**		**575.00**		
Total for 200			**3.00**		**575.00**		
WBS2 Number: 300 Shop Drawings/Submittals							
04331	Johnson, David	4/3/2017	1.00	225.00	225.00		
04331	Johnson, David	4/7/2017	1.00	225.00	225.00		
04331	Johnson, David	4/21/2017	1.00	225.00	225.00		
04331	Johnson, David	4/25/2017	1.00	225.00	225.00		
04423	Dobyns, Thomas	4/5/2017	5.00	125.00	625.00		
04423	Dobyns, Thomas	4/6/2017	8.00	125.00	1,000.00		
04423	Dobyns, Thomas	4/7/2017	3.00	125.00	375.00		
04515	Luke, Benjamin	3/31/2017	2.00	125.00	250.00		
04515	Luke, Benjamin	4/3/2017	4.00	125.00	500.00		
04515	Luke, Benjamin	4/4/2017	8.00	125.00	1,000.00		
04515	Luke, Benjamin	4/5/2017	4.00	125.00	500.00		
04515	Luke, Benjamin	4/6/2017	2.00	125.00	250.00		
04515	Luke, Benjamin	4/11/2017	1.50	125.00	187.50		
04515	Luke, Benjamin	4/12/2017	1.50	125.00	187.50		
04515	Luke, Benjamin	4/13/2017	2.00	125.00	250.00		
04515	Luke, Benjamin	4/17/2017	.50	125.00	62.50		
04515	Luke, Benjamin	4/19/2017	.50	125.00	62.50		
04515	Luke, Benjamin	4/20/2017	1.50	125.00	187.50		
04515	Luke, Benjamin	4/21/2017	4.00	125.00	500.00		
04515	Luke, Benjamin	4/24/2017	2.50	125.00	312.50		
04515	Luke, Benjamin	4/25/2017	2.50	125.00	312.50		
04885	Fuller, Claude	3/28/2017	.75	80.00	60.00		
04885	Fuller, Claude	3/30/2017	.75	80.00	60.00		
04885	Fuller, Claude	3/31/2017	.50	80.00	40.00		
04885	Fuller, Claude	4/1/2017	1.50	80.00	120.00		
04885	Fuller, Claude	4/3/2017	1.50	80.00	120.00		
04885	Fuller, Claude	4/4/2017	.50	80.00	40.00		
04885	Fuller, Claude	4/5/2017	.75	80.00	60.00		
04885	Fuller, Claude	4/6/2017	.50	80.00	40.00		
04885	Fuller, Claude	4/7/2017	1.25	80.00	100.00		
04885	Fuller, Claude	4/11/2017	.25	80.00	20.00		
04885	Fuller, Claude	4/12/2017	1.50	80.00	120.00		

04885	Fuller, Claude	4/13/2017	.50	80.00	40.00		
04885	Fuller, Claude	4/17/2017	.25	80.00	20.00		
04885	Fuller, Claude	4/18/2017	1.00	80.00	80.00		
04885	Fuller, Claude	4/19/2017	1.00	80.00	80.00		
04885	Fuller, Claude	4/20/2017	.25	80.00	20.00		
04885	Fuller, Claude	4/25/2017	.75	80.00	60.00		
Total for 300			**70.00**		**8,542.50**		
WBS2 Number: 400 Requests for Information							
04515	Luke, Benjamin	3/28/2017	2.00	125.00	250.00		
04515	Luke, Benjamin	3/31/2017	6.00	125.00	750.00		
04515	Luke, Benjamin	4/3/2017	2.00	125.00	250.00		
04515	Luke, Benjamin	4/7/2017	2.00	125.00	250.00		
04515	Luke, Benjamin	4/10/2017	3.50	125.00	437.50		
04515	Luke, Benjamin	4/11/2017	.50	125.00	62.50		
04515	Luke, Benjamin	4/25/2017	1.00	125.00	125.00		
04885	Fuller, Claude	3/28/2017	.25	80.00	20.00		
04885	Fuller, Claude	3/30/2017	.50	80.00	40.00		
04885	Fuller, Claude	4/10/2017	.50	80.00	40.00		
04885	Fuller, Claude	4/25/2017	.25	80.00	20.00		
Total for 400			**18.50**		**2,245.00**		
WBS2 Number: 700 Project Management							
02779	Haider, Rebecca	3/28/2017	.25	85.00	21.25		
02779	Haider, Rebecca	4/5/2017	4.00	85.00	340.00		
02865	Stewart, Kenneth	3/29/2017	.50	200.00	100.00		
02865	Stewart, Kenneth	3/30/2017	1.00	200.00	200.00		
02865	Stewart, Kenneth	3/31/2017	1.00	200.00	200.00		
02865	Stewart, Kenneth	4/11/2017	1.00	200.00	200.00		
02865	Stewart, Kenneth	4/13/2017	2.00	200.00	400.00		
02865	Stewart, Kenneth	4/17/2017	2.00	200.00	400.00		
02865	Stewart, Kenneth	4/19/2017	2.00	200.00	400.00		
02865	Stewart, Kenneth	4/20/2017	1.00	200.00	200.00		
02865	Stewart, Kenneth	4/21/2017	4.00	200.00	800.00		
02865	Stewart, Kenneth	4/24/2017	3.50	200.00	700.00		
02865	Stewart, Kenneth	4/25/2017	2.00	200.00	400.00		
04622	Duffy, Melissa	3/29/2017	1.00	120.00	120.00		
04622	Duffy, Melissa	4/11/2017	1.00	120.00	120.00		
04622	Duffy, Melissa	4/24/2017	1.00	120.00	120.00		
Total for 700			**27.25**		**4,721.25**		
WBS2 Number: 800 Additional Services							
WBS3 Number: 801 Major Milestone Meetings/Site Visits						**1,800.00**	**1,800.00**
WBS3 Number: 802 Progress Meetings						**3,522.50**	**3,522.50**
WBS3 Number: 804 Equipment Witness Testing							
04515	Luke, Benjamin	4/13/2017	.50	125.00	62.50		
04515	Luke, Benjamin	4/18/2017	.25	125.00	31.25		
04515	Luke, Benjamin	4/24/2017	.50	125.00	62.50		
Total for 804			**1.25**		**156.25**	**2,356.25**	**2,512.50**

ATTACHMENT 3C

WBS3 Number: 805 Start-up and Commissioning							
02550	Baker, Kenneth	3/28/2017	4.00	250.00	1,000.00		
02550	Baker, Kenneth	3/29/2017	3.00	250.00	750.00		
02550	Baker, Kenneth	3/30/2017	6.00	250.00	1,500.00		
02550	Baker, Kenneth	3/31/2017	3.00	250.00	750.00		
02550	Baker, Kenneth	4/17/2017	4.00	250.00	1,000.00		
02550	Baker, Kenneth	4/18/2017	4.00	250.00	1,000.00		
02550	Baker, Kenneth	4/19/2017	4.00	250.00	1,000.00		
02550	Baker, Kenneth	4/20/2017	4.00	250.00	1,000.00		
02550	Baker, Kenneth	4/21/2017	4.00	250.00	1,000.00		
02779	Haider, Rebecca	4/13/2017	2.00	85.00	170.00		
04428	Abraham, Ronald	4/14/2017	3.00	225.00	675.00		
04428	Abraham, Ronald	4/20/2017	8.00	225.00	1,800.00		
Total for 805			**49.00**		**11,645.00**	**44,850.00**	**56,495.00**
WBS3 Number: 806 Develop Training Manuals						**14,643.75**	**14,643.75**
WBS3 Number: 808 Operator Training							
04428	Abraham, Ronald	4/14/2017	3.00	225.00	675.00		
04428	Abraham, Ronald	4/21/2017	8.00	225.00	1,800.00		
04515	Luke, Benjamin	3/28/2017	6.00	125.00	750.00		
04515	Luke, Benjamin	3/29/2017	8.00	125.00	1,000.00		
04515	Luke, Benjamin	3/30/2017	7.50	125.00	937.50		
04515	Luke, Benjamin	4/3/2017	2.00	125.00	250.00		
Total for 808			**34.50**		**5,412.50**	**31,178.75**	**36,591.25**
WBS3 Number: 812 Contractor Changes							
04331	Johnson, David	4/21/2017	2.00	225.00	450.00		
04331	Johnson, David	4/24/2017	2.00	225.00	450.00		
04428	Abraham, Ronald	3/28/2017	8.00	225.00	1,800.00		
04428	Abraham, Ronald	3/29/2017	8.00	225.00	1,800.00		
04428	Abraham, Ronald	3/31/2017	4.00	225.00	900.00		
04428	Abraham, Ronald	4/12/2017	8.00	225.00	1,800.00		
04515	Luke, Benjamin	4/5/2017	2.00	125.00	250.00		
04515	Luke, Benjamin	4/6/2017	4.00	125.00	500.00		
04515	Luke, Benjamin	4/7/2017	1.50	125.00	187.50		
Total for 812			**39.50**		**8,137.50**	**17,097.50**	**25,235.00**
Total for 800			**124.25**		**25,351.25**	**115,448.75**	**140,800.00**
WBS2 Number: 900 Mechanical Submittals							
04515	Luke, Benjamin	4/19/2017	1.00	125.00	125.00		
Total for 900			**1.00**		**125.00**	**5,541.25**	**5,666.25**
Total Additional Services					**25,476.25**	**120,990.00**	**146,466.25**
Total for 41192.00			**244.00**		**41,560.00**		

Expense Detail

Monday, May 01, 2017
11:22:06 AM

Gresham, Smith and Partners

Transactions for 3/28/2017 through 4/25/2017

	Trans Type	Reference Number	Date	Billing Amount	Full Description
Project Number: 41192.00 Guam - Agat-Santa Rita WWTP (Phase 2)					
WBS2 Number: 000 NOT FOR TIMESHEET USE					
Reimbursable Expenses					
521.000 Printing					
*	JE	0004230	4/9/2017	8.64	Equitrac / Prints - 3/10/2017 - 04/09/2017
	JE	0004230	4/9/2017	7.88	Equitrac / Prints - 3/10/2017 - 04/09/2017
Total for 521.000				**16.52**	
532.000 Color Copy/Printing					
	JE	0004230	4/9/2017	.50	Equitrac / Prints - 3/10/2017 - 04/09/2017
*	JE	0004230	4/9/2017	36.00	Equitrac / Prints - 3/10/2017 - 04/09/2017
Total for 532.000				**36.50**	
Total for Reimb. Exp.				**53.02**	
Total for 000				**53.02**	
WBS2 Number: 800 Additional Services					
WBS3 Number: 802 Progress Meetings					
Reimbursable Expenses					
525.000 Travel					
	EX	0120323	3/31/2017	1,178.15	Baker, Kenneth
Total for 802				**1,178.15**	
WBS3 Number: 805 Start-up and Commissioning					
Reimbursable Expenses					
522.000 Office Supplies					
	EX	0121808	3/16/2017	30.13	Luke, Ben
525.000 Travel					
	EX	0121808	3/13/2017	14.37	Luke, Ben
	EX	0121808	3/14/2017	30.00	Luke, Ben
	EX	0121792	4/3/2017	3,288.45	Baker, Kenneth
Total for 525.000				**3,332.82**	
525.020 Lodging					
	EX	0121808	3/17/2017	976.80	Luke, Benjamin / Sheraton Stay #1
	EX	0121808	3/19/2017	521.70	Luke, Benjamin / Hyatt Stay #1
	EX	0121802	3/20/2017	1,221.00	Abraham, Ronald
	EX	0121808	3/23/2017	1,285.25	Luke, Benjamin / Sheraton Stay #2
	EX	0121802	3/26/2017	1,198.80	Abraham, Ronald
	EX	0121808	3/30/2017	1,931.40	Luke, Benjamin / Hyatt Stay #2
Total for 525.020				**7,134.95**	
525.030 Car Rental					
	EX	0121802	4/1/2017	300.00	Abraham, Ronald
	EX	0121802	4/1/2017	300.00	Abraham, Ronald
Total for 525.030				**600.00**	
527.000 Telephone					
	EX	0121808	3/13/2017	21.99	Luke, Benjamin / Plane WiFi for Working
528.000 Meals					
	EX	0121808	3/13/2017	23.00	Luke, Benjamin / 3/13 Dinner
	EX	0121808	3/13/2017	5.45	Luke, Benjamin / 3/13 Breakfast
	EX	0121799	3/15/2017	11.25	Abraham, Ronald
	EX	0121808	3/15/2017	8.00	Luke, Benjamin / 3/15 Breakfast
	EX	0121802	3/16/2017	83.30	Abraham, Ronald

EX	0121808	3/16/2017	14.50	Luke, Benjamin / 3/16 Lunch
EX	0121808	3/16/2017	42.00	Luke, Benjamin / 3/16 Dinner
EX	0121808	3/16/2017	11.00	Luke, Benjamin / 3/16 Breakfast
EX	0121808	3/19/2017	10.74	Luke, Benjamin / 3/19 Dinner
EX	0121808	3/20/2017	4.36	Luke, Benjamin / 3/20 Lunch
EX	0121808	3/21/2017	13.05	Luke, Benjamin / 3/21 Lunch
EX	0121801	3/22/2017	3.58	Abraham, Ronald
EX	0121801	3/22/2017	27.48	Abraham, Ronald
EX	0121808	3/22/2017	85.00	Luke, Benjamin / 3/22 Lunch
EX	0121808	3/22/2017	2.48	Luke, Benjamin / 3/22 Breakfast
EX	0121808	3/23/2017	12.68	Luke, Benjamin / 3/23 Lunch
EX	0121808	3/23/2017	3.50	Luke, Benjamin / 3/23 Breakfast
EX	0121808	3/24/2017	35.00	Luke, Benjamin / 3/24 Lunch
EX	0121808	3/24/2017	2.50	Luke, Benjamin / 3/24 Breakfast
EX	0121808	3/27/2017	5.50	Luke, Benjamin / 3/27 Breakfast
EX	0121808	3/27/2017	65.00	Luke, Benjamin / 3/27 Lunch
EX	0121799	3/28/2017	112.87	Abraham, Ronald
EX	0121808	3/29/2017	10.50	Luke, Benjamin / 3/29 Breakfast
EX	0121801	3/31/2017	24.65	Abraham, Ronald
Total for 528.000			**617.39**	
Total for Reimb. Exp.			**11,737.28**	
Total for 805			**11,737.28**	
WBS3 Number: 808 Operator Training				
Reimbursable Expenses				
522.000 Office Supplies				
EX	0121799	3/25/2017	2.95	Abraham, Ronald
525.000 Travel				
EX	0121799	3/30/2017	15.00	Abraham, Ronald
EX	0121799	3/30/2017	24.00	Abraham, Ronald
Total for 525.000			**39.00**	
525.020 Lodging				
EX	0121802	3/15/2017	976.80	Abraham, Ronald
525.030 Mileage/Fuel				
EX	0121800	3/22/2017	45.00	Abraham, Ronald
528.000 Meals				
EX	0121800	3/10/2017	32.50	Abraham, Ronald
EX	0121802	3/13/2017	5.95	Abraham, Ronald
EX	0121800	3/14/2017	13.50	Abraham, Ronald
EX	0121800	3/15/2017	45.13	Abraham, Ronald
EX	0121800	3/16/2017	13.00	Abraham, Ronald
EX	0121800	3/16/2017	15.49	Abraham, Ronald
EX	0121802	3/25/2017	75.00	Abraham, Ronald
EX	0121802	3/25/2017	22.00	Abraham, Ronald
EX	0121802	3/26/2017	185.60	Abraham, Ronald
EX	0121800	3/27/2017	10.75	Abraham, Ronald
EX	0121800	3/27/2017	61.05	Abraham, Ronald
Total for Reimb. Exp.			**479.97**	
Total for 808			**1,543.72**	
WBS3 Number: 812 Contractor Changes				
Reimbursable Expenses				
525.020 Lodging				
EX	0121802	3/29/2017	1,198.80	Abraham, Ronald
Total for 812			**1,198.80**	
Total for 800			**15,657.95**	
Total for 41192.00			**15,710.97**	

Project	41192.00	Guam - Agat-Santa Rita WWTP (Phase 2)	Invoice	0705286

Billing Backup

Thursday, April 20, 2017

Gresham, Smith and Partners — Invoice 0705286 Dated 4/8/2017 — 4:47:17 PM

Professional Personnel

			Hours	Rate	Amount
Principal					
02550	167 - Baker, Kenneth	2/28/2017	1.00	250.00	250.00
02550	167 - Baker, Kenneth	3/13/2017	8.00	250.00	2,000.00
02550	167 - Baker, Kenneth	3/14/2017	5.00	250.00	1,250.00
02550	167 - Baker, Kenneth	3/15/2017	8.00	250.00	2,000.00
02550	167 - Baker, Kenneth	3/16/2017	3.00	250.00	750.00
02550	167 - Baker, Kenneth	3/17/2017	4.00	250.00	1,000.00
02550	167 - Baker, Kenneth	3/20/2017	8.00	250.00	2,000.00
02550	167 - Baker, Kenneth	3/21/2017	8.00	250.00	2,000.00
02550	167 - Baker, Kenneth	3/23/2017	8.00	250.00	2,000.00
02550	167 - Baker, Kenneth	3/24/2017	6.00	250.00	1,500.00
02550	167 - Baker, Kenneth	3/27/2017	8.00	250.00	2,000.00
Sr. Technical Specialist					
04428	140 - Abraham, Ronald	2/28/2017	2.00	225.00	450.00
	Ken Rekdahl				
04428	140 - Abraham, Ronald	3/6/2017	2.00	225.00	450.00
	Ken Rekdahl				
04428	140 - Abraham, Ronald	3/7/2017	8.00	225.00	1,800.00
	UV modifications to accomodate rerouted conduits, effluent wei, and eff PS piping				
04428	140 - Abraham, Ronald	3/8/2017	2.00	225.00	450.00
04428	140 - Abraham, Ronald	3/8/2017	2.00	225.00	450.00
04428	140 - Abraham, Ronald	3/10/2017	8.00	225.00	1,800.00
04428	140 - Abraham, Ronald	3/13/2017	8.00	225.00	1,800.00
04428	140 - Abraham, Ronald	3/14/2017	8.00	225.00	1,800.00
04428	140 - Abraham, Ronald	3/15/2017	8.00	225.00	1,800.00
04428	140 - Abraham, Ronald	3/16/2017	8.00	225.00	1,800.00
04428	140 - Abraham, Ronald	3/17/2017	8.00	225.00	1,800.00
04428	140 - Abraham, Ronald	3/20/2017	8.00	225.00	1,800.00
04428	140 - Abraham, Ronald	3/21/2017	8.00	225.00	1,800.00
04428	140 - Abraham, Ronald	3/22/2017	8.00	225.00	1,800.00
04428	140 - Abraham, Ronald	3/23/2017	8.00	225.00	1,800.00
04428	140 - Abraham, Ronald	3/24/2017	8.00	225.00	1,800.00
04428	140 - Abraham, Ronald	3/27/2017	8.00	225.00	1,800.00
04331	139 - Johnson, David	2/24/2017	1.00	225.00	225.00
	VFD conf call				
04331	139 - Johnson, David	2/28/2017	.50	225.00	112.50
	Coordinating Project With Others				
04331	139 - Johnson, David	3/1/2017	2.00	225.00	450.00
	Grit System review				
04331	139 - Johnson, David	3/7/2017	1.00	225.00	225.00
	08 vfds				
04331	139 - Johnson, David	3/14/2017	6.00	225.00	1,350.00
	Processing/Checking Shop Drawings				
04331	139 - Johnson, David	3/17/2017	2.00	225.00	450.00
	Processing/Checking Shop Drawings				
04331	139 - Johnson, David	3/27/2017	4.00	225.00	900.00
	Processing/Checking Shop Drawings				

Design and Consulting Solutions for the Built Environment

Please remit payment along with attached invoice copy to:

Gresham, Smith and Partners / P.O. Box 440029 / Nashville, TN 37244-0029

Project	41192.00	Guam - Agat-Santa Rita WWTP (Phase 2)			Invoice	0705286
Sr. Project Manager						
02865	139 - Stewart, Kenneth Project Review	3/1/2017	1.00	200.00	200.00	
02865	139 - Stewart, Kenneth Project Review	3/7/2017	1.00	200.00	200.00	
02865	139 - Stewart, Kenneth Project Review	3/8/2017	1.50	200.00	300.00	
02865	139 - Stewart, Kenneth Unpaid invoices and projections	3/10/2017	.50	200.00	100.00	
02865	139 - Stewart, Kenneth Aged AR	3/16/2017	.25	200.00	50.00	
02865	139 - Stewart, Kenneth Project update	3/17/2017	.50	200.00	100.00	
02865	139 - Stewart, Kenneth Project Review	3/21/2017	.50	200.00	100.00	
02865	139 - Stewart, Kenneth RFI Review	3/23/2017	.50	200.00	100.00	
02865	139 - Stewart, Kenneth Aged AR	3/24/2017	.75	200.00	150.00	
Project Manager						
02591	138 - Schnell, Kristi	2/27/2017	4.00	165.00	660.00	
02591	138 - Schnell, Kristi	2/28/2017	3.00	165.00	495.00	
02591	138 - Schnell, Kristi	2/28/2017	1.00	165.00	165.00	
Engineer II						
04423	136 - Dobyns, Thomas Grit submittal, RFI, and meeting	2/28/2017	2.00	125.00	250.00	
04423	136 - Dobyns, Thomas submittal, RFI, and grit meetings	3/1/2017	8.00	125.00	1,000.00	
04423	136 - Dobyns, Thomas Grit submittal, RFI, and meeting	3/2/2017	2.00	125.00	250.00	
04423	136 - Dobyns, Thomas Submittals	3/8/2017	8.00	125.00	1,000.00	
04423	136 - Dobyns, Thomas Hydro Grit System	3/10/2017	2.00	125.00	250.00	
04515	136 - Luke, Benjamin RFIs	2/24/2017	2.50	125.00	312.50	
04515	136 - Luke, Benjamin Witness Testing Coordination	2/24/2017	2.00	125.00	250.00	
04515	136 - Luke, Benjamin Digester Piping	2/24/2017	1.50	125.00	187.50	
04515	136 - Luke, Benjamin Digester Piping Descriptions	2/27/2017	2.50	125.00	312.50	
04515	136 - Luke, Benjamin RFIs	2/27/2017	4.00	125.00	500.00	
04515	136 - Luke, Benjamin Startup Conference Call	2/27/2017	1.50	125.00	187.50	
04515	136 - Luke, Benjamin RFIs	2/28/2017	1.50	125.00	187.50	
04515	136 - Luke, Benjamin Progress Meeting	2/28/2017	.50	125.00	62.50	
04515	136 - Luke, Benjamin Submittal	2/28/2017	2.00	125.00	250.00	
04515	136 - Luke, Benjamin Submittal	3/1/2017	2.00	125.00	250.00	

Project	41192.00	Guam - Agat-Santa Rita WWTP (Phase 2)			Invoice	0705286
04515	136 - Luke, Benjamin Witness Testing Coordination	3/1/2017	1.00	125.00	125.00	
04515	136 - Luke, Benjamin RFIs	3/1/2017	2.00	125.00	250.00	
04515	136 - Luke, Benjamin RFIs	3/2/2017	2.00	125.00	250.00	
04515	136 - Luke, Benjamin Digester Loop Descriptions	3/3/2017	2.00	125.00	250.00	
04515	136 - Luke, Benjamin RFIs	3/3/2017	2.50	125.00	312.50	
04515	136 - Luke, Benjamin Submittal	3/3/2017	2.00	125.00	250.00	
04515	136 - Luke, Benjamin Submittals	3/6/2017	2.50	125.00	312.50	
04515	136 - Luke, Benjamin Contractor Changes	3/6/2017	2.00	125.00	250.00	
04515	136 - Luke, Benjamin RFIs	3/6/2017	2.00	125.00	250.00	
04515	136 - Luke, Benjamin Contractor Changes	3/7/2017	2.50	125.00	312.50	
04515	136 - Luke, Benjamin Submittals	3/7/2017	1.00	125.00	125.00	
04515	136 - Luke, Benjamin Submittal	3/8/2017	4.00	125.00	500.00	
04515	136 - Luke, Benjamin Submittal	3/9/2017	1.00	125.00	125.00	
04515	136 - Luke, Benjamin RFIs	3/9/2017	1.00	125.00	125.00	
04515	136 - Luke, Benjamin Submittals	3/10/2017	2.00	125.00	250.00	
04515	136 - Luke, Benjamin Startup and Commissioning	3/13/2017	8.00	125.00	1,000.00	
04515	136 - Luke, Benjamin Startup and Commissioning	3/14/2017	8.00	125.00	1,000.00	
04515	136 - Luke, Benjamin Startup and Commissioning	3/15/2017	6.00	125.00	750.00	
04515	136 - Luke, Benjamin Submittals	3/15/2017	2.00	125.00	250.00	
04515	136 - Luke, Benjamin Submittals	3/16/2017	2.00	125.00	250.00	
04515	136 - Luke, Benjamin Startup and Commissioning	3/16/2017	4.00	125.00	500.00	
04515	136 - Luke, Benjamin Startup and Commissioning	3/17/2017	2.00	125.00	250.00	
04515	136 - Luke, Benjamin Submittals	3/17/2017	2.00	125.00	250.00	
04515	136 - Luke, Benjamin RFIs	3/17/2017	2.00	125.00	250.00	
04515	136 - Luke, Benjamin Submittal	3/19/2017	2.00	125.00	250.00	
04515	136 - Luke, Benjamin Startup and Commissioning	3/20/2017	8.00	125.00	1,000.00	
04515	136 - Luke, Benjamin Startup and Commissioning	3/21/2017	8.00	125.00	1,000.00	
04515	136 - Luke, Benjamin Startup and Commissioning	3/22/2017	4.00	125.00	500.00	

Project	41192.00	Guam - Agat-Santa Rita WWTP (Phase 2)			Invoice	0705286
04515	136 - Luke, Benjamin	3/22/2017	2.00	125.00	250.00	
	RFIs					
04515	136 - Luke, Benjamin	3/23/2017	2.00	125.00	250.00	
	RFIs					
04515	136 - Luke, Benjamin	3/23/2017	1.50	125.00	187.50	
	Startup and Commissioning					
04515	136 - Luke, Benjamin	3/24/2017	1.00	125.00	125.00	
	RFI					
04515	136 - Luke, Benjamin	3/24/2017	1.00	125.00	125.00	
	Submittal					
04515	136 - Luke, Benjamin	3/27/2017	1.00	125.00	125.00	
	Submittal					
04515	136 - Luke, Benjamin	3/27/2017	2.00	125.00	250.00	
	Startup and Commissioning					
Project Accountant						
04622	103 - Duffy, Melissa	2/24/2017	1.00	120.00	120.00	
	Billing					
04622	103 - Duffy, Melissa	2/27/2017	1.00	120.00	120.00	
	Billing					
04622	103 - Duffy, Melissa	3/6/2017	1.00	120.00	120.00	
	Project Review					
Administration						
04885	146 - Fuller, Claude	2/24/2017	1.25	80.00	100.00	
	Construction Photo Archiving					
04885	146 - Fuller, Claude	2/25/2017	-1.00	80.00	-80.00	
	Timesheet Day 2/22-2/23 Estimate Reconciliation					
04885	146 - Fuller, Claude	2/25/2017	-.50	80.00	-40.00	
	Timesheet Day 2/22-2/23 Estimate Reconciliation					
04885	146 - Fuller, Claude	2/28/2017	.25	80.00	20.00	
	RFI Processing					
04885	146 - Fuller, Claude	2/28/2017	.50	80.00	40.00	
	Submittal Processing					
04885	146 - Fuller, Claude	3/1/2017	.50	80.00	40.00	
	RFI Processing					
04885	146 - Fuller, Claude	3/2/2017	.75	80.00	60.00	
	RFI Processing					
04885	146 - Fuller, Claude	3/3/2017	1.50	80.00	120.00	
	Construction Photo Archiving Strategizing and EADOC Help With K. Stewart					
04885	146 - Fuller, Claude	3/6/2017	1.00	80.00	80.00	
	Submittal Processing					
04885	146 - Fuller, Claude	3/6/2017	.50	80.00	40.00	
	RFI Processing					
04885	146 - Fuller, Claude	3/7/2017	.75	80.00	60.00	
	Submittal Processing					
04885	146 - Fuller, Claude	3/8/2017	.75	80.00	60.00	
	Submittal Processing					
04885	146 - Fuller, Claude	3/9/2017	.50	80.00	40.00	
	Submittal Processing					
04885	146 - Fuller, Claude	3/10/2017	.25	80.00	20.00	
	Submittal Processing					
04885	146 - Fuller, Claude	3/13/2017	1.00	80.00	80.00	
	Construction Photo Archiving					
04885	146 - Fuller, Claude	3/14/2017	.75	80.00	60.00	
	Submittal Processing					
04885	146 - Fuller, Claude	3/16/2017	.50	80.00	40.00	
	Submittal Processing					

Design and Consulting Solutions for the Built Environment
Please remit payment along with attached invoice copy to:
Gresham, Smith and Partners / P.O. Box 440029 / Nashville, TN 37244-0029

Project	41192.00	Guam - Agat-Santa Rita WWTP (Phase 2)			Invoice	0705286
04885	146 - Fuller, Claude	3/16/2017	.25	80.00	20.00	
	RFI Processing					
04885	146 - Fuller, Claude	3/17/2017	.50	80.00	40.00	
	RFI Processing					
04885	146 - Fuller, Claude	3/17/2017	1.75	80.00	140.00	
	Submittal Processing and Construction Photo Archiving					
04885	146 - Fuller, Claude	3/20/2017	1.00	80.00	80.00	
	Submittal Processing and Construction Photo Archiving					
04885	146 - Fuller, Claude	3/21/2017	.25	80.00	20.00	
	RFI Processing					
04885	146 - Fuller, Claude	3/22/2017	.50	80.00	40.00	
	RFI Processing					
04885	146 - Fuller, Claude	3/23/2017	.75	80.00	60.00	
	RFI Processing					
04885	146 - Fuller, Claude	3/23/2017	.25	80.00	20.00	
	Submittal Processing					
04885	146 - Fuller, Claude	3/24/2017	1.00	80.00	80.00	
	Submittal Processing and Construction Photo Archiving					
04885	146 - Fuller, Claude	3/27/2017	1.00	80.00	80.00	
	RFI Processing					
	Totals		369.50		67,462.50	
	Total Labor					**67,462.50**
Reimbursable Expenses						
Printing						
JE	0003230	3/9/2017	Equitrac / Prints - 2/10/2017 - 03/09/2017		68.12	
JE	0003230	3/9/2017	Equitrac / Prints - 2/10/2017 - 03/09/2017		2.48	
JE	0003230	3/9/2017	Equitrac / Prints - 2/10/2017 - 03/09/2017		.56	
Travel						
EX	0119875	2/22/2017	Abraham, Ronald		1,178.15	
Color Copy/Printing						
JE	0003230	3/9/2017	Equitrac / Prints - 2/10/2017 - 03/09/2017		5.50	
JE	0003230	3/9/2017	Equitrac / Prints - 2/10/2017 - 03/09/2017		13.00	
	Total Reimbursables				**1,267.81**	**1,267.81**
				Total this Project		**$68,730.31**
				Total this Report		**$68,730.31**

Design and Consulting Solutions for the Built Environment
Please remit payment along with attached invoice copy to:
Gresham, Smith and Partners / P.O. Box 440029 / Nashville, TN 37244-0029

Job-To-Date Summary

Gresham, Smith and Partners

Transactions for 2/24/2017 through 3/27/2017

		Current Amount	Prior Amount	To-Date Amount	Amount Remaining
Project Number: 41192.00 Guam - Agat-Santa Rita WWTP (Phase 2)					
	Scoped Services	**$18,279.66**	**$218,695.74**	**$236,975.40**	
	Additional Services				
	Labor	**$49,272.50**	**$71,717.50**	**$120,990.00**	
	Expenses	**$1,178.15**	**$10,043.27**	**$11,221.42**	
	Total Additional Services	**$50,450.65**	**$81,760.77**	**$132,211.42**	
	Total Services	**$68,730.31**	**$300,456.51**	**$369,186.82**	**$241,724.04**
Total for 41192.00		**$68,730.31**	**$300,456.51**	**$369,186.82**	**$241,724.04**

Labor Detail

Thursday, April 13, 2017
1:26:19 PM

Gresham, Smith and Partners

Transactions for 2/24/2017 through 3/27/2017

		Date	Total Hours	Billing Rate	Total Billing	Additional Services Prior Amount	Additional Services To Date Amount
Project Number: 41192.00 Guam - Agat-Santa Rita WWTP (Phase 2)							
WBS2 Number: 200 Meetings							
WBS3 Number: 202 Internal Progress Meetings							
02550	Baker, Kenneth	2/28/2017	1.00	250.00	$250.00		
02591	Schnell, Kristi	2/28/2017	1.00	165.00	$165.00		
04331	Johnson, David	2/28/2017	.50	225.00	$112.50		
04515	Luke, Benjamin	2/28/2017	.50	125.00	$62.50		
Total for 202			**3.00**		**$590.00**		
Total for 200			**3.00**		**$590.00**		
WBS2 Number: 300 Shop Drawings/Submittals							
04331	Johnson, David	2/24/2017	1.00	225.00	$225.00		
04331	Johnson, David	3/1/2017	2.00	225.00	$450.00		
04331	Johnson, David	3/7/2017	1.00	225.00	$225.00		
04331	Johnson, David	3/14/2017	6.00	225.00	$1,350.00		
04331	Johnson, David	3/17/2017	2.00	225.00	$450.00		
04331	Johnson, David	3/27/2017	4.00	225.00	$900.00		
04423	Dobyns, Thomas	2/28/2017	2.00	125.00	$250.00		
04423	Dobyns, Thomas	3/1/2017	8.00	125.00	$1,000.00		
04423	Dobyns, Thomas	3/2/2017	2.00	125.00	$250.00		
04423	Dobyns, Thomas	3/8/2017	8.00	125.00	$1,000.00		
04423	Dobyns, Thomas	3/10/2017	2.00	125.00	$250.00		
04428	Abraham, Ronald	3/8/2017	2.00	225.00	$450.00		
04515	Luke, Benjamin	2/28/2017	2.00	125.00	$250.00		
04515	Luke, Benjamin	3/1/2017	2.00	125.00	$250.00		
04515	Luke, Benjamin	3/3/2017	2.00	125.00	$250.00		
04515	Luke, Benjamin	3/6/2017	2.50	125.00	$312.50		
04515	Luke, Benjamin	3/7/2017	1.00	125.00	$125.00		
04515	Luke, Benjamin	3/8/2017	4.00	125.00	$500.00		
04515	Luke, Benjamin	3/9/2017	1.00	125.00	$125.00		
04515	Luke, Benjamin	3/10/2017	2.00	125.00	$250.00		
04515	Luke, Benjamin	3/15/2017	2.00	125.00	$250.00		
04515	Luke, Benjamin	3/16/2017	2.00	125.00	$250.00		
04515	Luke, Benjamin	3/17/2017	2.00	125.00	$250.00		
04515	Luke, Benjamin	3/19/2017	2.00	125.00	$250.00		
04515	Luke, Benjamin	3/24/2017	1.00	125.00	$125.00		
04515	Luke, Benjamin	3/27/2017	1.00	125.00	$125.00		
04885	Fuller, Claude	2/24/2017	1.25	80.00	$100.00		
04885	Fuller, Claude	2/25/2017	-1.00	80.00	-$80.00		
04885	Fuller, Claude	2/28/2017	.50	80.00	$40.00		
04885	Fuller, Claude	3/3/2017	1.50	80.00	$120.00		

04885	Fuller, Claude	3/6/2017	1.00	80.00	$80.00
04885	Fuller, Claude	3/7/2017	.75	80.00	$60.00
04885	Fuller, Claude	3/8/2017	.75	80.00	$60.00
04885	Fuller, Claude	3/9/2017	.50	80.00	$40.00
04885	Fuller, Claude	3/10/2017	.25	80.00	$20.00
04885	Fuller, Claude	3/13/2017	1.00	80.00	$80.00
04885	Fuller, Claude	3/14/2017	.75	80.00	$60.00
04885	Fuller, Claude	3/16/2017	.50	80.00	$40.00
04885	Fuller, Claude	3/17/2017	1.75	80.00	$140.00
04885	Fuller, Claude	3/20/2017	1.00	80.00	$80.00
04885	Fuller, Claude	3/23/2017	.25	80.00	$20.00
04885	Fuller, Claude	3/24/2017	1.00	80.00	$80.00
Total for 300			**78.25**		**$11,052.50**

WBS2 Number: 400 Requests for Information

04428	Abraham, Ronald	3/8/2017	2.00	225.00	$450.00
04515	Luke, Benjamin	2/24/2017	2.50	125.00	$312.50
04515	Luke, Benjamin	2/27/2017	4.00	125.00	$500.00
04515	Luke, Benjamin	2/28/2017	1.50	125.00	$187.50
04515	Luke, Benjamin	3/1/2017	2.00	125.00	$250.00
04515	Luke, Benjamin	3/2/2017	2.00	125.00	$250.00
04515	Luke, Benjamin	3/3/2017	2.50	125.00	$312.50
04515	Luke, Benjamin	3/6/2017	2.00	125.00	$250.00
04515	Luke, Benjamin	3/9/2017	1.00	125.00	$125.00
04515	Luke, Benjamin	3/17/2017	2.00	125.00	$250.00
04515	Luke, Benjamin	3/22/2017	2.00	125.00	$250.00
04515	Luke, Benjamin	3/23/2017	2.00	125.00	$250.00
04515	Luke, Benjamin	3/24/2017	1.00	125.00	$125.00
04885	Fuller, Claude	2/25/2017	-.50	80.00	-$40.00
04885	Fuller, Claude	3/16/2017	.25	80.00	$20.00
04885	Fuller, Claude	3/17/2017	.50	80.00	$40.00
04885	Fuller, Claude	3/21/2017	.25	80.00	$20.00
04885	Fuller, Claude	3/22/2017	.50	80.00	$40.00
04885	Fuller, Claude	3/23/2017	.75	80.00	$60.00
04885	Fuller, Claude	3/27/2017	1.00	80.00	$80.00
Total for 400			**29.25**		**$3,732.50**

WBS2 Number: 700 Project Management

02591	Schnell, Kristi	2/27/2017	4.00	165.00	$660.00
02591	Schnell, Kristi	2/28/2017	3.00	165.00	$495.00
02865	Stewart, Kenneth	3/1/2017	1.00	200.00	$200.00
02865	Stewart, Kenneth	3/7/2017	1.00	200.00	$200.00
02865	Stewart, Kenneth	3/8/2017	1.50	200.00	$300.00
02865	Stewart, Kenneth	3/10/2017	.50	200.00	$100.00
02865	Stewart, Kenneth	3/16/2017	.25	200.00	$50.00
02865	Stewart, Kenneth	3/17/2017	.50	200.00	$100.00
02865	Stewart, Kenneth	3/21/2017	.50	200.00	$100.00
02865	Stewart, Kenneth	3/23/2017	.50	200.00	$100.00

02865	Stewart, Kenneth	3/24/2017	.75	200.00	$150.00		
04622	Duffy, Melissa	2/24/2017	1.00	120.00	$120.00		
04622	Duffy, Melissa	2/27/2017	1.00	120.00	$120.00		
04622	Duffy, Melissa	3/6/2017	1.00	120.00	$120.00		
Total for 700			**16.50**		**$2,815.00**		
WBS2 Number: 800 Additional Services							
WBS3 Number: 801 Major Milestone Meetings/Site Visits						**$1,800.00**	**$1,800.00**
WBS3 Number: 802 Progress Meetings							
04428	Abraham, Ronald	2/28/2017	2.00	225.00	$450.00		
04428	Abraham, Ronald	3/6/2017	2.00	225.00	$450.00		
Total for 802			**4.00**		**$900.00**	**$2,622.50**	**$3,522.50**
WBS3 Number: 804 Equipment Witness Testing							
04515	Luke, Benjamin	2/24/2017	2.00	125.00	$250.00		
04515	Luke, Benjamin	3/1/2017	1.00	125.00	$125.00		
Total for 804			**3.00**		**$375.00**	**$1,981.25**	**$2,356.25**
WBS3 Number: 805 Start-up and Commissioning							
02550	Baker, Kenneth	3/13/2017	8.00	250.00	$2,000.00		
02550	Baker, Kenneth	3/14/2017	5.00	250.00	$1,250.00		
02550	Baker, Kenneth	3/15/2017	8.00	250.00	$2,000.00		
02550	Baker, Kenneth	3/16/2017	3.00	250.00	$750.00		
02550	Baker, Kenneth	3/17/2017	4.00	250.00	$1,000.00		
02550	Baker, Kenneth	3/20/2017	8.00	250.00	$2,000.00		
02550	Baker, Kenneth	3/21/2017	8.00	250.00	$2,000.00		
02550	Baker, Kenneth	3/23/2017	8.00	250.00	$2,000.00		
02550	Baker, Kenneth	3/24/2017	6.00	250.00	$1,500.00		
02550	Baker, Kenneth	3/27/2017	8.00	250.00	$2,000.00		
04428	Abraham, Ronald	3/10/2017	8.00	225.00	$1,800.00		
04428	Abraham, Ronald	3/13/2017	8.00	225.00	$1,800.00		
04428	Abraham, Ronald	3/14/2017	8.00	225.00	$1,800.00		
04428	Abraham, Ronald	3/15/2017	8.00	225.00	$1,800.00		
04428	Abraham, Ronald	3/16/2017	8.00	225.00	$1,800.00		
04428	Abraham, Ronald	3/17/2017	8.00	225.00	$1,800.00		
04428	Abraham, Ronald	3/20/2017	8.00	225.00	$1,800.00		
04428	Abraham, Ronald	3/21/2017	8.00	225.00	$1,800.00		
04428	Abraham, Ronald	3/22/2017	8.00	225.00	$1,800.00		
04428	Abraham, Ronald	3/23/2017	8.00	225.00	$1,800.00		
04428	Abraham, Ronald	3/24/2017	8.00	225.00	$1,800.00		
04428	Abraham, Ronald	3/27/2017	8.00	225.00	$1,800.00		
04515	Luke, Benjamin	2/27/2017	1.50	125.00	$187.50		
04515	Luke, Benjamin	3/13/2017	8.00	125.00	$1,000.00		
04515	Luke, Benjamin	3/14/2017	8.00	125.00	$1,000.00		
04515	Luke, Benjamin	3/15/2017	6.00	125.00	$750.00		
04515	Luke, Benjamin	3/16/2017	4.00	125.00	$500.00		
04515	Luke, Benjamin	3/17/2017	2.00	125.00	$250.00		
04515	Luke, Benjamin	3/20/2017	8.00	125.00	$1,000.00		
04515	Luke, Benjamin	3/21/2017	8.00	125.00	$1,000.00		

04515	Luke, Benjamin	3/22/2017	4.00	125.00	$500.00		
04515	Luke, Benjamin	3/23/2017	1.50	125.00	$187.50		
04515	Luke, Benjamin	3/27/2017	2.00	125.00	$250.00		
Total for 805			**215.00**		**$44,725.00**	**$125.00**	**$44,850.00**
WBS3 Number: 806 Develop Training Manuals						**$14,643.75**	**$14,643.75**
WBS3 Number: 808 Operator Training						**$31,178.75**	**$31,178.75**
WBS3 Number: 812 Contractor Changes							
04428	Abraham, Ronald	3/7/2017	8.00	225.00	$1,800.00		
04515	Luke, Benjamin	2/24/2017	1.50	125.00	$187.50		
04515	Luke, Benjamin	2/27/2017	2.50	125.00	$312.50		
04515	Luke, Benjamin	3/3/2017	2.00	125.00	$250.00		
04515	Luke, Benjamin	3/6/2017	2.00	125.00	$250.00		
04515	Luke, Benjamin	3/7/2017	2.50	125.00	$312.50		
Total for 812			**18.50**		**$3,112.50**	**$13,985.00**	**$17,097.50**
Total for 800			**240.50**		**$49,112.50**	**$66,336.25**	**$115,448.75**
WBS2 Number: 900 Mechanical Submittals - Additional Services							
04885	Fuller, Claude	2/28/2017	.25	80.00	$20.00		
04885	Fuller, Claude	3/1/2017	.50	80.00	$40.00		
04885	Fuller, Claude	3/2/2017	.75	80.00	$60.00		
04885	Fuller, Claude	3/6/2017	.50	80.00	$40.00		
Total for 900			**2.00**		**$160.00**	**$5,381.25**	**$5,541.25**
Total Additional Services					**$49,272.50**	$71,717.50	$120,990.00
Total for 41192.00			**369.50**		**67,462.50**		

Expense Detail

Thursday, April 13, 2017
4:16:19 PM

Gresham, Smith and Partners

Transactions for 2/24/2017 through 3/27/2017

	Trans Type	Reference Number	Date	Billing Full Amount	Description	Additional Services Prior Amount	Additional Services To Date Amount
Project Number: 41192.00 Guam - Agat-Santa Rita WWTP (Phase 2)							
WBS2 Number: 000 NOT FOR TIMESHEET USE							
Reimbursable Expenses							
521.000 Printing							
	JE	0003230	3/9/2017	68.12	Equitrac / Prints - 2/10/2017 - 03/09/2017		
*	JE	0003230	3/9/2017	2.48	Equitrac / Prints - 2/10/2017 - 03/09/2017		
*	JE	0003230	3/9/2017	.56	Equitrac / Prints - 2/10/2017 - 03/09/2017		
Total for 521.000				**71.16**			
532.000 Color Copy/Printing							
*	JE	0003230	3/9/2017	5.50	Equitrac / Prints - 2/10/2017 - 03/09/2017		
	JE	0003230	3/9/2017	13.00	Equitrac / Prints - 2/10/2017 - 03/09/2017		
Total for 532.000				**18.50**			
Total for Reimb. Exp.				**89.66**			
Total for 000				**89.66**			
WBS2 Number: 800 Additional Services							
WBS3 Number: 802 Progress Meetings						**0.00**	**0.00**
WBS3 Number: 805 Start-up and Commissioning							
Reimbursable Expenses							
525.000 Travel							
	EX	0119875	2/22/2017	1,178.15	Abraham, Ronald		
Total for 805				**1,178.15**		**3254.95**	**4433.10**
WBS3 Number: 806 Develop Training Manuals						**2346.47**	**2346.47**
WBS3 Number: 808 Operator Training						**4441.85**	**4441.85**
WBS3 Number: 812 Contractor Changes						**0.00**	**0.00**
Total for 800				**1,178.15**		**10,043.27**	**11,221.42**
Total for 41192.00				**1,267.81**			
Scoped Services				**89.66**			

Additional Services

GS&P Invoice 0703530
Dated March 8, 2017

Time Associated with Conference Calls

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
02/10/2017	Kristi Schnell	0.50	$165.00	$82.50	-	-
				$82.50	**$2,540.00**	**$2,622.50**

Developing Training Materials

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
				-	-	-
				-	**$14,463.75**	**$14,463.75**

Expense	Current Amount	Prior Amount	To-Date Amount
Training Materials	-	$107.00	$107.00
Printing	-	$1,369.92	$1,369.92
Shipping	$869.55	-	$869.55
	$869.55	**$1,476.92**	**$2,346.47**

Operator Training

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
				-	-	-
				-	**$31,178.75**	**$31,178.75**

Expense	Current Amount	Prior Amount	To-Date Amount
Airfare for Dave Fletcher and Ben Barcinas	-	$283.96	$283.96
Hotel for Dave Fletcher and Ben Barcinas	-	$2,975.91	$2,975.91
Meals	-	$23.01	$23.01
Parking / Taxi	-	$57.05	$57.05
Rental Car / Fuel	-	$828.14	$828.14
Mileage	-	$273.78	$273.78
	-	**$4,441.85**	**$4,441.85**

Time associated with Witness Testing

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
01/31/2017	Ben Luke	1.00	$125.00	$125.00	-	-
02/01/2017	Ben Luke	2.25	$125.00	$281.25	-	-
02/03/2017	Ben Luke	0.50	$125.00	$62.50	-	-
02/08/2017	Ben Luke	0.50	$125.00	$62.50	-	-
				$531.25	**$1,450.00**	**$1,981.25**

Additional Services

GS&P Invoice 0703530
Dated March 8, 2017

Time associated with Start-up and Commissioning

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
02/14/2017	Ben Luke	1.00	$125.00	$125.00	-	$125.00
				$125.00	-	**$125.00**

Expense	Current Amount	Prior Amount	To-Date Amount
Airfare	$3,254.95	-	$3,254.95
	$3,254.95	-	**$3,254.95**

TOTAL $12,525.75 $69,235.02 $81,760.77

GRESHAM
SMITH AND
PARTNERS

Duenas, Camacho & Associates
Attn: Kenneth M. Rekdahl, Chief of Spec. Projects
238 East Marine Corps Drive
P.O. 8900
Hagatna 96910

June 8, 2017
Project No: 41192.00
Invoice No: 0706680

Project 41192.00 Agat - Santa Rita WWTP (Phase 2), GWA Project WW-08

Professional Services for the period ending May 24, 2017

Professional Personnel

	Hours	Rate	Amount	
Principal				
Baker, Kenneth	8.00	250.00	2,000.00	
Sr. Technical Specialist				
Abraham, Ronald	38.00	225.00	8,550.00	
Johnson, David	18.00	225.00	4,050.00	
Sr. Project Manager				
Stewart, Kenneth	67.00	200.00	13,400.00	
Engineer II				
Luke, Benjamin	38.00	125.00	4,750.00	
Sr. CADD				
Robertson, Michael	6.00	135.00	810.00	
Project Accountant				
Duffy, Melissa	1.00	120.00	120.00	
Administration				
Fuller, Claude	9.00	80.00	720.00	
Totals	185.00		34,400.00	
Total Labor				**34,400.00**

Reimbursable Expenses

Printing	22.86	
Travel	2,679.23	
Lodging	950.84	
Car Rental	300.00	
Telephone	50.00	
Meals	195.57	
Color Copy/Printing	117.50	
Total Reimbursables	**4,316.00**	**4,316.00**

Billing Limits	**Current**	**Prior**	**To-Date**
Total Billings	38,716.00	426,457.79	465,173.79
Limit			610,910.86
Remaining			145,737.07

Total this Invoice **$38,716.00**

If you have any questions concerning this invoice,
please contact Ken Stewart, Project Manager at 615.770.8422.

Design Services for the Built Environment

Please remit payment along with attached invoice copy to:

Gresham, Smith, and Partners / P.O. Box 440029 / Nashville, TN 37244-0029

GRESHAM
SMITH AND
PARTNERS

Duenas, Camacho & Associates
Attn: Kenneth M. Rekdahl, Chief of Spec. Projects
238 East Marine Corps Drive
P.O. 8900
Hagatna 96910

July 08, 2017
Project No: 41192.00
Invoice No: 0707927

Project 41192.00 Agat - Santa Rita WWTP (Phase 2), GWA Project WW-08

Professional Services for the period ending June 26, 2017

Professional Personnel

	Hours	Rate	Amount	
Principal				
Baker, Kenneth	18.00	250.00	4,500.00	
Sr. Technical Specialist				
Abraham, Ronald	22.00	225.00	4,950.00	
Johnson, David	10.00	225.00	2,250.00	
Sr. Project Manager				
Stewart, Kenneth	12.25	200.00	2,450.00	
Engineer II				
Luke, Benjamin	12.50	125.00	1,562.50	
Project Accountant				
Duffy, Melissa	3.00	120.00	360.00	
Administration				
Fuller, Claude	5.50	80.00	440.00	
Totals	83.25		16,512.50	
Total Labor				**16,512.50**

Reimbursable Expenses

Printing	9.72	
Color Copy/Printing	55.00	
Total Reimbursables	**64.72**	**64.72**

Billing Limits	**Current**	**Prior**	**To-Date**
Total Billings	16,577.22	465,173.79	481,751.01
Limit			610,910.86
Remaining			129,159.85

Total this Invoice **$16,577.22**

If you have any questions concerning this invoice,
please contact Ken Stewart, Project Manager at 615.770.8422.

Design Services for the Built Environment

Please remit payment along with attached invoice copy to:

Gresham, Smith, and Partners / P.O. Box 440029 / Nashville, TN 37244-0029

GRESHAM
SMITH AND
PARTNERS

Kenneth Rekdahl
Duenas, Camacho & Associates, Inc.
238 East Marine Corps Drive
P.O. 8900
Hagatna, Guam 96910

August 8, 2017
Project No: 41192.00
Invoice No: 0709185

Project 41192.00 Agat - Santa Rita WWTP (Phase 2), GWA Project WW-08

Professional Services for the period ending July 27, 2017

Professional Personnel

	Hours	Rate	Amount	
Principal				
Baker, Kenneth	12.00	250.00	3,000.00	
Sr. Technical Specialist				
Abraham, Ronald	16.00	225.00	3,600.00	
Johnson, David	4.50	225.00	1,012.50	
Sr. Project Manager				
Stewart, Kenneth	8.50	200.00	1,700.00	
Engineer II				
Luke, Benjamin	8.25	125.00	1,031.25	
Project Accountant				
Duffy, Melissa	2.00	120.00	240.00	
Administration				
Fuller, Claude	5.25	80.00	420.00	
Totals	56.50		11,003.75	
Total Labor				**11,003.75**

Reimbursable Expenses

Printing			2.80	
Office Supplies			2,594.37	
Travel			6,065.18	
Lodging			666.00	
Car Rental			162.00	
Color Copy/Printing			20.00	
Total Reimbursables			**9,510.35**	**9,510.35**

Billing Limits	**Current**	**Prior**	**To-Date**	
Total Billings	20,514.10	481,751.01	502,265.11	
Limit			610,910.86	
Remaining			108,645.75	
		Total this Invoice		**$20,514.10**

If you have any questions concerning this invoice,
please contact Ken Stewart, Project Manager at 615.770.8422.

Design Services for the Built Environment

Please remit payment along with attached invoice copy to:

Gresham, Smith, and Partners / P.O. Box 440029 / Nashville, TN 37244-0029

Project	41192.00	Guam - Agat-Santa Rita WWTP (Phase 2)	Invoice	0709185

Billing Backup

Sunday, August 6, 2017
9:12:41 PM

Gresham, Smith and Partners — Invoice 0709185 Dated 8/8/2017

Professional Personnel

			Hours	Rate	Amount
Principal					
02550	167 - Baker, Kenneth	7/6/2017	4.00	250.00	1,000.00
02550	167 - Baker, Kenneth	7/21/2017	8.00	250.00	2,000.00
Sr. Technical Specialist					
04428	140 - Abraham, Ronald	6/27/2017	4.00	225.00	900.00
04428	140 - Abraham, Ronald	7/14/2017	4.00	225.00	900.00
04428	140 - Abraham, Ronald	7/20/2017	8.00	225.00	1,800.00
04331	139 - Johnson, David	7/5/2017	2.00	225.00	450.00
	Processing/Checking Shop Drawings				
04331	139 - Johnson, David	7/14/2017	2.50	225.00	562.50
	Processing/Checking Shop Drawings				
Sr. Project Manager					
02865	139 - Stewart, Kenneth	6/27/2017	2.00	200.00	400.00
02865	139 - Stewart, Kenneth	6/28/2017	.50	200.00	100.00
02865	139 - Stewart, Kenneth	6/29/2017	1.00	200.00	200.00
02865	139 - Stewart, Kenneth	6/30/2017	.50	200.00	100.00
02865	139 - Stewart, Kenneth	7/6/2017	1.00	200.00	200.00
02865	139 - Stewart, Kenneth	7/11/2017	.50	200.00	100.00
02865	139 - Stewart, Kenneth	7/12/2017	1.25	200.00	250.00
	Invoice				
02865	139 - Stewart, Kenneth	7/19/2017	1.25	200.00	250.00
02865	139 - Stewart, Kenneth	7/20/2017	.50	200.00	100.00
	AR Review				
Engineer II					
04515	136 - Luke, Benjamin	6/27/2017	.50	125.00	62.50
	Submittal				
04515	136 - Luke, Benjamin	6/29/2017	.50	125.00	62.50
	Submittal				
04515	136 - Luke, Benjamin	7/5/2017	.50	125.00	62.50
	Submittal				
04515	136 - Luke, Benjamin	7/5/2017	3.50	125.00	437.50
	RFI				
04515	136 - Luke, Benjamin	7/6/2017	.50	125.00	62.50
	RFI				
04515	136 - Luke, Benjamin	7/12/2017	1.00	125.00	125.00
	RFI				
04515	136 - Luke, Benjamin	7/12/2017	.75	125.00	93.75
	Submittal				
04515	136 - Luke, Benjamin	7/13/2017	.50	125.00	62.50
	Submittal				
04515	136 - Luke, Benjamin	7/16/2017	.50	125.00	62.50
	Submittal				
Project Accountant					
04622	103 - Duffy, Melissa	6/30/2017	2.00	120.00	240.00
Administration					
04885	146 - Fuller, Claude	6/27/2017	.25	80.00	20.00
	Submittal Processing				
04885	146 - Fuller, Claude	6/29/2017	.50	80.00	40.00

Project	41192.00	Guam - Agat-Santa Rita WWTP (Phase 2)			Invoice	0709185
	Construction Photo Archiving					
04885	146 - Fuller, Claude	7/5/2017	.50	80.00	40.00	
	Submittal Processing					
04885	146 - Fuller, Claude	7/5/2017	.75	80.00	60.00	
	RFI Processing					
04885	146 - Fuller, Claude	7/6/2017	.25	80.00	20.00	
	RFI Processing					
04885	146 - Fuller, Claude	7/11/2017	.50	80.00	40.00	
	Submittal Processing					
04885	146 - Fuller, Claude	7/13/2017	.25	80.00	20.00	
	RFI Processing					
04885	146 - Fuller, Claude	7/13/2017	.50	80.00	40.00	
	Submittal Processing					
04885	146 - Fuller, Claude	7/14/2017	.50	80.00	40.00	
	RFI/Submittal Processing					
04885	146 - Fuller, Claude	7/15/2017	.25	80.00	20.00	
	7/10/17 Timesheet Day Adjustment					
04885	146 - Fuller, Claude	7/17/2017	.25	80.00	20.00	
	Submittal Processing					
04885	146 - Fuller, Claude	7/19/2017	.75	80.00	60.00	
	Construction Photo Archiving					
	Totals		56.50		11,003.75	
	Total Labor					**11,003.75**

Reimbursable Expenses

Printing				
JE 0007230	7/9/2017	Equitrac / Prints - 06/10/2017 - 07/09/2017	2.80	
Office Supplies				
EX 0126276	6/14/2017	Abraham, Ronald / This is for purchase of operator equipment Ultraviolet Transmittance analyzer	2,594.37	
Travel				
EX 0126273	6/23/2017	Baker, Kenneth / 2 round trip tickets to Guam for Ken Baker and Ron Abraham - Guam - UMATAC / Northern District Waste Water Treatment Plant - PHASE 2	4,059.45	
EX 0126273	7/28/2017	Baker, Kenneth / 2 round trip tickets to Guam for Ken Baker and Ron Abraham - Guam - UMATAC / Northern District Waste Water Treatment Plant - Phase 2	2,005.73	
Lodging				
EX 0126276	6/20/2017	Abraham, Ronald / Waste water treatment plant - start-up	666.00	
Car Rental				
EX 0126276	6/23/2017	Abraham, Ronald / Guam Water Authority - Operator Training	162.00	
Color Copy/Printing				
JE 0007230	7/9/2017	Equitrac / Prints - 06/10/2017 - 07/09/2017	5.00	
JE 0007230	7/9/2017	Equitrac / Prints - 06/10/2017 - 07/09/2017	15.00	
	Total Reimbursables		**9,510.35**	**9,510.35**
		Total this Project		**$20,514.10**
		Total this Report		**$20,514.10**

Design Services for the Built Environment

Please remit payment along with attached invoice copy to:

Gresham, Smith, and Partners / P.O. Box 440029 / Nashville, TN 37244-0029

Job-To-Date Summary

Gresham, Smith and Partners

Transactions for 6/27/2017 through 7/27/2017

		Current Amount	Prior Amount	To-Date Amount	Amount Remaining
Project Number: 41192.00 Guam - Agat-Santa Rita WWTP					
	Scoped Services	**$5,326.55**	**$279,629.75**	**$284,956.30**	
	Additional Services				
	Labor	**$5,700.00**	**$171,066.25**	**$176,766.25**	
	Expenses	**$9,487.55**	**$31,055.01**	**$40,542.56**	
	Total Additional Services	**$15,187.55**	**$202,121.26**	**$217,308.81**	
	Total Services	**$20,514.10**	**$481,751.01**	**$502,265.11**	**$108,645.75**
Total for 41192.00		**$20,514.10**	**$481,751.01**	**$502,265.11**	**$108,645.75**

Labor Detail

Monday, August 07, 2017
3:22:57 PM

Gresham, Smith and Partners

Transactions for 6/27/2017 through 7/27/2017

						Additional Services	
		Date	Total Hours	Billing Rate	Total Billing	Prior Amount	To Date Amount
Project Number: 41192.00 Guam - Agat-Santa Rita WWTP (Phase 2)							
WBS2 Number: 300 Shop Drawings/Submittals							
04331	Johnson, David	7/5/2017	2.00	225.00	450.00		
04331	Johnson, David	7/14/2017	2.50	225.00	562.50		
04515	Luke, Benjamin	6/27/2017	.50	125.00	62.50		
04515	Luke, Benjamin	6/29/2017	.50	125.00	62.50		
04515	Luke, Benjamin	7/5/2017	.50	125.00	62.50		
04515	Luke, Benjamin	7/12/2017	.75	125.00	93.75		
04515	Luke, Benjamin	7/13/2017	.50	125.00	62.50		
04515	Luke, Benjamin	7/16/2017	.50	125.00	62.50		
04885	Fuller, Claude	6/27/2017	.25	80.00	20.00		
04885	Fuller, Claude	6/29/2017	.50	80.00	40.00		
04885	Fuller, Claude	7/5/2017	.50	80.00	40.00		
04885	Fuller, Claude	7/11/2017	.50	80.00	40.00		
04885	Fuller, Claude	7/13/2017	.50	80.00	40.00		
04885	Fuller, Claude	7/14/2017	.50	80.00	40.00		
04885	Fuller, Claude	7/17/2017	.25	80.00	20.00		
04885	Fuller, Claude	7/19/2017	.75	80.00	60.00		
Total for 300			**11.50**		**1,718.75**		
WBS2 Number: 400 Requests for Information (RFI)							
04428	Abraham, Ronald	6/27/2017	4.00	225.00	900.00		
04515	Luke, Benjamin	7/5/2017	3.50	125.00	437.50		
04515	Luke, Benjamin	7/6/2017	.50	125.00	62.50		
04515	Luke, Benjamin	7/12/2017	1.00	125.00	125.00		
04885	Fuller, Claude	7/5/2017	.75	80.00	60.00		
04885	Fuller, Claude	7/6/2017	.25	80.00	20.00		
04885	Fuller, Claude	7/13/2017	.25	80.00	20.00		
04885	Fuller, Claude	7/15/2017	.25	80.00	20.00		
Total for 400			**10.50**		**1,645.00**		
WBS2 Number: 700 Project Management							
02865	Stewart, Kenneth	6/27/2017	2.00	200.00	400.00		
02865	Stewart, Kenneth	6/28/2017	.50	200.00	100.00		
02865	Stewart, Kenneth	6/29/2017	1.00	200.00	200.00		
02865	Stewart, Kenneth	6/30/2017	.50	200.00	100.00		
02865	Stewart, Kenneth	7/6/2017	1.00	200.00	200.00		
02865	Stewart, Kenneth	7/11/2017	.50	200.00	100.00		

ATTACHMENT 3D

		Date	Total Hours	Billing Rate	Total Billing	Prior Amount	To Date Amount
02865	Stewart, Kenneth	7/12/2017	1.25	200.00	250.00		
02865	Stewart, Kenneth	7/19/2017	1.25	200.00	250.00		
02865	Stewart, Kenneth	7/20/2017	.50	200.00	100.00		
04622	Duffy, Melissa	6/30/2017	2.00	120.00	240.00		
Total for 700			**10.50**		**1,940.00**		
WBS2 Number: 800 Additional Services							
WBS3 Number: 801 Major Mileston Meetings/Site Visits						**1,800.00**	**1,800.00**
WBS3 Number: 802 Progress Meetings						**3,522.50**	**3,522.50**
WBS3 Number: 804 Equipment Witness Testing						**11,562.50**	**11,562.50**
WBS3 Number: 805 Start-up and Commissioning						**59,245.00**	**59,245.00**
WBS3 Number: 806 Develop Training Manuals							
04428	Abraham, Ronald	7/14/2017	4.00	225.00	900.00		
04428	Abraham, Ronald	7/20/2017	8.00	225.00	1,800.00		
Total for 806			**12.00**		**2,700.00**	**14,643.75**	**17,343.75**
WBS3 Number: 808 Operator Training							
02550	Baker, Kenneth	7/6/2017	4.00	250.00	1,000.00		
02550	Baker, Kenneth	7/21/2017	8.00	250.00	2,000.00		
Total for 808			**12.00**		**3,000.00**	**42,141.25**	**45,141.25**
Total for 812						**32,297.50**	**32,297.50**
Total for 800			**24.00**		**5,700.00**	**165,212.50**	**170,912.50**
Total Additional Services					**5,700.00**	**171,066.25**	**176,766.25**
Total for 41192.00			**56.50**		**11,003.75**		
Scoped Services					**5,303.75**		

Expense Detail

Tuesday, August 08, 2017
1:47:53 PM

Gresham, Smith and Partners - Final-All

Transactions for 6/14/2017 through 7/28/2017

	Trans Type	Reference Number	Date	Billing Amount	Full Description
41192.00 Guam - Agat-Santa Rita WWTP (Phase 2)					
WBS2 Number: 000 NOT FOR TIMESHEET USE					
Reimbursable Expenses					
521.000 Printing					
*	JE	0007230	7/9/17	2.80	Equitrac / Prints - 06/10/2017 -
532.000 Color Copy/Printing					
*	JE	0007230	7/9/17	15.00	Equitrac / Prints - 06/10/2017 -
	JE	0007230	7/9/17	5.00	Equitrac / Prints - 06/10/2017 -
Total for 532.000				**20.00**	
Total for Reimb. Exp.				**22.80**	
Total for 000				**22.80**	
WBS2 Number: 800 Additional Services					
WBS3 Number: 801 Major Milestone Meetings/Site Visits					
Total for 801					
WBS3 Number: 802 Progress Meetings					
Total for 802					
WBS3 Number: 803 Technical Memorandums					
Total for 803					
WBS3 Number: 804 Equipment Witness Testing					
Total for 804					
WBS3 Number: 805 Start-up and Commissioning					
Total for 805					
WBS3 Number: 806 Develop Training Manuals					
Total for 806					
WBS3 Number: 807 Laboratory Testing					
Total for 807					
WBS3 Number: 808 Operator Training					
Reimbursable Expenses					
522.000 Office Supplies					
	EX	0126276	6/14/17	2,594.37	Abraham, Ronald
525.000 Travel					
	EX	0126273	6/23/17	4,059.45	Baker, Kenneth
	EX	0126273	7/28/17	2,005.73	Baker, Kenneth
Total for 525.000				**6,065.18**	
525.020 Lodging					
	EX	0126276	6/20/17	666.00	Abraham, Ronald
525.030 Car Rental					
	EX	0126276	6/23/17	162.00	Abraham, Ronald
Total for Reimb. Exp.					
Total for 808				**9,487.55**	
WBS3 Number: 809 I&C Training					
Total for 809					
WBS3 Number: 810 Vendor O&M Manuals					
Total for 810					

	Trans Type	Reference Number	Date	Billing Amount	Full Description
WBS3 Number: 811 Standard Operating Procedures					
Total for 811					
WBS3 Number: 812 Contractor Changes					
Total for 812					
Total for 800				**9,487.55**	
Total for 41192.00				**9,510.35**	
Scoped Services				**22.80**	

Project	41192.00	Guam - Agat-Santa Rita WWTP (Phase 2)	Invoice	0707927

Billing Backup

Wednesday, July 05, 2017
9:00:52 AM

Gresham, Smith and Partners — Invoice 0707927 Dated 7/8/2017

Professional Personnel

			Hours	Rate	Amount
Principal					
02550	167 - Baker, Kenneth	5/26/2017	2.00	250.00	500.00
02550	167 - Baker, Kenneth	5/30/2017	1.00	250.00	250.00
02550	167 - Baker, Kenneth	6/15/2017	8.00	250.00	2,000.00
02550	167 - Baker, Kenneth	6/22/2017	5.00	250.00	1,250.00
02550	167 - Baker, Kenneth	6/23/2017	2.00	250.00	500.00
Sr. Technical Specialist					
04428	140 - Abraham, Ronald	6/1/2017	4.00	225.00	900.00
04428	140 - Abraham, Ronald	6/2/2017	4.00	225.00	900.00
04428	140 - Abraham, Ronald	6/2/2017	4.00	225.00	900.00
	Thickening control modifications				
04428	140 - Abraham, Ronald	6/9/2017	2.00	225.00	450.00
	UVT Agat and				
04428	140 - Abraham, Ronald	6/15/2017	4.00	225.00	900.00
04428	140 - Abraham, Ronald	6/22/2017	4.00	225.00	900.00
04331	139 - Johnson, David	5/25/2017	1.00	225.00	225.00
	Processing/Checking Shop Drawings				
04331	139 - Johnson, David	6/9/2017	3.00	225.00	675.00
	Processing/Checking Shop Drawings				
04331	139 - Johnson, David	6/14/2017	2.00	225.00	450.00
	Processing/Checking Shop Drawings				
04331	139 - Johnson, David	6/26/2017	4.00	225.00	900.00
	Processing/Checking Shop Drawings				
Sr. Project Manager					
02865	139 - Stewart, Kenneth	5/30/2017	1.00	200.00	200.00
02865	139 - Stewart, Kenneth	5/31/2017	1.00	200.00	200.00
02865	139 - Stewart, Kenneth	6/1/2017	1.00	200.00	200.00
02865	139 - Stewart, Kenneth	6/2/2017	1.00	200.00	200.00
02865	139 - Stewart, Kenneth	6/5/2017	1.00	200.00	200.00
02865	139 - Stewart, Kenneth	6/8/2017	1.00	200.00	200.00
02865	139 - Stewart, Kenneth	6/13/2017	2.00	200.00	400.00
	Invoice and back-up				
02865	139 - Stewart, Kenneth	6/14/2017	2.00	200.00	400.00
	Invoice and back-up				
02865	139 - Stewart, Kenneth	6/20/2017	.50	200.00	100.00
02865	139 - Stewart, Kenneth	6/21/2017	.50	200.00	100.00
02865	139 - Stewart, Kenneth	6/22/2017	1.00	200.00	200.00
02865	139 - Stewart, Kenneth	6/26/2017	.25	200.00	50.00
Engineer II					
04515	136 - Luke, Benjamin	5/28/2017	1.00	125.00	125.00
	RFI				
04515	136 - Luke, Benjamin	5/30/2017	1.00	125.00	125.00
	Submittal				
04515	136 - Luke, Benjamin	6/1/2017	.50	125.00	62.50
	Contractor Changes				
04515	136 - Luke, Benjamin	6/5/2017	4.00	125.00	500.00
	Submittal				
04515	136 - Luke, Benjamin	6/8/2017	1.00	125.00	125.00
	Submittals				

Design Services for the Built Environment

Please remit payment along with attached invoice copy to:

Gresham, Smith, and Partners / P.O. Box 440029 / Nashville, TN 37244-0029

Project	41192.00	Guam - Agat-Santa Rita WWTP (Phase 2)			Invoice	0707927
04515	136 - Luke, Benjamin	6/9/2017	1.00	125.00	125.00	
	Submittals					
04515	136 - Luke, Benjamin	6/12/2017	.50	125.00	62.50	
	Submittal					
04515	136 - Luke, Benjamin	6/13/2017	1.00	125.00	125.00	
	Submittal					
04515	136 - Luke, Benjamin	6/14/2017	2.00	125.00	250.00	
	Submittals					
04515	136 - Luke, Benjamin	6/19/2017	.50	125.00	62.50	
	RFI					
Project Accountant						
04622	103 - Duffy, Melissa	5/30/2017	2.00	120.00	240.00	
04622	103 - Duffy, Melissa	6/1/2017	1.00	120.00	120.00	
	Project Review/AR Review					
Administration						
04885	146 - Fuller, Claude	5/25/2017	.50	80.00	40.00	
	Submittal Processing					
04885	146 - Fuller, Claude	5/30/2017	.25	80.00	20.00	
	RFI/Submittal Processing					
04885	146 - Fuller, Claude	6/3/2017	.25	80.00	20.00	
	Submittal Processing					
04885	146 - Fuller, Claude	6/5/2017	.25	80.00	20.00	
	Submittal Processing					
04885	146 - Fuller, Claude	6/8/2017	1.00	80.00	80.00	
	Submittal Processing + Construction Photo Archiving					
04885	146 - Fuller, Claude	6/9/2017	.75	80.00	60.00	
	Submittal Processing					
04885	146 - Fuller, Claude	6/12/2017	.25	80.00	20.00	
	Submittal Processing					
04885	146 - Fuller, Claude	6/13/2017	.50	80.00	40.00	
	Submittal Processing					
04885	146 - Fuller, Claude	6/14/2017	.25	80.00	20.00	
	Submittal Processing					
04885	146 - Fuller, Claude	6/19/2017	.25	80.00	20.00	
	RFI Processing					
04885	146 - Fuller, Claude	6/21/2017	.50	80.00	40.00	
	Submittal Processing + Construction Photo Archiving					
04885	146 - Fuller, Claude	6/26/2017	.75	80.00	60.00	
	Submittal Processing					
	Totals		83.25		16,512.50	
	Total Labor					**16,512.50**

Reimbursable Expenses

Printing				
JE 0006230	6/9/2017	Equitrac / Prints - 5/10/2017 - 06/09/2017	9.72	
Color Copy/Printing				
JE 0006230	6/9/2017	Equitrac / Prints - 5/10/2017 - 06/09/2017	55.00	
	Total Reimbursables		**64.72**	**64.72**
		Total this Project		**$16,577.22**
		Total this Report		**$16,577.22**

Design Services for the Built Environment

Please remit payment along with attached invoice copy to:

Gresham, Smith, and Partners / P.O. Box 440029 / Nashville, TN 37244-0029

Job-To-Date Summary

Gresham, Smith and Partners

Transactions for 5/25/2017 through 6/26/2017

		Current Amount	Prior Amount	To-Date Amount	Amount Remaining
Project Number: 41192.00 Guam - Agat-Santa Rita WWTP (Phase 2)					
	Scoped Services	**$8,864.72**	**$270,765.03**	**$279,629.75**	
	Additional Services				
	Labor	**$7,712.50**	**$163,353.75**	**$171,066.25**	
	Expenses	**$0.00**	**$31,055.01**	**$31,055.01**	
	Total Additional Services	**$7,712.50**	**$194,408.76**	**$202,121.26**	
	Total Services	**$16,577.22**	**$465,173.79**	**$481,751.01**	**$129,159.85**
Total for 41192.00		**$16,577.22**	**$465,173.79**	**$481,751.01**	**$129,159.85**

Labor Detail

Thursday, July 13, 2017
1:14:10 PM

Gresham, Smith and Partners

Transactions for 5/25/2017 through 6/26/2017

						Additional Services	
		Date	Total Hours	Billing Rate	Total Billing	Prior Amount	To Date Amount
Project Number: 41192.00 Guam - Agat-Santa Rita WWTP (Phase 2)							
WBS2 Number: 300 Shop Drawings/Submittals							
04331	Johnson, David	5/25/2017	1.00	225.00	225.00		
04331	Johnson, David	6/9/2017	3.00	225.00	675.00		
04331	Johnson, David	6/14/2017	2.00	225.00	450.00		
04331	Johnson, David	6/26/2017	4.00	225.00	900.00		
04428	Abraham, Ronald	6/2/2017	4.00	225.00	900.00		
04515	Luke, Benjamin	5/30/2017	1.00	125.00	125.00		
04515	Luke, Benjamin	6/5/2017	4.00	125.00	500.00		
04515	Luke, Benjamin	6/8/2017	1.00	125.00	125.00		
04515	Luke, Benjamin	6/9/2017	1.00	125.00	125.00		
04515	Luke, Benjamin	6/12/2017	.50	125.00	62.50		
04515	Luke, Benjamin	6/13/2017	1.00	125.00	125.00		
04515	Luke, Benjamin	6/14/2017	2.00	125.00	250.00		
04885	Fuller, Claude	5/25/2017	.50	80.00	40.00		
04885	Fuller, Claude	5/30/2017	.25	80.00	20.00		
04885	Fuller, Claude	6/3/2017	.25	80.00	20.00		
04885	Fuller, Claude	6/5/2017	.25	80.00	20.00		
04885	Fuller, Claude	6/8/2017	1.00	80.00	80.00		
04885	Fuller, Claude	6/9/2017	.75	80.00	60.00		
04885	Fuller, Claude	6/12/2017	.25	80.00	20.00		
04885	Fuller, Claude	6/13/2017	.50	80.00	40.00		
04885	Fuller, Claude	6/14/2017	.25	80.00	20.00		
04885	Fuller, Claude	6/21/2017	.50	80.00	40.00		
04885	Fuller, Claude	6/26/2017	.75	80.00	60.00		
Total for 300			**29.75**		**4,882.50**		
WBS2 Number: 400 Requests for Information (RFI)							
04428	Abraham, Ronald	6/1/2017	4.00	225.00	900.00		
04515	Luke, Benjamin	5/28/2017	1.00	125.00	125.00		
04515	Luke, Benjamin	6/19/2017	.50	125.00	62.50		
04885	Fuller, Claude	6/19/2017	.25	80.00	20.00		
Total for 400			**5.75**		**1,107.50**		
WBS2 Number: 700 Project Management							
02865	Stewart, Kenneth	5/30/2017	1.00	200.00	200.00		
02865	Stewart, Kenneth	5/31/2017	1.00	200.00	200.00		
02865	Stewart, Kenneth	6/1/2017	1.00	200.00	200.00		
02865	Stewart, Kenneth	6/2/2017	1.00	200.00	200.00		
02865	Stewart, Kenneth	6/5/2017	1.00	200.00	200.00		
02865	Stewart, Kenneth	6/8/2017	1.00	200.00	200.00		

		Date	Total Hours	Billing Rate	Total Billing	Prior Amount	To Date Amount
02865	Stewart, Kenneth	6/13/2017	2.00	200.00	400.00		
02865	Stewart, Kenneth	6/14/2017	2.00	200.00	400.00		
02865	Stewart, Kenneth	6/20/2017	.50	200.00	100.00		
02865	Stewart, Kenneth	6/21/2017	.50	200.00	100.00		
02865	Stewart, Kenneth	6/22/2017	1.00	200.00	200.00		
02865	Stewart, Kenneth	6/26/2017	.25	200.00	50.00		
04622	Duffy, Melissa	5/30/2017	2.00	120.00	240.00		
04622	Duffy, Melissa	6/1/2017	1.00	120.00	120.00		
Total for 700			**15.25**		**2,810.00**		
WBS2 Number: 800 Additional Services							
WBS3 Number: 801 Major Milestone Meetings/Site Visits						**1,800.00**	**1,800.00**
WBS3 Number: 802 Progress Meetings						**3,522.50**	**3,522.50**
WBS3 Number: 804 Equipment Witness Testing						**11,562.50**	**11,562.50**
WBS3 Number: 805 Start-up and Commissioning							
02550	Baker, Kenneth	5/26/2017	2.00	250.00	500.00		
02550	Baker, Kenneth	5/30/2017	1.00	250.00	250.00		
Total for 805			**3.00**		**750.00**	**58,495.00**	**59,245.00**
WBS3 Number: 806 Develop Training Manuals						**14,643.75**	**14,643.75**
WBS3 Number: 808 Operator Training							
02550	Baker, Kenneth	6/15/2017	8.00	250.00	2,000.00		
02550	Baker, Kenneth	6/22/2017	5.00	250.00	1,250.00		
02550	Baker, Kenneth	6/23/2017	2.00	250.00	500.00		
04428	Abraham, Ronald	6/15/2017	4.00	225.00	900.00		
04428	Abraham, Ronald	6/22/2017	4.00	225.00	900.00		
Total for 808			**23.00**		**5,550.00**	**36,591.25**	**42,141.25**
WBS3 Number: 812 Contractor Changes							
04428	Abraham, Ronald	6/2/2017	4.00	225.00	900.00		
04428	Abraham, Ronald	6/9/2017	2.00	225.00	450.00		
04515	Luke, Benjamin	6/1/2017	.50	125.00	62.50		
Total for 812			**6.50**		**1,412.50**	**30,885.00**	**32,297.50**
Total for 800			**32.50**		**7,712.50**	**157,500.00**	**165,212.50**
Total Additional Services					**7,712.50**	**163,353.75**	**171,066.25**
Total for 41192.00			**83.25**		**16,512.50**		
Scoped Services					**8,800.00**		

Expense Detail

Thursday, July 13, 2017
1:58:47 PM

Gresham, Smith and Partners

Transactions for 5/25/2017 through 6/26/2017

Trans Type	Reference Number	Date	Billing Amount	Full Description
Project Number: 41192.00 Guam - Agat-Santa Rita WWTP (Phase 2)				
WBS2 Number: 000 NOT FOR TIMESHEET USE				
Reimbursable Expenses				
521.000 Printing				
JE	0006230	6/9/2017	9.72	Equitrac / Prints - 5/10/2017 - 06/09/2017
532.000 Color Copy/Printing				
JE	0006230	6/9/2017	55.00	Equitrac / Prints - 5/10/2017 - 06/09/2017
Total for Reimb. Exp.			**64.72**	
Total for 000			**64.72**	
WBS2 Number: 800 Additional Services				
Total for 800			**0.00**	
Total for 41192.00			**64.72**	
Scoped Services			**64.72**	

Job-To-Date Summary

Gresham, Smith and Partners

Transactions for 4/26/2017 through 5/24/2017

		Current Amount	Prior Amount	To-Date Amount	Amount Remaining
Project Number: 41192.00 Guam - Agat-Santa Rita WWTP (Phase 2)					
	Scoped Services	**$17,652.86**	**$253,112.17**	**$270,765.03**	
	Additional Services				
	Labor	**$16,887.50**	**$146,466.25**	**$163,353.75**	
	Expenses	**$4,175.64**	**$26,879.37**	**$31,055.01**	
	Total Additional Services	**$21,063.14**	**$173,345.62**	**$194,408.76**	
	Total Services	**$38,716.00**	**$426,457.79**	**$465,173.79**	**$145,737.07**
Total for 41192.00		**$38,716.00**	**$426,457.79**	**$465,173.79**	**$145,737.07**

Labor Detail

Tuesday, June 13, 2017
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Gresham, Smith and Partners

Transactions for 4/26/2017 through 5/24/2017

						Additional Services	
		Date	Total Hours	Billing Rate	Regular Billing	Prior Amount	To Date Amount
41192.00 Guam - Agat-Santa Rita WWTP (Phase 2)							
WBS2 Number: 200 Meetings							
WBS3 Number: 202 Internal Progress Meetings							
04515	Luke, Benjamin	5/3/2017	.50	125.00	62.50		
Total for 202			**.50**		**62.50**		
Total for 200			**.50**		**62.50**		
WBS2 Number: 300 Shop Drawings/Submittals							
04331	Johnson, David	4/27/2017	2.00	225.00	450.00		
04331	Johnson, David	5/4/2017	4.00	225.00	900.00		
04331	Johnson, David	5/9/2017	4.00	225.00	900.00		
04428	Abraham, Ronald	4/28/2017	4.00	225.00	900.00		
04515	Luke, Benjamin	4/27/2017	1.00	125.00	125.00		
04515	Luke, Benjamin	5/2/2017	1.50	125.00	187.50		
04515	Luke, Benjamin	5/3/2017	1.50	125.00	187.50		
04515	Luke, Benjamin	5/4/2017	.50	125.00	62.50		
04515	Luke, Benjamin	5/15/2017	2.00	125.00	250.00		
04515	Luke, Benjamin	5/16/2017	6.50	125.00	812.50		
04515	Luke, Benjamin	5/17/2017	2.25	125.00	281.25		
04515	Luke, Benjamin	5/22/2017	2.00	125.00	250.00		
04885	Fuller, Claude	4/26/2017	.25	80.00	20.00		
04885	Fuller, Claude	4/27/2017	.50	80.00	40.00		
04885	Fuller, Claude	4/29/2017	.25	80.00	20.00		
04885	Fuller, Claude	5/1/2017	.25	80.00	20.00		
04885	Fuller, Claude	5/2/2017	.50	80.00	40.00		
04885	Fuller, Claude	5/3/2017	1.00	80.00	80.00		
04885	Fuller, Claude	5/4/2017	1.00	80.00	80.00		
04885	Fuller, Claude	5/5/2017	.25	80.00	20.00		
04885	Fuller, Claude	5/9/2017	1.00	80.00	80.00		
04885	Fuller, Claude	5/12/2017	.75	80.00	60.00		
04885	Fuller, Claude	5/16/2017	.50	80.00	40.00		
04885	Fuller, Claude	5/17/2017	.25	80.00	20.00		
04885	Fuller, Claude	5/22/2017	.50	80.00	40.00		
04885	Fuller, Claude	5/24/2017	.25	80.00	20.00		
Total for 300			**38.50**		**5,886.25**		
WBS2 Number: 400 Requests for Information (RFI)							
04323	Robertson, Michael	5/22/2017	2.00	135.00	270.00		
04323	Robertson, Michael	5/23/2017	2.00	135.00	270.00		
04323	Robertson, Michael	5/24/2017	2.00	135.00	270.00		
04428	Abraham, Ronald	4/28/2017	2.00	225.00	450.00		

		Date	Total Hours	Billing Rate	Regular Billing	Prior Amount	To Date Amount
04428	Abraham, Ronald	5/3/2017	8.00	225.00	1,800.00		
04428	Abraham, Ronald	5/12/2017	2.00	225.00	450.00		
04428	Abraham, Ronald	5/16/2017	4.00	225.00	900.00		
04428	Abraham, Ronald	5/17/2017	2.00	225.00	450.00		
04515	Luke, Benjamin	4/26/2017	1.00	125.00	125.00		
04515	Luke, Benjamin	4/27/2017	.75	125.00	93.75		
04515	Luke, Benjamin	5/5/2017	.50	125.00	62.50		
04515	Luke, Benjamin	5/15/2017	6.00	125.00	750.00		
04515	Luke, Benjamin	5/16/2017	1.00	125.00	125.00		
04515	Luke, Benjamin	5/17/2017	1.50	125.00	187.50		
04515	Luke, Benjamin	5/22/2017	2.00	125.00	250.00		
04515	Luke, Benjamin	5/23/2017	2.00	125.00	250.00		
04885	Fuller, Claude	4/27/2017	.50	80.00	40.00		
04885	Fuller, Claude	5/5/2017	.25	80.00	20.00		
04885	Fuller, Claude	5/15/2017	.75	80.00	60.00		
04885	Fuller, Claude	5/22/2017	.25	80.00	20.00		
Total for 400			**40.50**		**6,843.75**		
WBS2 Number: 700 Project Management							
02865	Stewart, Kenneth	4/26/2017	1.00	200.00	200.00		
02865	Stewart, Kenneth	4/28/2017	2.00	200.00	400.00		
02865	Stewart, Kenneth	5/1/2017	6.00	200.00	1,200.00		
02865	Stewart, Kenneth	5/3/2017	2.00	200.00	400.00		
02865	Stewart, Kenneth	5/4/2017	2.00	200.00	400.00		
02865	Stewart, Kenneth	5/5/2017	5.00	200.00	1,000.00		
02865	Stewart, Kenneth	5/15/2017	2.00	200.00	400.00		
02865	Stewart, Kenneth	5/17/2017	.50	200.00	100.00		
02865	Stewart, Kenneth	5/22/2017	2.00	200.00	400.00		
02865	Stewart, Kenneth	5/23/2017	.50	200.00	100.00		
04622	Duffy, Melissa	4/27/2017	1.00	120.00	120.00		
Total for 700			**24.00**		**4,720.00**		
WBS2 Number: 800 Additional Services							
WBS3 Number: 801 Major Milestone Meetings/Site Visits						**1,800.00**	**1,800.00**
WBS3 Number: 802 Progress Meetings						**3,522.50**	**3,522.50**
WBS3 Number: 804 Equipment Witness Testing							
02865	Stewart, Kenneth	4/26/2017	1.00	200.00	200.00		
02865	Stewart, Kenneth	4/28/2017	1.00	200.00	200.00		
02865	Stewart, Kenneth	5/4/2017	1.00	200.00	200.00		
02865	Stewart, Kenneth	5/5/2017	1.00	200.00	200.00		
02865	Stewart, Kenneth	5/8/2017	8.00	200.00	1,600.00		
02865	Stewart, Kenneth	5/9/2017	8.00	200.00	1,600.00		
02865	Stewart, Kenneth	5/10/2017	8.00	200.00	1,600.00		
02865	Stewart, Kenneth	5/11/2017	8.00	200.00	1,600.00		
02865	Stewart, Kenneth	5/12/2017	8.00	200.00	1,600.00		
04515	Luke, Benjamin	5/4/2017	2.00	125.00	250.00		
Total for 804			**46.00**		**9,050.00**	**2,512.50**	**11,562.50**
WBS3 Number: 805 Start-up and Commissioning							

		Date	Total Hours	Billing Rate	Regular Billing	Prior Amount	To Date Amount
02550	Baker, Kenneth	4/27/2017	2.00	250.00	500.00		
02550	Baker, Kenneth	5/3/2017	6.00	250.00	1,500.00		
Total for 805			**8.00**		**2,000.00**	**56,495.00**	**58,495.00**
WBS3 Number: 806 Develop Training Manuals						**14,643.75**	**14,643.75**
WBS3 Number: 808 Operator Training						**36,591.25**	**36,591.25**
WBS3 Number: 812 Contractor Changes							
04331	Johnson, David	5/16/2017	4.00	225.00	900.00		
04331	Johnson, David	5/24/2017	4.00	225.00	900.00		
04428	Abraham, Ronald	5/2/2017	8.00	225.00	1,800.00		
04428	Abraham, Ronald	5/12/2017	4.00	225.00	900.00		
04428	Abraham, Ronald	5/18/2017	4.00	225.00	900.00		
04515	Luke, Benjamin	5/24/2017	2.00	125.00	250.00		
Total for 812			**26.00**		**5,650.00**	**25,235.00**	**30,885.00**
Total for 800			**80.00**		**16,700.00**	**140,800.00**	**157,500.00**
WBS2 Number: 900 Mechanical Submittals							
04515	Luke, Benjamin	4/26/2017	1.50	125.00	187.50		
Total for 900			**1.50**		**187.50**	**5,666.25**	**5,853.75**
Total Additional Services					**16,887.50**	**146,466.25**	**163,353.75**
Total for 41192.00			**185.00**		**34,400.00**		
Scoped Services					**17,512.5**		

Expense Detail

Tuesday, June 13, 2017
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Gresham, Smith and Partners

Transactions for 4/26/2017 through 5/24/2017

	Trans Type	Reference Number	Date	Billing Amount	Full Description
Project Number: 41192.00 Guam - Agat-Santa Rita WWTP (Phase 2)					
WBS2 Number: 000 NOT FOR TIMESHEET USE					
Reimbursable Expenses					
521.000 Printing					
	JE	0005230	5/9/17	4.74	Equitrac / Prints - 4/10/2017 - 05/09/2017
*	JE	0005230	5/9/17	18.12	Equitrac / Prints - 4/10/2017 - 05/09/2017
Total for 521.000				**22.86**	
532.000 Color Copy/Printing					
*	JE	0005230	5/9/17	97.50	Equitrac / Prints - 4/10/2017 - 05/09/2017
	JE	0005230	5/9/17	20.00	Equitrac / Prints - 4/10/2017 - 05/09/2017
Total for 532.000				**117.50**	
Total for Reimb. Exp.				**140.36**	
Total for 000				**140.36**	
WBS2 Number: 100 Addendums					
Total for 100					
WBS2 Number: 200 Meetings					
WBS3 Number: 201 Construction Kickoff Meeting					
Total for 201					
WBS3 Number: 202 Internal Progress Meetings					
Total for 202					
Total for 200					
WBS2 Number: 300 Shop Drawings/Submittals					
Total for 300					
WBS2 Number: 400 Requests for Information (RFI)					
Total for 400					
WBS2 Number: 500 O&M Manuals					
Total for 500					
WBS2 Number: 600 Record Drawings					
Total for 600					
WBS2 Number: 700 Project Management					
Total for 700					
WBS2 Number: 800 Additional Services					
WBS3 Number: 801 Major Milestone Meetings/Site Visits					
Total for 801					
WBS3 Number: 802 Progress Meetings					
Total for 802					
WBS3 Number: 803 Technical Memorandums					
Total for 803					
WBS3 Number: 804 Equipment Witness Testing					
Reimbursable Expenses					
525.000 Travel					
	EX	0122976	4/26/17	2,650.23	Stewart, Kenneth
	EX	0122976	4/26/17	29.00	Stewart, Kenneth
Total for 525.000				**2,679.23**	
525.020 Lodging					
	EX	0123809	5/11/17	408.52	Stewart, Kenneth / Erlangen, Germany - Witness Test

	Trans Type	Reference Number	Date	Billing Amount	Full Description
Total for 525.020				**408.52**	
528.000 Meals					
	EX	0123809	5/11/17	7.61	Stewart, Kenneth / Erlangen, Germany - Witness Test
	EX	0123809	5/12/17	34.23	Stewart, Kenneth / Erlangen Germany - Witness Test
Total for 528.000				**41.84**	
Total for Reimb. Exp.				**3,129.59**	
Total for 804				**3,129.59**	
WBS3 Number: 805 Start-up and Commissioning					
Reimbursable Expenses					
525.020 Lodging					
	EX	0122980	4/21/17	271.16	Abraham, Ronald
Total for 525.020				**271.16**	
525.030 Car Rental					
	EX	0122980	4/22/17	150.00	Abraham, Ronald
Total for 525.030				**150.00**	
527.000 Telephone					
	EX	0122983	4/8/17	50.00	Luke, Benjamin / International Phone Passport
Total for 527.000				**50.00**	
528.000 Meals					
	EX	0122980	4/19/17	19.47	Abraham, Ronald
	EX	0122980	4/20/17	86.99	Abraham, Ronald
	EX	0122980	4/21/17	7.27	Abraham, Ronald
Total for 528.000				**113.73**	
Total for Reimb. Exp.				**584.89**	
Total for 805				**584.89**	
WBS3 Number: 806 Develop Training Manuals					
Total for 806					
WBS3 Number: 807 Laboratory Testing					
Total for 807					
WBS3 Number: 808 Operator Training					
Reimbursable Expenses					
525.020 Lodging					
	EX	0122980	4/21/17	271.16	Abraham, Ronald
Total for 525.020				**271.16**	
525.030 Car Rental					
	EX	0122980	4/22/17	150.00	Abraham, Ronald
Total for 525.030				**150.00**	
528.000 Meals					
	EX	0122980	4/21/17	40.00	Abraham, Ronald
Total for 528.000				**40.00**	
Total for Reimb. Exp.				**461.16**	
Total for 808				**461.16**	
WBS3 Number: 809 I&C Training					
Total for 809					
WBS3 Number: 810 Vendor O&M Manuals					
Total for 810					
WBS3 Number: 811 Standard Operating Procedures					
Total for 811					
WBS3 Number: 812 Contractor Changes					
Total for 812					

	Trans Type	Reference Number	Date	Billing Amount	Full Description
Total for 800				4,175.64	
WBS2 Number: 900 Mechanical Submittals					
Total for 900					
Total for 41192.00				4,316.00	
Scoped Services				140.36	

ATTACHMENT 4

From: **Luke, Ben** ben_luke@gspnet.com
Subject: RE: Lab Equipment
Date: August 5, 2017 at 5:28 AM
To: Ken Rekdahl kmrekdahl@dcaguam.com
Cc: Abraham, Ron ron_abraham@gspnet.com, Ogg, Jason jason_ogg@gspnet.com, Stewart, Ken ken_stewart@gspnet.com, Baker, Ken ken_baker@gspnet.com

Ken R.,

Below is a summary of the lab equipment required to carry out the WW characterization for Northern District. I have omitted everyday items such as glass fiber filters, glassware, etc. with the belief that these can be acquired from GWA's stock. The big purchases are the spectrophotometer and the digital reactor (data sheets attached) which will be turned over to the Agat lab following completion of the characterization. The test kits detailed below will likely be exhausted during the WW characterization. Prices are preliminary and do not include taxes or shipping.

HACH EQUIPMENT TO BUY

Equipment	Quantity Required	Unit Price	Total Price
DR6000 Spectrophotometer	1	$ 9,000.00	$ 9,000.00
DRB200 Reactor (Dual 21x13mm, 4x20mm)	1	$ 1,358.00	$ 1,358.00
TNTPlus NH3-N (2-47mg/L N)	4	$ 53.00	$ 212.00
TNTPlus COD (20-1,500 mg/L)	12	$ 54.00	$ 648.00
TNTPlus TN (5-40mg/L N)	4	$ 73.00	$ 292.00
TNTPlus TP & Ortho (2-20mg/L PO4-P)	8	$ 53.00	$ 424.00
TNTPlus TKN (0-16mg/L TKN)	4	$ 134.00	$ 536.00
TNTPlus Alk (50-400mg/L CaCO3)	4	$ 41.00	$ 164.00
Reaction Tubes 20mm	5	$ 19.00	$ 95.00
			$ -
			$ -
			$ -
			$ -
			$ -
			$ -
			$ -
			$ -
			$ -
		Total	$ 12,729.00

This is simply the lab equipment needed for approximately 30 days of characterization and does not include the more substantial purchase of an online analyzer for continuous monitoring of the WWTP influent quality which will need to be a separate purchase if we and GWA wish to go that route.

The other primary concern involving the WW characterization is the availability and status of an automatic composite sampler at Northern District headworks. I know other items such as

ATTACHMENT 5

Geo-Engineering & Testing, Inc.

P O Box 8170
Tamuning, Guam 96931
Tel No. 646-7710
Fax No.646-6600

INVOICE

DATE	INVOICE #
3/29/2017	53-311.108A

BILL TO
Duenas,Camacho & Associates P.O.Box 8900 Tamuning, Guam 96931 Attn: Mr. Thomas P. Camacho

Approved by:_____

Date:_____

Project Number:_____

DESCRIPTION	AMOUNT
Test Boring at Retaining Wall Construction of Agat-Santa Rita WasteWater Treatment Plant	
Guam EPA soil boring permit and inspection	300.00
Site coordination, including site visit and plotting of borings	400.00
Site access clearing, including gravel backfill for set-up of drill rig (Contractor to provide at no cost to us)	
Mobilization/demobilization of drill rig and crew and set-up to drill	1,000.00
Test borings including logging and sampling, 2 test borings x 30 ft. x $50/ft.	3,000.00
Laboratory testing	1,000.00
Engineering, report, manage	4,000.00
Drafting, clerical support	600.00
Subtotal	10,300.00
Add: 4.17% tax	429.51
Thank you for your business.	**Total Due** $10,729.51

Invoice is due on presentation and is past-due after 30 days from invoice date. Finance charge of 1.5% per month will be added on past due accounts. Collection fee, if applicable,will be added to the account.

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 15-FY2018
Relative to Approval of Change Order No. 2 for the GWA Line Replacement – Phase IV Construction Contract

What is the project's objective and is it necessary and urgent?
The project is part of the continuing waterline replacement program to reduce water loss in the water distribution system throughout the island. The Change Order proposal is to increase the 6-inch diameter water main currently under contract to be installed to a larger 12-inch diameter water main so as to handle the volume of water that will be pumped from the soon to be completed AG-10 production well which is located adjacent to Chalan Koda. The AG-10 production well construction project is slated to start within 2018 therefore it would be incumbent upon GWA to address the watermain along Chalan Koda given the current waterline replacement scope along this stretch of roadway.

Where is the location?
The change order involves increasing the 6-inch diameter water main to be installed to a 12-inches diameter watermain along Chalan Koda in Dededo, along with changes to appurtenant fittings, valves and hydrant locations.

How much will it cost?
The fee proposal for the change order is One Million Fifty-Six Thousand Nine Hundred Thirty-Seven Dollars ($1,056,937.00) to increase the watermain to 12-inch diameter which would then bring the total authorized contract value to Eight Million Nine Hundred Forty-Two Thousand Nine Hundred Eighty-Three Dollars and Fifty Cents ($8,942,983.50). GWA management further seeks CCU approval of the total authorized funding of Nine Million Three Hundred Thirty-Eight Thousand Three Hundred Thirty-Five Dollars and Eighty-Three Cents ($9,338,335.83) which still includes the original contingency fund of Three Hundred Ninety-Four Thousand Three Hundred Fifty-Two Dollars and Thirty-Three Cents ($394,352.33).

When will it be completed?
The contractor is expected to complete the waterline installation by March 2019.

What is the funding source?
The source of funding for the change order will be from the Bond proceeds under CIP PW 09-03 "Water Distribution System Pipe Replacement" and funds from the System Development Charge fund.

The RFP/BID responses (if applicable):
NOT APPLICABLE

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

GWA RESOLUTION NO. 15-FY2018

RELATIVE TO APPROVAL OF CHANGE ORDER No. 2 FOR THE GWA LINE REPLACEMENT – PHASE IV CONSTRUCTION CONTRACT

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, The CCU approved via Resolution 01-FY2016 for GWA management to enter into contract with Giant Construction Corporation to continue to provide construction services for water service lateral upgrades and replacement of existing old and leaking waterlines with new pipes ranging in size from 2 inches to 8 inches in diameter to reduce water loss in the potable water system throughout the island; and

WHEREAS, the above noted resolution approved the funding total of Seven Million Eight Hundred Eighty-Seven Thousand Forty-Six Dollars and Fifty Cents ($7,887,046.50), along with a five percent (5%) contingency of Three Hundred Ninety-Four Thousand Three Hundred Fifty-Two Dollars and Thirty-Three Cents ($394,352.33) to bring the total authorized funding amount to Eight Million Two Hundred Eighty-One Thousand Three Hundred Ninety-Eight Dollars and Eighty-Three Cents ($8,281,398.83).; and

WHEREAS, GWA to date has replaced approximately 100,000 linear feet of waterline throughout the island and intends to continue the waterline replacement program as part of GWA's efforts to reduce the non-revenue water rate as well as improvements to the system where service delivery has been below standard; and

WHEREAS, one of the locations slated for line replacement as part of Giant Construction's scope is along Chalan Koda in Dededo wherein the existing/old 2" water line is to be replaced with a 6" diameter watermain; and

WHEREAS, adjacent to Chalan Koda is a proposed GWA production well AG-10 which is slated for construction in the near future which requires a minimum water distribution line to be 12-inches in diameter to handle the volume of water pumped from the new production well into the water distribution system; and

WHEREAS, GWA management seeks to change order the existing contract scope with Giant Construction by requiring an increase in size of over 13,800 linear feet of waterline from the 6-inch diameter water main currently under contract to be installed to a 12-inch diameter water main along Chalan Koda as a means of preparing for the new well project; and

WHEREAS, GWA engineering negotiated with Giant Construction Corporation to increase the 6-inch diameter pipe to be installed to a 12-inch diameter pipe, including fittings, valves and hydrants (See Exhibit A) for an additional fee of One Million Fifty-Six Thousand Nine Hundred Thirty-Seven Dollars ($1,056,937.00); and

WHEREAS, GWA Management seeks CCU approval of the Change Order with Giant Construction Corporation to increase the pipe size from 6-inches in diameter to 12-inches at a cost of One Million Fifty-Six Thousand Nine Hundred Thirty-Seven Dollars ($1,056,937.00) which would then bring the total authorized contract value to Eight Million Nine Hundred Forty-Two Thousand Nine Hundred Eighty-Three Dollars and Fifty Cents ($8,942,983.50); and

WHEREAS, the total authorized contract value to Eight Million Nine Hundred Forty-Two Thousand Nine Hundred Eighty-Three Dollars and Fifty Cents ($8,942,983.50) plus the original five percent (5%) contingency of Three Hundred Ninety-Four Thousand Three Hundred Fifty-Two Dollars and Thirty-Three Cents ($394,352.33) will bring the total authorized funding amount to Nine Million Three Hundred Thirty-Eight Thousand Three Hundred Thirty-Five Dollars and Eighty-Three Cents ($9,338,335.83); and

DRAFT

WHEREAS, the source of funding for the change order will be from the Bond proceeds under CIP PW 09-03 "Water Distribution System Pipe Replacement" and funds from the System Development Charge fund; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve and authorize the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms of the change order proposal submitted by Giant Construction Corp. to be fair and reasonable.
3. The CCU finds that the terms of the conditions set by GWA relative to commencement of subsequent work activities are fair and reasonable and serve as a measure of Quality Assurance/Quality Control (QA/QC).
4. The CCU hereby authorizes the management of GWA to accept the change order proposal from "Giant Construction Corp." attached hereto as Exhibit A, and which is incorporated into this Resolution in its entirety.
5. The CCU hereby further authorizes the management to execute the change order with "Giant Construction Corp.", in the amount of One Million Fifty-Six Thousand Nine Hundred Thirty-Seven Dollars ($1,056,937.00).
6. The CCU hereby further approves the increased contract value of Eight Million Nine Hundred Forty-Two Thousand Nine Hundred Eighty-Three Dollars and Fifty Cents ($8,942,983.50) plus the original five percent (5%) contingency of Three Hundred Ninety-Four Thousand Three Hundred Fifty-Two Dollars and Thirty Three Cents ($394,352.33) to bring the total authorized funding amount to Nine Million Three Hundred Thirty-Eight Thousand Three Hundred Thirty-Five Dollars and Eighty Three Cents ($9,338,335.83).
7. The CCU hereby further approves the source of funding for the construction project will be from the Bond proceeds under CIP PW 09-03 "Water Distribution System Pipe Replacement" and/or funds from the System Development Charge fund and further approves GWA Management to seek PUC approval if applicable to use SDC funds.

DRAFT

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 23rd day of January 2018.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS **J. GEORGE BAMBA**
Chairperson Secretary

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

///

DRAFT

Exhibit A (1 of 4)

GIANT CONSTRUCTION CORP.
P.O. Box 9578 Tamuning, Guam 96931
Tel.: (671) 649-6472 • Fax.: (671) 646-3693
E-mail: giantconst@gmail.com

Dec. 04, 2017

Guam Waterworks Authority
Mr. Miguel Bordalio P.E.
Interim General Manager
Gloria B. Nelson Public Service Building
688 Route 15
Mangilao, Guam 96913

Attention : Mrs. Thomas Cruz / Chief Engineer

Project : GWA Line Replacement - Phase IV
GWA Project No. W15-003-BND

Subject : Proposal of 12" water line in Chalan Koda, Chalan Bada, and Road S-28

Dear Sir

Hafa Adai! This is our proposal of as followed area and scope of work,

1. Chalan BADA (From Route 9 to Chalan BARETA)	$	554,600.00
a. 12" PVC water line total 3,900 LF		
b. Connection work in Route 9 (Existing 12 PVC water line)		
c. Fire hydrant 4 EA, service lateral connection 5 EA, and 12" gate valve 14 EA		
2. Chalan Koda (From BARETA to Lucky Street AG-10)	$	144,057.00
a. Additional cost change from 6" PVC water to 12" (Total length 2,721 LF)		
b. Additional cost change from all of 6" fittings to 12" fittings		
c. Additional 6" stub out for future connection 1 each		
3. Chalan Koda (From Lucky Street AG-10 to Chalan Koda and Chalan Piga Intersection)	$	358,280.00
a. 6" PVC water line change to 12" (Total length 7,229 LF)		
b. Change all of 6" fittings to 12" fittings		
c. Additional 6" stub out for future connection 3 each		
Total Additional Work Proposed Amount	**$**	**1,056,937.00**

Chung, In Chul
Vice-Preisdent

Received by:
12-7-17

Exhibit A (2 of 4)

GWA Line Replacement- Phase IV Project
GWA Project No. W15-003-BND

Chalan BADA (From Route 9 to Chalan BARETA)

Pay Item	Description	BASE BID			
		Qty.	Unit	Unit Cost	Sub-Total
1.0 General Requiements			LS		
1.1	Mobilization /Demolization	1	LS		$33,000.00
1.2	Bonding Fee & Insurance	1	LS		$27,000.00
1.3	Permit application Fee	1	LS		$6,800.00
1.4	Right of Way Confirmation	1	LS		$13,000.00
1.5	Construction drawings	1	LS		$23,000.00
2.0 Pipe Replacement					
2.1	12" PVC Water line AWWA C-900, DR-18, Class 150	3,900	LF	$70.00	$273,000.00
2.2	Connection work in Route 9	1	LS	$5,000.00	$5,000.00
2.3	Service lateral connection to existing water meter	5	LS	$1,330.00	$6,650.00
2.4	Fire hydrant including connection fittings, isolation valve, guard post complete in place	4	EA	$5,300.00	$21,200.00
2.5	Permanent road restoration including flowabfill concrete, steel plate cover, 2" thick hot mix asphalt	1	LS	$11,000.00	$11,000.00
2.6	Disinfection of new waterline	1	LS	$7,800.00	$7,800.00
2.7	Well No. AG-10 12" Stub out100 LF with valves	1	EA	$18,700.00	$18,700.00
2.8	Abandon existing waterline in place with cap/plug	1	LS	$6,000.00	$6,000.00
2.9	Air relief valve assembly	3	EA	$4,130.00	$12,390.00
2.10	Blow off valve assembly	2	EA	$4,130.00	$8,260.00
2.11	12" Gate valve with valve box frame and cover	14	EA	$3,500.00	$49,000.00
2.12	12" DI Fittings AWWA C-153 Mj x MJ w/Thrust block	12	EA	$700.00	$8,400.00
2.13	12" x 6" Lateral stub out with 6" gate valve	2	EA	$3,100.00	$6,200.00
2.14	2" Lateral connection (Machete, Gachai Luchan)	2	EA	$1,600.00	$3,200.00
2.15	Clearing work	3200	SY	$3.50	$11,200.00
3.0 Project Completion					
3.1	As-built drawing	1	LS	$3,800.00	$3,800.00
	Sub-Total			$	$554,600.00

Exhibit A (3 of 4)

GWA Line Replacement- Phase IV Project
GWA Project No. W15-003-BND

Chalan KODA (6" PVC water line change to 12" PVC)
(Chalan Bareta to Lucky street - Entrance of Well No. AG - 10)

Pay Item	Description	BASE BID			
		Qty.	Unit	Unit Cost	Sub-Total
1.0 General Requiements			LS		
1.1	Mobilization /Demolization	1	LS		$0.00
1.2	Bonding Fee & Insurance	1	LS	$8,800.00	$8,800.00
1.3	Permit application Fee	1	LS	$3,200.00	$3,200.00
1.4	Right of Way Confirmation	1	LS		$0.00
1.5	Construction drawings	1	LS	$800.00	$800.00
2.0 Pipe Replacement					
2.1	Additional cost 6" PVC Water line change to 12" PVC AWWA C-900, DR-18, Class 150	2,721	LF	$32.00	$87,072.00
2.2	Additional cost change from 6" to 12" Service lateral Saddle	15	EA	$52.00	$780.00
2.3	Well No. AG-10 12" Stub out100 LF with valves	1	LS	$18,700.00	$18,700.00
2.4	Fire hydrant fitting change from 6"x 6" to 12" x 6" fittings	2	EA	$320.00	$640.00
2.5	Permanent road restoration including flowabfill concrete, steel plate cover, 2" thick hot mix asphalt	1	LS	$3,000.00	$3,000.00
2.6	Disinfection additional	1	LS	$3,800.00	$3,800.00
2.7	2" Lateral connection	1	EA	$1,700.00	$1,700.00
2.8	12" Gate valve additional	2	EA	$3,500.00	$7,000.00
2.9	Air relief valve assembly saddle and valve change	1	EA	$280.00	$280.00
2.10	Blow off valve assembly saddle change	1	EA	$55.00	$55.00
2.11	6" gate valve change to 12" gate valve additional	2	EA	$2,050.00	$4,100.00
2.12	6" fittings change to 12" fittings	2	EA	$315.00	$630.00
2.13	12" x 6" Lateral stub out with 6" gate valve	1	EA	$3,000.00	$3,000.00
3.0 Project Completion					
3.1	As-built drawing	1	LS	$500.00	$500.00
	Sub-Total			$	$144,057.00

Exhibit A (4 of 4)

GWA Line Replacement- Phase IV Project
GWA Project No. W15-003-BND

Chalan KODA (6" PVC water line change to 12" PVC)
(Lucky street - Entrance of Well No. AG - 10 to Chalan Koda and Chalan Piga Intersection)

Pay Item	Description	BASE BID			
		Qty.	Unit	Unit Cost	Sub-Total
1.0 General Requiements			LS		
1.1	Mobilization /Demolization	1	LS	$22,800.00	$0.00
1.2	Bonding Fee & Insurance	1	LS	$19,000.00	$19,000.00
1.3	Permit application Fee	1	LS	$7,600.00	$7,600.00
1.4	Right of Way Confirmation	1	LS	$0.00	$0.00
1.5	Construction drawings	1	LS	$2,000.00	$2,000.00
2.0 Pipe Replacement					
2.1	Additional cost 6" PVC Water line change to 12" PVC AWWA C-900, DR-18, Class 150	7,229	LF	$32.00	$231,328.00
2.2	Additional cost change from 6" to 12" Service lateral Saddle	31	EA	$52.00	$1,612.00
2.3	Well No. AG-10 12" Stub out100 LF with valves	1	LS	$18,700.00	$18,700.00
2.4	Fire hydrant fitting change from 6"x 6" to 12" x 6" fittings	8	EA	$320.00	$2,560.00
2.5	Permanent road restoration including flowabfill concrete, steel plate cover, 2" thick hot mix asphalt	1	LS	$6,000.00	$6,000.00
2.6	Disinfection additional	1	LS	$5,200.00	$5,200.00
2.7	2" Lateral connection	5	EA	$1,700.00	$8,500.00
2.8	12" Gate valve additional	8	EA	$3,500.00	$28,000.00
2.9	Air relief valve assembly saddle and valve change	3	EA	$280.00	$840.00
2.10	Blow off valve assembly saddle change	2	EA	$55.00	$110.00
2.11	Additional cost change from 6" gate valve to 12" gate valve	8	EA	$2,050.00	$16,400.00
2.12	6" fittings change to 12" fittings	2	EA	$315.00	$630.00
2.13	12" x 6" Lateral stub out with 6" gate valve	3	EA	$3,000.00	$9,000.00
3.0 Project Completion					
3.1	As-built drawing	1	LS	$800.00	$800.00
	Sub-Total			$	$358,280.00

GWA Utility Services Division
Monthly Status Report
Month ending December 30, 2017

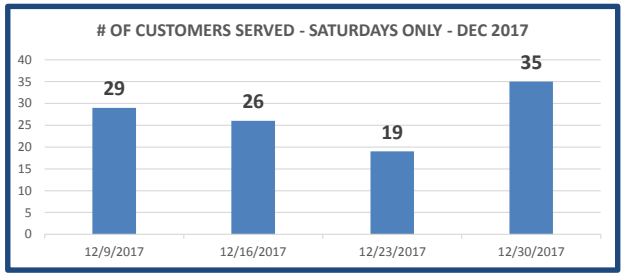
UTILITY SERVICES DIVISION UNITS & ACTIVITIES:	WEEKLY AVERAGE NOV 2017	NOV 2017 MONTHLY TOTAL	WEEK ENDING: 12/9/2017	WEEK ENDING: 12/16/2017	WEEK ENDING: 12/23/2017	WEEK ENDING: 12/30/2017	WEEKLY AVERAGE DEC 2017	DEC 2017 MONTHLY TOTAL
Customer Service Unit								
I. Service Delivery Points:								
a. GBN Public Service Building – Fadian								
i. Total Customers Assisted :	234	1171	272	210	236	156	219	874
ii. Total Abandoned Requests :	31	157	32	19	22	17	23	90
ii. Average Wait Time:	12 minutes		13 minutes	11 minutes	9 minutes	11 minutes	12 minutes	
iii. Average Service Time:	115 minutes		13 minutes	12 minutes	13 minutes	13 minutes	115 minutes	
iv. Breakdown by request type:								
1. Apply for water	56	282	64	50	52	26	48	192
2. Restore water cut for non payment	5	25	9	10	7	6	8	32
3. Terminate Water	16	82	13	17	12	12	14	54
4. Copy of Bill	37	184	38	23	30	28	30	119
5. Billing Dispute	57	286	75	51	71	45	61	242
6. Billing Dispute follow up	5	24	3	5	5	4	4	17
7. General Questions & Other	35	175	28	30	39	24	30	121
8. Report a water leak	2	9	4	0	0	0	1	4
9. Report water theft	0	0	0	0	0	0	0	0
10. Payment Arrangement	25	125	39	24	22	16	25	101
b. Julale Satellite Office – Hagatna								
i. Total Customers Assisted :	222	1108	269	220	251	171	228	911
ii. Total Abandoned Requests :	8	39	13	7	11	5	9	36
ii. Average Wait Time:	7 minutes		8 minutes	8 minutes	9 minutes	7 minutes	7 minutes	
iii. Average Service Time:	11 minutes		10 minutes	10 minutes	10 minutes	13 minutes	11 minutes	
iv. Breakdown by request type:								
1. Apply for water	44	220	36	38	48	37	40	159
2. Restore water cut for non payment	5	27	5	1	1	0	2	7
3. Terminate Water	21	105	18	16	17	11	16	62
4. Copy of Bill	44	218	54	38	56	24	43	172
5. Billing Dispute	55	274	85	67	55	52	65	259
6. Billing Dispute follow up	4	19	4	3	7	3	4	17
7. General Questions & Other	25	127	26	27	32	29	29	114
8. Report a water leak	1	5	1	2	1	0	1	4
9. Report water theft	0	0	1	1	0	0	1	2
10. Payment Arrangement	25	125	43	31	34	16	31	124

GWA Utility Services Division
Monthly Status Report
Month ending December 30, 2017

UTILITY SERVICES DIVISION UNITS & ACTIVITIES:	WEEKLY AVERAGE NOV 2017	NOV 2017 MONTHLY TOTAL	WEEK ENDING: 12/9/2017	WEEK ENDING: 12/16/2017	WEEK ENDING: 12/23/2017	WEEK ENDING: 12/30/2017	WEEKLY AVERAGE DEC 2017	DEC 2017 MONTHLY TOTAL
c. Upper Tumon Satellite Office – Upper Tumon								
i. Total Customers Assisted :	266	1331	365	309	306	249	307	1229
ii. Total Abandoned Requests :	11	56	18	6	8	2	9	34
ii. Average Wait Time:	11 minutes		10 minutes	11 minutes	6 minutes	6 minutes	11 minutes	
iii. Average Service Time:	10 minutes		10 minutes	10 minutes	11 minutes	11 minutes	10 minutes	
iv. Breakdown by request type:								
1. Apply for water	58	288	86	71	55	50	66	262
2. Restore water cut for non payment	6	31	9	7	3	3	6	22
3. Terminate Water	24	122	36	26	25	16	26	103
4. Copy of Bill	57	286	85	73	78	53	72	289
5. Billing Dispute	64	320	88	62	86	61	74	297
6. Billing Dispute follow up	2	9	3	3	4	5	4	15
7. General Questions & Other	26	129	31	27	29	24	28	111
8. Report a water leak	3	17	3	6	3	1	3	13
9. Report water theft	0	2	0	0	1	0	0	1
10. Payment Arrangement	29	144	32	36	24	37	32	129
II. Customer Call Center								
a. Calls Recieved :	1089	5443	1317	862	1040	742	990	3961
b. Calls Immediately Answered :	652	3259	757	555	689	513	629	2514
c. Calls Abandoned	44	221	54	26	38	31	37	149
d. Calls Handled by Voice mail:	423	2117	503	281	320	209	328	1313
e. Average duration of calls answered:	6 minutes		3 minutes	4 minutes	4 minutes	5 minutes	4 minutes	
III. Customer Emails:								
a. Emails Recieved :								
i. customers@guamwaterworks.org	38	191	45	32	58	31	42	166
Breakdown by request type (email):								
1. Apply for water	2	8	5	1	1	0	2	7
2. Terminate Water	1	7	5	0	1	2	2	8
3. Copy of Bill	1	6	2	4	1	0	2	7
4. Billing Dispute & follow up	10	51	10	10	12	10	11	42
5. General Questions & Other	15	76	17	13	28	12	18	70
6. Report a water leak	3	16	2	2	5	4	3	13
7. Report water theft	0	0	0	0	0	0	0	0
8. Online services inquiry	5	27	4	2	10	3	5	19
ii. realtors@guamwaterworks.org	0	0	2	1	0	0	1	3
b. Emails Replied (both):	15	75	21	13	34	18	22	86

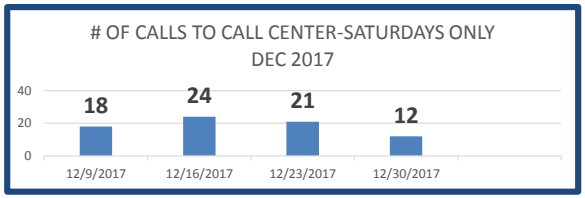
GWA Utility Services Division
Monthly Status Report
Month ending December 30, 2017

UTILITY SERVICES DIVISION UNITS & ACTIVITIES:	WEEKLY AVERAGE NOV 2017	NOV 2017 MONTHLY TOTAL	WEEK ENDING: 12/9/2017	WEEK ENDING: 12/16/2017	WEEK ENDING: 12/23/2017	WEEK ENDING: 12/30/2017	WEEKLY AVERAGE DEC 2017	DEC 2017 MONTHLY TOTAL
			12/9/2017	12/16/2017	12/23/2017	12/30/2017		
IV. Saturday Services: 9AM TO 1PM ONLY	24		29	26	19	35	27	
a. VISITS: Breakdown by request type:								
1. Apply for water	4		11	4	1	7	6	
2. Restore water cut for non payment	0		0	0	0	1	0	
3. Terminate Water	2		1	2	1	2	2	
4. Copy of Bill	7		9	6	6	7	7	
5. Billing Dispute	7		2	7	4	8	5	
6. Billing Dispute follow up	1		1	1	0	1	1	
7. General Questions & Other	1		2	0	0	3	1	
8. Report a water leak	0		1	1	0	0	1	
9. Report water theft	0		0	0	0	0	0	
10. Payment Arrangement	3		2	5	7	6	5	



b. CALLS TO CALL CENTER (Saturday services only):

12/9/2017	12/16/2017	12/23/2017	12/30/2017
18	24	21	12



GWA Utility Services Division
Monthly Status Report
Month ending December 30, 2017

UTILITY SERVICES DIVISION UNITS & ACTIVITIES:	WEEKLY AVERAGE NOV 2017	NOV 2017 MONTHLY TOTAL	WEEK ENDING: 12/9/2017	WEEK ENDING: 12/16/2017	WEEK ENDING: 12/23/2017	WEEK ENDING: 12/30/2017	WEEKLY AVERAGE DEC 2017	DEC 2017 MONTHLY TOTAL
Dispute Resolution & Document Control								
I. Dispute Resolution:								
a. Number of disputed accounts resolved:	7	35	7	9	15	13	11	44
b. Number of disputed accounts under review:	179	894	179	179	179	179	179	716
II. Document Control:								
a. Number of field activities posted :	416	2082	468	464	590	377	475	1899
b. Number of field activities pending:	1023	5113	809	756	637	505	677	2707
Disconnect/Reconnect Unit								
I. Number of field activities received:	259	1293	337	227	235	168	242	967
II. Number of field activities completed:	239	1193	370	236	251	183	260	1040
III.Number of field activities pending field action:	2	12	3	4	2	0	2	9
Meter Reading Unit								
I. Number of meters read:								
a. Electronically Read Meters:	8192	40962	10250	12146	10437	9014	10462	41847
b. Manually Read Meters:	35	173	29	43	26	55	38	153
II. Unread meters (Meters scheduled to be read but not read):	59	297	62	56	42	88	62	248
III. Number of data logs received:	30	151	40	40	37	30	37	147
IV. Number of data logs retrieved:	28	140	52	39	49	21	40	161
V. Number of data logs pending field action:	23	115	12	21	1	13	12	47
VI. Communication Errors/Reprogramming requests received (from CSU):	8	39	2	6	1	0	2	9
VII. Number of estimated readings (for the week):	34	168	48	46	34	74	51	202
a. Reasons for Estimations:								
i. Cant locate meter:	2	11	0	3	1	1	1	5
ii. Temporary Obstruction	1	5	1	2	0	5	2	8
iii. Vicious Dog	2	9	0	3	3	2	2	8
iv. Flooded meter	2	9	3	2	0	3	2	8
v. Corrective action requested (database corrections needed)	2	11	4	3	1	0	2	8
vi. Possible changed out meter:	17	86	14	10	8	14	12	46
vii. Communication/Programming error (code 92's):	3	16	2	4	1	3	3	10
viii. Other:	7	33	4	4	1	22	8	31
ix. Leaks detected on customer's private line:	947	4734	1370	1614	1178	972	1284	5134
x. Reverse Flow Detected	28	138	15	28	10	65	30	118
xi. No Usages Detected	194	968	301	325	309	362	324	1297
xii. Tamper Code	10	48	15	20	12	13	15	60
VII. Electronic Read Percentage: (for the week):	99%	99%	98%	98%	98%	98%	99%	99%

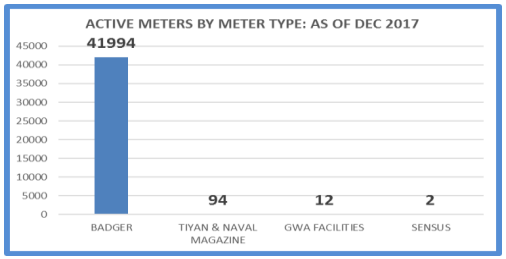
GWA Utility Services Division
Monthly Status Report
Month ending December 30, 2017

UTILITY SERVICES DIVISION UNITS & ACTIVITIES:	WEEKLY AVERAGE NOV 2017	NOV 2017 MONTHLY TOTAL	WEEK ENDING: 12/9/2017	WEEK ENDING: 12/16/2017	WEEK ENDING: 12/23/2017	WEEK ENDING: 12/30/2017	WEEKLY AVERAGE DEC 2017	DEC 2017 MONTHLY TOTAL
Revenue Protection Unit								
I. Number of Inactive Still Consuming Reports rec'd & investigated:	1	3	1	1	0	0	1	2
II.Number of Illegal Connection reports rec'd & investigated:	2	8	3	0	3	0	2	6

III. Meter Replacement Project – Post 2010 Metron Farnier & Sensus Status Report (as of Dec 30 2017):

METER TYPE	COUNT
SENSUS	2
METRON FARNIER	0
	2

a. Account & Meter Type Count :



GUAM WATERWORKS AUTHORITY

Engineering Monthly Report
December 2017/January 2018

Prepared By:
Thomas Cruz, P.E. Chief Engineer

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A. Summary Table of 2010, 2013 and 2016 Bond

Potable Water

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
PW 05-01	Ground Water Disinfection	$ 500,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 05-03	Santa Rita Springs Booster Pump Rehab Phase II	$ -	N/A	N/A	$ 100,000.00	100.00%	0.00%	$ -	N/A	N/A
PW-05-05	"A Series Well Transmission Line	$ 518,143.96	100.00%	0.00%	$ 400,000.00	100.00%	0.00%	$ -	N/A	N/A
PW 05-06	Water Booster Pump Station	$ 500,000.00	100.00%	0.00%	$ 1,861,000.00	99.49%	0.51%	$ 4,139,000.00	0.00%	100.00%
PW 05-07	Meter Replacement Program	$ 10,300,000.00	99.84%	0.16%	$ 999,000.00	99.75%	0.25%	$ 4,501,000.00	3.33%	96.67%
PW 05-08	Barrigada Tank Repair/Replacement	$ 5,450,000.00	99.92%	0.08%	$ 4,987,000.00	99.32%	0.68%	$ 1,013,000.00	0.00%	100.00%
PW 05-09	Leak Detection	$ 200,000.00	100.06%	-0.06%	$ 20,000.00	96.25%	3.75%	$ 1,180,000.00	0.00%	100.00%
PW 05-10	Potable Water System Planning	$ 200,000.00	100.00%	0.00%	$ 624,000.00	100.00%	0.00%	$ 2,276,000.00	20.93%	79.07%
PW 05-11	Implement Ground Water Rule	$ 1,700,000.00	100.00%	0.00%	$ 1,000,000.00	100.00%	0.00%	$ -	N/A	N/A
PW 05-12	Brigade II (Ugum Lift) BPS Upgrade	$ 1,700,000.00	18.03%	81.97%	$ -	N/A	N/A	$ -	N/A	N/A
PW 05-13	Deep Well Rehabilitation	$ 548,000.00	100.00%	0.00%	$ 200,000.00	100.00%	0.00%	$ 250,000.00	0.00%	100.00%
PW 05-14	New Deep Wells at Dow n Hard	$ 638,252.85	76.11%	23.89%	$ 810,000.00	0.00%	100.00%	$ 1,190,000.00	0.00%	100.00%
PW 05-15	Rehabilitation of Asan Springs	$ 900,000.00	37.87%	62.13%	$ -	N/A	N/A	$ -	N/A	N/A
PW 05-16	Master Meters	$ 1,600,000.00	99.44%	0.56%	$ 784,000.00	99.88%	0.12%	$ 3,616,000.00	4.19%	95.81%
PW 09-01	Ugum Water Treatment Plant Intake	$ 700,000.00	99.47%	0.53%	$ 982,000.00	100.00%	0.00%	$ 18,000.00	0.00%	100.00%
PW 09-02	Water Wells	$ -	N/A	N/A	$ 4,200,000.00	46.77%	53.23%	$ 2,500,000.00	13.60%	86.40%
PW 09-03	Water Distribution System	$ 3,174,748.00	100.00%	0.00%	$ 11,151,000.00	87.97%	12.03%	$ 49,000.00	0.00%	100.00%
PW 09-04	Pressure Zone Realignment	$ -	N/A	N/A	$ 431,000.00	99.95%	0.05%	$ 1,141,000.00	58.58%	41.42%
PW 09-06	Central Water Distribution System 2005	$ 900,000.00	91.67%	8.33%	$ -	N/A	N/A	$ -	N/A	N/A
PW 09-08	Mechanical/Electrical Equipment	$ 1,200,000.00	100.00%	0.00%	$ 430,000.00	99.60%	0.40%	$ 100,000.00	0.00%	100.00%
PW 09-09	Water Reservoir Internal/External	$ 2,000,000.00	73.20%	24.53%	$ -	N/A	N/A	$ -	N/A	N/A
PW 09-10	Water Reservoir Internal/External	$ -	N/A	N/A	$ -	N/A	N/A	$ 800,000.00	0.00%	100.00%
PW 09-11	Water System Reservoirs 2005 Improvements	$ 1,050,000.00	100.00%	0.00%	$ 13,878,000.00	99.99%	0.01%	$ 28,350,000.00	36.77%	63.23%
PW 11-01	Distribution System Upgrades	$ 474,159.85	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 11-02	Ugum Water Treatment Plant Reservoir	$ -	N/A	N/A	$ 90,000.00	0.00%	100.00%	$ -	N/A	N/A
PW 12-01	Water Audit Program & Water Loss Control Plan	$ 100,000.00	78.46%	21.54%	$ -	N/A	N/A	$ 1,000,000.00	0.00%	100.00%
PW 12-02	Production Plan / Reduce Navy Purchases	$ 100,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 12-03	Hydraulic Assessment of Tanks	$ 500,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 12-04	Agana Heights & Chaot Tanks	$ 4,700,000.00	100.00%	0.00%	$ 3,280,000.00	40.52%	59.48%	$ 1,220,000.00	40.98%	59.02%
PW 12-05	Tank Major Repair Yigo #1, Mangilao #2, Astumbo#1	$ 1,900,000.00	95.16%	4.84%	$ 11,605,000.00	99.99%	0.01%	$ 1,895,000.00	96.15%	3.85%
PW 12-06	Tank Replacement Piti & Hyundai	$ -	N/A	N/A	$ -	N/A	N/A	$ 7,409,830.00	98.52%	1.48%
PW 12-07	Assessment of Malojloj Elevated & Yigo Elevated	$ 200,000.00	100.00%	0.00%	$ 485,117.00	100.00%	0.00%	$ -	N/A	N/A
PW 12-08	Public Water System Asset Inventory/ Condition Assessment	$ 100,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 12-09	Public Water System GIS & Mapping	$ 50,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 14-01	Fire Hydrant Replacement Program	$ -	N/A	N/A	$ -	N/A	N/A	$ 2,000,000.00	0.00%	100.00%
		$ 41,903,304.66			$ 58,317,117.00			$ 64,647,830.00		

Wastewater

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
WW 05-04	Wastew ater System Planning	$ 1,500,000.00	100.00%	0.00%	$ 651,000.00	100.00%	0.00%	$ 349,000.00	89.68%	10.32%
WW 05-05	Wastew ater Vehicles	$ 235,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 05-07	NDWWTP - Chlorine Tanks	$ 250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 09-01	Lift station upgrades	$ -	N/A	N/A	$ 946,000.00	84.08%	0.06%	$ 2,404,000.00	12.21%	71.15%
WW 09-06	Wastew ater Collection System Repl/ Rehabilitation	$ 1,105,000.00	99.93%	0.07%	$ 780,000.00	97.55%	2.45%	$ 2,920,000.00	0.00%	92.30%
WW 09-08	Facilities Plan/Design for Baza Gardens WWTP	$ 1,250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 09-10	Facilities Plan/Design for Agat-Santa Rita WWTP	$ 899,630.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 11-03	Baza Gardens STP Replacement	$ 1,301,947.00	24.27%	11.57%	$ 3,114,883.00	99.97%	0.03%	$ 29,400,170.00	99.31%	0.69%
WW 11-04	Facilities Plan/Design for Umatac-Merizo WWTP	$ 900,000.00	100.00%	0.00%	$ 473,000.00	100.00%	0.00%	$ 527,000.00	47.44%	52.56%
WW 11-08	Agat/Santa Rita STP Replacement	$ 2,218,000.00	99.91%	0.09%	$ 67,200,000.00	99.43%	0.57%	$ 3,000,000.00	48.72%	51.28%
WW 12-01	Northern District WWTP Primary Treatment Upgrade	$ 11,750,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-02	Biosolids Management Plan	$ 200,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-03	Agana WWTP Interim Measures	$ 11,500,000.00	100.00%	0.00%	$ 673,000.00	100.00%	0.00%	$ 827,000.00	0.00%	100.00%
WW 12-04	I&I SSES Southern	$ 800,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-05	I&I SSES Central	$ 850,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-06	I&I SSES Northern	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 12 -07	Umatac Merizo Replacement	$ 250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ 20,800,000.00	99.26%	0.74%
WW 12-08	Wastew ater System GIS & Mapping	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-09	Wastew ater Facility Back Up Pow er	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-10	Wastew ater System Asset Inventory	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 17-01	Wastew ater Sew er System Expansion									
WW 17-02	Northern District WWTP Secondary Treatment Upgrade	$ 1,000,000.00	0.00%	100.00%						
		$ 36,009,577.00			$ 73,837,883.00			$ 60,227,170.00		

Electrical Engineering Support

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
EE 05-02	SCADA Pilot Project	$ 61,950.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
EE 09-01	Wastew ater Pumping Station Electrical Upgrade	$ -	N/A	N/A	$ 620,000.00	16.13%	83.87%	$ 100,000.00	0.00%	100.00%
EE 09-02	Electrical Upgrade - Water Wells	$ 354,226.63	100.00%	0.00%	$ 1,500,000.00	100.00%	0.00%	$ 650,000.00	76.92%	23.08%
EE 09-03	Electrical Upgrade - Water Booster	$ -	N/A	N/A	$ 2,000.00	0.00%	100.00%	$ 323,000.00	0.00%	100.00%
EE 09-04	Electrical Upgrade - Water Booster	$ -	N/A	N/A	$ 200,000.00	0.49%	99.51%	$ -	N/A	N/A
EE 09-05	Electrical Upgrade - Other Water	$ -	N/A	N/A	$ 150,000.00	40.47%	59.53%	$ -	N/A	N/A
EE 09-06	SCADA Improvements - Phase I	$ 250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
EE 09-07	SCADA Improvements - Phase 2	$ 1,056,986.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
EE 09-08	SCADA Improvements - Phase 3	$ 24,955.71	100.00%	0.00%	$ 923,000.00	99.93%	0.07%	$ 1,177,000.00	61.46%	38.54%
EE 09-09	SCADA Improvements - Phase 4	$ -	N/A	N/A	$ -	N/A	N/A	$ 6,500,000.00	0.00%	93.08%
		$ 1,748,118.34			$ 3,395,000.00			$ 8,750,000.00		

Miscellaneous Engineering Support

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
MC 05-01	Laboratory Modernization	$ -	N/A	N/A	$ 1,173,000.00	100.00%	0.00%	$ 1,127,000.00	100.00%	0.00%
MC 05-02	Land Survey	$ 500,000.00	99.94%	0.06%	$ 2,000.00	0.00%	100.00%	$ 1,998,000.00	63.09%	36.91%
MC 09-01	General Plant Improvements	$ 7,241,000.00	99.58%	0.42%	$ 2,600,000.00	84.10%	15.90%	$ 2,769,460.00	53.83%	37.19%
MC 15-01	Information Technology Intergration Improvements							$ 500,000.00	40.70%	59.30%
		$ 7,741,000.00			$ 3,775,000.00			$ 6,394,460.00		

	2010 Bond Allotment	2013 Bond Allotment	2016 Bond Allotment
CIP Water	$ 41,903,304.66	$ 58,317,117.00	$ 64,647,830.00
CIP Wastewater	$ 36,009,577.00	$ 73,837,883.00	$ 60,227,170.00
CIP Electrical	$ 1,748,118.34	$ 3,395,000.00	$ 8,750,000.00
CIP Miscellaneous	$ 7,741,000.00	$ 3,775,000.00	$ 6,394,460.00
	$ 87,402,000.00	$ 139,325,000.00	$ 140,019,460.00

Bond Fund	Construction Fund Amount ($M)	Estimated # of months fund available for use		Total Funds encumbered to date ($M)	% of fund used	Rate of Spending: ($M) per year
2005	$82.930	82	*	$82.930	100.00%	12.14
2010	$87.402	84	**	$83.354	95.37%	11.91
2013	$139.325	47	**	$131.064	94.07%	33.46
2015	$140.019	17		$79.548	56.81%	56.15
	* - End date November 2013 via CCU Resolution 06-FY2014					
	** - Includes month of December 2017					

B. Projects Procurement

Percentage Key:

100%	Approved by GM
99%	Signature required from either Accounting/Legal/GM
98%	Processing engineering service or construction contract (with legal)
95%	Request for CCU approval (GM/engineering)
90%	A/E fee negotiation or contractor bid evaluation (engineering)
80%	Selected A/E or Conducted bid opening (engineering)
70%	Advertised RFP/IFB (engineering)
60%	RFP/IFB Package under legal review
50%	RFP/IFB Package completed (engineering)
Less than 50%	Project Scope of work development in progress

- Red text anywhere indicates a change from the last report.

BOX KEY FOR PROCUREMENT:

(Type of Procurement) (Relevant CIP NO. or Funding Source)	**(Project Title)**	
(Percentage complete for procurement)	**Activities/Notes:** (see percentage key above)	**Consultant** (listed when selected)
Project Description	Summary of project description	

BID PACKAGE PW 09-02	**New Well Construction**	
<50% Complete	**Activities/Notes:** GWA engineering continuing discussion with Dept. of Agriculture and lessee on options of acquisition of property for well site at AG-10. Internal GWA discussions underway for survey and appraisal services.	
Project Description:	The project is to construct three new production wells for GWA as well as installation of a water main to connect the new production wells to the Ysengsong Reservoirs.	

RFP PW 09-02	**New Well Construction (Construction Management)**	
<50% Complete	**Activities/Notes:** SOW being developed	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of up to three (3) new production wells for GWA. GWA plans to increase source water production to improve system redundancy that allows for operating the water production wells more effectively. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

RFP PW 12-04, PW 12-06 AND PW 09-11	**Central Tank Phase I (Chaot #2, Tumon #2, Hyundai) Construction Management**	
100% Complete	**Activities/Notes:** Contract fully executed. NTP issued December 20, 2017.	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of three water reservoirs; 0.5MG Chaot #2, 1MG Tumon #2 (Nissan) and 1MG Hyundai. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

BID PACKAGE PW 12-04, PW 12-06 AND PW 09-11	**Central Tank Phase I (Chaot #2, Tumon #2, Hyundai) Construction**	
99% Complete	**Activities/Notes:** Contract with finance for fund certification.	
Project Description:	The work performed under this project procurement shall consist of Construction of three water reservoirs; 0.5MG Chaot #2, 1MG Tumon #2 (Nissan) and 1MG Hyundai. Some piping work off site from the reservoir is also required to ensure the reservoirs function optimally.	

BID PACKAGE PW 14-01	**Fire Hydrant Replacement Phase I**	
<50% Complete	**Activities/Notes:** Bid package being prepared.	
Project Description:	The work performed under this project consist of replacing all know dry barrel fire hydrants down to the lateral as well as any defective wet barrel fire hydrant. Where necessary the gate valve for the fire hydrant may also be replaced.	

RFP WW 09-01	**Yigo SPS Flood Protection and Rehabilitation Design**	
90% Complete	**Activities/Notes:** RFP Proposals received and evaluated. AECOM selected and scoping and fee negotiations on going.	
Project Description:	The work performed under this project procurement shall consist of a design services to implement storm water mitigation measures to protect the facility during extreme weather as well as rehabilitate the facility to provide better redundancy and operate efficiently.	

RFP PW 09-11	**Northern and Southern Tank Phase I (Santa Rosa, Sinifa, Santa Rita) Construction Management**	
95% Complete	**Activities/Notes:** Resolution to CCU to be presented in January meeting for contact approval.	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of three water reservoirs; 1MG Santa Rosa, 1MG Sinifa and 1MG Santa Rita. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

BID PACKAGE PW 09-03, PW 09-04 AND PW 09-11	**Northern and Southern Tank Phase I (Santa Rosa, Sinifa, Santa Rita) Construction**	
<50% Complete	**Activities/Notes:** Designs for all tanks complete. GWA will issue only a bid for Santa Rosa Tank and off-site improvements first.	
Project Description:	The work performed under this project procurement shall consist of Construction of three water reservoirs; 1MG Santa Rosa, 1MG Sinifa and 1MG Santa Rita. Some piping work off site from the reservoir is also required to ensure the reservoirs function optimally.	

BID PACKAGE EE 09-08, EE 09-09	**SCADA Phase A1 Construction**	
<50% Complete	**Activities/Notes:** Designs complete, bid package being prepared for bid.	
Project Description:	The work performed under this project procurement shall consist of Construction of SCADA ready instrumentation at several water and waste water facilities throughout the island.	

RFP EE 09-08, EE 09-09	**SCADA Phase A1 Construction Management**	
<50% Complete	**Activities/Notes:** SCADA scope of work being finalized.	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of all SCADA ready instrumentation at the various facilities throughout Guam. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

BOX KEY FOR PROJECT:

(Type of Project) (Relevant CIP NO.)	**(Project Title)** **(Contractor or consultant)**	**Start Date:** (month and year)
(Percentage complete for project)	**Activities/Notes:** (brief description of activity)	**Completion Date:** (month and year)
(Court Order Paragraph No.)	(Project type)	
Project Description	Project Description Narrative	

C. CIP Water Section

INSPECTION CIP PW 05-02	**Inspection & Maintenance Repairs to GWA Island-Wide Steel Water Tank Reservoirs Phase 2 (DCA)**	**Start Date:** April 2010
80% Complete	**Activities/Notes:** Still waiting for Quotes for tank bypass/take down for Umatac #1 and Pigua. Supplier for Agat/Umatac tank by-pass ordered and installed wrong controller, sill requires contractor to rectify. Testing occurred for Malojloj tank take down, Ops to shut valve, another by-pass is needed. Working on plan for Kaiser, Windward and Agat #1 take down.	**Completion Date:** Anticipate December 2021
CO 38C	Engineering inspection services	
Project Description:	The Court Order requires GWA to inspect all active and in some cases inactive water reservoirs. The inspection results will allow GWA to determine if a reservoir requires repair or replacement.	

DESIGN CIP PW 05-12	**Brigade II BPS Upgrade** **(EM Chen)**	**Start Date:** April 2012
100% complete (Basis of Design) 0% (Design)	**Activities/Notes:** Preliminary design on-going. Expect to receive 30% design in February 2018.	**Completion Date:** Due to property acquisition issues GWA anticipate May 2018
N/A	Engineering design services	
Project Description:	The design project is intended to assess system water supply feed from the north as well as Ugum WTP and the water demands downstream from the Brigade BPS so as to reconfigure the piping into the BPS and resize the pumps to me system head requirements.	

DESIGN / BUILD CIP PW 12-04	**Reservoirs 2005 Improvements,** **Chaot & Agana Heights Reservoirs** **(GSI Construction)**	**Start Date:** April 2013
99% Complete	**Activities/Notes:** Warranty work complete at both reservoirs. Remaining work is deep well flow meter replacement.	**Completion Date:** Due to delays from contractor new anticipate completion is

		November 2017
CO 38B	Design/Construction services	
Project Description:	The project is to replace the existing 1.0MG steel reservoirs with 0.5MG concrete tanks at the Chaot and Agana Heights reservoir locations. The contractor shall also link certain A-series wells to the reservoir via SCADA.	

DESIGN CIP PW 12-05	**Yigo and Astumbo 2MG Tank Design Project (Lyons)**	**Start Date:** September 2013
99% complete	**Activities/Notes:** Design firm to provide RFI support during the construction.	**Completion Date:** January 2016
CO 9 (b)(4)	Engineering design services	
Project Description:	Develop the construction documents for two (2) 2.0 million-gallon (MG) nominal capacity concrete reservoirs in the Yigo service zones and one (1) 2.0 MG reservoir in the Astumbo service area. The design services will consist of preparation of plans, specifications, and estimates (PS&E), including Basis of Design, design calculations, construction schedule, topographical survey, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic resources, hazardous materials survey, construction documents, design drawings in Auto CAD (latest version), and relevant permits. Other services will include construction bid support service, meetings, and response to request for interpretation/information during construction. The consultant is required to incorporate and modify existing GWA concrete reservoir specifications to meet the project objective.	

DESIGN PW 09-11	**Northern and Southern Guam Reservoir Design** **(TG Engineers)**	**Start Date:** May 2015
60% Complete	**Activities/Notes:** Santa Rosa – 100% design in hand. Santa Rita – 100% design in hand. Inarajan – Land procurement second site related to new BPS's still on-going. Sinifa – 100% design in hand. Ugum – GWA still in discussion with re-evaluation and discussion with property owner of alternative property on-going.	**Completion Date:** Update: Due to property acquisitions issues for Piti and Tumon #1, design completion 6 months after property issue resolved.
CO 29 (b)(4)	Engineering design services	
Project Description:	The design services will consist of preparation of plans, specifications, and estimates (PS&E), which includes Basis of Design, design calculations, hydraulic modeling (EPANET), computational fluid dynamic modeling (CFD), construction schedule, topographical survey, property research, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic resources, hazardous materials survey, construction documents, design drawings in Auto CAD, relevant permit, construction bid support service, and response to request for interpretation/information during construction. The tank locations are Ugum, Santa Rita, Santa Rosa, Inarajan and Sinifa.	

DESIGN PW 12-04	**Central Guam Reservoirs Design (GHD Inc.)**	**Start Date:** May 2015
65% Complete	**Activities/Notes:** Chaot #2 – Chaot off-site work part of base bid. Contract with finance for fund cert. Chaot Tank work expected to be Change Order in once funding available. Tumon #2 – Tumon tank part of base bid. Contract with finance for fund cert. Hyundai – Hyundai tank part of base bid. Contract with Finance for fund cert. Piti – GWA still evaluating alternative solutions to storage needs in Piti area. Manenggon – Geotech work complete. 60% design near complete. Tumon #1 – GWA working on land issues.	**Completion Date:** Update: Due to property acquisitions issues for Piti and Tumon #1, design completion 6 months after property issue resolved.
CO 29 (b)(4)	Engineering design services	
Project Description:	The design services will consist of preparation of plans, specifications, and estimates (PS&E), which includes Basis of Design, design calculations, hydraulic modeling (EPANET), computational fluid dynamic modeling (CFD), construction schedule, topographical survey, property research, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic resources, hazardous materials survey, construction documents, design drawings in Auto CAD, relevant permit, construction bid support service, and response to request for interpretation/information during construction The tank locations are Hyundai, Pulantat, Chaot #2, Tumon #2, Piti and Tumon #1.	

CONSTRUCTION PW 09-03	**Line Replacement Phase IV (Giant Construction)**	**Start Date:** 02/14/16
60% Complete	**Activities/Notes:** Contractor working in Santa Rita (Santa Rosa Subd.) and still working on ROW/easement issue along Famha Rd. Making reconnections/finalizing in Agafa Gumas, Chalan Agoan and Perez Gardens, Machanao.	**Completion Date:** 02/06/18
	Construction Services	
Project Description:	The project is intended for a contractor to replace existing water lines that have been found by operations to be leaking and/or are causing service delivery to less than what GWA is required to provide. The project will replace water mains and ten known locations throughout the island and there is a component within the bid where line replacement work for unknown locations is accounted for.	

DESIGN PW 05-15	**Asan Spring Rehabilitation Design (HDR)**	**Start Date:** August 24, 2016
10% Complete	**Activities/Notes:** GWA receive approval from Parks Service start design field investigation work. Design Investigation is proceeding.	**Completion Date:** Due to delays from the Park Services related to property access the anticipated

		completion of the design is May 2018.
	Engineering design services	
Project Description:	- Perform site visits and condition assessment for site conditions to determine demolition and rehabilitation requirement, process equipment condition, structural condition, and electrical system. Site condition assessment shall include all disciplines to execute the project. - Review and validate the current property boundary information to confirm the available space for the project development. - Perform an environmental impact study and prepare all required permits as needed. - Perform an archeological and historical resources study to identify potential impact to the project, prepare all required permits as needed. - Coordinate with Guam Historic Resources Division State Historic Preservation Office (SHPO) on historical resources study. Prepare all necessary reports and documents as required by SHPO. - Coordinate with Guam Department of Agriculture, Division of Aquatic and Wildlife Resources (DAWR) on vegetation clearance. Prepare all necessary reports and documents required by DAWR. - Identify the existing and projected service area, period of design. - Identify and recommend conceptual water treatment system. - Perform a Class 4 engineering cost estimate according to the American Association of Cost Engineers (AACE) International Cost Estimate Classification System for construction fee. Cost must include all disciplines, permit, construction and administration that are necessary to execute the project. All costs will be in current dollars and escalated to the estimated midpoint of construction.	

CONSTRUCTION PW 09-11, PW 12-05	**Yigo/Astumbo Tank Construction (Pernix)**	**Start Date:** 12/1/16
40% Complete	**Activities/Notes:** Yigo #1 core wall #1 through #6 complete. Yigo #2 preparing main foundation. Astumbo #1 preparing main foundation.	**Completion Date:** 02/06/18
	Construction Services	
Project Description:	This project will involve construction of two (2) 2MG concrete tanks and Booster Pump Station at the Yigo site and a one (1) 2MG concrete tank at the Astumbo site. Work will involve new pipe line, valves, electrical controls, pumps and motors, site drainage, paving, generator for the BPS, SCADA, etc.	

CONSTRUCTION MANAGEMENT PW 09-11, PW 12-05	**Yigo/Astumbo Tank Construction Management (GHD)**	**Start Date:** December 2016
35% complete	**Activities/Notes:** Processing submittals and on-site inspection	**Completion Date:** February 2018
N/A	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the demolition of	

	existing steel elevate and ground tanks as well as the construction of the 2MG concrete tanks at the Yigo tank location and Astumbo tank location. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.

D. CIP Wastewater Section

DESIGN WW 11-08	**Agat-Santa Rita WWTP Replacement (DCA)**	**Start Date:** October 2014
99% Complete	**Activities/Notes:** Design complete. Services during construction on-going through Nov 2017. CCU resolution before the January CCU to extend design services during construction.	**Completion Date:** Nov. 2015 (design); April 2018 (construction)
CO 11	Engineering design services	
Project Description:	The engineering design consultant is required to design a new wastewater treatment facility that will meet secondary treatment limits. The new facilities will incorporate provisions for redundancy to improve reliability and facilitate operations and maintenance activities at the existing facility	

INSPECTION 2010 BOND WW 12-05 2010 BOND WW 05-04 2013 BOND WW 05-04	**SSES Central Sewer System (HDR)**	**Start Date:** November 2014
99% Complete	**Activities/Notes:** GWA still awaiting final report from HDR.	**Completion Date:** January 2018
CO 8 (c)	Engineering Inspection Services	
Project Description:	Work specifically required includes data analysis, development of hydraulic modeling, and development of an SSES fieldwork plan, manhole inspections, smoke testing, CCTV inspection and preparation of a Project Report.	

CONSTRUCTION MANAGEMENT WW 11-08	**Agat Santa Rita WWTP CM (GHD)**	**Start Date:** November 2014
100% (PH 1) 100% Complete (PH 2, Part 1) 80% Complete (PH 2, Part B)	**Activities/Notes:** Typical CM inspections on-going. Change order required to continue services through April 2018.	**Completion Date:** December 2017, projected through April 2018
CO 11	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of the Agat Santa Rita WWTP Phase II project. GWA plans to replace the existing wastewater treatment plant for a new plant that can meets permit limits. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

CONSTRUCTION WW 11-08	**Agat Santa Rita WWTP Phase II (Sumitomo Construction)**	**Start Date:** January 2016
Part 1 of Phase II- 100% Complete Part 2 of Phase II- 80% complete	**Activities/Notes:** Contractor still working on second ditch, second clarifier, headworks, aerobic digester, equalization basin, admin and maintenance buildings.	**Completion Date:** Phase A: 03/15/17 Phase B: 12/31/17 will not be met, April 2018 projected
CO 11	Construction services	
Project Description:	This project includes construction of the head works, clarifier, oxidation ditches and UV disinfection and administration facilities. Rehabilitation work at the existing WWTP will also occur to ensure the wastewater can be pumped to the new plant. The new plant will also tie into the Tipalao SPS.	

DESIGN WW 09-08, WW11-03	**Baza Gardens Cross Island Sewer Design (DCA)**	**Start Date:** 02/05/16
99% Complete	**Activities/Notes:** DCA providing engineering services during construction.	**Completion Date:** 04/30/18(this completion date will have to be extended.)
CO 11	Engineering design services	
Project Description:	The intent of this project for an engineering firm to prepare design drawings and specification for a sewer conveyance from the Baza Garden WWTP to the new Agat Santa-Rite WWTP. The design will take into account growth in the Baza Gardens/Talofofo areas as wells as new connection along the Route 17 route.	

DESIGN WW 09-06	**Bayside SPS Improvements Design (EMPSCO)**	**Start Date:** July 29, 2016
99% Complete	**Activities/Notes:** Design consultant continuing to work on Army Corp of Engineers permit. GWA received 100% design and under review.	**Completion Date:** Due to issue with ACOE anticipate December 2017 for design only.
	Engineering design services	
Project Description:	The intent of this project for an engineering firm to prepare design drawings and specification to upgrade the Bayside Sewer Pump Station given the facility is in major disrepair and the adjacent river is eroding away the access road to the facility which is causing maintenance challenges.	

CONSTRUCTION WW 09-08, WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance Construction Phase I (BME and Sons)**	**Start Date:** October 2016

60% Complete	**Activities/Notes:** New SPS, force main and gravity line installation along Route 17 on-going.	**Completion Date:** Phase I: 03/01/18 (this completion date will have to be extended.)
	Construction services	
Project Description:	The work performed under this project consist of construction of 14,714' of gravity main, 2,767' of force main and sewer pump station #3 next to the Aplacho River in Santa Rita.	

CONSTRUCTION MANAGEMENT WW 09-08 WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance (Construction Management) (SSFM)**	**Start Date:** December 5, 2016
55% Complete	**Activities/Notes:** Field inspection, project coordination and invoice review on-gong.	**Completion Date:** April 2018 (this completion date will have to be extended.)
	Construction Management services	
Project Description:	The work performed under this project shall consist of Construction Management and Inspection Services for the construction of gravity main, force mains and sewer pump station as well as an equalization basin at the Baza Garden WWTP.	

CONSTRUCTION WW 09-08, WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance Construction Phase II (BME and Sons)**	**Start Date:** March 2017
40% Complete	**Activities/Notes:** New SPS, force main and gravity line installation along Route 17 on-going.	**Completion Date:** Phase II: 03/16/18 (this completion date will have to be extended.)
	Construction services	
Project Description:	The work performed under this project consist of construction of 1,767' of gravity main, 14,400' of force mains and sewer pump station #2 along Route 17.	

CONSTRUCTION WW 09-08, WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance Construction Phase III (Sumitomo Construction)**	**Start Date:** June 2017
15% Complete	**Activities/Notes:** Pipeline construction on Route 17 on going.	**Completion Date:** Phase III: 03/16/18 (this completion date will have to be extended.)
	Construction services	

Project Description:	The work performed under this project consist of construction of, but not limited to, 10,481' of force mains and sewer pump station at existing WWTP, equalization tanks, stand-by generator, improved headworks, grit removal system, and associated equipment.

CONSTRUCTION WW 11-04	**Umatac Merizo WWTP Design Build Improvements Project (CoreTech)**	**Start Date:** June 2017
5% Complete	**Activities/Notes:** Initial design work on-going. Coordination with operation for field survey on-going.	**Completion Date:** December 31, 2018
	Construction services	
Project Description:	The project is intended to improve the aeration basin, construct a new sewer pump station, regrade the overland field, construct a new effluent storage tank and disinfection facility. The overland percolation basin will undergo regarding work to ensure appropriate distribution of effluent through the whole basin.	

CONSTRUCTION MANAGEMENT WW 11-04	**Umatac Merizo WWTP Design Build Improvements Project (SSFM Inc)**	**Start Date:** September 7, 2017
5%	**Activities/Notes:** Establishing communication links with project management team and contractor.	**Completion Date:** December 31, 2018
	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the improvements works at the aeration basin, new sewer pump station, overland field improvements, effluent storage tank. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

DESIGN OEA GRANT	**Design Services for the Upgrade of the Northern District WWTP (DCA)**	**Start Date:** August 8, 2017
5% Complete	**Activities/Notes:** Wastewater treatment process workshops completed.	**Completion Date:** December 2018.
	Engineering design services	
Project Description:	The work performed under this project procurement shall consist of engineering design services for the conversion of the existing WWTP to secondary treatment. The design will require the existing plant to stay operational and the designer will use the new 17 acres GWA acquired to place new headworks, oxidation ditches and UV disinfection systems.	

E. CIP Engineering Support

DESIGN EE 09-08	**SCADA System for Water and Wastewater Facilities Phase A-1 (AECOM)**	**Start Date:** June 2015
100% complete	**Activities/Notes:** Final design in hand. GWA to work towards bidding out construction.	**Completion Date:** November 2017 - Design January 2019 - (Bid and Construction Support)
N/A	Engineering design services	
Project Description:	The A/E firm will design an integrated, robust and secure Supervisory Control and Data Acquisition (SCADA) system for GWA's water and wastewater systems, and to provide support services during bid and construction. The 22 sites will consist of a combination of water facilities such as production wells, reservoirs, booster pump station and wastewater sites include sewer treatment plants and sewer pump stations. Executed by approved change orders, number of sites in original design scope has changed from 22 sites to 19 sites and design of High Water Alarm for 20 critical sewer pump stations has been added. Scope also includes bid and construction support of the design-build project of GPWA SCADA EMS project.	

DESIGN MC 05-01	**New GWA Lab Design Project (Laguana Architects)**	**Start Date:** June 2015
100% complete	**Activities/Notes:** Design complete however services continue into construction phase.	**Completion Date:** February 2016
N/A	Engineering design services	
Project Description:	The design firm is required to review all laboratory activities GWA's lab staff conduct for water and wastewater analysis after which they are to develop design drawing and specification to be bid out for construction. The design firm shall also take into account power and water needs to ensure the facility is self-sufficient.	

CONSTRUCTION MC 05-01	**New GWA Lab Construction (Mega United Construction)**	**Start Date:** NTP issued August 18, 2016
99% Complete	**Activities/Notes:** Punch list items and communication installation remaining. GWA to issue a letter to contractor relative to LD.	**Completion Date:** Early February 2018. LD to be assessed.
	Construction services	
Project Description:	The project will involve construction of a new building at the GWA Upper Tumon compound to house the laboratory section. The facility will include office, laboratory and storage space for the lab employees. The facility will also include a back-up generator.	

F. GIS Section

MAPPING MC 05-02	**Island Wide Survey-** **(Duenas, Camacho & Ass.)**	**Start Date:** December 2007
94% complete	**Activities/Notes:** Task #12 map submitted to DLM for final approval. Task #13 awaiting GM approval for NTP. Task #14 work on-going.	**Completion Date:** New anticipated completion is April 2018.
	Survey services	
Project Description:	The contracted land surveyor is required to conduct title research, property valuation and mapping of property boundaries where GWA facilities are located but the lot is not registered under GWA's name.	

MAPPING MC 05-02	**Island Wide Survey PH II -** **(Duenas, Camacho & Ass.)**	**Start Date:** August 30, 2017
25% complete	**Activities/Notes:** Surveyor conducting field survey work and map preparation for 25 parcels. GWA reviewing maps submitted to date.	**Completion Date:** December 2018
	Survey services	
Project Description:	The work performed under this project procurement shall consist of a professional land surveyor conducting field work to mark corners of existing government properties as a means of severing out portions of the larger property to be deeded to GWA. Surveyor shall also prepare all necessary maps and documents for recording at DLM	

G. Permits Section

PERMITS
MONTHLY REPORT 2017

	2017								2018
Description	Apr	May	Jun/Jul	Aug	Sept	Oct	Nov	Dec	Jan
Building Permit	17	23	27	27	27	12	7	11	
Occupancy Permit	5	25	28	28	30	13	9	3	
New Installation	15	15	33	33	25	17	3	14	
Sewer Application	3	4	3	3	7	5	18	15	
Sewer Inspection	0	1	0	0	1	1	1	0	
Private Utility Acceptance	0	0	0	0	0	0	0	0	
Relocation of Water Meter	0	0	0	0	0	0	0	0	
Tapping-Water	0	3	8	8	0	0	0	1	
Tapping-Sewer	1	3	5	5	0	0	0	0	
Clearance-Water	2	20	26	26	11	1	2	3	
Clearance-Sewer	2	20	26	26	11	0	2	3	
Highway Encroachment	6	20	12	12	25	4	19	0	
Verification of Utilities	5	1	8	8	7	0	1	4	
Fire Flow Test	0	0	3	3	1	3	0	0	
Schedule Water Outage	0	0	0	0	0	0	0	0	

H. SRF Project Status Report

- Projects listed below that are noted to be in the procurement phase will follow the "Percentage Key" below.

Percentage Key:

100%	Approved by GM
99%	Signature required from either Accounting/Legal/GM
98%	Processing engineering service or construction contract (with legal)
95%	Request for CCU approval (GM/engineering)
90%	A/E fee negotiation or contractor bid evaluation (engineering)
80%	Selected A/E or Conducted bid opening (engineering)
70%	Advertised RFP/IFB (engineering)
60%	RFP/IFB Package under legal review
50%	RFP/IFB Package completed (engineering)
Less than 50%	Project Scope of work development in progress

- Red text anywhere indicates a change from the last report.
- Cells highlighted in green indicate contract amount certified and project active.

	Project	Project Description	Project Manager	Phase		Start Date (NTP Issued)	Anticipated Completion Date	Contract Amount (+) change orders	Contractor	Status as of 01/16/18
1	Northern District SSES & I/I Study	Sanitary sewer system evaluation study (SSES) and inflow and infiltration (I/I) study designed to evaluate high I/I areas within the Northern sewer basin with the goal of identifying projects to eliminate them.	J. Davis	Design	1	10/10/2014	2/29/2016	$ 792,979.97	Stanley	100% Complete.
				Construction				*The project does not involve construction.*		
				Const. Mgmt						
2	Southern SSES Rehabilitation (Agat-Santa Rita-Umatac-Merizo)	Rehabilitation of segments of sewer lines in Umatac, Merizo, Agat, and Santa Rita where the Sanitary Sewer Evaluation Study recommends rehabilitation.	Brown & Caldwell	Design				*The design was previously completed under bond funding.*		
				Construction	1	10/30/2015	2/28/2017	$ 1,170,583.82	Reliable Builders	· RBI proposing to do open cut to address the warranty descrpencies found on CCTV footage. GWA still waiting for work plan.
				Const. Mgmt	1	11/10/2015	3/30/2017	$ 226,980.23	TG Engineers	· Due to CM over spending a Change Order had to be executed before contract can be closed out. CM release of claims and final invoice will then be
3	Asan-Adelup-Hagatna RT1 Sewer Line Rehabilitation and Replacement	Rehabilitation of sewer lines from the War in the Pacific Asan Park to the Governor's Complex in Adelup. This line is asbestos concrete that is dilapidated and some areas have disintegrated crowns.	Brown & Caldwell	Design	2	12/11/2015	3/30/2017 for Design requirements	$ 1,780,210.00	HDR	Design complete.
				Construction		10/16/2016	6/30/2019			Procurement 75%. No bids submitted for Route 1 Phase I. PMO acquiring responses form companies that pick up bids as to why they did not bid. GWA expected to rebid asap.
				Const. Mgmt		6/30/2017	6/30/2019			Procurement 90%. CM scope and fee proposal received 6/23 ($698K); due to canceling of bid GWA will repackaging bid therefore scope and fee will need to be refined.
4	RT2 Agat War in the Pacific Sewer Line Rehabilitation and Replacement	Rehabilitation of a large segment of sewer line fronting the War in the Pacific Park in Agat that has collapsed.	Brown & Caldwell	Design	3	11/17/2015	3/30/2017 for Design requirements	$ 316,681.00	SSFM	SSFM providing services during bidding process as well as construction phase.
				Construction	6	8/31/2017	10/1/2018	$ 4,554,451.00		Contractor still waiting on building permit. Expecting to get it this week Currently constructing manholes off site
				Const. Mgmt	8	9/19/2017	10/1/2018	$ 584,725.00		CM reviewing and commenting on submittals.

5	Brown & Caldwell Project Management	Brown & Caldwell to provide program management services and support.	T. Cruz	Design	4	3/24/2015	2/28/2019	$ 1,819,850.00	B&C	Project underway.
				Construction				*The project does not involve construction.*		
				Const. Mgmt						
6	Wastewater, Water and Source Water System Master Plan Upgrade	Update of the existing water and wastewater master plan while factoring in military integration and secondary treatment plant options.	Brown & Caldwell	Design	5	7/6/2015	01/30/2018 (revised due to financial workshop)	$ 2,623,300.00	B&C	Brown and Caldwell working to complete draft fainal by end of January 2018.
				Construction				*The project does not involve construction.*		
				Const. Mgmt						
7	Groundwater Wells Rehabilitation (F-3, A-2, A-7, A-12, D-5)	Rehabilitation of existing deep wells and/or in cases where pipe column needs replacing, wells will be re-drilled. The deep wells to be rehabilitated are A-2, A-7, A-12, D-5, & F-3.	Brown & Caldwell	Design	6	5/27/2016	10/31/2017 (for design only)	$ 1,758,247.00	AECOM	100% design review meeting was on 11/22. GEPA provided comments on 90% design, waiting for 100% design comments. AECOM visited sites with GPA to coordinate work required. Proceeding toward Final design. A-12: Design rate of 200 gpm (45.5 ft drawdown). D-05: Design rate of 125 gpm (39 ft drawdown). A-02: Design rate of 250 gpm (34.6 ft drawdown). F-03: Design rate of 200 gpm (1.5 ft drawdown).
				Construction		3/23/2017	4/30/2018			
				Const. Mgmt		3/23/2017	4/30/2018			
8	Tumon Sewer Hot Spots	Investigation, evaluation, and repair of possible solutions, to long plaguing issues where sewer overflows are known to occur in Tumon San Vitores.	Brown & Caldwell	Design	7	6/24/2016	10/30/2017 for design only	$ 572,089.00	TG Engineers	• TGE submitted 100%, but working through some additional comments.
				Construction		3/23/2017	3/22/2018			
				Const. Mgmt		3/23/2017	3/22/2018			

9	Critical Sewer Pump Stations (7 stations)	Rehabilitation of various components of 7 pump stations that were identified to by the CDM design team: Macheche, Ypaopao, Astumbo 1, Fujita, Santa Ana, Southern Link, and Route 1.	CDM	Design				*The design will be incorporated into the design/build package.*		
			J. Davis	Design/Build	1	8/8/2016	3/30/2018	$ 1,531,456.33	ProPacific	Upcoming change orders @ Fujita and Route 16 PS – Rehabilitate Roof Ventilation and Curb Repair is under process @ Route 16 PS – Set schedule for structural evaluation and rehabilitation of wet well on January 15, 2018. Additional time extension is needed. @ Fujita PS- Request for additional painting (Additive) and Macheche PS- Wet well coating below water surface eliminated. (Deductive)- under review.
				Const. Mgmt	2	9/9/2016	3/30/2018	$ 299,519.00	Stanley	CM work ongoing. GWA working on Change Order proposal to extend contract to match constructions activities.
10	Sewer Pump Station High Water Alarm Systems (20 stations)	This project will design and installed telemetry equipment/SCADA type alarms that will alert when pump station failure occurs.	C. Yam	Design				*The design will be incorporated into the design/build package.*		
				Design	8	8/12/2016	02/30/2017	$ 183,171.00	AECOM	Design complete
				Construction	5	4/5/2017	9/30/2017	$ 1,444,888.00	Pacific Rim	Project complete
				Const. Mgmt	3	02/30/2017	9/30/2017	$ 195,269.00	EMSPCO	CM work complete
11	Sewer Pump Station Backup Power (2 stations)	Construction of the housing and installation of new generators for the Casimero pump station (Mongmong) and the Namo pump station (Yona central).	B. Cruz	Design				*The design will be incorporated into the design/build package.*		
				Design/Build	2	6/24/2016	9/30/2017	$ 362,692.53	ProPacific	Issue regarding contractor not conforming to Davis Bacon Act still pending. GWA legal to preapre position statement to contract.
				Const. Mgmt				*B. Cruz is the construction manager.*		
12	RT4 Relief Sewer Line Rehabilitation and Replacement	Rehabilitation of sewer lines that are located from Agana McDonalds to Marine Drive that have been known to overflow due to structural issues.	Brown & Caldwell	Design	9	3/1/2016	4/22/2017	$ 794,000.00	AECOM	· AECOM to provided services during bidding process.
				Construction		4/23/2017	12/31/2018			Procurement 70%, GWA working to rebid with work sepearetd by open cut and CIPP.
				Const. Mgmt		4/23/2017	12/31/2018	$ 647,000.00		Procurement 90%, EMPSCO submitted revised fee ($647K). B&C recommending renegotiating given the plans to reorganize the bid package.

13	Groundwater Wells Rehabilitation (D-3, D-17, D-18, D-22, M-9)	Rehabilitation of existing deep wells and/or in cases where pipe column needs replacing will be re-drilled. D-3, D-17, D-18, D-22, and M-9.	Brown & Caldwell	Design				*The design was previously completed under bond funding.*		
				Construction	2	8/19/2016	3/30/2018	$ 6,120,353.44	Pacific Rim	Operating Permit applications delivered to GEPA 1/3/2018 Initial checkouts started this week before connection to the distribution system. D-03: [250 gpm design] Currently achieving 75 gpm. Waiting on proposals from contractor to determine next steps for well completion. Current thought is to do checkout of existing system and except it then work on changes required via CO. D-17: [200 gpm] Initial checkout was completed 1/2/2018 with some minor issues to correct. D-18: [300 gpm] Initial Check out underway 1/3/2018. D-22: [100 gpm] Initial Checkout planned for 1/4/2018. M-09: [Rehab 150 gpm] GEPA inspection complete and well back in operation Compressor on island (11/27). Delivery scheduled to GWA for Jan 11 with training on the 11th and 12th. Working on CO#8; EA negotiating costs.
				Const. Mgmt	4	3/22/2016	3/30/2018	$ 943,361.24	EA	• CO#3 still pending execution from GWA.
14	Southern SSES Sewer Rehabilitation (Baza Gardens-Talofofo)	Rehabilitation of segments of sewer lines in Windward Hills, Talofofo area where the Sanitary Sewer Evaluation Study recommends rehabilitation.	Brown & Caldwell	Design				*The design was previously completed under bond funding.*		
				Construction	3	8/2/2016	7/2/2017	$ 1,189,815.00	ProPacific	- Contractor stated that they have removed the failed liner this week. Waiting on CCTV to confirm. - Contractor notified of possible termination for default if there is no improvement in performance. - Accruing Liquidated Damages against contractor (over $175,000 so far).
				Const. Mgmt	5	7/29/2016	5/28/2017	$ 347,945.93	EMPSCO	· CM on notice to minimize management costs. CM will need CM CO #4 in order to pay for work after October 31. Continuing to negotiate with CM to bring down costs.
15	Tamuning Sewer Hot Spots	Sewer rehabilitation for lines at Winner Apartments, Segund Leon Guerrero, and behind Guam Premium Outlets.	Brown & Caldwell	Design	10	9/9/2016	10/31/2017 (for design only)	$ 663,629.00	TG Engineers	• TGE submitted 100%, but working through some additional comments. • Met with New Plaza Market Owners and made the request for a new easement waiting on response.
				Construction		4/29/2017	4/30/2018			
				Const. Mgmt		4/29/2017	4/30/2018			
16	Talofofo Sewer Pump Stations (4 stations)	Design and construction of 4 sewer lift stations in the Talofofo village where sewer lines are installed but never completed.	J. Davis	Design (for Talofofo and Chalan Pago PS)	11	8/17/2016	11/30/2017	$ 477,999.50	EMPSCO	Designer preparing bid package for Talafofo. GWA received draft Chalan Pago 100% design which is under review.
				Construction		4/29/2017	4/30/2018			
				Const. Mgmt		4/29/2017	4/30/2018			

17	Chalan Pago Sewer Pump Station	Design and construction of sewer lift stations and gravity lines in Scott Laguana, Santa Cruz Street Chalan Pago.	J. Davis	Design		8/17/2016	11/30/2017	*The design will be included with the Talofofo Pump Station design project.*		
				Construction		4/29/2017	4/30/2018			
				Const. Mgmt		4/29/2017	4/30/2018			
18	Water Hydraulic Model (SCADA ready instruments to update Model)	Design and construction of instrumentation at key water sites in the Barrigada service area necessary to update GWA Water hydraulic model.	Barbara Cruz	Design	12	8/3/2016	3/15/2017	$ 523,268.00	GHD	Design complete.
				Construction		2/1/2017	12/30/2019			Funding for construction project to be from FY18 grant that is still pending.
				Const. Mgmt		2/1/2017	12/30/2019			
19	Macheche Hill Sewer Rehabilitation/ Replacement	Rehabilitation of sewer lines on Macheche road. Segments of this sewer line has collapsed recently and is consider a high priority.	J. Davis	Design-Build	3	8/29/2016	3/30/2018	$ 2,202,545.47	Giant Const.	All paving work complete. Final connection of existing system to new system ongoing.
				Const. Mgmt	6	9/16/2016	3/30/2018	$ 379,994.38	Am Orient	CM coordinating conneciton activites with contractor.
20	Asan-Adelup-Hagatna Rt. 1 Sewer Line Rehabilitation and Replacement Emergency Repairs	Rehabilitation of sewer line in Asan that collapsed and which is current fitted with a temporary pumping system.	Brown & Caldwell	Design				Design cost covered under 3A above.		
				Construction	4	3/8/2017	12/30/2017	$ 2,470,658.00		All work complete at Harley Davison and Asan Beach Park.
				Const. Mgmt	7	1/24/2017	12/30/2017	covered under 3A		· CO#3 (for HDR CM) submitted to GWA 10/5; HDR currently beyond time and short on budget until CO processed.

DASHBOARD

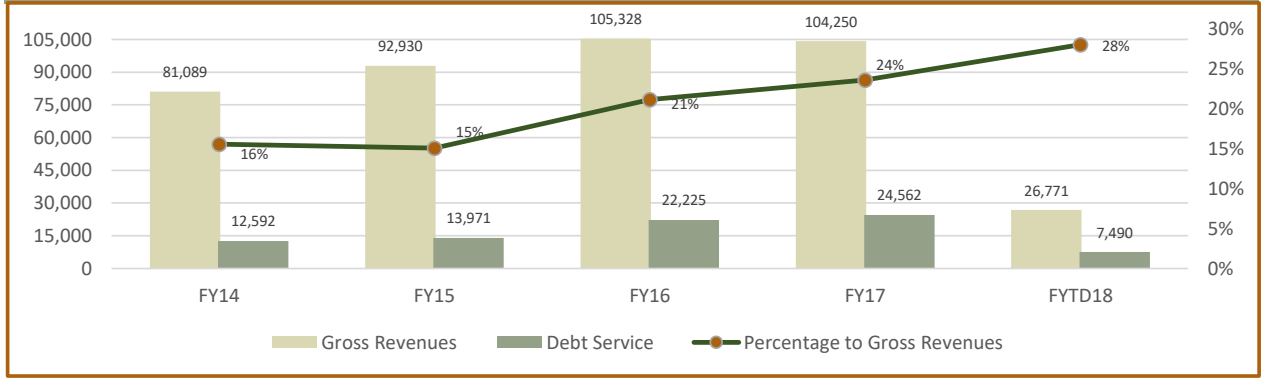
FYTD December 2017 Budget vs Actual ($000)

Category	Description	Budget FYTD18	Actual FYTD18	Variance
Rate Based Revenues	Water	$17,825	$16,903	($922)
	Wastewater	9,965	9,761	(205)
	Total	27,790	26,663	(1,126)
Operations & Maintenance	Salaries & Benefits	6,629	5,307	(1,322)
	Power	3,174	3,412	238
	Water Purchases	2,163	2,088	(75)
	A&G	3,217	2,000	(1,217)
	Contractual	1,120	730	(390)
	Total	$21,131	$18,356	($2,775)

Key Financial Ratios ($000)

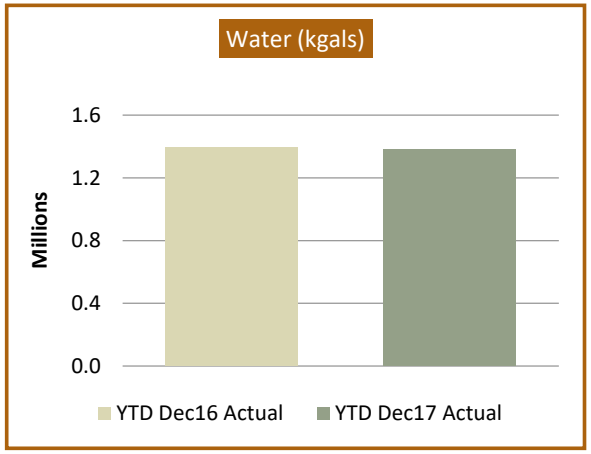
Category	FY18	FY17
Accounts Payable $$/Days	$4,195 / 54 days	$5,390 / 59 days
Accounts Receivable $$/Days	$17,257 / 69 days	$15,451 / 51 days
Days Cash On Hand	165 days	184 days
Annual Debt Service (Revenue Bonds)	$29,961	$24,563
Debt Service Coverage (Bond/PUC)	1.77 / 2.14	1.99 / 2.44

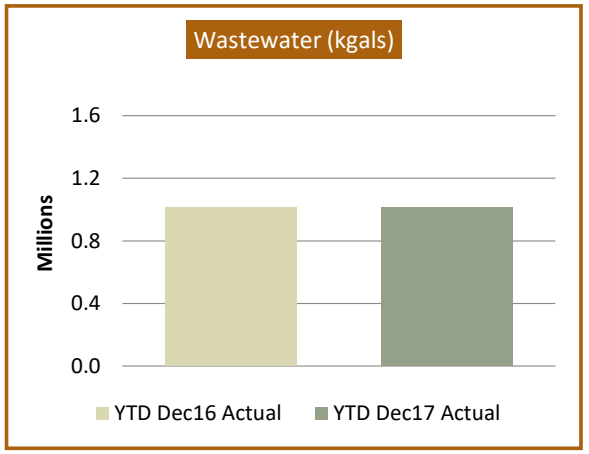
Debt as a Percent to Gross Revenue

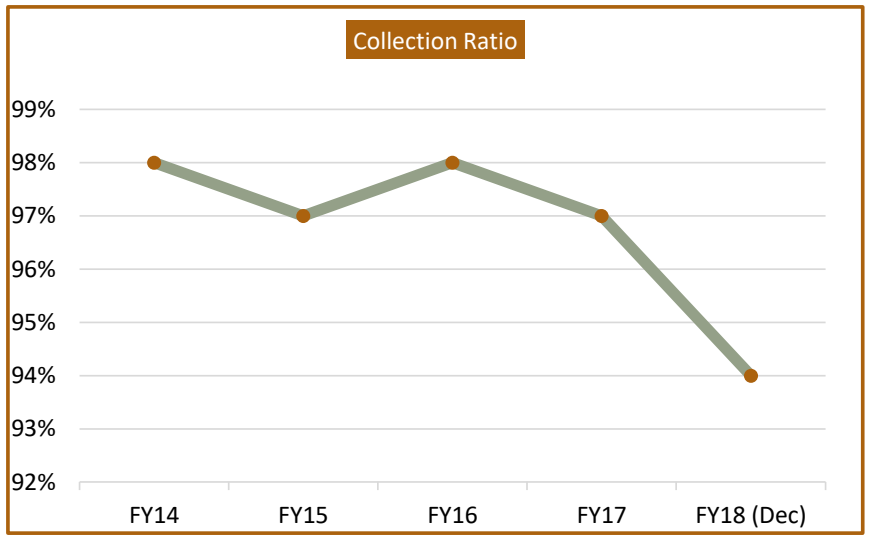


(1) Gross Revenues excludes SDC
(2) Debt Service Excludes Cap I

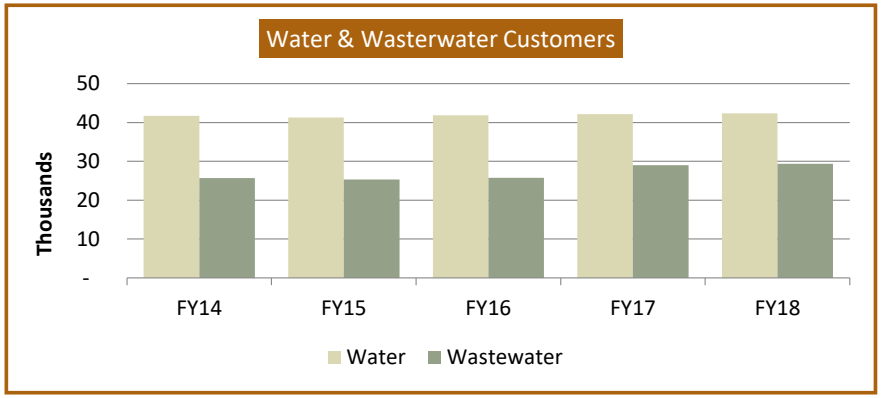
Water & Wastewater Analytics

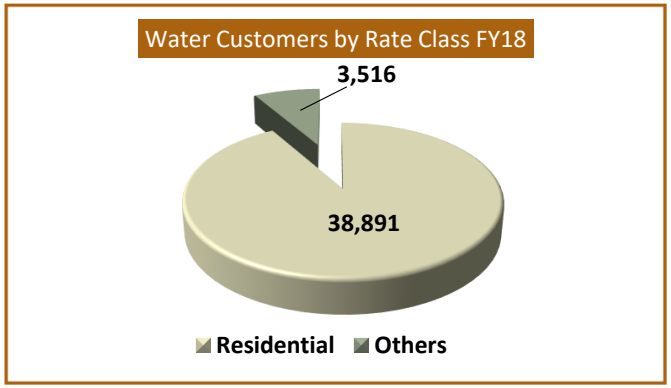


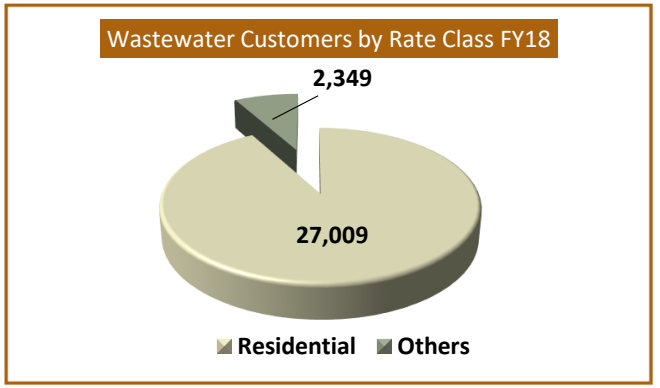


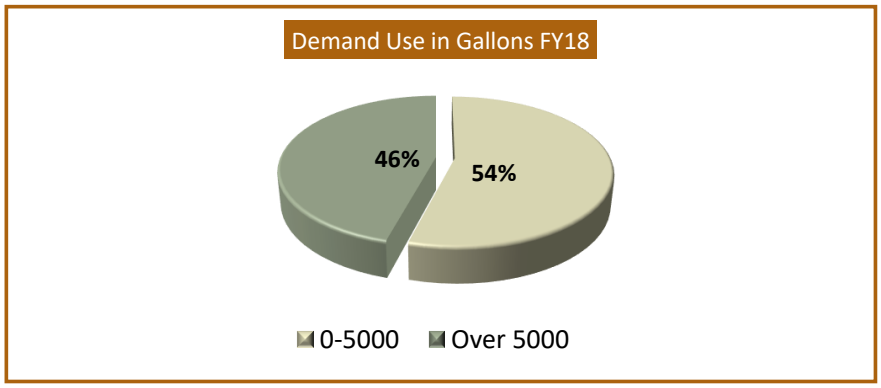


Water & Wastewater Customers





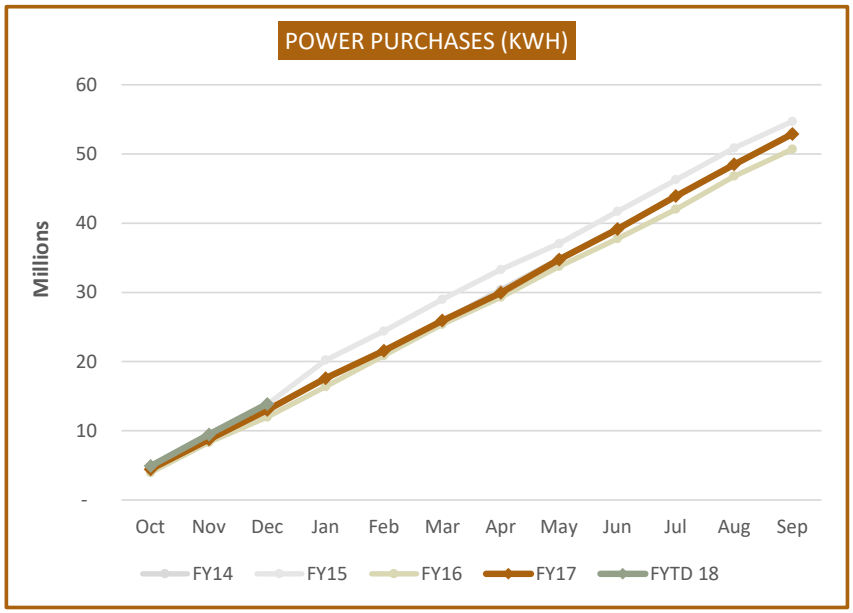


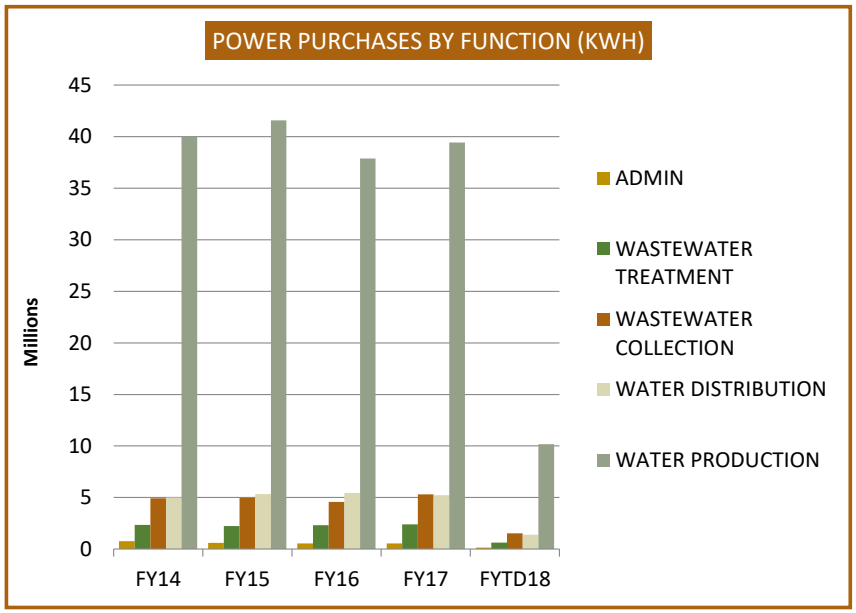


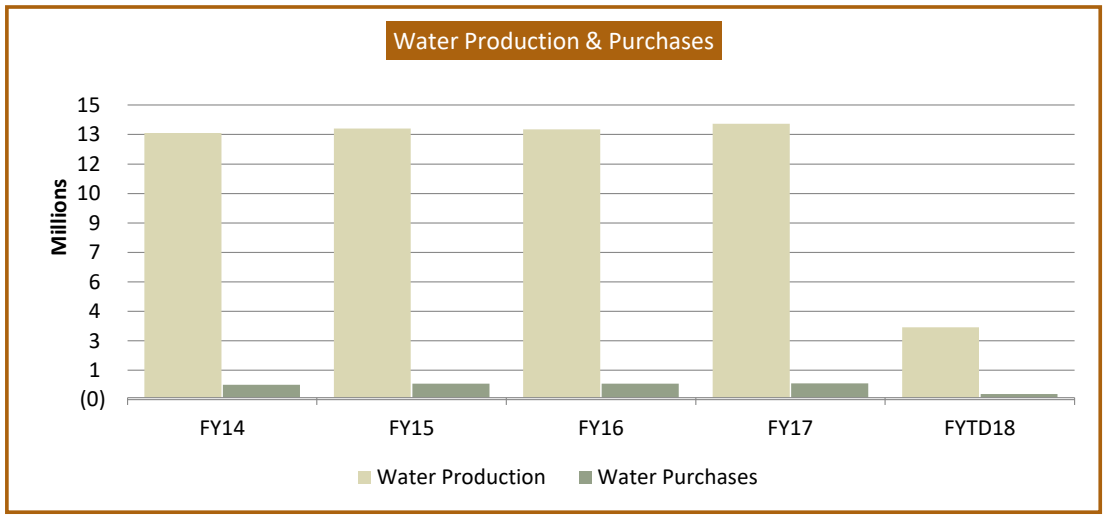
Top Ten Largest Water and Wastewater Customers – December 2017

Water			Wastewater		
Customer Name	FYTD18 Revenues	% of Total	Customer Name	FYTD18 Revenues	% of Total
1) MDI GUAM CORPORATION/LEOPALACE	$338,419	2.00%	1) AIR FORCE DOD	$938,166	9.62%
2) PACIFIC ISLANDS CLUB	276,261	1.63%	2) NAVY DOD	494,311	5.07%
3) HOTELS OF THE MARIANAS INC	253,662	1.50%	3) HOTELS OF THE MARIANAS INC	271,284	2.78%
4) HYATT	237,019	1.40%	4) HYATT	253,784	2.60%
5) HOTEL NIKKO GUAM	219,864	1.30%	5) HOTEL NIKKO GUAM	234,980	2.41%
6) GUAM REEF HOTEL INC	217,479	1.29%	6) GUAM REEF HOTEL INC	232,794	2.39%
7) SHERATON LAGUNA GUAM RESORT	192,702	1.14%	7) SHERATON LAGUNA GUAM RESORT	206,179	2.11%
8) MDI GUAM CORPORATION/WESTIN	158,683	0.94%	8) MDI GUAM CORPORATION/WESTIN	169,637	1.74%
9) TANOTA DEVELOPMENT LLC	158,467	0.94%	9) TANOTA DEVELOPMENT LLC	170,046	1.74%
10) OUTRIGGER GUAM RESORT	150,959	0.89%	10) OUTRIGGER GUAM RESORT	161,717	1.66%
Total	**$2,203,516**	**13.03%**	**Total**	**$3,132,898**	**32.11%**

Power, Water Purchases and Water Production

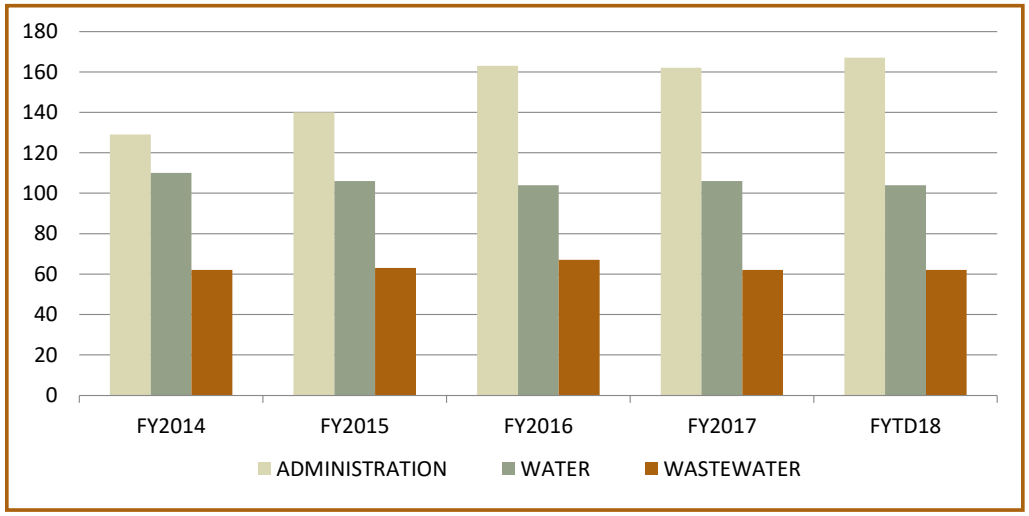




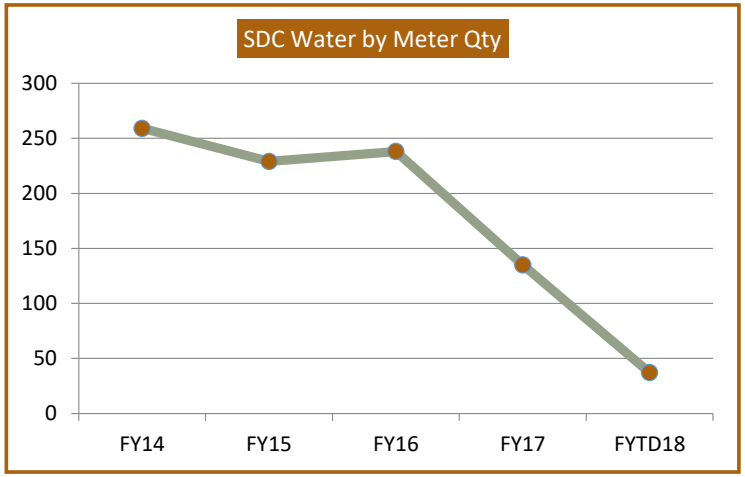


FTE by Major Division

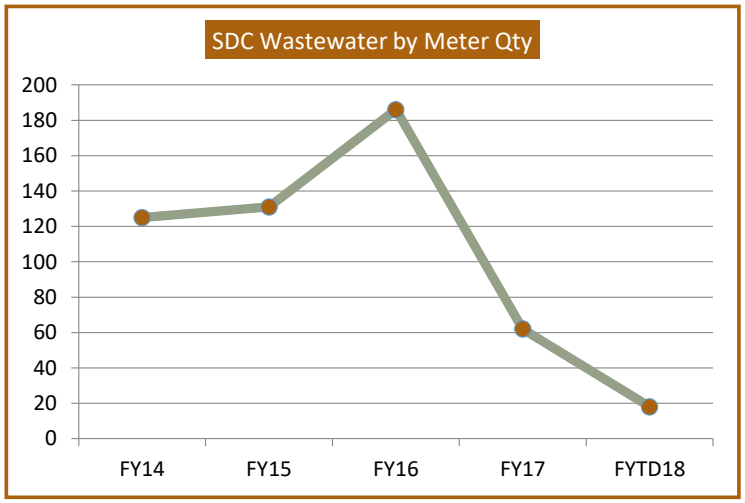
DIVISION	FY2014	FY2015	FY2016	FY2017	FYTD18
ADMINISTRATION	129	140	163	162	167
WATER	110	106	104	106	104
WASTEWATER	62	63	67	62	62
TOTAL NUMBER OF STAFF	301	309	334	330	333
Gross Salaries & Wages ($000)	15,532	15,805	16,442	16,963	3,990
Water Customers	41,702	41,274	41,858	42,181	42,407
Staff to Customers Ratio	0.72%	0.75%	0.80%	0.78%	0.79%



SDC Water & Wastewater (Meter Quantity)



Actual Meter Sizes (Inches)	FY 2014	FY 2015	FY 2016	FY 2017	FYTD18
5/8 x 3/4	248	220	239	129	31
1	5	5	7	2	1
1 1/2	1	1	1	1	3
2	3	2	4	2	2
3	1	-	1	-	-
4	-	1	-	-	-
6	-	-	-	1	-
8	1	-	-	-	-
10	-	-	-	-	-
Total SDC by Water	259	229	252	135	37



Actual Meter Sizes (Inches)	FY 2014	FY 2015	FY 2016	FY 2017	FYTD18
5/8 x 3/4	115	124	179	58	12
1	4	3	2	-	1
1 1/2	1	1	1	1	3
2	3	2	3	2	2
3	1	-	1	-	-
4	-	1	-	-	-
6	-	-	-	1	-
8	1	-	-	-	-
10	-	-	-	-	-
Total SDC by Wastewater	125	131	186	62	18

GUAM WATERWORKS AUTHORITY
DECEMBER 31, 2017
FINANCIAL AND RELATED REPORTS
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GUAM WATERWORKS AUTHORITY
Balance Sheet
December 31, 2017

SCHEDULE A

ASSETS	Unaudited December 31, 2017	Unaudited September 30, 2017	Increase (Decrease)
Current Assets:			
Cash:			
Unrestricted (Schedule G)	2,052,077	4,873,275	(2,821,198)
Restricted Funds (Schedule G)	67,319,464	65,124,400	2,195,064
Accounts Receivable Trade, Net of Allowance for Doubtful Receivables of $12,733,239 at Dec 31, 2017 and $12,619,034 at Sep 30, 2017	17,256,889	15,450,733	1,806,155
Other Receivable	4,469,691	8,433,446	(3,963,754)
Materials & Supplies Inventory, Net of Allowance for Obsolescence of $457,370 at Dec 31, 2017 and Sep 30, 2017	2,354,201	2,166,557	187,644
Total Current Assets	93,452,322	96,048,411	(2,596,089)
Property, Plant and Equipment			
Utility plant in service:			
Water system	327,493,369	327,484,191	9,177
Wastewater system	286,394,940	286,394,940	-
Non-utility property	18,938,255	18,938,255	-
Total property	632,826,564	632,817,387	9,177
Less Accumulated Depreciation	(290,628,105)	(286,043,580)	(4,584,525)
Land	1,163,298	1,110,998	52,300
Construction Work in Progress	124,649,927	111,695,887	12,954,040
Property, Plant and Equipment, net	468,011,683	459,580,691	8,430,992
Other noncurrent assets			
Restricted cash (Schedule G)	223,284,646	236,550,002	(13,265,356)
Investments (Schedule G)	48,266,271	41,042,038	7,224,233
Other Prepaid Expenses	2,572,233	551,128	2,021,104
Total other noncurrent assets	274,123,150	278,143,169	(4,020,019)
TOTAL ASSETS	835,587,155	833,772,271	1,814,884
Deferred outflows of resources:			
Debt defeasance loss on refunding	11,130,199	1,695,981	9,434,218
Deferred outflows from pension	3,270,212	3,414,242	(144,030)
Total Assets and Deferred Outflows of Resources	**849,987,566**	**838,882,494**	**11,105,072**
LIABILITIES AND NET ASSETS			
Current Liabilities:			
Current maturities of long-term debt			
-Series 2010 Bond	-	1,655,000	(1,655,000)
-Series 2014 Refunding	3,385,000	3,385,000	-
-Notes Payable	2,873,988	2,873,988	-
Accounts Payable -Trade	4,195,560	5,390,256	(1,194,696)
Interest Payable	13,266,149	6,656,499	6,609,649
Accrued Payroll and Employee Benefits	1,114,559	2,604,471	(1,489,913)
Accrued Annual Leave	1,729,291	1,729,291	-
Current portion of employee annual leave	567,057	567,057	-
Contractors' Payable	7,876,293	13,950,287	(6,073,994)
Customer and Other Deposits	2,458,972	2,087,207	371,764
Total Current Liabilities	37,466,868	40,899,057	(3,432,189)
Long Term Debt, less current maturities			
Series 2010 Revenue Bond	-	112,870,000	(112,870,000)
Series 2013 Revenue Bond	172,630,000	172,630,000	-
Series 2014 Refunding	72,610,000	72,610,000	-
Series 2016 Revenue Bond	143,310,000	143,310,000	-
Series 2017 Refunding Bond	107,660,000	-	107,660,000
Unamortized Discount - Bond 2010	-	(1,867,525)	1,867,525
Unamortized Discount - Bond 2013	(1,330,234)	(1,338,751)	8,517
Unamortized Premium - Bond 2014	4,760,258	4,804,694	(44,436)
Unamortized Premium - Bond 2016	17,161,726	17,262,975	(101,249)
Unamortized Premium - Bond 2017	13,854,833	-	13,854,833
Notes Payable	4,970,396	5,697,499	(727,103)
Unfunded Ret Liability (GASB 67/68)	38,195,938	38,195,938	-
Employee Annual Leave, Less Current Portion	783,992	783,992	-
TOTAL LIABILITIES	612,073,776	605,857,879	6,215,897
Net Assets	**237,913,790**	**233,024,615**	**4,889,175**
Total Liabilities and Net Assets	**849,987,566**	**838,882,494**	**11,105,072**

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited)
Comparative Budget vs. Actual for the period ending December 31, 2017

SCHEDULE B

	Budget December-17	Month to Date Actual (Unaudited) December-17	Variance Increase / (Decrease)
OPERATING REVENUES			
Water Revenues	5,743,160	5,334,955	(408,205)
Wastewater Revenues	3,228,257	3,117,461	(110,796)
Legislative Surcharge	291,896	250,233	(41,663)
Other Revenues	57,638	34,800	(22,838)
System Development Charge	46,136	138,534	92,398
Total Operating Revenues	9,367,087	8,875,983	(491,105)
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	721,113	633,175	(87,938)
Power Purchases	1,057,997	1,092,764	34,767
Total Utility Costs	1,779,110	1,725,939	(53,171)
Salaries and Wages	1,625,056	1,148,512	(476,544)
Pension and Benefits	584,558	367,837	(216,722)
Total Salaries and Benefits	2,209,614	1,516,348	(693,266)
Capitalized Labor and Benefits	(208,333)	(225,000)	(16,667)
Net Salaries and Benefits	2,001,281	1,291,348	(709,933)
Administrative and General Expenses			
Sludge removal	174,514	169,674	(4,840)
Chemicals	229,997	228,451	(1,546)
Materials & Supplies	237,400	235,767	(1,633)
Transportation	61,370	61,222	(148)
Communications	16,182	12,411	(3,771)
Claims	17,600	17,572	(28)
Insurance	97,757	75,480	(22,277)
Training & Travel	21,814	19,024	(2,791)
Advertising	13,910	2,800	(11,110)
Miscellaneous	115,515	75,055	(40,460)
Total Administrative and General Expense	986,059	897,456	(88,603)
Regulatory Expense	29,086	29,049	(37)
Bad Debts Provision	57,103	57,096	(6)
Depreciation Expense	1,528,175	1,528,175	0
Contractual Expense			
Audit & Computer Maint.	78,630	65,410	(13,220)
Building rental	37,955	35,852	(2,103)
Equipment rental	57,375	55,184	(2,191)
Legal	4,167	1,500	(2,667)
Laboratory	64,752	4,090	(60,662)
Other	130,363	82,321	(48,042)
Total Contractual Expense	373,241	244,357	(128,884)
Retiree Supp. Annuities and health care costs	240,008	236,940	(3,068)
Contribution to Government of Guam	49,500	49,833	333
Total Retiree Benefits	289,508	286,774	(2,735)
Total Operating Expenses	7,043,563	6,060,193	(983,370)
Earnings (Loss) from Operations	2,323,524	2,815,789	492,265
Interest Income-2010/13/14/16 Series Bond	15,727	139,245	123,518
Interest Income-Other Funds	2,935	24,681	21,747
Interest Income-SDC	2,414	18,498	16,084
Interest Expense- 2010/13/14/16 Series Bond	(2,625,587)	(2,211,025)	414,563
Interest Expense- ST BOG	(33,288)	(45,267)	(11,979)
Federal Expenditures	(51,332)	-	51,332
Loss on Asset Disposal	-	-	-
AFUDC	625,000	625,000	-
Amortization of Discount, Premium and Issuance Costs	(61,861)	61,861	123,722
Loss on Defeasance Bond05 Refunding	(15,218)	(12,444)	2,775
Deferred outflows from pension	(105,281)	(48,010)	57,271
Prior Year Adjustment	-	-	-
Total non-operating revenues (expenses)	(2,246,492)	(1,447,460)	799,032
Net Income (Loss) before capital contributions	77,032	1,368,329	1,291,297
Capital Contributions			
Grants from US Government	873,108	413,372	(459,736)
Grants from GovGuam & Others	-	-	-
Other Contributions	-	-	-
Total Capital Contributions	873,108	413,372	(459,736)
Change in Net Assets	950,140	1,781,701	831,561
Debt Service Calculation			
Earnings From Operations	2,323,524	2,815,789	
System Development Charge	(46,136)	(138,534)	
Retiree COLA	49,500	49,833	
Interest/Investment Income	2,935	24,681	
Depreciation	1,528,175	1,528,175	
Balance Available for Debt Service per Section 6.12	3,857,998	4,279,945	
Working Capital Reserve Available for Debt Service	935,321	935,321	
Transfer to Working Capital- Debt Service Reserve	(150,000)	-	
Transfer to Working Capital- O&M Reserve	(266,667)	-	
Balance Available for Debt Service inclusive of reserves	4,376,652	5,215,266	
Debt Service			
Principal	433,333	433,333	
Interest	2,063,402	2,063,402	
Total	2,496,736	2,496,736	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.55	1.71	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	1.75	2.09	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited)
Comparative for the period ending December 31, 2017 and 2016

SCHEDULE C

	Month to Date Actual (Unaudited) December-17	Month to Date Actual (Unaudited) December-16	Variance Increase / (Decrease)
OPERATING REVENUES			
Water Revenues	5,334,955	5,331,404	3,551
Wastewater Revenues	3,117,461	3,099,528	17,934
Legislative Surcharge	250,233	267,269	(17,036)
Other Revenues	34,800	36,293	(1,493)
System Development Charge	138,534	72,662	65,872
Total Operating Revenues	8,875,983	8,807,155	68,827
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	633,175	609,094	24,081
Power Purchases	1,092,764	1,006,355	86,408
Total Utility Costs	1,725,939	1,615,449	110,490
Salaries and Wages	1,148,512	1,413,608	(265,097)
Pension and Benefits	367,837	477,546	(109,709)
Total Salaries and Benefits	1,516,348	1,891,154	(374,806)
Capitalized Labor and Benefits	(225,000)	(262,516)	37,516
Net Salaries and Benefits	1,291,348	1,628,638	(337,290)
Administrative and General Expenses			
Sludge removal	169,674	140,487	29,187
Chemicals	228,451	174,001	54,450
Materials & Supplies	235,767	128,788	106,979
Transportation	61,222	53,744	7,478
Communications	12,411	10,884	1,527
Claims	17,572	22,151	(4,579)
Insurance	75,480	90,603	(15,123)
Training & Travel	19,024	23,055	(4,031)
Advertising	2,800	8,988	(6,188)
Miscellaneous	75,055	71,997	3,059
Total Administrative and General Expense	897,456	724,696	172,759
Regulatory Expense	29,049	24,134	4,915
Bad Debts Provision	57,096	109,700	(52,604)
Depreciation Expense	1,528,175	1,402,038	126,137
Contractual Expense			
Audit & Computer Maint.	65,410	76,901	(11,491)
Building rental	35,852	36,557	(704)
Equipment rental	55,184	59,374	(4,190)
Legal	1,500	414	1,086
Laboratory	4,090	10,627	(6,537)
Other	82,321	156,747	(74,426)
Total Contractual Expense	244,357	340,619	(96,262)
Retiree Supp. Annuities and health care costs	236,940	231,895	5,045
Contribution to Government of Guam	49,833	49,500	333
Total Retiree Benefits	286,774	281,395	5,378
Total Operating Expenses	6,060,193	6,126,670	(66,477)
Earnings (Loss) from Operations	2,815,789	2,680,485	135,304
Interest Income-2010/13/14/16 Series Bond	139,245	65,354	73,891
Interest Income-Other Funds	24,681	10,032	14,650
Interest Income-SDC	18,498	1,060	17,439
Interest Expense- 2010/13/14/16 Series Bond	(2,211,025)	(2,220,744)	9,719
Interest Expense- ST BOG	(45,267)	(43,736)	(1,531)
Federal Expenditures	-	(42,501)	42,501
Loss on Asset Disposal	-	(81,105)	81,105
AFUDC	625,000	1,172,241	(547,241)
Amortization of Discount, Premium and Issuance Costs	61,861	61,861	-
Loss on Defeasance Bond05 Refunding	(12,444)	(15,218)	2,775
Deferred outflows from pension	(48,010)	(104,481)	56,471
Prior Year Adjustment	-	(26,756)	26,756
Total non-operating revenues (expenses)	(1,447,460)	(1,223,993)	(223,467)
Net Income (Loss) before capital contributions	1,368,329	1,456,492	(88,163)
Capital Contributions			
Grants from US Government	413,372	1,815,921	(1,402,549)
Grants from GovGuam & Others	-	1,664	(1,664)
Other Contributions	-	-	-
Total Capital Contributions	413,372	1,817,586	(1,404,214)
Change in Net Assets	1,781,701	3,274,078	(1,492,376)
Debt Service Calculation			
Earnings From Operations	2,815,789	2,680,485	
System Development Charge	(138,534)	(72,662)	
Retiree COLA	49,833	49,500	
Interest/Investment Income	24,681	10,032	
Depreciation	1,528,175	1,402,038	
Balance Available for Debt Service per Section 6.12	4,279,945	4,069,392	
Working Capital Reserve Available for Debt Service	935,321	932,134	
Transfer to Working Capital- Debt Service Reserve	-	-	
Transfer to Working Capital- O&M Reserve	-	-	
Balance Available for Debt Service inclusive of reserves	5,215,266	5,001,527	
Debt Service			
Principal	433,333	420,000	
Interest	2,063,402	1,626,858	
Total	2,496,736	2,046,858	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.71	1.99	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	2.09	2.44	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited) **SCHEDULE D**
Comparative Budget vs. Actual for the period ending December 31, 2017

	Budget December-17	Year to Date Encumbered December-17	Year to Date Actual (Unaudited) December-17	Variance Increase / (Decrease)
OPERATING REVENUES				
Water Revenues	17,229,480		16,345,904	(883,576)
Wastewater Revenues	9,684,772		9,500,820	(183,952)
Legislative Surcharge	875,688		816,723	(58,965)
Other Revenues	172,914		107,386	(65,528)
System Development Charge	138,407		334,581	196,174
Total Operating Revenues	28,101,262		27,105,414	(995,848)
OPERATING AND MAINTENANCE EXPENSES				
Water Purchases	2,163,339		2,087,849	(75,490)
Power Purchases	3,173,991		3,411,972	237,982
Total Utility Costs	5,337,330		5,499,822	162,492
Salaries and Wages	4,875,168		3,990,061	(885,107)
Pension and Benefits	1,753,675		1,317,268	(436,407)
Total Salaries and Benefits	6,628,843		5,307,329	(1,321,514)
Capitalized Labor and Benefits	(625,000)		(625,000)	-
Net Salaries and Benefits	6,003,843		4,682,329	(1,321,514)
Administrative and General Expenses				
Sludge removal	523,542		286,054	(237,488)
Chemicals	614,990	75,000	471,739	(68,252)
Materials & Supplies	833,699	250,000	307,882	(275,817)
Transportation	157,111	35,000	118,493	(3,619)
Communications	48,546		48,056	(490)
Claims	33,300		10,378	(22,922)
Insurance	314,270		226,440	(87,830)
Training & Travel	65,443		47,791	(17,652)
Advertising	41,730		20,345	(21,385)
Miscellaneous	346,546	85,000	237,580	(23,967)
Total Administrative and General Expense	2,979,177	445,000	1,774,757	(759,420)
Regulatory Expense	66,259		53,959	(12,300)
Bad Debts Provision	171,308		171,294	(14)
Depreciation Expense	4,584,524		4,584,525	1
Contractual Expense				
Audit & Computer Maint.	250,891		250,333	(558)
Building rental	113,865		108,847	(5,018)
Equipment rental	172,124		168,836	(3,287)
Legal	12,500		1,800	(10,700)
Laboratory	179,255		160,985	(18,270)
Other	391,089	250,000	39,094	(101,995)
Total Contractual Expense	1,119,724	250,000	729,895	(139,829)
Retiree Supp. Annuities and health care costs	720,025		709,850	(10,175)
Contribution to Government of Guam	148,500		149,500	1,000
Total Retiree Benefits	868,525	-	859,350	(9,175)
Total Operating Expenses	21,130,690	695,000	18,355,931	(2,079,759)
Earnings (Loss) from Operations	6,970,572	(695,000)	8,749,483	1,083,911
Interest Income-2010/13/14/16 Series Bond	47,180		444,222	397,042
Interest Income-Other Funds	8,804		71,991	63,187
Interest Income-SDC	7,243		29,886	22,643
Interest Expense- 2010/13/14/16 Series Bond	(7,876,762)		(6,633,074)	1,243,688
Interest Expense- ST BOG	(99,865)		(104,472)	(4,607)
Federal Expenditures	(153,997)		(76,977)	77,020
Loss on Asset Disposal	-		-	-
AFUDC	1,875,000		1,875,000	-
Amortization of Discount, Premium and Issuance Costs	(185,582)		185,582	371,165
Loss on Defeasance Bond05 Refunding	(45,655)		(37,331)	8,324
Deferred outflows from pension	(315,842)		(144,030)	171,812
Prior Year Adjustment	-		38,546	38,546
Total non-operating revenues (expenses)	(6,739,476)	-	(4,350,657)	2,388,819
Net Income (Loss) before capital contributions	231,096	(695,000)	4,398,826	3,472,730
Capital Contributions				
Grants from US Government	2,619,325		490,349	(2,128,975)
Grants from GovGuam & Others	-		-	-
Other Contributions	-		-	-
Total Capital Contributions	2,619,325	-	490,349	(2,128,975)
Change in Net Assets	2,850,421	(695,000)	4,889,175	1,343,754
Debt Service Calculation				
Earnings From Operations	6,970,572		8,749,483	
System Development Charge	(138,407)		(334,581)	
Retiree COLA	148,500		149,500	
Interest/Investment Income	8,804		71,991	
Depreciation	4,584,524		4,584,525	
Balance Available for Debt Service per Section 6.12	11,573,993		13,220,918	
Working Capital Reserve Available for Debt Service	2,805,963		2,796,403	
Transfer to Working Capital- Debt Service Reserve	(450,000)		-	
Transfer to Working Capital- O&M Reserve	(800,000)		-	
Balance Available for Debt Service inclusive of reserves	13,129,956		16,017,321	
Debt Service				
Principal	1,300,000		1,300,000	
Interest	6,190,207		6,190,207	
Total	7,490,207		7,490,207	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.55		1.77	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	1.75		2.14	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited)
Comparative for the period ending December 31, 2017 and 2016

SCHEDULE E

	Year to Date ACTUAL (Unaudited) December-17	ACTUAL (Unaudited) December-16	Variance Increase / (Decrease)
OPERATING REVENUES			
Water Revenues	16,345,904	15,994,211	351,694
Wastewater Revenues	9,500,820	9,298,583	202,237
Legislative Surcharge	816,723	801,807	14,917
Other Revenues	107,386	108,879	(1,493)
System Development Charge	334,581	217,986	116,595
Total Operating Revenues	27,105,414	26,421,465	683,949
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	2,087,849	1,827,281	260,568
Power Purchases	3,411,972	3,019,066	392,907
Total Utility Costs	5,499,822	4,846,347	653,475
Salaries and Wages	3,990,061	4,240,825	(250,765)
Pension and Benefits	1,317,268	1,432,637	(115,369)
Total Salaries and Benefits	5,307,329	5,673,463	(366,134)
Capitalized Labor and Benefits	(625,000)	(787,547)	162,547
Net Salaries and Benefits	4,682,329	4,885,915	(203,586)
Administrative and General Expenses			
Sludge removal	286,054	421,460	(135,407)
Chemicals	471,739	522,003	(50,264)
Materials & Supplies	307,882	386,363	(78,481)
Transportation	118,493	161,233	(42,740)
Communications	48,056	32,651	15,405
Claims	10,378	66,453	(56,075)
Insurance	226,440	271,808	(45,368)
Training & Travel	47,791	69,164	(21,373)
Advertising	20,345	26,963	(6,618)
Miscellaneous	237,580	215,990	21,590
Total Administrative and General Expense	1,774,757	2,174,089	(399,332)
Regulatory Expense	53,959	72,403	(18,444)
Bad Debts Provision	171,294	329,099	(157,805)
Depreciation Expense	4,584,525	4,206,114	378,411
Contractual Expense			
Audit & Computer Maint.	250,333	230,703	19,630
Building rental	108,847	109,670	(823)
Equipment rental	168,836	178,122	(9,285)
Legal	1,800	1,242	558
Laboratory	160,985	31,880	129,106
Other	39,094	470,241	(431,148)
Total Contractual Expense	729,895	1,021,857	(291,962)
Retiree Supp. Annuities and health care costs	709,850	695,686	14,164
Contribution to Government of Guam	149,500	148,500	1,000
Total Retiree Benefits	859,350	844,186	15,164
Total Operating Expenses	18,355,931	18,380,011	(24,080)
Earnings (Loss) from Operations	8,749,483	8,041,455	708,028
Interest Income-2010/13/14/16 Series Bond	444,222	196,063	248,159
Interest Income-Other Funds	71,991	30,095	41,896
Interest Income-SDC	29,886	3,179	26,706
Interest Expense- 2010/13/14/16 Series Bond	(6,633,074)	(6,662,231)	29,157
Interest Expense- ST BOG	(104,472)	(131,209)	26,737
Federal Expenditures	(76,977)	(127,504)	50,527
Loss on Asset Disposal	-	(243,314)	243,314
AFUDC	1,875,000	3,516,723	(1,641,723)
Amortization of Discount, Premium and Issuance Costs	185,582	185,582	-
Loss on Defeasance Bond05 Refunding	(37,331)	(45,655)	8,324
Deferred outflows from pension	(144,030)	(313,442)	169,412
Prior Year Adjustment	38,546	(80,267)	118,813
Total non-operating revenues (expenses)	(4,350,657)	(3,671,979)	(678,677)
Net Income (Loss) before capital contributions	4,398,826	4,369,475	29,351
Capital Contributions			
Grants from US Government	490,349	5,447,764	(4,957,415)
Grants from GovGuam & Others	-	4,993	(4,993)
Other Contributions	-	-	-
Total Capital Contributions	490,349	5,452,758	(4,962,408)
Change in Net Assets	4,889,175	9,822,233	(4,933,057)
Debt Service Calculation			
Earnings From Operations	8,749,483	8,041,455	
System Development Charge	(334,581)	(217,986)	
Retiree COLA	149,500	148,500	
Interest/Investment Income	71,991	30,095	
Depreciation	4,584,525	4,206,114	
Balance Available for Debt Service per Section 6.12	13,220,918	12,208,177	
Working Capital Reserve Available for Debt Service	2,796,403	2,796,403	
Transfer to Working Capital- Debt Service Reserve	-	-	
Transfer to Working Capital- O&M Reserve	-	-	
Balance Available for Debt Service inclusive of reserves	16,017,321	15,004,580	
Debt Service			
Principal	1,300,000	1,260,000	
Interest	6,190,207	4,880,575	
Total	7,490,207	6,140,575	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.77	1.99	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	2.14	2.44	

SCHEDULE F

Bond Compliance		**($$$) Per Indenture**	**As of 12/31/17 ($$$) Bond 2013/2014/2016/2017**
• Operation and Maintenance Fund-BOG	*Equivalent to 55 days of the annual O&M budget less depreciation*	$10.5M	$10.5M
• Bond Reserve Fund - US Bank	*Fully funded- Principal and Interest (Bond Series 2010, 2013, 2014 Refunding and 2016)*	$34.9M	$34.9M
• Operation, Maintenance, Renewal and Replacement Reserve Fund-BOG Trust	*Equivalent to 1/4 of the annual O&M budget & CIP budget to be funded in 5 years ($2M/year)*	$17.4M	$17.4M
• Capital Improvement Fund & BOG Reserves	*Balance remaining in the Revenue Fund after the foregoing deposits*	$3.9K	$4.5K
• Capitalized Interest Fund			$1.9K

GUAM WATERWORKS AUTHORITY
Restricted and Unrestricted Cash Summary
FY 2018

SCHEDULE G

Description	Unaudited December 31, 2017	Unaudited September 30, 2017	Increase (Decrease)
UNRESTRICTED			
Change Fund	2,000	2,000	0
Petty Cash	5,000	5,000	0
BOG - General Fund	2,015,038	4,836,236	(2,821,198)
BOG - PRN Payroll	30,039	30,039	0
Sub-total Unrestricted	2,052,077	4,873,275	(2,821,198)
RESTRICTED			
Bank of Hawaii	176,053	133,931	42,121
ANZ Bank	97	(0)	97
First Hawaiian Bank	42,205	10,261	31,944
Bank Pacific	10,548	15,825	(5,277)
Community First FCU	2,063	3,448	(1,386)
BOG - Customer Refunds	1,843,368	1,831,426	11,942
Bank Pacific - Surcharge	889,718	278,142	611,576
Bank Pacific - Escrow Deposit	666,122	666,140	(18)
BOG Emergency Reserve Fund	6,124	6,122	2
BOG - Revenue Trust	1,242,847	201,614	1,041,233
BOG Revenue Trust Fund	7,169,864	7,782,227	(612,363)
BOG Capital Improvement Fund-Bond	4,500	5,598	(1,098)
BOG Capital Improvement Revenue Fund	882,305	-	882,305
BOG-O & M Reserve	13,531,526	13,516,540	14,986
BOG-Debt Service Reserve	11,230,272	11,217,733	12,539
BOG-CAPEX Reserve	15,478,485	15,462,869	15,616
BOG Sewer Hookup Revolving Fund	64,328	63,590	738
BOG Subord. Sec. Fund	782,361	859,233	(76,872)
BOG Operation and Maintenance Fund	3,083,482	3,083,482	0
	57,106,266	55,138,182	1,968,084
BOG - SDC Deposit	1,713,198	1,486,219	226,980
BOG - SDC CDs	8,500,000	8,500,000	0
Total Restricted	67,319,464	65,124,400	2,195,064
Reserve Funds			
BOG Series 05 OMRRRF Fund	17,423,213	17,423,213	0
BOG Series 13 Construction Fund	67,985,926	74,461,765	(6,475,839)
BOG Series 14 Refunding Construction Fund	761,698	771,281	(9,583)
BOG Series 16 Construction Fund	128,113,664	132,811,449	(4,697,785)
BOG Series 16 Cap Int Fund	1,907	1,782,982	(1,781,075)
BOG Series 17 Refunding Construction Fund	8,941,663	9,299,311	(357,648)
BOG Series 17 Refunding COI Fund	56,575	-	56,575
Total Restricted - Held by Trustee	223,284,646	236,550,002	(13,265,356)
USB Series 2013 Debt Service Fund	4,671,759	2,336,754	2,335,006
USB Series 2013 Debt Service Reserve Fund	12,031,688	12,031,688	0
USB Series 2014 Refunding Debt Service Fund	3,590,622	1,796,559	1,794,064
USB Series 2014 Refunding Debt Service Reserve Fund	7,729,117	7,707,602	21,515
USB Series 2016 Debt Service Fund	3,582,140	130	3,582,010
USB Series 2016 Debt Service Reserve Fund	7,588,700	7,582,725	5,975
USB Series 2017 Refunding Debt Service Fund	1,505,785	2,020,121	(514,336)
USB Series 2017 Refunding Debt Service Reserve Fund	7,566,460	7,566,460	0
Total Investments	48,266,271	41,042,038	7,224,233
Total Restricted and Unrestricted Cash	340,922,458	347,589,716	(6,667,258)

SCHEDULE H

Guam Waterworks Authority
Statement of Cash Flows (Unaudited)
FY 2018

	YTD Dec-17
Increase (decrease) in cash	
Cash flows from operating activities:	
Cash received from trade and others	24,379,776
Cash payments to suppliers/contractors for goods and services	(10,065,839)
Cash payments to employees for services	(6,895,690)
Net cash provided by operating activities	7,418,247
Cash flows from capital and related financing activities:	
Contributed capital received (grants)	4,258,777
Acquisition of utility plant	(17,094,511)
Repayment of Long Term Debt	(123,721)
Interest expense	(812,233)
Net cash provided by (used in) capital and related financing activities	(13,771,687)
Cash flows from investing activities:	
Transfers from (to) restricted fund	2,986,143
Interest income received	546,099
Net cash provided by investing activities	3,532,242
Net increase (decrease) in cash	(2,821,198)
Unrestricted cash at beginning of the period	4,873,275
Unrestricted cash at end of period	2,052,077
Reconciliation of operating loss to net cash provided by operating activities:	
Operating Income (loss)	7,575,982
Adjustments to reconcile to net cash provided by operating activities:	
Depreciation expense	4,584,525
Other Expense/income	315,324
(Increase) decrease in assets:	
Accounts receivable	(2,762,821)
Materials and supplies inventory	(187,644)
Other Assets	(93,736)
Increase (decrease) in liabilities:	
Accounts payable, Contractors, Retention & Escrow Deposit	(887,106)
Accrued payroll	(1,498,041)
Customer deposits	371,764
Net cash provided by operating activities	7,418,247

Guam Waterworks Authority
Accounts Receivable - Government
As of December 31, 2017

SCHEDULE I

		AGING				
Customer Name	**No of Accounts**	**Current Balance**	**31-60 days**	**61-90 days**	**91-120 days**	**Over 120 days**	**Outstanding Bal.**
GUAM INT'L AIRPORT AUTHORITY	10	39,092	40,979	31,619	43,792	178,730	334,213
GUAM POWER AUTHORITY	25	16,990	44,278	30,776	1,000	159,569	252,613
PORT AUTHORITY OF GUAM	1	50,405	43,962	-	-	-	94,367
GUAM MEMORIAL HOSPITAL AUTHORITY	3	34,912	37,847	-	-	-	72,759
GUAM COMMUNITY COLLEGE	3	9,307	5,159	-	-	-	14,465
UNIVERSITY OF GUAM	4	8,014	-	-	-	-	8,014
GUAM HOUSING & URBAN RENEWAL AUTHORITY	7	2,033	-	-	-	92	2,125
GUAM HOUSING CORPORATION	1	31	-	-	-	-	31
AUTONOMOUS AGENCIES	**54**	**160,781**	**172,225**	**62,395**	**44,793**	**338,392**	**778,586**
DEPT OF EDUCATION	50	228,680	199,692	33,997	50,336	79,697	592,401
DEPT OF PARKS & RECREATION	21	28,062	27,869	195,408	49,703	157,403	458,445
DEPT OF CORRECTIONS	8	132,921	53	-	-	-	132,975
DEPT OF PUBLIC HEALTH & SOCIAL SERVICES	4	1,258	1,117	639	426	103,629	107,069
DEPT OF CHAMORRO AFFAIRS	7	6,209	6,762	9,021	5,000	-	26,992
MAYORS' COUNCIL OF GUAM	41	11,622	118	6	-	-	11,746
GUAM FIRE DEPARTMENT	11	9,196	-	-	-	-	9,196
DEPT OF YOUTH AFFAIRS	4	1,285	25	154	3,872	-	5,336
DEPT OF PUBLIC WORKS	9	5,099	-	-	-	-	5,099
SANCTUARY INC	1	4,449	-	-	-	-	4,449
DEPT OF MILITARY AFFAIRS/GUARNG	1	4,083	-	-	-	-	4,083
OFFICE OF THE GOVERNOR	2	3,209	-	-	-	-	3,209
DEPT OF MENTAL HEALTH AND SUBTANCE	3	2,263	-	-	-	-	2,263
DEPT OF AGRICULTURE	2	1,700	-	-	-	-	1,700
DEPT OF ADMINISTRATION	2	583	146	137	134	628	1,628
NEW GUAM MENTAL HEALTH	1	904	-	-	-	-	904
GHURA-AGAFU GUMAS PARK	1	26	38	28	47	755	895
GUAM POLICE DEPARTMENT	2	855	-	-	-	-	855
DIVISION OF SENIOR CITIZENS, DPH&SS	2	316	151	140	60	-	667
GUAM PUBLIC LIBRARY	3	134	-	-	-	-	134
GUAM VETERANS AFFAIRS OFFICE	1	103	-	-	-	-	103
THE OFFICE OF THE DEDEDO MAYOR	1	43	-	-	-	-	43
MERIZO MAYOR	1	25	-	-	-	-	25
GUAM SOLID WASTE AUTHORITY	1	24	-	-	-	-	24
							-
LINE AGENCIES	**179**	**443,047**	**235,972**	**239,531**	**109,578**	**342,112**	**1,370,240**
TOTAL December 31, 2017	**233**	**603,829**	**408,197**	**301,926**	**154,370**	**680,504**	**2,148,826**
TOTAL September 30, 2017	**253**	**715,578**	**442,522**	**169,120**	**72,476**	**396,347**	**1,796,043**
% INCREASE/ (DECREASE)	**-8%**	**-16%**	**-8%**	**79%**	**113%**	**72%**	**20%**

GUAM WATERWORKS AUTHORITY
2013 Series Bond Project Status
As of Dec. 31, 2017

SCHEDULE J

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 12/31/17	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 12/31/17
Santa Rita Springs Booster Pump Rehab Phase II	$ 100,000	$ 100,000	61,482	38,518	$ 100,000	$ -	$ 38,518
"A" Series Well Transmission Line	$ 400,000	$ 400,000	314,479	55,367	$ 369,846	$ 30,154	$ 85,521
Water Booster Pump Station	$ 6,000,000	$ 1,861,000	1,656,428	23,536	$ 1,679,964	$ 181,036	$ 204,572
Meter Replacement Program		$ 999,000	996,532	-	$ 996,532	$ 2,468	$ 2,468
Barrigada Tank Repair/Replacement	$ 6,000,000	$ 4,987,000	4,924,959	62,041	$ 4,987,000	$ 0	$ 62,041
Leak Detection	$ 100,000	$ 20,000	16,916	-	$ 16,916	$ 3,084	$ 3,084
Potable Water System Planning	$ 800,000	$ 624,000	598,825	25,175	$ 624,000	$ -	$ 25,175
Implement Ground Water Rule	$ 1,000,000	$ 1,000,000	1,000,000	-	$ 1,000,000	$ -	$ -
Deep Well Rehabilitation	$ 800,000	$ 200,000	189,930	10,071	$ 200,000	$ (0)	$ 10,070
New Deep Wells at Down Hard	$ 2,000,000	$ 810,000			$ -	$ 810,000	$ 810,000
Master Meters	$ 4,000,000	$ 784,000	531,188	180,872	$ 712,060	$ 71,940	$ 252,812
Ugum Water Treatment Plant Intake	$ 1,000,000	$ 982,000	578,858	280,943	$ 859,801	$ 122,199	$ 403,142
Water Wells	$ 4,200,000	$ 4,200,000	2,284,474	745,555	$ 3,030,029	$ 1,169,971	$ 1,915,527
Water Distribution System	$ 12,000,000	$ 11,151,000	4,602,272	4,444,588	$ 9,046,860	$ 2,104,140	$ 6,548,728
Pressure Zone Realignment /	$ 1,000,000	$ 431,000	336,036	1,074	$ 337,110	$ 93,890	$ 94,964
Mechanical/Electrical Equipment	$ 430,000	$ 430,000	328,686	98,112	$ 426,798	$ 3,202	$ 101,314
Water Reservoir Internal/External	$ 800,000	$ -			$ -	$ -	$ -
Water System Reservoirs 2005 Improvements	$ 21,000,000	$ 13,878,000	10,597,654	3,152,159	$ 13,749,814	$ 128,187	$ 3,280,346
Ugum Water Treatment Plant Reservoir	$ 7,000,000	$ 90,000			$ -	$ 90,000	$ 90,000
Agana Heights & Chaot Tanks	$ 4,500,000	$ 3,280,000	233,265	847,022	$ 1,080,287	$ 2,199,713	$ 3,046,735
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 13,500,000	$ 11,605,000	1,167,648	10,437,352	$ 11,605,000	$ 0	$ 10,437,353
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 8,000,000	$ -			$ -	$ -	$ -
Assessment of maloilol Elevetad & Yigo Elevated	$ 500,000	$ 485,117	461,813	23,304	$ 485,117	$ -	$ 23,304
Fire Hydrant Replacement Program	$ -	$ -			$ -	$ -	$ -
		$ -					
Wastewater System Planning	$ 800,000	$ 651,000	550,480	100,520	$ 651,000	$ (0)	$ 100,520
Lift Station Upgrades	$ 5,000,000	$ 946,000	562,108	363	$ 562,471	$ 383,529	$ 383,892
Wastewater Collection System Repl/Rehab	$ 6,500,000	$ 780,000	476,682	168,631	$ 645,314	$ 134,687	$ 303,318
Baza Gardens STP Replacement		$ 3,114,883	936,401	2,178,467	$ 3,114,869	$ 15	$ 2,178,482
Facilities Plan/Design for Umatac-Merizo WWTP		$ 473,000	335,000	36,699	$ 371,699	$ 101,301	$ 138,000
Agat/Santa Rita STP Replacement	$ 19,000,000	$ 67,200,000	33,195,183	34,004,817	$ 67,200,000	$ 0	$ 34,004,817
Agana WWTP Interim Measures		$ 673,000	548,597	124,403	$ 673,000	$ (0)	$ 124,403
Umatac Merizo Replacement	$ 2,000,000	$ -			$ -	$ -	$ -
		$ -					
Wastewater Pump Station Electrical Upgrade	$ 620,000	$ 620,000	91,348	8,513	$ 99,861	$ 520,139	$ 528,652
Electrical Upgrade - Water Wells	$ 1,500,000	$ 1,500,000	1,480,769	19,230	$ 1,500,000	$ 0	$ 19,231
Electrical Upgrade - Water Booster	$ 325,000	$ 2,000			$ -	$ 2,000	$ 2,000
Electrical Upgrade -Water Booster	$ 350,000	$ 200,000	977	-	$ 977	$ 199,023	$ 199,023
Electrical Upgrade - Other Water	$ 250,000	$ 150,000	60,700	-	$ 60,700	$ 89,300	$ 89,300
SCADA Improvements – Phase 3	$ 1,850,000	$ 923,000	427,949	294,410	$ 722,359	$ 200,641	$ 495,051
SCADA Improvements – Phase 4	$ 500,000	$ -			$ -	$ -	$ -
		$ -					$ -
Laboratory Modernization	$ 1,500,000	$ 1,173,000	1,155,875	15,590	$ 1,171,465	$ 1,535	$ 17,125
Land Survey	$ 2,000,000	$ 2,000	1,038	15	$ 1,053	$ 948	$ 963
General Plant Improvements / Water	$ 2,000,000	$ 2,600,000	1,265,043	1,176,695	$ 2,441,737	$ 158,263	$ 1,334,957
Allowance for COI							$ 275,005
Interest Earned							$ 355,516
Total Construction Fund	**$ 139,325,000**	**$ 139,325,000**	**$ 71,969,595**	**$ 58,554,042**	**$ 130,523,637**	**$ 8,801,363**	**$ 67,985,926**

PUC's Docket 14-04 dated February 25, 2014

GUAM WATERWORKS AUTHORITY
2014 Series Refunded Bond Project Status
As of Dec. 31, 2017

SCHEDULE K

PROJECT NAME	ORIGINAL APPROVED PROJECT	ADJUSTED PROJECT COST	EXPENDITURES AS OF 12/31/17	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	20% PUC AS OF 12/31/17	Construction fund balance AS OF 12/31/17
Agana Treatment Plant	$ 10,475,000	$ 11,065,512	11,065,512	$ -	$ 11,065,512	$ (0)	$ 2,095,000	$ (0)
								$ -
Agana Outfall	$ 5,030,000	$ 10,127,198	10,127,198	$ -	$ 10,127,198	$ 0	$ 1,006,000	$ 0
								$ -
								$ -
Northern District (Outfall)	$ 4,700,000	$ 10,251,423	10,251,423	$ -	$ 10,251,423	$ 0	$ 940,000	$ 0
Northern District WWTP Upgrade		$ 173,681	173,681		$ 173,681	$ -		$ -
Northern Treatment Plant		$ -	-		$ -	$ -		$ -
Baza Gardens Wastewater Treatment Plant	$ 500,000	$ 297,177	297,177	$ -	$ 297,177	$ (0)	$ 100,000	$ (0)
Interim Disinfection Facilities	$ 581,000	$ 3,437,311	3,408,599	$ 28,712	$ 3,437,311	$ (0)	$ 116,200	$ 28,712
						$ -		$ -
Electrical Protection	$ 1,000,000	$ 1,512,483	1,512,483.3	$ -	$ 1,512,483	$ (0)	$ 200,000	$ (0)
Well Vulnerability Reduction	$ 600,000	$ 185,522	185,522	$ -	$ 185,522	$ 0	$ 120,000	$ 0
Old Agat Wastewater Collection (I/I Reductic	$ 2,155,000	$ 1,931,659	1,931,659	$ -	$ 1,931,659	$ (0)	$ 431,000	$ (0)
				$ -		$ -		$ -
Chaot WW Pump Station/Collection System	$ 410,000	$ 399,120	399,120	$ -	$ 399,120	$ -	$ 82,000	$ -
Lift Station Upgrades	$ 230,000	$ 149,895	149,895	$ -	$ 149,895	$ 0	$ 46,000	$ 0
Collection Line Upgrades	$ 200,000	$ 62,755	62,755	$ -	$ 62,755	$ 0	$ 40,000	$ 0
"A" Well Transmission Line	$ 2,413,000	$ 3,833,175	3,790,888	$ 42,287	$ 3,833,175	$ (0)	$ 482,600	$ 42,287
					$ -	$ -		$ -
Santa Rita Springs - Booster Pump Rehab.	$ 648,000	$ 306,841	306,841	-	$ 306,841	$ (0)	$ 129,600	$ (0)
						$ -	$ -	$ -
Fena Bypass Transmission line		$ 160,913	160,913	$ -	$ 160,913	$ (0)	$ -	$ (0)
Storage Additions	$ 950,000	$ -			$ -	$ -	$ 190,000	$ -
Booster Station Upgrades	$ 390,000	$ 66,734	66,734	$ -	$ 66,734	$ -	$ 78,000	$ -
Mangilao Tank Repair	$ 800,000	$ 398,367	397,933	$ 434	$ 398,367	$ (0)	$ 160,000	$ 434
Ugum Tank Replacement	$ 2,500,000	$ -			$ -	$ -	$ 500,000	$ -
Ugum WTPlant Refurbishment ($1.724,970EPA)		$ 6,588,473	6,531,525	$ 56,949	$ 6,588,473	$ (0)		$ 56,948
Barrigada Tank Repair/Replacement	$ 3,000,000	$ 65,019	65,019	$ -	$ 65,019	$ 0	$ 600,000	$ 0
						$ -		$ -
Water Reservoir Condition Assessment		$ 1,250,000	1,249,227.16	$ 772	$ 1,250,000	$ 0	$ -	$ 773
EarthTech Well Buyout	$ 5,000,000	$ 5,975,000	5,975,000	$ -	$ 5,975,000	$ -	$ 1,000,000	$ -
Water Wastewater Master Plan	$ 4,900,000	$ 4,881,308	4,881,308	$ -	$ 4,881,308	$ 0	$ 980,000	$ 0
Laboratory Modernization	$ 800,000	$ 135,055	135,055	$ -	$ 135,055	$ 0	$ 160,000	$ 0
Land Survey	$ 800,000	$ 577,836	576,134	$ 1,702	$ 577,836	$ 0	$ 160,000	$ 1,702
Ground Water Disinfection		$ -				$ -		$ -
GWUDI Study		$ 262,234	260,430	1,804	$ 262,234	$ -		$ 1,804
						$ -		$ -
Contingency	$ 12,276,023	$ 154	-	$ -	$ -	$ -		$ 732
						$ -		$ -
						$ -		$ -
						$ -		$ -
						$ -		$ -
						$ -		$ -
Vehicles	$ 1,100,000	$ 1,280,000	2,130,305	$ (850,305)	$ 1,280,000	$ -	$ 220,000	$ -
Generation Equipment	$ 700,000	$ 880,000	2,712	$ 877,288	$ 880,000	$ 0		$ 27,033
Leak Detection/Line Replacement	$ 8,200,000	$ 5,988,494	5,988,494	$ -	$ 5,988,494	$ -	$ 1,640,000	$ -
						$ -		$ -
						$ -		$ -
Automated Meter Reading	$ 12,572,063	$ 17,468,359	16,870,522	$ 537,157	$ 17,468,359.32	$ 0	$ 2,514,413	$ 597,837
Total Construction Fund	$ 82,930,086	$ 89,711,698	88,891,990	$ 758,873.38	$ 89,711,543	$ 1	$ 13,990,813	$ 758,263
Interest Earned	$ 6,781,612	$ (0)				$ (0)		$ 3,435
Total Project Cost Funding	**$ 89,711,698**	**$ 89,711,698**	**88,891,990**	**$ 758,873.38**	**$ 89,711,543**	**$ 1**	**$ 13,990,813**	**$ 761,698**

GUAM WATERWORKS AUTHORITY
2016 Series Bond Project Status
As of Dec. 31, 2017

SCHEDULE L

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 12/31/17	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 12/31/17
Water Booster Pump Station	$ 4,139,000	$ 4,139,000			$ -	$ 4,139,000	$ 4,139,000
Meter Replacement Program	$ 4,501,000	$ 4,501,000		150,000.00	$ 150,000	$ 4,351,000	$ 4,501,000
Barrigada Tank Repair/Replacement	$ 1,013,000	$ 1,013,000		-	$ -	$ 1,013,000	$ 1,013,000
Leak Detection	$ 1,180,000	$ 1,180,000		-	$ -	$ 1,180,000	$ 1,180,000
Potable Water System Planning	$ 2,276,000	$ 2,276,000	159,105	261,339.91	$ 420,445	$ 1,855,555	$ 2,116,895
Deep Well Rehabilitation	$ 250,000	$ 250,000		-	$ -	$ 250,000	$ 250,000
New Deep Wells at Down Hard	$ 1,190,000	$ 1,190,000			$ -	$ 1,190,000	$ 1,190,000
Master Meters	$ 3,616,000	$ 3,616,000		39,339.84	$ 39,340	$ 3,576,660	$ 3,616,000
Ugum Water Treatment Plant Intake	$ 18,000	$ 18,000			$ -	$ 18,000	$ 18,000
Water Wells	$ 2,500,000	$ 2,500,000			$ -	$ 2,500,000	$ 2,500,000
Water Distribution System	$ 2,049,000	$ 49,000			$ -	$ 49,000	$ 49,000
Pressure Zone Realignment /	$ 1,141,000	$ 1,141,000			$ -	$ 1,141,000	$ 1,141,000
Mechanical/Electrical Equipment	$ 100,000	$ 100,000			$ -	$ 100,000	$ 100,000
Water Reservoir Internal/External	$ 800,000	$ 800,000			$ -	$ 800,000	$ 800,000
Water System Reservoirs 2005 Improvements	$ 42,350,000	$ 28,350,000	880,346	2,341,592.76	$ 3,221,939	$ 25,128,062	$ 27,469,654
Ugum Water Treatment Plant Reservoir	$ 6,410,000	$ -			$ -	$ -	$ -
Water Audit Program & Water Loss Control Plan	$ 1,000,000	$ 1,000,000				$ 1,000,000	$ 1,000,000
Agana Heights & Chaot Tanks	$ 1,220,000	$ 1,220,000			$ -	$ 1,220,000	$ 1,220,000
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 1,895,000	$ 1,895,000			$ -	$ 1,895,000	$ 1,895,000
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 10,500,000	$ 7,409,830		1,822,132.80	$ 1,822,133	$ 5,587,697	$ 7,409,830
Fire Hydrant Replacement Program	$ 2,000,000	$ 2,000,000			$ -	$ 2,000,000	$ 2,000,000
						$ -	
Wastewater System Planning	$ 349,000	$ 349,000	30,708	263,222.72	$ 293,931	$ 55,069	$ 318,292
Lift Station Upgrades	$ 2,404,000	$ 2,404,000	64,755	166,039.41	$ 230,794	$ 2,173,206	$ 2,339,245
Wastewater Collection System Repl/Rehab	$ 2,920,000	$ 2,920,000			$ -	$ 2,920,000	$ 2,920,000
Baza Gardens STP Replacement	$ 16,700,000	$ 29,400,170	6,683,340	22,098,709.16	$ 28,782,050	$ 618,120	$ 22,716,830
Facilities Plan/Design for Umatac-Merizo WWTP	$ 527,000	$ 527,000	190,947	59,839.09	$ 250,786	$ 276,214	$ 336,053
Agat/Santa Rita STP Replacement	$ 3,000,000	$ 3,000,000	485,024	199,334.53	$ 684,358	$ 2,315,642	$ 2,514,976
Agana WWTP Interim Measures	$ 827,000	$ 827,000			$ -	$ 827,000	$ 827,000
Umatac Merizo Replacement	$ 8,000,000	$ 20,800,000	2,301,795	18,465,113.96	$ 20,766,909	$ 33,091	$ 18,498,205
						$ -	
Wastewater Pump Station Electrical Upgrade	$ 100,000	$ 100,000			$ -	$ 100,000	$ 100,000
Electrical Upgrade - Water Wells	$ 650,000	$ 650,000			$ -	$ 650,000	$ 650,000
Electrical Upgrade - Water Booster	$ 323,000	$ 323,000			$ -	$ 323,000	$ 323,000
SCADA Improvements – Phase 3	$ 1,177,000	$ 1,177,000	18,000	505,421.60	$ 523,422	$ 653,578	$ 1,159,000
SCADA Improvements – Phase 4	$ 6,500,000	$ 6,500,000			$ -	$ 6,500,000	$ 6,500,000
						$ -	
Laboratory Modernization	$ 1,127,000	$ 1,127,000	1,127,000	-	$ 1,127,000	$ -	$ -
Land Survey	$ 1,998,000	$ 1,998,000	14,147	1,246,376.39	$ 1,260,524	$ 737,476	$ 1,983,853
General Plant Improvements / Water	$ 2,769,463	$ 2,769,463	230,230	1,139,202.60	$ 1,369,432	$ 1,400,031	$ 2,539,233
Information Technology Integration Improvements	$ 500,000	$ 500,000	244,068	-		$ 500,000	$ 255,932
Interest Earned		$ -					$ 523,666
		$ -					
Total Construction Fund	**$ 140,019,463**	**$ 140,019,463**	**$ 12,429,466**	**$ 48,757,665**	**$ 60,943,062**	**$ 79,076,401**	**$ 128,113,664**

GUAM WATERWORKS AUTHORITY
2017 Series Refunded Bond Project Status
As of Dec. 31, 2017

SCHEDULE M

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 12/31/17	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 12/31/17
Ground Water Disinfection	$ -	$ 500,000	$ 438,141	$ 61,859	$ 500,000	$ 0	$ 61,859
"A" Series Well Transmission Line	$ 600,000	$ 518,144	$ 474,434	$ 1,274	$ 475,709	$ 42,435	$ 43,710
Water Booster Pump Station	$ 500,000	$ 500,000	$ 418,844	$ 81,156	$ 500,000	$ (0)	$ 81,156
Meter Replacement Program	$ 2,500,000	$ 10,300,000	$ 10,254,220	$ 19,409	$ 10,273,628	$ 26,372	$ 45,780
Barrigada Tank Repair/Replacement	$ -	$ 5,450,000	$ 5,442,302	$ 7,698	$ 5,450,000	$ 0	$ 7,698
Leak Detection		$ 200,000	$ -	$ 200,000	$ 200,000	$ -	$ 200,000
Potable Water System Planning	$ 200,000	$ 200,000	$ 179,638	$ 20,362	$ 200,000	$ -	$ 20,362
Implement Ground Water Rule		$ 1,700,000	$ 1,499,464	$ 200,535	$ 1,700,000	$ 1	$ 200,536
Brigade II (Ugum Lift) BPS Upgrade	$ 1,200,000	$ 1,700,000	$ 135,695	$ 202,199	$ 337,895	$ 1,362,105	$ 1,564,305
Deep Well Rehabilitation	$ 548,000	$ 548,000	$ 548,000	$ -	$ 548,000	$ -	$ -
New Deep Wells at Down Hard	$ 3,773,000	$ 638,252	$ 485,743	$ -	$ 485,743	$ 152,509	$ 152,509
Rehabilitation of Asan Springs	$ 900,000	$ 900,000	$ 188,771	$ 152,068	$ 340,838	$ 559,162	$ 711,229
Master Meters	$ 1,600,000	$ 1,600,000	$ 1,421,267	$ 68,690	$ 1,489,957	$ 110,043	$ 178,733
Ugum Water Treatment Plant Intake	$ 3,670,000	$ 700,000	$ 543,615	$ 156,385	$ 700,000	$ -	$ 156,385
Water Wells	$ 2,000,000	$ -	$ -		$ -	$ -	$ -
Water Distribution System	$ 384,000	$ 3,174,748	$ 3,174,748	$ -	$ 3,174,748	$ (0)	$ (0)
Pressure Zone Realignment /	$ 3,550,000	$ -	$ -		$ -	$ -	$ -
Northern System Water Distribution	$ 2,725,000	$ -	$ -	$ -	$ -	$ -	$ -
Central Water Distribution System 2005	$ 1,200,000	$ 900,000	$ 692,926	$ 82,076	$ 775,002	$ 124,998	$ 207,074
Southern Water Distribution System	$ 1,800,000	$ -	$ -		$ -	$ -	$ -
Mechanical/Electrical Equipment	$ 1,360,000	$ 1,200,000	$ 1,079,495	$ 120,505	$ 1,200,000	$ (0)	$ 120,505
Water Reservoir Internal/External	$ 500,000	$ 2,000,000	$ 970,439	$ 538,944	$ 1,509,384	$ 490,616	$ 1,029,561
Water Reservoir Internal/External	$ 2,400,000	$ -	$ -		$ -	$ -	$ -
Water System Reservoirs 2005 Improvements	$ 11,697,000	$ 1,050,000	$ 1,050,000		$ 1,050,000	$ 0	$ 0
Distribution System Upgrades	$ 3,182,000	$ 474,160	$ 451,462	$ 22,698	$ 474,160	$ 0	$ 22,698
Ugum Water Treatment Plant Reservoir	$ 3,672,000	$ -	$ -		$ -	$ -	$ -
Water Audit Program & Water Loss Control Plan		$ 100,000	$ 15,031	$ 63,428	$ 78,459	$ 21,541	$ 84,970
Production Plan / Reduce Navy Purchases		$ 100,000	$ 94,286	$ 5,714	$ 100,000	$ -	$ 5,714
Hydraulic Asessment of Tank		$ 500,000	$ 497,004	$ 2,996	$ 500,000	$ -	$ 2,996
Agana Heights & Chaot Tanks		$ 4,700,000	$ 4,327,370	$ 372,630	$ 4,700,000	$ -	$ 372,630
Tank Major Repair Yigo#1 Mangilao#2 Agat#2		$ 1,900,000	$ 1,750,355	$ 97,659	$ 1,848,013	$ 51,987	$ 149,645
Tank Major Repair Yigo#1 Mangilao#2 Agat#2		$ -			$ -	$ -	$ -
Assessment of malojloj Elevetad & Yigo Elevated		$ 200,000	$ 200,000	$ -	$ 200,000	$ -	$ -
Public Water System Asser Inventory/Condition Assesment		$ 100,000	$ 96,554	$ 3,446	$ 100,000	$ -	$ 3,446
Public Water System GIS & Mapping		$ 50,000	$ 50,000	$ -	$ 50,000	$ -	$ -
		$ -			$ -	$ -	$ -
Wastewater System Planning	$ 1,500,000	$ 1,500,000	$ 1,465,858	$ 8,142	$ 1,474,000	$ 26,000	$ 34,142
Wastewater Vehicles	$ 235,000	$ 235,000	$ 209,795	$ 25,205	$ 235,000	$ 0	$ 25,205
NDWWTP - Chlorine Tanks	$ 250,000	$ 250,000	$ 250,000		$ 250,000	$ -	$ -
Tumon Bay Sewer Upgrades	$ 100,000	$ -	$ -		$ -	$ -	$ -
Wastewater Collection System Repl/Rehab		$ 1,105,000	$ 718,036	$ 283,287	$ 1,001,323	$ 103,677	$ 386,964
Facilities Plan/Design for Baza Gardens WWTP	$ 1,250,000	$ 1,250,000	$ 1,239,250	$ 10,750	$ 1,250,000	$ -	$ 10,750
Facilities Plan/Design for Agat-Santa Rita WWTP	$ 900,000	$ 899,630	$ 881,749	$ 17,881	$ 899,630	$ -	$ 17,881
Priority 1 Sewer Upgrades – Baza Gardens WWTP	$ 650,000	$ -	$ -		$ -	$ -	$ -
Baza Gardens STP Replacement	$ 3,567,000	$ 1,301,947	$ 316,686	$ 314	$ 317,000	$ 984,947	$ 985,261
Facilities Plan/Design for Umatac Merizo WWTP		$ 900,000	$ 693,161	$ 160,696	$ 853,858	$ 46,142	$ 206,839
Agat/Santa Rita STP Replacement	$ 2,968,000	$ 2,218,000	$ 2,215,591	$ 2,109	$ 2,217,701	$ 300	$ 2,409
Northern District WWTP Primary Treatment Upgrades	$ -	$ 11,750,000	$ 11,532,253	$ 211,261	$ 11,743,514	$ 6,486	$ 217,747
Biosolids Management Plan		$ 200,000	$ 196,414	$ 3,586	$ 200,000	$ -	$ 3,586
Agana WWTP Interim Measures	$ -	$ 11,500,000	$ 11,242,386	$ 57,614	$ 11,300,000	$ 200,000	$ 257,614
I&I SSES Southern		$ 800,000	$ 733,872	$ 66,129	$ 800,000	$ (0)	$ 66,128
I&I SSES Central		$ 850,000	$ 794,325	$ 55,675	$ 850,000	$ -	$ 55,675
I&I SSES Northern		$ -			$ -	$ -	$ -
Umatac Merizo Replacement		$ 250,000	$ 247,431	$ 2,569	$ 250,000	$ -	$ 2,569
Northern District WWTP Secondary Treatment Upgrades		$ 1,000,000					$ 1,000,000
		$ -					
Well Electrical Protection	$ 26,000	$ -	$ -		$ -	$ -	$ -
SCADA Pilot Project	$ 300,000	$ 61,950	$ 19,812	$ 42,138	$ 61,950	$ (0)	$ 42,138
Electrical Upgrade - Water Wells	$ 3,000,000	$ 354,227	$ 335,378	$ 18,849	$ 354,227	$ 0	$ 18,849
Electrical Upgrade - Water Booster	$ 325,000	$ -	$ -		$ -	$ -	$ -
Electrical Upgrade -Water Booster	$ 350,000	$ -	$ -		$ -	$ -	$ -
Electrical Upgrade - Other Water	$ 250,000	$ -			$ -	$ -	$ -
SCADA Improvements – Phase 1	$ 250,000	$ 250,000	$ 193,989	$ 56,011	$ 250,000	$ -	$ 56,011
SCADA Improvements – Phase 2	$ 1,100,000	$ 1,056,986	$ 1,027,424	$ 29,562	$ 1,056,986	$ -	$ 29,562
SCADA Improvements – Phase 3	$ 2,500,000	$ 24,956	$ 24,956	$ -	$ 24,956	$ 0	$ 0
SCADA Improvements – Phase 4	$ 850,000	$ -	$ -		$ -	$ -	$ -
		$ -					
Laboratory Modernization	$ 1,200,000	$ -	$ -		$ -	$ -	$ -
Land Survey	$ 1,500,000	$ 500,000	$ 470,590	$ 29,097	$ 499,687	$ 313	$ 29,410
General Plant Improvements / Water	$ 14,370,000	$ 7,241,000	$ 7,241,000	$ 0	$ 7,241,000	$ 0	$ 0
Interest Earned							$ 69,423
Total Construction Fund	**$ 87,402,000**	**$ 87,402,000**	**$ 78,529,760**	**$ 3,562,606**	**$ 82,092,366**	**$ 4,309,634**	**$ 8,941,663**

1.) PUC's Docket 11-01 $29,000,000.00 dated 09/19/11authorized GWA for reallocation

2) PUC's Docket 11-01 Reallocation of $23,246,000.00 dated 07/30/12

3) PUC's Dockect Reallocation dated February 2013

GUAM WATERWORKS AUTHORITY
Schedule of Series 2013, 2014 Refunding, 2016 and 2017 Refunding Bond Bank Accounts
As of December 31, 2017

SCHEDULE N

	12/31/2017
BANK OF GUAM	
BOG - Revenue Account	7,169,864
BOG - Operations and Maintenance Reserve	3,083,482
BOG - Operations, Maintenance, Renewal and Replacement Reserve Fund	17,423,213
BOG - Capital Improvement Fund	886,805
BOG - O & M Reserve	13,531,526
BOG - Debt Service Reserve	11,230,272
BOG - CAPEX Reserve	15,478,485
Total BOG Bank Account Balance	**68,803,646**
Series 2013 Bond:	
BOG - Construction Fund	67,985,926
USB - Debt Service Fund	4,671,759
USB - Debt Service Reserve Fund	12,031,688
Total Series 2013 Bond Bank Balance	**84,689,373**
Series 2014 Refunding Bond:	
BOG - Construction Fund	761,698
USB - Debt Service Fund	3,590,622
USB - Debt Service Reserve Fund	7,729,117
Total Series 2014 Refunding Bond Bank Balance	**12,081,437**
Series 2016 Bond:	
BOG - Construction Account	128,113,664
BOG - Capitalized Interest Fund	1,907
USB - Debt Service Fund	3,582,140
USB - Debt Service Reserve Fund	7,588,700
Total Series 2016 Bond Bank Balance	**139,286,411**
Series 2017 Refunding Bond:	
BOG - Construction Account	8,941,663
BOG - Cost of Issuance Fund	56,575
USB - Debt Service Fund	1,505,785
USB - Debt Service Reserve Fund	7,566,460
Total Series 2017 Refunding Bond Bank Balance	**18,070,483**

GUAM WATERWORKS AUTHORITY

Guam Waterworks Authority

VEHICLE FLEET STATUS

1/10/2018

EQUIPMENT STATUS				
Description	Number of Equipment	Number of Equipment Available	Number of Equipment Not Available	Percentage
Backhoe	5	2	3	40%
Bobcat	1	1	0	100%
Boom Truck	2	0	2	0%
Crane	2	0	2	0%
Dump Truck	3	1	2	33%
Flat Bed	1	0	1	0%
Forklift	7	4	3	57%
Fuel Tanker	1	1	0	100%
Heavy Duty	3	0	3	0%
Light	150	103	47	69%
Mini Backhoe	4	2	2	50%
Pumper Truck	1	0	1	0%
Sludge Truck	4	3	1	75%
Tow	1	0	1	0%
Tractor	2	1	1	50%
Trailer	12	7	5	58%
Trencher	1	1	0	100%
Vaccon	1	1	0	100%
Vacuum Truck	3	2	1	67%
Water Buffalo	2	2	0	100%
Water Tanker	5	3	2	60%
Total	211	134	77	

SUMMARY						
Operational	Operational w/Rprs Pending	In Shop-Accident Repairs	In Shop-Assessment Pending	In Shop-Repairs Pending	In Shop-Vendor Repairs	Recommend Survey
2	0	0	0	2	0	1
1	0	0	0	0	0	0
0	0	1	0	1	0	0
0	0	0	0	0	1	1
1	0	0	0	2	0	0
0	0	0	0	0	0	1
4	0	0	0	2	0	1
1	0	0	0	0	0	0
0	0	0	0	0	2	1
101	2	2	9	4	7	25
2	0	0	0	2	0	0
0	0	0	0	0	1	0
3	0	0	0	1	0	0
0	0	0	0	0	0	1
1	0	0	0	0	1	0
1	0	0	0	0	1	0
7	0	0	0	1	2	2
1	0	0	0	0	0	0
1	0	0	0	0	0	0
2	0	0	0	0	1	0
2	0	0	0	0	0	0
3	0	0	0	1	0	1
132	2	3	9	16	15	34

Guam Waterworks Authority	Date: 1/10/2018 Time:

REVIEWS

TOTAL PUMPS INSTALLED	51	OVERAL AVERAGE	*94%*
TOTAL PUMPS OPERATIONAL	48	% OF OPERATING PUMPS	*94%*
TOTAL BOOSTER PUMP STATIONS	25		

GUAM WATERWORKS AUTHORITY

WATER DISTRIBUTION FACILITIES REPORT

Northern District

NO:	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	PUMP AND MOTOR INVENTORY
1	Gayinero	20	2	2	100%	OP	A						
2	Mataguac	25	2	2	100%	OP	A						
3	Santa Rosa	15	2	2	100%	OP	A						
4	Hyundai	40	2	1	50%	OP	A	Pump # 1 requires pump and motor. Station to undergo renovation during reservoir project.					
5	Access	60	2	2	100%	OP	A						
6	Chln. Palauan	5	2	2	100%	N/A							
7	Nimitz Hill	7.5	2	2	100%	N/A							
8	Adawag	1.5	2	2	100%	N/A							
9	Pale Kiren	1	1	1	100%	N/A							
10	Ulloa/Untalan	1	2	2	100%	OP	A						
11	Latte Heights	15	2	2	100%	OP	A						
	TOTAL = 11		**21**	**20**	**95%**								
pump availability =no of operational pumps/no of pumps*100%													

Central District

NO:	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	UPDATES
1	Pago	150 / 100	3	2	67%	0P	A	Pump 2 leaking at seal, pump operational, work ongoing.					
2	Brigade	60	3	3	100%	OP	A						
3	Windward Hills	200 / 75	3	3	100%	OP	A						
4	Santa Rita Springs	40	2	2	100%	OP	A						
5	Santa Ana (Lower)	25	2	1	50%	N/A						CIP required for new unit and electrical for generator	
6	Camacho	1	1	1	100%	N/A						CIP required for new unit and electrical for generator	
7	Tenorio	1.5	1	1	100%	N/A						CIP required for new unit and electrical for generator	
	Total=7		**15**	**13**	**87%**								
pump availability =no of operational pumps/no of pumps*100%													

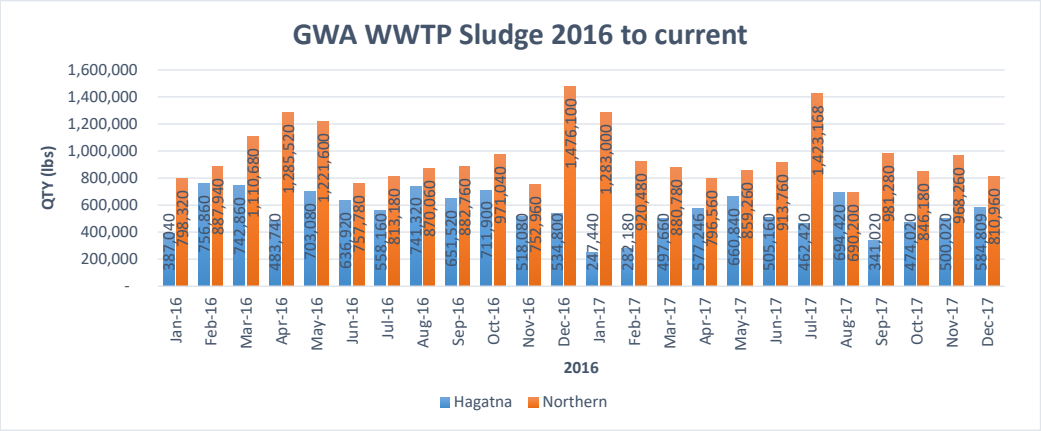
Southern District

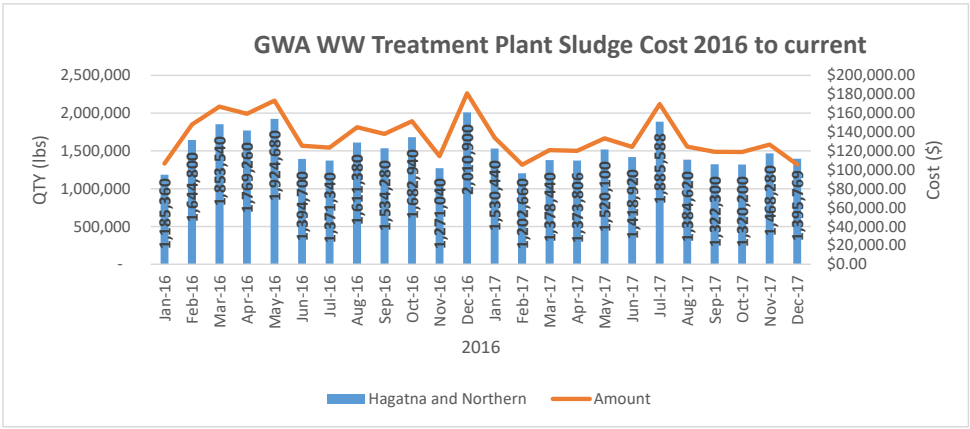
NO:	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	UPDATES
1	Malojloj Line	125 / 50	3	3	100%	OP	A						
2	Geus	25	2	2	100%	OP	A						
3	Pigua	7.5	2	2	100%	N/A							
4	Toguan	25	2	2	100%	OP	A						
5	WBP-2	25	2	2	100%	OP	A						
6	WBP-1	5	2	2	100%	OP	A						
7	Malojloj Elevated	15	2	2	100%	OP	A						
	Total=7		**15**	**15**	**100%**								
pump availability =no of operational pumps/no of pumps*100%													

	Hagatna		Northern		Hagatna and Northern	
2016	Qty	Amount	Qty	Amount	Qty	Amount
Month- Yr	lbs	$	lbs	$	lbs	$
Jan-16	387,040	$34,833.60	798,320	$71,848.80	1,185,360	$106,682.40
Feb-16	756,860	$68,117.40	887,940	$79,914.60	1,644,800	$148,032.00
Mar-16	742,860	$66,857.40	1,110,680	$99,961.20	1,853,540	$166,818.60
Apr-16	483,740	$43,536.60	1,285,520	$115,696.80	1,769,260	$159,233.40
May-16	703,080	$63,277.20	1,221,600	$109,944.00	1,924,680	$173,221.20
Jun-16	636,920	$57,322.80	757,780	$68,200.20	1,394,700	$125,523.00
Jul-16	558,160	$50,234.40	813,180	$73,186.20	1,371,340	$123,420.60
Aug-16	741,320	$66,718.80	870,060	$78,305.40	1,611,380	$145,024.20
Sep-16	651,520	$58,636.80	882,760	$79,448.40	1,534,280	$138,085.20
Oct-16	711,900	$64,071.00	971,040	$87,393.60	1,682,940	$151,464.60
Nov-16	518,080	$46,627.20	752,960	$67,766.40	1,271,040	$114,393.60
Dec-16	534,800	$48,132.00	1,476,100	$132,849.00	2,010,900	$180,981.00
Grand Total	$7,426,280	$ 668,365	$ 11,827,940	$ 1,064,515	$ 19,254,220	$ 1,732,880

	Hagatna		Northern		Hagatna and Northern	
2017	Qty	Amount	Qty	Amount	Qty	Amount
Month- Yr	lbs	$	lbs	$	lbs	$
Jan-17	247,440	$21,669.94	1,283,000	$112,371.53	1,530,440	$134,041.47
Feb-17	282,180	$24,709.93	920,480	$80,620.27	1,202,660	$105,330.20
Mar-17	497,660	$43,587.57	880,780	$77,143.14	1,378,440	$120,730.71
Apr-17	577,246	$50,226.47	796,560	$69,736.83	1,373,806	$119,963.30
May-17	660,840	$58,154.00	859,260	$75,261.61	1,520,100	$133,415.61
Jun-17	505,160	$44,239.74	913,760	$80,031.65	1,418,920	$124,271.39
Jul-17	462,420	$41,617.80	1,423,168	$128,085.12	1,885,588	$169,702.92
Aug-17	694,420	$62,497.80	690,200	$62,118.00	1,384,620	$124,615.80
Sep-17	341,020	$30,691.80	981,280	$88,315.20	1,322,300	$119,007.00
Oct-17	474,020	$42,661.80	846,180	$76,156.20	1,320,200	$118,818.00
Nov-17	500,020	$41,843.68	968,260	$84,805.04	1,468,280	$126,648.72
Dec-17	584,809	$34,523.89	810,960	$70,999.90	1,395,769	$105,523.79
Grand Total	5827235	$496,424.42	11373888	$1,005,644.50	17201123	$1,502,068.91

Hagatna and Northern WWTP Sludge Report 2016, GWA Operations kcog / df, 1/11/2018


GWA WWTP Sludge 2016 to current
QTY (lbs)
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
-
387,040 798,320
756,860 887,940
742,860 1,110,680
483,740 1,285,520
703,080 1,221,600
635,920 757,780
558,160 813,180
741,320 870,060
651,520 882,760
711,900 971,040
518,080 752,960
534,800 1,476,100
247,440 1,283,000
282,180 920,480
497,660 880,780
577,445 796,560
660,840 859,260
505,160 913,760
462,420 1,423,168
694,420 690,200
341,020 981,280
474,020 846,180
500,020 968,260
584,809 810,960
Jan-16 Feb-16 Mar-16 Apr-16 May-16 Jun-16 Jul-16 Aug-16 Sep-16 Oct-16 Nov-16 Dec-16 Jan-17 Feb-17 Mar-17 Apr-17 May-17 Jun-17 Jul-17 Aug-17 Sep-17 Oct-17 Nov-17 Dec-17
2016
Hagatna
Northern

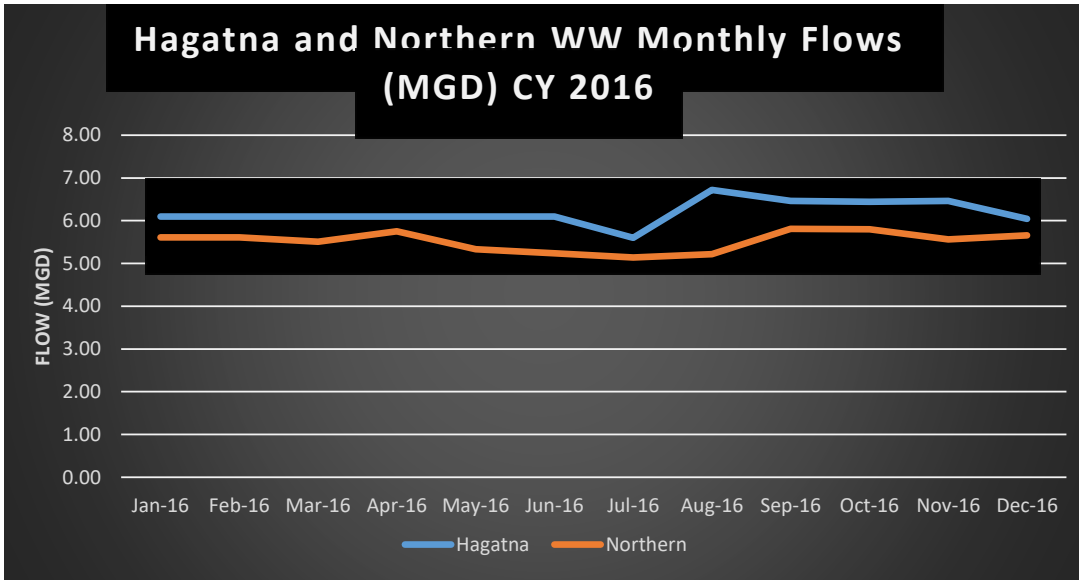

GWA WW Treatment Plant Sludge Cost 2016 to current
QTY (lbs)
2,500,000
2,000,000
1,500,000
1,000,000
500,000
-
Cost ($)
$200,000.00
$180,000.00
$160,000.00
$140,000.00
$120,000.00
$100,000.00
$80,000.00
$60,000.00
$40,000.00
$20,000.00
$0.00
1,185,360
1,644,800
1,853,540
1,769,260
1,924,680
1,394,700
1,371,340
1,611,380
1,534,280
1,682,940
1,271,040
2,010,900
1,530,440
1,202,660
1,378,440
1,373,806
1,520,100
1,418,920
1,885,588
1,384,620
1,322,300
1,320,200
1,468,280
1,395,769
Jan-16 Feb-16 Mar-16 Apr-16 May-16 Jun-16 Jul-16 Aug-16 Sep-16 Oct-16 Nov-16 Dec-16 Jan-17 Feb-17 Mar-17 Apr-17 May-17 Jun-17 Jul-17 Aug-17 Sep-17 Oct-17 Nov-17 Dec-17
2016
Hagatna and Northern
Amount

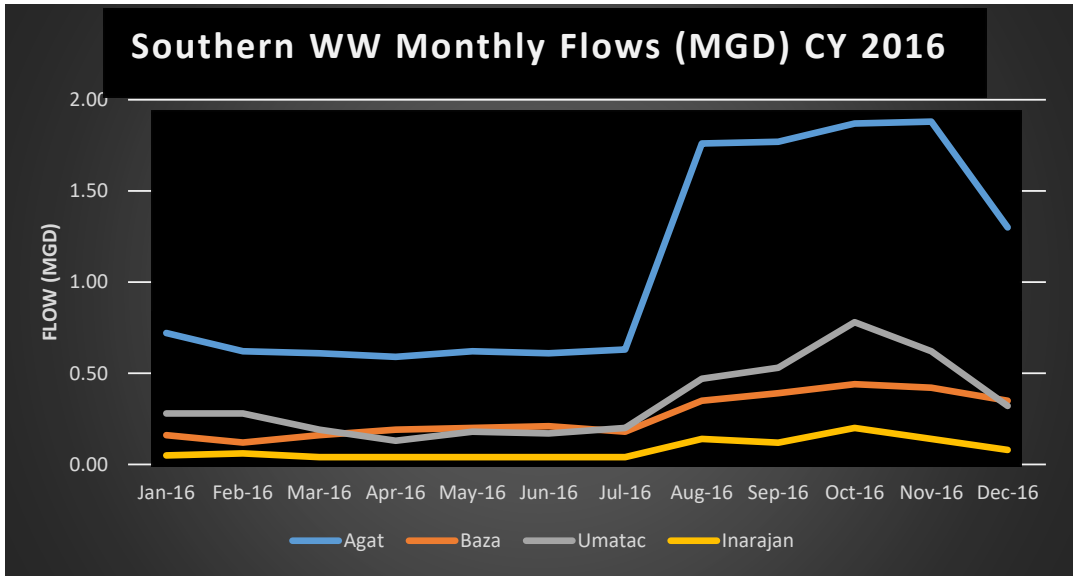
Wastewater Treatment Plant Average Monthy Flows Million Gallons Per Day

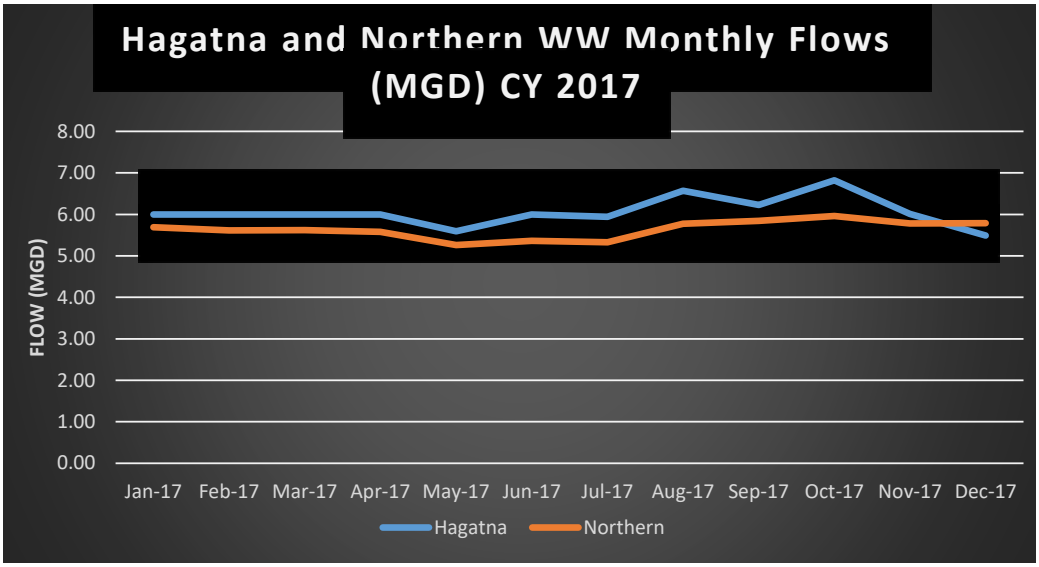
2016	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
Jan-16	6.10	5.61	0.72	0.16	0.28	0.05
Feb-16	6.10	5.61	0.62	0.12	0.28	0.06
Mar-16	6.10	5.51	0.61	0.16	0.19	0.04
Apr-16	6.10	5.75	0.59	0.19	0.13	0.04
May-16	6.10	5.33	0.62	0.20	0.18	0.04
Jun-16	6.10	5.24	0.61	0.21	0.17	0.04
Jul-16	5.60	5.14	0.63	0.18	0.20	0.04
Aug-16	6.72	5.22	1.76	0.35	0.47	0.14
Sep-16	6.46	5.81	1.77	0.39	0.53	0.12
Oct-16	6.44	5.80	1.87	0.44	0.78	0.20
Nov-16	6.46	5.56	1.88	0.42	0.62	0.14
Dec-16	6.04	5.66	1.30	0.35	0.32	0.08
2016 Average MGD	**6.19**	**5.52**	**1.08**	**0.26**	**0.35**	**0.08**
2016 Total MGY	2,261	2,015	395	96	126	30

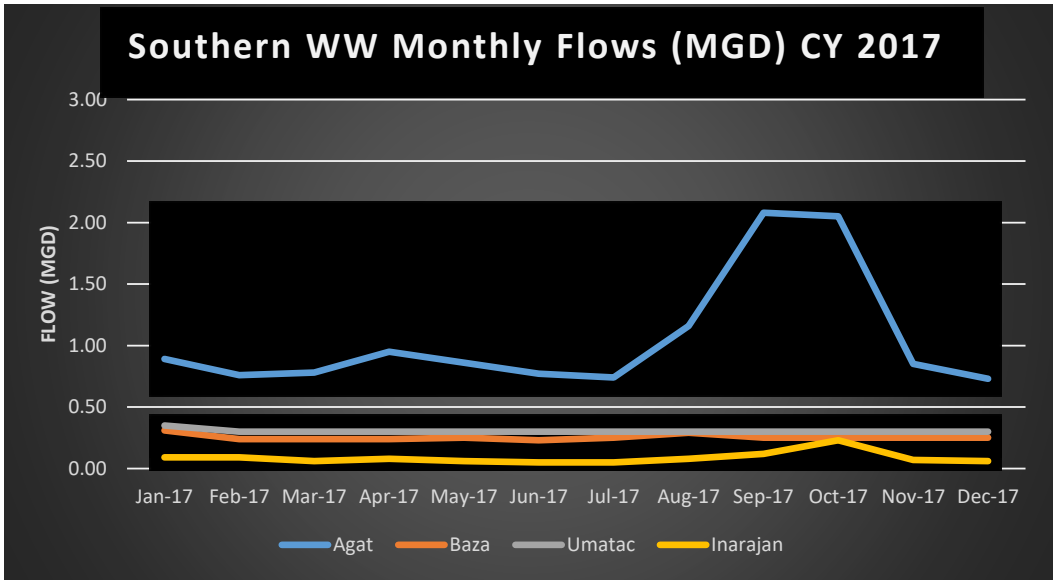
2017	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
Jan-17	6.00	5.69	0.89	0.31	0.35	0.09
Feb-17	6.00	5.61	0.76	0.24	0.30	0.09
Mar-17	6.00	5.62	0.78	0.24	0.30	0.06
Apr-17	6.00	5.58	0.95	0.24	0.30	0.08
May-17	5.59	5.26	0.86	0.25	0.30	0.06
Jun-17	6.00	5.36	0.77	0.23	0.30	0.05
Jul-17	5.94	5.33	0.74	0.25	0.30	0.05
Aug-17	6.57	5.77	1.16	0.29	0.30	0.08
Sep-17	6.23	5.84	2.08	0.25	0.30	0.12
Oct-17	6.82	5.96	2.05	0.25	0.30	0.23
Nov-17	6.01	5.78	0.85	0.25	0.30	0.07
Dec-17	5.49	5.79	0.73	0.25	0.30	0.06
2017 Average MGD	**6.05**	**5.63**	**1.05**	**0.25**	**0.30**	**0.09**
2017 Total MGY	2,210	2,056	384	93	111	32

GWA WWT Flow Report 2013 to Present, prepared by kcog/df, 1/11/2018

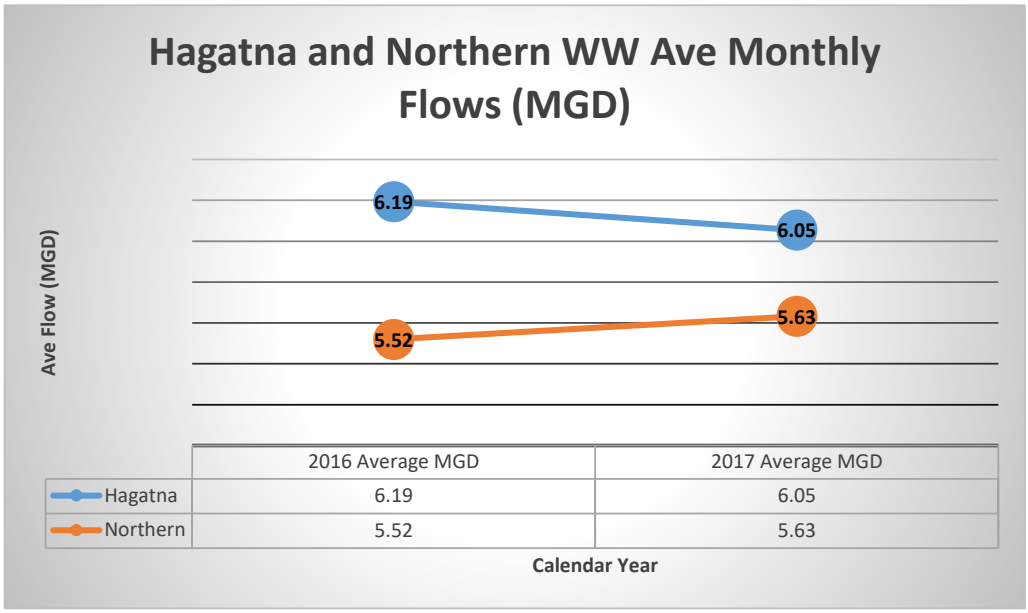

Hagatna and Northern WW Monthly Flows (MGD) CY 2016
FLOW (MGD)
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
Jan-16 Feb-16 Mar-16 Apr-16 May-16 Jun-16 Jul-16 Aug-16 Sep-16 Oct-16 Nov-16 Dec-16
Hagatna
Northern

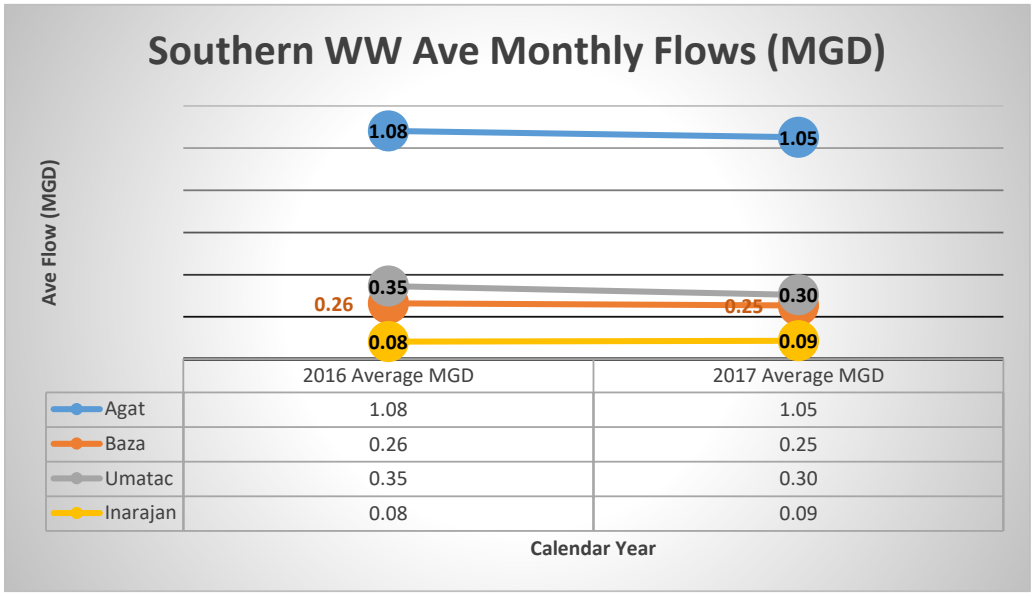

Southern WW Monthly Flows (MGD) CY 2016
FLOW (MGD)
2.00
1.50
1.00
0.50
0.00
Jan-16 Feb-16 Mar-16 Apr-16 May-16 Jun-16 Jul-16 Aug-16 Sep-16 Oct-16 Nov-16 Dec-16
Agat
Baza
Umatac
Inarajan

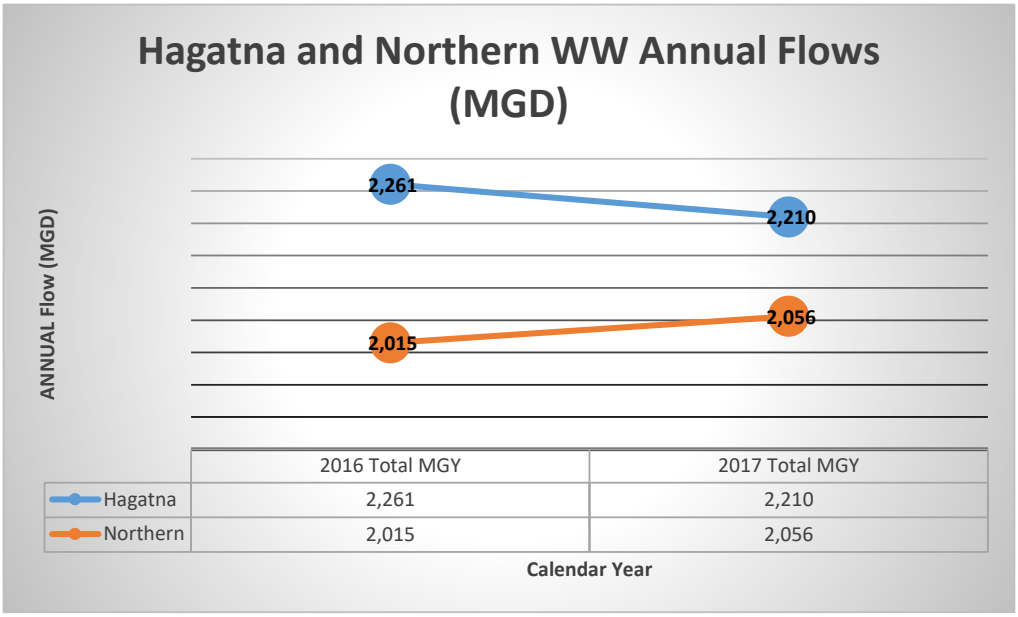


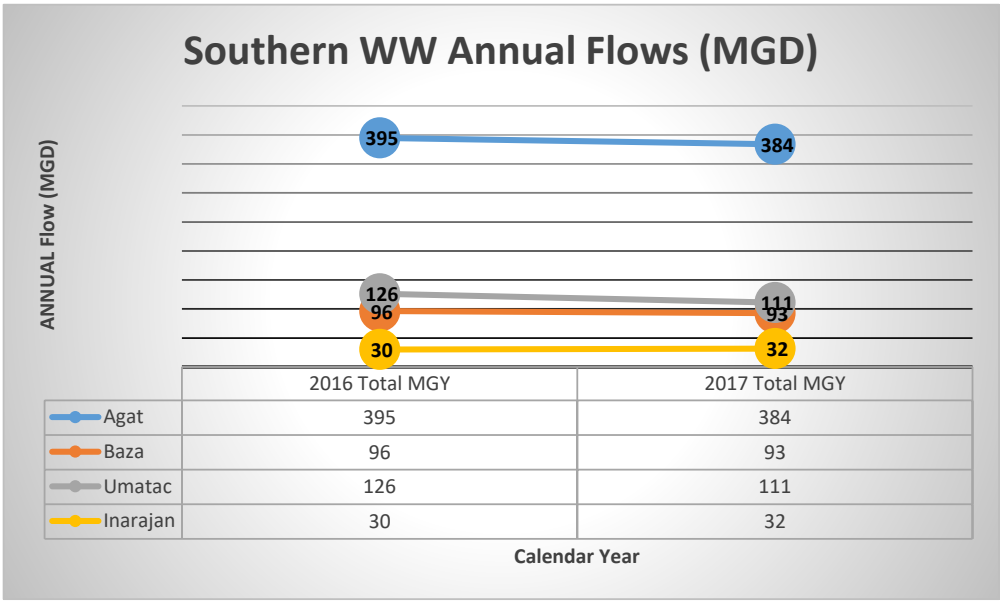


GWA WWT Flow Report 2013 to Present, prepared by kcog/df, 1/11/2018


Hagatna and Northern WW Ave Monthly Flows (MGD)
Ave Flow (MGD)
6.19
6.05
5.52
5.63
2016 Average MGD
2017 Average MGD
Hagatna
6.19
6.05
Northern
5.52
5.63
Calendar Year


Southern WW Ave Monthly Flows (MGD)
Ave Flow (MGD)
1.08
1.05
0.35
0.30
0.26
0.25
0.08
0.09
2016 Average MGD
2017 Average MGD
Agat
1.08
1.05
Baza
0.26
0.25
Umatac
0.35
0.30
Inarajan
0.08
0.09
Calendar Year


Hagatna and Northern WW Annual Flows (MGD)
ANNUAL Flow (MGD)
2,261
2,210
2,015
2,056
2016 Total MGY
2017 Total MGY
Hagatna
2,261
2,210
Northern
2,015
2,056
Calendar Year


Southern WW Annual Flows (MGD)
ANNUAL Flow (MGD)
395
384
126
111
96
93
30
32
2016 Total MGY
2017 Total MGY
Agat
395
384
Baza
96
93
Umatac
126
111
Inarajan
30
32
Calendar Year

Wastewater Treatment Plant Average Monthy Flows Million Gallons Per Day

	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
DESIGN FLOWS (MGD)	12.0	12.0	0.75	0.60	0.39	0.19

2013	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
Jan-13	5.72	5.23	0.83	0.06	0.16	0.07
Feb-13	5.94	5.38	0.71	0.05	0.11	0.07
Mar-13	5.70	5.34	0.75	0.06	0.16	0.07
Apr-13	5.50	5.23	0.69	0.05	0.09	0.08
May-13	5.72	5.15	0.92	0.07	0.14	0.07
Jun-13	5.69	5.27	0.80	0.06	0.25	0.06
Jul-13	5.82	5.48	0.80	0.08	0.24	0.08
Aug-13	6.02	5.68	1.02	0.08	0.22	0.08
Sep-13	6.56	6.33	1.42	0.04	0.75	0.04
Oct-13	6.88	6.20	1.63	0.05	0.63	0.05
Nov-13	5.99	5.67	1.07	0.12	0.57	0.12
Dec-13	5.92	5.56	0.80	0.06	0.67	0.06
2013 Ave MGD	**5.96**	**5.54**	**0.95**	**0.07**	**0.33**	**0.07**
2013 Total MGY	2,174	2,023	348	24	121	26

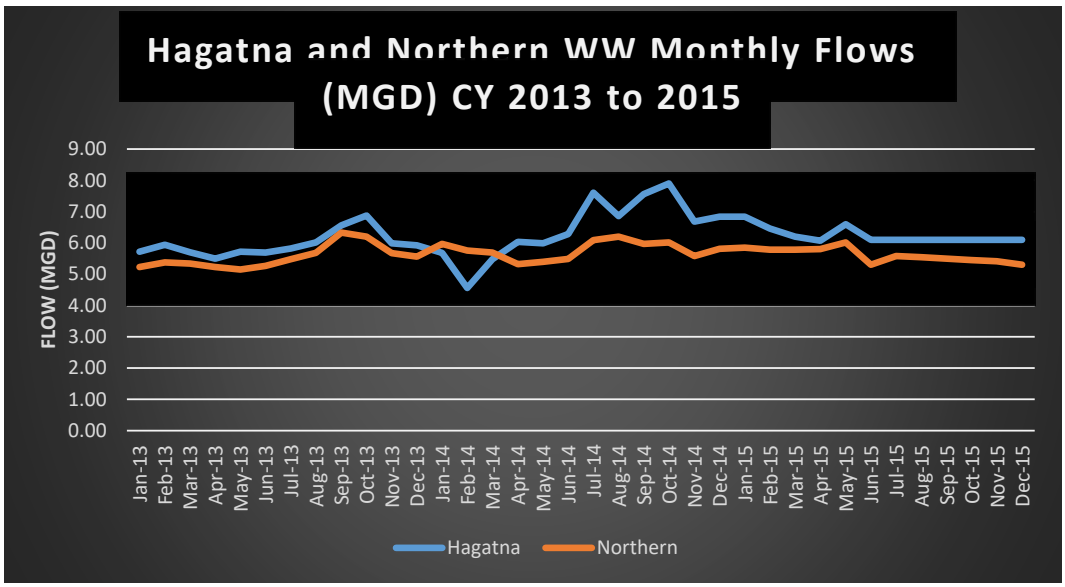
2014	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
Jan-14	5.68	5.97	1.13	0.09	0.72	0.07
Feb-14	4.56	5.76	1.12	0.11	0.99	0.16
Mar-14	5.48	5.69	0.7	0.14	0.78	0.06
Apr-14	6.03	5.32	0.67	0.09	0.52	0.05
May-14	5.99	5.4	0.66	0.09	0.31	0.05
Jun-14	6.28	5.49	0.67	0.09	0.28	0.05
Jul-14	7.61	6.09	1.34	0.09	0.39	0.13
Aug-14	6.86	6.2	1.46	0.09	0.27	0.15
Sep-14	7.56	5.97	1.45	0.37	0.35	0.11
Oct-14	7.9	6.02	2.01	0.38	0.93	0.19
Nov-14	6.68	5.58	1.35	0.22	0.27	0.14
Dec-14	6.84	5.81	0.86	0.15	0.16	0.07
2014 Ave MGD	**6.46**	**5.78**	**1.12**	**0.16**	**0.50**	**0.10**
2014 Total MGY	2,356	2,108	408	58	182	37

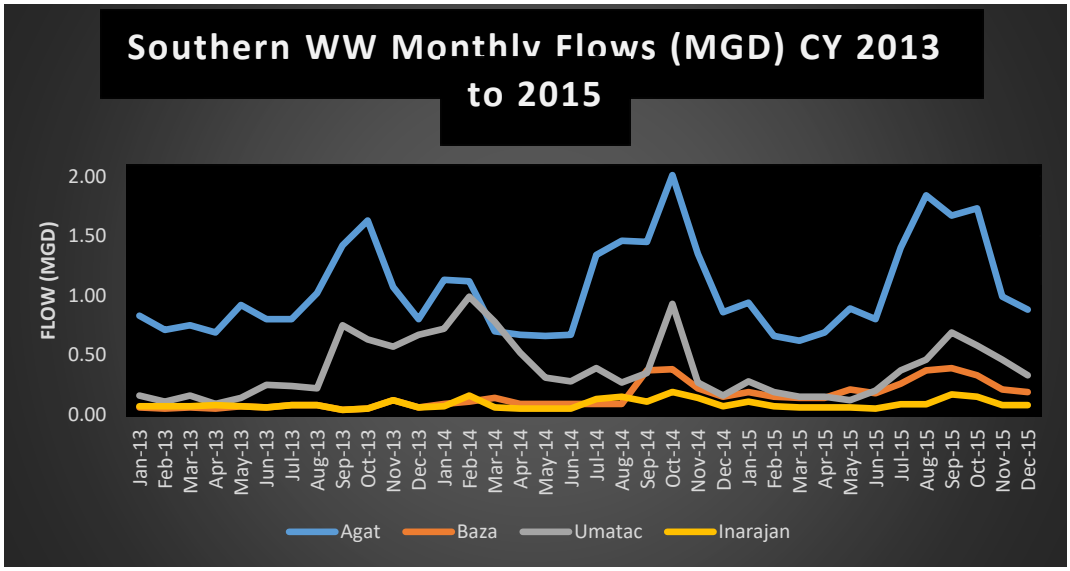
2015	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
Jan-15	6.84	5.85	0.94	0.19	0.28	0.11
Feb-15	6.46	5.78	0.66	0.15	0.19	0.07
Mar-15	6.20	5.78	0.62	0.14	0.15	0.06
Apr-15	6.07	5.80	0.69	0.14	0.15	0.06
May-15	6.60	6.02	0.89	0.21	0.12	0.06
Jun-15	6.10	5.30	0.80	0.18	0.20	0.05
Jul-15	6.10	5.58	1.40	0.26	0.37	0.09
Aug-15	6.10	5.54	1.84	0.37	0.46	0.09
Sep-15	6.10	5.50	1.67	0.39	0.69	0.17
Oct-15	6.10	5.45	1.73	0.33	0.58	0.15
Nov-15	6.10	5.41	0.99	0.21	0.46	0.08
Dec-15	6.10	5.30	0.88	0.19	0.33	0.08
2015 Ave MGD	**6.24**	**5.61**	**1.09**	**0.23**	**0.33**	**0.09**
2015 Total MGY	2,277	2,047	399	84	121	32

GWA WWT Flow Report 2013 to Present, prepared by kcog/df, 1/11/2018

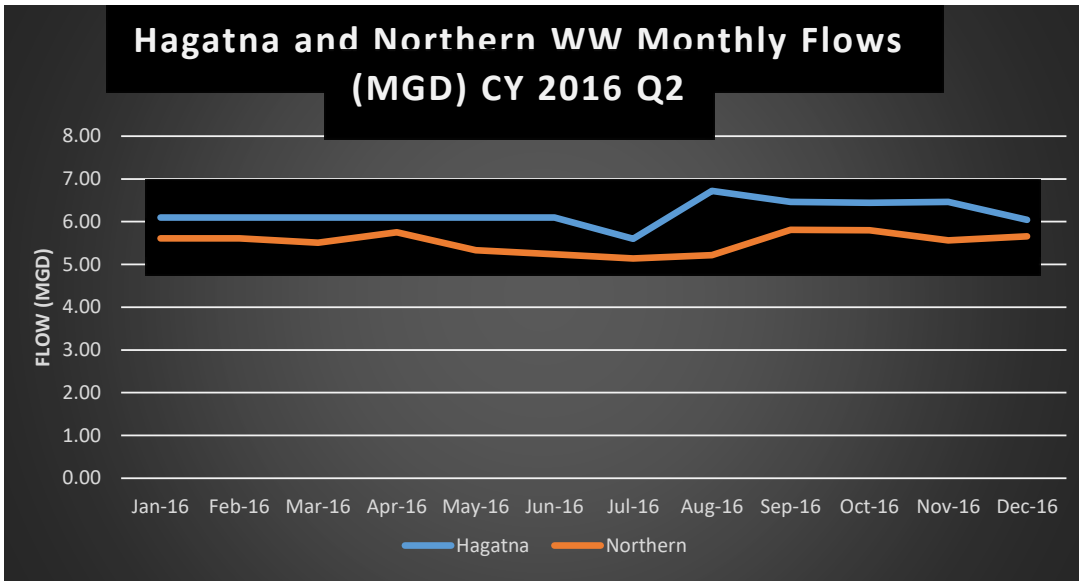
2016	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
Jan-16	6.10	5.61	0.72	0.16	0.28	0.05
Feb-16	6.10	5.61	0.62	0.12	0.28	0.06
Mar-16	6.10	5.51	0.61	0.16	0.19	0.04
Apr-16	6.10	5.75	0.59	0.19	0.13	0.04
May-16	6.10	5.33	0.62	0.20	0.18	0.04
Jun-16	6.10	5.24	0.61	0.21	0.17	0.04
Jul-16	5.60	5.14	0.63	0.18	0.20	0.04
Aug-16	6.72	5.22	1.76	0.35	0.47	0.14
Sep-16	6.46	5.81	1.77	0.39	0.53	0.12
Oct-16	6.44	5.80	1.87	0.44	0.78	0.20
Nov-16	6.46	5.56	1.88	0.42	0.62	0.14
Dec-16	6.04	5.66	1.30	0.35	0.32	0.08
Average MGD	**6.19**	**5.52**	**1.08**	**0.26**	**0.35**	**0.08**
2016 Total MGY	**2,261**	**2,015**	**395**	**96**	**126**	**30**

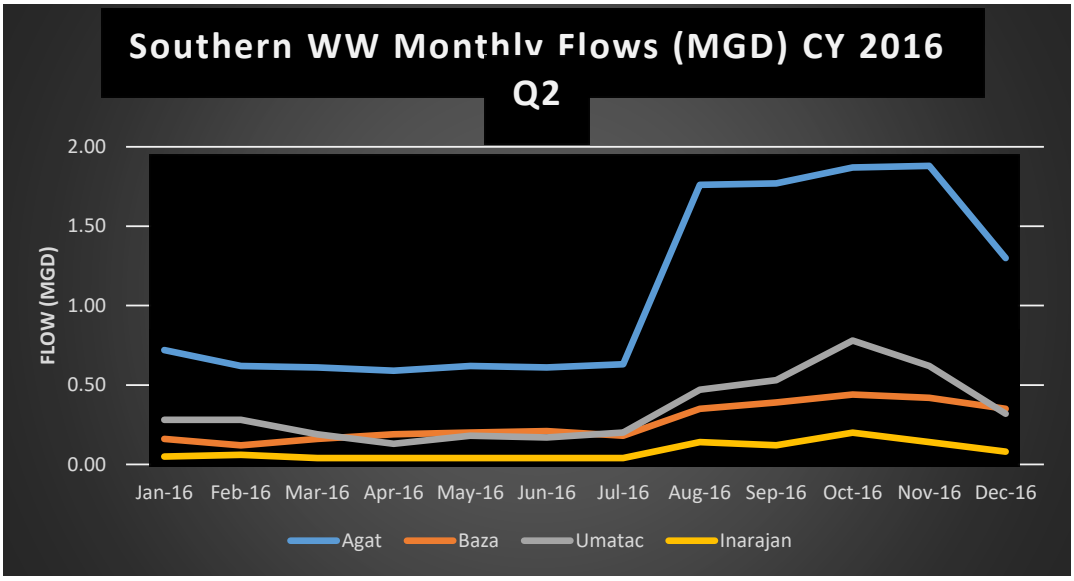
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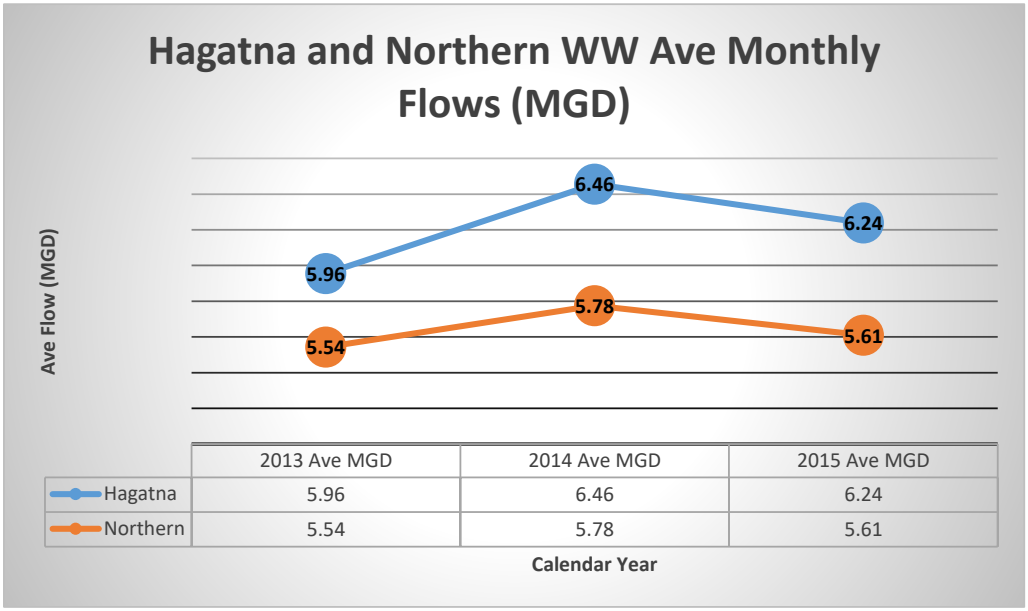


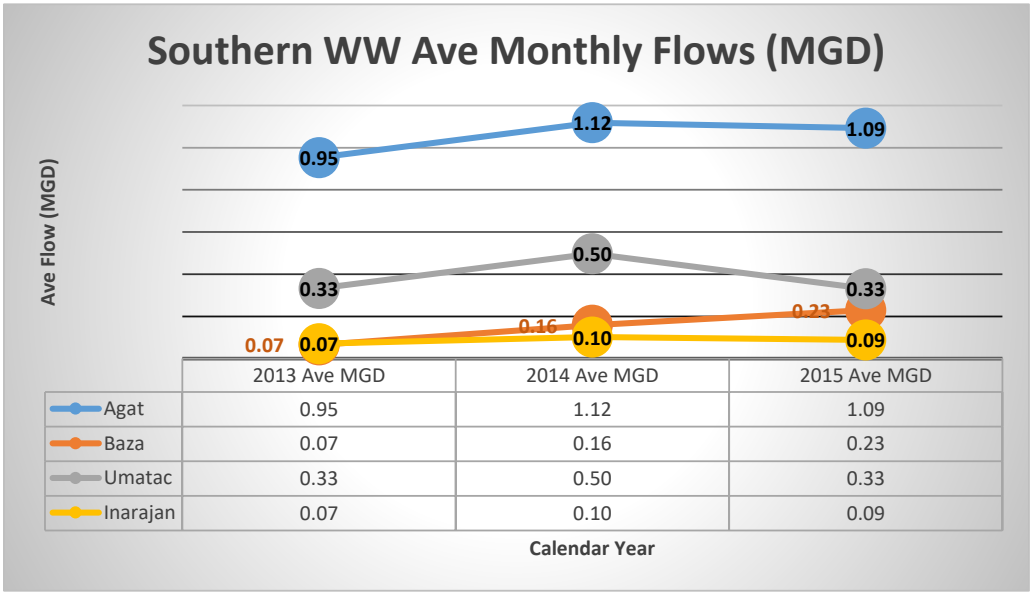


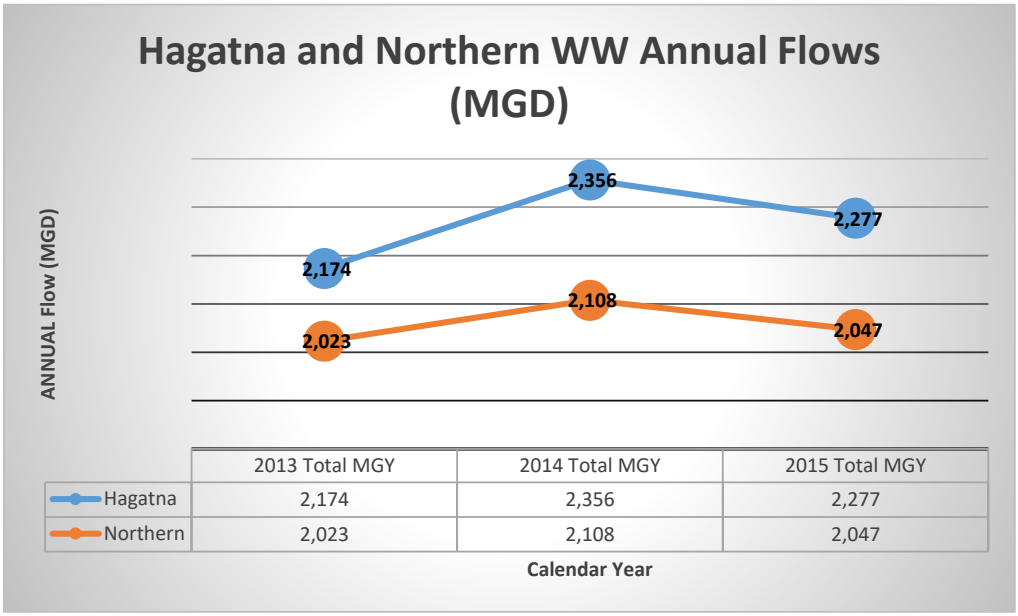
GWA WWT Flow Report 2013 to Present, prepared by kcog/df, 1/11/2018

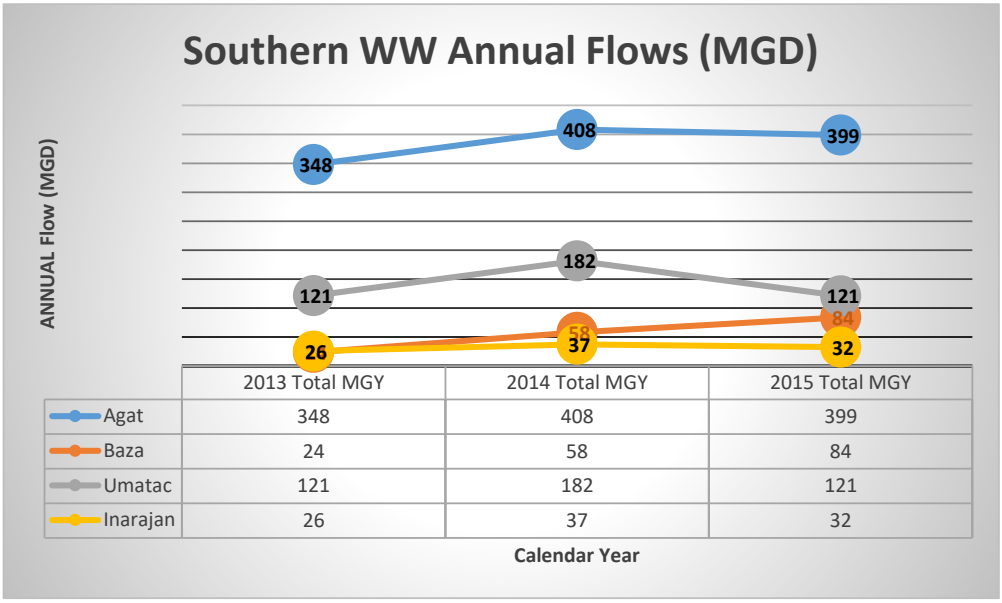

Hagatna and Northern WW Monthly Flows (MGD) CY 2016 Q2
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
FLOW (MGD)
Jan-16 Feb-16 Mar-16 Apr-16 May-16 Jun-16 Jul-16 Aug-16 Sep-16 Oct-16 Nov-16 Dec-16
Hagatna
Northern


Southern WW Monthly Flows (MGD) CY 2016 Q2
2.00
1.50
1.00
0.50
0.00
FLOW (MGD)
Jan-16 Feb-16 Mar-16 Apr-16 May-16 Jun-16 Jul-16 Aug-16 Sep-16 Oct-16 Nov-16 Dec-16
Agat
Baza
Umatac
Inarajan


Hagatna and Northern WW Ave Monthly Flows (MGD)
Ave Flow (MGD)
6.46
6.24
5.96
5.78
5.61
5.54
2013 Ave MGD
2014 Ave MGD
2015 Ave MGD
Hagatna
5.96
6.46
6.24
Northern
5.54
5.78
5.61
Calendar Year


Southern WW Ave Monthly Flows (MGD)
Ave Flow (MGD)
1.12
1.09
0.95
0.50
0.33
0.33
0.23
0.16
0.07
0.07
0.10
0.09
2013 Ave MGD
2014 Ave MGD
2015 Ave MGD
Agat
0.95
1.12
1.09
Baza
0.07
0.16
0.23
Umatac
0.33
0.50
0.33
Inarajan
0.07
0.10
0.09
Calendar Year


Hagatna and Northern WW Annual Flows (MGD)
ANNUAL Flow (MGD)
2,356
2,277
2,174
2,108
2,023
2,047
2013 Total MGY
2014 Total MGY
2015 Total MGY
Hagatna
2,174
2,356
2,277
Northern
2,023
2,108
2,047
Calendar Year


Southern WW Annual Flows (MGD)
ANNUAL Flow (MGD)
408
399
348
182
121
121
84
58
37
32
26
2013 Total MGY
2014 Total MGY
2015 Total MGY
Agat
348
408
399
Baza
24
58
84
Umatac
121
182
121
Inarajan
26
37
32
Calendar Year

GUAM WATERWORKS AUTHORITY

WASTEWATER COLLECTION REPORT

MONTHLY REPORT

DECEMBER 2017



CCTV INSPECTIONS AND SEWER CLEANING

Dec. 01 - 07	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3267	0	6534
Feet Completed	3019.4	0	0	3019.4
	92%	0%	0%	46%

Dec. 08 - 14	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3,267	0	6,534
Feet Completed	5,429.3	0	0	5429.3
	166%	0%	0%	83%

Dec. 15 - 21	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3,267	0	6,534
Feet Completed	22,724	0	0	22,724
	695%	0%	0%	348%

Dec. 22 - 28	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3,267	0	6,534
Feet Completed	0	0	0	0
	0%	0%	0%	0%

Dec. 29- 30	Team #1	Team #2	Vendor	Total
Feet Scheduled	0	0	0	0
Feet Completed	0	0	0	0
	0%	0%	0%	0%

TOTAL FEET SCHEDULED: 26,136

TOTAL FEET COMPLETED: 31,173

TOTAL MILES SCHEDULED FOR THE MONTH: 5.0

TOTAL MILES COMPLETD FOR THE MONTH: 5.9

*On the week of December 15-21, the crews pulled 16 hour shifts for that week in order to complete the yearly required miles. The whole Barrigada Heights area was CCTV knowing that there were no known prior issues. The crews were set back in the months of October and November due to sewer line breaks in Asan and in Adelup. They broke off their planned areas and proceeded to Barrigada heights area in order to ensure the completion of required miles to avoid any violations.

PUMPING STATION TROUBLE CALLS

Dec. 01 - 07	CREATED	COMPLETED	PENDING
NORTHERN	2	2	0
CENTRAL	3	3	0
SOUTHERN	2	2	0
TOTAL	7	7	0

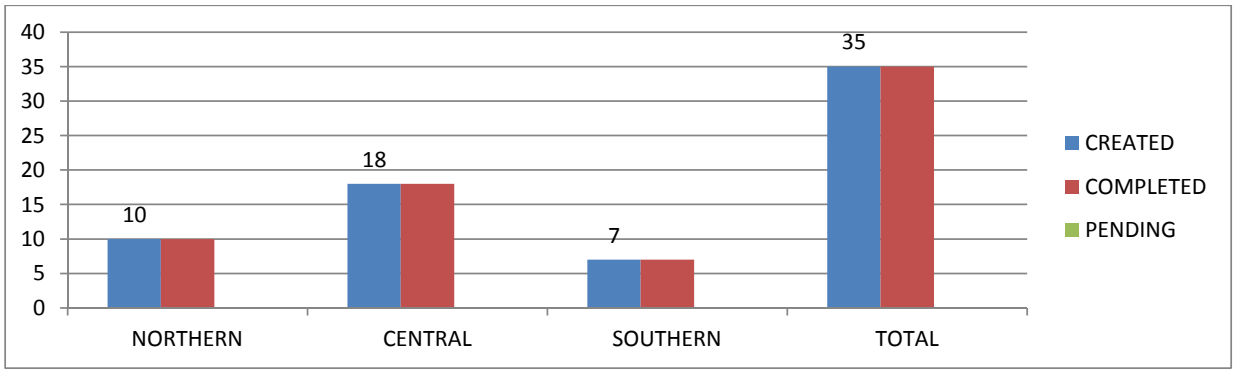
Dec. 08 - 14	CREATED	COMPLETED	PENDING
NORTHERN	4	4	0
CENTRAL	2	2	0
SOUTHERN	0	0	0
TOTAL	6	6	0

Dec. 15 - 21	CREATED	COMPLETED	PENDING
NORTHERN	1	1	0
CENTRAL	9	9	0
SOUTHERN	1	1	0
TOTAL	11	11	0

Dec. 22 - 28	CREATED	COMPLETED	PENDING
NORTHERN	2	2	0
CENTRAL	2	2	0
SOUTHERN	2	2	0
TOTAL	6	6	0

Dec. 29- 30	CREATED	COMPLETED	PENDING
NORTHERN	0	0	0
CENTRAL	2	2	0
SOUTHERN	2	2	0
TOTAL	4	4	0

	CREATED	COMPLETED	PENDING
NORTHERN	10	10	0
CENTRAL	18	18	0
SOUTHERN	7	7	0
TOTAL	35	35	0



MAINTENANCE PREVENTIVE AND CORRECTIVE CALL OUTS

Dec. 01 - 07	PREVENTIVE	CORRECTIVE
NORTHERN	0	4
CENTRAL	0	1
SOUTHERN	0	3
TOTAL	0	8

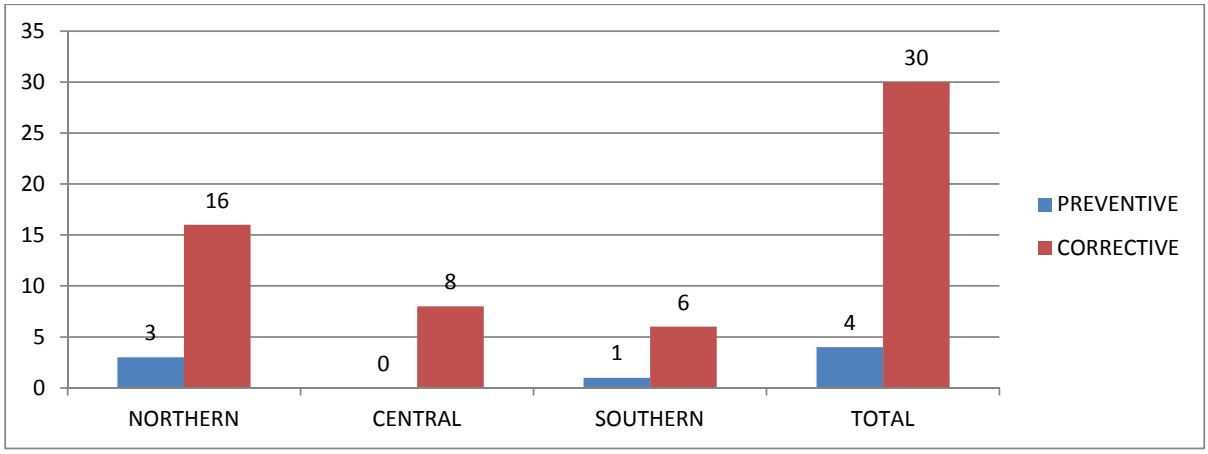
Dec. 08 - 14	PREVENTIVE	CORRECTIVE
NORTHERN	0	3
CENTRAL	0	2
SOUTHERN	0	0
TOTAL	0	5

Dec. 15 - 21	PREVENTIVE	CORRECTIVE
NORTHERN	1	2
CENTRAL	0	2
SOUTHERN	0	0
TOTAL	1	4

Dec. 22 - 28	PREVENTIVE	CORRECTIVE
NORTHERN	1	3
CENTRAL	0	3
SOUTHERN	0	1
TOTAL	1	7

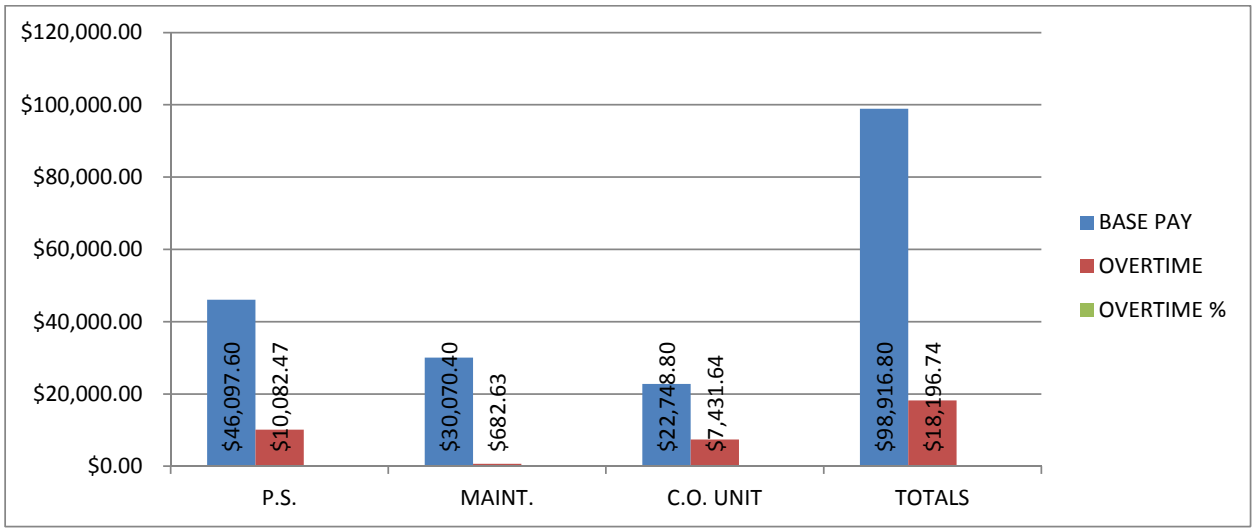
Dec. 29- 31	PREVENTIVE	CORRECTIVE
NORTHERN	1	4
CENTRAL	0	0
SOUTHERN	1	2
TOTAL	2	6

	PREVENTIVE	CORRECTIVE
NORTHERN	3	16
CENTRAL	0	8
SOUTHERN	1	6
TOTAL	4	30



BASE PAY VS OVERTIME

	BASE PAY	OVERTIME	OVERTIME %
PUMPING STATION	$46,097.60	$10,082.47	21%
MAINTENANCE	$30.070.40	$682.63	2%
COURT ORDER UNIT	$22,748.80	$7,431.64	32%
TOTALS			



CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671) 648-3002 | guamccu.org

GUAM WATERWORKS AUTHORITY WORK SESSION

CCU February 20, 2018

AGENDA

1. **ISSUES FOR DECISION**
   - 1.1 **Approval of Change Order No. 4 for the Agat-Santa Rita WWTP Upgrade Construction Management Contract / Resolution 17-FY2018**
   - 1.2 **Approval of 2010 Bond Proceeds Reallocation / Resolution 18-FY2018**
   - 1.3 **Approval of Contract for the NDWWTP Outfall Effluent Diffuser Installation Project / Resolution 19-FY2018**

2. **GM REPORT**

3. **ISSUES FOR DISCUSSION**

4. **DIVISION REPORTS**
   - 4.1 **Communications**
   - 4.2 **Compliance & Safety**
   - 4.3 **Customer Service**
   - 4.4 **Engineering**
   - 4.5 **Finance**
   - 4.6 **Operations**

5. **ANNOUNCEMENTS**
   - 5.1 **Next CCU Meetings: GPA Work Session: 2/22/18; CCU Meeting: 2/27/18**

6. **ADJOURNMENT**

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 17-FY2018
Relative to Approval of Change Order No. 4 for the Agat Santa Rita Wastewater Treatment Plant Upgrade Construction Management Contract

What is the project's objective and is it necessary and urgent?
The objective of the Change Order is to continue construction management services at the Agat Santa Rita WWTP construction project until such time the contractor has completed all required work. GWA has executed an extension to the contractor's contract completion date to March 2018, and has adjusted the CM's contract accordingly. The contractor, Sumitomo Mitsui Construction Corp (SMCC), recently presented a proposed construction schedule that extends the current contract completion date. GWA is currently assessing the contractual implications of the Contractor's failure to meet the current construction schedule that notwithstanding, CM services will be required on the project until all work is completed. The completion of the construction work is the responsibility of SMCC however, GWA must ensure that CM services also continues, and thus the resolution before the CCU is to approve a Change Order that will extend the required CM services possibly to July or August of 2018 and will necessarily increase the authorized CM contract amount.

The Change order would also cover work related to construction activities associated with the installation of the 21-inch diameter gravity sewer line on the A-SR WWTP site that is part of the Baza Gardens Pumping and Conveyance project but which is not currently contracted out for installation.

Where is the location?
New Agat Santa Rita WWTP

How much will it cost?
GWA management seeks CCU approval of Change Order No. 4 with GHD, Inc. in an amount not-to-exceed Eight Hundred Eighty-Two Thousand Six Hundred Thirty-One Dollars ($882,631.00). The change order will be negotiated to an appropriate amount and expended on a Time and Materials basis.

When will it be completed?
The anticipated completion of the construction activities by the contractor is May 2018 however the Change Order covers additional services up unto August 2018.

What is the funding source?
Funding for the Change Order will be from the bond funds under the line item - WW 11-08 "Agat/ Sta Rita STP Replacement" and/or funds derived from Liquidated Damages assessed the Contractor and will be applied to pay CM services.

The RFP/BID responses (if applicable):
NOT APPLICABLE

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

RESOLUTION NO. 17–FY2018

RELATIVE TO CHANGE ORDER NO. 4 FOR THE AGAT SANTA RITA WASTEWATER TREATMENT PLANT UPGRADES CONSTRUCTION MANAGEMENTCONTRACT

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA currently has a number of critical Court Order ("CO") projects including construction of the new Agat Santa Rita Wastewater Treatment Plant that is necessary for the plant to achieve compliance with the GWA's NDPES permit, eliminate by-passes at the old Agat wastewater treatment plant, ensure that solids generated by the WWTP are adequately stabilized and dewatered, and to comply with sludge and biosolids requirements 40 C.F.R. Part 503 as stated in Paragraph 11 of the 2011 Court Order; and

WHEREAS, GWA executed contracts with Sumitomo Mitsui Construction Company (SMCC) to construct the new WWTP and GHD, Inc. to provide construction management services as a means to work towards achieving the Court Order requirements; and

WHEREAS, GWA has executed a few Change Orders to the SMCC contract with the latest one extending the phase II construction completion deadline to March 25, 2018 to address SMCC's claims related to rain delays; and

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//

WHEREAS, via CCU Resolution No. 48-FY2017 executed in July of 2017, the CCU also authorized the continuation of CM services with GHD. Inc. from August 15, 2017 through the then anticipated March 31, 2018 construction completion date, after which GWA executed Change Orders 2 and 3 in the total amount of One Million Fourteen Thousand Four Hundred Twelve Dollars ($1,014,412.00); and

WHEREAS, while SMCC has maintained its staffing levels and construction effort, they recently submitted an updated project schedule that shows completion of all critical process facilities by March 2018 and all remaining construction activities by May 2018. SMCC claims additional delays due to adverse weather and work force shortages as a result of the H2-B visa program; and

WHEREAS, GWA management has not agreed to accept this claim and if, after further investigation, GWA denies the additional delay claims, the current construction contract completion date of March 25, 2018 will stand; after which Liquidated Damages will be assessed against the Contractor; and

WHEREAS, notwithstanding the final disposition of any SMCC claims for an extension of schedule, construction work will continue until the facility is completed. This means GWA will still require continuity of construction management services and has therefore requested that GHD provide a fee proposal for CM services related to the potential extension of the contract completion date; and

WHEREAS, the fee proposal submitted by GHD is being evaluated and GWA intends to negotiate a reasonable not-to-exceed amount to cover the anticipated services needed until construction completion; and

WHEREAS, GWA management may also request that GHD, Inc submit a fee proposal for additional construction management services on the Agat Santa Rita WWTP site related to the installation of the 21-inch diameter gravity line that ties in the Baza Gardens Pumping and Conveyance project which is not currently contracted out for installation; and

WHEREAS, GWA management seeks CCU approval to execute Change Order No. 4 with GHD, Inc. on a Time and Materials basis related to the above described additional work in an amount not-to-exceed Eight Hundred Eighty-Two Thousand Six Hundred Thirty-One Dollars ($882,631.00); and

WHEREAS, funding for this project will be from the bond funds under the line item - WW 11-08 "Agat/ Sta Rita STP Replacement" and/or funds derived from the Liquidated Damages that may be assessed the contractor and will be applied to pay the additional CM services; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the scope of additional work requested of GHD is reasonable and necessary.
3. The CCU finds that the fee proposal submitted by GHD, subject to final negotiation by GWA Management, to be fair and reasonable, and the terms of the conditions set by GWA relative to commencement of subsequent work activities are fair and reasonable and serve as a measure of Quality Assurance/Quality Control (QA/QC).
4. The CCU hereby approves GWA management to execute Change Order No. 4 on a Time and Materials basis in an amount not-to-exceed Eight Hundred Eighty-Two Thousand Six Hundred Thirty-One Dollars ($882,631.00) (EXHIBIT A) which would cover CM services through final construction completion and close-out.
5. The source of funding for the additional CM services will be from the bond funds under the line item - WW 11-08 "Agat/ Sta Rita STP Replacement" and/or funds withheld from the construction contract with SMCC as Liquidated Damages assessed to the contractor.

DRAFT

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 27th day of February 2018.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS **J. GEORGE BAMBA**
Chairperson Secretary

SECRETARY'S CERTIFICATE

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

///

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DRAFT

Exhibit A

Date: February 16, 2018

Reference No.: GHD/GWA – LTR-04

To: Mr. John Davis, P.E., Project Manager
Guam Waterworks Authority
Gloria B. Nelson Public Utilities Complex
Route 15, Mangilao, Guam

Project: Agat-Santa Rita WWTP Replacement Project - Phase II
Project No. S14-002-BND

Subject: MOD 004, 005, & 006 – Additional Construction Management Services Scope of Work and Fee Proposal

Dear Mr. Davis:

We are pleased to submit this proposal for additional CM support services as described below.

SCOPE OF WORK:

In follow up to our meeting with yourself and Mr. Tom Cruz on February 07, 2018 at the GWA Multi-Purpose Room following our Monthly Managers Meeting, we have prepared three (3) cost proposals to extend our Construction Management Services from April 01, 2018 through June 30, 2018, July 01, 2018 through August 31, 2018, and CM services for the on-site installation of the sanitary sewer line from Baza Gardens. Each has been detailed below.

1. **MOD 04** has been prepared to provide additional CM services from April 01, 2018 to June 30, 2018 per **Table 1**. This modification is needed due to an increase in the overall construction schedule. Additional support services and expenses associated with this effort is detailed below.

    - **Item 01: Clearing & Grading QA Testing and Survey Services**
      Our original SOW provides concrete testing, material testing, and field verification survey services as a budgetary amount with the understanding that should additional services be needed, they can be brought to GWA's attention for additional compensation.

      No budget for these services was allocated in the Clearing and Grading (C&G) phase of work. GHD provided these services using the available Waste Water Treatment Plant Replacement budget with the intent of revisiting the need for additional budget at a later date only if required. The cost to provide compaction testing during the C&G phase was $6,757.40, concrete testing was $2,580.60, and survey was $6,900.00. We request the QA Services budgets be restored by these amounts to allow us to maintain the same level of QA testing and survey for the duration of the project. See attached **Exhibit A.**

- **Item 02: Construction Site Camera**
  Our original Contract duration for this project was September 08, 2015 through June 07, 2017. MOD's 01, 02, 03, 04, & 05 extend the Contract Completion date to the end of August 2018. The monthly cost for the site camera fully hosted website is $325.00 per month. The extension of the contract through August 2018 will require an additional 13 months at a cost of $4,225.00. Please see attached Work Zone Cam Invoice #ZC0306175169 for the prorated monthly cost. Currently the services are through April 05, 2018 and they will be extended by GHD through June 2018. See attached **Exhibit B.**

- **Item 03: Additional Survey for Hyundai Line Permit Issue**
  GHD provided a survey of the centerline of Hyundai Construction Access Road from station 16+51.44 to 24+11.88 to advance the work of the Archaeologist for the permitting of the Hyundai Waterline. Obtaining access for the easement from the Navy and processing of the Building Permit with DPW took in excess of one (1) year. At the time of the survey, DCA's surveyor was not available and the Contractor declined to do the work. GHD took action to advance the work. See attached **Exhibit C.**

2. **MOD 05** has been prepared to provide GWA with advanced notice of anticipated additional CM services that may be required from July 01 to August 31, 2018 per **Table 2**. It is our opinion that the Phase 2 System Priority Work will not ramp down by the end of March 2018 and the project will extend through August of 2018. We base this on field observation and our review of the most recent percent completes provided in the Contractor's updated January 2018 Progress Schedule as follows:

   - Process 08 Effluent Pump Station – 45% complete
   - Process 10 Aerobic Digester – 64% complete
   - Process 11 Dewatering Centrifuge Building – 59%
   - Process 13 Plant Water System – 74%
   - Process 14 On-site sewer system and collection – 66%
   - Process 15 Administrative Building – 45%

   We estimate the Phase 2 System Priority Work to be approximately 58% complete in aggregate and this does not include the Equalization Tank which is currently at 5% complete. The contractor's January 2018 progress schedule indicates that Priority Structures will be completed on April 2, 2018 and Non-Priority Structures will be completed on August 10, 2018.

3. **MOD 06** has been prepared to provide additional CM services for the proposed 21-inch Baza Gardens Sanitary Sewer extension from Route 2A to the new ASRWWTP lift station. We have spoken with the Contractor and their current estimated duration for this work is four (4) months per **Table 3.** Our estimate assumes the same duration and also includes the associated QA testing and surveying services. See attached **Exhibit E.**

CLARIFICATIONS AND ASSUMPTIONS:

1. The CM's staffing shall consist of the following: one (1) Project Manager, one (1) Assistant PM, one (1) Civil/General Inspector, one (1) Special Inspector, one (1) RFI/Submittal Manager, and one (1) Scheduler. The onsite staffing will vary based on the Contractor's level of the work in progress. The CM will coordinate staffing based on the requirements for a particular day or week. No time has been provided for the Principal or any other staff position although they will be participating as needed on the project.

2. Additional budget has been requested for Quality Assurance Compaction Testing, Concrete Strength Testing, Material Testing and Survey Verification for the balance of the work. The execution of MOD 05 assumes the QA services budget requested via MOD 04 have been accepted and approved by GWA. If additional QA services are required it will be brought to GWA's attention and negotiated.

3. The Construction contract will include requirements that the Construction Contractor pay for overtime inspection outside of the normal 40 hour work week and this requirement will be strictly enforced and supported by GWA with payment coming out of the Contractor's Pay Request and then distributed to GHD by GWA or by other acceptable terms to GHD and GWA.

4. GWA agrees to negotiate with GHD for change orders for additional construction phase services due to construction delays, additional work, adverse weather delays, or any other reason not due to the negligent acts of GHD until final acceptance of the project is achieved.

The following tables show the summary of hours and cost for **MOD 04, MOD 05,** and **MOD 06** and the totals for all three (3)

TABLE 1. SUMMARY OF MOD 04 COSTS (April 01, 2018 through June 30, 2018)

Description/Labor Class	Labor Hours	Estimated Labor Cost	GRT	Total Cost 04/01/18 to 06/30/18
Project Manager	520	$100,360	$4,182	$104,542
Special Inspector	130	$28,730	$1,197	$29,927
Civil Inspector	520	$62,920	$2,622	$65,542
Assistant PM	520	$62,920	$2,622	$65,542
Special Inspector	520	$65,520	$2,730	$68,250
Submittal/ RFI Manager	520	$52,520	$2,189	$54,709
Scheduler	30	$4,500	$188	$4,688
Expenses				$32,189
Total	**2760**	**$377,470**	**$15,729**	**$425,388**

TABLE 2. SUMMARY OF MOD 05 COSTS (July 01, 2018 through August 31, 2018)

Description/Labor Class	Labor Hours	Estimated Labor Cost	GRT	Total Cost 07/01/18 to 08/31/18
Project Manager	360	$69,480	$2,895	$72,375
Special Inspector	90	$19,890	$829	$20,719
Civil Inspector	360	$43,560	$1,815	$45,375
Assistant PM	360	$43,560	$1,815	$45,375
Special Inspector	360	$45,360	$1,890	$47,250
Submittal/ RFI Manager	360	$36,360	$1,515	$37,875
Scheduler	20	$3,000	$125	$3,125
Expenses				$3,260
Total	**1910**	**$261,210**	**$10,885**	**$275,355**

- **Item 02: Construction Site Camera**
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Scheduler	20	$3,000	$125	$3,125
Expenses				$3,260
Total	**1910**	**$261,210**	**$10,885**	**$275,355**

TABLE 3. SUMMARY OF MOD 06 COSTS (Baza Gardens – Four (4) Months)

Description/Labor Class	Labor Hours	Estimated Labor Cost	GRT	Total Cost (Four Months)
Project Manager	84	$15,708	$655	$16,363
Civil Inspector	672	$77,280	$3,220	$80,500
Expenses				$25,026
Total	**756**	**$92,988**	**$3,875**	**$121,889**

TABLE 4. SUMMARY OF MOD 04, MOD 05, & MOD 06 TOTAL COSTS

Description/Labor Class	Labor Hours	Estimated Labor Cost	GRT	Total Cost MOD 04, 05, & 06
Project Manager	964	$185,548	$7,732	$193,280
Special Inspector	220	$48,620	$2,026	$50,646
Civil Inspector	1552	$183,760	$7,657	$191,417
Assistant PM	880	$106,480	$4,437	$110,917
Special Inspector	880	$110,880	$4,620	$115,500
Submittal/ RFI Manager	880	$88,880	$3,704	$92,584
Scheduler	50	$7,500	$313	$7,813
Expenses				$60,475
			GRAND TOTAL	**$822,631**

We look forward to your favourable and expeditious response to this proposal. If you have any questions or concerns please do not hesitate to contact me directly.

Yours sincerely,



Paul K. Baron
Principal

Attachments:

- Exhibit A - QA Services Summary
- Exhibit B - Work Zone Camera Invoices
- Exhibit C - Survey Invoices
- Exhibit D – EarthCam Invoices
- Exhibit E – Baza Gardens Sanitary Sewer Documents

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EXHIBIT A - QA SERVICES SUMMARY

GHD - PROJECT ESTIMATING SHEET- GHD EXPENSES

Project Name: GWA Construction Agat-Santa Rita WWTP **- CM Services for MOD 04** **Attachment:**
GHD Project Number: 11109000 **of:**
Prepared by: Bryan J. Ryley **Checked by:** Paul K. Baron
Date: **Date:**

EXPENSE ITEM	QUANTITY	UNIT COST	AMOUNT	MARKUP	TOTAL
PRECONSTRUCTION PHASE TASKS					
SUBTOTAL					
CONSTRUCTION PHASE TASKS					
Mileage (3 vehicles x 24 miles x 65 days)	4,680	$ 0.52	$ 2,433.60	$ 365.04	$ 2,798.64
Report Reproduction, misc	1	$ 1,500.00	$ 1,500.00	$ 225.00	$ 1,725.00
Live video feed, website access & maintenance (month)	13	$ 325.00	$ 4,225.00	$ 633.75	$ 4,858.75
CQA Compaction Testing	1	$ 6,757.40	$ 6,757.40	$ 1,013.61	$ 7,771.01
CQA Concrete Testing	1	$ 2,580.60	$ 2,580.60	$ 387.09	$ 2,967.69
CQA Survey Verification	1	$ 10,493.76	$ 10,493.76	$ 1,574.06	$ 12,067.82
SUBTOTAL			**$ 27,990.36**	**$ 4,198.55**	**$ 32,188.91**
POST CONSTRUCTION SERVICES					
GHD Consumables ($6.00/hour)					
SUBTOTAL					
TOTAL		**$ -**	**$ 27,990.36**	**$ 4,198.55**	**$ 32,188.91**

GHD - PROJECT ESTIMATING SHEET- GHD EXPENSES

Project Name: GWA Construction Agat-Santa Rita WWTP **- CM Services for MOD 05** **Attachment:**
GHD Project Number: 11109000 **of:**
Prepared by: Bryan J. Ryley **Checked by:** Paul K. Baron
Date: **Date:**

EXPENSE ITEM	QUANTITY	UNIT COST	AMOUNT	MARKUP	TOTAL
PRECONSTRUCTION PHASE TASKS					
SUBTOTAL					
CONSTRUCTION PHASE TASKS					
Mileage (3 vehicles x 24 miles x 45 days)	3,240	$ 0.52	$ 1,684.80	$ 252.72	$ 1,937.52
Report Reproduction, misc	1	$ 500.00	$ 500.00	$ 75.00	$ 575.00
Live video feed, website access & maintenance (month)	2	$ 325.00	$ 650.00	$ 97.50	$ 747.50
CQA Compaction Testing		$ -	$ -	$ -	$ -
CQA Concrete Testing		$ -	$ -	$ -	$ -
CQA Survey Verification		$ -	$ -	$ -	$ -
SUBTOTAL			**$ 2,834.80**	**$ 425.22**	**$ 3,260.02**
POST CONSTRUCTION SERVICES					
GHD Consumables ($6.00/hour)					
SUBTOTAL					
TOTAL		**$ -**	**$ 2,834.80**	**$ 425.22**	**$ 3,260.02**

GHD - PROJECT ESTIMATING SHEET- GHD EXPENSES

Project Name: GWA Construction Agat-Santa Rita WWTP **- CM Services for MOD 06** **Attachment:**
GHD Project Number: 11109000 **of:**
Prepared by: Bryan J. Ryley **Checked by:** Paul K. Baron
Date: **Date:**

EXPENSE ITEM	QUANTITY	UNIT COST	AMOUNT	MARKUP	TOTAL
PRECONSTRUCTION PHASE TASKS					
SUBTOTAL					
CONSTRUCTION PHASE TASKS					
Mileage (1.5 vehicles x 24 miles x 84 days)	3,024	$ 0.52	$ 1,572.48	$ 235.87	$ 1,808.35
Report Reproduction, misc	1	$ 500.00	$ 500.00	$ 75.00	$ 575.00
Live video feed, website access & maintenance (month)	4	$ 325.00	$ 1,300.00	$ 195.00	$ 1,495.00
CQA Compaction Testing	1	$ 2,289.08	$ 2,289.08	$ 343.36	$ 2,632.44
CQA Concrete Testing	0	$ -	$ -	$ -	$ -
CQA Survey Verification	1	$ 16,100.00	$ 16,100.00	$ 2,415.00	$ 18,515.00
SUBTOTAL			**$ 21,761.56**	**$ 3,264.23**	**$ 25,025.79**
POST CONSTRUCTION SERVICES					
GHD Consumables ($6.00/hour)					
SUBTOTAL					
TOTAL		**$ -**	**$ 21,761.56**	**$ 3,264.23**	**$ 25,025.79**

GHD - PROJECT ESTIMATING SHEET - GHD QA SERVICES SUMMARY

Project Name: GWA Construction Agat-Santa Rita WWTP - **QA Services for MOD 06** **Attachment:**
GHD Project Number: 11109000 **of:**
Prepared By: Bryan J. Ryley **Checked By:** Paul K. Baron
Date: **Date:**

QA SURVEY ESTIMATE

Sanitary Sewer Manholes	Quantity	Quantity	Cost
Base Section	4	$800	$3,200
Sanitary Sewer Pipeline			
Vertical Alignment (at 100 Ft. Stations)	8	$1,200	$9,600
Bench Marks:			
Establish/Verify project bench	1	$1,200	$1,200
		Subtotal	$14,000

Rate			
Half Day	$800	Contingency **15%**	$2,100
Full Day	$1,200		
Hourly	$150	**TOTAL ESTIMATED BUDGET**	**$16,100**

CQA TESTING ESTIMATE

Material Labratory Testing:

Procotor & Seive Analysis:	Quantity	Quantity	Cost
Base Course	$234.50	1	$234.50
Fill Material	$234.50	1	$234.50
Bedding Material	$234.50	1	$234.50

Compaction Testing:

Sanitary Sewer Pipeline			
Manhole Base Course	$99.00	4	$396.00
Sand Bedding	$99.00	2	$198.00
Backfill	$99.00	5	$495.00
Pavement Base Course	$99.00	2	$198.00
		Contingency **15%**	$298.58
		TOTAL ESTIMATED BUDGET:	**$2,289.08**

DESCRIPTION OF TESTS:

Modified Proctor Test		$115.00
Sieve Analysis		$50.00
Soil Classification		$38.50
Amount of Material in Soils Finer than No. 200 Sieve		$31.00
	SUBTOTAL:	**$234.50**
Compaction Test - First Test $49.50		$49.50
Compaction Tests - Subsequent Tests $16.50 (Assume 3 subsequent tests)		$49.50
	SUBTOTAL:	**$99.00**
	GRAND TOTAL ESTIMATED QA TESTING BUDGET:	**$18,389**

GWA Agat Santa Rita Waste Water Treatment Plant Replacement
Quality Assurance Services Summary

A	B	C	D	E	F
Item No.	Description of Work	Value	Total Amount to Date	Percent Complete	Remaining
1	QA Material Testing	$ 28,871.00	$ 20,819.60	72%	$ 8,051.40
2	QA Concrete Testing	$ 28,551.00	$ 51,403.28	180%	$ (22,852.28)
3	QA Survey	$ 102,718.00	$ 105,570.00	103%	$ (2,852.00)
	SubTotal	$ 160,140.00	$ 177,792.88	111%	$ (17,652.88)

GWA Agat Santa Rita Waste Water Treatment Plant Replacement
Quality Assurance Material Testing Summary

Invoice Date	Invoice Number	Sub-consultant	Description	Invoice Amount	Invoice Amount With Mark Up	Running Total Invoice Amount	Remaining Balance
							$28,871.00
1/11/2016	1	PSET	Phase I QA Material Testing Services	$ 1,603.50	$ 1,844.03	$ 1,844.03	$27,026.98
2/10/2016	2	PSET	Phase I QA Material Testing Services	$ 709.50	$ 815.93	$ 2,659.95	$26,211.05
3/10/2016	3	PSET	Phase I QA Material Testing Services	$ 1,835.00	$ 2,110.25	$ 4,770.20	$24,100.80
4/10/2016	4	PSET	Phase I QA Material Testing Services	$ 985.50	$ 1,133.33	$ 5,903.53	$22,967.48
5/10/2016	5	PSET	Phase I QA Material Testing Services	$ 742.50	$ 853.88	$ 6,757.40	$22,113.60
8/22/2016	155-365.68	GEO	Phase II QA Material Testing Services	$ 200.00	$ 230.00	$ 6,987.40	$21,883.60
8/22/2016	156-365.68	GEO	Phase II QA Material Testing Services	$ 720.00	$ 828.00	$ 7,815.40	$21,055.60
8/22/2016	158-365.68	GEO	Phase II QA Material Testing Services	$ 300.00	$ 345.00	$ 8,160.40	$20,710.60
8/22/2016	159-365.68	GEO	Phase II QA Material Testing Services	$ 95.00	$ 109.25	$ 8,269.65	$20,601.35
9/21/2016	162-365.68	GEO	Phase II QA Material Testing Services	$ 182.50	$ 209.88	$ 8,479.53	$20,391.48
9/21/2016	163-365.68	GEO	Phase II QA Material Testing Services	$ 808.00	$ 929.20	$ 9,408.73	$19,462.28
9/21/2016	166-365.68	GEO	Phase II QA Material Testing Services	$ 285.00	$ 327.75	$ 9,736.48	$19,134.53
9/21/2016	167-365.68	GEO	Phase II QA Material Testing Services	$ 170.00	$ 195.50	$ 9,931.98	$18,939.03
5/31/2016	147-365.68	GEO	Phase II QA Material Testing Services	$ 739.00	$ 849.85	$ 10,781.83	$18,089.18
6/30/2016	151-365.68	GEO	Phase II QA Material Testing Services	$ 750.00	$ 862.50	$ 11,644.33	$17,226.68
10/18/2016	170-365.68	GEO	Phase II QA Material Testing Services	$ 402.00	$ 462.30	$ 12,106.63	$16,764.38
10/21/2016	173-365.68	GEO	Phase II QA Material Testing Services	$ 234.00	$ 269.10	$ 12,375.73	$16,495.28
10/21/2016	174-365.68	GEO	Phase II QA Material Testing Services	$ 274.00	$ 315.10	$ 12,690.83	$16,180.18
10/28/2016	178-365.68	GEO	Phase II QA Material Testing Services	$ 75.00	$ 86.25	$ 12,777.08	$16,093.93
11/11/2016	180-365.68	GEO	Phase II QA Material Testing Services	$ 130.00	$ 149.50	$ 12,926.58	$15,944.43
11/17/2016	182-365.68	GEO	Phase II QA Material Testing Services	$ 95.00	$ 109.25	$ 13,035.83	$15,835.18
11/18/2019	183-365.68	GEO	Phase II QA Material Testing Services	$ 233.00	$ 267.95	$ 13,303.78	$15,567.23
11/23/2016	184-365.68	GEO	Phase II QA Material Testing Services	$ 194.00	$ 223.10	$ 13,526.88	$15,344.13
11/28/2016	187-365.68	GEO	Phase II QA Material Testing Services	$ 370.00	$ 425.50	$ 13,952.38	$14,918.63
11/28/2016	188-365.69	GEO	Phase II QA Material Testing Services	$ 190.00	$ 218.50	$ 14,170.88	$14,700.13
11/28/2016	189-365.68	GEO	Phase II QA Material Testing Services	$ 275.00	$ 316.25	$ 14,487.13	$14,383.88
12/16/2016	194-365.68	GEO	Phase II QA Material Testing Services	$ 170.00	$ 195.50	$ 14,682.63	$14,188.38
12/30/2016	200-365.68	GEO	Phase II QA Material Testing Services	$ 75.00	$ 86.25	$ 14,768.88	$14,102.13
1/24/2017	208-365.68	GEO	Phase II QA Material Testing Services	$ 210.00	$ 241.50	$ 15,010.38	$13,860.63
3/31/2017	218-365.68	GEO	Phase II QA Material Testing Services	$ 305.00	$ 350.75	$ 15,361.13	$13,509.88
3/31/2017	219-365.68	GEO	Phase II QA Material Testing Services	$ 174.00	$ 200.10	$ 15,561.23	$13,309.78
3/31/2017	220-365.68	GEO	Phase II QA Material Testing Services	$ 131.00	$ 150.65	$ 15,711.88	$13,159.13
3/31/2017	224-365.68	GEO	Phase II QA Material Testing Services	$ 192.00	$ 220.80	$ 15,932.68	$12,938.33
4/28/2017	229-365.68	GEO	Phase II QA Material Testing Services	$ 142.00	$ 163.30	$ 16,095.98	$12,775.03
4/28/2017	231-365.68	GEO	Phase II QA Material Testing Services	$ 218.00	$ 250.70	$ 16,346.68	$12,524.33
5/11/2017	235-365.68	GEO	Phase II QA Material Testing Services	$ 109.00	$ 125.35	$ 16,472.03	$12,398.98
6/16/2017	246-365.67	GEO	Phase II QA Material Testing Services	$ 349.00	$ 401.35	$ 16,873.38	$11,997.63
6/19/2017	248-365.68	GEO	Phase II QA Material Testing Services	$ 109.00	$ 125.35	$ 16,998.73	$11,872.28
6/30/2017	254-365.68	GEO	Phase II QA Material Testing Services	$ 87.00	$ 100.05	$ 17,098.78	$11,772.23
7/10/2017	257-365.68	GEO	Phase II QA Material Testing Services	$ 135.00	$ 155.25	$ 17,254.03	$11,616.98
7/27/2017	264-365.68	GEO	Phase II QA Material Testing Services	$ 87.00	$ 100.05	$ 17,354.08	$11,516.93
8/31/2017	276-365.68	GEO	Phase II QA Material Testing Services	$ 87.00	$ 100.05	$ 17,454.13	$11,416.88
9/27/2017	287-365.68	GEO	Phase II QA Material Testing Services	$ 109.00	$ 125.35	$ 17,579.48	$11,291.53
10/31/2017	301-365.68	GEO	Phase II QA Material Testing Services	$ 371.00	$ 426.65	$ 18,006.13	$10,864.88
11/30/2017	323-365.68	GEO	Phase II QA Material Testing Services	$ 176.00	$ 202.40	$ 18,208.53	$10,662.48
12/29/2017	330-365.68	GEO	Phase II QA Material Testing Services	$ 109.00	$ 125.35	$ 18,333.88	$10,537.13
12/29/2017	337-365.68	GEO	Phase II QA Material Testing Services	$ 395.00	$ 454.25	$ 18,788.13	$10,082.88
12/29/2017	339-365.68	GEO	Phase II QA Material Testing Services	$ 278.00	$ 319.70	$ 19,107.83	$9,763.18
1/31/2018	342-365.68	GEO	Phase II QA Material Testing Services	$ 403.00	$ 463.45	$ 19,571.28	$9,299.73
1/31/2018	343-365.68	GEO	Phase II QA Material Testing Services	$ 239.00	$ 274.85	$ 19,846.13	$9,024.88
1/31/2018	344-365.68	GEO	Phase II QA Material Testing Services	$ 162.00	$ 186.30	$ 20,032.43	$8,838.58
1/31/2018	372-365.68	GEO	Phase II QA Material Testing Services	$ 422.50	$ 485.88	$ 20,518.30	$8,352.70
1/31/2018	373-365.68	GEO	Phase II QA Material Testing Services	$ 262.00	$ 301.30	$ 20,819.60	$8,051.40

GWA Agat Santa Rita Waste Water Treatment Plant Replacement
Quality Assurance Concrete Testing Summary

Invoice Date	Invoice Number	Sub-consultant	Description	Invoice Amount	Invoice Amount With Mark Up	Running Total Invoice Amount	Remaining Balance $28,551.00
2/10/2016	2	PSET	Phase I QA Testing Services	$ 405.00	$ 465.75	$ 465.75	$28,085.25
3/10/2016	3	PSET	Phase I QA Testing Services	$ 433.50	$ 498.53	$ 964.28	$27,586.73
4/10/2016	4	PSET	Phase I QA Testing Services	$ 495.00	$ 569.25	$ 1,533.53	$27,017.48
5/10/2016	5	PSET	Phase I QA Testing Services	$ 910.50	$ 1,047.08	$ 2,580.60	$25,970.40
8/22/2016	157-365.68	GEO	Phase II QA Testing Services	$ 606.50	$ 697.48	$ 3,278.08	$25,272.93
8/30/2016	160-365.68	GEO	Phase II QA Testing Services	$ 444.00	$ 510.60	$ 3,788.68	$24,762.33
8/30/2016	161-365.68	GEO	Phase II QA Testing Services	$ 569.00	$ 654.35	$ 4,443.03	$24,107.98
9/21/2016	164-365.68	GEO	Phase II QA Testing Services	$ 287.00	$ 330.05	$ 4,773.08	$23,777.93
9/21/2016	165-365.68	GEO	Phase II QA Testing Services	$ 287.00	$ 330.05	$ 5,103.13	$23,447.88
9/29/2016	168-365.68	GEO	Phase II QA Testing Services	$ 344.00	$ 395.60	$ 5,498.73	$23,052.28
9/29/2016	169-365.68	GEO	Phase II QA Testing Services	$ 264.00	$ 303.60	$ 5,802.33	$22,748.68
10/18/2016	170-365.68	GEO	Phase II QA Testing Services	$ 110.00	$ 126.50	$ 5,928.83	$22,622.18
10/21/2016	171-365.68	GEO	Phase II QA Testing Services	$ 241.00	$ 277.15	$ 6,205.98	$22,345.03
10/21/2016	172-365.68	GEO	Phase II QA Testing Services	$ 287.00	$ 330.05	$ 6,536.03	$22,014.98
10/24/2016	175-365.68	GEO	Phase II QA Testing Services	$ 252.50	$ 290.38	$ 6,826.40	$21,724.60
10/27/2016	176-365.68	GEO	Phase II QA Testing Services	$ 287.00	$ 330.05	$ 7,156.45	$21,394.55
10/28/2016	177-365.68	GEO	Phase II QA Testing Services	$ 287.00	$ 330.05	$ 7,486.50	$21,064.50
11/11/2016	179-365.68	GEO	Phase II QA Testing Services	$ 287.00	$ 330.05	$ 7,816.55	$20,734.45
11/11/2016	180-365.68	GEO	Phase II QA Testing Services	$ 224.00	$ 257.60	$ 8,074.15	$20,476.85
11/11/2016	181-365.68	GEO	Phase II QA Testing Services	$ 379.00	$ 435.85	$ 8,510.00	$20,041.00
11/17/2016	182-365.68	GEO	Phase II QA Testing Services	$ 275.50	$ 316.83	$ 8,826.83	$19,724.18
11/18/2016	183-365.68	GEO	Phase II QA Testing Services	$ 132.00	$ 151.80	$ 8,978.63	$19,572.38
11/28/2016	185-365.68	GEO	Phase II QA Testing Services	$ 287.00	$ 330.05	$ 9,308.68	$19,242.33
11/28/2016	186-365.68	GEO	Phase II QA Testing Services	$ 264.00	$ 303.60	$ 9,612.28	$18,938.73
12/16/2016	190-365.68	GEO	Phase II QA Testing Services	$ 346.00	$ 397.90	$ 10,010.18	$18,540.83
12/16/2016	191-365.68	GEO	Phase II QA Testing Services	$ 310.00	$ 356.50	$ 10,366.68	$18,184.33
12/16/2016	192-365.68	GEO	Phase II QA Testing Services	$ 310.00	$ 356.50	$ 10,723.18	$17,827.83
12/16/2016	193-365.68	GEO	Phase II QA Testing Services	$ 310.00	$ 356.50	$ 11,079.68	$17,471.33
12/20/2016	195-365.68	GEO	Phase II QA Testing Services	$ 288.00	$ 331.20	$ 11,410.88	$17,140.13
12/21/2016	196-365.68	GEO	Phase II QA Testing Services	$ 631.50	$ 726.23	$ 12,137.10	$16,413.90
12/30/2016	197-365.68	GEO	Phase II QA Testing Services	$ 677.50	$ 779.13	$ 12,916.23	$15,634.78
12/30/2016	198-365.68	GEO	Phase II QA Testing Services	$ 310.00	$ 356.50	$ 13,272.73	$15,278.28
12/30/2016	199-365.68	GEO	Phase II QA Testing Services	$ 331.50	$ 381.23	$ 13,653.95	$14,897.05
12/30/2016	200-365.68	GEO	Phase II QA Testing Services	$ 346.00	$ 397.90	$ 14,051.85	$14,499.15
1/20/2017	201-365.68	GEO	Phase II QA Testing Services	$ 356.50	$ 409.98	$ 14,461.83	$14,089.18
1/20/2017	202-365.68	GEO	Phase II QA Testing Services	$ 319.00	$ 366.85	$ 14,828.68	$13,722.33
1/20/2017	203-365.68	GEO	Phase II QA Testing Services	$ 294.00	$ 338.10	$ 15,166.78	$13,384.23
1/20/2017	204-365.68	GEO	Phase II QA Testing Services	$ 283.50	$ 326.03	$ 15,492.80	$13,058.20
1/20/2017	205-365.68	GEO	Phase II QA Testing Services	$ 291.50	$ 335.23	$ 15,828.03	$12,722.98
1/20/2017	206-365.68	GEO	Phase II QA Testing Services	$ 369.00	$ 424.35	$ 16,252.38	$12,298.63
1/20/2017	207-365.68	GEO	Phase II QA Testing Services	$ 319.00	$ 366.85	$ 16,619.23	$11,931.78
1/24/2017	208-365.68	GEO	Phase II QA Testing Services	$ 356.50	$ 409.98	$ 17,029.20	$11,521.80
2/13/2017	209-365.68	GEO	Phase II QA Testing Services	$ 495.50	$ 569.83	$ 17,599.03	$10,951.98
2/13/2017	210-365.68	GEO	Phase II QA Testing Services	$ 369.00	$ 424.35	$ 18,023.38	$10,527.63
2/22/2017	211-365.68	GEO	Phase II QA Testing Services	$ 394.00	$ 453.10	$ 18,476.48	$10,074.53
2/22/2017	212-365.68	GEO	Phase II QA Testing Services	$ 319.00	$ 366.85	$ 18,843.33	$9,707.68
2/28/2017	213-365.68	GEO	Phase II QA Testing Services	$ 473.00	$ 543.95	$ 19,387.28	$9,163.73
2/28/2017	214-365.68	GEO	Phase II QA Testing Services	$ 563.00	$ 647.45	$ 20,034.73	$8,516.28
2/28/2017	215-365.68	GEO	Phase II QA Testing Services	$ 269.00	$ 309.35	$ 20,344.08	$8,206.93
3/31/2017	216-365.68	GEO	Phase II QA Testing Services	$ 344.00	$ 395.60	$ 20,739.68	$7,811.33
3/31/2017	217-365.68	GEO	Phase II QA Testing Services	$ 272.00	$ 312.80	$ 21,052.48	$7,498.53
3/31/2017	221-365.68	GEO	Phase II QA Testing Services	$ 319.00	$ 366.85	$ 21,419.33	$7,131.68
3/31/2017	222-365.68	GEO	Phase II QA Testing Services	$ 381.50	$ 438.73	$ 21,858.05	$6,692.95
3/31/2017	223-365.68	GEO	Phase II QA Testing Services	$ 442.00	$ 508.30	$ 22,366.35	$6,184.65
4/7/2017	225-365.68	GEO	Phase II QA Testing Services	$ 394.00	$ 453.10	$ 22,819.45	$5,731.55
4/17/2017	227-365.68	GEO	Phase II QA Testing Services	$ 319.00	$ 366.85	$ 23,186.30	$5,364.70
4/28/2017	228-365.68	GEO	Phase II QA Testing Services	$ 294.00	$ 338.10	$ 23,524.40	$5,026.60
5/11/2017	232-365.68	GEO	Phase II QA Testing Services	$ 294.00	$ 338.10	$ 23,862.50	$4,688.50
5/11/2017	233-365.68	GEO	Phase II QA Testing Services	$ 294.00	$ 338.10	$ 24,200.60	$4,350.40
5/11/2017	234-365.68	GEO	Phase II QA Testing Services	$ 294.00	$ 338.10	$ 24,538.70	$4,012.30
5/11/2017	237.365.67	GEO	Phase II QA Testing Services	$ 337.50	$ 388.13	$ 24,926.83	$3,624.18
5/31/2017	238-365.68	GEO	Phase II QA Testing Services	$ 281.50	$ 323.73	$ 25,250.55	$3,300.45
5/31/2017	239-365.67	GEO	Phase II QA Testing Services	$ 307.50	$ 353.63	$ 25,604.18	$2,946.83
5/31/2017	240-365.67	GEO	Phase II QA Testing Services	$ 131.00	$ 150.65	$ 25,754.83	$2,796.18
6/16/2017	241-365.68	GEO	Phase II QA Testing Services	$ 394.00	$ 453.10	$ 26,207.93	$2,343.08
6/16/2017	243-365.68	GEO	Phase II QA Testing Services	$ 319.00	$ 366.85	$ 26,574.78	$1,976.23
6/16/2017	244-365.68	GEO	Phase II QA Testing Services	$ 331.50	$ 381.23	$ 26,956.00	$1,595.00
6/16/2017	245-365.68	GEO	Phase II QA Testing Services	$ 381.50	$ 438.73	$ 27,394.73	$1,156.28

GWA Agat Santa Rita Waste Water Treatment Plant Replacement
Quality Assurance Concrete Testing Summary

6/16/2017	246-365.68	GEO	Phase II QA Testing Services	$ 349.00	$ 401.35	$ 27,796.08	$754.93
6/16/2017	247-365.68	GEO	Phase II QA Testing Services	$ 236.00	$ 271.40	$ 28,067.48	$483.53
6/19/2017	248-365.68	GEO	Phase II QA Testing Services	$ 109.00	$ 125.35	$ 28,192.83	$358.18
6/22/2017	249-365.68	GEO	Phase II QA Testing Services	$ 592.00	$ 680.80	$ 28,873.63	-$322.62
6/30/2017	250-365.67	GEO	Phase II QA Testing Services	$ 488.00	$ 561.20	$ 29,434.83	-$883.82
6/30/2017	251-365.67	GEO	Phase II QA Testing Services	$ 481.50	$ 553.73	$ 29,988.55	-$1,437.55
6/30/2017	252-365.67	GEO	Phase II QA Testing Services	$ 231.50	$ 266.23	$ 30,254.78	-$1,703.77
6/30/2017	253-365.68	GEO	Phase II QA Testing Services	$ 269.00	$ 309.35	$ 30,564.13	-$2,013.12
7/10/2017	255-365.68	GEO	Phase II QA Testing Services	$ 306.00	$ 351.90	$ 30,916.03	-$2,365.02
7/10/2017	257-365.68	GEO	Phase II QA Testing Services	$ 100.00	$ 115.00	$ 31,031.03	-$2,480.02
7/14/2017	261-365.68	GEO	Phase II QA Testing Services	$ 513.00	$ 589.95	$ 31,620.98	-$3,069.97
7/27/2017	264-365.68	GEO	Phase II QA Testing Services	$ 294.00	$ 338.10	$ 31,959.08	-$3,408.07
7/31/2017	265-365.69	GEO	Phase II QA Testing Services	$ 225.00	$ 258.75	$ 32,217.83	-$3,666.82
8/24/2017	266-365.68	GEO	Phase II QA Testing Services	$ 294.00	$ 338.10	$ 32,555.93	-$4,004.92
8/24/2017	267-365.68	GEO	Phase II QA Testing Services	$ 613.00	$ 704.95	$ 33,260.88	-$4,709.87
8/24/2017	268-365.68	GEO	Phase II QA Testing Services	$ 294.00	$ 338.10	$ 33,598.98	-$5,047.97
9/21/2017	281-365.68	GEO	Phase II QA Testing Services	$ 583.00	$ 670.45	$ 34,269.43	-$5,718.42
9/21/2017	282-365.68	GEO	Phase II QA Testing Services	$ 299.00	$ 343.85	$ 34,613.28	-$6,062.27
9/21/2017	283-365.68	GEO	Phase II QA Testing Services	$ 294.00	$ 338.10	$ 34,951.38	-$6,400.37
9/27/2017	285-365.68	GEO	Phase II QA Testing Services	$ 319.00	$ 366.85	$ 35,318.23	-$6,767.22
9/27/2017	286-365.68	GEO	Phase II QA Testing Services	$ 319.00	$ 366.85	$ 35,685.08	-$7,134.07
9/27/2017	287-365.68	GEO	Phase II QA Testing Services	$ 269.00	$ 309.35	$ 35,994.43	-$7,443.42
9/29/2017	288-365.68	GEO	Phase II QA Testing Services	$ 269.00	$ 309.35	$ 36,303.78	-$7,752.77
10/17/2017	296-365.68	GEO	Phase II QA Testing Services	$ 760.00	$ 874.00	$ 37,177.78	-$8,626.77
10/17/2017	297-365.68	GEO	Phase II QA Testing Services	$ 294.00	$ 338.10	$ 37,515.88	-$8,964.87
10/17/2017	298-365.68	GEO	Phase II QA Testing Services	$ 516.00	$ 593.40	$ 38,109.28	-$9,558.27
10/31/2017	305-365.68	GEO	Phase II QA Testing Services	$ 588.00	$ 676.20	$ 38,785.48	-$10,234.48
10/31/2017	299-365.68	GEO	Phase II QA Testing Services	$ 319.00	$ 366.85	$ 39,152.32	-$10,601.32
10/31/2017	300-365.68	GEO	Phase II QA Testing Services	$ 319.00	$ 366.85	$ 39,519.18	-$10,968.18
10/31/2017	306-365.68	GEO	Phase II QA Testing Services	$ 319.00	$ 366.85	$ 39,886.03	-$11,335.03
11/24/2017	307-365.68	GEO	Phase II QA Testing Services	$ 309.50	$ 355.93	$ 40,241.95	-$11,690.95
11/24/2017	308-365.68	GEO	Phase II QA Testing Services	$ 380.00	$ 437.00	$ 40,678.95	-$12,127.95
11/24/2017	309-365.68	GEO	Phase II QA Testing Services	$ 319.00	$ 366.85	$ 41,045.80	-$12,494.80
11/24/2017	310-365.68	GEO	Phase II QA Testing Services	$ 297.00	$ 341.55	$ 41,387.35	-$12,836.35
11/24/2017	311-365.68	GEO	Phase II QA Testing Services	$ 247.00	$ 284.05	$ 41,671.40	-$13,120.40
11/30/2017	323-365.68	GEO	Phase II QA Testing Services	$ 344.00	$ 395.60	$ 42,067.00	-$13,516.00
11/30/2017	324-365.68	GEO	Phase II QA Testing Services	$ 344.00	$ 395.60	$ 42,462.60	-$13,911.60
12/29/2017	325-365.68	GEO	Phase II QA Testing Services	$ 319.00	$ 366.85	$ 42,829.45	-$14,278.45
12/29/2017	326-365.68	GEO	Phase II QA Testing Services	$ 319.00	$ 366.85	$ 43,196.30	-$14,645.30
12/29/2017	327-365.68	GEO	Phase II QA Testing Services	$ 860.00	$ 989.00	$ 44,185.30	-$15,634.30
12/29/2017	328-365.68	GEO	Phase II QA Testing Services	$ 563.00	$ 647.45	$ 44,832.75	-$16,281.75
12/29/2017	329-365.68	GEO	Phase II QA Testing Services	$ 525.50	$ 604.33	$ 45,437.07	-$16,886.07
12/29/2017	338-365.68	GEO	Phase II QA Testing Services	$ 269.00	$ 309.35	$ 45,746.42	-$17,195.42
1/31/2017	345-365.68	GEO	Phase II QA Testing Services	$ 319.00	$ 366.85	$ 46,113.27	-$17,562.27
1/31/2017	346-365.68	GEO	Phase II QA Testing Services	$ 319.00	$ 366.85	$ 46,480.12	-$17,929.12
1/31/2017	347-365.68	GEO	Phase II QA Testing Services	$ 306.50	$ 352.48	$ 46,832.60	-$18,281.60
1/31/2017	348-365.68	GEO	Phase II QA Testing Services	$ 369.00	$ 424.35	$ 47,256.95	-$18,705.95
1/31/2017	363-365.68	GEO	Phase II QA Testing Services	$ 473.00	$ 543.95	$ 47,800.90	-$19,249.90
1/31/2017	364-365.68	GEO	Phase II QA Testing Services	$ 294.00	$ 338.10	$ 48,139.00	-$19,588.00
1/31/2017	365-365.68	GEO	Phase II QA Testing Services	$ 563.00	$ 647.45	$ 48,786.45	-$20,235.45
1/31/2017	366-365.68	GEO	Phase II QA Testing Services	$ 294.00	$ 338.10	$ 49,124.55	-$20,573.55
1/31/2017	367-365.68	GEO	Phase II QA Testing Services	$ 349.00	$ 401.35	$ 49,525.90	-$20,974.90
1/31/2017	368-365.68	GEO	Phase II QA Testing Services	$ 294.00	$ 338.10	$ 49,864.00	-$21,313.00
1/31/2017	369-365.68	GEO	Phase II QA Testing Services	$ 419.00	$ 481.85	$ 50,345.85	-$21,794.85
1/31/2017	370-365.68	GEO	Phase II QA Testing Services	$ 294.00	$ 338.10	$ 50,683.95	-$22,132.95
1/31/2017	371-365.68	GEO	Phase II QA Testing Services	$ 625.50	$ 719.33	$ 51,403.27	-$22,852.27

GWA Agat Santa Rita Waste Water Treatment Plant Replacement
Quality Assurance Survey Verification Summary

Date	Invoice Number	Description	Invoice Amount	Invoice amount with 15% Mark Up	Running Total Invoice Amount	Remaining Balance
						$102,718.00
04/05/16	2016-054	Ed, 2016-054 Pattrick	$ 1,200.00	$ 1,380.00	$ 1,380.00	$101,338.00
04/06/16	2016-054	3MFD, Retrace boundary points and establish vertical points. Completed. Ed, Pattrick, Gerard	$ 1,200.00	$ 1,380.00	$ 2,760.00	$99,958.00
04/11/16	2016-054	2MFD, Verification of Gambion Wall. Completed. Ed, Pattrick	$ 1,200.00	$ 1,380.00	$ 4,140.00	$98,578.00
04/26/16	2016-054	2MFD, Layout of Centerline of Road "A" Sta, 2+0, 6+00, 10+00, 14+00. Completed. Ed, Pattrick	$ 1,200.00	$ 1,380.00	$ 5,520.00	$97,198.00
05/10/16	2016-054	2MFD, Elevation verification of all Spillway, Storm Drain invert and pipe elevation. Vertical and Horizontal datum of trapezoidal concrete swale. Completed. Ed, Pattrick	$ 1,200.00	$ 1,380.00	$ 6,900.00	$95,818.00
05/23/16	2016-054	2MHD, Verify project site survey control points; vertical and horizontal. Completed. Ed, Pattrick	$ 900.00	$ 1,035.00	$ 7,935.00	$94,783.00
05/25/16	2016-054	2MFD, Vertical verification of Oxidation Ditches. Completed. Ed, Pattrick	$ 1,200.00	$ 1,380.00	$ 9,315.00	$93,403.00
05/31/16	2016-054	2MHD, Vertical verification of Oxidation Ditch	$ 900.00	$ 1,035.00	$ 10,350.00	$92,368.00
06/01/16	2016-054	2MHD, Verify horizontal Oxidation Ditch corner	$ 900.00	$ 1,035.00	$ 11,385.00	$91,333.00
06/28/16	2016-054	2MHD, Verification of Oxidation Ditch layout	$ 900.00	$ 1,035.00	$ 12,420.00	$90,298.00
07/20/16	2016-054	2MFD, Oxidation Ditch 1 & 2, Area 4 & 2, Topo Slab 10X10 Grid Asbuilt-Asbuild of top of slab; Area 4 set, traverse, & set elevation	$ 1,200.00	$ 1,380.00	$ 13,800.00	$88,918.00
07/22/16	2016-054	2MFD, Oxidation Ditch 1 & 2, Area 4 & 2, Topo Slab 10X10 Grid Asbuilt-Asbuilt area 4 completed; Area 2 completed partially	$ 1,200.00	$ 1,380.00	$ 15,180.00	$87,538.00
07/25/16	2016-054	2MFD, Oxidation Ditch 1 & 2, Area 4 & 2, Topo Slab 10X10 Grid Asbuilt-Asbuild completed	$ 1,200.00	$ 1,380.00	$ 16,560.00	$86,158.00
07/29/16	2016-054	2MFD, Asbuilt of Oxidation Ditch 1 & 2 area 3 & 1 top of slab- grid of 10x10- Area 3 completed and portion of Area 1	$ 1,200.00	$ 1,380.00	$ 17,940.00	$84,778.00
08/01/16	2016-054.02	2MHD, Asbuilt Oxidation Ditch 1 & 2 area 1 - Top of Slab 10' X 10' interval-portion of area 1 completed.	$ 900.00	$ 1,035.00	$ 18,975.00	$83,743.00
08/08/16	2016-054.02	2MFD, Asbuilt of Oxidation Ditch 1 & 2 area 1-top of slab 10' X 10' grid-completed	$ 1,200.00	$ 1,380.00	$ 20,355.00	$82,363.00
08/13/16	2016-054.02	2MFD, Asbuilt of clarifier No. 1 by 8 section; Crew: Ed, Pat	$ 1,200.00	$ 1,380.00	$ 21,735.00	$80,983.00
09/28/16	2016-054.02	2MHD, Horizontal & Vertical check on sludge piping of Tipalas substation: work completed	$ 900.00	$ 1,035.00	$ 22,770.00	$79,948.00
10/13/16	2016-054.03	2MHD, Asbuilt of ultra violet disinfection and sludge piping to clarifier (Ed, Pattric k)	$ 900.00	$ 1,035.00	$ 23,805.00	$78,913.00
10/18/16	2016-054.03	2MHD, Asbullt of sludge pipin g various area (Ed, Pattric k)	$ 900.00	$ 1,035.00	$ 24,840.00	$77,878.00
10/21/16	2016-054.03	2MHD, As built of sludge piping various area - UV Inlet & Outlet pipe ; Secondary clarifier - Supply pipe to Oxidation Ditc h and effluent pipe elbow/pipe deflection @ sta . 1+37.39 (Ed , Pattrick)	$ 900.00	$ 1,035.00	$ 25,875.00	$76,843.00
10/28/16	2016-054.03	3MHD,Asbullt of UV inlet. clarifier 2 piping to Oxidation Ditch and process drainage- pipe force main (Ed , Raughly , Pattrick)	$ 900.00	$ 1,035.00	$ 26,910.00	$75,808.00
10/31/16	2016-054.03	2MFD, Oxidation Ditch out to secondary clarifier as built , Oxidation Ditch Inlet structure spot elevation, 30 • effluent pipe as built and Oxidation Ditch roof spot elevation . (Ed, Allan)	$ 1,200.00	$ 1,380.00	$ 28,290.00	$74,428.00
11/03/16	2016-054.04	2MFD, Asbullt of oxidation Inlet structure, elevation check on oxidation ditch Inlet pipe, oxidation outlet pipe to secondary clarifier elevation check and process dralnage pipe force main asbullt, Ed, Pattrick	$ 1,200.00	$ 1,380.00	$ 29,670.00	$73,048.00
11/16/16	2016-054.04	2MFD, Verify elevation of Influent, onslte lift station & process dralnage pipe force main, Ultraviolet Inlet pipe to secondary clarlflers, Secondary clarifying I pipe to Ultraviolet, Oxidation ditch I floor elevation- roof,	$ 1,200.00	$ 1,380.00	$ 31,050.00	$71,668.00
11/23/16	2016-054.04	2MFD, Rae/Was pump station pipe, Manifold elevation check, Force main pipe check, Oxidation ditch Inlet structure- Inlet and outlet pipe vertical elevation check, Portion of secondary clarifier 2-base and sub-base	$ 1,200.00	$ 1,380.00	$ 32,430.00	$70,288.00
11/30/16	2016-054.04	2MFD, Rechecked oxidation ditch Inlet structure piping, Effluent pipe, Force main piping Influent pipe; Onslte lift station; Process dralnage piping, Equalization overflow pipe and draln pipe, Ed, Pattrick	$ 1,200.00	$ 1,380.00	$ 33,810.00	$68,908.00
12/05/16	2016-054.05	2MHD, Second Clarifier No. 2 Sludge Pipe elevation check@ deflection and end; Scum Pump Station foundation and elevation check: Influent Pipe elevation check@	$ 900.00	$ 1,035.00	$ 34,845.00	$67,873.00
12/09/16	2016-054.05	2MFD, As-built of Sludge Piping to Clarifier 1 & 2; Scum Pump Station foundation -054.05 vertical check: 3- 12" Sludae Pioina (cf) RAS/ WAS vertical check: Re-survey	$ 1,200.00	$ 1,380.00	$ 36,225.00	$66,493.00
12/20/16	2016-054.05	2MFD, Secondary Clarifier Sludge pipe@ RAS/WAS pump station-resurvey; -054.05 Ultraviolet Inlet pipe elbow: Oxidation Ditch 1 Influent Flow: RAS/WAS pump station	$ 1,200.00	$ 1,380.00	$ 37,605.00	$65,113.00
12/21/16	2016-054.05	2MFD, RAS/WAS pump station manhole; Oxidation Ditch 1 Influent Flow-resurvey -054.05 (Crew: Ed and Pattrick)	$ 1,200.00	$ 1,380.00	$ 38,985.00	$63,733.00
01/03/17	2016-054.06	3MFD, see attachment (Ed, Pat, Raughly)	$ 1,200.00	$ 1,380.00	$ 40,365.00	$62,353.00
01/04/17	2016-054.06	2MFD, SMHvertical check-resurvey; Weir Gate Oxidation Ditch 1 & 2; RAS pipe from OXfdation Ditch 1 & 2; Recalculate elevation of Secondary Clarifier based on	$ 1,200.00	$ 1,380.00	$ 41,745.00	$60,973.00

GWA Agat Santa Rita Waste Water Treatment Plant Replacement
Quality Assurance Survey Verification Summary

01/12/17	2016-054.06	2MFD, As-built of: Sludge piplng: Oxidatfon Ditch 1 Influent flow pipe 24"; 30" Secondary Clarifier 3 piping; Oxidation Ditch Influent flow slab & inlet; Secondary	$ 1,200.00	$ 1,380.00	$ 43,125.00	$59,593.00
01/13/17	2016-054.06	2MHD, As-built of: 30" Effluent pipe at Station 0+00 & Station 0+14.17; 24" pipe thimble at Influent flow control gate-Oxidation Ditch 1 (Ed, Allan)	$ 900.00	$ 1,035.00	$ 44,160.00	$58,558.00
01/20/17	2016-054.06	2MFDt As-built 0+00 & 0+14.17 for yard piping 30" effluent pipe, resurvey; As-built 0+00, 0+06.49, 0+58.8, & 0+77 .85 for Secondary Clarifier, Resurvey (Gerard, Allan)	$ 1,200.00	$ 1,380.00	$ 45,540.00	$57,178.00
01/23/17	2016-054.06	2MHD, As-built of Secondary Clarifier No. 2 form work-vertical and horizontal check (see field book no. 1061 p. 20-21), S5.41, Sheet 320 of634 (Ed, Allan)	$ 900.00	$ 1,035.00	$ 46,575.00	$56,143.00
01/26/17	2016-054.06	2MHD, As-built of 30" Effluent pipe at station 3+10.33 and station 3+31.20; As-built of Influent box finish slab; As-built of weir gate at Oxidation Ditch inlet structure (Ed,	$ 900.00	$ 1,035.00	$ 47,610.00	$55,108.00
01/30/17	2016-054.06	2MFD, As-built of Secondary Clarifier 2 pipe; As-built of Ultraviolet Disinfection slab (Ed, Allan)	$ 1,200.00	$ 1,380.00	$ 48,990.00	$53,728.00
12/28/16	2016-054.07	3MHD, Resurveyed Secondary Clarifier Sludge Piping at Tipalao Pump Station: Force Main piping vertical and horizontal check: Secondary Clarifier 2 base course	$ 900.00	$ 1,035.00	$ 50,025.00	$52,693.00
02/09/17	2016-054.07	2MFD, As-built of 24" pipe thimble @ Oxidation Ditch 2: Influent flow pipe: As-built of yard piping-Eq.drainpipe and Eq. overflow pipe: As-built of R.A.S. flow meter	$ 1,200.00	$ 1,380.00	$ 51,405.00	$51,313.00
02/15/17	2016-054.07	2MFD, As-built of Secondary Clarifier 1 Weir Plate; Yard piping = Influent line, On-site lift station and processd draingae pipe: Yard piping=Equalization Drain Pipe	$ 1,200.00	$ 1,380.00	$ 52,785.00	$49,933.00
02/20/17	2016-054.07	2MHD, Yard Piping - Ultra violet Supply Pipe to Secondary Clarifier No. 2 24": Ultra violet Disinfection Weir (Ed, Pattrick)	$ 900.00	$ 1,035.00	$ 53,820.00	$48,898.00
03/01/17	2016-054.08	2MFD, As built of Headworks-sub-base course (Ed, Pat)	$ 1,200.00	$ 1,380.00	$ 55,200.00	$47,518.00
03/03/17	2016-054.08	2M D, As-built of Oxidation Ditch Inlet Structure-Lower evel Plan 16" 24" and 30" pipes: As-built of Tipalao (Effluent) Pump Station force main 16" and 6" As built of	$ 1,200.00	$ 1,380.00	$ 56,580.00	$46,138.00
03/09/17	2016-054.08	2MHD, Oxidation Ditch Inlet piping 24" (resurvey); Secondary Clarifier No 1 Weir and Baffle·Manhole at Tipalao (Ed, Allan)	$ 900.00	$ 1,035.00	$ 57,615.00	$45,103.00
03/16/17	2016-054.08	2MHD, Headworks sub-grade as-built (Ed, Allan)	$ 900.00	$ 1,035.00	$ 58,650.00	$44,068.00
03/28/16	2016-054.08	2MFD, As built of Headworks top of slab form work, As-built of Secondary Clarifier 2 lander channels: Asbuit of Digester Tank Subbase course (Ed, Raughly)	$ 1,200.00	$ 1,380.00	$ 60,030.00	$42,688.00
03/31/16	2016-054.08	3MFD, Secondary Clarifier No 2 Lander Channel as-built; Horizontal as-built of Headworks-Lower Level, As-built of Aerobic Digester Sludge Digester No 1 and 2 sub	$ 1,200.00	$ 1,380.00	$ 61,410.00	$41,308.00
04/04/17	2016-054.09	3MFD, As-built of Aerobic Digester Tank 1 & 2 Top of base course: Return Activated Sludge pipe as-built at Sta. +281.38: As-built of Sludge Digester Tank pipe Co":	$ 1,200.00	$ 1,380.00	$ 62,790.00	$39,928.00
04/10/17	2016-054.09	2MFD, As-built of Aerobic Digester top of base course; As-built of Return Activated Sludge pipe at Station 2+42.65 and at Station 2+22.65: Station 0+35 and 0+72; As-	$ 1,200.00	$ 1,380.00	$ 64,170.00	$38,548.00
04/12/17	2016-054.09	2MFD, Return Activated Sludge piping: As-built of Secondary Clarifier 2 Lauder Channel: As-built of Aerobic Digester top of base course (Ed, Allan)	$ 1,200.00	$ 1,380.00	$ 65,550.00	$37,168.00
04/18/17	2016-054.09	2MHD 12" Sludge Pipe at 4+2 and Sta 4+50 from Secondary Clarifier 1 & 2: As-built of Secondary Clarifier 2 Lauder Channel top of slab	$ 900.00	$ 1,035.00	$ 66,585.00	$36,133.00
05/04/17	2016-054.10	2MFD, As-built of Hyundai Waterline Sta. 13+60 to Sta. 16+31.44; Set control stations/ bench mark; Oxidation Ditch 2 topo of slab/ form work (Ed, Allan)	$ 1,200.00	$ 1,380.00	$ 67,965.00	$34,753.00
05/10/17	2016-054.10	3MHD, Sewer line at Agat Treatment Plant (Ga'an) site relief sewer line man hole; Sewer line from SMH3 to SMH4 (Ed, Gerard, Joseph)	$ 900.00	$ 1,035.00	$ 69,000.00	$33,718.00
05/12/17	2016-054.10	3MHD, 30" sewer ine at Ga'an Sewer Treatment Plant; Head works; TOS as-built (Ed, Allan, Patrick)	$ 900.00	$ 1,035.00	$ 70,035.00	$32,683.00
05/15/17	2016-054.10	2MFD, Ga'an 30" sewer ine as-built; Headwork foundation at wet well as-built and pipe; Digestion Tank 1 and 2 foundation TOS as-built (Ed, Virgilio)	$ 1,200.00	$ 1,380.00	$ 71,415.00	$31,303.00
05/17/17	2016-054.10	2MHD, Ga'an 30" sewer line as-built; 8" sewer line between M H3 and M H4 as-built; 12" sludge pipe at 4+11.92 Secondary Clarifier B (Ed, Allan)	$ 900.00	$ 1,035.00	$ 72,450.00	$30,268.00
05/25/17	2016-054.10	2MFD, Ga'an 30" sewer line at1 +01.82 and 1 +29.82 as-built (Ed, Allan)	$ 1,200.00	$ 1,380.00	$ 73,830.00	$28,888.00
05/26/17	2016-054.10	2MFD, Sewer manhole 2, 3, 4, 6, 7; Return activated sludge piping at Sta. 0+72.53 to 1 +21.22; Sewer line between sewer manhole 2 and sewer manhole 3	$ 1,200.00	$ 1,380.00	$ 75,210.00	$27,508.00
05/30/17	2016-054.10	2MHD, As-built of sewer line between SMH3 and SMH2 and sewer line between SMH6 and SMH7 (Ed, Allan)	$ 900.00	$ 1,035.00	$ 76,245.00	$26,473.00
06/01/17	2016-054.11	3MHD, As-built of sewer line between SMH 5 and SMH6; As-built of Return Activated Sludge Pipe (Ed, Raughly, Allan)	$ 900.00	$ 1,035.00	$ 77,280.00	$25,438.00

GWA Agat Santa Rita Waste Water Treatment Plant Replacement
Quality Assurance Survey Verification Summary

06/09/17	2016-054.11	2MHD, Dewatering Centrifuge Building As-built-top of base course and location; Ga'an 30' sewer line @ Sta o+oo (Ed, Allan	$ 900.00	$ 1,035.00	$ 78,315.00	$24,403.00
06/12/17	2016-054.11	2MFD, As-built@ Ga'an 30" Sewerline; As-built Aerobic Digestion Tank no. 2; As-built Sewerline between SMH 2 and SMH 5; As-built Dewatering Centrifuge building	$ 1,200.00	$ 1,380.00	$ 79,695.00	$23,023.00
06/26/17	2016-054.11	2 MFD, As-built of 16" force main sewer pipe- Equalization tank to head works; As-built of 6" scum pump to sludge thickening line; As-built of sewer line "C" between	$ 1,200.00	$ 1,380.00	$ 81,075.00	$21,643.00
07/05/17	2016-054.12	2MFD, Aerobic Digester Influent Line 6"; Sewer line between SMH1 and SMH 2; 6" Waste Activated Sludge Pipe; Retaining Wall at Secondary Clarifier 2 (Ed, Allan)	$ 1,200.00	$ 1,380.00	$ 82,455.00	$20,263.00
07/10/17	2016-054.12	2MFD, Aerobic Digester Tank 6" Thimble page 28; Water Line- A 12" page 28; 8" Sewer Line between SMH 7 and SMH 8 page 27; 6" Waste Activated Sludge pipe*	$ 1,200.00	$ 1,380.00	$ 83,835.00	$18,883.00
07/14/17	2016-054.12	2MFD, Dewatering Centrifuge-Drilled Pier; Sewer Line between SMH 7 and SMH B; s 1,200.00 Aerobic Digester Tank 1 6" pipe thimble; Dewatering Centrifuge base course and top	$ 1,200.00	$ 1,380.00	$ 85,215.00	$17,503.00
07/18/17	2016-054.12	2MFD, Aerobic Digester-Drilled Pier- Horizontal check; Sewer line between SMH 8 and SMH 9; Dewatering Centrifuge Top of base course (Ed, Allan)	$ 1,200.00	$ 1,380.00	$ 86,595.00	$16,123.00
08/08/17	2016-054.13	2MFD, Deawtering Centrifuge Building drilled pier foundation layout; Hyundai Water Valve Vault (Ed, Allan)	$ 1,200.00	$ 1,380.00	$ 87,975.00	$14,743.00
08/25/17	2016-054.13	2MHD, Check and verify locatin of four corners of building frame work of Dewatering Centrifuge; Check elevation 32.50 around frame work of Dewatering Centrifuge	$ 900.00	$ 1,035.00	$ 89,010.00	$13,708.00
09/07/17	2016-054.14	2MFD, Aerobic Digester Drilled Pier, 1-20,27,33,39; Aerobic Digester Tank 2 6" Pipe Thimble; Headworks- top of footing; Headworks- Weir Wall, Flow Channel 2 and	$ 1,200.00	$ 1,380.00	$ 90,390.00	$12,328.00
09/15/17	2016-054.14	2 MFD, Check elevation for finish grade of Tipalao Effluent Valve Pit; Check elevation of Oxidation Ditch Supply Pipe 30"; Locate & check elevation of end section for Pipe	$ 1,200.00	$ 1,380.00	$ 91,770.00	$10,948.00
09/18/17	2016-054.14	2MFD, Fire Hydrant at Sta. 7+82.21; 30" Oxidation Ditch Supply Line; Aerobic Digester 8" riser pipe (Ed, Allan)	$ 1,200.00	$ 1,380.00	$ 93,150.00	$9,568.00
09/25/17	2016-054.14	2MHD, As-built of Administration Building drilled pier foundation; Sewer line between sewer manhole 1 and sewer manhole 2 (Ed, Allan)	$ 900.00	$ 1,035.00	$ 94,185.00	$8,533.00
09/27/17	2016-054.14	2MFD, Check horizontal location of Administration Building drilled pier foundation; Check horizontal and vertical location of Digester 1 OVF-DIP 6" Pipe (Darius, Allan)	$ 1,200.00	$ 1,380.00	$ 95,565.00	$7,153.00
10/02/17	2016-054.15	3MFD, Layout of Hyundai water line from Sta. 16+51.44 to Sta. 24+11.88, Work completed: Sta. 16+51.44 to Sta. 24+11.88 (Ed, Allan, Stephen)	$ 1,200.00	$ 1,380.00	$ 96,945.00	$5,773.00
10/04/17	2016-054.15	3MFD, Layout of stations for Hyundai water line from Sta. 16+51.44 to Sta. 24+11.88, Work completed: Sta. 16+51.44 to Sta. 22+04.71 and Sta. 23+25.56	$ 900.00	$ 1,035.00	$ 97,980.00	$4,738.00
10/05/17	2016-054.15	3MFD, Layout of station for Hyundai water line from Sta. 16+51.44 to Sta. 24+01.44, Work completed (Ed, Aaron, Stephen)	$ 900.00	$ 1,035.00	$ 99,015.00	$3,703.00
10/06/17	2016-054.15	2MFD, As-built of portion of Administration Building - drilled pier, As-built of portion of Aerobic Digester-drilled pier, Work completed (Ed, Allan)	$ 1,200.00	$ 1,380.00	$ 100,395.00	$2,323.00
10/19/17	2016-054.15	2MFD, As-built of 6" perforated drain pipe at Headworks; As-built of reflected ceiling plan - Mezzanine of Dewatering Centrifuge	$ 900.00	$ 1,035.00	$ 101,430.00	$1,288.00
11/07/17	2016-054.15	2MFD, Aerobic Digester Blower Digester Bldg. Base Course, Headworks Channel Weir Slab; RAS/WAS Flow Meter MH-Top of form work; End of trapezoidal concrete	$ 1,200.00	$ 1,380.00	$ 102,810.00	-$92.00
11/20/17	2016-054.15	2MFD, Invert elevation of sewer manhole no. 7, 8, 9 and 10 (Ed, Allan)	$ 1,200.00	$ 1,380.00	$ 104,190.00	-$1,472.00
11/27/17	2016-054.15	2MFD, Sewer line at SMH10 resurvey; Aerobic Digester Sludge thickening pipe 6"; Aerobic Digester-6" pipe thimble; Yard piping force main; process drain, lift station	$ 1,200.00	$ 1,380.00	$ 105,570.00	-$2,852.00

EXHIBIT B - WORK ZONE CAMERA INVOICES

(QSF-024G)
Goods (Standard)

GHD Inc.
☒ 2235 Mercury Way Suite 150 Santa Rosa California 95407 T 707 523 1010 F 707 527 8679

Send invoice to above address, attn.: Accounts Payable
(Show Purchase order no. and Project no.)

PO date: (mm/dd/yyyy)	04/20/2017	**Purchase order no.:**				38000925	
Project no.:	11109000	**Phase:**	10	**Task:**	DEFAULT	**Project Manager:**	BRYAN RYLEY

Vendor to provide and deliver all items set out or otherwise described below subject to the governing Terms and Conditions below. This PO expressly limits acceptance to such Terms and Conditions. Any additional or different terms proposed by Vendor are rejected unless expressly agreed to in writing by GHD Inc. ("GHD"). Show Project no. on all correspondence, invoices, and delivery papers.

(authorized GHD signature) Bryan J. Ryley (printed name of issuer) 04/20/2017 (date signed)

Shipping the goods listed on this PO constitutes acceptance of the Terms and Conditions below

Issued to (Vendor):
Work Zone Cam
650 East Crescent Avenue
Upper Saddle River, NJ 07458

Attention: Raymond Kutter
Tel: (201) 488-1111 **Fax:** ( )
Email: rkuttner@earthcam.com

Currency: U.S
Name of Client: Guam Waterworks Authority

Deliver to:
GHD Inc
865 South Marine Corps Drive, Suite 202
Tamuning, Guam 96913

Attention: Bryan Ryley
Tel: (671) 472-6792 **Fax:** (671) 477-6229
Email: bryan.ryley@ghd.com

☐ **F.O.B. destination** ☐ **F.O.B. origin**
☐ **Freight collect** ☐ **Freight prepaid**
Delivery date required: N/A
Delivery method: N/A

Terms and Conditions - Goods (Standard) GHD

1. **Definitions:** "PO" means the Purchase Order, these Terms and Conditions, and any other Exhibits listed in the PO, all of which are to be construed as one document; "Goods" shall mean all tangible property required to be furnished to GHD by Vendor under this PO; "Laws" shall mean any and all applicable statutes, laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction; "Client" shall mean the individual or entity named in the PO with whom GHD has entered into an agreement; "GHD" shall mean the party issuing the PO
2. **Conforming Goods:** Acceptance of all or any part of the Goods shall not be deemed to be a waiver of GHD's right either to cancel or return all or any portion of the Goods because of failure to conform to this PO, or by reason of defects, latent or patent, or other breach of warranty, or to make any claim for damages, including construction costs and loss of profits or other special damages incurred by GHD. Such rights shall be in addition to any other remedies provided by Laws. GHD reserves the right to refuse any Goods and to cancel all or any part of the Goods not conforming to applicable specifications, drawings, samples, or descriptions. Acceptance of any part of the Goods shall not bind GHD to accept future shipments, nor deprive it of the right to return Goods already accepted. Partial shipments are not permitted unless specifically authorized.
3. **Risk of Loss:** Unless otherwise provided in the PO, Vendor shall assume all risk of loss or damage to the Goods prior to acceptance of delivery by GHD at the point of delivery. Delivery shall not be deemed to be complete until the Goods have been actually received and accepted by GHD.
4. **Warranty:** Vendor expressly warrants that the Goods covered by this PO are of merchantable quality and satisfactory and safe for consumer use. Acceptance of this PO shall constitute an agreement upon Vendor's part to indemnify and hold GHD harmless from liability, loss, damage, and expense, including reasonable attorneys' fees, incurred or sustained by GHD by reason of the failure of the Goods to conform to such warranties.
5. **Taxes:** Vendor shall pay ~~all fees or taxes, including sales, use, consumer~~ all taxes for employment insurance, pensions, or any similar purpose, ~~and other taxes mandated by Laws~~. No liability shall accrue to GHD for any such taxes.
6. **Packing:** All Goods, wrappers, and containers must bear markings and labels required by Laws for the protection and safety of persons and property, and Vendor warrants that prices include all charges for packing, crating, and transportation to specified F.O.B. point. Vendor shall include packing list with all shipments.
7. **Payment:** Vendor shall submit an invoice for Goods furnished in a form and with such documentation as GHD may require. Payment of an invoice approved by GHD, including final payment, will be made within 30 days after GHD's receipt of an acceptable invoice. No payment made by GHD, including final payment, shall be construed as evidence of the proper furnishing of the Goods, nor of acceptance of defective or nonconforming Goods. Acceptance of final payment by Vendor shall constitute a waiver of all claims by Vendor against GHD and Client.
8. **Schedule:** Unless stated otherwise in the PO, time is of the essence for delivery of the Goods.
9. **Rights and Remedies:** The rights and remedies of the parties hereunder are cumulative, and in addition to, not in lieu of, those which the parties have at law or in equity. Waiver of a breach of any provision of this PO shall not constitute a waiver of any other or future breach of the same provision or any other provision or of the entire PO. Failure of GHD to insist upon strict performance of any provision of this PO shall not be deemed a waiver of any rights GHD may have.
10. **Governing Law:** This PO shall be governed by and construed in accordance with the laws of the state/province in which the Goods are received by GHD.
11. **Entire Agreement:** This PO constitutes the entire agreement between the parties concerning the Goods, and supersedes all prior written and oral negotiations, agreements, and representations. This PO may only be modified by a change order issued by GHD.

Line no.	Description/Item no.	Quantity	Unit	Unit price	Amount
1	Work Zone Cam - 6MP Fully Hosted Service (12 months @ $325/mounth)	12	month	3,900.00	3,900.00
				Subtotal:	
				~~Tax:~~	~~3,900.00~~
				Shipping and handling:	
				Other:	
				Total:	3,900.00

cc: **Project Manager; GHD Regional Purchasing Coordinator**
Filing: **Vendor project file; GHD Equipment Manager (if applicable)**

Continuation sheet	PO date: (mm/dd/yyyy)		Purchase order no.:	
			Project no.:	

Line no.	Description/item no.	Quantity	Unit	Unit price	Amount

Work Zone Cam, LLC.

650 E. Crescent Avenue
Upper Saddle River, NJ, 07458
www.workzonecam.com
Phone: (201) 488-1111
Fax: (201) 488-1119

Invoice

WORK ZONE CAM

Date	Page
Mar 10, 2017	1
Invoice Number	
ZC0306175169	

Sold To:
Mark Pachkoski
GHD Guam
865 S Marine Corps Dr
Suite 202B '96931
GU

Ship To:
Mark Pachkoski
GHD Guam
865 S Marine Corps Dr
Suite 202B '96931
GU

Order No.	Order Date	Customer No.	Salesperson	PO Number	Ship Via	Terms
ZC0306175169	Mar 6, 2017	32539	BC			NET10

Qty. Ord.	Qty. Shp.	Item Number	Description	Unit Price	UOM	Extended Price
1.00	1.00	ZCPS02011	Work Zone Cam - 6MP Fully Hosted Service Server: Agat-Santa Rita WWTP Project: Agat-Santa Rita WWTP Location: Suite 202B GU Duration: 04/05/17 - 04/05/18	3,900.00	Ea.	3,900.00

GHD Inc. - GUA - 14
Vendor _____ PO 38000925
GL _____
Project / Phase 1110900 0/10
Subconsultant Agement Y/N # _____
Terms: PWP ☐ Other _____
Date: 04/13/17 Approver: BRIAN RYKER GROOM

Tax summary:
NT 0.00

Subtotal	3,900.00
Total sales tax	0.00
Total amount	3,900.00
Less payment	
Amount due	3,900.00

ALL PRICING IN U.S. DOLLARS

WORK ZONE CAM

650 E. Crescent Avenue
Upper Saddle River, NJ 07458

Contact:

Raymond Kuttner
Senior Accounting Manager
rkuttner@earthcam.com
201-403-2917 Direct
201-488-1119 Fax

PLEASE SEND WIRE/ACH PAYMENTS TO:

PNC Bank
141 Franklin Turnpike
Mahwah, NJ 07430

ABA: 031207607

ACCOUNT #: 8039896576

SWIFT: PNCCUS33

EXHIBIT C - SURVEY INVOICES

GUAM SURVEYOR, LLC
STREET: 171 CHALAN PALE RAMON HAYA RT. 1 (MARINE DRIVE), YIGO, GUAM 96929
MAIL: P.O BOX 6216, TAMUNING, GUAM 96931
P.671-637-2042/1 F.671-637-2041 M.688-0184
WWW.GUAMSURVEYOR.COM
SURVEYOR@GUAMSURVEYOR.COM

INVOICE # 2016-054.15 - 11-01-2017

To: Mr. Bryan Ryley, Construction Manager
GHD
865 South Marine Corps Drive, Suite 202
Tamuning, Guam 96913
472-6792 / 477-6229 / m: 797-3336
Bryan.Ryley@ghd.com

Project: 2016-054.15
Project Name: GWA Agat-Santa Rita WWTP Replacement Project
Village: Agat-Santa Rita **State:** Guam
Type of Survey: Construction Quality Assurance Survey
Project Status: Completed **Finan. Stat** Unpaid
Date of Invoice: 11/01/2017

Proj. #	Date:	Task	Survey description	Amount
2016-054.15	10/2/2017	87	3MFD, Layout of Hyundai water line from Sta 16+ 51.44 to Sta. 24+ 11.88; Work completed: Sta. 16+ 51.44 to Sta 24+ 11.88 (Ed, Allan, Stephen)	$ 1,200.00
2016-054.15	10/4/2017	88	3MHD, Layout of stations for Hyundai water line from Station 16 + 51.44 to Station 24 + 11.88; Work completed: Stations 16 + 51.44 to 22 + 04.71 and Stations 23 + 25.56	$ 900.00
2016-054.15	10/5/2017	89	3MHD, Layout of station for Hyundai water line from Station 16 + 51.44 to Station 24 + 01.44; Work completed (Ed, Aaron, Stephen)	$ 900.00
2016-054.15	10/16/2017	90	2MFD, As-built of portion of Administration Building- drilled pier; As-built of portion of Aerobic Digester- drilled pier; Work completed (Ed, Allan)	$ 1,200.00
2016-054.15	10/19/2017	91	2MHD, As-built of 6" perforated drain pipe at Headworks; As-built of reflected ceiling plan- Mezzanine of Dewatering Centrifuge	$ 900.00
			*Total due this invoice:	$ 5,100.00

GHD Inc. - GUA - 14
Vendor 380 GU SURV PO 38000407
GL 5710080
Project / Phase 11109000/09
Subconsultant Argement? Y N # ____
Terms: PWP ☒ Other ____
Date: 11/03/17 Approver: BRYAN T. RYLEY
JEFF GROOM
PAUL K. BARON

NOTE: **All invoices are due upon receipt. To ensure proper credit, please indicate project number and lot name (or project name) on your payment. If paying by check, make check payable to Guam Surveyor, LLC.** For your convenience, we also accept credit card payments on our website at **http://www.guamsurveyor.com**. If you need help with paying by credit card, instructions are online at **http://www.youtube.com/watch?v=h7D4E6Ptt0A** or you can give us a call at **671-637-2042** or **671-688-9868**.

By: _____
Name: Dennis S. Balagtas, P.L.S. No. 75

This Phase 09 cost will be carried forthcoming Option 1 invoice

EXHIBIT D - EARTHCAM INVOICES

EarthCam.net
The Webcam Technology Experts

-INVOICE-

Invoice Number:
WS0207182170

Bryan Ryley
GHD Guam
865 S Marine Corps Dr Suite 202
Tamuning, Guam 96913

671 472-6792
671 797-3336 (Mobile)
bryan.ryley@ghd.com

Ship to: Bryan Ryley
GHD Guam
865 S Marine Corps Dr Suite 202
Tamuning, Guam 96913

671 472-6792
bryan.ryley@ghd.com

Invoice Date: February 12, 2018
Payment Terms:
NET 30

Make all checks payable to EarthCam Inc.
650 East Crescent Avenue, Upper Saddle River, NJ 07458

*** Please include your client ID on your check: 32539**

MANAGED SERVICES		Quantity	Price	Total
Platinum Service *Agat-Santa Rita WWTP PTZ / Agat-Santa Rita WWTP PTZ [03/09/18 - 03/09/19] Tamuning GU*	(1 year)	**1**	$6900	$6900
Robotic Camera Software Support Package *Agat-Santa Rita WWTP PTZ / Agat-Santa Rita WWTP PTZ [03/09/18 - 03/09/19] Tamuning GU*	(1 year)	**1**		$0

Thank you for choosing EarthCam!
We appreciate your purchase and look forward to supporting your project needs.

Amount Due **$6,900**

Our Accounting Department:
Raymond Kuttner (201) 403-2917
rkuttner@earthcam.com

*Date Generated: 02/12/18. This invoice is confidential. All prices are quoted in US Dollars. While EarthCam, Inc. will endeavor to meet the customer's desired delivery date, no shipment date can be scheduled until after order is accepted by EarthCam, Inc. Payment in full must precede acceptance, which may be made by cash, cleared check, Fed wire, ACH or major credit card. All sales are final. All orders and services are subject to force majeure. All services shall automatically renew for successive one (1) month periods and continue until customer shall provide thirty (30) days written notice of termination to EarthCam, Inc. Any and all liability arising out of products or services included in the order, however or whenever arising, shall not, under any and all circumstances, exceed the actual payments received by EarthCam, Inc. in connection therewith or one month's service fee, whichever is less. In no event shall EarthCam, Inc. be liable for any special, incidental or consequential damages. Lifetime camera warranty for active software subscribers. Additional parts covered under standard 1 year manufacturer warranty.

EarthCam.net
The Webcam Technology Experts

-INVOICE-

Invoice Number:
WS0825165158

Bryan Ryley
GHD Guam
865 S Marine Corps Dr Suite 202
Tamuning, Guam 96931

671 472-6792
671 797-3336 (Mobile)
bryan.ryley@ghd.com

Ship to: Bryan Ryley
GHD Guam
865 S Marine Corps Dr Suite 202
Tamuning, Guam 96931

671 472-6792
bryan.ryley@ghd.com

Invoice Date: August 25, 2016
Purchase Order: TBA
Payment Terms:
PREPAY

Make all checks payable to EarthCam Inc.
650 East Crescent Avenue, Upper Saddle River, NJ 07458

		Quantity	Price	Total
CAMERA SYSTEMS				
Mobile TrailerCam Lite		1	$24,995	$24,995
Mobile Trailer Handling		1	$750	$750
MANAGED SERVICES				
Platinum Service *Archive every 5 minutes*	(1 year)	1	$6,900	$6,900
Robotic Camera Software Support Package *(TrailerCam Lite)*	(1 year)	1		Included
EarthCam Consulting Services		1		Included

Thank you for choosing EarthCam!
We appreciate your purchase and look forward to supporting your project needs.

Amount Due **$32,645**

Our Accounting Department:
Raymond Kuttner **(201) 403-2917**
rkuttner@earthcam.com

GHD Inc. - GUA - 14
Vendor 280ecn **PO** _____
GL _____
Project / Phase 11109000 / 10
Subconsultant Argement? Y N # _____
Terms: PWP ☐ **Other** _____
Date: 9/28/16 **Approver:** Jeff Gibson

Notes

Shipping FOB Upper Saddle River, NJ
GHD Guam Can Provide Freight Forwarder - $750 Handling Fee Will Apply

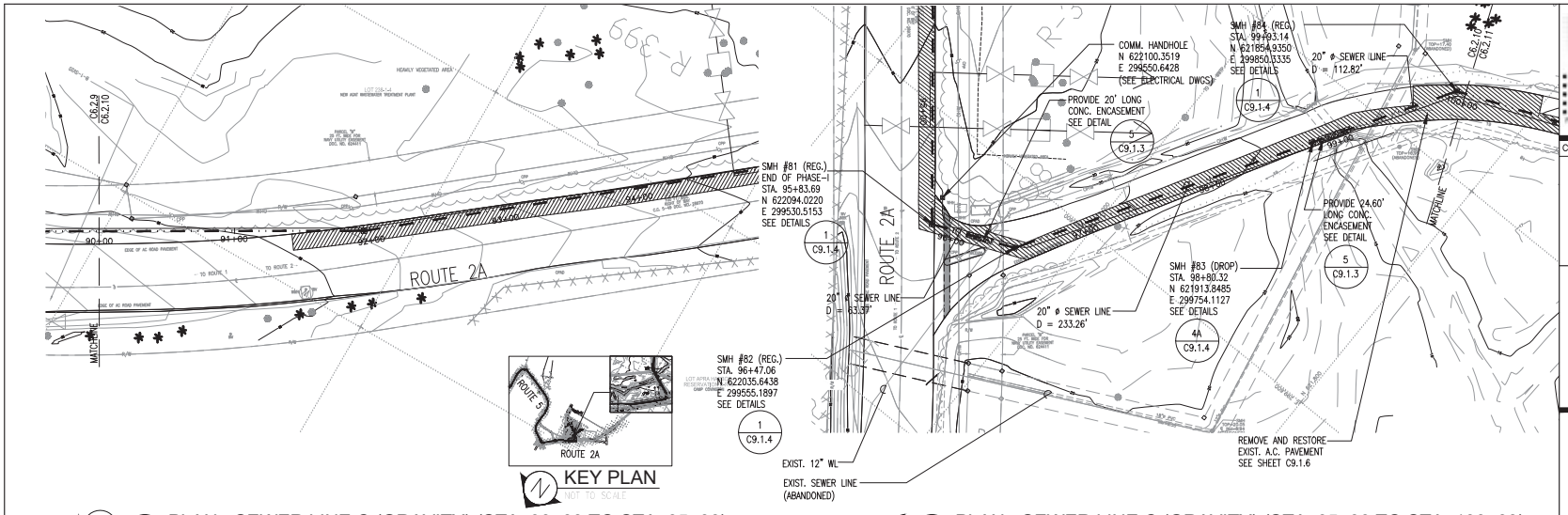
*Date Generated: 08/25/16. This invoice is confidential. All prices are quoted in US Dollars. While EarthCam, Inc. will endeavor to meet the customer's desired delivery date, no shipment date can be scheduled until after order is accepted by EarthCam, Inc. Payment in full must precede acceptance, which may be made by cash, cleared check, Fed wire, ACH or major credit card. All sales are final. All orders and services are subject to force majeure. All services shall automatically renew for successive one (1) month periods and continue until customer shall provide thirty (30) days written notice of termination to EarthCam, Inc. Any and all liability arising out of products or services included in the order, however or whenever arising, shall not, under any and all circumstances, exceed the actual payments received by EarthCam, Inc. in connection therewith or one month's service fee, whichever is less. In no event shall EarthCam, Inc. be liable for any special, incidental or consequential damages. Lifetime camera warranty for active software subscribers. Additional parts covered under standard 1 year manufacturer warranty.

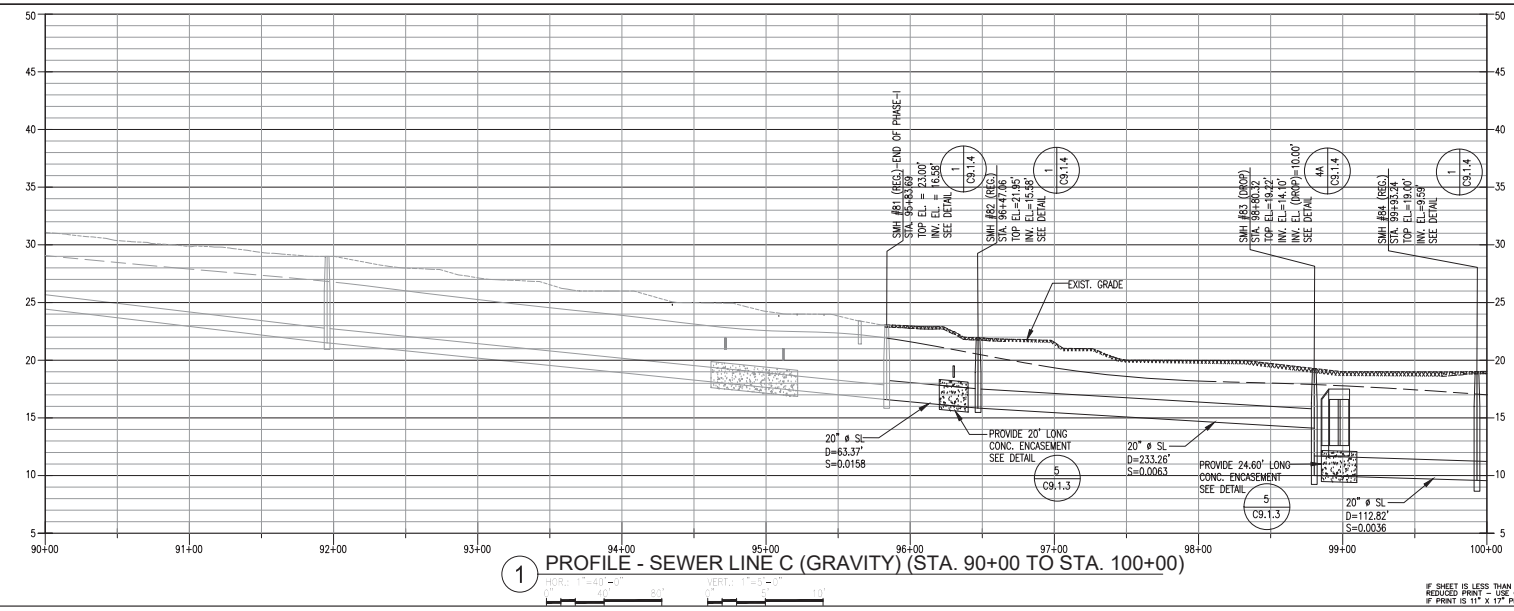
Your Account Manager: Brian Cury
brian@earthcam.com

1-800-EARTHCAM
- 1 of 1 -

650 East Crescent Avenue, Upper Saddle River, NJ 07458
201-488-1111

EXHIBIT E - BAZA GARDENS SANITARY SEWER DOCUMENTS





IF SHEET IS LESS THAN 22" X 34" REDUCED PRINT – USE GRAPHIC SCALES
IF PRINT IS 11" X 17" PRINT IS HALF SCALE

DCA
DUEÑAS · CAMACHO
ENGINEERING (CIVIL/STRUCTURAL)
CONSTRUCTION MANAGEMENT • PLANNING
ENVIRONMENTAL SERVICES • SURVEYING
DEVELOPMENT CONSULTATION
GEOGRAPHIC INFORMATION SYSTEMS

CONSULTANTS

COFFMAN ENGINEERS

TRMA
Taniguchi Ruth Makio Architects
Architecture
Planning
Interior Design

KENNETH M. REASNER
CERTIFICATE NO. 12825 (CIVIL)
EXP. 04/30/17
GUAM
PROFESSIONAL ENGINEER

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION. DATE: 9-6-2016

PROJECT TITLE

GUAM WATERWORKS AUTHORITY

BAZA GARDENS
WASTEWATER
CROSS-ISLAND PUMPING
AND
CONVEYANCE SYSTEM
(PHASE-I)

SUBMITTAL:
BID SET

Mark	Date	Description

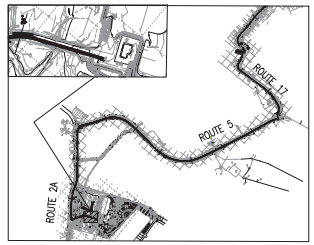
Project No.:	GG15-06
CAD Dwg File:	GG1506-C6.2.10.DWG
Issue Date:	SEPTEMBER 6, 2016
Drawn By:	JMC/HJ/CP
Checked By:	JMC/EMS
Supv. By:	EMS/KR

Sheet Title:

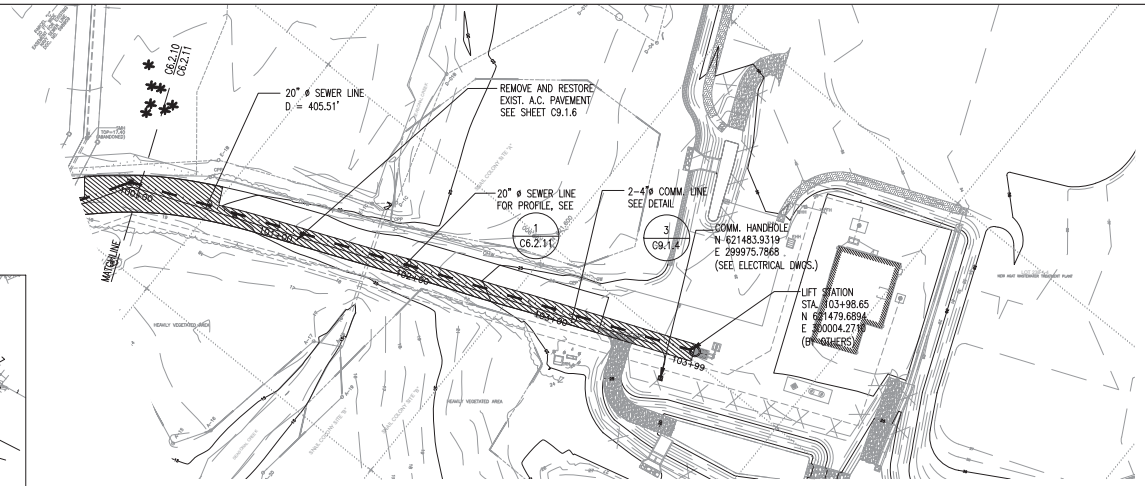
PROFILE & PLAN - SEWER LINE C (GRAVITY) (STA. 90+00 TO STA 100+00)

C6.2.10

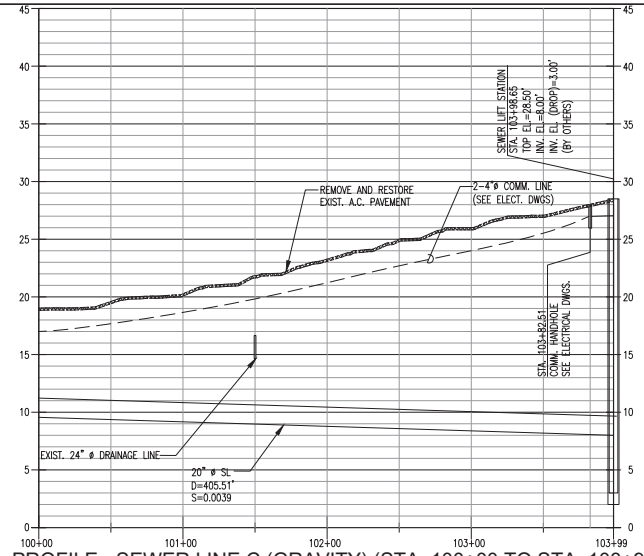
Sheet 32 of 117



KEY PLAN
NOT TO SCALE



2 PLAN - SEWER LINE C (GRAVITY) (STA. 100+00 TO STA. 103+98.65)
1" = 40'-0"



1 PROFILE - SEWER LINE C (GRAVITY) (STA. 100+00 TO STA. 103+98.65)
HOR. 1"=40'-0" VER. 1"=5'-0"

NOTE:

PHASE I CONTRACTORS SHALL PROVIDE GRAVITY CONNECTION TO AGAT WWTP LIFT STATION

IF SHEET IS LESS THAN 22" X 34" REDUCED PRINT – USE GRAPHIC SCALES
IF PRINT IS 11" X 17" PRINT IS HALF SCALE

DCA
DUEÑAS · CAMACHO
■ ENGINEERING (CIVIL/STRUCTURAL)
■ CONSTRUCTION MANAGEMENT ■ PLANNING
■ ENVIRONMENTAL SERVICES ■ SURVEYING
■ DEVELOPMENT CONSULTATION
■ GEOGRAPHIC INFORMATION SYSTEMS

CONSULTANTS

COFFMAN ENGINEERS

TRMA
Taniguchi Ruth Makio Architects
Architecture
Planning
Interior Design

KENNETH M. REDDEN
CERTIFICATE NO. 12825 (CIVIL)
EXP. 04/30/17
GUAM
PROFESSIONAL ENGINEER

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION. DATE: 9-6-2016

PROJECT TITLE

GUAM WATERWORKS AUTHORITY

BAZA GARDENS
WASTEWATER
CROSS-ISLAND PUMPING
AND
CONVEYANCE SYSTEM
SUBMITTAL: (PHASE-I)
BID SET

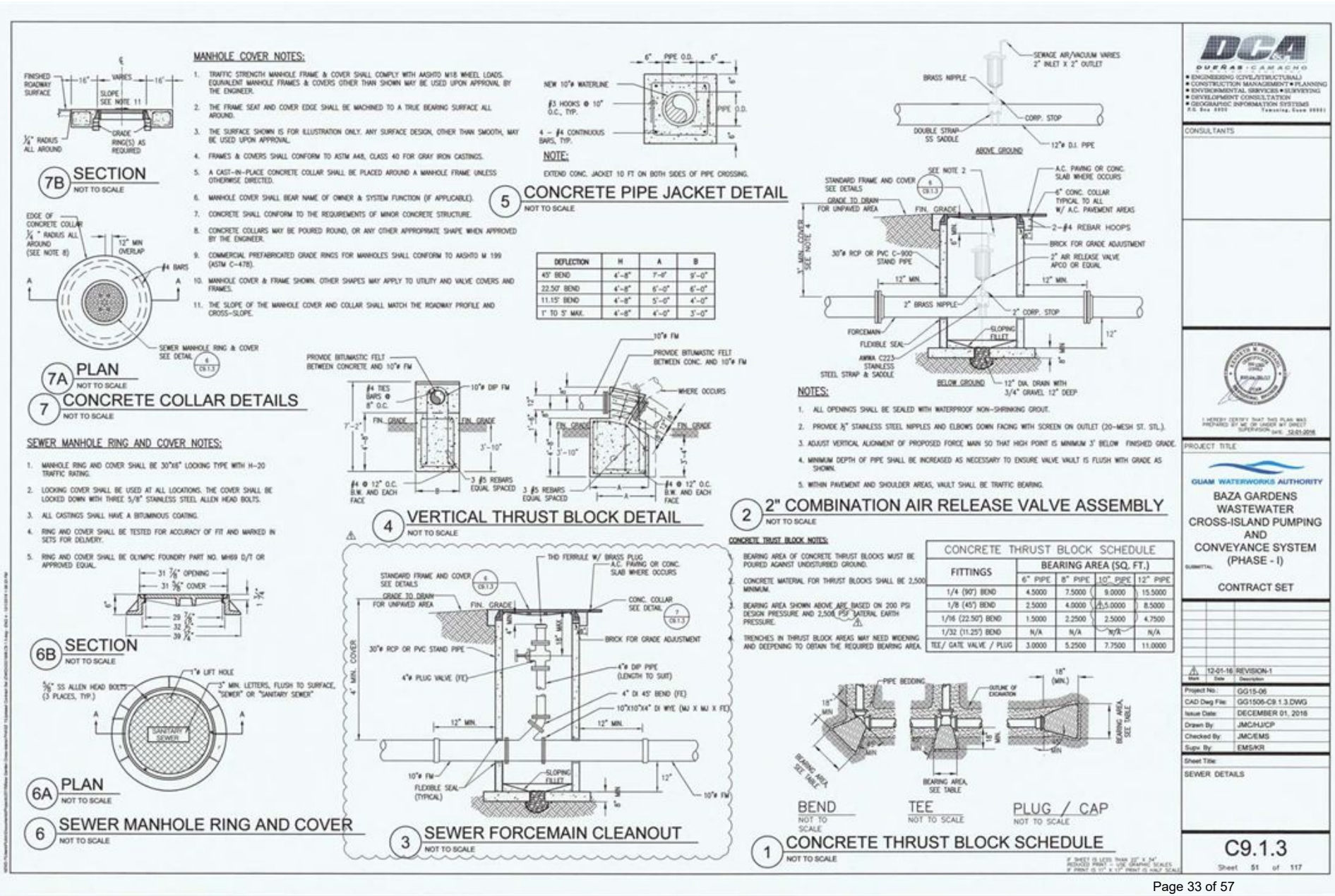
Mark	Date	Description

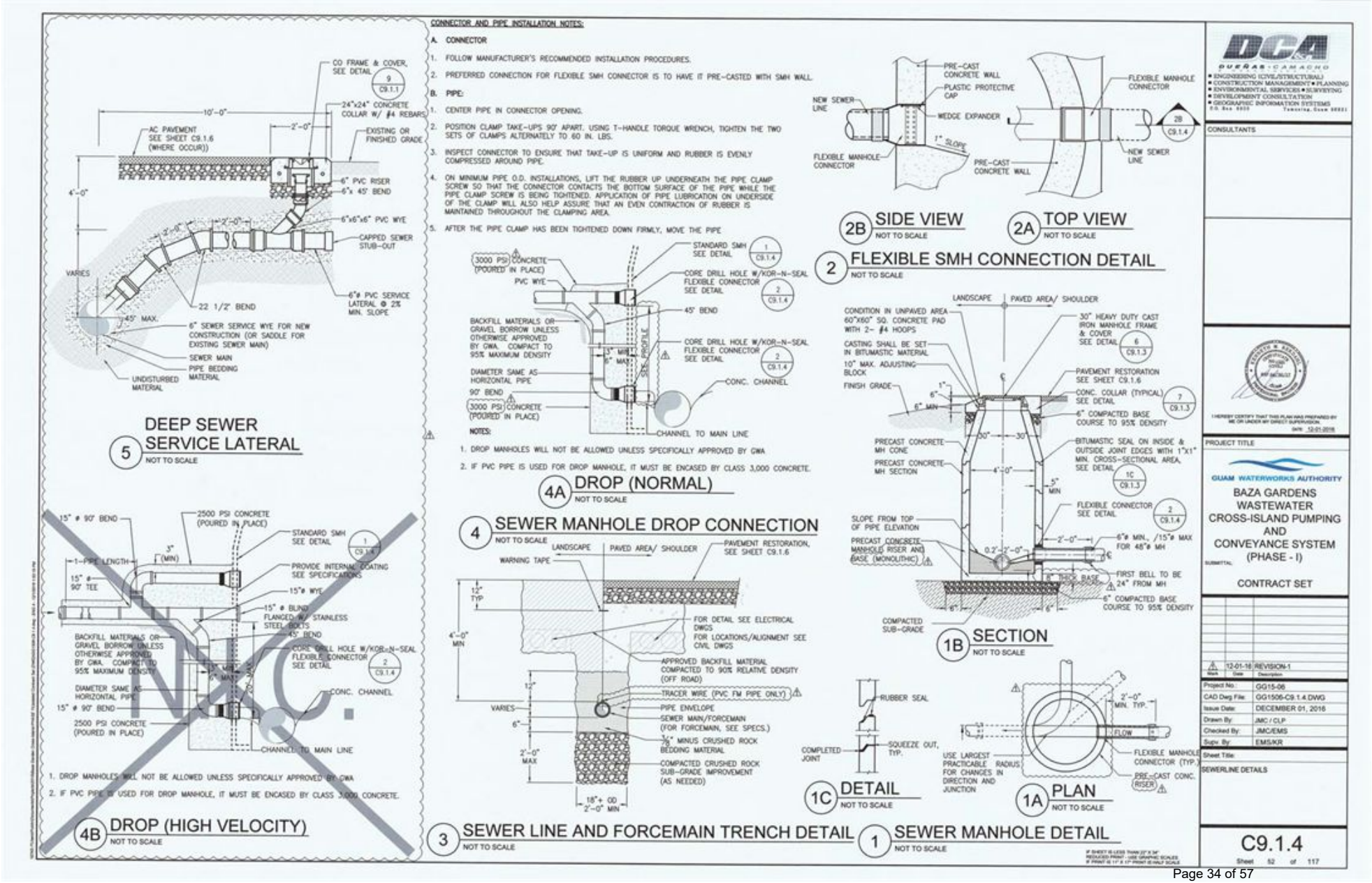
Project No.:	GG15-06
CAD Dwg File:	GG1506-C6.2.11.DWG
Issue Date:	SEPTEMBER 6, 2016
Drawn By:	JMC/HJ/CP
Checked By:	JMC/EMS
Supv. By:	EMS/KR

Sheet Title:

PROFILE & PLAN - SEWER LINE C (GRAVITY) (STA. 100+00 TO STA 103+98.65)

C6.2.11
Sheet 33 of 117


MANHOLE COVER NOTES:
1. TRAFFIC STRENGTH MANHOLE FRAME & COVER SHALL COMPLY WITH AASHTO M18 WHEEL LOADS. EQUIVALENT MANHOLE FRAMES & COVERS OTHER THAN SHOWN MAY BE USED UPON APPROVAL BY THE ENGINEER.
2. THE FRAME SEAT AND COVER EDGE SHALL BE MACHINED TO A TRUE BEARING SURFACE ALL AROUND.
3. THE SURFACE SHOWN IS FOR ILLUSTRATION ONLY. ANY SURFACE DESIGN, OTHER THAN SMOOTH, MAY BE USED UPON APPROVAL.
4. FRAMES & COVERS SHALL CONFORM TO ASTM A48, CLASS 40 FOR GRAY IRON CASTINGS.
5. A CAST-IN-PLACE CONCRETE COLLAR SHALL BE PLACED AROUND A MANHOLE FRAME UNLESS OTHERWISE DIRECTED.
6. MANHOLE COVER SHALL BEAR NAME OF OWNER & SYSTEM FUNCTION (IF APPLICABLE).
7. CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF MINOR CONCRETE STRUCTURE.
8. CONCRETE COLLARS MAY BE POURED ROUND, OR ANY OTHER APPROPRIATE SHAPE WHEN APPROVED BY THE ENGINEER.
9. COMMERCIAL PREFABRICATED GRADE RINGS FOR MANHOLES SHALL CONFORM TO AASHTO M 199 (ASTM C-478).
10. MANHOLE COVER & FRAME SHOWN. OTHER SHAPES MAY APPLY TO UTILITY AND VALVE COVERS AND FRAMES.
11. THE SLOPE OF THE MANHOLE COVER AND COLLAR SHALL MATCH THE ROADWAY PROFILE AND CROSS-SLOPE.
7B SECTION NOT TO SCALE
7A PLAN NOT TO SCALE
7 CONCRETE COLLAR DETAILS NOT TO SCALE
SEWER MANHOLE RING AND COVER NOTES:
1. MANHOLE RING AND COVER SHALL BE 30"X6" LOCKING TYPE WITH H-20 TRAFFIC RATING.
2. LOCKING COVER SHALL BE USED AT ALL LOCATIONS. THE COVER SHALL BE LOCKED DOWN WITH THREE 5/8" STAINLESS STEEL ALLEN HEAD BOLTS.
3. ALL CASTINGS SHALL HAVE A BITUMINOUS COATING.
4. RING AND COVER SHALL BE TESTED FOR ACCURACY OF FIT AND MARKED IN SETS FOR DELIVERY.
5. RING AND COVER SHALL BE OLYMPIC FOUNDRY PART NO. MH69 D/T OR APPROVED EQUAL.
6B SECTION NOT TO SCALE
6A PLAN NOT TO SCALE
6 SEWER MANHOLE RING AND COVER NOT TO SCALE
5 CONCRETE PIPE JACKET DETAIL NOT TO SCALE
NOTE: EXTEND CONC. JACKET 10 FT ON BOTH SIDES OF PIPE CROSSING.
DEFLECTION | H | A | B
45° BEND | 4'-8" | 7'-6" | 9'-0"
22.50° BEND | 4'-8" | 6'-0" | 6'-0"
11.15° BEND | 4'-8" | 5'-0" | 4'-0"
1° TO 5° MAX. | 4'-8" | 4'-0" | 3'-0"
4 VERTICAL THRUST BLOCK DETAIL NOT TO SCALE
3 SEWER FORCEMAIN CLEANOUT NOT TO SCALE
2 2" COMBINATION AIR RELEASE VALVE ASSEMBLY NOT TO SCALE
NOTES:
1. ALL OPENINGS SHALL BE SEALED WITH WATERPROOF NON-SHRINKING GROUT.
2. PROVIDE ¾" STAINLESS STEEL NIPPLES AND ELBOWS DOWN FACING WITH SCREEN ON OUTLET (20-MESH ST. STL.).
3. ADJUST VERTICAL ALIGNMENT OF PROPOSED FORCE MAIN SO THAT HIGH POINT IS MINIMUM 3' BELOW FINISHED GRADE.
4. MINIMUM DEPTH OF PIPE SHALL BE INCREASED AS NECESSARY TO ENSURE VALVE VAULT IS FLUSH WITH GRADE AS SHOWN.
5. WITHIN PAVEMENT AND SHOULDER AREAS, VAULT SHALL BE TRAFFIC BEARING.
CONCRETE THRUST BLOCK NOTES:
1. BEARING AREA OF CONCRETE THRUST BLOCKS MUST BE POURED AGAINST UNDISTURBED GROUND.
2. CONCRETE MATERIAL FOR THRUST BLOCKS SHALL BE 2,500 PSI MINIMUM.
3. BEARING AREA SHOWN ABOVE ARE BASED ON 200 PSI DESIGN PRESSURE AND 2,500 PSF LATERAL EARTH PRESSURE.
4. TRENCHES IN THRUST BLOCK AREAS MAY NEED WIDENING AND DEEPENING TO OBTAIN THE REQUIRED BEARING AREA.
CONCRETE THRUST BLOCK SCHEDULE
FITTINGS | BEARING AREA (SQ. FT.) 6" PIPE | 8" PIPE | 10" PIPE | 12" PIPE
1/4 (90°) BEND | 4.5000 | 7.5000 | 9.0000 | 15.5000
1/8 (45°) BEND | 2.5000 | 4.0000 | 5.0000 | 8.5000
1/16 (22.50°) BEND | 1.5000 | 2.2500 | 2.5000 | 4.7500
1/32 (11.25°) BEND | N/A | N/A | N/A | N/A
TEE/ GATE VALVE / PLUG | 3.0000 | 5.2500 | 7.7500 | 11.0000
BEND NOT TO SCALE
TEE NOT TO SCALE
PLUG / CAP NOT TO SCALE
1 CONCRETE THRUST BLOCK SCHEDULE NOT TO SCALE
DCA
CONSULTANTS
PROJECT TITLE
GUAM WATERWORKS AUTHORITY
BAZA GARDENS WASTEWATER CROSS-ISLAND PUMPING AND CONVEYANCE SYSTEM (PHASE - I)
CONTRACT SET
12-01-16 REVISION-1
Project No.: GG15-06
CAD Dwg File: GG1506-C9.1.3.DWG
Issue Date: DECEMBER 01, 2016
Drawn By: JMC/HJ/CP
Checked By: JMC/EMS
Supv. By: EMS/KR
Sheet Title: SEWER DETAILS
C9.1.3
Sheet 51 of 117


CONNECTOR AND PIPE INSTALLATION NOTES:
A. CONNECTOR
1. FOLLOW MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES.
2. PREFERRED CONNECTION FOR FLEXIBLE SMH CONNECTOR IS TO HAVE IT PRE-CASTED WITH SMH WALL.
B. PIPE:
1. CENTER PIPE IN CONNECTOR OPENING.
2. POSITION CLAMP TAKE-UPS 90° APART. USING T-HANDLE TORQUE WRENCH, TIGHTEN THE TWO SETS OF CLAMPS ALTERNATELY TO 60 IN. LBS.
3. INSPECT CONNECTOR TO ENSURE THAT TAKE-UP IS UNIFORM AND RUBBER IS EVENLY COMPRESSED AROUND PIPE.
4. ON MINIMUM PIPE O.D. INSTALLATIONS, LIFT THE RUBBER UP UNDERNEATH THE PIPE CLAMP SCREW SO THAT THE CONNECTOR CONTACTS THE BOTTOM SURFACE OF THE PIPE WHILE THE PIPE CLAMP SCREW IS BEING TIGHTENED. APPLICATION OF PIPE LUBRICATION ON UNDERSIDE OF THE CLAMP WILL ALSO HELP ASSURE THAT AN EVEN CONTRACTION OF RUBBER IS MAINTAINED THROUGHOUT THE CLAMPING AREA.
5. AFTER THE PIPE CLAMP HAS BEEN TIGHTENED DOWN FIRMLY, MOVE THE PIPE
CO FRAME & COVER, SEE DETAIL 9 C9.1.1
24"x24" CONCRETE COLLAR W/ #4 REBARS
AC PAVEMENT SEE SHEET C9.1.6 (WHERE OCCUR))
EXISTING OR FINISHED GRADE
6" PVC RISER
6"x 45° BEND
6"x6"x6" PVC WYE
CAPPED SEWER STUB-OUT
6"ø PVC SERVICE LATERAL @ 2% MIN. SLOPE
22 1/2° BEND
45° MAX.
6" SEWER SERVICE WYE FOR NEW CONSTRUCTION (OR SADDLE FOR EXISTING SEWER MAIN)
SEWER MAIN
PIPE BEDDING MATERIAL
UNDISTURBED MATERIAL
VARIES
10'-0"
2'-0"
4'-0"
5 DEEP SEWER SERVICE LATERAL
NOT TO SCALE
PRE-CAST CONCRETE WALL
PLASTIC PROTECTIVE CAP
WEDGE EXPANDER
1" SLOPE
FLEXIBLE MANHOLE CONNECTOR
NEW SEWER LINE
2B SIDE VIEW
NOT TO SCALE
2A TOP VIEW
NOT TO SCALE
2 FLEXIBLE SMH CONNECTION DETAIL
NOT TO SCALE
3000 PSI CONCRETE (POURED IN PLACE)
PVC WYE
BACKFILL MATERIALS OR GRAVEL BORROW UNLESS OTHERWISE APPROVED BY GWA. COMPACT TO 95% MAXIMUM DENSITY
DIAMETER SAME AS HORIZONTAL PIPE
90° BEND
STANDARD SMH SEE DETAIL 1 C9.1.4
CORE DRILL HOLE W/KOR-N-SEAL FLEXIBLE CONNECTOR SEE DETAIL 2 C9.1.4
45° BEND
CONC. CHANNEL
CHANNEL TO MAIN LINE
NOTES:
1. DROP MANHOLES WILL NOT BE ALLOWED UNLESS SPECIFICALLY APPROVED BY GWA
2. IF PVC PIPE IS USED FOR DROP MANHOLE, IT MUST BE ENCASED BY CLASS 3,000 CONCRETE.
4A DROP (NORMAL)
NOT TO SCALE
4 SEWER MANHOLE DROP CONNECTION
NOT TO SCALE
LANDSCAPE
PAVED AREA/ SHOULDER
PAVEMENT RESTORATION, SEE SHEET C9.1.6
WARNING TAPE
FOR DETAIL SEE ELECTRICAL DWGS FOR LOCATIONS/ALIGNMENT SEE CIVIL DWGS
APPROVED BACKFILL MATERIAL COMPACTED TO 90% RELATIVE DENSITY (OFF ROAD)
TRACER WIRE (PVC FM PIPE ONLY)
PIPE ENVELOPE
SEWER MAIN/FORCEMAIN (FOR FORCEMAIN, SEE SPECS.)
¾" MINUS CRUSHED ROCK BEDDING MATERIAL
COMPACTED CRUSHED ROCK SUB-GRADE IMPROVEMENT (AS NEEDED)
18"+ OD
2'-0" MIN
12" TYP
4'-0" MIN
2'-0" MAX
VARIES
6"
12"
3 SEWER LINE AND FORCEMAIN TRENCH DETAIL
NOT TO SCALE
CONDITION IN UNPAVED AREA 60"X60" SQ. CONCRETE PAD WITH 2- #4 HOOPS
CASTING SHALL BE SET IN BITUMASTIC MATERIAL
10" MAX. ADJUSTING BLOCK
FINISH GRADE
30" HEAVY DUTY CAST IRON MANHOLE FRAME & COVER SEE DETAIL 6 C9.1.3
PAVEMENT RESTORATION SEE SHEET C9.1.6
CONC. COLLAR (TYPICAL) SEE DETAIL 7 C9.1.3
6" COMPACTED BASE COURSE TO 95% DENSITY
PRECAST CONCRETE MH CONE
PRECAST CONCRETE MH SECTION
BITUMASTIC SEAL ON INSIDE & OUTSIDE JOINT EDGES WITH 1"x1" MIN. CROSS-SECTIONAL AREA, SEE DETAIL 1C C9.1.3
FLEXIBLE CONNECTOR SEE DETAIL 2 C9.1.4
SLOPE FROM TOP OF PIPE ELEVATION
PRECAST CONCRETE MANHOLE RISER AND BASE (MONOLITHIC)
6"ø MIN., /15"ø MAX FOR 48"ø MH
FIRST BELL TO BE 24" FROM MH
8" THICK BASE
COMPACTED SUB-GRADE
1B SECTION
NOT TO SCALE
RUBBER SEAL
SQUEEZE OUT, TYP.
COMPLETED JOINT
1C DETAIL
NOT TO SCALE
USE LARGEST PRACTICABLE RADIUS FOR CHANGES IN DIRECTION AND JUNCTION
2'-0" MIN. TYP.
FLOW
FLEXIBLE MANHOLE CONNECTOR (TYP.)
PRE-CAST CONC. RISER
1A PLAN
NOT TO SCALE
15" ø 90° BEND
2500 PSI CONCRETE (POURED IN PLACE)
STANDARD SMH SEE DETAIL 1 C9.1.4
3" (MIN)
1-PIPE LENGTH
15" ø 90° TEE
PROVIDE INTERNAL COATING SEE SPECIFICATIONS
15"ø WYE
15" ø BLIND FLANGED W/ STAINLESS STEEL BOLTS
45° BEND
CORE DRILL HOLE W/KOR-N-SEAL FLEXIBLE CONNECTOR SEE DETAIL 2 C9.1.4
BACKFILL MATERIALS OR GRAVEL BORROW UNLESS OTHERWISE APPROVED BY GWA. COMPACT TO 95% MAXIMUM DENSITY
DIAMETER SAME AS HORIZONTAL PIPE
CONC. CHANNEL
15" ø 90° BEND
2500 PSI CONCRETE (POURED IN PLACE)
CHANNEL TO MAIN LINE
1. DROP MANHOLES WILL NOT BE ALLOWED UNLESS SPECIFICALLY APPROVED BY GWA
2. IF PVC PIPE IS USED FOR DROP MANHOLE, IT MUST BE ENCASED BY CLASS 3,000 CONCRETE.
4B DROP (HIGH VELOCITY)
NOT TO SCALE
1 SEWER MANHOLE DETAIL
NOT TO SCALE
DCA
DUEÑAS · CAMACHO
ENGINEERING (CIVIL/STRUCTURAL)
CONSTRUCTION MANAGEMENT • PLANNING
ENVIRONMENTAL SERVICES • SURVEYING
DEVELOPMENT CONSULTATION
GEOGRAPHIC INFORMATION SYSTEMS
Tamuning, Guam 96921
CONSULTANTS
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION.
DATE: 12-01-2016
PROJECT TITLE
GUAM WATERWORKS AUTHORITY
BAZA GARDENS WASTEWATER CROSS-ISLAND PUMPING AND CONVEYANCE SYSTEM (PHASE - I)
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C9.1.4
Sheet 52 of 117

SECTION 330130.13 - SEWER AND MANHOLE TESTING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Testing of Gravity Sewer Piping:

a. Low pressure air testing.
b. Exfiltration testing.
c. Infiltration testing.

2. Testing of pressure piping.
3. Deflection testing of plastic sewer piping.
4. Testing of Manholes:

a. Vacuum testing.
b. Exfiltration testing.

B. Related Requirements:
1. Section 333400 - Sanitary Utility Sewerage Force Mains: Pipe materials and accessories normally encountered with municipal sanitary sewage force mains.

1.2 REFERENCE STANDARDS

A. ASTM International:

1. ASTM C1244 - Standard Test Method for Concrete Sewer Manholes by the Negative Air Pressure (Vacuum) Test Prior to Backfill.
2. ASTM D2122 - Standard Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings.

B. American Water Works Association:

1. AWWA C600 - Installation of Ductile Iron Mains and Their Appurtenances.

1.3 SUBMITTALS

A. Section 013300 - Submittal Procedures: Requirements for submittals.

B. Submit following items prior to start of testing:

1. Testing procedures.
2. List of test equipment.
3. Testing sequence schedule.

4. Provisions for disposal of flushing and test water.
5. Certification of test gage calibration.
6. Deflection mandrel drawings and calculations.

C. Test and Evaluation Reports: Indicate results of manhole and piping tests.

PART 2 - PRODUCTS

2.1 VACUUM TESTING

A. Equipment:

1. Vacuum pump.
2. Vacuum line.
3. Vacuum Tester Base:

   a. Compression band seal.
   b. Outlet port.

4. Shutoff valve.
5. Stopwatch.
6. Plugs.
7. Vacuum Gage: Calibrated to 0.1 in. Hg

2.2 EXFILTRATION TESTING

A. Equipment:

1. Plugs.
2. Pump.
3. Measuring device.

2.3 AIR TESTING

A. Equipment:

1. Air compressor.
2. Air supply line.
3. Shutoff valves.
4. Pressure regulator.
5. Pressure relief valve.
6. Stopwatch.
7. Plugs.
8. Pressure Gage: Calibrated to 0.1 psi

2.4 INFILTRATION TESTING

A. Equipment: Weirs.

2.5 HYDROSTATIC TESTING

A. Equipment:

1. Hydro pump.
2. Pressure hose.
3. Water meter.
4. Test connections.
5. Pressure relief valve.
6. Pressure Gage: Calibrated to 0.1 psi (0.69 kPa).

2.6 DEFLECTION TESTING

A. Equipment:

1. "Go, no go" mandrels.
2. Pull/retrieval ropes.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Section 017000 - Execution and Closeout Requirements: Requirements for installation examination.

B. Verify that manholes and piping are ready for testing.

C. Verify that trenches are backfilled.

D. Verify that pressure piping thrust restraint system is installed.

3.2 PREPARATION

A. Section 017000 - Execution and Closeout Requirements: Requirements for preparation.

B. Lamping:

1. Lamp gravity piping after flushing and cleaning.
2. Perform lamping operation by shining light at one end of each pipe section between manholes.
3. Observe light at other end.
4. Pipe not installed with uniform line and grade will be rejected.
5. Remove and reinstall rejected pipe sections.

6. Reclean and lamp until pipe section is installed to uniform line and grade.

C. Plugs:

1. Plug outlets, wye branches, and laterals.
2. Brace plugs to resist test pressures.

3.3 FIELD QUALITY CONTROL

A. Section 014000 - Quality Requirements: Requirements for inspecting and testing.

B. Low-Pressure Air Testing:

1. Test each reach of gravity sewer piping between manholes.
2. Introduce air pressure slowly to approximately 4
3. Determine ground water elevation above spring line of piping.
4. For every foot of ground water above spring line of piping, increase starting air test pressure by 0.43 psi
5. Do not increase pressure above 10 psig
6. Allow pressure to stabilize for at least five minutes.
7. Adjust pressure to 3.5 psig or to increased test pressure as determined above when ground water is present.
8. Do not make allowance for laterals.
9. Minimum Testing Duration in Minutes per 100 feet
   a. Pipe Size 10 Inches : 1.5.
   b. Pipe Size 12 Inches : 1.8.
   c. .
10. Record drop in pressure during testing period.
11. If air pressure drops more than 1.0 psi during testing period, piping has failed.
12. If 1.0 psi air pressure drop has not occurred during testing period, piping is acceptable; discontinue testing.
13. If piping fails, test reach of piping in incremental stages until leaks are isolated, repair leaks, and retest entire reach between manholes.

C. Testing of Pressure Piping:

1. Test system according to AWWA C600 and following:

   a. Hydrostatically test each portion of pressure piping, including valved section, at 1.5 times working pressure of piping, based on elevation of lowest point in piping corrected to elevation of test gage.
   b. Conduct hydrostatic testing for at least two hours.
   c. Slowly fill with water portion of piping to be tested, expelling air from piping at high points.
   d. Install corporation cocks at high points.
   e. Close air vents and corporation cocks after air is expelled.
   f. Raise pressure to specified test pressure.
   g. Observe joints, fittings, and valves undergoing testing.

h. Remove and renew cracked pipes, joints, fittings, and valves that show visible leakage.
i. Retest.
j. Correct visible deficiencies and continue testing at same test pressure for additional two hours to determine leakage rate.
k. Maintain pressure within plus or minus 5.0 psi of test pressure.
l. Leakage is defined as quantity of water supplied to piping necessary to maintain test pressure during period of testing.
m. Compute maximum allowable leakage using following formula:

1) L = [SD x sqrt(P)]/C.
2) L = testing allowance, gph
3) S = length of pipe tested, feet
4) D = nominal diameter of pipe, inches
5) P = average test pressure during hydrostatic testing,.
6) C = 148,000
7) If pipe undergoing testing contains sections of various diameters, calculate allowable leakage from sum of computed leakage for each pipe size.

2. If testing of piping indicates leakage greater than that allowed, locate source of leakage, make corrections, and retest until leakage is within acceptable limits.
3. Correct visible leaks regardless of quantity of leakage.

D. Deflection Testing of Plastic Sewer Piping:

1. Perform vertical ring deflection testing on PVC and acrylonitrile butadiene styrene sewer piping after backfilling has been in place for at least 30 days but not longer than 12 months.
2. Allowable maximum deflection for installed plastic sewer pipe is no greater than five percent of original vertical internal diameter.
3. Perform deflection testing using properly sized rigid ball or "go, no go" mandrel.
4. Furnish rigid ball or mandrel with diameter not less than 95 percent of base or average inside diameter of pipe, as determined by ASTM standard to which pipe is manufactured; measure pipe diameter in compliance with ASTM D2122.
5. Perform testing without mechanical pulling devices.
6. Locate, excavate, replace, and retest piping that exceeds allowable deflection.

E. Manhole Testing:

1. If air testing, test whenever possible prior to backfilling in order to more easily locate leaks.
2. Repair both outside and inside of joint to ensure permanent seal.
3. Test manholes with manhole frame set in place.
4. Vacuum Testing:

a. Comply with ASTM C1244
b. Plug pipe openings; securely brace plugs and pipe.
c. Inflate compression band to create seal between vacuum base and structure.
d. Connect vacuum pump to outlet port with valve open, then draw vacuum to 10 in. Hg
e. Close valve.

f. Manhole Test Duration in Seconds:

1) Diameter 4 Feet :60.

g. Record vacuum drop during test period.
h. If vacuum drop is greater than 1 in. Hg during testing period, repair and retest manhole.
i. If vacuum drop of 1 in. Hg does not occur during test period, manhole is acceptable; discontinue testing.
j. If vacuum test fails to meet 1 in. Hg drop in specified time after repair, repair and retest manhole.

5. If unsatisfactory testing results are achieved, repair manhole and retest until result meets criteria.
6. Repair visible leaks regardless of quantity of leakage.

END OF SECTION 330130.13

SECTION 330513 - MANHOLES AND STRUCTURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Cast-in-place concrete manholes and structures with transition to cover frame, covers, anchorage, and accessories.
2. Modular precast concrete manholes and structures with tongue-and-groove joints and transition to cover frame, covers, anchorage, and accessories.
3. Masonry manhole and structure sections with masonry transition to cover frame, covers, anchorage, and accessories.
4. Doghouse manhole connections to existing sewer lines.
5. Bedding and cover materials.
6. Pile support systems.

B. Related Requirements:

1. Section 031000 - Concrete Forming and Accessories: Erection and bracing of forms.
2. Section 032000 - Concrete Reinforcing: Execution requirements for reinforcing steel as required by this Section.
3. Section 033000 - Cast-in-Place Concrete: Concrete type for manhole and structure foundation slab construction.
4. Section 040514 - Masonry Mortaring and Grouting: Mortar and grout.
5. Section 042000 - Unit Masonry: Product requirements for clay brick units for use in manhole and structure construction.
6. Section 310513 - Soils for Earthwork: Soils for backfill in trenches.
7. Section 310516 - Aggregates for Earthwork: Aggregate for backfill in trenches.
8. Section 312316 - Excavation: Excavating for manholes, structures, and foundation slabs.
9. Section 312323 - Fill: Backfilling after manhole and structure installation.
10. Section 330130.13 - Sewer and Manhole Testing: Testing requirements for manholes.

1.2 REFERENCE STANDARDS

A. American Association of State Highway Transportation Officials:

1. AASHTO M91 - Standard Specification for Sewer and Manhole Brick (Made from Clay or Shale).
2. AASHTO M288 - Standard Specification for Geotextile Specification for Highway Applications.
3. AASHTO M306 - Standard Specification for Drainage, Sewer, Utility, and Related Castings.

B. American Concrete Institute:

1. ACI 530/530.1 - Building Code Requirements and Specification for Masonry Structures.

C. ASTM International:

1. ASTM A48 - Standard Specification for Gray Iron Castings.
2. ASTM A123 - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
3. ASTM C32 - Standard Specification for Sewer and Manhole Brick (Made From Clay or Shale).
4. ASTM C55 - Standard Specification for Concrete Building Brick.
5. ASTM C361 - Standard Specification for Reinforced Concrete Low-Head Pressure Pipe.
6. ASTM C478 - Standard Specification for Precast Reinforced Concrete Manhole Sections.
7. ASTM C497 - Standard Test Methods for Concrete Pipe, Manhole Sections, or Tile.
8. ASTM C913 - Standard Specification for Precast Concrete Water and Wastewater Structures.
9. ASTM C923 - Standard Specification for Resilient Connectors between Reinforced Concrete Manhole Structures, Pipes, and Laterals.

1.3 SUBMITTALS

A. Section 013300 - Submittal Procedures: Requirements for submittals.

B. Product Data: Submit data for manhole covers, component construction, features, configuration, dimensions

C. Shop Drawings:

1. Indicate structure locations and elevations.
2. Indicate sizes and elevations of piping and penetrations

D. Manufacturer's Certificate: Certify that products meet or exceed specified requirements

E. Manufacturer Instructions: Submit detailed instructions on installation requirements, including storage and handling procedures.

F. Field Quality-Control Submittals: Indicate results of Contractor-furnished tests and inspections.

G. Qualifications Statements:

1.4 DELIVERY, STORAGE, AND HANDLING

A. Section 016000 - Product Requirements: Requirements for transporting, handling, storing, and protecting products.

B. Inspection: Accept materials on Site in manufacturer's original packaging and inspect for damage.

C. Comply with precast concrete manufacturer's instructions and ASTM C913 for unloading, storing, and moving precast manholes and drainage structures.

D. Storage:

1. Store precast concrete manholes and drainage structures to prevent damage to Owner's property or other public or private property.
2. Repair property damaged from materials storage.

PART 2 - PRODUCTS

2.1 MANHOLES AND STRUCTURES

A. Standard Precast Concrete Manholes:

1. Description: ASTM C 478 precast, reinforced concrete, of depth indicated, with provision for sealant joints.
2. Diameter: 48 inches minimum unless otherwise indicated.
3. Ballast: Increase thickness of precast concrete sections or add concrete to base section, as required to prevent flotation.
4. Base Section: 6-inch minimum thickness for floor slab and 4-inch minimum thickness for walls and base riser section; with separate base slab or base section with integral floor.
5. Riser Sections: 4-inch minimum thickness, of length to provide depth indicated.
6. Top Section: Eccentric-cone type unless concentric-cone or flat-slab-top type is indicated; with top of cone of size that matches grade rings.
7. Joint Sealant: ASTM C 990 bitumen or butyl rubber.
8. Resilient Pipe Connectors: ASTM C 923 cast or fitted into manhole walls, for each pipe connection.

B. High Velocity Protection

1. Each manhole and force-main receiving structure shall be coated with an epoxy based liner to protect against high velocities and corrosion. The entire structure from the bottom to the top including rungs ,rings and channel shall be coated. The coating shall be applied after the concrete in the structures has completely cured. Acceptable coating manufactures include:
   a. Raven Lining systems
   b. Sika
   c. Approved Equal

C. Manhole Frames and Covers:

1. Description: Ferrous; 30-inch ID by 6- to 9-inch riser, with 4-inch- minimum-width flange and 31-inch- diameter cover. Include indented top design with lettering cast into cover, using wording equivalent to "SANITARY SEWER."
2. Material: ASTM A 48, Class 40 gray iron unless otherwise indicated.

2.2 CONCRETE

A. General: Cast-in-place concrete complying with ACI 318, ACI 350/350R and the following:

1. Cement: ASTM C 150, Type II or JIS R5210.
2. Fine Aggregate: ASTM C 33, sand.
3. Coarse Aggregate: ASTM C 33, crushed gravel.
4. Water: Potable.

B. Portland Cement Design Mix: 4000 psi minimum, with 0.45 maximum water/cementitious materials ratio.

1. Reinforcing Fabric: ASTM A 185, steel, welded wire fabric, plain.
2. Reinforcing Bars: ASTM A 615, Grade 60 deformed steel.

C. Manhole Channels and Benches: Factory or field formed from concrete. Portland cement design mix, 4000 psi minimum, with 0.45 maximum water/cementitious materials ratio. Include channels and benches in manholes.

1. Channels: Concrete invert, formed to same width as connected piping, with height of vertical sides to three-fourths of pipe diameter. Form curved channels with smooth, uniform radius and slope.

   a. Invert Slope: 1 percent through manhole.

2. Benches: Concrete, sloped to drain into channel.

   a. Slope: 4 percent.

D. Ballast and Pipe Supports: Portland cement design mix, 4000 psi minimum, with 0.45 maximum water/cementitious materials ratio.

1. Reinforcing Fabric: ASTM A 185, steel, welded wire fabric, plain.
2. Reinforcing Bars: ASTM A 615, Grade 60 deformed steel.

2.3 FRAMES AND COVERS

A. Description:

1. Construction: ASTM, Class 30B, cast iron.
2. Lid:

   a. Machined flat bearing surface.
   b. Removable.

3. Cover Design: Closed

4. Live Load Rating: H20-44
5. Sealing gasket.

2.4 RISER RINGS

A. Riser Rings:

1. 4 Inches to 6 Inches Thick:

   a. Material: Precast concrete.
   b. Comply with ASTM C478

2. Less than 4 Inches Thick:

   a. Material: Cast iron.
   b. Comply with AASHTO M306.

3. Rubber Seal Wraps:

   a. Wraps and Band Widths: Conform to ASTM C877 Type III.
   b. Cone/Riser Ring Joint: Minimum 3 inches overlap.
   c. Frame/Riser Ring Joint: 2 inches overlap.
   d. Additional Bands: Overlap upper band by 2 inches

B. Accessories:

1. Joint Sealant: Comply with ASTM C990
2. Bolts:

   a. Stainless Steel: Comply with ASTM F593.
   b. Galvanized: Comply with ASTM F1554.

2.5 ACCESSORIES

A. Foundation Slab:

1. Cast-in-place concrete as specified in Section 033000 - Cast-in-Place Concrete
2. Top Surface: Level.Indicate type of anchorage required to anchor to other structural elements.

B. Concrete: As specified in Section 033000 - Cast-in-Place Concrete

C. Grout: As specified in Section 036000 - Grout

D. Odor Control Polyethylene Manhole Insert:

1. Contractor shall supply odor reducing manhole inserts made from high density Polyethylene Copolymer material that meets ASTM Specification Designation D-1248 Class A, Category 5, Type III. Filter shall make use of non-hazardous, according to the

definition for “health hazard” and “physical hazard” provided in the OSHA Hazard Communication Law (29 CFR Part 1910), activated carbon filter media. Insert shall be manufactured to fit the manhole frame rim upon which the manhole cover rests.

2. Contractor shall supply odor reducing manhole inserts for all manholes locates along Sewerline B

3. Manufactures

   a. Parson Environmental Products
   b. Simple Solutions Dist
   c. Approved Equal

2.6 FINISHES

A. Steel Galvanizing:

1. ASTM A123
2. Hot dip galvanize after fabrication.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Section 017000 - Execution and Closeout Requirements: Requirements for installation examination.

B. Verify that items provided by other Sections of Work are properly sized and located.

C. Verify that built-in items are in proper location and are ready for roughing into Work.

D. Verify correct size of manhole and structure excavation.

3.2 PREPARATION

A. Section 017000 - Execution and Closeout Requirements: Requirements for installation preparation.

B. Mark each precast structure by indentation or waterproof paint showing date of manufacture, manufacturer, and identifying symbols and numbers as indicated on Drawings to indicate its intended use.

C. Coordinate placement of inlet and outlet pipe or duct sleeves required by other Sections.

D. Do not install manholes and structures where Site conditions induce loads exceeding structural capacity of manholes or structures.

E. Inspect precast concrete manholes and structures immediately prior to placement in excavation to verify that they are internally clean and free from damage; remove and replace damaged units.

3.3 INSTALLATION

A. Excavation and Backfill:

1. Excavate for manholes and structures as specified in Section 312316 - Excavation and in indicated locations and depths.
2. Provide clearance around sidewalls of manhole or structure for construction operations granular backfill
3. If groundwater is encountered, prevent accumulation of water in excavations; place manhole or structure in dry trench.
4. Where possibility exists of watertight manhole or structure becoming buoyant in flooded excavation, anchor manhole or structure to avoid flotation, as approved by Architect/Engineer.

B. Foundation Slab:

C. Install manholes and structures supported at proper grade and alignment as indicated on Drawings.

D. Backfill excavations for manholes and structures as specified in Section 312316 - Excavationand312323 - Fill.

E. Form and place manhole or structure cylinder plumb and level, to correct dimensions and elevations.

F. As Work progresses, build fabricated metal items

G. Cut and fit for pipe and sleeves

H. Grout base of shaft sections to achieve slope to exit piping, trowel smooth, and contour to form continuous drainage channel

I. Paint interior with two coats of bituminous interior coating at rate of 120sq. ft. per for each coat.

J. Set cover frames and covers level to correct elevations without tipping.

K. Precast Concrete Manholes and Structures:

1. Lift precast components at lifting points designated by manufacturer.
2. When lowering manholes into excavations and joining pipe to units, take precautions to ensure that interior of pipeline and structure remains clean.
3. Set precast structures, bearing firmly and fully on crushed stone bedding, compacted as specified in Section 312316 – Excavation and 312323 - Fill or on other support system as indicated on Drawings.
4. Assembly:

a. Assemble multi-section manholes and structures by lowering each section into excavation.
b. Install rubber gasket joints between precast sections according to manufacturer's recommendations.
c. Lower, set level, and firmly position base section before placing additional sections.

5. Remove foreign materials from joint surfaces and verify sealing materials are placed properly.
6. Maintain alignment between sections by using guide devices affixed to lower section.
7. Joint sealing materials may be installed on Site or at manufacturer's plant.
8. Verify that installed manholes meet required alignment and grade.
9. Remove knockouts or cut structure to receive piping without creating openings larger than required to receive pipe; fill annular spaces with mortar.
10. Cut pipe flush with interior of structure.
11. Shape inverts through manhole as indicated on Drawings.

L. Cast-in-Place Concrete Manholes and Structures:

1. Prepare crushed stone bedding or other support system as indicated on Drawings to receive base slab as specified for precast structures.
2. Erect and brace forms against movement as specified in Section 031000 - Concrete Forming and Accessories.
3. Install reinforcing steel as indicated on Drawings and as specified in Section 032000 - Concrete Reinforcing.
4. Place and cure concrete as specified in Section 033000 - Cast-in-Place Concrete.
5. Frames and Covers:

a. Set frames using mortar and masonry.
b. Install radially laid concrete brick with 1/4 inch thick vertical joints at inside perimeter.
c. Lay concrete brick in full bed of mortar and completely fill joints.
d. If more than one course of concrete brick is required, stagger vertical joints.
e. Set frame and cover 2 inches above finished grade for manholes [and structures] with covers located within unpaved areas, to allow area to be graded away from cover beginning 1 inch below top surface of frame.

M. Sanitary Manhole Drop Connections:

1. Concrete Encasement: Minimum [2] feet outside of manhole upto top of upstream pipe.
2. Form channel from pipe drop to sweep into main channel at maximum angle of 30 degrees.

N. Castings:

1. Set frames using mortar and masonry as indicated on Drawings.
2. Install radially-laid concrete brick with [1/4] inch thick vertical joints at inside perimeter.
3. Lay concrete brick in full bed of mortar and completely fill joints.
4. If more than one course of concrete brick is required, stagger vertical joints.

5. Set frame and cover [2] inches) above finished grade for manholes and other structures with covers located within unpaved areas to allow area to be graded away from cover beginning [1] inch below top surface of frame.

3.4 FIELD QUALITY CONTROL

A. Section 014000 - Quality Requirements: Requirements for inspecting and testing.

B. Test cast-in-place concrete as specified in Section 033000 - Cast-in-Place Concrete

C. Test concrete manhole and structure sections as specified in Section 330130.13 - Sewer and Manhole Testing.

D. Vertical Adjustment of Existing Manholes and Structures:
   1. If required, adjust top elevation of existing manholes and structures to finished grades as indicated on Drawings.
   2. Frames, Grates, and Covers:
      a. Carefully remove frames, grates, and covers cleaned of mortar fragments.
      b. Reset to required elevation according to requirements specified for installation of castings.
   3. Reinforcing Bars:
      a. Remove concrete without damaging existing vertical reinforcing bars if removal of existing concrete wall is required.
      b. Clean vertical bars of concrete and bend into new concrete top slab or splice to required vertical reinforcement as indicated on Drawings.
   4. Clean and apply sand-cement bonding compound on existing concrete surfaces to receive cast-in-place concrete as specified in Section 033000 - Cast-in-Place Concrete

END OF SECTION 330513

SECTION 333113 - PUBLIC SANITARY UTILITY SEWERAGE PIPING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Sanitary sewerage pipe and fittings.
2. Pipe markers.
3. Connection to existing manholes.
4. Manholes.
5. Wye branches and tees.
6. Sanitary laterals.
7. Bedding and cover materials.

1.2 REFERENCE STANDARDS

A. American Association of State Highway and Transportation Officials:

1. AASHTO T 180 - Standard Method of Test for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop.

B. ASTM International:

1. ASTM A74 - Standard Specification for Cast Iron Soil Pipe and Fittings.
2. ASTM A123 - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
3. ASTM C14 - Standard Specification for Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe.
4. ASTM C76 - Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe.
5. ASTM C443 - Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets.
6. ASTM C564 - Standard Specification for Rubber Gaskets for Cast Iron Soil Pipe and Fittings.
7. ASTM C923 - Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes, and Laterals.
8. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft3 (600 kN-m/m3).
9. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft3 (2,700 kN-m/m3).
10. ASTM D1785 - Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120.
11. ASTM D2235 - Standard Specification for Solvent Cement for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe and Fittings.

12. ASTM D2321 - Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications.
13. ASTM D2466 - Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40.
14. ASTM D2564 - Standard Specification for Solvent Cements for Poly(Vinyl Chloride) (PVC) Plastic Piping Systems.
15. ASTM D2729 - Standard Specification for Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
16. ASTM D2751 - Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) Sewer Pipe and Fittings.
17. ASTM D2855 - Standard Practice for Making Solvent-Cemented Joints with Poly(Vinyl Chloride) (PVC) Pipe and Fittings.
18. ASTM D6938 - Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).
19. ASTM D3034 - Standard Specification for Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
20. ASTM F477 - Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.

C. American Water Works Association:

1. AWWA C104 - Cement-Mortar Lining for Ductile-Iron Pipe and Fittings.
2. AWWA C105 - Polyethylene Encasement for Ductile-Iron Pipe Systems.
3. AWWA C110 - Ductile-Iron and Gray-Iron Fittings.
4. AWWA C111 - Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings.
5. AWWA C150 - Thickness Design of Ductile-Iron Pipe.
6. AWWA C151 - Ductile-Iron Pipe, Centrifugally Cast.
7. AWWA C153 - Ductile-Iron Compact Fittings.

1.3 COORDINATION

A. Section 013000 - Administrative Requirements: Requirements for coordination.

B. Notify affected utility companies at least 72hours prior to construction.

1.4 PREINSTALLATION MEETINGS

A. Section 013000 - Administrative Requirements: Requirements for preinstallation meeting.

B. Convene minimum 2 weeks prior to commencing Work of this Section.

C. Attendance Roster: Include affected utility companies and appropriate local officials.

1.5 SUBMITTALS

A. Section 013300 - Submittal Procedures: Requirements for submittals.

B. Product Data: Submit manufacturer catalog cuts and other information indicating proposed materials, accessories, details, , and construction information.

C. Shop Drawings:

1. Indicate layout of sewer system and appurtenances
2. Show size, materials, components of system, and burial depth.

D. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

E. Test and Evaluation Reports: Submit reports indicating field tests made and results obtained.

F. Manufacturer Instructions:

1. Indicate special procedures required to install specified products.

G. Field Quality-Control Submittals: Indicate results of Contractor-furnished tests and inspections.

H. Qualifications Statements:

1. Submit qualifications for manufacturer and installer.
2. Submit manufacturer's approval of installer.

1.6 CLOSEOUT SUBMITTALS

A. Section 017000 - Execution and Closeout Requirements: Requirements for submittals.

B. Project Record Documents: Record invert elevations and actual locations of pipe runs, connections , manholes and cleanouts.

C. Identify and describe unexpected variations to subsoil conditions or discovery of uncharted utilities.

D. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum 20 years' documented experience.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Section 016000 - Product Requirements: Requirements for transporting, handling, storing, and protecting products.

B. Inspection: Accept materials on Site in manufacturer's original packaging and inspect for damage.

C. Storage:

1. Store materials according to manufacturer instructions.
2. Store valves in shipping containers with labeling in place.

D. Protection:

1. Protect materials from moisture and dust by storing in clean, dry location remote from construction operations areas.
2. Block individual and stockpiled pipe lengths to prevent moving.
3. Provide additional protection according to manufacturer instructions.

E. Deliver and store valves in shipping containers with labeling in place.

1.8 EXISTING CONDITIONS

A. Field Measurements:

1. Verify field measurements prior to fabrication.
2. Indicate field measurements on Shop Drawings.

PART 2 - PRODUCTS

2.1 SANITARY SEWERAGE PIPE AND FITTINGS

A. Ductile-Iron Pipe for use at all fittings and drop structures:

B. Plastic pipe alternative may be used, refer to plans for details

1. Comply with AWWA C151
2. Minimum Pressure Class: 150
3. End Connections: Bell and spigot
4. Outside Coating:

a. Type: Asphaltic coating, minimum 2 mil uniform thickness.

5. Lining:

a. Type: Asphaltic sealcoat, minimum [1] mil uniform thickness.
b. Comply with AWWA C104.

6. Polyethylene encasement: Comply with AWWA C105.
7. Fittings:

a. Material: Ductile iron, Class 50
b. Comply with AWWA C110.
c. Lining: Cement-mortar lined according to AWWA C104 Seal coat lined and coated with bituminous paint

8. Coating:

a. Coat pipe and fittings exposed inside of structures with two coats of bituminous
b. As specified in Section 099000 - Painting and Coating.

9. Joints:

    a. Rubber gasket joint devices.
    b. Comply with AWWA C111.

C. Plastic Pipe:

1. Material: Polyvinyl chloride (PVC), Schedule 80
2. Comply with ASTM D1785.
3. Inside Nominal Diameter: 12 inches End Connections: Bell and spigot style, with solvent-sealed ends.
4. Fittings:

    a. Material: PVC.
    b. Comply with ASTM D2466.

5. Joints:

    a. Solvent welded with solvent cement conforming to ASTM D2564.
    b. Comply with ASTM D2855.

D. Plastic Pipe (alternative):

1. Material: Polyvinyl chloride (PVC).
2. Comply with ASTM D3034, SDR-35
3. Inside Nominal Diameter: 12 - 15 inches
4. End Connections: Bell and spigot style, with rubber-ring-sealed gasket joint.
5. Fittings: PVC.
6. Joints:

    a. Elastomeric gaskets.
    b. Comply with ASTM F477.

2.2 FLEXIBLE COUPLINGS

A. Description:

1. Resilient chemical-resistant elastomeric polyvinyl chloride (PVC) coupling.
2. Attachment: Two stainless-steel clamps, screws, and housings.

2.3 FLEXIBLE PIPE BOOT FOR MANHOLE PIPE ENTRANCES

A. Description:

1. Material: Ethylene propylene rubber (EPDM).
2. Comply with ASTM C923 (C923M).
3. Attachment: stainless-steel clamp and hardware.

2.4 CONCRETE ENCASEMENT AND CRADLES

A. Concrete:

1. As specified in Section 033000 - Cast-in-Place Concrete.
2. Strength: 4000 psi at 28 days.
3. Finish: Rough troweled.

2.5 MANHOLES

A. Description: As specified in Section 330513.16 - Public Manholes and Structures.

B. Description:

1. As specified in Section 330513.16 - Public Manholes and Structures.
2. Material: Precast concrete.
3. Diameter: 48 inches
4. Frames and Covers: Watertight cast iron.
5. Cover Inscription: SANITARY SEWER

2.6 MIXES

A. Grout: As specified in Section 036000 - Grouting

2.7 FINISHES

A. Galvanizing:

1. Hot-dip galvanize after fabrication.
2. Comply with ASTM A123 (A123M).

2.8 ACCESSORIES

A. Pipe Supports:

1. Metal for pipe support brackets: Galvanized structural steel, thoroughly coated with bituminous paint.

B. Pipe Markers: As specified in Section 330526 - Utility Identification.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Section 017000 - Execution and Closeout Requirements: Requirements for installation examination.

B. Verify that excavation base is ready to receive Work.

C. Verify that excavations, dimensions, and elevations are as indicated on Drawings.

3.2 PREPARATION

A. Section 017000 - Execution and Closeout Requirements: Requirements for installation preparation.

B. Correct over-excavation with coarse aggregate.

C. Remove large stones or other hard materials that could damage pipe or impede consistent backfilling or compaction.

D. Protect and support existing sewer lines, utilities, and appurtenances.

E. Utilities:

1. Maintain profiles of utilities.
2. Coordinate with other utilities to eliminate interference.
3. Notify Architect/Engineer if crossing conflicts occur.

3.3 INSTALLATION

A. Bedding:

1. Excavate pipe trench as specified in Section 312317 - Trenching.
2. Excavate to lines and grades as indicated on Drawings or as required to accommodate installation of encasement.
3. Dewater excavations to maintain dry conditions and to preserve final grades at bottom of excavation.
4. Provide sheeting and shoring as specified in Section 312317 - Trenching .
5. Placement:
    a. Place bedding material at trench bottom.
    b. Level materials in continuous layer not exceeding 6 inches compacted depth.
    c. Compact to 95 percent of maximum density.

B. Piping:

1. Install pipe, fittings, and accessories according to ASTM D2321and seal joints watertight.
2. Lay pipe to slope gradients as indicated on Drawings
3. Maximum Variation from Indicated Slope: [1/8] inch in [10] feet
4. Begin at downstream end and progress upstream.
5. Assemble and handle pipe according to manufacturer's instructions, except as may be modified on Drawings or by Construction Manager.
6. Keep pipe and fittings clean until Work has been completed and accepted by Architect/Engineer.

7. Cap open ends during periods of Work stoppage.
8. Lay bell and spigot pipe with bells upstream.

C. Manholes:

1. Install manholes as specified in Section 330513.16 - Public Manholes and Structures

D. Wye Branches and Tees:

1. Concurrent with pipe-laying operations, install wye branches and pipe tees at locations indicated on Drawings.
2. Use standard fittings of same material and joint type as sewer main.
3. Maintain minimum 5ft separation distance between wye connection and manhole.
4. Use saddle wye or tee with stainless-steel clamps for taps into existing piping.
5. Mount saddles with solvent cement or gasket and secure with metal bands.
6. Lay out holes with template, and cut holes with mechanical cutter.

3.4 FIELD QUALITY CONTROL

A. Section 014000 - Quality Requirements: Requirements for inspecting and testing.

B. Request inspection by Construction Manager prior to and immediately after placing bedding.

C. Testing:

1. If tests indicate that Work does not meet specified requirements, remove Work, replace, and retest.
2. Pipe Testing:

a. Pressure Test: As specified in Section 330130.13 - Sewer and Manhole Testing.
b. Infiltration Test: As specified in Section 330130.13 - Sewer and Manhole Testing
c. Deflection Test: As specified in Section 330130.13 - Sewer and Manhole Testing

3. Compaction Testing:

a. Comply with ASTM D1557 or ASTM D698 and ASTM D6938.
b. Testing Frequency: 1 per 600 linear feet/2,000 sq. ft..

3.5 PROTECTION

A. Section 017000 - Execution and Closeout Requirements: Requirements for protecting finished Work.

B. Protect pipe and aggregate cover from damage or displacement until backfilling operation is in progress.

END OF SECTION 330130.13

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 18 - FY2018
Relative to Approval of the 2010 Bond Proceeds Reallocation

What is the project's objective and is it necessary and urgent?
The objective of the resolution is to give GWA management the authority to reallocate unspent or unused monies from completed CIP projects funded by the 2010 bond proceeds (such as unused contingencies, or negotiated cost savings) to other CIP line items that are on-going and for which there exists a current and greater need for funding, thereby improving management's ability to encumber the fund balance.

The on-going CIP line items that would have unobligated 2010 Bond proceeds reallocated to them are PW 05-07 "Meter Replacement Program", PW 05-12 "Brigade II (Ugum Lift) BPS Upgrade", PW 05-15 "Rehabilitation of Asan Springs", PW 09-09 "Water "Reservoir Internal/External" and WW 11-03 "Baza Gardens STP Replacement".

Where is the location?
NOT APPLICABLE

How much will it cost?
The bond proceeds that will be affected by the reallocation is Eight Hundred Eighty-Six Thousand Four Hundred Thirty-One Dollars and Six Cents ($886,431.06)

When will it be completed?
The goal of reallocating the 2010 bond proceeds is to encumber all bond proceeds by December 2018.

What is the funding source?
NOT APPLICABLE

The RFP/BID responses (if applicable):
NOT APPLICABLE

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

GWA RESOLUTION NO. 18–FY2018

RELATIVE TO APPROVAL OF THE 2010 BOND PROCEEDS REALLOCATION

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA accounting has reconciled all 2010 Bond Capital Improvements Project (CIP) accounts and have determined there are several CIP line items with a remaining balance under "Unobligated Project Cost" in the amount of Four Million Three Hundred Nine Thousand Six Hundred Thirty-Four Dollars ($4,309,634) (See Exhibit A); and

WHEREAS, GWA engineering has determined the remaining balance for CIP line items shown in the Unobligated Project Cost, with the exception of five (5) CIP line items, specifically PW 05-07 "Meter Replacement Program", PW 05-12 "Brigade II (Ugum Lift) BPS Upgrade", PW 05-15 "Rehabilitation of Asan Springs", PW 09-09 "Water "Reservoir Internal/External" and WW 11-03 "Baza Gardens STP Replacement," are generally unspent amounts resulting from negotiated cost savings or unused contingencies, and are insufficient to fund an additional capital projects specific to the CIP line item; and

WHEREAS, the five GWA CIP projects noted above have 2010 Bond funding allotments already but these projects are anticipated to require additional funding or the amounts are needed to supplement the funding sources towards construction costs; and

//

WHEREAS, GWA management seeks CCU approval to reallocate all unobligated funds from certain CIP line items as shown on Exhibit B under the "Reduction Funds (x1000)" column in the amount of Eight Hundred Eighty-Six Thousand Four Hundred Thirty-One Dollars and Six Cents ($886,431.06) to fund five CIP line items noted above which are under the "Additional Funds (x1000)" column which correspond to the CIP projects requiring additional funding or that would supplement the funding sources towards construction costs; and

WHEREAS, the reallocation of the funds noted to the five CIP line items identified is expected to expedite the 2010 Bond fund balance encumbrance given these five CIP line items involve ongoing projects or projects that are expected to be procured within calendar year 2018; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms of the reallocation presented by GWA management is fair and reasonable.
3. The CCU hereby approves the 2010 bond reallocation request of all unobligated funds from CIP line items shown in Exhibit B under the "Reduction Funds (x1000)" column to be allotted to CIP line item PW 05-07, PW 05-12, PW 05-15, PW 09-09 and WW 11-03 in the amount of One Hundred Fifty Thousand Dollars ($150,000.00), Two Hundred Thousand Dollars ($200,000.00), Two Hundred Thousand Dollars ($200,000.00), One Hundred Fifty Thousand Dollars ($150,000.00) and One Hundred Eighty-Six Thousand Four Hundred Thirty-One Dollars and Six Cents ($186,431.06), respectively .
4. The CCU further hereby authorizes GWA management to seek PUC approval of the 2010 bond reallocation as presented herein.

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RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 27th day of February, 2018.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS **J. GEORGE BAMBA**
Chairperson Secretary

SECRETARY'S CERTIFICATE

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

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GUAM WATERWORKS AUTHORITY
2010 Series Bond Project Status
As of Jan. 31, 2018

SCHEDULE M

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 01/31/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 01/31/18
Ground Water Disinfection	$ -	$ 500,000	$ 438,141	$ 61,859	$ 500,000	$ 0	$ 61,859
"A" Series Well Transmission Line	$ 600,000	$ 518,144	$ 474,434	$ 1,274	$ 475,709	$ 42,435.15	$ 43,710
Water Booster Pump Station	$ 500,000	$ 500,000	$ 418,844	$ 81,156	$ 500,000	$ (0)	$ 81,156
Meter Replacement Program	$ 2,500,000	$ 10,300,000	$ 10,254,220	$ 19,409	$ 10,273,628	$ 26,371.65	$ 45,780
Barrigada Tank Repair/Replacement	$ -	$ 5,450,000	$ 5,442,302	$ 7,698	$ 5,450,000	$ 0	$ 7,698
Leak Detection		$ 200,000	$ -	$ 200,000	$ 200,000	$ -	$ 200,000
Potable Water System Planning	$ 200,000	$ 200,000	$ 179,638	$ 20,362	$ 200,000	$ -	$ 20,362
Implement Ground Water Rule		$ 1,700,000	$ 1,499,464	$ 200,535	$ 1,700,000	$ 0.50	$ 200,536
Brigade II (Ugum Lift) BPS Upgrade	$ 1,200,000	$ 1,700,000	$ 135,695	$ 202,199	$ 337,895	$ 1,362,105	$ 1,564,305
Deep Well Rehabilitation	$ 548,000	$ 548,000	$ 548,000	$ -	$ 548,000	$ -	$ -
New Deep Wells at Down Hard	$ 3,773,000	$ 638,252	$ 485,743	$ -	$ 485,743	$ 152,509.31	$ 152,509
Rehabilitation of Asan Springs	$ 900,000	$ 900,000	$ 188,771	$ 152,068	$ 340,838	$ 559,162	$ 711,229
Master Meters	$ 1,600,000	$ 1,600,000	$ 1,421,267	$ 68,690	$ 1,489,957	$ 110,042.85	$ 178,733
Ugum Water Treatment Plant Intake	$ 3,670,000	$ 700,000	$ 543,615	$ 156,385	$ 700,000	$ -	$ 156,385
Water Wells	$ 2,000,000	$ -	$ -		$ -	$ -	$ -
Water Distribution System	$ 384,000	$ 3,174,748	$ 3,174,748	$ -	$ 3,174,748	$ (0)	$ (0)
Pressure Zone Realignment /	$ 3,550,000	$ -	$ -		$ -	$ -	$ -
Northern System Water Distribution	$ 2,725,000	$ -	$ -	$ -	$ -	$ -	$ -
Central Water Distribution System 2005	$ 1,200,000	$ 900,000	$ 692,926	$ 82,076	$ 775,002	$ 124,997.80	$ 207,074
Southern Water Distribution System	$ 1,800,000	$ -	$ -		$ -	$ -	$ -
Mechanical/Electrical Equipment	$ 1,360,000	$ 1,200,000	$ 1,079,495	$ 120,505	$ 1,200,000	$ (0)	$ 120,505
Water Reservoir Internal/External	$ 500,000	$ 2,000,000	$ 1,033,356	$ 476,027	$ 1,509,384	$ 490,616	$ 966,644
Water Reservoir Internal/External	$ 2,400,000	$ -	$ -		$ -	$ -	$ -
Water System Reservoirs 2005 Improvements	$ 11,697,000	$ 1,050,000	$ 1,050,000		$ 1,050,000	$ 0	$ 0
Distribution System Upgrades	$ 3,182,000	$ 474,160	$ 451,462	$ 22,698	$ 474,160	$ 0	$ 22,698
Ugum Water Treatment Plant Reservoir	$ 3,672,000	$ -	$ -		$ -	$ -	$ -
Water Audit Program & Water Loss Control Plan		$ 100,000	$ 15,031	$ 63,428	$ 78,459	$ 21,541.49	$ 84,970
Production Plan / Reduce Navy Purchases		$ 100,000	$ 94,286	$ 5,714	$ 100,000	$ -	$ 5,714
Hydraulic Asessment of Tank		$ 500,000	$ 497,004	$ 2,996	$ 500,000	$ -	$ 2,996
Agana Heights & Chaot Tanks		$ 4,700,000	$ 4,327,370	$ 372,630	$ 4,700,000	$ -	$ 372,630
Tank Major Repair Yigo#1 Mangilao#2 Agat#2		$ 1,900,000	$ 1,750,355	$ 97,659	$ 1,848,013	$ 51,986.58	$ 149,645
Tank Major Repair Yigo#1 Mangilao#2 Agat#2		$ -			$ -	$ -	$ -
Assessment of malojloj Elevetad & Yigo Elevated		$ 200,000	$ 200,000	$ -	$ 200,000	$ -	$ -
Public Water System Asser Inventory/Condition Assesment		$ 100,000	$ 96,554	$ 3,446	$ 100,000	$ -	$ 3,446
Public Water System GIS & Mapping		$ 50,000	$ 50,000	$ -	$ 50,000	$ -	$ -
		$ -			$ -	$ -	$ -
Wastewater System Planning	$ 1,500,000	$ 1,500,000	$ 1,465,858	$ 8,142	$ 1,474,000	$ 26,000.00	$ 34,142
Wastewater Vehicles	$ 235,000	$ 235,000	$ 209,795	$ 25,205	$ 235,000	$ 0	$ 25,205
NDWWTP - Chlorine Tanks	$ 250,000	$ 250,000	$ 250,000		$ 250,000	$ -	$ -
Tumon Bay Sewer Upgrades	$ 100,000	$ -	$ -		$ -	$ -	$ -
Wastewater Collection System Repl/Rehab		$ 1,105,000	$ 718,036	$ 283,287	$ 1,001,323	$ 103,676.99	$ 386,964
Facilities Plan/Design for Baza Gardens WWTP	$ 1,250,000	$ 1,250,000	$ 1,239,250	$ 10,750	$ 1,250,000	$ -	$ 10,750
Facilities Plan/Design for Agat-Santa Rita WWTP	$ 900,000	$ 899,630	$ 881,749	$ 17,881	$ 899,630	$ -	$ 17,881
Priority 1 Sewer Upgrades – Baza Gardens WWTP	$ 650,000	$ -	$ -		$ -	$ -	$ -
Baza Gardens STP Replacement	$ 3,567,000	$ 1,301,947	$ 316,686	$ 314	$ 317,000	$ 984,947	$ 985,261
Facilities Plan/Design for Umatac Merizo WWTP		$ 900,000	$ 693,161	$ 160,696	$ 853,858	$ 46,142.15	$ 206,839
Agat/Santa Rita STP Replacement	$ 2,968,000	$ 2,218,000	$ 2,217,314	$ 387	$ 2,217,701	$ 299.50	$ 686
Northern District WWTP Primary Treatment Upgrades	$ -	$ 11,750,000	$ 11,532,253	$ 211,261	$ 11,743,514	$ 6,486.06	$ 217,747
Biosolids Management Plan		$ 200,000	$ 196,414	$ 3,586	$ 200,000	$ -	$ 3,586
Agana WWTP Interim Measures	$ -	$ 11,500,000	$ 11,242,386	$ 57,614	$ 11,300,000	$ 200,000.00	$ 257,614
I&I SSES Southern		$ 800,000	$ 733,872	$ 66,129	$ 800,000	$ (0)	$ 66,128
I&I SSES Central		$ 850,000	$ 794,325	$ 55,675	$ 850,000	$ -	$ 55,675
I&I SSES Northern		$ -			$ -	$ -	$ -
Umatac Merizo Replacement		$ 250,000	$ 247,431	$ 2,569	$ 250,000	$ -	$ 2,569
Northern District WWTP Secondary Treatment Upgrades		$ 1,000,000					$ 1,000,000
		$ -					
Well Electrical Protection	$ 26,000	$ -	$ -		$ -	$ -	$ -
SCADA Pilot Project	$ 300,000	$ 61,950	$ 19,812	$ 42,138	$ 61,950	$ (0)	$ 42,138
Electrical Upgrade - Water Wells	$ 3,000,000	$ 354,227	$ 335,378	$ 18,849	$ 354,227	$ 0	$ 18,849
Electrical Upgrade - Water Booster	$ 325,000	$ -	$ -		$ -	$ -	$ -
Electrical Upgrade -Water Booster	$ 350,000	$ -	$ -		$ -	$ -	$ -
Electrical Upgrade - Other Water	$ 250,000	$ -			$ -	$ -	$ -
SCADA Improvements – Phase 1	$ 250,000	$ 250,000	$ 193,989	$ 56,011	$ 250,000	$ -	$ 56,011
SCADA Improvements – Phase 2	$ 1,100,000	$ 1,056,986	$ 1,027,424	$ 29,562	$ 1,056,986	$ -	$ 29,562
SCADA Improvements – Phase 3	$ 2,500,000	$ 24,956	$ 24,956	$ -	$ 24,956	$ 0	$ 0
SCADA Improvements – Phase 4	$ 850,000	$ -	$ -		$ -	$ -	$ -
		$ -					
Laboratory Modernization	$ 1,200,000	$ -	$ -		$ -	$ -	$ -
Land Survey	$ 1,500,000	$ 500,000	$ 470,590	$ 29,097	$ 499,687	$ 312.68	$ 29,410
General Plant Improvements / Water	$ 14,370,000	$ 7,241,000	$ 7,241,000	$ 0	$ 7,241,000	$ 0	$ 0
Interest Earned							$ 81,037
Total Construction Fund (2010 Series Revenue Bond)	**$ 87,402,000**	**$ 87,402,000**	**$ 78,594,399**	**$ 3,497,966**	**$ 82,092,366**	**$ 4,309,634**	**$ 8,888,637**

1.) PUC's Docket 11-01 $29,000,000.00 dated
09/19/11authorized GWA for reallocation
2) PUC's Docket 11-01 Reallocation of $23,246,000.00 dated 07/30/12
3) PUC's Dockect Reallocation dated February 2013

Exhibit A (1 of 1)

Exhibit B (1 of 1)

2010 Bond Reallocation			
CIP No.	Name	Additional Funds (x1000)	Reduction Funds (x1000)
PW 05-05	"A" Series Well Transmission Line		$ 42,435.15
PW 05-07	Meter Replacement Program	$ 150,000	
PW 05-11	Implement Ground Water Rule		$ 0.50
PW 05-12	Brigade II (Ugum Lift) BPS Upgrade	$ 200,000	
PW 05-14	New Deep Wells at Down Hard		$ 152,509.31
PW 05-15	Rehabilitation of Asan Springs	$ 200,000	
PW 05-16	Master Meters		$ 110,042.85
PW 09-06	Central Water Distribution System 2005		$ 124,997.80
PW 09-09	Water Reservoir Internal/External	$ 150,000	
PW 12-01	Water Audit Program & Water Loss Control Plan		$ 21,541.49
PW 12-05	Tank Major Repair Yigo#1 Mangilao#2 Agat#2		$ 51,986.58
WW 05-04	Wastewater System Planning		$ 26,000.00
WW 09-06	Wastewater Collection System Repl/Rehab		$ 103,676.99
WW 11-03	Baza Gardens STP Replacement	$ 186,431.06	
WW 11-04	Facilities Plan/Design for Umatac Merizo WWTP		$ 46,142.15
WW 11-08	Agat/Santa Rita STP Replacement		$ 299.50
WW 12-01	Northern District WWTP Primary Treatment Upgrades		$ 6,486.06
WW 12-03	Agana WWTP Interim Measures		$ 200,000.00
MC 05-02	Land Survey		$ 312.68
		$ 886,431.06	$ 886,431.06

$ -

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 19- FY2018
Relative to Approval of a Contract for Construction of **Outfall Effluent Diffuser Installation** for the Upgrade of the Northern District Wastewater Treatment Plant to Secondary Treatment, GWA Project No. S-18-002-OEA, (OEA Grant OCON 676-16-02)

What is the project's objective and is it necessary and urgent?
The objective of the diffuser installation project is to comply with the current National Pollutant Discharge Elimination System permit and mitigate impacts to nearshore waters and marine biological resources. The diffuser installation is necessary to properly discharge treated effluent from the Northern District Wastewater Treatment Plant over a large mixing zone. Additionally, the diffuser installation supports increasing the performance of the WWTP to address the impacts from the impending military relocation. The installation is urgent to avoid adverse seasonal weather and allow sufficient time for construction to meet the scheduled military relocation.

Where is the location?
The ocean outfall effluent diffuser will be installed west-northwest of Tanguisson Beach, approximately 1,950 feet from the shoreline into the ocean at 140 feet below the ocean surface. It will be attached to the existing deep ocean outfall pipe.

How much will it cost?
GWA Management seeks CCU approval for the proposed bid price of _____ Million _____ Dollars ($_____). With a ten percent (10%) contingency of _____ ($_____), the total authorized funding amount requested is _____ Million _____Dollars ($_____).

When will it be completed?
The anticipated completion of the construction activities by the contractor is August 2018, however this is dependent on weather and sea conditions.

What is the funding source?
Funding for the diffuser project is from Department of Defense, Office of Economic Adjustment (OEA) General Assistance Grant for water and wastewater improvements in support of the relocation of U.S. Marines and their dependents to Guam OEA Award No. OCON676-16-02, dated August 26, 2016.

The RFP/BID responses (if applicable):
____ firms registered for and picked up the bidding documents
____ firms submitted bids
_____ is recommended as the lowest priced, responsive and responsible bidder.

DRAFT

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

RESOLUTION NO. 19–FY2018

RELATIVE TO APPROVAL OF CONTRACT FOR CONSTRUCTION OF OUTFALL EFFLUENT DIFFUSER INSTALLATION FOR THE UPGRADE OF THE NORTHERN DISTRICT WASTEWATER TREATMENT PLANT TO SECONDARY TREATMENT, GWA PROJECT NO. S18-002-OEA (OEA GRANT OCO N676-16-02)

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, the U.S. Department of Defense, Office of Economic Adjustment awarded to GWA a General Assistance Grant (OEA Award No. OCON676-16-02) for community investment August 26, 2016 for $21,000,000, of which funding for the outfall effluent diffuser is included; and

WHEREAS, the General Assistance Grant is to be used for water and wastewater improvements in support of the relocation of U.S. Marines and their dependents to Guam; and

WHEREAS, the report "Final Guam Water and Wastewater Assessment Report in Support of the Economic Adjustment Committee Implementation Plan," (NAVFAC, Department of the Navy, February 2015) has recommended the design and construction of NDWWTP treatment upgrades to comply with current National Pollutant Discharge Elimination System permit and mitigate impacts to wastewater utilities, nearshore waters, and marine biological resources; and

WHEREAS, installation of the Ocean Outfall Effluent Diffuser was recommended in the report; and

WHEREAS, GWA has advertised an Invitation for Bid IFB-01-ENG-2018 dated January 16, 2018, soliciting bid proposals from experienced, responsible, and responsive bidders to construct and install the ocean outfall effluent diffuser; and

WHEREAS, the Pre-Bid Conference was attended by six (6) interested construction firms and of those five (5) firms picked up the appropriate bid documents, from which GWA received bid submittals from _____ (__) firms of the six (6) firms before the bid submittal deadline (See EXHIBIT A – Abstract of Bids); and

WHEREAS, GWA Engineering and the Program Manager (PM/CM) analyzed all bid proposals received on February 23, 2018 and determined that _____, who submitted the lowest bid as being the responsive and responsible bidder and met all the bid requirements set forth by GWA (See EXHIBIT B – Recommendation Memorandum); and

WHEREAS, GWA Management finds the _____ bid proposal of _____Million _____ Dollars ($_____) to be acceptable (See EXHIBIT C – Bid Proposal); and

WHEREAS, GWA Management is seeking approval to enter into contract with _____ for IFB-01-ENG-2018 in the amount of _____ Million _____ Dollars ($_____), and

WHEREAS, the funding source for the construction project will be from the OEA General Assistance Grant (OCON676-16-02); and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms of the bid proposal submitted by _____ are fair and reasonable.

3. The CCU hereby authorizes the management of GWA to accept the bid from _____ attached hereto as EXHIBIT C, and which is also incorporated into this Resolution in its entirety.
4. The CCU hereby authorizes the management of GWA to execute an Agreement with _____ in the amount of _____Million _____ Dollars.
5. The CCU hereby authorizes the funding source for this project to be described above.
6. The CCU hereby authorizes the funding total of _____ Million _____ Dollars ($_____), along with a ten percent (10%) contingency of _____ ($_____), bringing the total requested funding amount to _____ Million _____ Dollars.

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 27th day of February, 2018.

Certified by:

_____
JOSEPH T. DUENAS
Chairperson

Attested by:

_____
J. GEORGE BAMBA
Secretary

DRAFT

SECRETARY'S CERTIFICATE

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

DRAFT

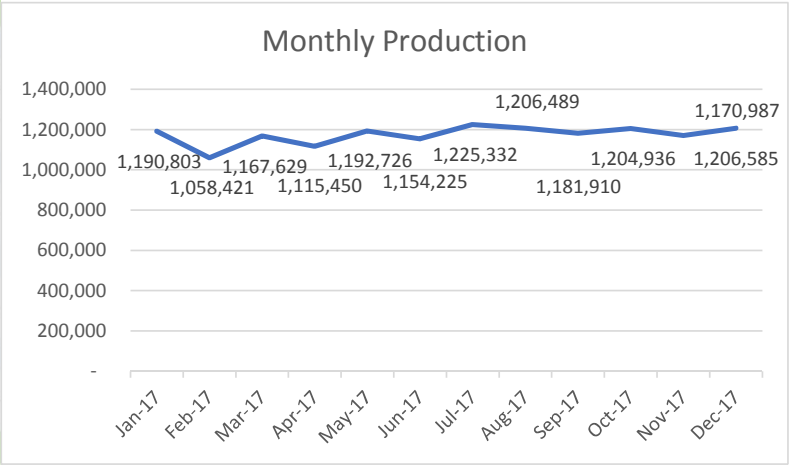
GUAM WATERWORKS AUTHORITY

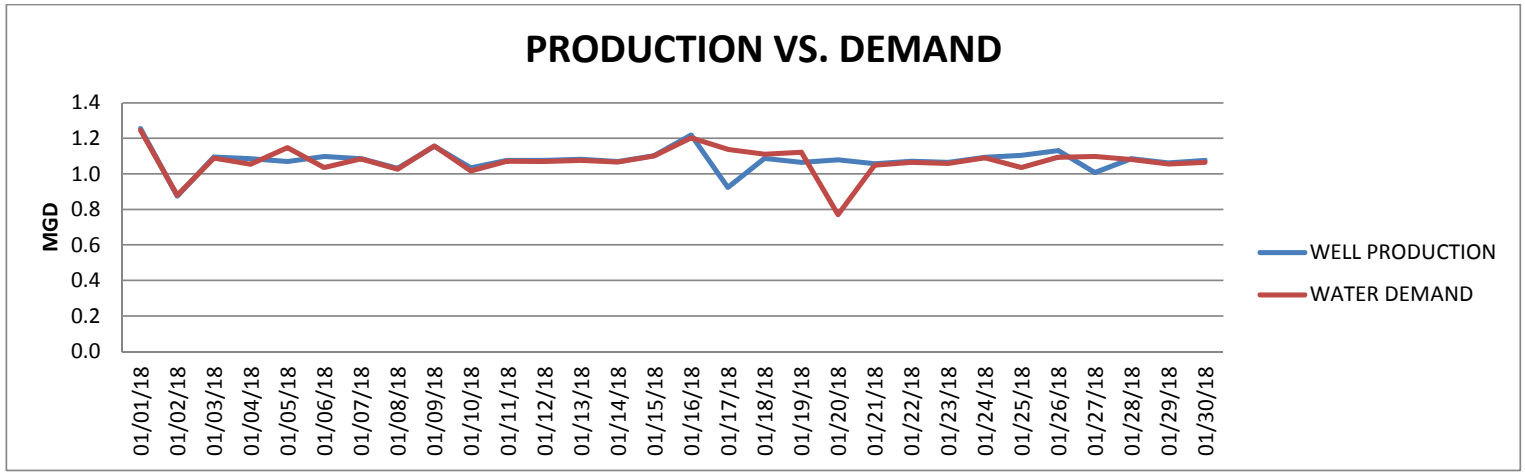
General Manager's Report
GWA Work Session, February 20, 2018

Operations Update

Production

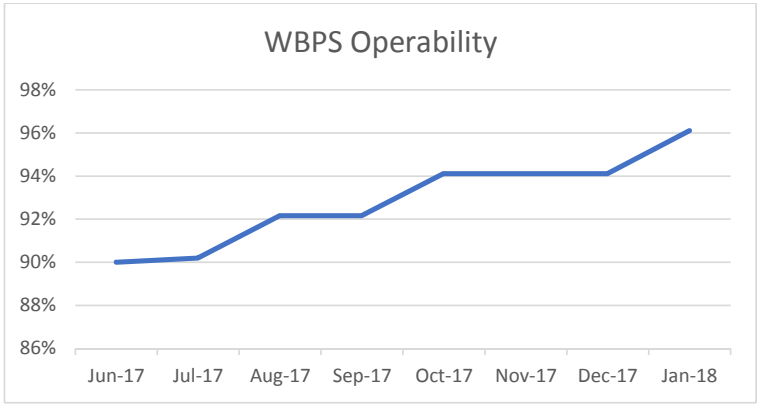
Monthly Production Summary - January 2018			
Deep Wells			34.7 MGD
Active wells =	96	of 120	
Avg days in operation =	28.54	days	
Total Production =	1,076,807	Kgals	
Springs			0.00 MGD
Avg days in operation =	0	days	*placed on standby
Total Production =	0	Kgals	
Ugum Surface Water Plant			2.0 MGD
Avg days in operation =	30	days	
Total Production =	62,600	Kgals	*data pending
Tumon Maui Well			1.02 MGD
Avg days in operation =	30	days	
Total Production =	31,580	Kgals	*data pending
	1,170,987	Kgals	37.8 MGD

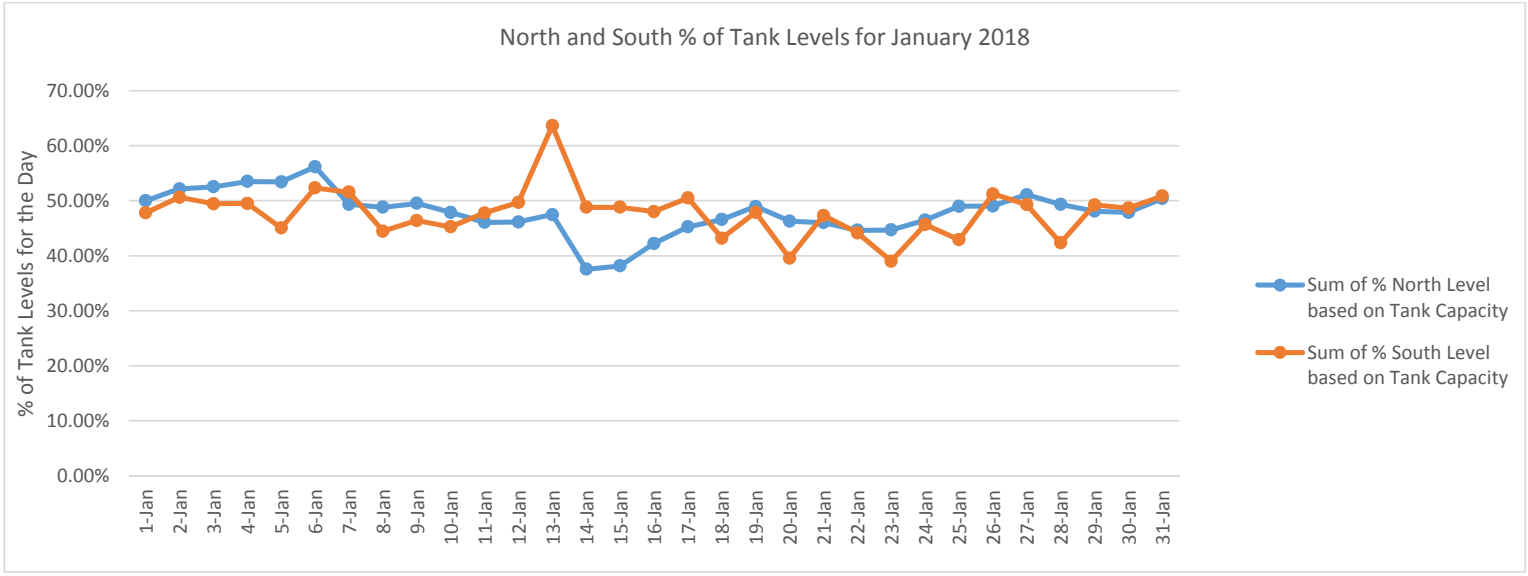




Distribution

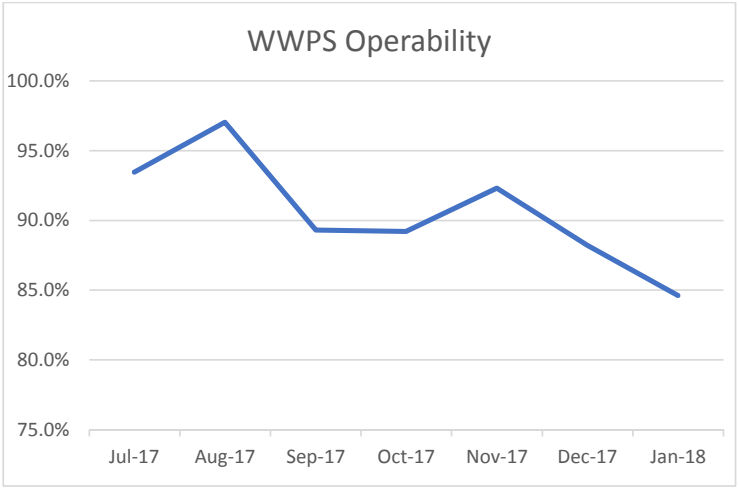
Monthly Distribution Summary - January 2018					
Water Booster Pump Stations					
	District	No. of Stations	Total Pumps	Pumps Operating	% Operationa
	Northern	11	21	20	95.2%
	Central	7	15	14	93.3%
	Southern	7	15	15	100.0%
		25	51	49	96.1%





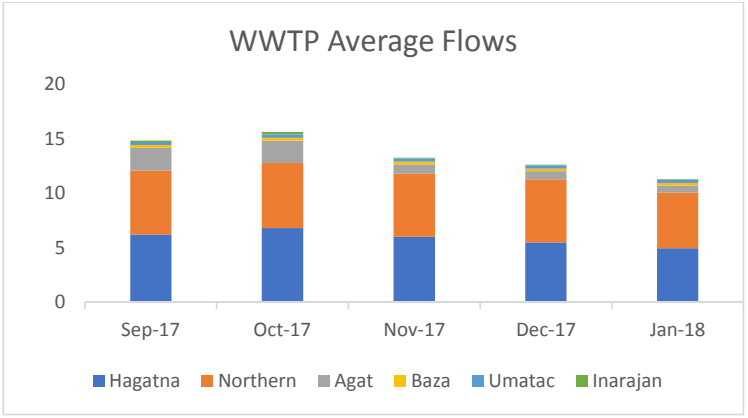
Wastewater Collections

Monthly Collections Summary -January 2018					
Wastewater Pump Stations					
	District	No. of Stations	Total Pumps	Pumps Operating	% Operational
	Northern	22	52	46	88.5%
	Central	29	63	56	88.9%
	Southern	27	54	41	75.9%
		78	169	143	84.6%

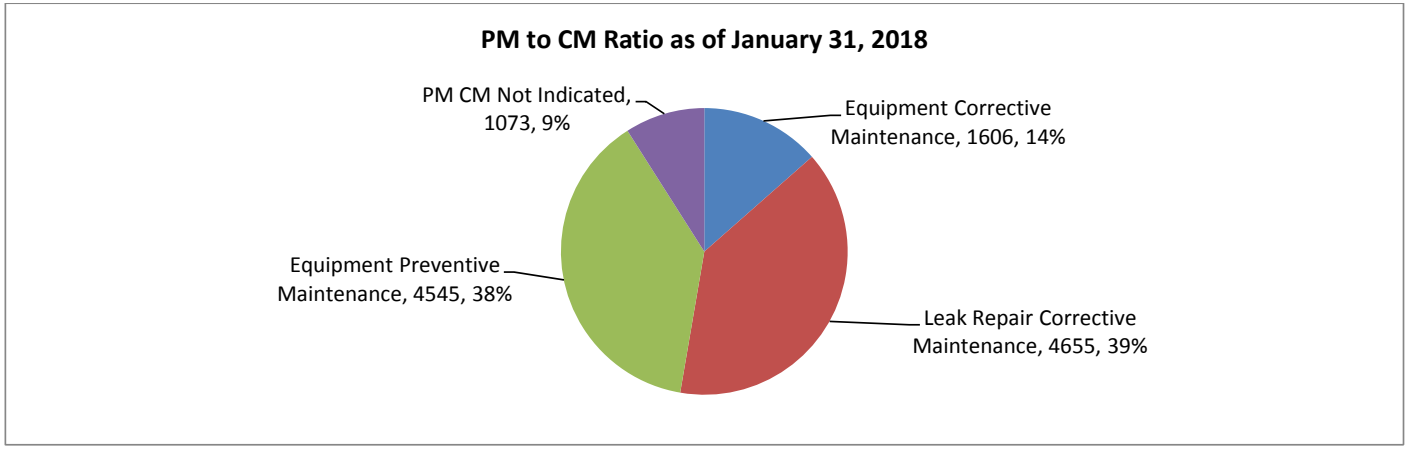


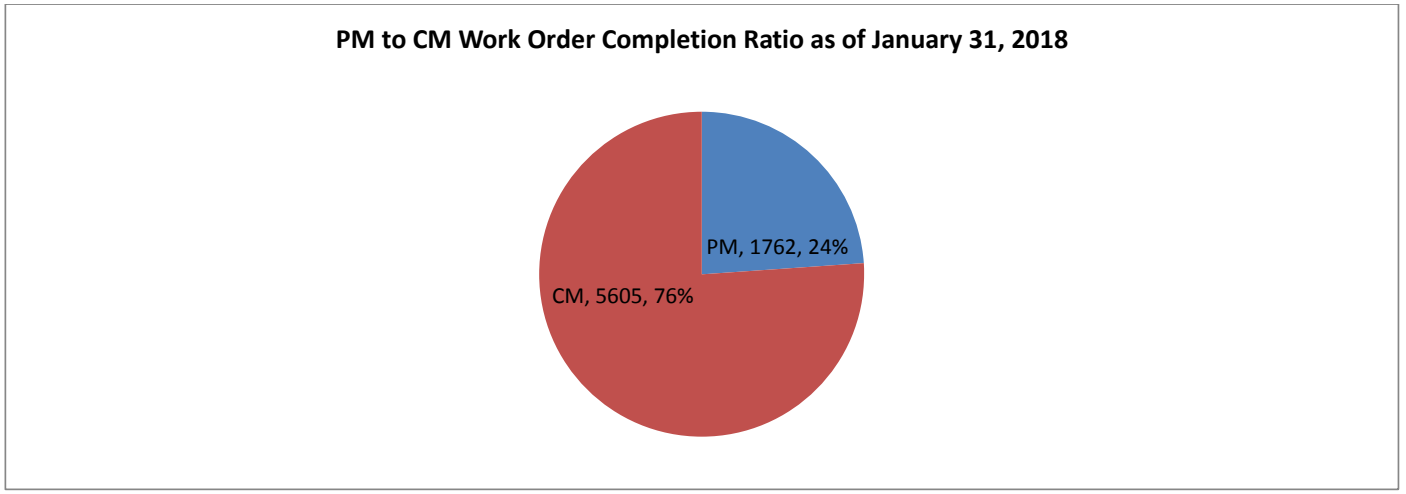
Wastewater Treatment

Monthly Wastewater Treatment Summary - January 2018				
WW Treatment Plants - Flows				
	Facility	**Avg. Daily Flows**	**Sludge (lbs)**	**Sludge Disp. ($)**
	Hagatna	4.96	373,140	$ 33,583
	Northern	5.1	1,227,040	$ 110,434
	Agat	0.64		
	Baza	0.25		
	Umatac	0.30		
	Inarajan	0.05		
		11.3	1,600,180	$ 144,016



Asset Management





Operational Issues

- 25 additional trades helpers started work this month:
    - Production –
    - Distribution –
    - WW Collection –
    - WW Treatment -
- GWA Employees continue to apply for and take computer-based certification testing conducted as a joint effort between GEPA, GWA, UOG and the Western Pacific Subsection of AWWA. So far, over 40 individuals have participated in the certification testing at various certification levels, with 10 receiving passing scores.
- Deployment of new light and medium duty fleet this month

Production & Distribution

- Leak repair
    - backlog has been significantly cleared; less than 60 pending repairs
    - pending IFB for leak repair services
    - pending for advanced remote leak detection services pending
- General Counsel working on letter to chlorine supply vendor regarding maintenance of minimum inventory levels per our contract.
- Ugum WTP – assessment of existing SCADA system completed; report and recommendations pending.
- GAC Treatment Systems for wells affected by PFOS
    - NAS-1
        - Permanent modifications to NAS-1 GAC Treatment System pending – confirmed for summer break;
        - Replacement Carbon being ordered
    - A-23/A-25:
        - existing GAC canisters for re-use have been isolated from the system and are being cleaned;
        - GWA evaluating potential to re-program DOI grant funding to expedite this work.
    - GIAA System: GIAA advised to provide replacement GAC
- 2018 Pump/Motor order – released on February 16, 2018
- GWA Crane Repair –parts have arrived, installation completed but error codes persist; vendor consulting manufacturers technician.

Wastewater Collection & Treatment

- CCTV:
  - Crews completed approximately 3 miles in January; work schedule impacted by smoke testing and inspections for I&I affecting Barrigada/Mangilao area, and maintenance of critical lines serving Route 16 SPS
  - Planning and Ops have initiated conversion of older (2012) CCTV data for compatibility with current condition assessment protocols
- Pump station facility maintenance efforts to begin shortly
- FOG Program
  - Comments received from US EPA, Program Manual being finalized
  - 2nd Residential Collection Program being coordinated for Central service area
- Agana WWTP outfall pump repairs being prioritized
- Northern District WWTP drying beds and digesters being cleared to facilitate design work for plant upgrades

Meters

COMPLETED FIELD ACTIVITY JAN THRU JAN 2018 (POSTED IN CIS)	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	TOTAL:	JAN 2018 COMPLETED FIELD ACTIVITIES (IN PROCESS) TO BE POSTED IN CIS
GWA - Test Meter	30	9	9	371	745	87	393	743	1000	1007	434	378	750	5956	368
GWA - Meter Exchange	393	179	220	276	482	353	501	807	1526	1039	452	259	239	6726	222
GWA - Verify Zero Report	30	124	114	94	96	402	261	199	550	89	82	169	356	2566	10
GWA - Verify Low Usage	0	0	0	2	37	36	196	488	657	202	127	612	858	3215	173
TOTAL:	453	312	343	743	1360	878	1351	2237	3733	2337	1095	1418	2203	18463	773

# OF METERS TESTED AS PER METER TEST FACILITY REPORTS:	345	350	144	252	305	210	302	397	1013	1130	927	704	721	6800	
# OF BACKBILLINGS APPLIED AS PER FINANCE REPORTS:	0	0	0	20	122	84	29	111	219	80	77	4	136	882	$ 594,860.44

# OF FIELD CREW PERFORMING CHANGE OUTS:	19	10	13	9	21	21	14	24	35	28	28 *	28 *	5
# OF ADMIN STAFF TO CREATE AND POST FIELD ACTIVITIES IN CIS:	7	4	5	6	9	9	10	13	15	15	13	13	8
# OF SUPPLY STAFF TO ISSUE MATERIALS AND PROGRAM NEW METERS:	2	2	2	2	2	2	2	2	2	2	2	2	2
# OF TEST FACILITY PERSONNEL TESTING METERS:	2	2	2	3	3	3	3	3	3	3	3	3	3
# OF ACCOUNTANTS CALCULATING BACK BILLS:	0	0	0	2	3	2	2	3	3	2	2	2	2
TOTAL:	30	18	22	22	38	37	31	45	58	50	48	48	20

*Project overtime on hold Nov 18, 2017 thru Dec 16, 2017. During this period, 4 personnel performed work on this project during the regular work day with a majority of the work completed during Nov and Dec month occuring before and after the OT moratorium.

Marbo (Andy-South) Wells – Status

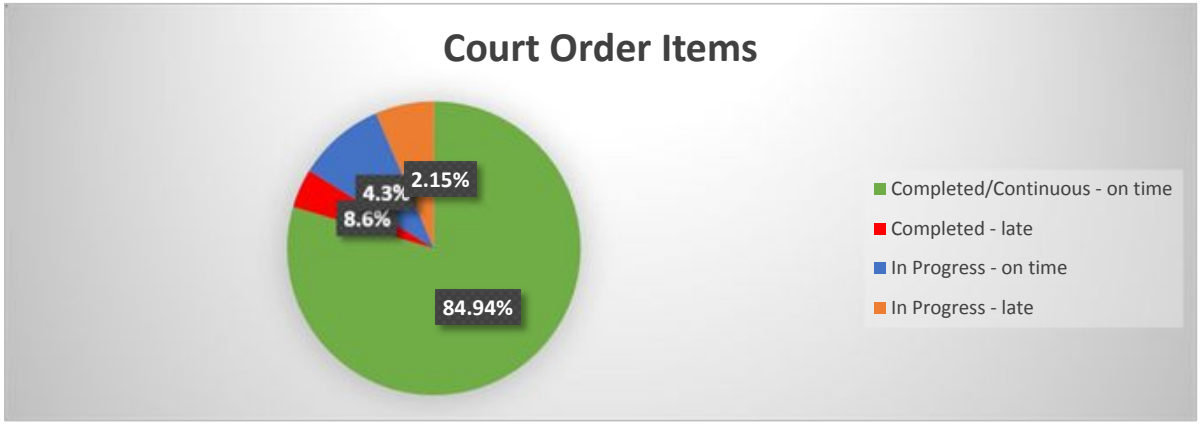
- Governor's Counsel provided recommended modifications to re-conveyance document to GSA
- GSA has not accepted the proposed changes
- GWA waiting for feedback from GSA

One Guam Update

- Tumon Maui Well:
  - GWA's Consultant B& C are working to develop a plan to address the Leaks from the vent shaft. GWA will determine the course of action to remedy the problem.
- Santa Rosa Tank:
  - MOU for Santa Rosa Tank – in progress. Changes are being made to the location of the valves.
  - B&C did a presentation on the modelling results on the appropriate levels for the tanks to ensure that neither party will be negatively impacted.
- Agat Santa Rita WWTP:
  - For the in-kind, Cynthia Blas is waiting on the final the response from NBG PWD on the easement will be transferred to GWA. The letter will be finalized on 2/16/18.
  - The DOD's Real Estate office determined that the value of the easement is $16,700. The in-kind contribution needs to match that amount.
- Distribution Systems:
  - GWA continues to work with DOD to resolve wastewater line issues in the Leon Guerrero area.
- DOD determined that they will not be able to connect to the new sewer line. However, they are interested in looking at future projects for further collaboration.

Court Order

	Items	On-time Items Completed/Continuous	Items Delayed	Completed Late	Items on Schedule	Performance %
Court order total	93	80	1	9	3	98.9%



Status Information

- 1 item delayed
  - Meters
- Final Date to complete all Court Order items is December 31, 2020.
- Overflow or Bypass events reported to USEPA:
  - Jan. 26, 2018, Bishop Olano St., Santa Rita – Rocks, Rags, etc. (Non-FOG)
  - Jan. 30, 2018, East Obrien Dr., Hagåtña - Gravel and FOG
  - Feb. 4, 2018, Astumbo Lift Station 1, Dededo - Rag caught in pump impeller.

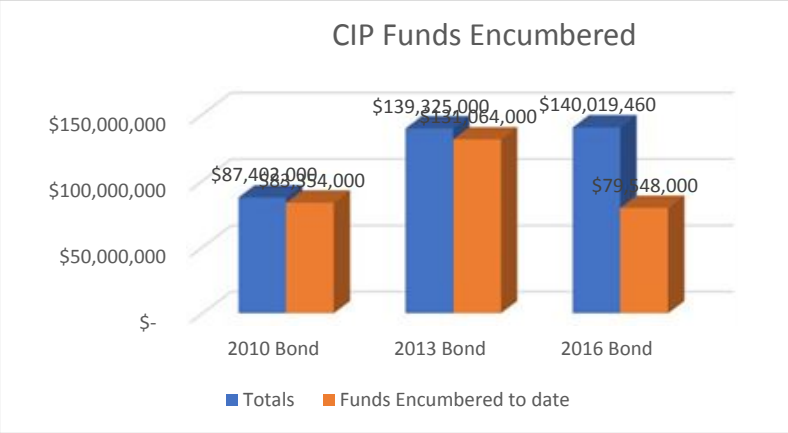
CIP Summary

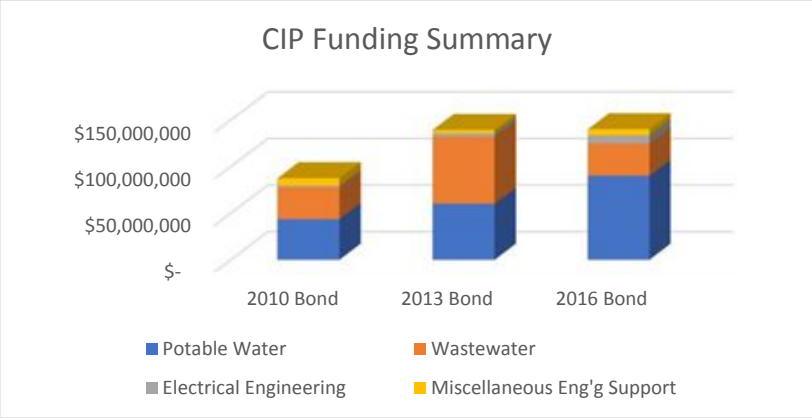
CIP Summary - Project Encumbrance

	2010 Bond		2013 Bond		2016 Bond			
	Funded	Complete	Funded	Complete	Funded	Complete	Total CIP Projects	%
Potable Water	28	17	21	7	20	0	35	49%
Wastewater	16	13	7	3	8	1	22	31%
Electrical Engineering	5	5	6	1	5	0	10	14%
Miscellaneous Eng'g Support	2	0	3	1	4	1	4	6%
Totals	51	35	37	12	37	2	71	100%
% of Total CIP by Fund Source	72%		52%		52%			

CIP Summary - Project Amounts

	2010 Bond		2013 Bond		2016 Bond			
	Funded	%	Funded	%	Funded	%	Total CIP Projects	%
Potable Water	$ 41,903,305	48%	$ 58,317,117	42%	$ 64,647,830	46%	$ 164,868,252	45%
Wastewater	$ 36,009,577	41%	$ 73,837,883	53%	$ 60,227,170	43%	$ 170,074,630	46%
Electrical Engineering	$ 1,748,118	2%	$ 3,395,000	2%	$ 8,750,000	6%	$ 13,893,118	4%
Miscellaneous Eng'g Support	$ 7,741,000	9%	$ 3,775,000	3%	$ 6,394,460	5%	$ 17,910,460	5%
Totals	$ 87,402,000	100%	$ 139,325,000	100%	$ 140,019,460	100%	$ 366,746,460	100%
Funds Encumbered to date	$ 83,354,000	95%	$ 131,064,000	94%	$ 79,548,000	57%		
% of Total CIP Funding	23.8%		38.0%		38.2%			

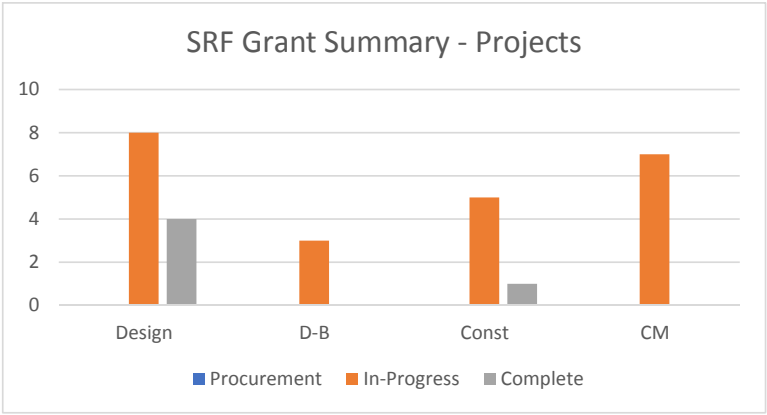




SRF Grant Summary

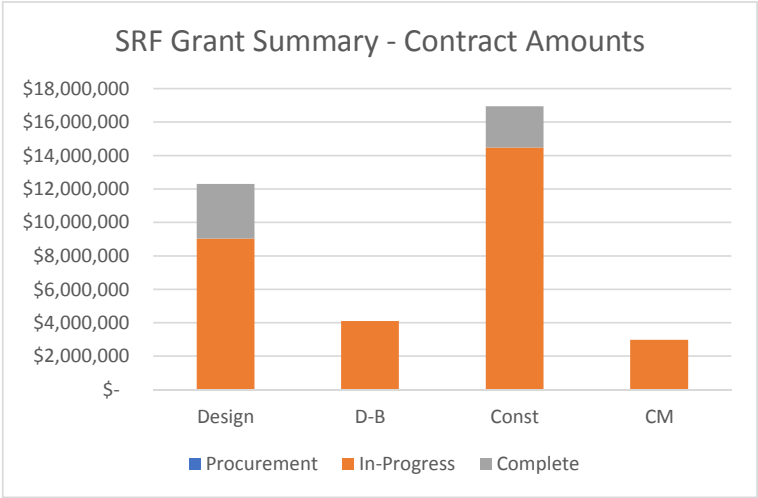
SRF Grant Summary - Projects

	Procurement	In-Progress	Complete	Totals	%
Design	0	8	4	12	43%
D-B	0	3	0	3	11%
Const	0	5	1	6	21%
CM	0	7	0	7	25%
Totals	0	23	5	28	
%	0%	82%	18%		



SRF Grant Summary - Contract Amounts

	Procurement	In-Progress	Complete	Totals	%
Design	$ -	$ 9,025,796	$ 3,279,629	$ 12,305,425	34%
D-B	$ -	$ 4,096,694		$ 4,096,694	11%
Const	$ -	$ 14,480,091	$ 2,470,658	$ 16,950,749	47%
CM	$ -	$ 2,977,793	$ -	$ 2,977,793	8%
Totals	$ -	$ 30,580,374	$ 5,750,287	$ 36,330,661	
%	0%	84%	16%		



OEA Grant Summary

- NDWWTP Upgrades
  - Technical memoranda / design workshops for solids processes expected in March
  - USEPA NEPA Document preparation on-going; 30% Design Submittal is next major milestone
- Outfall Diffuser:
  - IFB has been issued (1/16/18);
  - Pre-bid meeting 1/26/18;
  - Bids due 2/23/18 (extended)
- Sewer Line Interceptor Design-Build
  - Multi-Step IFB has been issued.
  - Technical Proposal Due 3/8/18
  - Price Proposal Due 4/12/18
- NGLA Observation wells – Design work on-going

Action Item	Date (Target)	Date (Actual)	Status	Remarks
Project Funds Available	July-16	AUG-30-16	Completed	
Land Acquisition	Jan-17	Jan-17 (Compensation Pending)	Pending	Survey complete, appraisals complete – under review
Procure PM/CM Firm	Jan-17	Jan-17 (NTP Issued Feb 10th)	Completed	
Procure Design Firm	Jul-17		Completed	Contract issued; kickoff pending
Design -- 30/60/90/Final -- Review	Jun-18		On-target	Project design schedule under review by PM/CM
NEPA Analysis and Determination	Feb-17		Delayed	USEPA work on-going; procurement of contractor completed
Procure Construction Firm	Dec-18		On-target	
Construction Complete/Commence Operations	Nov-21		On-target	
Sewer line connection from MCB to GWA infrastructure	Jul-19		On-target	
MCB Initial Operating Capability	Jul-22		On-target	

Land Acquisition Summary

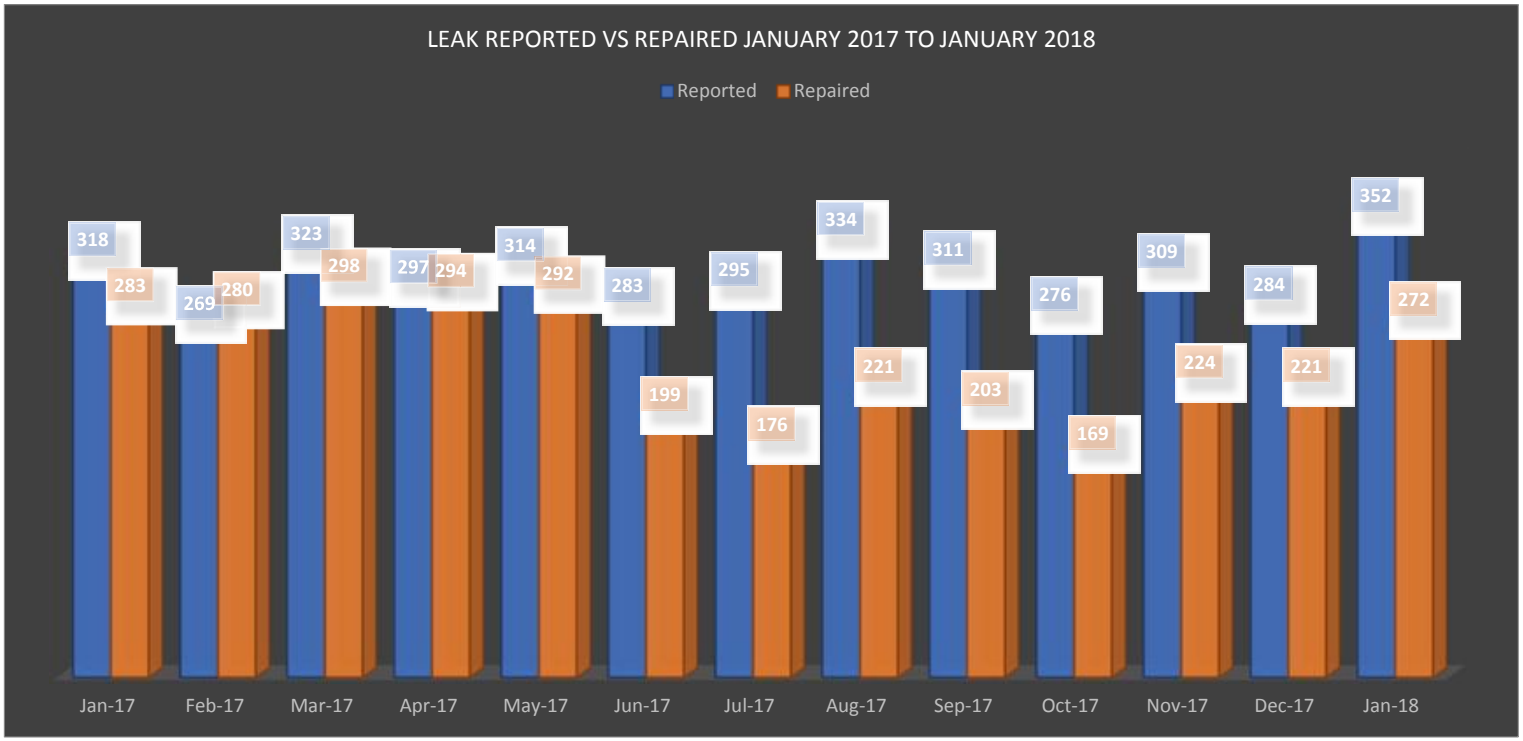
GWA Facility	Location	Gov. or Private Property	Land Acquisition Status
Tanks	Ugum	Private	TGE to draft Letter of Decision for private property owners 11/09/17
	Astumbo	Gov't. - CLTC	GWA and DLM working together on Land Registration process. Pending Notification of surrounding lot owner information from DLM
	Piti	Private	Letter of Intent sent out to private property owners on 01/29/2018
Expansion of the Northern District Wastewater Treatment Plant (NDWWTP)	Dededo	Gov't - GALC	Funding Approval Request Sent to Finance 11/30/17; Title & Escrow Open 12/28/17
Deep Well	A-12	Private	Property ownership vested in GWA 10/16/17
	AG-12	Dept. of Agriculture/Manhita Farms	DCA to submit revised Land Registration map to DLM for review and comments 01/16/18
	Y-8	Gov't. - CLTC	Parceling Map submitted to Governor's Office for signature on 01/31/2018
Booster Pump Station	Agfayan	Private	GWA started land acquisition inquiry process on 11/18/16; 2nd follow up Letter of Intent sent out 11/16/17; 2nd LOI Letter returned (unclaimed) 12/7/17; 2nd follow up Letter of Intent sent out to 12/29/17
Sewer Pump Stations	Property adjacent to Southern Link	Private	GWA started acquisition process on 12/23/2016. Property ownership vested in GWA 08/11/2017

NRW – Update

- Water Audit update on-going
  - Production rates are being reviewed for accuracy and refined
  - Unmetered, Authorized uses are being quantified
  - Meter and billing inaccuracies are being reviewed and refined

Leak Repair Summary




LEAK REPORTED VS REPAIRED JANUARY 2017 TO JANUARY 2018
Reported
Repaired
318
283
269
280
323
298
297
294
314
292
283
199
295
176
334
221
311
203
276
169
309
224
284
221
352
272
Jan-17
Feb-17
Mar-17
Apr-17
May-17
Jun-17
Jul-17
Aug-17
Sep-17
Oct-17
Nov-17
Dec-17
Jan-18



Assumptions:

1. Leak rate = 4 gpm
2. Cost per kgal = $4.00

2011 Court Order Performance Report Card / Dashboard as of 01/30/2018

GUAM WATERWORKS AUTHORITY

Court Order Performance Report Card

	Items	On-time Items Completed/Continuous	Items Delayed	Completed Late	Items on Schedule	Performance %
Court order total	93	80	1	9	3	98.9%

Legend in detail section below.

Fill Color	Meaning
Lime green	Done/Completed
Yellow	On Schedule
Blue	Behind Schedule
Violet	Completed Behind Schedule
Yellow Green	Ongoing and Continuous

2011 Court Order Performance Report Card / Dashboard as of 01/30/2018

Name	SO #	No	Project	GWA SO Timeline	Due to EPA	Status
Northern District WWTP Primary Treatment Upgrades.	2	1	Interim Primary Treatment Improvements Complete	09/30/2012	@EPA	**Done** Construction completed 12/13/2012
	3(a)	2	Interim Effluent to meet Table 1	09/30/2012 monitoring started	@EPA	**Done** Table 1 compliance beginning January 9, 2013.
	3(a)(1)	3	PE Review (Application for 7.5 MGD pending)	3 months after compliance with 3(a)	@EPA	3(a)(1) Application to increase to 7.5 MGD Approved 08/13/2017
	3(a)(2)	4	(Application for 9 MGD)	3 months after compliance with 3(a)(1)	TBD	Not considered necessary because of OEA Upgrade of NDWWTP
	3(c)	5	Effluent monitoring (calendar-year quarter)	**Completed**	@EPA	**Done. Full year completed 01/08/2012**
	4(a)	6	Sludge & Biosolids Management Plan	12/31/2011	@EPA	**Done.** Biosolids to Landfill EPA Approval 08/17/2014
	4(a)	7	Adequate stabilization and dewatering	9/30/2012	@EPA	**Done.** By Design-Build contract.
	4(b)	8	Biosolids Management, Quarterly Report	Quarterly Report	@EPA	Routine Monitoring Report, **Repeats Quarterly**
	4(c)	9	Biosolids Management, repair & replace facilities	09/30/2012	@EPA	**Done** Construction Complete 12/13/2012. Biosolids to Landfill
	4(d)	10	Biosolids Management, implement plan	9/30/2012	@EPA	**Done** - Biosolids to Landfill
Agaña WWTP Interim Measures.	5	11	Primary Treatment Plant Upgrades	06/30/2013	@EPA	**Done.** CEPT is operational and in final tune-up stages.
	5(a)	12	Scope and schedule	09/30/2011	@EPA	
	5(b)	13	Septage Handling Complete	06/30/2013	@EPA	**Done.** Septage Receiving is completed at the NDWWTP (location option) reported 06/26/2013.
	5(b) 1	14	Septage handling design contract signed	12/31/2011	@EPA	
	5(b) 2	15	Septage handling construction notice to proceed	06/30/2012	@EPA	
	5(c)	16	Grit and FOG Complete	06/30/2013	@EPA	Phase III CEPT is in operations.)
	5(c) 1	17	Grit and FOG design contract signed	12/31/2011	@EPA	**Done** Grit and FOG reported 06/06/2013
	5(c) 2	18	Grit and FOG construction notice to proceed	06/30/2012	@EPA	**Done** Submitted 11/17/2011
	5(d)	19	Repair Solids handling	11/17/2011	@EPA	**Done** O & M Plan reported 05/31/2012
	5(e)	20	O & M Plan	05/31/2013	@EPA	
	5(f)	21	Effluent monitoring (calendar-year quarter)	**Completed**	@EPA	**Done. Full year completed 01/08/2012**
	6	22	Prevent Effluent Back Surge	06/30/2013	@EPA	**Done** Old outfall decommissioned (plugged) 06/25/2013 **Done** Old outfall
	6	23	Effluent Back Surge Plan	12/30/2011	@EPA	decommissioned (plugged) 06/25/2013
I&I SSES	7	24	Collection System SSES and I/I evaluation	**Done**.	@EPA	**Done**.
SSES Work Plan	8	25	Work Plan	180 days	@EPA	**Done** Reported 08/13/2012
	8(a)	26	Flow and rainfall data	N/A	@EPA	**Done** Reported 04/25/2013
	8(b)	27	I/I Southern	540 days	@EPA	**Done** Reported 04/25/2013
	8(c)	28	I/I Central	900 days	@EPA	**Done** Reported 04/28/2014
	8(d)	29	SSES Southern	540 days	@EPA	**Done** Reported 04/30/2013 – update 04/29.2016
	8(e)	30	SSES Central	900 days 09/15/2015 EPA Disap. Ltr.	@EPA	**Done** – Completed June 2, 2017
	8(e) 2	31	SSES Central Report	09/15/2015 EPA Disapproval Letter	@EPA	**Done** – Completed June 2, 2017
Agat / Santa Rita,	9(a)	32	By Pass Report	60 days	@EPA	**Done** Reported 01/04/2012
	9(b)	33	Flow Meter	180 days	@EPA	**Done** Reported 07/26/2012
	9(c)1,2,3	34	Report evaluating near term measures	180 days response sent 09/29/2014	@EPA	**Done** Reported 05/07/2012 GWA response 09/292014.
	9(d)	35	Implement near term measures d - Disinfection	03/23/2016	@EPA	**EPA specifications of 9(c), 9(d) and 9(f) on 09/24/2015.**
	9(e)	36	Implement near term measures e – sludge mgmt.	03/23/2016	@EPA	
	9(f)	37	Implement near term measures f – 75% Bypass Red.	03/23/2016	@EPA	
	10	38	System Evaluation	12/31/2013 response sent 09/29/2014	@EPA	CO **Done** Reported 12/28/2013 GWA response 09/29/2014.- update 04/29/2016
	11	39	System Upgrades	03/14/2017 Plant became operational.	@EPA	New Agat WWTP on line 03/14/2017
	11(a)	40	System Upgrades design	06/30/2014-NTP 10/13/2014	@EPA	CCU approval 08/26/2014. NTP was issued on 10/13/2014
	11(b)	41	System Upgrades notice to proceed	06/30/2015-NTP 10/02/2015	@EPA	NTP Ph.1 issued 10/02/2015 - NTP Ph.2 due 01/04/2016
Baza Gardens	12(a)	42	Interim Measures Evaluation (Independent PE)	180 days	@EPA	**Done** Reported 05/07/2012, PMO task
	12(b)	43	Interim Measures Complete	540 days	@EPA	**Done** Reported 05/01/2013 PMO task
	12(c)	44	Evaluation Bio Solids Report	180 days	@EPA	**Done**-EPA Approval 08/28/2014
	12(d)	45	Complete Bio Solids	360 days	@EPA	**Done** Reported 03/21/2013
	13	46	System Evaluation	04/30/2014	@EPA	**Done** Reported 04/30/2014 GWA response 10/02/2014
	14	47	System Upgrades	04/31/2018	@EPA	Critical path, need to complete I&I/SSES
	14(a)	48	System Upgrades, Design Starts	10/31/2015 NTP DCA 02/05/2016	@EPA	Linked to new Agat WWTP NTP DCA 02/05/2016
	14(b)	49	System Upgrades, Construction Starts	10/31/2016	@EPA	Linked to new Agat WWTP

2011 Court Order Performance Report Card / Dashboard as of 01/30/2018

Name	SO #	No	Project	GWA SO Timeline	Due to EPA	Status
Umatac-Merizo	15	50	Complete Evaluation	12/31/2013	@EPA	CO 15 **Done** Reported 12/31/2013 -- Critical path, completed I&I/SSES
	16	51	System Upgrades	12/31/2018	@EPA	Design Build contract executed 06/29/2017
	16(a)	52	System Upgrades, Design Starts	06/30/2016	@EPA	Design Build contract executed 06/29/2017
	16(b)	53	System Upgrades, Notice to Proceed	06/30/2017	@EPA	NTP Issued 06/30/2017
Sewer Cleaning	17	54	Sewer Cleaning (in annual and quarterly reports)	2017-2022 Preliminary Goal set.	@EPA	2017-2022 Preliminary Goal set.
Hot Spot Plan	18	55	Hot Spot Plan	EPA Revision letter o9/08/2015	@EPA	Last Revision submitted 10/23/2015 GWA WW Ops
CCTV	19	56	CCTV (in annual and quarterly reports)	2017-2022 Preliminary Goal set.--- Entire System Every5 years	@EPA	2017-2022 Preliminary Goal set.--- Entire System Every5 years
Sewer Hook-Up	20	57	Sewer Hook-Up	In Operation	@EPA	**Done –** available on GWA web site or at GWA Customer Service
Groundwater Chlorination	21	58	Groundwater Chlorination	540 days	@EPA	**Done** Reported 04/29/2013
Chlorine Residual Monitors	22	59	Plan	180 days	@EPA	**Done** Reported 09/94/2012
	22(a)	60	High Risk Wells	540 days	@EPA	**Done** Reported 05/02/2013
	22(b)	61	Moderate Risk Wells	2 years	@EPA	**Done** Reported 07/31/2013
	22(c)	62	All Other Wells	Completed 07/31/2017	@EPA	Completed 07/31/2017
Water Metering	23(a)	63	Plan & schedule	180 days	@EPA	**Done** Reported 05/08/2012
	23(a)	64	All connections are metered and mapped	2 years	@EPA	10/31/2016 Substantially complete-- **2** Sensus, **0** Metron left
	23(b)	65	Plan repair & maintain	180 days	@EPA	**Done** GWA Test facility operational 06/28/2013
Ugum Surface Water Treatment Plant	24	66	Construction complete	One year	@EPA	**Done** Reported 11/09/2012
	24	67	PE Inspection	60 days before start-up	@EPA	**Done** EPA Approval 08/26/2014
	25	68	PE Performance Operation Assessment	60 days before start-up	@EPA	**Done** EPA Approval 08/26/2014
	26	69	O&M Plan and Procedures	90 days before start-up	@EPA	**Done** Reported 08/10/2012 EPA Approval 08/17/2014
	27	70	Plant compliance	365 days	@EPA	**Done** Reported 02/07/2013
Sinajana Water Transmission Line	28(a)	71	Existing Construction Complete	180 days	@EPA	**Done** Reported 12/23/2011
	28(b)	72	Hydraulic Evaluation	180 days	@EPA	**Done** EPA No Further Comment 08/26/2014
	28(c)	73	Construction Complete (2 tanks)	540 days from 11/21/2013	@EPA	**GEPA Delays** Tank Constr. Completed August 2015: **In Service July 2016.**
	28(d) 1	74	Monitoring Plan	90 days prior	@EPA	**Done** Reported 09/07/2012
	28(d) 1	75	Implement- Monitoring Plan	For one year after start up	@EPA	GWA Compliance
	28(d) 2	76	Monitoring Plan	180 days prior	@EPA	**Done** EPA Approval 08/26/2014
	28(e)	77	Implement- Monitoring Plan	For one year after start up	@EPA	**Start 09/01/2015 – end 08/31/2016**
Storage Tank/Reservoir Rehabilitation and Replacement Program.	29(a) 1	78	Plan hydraulic analysis	90 days	@EPA	**Done** Reported 11/09/2012
	29(a) 2	79	Hydraulic analysis	540 days	@EPA	**Done** EPA No Further Comment 08/26/2014
	29(b) 1	80	Plan minimize service interruptions	90 days after approval	@EPA	**Done** EPA approval 08/26/2014
	29(b) 2	81	Tank inspection schedule	540 days	@EPA	**Done** EPA approval 08/26/2014
	29(b) 3	82	Complete Barrigada (1 @ 2 MG tank)	540 days	@EPA	**Done**
	29(b) 4	83	Assess additional 7 tanks	5 years (11/10/2016)	@EPA	**Done** DCA contract task
	29(b) 5	84	RRRR 7 additional tanks	5 years (11/10/2016)	@EPA	**Done** PMO executed procurement
	29(b) 6 i	85	RRRR 10 additional tanks	7 years (11/10/3018)	@EPA	**Ongoing** - Completed the hydraulic analysis
	29(b) 6 ii	86	RRRR remaining	12/31/2020	@EPA	
	29(c)	87	In Quarterly / Annual Report	Quarterly / Annual Report	@EPA	GWA Compliance **Repeats Quarterly**
Section III REPORTING REQUIREMENTS	31(a)(1)	88	Quarterly Report	Jan., April, July, Sept. Continuous	@EPA	Due by the 30th of the specified months
	31(a)(2)	89	Reports on Non Compliance	Within 30 days from determination of delay	@EPA	As determined by GWA
	31(b)	90	SSO and Bypass Report	Jan., April, July, Sept. Continuous	@EPA	Due by the 30th of the specified months
	31(c)	91	Annual Report	January each year	@EPA	Included with 31(a) each Year
Section IV NOTICES	35	92	CO contacts		@EPA	GWA Compliance report 06/29/2016
	36	93	Formal notices of change in CO contacts	Whenever specified staffing changes	@EPA	GWA Compliance report 06/29/2016

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Guam Waterworks Authority Sanitary Survey Significant Deficiencies for the Water System

Prepared By: Paul Kemp, Vangie Lujan and John Riegel **Update**: January 23, 2018

NEIC Work Product No. VP0989E01 GWA Sanitary Survey Significant Deficiency Items:

Preface to the Corrective Action Plan

Reporting

Formal updates of the status of management of the Corrective Action Plan will be submitted on a regular basis to Region 9, USEPA.

The reports will be delivered on a quarterly basis beginning at the end of the next calendar-year quarter following the approval date of this Corrective Action Plan. Reporting will continue on a schedule by mutual agreement between GWA and Region 9 USEPA.

The vehicle to be used for this reporting will be an update of this document.

For Court Order updates/reporting, see the Court Order Submittals.

1. Sources—Lack of routine maintenance (both corrective and preventative of sources).

- Potential bacteriological and/or chemical contamination of source
- Many wells found to have leaking pipes and valves

Recommendation:

- Lack of adequate site security—missing or damaged fencing and signs of vandalism (graffiti) on structures should be repaired or replaced.
- Begin routine and corrective maintenance of all wellhead appurtenances and well facilities—meters, valves, pumps, air relief valves, piping pressure gauges, etc.

Remove unnecessary items (old lines, gauges, meters, etc.)

Action Plan:
GWA is implementing new O&M SOPs, programs and systems on an on-going basis.

Proposed Action Item Schedule	Task Description
As of 06/25/2013.	55 new SOP's Implemented (assisted by CDM, EPA Grant)
Drafts and planed	CDM continues work, particularly on Asset Management
Average one a month by 06/30/2014	Complete new SOP's and implement
Semi-annually beginning 01/2014	**Training on SOP's Repeats Continuously, Managed for GWA by Ann Borja Supported by CDM Smith funded by EPA SRF.**
Updates (Reporting per Preface)	**Supported by CDM Smith funded by EPA SRF CMMS Is being implemented.**

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2.

Sources—No Wellhead Protection Plan

Many wells are located in close proximity to potential sources of fecal and other sources of contamination, and no wellhead protection plan in place for GWA wells.

- Potential bacteriological and/or chemical contamination of source
- Wells located near potential sources of contamination

Recommendation:

- Possible sewage source upstream (Talofofo Falls Park) - Should notify owner/operators of need to notify Ugum WTP if there is a spill or discharge
- Recreational activities on the Ugum River at the intake site which currently allow people in close proximity to the intake structure should be evaluated.

Action Plan:

GWA will build from the existing 1992 Guam Law, Ch. 7 section 7130 of the Water Resource Development and Operating Regulations (GEPA) entitled "Well Head Protection for Public Water Supply Well". BC to develop a plan to improve monitoring of the wellhead. Plan to be in accordance with existing Guam EPA Wellhead Protection.

Proposed Action Item Schedule	Task Description
05/30/2013	First Draft for GWA review
06/03/2014	First Draft submitted to USEPA
06/29/2015.	Final Submitted to USEPA; EA Engineering Science and Technology, Inc..
	Complete

3. Sources Ugum— Diesel fuel storage tank containment located near intake for Ugum Water Treatment Plant (WTP) is undersized;

Diesel fuel storage tank containment located near intake for Ugum Water Treatment Plant (WTP) is undersized; spill could contaminate the Ugum River. Potential chemical contamination of source

- Diesel fuel storage tank containment area at the intake was visibly undersized and was designed to discharge to the ground where it could flow downhill to the Ugum River

Comment: This item was incorrectly evaluated.

Tank is dual walled construction. Containment is adequate.

Proposed Action Item Schedule	Task Description
	Provide documentation verifying dual wall construction.
05/08/2013	Verification sent to EPA – Complete

4. Sources Well— Some wells have cracks and other openings in the well pads, well casings and improperly sealed sanitary seals.

Some wells have cracks and other openings in the well pads, well casings and improperly sealed sanitary seals. These are direct openings for contamination to enter wells. Potential bacteriological or chemical contamination of source.

- Cracks in well pads and well casings and improperly sealed sanitary seals
- Lack of well pads at some locations

Action Plan:

Initiate repair. Document completion of repair. Engage consultant for independent confirmation of repair work and production of report.

Proposed Action Item Schedule	Task Description
12/1/2013	Initiate repair work
2/1/2013	Engage consultant Brown and Caldwell
4/30/2013	Complete repair work
5/5/2013	Draft report to GWA
6/6/2013	Report sent to USEPA - Complete

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NEIC Work Product No. VP0989E01 GWA Sanitary Survey Significant Deficiency Items:

5. Sources Well— Missing screens on well casing vents.

Potential contamination of source.

- Missing screens on well casing vents

Action Plan:
Initiate repair. Document completion of repair. Engage consultant for independent confirmation of repair work and production of report.

Proposed Action Item Schedule	Task Description
12/1/2013	Initiate repair work
2/1/2013	Engage consultant Brown and Caldwell
4/30/2013	Complete repair work
5/5/2013	Draft report to GWA
6/6/2013	Report to USEPA
5/13/2013	Report sent to USEPA - Complete

6. Sources Well— Wells have bypass lines that were routed into the ground and off-site without an air gap.

Wells have bypass lines that were routed into the ground and off-site without an air gap. Potential contamination of source. Many wells found to have bypass lines that were routed into the ground and off-site without an air gap

Action Plan:
Initiate repair. Document completion of repair. Engage consultant for independent confirmation of repair work and production of report.

Proposed Action Item Schedule	Task Description
12/1/2013	Initiate repair work
2/1/2013	Engage consultant Brown and Caldwell
4/30/2013	Complete repair work
5/5/2013	Draft report to GWA
6/6/2013	Report to USEPA
5/23/2013	Report sent to USEPA - Complete

7. Sources Spring--Lack of operating flow meter at spring source makes operation (including chlorine dosing) problematic.

Difficulty in ensuring adequate chlorination/disinfection

Recommendation:
Remove heavy vegetative growth around the clear well structure.
Implement routine and corrective maintenance at all spring appurtenances—meters, valves, pumps, piping, pressure gauges, etc.

Action Plan:
Initiate repair. Document completion of repair.

Proposed Action Item Schedule	Task Description
12/1/2013	Initiate repair work
4/30/2013	Complete repair work
6/6/2013	Report to USEPA
5/23/2013	Report sent to USEPA - Complete

8. Sources Spring-- Santa Rita Spring Box (Clear Well) –

– Gaps between corrugated metal roof and clear well walls allow entry by animals, birds and reptiles. Allow bacteriological contamination to enter source.

Action Plan:
Initiate repair. Document completion of repair.

Proposed Action Item Schedule	Task Description
05/08/2013	Reported to USEPA - Complete

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NEIC Work Product No. VP0989E01 GWA Sanitary Survey Significant Deficiency Items:

9. Treatment-- Lack of operations and maintenance (Ugum, Santa Rita Spring)

Recommendation:

- Implement routine and corrective maintenance at all spring appurtenances—meters, valves, pumps, piping, pressure gauges, etc.

Ugum training on O&M will be regular refresher classes on annual basis.

Action Plan:

Proposed Action Item Schedule	Task Description
Santa Rita Spring (Ground Water)	
05/08/2013	Santa Rita Spring O&M training was completed an has been sent to USEPA.
05/08/2013	O&M is now under Production Section.
05/31/2014 etc.	Santa Rita Spring O&M training will have annual refreshers.
Ugum Surface Water Treatment Plant	
11/19-23/2012	Latest Training by Siemens/Smithbridge
07/23/2013	Additional Specialized training on coagulation optimization for membranes
08/01/2013	Training certification sent to USEPA
07/01/2014 and thereafter.	**O&M training will have annual refreshers.**
Completed under Court Order	See Court Order Section II C 26 Ugum SOP's - Complete

10. Treatment-- Lack of operating turbidimeter at Santa Rita Spring source.

Action Plan:
Initiate repair. Document completion of repair.

Proposed Action Item Schedule	Task Description
05/08/2013	Verification submitted to USEPA - Complete

11. Treatment-- Plant operators do not regularly conduct jar tests and do not optimize precursor removal at Ugum WTP.

Action Plan:
Prepare Bid or Change Order for TOC. Prepare documentation of training. Provide copies of regular reporting.

Proposed Action Item Schedule	Task Description
5/15/2013	Prepare change order for installation of TOC and appurtenances. Smithbridge
08/12/2013	Completed installation of on-site TOC analyzer.
08/15/2013	Completed training of operators on site TOC analyzer.
07/23/2013	Additional Specialized training on coagulation optimization for membranes
08/01/2013	Training certification sent to USEPA – Complete

12. Treatment-- Inadequate turbidity monitoring and reporting at Ugum

Action Plan:
Address re-programming SCADA. Provide copies of daily submittals sent to GEPA and monthly submittals, and send example reports to USEPA as documentation.

Proposed Action Item Schedule	Task Description
06/06/2013	Send documentation of conformance to USEPA
05/30/2013	Sent documentation of conformance to USEPA - Complete

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13. Treatment-- At least one well (D-5) did not have a chlorination system in place	
Action Plan: Explain that D-5 well is not a point of entry into the potable distribution system issue.	
Proposed Action Item Schedule	**Task Description**
6/6/2013	Report to USEPA
05/31/2013	Report sent to USEPA - Complete

14. Treatment Well-- At least one well, the well log indicated chlorine gas had run out in the past (April 29, 2012) Inadequate chlorination/disinfection could result in exposure to bacteriological contamination.	
Action Plan: GWA to provide the log sheets. This finding is a result of an incorrect assessment	
Proposed Action Item Schedule	**Task Description**
6/6/2013	GWA to send USEPA the log sheet – interpretation was incorrect.
05/31/2013	Sent to USEPA - Complete

15. Water Storage-- Severe internal/external rust and corrosion including roofs, roof vents, walls, base and other welds, anchors allows contaminants to enter tanks. Recommendation: GWA should properly maintain facilities and grounds (remove overgrown vegetation, take away garbage, repair security breaches, etc.	
Action Plan: This is a Court Order project. Work performed will be in accordance with the 2011 court order.	
Proposed Action Item Schedule	**Task Description**
In Progress – Court Order.	See CO Section II C Paragraph 29, Quarterly and Annual Reports

16. Water Storage-- Bolts, many completely rusted through, compromise structural stability of tanks. Recommendation: Potential for tank failure	
Action Plan: This is a Court Order project. Work performed will be in accordance with the 2011 court order Paragraph 29.	
Proposed Action Item Schedule	**Task Description**
In Progress – Court Order.	See CO Section II C Paragraph 29, Quarterly and Annual Reports

17. Water Storage-- Inadequate Site Security (holes in fences, missing gates) and unlocked hatches allow easy access to tanks (as demonstrated by vandalism at many tanks). Potential for access by public and consequent contamination.	
Action Plan: This is a Court Order project. Work performed will be in accordance with the 2011 court order Paragraph 29. GWA will correct on tanks undergoing major repairs.	
Proposed Action Item Schedule	**Task Description**
In Progress – Court Order.	See CO Section II C Paragraph 29, Quarterly and Annual Reports

18. Water Storage-- Leaking tanks. Recommendation: Could allow contamination to enter.	
Action Plan: This is a Court Ordered project. Work performed will be in accordance with the 2011 court order Paragraph 29.	
Proposed Action Item Schedule	**Task Description**
In Progress – Court Order.	See CO Section II C Paragraph 29, Quarterly and Annual Reports

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NEIC Work Product No. VP0989E01 GWA Sanitary Survey Significant Deficiency Items:

19. Water Storage-- Flooded, uncovered and unsecured valve vaults Could allow contamination to enter.	
Action Plan: This is a Court Ordered project. Work performed will be in accordance with the 2011 court order Paragraph 29. GWA will correct on tanks undergoing major repairs.	
Proposed Action Item Schedule	**Task Description**
In Progress – Court Order.	See CO Section II C Paragraph 29, Quarterly and Annual Reports- Complete

20. Water Storage-- No screen or flapper on the storage tanks' overflows. Potential for access by public and consequent contamination.	
Action Plan: This is a Court Order project. Work performed will be in accordance with the 2011 court order Paragraph 29. GWA will correct on tanks undergoing major repairs.	
Proposed Action Item Schedule	**Task Description**
In Progress – Court Order.	See CO Section II C Paragraph 29, Quarterly and Annual Reports - Complete

21. Water Storage-- Ladders not locked, allow easy potential access by vandals.	
Action Plan: This is a Court Order project. Work performed will be in accordance with the 2011 court order Paragraph 29. GWA will correct on tanks undergoing major repairs.	
Proposed Action Item Schedule	**Task Description**
In Progress – Court Order.	Repairs Complete

22. Water Storage-- Ladders severely corroded or no cage will prevent adequate maintenance	
Action Plan: This is a Court Order project. Work performed will be in accordance with the 2011 court order Paragraph 29.	
Proposed Action Item Schedule	**Task Description**
In Progress – Court Order.	Repairs Complete

23. Distribution System-- Inadequate cross connection control program exists within GWA. Potential for backflow/backpressure and contamination.	
Action Plan: Engage consultant to develop how GWA can plan for backflow prevention program. Create report documenting procedures for implementing a program.	
Proposed Action Item Schedule	**Task Description**
02/01/2013	Engage consultant Brown and Caldwell
05/05/2013	Submit draft plan for GWA review
06/05/2013	Submitted draft plan to USEPA
NTP issued.	Draft Detailed Cross-Connection Control Plan by PMO Work Order.
Pending CCU approval	GWA recruiting positions to man and execute this project..
Included in Plan	Detailed Cross-Connection Control Plan Technical Memo Completed
Updates (Reporting per Preface)	**Final plan in final review at GWA for submittal to USEPA.**

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Prepared By: Paul Kemp, Vangie Lujan and John Riegel **Update**: January 23, 2018

NEIC Work Product No. VP0989E01 GWA Sanitary Survey Significant Deficiency Items:

24. Distribution System-- Undersized water lines impact water pressure and water quality and contribute to potential cross-connections.
Potential for backflow/backpressure and contamination.

Action Plan:
Engage consultant to develop how GWA can plan for small diameter pipeline replacement program. Create report documenting procedures for implementing a program.

Proposed Action Item Schedule	Task Description
02/01/2013	Engage consultant Brown and Caldwell
05/05/2013	Submit draft plan for GWA review
06/05/2013	Submitted draft plan to USEPA
10/01/2013	Approved Plan/CIP for line replacement.
12/31/2013	Submit Approved Plan/CIP for line replacement to PUC.
04/30/2014	Approved of Plan/CIP for line replacement by PUC.
07/01/2014	Begin line replacement program for small diameter pipelines.
01/01/2024	Complete small diameter pipeline replacement.
Updates (Reporting per Preface)	See GWA CIP at < http://guamwaterworks.org/wp-content/uploads/2016/02/GWA-CIP-2015-to-2020-CCU-102715-final-ver.pdf >.

25. Pumps-- No pump controls at many of the booster pump stations; lack of maintenance. Leaking seals in pumps and valves results in intermittent service and supply, lower reliability and decreased pressure.
Recommendation:
Implement routine and corrective maintenance at all spring appurtenances—meters, valves, pumps, piping, pressure gauges, etc.

Action Plan:
Initiate repair. Engage consultant for independent analysis and condition assessment of booster pumping stations. Consultant to develop schedule and cost estimates for implementing upgrades of booster pumping stations. Consultant to prepare a report for rehabilitation program.

Proposed Action Item Schedule	Task Description
12/01/2012	Initiate immediate repairs
02/01/2013	Engage consultant Brown and Caldwell
02/26/2013	5-year CIP approved by CCU
04/30/2013	Complete immediate repairs
05/05/2013	Submit draft report to GWA for review
09/06/2013	Submitted draft report to USEPA for approval
03/30/2014	Final plan for booster station repairs.
Updates (Reporting per Preface)	See GWA CIP at < http://guamwaterworks.org/wp-content/uploads/2016/02/GWA-CIP-2015-to-2020-CCU-102715-final-ver.pdf >.

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Corrective Action Plan (CAP) (Approved 10/21/2014) Quarterly/Annual Update Report

Guam Waterworks Authority Sanitary Survey Significant Deficiencies for the Water System

Prepared By: Paul Kemp, Vangie Lujan and John Riegel **Update**: January 23, 2018

NEIC Work Product No. VP0989E01 GWA Sanitary Survey Significant Deficiency Items:

26. Pumps-- Lack of adequate backup pumps. Flooding of booster pump stations.
Results in intermittent service and supply, lower reliability and decreased pressure

Action Plan:
Initiate repair. Engage consultant for independent analysis and condition assessment of booster pumping stations. Consultant to develop schedule and cost estimates for implementing upgrades of booster pumping stations. Consultant to prepare a report for rehabilitation program.

Proposed Action Item Schedule	Task Description
12/01/2012	Initiate immediate repairs
02/01/2013	Engage consultant Brown and Caldwell
02/26/2013	5-year CIP approved by CCU
04/30/2013	Complete immediate repairs
05/05/2013	Submit draft report to GWA for review
09/06/2013	Submitted draft report to USEPA for approval
03/30/2014	Final plan for booster station repairs.
Updates (Reporting per Preface)	See GWA CIP at < http://guamwaterworks.org/wp-content/uploads/2016/02/GWA-CIP-2015-to-2020-CCU-102715-final-ver.pdf >.

27. Pumps-- No controls on well pumps or booster pumps.
Results in intermittent service and supply, lower reliability and decreased pressure.

Action Plan:
Initiate repair. Engage consultant for independent analysis and condition assessment of booster pumping stations. Consultant to develop schedule and cost estimates for implementing upgrades of booster pumping stations. Consultant to prepare a report for rehabilitation program.

Proposed Action Item Schedule	Task Description
12/01/2012	Initiate immediate repairs
02/01/2013	Engage consultant Brown and Caldwell
02/26/2013	5-year CIP approved by CCU
04/30/2013	Complete immediate repairs
05/05/2013	Submit draft report to GWA for review
09/06/2013	Submitted draft report to USEPA for approval
03/30/2014	Final plan for booster station repairs.
Updates (Reporting per Preface)	See GWA CIP at < http://guamwaterworks.org/wp-content/uploads/2016/02/GWA-CIP-2015-to-2020-CCU-102715-final-ver.pdf >.

28. Pumps-- Leaking pump seals, valves, lines, and highly rusted piping.
Results in intermittent service and supply, lower reliability and decreased pressure.

Action Plan:
Initiate repair. Engage consultant for independent analysis and condition assessment of booster pumping stations. Consultant to develop schedule and cost estimates for implementing upgrades of booster pumping stations. Consultant to prepare a report for rehabilitation program.

Proposed Action Item Schedule	Task Description
12/01/2012	Initiate immediate repairs
02/01/2013	Engage consultant Brown and Caldwell
02/26/2013	5-year CIP approved by CCU
04/30/2013	Complete immediate repairs
05/05/2013	Submit draft report to GWA for review
09/06/2013	Submitted draft report to USEPA for approval
Maintenance work in progress	Begin program for booster station repairs, copy to USEPA
Updates (Reporting per Preface)	See GWA CIP at < http://guamwaterworks.org/wp-content/uploads/2016/02/GWA-CIP-2015-to-2020-CCU-102715-final-ver.pdf >.

GUAM WATERWORKS AUTHORITY

Suite 200, Gloria B. Nelson Public Service Building, 688 Rt. 15. Mangilao, GU 96913-6203

Corrective Action Plan (CAP) (Approved 10/21/2014) Quarterly/Annual Update Report

Guam Waterworks Authority Sanitary Survey Significant Deficiencies for the Water System

Prepared By: Paul Kemp, Vangie Lujan and John Riegel **Update**: January 23, 2018

NEIC Work Product No. VP0989E01 GWA Sanitary Survey Significant Deficiency Items:

29. Water Quality-- Inadequate monitoring and reporting – Ugum WTP and Santa Rita Spring (turbidity and chlorine residual) exceedances (violations) may be going undetected and unreported.
Recommendation:
Continue to improve utility-wide communications to address previous lack of complete communication between departments.

Action Plan:
GWA has made this KPI and it is managed via weekly reports

Proposed Action Item Schedule	Task Description
06/06/2013	GWA to submit weekly report documentation to USEPA.
05/30/2013	GWA submitted documentation to USEPA. Complete

30. SDWA Compliance-- Lead and Copper Rule monitoring overdue.

Action Plan:
GWA has implemented the required LCR monitoring and will proceed to complete and continue as required by the rule without waiting for GEPA to approve the schedule and process. If GEPA ever decides to participate, GWA will make additions that are requested.

Proposed Action Item Schedule	Task Description
12/04/2012	Routine Procedure started.
06/14/2013	Round 1 completed with all sample results below both Pb and Cu action levels.
12/31/2013	Completed second Round of Monitoring
01/31/2014.	Lab results verify GWA is in compliance. - Complete

31. SDWA Compliance-- Unaddressed Stage 2 Disinfection/Disinfectant Byproducts rule (DBP) Rule MCL Violations, required public notification.

Action Plan:
Continue to report in CCR and add quarterly mailings to Central (GU0000003) and or Southern (GU0000001) System customers. GWA to await schedule for Navy water compliance schedule from Fena Reservoir for Central (GU0000003).

Proposed Action Item Schedule	Task Description
05/20/2013	Southern (GU0000001) System is now compliant with Stage 2 DBP Rule
05/20/2013	Central (GU0000003) System is compliant with Stage 2 DBP Rule in all areas except one small part of Agat. Mailings to all Central Customers will continue until clear.
06/06/2013	Initiated quarterly mailings to affected customers. [Central (GU0000003)]
Consecutive System Management	GWA continues to reduce purchases of water from the Fena SWTP which has made the difference in the Central (GU0000003) System.
Navy Water is now in compliance	DBP exceedance Central (GU0000003) System has ended with changes in the Navy Fena Surface Water Treatment Plant's operations, achieving compliance with the Stage 2 DBP Rule.
Quarterly mailings are discontinued.	Complete

32. Administration-- No formal, comprehensive training program for operators and other personnel.
Can result in inappropriate or inadequate operation and negative impacts on water quality.

Action Plan:
GWA to complete an annual Workforce Development Report

Proposed Action Item Schedule	Task Description
01/16/2014	First Annual Workforce Development (Training) Report.
Regular Training Scheduled	**Adapted dependent on subject matter. Assisted by PMO.**
Updates (Reporting per Preface)	**See Comprehensive management Plan 08/27/2013**

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Guam Waterworks Authority Sanitary Survey Significant Deficiencies for the Water System

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NEIC Work Product No. VP0989E01 GWA Sanitary Survey Significant Deficiency Items:

33. Administration-- Hydraulic model is neither complete nor accurate enough to make operational or design decisions. Results in poor design and operational decisions impacting water quality.	
Action Plan: This is a Court Ordered project. Work performed will be in accordance with the 2011 court order Paragraph 29(a)(2).	
Proposed Action Item Schedule	**Task Description**
05/03/2013	Submitted Hydraulic Model report to USEPA under CO 29(a)(2). Complete

34. Administration-- No preventative maintenance programs for most operational areas. Many system components in varying levels of disrepair or failure put system at risk for contamination.	
Action Plan: GWA is working with USEPA and CDM to improve Asset Management	
Proposed Action Item Schedule	**Task Description**
In Progress	GWA/CDM-Smith Asset Management program
Continuously updated	**GWA/CDM-Smith Asset Management program – CMMS being implemented**

35. Administration-- Data are collected, but do not have the capacity to analyze the information to assist with operational decisions. Lack of understanding and use of operational data can result in poor system operations and consequent risk for contamination or failure.	
Action Plan: GWA will improve data collection and assessment function – SOP's and Training are in planning stages.	
Proposed Action Item Schedule	**Task Description**
2013	New SOP's and Training
2013 through 2018	Five year development plan for staff capacity for data retrieval and analysis.
Evolved, data collection upgraded.	**Required staff positions created**
Updates (Reporting per Preface)	**Creation of Management analyst positions is completed.**

36. Administration-- Lack of Standard Operating Procedures ("SOPs").	
Action Plan: GWA will conduct SOP training	
Proposed Action Item Schedule	**Task Description**
As of 06/25/2013.	55 new SOP's Implemented (assisted by CDM, EPA Grant)
Drafts and planed	CDM continues work, particularly on Asset Management
Average one a month my 06/30/2014	Complete new SOP's and implement
09/06/2013	Reported status to USEPA
Semi-annual - Continuous	**Training on SOP's**
Updates (Reporting per Preface)	**Supported by CDM Smith funded by EPA SRF**

37. Operator Compliance-- No proper operator certification for system type. Inadequately trained operators do not perform process control adequately, which impacts finished water quality.	
Action Plan: GWA disputes the described deficiency. **GWA has always been in compliance.**	
Proposed Action Item Schedule	**Task Description**
06/06/2013	Submit Certification information USEPA.
05/24/2013	Certification information sent to USEPA - Complete

GUAM WATERWORKS AUTHORITY

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Corrective Action Plan (CAP) (Approved 10/21/2014) Quarterly/Annual Update Report

Guam Waterworks Authority Sanitary Survey Significant Deficiencies for the Water System

Prepared By: Paul Kemp, Vangie Lujan and John Riegel **Update**: January 23, 2018

NEIC Work Product No. VP0989E01 GWA Sanitary Survey Significant Deficiency Items:

38. Operator Compliance-- Plant operators do not regularly conduct jar tests.
Inadequately trained operators do not perform process control adequately, which impacts finished water quality.

Proposed Action Item Schedule	Task Description
5/15/2013	Prepare change order for installation of TOC and appurtenances. Smithbridge
08/12/2013	Completed installation of on site TOC analyzer.
08/15/2013	Completed training of operators on site TOC analyzer.
07/23/2013	Additional Specialized training on coagulation optimization for membranes
08/01/2013	Training certification sent to USEPA - Complete

39. Operator Compliance-- Plant operators and engineering staff did not understand the correlation between ineffective coagulant dosing.
Inadequately trained operators do not perform process control adequately, which impacts finished water quality.

Proposed Action Item Schedule	Task Description
5/15/2013	Prepare change order for installation of TOC and appurtenances. Smithbridge
08/12/2013	Completed installation of on site TOC analyzer.
08/15/2013	Completed training of operators on site TOC analyzer.
07/23/2013	Additional Specialized training on coagulation optimization for membranes
08/01/2013	Training certification sent to USEPA - Complete

40. Operator Compliance-- No level 4 Operator is actually located on site at the Ugum WTP, as required.
Violation of Guam Operator Certification requirement.

Action Plan:
Level 4 operators are not required at Ugum, Current status requires only Level 3 operators. **GWA has always been in compliance.**

Proposed Action Item Schedule	Task Description
06/06/2013	Submit Certification information USEPA.
05/24/2013	Certification information sent to USEPA - Complete

Status Summary: as of January 30, 2018

Corrective Action Plan Legend	Fill Color	No. of Items
Information and/or future steps	**No Fill**	
Completed – no further action-or pending EPA approval	Green	**35**
Court Order Managed items (some are completed- the others are on schedule)	Blue	**9**
On Schedule or Continuous (Long Term Commitment/Reporting)	Orange	**12**

GWA Utility Services Division
Monthly Status Report
Month ending January 27, 2018

UTILITY SERVICES DIVISION UNITS & ACTIVITIES:	WEEKLY AVERAGE DEC 2017	DEC 2017 MONTHLY TOTAL	WEEK ENDING: 1/6/2018	WEEK ENDING: 1/13/2018	WEEK ENDING: 1/20/2018	WEEK ENDING: 1/27/2018	WEEKLY AVERAGE JAN 2018	JAN 2018 MONTHLY TOTAL
Collections Unit								
I. Number of accounts cut for nonpayment:	16	65	8	69	29	69	44	175
II. Number of accounts restored for nonpayment:	20	81	9	34	36	47	32	126
III. Number of No water reports responded to:	3	10	2	1	1	2	2	6
IV. Number of Secure/Unsecure valve reports responded to:	3	10	1	2	1	4	2	8
V. Number of Verify reads responded to:	1	4	3	1	1	2	2	7
VI. Number of new pay plans negotiated for **active** accounts :	159	634	16	181	160	195	138	552
VII. Number of active pay plans negotiated and ongoing :	1742		1656	1790	1874	1991	1828	
VIII. Number of **inactive** accounts with a payment arrangement:	6		4	4	4	4	4	
IX. Number of broken payment plans:	69	275	102	47	76	78	76	303
Customer Service Unit								
I. Service Delivery Points:								
a. GBN Public Service Building – Fadian								
i. Total Customers Assisted :	219	874	239	209	240	273	240	961
ii. Total Abandoned Requests :	23	90	25	18	13	15	18	71
ii. Average Wait Time:	12 minutes		14minutes	9 minutes	10 minutes	12 minutes	11 minutes	
iii. Average Service Time:	15 minutes		11 minutes	14 minutes	10 minutes	14 minutes	12 minutes	
iv. Breakdown by request type:								
1. Apply for water	48	192	41	43	42	56	46	182
2. Restore water cut for non paymen	8	32	4	5	7	15	8	31
3. Terminate Water	14	54	11	11	9	15	12	46
4. Copy of Bill	30	119	44	28	36	28	34	136
5. Billing Dispute	61	242	59	61	58	73	63	251
6. Billing Dispute follow up	4	17	9	3	4	7	6	23
7. General Questions & Other	30	121	30	30	32	43	34	135
8. Report a water leak	1	4	5	2	3	1	3	11
9. Report water theft	0	0	0	0	0	0	0	0
10. Payment Arrangement	25	101	38	28	49	35	38	150

GWA Utility Services Division
Monthly Status Report
Month ending January 27, 2018

UTILITY SERVICES DIVISION UNITS & ACTIVITIES:	WEEKLY AVERAGE DEC 2017	DEC 2017 MONTHLY TOTAL	WEEK ENDING: 1/6/2018	WEEK ENDING: 1/13/2018	WEEK ENDING: 1/20/2018	WEEK ENDING: 1/27/2018	WEEKLY AVERAGE JAN 2018	JAN 2018 MONTHLY TOTAL
b. Julale Satellite Office – Hagatna								
i. Total Customers Assisted :	228	911	225	258	219	235	234	937
ii. Total Abandoned Requests :	9	36	16	23	13	12	16	64
ii. Average Wait Time:	7 minutes		10 minutes	7 minutes	6 minutes	8 minutes	8 minutes	
iii. Average Service Time:	11 minutes		10 minutes	9 minutes	8 minutes	12 minutes	10 minutes	
iv. Breakdown by request type:								
1. Apply for water	40	159	32	44	43	51	43	170
2. Restore water cut for non paymen	2	7	4	3	5	6	5	18
3. Terminate Water	16	62	16	22	15	25	20	78
4. Copy of Bill	43	172	46	61	64	51	56	222
5. Billing Dispute	65	259	63	59	45	46	53	213
6. Billing Dispute follow up	4	17	4	5	1	2	3	12
7. General Questions & Other	29	114	36	34	15	34	30	119
8. Report a water leak	1	4	1	4	0	3	2	8
9. Report water theft	1	2	0	0	0	0	0	0
10. Payment Arrangement	31	124	26	33	35	28	31	122
c. Upper Tumon Satellite Office – Upper Tumon								
i. Total Customers Assisted :	307	1229	275	312	304	335	307	1226
ii. Total Abandoned Requests :	9	34	5	5	13	11	9	34
ii. Average Wait Time:	11 minutes		5 minutes	5 minutes	7 minutes	8 minutes	6 minutes	
iii. Average Service Time:	10 minutes		10 minutes	12 minutes	10 minutes	12 minutes	11 minutes	
iv. Breakdown by request type:								
1. Apply for water	66	262	53	61	57	84	64	255
2. Restore water cut for non paymen	6	22	4	15	7	20	12	46
3. Terminate Water	26	103	23	20	24	26	23	93
4. Copy of Bill	72	289	58	62	70	63	63	253
5. Billing Dispute	74	297	62	73	74	71	70	280
6. Billing Dispute follow up	4	15	5	5	3	2	4	15
7. General Questions & Other	28	111	26	34	24	34	30	118
8. Report a water leak	3	13	3	2	3	6	4	14
9. Report water theft	0	1	0	0	0	0	0	0
10. Payment Arrangement	32	129	35	41	45	31	38	152

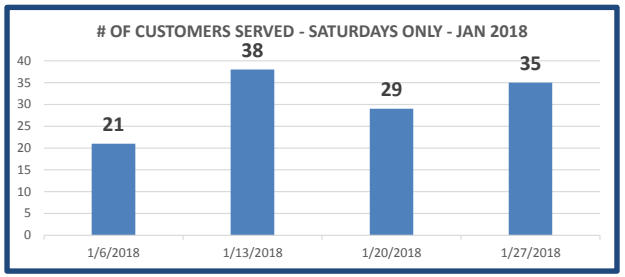
GWA Utility Services Division
Monthly Status Report
Month ending January 27, 2018

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II. Customer Call Center								
a. Calls Recieved :	990	3961	1350	1162	1187	1291	1248	4990
b. Calls Immediately Answered :	629	2514	772	743	692	829	759	3036
c. Calls Abandoned	37	149	54	50	36	41	45	181
d. Calls Handled by Voice mail:	328	1313	602	386	459	419	467	1866
e. Average duration of calls answered:	4 minutes		5 minutes	4 minutes	6 minutes	5 minutes	4 minutes	
III. Customer Emails:								
a. Emails Recieved :								
i. customers@guamwaterworks.org	42	166	38	63	34	43	45	178
Breakdown by request type (email):								
1. Apply for water	2	7	2	1	1	5	2	9
2. Terminate Water	2	8	2	0	1	2	1	5
3. Copy of Bill	2	7	1	6	2	1	3	10
4. Billing Dispute & follow up	11	42	7	10	7	9	8	33
5. General Questions & Other	18	70	16	35	8	13	18	72
6. Report a water leak	3	13	6	1	4	3	4	14
7. Report water theft	0	0	0	0	0	0	0	0
8. Online services inquiry	5	19	4	10	11	10	9	35
ii. realtors@guamwaterworks.org	1	3	0	0	0	0	0	0
b. Emails Replied (both):	22	86	32	23	23	40	30	118

		1/6/2018	1/13/2018	1/20/2018	1/27/2018	
IV. Saturday Services: 9AM TO 1PM ONLY	27	21	38	29	35	31
a. VISITS: Breakdown by request type:						
1. Apply for water	6	2	4	8	3	4
2. Restore water cut for non payment	0	0	2	0	2	1
3. Terminate Water	2	3	2	1	1	2
4. Copy of Bill	7	5	12	10	10	9
5. Billing Dispute	5	2	9	5	8	6
6. Billing Dispute follow up	1	1	0	0	0	0
7. General Questions & Other	1	4	2	2	5	3
8. Report a water leak	1	0	0	0	0	0
9. Report water theft	0	0	0	0	0	0
10. Payment Arrangement	5	4	7	3	6	5

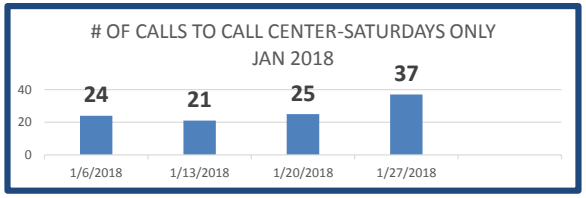
GWA Utility Services Division
Monthly Status Report
Month ending January 27, 2018

UTILITY SERVICES DIVISION UNITS & ACTIVITIES:	WEEKLY AVERAGE DEC 2017	DEC 2017 MONTHLY TOTAL	WEEK ENDING: 1/6/2018	WEEK ENDING: 1/13/2018	WEEK ENDING: 1/20/2018	WEEK ENDING: 1/27/2018	WEEKLY AVERAGE JAN 2018	JAN 2018 MONTHLY TOTAL



b. CALLS TO CALL CENTER (Saturday services only):

1/6/2018	1/13/2018	1/20/2018	1/27/2018
24	21	25	37



Dispute Resolution & Document Control

I. Dispute Resolution:								
a. Number of disputed accounts resolved:	11	44	11	9	3	11	9	34
b. Number of disputed accounts under review:	179	716	179	179	179	179	179	716
II. Document Control:								
a. Number of field activities posted :	475	1899	409	452	384	297	386	1542
b. Number of field activities pending:	677	2707	489	589	487	438	501	2003

Disconnect/Reconnect Unit

I. Number of field activities received:	242	967	250	240	225	251	242	966
II. Number of field activities completed:	260	1040	240	284	236	262	256	1022
III.Number of field activities pending field action:	2	9	4	3	2	1	3	10

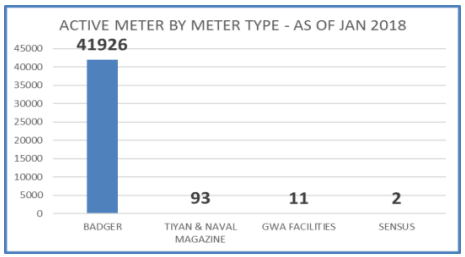
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Meter Reading Unit								
I. Number of meters read:								
a. Electronically Read Meters:	10462	41847	7926	7479	9272	13273	9488	37950
b. Manually Read Meters:	38	153	30	23	26	46	31	125
II. Unread meters (Meters scheduled to be read but not read):	62	248	40	48	43	101	58	232
III. Number of data logs received:	37	147	30	37	26	28	30	121
IV. Number of data logs retrieved:	40	161	44	28	30	39	35	141
V. Number of data logs pending field action:	12	47	8	15	11	6	10	40
VI. Communication Errors/Reprogramming requests received (from CSU):	2	9	2	2	2	0	2	6
VII. Number of estimated readings (for the week):	51	202	24	38	37	78	44	177
a. Reasons for Estimations:								
i. Cant locate meter:	1	5	1	1	0	1	1	3
ii. Temporary Obstruction	2	8	5	0	0	0	1	5
iii. Vicious Dog	2	8	2	4	1	0	2	7
iv. Flooded meter	2	8	1	0	1	2	1	4
v. Corrective action requested (database corrections needed)	2	8	13	6	2	0	5	21
vi. Possible changed out meter:	12	46	16	10	6	15	12	47
vii. Communication/Programming error (code 92's):	3	10	3	2	3	7	4	15
viii. Other:	8	31	4	5	4	4	4	17
ix. Leaks detected on customer's private line:	1284	5134	1016	1029	1154	1485	1171	4684
x. Reverse Flow Detected	30	118	16	26	5	75	31	122
xi. No Usages Detected	324	1297	228	192	300	404	281	1124
xii. Tamper Code	15	60	7	17	10	15	12	49
VII. Electronic Read Percentage: (for the week):	99%	99%	99%	98%	99%	99%	99%	99%
Revenue Protection Unit								
I. Number of Inactive Still Consuming Reports rec'd & investigated:	1	2	1	1	1	2	1	5
II.Number of Illegal Connection reports rec'd & investigated:	2	6	0	4	1	1	2	6

III. Meter Replacement Project – Post 2010 Metron Farnier & Sensus Status Report (as of Jan 27 2018):

METER TYPE	COUNT
SENSUS	2
METRON FARNIER	0
	2

a. Account & Meter Type Count :



GUAM WATERWORKS AUTHORITY

Engineering Monthly Report
February 2018

Prepared By:
Thomas Cruz, P.E. Chief Engineer

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A. Summary Table of 2010, 2013 and 2016 Bond

Potable Water

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
PW 05-01	Ground Water Disinfection	$ 500,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 05-03	Santa Rita Springs Booster Pump Rehab Phase II	$ -	N/A	N/A	$ 100,000.00	100.00%	0.00%	$ -	N/A	N/A
PW-05-05	"A Series Well Transmission Line	$ 518,143.96	100.00%	0.00%	$ 400,000.00	100.00%	0.00%	$ -	N/A	N/A
PW 05-06	Water Booster Pump Station	$ 500,000.00	100.00%	0.00%	$ 1,861,000.00	99.49%	0.51%	$ 4,139,000.00	0.00%	100.00%
PW 05-07	Meter Replacement Program	$ 10,300,000.00	99.84%	0.16%	$ 999,000.00	99.75%	0.25%	$ 4,501,000.00	3.33%	96.67%
PW 05-08	Barrigada Tank Repair/Replacement	$ 5,450,000.00	99.92%	0.08%	$ 4,987,000.00	99.32%	0.68%	$ 1,013,000.00	0.00%	100.00%
PW 05-09	Leak Detection	$ 200,000.00	100.06%	-0.06%	$ 20,000.00	96.25%	3.75%	$ 1,180,000.00	0.00%	100.00%
PW 05-10	Potable Water System Planning	$ 200,000.00	100.00%	0.00%	$ 624,000.00	100.00%	0.00%	$ 2,276,000.00	20.93%	79.07%
PW 05-11	Implement Ground Water Rule	$ 1,700,000.00	100.00%	0.00%	$ 1,000,000.00	100.00%	0.00%	$ -	N/A	N/A
PW 05-12	Brigade II (Ugum Lift) BPS Upgrade	$ 1,700,000.00	18.03%	81.97%	$ -	N/A	N/A	$ -	N/A	N/A
PW 05-13	Deep Well Rehabilitation	$ 548,000.00	100.00%	0.00%	$ 200,000.00	100.00%	0.00%	$ 250,000.00	0.00%	100.00%
PW 05-14	New Deep Wells at Dow n Hard	$ 638,252.85	76.11%	23.89%	$ 810,000.00	0.00%	100.00%	$ 1,190,000.00	0.00%	100.00%
PW 05-15	Rehabilitation of Asan Springs	$ 900,000.00	37.87%	62.13%	$ -	N/A	N/A	$ -	N/A	N/A
PW 05-16	Master Meters	$ 1,600,000.00	99.44%	0.56%	$ 784,000.00	99.88%	0.12%	$ 3,616,000.00	4.19%	95.81%
PW 09-01	Ugum Water Treatment Plant Intake	$ 700,000.00	99.47%	0.53%	$ 982,000.00	100.00%	0.00%	$ 18,000.00	0.00%	100.00%
PW 09-02	Water Wells	$ -	N/A	N/A	$ 4,200,000.00	46.77%	53.23%	$ 2,500,000.00	13.60%	86.40%
PW 09-03	Water Distribution System	$ 3,174,748.00	100.00%	0.00%	$ 11,151,000.00	87.97%	4.85%	$ 49,000.00	0.00%	100.00%
PW 09-04	Pressure Zone Realignment	$ -	N/A	N/A	$ 431,000.00	99.95%	0.05%	$ 1,141,000.00	58.58%	37.04%
PW 09-06	Central Water Distribution System 2005	$ 900,000.00	91.67%	8.33%	$ -	N/A	N/A	$ -	N/A	N/A
PW 09-08	Mechanical/Electrical Equipment	$ 1,200,000.00	100.00%	0.00%	$ 430,000.00	99.60%	0.40%	$ 100,000.00	0.00%	100.00%
PW 09-09	Water Reservoir Internal/External	$ 2,000,000.00	73.20%	24.53%	$ -	N/A	N/A	$ -	N/A	N/A
PW 09-10	Water Reservoir Internal/External	$ -	N/A	N/A	$ -	N/A	N/A	$ 800,000.00	0.00%	100.00%
PW 09-11	Water System Reservoirs 2005 Improvements	$ 1,050,000.00	100.00%	0.00%	$ 13,878,000.00	99.99%	0.01%	$ 28,350,000.00	36.77%	54.41%
PW 11-01	Distribution System Upgrades	$ 474,159.85	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 11-02	Ugum Water Treatment Plant Reservoir	$ -	N/A	N/A	$ 90,000.00	0.00%	100.00%	$ -	N/A	N/A
PW 12-01	Water Audit Program & Water Loss Control Plan	$ 100,000.00	78.46%	21.54%	$ -	N/A	N/A	$ 1,000,000.00	0.00%	100.00%
PW 12-02	Production Plan / Reduce Navy Purchases	$ 100,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 12-03	Hydraulic Assessment of Tanks	$ 500,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 12-04	Agana Heights & Chaot Tanks	$ 4,700,000.00	100.00%	0.00%	$ 3,280,000.00	40.52%	59.48%	$ 1,220,000.00	40.98%	59.02%
PW 12-05	Tank Major Repair Yigo #1, Mangilao #2, Astumbo#1	$ 1,900,000.00	95.16%	4.84%	$ 11,605,000.00	99.99%	0.01%	$ 1,895,000.00	96.15%	3.85%
PW 12-06	Tank Replacement Piti & Hyundai	$ -	N/A	N/A	$ -	N/A	N/A	$ 7,409,830.00	98.52%	1.48%
PW 12-07	Assessment of Malojloj Elevated & Yigo Elevated	$ 200,000.00	100.00%	0.00%	$ 485,117.00	100.00%	0.00%	$ -	N/A	N/A
PW 12-08	Public Water System Asset Inventory/ Condition Assessment	$ 100,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 12-09	Public Water System GIS & Mapping	$ 50,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 14-01	Fire Hydrant Replacement Program	$ -	N/A	N/A	$ -	N/A	N/A	$ 2,000,000.00	0.00%	100.00%
		$ 41,903,304.66			$ 58,317,117.00			$ 64,647,830.00		

Wastewater

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
WW 05-04	Wastew ater System Planning	$ 1,500,000.00	100.00%	0.00%	$ 651,000.00	100.00%	0.00%	$ 349,000.00	89.68%	9.15%
WW 05-05	Wastew ater Vehicles	$ 235,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 05-07	NDWWTP - Chlorine Tanks	$ 250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 09-01	Lift station upgrades	$ -	N/A	N/A	$ 946,000.00	84.08%	0.06%	$ 2,404,000.00	12.21%	66.99%
WW 09-06	Wastew ater Collection System Repl/ Rehabilitation	$ 1,105,000.00	99.93%	0.07%	$ 780,000.00	97.55%	2.45%	$ 2,920,000.00	0.00%	92.30%
WW 09-08	Facilities Plan/Design for Baza Gardens WWTP	$ 1,250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 09-10	Facilities Plan/Design for Agat-Santa Rita WWTP	$ 899,630.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 11-03	Baza Gardens STP Replacement	$ 1,301,947.00	24.27%	11.57%	$ 3,114,883.00	99.97%	0.03%	$ 29,400,170.00	99.31%	0.69%
WW 11-04	Facilities Plan/Design for Umatac-Merizo WWTP	$ 900,000.00	100.00%	0.00%	$ 473,000.00	100.00%	0.00%	$ 527,000.00	47.44%	52.56%
WW 11-08	Agat/Santa Rita STP Replacement	$ 2,218,000.00	99.91%	0.09%	$ 67,200,000.00	99.43%	0.57%	$ 3,000,000.00	48.72%	51.28%
WW 12-01	Northern District WWTP Primary Treatment Upgrade	$ 11,750,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-02	Biosolids Management Plan	$ 200,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-03	Agana WWTP Interim Measures	$ 11,500,000.00	100.00%	0.00%	$ 673,000.00	100.00%	0.00%	$ 827,000.00	0.00%	90.22%
WW 12-04	I&I SSES Southern	$ 800,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-05	I&I SSES Central	$ 850,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-06	I&I SSES Northern	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 12 -07	Umatac Merizo Replacement	$ 250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ 20,800,000.00	99.26%	0.74%
WW 12-08	Wastew ater System GIS & Mapping	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-09	Wastew ater Facility Back Up Pow er	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-10	Wastew ater System Asset Inventory	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 17-01	Wastew ater Sew er System Expansion									
WW 17-02	Northern District WWTP Secondary Treatment Upgrade	$ 1,000,000.00	0.00%	100.00%						
		$ 36,009,577.00			$ 73,837,883.00			$ 60,227,170.00		

Electrical Engineering Support

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
EE 05-02	SCADA Pilot Project	$ 61,950.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
EE 09-01	Wastewater Pumping Station Electrical Upgrade	$ -	N/A	N/A	$ 620,000.00	16.13%	83.87%	$ 100,000.00	0.00%	100.00%
EE 09-02	Electrical Upgrade - Water Wells	$ 354,226.63	100.00%	0.00%	$ 1,500,000.00	100.00%	0.00%	$ 650,000.00	76.92%	23.08%
EE 09-03	Electrical Upgrade - Water Booster	$ -	N/A	N/A	$ 2,000.00	0.00%	100.00%	$ 323,000.00	0.00%	100.00%
EE 09-04	Electrical Upgrade - Water Booster	$ -	N/A	N/A	$ 200,000.00	0.49%	99.51%	$ -	N/A	N/A
EE 09-05	Electrical Upgrade - Other Water	$ -	N/A	N/A	$ 150,000.00	40.47%	59.53%	$ -	N/A	N/A
EE 09-06	SCADA Improvements - Phase I	$ 250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
EE 09-07	SCADA Improvements - Phase 2	$ 1,056,986.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
EE 09-08	SCADA Improvements - Phase 3	$ 24,955.71	100.00%	0.00%	$ 923,000.00	99.93%	0.07%	$ 1,177,000.00	61.46%	38.54%
EE 09-09	SCADA Improvements - Phase 4	$ -	N/A	N/A	$ -	N/A	N/A	$ 6,500,000.00	0.00%	93.08%
		$ 1,748,118.34			$ 3,395,000.00			$ 8,750,000.00		

Miscellaneous Engineering Support

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
MC 05-01	Laboratory Modernization	$ -	N/A	N/A	$ 1,173,000.00	100.00%	0.00%	$ 1,127,000.00	100.00%	0.00%
MC 05-02	Land Survey	$ 500,000.00	99.94%	0.06%	$ 2,000.00	0.00%	100.00%	$ 1,998,000.00	63.09%	36.91%
MC 09-01	General Plant Improvements	$ 7,241,000.00	99.58%	0.42%	$ 2,600,000.00	84.10%	15.90%	$ 2,769,460.00	53.83%	37.19%
MC 15-01	Information Technology Intergration Improvements							$ 500,000.00	40.70%	59.30%
		$ 7,741,000.00			$ 3,775,000.00			$ 6,394,460.00		

	2010 Bond Allotment	2013 Bond Allotment	2016 Bond Allotment
CIP Water	$ 41,903,304.66	$ 58,317,117.00	$ 64,647,830.00
CIP Wastewater	$ 36,009,577.00	$ 73,837,883.00	$ 60,227,170.00
CIP Electrical	$ 1,748,118.34	$ 3,395,000.00	$ 8,750,000.00
CIP Miscellaneous	$ 7,741,000.00	$ 3,775,000.00	$ 6,394,460.00
	$ 87,402,000.00	$ 139,325,000.00	$ 140,019,460.00

Bond Fund	Construction Fund Amount ($M)	Estimated # of months fund available for use		Total Funds encumbered to date ($M)	% of fund used	Rate of Spending: ($M) per year
2005	$82.930	82	*	$82.930	100.00%	12.14
2010	$87.402	85	**	$83.354	95.37%	11.77
2013	$139.325	48	**	$131.064	94.07%	32.77
2015	$140.019	18		$79.548	56.81%	53.03
	* - End date November 2013 via CCU Resolution 06-FY2014					
	** - Includes month of January 2018					

B. Projects Procurement

Percentage Key:

100%	Approved by GM
99%	Signature required from either Accounting/Legal/GM
98%	Processing engineering service or construction contract (with legal)
95%	Request for CCU approval (GM/engineering)
90%	A/E fee negotiation or contractor bid evaluation (engineering)
80%	Selected A/E or Conducted bid opening (engineering)
70%	Advertised RFP/IFB (engineering)
60%	RFP/IFB Package under legal review
50%	RFP/IFB Package completed (engineering)
Less than 50%	Project Scope of work development in progress

- Red text anywhere indicates a change from the last report.

BOX KEY FOR PROCUREMENT:

(Type of Procurement) (Relevant CIP NO. or Funding Source)	**(Project Title)**	
(Percentage complete for procurement)	**Activities/Notes:** (see percentage key above)	**Consultant** (listed when selected)
Project Description	Summary of project description	

BID PACKAGE PW 09-02	**New Well Construction**	
<50% Complete	**Activities/Notes:** GWA engineering continuing discussion with Dept. of Agriculture and lessee on options of acquisition of property for well site at AG-10. Internal GWA discussions underway for survey and appraisal services.	
Project Description:	The project is to construct three new production wells for GWA as well as installation of a water main to connect the new production wells to the Ysengsong Reservoirs.	

RFP PW 09-02	**New Well Construction (Construction Management)**	
<50% Complete	**Activities/Notes:** SOW being developed	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of up to three (3) new production wells for GWA. GWA plans to increase source water production to improve system redundancy that allows for operating the water production wells more effectively. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

BID PACKAGE PW 12-04, PW 12-06 AND PW 09-11	**Central Tank Phase I (Chaot #2, Tumon #2, Hyundai) Construction**	
100% Complete	**Activities/Notes:** Contract fully executed. NTP issued February 8, 2018.	
Project Description:	The work performed under this project procurement shall consist of Construction of three water reservoirs; 0.5MG Chaot #2, 1MG Tumon #2 (Nissan) and 1MG Hyundai. Some piping work off site from the reservoir is also required to ensure the reservoirs function optimally.	

BID PACKAGE PW 14-01	**Fire Hydrant Replacement Phase I**	
<50% Complete	**Activities/Notes:** Bid package being prepared.	
Project Description:	The work performed under this project consist of replacing all know dry barrel fire hydrants down to the lateral as well as any defective wet barrel fire hydrant. Where necessary the gate valve for the fire hydrant may also be replaced.	

RFP WW 09-01	**Yigo SPS Flood Protection and Rehabilitation Design**	
90% Complete	**Activities/Notes:** GWA waiting for draft SOW and fee proposal from AECOM.	
Project Description:	The work performed under this project procurement shall consist of a design services to implement storm water mitigation measures to protect the facility during extreme weather as well as rehabilitate the facility to provide better redundancy and operate efficiently.	

RFP PW 09-11	**Northern and Southern Tank Phase I (Santa Rosa, Sinifa, Santa Rita) Construction Management**	
98% Complete	**Activities/Notes:** Contract with firm for signature. Once received contract to be transmitted for fund certification and GM execution.	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of three water reservoirs; 1MG Santa Rosa, 1MG Sinifa and 1MG Santa Rita. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

BID PACKAGE PW 09-03, PW 09-04 AND PW 09-11	**Northern Tank Phase I (Santa Rosa) Construction**	
<50% Complete	**Activities/Notes:** GWA will issue only a bid for Santa Rosa Tank and off-site improvements first.	
Project Description:	The work performed under this project procurement shall consist of Construction of a 1MG Santa Rosa reservoir and booster pump station. Some piping work off site from the reservoir is also required to ensure the reservoirs function optimally.	

BID PACKAGE EE 09-08, EE 09-09	**SCADA Phase A1 Construction**	
70% Complete	**Activities/Notes:** IFB advertised 1/30/18, Pre-bid conference completed. Bid opening 3/28/18.	
Project Description:	The work performed under this project procurement shall consist of Construction of SCADA ready instrumentation at several water and waste water facilities throughout he island.	

RFP EE 09-08, EE 09-09	**SCADA Phase A1 Construction Management**	
70% Complete	**Activities/Notes:** RFP advertised 1/26/18. Proposals due 2/23/18.	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of all SCADA ready instrumentation at the various facilities through Guam. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

RFP PW 09-04, PW 09-11	**Design Services for the Project Pressure Zone Realignment and Tank Repair/Replacement**	
70% Complete	**Activities/Notes:** RFP advertised 2/2/18. Proposals due 2/23/18.	
Project Description:	The work performed under this project procurement shall consist of design services for the remaining GWA reservoirs that required major repairs or replacement. The design will also address the required pressure zone realignment throughout the island so as to improve the distribution system functionality. .	

BOX KEY FOR PROJECT:

(Type of Project) (Relevant CIP NO.)	**(Project Title)** **(Contractor or consultant)**	**Start Date:** (month and year)
(Percentage complete for project)	**Activities/Notes:** (brief description of activity)	**Completion Date:** (month and year)
(Court Order Paragraph No.)	(Project type)	
Project Description	Project Description Narrative	

C. CIP Water Section

INSPECTION CIP PW 05-02	**Inspection & Maintenance Repairs to GWA Island-Wide Steel Water Tank Reservoirs Phase 2 (DCA)**	**Start Date:** April 2010
80% Complete	**Activities/Notes:** Still waiting for Quotes for tank bypass/take down for Umatac #1 and Pigua. Working on plan for Kaiser, Windward and Agat #1 take down. WBP2 Controls working property now which allows Agat Umatac Tank to be taken down.	**Completion Date:** Anticipate December 2021
CO 38C	Engineering inspection services	
Project Description:	The Court Order requires GWA to inspect all active and in some cases inactive water reservoirs. The inspection results will allow GWA to determine if a reservoir requires repair or replacement.	

DESIGN CIP PW 05-12	**Brigade II BPS Upgrade** **(EM Chen)**	**Start Date:** April 2012
100% complete (Basis of Design) 30% (Design)	**Activities/Notes:** GWA received 30% design, review comments to be transmitted to designer within two week time.	**Completion Date:** Due to property acquisition issues GWA anticipate May 2018
N/A	Engineering design services	
Project Description:	The design project is intended to assess system water supply feed from the north as well as Ugum WTP and the water demands downstream from the Brigade BPS so as to reconfigure the piping into the BPS and resize the pumps to me system head requirements.	

DESIGN / BUILD CIP PW 12-04	**Reservoirs 2005 Improvements,** **Chaot & Agana Heights Reservoirs** **(GSI Construction)**	**Start Date:** April 2013
100% Complete	**Activities/Notes:** All required work from GSI complete.	**Completion Date:** Due to delays from contractor new anticipate completion is November 2017
CO 38B	Design/Construction services	

Project Description:	The project is to replace the existing 1.0MG steel reservoirs with 0.5MG concrete tanks at the Chaot and Agana Heights reservoir locations. The contractor shall also link certain A-series wells to the reservoir via SCADA.

DESIGN CIP PW 12-05	**Yigo and Astumbo 2MG Tank Design Project (Lyons)**	**Start Date:** September 2013
99% complete	**Activities/Notes:** Design firm to provide RFI support during the construction.	**Completion Date:** January 2016
CO 9 (b)(4)	Engineering design services	
Project Description:	Develop the construction documents for two (2) 2.0 million-gallon (MG) nominal capacity concrete reservoirs in the Yigo service zones and one (1) 2.0 MG reservoir in the Astumbo service area. The design services will consist of preparation of plans, specifications, and estimates (PS&E), including Basis of Design, design calculations, construction schedule, topographical survey, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic resources, hazardous materials survey, construction documents, design drawings in Auto CAD (latest version), and relevant permits. Other services will include construction bid support service, meetings, and response to request for interpretation/information during construction. The consultant is required to incorporate and modify existing GWA concrete reservoir specifications to meet the project objective.	

DESIGN PW 09-11	**Northern and Southern Guam Reservoir Design** **(TG Engineers)**	**Start Date:** May 2015
60% Complete	**Activities/Notes:** Santa Rosa – 100% design in hand. Santa Rita – 100% design in hand. Inarajan – Land procurement second site related to new BPS's still on-going. Sinifa – 100% design in hand. Ugum – GWA still in discussion with re-evaluation and discussion with property owner of alternative property on-going.	**Completion Date:** Update: Due to property acquisitions issues for Piti and Tumon #1, design completion 6 months after property issue resolved.
CO 29 (b)(4)	Engineering design services	
Project Description:	The design services will consist of preparation of plans, specifications, and estimates (PS&E), which includes Basis of Design, design calculations, hydraulic modeling (EPANET), computational fluid dynamic modeling (CFD), construction schedule, topographical survey, property research, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic resources, hazardous materials survey, construction documents, design drawings in Auto CAD, relevant permit, construction bid support service, and response to request for interpretation/information during construction. The tank locations are Ugum, Santa Rita, Santa Rosa, Inarajan and Sinifa.	

DESIGN PW 12-04	**Central Guam Reservoirs Design (GHD Inc.)**	**Start Date:** May 2015
65% Complete	**Activities/Notes:** Chaot #2 – Chaot off-site work part of base bid. Contract with finance for fund cert. Chaot Tank work expected to be Change Order in once funding available. Tumon #2 – Tumon tank part of base bid. Contract with finance for fund cert. Hyundai – Hyundai tank part of base bid. Contract with Finance for fund cert. Piti – GWA still evaluating alternative solutions to storage needs in Piti area. Manenggon – Geotech work complete. 60% design near complete. Tumon #1 – GWA working on land issues.	**Completion Date:** Update: Due to property acquisitions issues for Piti and Tumon #1, design completion 6 months after property issue resolved.
CO 29 (b)(4)	Engineering design services	
Project Description:	The design services will consist of preparation of plans, specifications, and estimates (PS&E), which includes Basis of Design, design calculations, hydraulic modeling (EPANET), computational fluid dynamic modeling (CFD), construction schedule, topographical survey, property research, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic resources, hazardous materials survey, construction documents, design drawings in Auto CAD, relevant permit, construction bid support service, and response to request for interpretation/information during construction The tank locations are Hyundai, Pulantat, Chaot #2, Tumon #2, Piti and Tumon #1.	

CONSTRUCTION PW 09-03	**Line Replacement Phase IV (Giant Construction)**	**Start Date:** 02/14/16
75% Complete	**Activities/Notes:** Contractor working in Santa Rita (Santa Rosa Subd.) and Asumption, Piti. Sstill working on ROW/easement issue along Famha Rd.	**Completion Date:** 12/30/18 per Change Order.
	Construction Services	
Project Description:	The project is intended for a contractor to replace existing water lines that have been found by operations to be leaking and/or are causing service delivery to less than what GWA is required to provide. The project will replace water mains and ten known locations throughout the island and there is a component within the bid where line replacement work for unknown locations is accounted for.	

DESIGN PW 05-15	**Asan Spring Rehabilitation Design (HDR)**	**Start Date:** August 24, 2016
30% Complete	**Activities/Notes:** GWA received 30% design, review comments to be transmitted to designer within two week time.	**Completion Date:** Due to delays from the Park Services related to property access the anticipated completion of the design is May 2018.

	Engineering design services	
Project Description:	- Perform site visits and condition assessment for site conditions to determine demolition and rehabilitation requirement, process equipment condition, structural condition, and electrical system. Site condition assessment shall include all disciplines to execute the project. - Review and validate the current property boundary information to confirm the available space for the project development. - Perform an environmental impact study and prepare all required permits as needed. - Perform an archeological and historical resources study to identify potential impact to the project, prepare all required permits as needed. - Coordinate with Guam Historic Resources Division State Historic Preservation Office (SHPO) on historical resources study. Prepare all necessary reports and documents as required by SHPO. - Coordinate with Guam Department of Agriculture, Division of Aquatic and Wildlife Resources (DAWR) on vegetation clearance. Prepare all necessary reports and documents required by DAWR. - Identify the existing and projected service area, period of design. - Identify and recommend conceptual water treatment system. - Perform a Class 4 engineering cost estimate according to the American Association of Cost Engineers (AACE) International Cost Estimate Classification System for construction fee. Cost must include all disciplines, permit, construction and administration that are necessary to execute the project. All costs will be in current dollars and escalated to the estimated midpoint of construction.	

CONSTRUCTION PW 09-11, PW 12-05	**Yigo/Astumbo Tank Construction (Pernix)**	**Start Date:** 12/1/16
55% Complete	**Activities/Notes:** Yigo #1 core walls complete and contractor working on pretension cable and shotcrete concrete. Yigo #2 core wall on-going. Astumbo #1 preparing main foundation.	**Completion Date:** 02/06/18
	Construction Services	
Project Description:	This project will involve construction of two (2) 2MG concrete tanks and Booster Pump Station at the Yigo site and a one (1) 2MG concrete tank at the Astumbo site. Work will involve new pipe line, valves, electrical controls, pumps and motors, site drainage, paving, generator for the BPS, SCADA, etc.	

CONSTRUCTION MANAGEMENT PW 09-11, PW 12-05	**Yigo/Astumbo Tank Construction Management (GHD)**	**Start Date:** December 2016
50% complete	**Activities/Notes:** Processing submittals and on-site inspection	**Completion Date:** February 2018
N/A	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the demolition of existing steel elevate and ground tanks as well as the construction of	

	the 2MG concrete tanks at the Yigo tank location and Astumbo tank location. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.

CONSTRUCTION MANAGEMENT PW 12-04-11, PW 12-06 AND PW 09-11	**Central Tank Phase I (Chaot #2, Tumon #2, Hyundai) Construction Management (TG Engineers, PC)**	**Start Date:** December 2017
0% complete	**Activities/Notes:** Establishing project communications protocol, initiating project schedule review.	**Completion Date:** February 2019
N/A	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of three water reservoirs; 0.5MG Chaot #2, 1MG Tumon #2 (Nissan) and 1MG Hyundai. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

D. CIP Wastewater Section

DESIGN WW 11-08	**Agat-Santa Rita WWTP Replacement (DCA)**	**Start Date:** October 2014
99% Complete	**Activities/Notes:** Design complete. Services during construction on-going through Nov 2017. Change Order extend design services during construction with finance.	**Completion Date:** Nov. 2015 (design); April 2018 (construction)
CO 11	Engineering design services	
Project Description:	The engineering design consultant is required to design a new wastewater treatment facility that will meet secondary treatment limits. The new facilities will incorporate provisions for redundancy to improve reliability and facilitate operations and maintenance activities at the existing facility	

INSPECTION 2010 BOND WW 12-05 2010 BOND WW 05-04 2013 BOND WW 05-04	**SSES Central Sewer System (HDR)**	**Start Date:** November 2014
99% Complete	**Activities/Notes:** GWA still awaiting final report from HDR.	**Completion Date:** January 2018
CO 8 (c)	Engineering Inspection Services	
Project Description:	Work specifically required includes data analysis, development of hydraulic modeling, and development of an SSES fieldwork plan, manhole inspections, smoke testing, CCTV inspection and preparation of a Project Report.	

CONSTRUCTION MANAGEMENT WW 11-08	**Agat Santa Rita WWTP CM (GHD)**	**Start Date:** November 2014
100% (PH 1) 100% Complete (PH 2, Part 1) 80% Complete (PH 2, Part B)	**Activities/Notes:** Typical CM inspections on-going. Change order required to continue services through April 2018.	**Completion Date:** December 2017, projected through April 2018
CO 11	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of the Agat Santa Rita WWTP Phase II project. GWA plans to replace the existing wastewater treatment plant for a new plant that can meets permit limits. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

CONSTRUCTION WW 11-08	**Agat Santa Rita WWTP Phase II (Sumitomo Construction)**	**Start Date:** January 2016
Part 1 of Phase II- 100% Complete Part 2 of Phase II- 80% complete	**Activities/Notes:** Contractor still working on headworks, aerobic digester, equalization basin, admin and maintenance buildings.	**Completion Date:** Phase A: 03/15/17 Phase B: 12/31/17 will not be met, April 2018 projected
CO 11	Construction services	
Project Description:	This project includes construction of the head works, clarifier, oxidation ditches and UV disinfection and administration facilities. Rehabilitation work at the existing WWTP will also occur to ensure the wastewater can be pumped to the new plant. The new plant will also tie into the Tipalao SPS.	

DESIGN WW 09-08, WW11-03	**Baza Gardens Cross Island Sewer Design (DCA)**	**Start Date:** 02/05/16
99% Complete	**Activities/Notes:** DCA providing engineering services during construction.	**Completion Date:** 04/30/18(this completion date will have to be extended.)
CO 11	Engineering design services	
Project Description:	The intent of this project for an engineering firm to prepare design drawings and specification for a sewer conveyance from the Baza Garden WWTP to the new Agat Santa-Rite WWTP. The design will take into account growth in the Baza Gardens/Talofofo areas as wells as new connection along the Route 17 route.	

DESIGN WW 09-06	**Bayside SPS Improvements Design (EMPSCO)**	**Start Date:** July 29, 2016
99% Complete	**Activities/Notes:** Due to change in design Army Corp of Engineers permit viewed as not necessary. GWA received 100% design and under review.	**Completion Date:** Due to issue with ACOE anticipate December 2017 for

	GWA working on Change order to address snail and archeological report that was not part of original scope.	design only.
	Engineering design services	
Project Description:	The intent of this project for an engineering firm to prepare design drawings and specification to upgrade the Bayside Sewer Pump Station given the facility is in major disrepair and the adjacent river is eroding away the access road to the facility which is causing maintenance challenges.	

CONSTRUCTION WW 09-08, WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance Construction Phase I (BME and Sons)**	**Start Date:** October 2016
60% Complete	**Activities/Notes:** New SPS, force main and gravity line installation along Route 17 on-going.	**Completion Date:** Phase I: 03/01/18 (this completion date will have to be extended.)
	Construction services	
Project Description:	The work performed under this project consist of construction of 14,714' of gravity main, 2,767' of force main and sewer pump station #3 next to the Aplacho River in Santa Rita.	

CONSTRUCTION MANAGEMENT WW 09-08 WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance (Construction Management) (SSFM)**	**Start Date:** December 5, 2016
55% Complete	**Activities/Notes:** Field inspection, project coordination and invoice review on-gong.	**Completion Date:** April 2018 (this completion date will have to be extended.)
	Construction Management services	
Project Description:	The work performed under this project shall consist of Construction Management and Inspection Services for the construction of gravity main, force mains and sewer pump station as well as an equalization basin at the Baza Garden WWTP.	

CONSTRUCTION WW 09-08, WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance Construction Phase II (BME and Sons)**	**Start Date:** March 2017
60% Complete	**Activities/Notes:** New SPS, force main and gravity line installation along Route 17 on-going.	**Completion Date:** Phase II: 03/16/18 (this completion date will have to be extended.)
	Construction services	
Project Description:	The work performed under this project consist of construction of 1,767' of gravity main, 14,400' of force mains and sewer pump station #2 along Route 17.	

CONSTRUCTION WW 09-08, WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance Construction Phase III (Sumitomo Construction)**	**Start Date:** June 2017
20% Complete	**Activities/Notes:** Pipeline construction on Route 17 on going. contractor working on wet well at Baza Gardens WWTP.	**Completion Date:** Phase III: 03/16/18 (this completion date will have to be extended.)
	Construction services	
Project Description:	The work performed under this project consist of construction of, but not limited to, 10,481' of force mains and sewer pump station at existing WWTP, equalization tanks, stand-by generator, improved headworks, grit removal system, and associated equipment.	

CONSTRUCTION WW 11-04	**Umatac Merizo WWTP Design Build Improvements Project (CoreTech)**	**Start Date:** June 2017
5% Complete	**Activities/Notes:** Initial design work on-going. Coordination with operation for field survey on-going.	**Completion Date:** December 31, 2018
	Construction services	
Project Description:	The project is intended to improve the aeration basin, construct a new sewer pump station, regrade the overland field, construct a new effluent storage tank and disinfection facility. The overland percolation basin will undergo regarding work to ensure appropriate distribution of effluent through the whole basin.	

CONSTRUCTION MANAGEMENT WW 11-04	**Umatac Merizo WWTP Design Build Improvements Project (SSFM Inc)**	**Start Date:** September 7, 2017
5%	**Activities/Notes:** Establishing communication links with project management team and contractor.	**Completion Date:** December 31, 2018
	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the improvements works at the aeration basin, new sewer pump station, overland field improvements, effluent storage tank. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

E. CIP Engineering Support

DESIGN EE 09-08	**SCADA System for Water and Wastewater Facilities Phase A-1 (AECOM)**	**Start Date:** June 2015
100% complete	**Activities/Notes:** Final design in hand. AECOM to provide assistance during bidding process.	**Completion Date:** November 2017 - Design

		January 2019 - (Bid and Construction Support)
N/A	Engineering design services	
Project Description:	The A/E firm will design an integrated, robust and secure Supervisory Control and Data Acquisition (SCADA) system for GWA's water and wastewater systems, and to provide support services during bid and construction. The 22 sites will consist of a combination of water facilities such as production wells, reservoirs, booster pump station and wastewater sites include sewer treatment plants and sewer pump stations. Executed by approved change orders, number of sites in original design scope has changed from 22 sites to 19 sites and design of High Water Alarm for 20 critical sewer pump stations has been added. Scope also includes bid and construction support of the design-build project of GPWA SCADA EMS project.	

DESIGN MC 05-01	**New GWA Lab Design Project (Laguana Architects)**	**Start Date:** June 2015
100% complete	**Activities/Notes:** Design complete however services continue into construction phase.	**Completion Date:** February 2016
N/A	Engineering design services	
Project Description:	The design firm is required to review all laboratory activities GWA's lab staff conduct for water and wastewater analysis after which they are to develop design drawing and specification to be bid out for construction. The design firm shall also take into account power and water needs to ensure the facility is self-sufficient.	

CONSTRUCTION MC 05-01	**New GWA Lab Construction (Mega United Construction)**	**Start Date:** NTP issued August 18, 2016
99% Complete	**Activities/Notes:** Punch list items and permanent communication installation remaining. Facility is being used by lab personnel.	**Completion Date:** Early March 2018.
	Construction services	
Project Description:	The project will involve construction of a new building at the GWA Upper Tumon compound to house the laboratory section. The facility will include office, laboratory and storage space for the lab employees. The facility will also include a back-up generator.	

F. GIS Section

MAPPING MC 05-02	**Island Wide Survey- (Duenas, Camacho & Ass.)**	**Start Date:** December 2007
94% complete	**Activities/Notes:** Task #12 map submitted to DLM for final approval. Task #13 awaiting GM approval for NTP. Task #14 work on-going.	**Completion Date:** New anticipated complete is April 2018.
	Survey services	
Project Description:	The contracted land surveyor is required to conduct title research,	

	property valuation and mapping of property boundaries where GWA facilities are located but the lot is not registered under GWA's name.

MAPPING MC 05-02	**Island Wide Survey PH II -** **(Duenas, Camacho & Ass.)**	**Start Date:** August 30, 2017
35% complete	**Activities/Notes:** First 25 parcels completed by surveyor submitted to DLM for review. Surveyor conducting field work for 15 additional parcels.	**Completion Date:** December 2018
	Survey services	
Project Description:	The work performed under this project procurement shall consist of a professional land surveyor conducting field work to mark corners of existing government properties as a means of severing out portions of the larger property to be deeded to GWA. Surveyor shall also prepare all necessary maps and documents for recording at DLM	

G. Permits Section

PERMITS
MONTHLY REPORT 2017

	2018						
Description	Jan	Feb					
Building Permit	11	9					
Occupancy Permit	3	10					
New Installation	14	8					
Sewer Application	15	14					
Sewer Inspection	0	1					
Private Utility Acceptance	0	0					
Relocation of Water Meter	0	0					
Tapping-Water	1	1					
Tapping-Sewer	0	1					
Clearance-Water	3	2					
Clearance-Sewer	3	2					
Highway Encroachment	0	4					
Verification of Utilities	4	4					
Fire Flow Test	0	0					
Schedule Water Outage	0	1					

H. SRF Project Status Report

- Projects listed below that are noted to be in the procurement phase will follow the "Percentage Key" below.

Percentage Key:

100%	Approved by GM
99%	Signature required from either Accounting/Legal/GM
98%	Processing engineering service or construction contract (with legal)
95%	Request for CCU approval (GM/engineering)
90%	A/E fee negotiation or contractor bid evaluation (engineering)
80%	Selected A/E or Conducted bid opening (engineering)
70%	Advertised RFP/IFB (engineering)
60%	RFP/IFB Package under legal review
50%	RFP/IFB Package completed (engineering)
Less than 50%	Project Scope of work development in progress

- Red text anywhere indicates a change from the last report.
- Cells highlighted in green indicate contract amount certified and project active.

	Project	Project Description	Project Manager	Phase		Start Date (NTP Issued)	Anticipated Completion Date	Contract Amount (+) change orders	Contractor	Status as of 02/16/18
1	Northern District SSES & I/I Study	Sanitary sewer system evaluation study (SSES) and inflow and infiltration (I/I) study designed to evaluate high I/I areas within the Northern sewer basin with the goal of identifying projects to eliminate them.	J. Davis	Design	1	10/10/2014	2/29/2016	$ 792,979.97	Stanley	100% Complete.
				Construction				*The project does not involve construction.*		
				Const. Mgmt						
2	Southern SSES Rehabilitation (Agat-Santa Rita-Umatac-Merizo)	Rehabilitation of segments of sewer lines in Umatac, Merizo, Agat, and Santa Rita where the Sanitary Sewer Evaluation Study recommends rehabilitation.	Brown & Caldwell	Design				*The design was previously completed under bond funding.*		
				Construction	1	10/30/2015	2/28/2017	$ 1,170,583.82	Reliable Builders	CIPP work quality issues discovered in May 2017, within warranty period. RBI completed CCTV of defects on 10/21. RBI is working on permits and utility clearances. Considering release of payment and retainage as incentive to accelerate repairs. Still holding the performance bond.
				Const. Mgmt	1	11/10/2015	3/30/2017	$ 226,980.23	TG Engineers	Submitted CO for final contract amount. Will close as soon as approved by the GM.
3	Asan-Adelup-Hagatna RT1 Sewer Line Rehabilitation and Replacement	Rehabilitation of sewer lines from the War in the Pacific Asan Park to the Governor's Complex in Adelup. This line is asbestos concrete that is dilapidated and some areas have disintegrated crowns.	Brown & Caldwell	Design	2	12/11/2015	3/30/2017 for Design requirements	$ 1,780,210.00	HDR	Design complete however HDR reorganizing bid for multi-award. Expecting completion in the next week.
				Construction		10/16/2016	6/30/2019			Procurement 75%. No bids submitted for Route 1 Phase I. Contractor comments/responses to reasons for lack of bids be sent to GWA for review GWA expected to rebid asap.
				Const. Mgmt		6/30/2017	6/30/2019			Procurement 90%. CM scope and fee proposal received 6/23 ($698K); due to canceling of bid GWA will repackaging bid therefore scope and fee will need to be refined.
4	RT2 Agat War in the Pacific Sewer Line Rehabilitation and Replacement	Rehabilitation of a large segment of sewer line fronting the War in the Pacific Park in Agat that has collapsed.	Brown & Caldwell	Design	3	11/17/2015	3/30/2017 for Design requirements	$ 316,681.00	SSFM	SSFM providing services during bidding process as well as construction phase.
				Construction	6	8/31/2017	10/1/2018	$ 4,554,451.00		Currently constructing precast manholes at staging yard. Withholding payment until contractor can demonstrate Davis-Bacon compliance.
				Const. Mgmt	8	9/19/2017	10/1/2018	$ 584,725.00		CM reviewing and commenting on submittals.

5	Brown & Caldwell Project Management	Brown & Caldwell to provide program management services and support.	T. Cruz	Design	4	3/24/2015	2/28/2019	$ 1,819,850.00	B&C	Project underway.
				Construction				*The project does not involve construction.*		
				Const. Mgmt						
6	Wastewater, Water and Source Water System Master Plan Upgrade	Update of the existing water and wastewater master plan while factoring in military integration and secondary treatment plant options.	Brown & Caldwell	Design	5	7/6/2015	01/30/2018 (revised due to financial workshop)	$ 2,623,300.00	B&C	GWA received Draft final (7 sets) on 02/16/18. CCU to be given chance to review and comment before GWA puts WRMP Update out to public.
				Construction				*The project does not involve construction.*		
				Const. Mgmt						
7	Groundwater Wells Rehabilitation (F-3, A-2, A-7, A-12, D-5)	Rehabilitation of existing deep wells and/or in cases where pipe column needs replacing, wells will be re-drilled. The deep wells to be rehabilitated are A-2, A-7, A-12, D-5, & F-3.	Brown & Caldwell	Design	6	5/27/2016	2/28/2018 (for design only)	$ 1,758,247.00	AECOM	AECOM proceeding toward Final RFC design, with the aim of submitting final deliverables by 2/28/2018. A-12: Design rate of 200 gpm (45.5 ft drawdown). D-05: Design rate of 125 gpm (39 ft drawdown). A-02: Design rate of 250 gpm (34.6 ft drawdown). F-03: Design rate of 200 gpm (1.5 ft drawdown).
				Construction		3/23/2017	4/30/2018			
				Const. Mgmt		3/23/2017	4/30/2018			
8	Tumon Sewer Hot Spots	Investigation, evaluation, and repair of possible solutions, to long plaguing issues where sewer overflows are known to occur in Tumon San Vitores.	Brown & Caldwell	Design	7	6/24/2016	10/30/2017 for design only	$ 572,089.00	TG Engineers	TGE submitted 100%; working to rearrange bid schedule before bidding and responding to GEPA comments.
				Construction		3/23/2017	3/22/2018			
				Const. Mgmt		3/23/2017	3/22/2018			

9	Critical Sewer Pump Stations (7 stations)	Rehabilitation of various components of 7 pump stations that were identified to by the CDM design team: Macheche, Ypaopao, Astumbo 1, Fujita, Santa Ana, Southern Link, and Route 1.	CDM	Design				*The design will be incorporated into the design/build package.*		
			J. Davis	Design/Build	1	8/8/2016	3/30/2018	$ 1,531,456.33	ProPacific	-Route 16 Pump Stations- Structural Evaluation done. Waiting for the report from the Structural Engineer. Additional cost and time extension is anticipated. Upcoming change orders: - Fujita Pump Station- Request for additional painting (Additive) and Macheche PS- Wet well coating below water surface eliminated. (Deductive) - Santa Ana PS- Installation of break-away fittings for the new submersible pumps . Additional cost and time extension is anticipated - Route 16 PS & Fujita PS - Monorail and Hoist Support Load Testing - Southern Link Pump Station - Provision of Roll up door. Contractor to provide cost.
				Const. Mgmt	2	9/9/2016	3/30/2018	$ 299,519.00	Stanley	CM work ongoing. GWA working on Change Order proposal to extend contract to match constructions activities.
10	Sewer Pump Station High Water Alarm Systems (20 stations)	This project will design and installed telemetry equipment/SCADA type alarms that will alert when pump station failure occurs.	C. Yam	Design				*The design will be incorporated into the design/build package.*		
				Design	8	8/12/2016	02/30/2017	$ 183,171.00	AECOM	Design complete
				Construction	5	4/5/2017	9/30/2017	$ 1,444,888.00	Pacific Rim	Project complete
				Const. Mgmt	3	02/30/2017	9/30/2017	$ 195,269.00	EMSPCO	CM work complete
11	Sewer Pump Station Backup Power (2 stations)	Construction of the housing and installation of new generators for the Casimero pump station (Mongmong) and the Namo pump station (Yona central).	B. Cruz	Design				*The design will be incorporated into the design/build package.*		
				Design/Build	2	6/24/2016	9/30/2017	$ 362,692.53	ProPacific	Change order approved for a zero-cost time extension Aug to Sept 26th. Final payment held due to ProPacific not conforming to the Davis Bacon Act.
				Const. Mgmt				*B. Cruz is the construction manager.*		
12	RT4 Relief Sewer Line Rehabilitation and Replacement	Rehabilitation of sewer lines that are located from Agana McDonalds to Marine Drive that have been known to overflow due to structural issues.	Brown & Caldwell	Design	9	3/1/2016	4/22/2017	$ 794,000.00	AECOM	· AECOM to provided services during bidding process.
				Construction		4/23/2017	12/31/2018			Procurement 70%, GWA working to rebid with work sepearetd by open cut and CIPP. Awaiting for package fr om designers.
				Const. Mgmt		4/23/2017	12/31/2018	$ 647,000.00		Procurement 90%, EMPSCO submitted revised fee ($647K). B&C recommending renegotiating given the plans to reorganize the bid package.

13	Groundwater Wells Rehabilitation (D-3, D-17, D-18, D-22, M-9)	Rehabilitation of existing deep wells and/or in cases where pipe column needs replacing will be re-drilled. D-3, D-17, D-18, D-22, and M-9.	Brown & Caldwell	Design				*The design was previously completed under bond funding.*		
				Construction	2	8/19/2016	3/30/2018	$ 6,120,353.44	Pacific Rim	Operating Permit with GEPA as of 1/3; Ok'd to connect to system for tests. Expected any time once datum plate on well head installed. Punch lists ongoing; current issue with injector nozzle being oversized, and potentially VFDs and booster pumps undersized. Waiting on new injector nozzles to test on system. D-03: [250 gpm design] Currently achieving 75 gpm. Discussing proposal from contractor and exploring other options. Initial checkout of chlorine system and alarms completed 1/10. D-17: [200 gpm] Initial checkout completed 1/2; test connection to distribution system unsuccessful with current setup. D-18: [300 gpm] Initial checkout completed 1/3; test connection to distribution system unsuccessful with current setup. D-22: [100 gpm] Initial checkout completed 1/4; test connection to distribution system postponed. M-09: [Rehab 150 gpm] Well shutdown, pump pulled 1/26. Waiting on new cable for motor; no ETA yet. VFD training expected when an operational well available; ETA to be determined. Flatbed truck and rig tools at PRC yard and verified by GWA; to be delivered soon. Rig ETA 23 February with training to follow first week of March. CO#8 with Finance; EA continuing to negotiate other costs, including D-03.
				Const. Mgmt	4	3/22/2016	3/30/2018	$ 943,361.24	EA	Work in progress. Continuing to work with EOR and GWA on RFIs/PCOs. CO#3 ($119k) approved; discussion ongoing for CO#4 to extend CM contract needed; EA working to finalize cost proposal.
14	Southern SSES Sewer Rehabilitation (Baza Gardens-Talofofo)	Rehabilitation of segments of sewer lines in Windward Hills, Talofofo area where the Sanitary Sewer Evaluation Study recommends rehabilitation.	Brown & Caldwell	Design				*The design was previously completed under bond funding.*		
				Construction	3	8/2/2016	7/2/2017	$ 1,189,815.00	ProPacific	Contractor attempting to remove debris in line MH5678 – MH5679. Also needs to work on additional CIPP defects in line MH5680 – MH5681. Contractor notified of possible termination for default if there is no improvement in performance. Accruing potential Liquidated Damages against contractor (over $200,000 so far).
				Const. Mgmt	5	7/29/2016	5/28/2017	$ 347,945.93	EMPSCO	· CM on notice to minimize management costs. CM will need CM CO #4 in order to pay for work after October 31. Continuing to negotiate with CM to bring down costs.
15	Tamuning Sewer Hot Spots	Sewer rehabilitation for lines at Winner Apartments, Segund Leon Guerrero, and behind Guam Premium Outlets.	Brown & Caldwell	Design	10	9/9/2016	10/31/2017 (for design only)	$ 663,629.00	TG Engineers	TGE submitted 100%, working to rearrange bid schedule before bidding and responding to GEPA comments. Submitted letter and easement maps; New Plaza Market Owners response expected any day.
				Construction		4/29/2017	4/30/2018			
				Const. Mgmt		4/29/2017	4/30/2018			

16	Talofofo Sewer Pump Stations (4 stations)	Design and construction of 4 sewer lift stations in the Talofofo village where sewer lines are installed but never completed.	J. Davis	Design (for Talofofo and Chalan Pago PS)	11	8/17/2016	11/30/2017	$ 477,999.50	EMPSCO	Talafofo Pump Station- GWA Engineering & Designer agreed to revise the bid schedule based on per project site location. Project execution maybe awarded based on availability of funds and project priorities. Estimated cost approximately 2.8 M plus 12% contingency . GWA still waiting for GEPA 's review and comments for the plans of Talafofo Pump Station Final Design of Chalan Pago Pump Station project under review by GWA.
				Construction		4/29/2017	4/30/2018			
				Const. Mgmt		4/29/2017	4/30/2018			
17	Chalan Pago Sewer Pump Station	Design and construction of sewer lift stations and gravity lines in Scott Laguana, Santa Cruz Street Chalan Pago.	J. Davis	Design		8/17/2016	11/30/2017	*The design will be included with the Talofofo Pump Station design project.*		
				Construction		4/29/2017	4/30/2018			
				Const. Mgmt		4/29/2017	4/30/2018			
18	Water Hydraulic Model (SCADA ready instruments to update Model)	Design and construction of instrumentation at key water sites in the Barrigada service area necessary to update GWA Water hydraulic model.	Barbara Cruz	Design	12	8/3/2016	3/15/2017	$ 523,268.00	GHD	Design complete.
				Construction		2/1/2017	12/30/2019			Funding for construction project to be from FY18 grant that is still pending.
				Const. Mgmt		2/1/2017	12/30/2019			
19	Macheche Hill Sewer Rehabilitation/ Replacement	Rehabilitation of sewer lines on Macheche road. Segments of this sewer line has collapsed recently and is consider a high priority.	J. Davis	Design-Build	3	8/29/2016	3/30/2018	$ 2,202,545.47	Giant Const.	All construction work is complete. Pending As-Built drawings.
				Const. Mgmt	6	9/16/2016	3/30/2018	$ 379,994.38	Am Orient	CM addressing close out activities with contractor.
20	Asan-Adelup-Hagatna Rt. 1 Sewer Line Rehabilitation and Replacement Emergency Repairs	Rehabilitation of sewer line in Asan that collapsed and which is current fitted with a temporary pumping system.	Brown & Caldwell	Design				Design cost covered under 3A above.		
				Construction	4	3/8/2017	12/30/2017	$ 2,470,658.00		Work at both sites complete. Punch list mostly complete. Waiting on as-builts. Still working through CO#3; having issues coming to an agreement on costs. Meeting again this week to discuss latest cost request.
				Const. Mgmt	7	1/24/2017	12/30/2017	covered under 3A		Working with PRC on invoices and negotiating CO#3 with contractor. Submitted CO#3 for CM services for HDR. No cost CO; funding will come from Construction Services budget, at $46,732. CO with Finance.

DASHBOARD

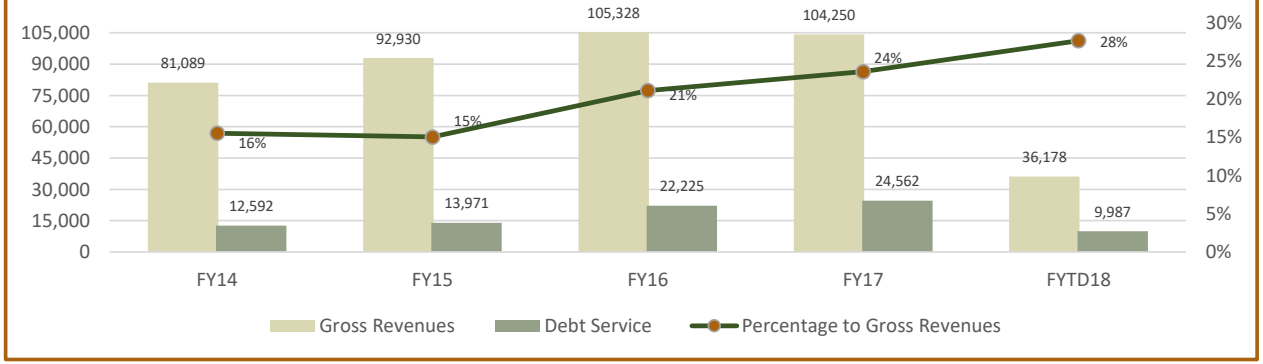
FYTD January 2018 Budget vs Actual ($000)

Category	Description	Budget FYTD18	Actual FYTD18	Variance
Rate Based Revenues	Water	$23,766	$22,913	($853)
	Wastewater	13,287	13,131	(156)
	Total	37,053	36,044	(1,009)
Operations & Maintenance	Salaries & Benefits	8,838	7,744	(1,094)
	Power	4,232	4,649	417
	Water Purchases	2,884	2,846	(39)
	A&G	4,289	3,129	(1,160)
	Contractual	1,493	1,340	(153)
	Total	$28,174	$26,134	($2,040)

Key Financial Ratios ($000)

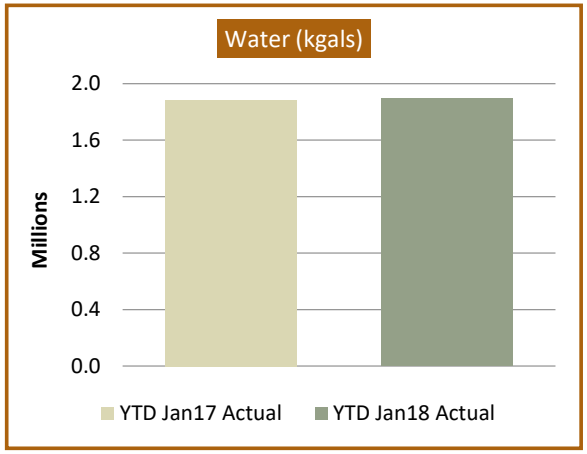
Category	FY18	FY17
Accounts Payable $$/Days	$4,960 / 53 days	$5,390 / 59 days
Accounts Receivable $$/Days	$16,676 / 68 days	$15,451 / 51 days
Days Cash On Hand	172 days	184 days
Annual Debt Service (Revenue Bonds)	$29,961	$24,563
Debt Service Coverage (Bond/PUC)	1.65 / 2.02	1.99 / 2.44

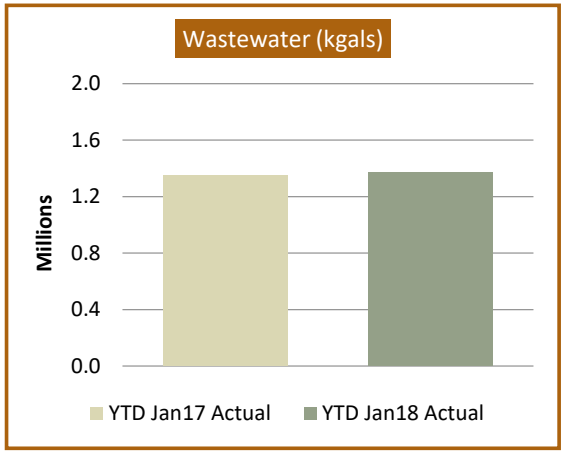
Debt as a Percent to Gross Revenue

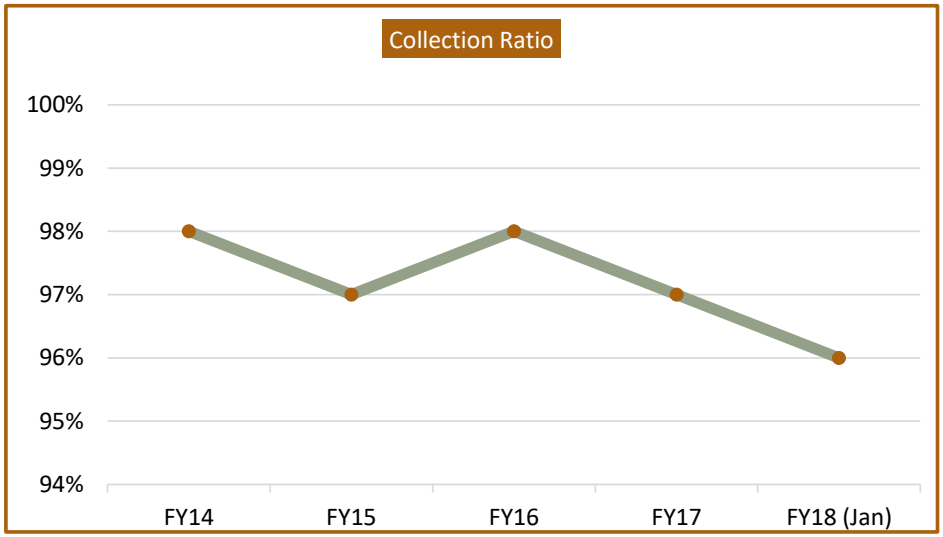


(1) Gross Revenues excludes SDC
(2) Debt Service Excludes Cap I

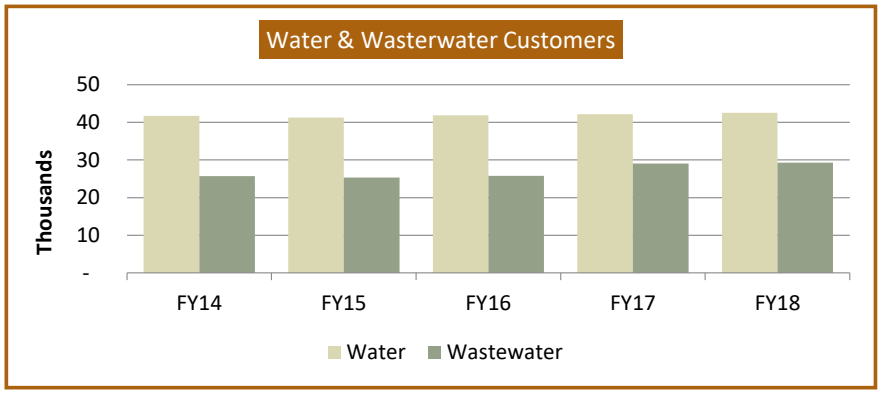
Water & Wastewater Analytics

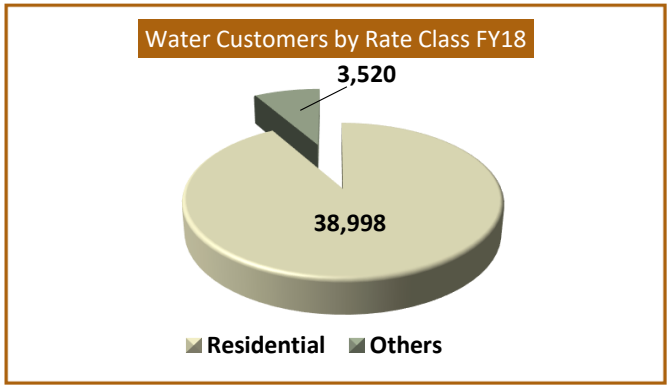


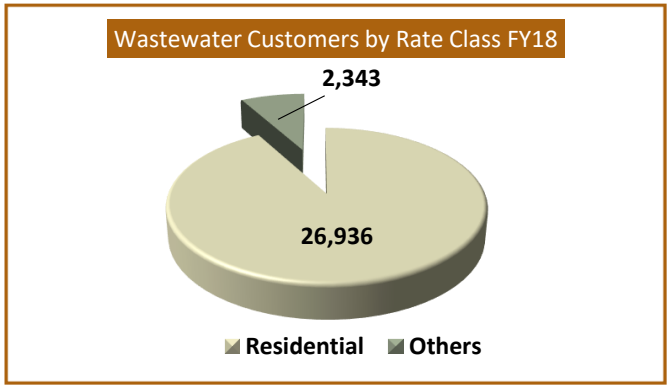


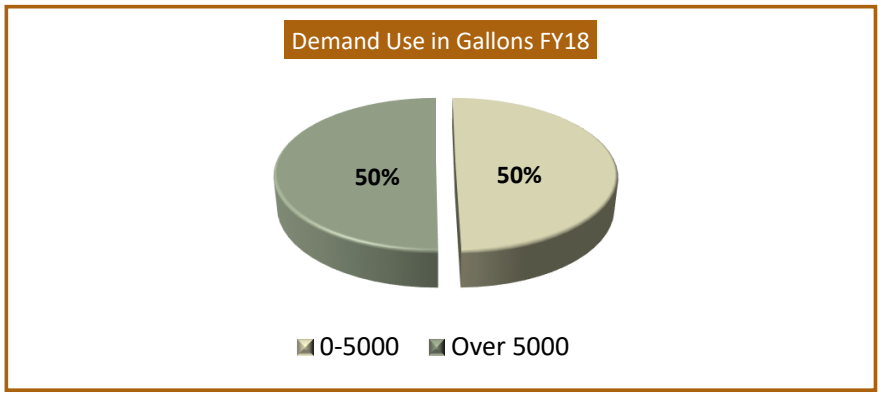


Water & Wastewater Customers





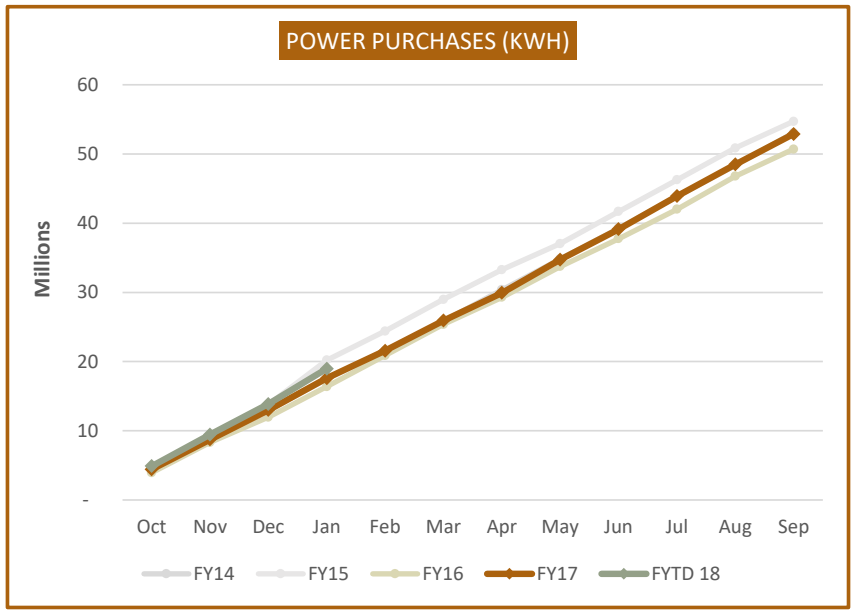


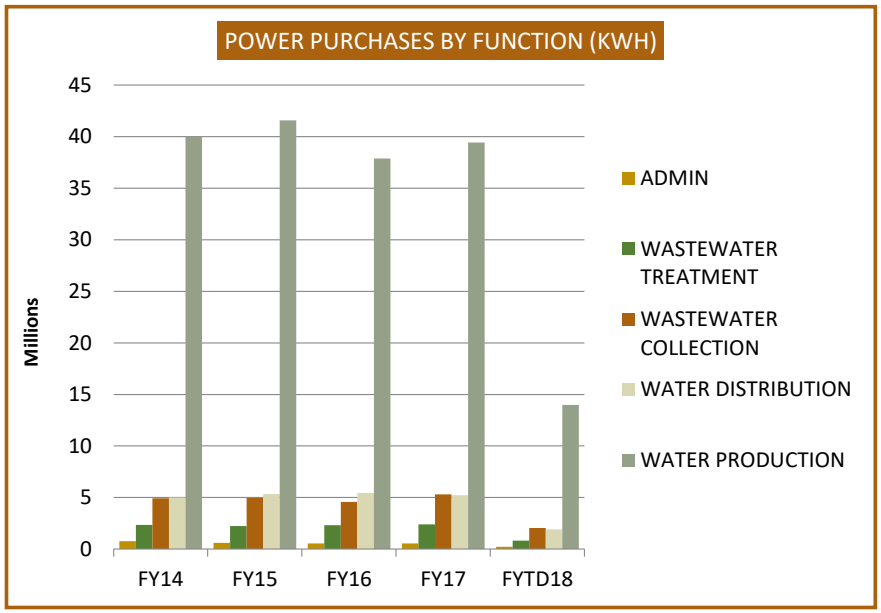


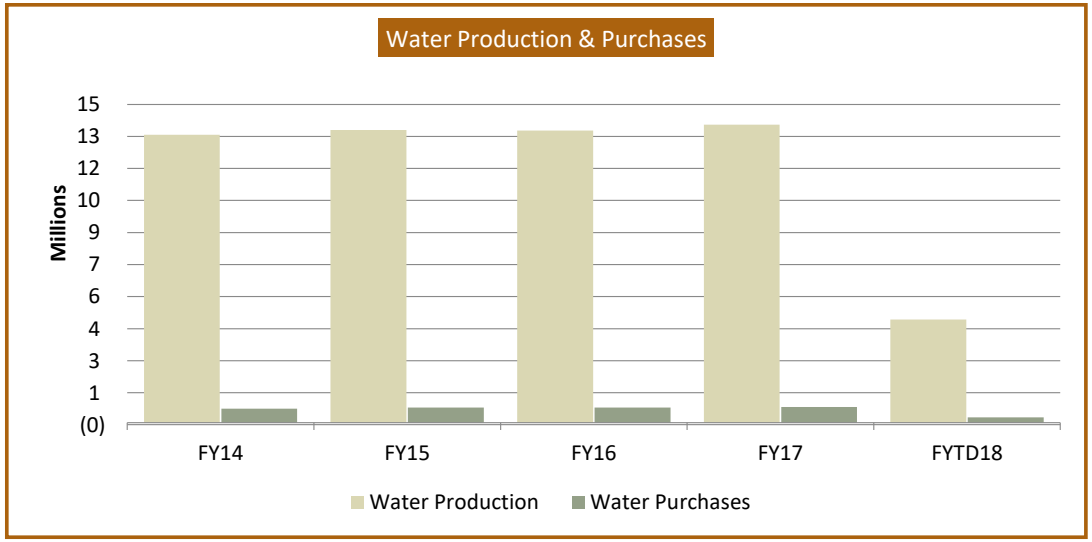
Top Ten Largest Water and Wastewater Customers – January 2018

Water			Wastewater		
Customer Name	FYTD18 Revenues	% of Total	Customer Name	FYTD18 Revenues	% of Total
1) MDI GUAM CORPORATION/LEOPALACE	$470,203	2.05%	1) AIR FORCE DOD	$1,158,536	8.83%
2) PACIFIC ISLANDS CLUB	378,673	1.65%	2) NAVY DOD	789,931	6.02%
3) HOTELS OF THE MARIANAS INC	337,091	1.47%	3) HOTELS OF THE MARIANAS INC	360,504	2.75%
4) HYATT	319,130	1.39%	4) HYATT	341,713	2.60%
5) HOTEL NIKKO GUAM	302,236	1.32%	5) HOTEL NIKKO GUAM	323,063	2.46%
6) GUAM REEF HOTEL INC	285,451	1.25%	6) GUAM REEF HOTEL INC	305,535	2.33%
7) SHERATON LAGUNA GUAM RESORT	263,178	1.15%	7) SHERATON LAGUNA GUAM RESORT	281,611	2.15%
8) MDI GUAM CORPORATION/WESTIN	218,024	0.95%	8) MDI GUAM CORPORATION/WESTIN	233,107	1.78%
9) TANOTA DEVELOPMENT LLC	212,245	0.93%	9) TANOTA DEVELOPMENT LLC	227,754	1.74%
10) OUTRIGGER GUAM RESORT	209,533	0.91%	10) OUTRIGGER GUAM RESORT	224,490	1.71%
Total	**$2,995,764**	**13.07%**	**Total**	**$4,246,244**	**32.35%**

Power, Water Purchases and Water Production

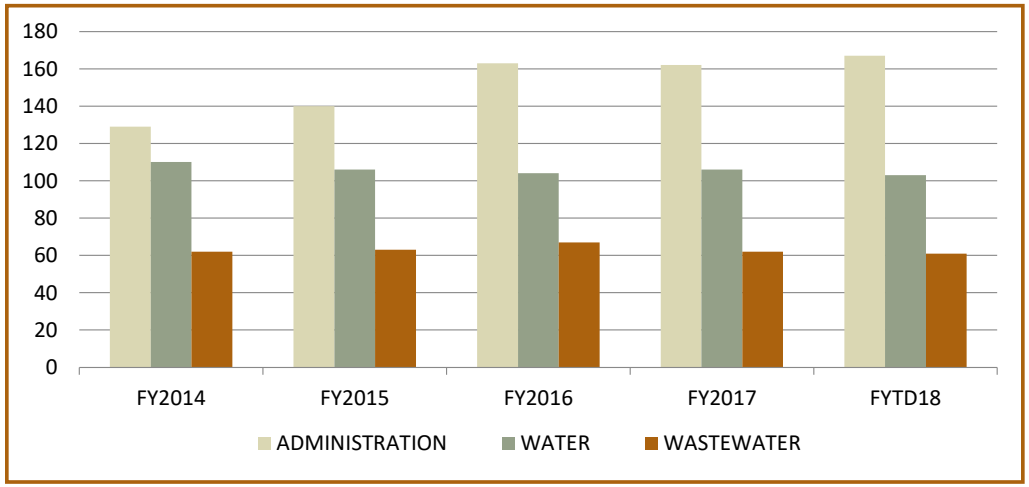




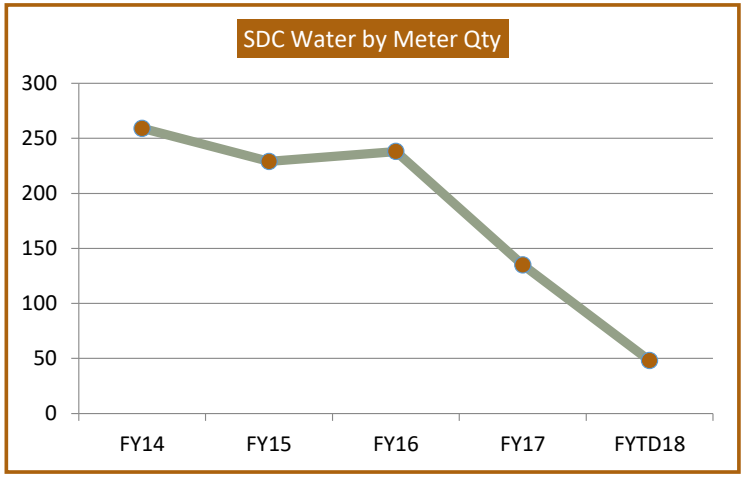


FTE by Major Division

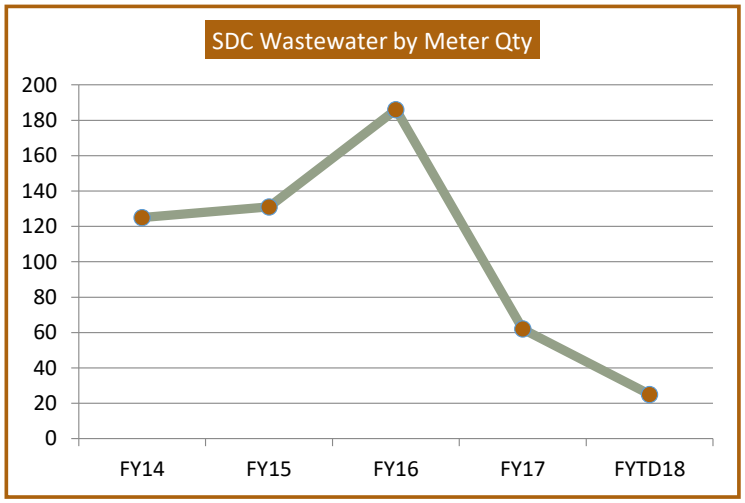
DIVISION	FY2014	FY2015	FY2016	FY2017	FYTD18
ADMINISTRATION	129	140	163	162	167
WATER	110	106	104	106	103
WASTEWATER	62	63	67	62	61
TOTAL NUMBER OF STAFF	301	309	334	330	331
Gross Salaries & Wages ($000)	15,532	15,805	16,442	17,210	5,811
Water Customers	41,702	41,274	41,858	42,181	42,518
Staff to Customers Ratio	0.72%	0.75%	0.80%	0.78%	0.78%



SDC Water & Wastewater (Meter Quantity)



Actual Meter Sizes (Inches)	FY 2014	FY 2015	FY 2016	FY 2017	FYTD18
5/8 x 3/4	248	220	239	129	42
1	5	5	7	2	1
1 1/2	1	1	1	1	3
2	3	2	4	2	2
3	1	-	1	-	-
4	-	1	-	-	-
6	-	-	-	1	-
8	1	-	-	-	-
10	-	-	-	-	-
Total SDC by Water	259	229	252	135	48



Actual Meter Sizes (Inches)	FY 2014	FY 2015	FY 2016	FY 2017	FYTD18
5/8 x 3/4	115	124	179	58	19
1	4	3	2	-	1
1 1/2	1	1	1	1	3
2	3	2	3	2	2
3	1	-	1	-	-
4	-	1	-	-	-
6	-	-	-	1	-
8	1	-	-	-	-
10	-	-	-	-	-
Total SDC by Wastewater	125	131	186	62	25

GUAM WATERWORKS AUTHORITY
JANUARY 31, 2018
FINANCIAL AND RELATED REPORTS
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GUAM WATERWORKS AUTHORITY
Balance Sheet
January 31, 2018

SCHEDULE A

ASSETS	Unaudited January 31, 2018	Unaudited September 30, 2017	Increase (Decrease)
Current Assets:			
Cash:			
Unrestricted (Schedule G)	3,301,196	4,873,275	(1,572,079)
Restricted Funds (Schedule G)	67,311,563	65,124,400	2,187,163
Accounts Receivable Trade, Net of Allowance for Doubtful Receivables of $12,847,445 at Jan 31, 2018 and $12,619,034 at Sep 30, 2017	16,675,949	15,450,733	1,225,216
Other Receivable	4,894,597	8,433,446	(3,538,849)
Materials & Supplies Inventory, Net of Allowance for Obsolescence of $457,370 at Jan 31, 2018 and Sep 30, 2017	2,127,929	2,166,557	(38,629)
Total Current Assets	94,311,233	96,048,411	(1,737,178)
Property, Plant and Equipment			
Utility plant in service:			
Water system	328,128,709	327,484,191	644,517
Wastewater system	286,418,021	286,394,940	23,082
Non-utility property	19,282,203	18,938,255	343,948
Total property	633,828,934	632,817,387	1,011,547
Less Accumulated Depreciation	(292,156,280)	(286,043,580)	(6,112,700)
Land	1,163,298	1,110,998	52,300
Construction Work in Progress	132,774,252	111,695,887	21,078,366
Property, Plant and Equipment, net	475,610,204	459,580,691	16,029,513
Other noncurrent assets			
Restricted cash (Schedule G)	218,026,315	236,550,002	(18,523,687)
Investments (Schedule G)	40,534,905	41,042,038	(507,134)
Other Prepaid Expenses	487,518	551,128	(63,610)
Total other noncurrent assets	259,048,738	278,143,169	(19,094,431)
TOTAL ASSETS	828,970,175	833,772,271	(4,802,096)
Deferred outflows of resources:			
Debt defeasance loss on refunding	11,124,478	1,695,981	9,428,498
Deferred outflows from pension	3,222,202	3,414,242	(192,040)
Total Assets and Deferred Outflows of Resources	**843,316,856**	**838,882,494**	**4,434,362**
LIABILITIES AND NET ASSETS			
Current Liabilities:			
Current maturities of long-term debt			
-Series 2010 Bond	-	1,655,000	(1,655,000)
-Series 2014 Refunding	3,475,000	3,385,000	90,000
-Notes Payable	3,038,469	2,873,988	164,481
Accounts Payable -Trade	4,960,010	5,390,256	(430,246)
Interest Payable	5,197,610	6,656,499	(1,458,889)
Accrued Payroll and Employee Benefits	1,869,929	2,604,471	(734,542)
Accrued Annual Leave	1,729,291	1,729,291	-
Current portion of employee annual leave	567,057	567,057	-
Contractors' Payable	7,813,984	13,950,287	(6,136,303)
Customer and Other Deposits	2,075,441	2,087,207	(11,767)
Total Current Liabilities	30,726,790	40,899,057	(10,172,267)
Long Term Debt, less current maturities			
Series 2010 Revenue Bond	-	112,870,000	(112,870,000)
Series 2013 Revenue Bond	172,630,000	172,630,000	-
Series 2014 Refunding	72,520,000	72,610,000	(90,000)
Series 2016 Revenue Bond	143,310,000	143,310,000	-
Series 2017 Refunding Bond	107,660,000	-	107,660,000
Unamortized Discount - 2010/2013 Series Bonds	(1,321,718)	(3,206,276)	1,884,558
Unamortized Premium - 2014/2016/2017 Series Bonds	34,002,001	22,067,669	11,934,332
Notes Payable	4,560,309	5,697,499	(1,137,190)
Unfunded Ret Liability (GASB 67/68)	38,195,938	38,195,938	-
Employee Annual Leave, Less Current Portion	783,992	783,992	-
TOTAL LIABILITIES	603,067,313	605,857,879	(2,790,566)
Net Assets	**240,249,543**	**233,024,615**	**7,224,928**
Total Liabilities and Net Assets	**843,316,856**	**838,882,494**	**4,434,362**

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited) **SCHEDULE B**
Comparative Budget vs. Actual for the period ending January 31, 2018

	Month to Date			Variance
	Budget January-18	Encumbered January-18	Actual (Unaudited) January-18	Increase / (Decrease)
OPERATING REVENUES				
Water Revenues	5,743,160		5,810,437	67,277
Wastewater Revenues	3,228,257		3,273,365	45,107
Legislative Surcharge	291,896		296,936	5,040
Other Revenues	57,638		26,724	(30,914)
System Development Charge	46,136		47,669	1,533
Total Operating Revenues	9,367,087		9,455,130	88,043
OPERATING AND MAINTENANCE EXPENSES				
Water Purchases	721,113		757,801	36,688
Power Purchases	1,057,997		1,237,130	179,133
Total Utility Costs	1,779,110		1,994,931	215,821
Salaries and Wages	1,625,056		1,518,692	(106,364)
Pension and Benefits	584,558		510,368	(74,190)
Total Salaries and Benefits	2,209,614		2,029,060	(180,554)
Capitalized Labor and Benefits	(208,333)		(208,333)	0
Net Salaries and Benefits	2,001,281		1,820,727	(180,554)
Administrative and General Expenses				
Sludge removal	174,514	-	141,826	(32,688)
Chemicals	229,997	18,565	242,974	31,542
Materials & Supplies	237,400	32,843	179,328	(25,230)
Transportation	61,370	17,243	53,871	9,743
Communications	16,182	4,758	15,334	3,910
Claims	17,600	-	25,547	7,947
Insurance	97,757	-	77,181	(20,576)
Training & Travel	21,814	-	38,568	16,754
Advertising	13,910	2,918	1,990	(9,003)
Miscellaneous	115,515	1,550	81,003	(32,963)
Total Administrative and General Expense	986,059	77,876	857,622	(50,562)
Regulatory Expense	29,086	-	27,902	(1,184)
Bad Debts Provision	57,103	-	57,096	(6)
Depreciation Expense	1,528,175	-	1,528,175	0
Contractual Expense				
Audit & Computer Maint.	78,630	27,869	39,373	(11,389)
Building rental	37,955	-	34,791	(3,164)
Equipment rental	57,375	10,267	84,789	37,681
Legal	4,167	-	600	(3,567)
Laboratory	64,752	34,567	10,654	(19,530)
Other	130,363	6,667	162,352	38,656
Total Contractual Expense	373,241	79,370	332,560	38,688
Retiree Supp. Annuities and health care costs	240,008		236,940	(3,068)
Contribution to Government of Guam	49,500		49,833	333
Total Retiree Benefits	289,508		286,774	(2,735)
Total Operating Expenses	7,043,563	157,245	6,905,787	19,469
Earnings (Loss) from Operations	2,323,524	(157,245)	2,549,343	68,574
Interest Income-2010/13/14/16 Series Bond	15,727		191,783	176,056
Interest Income-Other Funds	2,935		29,503	26,569
Interest Income-SDC	2,414		2,175	(239)
Interest Expense- 2010/13/14/16 Series Bond	(2,625,587)		(2,158,666)	466,921
Interest Expense- ST BOG	(33,288)		(39,394)	(6,106)
Federal Expenditures	(51,332)		(34,665)	16,667
Loss on Asset Disposal	-		-	-
AFUDC	625,000		625,000	-
Amortization of Discount, Premium and Issuance Costs	(61,861)		(77,542)	(15,681)
Loss on Defeasance Bond05 Refunding	(15,218)		(12,444)	2,775
Deferred outflows from pension	(105,281)		(48,010)	57,271
Prior Year Adjustment	-		-	-
Total non-operating revenues (expenses)	(2,246,492)	-	(1,522,260)	724,232
Net Income (Loss) before capital contributions	77,032	(157,245)	1,027,084	792,806
Capital Contributions				
Grants from US Government	873,108		2,102,130	1,229,022
Grants from GovGuam & Others	-		79,781	79,781
Other Contributions	-		-	-
Total Capital Contributions	873,108	-	2,181,911	1,308,802
Change in Net Assets	950,140	(157,245)	3,208,994	2,101,609
Debt Service Calculation				
Earnings From Operations	2,323,524		2,549,343	
System Development Charge	(46,136)		(47,669)	
Retiree COLA	49,500		49,833	
Interest/Investment Income	2,935		29,503	
Depreciation	1,528,175		1,528,175	
Balance Available for Debt Service per Section 6.12	3,857,998		4,109,186	
Working Capital Reserve Available for Debt Service	935,321		935,321	
Transfer to Working Capital- Debt Service Reserve	(150,000)		-	
Transfer to Working Capital- O&M Reserve	(266,667)		-	
Balance Available for Debt Service inclusive of reserves	4,376,652		5,044,507	
Debt Service				
Principal	433,333		433,333	
Interest	2,063,402		2,063,402	
Total	2,496,736		2,496,736	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.55		1.65	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	1.75		2.02	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited)
Comparative for the period ending January 31, 2018 and 2017

SCHEDULE C

	Month to Date		Variance
	Actual (Unaudited) January-18	Actual (Unaudited) January-17	Increase / (Decrease)
OPERATING REVENUES			
Water Revenues	5,810,437	5,331,404	479,033
Wastewater Revenues	3,273,365	3,099,528	173,837
Legislative Surcharge	296,936	267,269	29,667
Other Revenues	26,724	36,293	(9,569)
System Development Charge	47,669	72,662	(24,993)
Total Operating Revenues	9,455,130	8,807,155	647,975
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	757,801	609,094	148,707
Power Purchases	1,237,130	1,006,355	230,775
Total Utility Costs	1,994,931	1,615,449	379,482
Salaries and Wages	1,518,692	1,413,608	105,083
Pension and Benefits	510,368	477,546	32,823
Total Salaries and Benefits	2,029,060	1,891,154	137,906
Capitalized Labor and Benefits	(208,333)	(262,516)	54,183
Net Salaries and Benefits	1,820,727	1,628,638	192,089
Administrative and General Expenses			
Sludge removal	141,826	140,487	1,340
Chemicals	242,974	174,001	68,973
Materials & Supplies	179,328	128,788	50,540
Transportation	53,871	53,744	127
Communications	15,334	10,884	4,450
Claims	25,547	22,151	3,396
Insurance	77,181	90,603	(13,422)
Training & Travel	38,568	23,055	15,514
Advertising	1,990	8,988	(6,998)
Miscellaneous	81,003	71,997	9,006
Total Administrative and General Expense	857,622	724,696	132,925
Regulatory Expense	27,902	24,134	3,768
Bad Debts Provision	57,096	109,700	(52,604)
Depreciation Expense	1,528,175	1,402,038	126,137
Contractual Expense			
Audit & Computer Maint.	39,373	76,901	(37,528)
Building rental	34,791	36,557	(1,765)
Equipment rental	84,789	59,374	25,415
Legal	600	414	186
Laboratory	10,654	10,627	28
Other	162,352	156,747	5,605
Total Contractual Expense	332,560	340,619	(8,059)
Retiree Supp. Annuities and health care costs	236,940	231,895	5,045
Contribution to Government of Guam	49,833	49,500	333
Total Retiree Benefits	286,774	281,395	5,378
Total Operating Expenses	6,905,787	6,126,670	779,116
Earnings (Loss) from Operations	2,549,343	2,680,485	(131,142)
Interest Income-2010/13/14/16 Series Bond	191,783	65,354	126,428
Interest Income-Other Funds	29,503	10,032	19,472
Interest Income-SDC	2,175	1,060	1,115
Interest Expense- 2010/13/14/16 Series Bond	(2,158,666)	(2,220,744)	62,077
Interest Expense- ST BOG	(39,394)	(43,736)	4,342
Federal Expenditures	(34,665)	(42,501)	7,836
Loss on Asset Disposal	-	(81,105)	81,105
AFUDC	625,000	1,172,241	(547,241)
Amortization of Discount, Premium and Issuance Costs	(77,542)	61,861	(139,403)
Loss on Defeasance Bond05 Refunding	(12,444)	(15,218)	2,775
Deferred outflows from pension	(48,010)	(104,481)	56,471
Prior Year Adjustment	-	(26,756)	26,756
Total non-operating revenues (expenses)	(1,522,260)	(1,223,993)	(298,267)
Net Income (Loss) before capital contributions	1,027,084	1,456,492	(429,408)
Capital Contributions			
Grants from US Government	2,102,130	1,815,921	286,209
Grants from GovGuam & Others	79,781	1,664	78,116
Other Contributions	-	-	-
Total Capital Contributions	2,181,911	1,817,586	364,325
Change in Net Assets	3,208,994	3,274,078	(65,083)
Debt Service Calculation			
Earnings From Operations	2,549,343	2,680,485	
System Development Charge	(47,669)	(72,662)	
Retiree COLA	49,833	49,500	
Interest/Investment Income	29,503	10,032	
Depreciation	1,528,175	1,402,038	
Balance Available for Debt Service per Section 6.12	4,109,186	4,069,392	
Working Capital Reserve Available for Debt Service	935,321	932,134	
Transfer to Working Capital- Debt Service Reserve	-	-	
Transfer to Working Capital- O&M Reserve	-	-	
Balance Available for Debt Service inclusive of reserves	5,044,507	5,001,527	
Debt Service			
Principal	433,333	420,000	
Interest	2,063,402	1,626,858	
Total	2,496,736	2,046,858	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.65	1.99	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	2.02	2.44	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited)
Comparative Budget vs. Actual for the period ending January 31, 2018

SCHEDULE D

	Year to Date			Variance
	Budget January-18	Encumbered January-18	Actual (Unaudited) January-18	Increase / (Decrease)
OPERATING REVENUES				
Water Revenues	22,972,640		22,156,341	(816,299)
Wastewater Revenues	12,913,029		12,774,185	(138,845)
Legislative Surcharge	1,167,584		1,113,659	(53,925)
Other Revenues	230,552		133,504	(97,048)
System Development Charge	184,543		382,250	197,707
Total Operating Revenues	37,468,349		36,559,939	(908,410)
OPERATING AND MAINTENANCE EXPENSES				
Water Purchases	2,884,453		2,845,650	(38,803)
Power Purchases	4,231,988		4,649,102	417,115
Total Utility Costs	7,116,440		7,494,752	378,312
Salaries and Wages	6,500,224		5,810,805	(689,419)
Pension and Benefits	2,338,233		1,933,535	(404,698)
Total Salaries and Benefits	8,838,457		7,744,341	(1,094,116)
Capitalized Labor and Benefits	(833,333)		(833,333)	0
Net Salaries and Benefits	8,005,124		6,911,008	(1,094,116)
Administrative and General Expenses				
Sludge removal	698,056	-	505,267	(192,788)
Chemicals	819,987	222,778	740,263	143,053
Materials & Supplies	1,111,599	394,112	680,372	(37,115)
Transportation	209,482	206,911	127,742	125,172
Communications	64,728	57,098	60,187	52,557
Claims	44,400	9,000	21,781	(13,619)
Insurance	419,026	-	303,621	(115,405)
Training & Travel	87,257	13,315	53,048	(20,893)
Advertising	55,640	35,010	22,335	1,705
Miscellaneous	462,062	18,600	317,479	(125,983)
Total Administrative and General Expense	3,972,237	956,824	2,832,096	(183,317)
Regulatory Expense	88,345	-	68,709	(19,636)
Bad Debts Provision	228,410	-	228,390	(20)
Depreciation Expense	6,112,699	-	6,112,700	1
Contractual Expense				
Audit & Computer Maint.	329,521	86,100	274,970	31,549
Building rental	151,820	-	143,638	(8,182)
Equipment rental	229,498	123,200	311,476	205,178
Legal	16,667	-	2,400	(14,267)
Laboratory	244,006	414,810	171,639	342,443
Other	521,452	80,000	436,330	(5,122)
Total Contractual Expense	1,492,965	704,110	1,340,454	551,599
Retiree Supp. Annuities and health care costs	960,033		946,790	(13,243)
Contribution to Government of Guam	198,000		199,333	1,333
Total Retiree Benefits	1,158,033	-	1,146,124	(11,910)
Total Operating Expenses	28,174,253	1,660,934	26,134,233	(379,087)
Earnings (Loss) from Operations	9,294,096	(1,660,934)	10,425,706	(529,324)
Interest Income-2010/13/14/16 Series Bond	62,906		656,571	593,665
Interest Income-Other Funds	11,739		101,502	89,763
Interest Income-SDC	9,657		27,711	18,053
Interest Expense- 2010/13/14/16 Series Bond	(10,502,349)		(8,791,740)	1,710,609
Interest Expense- ST BOG	(133,153)		(143,866)	(10,713)
Federal Expenditures	(205,329)		(152,952)	52,377
Loss on Asset Disposal	-		-	-
AFUDC	2,500,000		2,500,000	-
Amortization of Discount, Premium and Issuance Costs	(247,443)		108,040	355,483
Loss on Defeasance Bond05 Refunding	(60,874)		(49,774)	11,099
Deferred outflows from pension	(421,122)		(192,040)	229,083
Prior Year Adjustment	-		22,201	22,201
Total non-operating revenues (expenses)	(8,985,967)	-	(5,914,348)	3,071,619
Net Income (Loss) before capital contributions	308,129	(1,660,934)	4,511,358	2,542,295
Capital Contributions				
Grants from US Government	3,492,433		2,633,789	(858,643)
Grants from GovGuam & Others	-		79,781	79,781
Other Contributions	-		-	-
Total Capital Contributions	3,492,433	-	2,713,570	(778,863)
Change in Net Assets	3,800,561	(1,660,934)	7,224,928	1,763,433
Debt Service Calculation				
Earnings From Operations	9,294,096		10,425,706	
System Development Charge	(184,543)		(382,250)	
Retiree COLA	198,000		199,333	
Interest/Investment Income	11,739		101,502	
Depreciation	6,112,699		6,112,700	
Balance Available for Debt Service per Section 6.12	15,431,990		16,456,991	
Working Capital Reserve Available for Debt Service	3,741,284		3,728,537	
Transfer to Working Capital- Debt Service Reserve	(600,000)		-	
Transfer to Working Capital- O&M Reserve	(1,066,667)		-	
Balance Available for Debt Service inclusive of reserves	17,506,608		20,185,528	
Debt Service				
Principal	1,733,333		1,733,333	
Interest	8,253,609		8,253,609	
Total	9,986,942		9,986,942	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.55		1.65	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	1.75		2.02	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited)
Comparative for the period ending January 31, 2018 and 2017

SCHEDULE E

	Year to Date ACTUAL (Unaudited) January-18	ACTUAL (Unaudited) January-17	Variance Increase / (Decrease)
OPERATING REVENUES			
Water Revenues	22,156,341	21,325,614	830,727
Wastewater Revenues	12,774,185	12,398,111	376,074
Legislative Surcharge	1,113,659	1,069,075	44,584
Other Revenues	133,504	145,171	(11,668)
System Development Charge	382,250	290,649	91,601
Total Operating Revenues	36,559,939	35,228,620	1,331,318
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	2,845,650	2,436,375	409,275
Power Purchases	4,649,102	4,025,421	623,682
Total Utility Costs	7,494,752	6,461,796	1,032,957
Salaries and Wages	5,810,805	5,654,434	156,371
Pension and Benefits	1,933,535	1,910,183	23,353
Total Salaries and Benefits	7,744,341	7,564,617	179,724
Capitalized Labor and Benefits	(833,333)	(1,050,063)	216,730
Net Salaries and Benefits	6,911,008	6,514,554	396,454
Administrative and General Expenses			
Sludge removal	505,267	561,947	(56,680)
Chemicals	740,263	696,004	44,258
Materials & Supplies	680,372	515,151	165,221
Transportation	127,742	214,978	(87,235)
Communications	60,187	43,535	16,651
Claims	21,781	88,604	(66,823)
Insurance	303,621	362,411	(58,790)
Training & Travel	53,048	92,218	(39,170)
Advertising	22,335	35,951	(13,616)
Miscellaneous	317,479	287,986	29,493
Total Administrative and General Expense	2,832,096	2,898,785	(66,689)
Regulatory Expense	68,709	96,538	(27,829)
Bad Debts Provision	228,390	438,799	(210,409)
Depreciation Expense	6,112,700	5,608,152	504,548
Contractual Expense			
Audit & Computer Maint.	274,970	307,604	(32,634)
Building rental	143,638	146,226	(2,588)
Equipment rental	311,476	237,496	73,981
Legal	2,400	1,656	744
Laboratory	171,639	42,506	129,133
Other	436,330	626,989	(190,658)
Total Contractual Expense	1,340,454	1,362,476	(22,022)
Retiree Supp. Annuities and health care costs	946,790	927,582	19,209
Contribution to Government of Guam	199,333	198,000	1,333
Total Retiree Benefits	1,146,124	1,125,582	20,542
Total Operating Expenses	26,134,233	24,506,681	1,627,552
Earnings (Loss) from Operations	10,425,706	10,721,940	(296,234)
Interest Income-2010/13/14/16 Series Bond	656,571	261,417	395,154
Interest Income-Other Funds	101,502	40,127	61,374
Interest Income-SDC	27,711	4,239	23,471
Interest Expense- 2010/13/14/16 Series Bond	(8,791,740)	(8,882,975)	91,235
Interest Expense- ST BOG	(143,866)	(174,945)	31,079
Federal Expenditures	(152,952)	(170,006)	17,054
Loss on Asset Disposal	-	(324,418)	324,418
AFUDC	2,500,000	4,688,964	(2,188,964)
Amortization of Discount, Premium and Issuance Costs	108,040	247,443	(139,403)
Loss on Defeasance Bond05 Refunding	(49,774)	(60,874)	11,099
Deferred outflows from pension	(192,040)	(417,923)	225,883
Prior Year Adjustment	22,201	(107,023)	129,223
Total non-operating revenues (expenses)	(5,914,348)	(4,895,973)	(1,018,376)
Net Income (Loss) before capital contributions	4,511,358	5,825,967	(1,314,609)
Capital Contributions			
Grants from US Government	2,633,789	7,263,686	(4,629,897)
Grants from GovGuam & Others	79,781	6,657	73,123
Other Contributions	-	-	-
Total Capital Contributions	2,713,570	7,270,343	(4,556,773)
Change in Net Assets	7,224,928	13,096,310	(5,871,383)
Debt Service Calculation			
Earnings From Operations	10,425,706	10,721,940	
System Development Charge	(382,250)	(290,649)	
Retiree COLA	199,333	198,000	
Interest/Investment Income	101,502	40,127	
Depreciation	6,112,700	5,608,152	
Balance Available for Debt Service per Section 6.12	16,456,991	16,277,570	
Working Capital Reserve Available for Debt Service	3,728,537	3,728,537	
Transfer to Working Capital- Debt Service Reserve	-	-	
Transfer to Working Capital- O&M Reserve	-	-	
Balance Available for Debt Service inclusive of reserves	20,185,528	20,006,106	
Debt Service			
Principal	1,733,333	1,680,000	
Interest	8,253,609	6,507,434	
Total	9,986,942	8,187,434	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.65	1.99	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	2.02	2.44	

SCHEDULE F

Bond Compliance		**($$$) Per Indenture**	**As of 1/31/18 ($$$) Bond 2013/2014/2016/2017**
• Operation and Maintenance Fund-BOG	*Equivalent to 55 days of the annual O&M budget less depreciation*	$10.5M	$10.5M
• Bond Reserve Fund - US Bank	*Fully funded- Principal and Interest (Bond Series 2013, 2014 Refunding 2016 and 2017 Refunding)*	$34.9M	$34.9M
• Operation, Maintenance, Renewal and Replacement Reserve Fund-BOG Trust	*Equivalent to 1/4 of the annual O&M budget & CIP budget to be funded in 5 years ($2M/year)*	$17.4M	$17.4M
• Capital Improvement Fund	*Balance remaining in the Revenue Fund after the foregoing deposits*	$3.9K	$5.6K
• Capitalized Interest Fund			$2.9K

GUAM WATERWORKS AUTHORITY
Restricted and Unrestricted Cash Summary
FY 2018

SCHEDULE G

Description	Unaudited January 31, 2018	Unaudited September 30, 2017	Increase (Decrease)
UNRESTRICTED			
Change Fund	2,000	2,000	0
Petty Cash	5,000	5,000	0
BOG - General Fund	3,264,157	4,836,236	(1,572,079)
BOG - PRN Payroll	30,039	30,039	0
Sub-total Unrestricted	3,301,196	4,873,275	(1,572,079)
RESTRICTED			
BOG - On Line Payment	-	-	0
BOG - Sweep Account	-	-	0
Bank of Hawaii	80,447	133,931	(53,485)
ANZ Bank	-	-	0
First Hawaiian Bank	8,139	10,261	(2,122)
Bank Pacific	22,440	15,825	6,615
Community First FCU	5,153	3,448	1,705
BOG - Customer Refunds	1,841,492	1,831,426	10,066
Bank Pacific - Surcharge	601,836	278,142	323,694
Bank Pacific - Escrow Deposit	666,222	666,140	82
BOG Emergency Reserve Fund	6,124	6,122	2
BOG - Revenue Trust	69,709	201,614	(131,905)
BOG Revenue Trust Fund	7,945,816	7,782,227	163,589
BOG Capital Improvement Fund-Bond	5,598	5,598	0
BOG Capital Improvement Revenue Fund	1,351,928	-	1,351,928
BOG-O & M Reserve	13,548,868	13,516,540	32,328
BOG-Debt Service Reserve	11,244,664	11,217,733	26,931
BOG-CAPEX Reserve	15,498,322	15,462,869	35,453
BOG Sewer Hookup Revolving Fund	64,341	63,590	751
BOG Subord. Sec. Fund	859,233	859,233	0
BOG Operation and Maintenance Fund	3,083,482	3,083,482	0
	56,903,815	55,138,182	1,765,633
BOG - SDC Deposit	3,157,748	1,486,219	1,671,530
BOG - SDC CDs	7,250,000	8,500,000	(1,250,000)
Total Restricted	67,311,563	65,124,400	2,187,163
Reserve Funds			
BOG Series 05 OMRRRF Fund	17,423,213	17,423,213	-
BOG Series 13 Construction Fund	64,149,060	74,461,765	(10,312,706)
BOG Series 14 Refunding Construction Fund	762,683	771,281	(8,598)
BOG Series 16 Construction Fund	126,752,323	132,811,449	(6,059,126)
BOG Series 16 Cap Int Fund	2,975	1,782,982	(1,780,008)
BOG Series 17 Refunding Construction Fund	8,888,638	9,299,311	(410,674)
BOG Series 17 Refunding COI Fund	47,424	-	47,424
Total Restricted - Held by Trustee	218,026,315	236,550,002	(18,523,687)
USB Series 2013 Debt Service Fund	787,869	2,336,754	(1,548,885)
USB Series 2013 Debt Service Reserve Fund	12,031,688	12,031,688	-
USB Series 2014 Refunding Debt Service Fund	2,344,001	1,796,559	547,442
USB Series 2014 Refunding Debt Service Reserve Fund	7,758,497	7,707,602	50,895
USB Series 2016 Debt Service Fund	598,108	130	597,978
USB Series 2016 Debt Service Reserve Fund	7,594,584	7,582,725	11,859
USB Series 2010 Debt Service Fund	1,377,700	2,020,121	(642,421)
USB Series 2017 Refunding Debt Service Reserve Fund	7,566,460	7,566,460	-
USB Series 2017 Debt Service Fund	475,997	-	475,997
Total Investments	40,534,905	41,042,038	(507,134)
Total Restricted and Unrestricted Cash	329,173,979	347,589,716	(18,415,737)

SCHEDULE H

Guam Waterworks Authority
Statement of Cash Flows (Unaudited)
FY 2018

	YTD Jan-18
Increase (decrease) in cash	
Cash flows from operating activities:	
Cash received from trade and others	34,758,036
Cash payments to suppliers/contractors for goods and services	(12,111,215)
Cash payments to employees for services	(8,400,300)
Net cash provided by operating activities	14,246,521
Cash flows from capital and related financing activities:	
Contributed capital received (grants)	6,483,193
Acquisition of utility plant	(25,778,516)
Repayment of Long Term Debt	6,953,891
Interest expense	(11,478,777)
Net cash provided by (used in) capital and related financing activities	(23,820,209)
Cash flows from investing activities:	
Transfers from (to) restricted fund	7,215,826
Interest income received	785,783
Net cash provided by investing activities	8,001,609
Net increase (decrease) in cash	(1,572,079)
Unrestricted cash at beginning of the period	4,873,275
Unrestricted cash at end of period	3,301,196
Reconciliation of operating loss to net cash provided by operating activities:	
Operating Income (loss)	12,072,015
Adjustments to reconcile to net cash provided by operating activities:	
Depreciation expense	6,112,700
Other Expense/income	420,430
(Increase) decrease in assets:	
Accounts receivable	(1,790,137)
Materials and supplies inventory	38,628
Other Assets	63,610
Increase (decrease) in liabilities:	
Accounts payable, Contractors, Retention & Escrow Deposit	(1,924,417)
Accrued payroll	(734,541)
Customer deposits	(11,767)
Net cash provided by operating activities	14,246,521

Guam Waterworks Authority
Accounts Receivable - Government
As of January 31, 2018

SCHEDULE I

			AGING				
Customer Name	**No of Accounts**	**Current Balance**	**31-60 days**	**61-90 days**	**91-120 days**	**Over 120 days**	**Outstanding Bal.**
GUAM INT'L AIRPORT AUTHORITY	10	47,433	37,492	38,570	31,237	161,181	315,913
GUAM POWER AUTHORITY	25	19,293	15,880	17,450	598	142,291	195,510
GUAM MEMORIAL HOSPITAL AUTHORITY	2	38,031	32,516	37,847	-	-	108,394
PORT AUTHORITY OF GUAM	1	54,109	34,514	-	-	-	88,623
GUAM COMMUNITY COLLEGE	3	8,994	9,307	5,159	-	-	23,459
UNIVERSITY OF GUAM	2	9,009	-	-	-	-	9,009
GUAM HOUSING & URBAN RENEWAL AUTHORITY	4	1,140	-	-	-	92	1,232
GUAM HOUSING CORPORATION	1	30	-	-	-	-	30
AUTONOMOUS AGENCIES	**48**	**178,039**	**129,709**	**99,025**	**31,834**	**303,564**	**742,171**
DEPT OF EDUCATION	51	213,202	219,782	38,880	12,658	117,414	601,934
DEPT OF PARKS & RECREATION	20	33,313	28,007	27,726	193,110	167,584	449,741
DEPT OF CORRECTIONS	8	167,613	53	-	-	-	167,667
DEPT OF PUBLIC HEALTH & SOCIAL SERVICES	5	1,351	1,058	626	454	103,673	107,162
DEPT OF CHAMORRO AFFAIRS	2	4,057	3,589	2,409	-	-	10,055
MAYORS' COUNCIL OF GUAM	40	9,867	113	12	-	-	9,991
DEPT OF MENTAL HEALTH AND SUBTANCE	2	8,977	-	-	-	-	8,977
GUAM FIRE DEPARTMENT	8	6,361	-	-	-	-	6,361
DEPT OF YOUTH AFFAIRS	4	1,291	25	25	154	3,847	5,342
OFFICE OF THE GOVERNOR	2	4,769	-	-	-	-	4,769
DEPT OF AGRICULTURE	7	4,217	-	-	-	-	4,217
DEPT OF PUBLIC WORKS	9	3,622	-	-	-	-	3,622
SANCTUARY INC	1	3,001	-	-	-	-	3,001
DEPT OF ADMINISTRATION	2	676	161	146	137	598	1,718
GUAM POLICE DEPARTMENT	2	1,037	-	-	-	-	1,037
GHURA-AGAFU GUMAS PARK	1	42	26	38	28	803	937
DIVISION OF SENIOR CITIZENS, DPH&SS	2	355	139	151	61	-	705
GUAM PUBLIC LIBRARY	3	134	-	-	-	-	134
GUAM VETERANS AFFAIRS OFFICE	1	127	-	-	-	-	127
GUAM LEGISLATURE	2	109	-	-	-	-	109
GUAM ENERGY OFFICE	1	79	-	-	-	-	79
MERIZO MAYOR	1	28	25	-	-	-	52
THE OFFICE OF THE DEDEDO MAYOR	1	44	-	-	-	-	44
GUAM SOLID WASTE AUTHORITY	1	23	-	-	-	-	23
LINE AGENCIES	**176**	**464,294**	**252,977**	**70,013**	**206,603**	**393,918**	**1,387,804**
TOTAL January 31, 2018	**224**	**642,333**	**382,686**	**169,037**	**238,437**	**697,482**	**2,129,976**
TOTAL September 30, 2017	**253**	**715,578**	**442,522**	**169,120**	**72,476**	**396,347**	**1,796,043**
% INCREASE/ (DECREASE)	**-11%**	**-10%**	**-14%**	**0%**	**229%**	**76%**	**19%**

GUAM WATERWORKS AUTHORITY
2013 Series Bond Project Status
As of January 31, 2018

SCHEDULE J

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 01/31/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 01/31/18
Santa Rita Springs Booster Pump Rehab Phase II	$ 100,000	$ 100,000	$ 61,482	$ 38,518	$ 100,000	$ -	$ 38,518
"A" Series Well Transmission Line	$ 400,000	$ 400,000	$ 314,479	$ 55,367	$ 369,846	$ 30,154	$ 85,521
Water Booster Pump Station	$ 6,000,000	$ 1,861,000	$ 1,656,428	$ 23,536	$ 1,679,964	$ 181,036	$ 204,572
Meter Replacement Program		$ 999,000	$ 996,532	$ -	$ 996,532	$ 2,468	$ 2,468
Barrigada Tank Repair/Replacement	$ 6,000,000	$ 4,987,000	$ 4,924,959	$ 62,041	$ 4,987,000	$ 0	$ 62,041
Leak Detection	$ 100,000	$ 20,000	$ 16,916	$ -	$ 16,916	$ 3,084	$ 3,084
Potable Water System Planning	$ 800,000	$ 624,000	$ 598,825	$ 25,175	$ 624,000	$ -	$ 25,175
Implement Ground Water Rule	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ -	$ 1,000,000	$ -	$ -
Deep Well Rehabilitation	$ 800,000	$ 200,000	$ 189,930	$ 10,071	$ 200,000	$ (0)	$ 10,070
New Deep Wells at Down Hard	$ 2,000,000	$ 810,000			$ -	$ 810,000	$ 810,000
Master Meters	$ 4,000,000	$ 784,000	$ 531,188	$ 180,872	$ 712,060	$ 71,940	$ 252,812
Ugum Water Treatment Plant Intake	$ 1,000,000	$ 982,000	$ 578,858	$ 280,943	$ 859,801	$ 122,199	$ 403,142
Water Wells	$ 4,200,000	$ 4,200,000	$ 2,284,474	$ 745,555	$ 3,030,029	$ 1,169,971	$ 1,915,527
Water Distribution System	$ 12,000,000	$ 11,151,000	$ 4,946,582	$ 4,908,934	$ 9,855,516	$ 1,295,484	$ 6,204,418
Pressure Zone Realignment /	$ 1,000,000	$ 431,000	$ 336,036	$ 1,074	$ 337,110	$ 93,890	$ 94,964
Mechanical/Electrical Equipment	$ 430,000	$ 430,000	$ 328,686	$ 98,112	$ 426,798	$ 3,202	$ 101,314
Water Reservoir Internal/External	$ 800,000	$ -			$ -	$ -	$ -
Water System Reservoirs 2005 Improvements	$ 21,000,000	$ 13,878,000	$ 10,597,654	$ 3,280,346	$ 13,878,000	$ (0)	$ 3,280,346
Ugum Water Treatment Plant Reservoir	$ 7,000,000	$ 90,000			$ -	$ 90,000	$ 90,000
Agana Heights & Chaot Tanks	$ 4,500,000	$ 3,280,000	$ 233,265	$ 1,097,022	$ 1,330,287	$ 1,949,713	$ 3,046,735
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 13,500,000	$ 11,605,000	$ 1,167,648	$ 10,437,352	$ 11,605,000	$ 0	$ 10,437,353
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 8,000,000	$ -			$ -	$ -	$ -
Assessment of maloiloi Elevetad & Yigo Elevated	$ 500,000	$ 485,117	$ 461,813	$ 23,304	$ 485,117	$ -	$ 23,304
Fire Hydrant Replacement Program	$ -	$ -			$ -	$ -	$ -
		$ -					
Wastewater System Planning	$ 800,000	$ 651,000	$ 550,480	$ 100,520	$ 651,000	$ (0)	$ 100,520
Lift Station Upgrades	$ 5,000,000	$ 946,000	$ 562,785	$ 363	$ 563,149	$ 382,852	$ 383,215
Wastewater Collection System Repl/Rehab	$ 6,500,000	$ 780,000	$ 476,682	$ 168,631	$ 645,314	$ 134,687	$ 303,318
Baza Gardens STP Replacement		$ 3,114,883	$ 969,594	$ 2,145,275	$ 3,114,869	$ 15	$ 2,145,290
Facilities Plan/Design for Umatac-Merizo WWTP		$ 473,000	$ 335,000	$ 36,699	$ 371,699	$ 101,301	$ 138,000
Agat/Santa Rita STP Replacement	$ 19,000,000	$ 67,200,000	$ 36,744,222	$ 30,455,778	$ 67,200,000	$ 0	$ 30,455,778
Agana WWTP Interim Measures		$ 673,000	$ 548,597	$ 124,403	$ 673,000	$ (0)	$ 124,403
Umatac Merizo Replacement	$ 2,000,000	$ -			$ -	$ -	$ -
		$ -					
Wastewater Pump Station Electrical Upgrade	$ 620,000	$ 620,000	$ 91,348	$ 8,513	$ 99,861	$ 520,139	$ 528,652
Electrical Upgrade - Water Wells	$ 1,500,000	$ 1,500,000	$ 1,480,769	$ 19,230	$ 1,500,000	$ 0	$ 19,231
Electrical Upgrade - Water Booster	$ 325,000	$ 2,000			$ -	$ 2,000	$ 2,000
Electrical Upgrade -Water Booster	$ 350,000	$ 200,000	$ 977	$ -	$ 977	$ 199,023	$ 199,023
Electrical Upgrade - Other Water	$ 250,000	$ 150,000	$ 60,700	$ -	$ 60,700	$ 89,300	$ 89,300
SCADA Improvements – Phase 3	$ 1,850,000	$ 923,000	$ 427,949	$ 294,410	$ 722,359	$ 200,641	$ 495,051
SCADA Improvements – Phase 4	$ 500,000	$ -			$ -	$ -	$ -
		$ -					$ -
Laboratory Modernization	$ 1,500,000	$ 1,173,000	$ 1,155,875	$ 15,590	$ 1,171,465	$ 1,535	$ 17,125
Land Survey	$ 2,000,000	$ 2,000	$ 1,038	$ 15	$ 1,053	$ 948	$ 963
General Plant Improvements / Water	$ 2,000,000	$ 2,600,000	$ 1,265,043	$ 1,176,695	$ 2,441,737	$ 158,263	$ 1,334,957
Allowance for COI							$ 275,005
Interest Earned							$ 445,868
Total Construction Fund (2013 Series Revenue Bond)	**$ 139,325,000**	**$ 139,325,000**	**$ 75,896,813**	**$ 55,814,344**	**$ 131,711,157**	**$ 7,613,843**	**$ 64,149,059**

PUC's Docket 14-04 dated February 25, 2014

GUAM WATERWORKS AUTHORITY
2014 Series Refunded Bond Project Status
As of January 31, 2018

SCHEDULE K

PROJECT NAME	ORIGINAL APPROVED PROJECT	ADJUSTED PROJECT COST	EXPENDITURES AS OF 01/31/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	20% PUC AS OF 01/31/18	Construction fund balance AS OF 01/31/18
Agana Treatment Plant	$ 10,475,000	$ 11,065,512	$ 11,065,512	$ -	$ 11,065,512	$ (0)	$ 2,095,000	$ (0)
								$ -
Agana Outfall	$ 5,030,000	$ 10,127,198	$ 10,127,198	$ -	$ 10,127,198	$ 0	$ 1,006,000	$ 0
								$ -
								$ -
Northern District (Outfall)	$ 4,700,000	$ 10,251,423	$ 10,251,423	$ -	$ 10,251,423	$ 0	$ 940,000	$ 0
Northern District WWTP Upgrade		$ 173,681	$ 173,681		$ 173,681	$ -		$ -
Northern Treatment Plant		$ -	$ -		$ -	$ -		$ -
Baza Gardens Wastewater Treatment Plant	$ 500,000	$ 297,177	$ 297,177	$ -	$ 297,177	$ (0)	$ 100,000	$ (0)
Interim Disinfection Facilities	$ 581,000	$ 3,437,311	$ 3,408,599	$ 28,712	$ 3,437,311	$ (0)	$ 116,200	$ 28,712
						$ -		$ -
Electrical Protection	$ 1,000,000	$ 1,512,483	$ 1,512,483	$ -	$ 1,512,483	$ (0)	$ 200,000	$ (0)
Well Vulnerability Reduction	$ 600,000	$ 185,522	$ 185,522	$ -	$ 185,522	$ 0	$ 120,000	$ 0
Old Agat Wastewater Collection (I/I Reductic	$ 2,155,000	$ 1,931,659	$ 1,931,659	$ -	$ 1,931,659	$ (0)	$ 431,000	$ (0)
				$ -		$ -		$ -
Chaot WW Pump Station/Collection System	$ 410,000	$ 399,120	$ 399,120	$ -	$ 399,120	$ -	$ 82,000	$ -
Lift Station Upgrades	$ 230,000	$ 149,895	$ 149,895	$ -	$ 149,895	$ 0	$ 46,000	$ 0
Collection Line Upgrades	$ 200,000	$ 62,755	$ 62,755	$ -	$ 62,755	$ 0	$ 40,000	$ 0
"A" Well Transmission Line	$ 2,413,000	$ 3,833,175	$ 3,790,888	$ 42,287	$ 3,833,175	$ (0)	$ 482,600	$ 42,287
					$ -	$ -		$ -
Santa Rita Springs - Booster Pump Rehab.	$ 648,000	$ 306,841	$ 306,841	$ -	$ 306,841	$ (0)	$ 129,600	$ (0)
						$ -	$ -	$ -
Fena Bypass Transmission line		$ 160,913	$ 160,913	$ -	$ 160,913	$ (0)	$ -	$ (0)
Storage Additions	$ 950,000	$ -			$ -	$ -	$ 190,000	$ -
Booster Station Upgrades	$ 390,000	$ 66,734	$ 66,734	$ -	$ 66,734	$ -	$ 78,000	$ -
Mangilao Tank Repair	$ 800,000	$ 398,367	$ 397,933	$ 434	$ 398,367	$ (0)	$ 160,000	$ 434
Ugum Tank Replacement	$ 2,500,000	$ -			$ -	$ -	$ 500,000	$ -
Ugum WTPlant Refurbishment ($1.724,970EPA)		$ 6,588,473	$ 6,531,525	$ 56,949	$ 6,588,473	$ (0)		$ 56,948
Barrigada Tank Repair/Replacement	$ 3,000,000	$ 65,019	$ 65,019	$ -	$ 65,019	$ 0	$ 600,000	$ 0
						$ -		$ -
Water Reservoir Condition Assessment		$ 1,250,000	$ 1,249,227	$ 772	$ 1,250,000	$ 0	$ -	$ 773
EarthTech Well Buyout	$ 5,000,000	$ 5,975,000	$ 5,975,000	$ -	$ 5,975,000	$ -	$ 1,000,000	$ -
Water Wastewater Master Plan	$ 4,900,000	$ 4,881,308	$ 4,881,308	$ -	$ 4,881,308	$ 0	$ 980,000	$ 0
Laboratory Modernization	$ 800,000	$ 135,055	$ 135,055	$ -	$ 135,055	$ 0	$ 160,000	$ 0
Land Survey	$ 800,000	$ 577,836	$ 576,134	$ 1,702	$ 577,836	$ 0	$ 160,000	$ 1,702
Ground Water Disinfection		$ -				$ -		$ -
GWUDI Study		$ 262,234	$ 260,430	$ 1,804	$ 262,234	$ -		$ 1,804
						$ -		$ -
Contingency	$ 12,276,023	$ 154	$ -	$ -	$ -	$ -		$ 732
						$ -		$ -
						$ -		$ -
						$ -		$ -
						$ -		$ -
						$ -		$ -
Vehicles	$ 1,100,000	$ 1,280,000	$ 2,130,305	$ (850,305)	$ 1,280,000	$ -	$ 220,000	$ -
Generation Equipment	$ 700,000	$ 880,000	$ 2,712	$ 877,288	$ 880,000	$ 0		$ 27,033
Leak Detection/Line Replacement	$ 8,200,000	$ 5,988,494	$ 5,988,494	$ -	$ 5,988,494	$ -	$ 1,640,000	$ -
						$ -		$ -
						$ -		$ -
Automated Meter Reading	$ 12,572,063	$ 17,468,359	$ 16,870,522	$ 537,157	$ 17,468,359	$ 0	$ 2,514,413	$ 597,837
Total Construction Fund (2014 Series Refu	$ 82,930,086	$ 89,711,698	$ 88,891,990	$ 758,873	$ 89,711,543	$ 1	$ 13,990,813	$ 758,263
Interest Earned	$ 6,781,612	$ (0)				$ (0)		$ 4,421
Total Project Cost Funding	**$ 89,711,698**	**$ 89,711,698**	**88,891,990**	**$ 758,873.38**	**$ 89,711,543**	**$ 1**	**$ 13,990,813**	**$ 762,683**

GUAM WATERWORKS AUTHORITY
2016 Series Bond Project Status
As of January 31, 2018

SCHEDULE L

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 01/31/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 01/31/18
Water Booster Pump Station	$ 4,139,000	$ 4,139,000			$ -	$ 4,139,000	$ 4,139,000
Meter Replacement Program	$ 4,501,000	$ 4,501,000		$ 150,000	$ 150,000	$ 4,351,000	$ 4,501,000
Barrigada Tank Repair/Replacement	$ 1,013,000	$ 1,013,000		$ -	$ -	$ 1,013,000	$ 1,013,000
Leak Detection	$ 1,180,000	$ 1,180,000		$ -	$ -	$ 1,180,000	$ 1,180,000
Potable Water System Planning	$ 2,276,000	$ 2,276,000	$ 159,105	$ 261,340	$ 420,445	$ 1,855,555	$ 2,116,895
Deep Well Rehabilitation	$ 250,000	$ 250,000		$ 110,013	$ 110,013	$ 139,987	$ 250,000
New Deep Wells at Down Hard	$ 1,190,000	$ 1,190,000			$ -	$ 1,190,000	$ 1,190,000
Master Meters	$ 3,616,000	$ 3,616,000		$ 39,340	$ 39,340	$ 3,576,660	$ 3,616,000
Ugum Water Treatment Plant Intake	$ 18,000	$ 18,000			$ -	$ 18,000	$ 18,000
Water Wells	$ 2,500,000	$ 2,500,000			$ -	$ 2,500,000	$ 2,500,000
Water Distribution System	$ 2,049,000	$ 49,000			$ -	$ 49,000	$ 49,000
Pressure Zone Realignment /	$ 1,141,000	$ 1,141,000		$ 668,355	$ 668,355	$ 472,645	$ 1,141,000
Mechanical/Electrical Equipment	$ 100,000	$ 100,000			$ -	$ 100,000	$ 100,000
Water Reservoir Internal/External	$ 800,000	$ 800,000			$ -	$ 800,000	$ 800,000
Water System Reservoirs 2005 Improvements	$ 42,350,000	$ 28,350,000	$ 1,820,465	$ 8,635,484	$ 10,455,949	$ 17,894,051	$ 26,529,535
Ugum Water Treatment Plant Reservoir	$ 6,410,000	$ -			$ -	$ -	$ -
Water Audit Program & Water Loss Control Plan	$ 1,000,000	$ 1,000,000				$ 1,000,000	$ 1,000,000
Agana Heights & Chaot Tanks	$ 1,220,000	$ 1,220,000		$ 500,000	$ 500,000	$ 720,000	$ 1,220,000
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 1,895,000	$ 1,895,000		$ 1,822,133	$ 1,822,133	$ 72,867	$ 1,895,000
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 10,500,000	$ 7,409,830		$ 7,300,000	$ 7,300,000	$ 109,830	$ 7,409,830
Fire Hydrant Replacement Program	$ 2,000,000	$ 2,000,000			$ -	$ 2,000,000	$ 2,000,000
						$ -	
Wastewater System Planning	$ 349,000	$ 349,000	$ 30,708	$ 263,223	$ 293,931	$ 55,069	$ 318,292
Lift Station Upgrades	$ 2,404,000	$ 2,404,000	$ 64,755	$ 166,039	$ 230,794	$ 2,173,206	$ 2,339,245
Wastewater Collection System Repl/Rehab	$ 2,920,000	$ 2,920,000		$ 224,923	$ 224,923	$ 2,695,077	$ 2,920,000
Baza Gardens STP Replacement	$ 16,700,000	$ 29,400,170	$ 7,244,707	$ 21,874,943	$ 29,119,650	$ 280,520	$ 22,155,463
Facilities Plan/Design for Umatac-Merizo WWTP	$ 527,000	$ 527,000	$ 190,947	$ 59,839	$ 250,786	$ 276,214	$ 336,053
Agat/Santa Rita STP Replacement	$ 3,000,000	$ 3,000,000	$ 510,092	$ 607,248	$ 1,117,339	$ 1,882,661	$ 2,489,908
Agana WWTP Interim Measures	$ 827,000	$ 827,000			$ -	$ 827,000	$ 827,000
Umatac Merizo Replacement	$ 8,000,000	$ 20,800,000	$ 2,301,795	$ 18,295,086	$ 20,596,882	$ 203,118	$ 18,498,205
						$ -	
Wastewater Pump Station Electrical Upgrade	$ 100,000	$ 100,000			$ -	$ 100,000	$ 100,000
Electrical Upgrade - Water Wells	$ 650,000	$ 650,000			$ -	$ 650,000	$ 650,000
Electrical Upgrade - Water Booster	$ 323,000	$ 323,000			$ -	$ 323,000	$ 323,000
SCADA Improvements – Phase 3	$ 1,177,000	$ 1,177,000	$ 18,000	$ 599,497	$ 617,497	$ 559,503	$ 1,159,000
SCADA Improvements – Phase 4	$ 6,500,000	$ 6,500,000			$ -	$ 6,500,000	$ 6,500,000
						$ -	
Laboratory Modernization	$ 1,127,000	$ 1,127,000	$ 1,127,000	$ -	$ 1,127,000	$ -	$ -
Land Survey	$ 1,998,000	$ 1,998,000	$ 14,147	$ 1,246,376	$ 1,260,524	$ 737,476	$ 1,983,853
General Plant Improvements / Water	$ 2,769,463	$ 2,769,463	$ 231,546	$ 1,143,966	$ 1,375,512	$ 1,393,951	$ 2,537,917
Information Technology Integration Improvements	$ 500,000	$ 500,000	$ 244,068	$ -		$ 500,000	$ 255,932
Interest Earned		$ -					$ 690,196
		$ -					
Total Construction Fund (2016 Series Revenue Bond)	**$ 140,019,463**	**$ 140,019,463**	**$ 13,957,336**	**$ 63,967,804**	**$ 77,681,072**	**$ 62,338,391**	**$ 126,752,323**

GUAM WATERWORKS AUTHORITY
2010 Series Bond Project Status
As of January 31, 2018

SCHEDULE M

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 01/31/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 01/31/18
Ground Water Disinfection	$ -	$ 500,000	$ 438,141	$ 61,859	$ 500,000	$ 0	$ 61,859
"A" Series Well Transmission Line	$ 600,000	$ 518,144	$ 474,434	$ 1,274	$ 475,709	$ 42,435	$ 43,710
Water Booster Pump Station	$ 500,000	$ 500,000	$ 418,844	$ 81,156	$ 500,000	$ (0)	$ 81,156
Meter Replacement Program	$ 2,500,000	$ 10,300,000	$ 10,254,220	$ 19,409	$ 10,273,628	$ 26,372	$ 45,780
Barrigada Tank Repair/Replacement	$ -	$ 5,450,000	$ 5,442,302	$ 7,698	$ 5,450,000	$ 0	$ 7,698
Leak Detection		$ 200,000	$ -	$ 200,000	$ 200,000	$ -	$ 200,000
Potable Water System Planning	$ 200,000	$ 200,000	$ 179,638	$ 20,362	$ 200,000	$ -	$ 20,362
Implement Ground Water Rule		$ 1,700,000	$ 1,499,464	$ 200,535	$ 1,700,000	$ 1	$ 200,536
Brigade II (Ugum Lift) BPS Upgrade	$ 1,200,000	$ 1,700,000	$ 135,695	$ 202,199	$ 337,895	$ 1,362,105	$ 1,564,305
Deep Well Rehabilitation	$ 548,000	$ 548,000	$ 548,000	$ -	$ 548,000	$ -	$ -
New Deep Wells at Down Hard	$ 3,773,000	$ 638,252	$ 485,743	$ -	$ 485,743	$ 152,509	$ 152,509
Rehabilitation of Asan Springs	$ 900,000	$ 900,000	$ 188,771	$ 152,068	$ 340,838	$ 559,162	$ 711,229
Master Meters	$ 1,600,000	$ 1,600,000	$ 1,421,267	$ 68,690	$ 1,489,957	$ 110,043	$ 178,733
Ugum Water Treatment Plant Intake	$ 3,670,000	$ 700,000	$ 543,615	$ 156,385	$ 700,000	$ -	$ 156,385
Water Wells	$ 2,000,000	$ -	$ -		$ -	$ -	$ -
Water Distribution System	$ 384,000	$ 3,174,748	$ 3,174,748	$ -	$ 3,174,748	$ (0)	$ (0)
Pressure Zone Realignment /	$ 3,550,000	$ -	$ -		$ -	$ -	$ -
Northern System Water Distribution	$ 2,725,000	$ -	$ -	$ -	$ -	$ -	$ -
Central Water Distribution System 2005	$ 1,200,000	$ 900,000	$ 692,926	$ 82,076	$ 775,002	$ 124,998	$ 207,074
Southern Water Distribution System	$ 1,800,000	$ -	$ -		$ -	$ -	$ -
Mechanical/Electrical Equipment	$ 1,360,000	$ 1,200,000	$ 1,079,495	$ 120,505	$ 1,200,000	$ (0)	$ 120,505
Water Reservoir Internal/External	$ 500,000	$ 2,000,000	$ 1,033,356	$ 476,027	$ 1,509,384	$ 490,616	$ 966,644
Water Reservoir Internal/External	$ 2,400,000	$ -	$ -		$ -	$ -	$ -
Water System Reservoirs 2005 Improvements	$ 11,697,000	$ 1,050,000	$ 1,050,000		$ 1,050,000	$ 0	$ 0
Distribution System Upgrades	$ 3,182,000	$ 474,160	$ 451,462	$ 22,698	$ 474,160	$ 0	$ 22,698
Ugum Water Treatment Plant Reservoir	$ 3,672,000	$ -	$ -		$ -	$ -	$ -
Water Audit Program & Water Loss Control Plan		$ 100,000	$ 15,031	$ 63,428	$ 78,459	$ 21,541	$ 84,970
Production Plan / Reduce Navy Purchases		$ 100,000	$ 94,286	$ 5,714	$ 100,000	$ -	$ 5,714
Hydraulic Asessment of Tank		$ 500,000	$ 497,004	$ 2,996	$ 500,000	$ -	$ 2,996
Agana Heights & Chaot Tanks		$ 4,700,000	$ 4,327,370	$ 372,630	$ 4,700,000	$ -	$ 372,630
Tank Major Repair Yigo#1 Mangilao#2 Agat#2		$ 1,900,000	$ 1,750,355	$ 97,659	$ 1,848,013	$ 51,987	$ 149,645
Tank Major Repair Yigo#1 Mangilao#2 Agat#2		$ -			$ -	$ -	$ -
Assessment of malojloj Elevetad & Yigo Elevated		$ 200,000	$ 200,000	$ -	$ 200,000	$ -	$ -
Public Water System Asser Inventory/Condition Assesment		$ 100,000	$ 96,554	$ 3,446	$ 100,000	$ -	$ 3,446
Public Water System GIS & Mapping		$ 50,000	$ 50,000	$ -	$ 50,000	$ -	$ -
		$ -			$ -	$ -	$ -
Wastewater System Planning	$ 1,500,000	$ 1,500,000	$ 1,465,858	$ 8,142	$ 1,474,000	$ 26,000	$ 34,142
Wastewater Vehicles	$ 235,000	$ 235,000	$ 209,795	$ 25,205	$ 235,000	$ 0	$ 25,205
NDWWTP - Chlorine Tanks	$ 250,000	$ 250,000	$ 250,000		$ 250,000	$ -	$ -
Tumon Bay Sewer Upgrades	$ 100,000	$ -	$ -		$ -	$ -	$ -
Wastewater Collection System Repl/Rehab		$ 1,105,000	$ 718,036	$ 283,287	$ 1,001,323	$ 103,677	$ 386,964
Facilities Plan/Design for Baza Gardens WWTP	$ 1,250,000	$ 1,250,000	$ 1,239,250	$ 10,750	$ 1,250,000	$ -	$ 10,750
Facilities Plan/Design for Agat-Santa Rita WWTP	$ 900,000	$ 899,630	$ 881,749	$ 17,881	$ 899,630	$ -	$ 17,881
Priority 1 Sewer Upgrades – Baza Gardens WWTP	$ 650,000	$ -	$ -		$ -	$ -	$ -
Baza Gardens STP Replacement	$ 3,567,000	$ 1,301,947	$ 316,686	$ 314	$ 317,000	$ 984,947	$ 985,261
Facilities Plan/Design for Umatac Merizo WWTP		$ 900,000	$ 693,161	$ 160,696	$ 853,858	$ 46,142	$ 206,839
Agat/Santa Rita STP Replacement	$ 2,968,000	$ 2,218,000	$ 2,217,314	$ 387	$ 2,217,701	$ 300	$ 686
Northern District WWTP Primary Treatment Upgrades	$ -	$ 11,750,000	$ 11,532,253	$ 211,261	$ 11,743,514	$ 6,486	$ 217,747
Biosolids Management Plan		$ 200,000	$ 196,414	$ 3,586	$ 200,000	$ -	$ 3,586
Agana WWTP Interim Measures	$ -	$ 11,500,000	$ 11,242,386	$ 57,614	$ 11,300,000	$ 200,000	$ 257,614
I&I SSES Southern		$ 800,000	$ 733,872	$ 66,129	$ 800,000	$ (0)	$ 66,128
I&I SSES Central		$ 850,000	$ 794,325	$ 55,675	$ 850,000	$ -	$ 55,675
I&I SSES Northern		$ -			$ -	$ -	$ -
Umatac Merizo Replacement		$ 250,000	$ 247,431	$ 2,569	$ 250,000	$ -	$ 2,569
Northern District WWTP Secondary Treatment Upgrades		$ 1,000,000					$ 1,000,000
		$ -					
Well Electrical Protection	$ 26,000	$ -	$ -		$ -	$ -	$ -
SCADA Pilot Project	$ 300,000	$ 61,950	$ 19,812	$ 42,138	$ 61,950	$ (0)	$ 42,138
Electrical Upgrade - Water Wells	$ 3,000,000	$ 354,227	$ 335,378	$ 18,849	$ 354,227	$ 0	$ 18,849
Electrical Upgrade - Water Booster	$ 325,000	$ -	$ -		$ -	$ -	$ -
Electrical Upgrade -Water Booster	$ 350,000	$ -	$ -		$ -	$ -	$ -
Electrical Upgrade - Other Water	$ 250,000	$ -			$ -	$ -	$ -
SCADA Improvements – Phase 1	$ 250,000	$ 250,000	$ 193,989	$ 56,011	$ 250,000	$ -	$ 56,011
SCADA Improvements – Phase 2	$ 1,100,000	$ 1,056,986	$ 1,027,424	$ 29,562	$ 1,056,986	$ -	$ 29,562
SCADA Improvements – Phase 3	$ 2,500,000	$ 24,956	$ 24,956	$ -	$ 24,956	$ 0	$ 0
SCADA Improvements – Phase 4	$ 850,000	$ -	$ -		$ -	$ -	$ -
		$ -					
Laboratory Modernization	$ 1,200,000	$ -	$ -		$ -	$ -	$ -
Land Survey	$ 1,500,000	$ 500,000	$ 470,590	$ 29,097	$ 499,687	$ 313	$ 29,410
General Plant Improvements / Water	$ 14,370,000	$ 7,241,000	$ 7,241,000	$ 0	$ 7,241,000	$ 0	$ 0
Interest Earned							$ 81,037
Total Construction Fund (2010 Series Revenue Bond)	**$ 87,402,000**	**$ 87,402,000**	**$ 78,594,399**	**$ 3,497,966**	**$ 82,092,366**	**$ 4,309,634**	**$ 8,888,637**

1.) PUC's Docket 11-01 $29,000,000.00 dated
09/19/11authorized GWA for reallocation
2) PUC's Docket 11-01 Reallocation of $23,246,000.00 dated 07/30/12
3) PUC's Dockect Reallocation dated February 2013

GUAM WATERWORKS AUTHORITY
Schedule of Series 2013, 2014 Refunding, 2016 and 2017 Refunding Bond Bank Accounts
As of January 31, 2018

SCHEDULE N

	1/31/2018
BANK OF GUAM	
BOG - Revenue Account	7,945,816
BOG - Operations and Maintenance Reserve	3,083,482
BOG - Operations, Maintenance, Renewal and Replacement Reserve Fund	17,423,213
BOG - Capital Improvement Fund	1,357,526
BOG - O & M Reserve	13,548,868
BOG - Debt Service Reserve	11,244,664
BOG - CAPEX Reserve	15,498,322
Total BOG Bank Account Balance	**70,101,891**
Series 2013 Bond:	
BOG - Construction Fund	64,149,060
USB - Debt Service Fund	787,869
USB - Debt Service Reserve Fund	12,031,688
Total Series 2013 Bond Bank Balance	**76,968,617**
Series 2014 Refunding Bond:	
BOG - Construction Fund	762,683
USB - Debt Service Fund	2,344,001
USB - Debt Service Reserve Fund	7,758,497
Total Series 2014 Refunding Bond Bank Balance	**10,865,181**
Series 2016 Bond:	
BOG - Construction Account	126,752,323
BOG - Capitalized Interest Fund	2,975
USB - Debt Service Fund	598,108
USB - Debt Service Reserve Fund	7,594,584
Total Series 2016 Bond Bank Balance	**134,947,990**
Series 2017 Refunding Bond:	
BOG - Construction Account	8,888,638
BOG - Cost of Issuance Fund	47,424
USB - Debt Service Fund	1,853,697
USB - Debt Service Reserve Fund	7,566,460
Total Series 2017 Refunding Bond Bank Balance	**18,356,219**

GUAM WATERWORKS AUTHORITY

Guam Waterworks Authority

VEHICLE FLEET STATUS

2/9/2018

EQUIPMENT STATUS				
Description	Number of Equipment	Number of Equipment Available	Number of Equipment Not Available	Percentage
Backhoe	5	2	3	40%
Bobcat	1	1	0	100%
Boom Truck	2	0	2	0%
Crane	2	0	2	0%
Dump Truck	3	2	1	67%
Flat Bed	1	0	1	0%
Forklift	7	6	1	86%
Fuel Tanker	1	1	0	100%
Heavy Duty	3	0	3	0%
Light	150	102	48	68%
Mini Backhoe	4	1	3	25%
Pumper Truck	1	1	0	100%
Sludge Truck	4	3	1	75%
Tow	1	0	1	0%
Tractor	2	2	0	100%
Trailer	12	8	4	67%
Trencher	1	1	0	100%
Vaccon	1	1	0	100%
Vacuum Truck	3	3	0	100%
Water Buffalo	2	2	0	100%
Water Tanker	5	3	2	60%
Total	211	139	72	

SUMMARY						
Operational	Operational w/Rprs Pending	In Shop-Accident Repairs	In Shop-Assessment Pending	In Shop-Repairs Pending	In Shop-Vendor Repairs	Recommend Survey
2	0	0	0	1	0	2
1	0	0	0	0	0	0
0	0	0	0	2	0	0
0	0	0	0	0	1	1
1	1	0	0	1	0	0
0	0	0	0	0	0	1
6	0	0	0	0	0	1
1	0	0	0	0	0	0
0	0	0	0	0	2	1
99	3	1	7	5	6	29
1	0	0	1	2	0	0
0	1	0	0	0	0	0
3	0	0	0	0	1	0
0	0	0	0	0	0	1
2	0	0	0	0	0	0
8	0	0	0	1	1	2
1	0	0	0	0	0	0
1	0	0	0	0	0	0
3	0	0	0	0	0	0
2	0	0	0	0	0	0
3	0	0	0	1	0	1
134	5	1	8	13	11	39

Guam Waterworks Authority	Date: 2/9/2018 Time:

REVIEWS			
TOTAL PUMPS INSTALLED	51	OVERAL AVERAGE	96%
TOTAL PUMPS OPERATIONAL	49	% OF OPERATING PUMPS	96%
TOTAL BOOSTER PUMP STATIONS	25		

GUAM WATERWORKS AUTHORITY

WATER DISTRIBUTION FACILITIES REPORT

Northern District

NO:	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	PUMP AND MOTOR INVENTORY
1	Gayinero	20	2	2	100%	OP	A						
2	Mataguac	25	2	2	100%	OP	A						
3	Santa Rosa	15	2	2	100%	OP	A						
4	Hyundai	40	2	1	50%	OP	A	Pump # 1 requires pump and motor. Station to undergo renovation during reservoir project.					
5	Access	60	2	2	100%	OP	A						
6	Chln. Palauan	5	2	2	100%	N/A							
7	Nimitz Hill	7.5	2	2	100%	N/A							
8	Adawag	1.5	2	2	100%	N/A							
9	Pale Kiren	1	1	1	100%	N/A							
10	Ulloa/Untalan	1	2	2	100%	OP	A						
11	Latte Heights	15	2	2	100%	OP	A						
	TOTAL = 11		**21**	**20**	**95%**								
pump availability =no of operational pumps/no of pumps*100%													

Central District

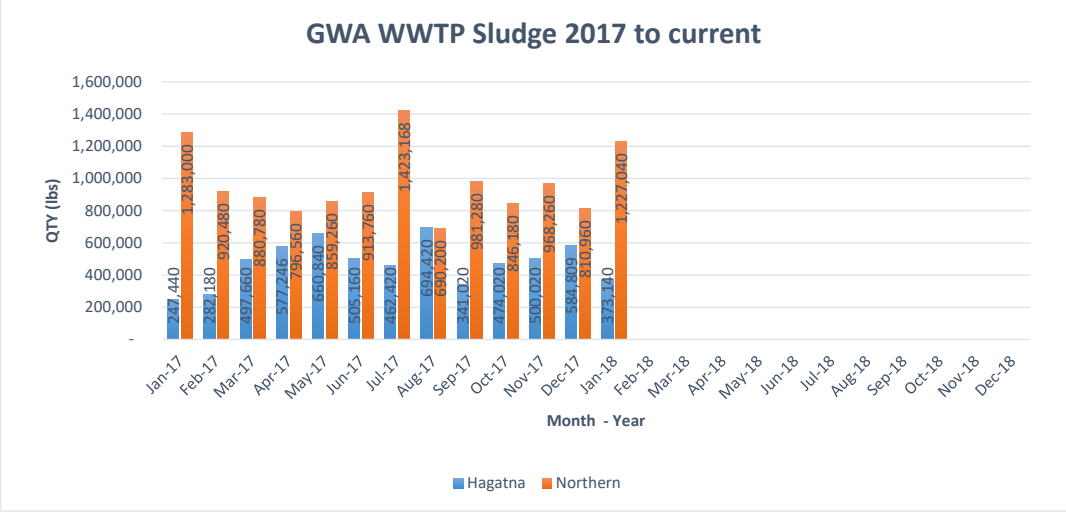
NO:	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	UPDATES
1	Pago	150 / 100	3	2	67%	0P	A	Pump 2 leaking at seal, pump operational, work ongoing.					
2	Brigade	60	3	3	100%	OP	A						
3	Windward Hills	200 / 75	3	3	100%	OP	A						
4	Santa Rita Springs	40	2	2	100%	OP	A						
5	Santa Ana (Lower)	25	2	2	100%	N/A						CIP required for new unit and electrical for generator	
6	Camacho	1	1	1	100%	N/A						CIP required for new unit and electrical for generator	
7	Tenorio	1.5	1	1	100%	N/A						CIP required for new unit and electrical for generator	
	Total=7		**15**	**14**	**93%**								
pump availability =no of operational pumps/no of pumps*100%													

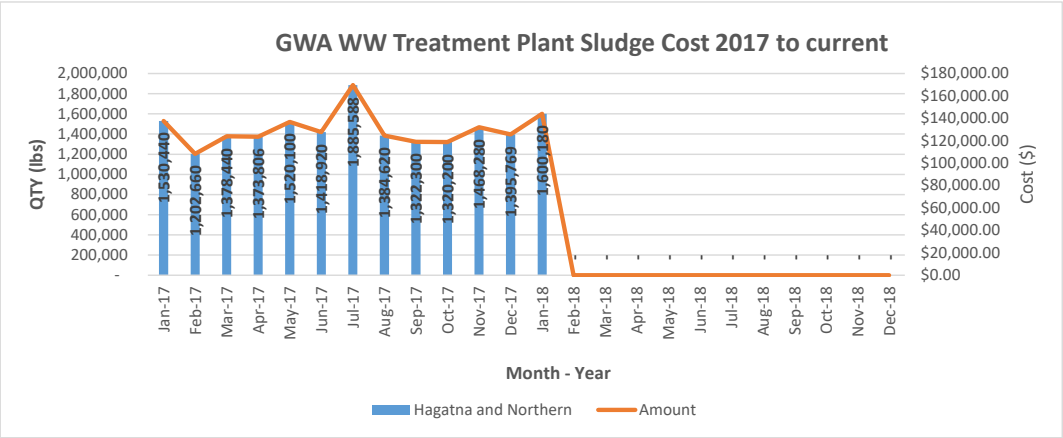
Southern District

NO:	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	UPDATES
1	Malojloj Line	125 / 50	3	3	100%	OP	A						
2	Geus	25	2	2	100%	OP	A						
3	Pigua	7.5	2	2	100%	N/A							
4	Toguan	25	2	2	100%	OP	A						
5	WBP-2	25	2	2	100%	OP	A						
6	WBP-1	5	2	2	100%	OP	A						
7	Malojloj Elevated	15	2	2	100%	OP	A						
	Total=7		**15**	**15**	**100%**								
pump availability =no of operational pumps/no of pumps*100%													

	Hagatna		Northern		Hagatna and Northern	
2017	Qty	Amount	Qty	Amount	Qty	Amount
Month- Yr	lbs	$	lbs	$	lbs	$
Jan-17	247,440	$22,269.60	1,283,000	$115,470.00	1,530,440	$137,739.60
Feb-17	282,180	$25,396.20	920,480	$82,843.20	1,202,660	$108,239.40
Mar-17	497,660	$44,789.40	880,780	$79,270.20	1,378,440	$124,059.60
Apr-17	577,246	$51,952.14	796,560	$71,690.40	1,373,806	$123,642.54
May-17	660,840	$59,475.60	859,260	$77,333.40	1,520,100	$136,809.00
Jun-17	505,160	$45,464.40	913,760	$82,238.40	1,418,920	$127,702.80
Jul-17	462,420	$41,617.80	1,423,168	$128,085.12	1,885,588	$169,702.92
Aug-17	694,420	$62,497.80	690,200	$62,118.00	1,384,620	$124,615.80
Sep-17	341,020	$30,691.80	981,280	$88,315.20	1,322,300	$119,007.00
Oct-17	474,020	$42,661.80	846,180	$76,156.20	1,320,200	$118,818.00
Nov-17	500,020	$45,001.80	968,260	$87,143.40	1,468,280	$132,145.20
Dec-17	584,809	$52,632.81	810,960	$72,986.40	1,395,769	$125,619.21
Grand Total	5827235	$524,451.15	11373888	$1,023,649.92	17201123	$1,548,101.07

	Hagatna		Northern		Hagatna and Northern	
2018	Qty	Amount	Qty	Amount	Qty	Amount
Month- Yr	lbs	$	lbs	$	lbs	$
Jan-18	373,140	$33,582.60	1,227,040	$110,433.60	1,600,180	$144,016.20
Feb-18		$0.00		$0.00	-	$0.00
Mar-18		$0.00		$0.00	-	$0.00
Apr-18		$0.00		$0.00	-	$0.00
May-18		$0.00		$0.00	-	$0.00
Jun-18		$0.00		$0.00	-	$0.00
Jul-18		$0.00		$0.00	-	$0.00
Aug-18		$0.00		$0.00	-	$0.00
Sep-18		$0.00		$0.00	-	$0.00
Oct-18		$0.00		$0.00	-	$0.00
Nov-18		$0.00		$0.00	-	$0.00
Dec-18		$0.00		$0.00	-	$0.00
Grand Total	373140	$33,582.60	1227040	$110,433.60	1600180	$144,016.20


GWA WWTP Sludge 2017 to current
QTY (lbs)
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
-
247,440
1,283,000
282,180
920,480
497,660
880,780
577,246
796,560
660,840
859,260
505,160
913,760
462,420
1,423,168
694,420
690,200
341,020
981,280
474,020
846,180
500,020
968,260
584,809
810,960
373,240
1,227,040
Jan-17
Feb-17
Mar-17
Apr-17
May-17
Jun-17
Jul-17
Aug-17
Sep-17
Oct-17
Nov-17
Dec-17
Jan-18
Feb-18
Mar-18
Apr-18
May-18
Jun-18
Jul-18
Aug-18
Sep-18
Oct-18
Nov-18
Dec-18
Month - Year
Hagatna
Northern

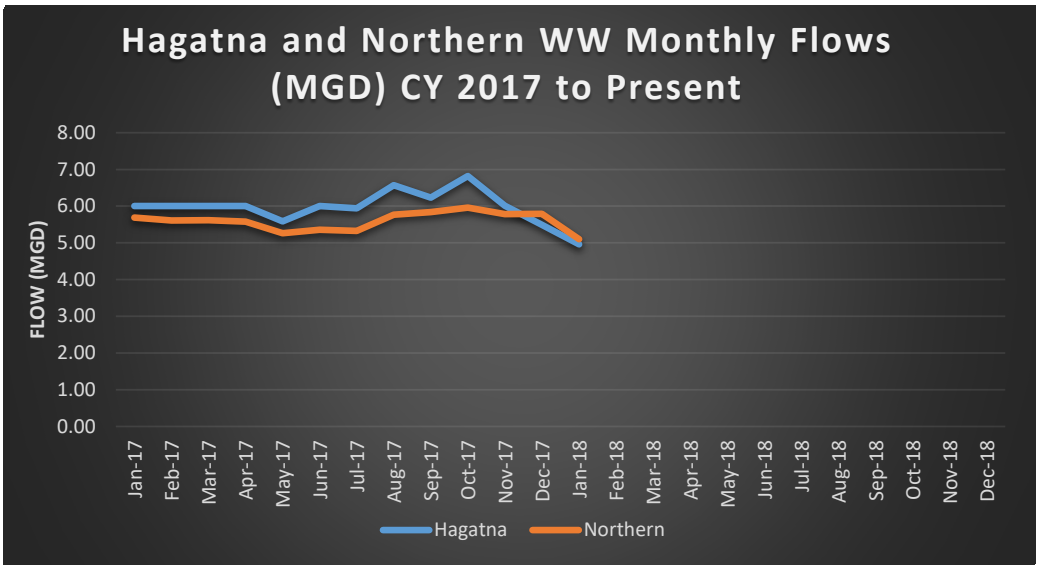

GWA WW Treatment Plant Sludge Cost 2017 to current
QTY (lbs)
2,000,000
1,800,000
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
-
Cost ($)
$180,000.00
$160,000.00
$140,000.00
$120,000.00
$100,000.00
$80,000.00
$60,000.00
$40,000.00
$20,000.00
$0.00
1,530,440
1,202,660
1,378,440
1,373,806
1,520,100
1,418,920
1,885,589
1,384,620
1,322,300
1,320,200
1,468,280
1,395,769
1,600,180
Jan-17
Feb-17
Mar-17
Apr-17
May-17
Jun-17
Jul-17
Aug-17
Sep-17
Oct-17
Nov-17
Dec-17
Jan-18
Feb-18
Mar-18
Apr-18
May-18
Jun-18
Jul-18
Aug-18
Sep-18
Oct-18
Nov-18
Dec-18
Month - Year
Hagatna and Northern
Amount

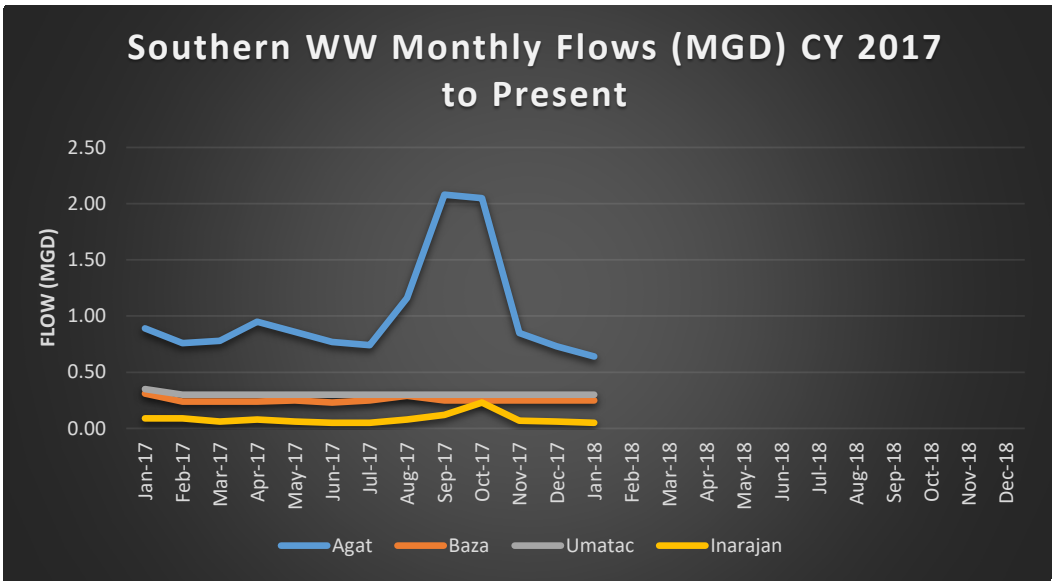
Wastewater Treatment Plant Average Monthy Flows Million Gallons Per Day

2017	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
Jan-17	6.00	5.69	0.89	0.31	0.35	0.09
Feb-17	6.00	5.61	0.76	0.24	0.30	0.09
Mar-17	6.00	5.62	0.78	0.24	0.30	0.06
Apr-17	6.00	5.58	0.95	0.24	0.30	0.08
May-17	5.59	5.26	0.86	0.25	0.30	0.06
Jun-17	6.00	5.36	0.77	0.23	0.30	0.05
Jul-17	5.94	5.33	0.74	0.25	0.30	0.05
Aug-17	6.57	5.77	1.16	0.29	0.30	0.08
Sep-17	6.23	5.84	2.08	0.25	0.30	0.12
Oct-17	6.82	5.96	2.05	0.25	0.30	0.23
Nov-17	6.01	5.78	0.85	0.25	0.30	0.07
Dec-17	5.49	5.79	0.73	0.25	0.30	0.06
2017 Average MGD	**6.05**	**5.63**	**1.05**	**0.25**	**0.30**	**0.09**
2017 Total MGY	2,210	2,056	384	93	111	32

2018	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
Jan-18	4.96	5.10	0.64	0.25	0.30	0.05
Feb-18						
Mar-18						
Apr-18						
May-18						
Jun-18						
Jul-18						
Aug-18						
Sep-18						
Oct-18						
Nov-18						
Dec-18						
2018 Average MGD	**4.96**	**5.10**	**0.64**	**0.25**	**0.30**	**0.05**
2018 Total MGY	1,810	1,862	234	91	110	18

GWA WWT Flow Report 2013 to Present, prepared by kcog/df, 2/13/2018





GWA WWT Flow Report 2013 to Present, prepared by kcog/df, 2/13/2018

GUAM WATERWORKS AUTHORITY

WASTEWATER COLLECTION REPORT

MONTHLY REPORT

JANUARY 2018



CCTV INSPECTIONS AND SEWER CLEANING

Jan. 01 - 07	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3267	0	6534
Feet Completed	1359	0	0	1359
	41.6%	0%	0%	21%

Jan. 08 - 14	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3,267	0	6,534
Feet Completed	0	0	0	0
	0%	0%	0%	0%

Jan. 15 - 21	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3,267	0	6,534
Feet Completed	4,276.8	0	0	4,276.8
	131%	0%	0%	65%

Jan. 22 - 28	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3,267	0	6,534
Feet Completed	8,235.8	0	0	8,235.8
	252%	0%	0%	126%

Jan. 29- 31	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	0	0	3,267
Feet Completed	1,250	0	0	1,250
	0%	0%	0%	0%

TOTAL FEET SCHEDULED: 26,136

TOTAL FEET COMPLETED: 15,122

TOTAL MILES SCHEDULED FOR THE MONTH: 5.0

TOTAL MILES COMPLETD FOR THE MONTH: 2.9

* Jan.08-14 Smoke test and manhole inspection was done at Mangilao area by DYA to Mayors office

*Jan. 15-21 Assisted in the cleaning of Route 16 inlet line.

PUMPING STATION TROUBLE CALLS

Jan. 01 - 07	CREATED	COMPLETED	PENDING
NORTHERN	2	2	0
CENTRAL	3	3	0
SOUTHERN	2	2	0
TOTAL	7	7	0

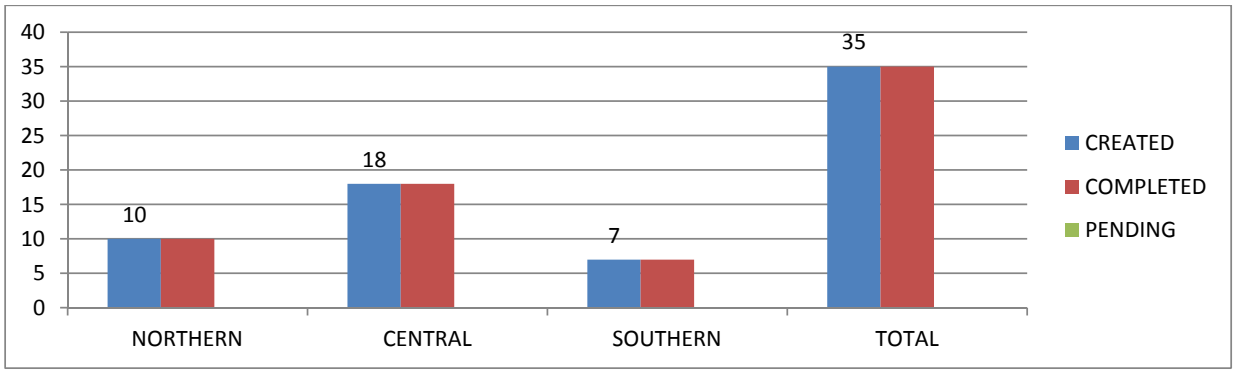
Jan. 08 - 14	CREATED	COMPLETED	PENDING
NORTHERN	4	4	0
CENTRAL	2	2	0
SOUTHERN	0	0	0
TOTAL	6	6	0

Jan. 15 - 21	CREATED	COMPLETED	PENDING
NORTHERN	1	1	0
CENTRAL	9	9	0
SOUTHERN	1	1	0
TOTAL	11	11	0

Jan. 22 - 28	CREATED	COMPLETED	PENDING
NORTHERN	2	2	0
CENTRAL	2	2	0
SOUTHERN	2	2	0
TOTAL	6	6	0

Jan. 29- 31	CREATED	COMPLETED	PENDING
NORTHERN	0	0	0
CENTRAL	2	2	0
SOUTHERN	2	2	0
TOTAL	4	4	0

	CREATED	COMPLETED	PENDING
NORTHERN	10	10	0
CENTRAL	18	18	0
SOUTHERN	7	7	0
TOTAL	35	35	0



MAINTENANCE PREVENTIVE AND CORRECTIVE CALL OUTS

Jan. 01 - 07	PREVENTIVE	CORRECTIVE
NORTHERN	0	4
CENTRAL	0	1
SOUTHERN	0	3
TOTAL	0	8

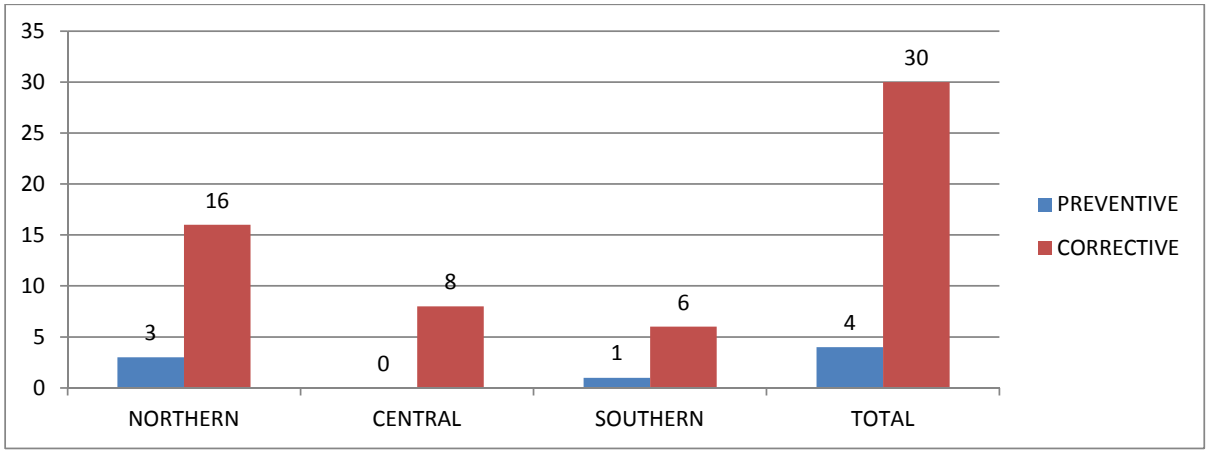
Jan. 08 - 14	PREVENTIVE	CORRECTIVE
NORTHERN	0	3
CENTRAL	0	2
SOUTHERN	0	0
TOTAL	0	5

Jan. 15 - 21	PREVENTIVE	CORRECTIVE
NORTHERN	1	2
CENTRAL	0	2
SOUTHERN	0	0
TOTAL	1	4

Jan. 22 - 28	PREVENTIVE	CORRECTIVE
NORTHERN	1	3
CENTRAL	0	3
SOUTHERN	0	1
TOTAL	1	7

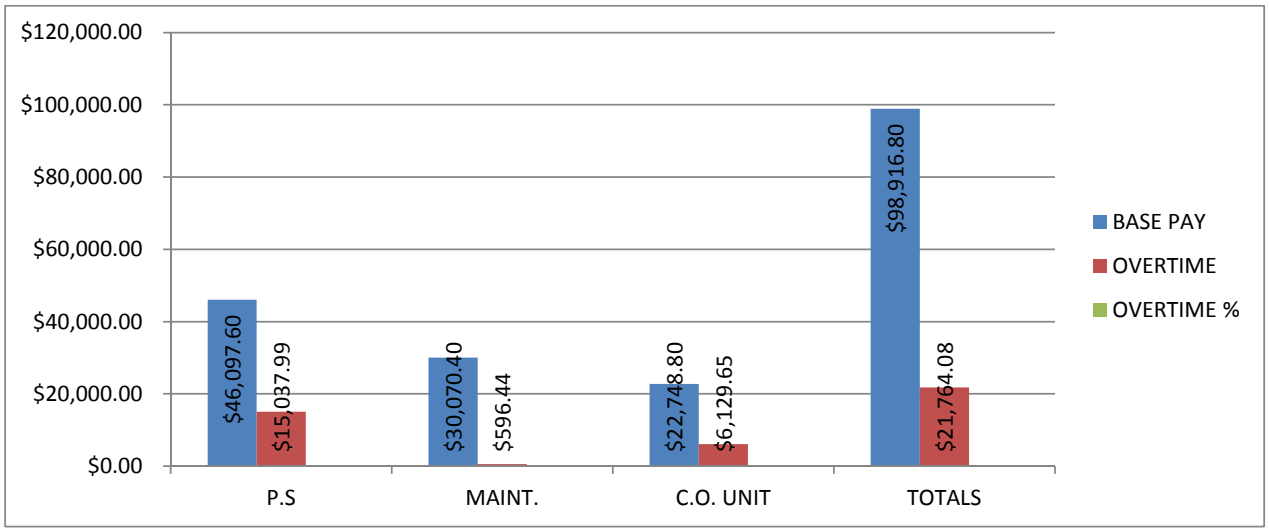
Jan. 29- 31	PREVENTIVE	CORRECTIVE
NORTHERN	1	4
CENTRAL	0	0
SOUTHERN	1	2
TOTAL	2	6

	PREVENTIVE	CORRECTIVE
NORTHERN	3	16
CENTRAL	0	8
SOUTHERN	1	6
TOTAL	4	30



BASE PAY VS OVERTIME

	BASE PAY	OVERTIME	OVERTIME %
PUMPING STATION	$46,097.60	$15,037.99	33%
MAINTENANCE	$30.070.40	$596.44	2%
COURT ORDER UNIT	$22,748.80	$6,129.65	27%
TOTALS	$98,916.80	$21,764.08	



CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671) 648-3002 | guamccu.org

GUAM WATERWORKS AUTHORITY WORK SESSION

CCU Conference Room
4:30 p.m., March 20, 2018

AGENDA

1. **ISSUES FOR DECISION**
   - 1.1 **Relative to Adoption and Implementation of a Unified Executive Officer Evaluation Policy for the Guam Power Authority and the Guam Waterworks Authority / Resolution No. 21-FY2018 (GPA Resolution No. 2018-08)**
   - 1.2 **Relative to the Approval of Adding the Utility Payroll Clerk Series of Positions to the GWA Certified, Technical and Professional (CTP) List / Resolution No. 22-FY2018**
   - 1.3 **Relative to the Approval of the Amendment of the Assistant General Manager of Administration & Support (Unclassified) Job Classification Standard / Resolution No. 23-FY2018**
   - 1.4 **Relative to the Approval of the Contract with Badger Meters for Additional Purchases of Water Meters / Resolution No. 24-FY2018**
   - 1.5 **Relative to the Approval of the Contract with Total Chemicals and JMI Edison for Additional Purchases of Wastewater Treatment Chemicals / Resolution No. 25-FY2018**
2. **GM REPORT**
3. **ISSUES FOR DISCUSSION**
4. **DIVISION REPORTS**
   - 4.1 **Communications**
   - 4.2 **Compliance & Safety**
   - 4.3 **Customer Service**
   - 4.4 **Engineering**
   - 4.5 **Finance**
   - 4.6 **Operations**
5. **ANNOUNCEMENTS**
   - 5.1 **Next CCU Meetings: GPA Work Session: 3/22/18; CCU Meeting: 3/27/18**
6. **ADJOURNMENT**

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

GWA Resolution No. 21-FY2018 / GPA Resolution No. 2018-08
Relative to Adoption and Implementation of a Unified Executive Officer Evaluation Policy for the Guam Power Authority and the Guam Waterworks Authority

What is the project's objective and is it necessary and urgent?
There is a pressing need to put in place a formal reporting and assessment mechanism for the Executive Officers of each utility.

Where is the location?
Executive Offices

How much will it cost?
No direct costs incurred**.**

When will it be completed?
Implementation date is April 1, 2018.

What is the funding source?
Not applicable

The RFP/BID responses (if applicable):
Not applicable

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

GPA RESOLUTION NO. 2018-08
GWA RESOLUTION NO. 17–FY2018

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Power Authority and the Guam Waterworks Authority; and

WHEREAS, the Guam Power Authority ("GPA") and the Guam Waterworks Authority ("GWA") are Guam Public Corporations established and existing under the laws of Guam; and

WHEREAS, the CCU has directed GPA and GWA to review the existing reporting requirements of the Officers of the Authorities along with the manner and frequency of evaluating the performance of the individual in each position; and

WHEREAS, GPA and GWA drafted a new unified EXECUTIVE OFFICER EVALUATION POLICY (Exhibit "A") to memorialize the responsibilities of the CCU and the General Managers with respect to assessing the performance of the executive officer team for each utility with the intent of establishing and documenting the performance goals and objectives for the officer team, assessing the performance against appropriate and measurable criteria, and recommending measures for improvement where and if needed; and

WHEREAS, the CCU has solicited comments from GPA & GWA General Managers and General Counsels regarding the proposed EXECUTIVE OFFICER EVALUATION POLICY; and

WHEREAS, management of GPA and GWA request the CCU to adopt the proposed unified EXECUTIVE OFFICER EVALUATION POLICY.

DRAFT

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The unified EXECUTIVE OFFICER EVALUATION POLICY (Exhibit "A") for GPA and GWA is hereby adopted to include the General Managers, Chief Financial Officers and General Counsels of GPA and GWA.
2. This policy shall be effective for the Guam Power Authority, Guam Waterworks Authority and the Consolidated Commission on Utilities on April 1, 2018.

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 27th day of March, 2018.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS **J. GEORGE BAMBA**
Chairperson Secretary

SECRETARY'S CERTIFICATE

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

EXECUTIVE OFFICER EVALUATION POLICY

Section 1. AUTHORITY

In accordance with 12 GCA §79101, the Consolidated Commission on Utilities (CCU) hereby adopts the following Policy on Personnel Performance Evaluations, to assist in the conduct of its affairs.

Section 2. PREAMBLE

The CCU is tasked under law with the responsibility of recruitment, management and direction of the executive management positions for both the Guam Power Authority (GPA) and the Guam Waterworks Authority (GWA), specifically the General Managers, Chief Financial Officers, and General Counsels for the respective utilities.

The CCU desires to proactively and regularly assess the performance of the executive management team for each utility with the intent of establishing and documenting the performance goals and objectives for the management team, assessing the performance against appropriate and measurable criteria, and recommending measures for improvement where and if needed.

The CCU formally defines the roles of the executive management team of each utility as follows:

General Manager - Leads the executive management team and is responsible for the overall performance of the utility with the responsibilities defined in and in accordance with the provisions of the law.

Chief Financial Officer – Works with the General Counsel in support of the General Manager and is responsible for the financial performance of the utility with the responsibilities defined in 12 GCA Chapter 8 (GPA) and 12 GCA Chapter 14 (GWA) and in accordance with the provisions of the laws of Guam.

General Counsel – Works with the Chief Financial Officer in support of the General Manager and is responsible for all legal matters for the utility with the responsibilities defined in 12 GCA Chapter 8 (GPA) and 12 GCA Chapter 14 (GWA) and in accordance with the provisions of the laws of Guam.

EXHIBIT A

1

To this end, the CCU intends to formalize and document the manner in which personnel performance evaluations are conducted through a formal policy which will clarify the intent of this activity and set the general guidelines by which the activity is to be conducted.

Section 3. STATEMENT OF POLICY

It is the policy of the CCU to conduct individual performance evaluations for each member of the executive management team of both the GPA and GWA at a minimum of once per annum in accordance with the following guidelines.

Section 4. GENERAL GUIDELINES

(a) The CCU shall conduct performance evaluations for the following positions on at least an annual basis:

1. GPA General Manager
2. GPA Chief Financial Officer
3. GPA General Counsel
4. GWA General Manager
5. GWA Chief Financial Officer
6. GWA General Counsel

(b) The Chairperson shall call for the performance evaluation of each of the above employees at a schedule convenient for the Commission.

(c) All Commissioners shall participate in the performance evaluation and provide their input and feedback to the Chairperson.

(d) The CCU shall set the performance criteria to be used in the evaluation and discuss the same with each employee upon hiring or within the first quarter following the date of hire. In the case of employees in the above positions prior to the adoption of this policy, the CCU shall discuss the performance criteria at the first performance evaluation subsequent to adoption of the policy.

(e) The CCU may adopt any forms or formats for the documentation of the performance evaluation, and may, from time to time, revise the forms or formats as needed to meet the intent of this policy.

(f) The CCU shall solicit evaluations from each General Manager, as leader of the executive management team, which shall be made part of the CCU's performance criteria used in each evaluation conducted on the Chief Financial Officer and General Counsel.

(g) The CCU shall meet with each employee listed above individually to discuss the results of the performance evaluation and to set, review and/or revise the performance goals and objectives for the next performance period.

(h) In accordance with Section 3, paragraph (g) of the CCU Code of Ethics, such performance evaluations shall be performed in a closed executive session in accordance with Guam Law.

Section 5. DISSEMINATION

A copy of this policy shall be delivered to each and every new member of the CCU no later than two weeks after such new member takes office.

Section 6. EFFECTIVE DATE

This Policy shall take effect upon approval by and affirmative vote of the majority of the Commissioners of the CCU.

SO APPROVED this _____ day of March, 2018.

_____ _____

JOSEPH T. DUENAS
Chairman

FRANCIS E. SANTOS
Vice-Chairman

_____ _____

J. GEORGE BAMBA
Secretary

SIMON A. SANCHEZ, II
Commissioner

_____

DR. JUDITH P. GUTHERTZ, P.A.
Treasurer

DRAFT

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Tel: (671) 300-6846

ISSUES FOR DECISION

Resolution No. 22-FY2018
Relative to the Approval of Adding the Utility Payroll Clerk Series of Positions to the GWA Certified, Technical and Professional List.

What is the project's objective and is it necessary and urgent?
The GWA finds the addition of the Utility Payroll Clerk series of positions will support the Payroll section of the Finance Division. The GWA is currently staffed with a Payroll Supervisor, who currently works through issues relative to manual review of numerous personnel actions which can cause delays in final payout of salary adjustments, transition and migration via the Payroll Section. Recruitment of this position will allow for continuity of service in the payroll section and reduce reliance on a single position for this critical function. The recruitment will expedite processing of personnel actions for payroll purposes with minimal to no delays.

Where is the location?
The Utility Payroll Clerk will be under the direct supervision of the Payroll Supervisor in the Finance Division of the Authority.

When will it be completed?
The addition of the Utility Payroll Clerk series of positions will be completed upon approval by the CCU Board for recruitment purposes.

What is the funding source?
GWA will certify funding for the position available for the filling and retention of its newly added certified, technical and professional position. The funding of this position will be from the operational revenues.

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

RESOLUTION NO. 22-FY2018

RELATIVE TO THE APPROVAL OF ADDING THE UTILITY PAYROLL CLERK SERIES OF POSITIONS TO THE GWA CERTIFIED, TECHNICAL AND PROFESSIONAL LIST

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA Personnel Rules and Regulations as amended by Public Law 28-159 Section 3 (C) authorizes the CCU to amend, modify or add a position to the list of certified, technical and professional positions; and

WHEREAS, Recruitment of this position will allow for continuity of service in the payroll section and reduce reliance on a single position for this critical function. The recruitment will expedite processing of personnel actions for payroll purposes with minimal to no delays.

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities, as the Governing Body of the Guam Waterworks Authority, does hereby approve and authorize the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The Utility Payroll Clerk series of positions is hereby added to the certified, technical and professional list of positions at GWA. (Attachment A)
3. Approval for GWA to recruit for the position to support the Payroll Section of the Finance Division.

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 27th day of March, 2018.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS **J. GEORGE BAMBA**
Chairperson Secretary

SECRETARY'S CERTIFICATE

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

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ATTACHMENT A

0.430

UTILITY PAYROLL CLERK I

NATURE OF WORK IN THIS CLASS:

This is routine utility clerical work in the preparation of payrolls and the maintenance of payroll records. Work is reviewed through submission of reports.

ILLUSTRATIVE EXAMPLES OF WORK: *(Any one position may not include all the duties listed, nor do the examples cover all the duties which may be performed.)*

Sorts and files personnel actions, correspondences, and other materials in the employees' jackets.

Updating and balancing employees leave status manually and in the JD Edwards System. Accrues employees annual and sick leave from employees record card.

Participates in computing special payments manually.

Processing of new employees (by entering their tax method, tax exemption, check route and security business unit.

Prepares timesheets of employees; posts to time and attendance record; checks for completeness and accuracy.

Prepares labor distribution summary.

Maintains payroll records and prepares reports.

Performs related duties as required.

MINIMUM KNOWLEDGE, ABILITIES AND SKILLS:

Knowledge of office practices and procedures.

Ability to learn and apply established payroll policies, procedures, and guidelines.

Ability to learn and use a computerized time entry system.

Ability to make arithmetic computations.

Ability to work effectively with the public and employees.

Ability to understand and follow oral and written instructions.

Ability to maintain records and prepare reports.

MINIMUM EXPERIENCE AND TRAINING:

A) Two years experience as an office clerk;

B) Any equivalent combination of experience and training which provides the minimum knowledge, abilities, and skills.

Established: September 26, 2017

10th Market Percentile (2017 Data)
minimum: $27,390 D2B
maximum: $28,503 D3B

JOSEPH T. DUENAS, Chairman
Consolidated Commission on Utilities

0.431

UTILITY PAYROLL CLERK II

NATURE OF WORK IN THIS CLASS:

This is moderately complex utility clerical work involved in the preparation of payrolls and the maintenance of payroll records in the autonomous agencies.

Employees in this class perform complex payroll clerical work independently on an ongoing basis.

ILLUSTRATIVE EXAMPLES OF WORK: *(Any one position may not include all the duties listed, nor do the examples cover all the duties which may be performed.)*

Prepares and maintains individual service cards for employees; annotates all necessary information on the service cards such as rates, job code titles, pay ranges, annual and sick leave taken and accrued each pay period.

Process time entry, payroll direct deposits and deductions utilizing the JD Edwards Systems.

Prepares and maintains payroll control master affecting necessary adjustment to employees salaries, deduction and related records.

Process Automatic Clearing House (ACH) transfers.

Processes personnel actions affecting employees' pay such as promotion, demotion, etc., computing retroactive adjustment for payments.

Processes and controls flow of Time of Attendance Time Sheet and other payroll disbursement for processing of payments.

Processes special payments manually for advance pay, lump sum payments, errors in leave processing, etc.

Balance year-to-date on individual earnings.

Controls accuracy, completeness and current status of savings bonds records.

Prepares bi-weekly payroll summary report, payroll analysis every end of payroll period.

May audit all special payments prior to signature of Payroll Supervisor.

Performs related duties as required.

MINIMUM KNOWLEDGE, ABILITIES AND SKILLS:

Knowledge of the practices and procedures of office management.

Ability to learn existing compensation plan; withholding tax procedures; payroll accounting procedures; laws and regulations giving the legality of payroll actions; policies and procedures in accomplishing payroll work and all types of actions affecting the salaries of a variety of employees.

Ability to learn and use a computerized time entry system.

Ability to make decisions in accordance with appropriate program guidelines.

Ability to make arithmetic computations.

Ability to work effectively with the public and employees.

Ability to communicate effectively, orally and in writing.

Ability to maintain records and prepare reports.

MINIMUM EXPERIENCE AND TRAINING:

A) Two years experience as an office clerk and one year in payroll work; or

B) Any equivalent combination of experience and training which provides the minimum knowledge, abilities, and skills.

Established: September 26, 2017

10th Market Percentile (2017 Data)
minimum: $32,336 G2B
maximum: $33,649 G3B

JOSEPH T. DUENAS, Chairman
Consolidated Commission on Utilities

UTILITY PAYROLL CLERK III

NATURE OF WORK IN THIS CLASS:

This is complex utility clerical work involved in the preparation of payrolls and the maintenance of payroll records in the autonomous agencies.

Employees in this class perform full range of complex payroll clerical work independently on an ongoing basis.

ILLUSTRATIVE EXAMPLES OF WORK: *(Any one position may not include all the duties listed, nor do the examples cover all the duties which may be performed.)*

Establishes employees names on the on-line payroll master.

Prepares and maintains payroll control master affecting necessary adjustments to employees' salaries, deductions and related records.

Process time entry, payroll direct deposits and deductions utilizing the JD Edwards System.

Process online Automatic Clearing House (ACH) transfers.

Processes personnel actions affecting employees' pay such as promotion, demotion, etc., computing retroactive adjustment for payments.

Updates payroll control master at pay period ending; verifies against the manual control master; releases control master for check-write.

Processes special payments manually for advance pay, lump sum payments, errors in leave processing, etc.

Balance year-to-date on individual earnings.

Controls accuracy, completeness and current status of savings bonds records.

Prepares bi-weekly payroll summary report, and payroll analysis every end of payroll period.

May audit all special payments prior to signature of Payroll Supervisor.

Performs related duties as required.

MINIMUM KNOWLEDGE, ABILITIES AND SKILLS:

Knowledge of the principles and practices of office management.

Ability to learn existing compensation plan; withholding tax procedures; payroll accounting procedures; laws and regulations giving the legality of payroll actions; policies and procedures in accomplishing payroll work and all types of actions affecting the salaries of a variety of employees.

Ability to proficiently use a computerized time entry system.

Ability to make decisions in accordance with appropriate program guidelines.

Ability to make arithmetic computations.

Ability to operate a computer terminal utilizing the payroll process.

Ability to work effectively with the public and employees.

Ability to communicate effectively.

Ability to maintain records and prepare reports.

MINIMUM EXPERIENCE AND TRAINING:

A) Three years of experience as an office clerk and two (2) year in payroll work and graduation from high school; or

B) Any equivalent combination of experience and training which provides the minimum knowledge, abilities, and skills.

Established: September 26, 2017

10th Market Percentile (2017 Data)
minimum: $37,044 H4A
maximum: $38,549 H5A

JOSEPH T. DUENAS, Chairman
Consolidated Commission on Utilities

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Tel: (671) 300-6846

ISSUES FOR DECISION

Resolution No. 23-FY2018
Relative to the Approval of the Amendment of the Assistant General Manager of Administration & Support (Unclassified) Job Classification Standard

What is the project's objective and is it necessary and urgent?
To amend the Assistant General Manager of Administration & Support job specification and salary range to support the Agency's daily operations within its Administrative and Support Divisions providing quality customer service to both internal and external customers at the most effective, efficient and cost-effective manner.

The Agency currently employs one Assistant General Manager for Compliance & Safety, while the other divisions of as much importance function without an Assistant General Manager at its helm, thus limiting effective communications direct to the General Manager while at the same time, affecting operations to provide statuses by Superintendents or Managers, who would otherwise be addressing the water and/or wastewater needs of our community.

Where is the location?
The Assistant General Manager of Administration & Support, if approved, will be under the direct supervision and management of the General Manager while overseeing the following divisions: Human Resources, Procurement, Supply & Warehouse, Fleet & Equipment, Information Technology and Customer Service.

When will it be completed?
Public Law 28-112, Section 9 (2) requires GPA and GWA to post a petition on their websites for ten (10) days (not including Saturdays, Sundays and government of Guam holidays). After the 10 days posting, the petition can then be forwarded to the CCU for their disposition at any regularly scheduled meeting. GWA has met the posting requirements.

Additionally, Guam law requires notice of such posting to each newspaper of general circulation and broadcasting station, which airs regular news programs within Guam.

What is the funding source?
GWA will certify funding for the position available for the filling and retention of its certified, technical and professional newly created position. The funding of this position does not have an impact on the General Fund.

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RESOLUTION NO. 23-FY2018

RELATIVE TO THE APPROVAL OF THE AMENDMENT OF THE ASSISTANT GENERAL MANAGER ADMINISTRATION & SUPPORT (UNCLASSIFIED) JOB CLASSIFICATION STANDARD

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, the GWA General Manager requests the CCU to approve the amendment of the Assistant General Manager Administration & Support classification standard (Exhibit A); and

WHEREAS, the GWA General Manager requests the CCU to approve the job classification standards of the Assistant General Manager Administration & Support position in the unclassified status; and

WHEREAS, Public Law 28-112 and 4 GCA §6303 (d) authorizes the creation of positions in Autonomous Agencies and Public Corporations; and

WHEREAS, GWA Personnel Rules and Regulations as amended by Public Law 28-159 Section 3 (C) authorizes the CCU to amend, modify or add a position to the list of certified, technical and professional positions;

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities, as the Governing Body of the Guam Waterworks Authority, does hereby approve and authorize the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The amendment of the job classification standard for the Assistant General Manager Administration & Support position in the unclassified status is hereby approved and attached herein as Attachment A.
3. The Assistant General Manager Administration & Support position is hereby added to the certified, technical and professional list of positions at GWA.

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 27th day of March, 2018.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS **J. GEORGE BAMBA**
Chairperson Secretary

SECRETARY'S CERTIFICATE

I, **J. George Bamba**, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

ATTACHMENT A

GUAM WATERWORKS AUTHORITY
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P. O. Box 3010 Hagatña, Guam 96932
Tel: 671.300.6846-48, Fax 671.648.3290

ASSISTANT GENERAL MANAGER OF ADMINISTRATION & SUPPORT (AGMA&S)
(Unclassified)

PROPOSED

MINIMUM QUALIFICATIONS

A. Master's Degree in Business Management, Business Administration, Public Administration or other related field; with major course work in utility infrastructure and operations, organization and customer service, analysis and evaluation, and financial management, plus 6 years of demonstrated experience and progressive responsibility in the management of facility support services in utilities, construction or technically related field; **OR**

B. Bachelor's Degree in Business Management, Business Administration, Public Administration or other related field with a minimum of 10 years of demonstrated experience and progressive responsibility in the management of facility support services in utilities, customer service, construction or technically related field;

NATURE OF WORK IN THIS CLASS:

- This is complex work involving the planning, organizing, staffing, directing and coordinating of all the Authority's administrative, technical and logistical support services, including customer service, procurement, warehouse and supply, equipment and vehicle fleet, information and data systems, and staffing resources to ensure the success of utility operations, customer care, compliance & safety, and finance & accounting functions.

- The AGMA&S shall report to and is accountable to the Guam Waterworks Authority's General Manager for the provisions of customer service and technical support, fleet and staffing support services to the rest of the Authority in an efficient manner, to enable successful operation of the utility.

- The AGMA&S is also responsible and accountable for managing and organizing efficient business practices in the divisions assigned.

- The AGMA&S shall also be responsible for assisting with the formulation of recommendations on policies, goals and objectives, and implementation of plans, policies and procedures adopted by the Consolidated Commission on Utilities (CCU).

- The AGMA&S directs and manages the development of short-term and long-term goals and objectives of GWA and ensures their effective execution and all assigned administrative and support functions are sustainable; and effectively serves the needs of GWA's ratepayers while complying with applicable laws and regulations; and performs related duties as assigned.

ILLUSTRATIVE EXAMPLES OF WORK: (These examples do not list all the duties which may be assigned)

- To manage, coordinate, and report on designated administrative and support divisions: Human Resources, Procurement, Supply & Warehouse, Fleet & Equipment, Information Technology and Customer Service.

- The AGMA&S shall plan, organize, staff, and direct the operation of the Authority's administrative and support divisions, including the setting of objectives, standards, training of employees and evaluation of staff and divisional performances.

- The AGMA&S shall assure compliance with the minimum Levels of Service (LOS) established by the Authority in the operation of the administrative and support divisions, and shall work with other Assistant General Managers, the Chief Financial Officer, Legal Counsel and under the direction of the General Manager, achieve utility wide LOS compliance at the lowest possible cost.

- The AGMA&S shall analyze the administrative and support functions for performance, costs and effectiveness, and develop strategies and recommendations to increase efficiency, reliability, sustainability, compliance and security of these functions, while maintaining the lowest cost possible.

- The AGMA&S shall work with the General Manager in continuing and advancing where feasible and desirable, the interoperation of an integration with military water and wastewater utility systems, in accordance with policy guidelines established by the CCU.
- The AGMA&S shall be responsible for the preparation of annual budget estimate for the administrative and support divisions under his or her supervision.
- The AGMA&S shall be responsible for the preparation of the Authority's Capital Improvement Program. The AGMA&S shall, working with other Assistant General Managers, the Chief Financial Officer, Legal Counsel and under the direction of the General Manager, support the implementation of approved CIPs in accordance with the Authority's approved Capital Improvements Program.
- The AGMA&S shall also oversee the provision of all customer service and information technology support as required to properly and effectively carry out the operational, administrative and support functions of the Authority.
- The AGMA&S shall be responsible, along with the Procurement Administrator and Warehouse Manager, for the planning, budgeting, procurement, storage and warehousing and proper dissemination/distribution of all materials, equipment, consumables and supplies needed to support all functions and operations of the Authority.
- The AGMA&S shall be responsible for the planning, budgeting, procurement, service, maintenance, assignment and monitoring of all fleet vehicles required to support all operations and functions of the Authority.
- The AGMA&S shall be responsible, along with the Personnel Services Administrator for the hiring, training and administration of all human resources functions and programs in compliance with federal and Guam law.
- The AGMA&S shall provide complete and timely reports on the administrative and support functions to the General Manager and the CCU.
- The AGMA&S may be appointed to serve as Acting General Manager for the Authority from time to time.
- The AGMA&S shall perform such other duties assigned by the General Manager.

MINIMUM KNOWLEDGE, SKILLS AND ABILITY:

- Knowledge of best practices in customer service, information technology support, procurement and supply, equipment fleet and staffing support functions related to facilities and infrastructure systems; procurement rules and regulations; information technology systems and development, deployment and maintenance; human resources practices and procedures, administration, training and development.
- Knowledge of personnel administration, internal and external customer service, office administration and utility organization.
- Knowledge of facilities management and facilities operations support systems for water and wastewater utilities.
- Knowledge of information technology, data processing, and financial management and support hardware and software systems.
- Knowledge of the procurement code, principles, practices, warehousing, inventory and supply chain management for utilities operations and support.
- Knowledge of management techniques, principles, and procedures to assign work, schedule, supervise, train, and evaluate the work of assigned staff.
- Knowledge of the utility's organization and operations and ability to anticipate the consequences of the utility's policies and practices within the economic, social and cultural structure of its service area.
- Ability to analyze and evaluate statistical and financial data, conduct and direct research, and develop alternatives and recommendations.
- Ability to communicate effectively with management and subordinates, both orally and in writing to convey logic and rationale ideas, objectives, consequences.

- Ability to establish and implement effective operational programs and procedures. Establishes priorities for the completion of work in accordance with sound time-management methodology.
- Ability to perform a broad range of managerial responsibilities over others.
- Ability to handle a variety of issues with tact and diplomacy and in confidential manner.
- Ability to induce effective employee performance to maintain high level of morale, performance, training and safety.
- Ability to understand and support water and wastewater systems repair and maintenance programs.
- Ability to recommend and implement changes in policies, procedures, materials and equipment to enhance program effectiveness.

Position Established:	1 February 1997
Amended (1st):	October 2012
Amended (2nd):	November 2016
Amended (3rd):	March 2018

Salary: Alan Searle Compensation Plan; ***COMMENSURATE WITH EXPERIENCE***

Pursuant to 12GCA: Autonomous Agencies, Chapter 14: Guam Waterworks Authority, §14.114, Employment, paragraph (c): "Notwithstanding any other provisions of law, neither the General Manager, Assistant General Managers, Secretary, Treasurer, Comptroller, nor Attorney of the Authority shall be within the classified service of the government of Guam but shall be hired, compensated and employed under the terms and conditions fixed by, and at the pleasure of the Board."

Joseph T. Duenas, Chairman
Consolidated Commission on Utilities

PROPOSED

GUAM WATERWORKS AUTHORITY
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Tel: (671) 300-6846

Issues for Decision

Resolution No. 24-FY2018
Relative to Ratification and Approval of Additional Purchases of Water Meters Under Indefinite Quantity Contract with Badger Meter Inc. for Water Meters of Various Sizes and Accessories.

What is the project's objective and is it necessary and urgent?
The objective of this resolution is to support GWA's on-going meter replacement initiative with regard to non-functioning model LP meters. In order to mitigate impact to revenues from the failing LP meter model, GWA initiated efforts to remove and replace the meters based on field performance, i.e., 'no consumption or low consumption' reads. To improve on this effort, GWA has ramped up the replacements and has outpaced the warranty replacement of the faulty meters. GWA continues to work with the manufacturer to expedite warranty replacements, but in order to achieve revenue recovery in the shortest time possible, purchase of additional meters is required to keep the pace of replacement efforts. This request will be used in purchasing water meters to provide a rolling inventory to replace defective meters currently installed island-wide.

We anticipate that there may be a number of meters which we are unable to get to within the warranty period, requiring purchase of replacements with no warranty coverage. In light of our recent efforts to expedite replacements, we have used existing inventory, and therefore, we also require an inventory of meters in various sizes for normal wear and tear replacements, new installations, and meter management purposes. These meters may be needed in the future before the expiration of the current 3-year contract with Badger Meter in early 2019. GWA is requesting approval to purchase up to approximately six thousand six hundred seventy-four meters, in sizes ranging from ¾-inch to 8-inch, at a cost of up to approximately One Million One Hundred Fifteen Thousand Seven Hundred Eighteen Dollars and Sixty-Five Cents ($1,115,718.65).

In addition, new meters were purchased to improve billing accuracy for customers who have wide variations in demand but could not be deployed because they required a dedicated power source at the customers meter box location. Rather than return these meters at a cost, the Manufacturer offered a deep discount if we kept the meters. GWA saw an opportunity to support production meter replacement in an effort to refine GWA's performance with respect to on-going water audit results since well sites have dedicated power sources. However, this originally un-planned purchase of production meters exceeded previously approved purchase levels, therefore GWA seeks a ratification of this expenditure.

Where is the location?
GWA customers island-wide.

How much will it cost?
The above effort will cost:

1. For rolling inventory of 10,100 of ¾-inch meters to facilitate warranty replacements: One Million Four Hundred Forty-Nine Thousand Eight Hundred Fifty-Five Dollars ($1,449,855.00).
2. For potential future inventory of replacement meters in various sizes up to 8-inches: One Million One Hundred Fifteen Thousand Seven Hundred Eighteen Dollars and Sixty Five Cents ($1,115,718.65).
3. For ratification of previous purchases above previously authorized amounts: Fourteen Thousand Two Hundred Twenty-Four Dollars and Thirty-Two Cents ($14,224.32).

This results in a total of Two Million Five Hundred Seventy-Nine Thousand Seven Hundred Ninety-Seven Dollars and Ninety-Seven Cents (**$2,579,797.97**).

PO Purchases

PO No	FY	GL Date	PO Amount	IFB 2015-13
299095	16	2/22/2016	$ 35,205.27	Y
299176	16	3/10/2016	$ 11,659.70	Y
299326	16	3/30/2016	$ 3,001.71	Y
299501	16	5/20/2016	$ 102,727.15	Y
299506	16	5/20/2016	$ 107.30	Y
299508	16	5/20/2016	$ 7,291.20	Y
299769	16	8/12/2016	$ 10,722.58	Y
299861	16	9/1/2016	$ 14,355.00	Y
299963	16	9/26/2016	$ 43,088.30	Y
300089	17	10/24/2016	$ 28,710.00	Y
300312	17	12/14/2016	$ 49,793.35	Y
300343	17	12/20/2016	$ 43,065.00	Y
300515	17	2/7/2017	$ 57,420.00	Y
300583	17	3/8/2017	$ 14,355.00	Y
300610	17	3/23/2017	$ 50,242.50	Y
300836	17	5/24/2017	$ 430,650.00	Y
300861	17	6/1/2017	$ 46,979.70	Y
300941	17	6/16/2017	$ 5,426.10	Y
300942	17	6/16/2017	$ 6,003.42	Y
300943	17	6/16/2017	$ 23,718.24	Y
301561	18	11/20/2017	$ 4,537.40	Y
As of Dec. 27, 2017			**$ 989,058.92**	
301812	18	1/12/2018	$ 14,355.00	Y
301813	18	1/12/2018	$ 10,810.40	Y
			$ 25,165.40	

TOTAL Purchase Orders **$ 1,014,224.32**

Additional Meter Purchases

Meter Size	Qty	IFB 2015-13 Unit Cost	Amount
3/4	10,100	$143.55	**$1,449,855.00**

Meter Inventory Replenishment

Meter Size	Qty	IFB 2015-13 Unit Cost	Amount
3/4	6,316	$143.55	$906,661.80
1	121	$226.87	$27,360.52
1 1/2	83	$361.74	$29,843.55
2	48	$540.52	$25,782.80
3	23	$738.12	$16,681.51
4	37	$1,200.92	$44,554.13
6	23	$2,202.86	$51,326.64
8	5	$3,001.71	$13,507.70
Inventory Replenishment Total	**6,654**		**$1,115,718.65**
Total Meter Purchases	**16,754**		**$2,565,573.65**

Summary IFB 2015-13 Badger Water Meters

CCU Ratification	$14,224.32	<Excess of $1M
Additional Meter Purchases	$1,449,855.00	Qty of 10,100 3/4 meters at $ 143.55 each.
Meter Inventory Replenishment	$1,115,718.65	Qty of 6,754 Meter Inventory Replenishment Various Sizes
TOTAL AMOUNT	**$2,579,797.97**	

When will it be completed?
The indefinite quantity contract will be in place for an initial term of 3 years and purchases will be ongoing on an as-needed basis over the life of the contract term. Three (3) year contract ends Feb 23, 2019.

What is the funding source(s)?
Internally Funded Capital Improvement Projects.

The RFP / Bid Responses
IFB 2015-13 Badger Water Meters.

EXHIBIT A



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WHEREAS, in order to support fulfilling Court Order requirements for meter replacement and provide for maintaining an adequate inventory, GWA advertised an Invitation for Bid (IFB) 2015-13 soliciting proposals from experienced and responsive bidders to provide water meters to replenish Guam Waterworks Authority stock as needed for water meter change outs and new installations; and

WHEREAS, out of fifteen (15) bidders expressing interest, there were two (2) responsive and responsible bidders who offered water meters of various sizes and accessories meeting the requirements of IFB 2015-13; and

WHEREAS, the IFB 2015-13 offers were evaluated by GWA's review committee; and

WHEREAS, GWA's review committee determined that the offer for "All or None Bid for water meters of various sizes and accessories" with an estimated amount of Four Hundred Twenty-Seven Five Hundred Forty Dollars and Two Cents ($427,540.02) over a 3-year contract

term, made by Badger Meter Inc. is fair and reasonable and recommended Badger Meter Inc. be awarded the contract [EXHIBIT A]; and

WHEREAS, GWA issued a Notice to Proceed to Badger Meter Inc. on February 23, 2016 at which time Badger Meter accepted the notice [EXHIBIT B]; and

WHEREAS, GWA submitted Resolution No. 32-FY2017 which sought approval of purchases up to One Million Dollars ($1,000,000.00) and CCU approved it on May 23, 2017 (EXHIBIT C); and

WHEREAS, GWA Management, in response to emergent functional issues with Badger's Model LP meter, has initiated efforts to replace that model under warranty with a more robust and reliable model, and such efforts have outpaced the receipt of warranty replacements from the manufacturer; and

WHEREAS, GWA Management seeks to continue its increased efforts to replace the Model LP meters to mitigate impacts to, and improve revenues, and will need to purchase additional meters to achieve this goal; and

WHEREAS, during the course of the replacement program, as meters are found to have failed the testing procedure, those meters still under warranty will be credited toward the supplier's invoices; and

WHEREAS, GWA Management seeks CCU Ratification of procurement related to IFB 2015-13 in the total amount of Fourteen Thousand Two Hundred Twenty-Four Dollars and Thirty-Two Cents ($14,224.32) for the purchases in excess of One Million Dollars ($1,000,000.00) (EXHBIT D); and

WHEREAS, GWA Management seeks CCU Approval to purchase an additional ten thousand one hundred meters (10,100) meters with a unit cost of One Hundred Forty-Three Dollars and Fifty-Five Cents ($143.55) under IFB 2015-13 in the amount of One Million Four

Hundred Forty-Nine Thousand Eight Hundred Fifty-Five Dollars ($1,449,855.00) (EXHIBIT D); and

WHEREAS, GWA Management seeks CCU Approval to purchase an additional six thousand six hundred seventy-four (6,674) meters of various sizes for meter inventory replenishment in the total amount of One Million One Hundred Fifteen Thousand Seven Hundred Eighteen Dollars and Sixty-Five Cents ($1,115,718.65) (EXHIBIT D); and

WHEREAS, GWA Management seeks CCU approval and ratification of IFB 2015-13 for water meters of various sizes and accessories indefinite quantity bid in the amount of Two Million Five Hundred Seventy Nine Thousand Seven Hundred Ninety Seven Dollars and Ninety-Seven Cents ($2,579,797.97), which is the sum of purchase orders in excess of One Million Dollars ($1,000,000.00) totaling to Fourteen Thousand Two Hundred Twenty Four Dollars and Thirty Two Cents ($14,224.32) plus additional meters requested at a cost of One Million Four Hundred Forty Nine Thousand Eight Hundred Fifty Five Dollars ($1,449,855.00) plus meter inventory replenishment with an amount of One Million One Hundred Fifteen Thousand Seven Hundred Eighteen Dollars and Sixty-Five Cents ($1,115,718.65); and

WHEREAS, the source of funding for the water meter purchases is Internally Funded Capital Improvement Projects.

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms of bid proposal submitted by "Badger Meter Inc" are fair and reasonable.
3. There was no indication of bad faith or fraud in any of the procurements contained therein.
4. All of the procurement herein is in the best interest of the territory of Guam and Guam Waterworks Authority.
5. The CCU ratifies the encumbered purchases under previously issued purchase orders relative to indefinite quantity contract with Badger Meters Inc. in the

amount of Fourteen Thousand Two Hundred Twenty-Four Dollars and Thirty-Two Cents ($14,224.32) (EXHIBIT D), and approves additional meter purchases in the amount of Two Million Five Hundred Sixty-Five Thousand Five Hundred Seventy-Three Dollars and Sixty-Five Cents ($2,565,573.65) (EXHIBIT D).

The CCU authorizes the General Manager to notify the Public Utilities Commission of this procurement as set forth in Section 3 of the PUC Order filed April 11, 2003, as a continuing obligation under the Court Order.

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 27th day of March, 2018.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS **J. GEORGE BAMBA**
Chairperson Secretary

SECRETARY'S CERTIFICATE

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

EXHIBIT A

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building
688 Route 15, Mangilao, Guam 96913

MEMORANDUM

TO: Miguel C. Bordallo, P.E., General Manager

CC Vincent Guerrero, SMA

FROM: Evaluation Committee Members

SUBJECT: Recommendation of Award
(Water Meters Various & Accessories)

DATE: January 26, 2016

Invitation for Bid No: GWA 2015-13 was officially announced and advertised in the Pacific Daily News, Marianas Variety and Guam Waterworks Authority Website on Sept 25, 2015 and open as scheduled on October 14, 2015 @ 10:00 am. Fifteen (15) prospective bidders expressed their interests by acknowledging receipt of the bid package thru GWA's website.

Bidders Register:

1. Canton Construction
2. Manhattan Guam Inc.
3. FS
4. Benson Guam
5. JMI Edison
6. Barrat Plumbing
7. Monhar Construction
8. Supreme Group Guam
9. American Int. Supply
10. American Water Works
11. USSI
12. Zenner Performance
13. GPE Ent.
14. Badger Meter Inc
15. Americas Best Electricmart

Of the fifteen (15), two (2) submitted their bid package, namely:

- Badger Meter Inc.
- Americas Best Eletricmart

An evaluation committee was formally assembled and met on October 28, 2015 @ 9:00 am in Procurement's office to review/discuss and evaluate the bid.

Committee members consist of:

- Marc Lopez

1

- Karen Grape
- Albert Perez
- Peter Salas

The committee members determined that Badger Meter Inc. submitted the lowest cost however, in-order for Badger Meter to be considered a responsive bidder, as part of the bid requirement, badger Meter Inc. is required to submit a Guam Business License in order to be consider for award.

On November 04, 2015, GWA notified Badger and requested they submit a Guam business license as specified in the bid, on January 07, 2016 Badger Meter complied and submitted a Guam business license, On January 12, 2016 the committee members reconvened and confirmed the requirement have been submitted by Badger and thereby agreed and accepted the bid offer from Badger Meter Inc. In closing, the committee members recommend the award issued to Badger.

Badger Meter Bid Cost:

Item No	Description	Estimated Qty	Unit Cost	Total Cost
1.1	Badger Water Meter RCDL Model 25 LL Disc Meter (NSF 61-G) 5/8" x ¾-3/4 Bore (3/4" x 7 ½")	500 each	$143.66	$71,775.00
1.2	Badger Water Meter 1 Inch RCDL Model 55 LL Disc Meter (NSF 61-G) 1" (1 x 10 ¾")	10 each	$226.87	$2,268.70
1.3	Badger Water Meter 1 ½" Inch RCDL Model 120 LL Disc Meter (NSF 61-G)	10 each	$361.74	$3,617.40
1.4	Badger Water Meter 2" Inch RCDL Model 170 Disc Meter (NDF61-G).	15 each	$540.52	$8,107.80

2

1.5	Badger Water Meter 3" inch. RCDL Turbo Series Meter LL (NSF 61-G).	5 each	$738.12	$3,690.60
1.6	Badger Water Meter 4" inch. RCDL Turbo Series Meter LL (NSF 61-G).	5 each	$1,200.92	$6,004.60
1.7	Badger Water Meter 6" inch. RCDL Turbo Series Meter LL (NSF 61-G).	2 each	$2,202.86	$4,405.72
1.8	Badger Water Meter 8" inch. RCDL Turbo Series Meter LL (NSF 61-G).	1 each	$3,001.71	$3,001.71
1.9	Badger Water Meter 10" inch. RCDL Turbo Series Meter LL (NSF 61-G).	1 each	$4,080.77	$4,080.77
1.10	Badger Water Meter 3" inch. RCDL Compound Series Meter LL (NSF 61-G).	5 each	$1,772.38	$8,861.88
1.11	Badger Water Meter 4" inch. RCDL Compound Series Meter LL (NSF 61-G).	1 each	$2,789.88	$2,789.88

3

1.12	Badger Water Meter 6" Inch. RCDL Compound Series Meter LL (NSF 61-G).	1 each	$3,953.04	$3,953.04
1.13	External Plate Strainer	1 each	$309.01	$309.01
1.14	3"External Plate Strainer	1 each	$405.65	$405.65
1.15	4" LL Bronze External Plate Strainer	1 each	$545.33	$545.33
1.16	6" LL Bronze External Plate Strainer	1 each	$761.12	$761.12
1.17	External Plate Strainer	1 each	$2,051.31	$2,051.31
1.18	External Plate Strainer	1 each	$4,567.20	$4,567.20
1.19	Assembly Elliptical 1-1/2"	1 each	$144.50	$144.50
1.20	Assembly Elliptical 2" Flange Brass	1 each	$195.50	$195.50
1.21	No Register, Orion ME Note: Add-on for each compound meter purchase	1 each	$107.30	$107.30
1.22	Badger M2000 2"	1 each	$1,863.00	$1,863.00
	Badger M2000 3"	1 each	$1,964.70	$1,964.70
	Badger M2000 4"	1 each	$2,070.90	$2,070.90
	Badger M2000 6"	1 each	$2,330.10	$2,330.10
	Badger M2000 8"	1 each	$2,640.60	$2,640.60

4

Summary:

This is an "Indefinite Quantity Bid" pursuant to the Guam Procurement Regulations. The quantities reflected are only estimated and not guarantee of amounts to be purchased.
Quantities may increase or decrease thru the duration of the contract and continued purchase is subject to the availability of funds. No guarantee or other commitment is made to vendors in terms of purchasing quantity and the amounts set forth in this bid are only estimates of needs for the near term.

Contract Term:

GWA and the lowest responsible bidder may enter into a contract (which may be in the form of a Purchase Order) on terms acceptable to GWA which shall commence upon vendor's acknowledged receipt of a Notice to Proceed from GWA. The initial term of the contract is three (3) years with two (2) one year options to renew, subject to availability of funds and agreement between the parties.

Concurred and accepted by the committee members:

Marc Lopez 01-22-2016
Marc Lopez, Associate Engineer

January 22, 2016
Karen Cheryl O. Grape, Management Analyst III, Operations

January 22, 2016
Albert Perez, Inventory Management Officer

Your approval is greatly appreciated.

Peter Salas.
Peter Salas

In consideration of the foregoing, please indicate your approval of this recommendation by your signature below.

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[✓] CONCURRED [ ] UNCONCURRED

VINCENT ED. GUERRERO, SMA

[✓] APPROVED [ ] DISAPPROVED

1-29-18

MIGUEL C. BORDALLO, P.E. GENERAL MANGER

MCB/vg/ecm

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EXHIBIT A

GWA IFB 2015-13 WATER METERS VARIOUS SIZES AND ACCESSORIES (ALL OR NOTHING)

ITEM #	DESCRIPTION	ESTIMATED QUANTITY	UNIT COST	TOTAL COST
1.1	Badger Water Meter 5/8"X3/4"	500 EACH	$ 143.55	$ 71,775.00
1.2	Badger Water Meter 1"	10 EACH	$ 226.87	$ 2,268.70
1.3	Badger Water Meter 1-1/2"	10 EACH	$ 361.74	$ 3,617.40
1.4	Badger Water Meter 2"	15 EACH	$ 540.52	$ 8,107.80
1.5	Badger Water Meter 3" Turbo	5 EACH	$ 738.12	$ 3,690.60
1.6	Badger Water Meter 4" Turbo	5 EACH	$ 1,200.92	$ 6,004.60
1.7	Badger Water Meter 6" Turbo	2 EACH	$ 2,202.86	$ 4,405.72
1.8	Badger Water Meter 8" Turbo	1 EACH	$ 3,001.71	$ 3,001.71
1.9	Badger Water Meter 10" Turbo	1 EACH	$ 4,080.77	$ 4,080.77
1.10	Badger Water Meter 3" Compound	5 EACH	$ 1,772.38	$ 8,861.90
1.11	Badger Water Meter 4" Compound	1 EACH	$ 2,789.88	$ 2,789.88
1.12	Badger Water Meter 6" Compound	1 EACH	$ 3,953.04	$ 3,953.04
1.13	2" External Plate Strainer	1 EACH	$ 309.01	$ 309.01
1.14	3" External Plate Strainer	1 EACH	$ 405.65	$ 405.65
1.15	4" Bronze External Plate Strainer	1 EACH	$ 545.33	$ 545.33
1.16	6" Bronze External Plate Strainer	1 EACH	$ 761.12	$ 761.12
1.17	8" External Plate Strainer	1 EACH	$ 2,051.31	$ 2,051.31
1.18	10" External Plate Strainer	1 EACH	$ 4,567.20	$ 4,567.20
1.19	Assembly Elliptical 1-1/2"	1 EACH	$ 144.50	$ 144.50
1.20	Assembly Elliptical 2" Flange Brass	1 EACH	$ 195.50	$ 195.50
1.21	No Register Orion ME	1 EACH	$ 107.30	$ 107.30
1.22	Badger M2000 2"	1 EACH	$ 1,863.00	$ 1,863.00
	Badger M2000 3"	1 EACH	$ 1,964.70	$ 1,964.70
	Badger M2000 4"	1 EACH	$ 2,070.90	$ 2,070.90
	Badger M2000 6"	1 EACH	$ 2,330.10	$ 2,330.10
	Badger M2000 8"	1 EACH	$ 2,640.60	$ 2,640.60
		TOTAL COST		$ 142,513.34

AT THREE YEARS =
$427,540.02

EXHIBIT B

GUAM WATERWORKS AUTHORITY
"Better Water. Better Lives."
Gloria B. Nelson Public Services Building
688 Route 15, Mangilao, Guam 96913
Tel: (671) 300-6026/27 Fax: (671) 649-3750

FEB 2 3 2018

NOTICE TO PROCEED

Ms. Theresa M. Szafranski
4545 W Brown Deer Road
P.O. Box 245036
Milwaukee, Wisconsin 53224-9536

Telephone: 414-355-0400/800-876-3838

Project No: GWA IFB 2015-13
Project Name: Water Meters Various Sizes and Accessories

Dear Theresa,

You are hereby notified to commence work in accordance with the contract dated **5th** day of **February**. This letter constitutes your official Notice to Proceed (NTP) for the above referenced bid.

Sincerely,

Vince Guerrero, CPM
Supply Management Adm.

Ref: GWA IFB 2015-13 Water Meters Various Sizes and Accessories

ACCEPTANCE OF NOTICE

Receipt of the above Notice to Proceed is hereby acknowledged this 23rd day of February, 2016.

Contractor: BADGER METER, INC.

Print Name & Title: Theresa M. Szafranski, Assistant Secretary

Signature: Theresa M. Szafranski

EXHIBIT C

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

RESOLUTION NO. 32-FY2017

RELATIVE TO RATIFICATION AND APPROVAL OF PURCHASES UNDER INDEFINITE QUANTITY CONTRACT WITH BADGER METER INC. FOR GWA WATER METERS OF VARIOUS SIZES AND ACCESSORIES

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA has advertised by an Invitation for Bid (IFB) 2015-13 soliciting bid proposals from experienced and responsive bidders to provide water meters to replenish Guam Waterworks Authority stock as needed for water meter change outs and new installations; and

WHEREAS, there were two (2) responsive and responsible bidders who offered water meters of various sizes and accessories meeting the requirements of IFB 2015-13; and

WHEREAS, the IFB 2015-13 offers were evaluated by GWA's review committee; and

WHEREAS, GWA's review committee determined that the offer for "All or None Bid for water meters of various sizes and accessories" with an estimated amount of Four Hundred Twenty Seven Thousand Five Hundred Forty Dollars and Two Cents ($427, 540.02) over a three (3) year contract term, made by Badger Meter Inc. is fair and reasonable, and recommended Badger Meter Inc.be awarded the contract [EXHIBIT A]; and

WHEREAS, GWA issued a Notice to Proceed to Badger Meter Inc. on February 23, 2016 at which time Badger Meter Inc. accepted the notice [EXHIBIT B]; and

WHEREAS, GWA Management seeks CCU ratification of procurement related to IFB 2015-13 in the total amount of Two Hundred Twenty One Thousand Seven Hundred Forty Four Dollars and Six Cents ($221,744.06), for purchases in excess of the General Manager's authorized threshold [EXHIBIT C]; and

WHEREAS, GWA Management seeks CCU approval to purchase additional meters under IFB 2015-13 in the amount of Four Hundred Seventy Five Thousand Three Hundred Seventy Six Dollars and Forty Cents ($475,376.40) [EXHIBIT D]; and

WHEREAS, GWA Management seeks CCU approval and ratification of IFB 2015-13 for water meters of various sizes and accessories indefinite quantity bid in the amount of Six Hundred Ninety Seven Thousand One Hundred Twenty Dollars and Forty Six Cents ($697,120.46), which is the sum of purchase orders issued totaling Two Hundred Twenty One Thousand Seven Hundred Forty Four Dollars and Six Cents ($221,744.06) plus additional meters requested at a cost of Four Hundred Seventy Five Thousand Three Hundred Seventy Six Dollars and Forty Cents ($475,376.40); and

WHEREAS, the source of funding for the water meter purchases is Internally Funded Capital Improvement Projects.

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve and authorize the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms of the bid proposal submitted by "Badger Meter Inc." are fair and reasonable.
3. There was no indication of bad faith or fraud in any of the procurements contained therein.

4. The Indefinite Quantity procurement used for these purchases is in the best interest of the territory of Guam and the Guam Waterworks Authority.
5. The CCU ratifies the encumbered purchases under previously issued purchase orders relative to indefinite quantity contract with Badger Meters Inc. in the total amount of Two Hundred Twenty One Thousand Seven Hundred Forty Four Dollars and Six Cents ($221,744.06) (EXHIBIT C) and approves currently planned purchases in the amount of Four Hundred Seventy Five Thousand Three Hundred Seventy Six Dollars and Forty Cents ($475,376.40) (EXHIBIT D) and future planned purchases under the Indefinite Quantity procurement up to a cumulative total of One Million Dollars ($1,000,000.00).
6. The CCU authorizes the General Manager to petition the Public Utilities Commission for approval of the IFB 2015-13 in the event GWA anticipates the procurement will exceed the One Million Dollars ($1,000,000.00) threshold as required by Docket 00-04.

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 23rd day of May 2017.

Certified by:

JOSEPH T. DUENAS
Chairperson

Attested by:

J. GEORGE BAMBA
Secretary

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I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities, as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: 4

NAYS: 0

ABSTENTIONS: 0

ABSENT: 1

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EXHIBIT D

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Encumbered Purchase Orders Relative to IFB 2015-13

PO No	FY	GL Date	PO Amount	IFB 2015-13
299095	16	2/22/2016	$ 35,205.27	Y
299176	16	3/10/2016	$ 11,659.70	Y
299326	16	3/30/2016	$ 3,001.71	Y
299501	16	5/20/2016	$ 102,727.15	Y
299506	16	5/20/2016	$ 107.30	Y
299508	16	5/20/2016	$ 7,291.20	Y
299769	16	8/12/2016	$ 10,722.58	Y
299861	16	9/1/2016	$ 14,355.00	Y
299963	16	9/26/2016	$ 43,088.30	Y
300089	17	10/24/2016	$ 28,710.00	Y
300312	17	12/14/2016	$ 49,793.35	Y
300343	17	12/20/2016	$ 43,065.00	Y
300515	17	2/7/2017	$ 57,420.00	Y
300583	17	3/8/2017	$ 14,355.00	Y
300610	17	3/23/2017	$ 50,242.50	Y
300836	17	5/24/2017	$ 430,650.00	Y
300861	17	6/1/2017	$ 46,979.70	Y
300941	17	6/16/2017	$ 5,426.10	Y
300942	17	6/16/2017	$ 6,003.42	Y
300943	17	6/16/2017	$ 23,718.24	Y
301561	18	11/20/2017	$ 4,537.40	Y
As of Dec. 27, 2017			**$ 989,058.92**	
301812	18	1/12/2018	$ 14,355.00	Y
301813	18	1/12/2018	$ 10,810.40	Y
			$ 25,165.40	
TOTAL Purchase Orders			**$ 1,014,224.32**	

Additional Meter Purchases

Meter Size	Qty	IFB 2015-13 Unit Cost	Amount
3/4	10,100	$143.55	**$1,449,855.00**

Meter Inventory Replenishment

Meter Size	Qty	IFB 2015-13 Unit Cost	Amount
3/4	6,316	$143.55	$906,661.80

1	121	$226.87	$27,360.52
1 1/2	83	$361.74	$29,843.55
2	48	$540.52	$25,782.80
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6	23	$2,202.86	$51,326.64
8	5	$3,001.71	$13,507.70
Inventory Replenishment Total	**6,654**		**$1,115,718.65**
Total Meter Purchases	**16,754**		**$2,565,573.65**

Summary IFB 2015-13 Badger Water Meters

CCU Ratification	$14,224.32	<Excess of $1M
Additional Meter Purchases	$1,449,855.00	Qty of 10,100 3/4 meters at $ 143.55 each.
Meter Inventory Replenishment	$1,115,718.65	Qty of 6,754 Meter Inventory Replenishment Various Sizes
TOTAL AMOUNT	**$2,579,797.97**	

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 25-FY2018
Relative to the Approval of the Contract with Total Chemicals and JMI Edison for Additional Purchase of Wastewater Treatment Chemicals

What is the project's objective and is it necessary and urgent?
To maintain a 90-day chemical inventory until the end of the existing three (3) year contract. The resolution seeks approval of funding amounts above the original estimated and approved levels due to an increase in actual demand and usage of the chemicals.

Where is the location?
1. Northern Wastewater Treatment Plant
2. Hagatna Wastewater Treatment Plant and

How much will it cost?

	Vendor	Cost / lb	Annual	3 Years
ACH	Total Chemical	$1.06	$851,739.68	$2,555,219.04
Anionic	Total Chemical	$1.40	$156,468.20	$469,404.60
			$1,008,207.88	**$3,024,623.64**
Cationic	JMI	$1.45	$200,188.45	$600,565.35
			$1,208,396.33	**$3,625,188.99**

*Three (3) Year Contract End Date: January 20, 2019
*CCU Resolution 12-FY2016, Approved December 10, 2015
* PUC GWA Docket 15-11, Review and Approval of Contracts with Total Chemical Resources, Inc and JMI Edison, Approved January 25, 2016.

	Vendor	Expensed as of Feb 2018	January-19	90 Days Cost	Jan 2019 + 90 Days
ACH	Total Chemical	$2,258,593.94	$124,654.55	$184,591.79	$309,246.34
Anionic	Total Chemical	$605,539.20	$60,906.25	$116,578.96	$177,485.21
		$2,864,133.14	**$185,560.79**	**$301,170.75**	**$486,731.55**

When will it be completed?
If approved, the procurement of adequate chemicals for daily operational requirements and related expenses will be extended to the end of the 3-year contract period in January of 2019.

What is the funding source?
Revenue Funds.

The RFP/BID responses (if applicable):
IFB 2015-10 Wastewater Treatment Chemicals

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

RESOLUTION NO. 25-FY2018

RELATIVE TO APPROVAL OF THE CONTRACT WITH TOTAL CHEMICALS AND JMI-EDISON FOR THE ADDITIONAL PURCHASE OF WASTEWATER CHEMICALS FOR WASTEWATER TREATMENT PLANTS

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual, and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA currently has a number of critical 2011 Court Order ("CO") Projects, including construction of system upgrade of the Northern District WWTP to use Chemically Enhanced Primary Treatment as specified in § II A Paragraph 2 of the CO; and

WHEREAS, GWA has completed the system upgrade of the Hagatna WWTP to use Chemical Enhanced Primary Treatment and is now operating it as specified in § II A Paragraph 5 of the CO; and

WHEREAS, the Chemically Enhanced Primary Treatment at the Northern District WWTP and the Hagatna WWTP requires purchase of chemicals for the application of the treatment process; and

WHEREAS, on July 30, 2015 GWA filed a Petition with the Guam Public Utilities Commission ("PUC") for approval to issue a bid for the chemicals for the Northern District and Hagatna wastewater treatment facilities; and GWA Petition was approved by the PUC on August 27, 2015; and

WHEREAS, GWA issued Bid Number 2015-10 to solicit bid proposals from experienced and responsive bidders to provide the chemicals needed to continue to operate the Northern District WWTP and the Hagatna WWTP in compliance with the Court Order; and

WHEREAS, there were two responsive and responsible bidders who offered chemicals meeting requirements in IFB 2015-10 (see Exhibit A); and

WHEREAS, the IFB 2015-10 offers were evaluated by GWA's review committee and GWA's review committee determined that the best offer for Anionic Polymer and Inorganic Coagulant ("ACH") (for sludge dewatering) was made by Total Chemical Resources, Inc; (see Exhibit B); and

WHEREAS, GWA's review committee also determined that the best offer for Cationic Polymer was made by JMI-Edison (See Exhibit C); and

WHEREAS,GWA accepted Total Chemical Resources, Inc.'s bid proposal (see Exhibit D) of $1.40/lb. for Anionic Polymer at an estimated annual cost of One Hundred Fifty Six Thousand Four Hundred Sixty Eight Dollars and Twenty Cents ($156,468.20), and for a three (3) year contract in the amount of Four Hundred Sixty Nine Thousand Four Hundred Four Dollars and Sixty Cents ($469,404.60) and for Inorganic Coagulant (ACH) at $1.06/lb. for an estimated annual cost of Eight Hundred Fifty One Thousand Seven Hundred Thirty Nine Dollars and Sixty-Eight Cents ($851,739.68), for a three (3) year contract in the amount of Two Million Five Hundred Fifty Five Thousand Two Hundred Nineteen Dollars and Forty Cents ($2,555,219.04), with a Grand Total to supply both Anionic Polymer and Inorganic Coagulant (ACH) for the Northern District WWTP and Hagatna WWTP is Three Million Twenty Four Thousand Six Hundred Twenty Three Dollars and Sixty-Four Cents ($3,024,623.64) as specified in IFB 2015-10; and

WHEREAS, GWA accepted JMI-Edison's bid proposal (Exhibit E) of $1.45/lb. for Cationic Polymer for an estimated annual cost of Two Hundred Thousand One Hundred Eighty Eight Dollars and Forty-Five Cents ($200,188.45), and for a three (3) year contract for a total amount of Six Hundred Thousand Five Hundred Sixty Five Dollars and Thirty-Five Cents

($600,565.35) to supply Cationic Polymer for the Northern District WWTP, Hagatna WWTP and Agat-Sta Rita WWTP for three (3) years as specified in GWA IFB 2015-10; and

WHEREAS, CCU approved the three (3) year contract with Total Chemical Resources in the amount of Three Million Twenty-Four Thousand Six Hundred Twenty-Three Dollars and Sixty-Four Cents ($3,024,623.64) for the chemicals Anionic Polymer and Inorganic Coagulant (ACH); and

WHEREAS, CCU approved the three (3) year contract with JMI-Edison in the amount of Six Hundred Thousand Five Hundred Sixty-Five Dollars and Thirty-Five Cents ($600,565.35) for the chemical Cationic Polymer; and

WHEREAS, the total amount expensed as of February 2018 is Two Million Eight Hundred Sixty-Four Thousand One Hundred Thirty-Three Dollars and Fourteen Cents ($2,864,133.14) for Anionic Polymer and Inorganic Coagulant and Three Hundred Sixty-Five Thousand Four Hundred Dollars ($365,400.00) for Cationic Polymer; and

WHEREAS, the amount required to purchase until the end of the contract for Anionic Polymer and Inorganic Coagulant, is One Hundred Eighty-Five Thousand Five Hundred Sixty Dollars and Eighty Cents ($185,560.80); and an additional amount of Three Hundred One Thousand One Hundred Seventy Dollars and Seventy-Five Cents ($301,170.75) for a 90-day chemical inventory which sums up to Four Hundred Eighty-Six Thousand Seven Hundred Thirty-One Dollars and Fifty-Five Cents ($486,731.55). The new total amount for the three (3) year contract with Total Chemical will now be ~~Three Million Six Hundred Twenty-Five Thousand One Hundred Eighty-Eight and 08/100~~ Three Million Five Hundred Eleven Thousand Three Hundred Fifty-Five Dollars and Nineteen Cents ($3,511,355.19); and

WHEREAS, the original approved amount of Six Hundred Thousand Five Hundred Sixty-Five Dollars and Thirty-Five Cents ($600,565.35) for the three (3) year contract with JMI is sufficient until the end of the contract period; and

WHEREAS, GWA seeks approval for an additional purchase of wastewater treatment chemicals Anionic Polymer and Inorganic Coagulant (ACH) in the total amount of Four Hundred Eighty-Six Thousand Seven Hundred Thirty-One Dollars and Fifty-Five Cents ($486,731.55); and

WHEREAS, the source of funding for the additional chemical purchases will be FY2018 and FY2019 Wastewater Operations Budget; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU hereby authorizes the management to purchase additional Anionic Polymer in the amount of One Hundred Thousand Seventy-Seven Four Hundred Eighty-Five Dollars and Twenty-One Cents ($177,485.21) and Inorganic Coagulant (ACH) in the amount of Three Hundred Nine Thousand Two Hundred Forty-Six Dollars and Thirty-Four Cents ($309,246.34) with a total amount of Four Hundred Eighty-Six Thousand Seven Hundred Thirty-One Dollars and Fifty-Five Cents ($486,731.55) with Total Chemical Resources.
3. GWA Management is hereby authorized to seek PUC approval as required by Docket No. 00-04.

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 27th day of March, 2018.

Certified by:

_____
JOSEPH T. DUENAS
Chairperson

Attested by:

_____
J. GEORGE BAMBA
Secretary

DRAFT

SECRETARY'S CERTIFICATE

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

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DRAFT

EXHIBIT A

GUAM WATERWORKS AUTHORITY

"Better Water. Better Lives."
Gloria B. Nelson Public Services Building
688 Route 15, Mangilao, Guam 96913

MEMORANDUM

TO: General Manager

VIA: Supply Management Administrator

FROM: Evaluation Committee Members

SUBJECT: Invitation to Bid No. GWA 2015-10
Ref: Wastewater Treatment Chemicals

Invitation for Bid No: GWA 2015-10 was officially announced and advertised in the Pacific Daily News, Marianas Variety and Guam Waterworks Authority Website on September 24, 2015 and open as scheduled on October 15, 2015 @ 10:00am twenty (20) prospective bidders expressed their interests by acknowledging receipt of the bid package thru GWA's website.

Bidders Register:

1. Total Chemical Resources, Inc.
2. Canton Construction Corp.
3. DSGDSFG
4. HDR
5. JMI-Edison
6. Island Equipment Co.
7. M.D. Wholesale
8. Bei Hawaii
9. Carus Corp.
10. Monhar Construction.
11. VMB Trading Co.
12. Sai Machinery LLC.
13. Culligan Pacific
14. Student Construction
15. Guam Pacific Enterprise.
16. America's Best Electricmart
17. Gulbrandsen Technologies
18. SS
19. D. Mullis Insurance
20. Polydyne Inc.

Of the twenty (20) only two (2) submitted their bid package namely:

- Total Chemical Resource
- JMI-Edison

An evaluation committee was formally assembled and met on October 22, 2015 @ 11:00am in GPWA conference room 1st floor to review/discuss and evaluate the bid.

REF: IFB 2015-10 Wastewater Treatment Chemicals

Committee members consist of:

- Antonio Camacho
- Paul Kemp
- Dan Aguon
- Dave Fletcher

The committee members reviewed the bid proposals and have determined both prospective bidders Total Chemical and JMI-Edison respectfully submitted a reasonable and fair cost and is awarded based on the lowest annual cost as specified in the IFB, as follows:

Total Chemical to be awarded as follows:

Item No. 1: Inorganic Coagulant,
Price per pound delivered CIF: **$1.06**
Product Label Name: **Achieve D1012 ACH Powder**

$1.06 X 803,528. =$851,739.68 (Annual Cost)

Item No. 2: Coagulant Aid (e. g. anionic polymer)
Price per pound delivered CIF: **$1.40**
Product Label Name: Nalclear 7767 Anionic Flocculant

$1.40 x 111,763= $156,468.20 (Annual Cost)

JMI Edison to be awarded as follows:

Item No. 3: Cationic Polymer
Price per pound delivered CIF: **$1.45**
Product Label Name: **Hydrex 6402 Cationic Emulsion Polymers**

$1.45 x 138,061 = $200,188.45 (Annual Cost)

After a thorough evaluation the committee members agreed to and accept the submitted bid offers from both Total Chemical Resources and JMI Edison and have been determined they respectfully complied with all specifications and requirements set forth in this IFB. In closing, the committee members respectfully request your approval to proceed with the award.

Bid Summary:

This is an "Indefinite Quantity Bid" pursuant to the Guam Procurement Regulations. **The quantities reflected in the bid are estimated requirements only and not guaranteed minimums.**

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REF: IFB 2015-10 Wastewater Treatment Chemicals

Delivery:

The vendor will be responsible for all cost and all risks associated with the provision of these goods until delivery is made and the items are formally accepted by GWA. All goods shall be delivered in its manufacturer's original factory sealed containers to Guam Waterworks Authority Northern District Wastewater Treatment Plant and Hagatna Wastewater Treatment Plants. Delivery time is 60 days from the date on the Notice to Proceed.

Contract Term:

GWA and the lowest responsible bidder may enter into a contract (which may be in the form of a Purchase Order) on terms acceptable to GWA and which shall in all cases incorporate the terms of this bid whether stated on the Purchase Order or not, which shall commence upon vendor's acknowledged receipt of a Notice to Proceed from GWA. The initial term of the contract is for three (3) years fixed price term with option to renew for additional two (2) one (1) year term, all prices shall be fixed for the initial one (1) year term. All purchases are subject to availability of funds.

Concurred and accepted by the committee members:

Paul Kemp, Assistant General Manager Compliance & Safety

Dan Aguon, Wastewater Plant Superintendent

Dave Fletcher, Operations and Maintenance Manager

Antonio Camacho, Buyer II Procurement

Your approval is greatly appreciated.

Peter Salas

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REF: IFB 2015-10 Wastewater Treatment Chemicals

Note: Fund Certification form reviewed, signed and approved dated on Sept 10, 2015 GL Account Number: 7003.71802.430 (Estimated cost: $1,534,307.00 - Pending approval of FY 2016 budget.)

In consideration of the foregoing, please indicate your approval of this recommendation by your signature below.

[✓] CONCURRED [ ] UNCONCURRED

VINCENT ED. GUERRERO, SMA

[✓] APPROVED [ ] DISAPPROVED

10/2/2015

MARK G. MILLER, GENERAL MANGER, INTERIM

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GUAM WATERWORKS AUTHORITY

Guam Waterworks Authority
P. O. Box 3010
Hagatna, Guam, 96932
BID ABSTRACT

IFB GWA 2015-10
FOR: WW TREATMENT CHEM.
OPENING DATE: OCT. 15, 2015
OPENING TIME: 10:00 AM

BIDDERS	ITEM #	VENDOR 1	VENDOR 2	VENDOR 3	VENDOR 4
Vendor #1 JMI EDISON		JMI EDISON	TOTAL CHEMICAL RESOURCES	NO BID SUBMITTAL	NO BID SUBMITTAL
Bid Guarantee: [ ]Cashier's Check or Certified Check $ [ ]Letter of Credit $_____[ ]Bid/Performance Bond 15% [ ]Surety Bond: Current Cert. of Auth."Power of Attorney" [ ]Non-Collusion Affidavit [ ]Statement of Qualifications [ ] Samples [ ] Brochures/Literatures [ ]Affidavit of Disclosure of Major Shareholders/Exp: [ ]Certification of Non-Employment of Convicted Sexual Offenders [ ]CD Provided REMARKS:	1.0	DESCRIPTION / PRODUCT INORGANIC COAGULANT / ALUMINUM CHLORHYDRATE	DESCRIPTION / PRODUCT INORGANIC COAGULANT ACH POWDER (ACHIEVE D812)	DESCRIPTION / PRODUCT INORGANIC COAGULANT /	DESCRIPTION / PRODUCT INORGANIC COAGULANT /
		PRICE PER POUND DELIVERED CIF: $ 1.43 PER POUND TIME OF FIRST DELIVERY: AS PER GWA REQUIREMENTS	PRICE PER POUND DELIVERED CIF: $ 1.06 PER POUND TIME OF FIRST DELIVERY: 90 DAYS	PRICE PER POUND DELIVERED CIF: TIME OF FIRST DELIVERY:	PRICE PER POUND DELIVERED CIF: TIME OF FIRST DELIVERY:
		MFG: SUMMIT RESEARCH LABS BRAND: SUMALCHLOR 200	MFG: GEORGIA PACIFIC TECHNOLOGIES (GPTA) BRAND: ACHIEVE D812 ACH POWDER	MFG: BRAND:	MFG: BRAND:
		PLACE OF ORIGIN: U.S.A. DATE OF DELIVERY:	PLACE OF ORIGIN: PEARLAND, TEXAS DATE OF DELIVERY:	PLACE OF ORIGIN: DATE OF DELIVERY:	PLACE OF ORIGIN: DATE OF DELIVERY:
Vendor #2 TOTAL CHEMICAL RESOURCES	2.0	DESCRIPTION / PRODUCT COAGULANT AID (e.g. anionic polymer)	DESCRIPTION / PRODUCT COAGULANT AID (e.g. anionic polymer)	DESCRIPTION / PRODUCT COAGULANT AID (e.g. anionic polymer)	DESCRIPTION / PRODUCT COAGULANT AID (e.g. anionic polymer)
Bid Guarantee: [ ]Cashier's Check or Certified Check $ [ ]Letter of Credit $_____[ ]Bid/Performance Bond 15% [ ]Surety Bond: Current Cert. of Auth."Power of Attorney" [ ]Non-Collusion Affidavit [ ]Statement of Qualifications [ ] Samples [ ] Brochures/Literatures [ ]Affidavit of Disclosure of Major Shareholders/Exp: [ ]Certification of Non-Employment of Convicted Sexual Offenders [ ]CD Provided REMARKS:		PRICE PER POUND DELIVERED CIF: $ 1.29 PER POUND TIME OF FIRST DELIVERY: AS PER GWA REQUIREMENTS	PRICE PER POUND DELIVERED CIF: $ 1.40 PER POUND TIME OF FIRST DELIVERY: 45 DAYS	PRICE PER POUND DELIVERED CIF: TIME OF FIRST DELIVERY:	PRICE PER POUND DELIVERED CIF: TIME OF FIRST DELIVERY:
		MFG: Veolia Water Technologies BRAND: Hydrex 6184 Anionic Polymers	MFG: HALCO AN ECOLAB COMPANY BRAND: HALCLEAR 7187 ANIONIC FLOCCULANT	MFG: BRAND:	MFG: BRAND:
		PLACE OF ORIGIN: KOREA DATE OF DELIVERY:	PLACE OF ORIGIN: NAPERVILLE, ILLINOIS, USA DATE OF DELIVERY: 30 DAYS	PLACE OF ORIGIN: DATE OF DELIVERY:	PLACE OF ORIGIN: DATE OF DELIVERY:
Vendor #3 NO BID SUBMITTAL	3.0	DESCRIPTION / PRODUCT CATIONIC POLYMER	DESCRIPTION / PRODUCT CATIONIC POLYMER	DESCRIPTION / PRODUCT CATIONIC POLYMER	DESCRIPTION / PRODUCT CATIONIC POLYMER
Bid Guarantee: [ ]Cashier's Check or Certified Check $ [ ]Letter of Credit $_____[ ]Bid/Performance Bond 15 % [ ]Surety Bond: Current Cert. of Auth."Power of Attorney" [ ]Non-Collusion Affidavit [ ]Statement of Qualifications [ ] Samples [ ] Brochures/Literatures [ ]Affidavit of Disclosure of Major Shareholders/Exp: [ ]Certification of Non-Employment of Convicted Sexual Offenders [ ]CD Provided REMARKS:		PRICE PER POUND DELIVERED CIF: $ 1.45 PER POUND TIME OF FIRST DELIVERY: AS PER GWA REQUIREMENTS	PRICE PER POUND DELIVERED CIF: $ 1.35 PER POUND TIME OF FIRST DELIVERY: 45 DAYS	PRICE PER POUND DELIVERED CIF: TIME OF FIRST DELIVERY:	PRICE PER POUND DELIVERED CIF: TIME OF FIRST DELIVERY:
		MFG: Veolia Water Technologies BRAND: Hydrex 6184 Anionic Polymers	MFG: HALCO AN ECOLAB COMPANY BRAND: OPTIMER 7194 CATIONIC	MFG: BRAND:	MFG: BRAND:
		PLACE OF ORIGIN: KOREA DATE OF DELIVERY: AS PER GWA REQUIREMENTS	PLACE OF ORIGIN: NAPERVILLE, ILLINOIS, USA DATE OF DELIVERY: 30 DAYS	PLACE OF ORIGIN: DATE OF DELIVERY:	PLACE OF ORIGIN: DATE OF DELIVERY:
Vendor #4 NO BID SUBMITTAL					
Bid Guarantee: [ ]Cashier's Check or Certified Check $ [ ]Letter of Credit $_____[ ]Bid/Performance Bond 15 % [ ]Surety Bond: Current Cert. of Auth."Power of Attorney" [ ]Non-Collusion Affidavit [ ]Statement of Qualifications [ ] Samples [ ] Brochures/Literatures [ ]Affidavit of Disclosure of Major Shareholders/Exp: [ ]Certification of Non-Employment of Convicted Sexual Offenders [ ]CD Provided REMARKS:					

Tabulated By: _____ Date: 10/15/15

Bids Eval/Awarded
[ ] Lowest Responsive Bidder
[ ] Tie Bid
[ ] Only Bid
[ ] Other Than Lowest Responsive Bidder

TOTAL CHEMICAL

BID FORM FOR CHEMICALS FOR GWA'S NDWWTP AND HWWTP
(TO BE PLACED IN A SEALED ENVELOPE AND DELIVERED WITH TECHNICAL PROPOSAL)

1. **Inorganic Coagulant,**

Product ACH Powder (ACHIEVE D1012) **Price per pound delivered CIF** $ 1.06 per pound

Manufacturer: GULBRANDSEN Technologies (India) Pvt. Inc.

Product Label Name: ACHIEVE D1012 ACH POWDER

Place of Origin: Gujarat, India

Time of first Delivery: 90 days (days)
After Receipt of Purchase Order

Reorder lead time: 30 days (days)
Upon Receipt of Purchase Order

2. **Coagulant Aid (e. g. anionic polymer) Price per pound delivered CIF** $ 1.40 per pound

Manufacturer: NALCO An Ecolab Company

Product Label Name: NALCLEAR 7767 Anionic Flocculant

Place of Origin: Naperville, Illinois U.S.A>

Time of first Delivery: 45 days (days)
After Receipt of Purchase Order

Reorder lead time: 30 days (days)
Upon Receipt of Purchase Order

3. **Cationic Polymer** **Price per pound delivered CIF** $ 1.75 per pound

Manufacturer: NALCO An Ecolab Company

Product Label Name: OPTIMER 7194 Cationic Flocculant

Place of Origin: Naperville Illinois U.S.A

Time of first Delivery: 45 days (days)
After Receipt of Purchase Order

Reorder lead time: 30 days (days)
Upon Receipt of Purchase Order

15

10/14/15
Date

Jerry A. Flores
Chief Financial Officer
Total Chemical Resources, Inc.

JMI EDISON

BID FORM FOR CHEMICALS FOR GWA'S NDWWTP AND HWWTP
(TO BE PLACED IN A SEALED ENVELOPE AND DELIVERED WITH TECHNICAL PROPOSAL)

1. **Inorganic Coagulant,**

Product Aluminum Chlorohydrate **Price per pound delivered CIF** $1.42 per pound

Manufacturer: Summit Research Labs

Product Label Name: Sumalchlor 200

Place of Origin: U.S.A.

Time of first Delivery: As Per GWA Requirements (days)
After Receipt of Purchase Order

Reorder lead time: As Per GWA Requirements (days)
Upon Receipt of Purchase Order

2. **Coagulant Aid (e. g. anionic polymer) Price per pound delivered CIF** $1.29 per pound

Manufacturer: Veolia Water Treatment Technologies

Product Label Name: HYDREX 6104 Anionic Polymers

Place of Origin: Korea

Time of first Delivery: As Per GWA Requirements (days)
After Receipt of Purchase Order

Reorder lead time: As Per GWA Requirements (days)
Upon Receipt of Purchase Order

3. **Cationic Polymer** **Price per pound delivered CIF** $1.45 per pound

Manufacturer: Veolia Water Treatment Technologies

Product Label Name: HYDREX 6402 Cationic Emulsion Polymers

Place of Origin: Korea

Time of first Delivery: As Per GWA Requirements (days)
After Receipt of Purchase Order

Reorder lead time: As Per GWA Requirements (days)
Upon Receipt of Purchase Order

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GUAM WATERWORKS AUTHORITY

"Better Water. Better Lives."
Gloria B. Nelson Public Services Building
688 Route 15, Mangilao, Guam 96913

PRIORITY

GWA FINANCE & ACCOUNTING OFFICE ADMINISTRATIVE
RECEIVED BY:
SEP 03 2015
BY:

9/9/15
2:42 pm

REVIEW FORM

This **IFB 2015-10 / Wastewater Treatment Chemicals** will be acquired by means of competitive bid process through GWA Procurement Office. Below are the following divisions who concurred and agree to proceed.

Requested by: _____ Print/sign Date: 09/03/2015

Concurred By:

Supply Management Admin: _____ Print/sign Date: 9/3/15

Review by Budget: GREG CRUZ Print/sign Date: 9.14.15

Pending approval of FY 2016 Budget

7003.71802.430

GUAM WATERWORKS AUTHORITY
BUDGET OFFICE
BUDGET OFFICER

Estimated cost: $ FY16 - 1,534,307.00

DATE 9/10/15 TIME _____

FY 2015 Budget - No Balance
FY 2016 Budget - Approval Pending
Proposed Paid for FY16 Only

EXHIBIT B

GUAM WATERWORKS AUTHORITY

Gloria B. Nelson Public Service Building
688 Route 15, Mangilao GU, 96913

NOTICE OF CONDITIONAL AWARD

Date 11/03/2015

Mr. Glen Canovas
Total Chemical Resources Inc.
P.O. Box 20730
Barrigada, Guam 96921
Tel. No: 646-4742
Fax No: 649-0447

Re: Invitation for Bid Number: IFB 2015-10 Wastewater Treatment Chemicals

Hafa Adai,

The Guam Waterworks Authority ("GWA") has considered the bid submitted by Total Chemicals Resource for the above described reference in response to its Advertisement for Bids dated September 24, 2015 and you are hereby notified that the bid cost for Item No. 1: Inorganic Coagulant and Item No. 2: Coagulant Aid (Anionic Polymer) has been accepted by GWA. Please be advised that you must now deliver all other documents required by the bid, including, but not limited to, proof of insurance and the Performance and Payment Bond (which must remain in full force and effect until all performance has ended, which includes all warranty periods).

You are also advised that any obligation incurred by your firm prior to execution of the contract is entirely at your own risk and GWA shall have no obligation to reimburse costs incurred prior to execution of the contract.

Please note this Notice of Award is conditional on obtaining the approval of the Guam Consolidated Commission on Utilities for any award over $250,000 and the approval of the Guam Public Utilities Commission where the total value over the life of the contract could exceed $1M. Also, award is conditional upon providing any documents such as proof of licensure, proof of insurance or other documents required to be submitted to GWA under the Bid or Guam law.

/

You are required to return an acknowledged copy of this Conditional Notice of Award to the Procurement & Supply Administrator.

Sincerely,

Mark Miller.
General Manager (Interim)

ACCEPTANCE OF CONDITIONAL NOTICE OF AWARD

Receipt of the above Notice of Conditional Award for GWA IFB 2015-10 is hereby acknowledged

By: _____ Title: JERRY A. FLORES - C.F.O.
Signature (please print)

Dated this 3rd day of NOVEMBER, 2015.

******* END OF CONDITIONAL NOTICE OF AWARD *******

EXHIBIT C

02:03:20 p.m. 11-03-2015 2 / 3
67164933750 GWA Procurement Supply

GUAM WATERWORKS AUTHORITY

Gloria B. Nelson Public Service Building
688 Route 15, Mangilao GU, 96913

NOTICE OF CONDITIONAL AWARD

Date 11/03/2015

Mr. Jeff Pacsto
JMI-Edison
125 North Marine Corps. Dr.
Tamuning, Guam 96913
Tel No: 646-6400
Fax No: 649-4835

Re: Invitation for Bid Number: IFB 2015-10 Wastewater Treatment Chemicals

Hafa Adai,

The Guam Waterworks Authority ("GWA") has considered the bid submitted by JMI-Edison for the above described reference in response to its Advertisement for Bids dated September 24, 2015 and you are hereby notified that the bid cost for Item No.3 Cationic Polymer has been accepted by GWA. Please be advised that you must now deliver all other documents required by the bid, including, but not limited to, proof of insurance and the Performance and Payment Bond (which must remain in full force and effect until all performance has ended, which includes all warranty periods).

You are also advised that any obligation incurred by your firm prior to execution of the contract is entirely at your own risk and GWA shall have no obligation to reimburse costs incurred prior to execution of the contract.

Please note this Notice of Award is conditional on obtaining the approval of the Guam Consolidated Commission on Utilities for any award over $250,000 and the approval of the Guam Public Utilities Commission where the total value over the life of the contract could exceed $1M. Also, award is conditional upon providing any documents such as proof of licensure, proof of insurance or other documents required to be submitted to GWA under the Bid or Guam law.

02:12:19 p.m. 11-03-2015 3 6716493750

6716493750 GWA Procurement Supply 02:04:06 p.m. 11-03-2015 3/3

Ref: IFB 2015-10 Wastewater Chemicals

You are required to return an acknowledged copy of this Conditional Notice of Award to the Procurement & Supply Administrator.

Sincerely,

Mark Miller
General Manager (Interim)

ACCEPTANCE OF CONDITIONAL NOTICE OF AWARD

Receipt of the above Notice of Conditional Award for GWA IFB.2015-10 is hereby acknowledged

By: _____ Title: Operations Manager
Signature (please print)

Dated this 3rd day of November, 2015.

******** END OF CONDITIONAL NOTICE OF AWARD ********

EXHIBIT D

BID FORM FOR CHEMICALS FOR GWA'S NDWWTP AND HWWTP
(TO BE PLACED IN A SEALED ENVELOPE AND DELIVERED WITH TECHNICAL PROPOSAL)

1. **Inorganic Coagulant,**

Product ACH Powder (ACHIEVE D1012) **Price per pound delivered CIF** $ 1.08 per pound

Manufacturer: GULBRANDSEN Technologies (India) Pvt. Inc.

Product Label Name: ACHIEVE D1012 ACH POWDER

Place of Origin: Gujarat, India

Time of first Delivery: 90 days (days)
After Receipt of Purchase Order

Reorder lead time: 30 days (days)
Upon Receipt of Purchase Order

2. **Coagulant Aid** (e. g. anionic polymer) **Price per pound delivered CIF** $ 1.40 per pound

Manufacturer: NALCO An Ecolab Company

Product Label Name: NALCLEAR 7767 Anionic Flocculant

Place of Origin: Naperville, Illinois U.S.A>

Time of first Delivery: 45 days (days)
After Receipt of Purchase Order

Reorder lead time: 30 days (days)
Upon Receipt of Purchase Order

3. **Cationic Polymer** **Price per pound delivered CIF** $ 1.75 per pound

Manufacturer: NALCO An Ecolab Company

Product Label Name: OPTIMER 7194 Cationic Flocculant

Place of Origin: Naperville, Illinois U.S.A.

Time of first Delivery: 45 days (days)
After Receipt of Purchase Order

Reorder lead time: 30 days (days)
Upon Receipt of Purchase Order

15

10/14/15
Jerry A. Flores Date
Chief Financial Officer
Total Chemical Resources, Inc.

EXHIBIT E

BID FORM FOR CHEMICALS FOR GWA'S NDWWTP AND HWWTP
(TO BE PLACED IN A SEALED ENVELOPE AND DELIVERED WITH TECHNICAL PROPOSAL)

1. Inorganic Coagulant,

Product Aluminum Chlorohydrate **Price per pound delivered CIF** $1.42 per pound

Manufacturer: Summit Research Labs

Product Label Name: Sumalchlor 200

Place of Origin: U.S.A.

Time of first Delivery: As Per GWA Requirements (days)
After Receipt of Purchase Order

Reorder lead time: As Per GWA Requirements (days)
Upon Receipt of Purchase Order

2. Coagulant Aid (e. g. anionic polymer) Price per pound delivered CIF $1.29 per pound

Manufacturer: Veolia Water Treatment Technologies

Product Label Name: HYDREX 6104 Anionic Polymers

Place of Origin: Korea

Time of first Delivery: As Per GWA Requirements (days)
After Receipt of Purchase Order

Reorder lead time: As Per GWA Requirements (days)
Upon Receipt of Purchase Order

3. Cationic Polymer Price per pound delivered CIF $1.45 per pound

Manufacturer: Veolia Water Treatment Technologies

Product Label Name: HYDREX 6402 Cationic Emulsion Polymers

Place of Origin: Korea

Time of first Delivery: As Per GWA Requirements (days)
After Receipt of Purchase Order

Reorder lead time: As Per GWA Requirements (days)
Upon Receipt of Purchase Order

15

GWA Utility Services Division
Monthly Status Report
Month ending March 02, 2018

UTILITY SERVICES DIVISION UNITS & ACTIVITIES:	WEEKLY AVERAGE JAN 2018	JAN 2018 MONTHLY TOTAL	WEEK ENDING: 2/2/2018	WEEK ENDING: 2/9/2018	WEEK ENDING: 2/16/2018	WEEK ENDING: 2/23/2018	WEEK ENDING: 3/2/2018	WEEKLY AVERAGE FEB 2018	FEB 2018 MONTHLY TOTAL
Collections Unit									
I. Number of accounts cut for nonpayment:	44	175	24	84	78	75	52	65	261
II. Number of accounts restored for nonpayment:	32	126	29	66	51	58	54	51	204
III. Number of No water reports responded to:	2	6	0	5	0	4	2	2	9
IV. Number of Secure/Unsecure valve reports responded to:	2	8	5	1	1	1	2	2	8
V. Number of Verify reads responded to:	2	7	0	1	3	0	0	1	4
VI. Number of new pay plans negotiated for **active** accounts :	138	552	163	206	207	192	212	192	768
VII. Number of active pay plans negotiated and ongoing :	1828		1814	1930	2068	2184	2310	1999	
VIII. Number of **inactive** accounts with a payment arrangement:	4		0	0	0	14	14	6	
IX. Number of broken payment plans:	76	303	91	90	69	76	86	82	326
Customer Service Unit									
I. Service Delivery Points:									
a. GBN Public Service Building – Fadian									
i. Total Customers Assisted :	240	961	288	258	241	240	205	246	1232
ii. Total Abandoned Requests :	18	71	25	20	10	11	12	16	78
ii. Average Wait Time:	11 minutes		13 minutes	10 minutes	8 minutes	7 minutes	6 minutes	9 minutes	
iii. Average Service Time:	12 minutes		16 minutes	14 minutes	11 minutes	13 minutes	10 minutes	13 minutes	
iv. Breakdown by request type:									
1. Apply for water	46	182	95	57	46	41	44	57	283
2. Restore water cut for non p	8	31	4	12	15	10	7	10	48
3. Terminate Water	12	46	20	13	18	15	10	15	76
4. Copy of Bill	34	136	32	26	36	46	27	33	167
5. Billing Dispute	63	251	78	46	54	58	59	59	295
6. Billing Dispute follow up	6	23	2	2	1	3	6	3	14
7. General Questions & Othe	34	135	43	53	39	36	25	39	196
8. Report a water leak	3	11	1	5	1	4	2	3	13
9. Report water theft	0	0	0	1	0	0	0	0	1
10. Payment Arrangement	38	150	21	43	15	28	25	26	132

GWA Utility Services Division
Monthly Status Report
Month ending March 02, 2018

UTILITY SERVICES DIVISION UNITS & ACTIVITIES:	WEEKLY AVERAGE JAN 2018	JAN 2018 MONTHLY TOTAL	WEEK ENDING: 2/2/2018	WEEK ENDING: 2/9/2018	WEEK ENDING: 2/16/2018	WEEK ENDING: 2/23/2018	WEEK ENDING: 3/2/2018	WEEKLY AVERAGE FEB 2018	FEB 2018 MONTHLY TOTAL
b. Julale Satellite Office – Hagatna									
i. Total Customers Assisted :	234	937	264	255	270	255	290	267	1334
ii. Total Abandoned Requests :	16	64	25	16	22	16	16	19	95
ii. Average Wait Time:	8 minutes		7 minutes	7 minutes	7 minutes	6 minutes	6 minutes	7 minutes	
iii. Average Service Time:	10 minutes		9 minutes	9 minutes	9 minutes	9 minutes	9 minutes	9 minutes	
iv. Breakdown by request type:									
1. Apply for water	43	170	43	46	37	44	66	47	236
2. Restore water cut for non p	5	18	5	12	13	8	10	10	48
3. Terminate Water	20	78	27	13	23	21	14	20	98
4. Copy of Bill	56	222	57	59	61	53	60	58	290
5. Billing Dispute	53	213	73	69	63	69	71	69	345
6. Billing Dispute follow up	3	12	3	0	3	0	2	2	8
7. General Questions & Othe	30	119	30	24	38	42	43	35	177
8. Report a water leak	2	8	2	2	0	2	0	1	6
9. Report water theft	0	0	0	0	0	0	0	0	0
10. Payment Arrangement	31	122	27	34	37	20	30	30	148
c. Upper Tumon Satellite Office – Upper Tumon									
i. Total Customers Assisted :	307	1226	322	321	315	320	349	325	1627
ii. Total Abandoned Requests :	9	34	15	15	11	6	11	12	58
ii. Average Wait Time:	6 minutes		8 minutes	6 minutes	5 minutes	6 minutes	4 minutes	6 minutes	
iii. Average Service Time:	11 minutes		14 minutes	13 minutes	13 minutes	14 minutes	14 minutes	14 minutes	
iv. Breakdown by request type:									
1. Apply for water	64	255	81	70	73	80	75	76	379
2. Restore water cut for non p	12	46	12	14	15	13	8	12	62
3. Terminate Water	23	93	36	24	18	24	27	26	129
4. Copy of Bill	63	253	36	51	65	41	60	51	253
5. Billing Dispute	70	280	77	76	69	84	83	78	389
6. Billing Dispute follow up	4	15	5	6	2	4	8	5	25
7. General Questions & Othe	30	118	33	30	34	32	44	35	173
8. Report a water leak	4	14	3	2	4	3	4	3	16
9. Report water theft	0	0	0	0	0	0	0	0	0
10. Payment Arrangement	38	152	38	51	38	40	42	42	209

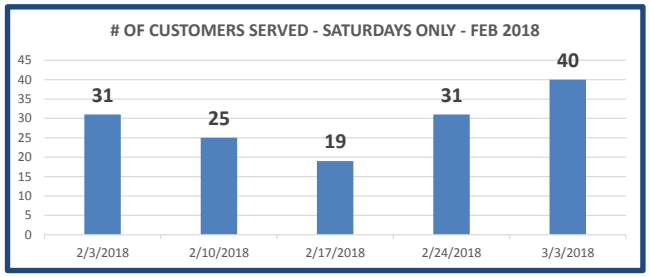
GWA Utility Services Division
Monthly Status Report
Month ending March 02, 2018

UTILITY SERVICES DIVISION UNITS & ACTIVITIES:	WEEKLY AVERAGE JAN 2018	JAN 2018 MONTHLY TOTAL	WEEK ENDING: 2/2/2018	WEEK ENDING: 2/9/2018	WEEK ENDING: 2/16/2018	WEEK ENDING: 2/23/2018	WEEK ENDING: 3/2/2018	WEEKLY AVERAGE FEB 2018	FEB 2018 MONTHLY TOTAL
II. Customer Call Center									
a. Calls Recieved :	1248	4990	1398	1271	1389	1209	1236	1301	6503
b. Calls Immediately Answered :	759	3036	717	705	759	764	788	747	3733
c. Calls Abandoned	45	181	49	48	49	43	47	47	236
d. Calls Handled by Voice mail:	467	1866	631	518	579	399	398	505	2525
e. Average duration of calls answered:	4 minutes		6 minutes	6 minutes	6 minutes	6 minutes	5 minutes	6 minutes	
III. Customer Emails:									
a. Emails Recieved :									
i. customers@guamwaterworks.org	45	178	41	40	46	40	41	42	208
Breakdown by request type (email):									
1. Apply for water	2	9	4	0	0	1	3	2	8
2. Terminate Water	1	5	2	1	1	1	2	1	7
3. Copy of Bill	3	10	1	2	5	0	1	2	9
4. Billing Dispute & follow up	8	33	5	12	8	11	6	8	42
5. General Questions & Other	18	72	18	16	19	19	16	18	88
6. Report a water leak	4	14	3	3	1	6	3	3	16
7. Report water theft	0	0	0	0	0	0	1	0	1
8. Online services inquiry	9	35	8	6	12	2	9	7	37
ii. realtors@guamwaterworks.org	0	0	0	0	0	0	0	0	0
b. Emails Replied (both):	30	118	29	22	51	35	21	32	158

		2/3/2018	2/10/2018	2/17/2018	2/24/2018	3/3/2018	AVERAGE
IV. Saturday Services: 9AM TO 1PM ONLY	31	31	25	19	31	40	29
a. VISITS: Breakdown by request type:							
1. Apply for water	4	8	5	4	6	7	6
2. Restore water cut for non payment	1	2	0	0	0	1	1
3. Terminate Water	2	1	0	1	0	0	0
4. Copy of Bill	9	2	8	0	4	14	6
5. Billing Dispute	6	8	5	7	6	7	7
6. Billing Dispute follow up	0	1	0	0	0	0	0
7. General Questions & Other	3	4	4	2	4	5	4
8. Report a water leak	0	0	1	0	0	0	0
9. Report water theft	0	0	0	0	0	0	0
10. Payment Arrangement	5	5	2	5	11	6	6

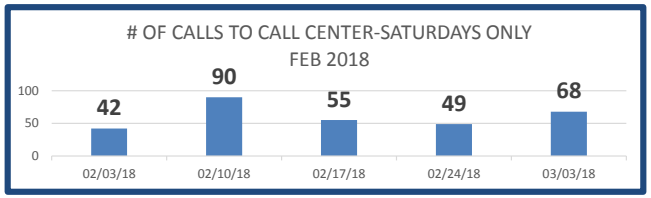
GWA Utility Services Division
Monthly Status Report
Month ending March 02, 2018

UTILITY SERVICES DIVISION UNITS & ACTIVITIES:	WEEKLY AVERAGE JAN 2018	JAN 2018 MONTHLY TOTAL	WEEK ENDING: 2/2/2018	WEEK ENDING: 2/9/2018	WEEK ENDING: 2/16/2018	WEEK ENDING: 2/23/2018	WEEK ENDING: 3/2/2018	WEEKLY AVERAGE FEB 2018	FEB 2018 MONTHLY TOTAL



b. CALLS TO CALL CENTER (Saturday services only):

02/03/18	02/10/18	02/17/18	02/24/18	03/03/18
42	90	55	49	68



Dispute Resolution & Document Control

			02/02/18	02/09/18	02/16/18	02/23/18	03/02/18		
I. Dispute Resolution:									
a. Number of disputed accounts resolved:	9	34	5	6	8	7	7	7	33
b. Number of disputed accounts under review:	179	716	179	179	179	179	179	179	895
II. Document Control:									
a. Number of field activities posted :	386	1542	369	364	426	426	433	404	2018
b. Number of field activities pending:	501	2003	675	668	574	609	616	628	3142

Disconnect/Reconnect Unit

I. Number of field activities received:	242	966	350	298	264	214	345	294	1471
II. Number of field activities completed:	256	1022	358	310	264	243	336	302	1511
III.Number of field activities pending field action:	3	10	4	3	2	0	3	2	12

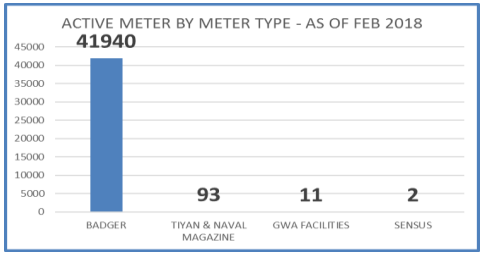
GWA Utility Services Division
Monthly Status Report
Month ending March 02, 2018

UTILITY SERVICES DIVISION UNITS & ACTIVITIES:	WEEKLY AVERAGE JAN 2018	JAN 2018 MONTHLY TOTAL	WEEK ENDING: 2/2/2018	WEEK ENDING: 2/9/2018	WEEK ENDING: 2/16/2018	WEEK ENDING: 2/23/2018	WEEK ENDING: 3/2/2018	WEEKLY AVERAGE FEB 2018	FEB 2018 MONTHLY TOTAL
Meter Reading Unit									
I. Number of meters read:			02/02/18	02/09/18	02/16/18	02/23/18	03/02/18		
a. Electronically Read Meters:	9488	37950	8471	8434	11739	11569	10230	10089	50443
b. Manually Read Meters:	31	125	45	35	37	39	58	43	214
II. Unread meters (Meters scheduled to be read but not read):	58	232	58	21	50	46	77	50	252
III. Number of data logs received:	30	121	27	33	46	44	38	38	188
IV. Number of data logs retrieved:	35	141	41	18	32	42	31	33	164
V. Number of data logs pending field action:	10	40	0	15	29	24	11	16	79
VI. Communication Errors/Reprogramming requests received (from CSU):	2	6	2	2	5	2	1	2	12
VII. Number of estimated readings (for the week):	44	177	43	18	40	18	66	37	185
a. Reasons for Estimations:									
i. Cant locate meter:	1	3	0	2	1	1	4	2	8
ii. Temporary Obstruction	1	5	0	1	1	0	1	1	3
iii. Vicious Dog	2	7	1	0	1	1	0	1	3
iv. Flooded meter	1	4	0	1	1	2	2	1	6
v. Corrective action requested (database corrections needed)	5	21	0	5	6	1	1	3	13
vi. Possible changed out meter:	12	47	51	6	10	28	11	21	106
vii. Communication/Programming error (code 92's):	4	15	9	7	7	6	11	8	40
viii. Other:	4	17	3	8	3	10	11	7	35
ix. Leaks detected on customer's private line:	1171	4684	1046	1072	1395	1343	1246	1220	6102
x. Reverse Flow Detected	31	122	29	86	26	44	50	47	235
xi. No Usages Detected	281	1124	314	216	374	354	367	325	1625
xii. Tamper Code	12	49	13	14	17	14	13	14	71
VII. Electronic Read Percentage: (for the week):	99%		98%	98%	98%	98%	98%	98%	
Revenue Protection Unit									
I. Number of Inactive Still Consuming Reports rec'd & investigated:	1	5	2	1	0	1	1	1	5
II.Number of Illegal Connection reports rec'd & investigated:	2	6	1	0	1	0	1	1	3

III. Meter Replacement Project – Post 2010 Metron Farnier & Sensus Status Report (as of Feb 28 2018):

METER TYPE	COUNT
SENSUS	2
METRON FARNIER	0
	2

a. Account & Meter Type Count :



GUAM WATERWORKS AUTHORITY

Engineering Monthly Report
March 2018

Prepared By:
Thomas Cruz, P.E. Chief Engineer

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A. Summary Table of 2010, 2013 and 2016 Bond

Potable Water

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
PW 05-01	Ground Water Disinfection	$ 500,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 05-03	Santa Rita Springs Booster Pump Rehab Phase II	$ -	N/A	N/A	$ 100,000.00	100.00%	0.00%	$ -	N/A	N/A
PW-05-05	"A Series Well Transmission Line	$ 518,143.96	100.00%	0.00%	$ 400,000.00	100.00%	0.00%	$ -	N/A	N/A
PW 05-06	Water Booster Pump Station	$ 500,000.00	100.00%	0.00%	$ 1,861,000.00	99.49%	0.51%	$ 4,139,000.00	0.00%	100.00%
PW 05-07	Meter Replacement Program	$ 10,300,000.00	99.84%	0.16%	$ 999,000.00	99.75%	0.25%	$ 4,501,000.00	3.33%	96.67%
PW 05-08	Barrigada Tank Repair/Replacement	$ 5,450,000.00	99.92%	0.08%	$ 4,987,000.00	99.32%	0.68%	$ 1,013,000.00	0.00%	100.00%
PW 05-09	Leak Detection	$ 200,000.00	100.06%	-0.06%	$ 20,000.00	96.25%	3.75%	$ 1,180,000.00	0.00%	100.00%
PW 05-10	Potable Water System Planning	$ 200,000.00	100.00%	0.00%	$ 624,000.00	100.00%	0.00%	$ 2,276,000.00	20.93%	79.07%
PW 05-11	Implement Ground Water Rule	$ 1,700,000.00	100.00%	0.00%	$ 1,000,000.00	100.00%	0.00%	$ -	N/A	N/A
PW 05-12	Brigade II (Ugum Lift) BPS Upgrade	$ 1,700,000.00	18.03%	81.97%	$ -	N/A	N/A	$ -	N/A	N/A
PW 05-13	Deep Well Rehabilitation	$ 548,000.00	100.00%	0.00%	$ 200,000.00	100.00%	0.00%	$ 250,000.00	0.00%	100.00%
PW 05-14	New Deep Wells at Dow n Hard	$ 638,252.85	76.11%	23.89%	$ 810,000.00	0.00%	100.00%	$ 1,190,000.00	0.00%	100.00%
PW 05-15	Rehabilitation of Asan Springs	$ 900,000.00	37.87%	62.13%	$ -	N/A	N/A	$ -	N/A	N/A
PW 05-16	Master Meters	$ 1,600,000.00	99.44%	0.56%	$ 784,000.00	99.88%	0.12%	$ 3,616,000.00	4.19%	95.81%
PW 09-01	Ugum Water Treatment Plant Intake	$ 700,000.00	99.47%	0.53%	$ 982,000.00	100.00%	0.00%	$ 18,000.00	0.00%	100.00%
PW 09-02	Water Wells	$ -	N/A	N/A	$ 4,200,000.00	46.77%	53.23%	$ 2,500,000.00	13.60%	86.40%
PW 09-03	Water Distribution System	$ 3,174,748.00	100.00%	0.00%	$ 11,151,000.00	87.97%	4.85%	$ 49,000.00	0.00%	100.00%
PW 09-04	Pressure Zone Realignment	$ -	N/A	N/A	$ 431,000.00	99.95%	0.05%	$ 1,141,000.00	58.58%	37.04%
PW 09-06	Central Water Distribution System 2005	$ 900,000.00	91.67%	8.33%	$ -	N/A	N/A	$ -	N/A	N/A
PW 09-08	Mechanical/Electrical Equipment	$ 1,200,000.00	100.00%	0.00%	$ 430,000.00	99.60%	0.40%	$ 100,000.00	0.00%	100.00%
PW 09-09	Water Reservoir Internal/External	$ 2,000,000.00	73.20%	24.53%	$ -	N/A	N/A	$ -	N/A	N/A
PW 09-10	Water Reservoir Internal/External	$ -	N/A	N/A	$ -	N/A	N/A	$ 800,000.00	0.00%	100.00%
PW 09-11	Water System Reservoirs 2005 Improvements	$ 1,050,000.00	100.00%	0.00%	$ 13,878,000.00	99.99%	0.01%	$ 28,350,000.00	36.77%	54.41%
PW 11-01	Distribution System Upgrades	$ 474,159.85	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 11-02	Ugum Water Treatment Plant Reservoir	$ -	N/A	N/A	$ 90,000.00	0.00%	100.00%	$ -	N/A	N/A
PW 12-01	Water Audit Program & Water Loss Control Plan	$ 100,000.00	78.46%	21.54%	$ -	N/A	N/A	$ 1,000,000.00	0.00%	100.00%
PW 12-02	Production Plan / Reduce Navy Purchases	$ 100,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 12-03	Hydraulic Assessment of Tanks	$ 500,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 12-04	Agana Heights & Chaot Tanks	$ 4,700,000.00	100.00%	0.00%	$ 3,280,000.00	40.52%	59.48%	$ 1,220,000.00	40.98%	59.02%
PW 12-05	Tank Major Repair Yigo #1, Mangilao #2, Astumbo#1	$ 1,900,000.00	95.16%	4.84%	$ 11,605,000.00	99.99%	0.01%	$ 1,895,000.00	96.15%	3.85%
PW 12-06	Tank Replacement Piti & Hyundai	$ -	N/A	N/A	$ -	N/A	N/A	$ 7,409,830.00	98.52%	1.48%
PW 12-07	Assessment of Malojloj Elevated & Yigo Elevated	$ 200,000.00	100.00%	0.00%	$ 485,117.00	100.00%	0.00%	$ -	N/A	N/A
PW 12-08	Public Water System Asset Inventory/ Condition Assessment	$ 100,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 12-09	Public Water System GIS & Mapping	$ 50,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 14-01	Fire Hydrant Replacement Program	$ -	N/A	N/A	$ -	N/A	N/A	$ 2,000,000.00	0.00%	100.00%
		$ 41,903,304.66			$ 58,317,117.00			$ 64,647,830.00		

Wastewater

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
WW 05-04	Wastew ater System Planning	$ 1,500,000.00	100.00%	0.00%	$ 651,000.00	100.00%	0.00%	$ 349,000.00	89.68%	9.15%
WW 05-05	Wastew ater Vehicles	$ 235,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 05-07	NDWWTP - Chlorine Tanks	$ 250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 09-01	Lift station upgrades	$ -	N/A	N/A	$ 946,000.00	84.08%	0.06%	$ 2,404,000.00	12.21%	66.99%
WW 09-06	Wastew ater Collection System Repl/ Rehabilitation	$ 1,105,000.00	99.93%	0.07%	$ 780,000.00	97.55%	2.45%	$ 2,920,000.00	0.00%	92.30%
WW 09-08	Facilities Plan/Design for Baza Gardens WWTP	$ 1,250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 09-10	Facilities Plan/Design for Agat-Santa Rita WWTP	$ 899,630.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 11-03	Baza Gardens STP Replacement	$ 1,301,947.00	24.27%	11.57%	$ 3,114,883.00	99.97%	0.03%	$ 29,400,170.00	99.31%	0.69%
WW 11-04	Facilities Plan/Design for Umatac-Merizo WWTP	$ 900,000.00	100.00%	0.00%	$ 473,000.00	100.00%	0.00%	$ 527,000.00	47.44%	52.56%
WW 11-08	Agat/Santa Rita STP Replacement	$ 2,218,000.00	99.91%	0.09%	$ 67,200,000.00	99.43%	0.57%	$ 3,000,000.00	48.72%	51.28%
WW 12-01	Northern District WWTP Primary Treatment Upgrade	$ 11,750,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-02	Biosolids Management Plan	$ 200,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-03	Agana WWTP Interim Measures	$ 11,500,000.00	100.00%	0.00%	$ 673,000.00	100.00%	0.00%	$ 827,000.00	0.00%	90.22%
WW 12-04	I&I SSES Southern	$ 800,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-05	I&I SSES Central	$ 850,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-06	I&I SSES Northern	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 12 -07	Umatac Merizo Replacement	$ 250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ 20,800,000.00	99.26%	0.74%
WW 12-08	Wastew ater System GIS & Mapping	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-09	Wastew ater Facility Back Up Pow er	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-10	Wastew ater System Asset Inventory	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 17-01	Wastew ater Sew er System Expansion									
WW 17-02	Northern District WWTP Secondary Treatment Upgrade	$ 1,000,000.00	0.00%	100.00%						
		$ 36,009,577.00			$ 73,837,883.00			$ 60,227,170.00		

Electrical Engineering Support

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
EE 05-02	SCADA Pilot Project	$ 61,950.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
EE 09-01	Wastewater Pumping Station Electrical Upgrade	$ -	N/A	N/A	$ 620,000.00	16.13%	83.87%	$ 100,000.00	0.00%	100.00%
EE 09-02	Electrical Upgrade - Water Wells	$ 354,226.63	100.00%	0.00%	$ 1,500,000.00	100.00%	0.00%	$ 650,000.00	76.92%	23.08%
EE 09-03	Electrical Upgrade - Water Booster	$ -	N/A	N/A	$ 2,000.00	0.00%	100.00%	$ 323,000.00	0.00%	100.00%
EE 09-04	Electrical Upgrade - Water Booster	$ -	N/A	N/A	$ 200,000.00	0.49%	99.51%	$ -	N/A	N/A
EE 09-05	Electrical Upgrade - Other Water	$ -	N/A	N/A	$ 150,000.00	40.47%	59.53%	$ -	N/A	N/A
EE 09-06	SCADA Improvements - Phase I	$ 250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
EE 09-07	SCADA Improvements - Phase 2	$ 1,056,986.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
EE 09-08	SCADA Improvements - Phase 3	$ 24,955.71	100.00%	0.00%	$ 923,000.00	99.93%	0.07%	$ 1,177,000.00	61.46%	38.54%
EE 09-09	SCADA Improvements - Phase 4	$ -	N/A	N/A	$ -	N/A	N/A	$ 6,500,000.00	0.00%	93.08%
		$ 1,748,118.34			$ 3,395,000.00			$ 8,750,000.00		

Miscellaneous Engineering Support

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
MC 05-01	Laboratory Modernization	$ -	N/A	N/A	$ 1,173,000.00	100.00%	0.00%	$ 1,127,000.00	100.00%	0.00%
MC 05-02	Land Survey	$ 500,000.00	99.94%	0.06%	$ 2,000.00	0.00%	100.00%	$ 1,998,000.00	63.09%	36.91%
MC 09-01	General Plant Improvements	$ 7,241,000.00	99.58%	0.42%	$ 2,600,000.00	84.10%	15.90%	$ 2,769,460.00	53.83%	37.19%
MC 15-01	Information Technology Intergration Improvements							$ 500,000.00	40.70%	59.30%
		$ 7,741,000.00			$ 3,775,000.00			$ 6,394,460.00		

	2010 Bond Allotment	2013 Bond Allotment	2016 Bond Allotment
CIP Water	$ 41,903,304.66	$ 58,317,117.00	$ 64,647,830.00
CIP Wastewater	$ 36,009,577.00	$ 73,837,883.00	$ 60,227,170.00
CIP Electrical	$ 1,748,118.34	$ 3,395,000.00	$ 8,750,000.00
CIP Miscellaneous	$ 7,741,000.00	$ 3,775,000.00	$ 6,394,460.00
	$ 87,402,000.00	$ 139,325,000.00	$ 140,019,460.00

Bond Fund	Construction Fund Amount ($M)	Estimated # of months fund available for use		Total Funds encumbered to date ($M)	% of fund used	Rate of Spending: ($M) per year
2005	$82.930	82	*	$82.930	100.00%	12.14
2010	$87.402	86	**	$83.354	95.37%	11.63
2013	$139.325	49	**	$131.064	94.07%	32.10
2015	$140.019	19		$79.548	56.81%	50.24
	* - End date November 2013 via CCU Resolution 06-FY2014					
	** - Includes month of February 2018					

B. Projects Procurement

Percentage Key:

100%	Approved by GM
99%	Signature required from either Accounting/Legal/GM
98%	Processing engineering service or construction contract (with legal)
95%	Request for CCU approval (GM/engineering)
90%	A/E fee negotiation or contractor bid evaluation (engineering)
80%	Selected A/E or Conducted bid opening (engineering)
70%	Advertised RFP/IFB (engineering)
60%	RFP/IFB Package under legal review
50%	RFP/IFB Package completed (engineering)
Less than 50%	Project Scope of work development in progress

- Red text anywhere indicates a change from the last report.

BOX KEY FOR PROCUREMENT:

(Type of Procurement) (Relevant CIP NO. or Funding Source)	**(Project Title)**	
(Percentage complete for procurement)	**Activities/Notes:** (see percentage key above)	**Consultant** (listed when selected)
Project Description	Summary of project description	

BID PACKAGE PW 09-02	**New Well Construction**	
<50% Complete	**Activities/Notes:** GWA engineering continuing discussion with Dept. of Agriculture and lessee on options of acquisition of property for well site at AG-12. Internal GWA discussions underway for survey and appraisal services as well as continuing services form Designer.	
Project Description:	The project is to construct three new production wells for GWA as well as installation of a water main to connect the new production wells to the Ysengsong Reservoirs.	

RFP PW 09-02	**New Well Construction (Construction Management)**	
<50% Complete	**Activities/Notes:** SOW being developed	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of up to three (3) new production wells for GWA. GWA plans to increase source water production to improve system redundancy that allows for operating the water production wells more effectively. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

BID PACKAGE PW 14-01	**Fire Hydrant Replacement Phase I**	
<50% Complete	**Activities/Notes:** Bid package being prepared.	
Project Description:	The work performed under this project consist of replacing all know dry barrel fire hydrants down to the lateral as well as any defective wet barrel fire hydrant. Where necessary the gate valve for the fire hydrant may also be replaced.	

RFP WW 09-01	**Yigo SPS Flood Protection and Rehabilitation Design**	
90% Complete	**Activities/Notes:** GWA in negotiation with AECOM on SOW and fee proposal.	
Project Description:	The work performed under this project procurement shall consist of a design services to implement storm water mitigation measures to protect the facility during extreme weather as well as rehabilitate the facility to provide better redundancy and operate efficiently.	

RFP PW 09-11	**Northern and Southern Tank Phase I (Santa Rosa, Sinifa, Santa Rita) Construction Management**	
99% Complete	**Activities/Notes:** Contract with finance for fund certification then will be sent to GM for execution.	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of three water reservoirs; 1MG Santa Rosa, 1MG Sinifa and 1MG Santa Rita. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

BID PACKAGE PW 09-03, PW 09-04 AND PW 09-11	**Northern Tank Phase I (Santa Rosa) Construction**	
<50% Complete	**Activities/Notes:** GWA will issue only a bid for Santa Rosa Tank and off-site improvements first.	
Project Description:	The work performed under this project procurement shall consist of Construction of a 1MG Santa Rosa reservoir and booster pump station. Some piping work off site from the reservoir is also required to ensure the reservoirs function optimally.	

BID PACKAGE EE 09-08, EE 09-09	**SCADA Phase A1 Construction**	
70% Complete	**Activities/Notes:** IFB advertised 1/30/18, Pre-bid conference completed. Bid opening 3/28/18.	
Project Description:	The work performed under this project procurement shall consist of	

	Construction of SCADA ready instrumentation at several water and waste water facilities throughout he island.

RFP EE 09-08, EE 09-09	**SCADA Phase A1 Construction Management**	
75% Complete	**Activities/Notes:** Proposals received and being reviewed by evaluation team.	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of all SCADA ready instrumentation at the various facilities through Guam. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

RFP PW 09-04, PW 09-11	**Design Services for the Project Pressure Zone Realignment and Tank Repair/Replacement**	
80% Complete	**Activities/Notes:** Evaluation team completed review of proposal and recommendation letter submitted to GM for approval.	
Project Description:	The work performed under this project procurement shall consist of design services for the remaining GWA reservoirs that required major repairs or replacement. The design will also address the required pressure zone realignment throughout the island so as to improve the distribution system functionality. .	

BOX KEY FOR PROJECT:

(Type of Project) (Relevant CIP NO.)	**(Project Title) (Contractor or consultant)**	**Start Date:** (month and year)
(Percentage complete for project)	**Activities/Notes:** (brief description of activity)	**Completion Date:** (month and year)
(Court Order Paragraph No.)	(Project type)	
Project Description	Project Description Narrative	

C. CIP Water Section

INSPECTION CIP PW 05-02	**Inspection & Maintenance Repairs to GWA Island-Wide Steel Water Tank Reservoirs Phase 2 (DCA)**	**Start Date:** April 2010
80% Complete	**Activities/Notes:** Still waiting for Quotes for tank bypass/take down for Umatac #1 and Pigua. Working on plan for Kaiser, Windward and Agat #1 take down. WBP2 Controls working property now which allows Agat Umatac Tank to be taken down.	**Completion Date:** Anticipate December 2021
CO 38C	Engineering inspection services	
Project Description:	The Court Order requires GWA to inspect all active and in some cases inactive water reservoirs. The inspection results will allow GWA to determine if a reservoir requires repair or replacement.	

DESIGN CIP PW 05-12	**Brigade II BPS Upgrade (EM Chen)**	**Start Date:** April 2012
100% complete (Basis of Design) 40% (Design)	**Activities/Notes:** Designer working on 60% design submittal.	**Completion Date:** Due to property acquisition issues GWA anticipate May 2018
N/A	Engineering design services	
Project Description:	The design project is intended to assess system water supply feed from the north as well as Ugum WTP and the water demands downstream from the Brigade BPS so as to reconfigure the piping into the BPS and resize the pumps to me system head requirements.	

DESIGN CIP PW 12-05	**Yigo and Astumbo 2MG Tank Design Project (Lyons)**	**Start Date:** September 2013
99% complete	**Activities/Notes:** Design firm to provide RFI support during the construction.	**Completion Date:** January 2016
CO 9 (b)(4)	Engineering design services	
Project Description:	Develop the construction documents for two (2) 2.0 million-gallon (MG) nominal capacity concrete reservoirs in the Yigo service zones and one (1) 2.0 MG reservoir in the Astumbo service area. The design services will consist of preparation of plans, specifications, and estimates	

	(PS&E), including Basis of Design, design calculations, construction schedule, topographical survey, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic resources, hazardous materials survey, construction documents, design drawings in Auto CAD (latest version), and relevant permits. Other services will include construction bid support service, meetings, and response to request for interpretation/information during construction. The consultant is required to incorporate and modify existing GWA concrete reservoir specifications to meet the project objective.

DESIGN PW 09-11	**Northern and Southern Guam Reservoir Design** **(TG Engineers)**	**Start Date:** May 2015
60% Complete	**Activities/Notes:** Santa Rosa – 100% design in hand. Santa Rita – 100% design in hand. Inarajan – Land procurement second site related to new BPS's still on-going. Sinifa – 100% design in hand. Ugum – GWA still in discussion with re-evaluation and discussion with property owner of alternative property on-going.	**Completion Date:** Update: Due to property acquisitions issues for Piti and Tumon #1, design completion 6 months after property issue resolved.
CO 29 (b)(4)	Engineering design services	
Project Description:	The design services will consist of preparation of plans, specifications, and estimates (PS&E), which includes Basis of Design, design calculations, hydraulic modeling (EPANET), computational fluid dynamic modeling (CFD), construction schedule, topographical survey, property research, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic resources, hazardous materials survey, construction documents, design drawings in Auto CAD, relevant permit, construction bid support service, and response to request for interpretation/information during construction. The tank locations are Ugum, Santa Rita, Santa Rosa, Inarajan and Sinifa.	

DESIGN PW 12-04	**Central Guam Reservoirs Design** **(GHD Inc.)**	**Start Date:** May 2015
65% Complete	**Activities/Notes:** Chaot #2 – Chaot off-site work part of base bid. Contract with finance for fund cert. Chaot Tank work expected to be Change Order in once funding available. Tumon #2 – Tumon tank part of base bid. Contract with finance for fund cert. Hyundai – Hyundai tank part of base bid. Contract with Finance for fund cert. Piti – GWA still evaluating alternative solutions to storage needs in Piti area. Manenggon – Geotech work complete. 60% design near complete. Tumon #1 – GWA working on land issues.	**Completion Date:** Update: Due to property acquisitions issues for Piti and Tumon #1, design completion 6 months after property issue resolved.
CO 29 (b)(4)	Engineering design services	
Project Description:	The design services will consist of preparation of plans, specifications, and estimates (PS&E), which includes Basis of Design, design	

	calculations, hydraulic modeling (EPANET), computational fluid dynamic modeling (CFD), construction schedule, topographical survey, property research, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic resources, hazardous materials survey, construction documents, design drawings in Auto CAD, relevant permit, construction bid support service, and response to request for interpretation/information during construction The tank locations are Hyundai, Pulantat, Chaot #2, Tumon #2, Piti and Tumon #1.

CONSTRUCTION PW 09-03	**Line Replacement Phase IV (Giant Construction)**	**Start Date:** 02/14/16
80% Complete	**Activities/Notes:** Contractor completing work in Santa Rita (Santa Rosa Subd.). Continuing pipe installation at Asumption, Piti. Due to ROW/easement issue along Famha Rd, portion of installation work to be defer.	**Completion Date:** 12/30/18 per Change Order.
	Construction Services	
Project Description:	The project is intended for a contractor to replace existing water lines that have been found by operations to be leaking and/or are causing service delivery to less than what GWA is required to provide. The project will replace water mains and ten known locations throughout the island and there is a component within the bid where line replacement work for unknown locations is accounted for.	

DESIGN PW 05-15	**Asan Spring Rehabilitation Design (HDR)**	**Start Date:** August 24, 2016
40% Complete	**Activities/Notes:** Designer working on 60% design submittal.	**Completion Date:** Due to delays from the Park Services related to property access the anticipated completion of the design is May 2018.
	Engineering design services	
Project Description:	- Perform site visits and condition assessment for site conditions to determine demolition and rehabilitation requirement, process equipment condition, structural condition, and electrical system. Site condition assessment shall include all disciplines to execute the project. - Review and validate the current property boundary information to confirm the available space for the project development. - Perform an environmental impact study and prepare all required permits as needed. - Perform an archeological and historical resources study to identify potential impact to the project, prepare all required permits as needed. - Coordinate with Guam Historic Resources Division State Historic Preservation Office (SHPO) on historical resources study. Prepare all necessary reports and documents as required by SHPO. - Coordinate with Guam Department of Agriculture, Division of Aquatic and Wildlife Resources (DAWR) on vegetation clearance. Prepare all	

	necessary reports and documents required by DAWR. - Identify the existing and projected service area, period of design. - Identify and recommend conceptual water treatment system. - Perform a Class 4 engineering cost estimate according to the American Association of Cost Engineers (AACE) International Cost Estimate Classification System for construction fee. Cost must include all disciplines, permit, construction and administration that are necessary to execute the project. All costs will be in current dollars and escalated to the estimated midpoint of construction.

CONSTRUCTION PW 09-11, PW 12-05	**Yigo/Astumbo Tank Construction (Pernix)**	**Start Date:** 12/1/16
65% Complete	**Activities/Notes:** Yigo #1 pretension cable and shotcrete concrete complete. Yigo #2 core wall on-going. Astumbo #1 core wall work on-going.	**Completion Date:** 07/31/18
	Construction Services	
Project Description:	This project will involve construction of two (2) 2MG concrete tanks and Booster Pump Station at the Yigo site and a one (1) 2MG concrete tank at the Astumbo site. Work will involve new pipe line, valves, electrical controls, pumps and motors, site drainage, paving, generator for the BPS, SCADA, etc.	

CONSTRUCTION MANAGEMENT PW 09-11, PW 12-05	**Yigo/Astumbo Tank Construction Management (GHD)**	**Start Date:** December 2016
65% complete	**Activities/Notes:** Processing submittals and on-site inspection	**Completion Date:** July 2018
N/A	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the demolition of existing steel elevate and ground tanks as well as the construction of the 2MG concrete tanks at the Yigo tank location and Astumbo tank location. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

CONSTRUCTION MANAGEMENT PW 12-04-11, PW 12-06 AND PW 09-11	**Central Tank Phase I (Chaot #2, Tumon #2, Hyundai) Construction Management (TG Engineers, PC)**	**Start Date:** December 2017
0% complete	**Activities/Notes:** Establishing project communications protocol, initiating project schedule review.	**Completion Date:** February 2019
N/A	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of three water reservoirs; 0.5MG Chaot #2, 1MG Tumon #2 (Nissan)	

	and 1MG Hyundai. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.

CONSTRUCTION PW 12-04, PW 12-06 AND PW 09-11	**Central Tank Phase I (Chaot #2, Tumon #2, Hyundai) Construction (AIC)**	**Start Date:** 02/8/18
5% Complete	**Activities/Notes:** Contractor mobilizing.	**Completion Date:** 02/31/19
	Construction Services	
Project Description:	The work performed under this project procurement shall consist of Construction of three water reservoirs; 0.5MG Chaot #2, 1MG Tumon #2 (Nissan) and 1MG Hyundai. Some piping work off site from the reservoir is also required to ensure the reservoirs function optimally.	

D. CIP Wastewater Section

DESIGN WW 11-08	**Agat-Santa Rita WWTP Replacement (DCA)**	**Start Date:** October 2014
99% Complete	**Activities/Notes:** Change Order to extend design services during construction executed.	**Completion Date:** Nov. 2015 (design); June 2018 (construction)
CO 11	Engineering design services	
Project Description:	The engineering design consultant is required to design a new wastewater treatment facility that will meet secondary treatment limits. The new facilities will incorporate provisions for redundancy to improve reliability and facilitate operations and maintenance activities at the existing facility	

INSPECTION 2010 BOND WW 12-05 2010 BOND WW 05-04 2013 BOND WW 05-04	**SSES Central Sewer System (HDR)**	**Start Date:** November 2014
99% Complete	**Activities/Notes:** GWA still awaiting final report from HDR.	**Completion Date:** January 2018
CO 8 (c)	Engineering Inspection Services	
Project Description:	Work specifically required includes data analysis, development of hydraulic modeling, and development of an SSES fieldwork plan, manhole inspections, smoke testing, CCTV inspection and preparation of a Project Report.	

CONSTRUCTION MANAGEMENT WW 11-08	**Agat Santa Rita WWTP CM (GHD)**	**Start Date:** November 2014
100% (PH 1) 100% Complete (PH 2, Part 1) 80% Complete (PH 2, Part B)	**Activities/Notes:** Typical CM inspections on-going. Change order required to continue services through April 2018.	**Completion Date:** December 2017, projected through April 2018
CO 11	Construction Management services	

Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of the Agat Santa Rita WWTP Phase II project. GWA plans to replace the existing wastewater treatment plant for a new plant that can meets permit limits. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.

CONSTRUCTION WW 11-08	**Agat Santa Rita WWTP Phase II (Sumitomo Construction)**	**Start Date:** January 2016
Part 1 of Phase II- 100% Complete Part 2 of Phase II- 85% complete	**Activities/Notes:** Contractor still working on headworks, aerobic digester, equalization basin, admin and maintenance buildings.	**Completion Date:** Phase A: 03/15/17 Phase B: 12/31/17 will not be met, April 2018 projected
CO 11	Construction services	
Project Description:	This project includes construction of the head works, clarifier, oxidation ditches and UV disinfection and administration facilities. Rehabilitation work at the existing WWTP will also occur to ensure the wastewater can be pumped to the new plant. The new plant will also tie into the Tipalao SPS.	

DESIGN WW 09-08, WW11-03	**Baza Gardens Cross Island Sewer Design (DCA)**	**Start Date:** 02/05/16
99% Complete	**Activities/Notes:** DCA providing engineering services during construction.	**Completion Date:** 04/30/18(this completion date will have to be extended.)
CO 11	Engineering design services	
Project Description:	The intent of this project for an engineering firm to prepare design drawings and specification for a sewer conveyance from the Baza Garden WWTP to the new Agat Santa-Rite WWTP. The design will take into account growth in the Baza Gardens/Talofofo areas as wells as new connection along the Route 17 route.	

DESIGN WW 09-06	**Bayside SPS Improvements Design (EMPSCO)**	**Start Date:** July 29, 2016
99% Complete	**Activities/Notes:** Due to change in design Army Corp of Engineers permit viewed as not necessary. GWA received 100% design and under review. GWA working on Change order to address snail and archeological report that was not part of original scope.	**Completion Date:** Due to issue with ACOE anticipate December 2017 for design only.
	Engineering design services	
Project Description:	The intent of this project for an engineering firm to prepare design drawings and specification to upgrade the Bayside Sewer Pump Station given the facility is in major disrepair and the adjacent river is eroding away the access road to the facility which is causing maintenance challenges.	

CONSTRUCTION WW 09-08, WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance Construction Phase I (BME and Sons)**	**Start Date:** October 2016
65% Complete	**Activities/Notes:** New SPS, force main and gravity line installation along Route 17 on-going.	**Completion Date:** Phase I: 03/01/18 (this completion date will have to be extended.)
	Construction services	
Project Description:	The work performed under this project consist of construction of 14,714' of gravity main, 2,767' of force main and sewer pump station #3 next to the Aplacho River in Santa Rita.	

CONSTRUCTION MANAGEMENT WW 09-08 WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance (Construction Management) (SSFM)**	**Start Date:** December 5, 2016
55% Complete	**Activities/Notes:** Field inspection, project coordination and invoice review on-gong.	**Completion Date:** April 2018 (this completion date will have to be extended.)
	Construction Management services	
Project Description:	The work performed under this project shall consist of Construction Management and Inspection Services for the construction of gravity main, force mains and sewer pump station as well as an equalization basin at the Baza Garden WWTP.	

CONSTRUCTION WW 09-08, WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance Construction Phase II (BME and Sons)**	**Start Date:** March 2017
65% Complete	**Activities/Notes:** New SPS, force main and gravity line installation along Route 17 on-going.	**Completion Date:** Phase II: 03/16/18 (this completion date will have to be extended.)
	Construction services	
Project Description:	The work performed under this project consist of construction of 1,767' of gravity main, 14,400' of force mains and sewer pump station #2 along Route 17.	

CONSTRUCTION WW 09-08, WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance Construction Phase III (Sumitomo Construction)**	**Start Date:** June 2017
25% Complete	**Activities/Notes:** Contractor continuing pipeline and SPS construction work on Route 17 along with work at wet well at Baza Gardens WWTP.	**Completion Date:** Phase III: 03/16/18 (this completion date will have to be extended.)
	Construction services	

Project Description:	The work performed under this project consist of construction of, but not limited to, 10,481' of force mains and sewer pump station at existing WWTP, equalization tanks, stand-by generator, improved headworks, grit removal system, and associated equipment.

CONSTRUCTION WW 11-04	**Umatac Merizo WWTP Design Build Improvements Project (CoreTech)**	**Start Date:** June 2017
15% Complete	**Activities/Notes:** Site work commenced on 3/8. BMPs and temporary facilities are being installed, covered by the contractor's Clearing & Grubbing permit. Earthwork to clear and grub began 3/19/18.	**Completion Date:** December 31, 2018
	Construction services	
Project Description:	The project is intended to improve the aeration basin, construct a new sewer pump station, regrade the overland field, construct a new effluent storage tank and disinfection facility. The overland percolation basin will undergo regarding work to ensure appropriate distribution of effluent through the whole basin.	

CONSTRUCTION MANAGEMENT WW 11-04	**Umatac Merizo WWTP Design Build Improvements Project (SSFM Inc)**	**Start Date:** September 7, 2017
15%	**Activities/Notes:** Continuing on-site inspection of field activities.	**Completion Date:** December 31, 2018
	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the improvements works at the aeration basin, new sewer pump station, overland field improvements, effluent storage tank. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

E. CIP Engineering Support

DESIGN EE 09-08	**SCADA System for Water and Wastewater Facilities Phase A-1 (AECOM)**	**Start Date:** June 2015
100% complete	**Activities/Notes:** Final design in hand. AECOM to provide assistance during bidding process.	**Completion Date:** November 2017 - Design January 2019 - (Bid and Construction Support)
N/A	Engineering design services	
Project Description:	The A/E firm will design an integrated, robust and secure Supervisory Control and Data Acquisition (SCADA) system for GWA's water and wastewater systems, and to provide support services during bid and construction. The 22 sites will consist of a combination of water facilities such as production wells, reservoirs, booster pump station and	

	wastewater sites include sewer treatment plants and sewer pump stations. Executed by approved change orders, number of sites in original design scope has changed from 22 sites to 19 sites and design of High Water Alarm for 20 critical sewer pump stations has been added. Scope also includes bid and construction support of the design-build project of GPWA SCADA EMS project.

CONSTRUCTION MC 05-01	**New GWA Lab Construction (Mega United Construction)**	**Start Date:** NTP issued August 18, 2016
99% Complete	**Activities/Notes:** Punch list items and permanent communication installation remaining. Facility is being used by lab personnel.	**Completion Date:** Early March 2018.
	Construction services	
Project Description:	The project will involve construction of a new building at the GWA Upper Tumon compound to house the laboratory section. The facility will include office, laboratory and storage space for the lab employees. The facility will also include a back-up generator.	

F. GIS Section

MAPPING MC 05-02	**Island Wide Survey-** **(Duenas, Camacho & Ass.)**	**Start Date:** December 2007
94% complete	**Activities/Notes:** Task #12 map submitted to DLM for final approval. Task #13 awaiting GM approval for NTP. Task #14 work on-going.	**Completion Date:** New anticipated complete is April 2018.
	Survey services	
Project Description:	The contracted land surveyor is required to conduct title research, property valuation and mapping of property boundaries where GWA facilities are located but the lot is not registered under GWA's name.	

MAPPING MC 05-02	**Island Wide Survey PH II -** **(Duenas, Camacho & Ass.)**	**Start Date:** August 30, 2017
35% complete	**Activities/Notes:** Surveyor continuing field work for 15 additional parcels.	**Completion Date:** December 2018
	Survey services	
Project Description:	The work performed under this project procurement shall consist of a professional land surveyor conducting field work to mark corners of existing government properties as a means of severing out portions of the larger property to be deeded to GWA. Surveyor shall also prepare all necessary maps and documents for recording at DLM	

G. Permits Section

PERMITS
MONTHLY REPORT 2017

	2018						
Description	Jan	Feb	Mar				
Building Permit	11	9	1				
Occupancy Permit	3	10	18				
New Installation	14	8	7				
Sewer Application	15	14	7				
Sewer Inspection	0	1	3				
Private Utility Acceptance	0	0	0				
Relocation of Water Meter	0	0	0				
Tapping-Water	1	1	0				
Tapping-Sewer	0	1	0				
Clearance-Water	3	2	7				
Clearance-Sewer	3	2	7				
Highway Encroachment	0	4	41				
Verification of Utilities	4	4	5				
Fire Flow Test	0	0	1				
Schedule Water Outage	0	1	0				

H. SRF Project Status Report

- Projects listed below that are noted to be in the procurement phase will follow the "Percentage Key" below.

Percentage Key:

100%	Approved by GM
99%	Signature required from either Accounting/Legal/GM
98%	Processing engineering service or construction contract (with legal)
95%	Request for CCU approval (GM/engineering)
90%	A/E fee negotiation or contractor bid evaluation (engineering)
80%	Selected A/E or Conducted bid opening (engineering)
70%	Advertised RFP/IFB (engineering)
60%	RFP/IFB Package under legal review
50%	RFP/IFB Package completed (engineering)
Less than 50%	Project Scope of work development in progress

- Red text anywhere indicates a change from the last report.
- Cells highlighted in green indicate contract amount certified and project active.

	Project	Project Description	Project Manager	Phase		Start Date (NTP Issued)	Anticipated Completion Date	Contract Amount (+) change orders	Contractor	Status as of 03/16/18
1	Northern District SSES & I/I Study	Sanitary sewer system evaluation study (SSES) and inflow and infiltration (I/I) study designed to evaluate high I/I areas within the Northern sewer basin with the goal of identifying projects to eliminate them.	J. Davis	Design	1	10/10/2014	2/29/2016	$ 792,979.97	Stanley	100% Complete.
				Construction				*The project does not involve construction.*		
				Const. Mgmt						
2	Southern SSES Rehabilitation (Agat-Santa Rita-Umatac-Merizo)	Rehabilitation of segments of sewer lines in Umatac, Merizo, Agat, and Santa Rita where the Sanitary Sewer Evaluation Study recommends rehabilitation.	Brown & Caldwell	Design				*The design was previously completed under bond funding.*		
				Construction	1	10/30/2015	2/28/2017	$ 1,170,583.82	Reliable Builders	RBI started working on warranty repairs on 03/05/18; first location on Fanile Street. GWA still holding the performance bond.
				Const. Mgmt	1	11/10/2015	3/30/2017	$ 226,980.23	TG Engineers	Final invoice for CM submitted to GWA for payment - from 2611 grant.
3	Asan-Adelup-Hagatna RT1 Sewer Line Rehabilitation and Replacement	Rehabilitation of sewer lines from the War in the Pacific Asan Park to the Governor's Complex in Adelup. This line is asbestos concrete that is dilapidated and some areas have disintegrated crowns.	Brown & Caldwell	Design	2	12/11/2015	3/30/2017 for Design requirements	$ 1,780,210.00	HDR	Route 1 rebid: HDR revised plans/specs and bid schedule; delivered 3/14. PM delivered plan/specs to GWA 3/15; PM revising front end docs with GWA staff.
				Construction		10/16/2016	6/30/2019			Procurement 75%. GWA to advertise rebid for thrid time by 04/15/18.
				Const. Mgmt		6/30/2017	6/30/2019			Procurement 90%. CM scope and fee proposal received 6/23 ($698K); PM meet with DCA to discuss rebid package prepared to determine if any impacts to scope and fee submitted.
4	RT2 Agat War in the Pacific Sewer Line Rehabilitation and Replacement	Rehabilitation of a large segment of sewer line fronting the War in the Pacific Park in Agat that has collapsed.	Brown & Caldwell	Design	3	11/17/2015	3/30/2017 for Design requirements	$ 316,681.00	SSFM	SSFM providing services during bidding process as well as construction phase.
				Construction	6	8/31/2017	10/1/2018	$ 4,554,451.00		- Prefabricated manholes being constructed in staging yard. 3rd section of concrete lifted out of forms on 3/8. - Schedule provided at 3/6 meeting indicates that PPBC will start installing manholes by 4/17.Final submittals needed prior to excavation, such as final dewatering plan, trenching support plan, power pole support shop drawings, etc. - Contractor received building permit on 1/2, and received Highway Encroachment Permit on 1/24. - Dewatering plan has received GEPA approval.
				Const. Mgmt	8	9/19/2017	10/1/2018	$ 584,725.00		CM reviewing and commenting on submittals.

5	Brown & Caldwell Project Management	Brown & Caldwell to provide program management services and support.	T. Cruz	Design	4	3/24/2015	2/28/2019	$ 1,819,850.00	B&C	Project underway.
				Construction				*The project does not involve construction.*		
				Const. Mgmt						
6	Wastewater, Water and Source Water System Master Plan Upgrade	Update of the existing water and wastewater master plan while factoring in military integration and secondary treatment plant options.	Brown & Caldwell	Design	5	7/6/2015	01/30/2018 (revised due to financial workshop)	$ 2,623,300.00	B&C	· Held review meetings with CCU/PUC. · MP will be updated based on CCU comments to financial plan and submitted to CCU on March 20th. Public meetings to be held in April. BC assisted with creation of newsletter to be sent to customers with March billing.
				Construction				*The project does not involve construction.*		
				Const. Mgmt						
7	Groundwater Wells Rehabilitation (F-3, A-2, A-7, A-12, D-5)	Rehabilitation of existing deep wells and/or in cases where pipe column needs replacing, wells will be re-drilled. The deep wells to be rehabilitated are A-2, A-7, A-12, D-5, & F-3.	Brown & Caldwell	Design	6	5/27/2016	2/28/2018 (for design only)	$ 1,758,247.00	AECOM	· AECOM plans to submit final design package to BC by 3/16/18. A-12: Design rate of 200 gpm (45.5 ft drawdown). D-05: Design rate of 125 gpm (39 ft drawdown). A-02: Design rate of 250 gpm (34.6 ft drawdown). F-03: Design rate of 200 gpm (1.5 ft drawdown).
				Construction		9/30/2018	9/30/2019			SRF grant funds specific to project pending FY18 grant approvals and award.
				Const. Mgmt		9/30/2018	9/30/2019			· Draft CM scope submitted to GWA.
8	Tumon Sewer Hot Spots	Investigation, evaluation, and repair of possible solutions, to long plaguing issues where sewer overflows are known to occur in Tumon San Vitores.	Brown & Caldwell	Design	7	6/24/2016	10/30/2017 for design only	$ 572,089.00	TG Engineers	· TGE submitted 100% design documents. Contract package to be sent to GWA 3/20; Editing front end docs based on changes from Rt 4.
				Construction		3/23/2017	3/22/2018			
				Const. Mgmt		3/23/2017	3/22/2018			

9	Critical Sewer Pump Stations (7 stations)	Rehabilitation of various components of 7 pump stations that were identified to by the CDM design team: Macheche, Ypaopao, Astumbo 1, Fujita, Santa Ana, Southern Link, and Route 1.	CDM	Design				*The design will be incorporated into the design/build package.*		
			J. Davis	Design/Build	1	8/8/2016	3/30/2018	$ 1,531,456.33	ProPacific	-Route 16 Pump Stations- Structural Evaluation done. Waiting for the report from the Structural Engineer. Additional cost and time extension is anticipated. Change Order #4 executed. - Fujita Pump Station- Request for additional painting (Additive) and Macheche PS- Wet well coating below water surface eliminated. (Deductive) - Santa Ana PS- Installation of break-away fittings for the new submersible pumps . Additional cost and time extension is anticipated - Route 16 PS & Fujita PS - Monorail and Hoist Support Load Testing Change Order Proposal: - Southern Link Pump Station - Provision of Roll up door. Contractor to provide cost.
				Const. Mgmt	2	9/9/2016	3/30/2018	$ 299,519.00	Stanley	CM work ongoing. GWA working on Change Order proposal to extend contract to match constructions activities.
10	Sewer Pump Station High Water Alarm Systems (20 stations)	This project will design and installed telemetry equipment/SCADA type alarms that will alert when pump station failure occurs.	C. Yam	Design				*The design will be incorporated into the design/build package.*		
				Design	8	8/12/2016	02/30/2017	$ 183,171.00	AECOM	Design complete
				Construction	5	4/5/2017	9/30/2017	$ 1,444,888.00	Pacific Rim	Project complete
				Const. Mgmt	3	02/30/2017	9/30/2017	$ 195,269.00	EMSPCO	CM work complete
11	Sewer Pump Station Backup Power (2 stations)	Construction of the housing and installation of new generators for the Casimero pump station (Mongmong) and the Namo pump station (Yona central).	B. Cruz	Design				*The design will be incorporated into the design/build package.*		
				Design/Build	2	6/24/2016	9/30/2017	$ 362,692.53	ProPacific	Design Build project complete.
				Const. Mgmt				*B. Cruz is the construction manager.*		
12	RT4 Relief Sewer Line Rehabilitation and Replacement	Rehabilitation of sewer lines that are located from Agana McDonalds to Marine Drive that have been known to overflow due to structural issues.	Brown & Caldwell	Design	9	3/1/2016	4/22/2017	$ 794,000.00	AECOM	· AECOM to provided services during bidding process.
				Construction		6/30/2018	09/31/2019			Procurement 70%, AECOM revised bid schedule to be a multi-award contract with two schedules; delivered to GWA on 2/23. Editing front end docs, and finalizing 3/16.
				Const. Mgmt		4/23/2017	12/31/2018	$ 647,000.00		Procurement 90%, EMPSCO original CM fee ($647K); revised fee is $647K + $157K if two contractors.

13	Groundwater Wells Rehabilitation (D-3, D-17, D-18, D-22, M-9)	Rehabilitation of existing deep wells and/or in cases where pipe column needs replacing will be re-drilled. D-3, D-17, D-18, D-22, and M-9.	Brown & Caldwell	Design				*The design was previously completed under bond funding.*		
				Construction	2	8/19/2016	3/30/2018	$ 6,120,353.44	Pacific Rim	· New nozzles (10 ppd) installed at D-17/18/22. · Working to solve the level sensor issues, troubleshooting D-17 and D-22. · PRC/EA working on determining VFD needed for D-18. M-09 pump/motor to be reinstalled 3/16. Training for VFDs to be scheduled soon; waiting on agenda from rep. · Well operating permits for D-17/18/22 received; Occupancy permit received.
				Const. Mgmt	4	3/22/2016	3/30/2018	$ 943,361.24	EA	· Working through CO#4 for CM.
14	Southern SSES Sewer Rehabilitation (Baza Gardens-Talofofo)	Rehabilitation of segments of sewer lines in Windward Hills, Talofofo area where the Sanitary Sewer Evaluation Study recommends rehabilitation.	Brown & Caldwell	Design				*The design was previously completed under bond funding.*		
				Construction	3	8/2/2016	7/2/2017	$ 1,189,815.00	ProPacific	- Contractor on notice since 12/01/2017 (via formal GWA letter) that continuing delays are unacceptable and grounds for potential default. Contractor asked for special meeting on 3/9 to discuss PPBC's pump station proposal. PPBC continually bypass pumping through the wetland area, due to collapses of CIPP liner. Contractor attempting to remove debris in line MH5678 – MH5679. Also needs to work on additional CIPP defects in line MH5680 – MH5681. Baza Gardens area: On 2/8, Todo Mauleg was on site to conduct CCTV and reinstate laterals for MH4213-MH4214 and others.
				Const. Mgmt	5	7/29/2016	5/28/2017	$ 347,945.93	EMPSCO	· PM to work on Change Order to extend contract and amount.
15	Tamuning Sewer Hot Spots	Sewer rehabilitation for lines at Winner Apartments, Segund Leon Guerrero, and behind Guam Premium Outlets.	Brown & Caldwell	Design	10	9/9/2016	10/31/2017 (for design only)	$ 663,629.00	TG Engineers	· TGE submitted 100% design documents. Contract package to be sent to GWA 3/20; Editing front end docs based on changes from Rt 4.
				Construction		4/29/2017	4/30/2018			
				Const. Mgmt		4/29/2017	4/30/2018			
16	Talofofo Sewer Pump Stations (4 stations)	Design and construction of 4 sewer lift stations in the Talofofo village where sewer lines are installed but never completed.	J. Davis	Design (for Talofofo and Chalan Pago PS)	11	8/17/2016	11/30/2017	$ 477,999.50	EMPSCO	Talafofo Pump Station design /bid ackage to be submitted to GWA week of 3/19/18. Final Design of Chalan Pago Pump Station project under review by GWA. Field inspection for snail to be under taken .
				Construction		4/29/2017	4/30/2018			
				Const. Mgmt		4/29/2017	4/30/2018			

17	Chalan Pago Sewer Pump Station	Design and construction of sewer lift stations and gravity lines in Scott Laguana, Santa Cruz Street Chalan Pago.	J. Davis	Design		8/17/2016	11/30/2017	*The design will be included with the Talofofo Pump Station design project.*		
				Construction		4/29/2017	4/30/2018			
				Const. Mgmt		4/29/2017	4/30/2018			
18	Water Hydraulic Model (SCADA ready instruments to update Model)	Design and construction of instrumentation at key water sites in the Barrigada service area necessary to update GWA Water hydraulic model.	Barbara Cruz	Design	12	8/3/2016	3/15/2017	$ 523,268.00	GHD	Design complete.
				Construction		2/1/2017	12/30/2019			Funding for construction project to be from FY18 grant that is still pending.
				Const. Mgmt		2/1/2017	12/30/2019			
19	Macheche Hill Sewer Rehabilitation/ Replacement	Rehabilitation of sewer lines on Macheche road. Segments of this sewer line has collapsed recently and is consider a high priority.	J. Davis	Design-Build	3	8/29/2016	3/30/2018	$ 2,202,545.47	Giant Const.	Construtcion project complete.
				Const. Mgmt	6	9/16/2016	3/30/2018	$ 379,994.38	Am Orient	CM work complete.
20	Asan-Adelup-Hagatna Rt. 1 Sewer Line Rehabilitation and Replacement Emergency Repairs	Rehabilitation of sewer line in Asan that collapsed and which is current fitted with a temporary pumping system.	Brown & Caldwell	Design				Design cost covered under 3A above.		
				Construction	4	3/8/2017	12/30/2017	$ 2,470,658.00		GWA waiting on as-builts. Signed PRC copy of CO#3 in hand; routing to GWA. Project Manager working with HDR to solve new pump issue.
				Const. Mgmt	7	1/24/2017	12/30/2017	covered under 3A		CM work complete.

DASHBOARD

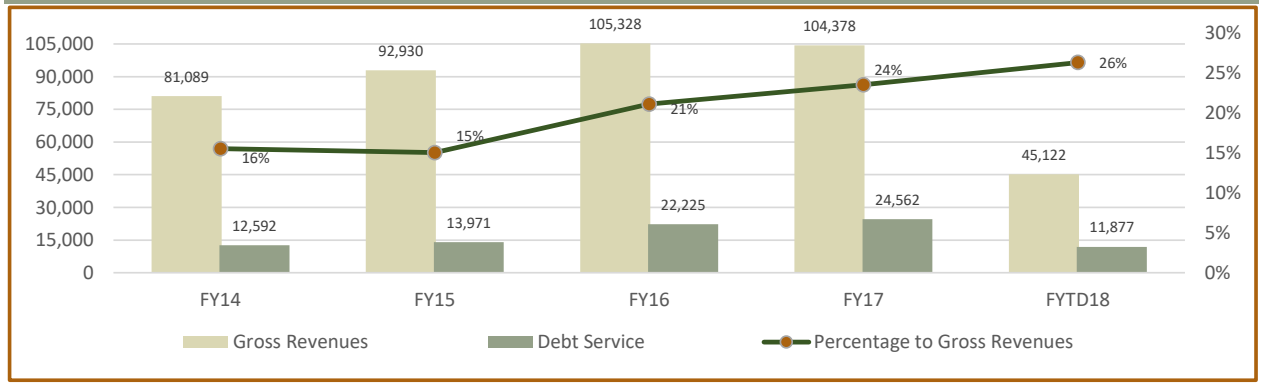
FYTD February 2018 Budget vs Actual ($000)

Category	Description	Budget FYTD18	Actual FYTD18	Variance
Rate Based Revenues	Water	$29,708	$28,515	($1,192)
	Wastewater	16,609	16,607	(2)
	Total	46,317	45,122	(1,195)
Operations & Maintenance	Salaries & Benefits	11,048	9,641	(1,407)
	Power	5,290	5,842	552
	Water Purchases	3,606	3,777	171
	A&G	5,361	4,212	(1,150)
	Contractual	1,866	1,688	(178)
	Total	$35,218	$34,240	($978)

Key Financial Ratios ($000)

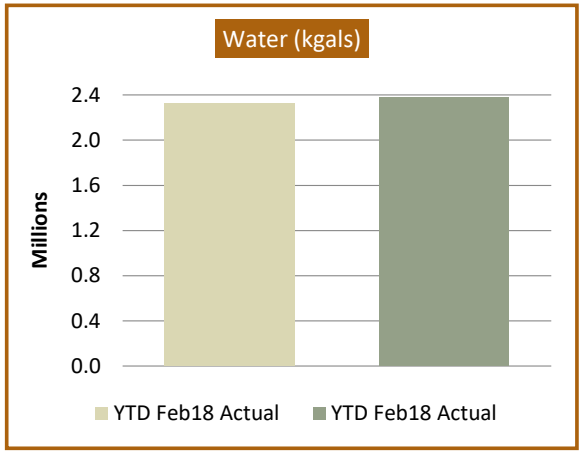
Category	FY18	FY17
Accounts Payable $$/Days	$4,355 / 47 days	$5,390 / 59 days
Accounts Receivable $$/Days	$16,173 / 65 days	$15,451 / 51 days
Days Cash On Hand	178 days	184 days
Annual Debt Service (Revenue Bonds)	$28,504	$24,563
Debt Service Coverage (Bond/PUC)	1.61 / 1.99	1.99 / 2.44

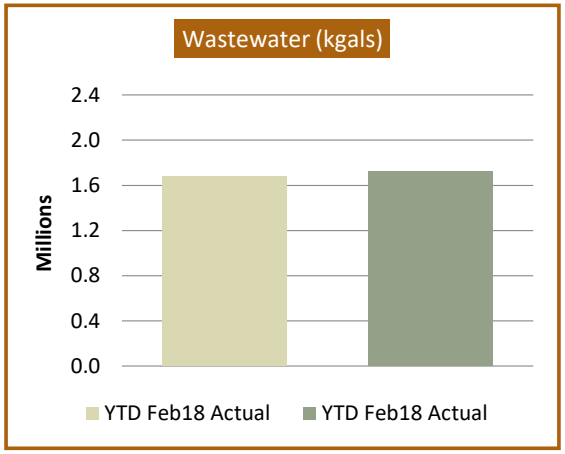
Debt as a Percent to Gross Revenue

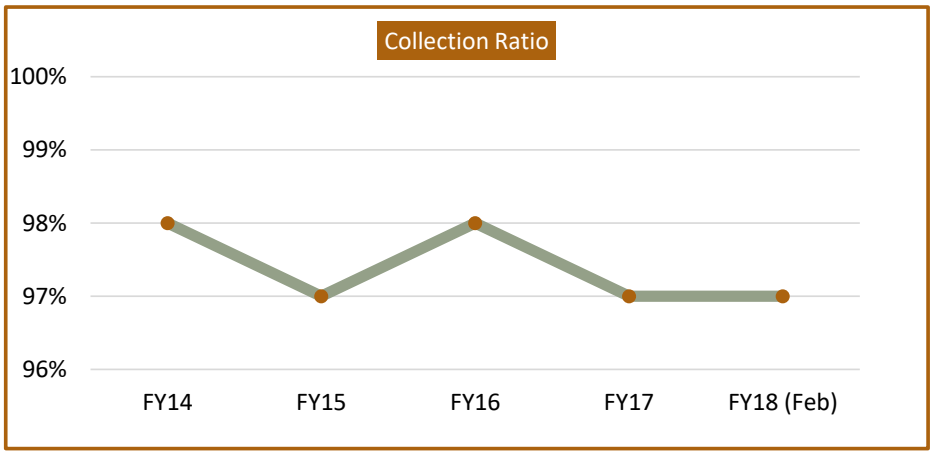


(1) Gross Revenues excludes SDC
(2) Debt Service Excludes Cap I

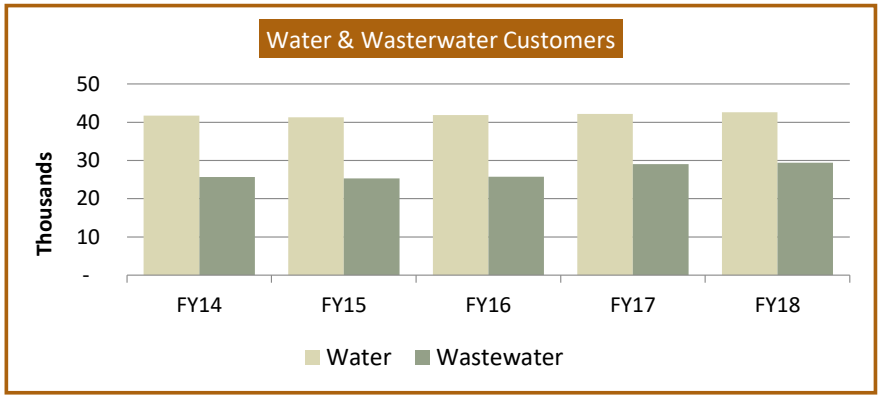
Water & Wastewater Analytics

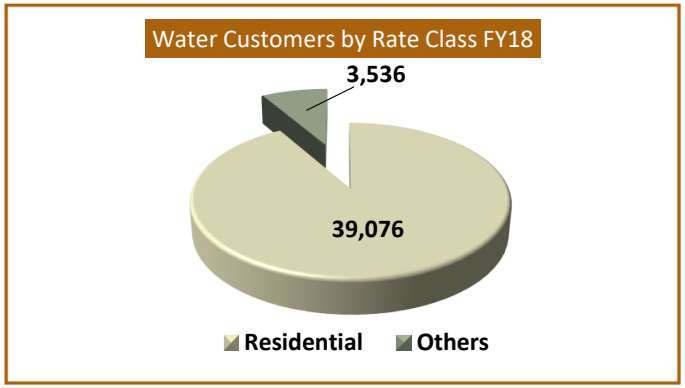


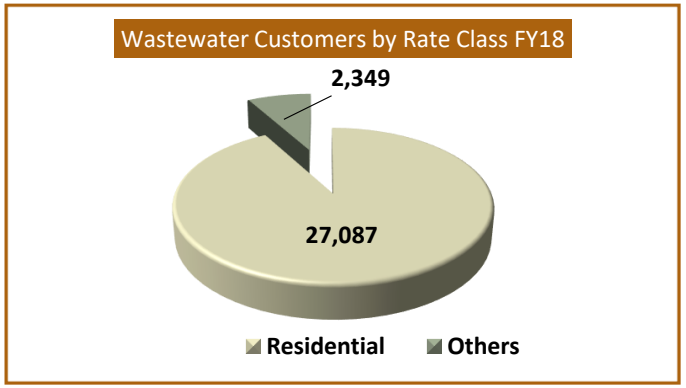


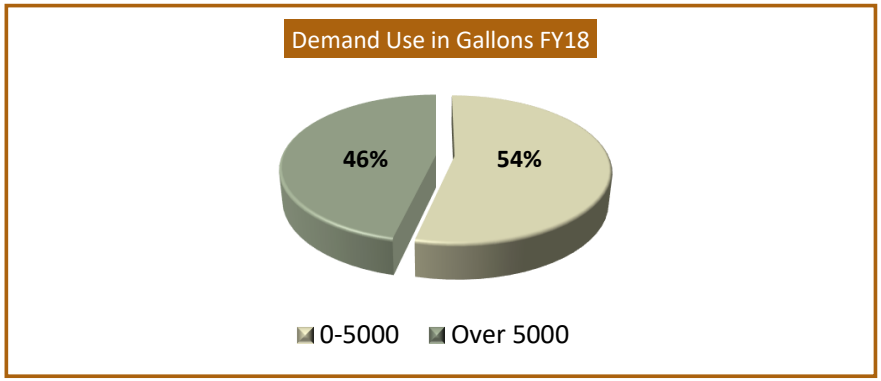


Water & Wastewater Customers





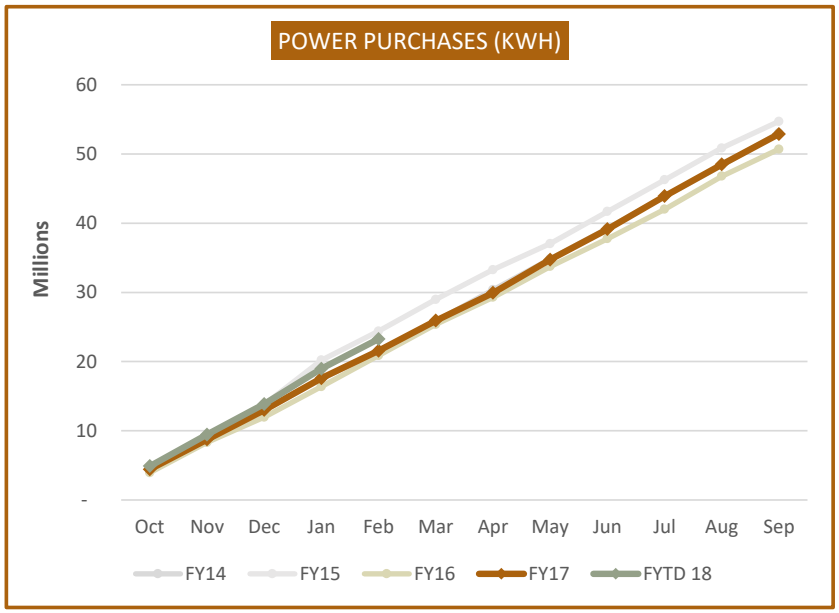


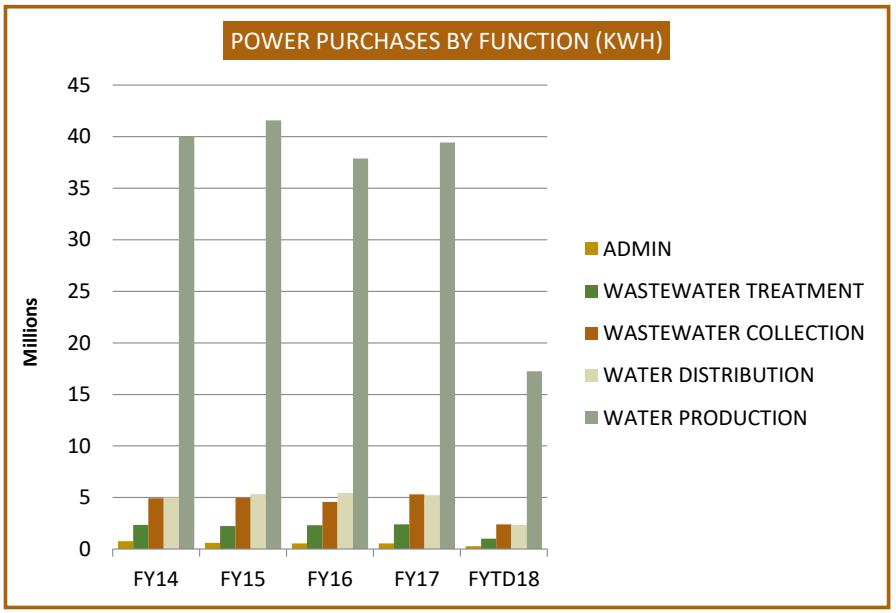


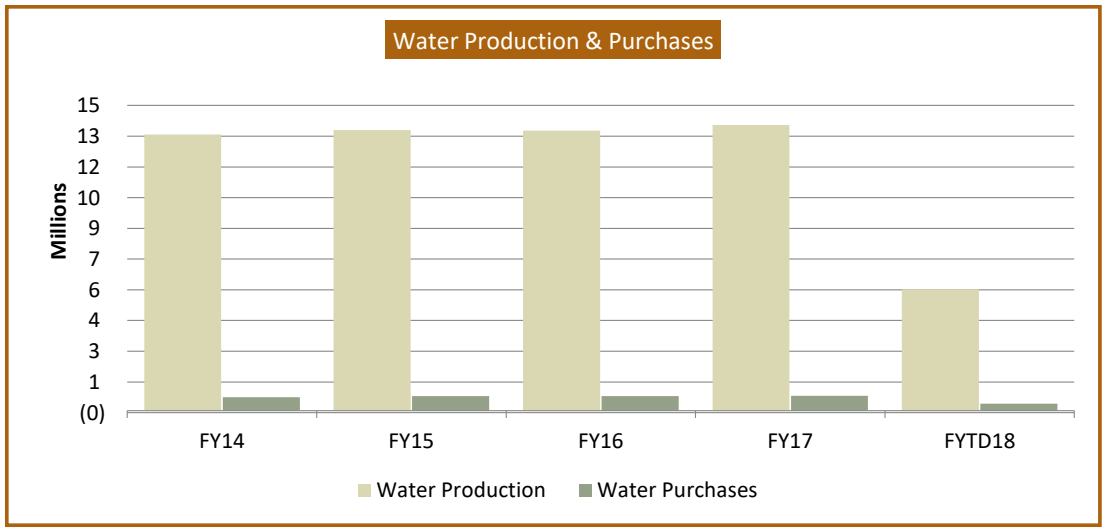
Top Ten Largest Water and Wastewater Customers – February 2018

Water			Wastewater		
Customer Name	FYTD18 Revenues	% of Total	Customer Name	FYTD18 Revenues	% of Total
1) MDI GUAM CORPORATION/LEOPALACE	$571,787	2.01%	1) AIR FORCE DOD	$1,588,771	9.57%
2) PACIFIC ISLANDS CLUB	475,631	1.67%	2) NAVY DOD	1,034,250	6.23%
3) HOTELS OF THE MARIANAS INC	417,437	1.46%	3) HOTELS OF THE MARIANAS INC	446,412	2.69%
4) HYATT	389,275	1.37%	4) HYATT	416,788	2.51%
5) HOTEL NIKKO GUAM	374,798	1.31%	5) HOTEL NIKKO GUAM	400,610	2.41%
6) GUAM REEF HOTEL INC	352,480	1.24%	6) GUAM REEF HOTEL INC	377,265	2.27%
7) SHERATON LAGUNA GUAM RESORT	332,191	1.16%	7) SHERATON LAGUNA GUAM RESORT	355,470	2.14%
8) MDI GUAM CORPORATION/WESTIN	269,669	0.95%	8) MDI GUAM CORPORATION/WESTIN	288,311	1.74%
9) OUTRIGGER GUAM RESORT	263,510	0.92%	9) OUTRIGGER GUAM RESORT	282,324	1.70%
10) TANOTA DEVELOPMENT LLC	257,430	0.90%	10) TANOTA DEVELOPMENT LLC	276,232	1.66%
Total	**$3,704,208**	**12.99%**	**Total**	**$5,466,433**	**32.92%**

Power, Water Purchases and Water Production

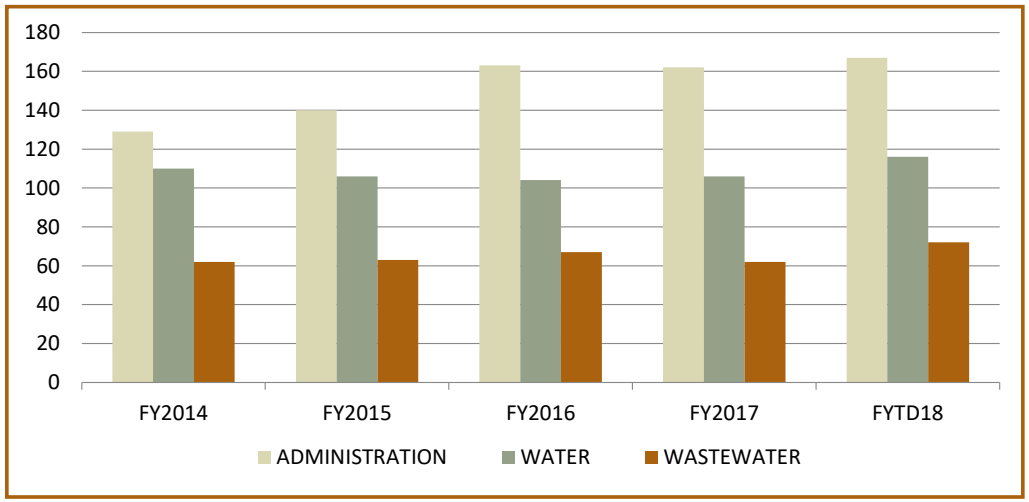




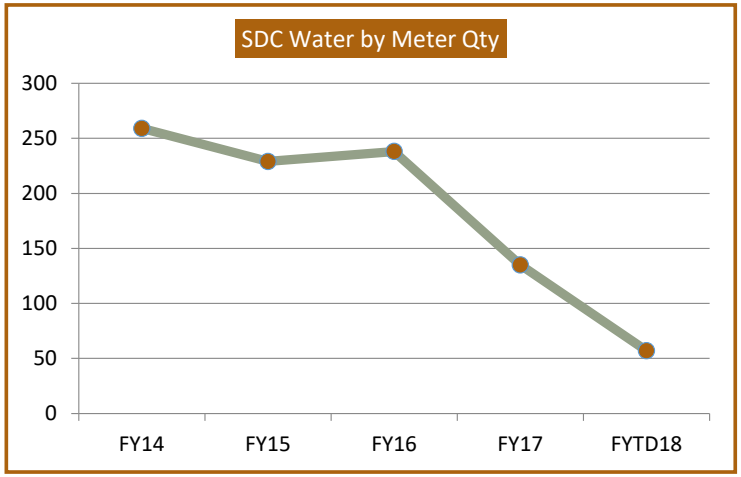


FTE by Major Division

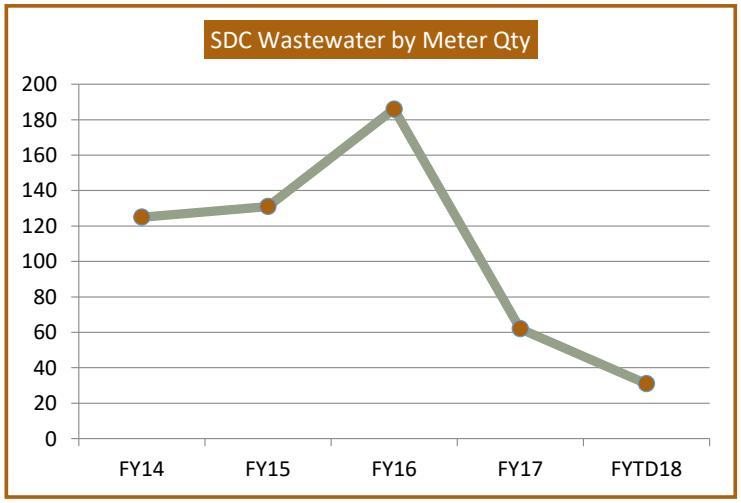
DIVISION	FY2014	FY2015	FY2016	FY2017	FYTD18
ADMINISTRATION	129	140	163	162	167
WATER	110	106	104	106	116
WASTEWATER	62	63	67	62	72
TOTAL NUMBER OF STAFF	301	309	334	330	355
Gross Salaries & Wages ($000)	15,532	15,805	16,442	17,210	7,243
Water Customers	41,702	41,274	41,858	42,181	42,612
Staff to Customers Ratio	0.72%	0.75%	0.80%	0.78%	0.83%



SDC Water & Wastewater (Meter Quantity)



Actual Meter Sizes (Inches)	FY 2014	FY 2015	FY 2016	FY 2017	FYTD18
5/8 x 3/4	248	220	239	129	50
1	5	5	7	2	1
1 1/2	1	1	1	1	3
2	3	2	4	2	2
3	1	-	1	-	-
4	-	1	-	-	1
6	-	-	-	1	-
8	1	-	-	-	-
10	-	-	-	-	-
Total SDC by Water	259	229	252	135	57



Actual Meter Sizes (Inches)	FY 2014	FY 2015	FY 2016	FY 2017	FYTD18
5/8 x 3/4	115	124	179	58	24
1	4	3	2	-	1
1 1/2	1	1	1	1	3
2	3	2	3	2	2
3	1	-	1	-	-
4	-	1	-	-	-
6	-	-	-	1	1
8	1	-	-	-	-
10	-	-	-	-	-
Total SDC by Wastewater	125	131	186	62	31

GUAM WATERWORKS AUTHORITY
FEBRUARY 28, 2018
FINANCIAL AND RELATED REPORTS
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GUAM WATERWORKS AUTHORITY
Balance Sheet
February 28, 2018

SCHEDULE A

ASSETS	Unaudited February 28, 2018	Unaudited September 30, 2017	Increase (Decrease)
Current Assets:			
Cash:			
Unrestricted (Schedule G)	3,301,864	4,873,275	(1,571,410)
Restricted Funds (Schedule G)	68,093,664	65,124,400	2,969,264
Accounts Receivable Trade, Net of Allowance for Doubtful Receivables of $13,160,701 at Feb 28, 2018 and $12,619,034 at Sep 30, 2017	16,172,759	15,450,733	722,025
Other Receivable	4,492,742	8,433,446	(3,940,704)
Materials & Supplies Inventory, Net of Allowance for Obsolescence of $457,370 at Feb 28, 2018 and Sep 30, 2017	2,060,482	2,166,557	(106,075)
Total Current Assets	94,121,511	96,048,411	(1,926,900)
Property, Plant and Equipment			
Utility plant in service:			
Water system	327,872,267	327,484,191	388,076
Wastewater system	286,534,706	286,394,940	139,767
Non-utility property	18,945,633	18,938,255	7,378
Total property	633,352,607	632,817,387	535,220
Less Accumulated Depreciation	(293,684,455)	(286,043,580)	(7,640,875)
Land	1,163,298	1,110,998	52,300
Construction Work in Progress	144,540,173	111,695,887	32,844,286
Property, Plant and Equipment, net	485,371,623	459,580,691	25,790,932
Other noncurrent assets			
Restricted cash (Schedule G)	209,527,323	236,550,002	(27,022,680)
Investments (Schedule G)	43,010,059	41,042,038	1,968,020
Other Prepaid Expenses	470,417	551,128	(80,711)
Total other noncurrent assets	253,007,798	278,143,169	(25,135,371)
TOTAL ASSETS	832,500,932	833,772,271	(1,271,339)
Deferred outflows of resources:			
Debt defeasance loss on refunding	8,073,091	1,695,981	6,377,110
Deferred outflows from pension	3,174,193	3,414,242	(240,050)
Total Assets and Deferred Outflows of Resources	**843,748,215**	**838,882,494**	**4,865,721**
LIABILITIES AND NET ASSETS			
Current Liabilities:			
Current maturities of long-term debt			
-Series 2010 Bond	-	1,655,000	(1,655,000)
-Series 2014 Refunding	3,475,000	3,385,000	90,000
-Notes Payable	2,873,988	2,873,988	-
Accounts Payable -Trade	4,355,490	5,390,256	(1,034,766)
Interest Payable	4,317,333	6,656,499	(2,339,167)
Accrued Payroll and Employee Benefits	1,930,635	2,604,471	(673,837)
Accrued Annual Leave	1,729,291	1,729,291	-
Current portion of employee annual leave	567,057	567,057	-
Contractors' Payable	8,786,562	13,950,287	(5,163,725)
Customer and Other Deposits	2,079,701	2,087,207	(7,506)
Total Current Liabilities	30,115,056	40,899,057	(10,784,001)
Long Term Debt, less current maturities			
Series 2010 Revenue Bond	-	112,870,000	(112,870,000)
Series 2013 Revenue Bond	172,630,000	172,630,000	-
Series 2014 Refunding	72,520,000	72,610,000	(90,000)
Series 2016 Revenue Bond	143,310,000	143,310,000	-
Series 2017 Refunding Bond	107,660,000	-	107,660,000
Unamortized Discount - Bond 2010	-	(1,867,525)	1,867,525
Unamortized Discount - Bond 2013	(1,317,459)	(1,338,751)	21,291
Unamortized Premium - Bond 2014	4,693,605	4,804,694	(111,089)
Unamortized Premium - Bond 2016	17,009,852	17,262,975	(253,123)
Unamortized Premium - Bond 2017	12,371,828	-	12,371,828
Notes Payable	4,479,009	5,697,499	(1,218,490)
Unfunded Ret Liability (GASB 67/68)	38,195,938	38,195,938	-
Employee Annual Leave, Less Current Portion	783,992	783,992	-
TOTAL LIABILITIES	602,451,820	605,857,879	(3,406,059)
Net Assets	**241,296,396**	**233,024,615**	**8,271,780**
Total Liabilities and Net Assets	**843,748,215**	**838,882,494**	**4,865,721**

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited) **SCHEDULE B**
Comparative Budget vs. Actual for the period ending February 28, 2018

	Month to Date			Variance
	Budget February-18	Encumbered February-18	Actual (Unaudited) February-18	Favorable (Unfavorable)
OPERATING REVENUES				
Water Revenues	5,743,160		5,406,069	(337,091)
Wastewater Revenues	3,228,257		3,365,508	137,250
Legislative Surcharge	291,896		305,718	13,822
Other Revenues	57,638		29,674	(27,964)
System Development Charge	46,136		171,006	124,870
Total Operating Revenues	9,367,087		9,277,975	(89,113)
OPERATING AND MAINTENANCE EXPENSES				
Water Purchases	721,113		930,978	(209,865)
Power Purchases	1,057,997		1,280,891	(222,894)
Total Utility Costs	1,779,110		2,211,869	(432,759)
Salaries and Wages	1,625,056		1,432,480	192,576
Pension and Benefits	584,558		465,024	119,534
Total Salaries and Benefits	2,209,614		1,897,504	312,110
Capitalized Labor and Benefits	(208,333)		-	(208,333)
Net Salaries and Benefits	2,001,281		1,897,504	103,777
Administrative and General Expenses				
Sludge removal	174,514		107,247	67,267
Chemicals	229,997	41,153	120,719	68,125
Materials & Supplies	237,400	61,391	200,263	(24,254)
Transportation	61,370	24,312	57,106	(20,047)
Communications	16,182		20,617	(4,435)
Claims	17,600		4,210	13,390
Insurance	97,757		75,480	22,277
Training & Travel	21,814	5,154	16,370	291
Advertising	13,910	5,500	5,054	3,356
Miscellaneous	115,515	83,653	97,774	(65,912)
Regulatory Expense	29,086		25,895	3,192
Bad Debts Provision	57,103		108,324	(51,221)
Total Administrative and General Expense	1,072,248	221,163	839,058	(12,028)
Depreciation Expense	1,528,175	-	1,528,175	0
Contractual Expense				
Audit & Computer Maint.	78,630	8,465	49,602	20,563
Building rental	37,955		41,500	(3,545)
Equipment rental	57,375		52,405	4,969
Legal	4,167		600	3,567
Laboratory	64,752		18,285	46,467
Other	130,363		100,855	29,508
Total Contractual Expense	373,241	8,465	263,247	101,530
Retiree Supp. Annuities and health care costs	240,008		243,467	(3,459)
Contribution to Government of Guam	49,500		49,833	(333)
Total Retiree Benefits	289,508		293,301	(3,792)
Total Operating Expenses	7,043,563	229,628	7,033,154	(219,218)
Earnings (Loss) from Operations	2,323,524		2,244,821	78,703
Interest Income-2010/13/14/16 Series Bond	15,727		211,295	195,568
Interest Income-Other Funds	2,935		34,130	31,196
Interest Income-SDC	2,414		4,500	2,086
Interest Expense- 2010/13/14/16 Series Bond	(2,625,587)		(2,158,666)	466,921
Interest Expense- ST BOG	(33,288)		(39,219)	(5,931)
Federal Expenditures	(51,332)		(47,164)	4,168
Loss on Asset Disposal	-		-	-
AFUDC	625,000		625,000	-
Amortization of Discount, Premium and Issuance Costs	(61,861)		(77,542)	(15,681)
Loss on Defeasance Refunding	(15,218)		(12,444)	2,775
Deferred outflows from pension	(105,281)		(48,010)	57,271
Prior Year Adjustment	-		-	-
Total non-operating revenues (expenses)	(2,246,492)	-	(1,508,119)	738,373
Net Income (Loss) before capital contributions	77,032	-	736,702	659,670
Capital Contributions				
Grants from US Government	873,108		1,348,860	475,752
Grants from GovGuam & Others	-		57,952	57,952
Other Contributions	-		-	-
Total Capital Contributions	873,108	-	1,406,812	533,704
Change in Net Assets	950,140	-	2,143,515	1,193,374
Debt Service Calculation				
Earnings From Operations	2,323,524		2,244,821	
System Development Charge	(46,136)		(171,006)	
Retiree COLA	49,500		49,833	
Interest/Investment Income	2,935		34,130	
Depreciation	1,528,175		1,528,175	
Balance Available for Debt Service per Section 6.12	3,857,998		3,685,954	
Working Capital Reserve Available for Debt Service	935,321		935,321	
Transfer to Working Capital- Debt Service Reserve	(150,000)		-	
Transfer to Working Capital- O&M Reserve	(266,667)		-	
Balance Available for Debt Service inclusive of reserves	4,376,652		4,621,275	
Debt Service				
Principal	433,333		433,333	
Interest	2,063,402		1,942,002	
Total	2,496,736		2,375,335	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.55		1.55	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	1.75		1.95	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited) **SCHEDULE C**
Comparative for the period ending February 28, 2018 and 2017

	Month to Date		Variance
	Actual (Unaudited) February-18	Actual (Unaudited) February-17	Favorable (Unfavorable)
OPERATING REVENUES			
Water Revenues	5,406,069	5,331,404	74,665
Wastewater Revenues	3,365,508	3,099,528	265,980
Legislative Surcharge	305,718	267,269	38,449
Other Revenues	29,674	36,293	(6,619)
System Development Charge	171,006	72,662	98,344
Total Operating Revenues	9,277,975	8,807,155	470,820
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	930,978	609,094	(321,884)
Power Purchases	1,280,891	1,006,355	(274,536)
Total Utility Costs	2,211,869	1,615,449	(596,420)
Salaries and Wages	1,432,480	1,413,608	(18,871)
Pension and Benefits	465,024	477,546	12,521
Total Salaries and Benefits	1,897,504	1,891,154	(6,350)
Capitalized Labor and Benefits	-	(262,516)	(262,516)
Net Salaries and Benefits	1,897,504	1,628,638	(268,866)
Administrative and General Expenses			
Sludge removal	107,247	140,487	33,240
Chemicals	120,719	174,001	53,282
Materials & Supplies	200,263	128,788	(71,475)
Transportation	57,106	53,744	(3,362)
Communications	20,617	10,884	(9,733)
Claims	4,210	22,151	17,941
Insurance	75,480	90,603	15,123
Training & Travel	16,370	23,055	6,685
Advertising	5,054	8,988	3,934
Miscellaneous	97,774	71,997	(25,777)
Regulatory Expense	25,895	24,134	(1,760)
Bad Debts Provision	108,324	109,700	1,376
Total Administrative and General Expense	839,058	858,530	19,472
Depreciation Expense	1,528,175	1,402,038	(126,137)
Contractual Expense			
Audit & Computer Maint.	49,602	76,901	27,299
Building rental	41,500	36,557	(4,943)
Equipment rental	52,405	59,374	6,969
Legal	600	414	(186)
Laboratory	18,285	10,627	(7,659)
Other	100,855	156,747	55,893
Total Contractual Expense	263,247	340,619	77,372
Retiree Supp. Annuities and health care costs	243,467	231,895	(11,572)
Contribution to Government of Guam	49,833	49,500	(333)
Total Retiree Benefits	293,301	281,395	(11,905)
Total Operating Expenses	7,033,154	6,126,670	(906,483)
Earnings (Loss) from Operations	2,244,821	2,680,485	435,664
Interest Income-2010/13/14/16 Series Bond	211,295	65,354	145,941
Interest Income-Other Funds	34,130	10,032	24,099
Interest Income-SDC	4,500	1,060	3,441
Interest Expense- 2010/13/14/16 Series Bond	(2,158,666)	(2,220,744)	62,077
Interest Expense- ST BOG	(39,219)	(43,736)	4,517
Federal Expenditures	(47,164)	(42,501)	(4,663)
Loss on Asset Disposal	-	(81,105)	81,105
AFUDC	625,000	1,172,241	(547,241)
Amortization of Discount, Premium and Issuance Costs	(77,542)	61,861	(139,403)
Loss on Defeasance Bond05 Refunding	(12,444)	(15,218)	2,775
Deferred outflows from pension	(48,010)	(104,481)	56,471
Prior Year Adjustment	-	(26,756)	26,756
Total non-operating revenues (expenses)	(1,508,119)	(1,223,993)	(284,126)
Net Income (Loss) before capital contributions	736,702	1,456,492	(719,789)
Capital Contributions			
Grants from US Government	1,348,860	1,815,921	(467,061)
Grants from GovGuam & Others	57,952	1,664	56,288
Other Contributions	-	-	-
Total Capital Contributions	1,406,812	1,817,586	(410,774)
Change in Net Assets	2,143,515	3,274,078	(1,130,563)
Debt Service Calculation			
Earnings From Operations	2,244,821	2,680,485	
System Development Charge	(171,006)	(72,662)	
Retiree COLA	49,833	49,500	
Interest/Investment Income	34,130	10,032	
Depreciation	1,528,175	1,402,038	
Balance Available for Debt Service per Section 6.12	3,685,954	4,069,392	
Working Capital Reserve Available for Debt Service	935,321	932,134	
Transfer to Working Capital- Debt Service Reserve	-	-	
Transfer to Working Capital- O&M Reserve	-	-	
Balance Available for Debt Service inclusive of reserves	4,621,275	5,001,527	
Debt Service			
Principal	433,333	420,000	
Interest	1,942,002	1,626,858	
Total	2,375,335	2,046,858	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.55	1.99	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	1.95	2.44	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited) **SCHEDULE D**
Comparative Budget vs. Actual for the period ending February 28, 2018

	Year to Date			Variance
	Budget February-18	Encumbered February-18	Actual (Unaudited) February-18	Favorable (Unfavorable)
OPERATING REVENUES				
Water Revenues	28,715,800		27,562,569	(1,153,232)
Wastewater Revenues	16,141,287		16,139,781	(1,505)
Legislative Surcharge	1,459,480		1,419,383	(40,097)
Other Revenues	288,190		163,186	(125,004)
System Development Charge	230,679		553,256	322,577
Total Operating Revenues	46,835,436		45,838,175	(997,261)
OPERATING AND MAINTENANCE EXPENSES				
Water Purchases	3,605,566		3,776,628	(171,062)
Power Purchases	5,289,984		5,841,655	(551,670)
Total Utility Costs	8,895,550		9,618,283	(722,733)
Salaries and Wages	8,125,280		7,243,285	881,995
Pension and Benefits	2,922,791		2,398,560	524,232
Total Salaries and Benefits	11,048,071		9,641,845	1,406,226
Capitalized Labor and Benefits	(1,041,667)		-	(1,041,667)
Net Salaries and Benefits	10,006,404		9,641,845	364,560
Administrative and General Expenses				
Sludge removal	872,570	377,303	478,488	16,779
Chemicals	1,024,984	772,045	860,982	(608,042)
Materials & Supplies	1,389,499	334,352	1,117,123	(61,977)
Transportation	261,852	357,827	184,848	(280,823)
Communications	80,910	98,493	80,804	(98,387)
Claims	55,500	-	12,700	42,800
Insurance	523,783	-	379,101	144,682
Training & Travel	109,071	9,749	35,418	63,904
Advertising	69,550	56,502	27,389	(14,340)
Miscellaneous	577,577	100,204	399,202	78,172
Regulatory Expense	110,432	-	93,838	16,593
Bad Debts Provision	285,513	-	541,667	(256,154)
Total Administrative and General Expense	5,361,241	2,106,475	4,211,560	(956,794)
Depreciation Expense	7,640,873	-	7,640,875	(2)
Contractual Expense				
Audit & Computer Maint.	408,152	159,392	278,304	(29,545)
Building rental	189,775	-	185,138	4,637
Equipment rental	286,873	-	361,439	(74,566)
Legal	20,833	-	3,000	17,833
Laboratory	308,758	394,551	189,924	(275,717)
Other	651,815	-	670,501	(18,685)
Total Contractual Expense	1,866,206	553,943	1,688,305	(376,042)
Retiree Supp. Annuities and health care costs	1,200,042		1,190,258	9,784
Contribution to Government of Guam	247,500		249,167	(1,667)
Total Retiree Benefits	1,447,542	-	1,439,424	8,117
Total Operating Expenses	35,217,816	2,660,418	34,240,292	(1,682,894)
Earnings (Loss) from Operations	11,617,620		11,597,883	(19,737)
Interest Income-2010/13/14/16 Series Bond	78,633		867,866	789,233
Interest Income-Other Funds	14,674		135,633	120,959
Interest Income-SDC	12,071		20,609	8,537
Interest Expense- 2010/13/14/16 Series Bond	(13,127,936)		(10,950,407)	2,177,529
Interest Expense- ST BOG	(166,441)		(183,085)	(16,644)
Federal Expenditures	(256,661)		(200,116)	56,545
Loss on Asset Disposal	-		-	-
AFUDC	3,125,000		3,125,000	-
Amortization of Discount, Premium and Issuance Costs	(309,304)		30,498	339,802
Loss on Defeasance Bond05 Refunding	(76,092)		(62,218)	13,874
Deferred outflows from pension	(526,403)		(240,050)	286,353
Prior Year Adjustment	-		9,784	9,784
Total non-operating revenues (expenses)	(11,232,459)	-	(7,446,486)	3,785,974
Net Income (Loss) before capital contributions	385,161	-	4,151,397	3,766,237
Capital Contributions				
Grants from US Government	4,365,541		3,982,651	(382,890)
Grants from GovGuam & Others	-		137,733	137,733
Other Contributions	-		-	-
Total Capital Contributions	4,365,541	-	4,120,383	(245,158)
Change in Net Assets	4,750,702	-	8,271,781	3,521,079
Debt Service Calculation				
Earnings From Operations	11,617,620		11,597,883	
System Development Charge	(230,679)		(553,256)	
Retiree COLA	247,500		249,167	
Interest/Investment Income	14,674		135,633	
Depreciation	7,640,873		7,640,875	
Balance Available for Debt Service per Section 6.12	19,289,988		19,070,302	
Working Capital Reserve Available for Debt Service	4,676,605		4,660,671	
Transfer to Working Capital- Debt Service Reserve	(750,000)		(35,950)	
Transfer to Working Capital- O&M Reserve	(1,333,333)		(43,195)	
Balance Available for Debt Service inclusive of reserves	21,883,260		23,651,827	
Debt Service				
Principal	2,166,667		2,166,667	
Interest	10,317,011		9,710,010	
Total	12,483,678		11,876,676	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.55		1.61	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	1.75		1.99	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited)
Comparative for the period ending February 28, 2018 and 2017

SCHEDULE E

	Year to Date ACTUAL (Unaudited) February-18	Year to Date ACTUAL (Unaudited) February-17	Variance Favorable (Unfavorable)
OPERATING REVENUES			
Water Revenues	27,562,569	26,657,018	905,551
Wastewater Revenues	16,139,781	15,497,638	642,143
Legislative Surcharge	1,419,383	1,336,344	83,039
Other Revenues	163,186	181,464	(18,278)
System Development Charge	553,256	363,311	189,945
Total Operating Revenues	45,838,175	44,035,775	1,802,400
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	3,776,628	3,045,469	(731,159)
Power Purchases	5,841,655	5,031,776	(809,879)
Total Utility Costs	9,618,283	8,077,245	(1,541,038)
Salaries and Wages	7,243,285	7,068,042	(175,243)
Pension and Benefits	2,398,560	2,387,729	(10,831)
Total Salaries and Benefits	9,641,845	9,455,771	(186,074)
Capitalized Labor and Benefits	-	(1,312,579)	(1,312,579)
Net Salaries and Benefits	9,641,845	8,143,192	(1,498,652)
Administrative and General Expenses			
Sludge removal	478,488	702,434	223,946
Chemicals	860,982	870,005	9,024
Materials & Supplies	1,117,123	643,938	(473,185)
Transportation	184,848	268,722	83,874
Communications	80,804	54,419	(26,385)
Claims	12,700	110,755	98,055
Insurance	379,101	453,014	73,912
Training & Travel	35,418	115,273	79,855
Advertising	27,389	44,939	17,550
Miscellaneous	399,202	359,983	(39,219)
Regulatory Expense	93,838	120,672	26,834
Bad Debts Provision	541,667	548,499	6,832
Total Administrative and General Expense	4,211,560	4,292,652	81,092
Depreciation Expense	7,640,875	7,010,190	(630,685)
Contractual Expense			
Audit & Computer Maint.	278,304	384,505	106,201
Building rental	185,138	182,783	(2,355)
Equipment rental	361,439	296,870	(64,569)
Legal	3,000	2,070	(930)
Laboratory	189,924	53,133	(136,792)
Other	670,501	783,736	113,235
Total Contractual Expense	1,688,305	1,703,095	14,790
Retiree Supp. Annuities and health care costs	1,190,258	1,159,477	(30,781)
Contribution to Government of Guam	249,167	247,500	(1,667)
Total Retiree Benefits	1,439,424	1,406,977	(32,447)
Total Operating Expenses	34,240,292	30,633,351	(3,606,941)
Earnings (Loss) from Operations	11,597,883	13,402,424	(1,804,541)
Interest Income-2010/13/14/16 Series Bond	867,866	326,772	541,094
Interest Income-Other Funds	135,633	50,159	85,474
Interest Income-SDC	20,609	5,299	15,310
Interest Expense- 2010/13/14/16 Series Bond	(10,950,407)	(11,103,719)	153,312
Interest Expense- ST BOG	(183,085)	(218,681)	35,596
Federal Expenditures	(200,116)	(212,507)	12,391
Loss on Asset Disposal	-	(405,523)	405,523
AFUDC	3,125,000	5,861,205	(2,736,205)
Amortization of Discount, Premium and Issuance Costs	30,498	309,304	(278,805)
Loss on Defeasance Bond05 Refunding	(62,218)	(76,092)	13,874
Deferred outflows from pension	(240,050)	(522,403)	282,354
Prior Year Adjustment	9,784	(133,778)	143,562
Total non-operating revenues (expenses)	(7,446,486)	(6,119,966)	(1,326,520)
Net Income (Loss) before capital contributions	4,151,397	7,282,459	(3,131,061)
Capital Contributions			
Grants from US Government	3,982,651	9,079,607	(5,096,957)
Grants from GovGuam & Others	137,733	8,322	129,411
Other Contributions	-	-	-
Total Capital Contributions	4,120,383	9,087,929	(4,967,546)
Change in Net Assets	8,271,781	16,370,388	(8,098,607)
Debt Service Calculation			
Earnings From Operations	11,597,883	13,402,424	
System Development Charge	(553,256)	(363,311)	
Retiree COLA	249,167	247,500	
Interest/Investment Income	135,633	50,159	
Depreciation	7,640,875	7,010,190	
Balance Available for Debt Service per Section 6.12	19,070,302	20,346,962	
Working Capital Reserve Available for Debt Service	4,660,671	4,660,671	
Transfer to Working Capital- Debt Service Reserve	(35,950)	-	
Transfer to Working Capital- O&M Reserve	(43,195)	-	
Balance Available for Debt Service inclusive of reserves	23,651,827	25,007,633	
Debt Service			
Principal	2,166,667	2,100,000	
Interest	9,710,010	8,134,292	
Total	11,876,676	10,234,292	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.61	1.99	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	1.99	2.44	

SCHEDULE F

Bond Compliance

		($$$) Per Indenture	As of 2/28/18 ($$$) Bond 2013/2014/2016/2017
• Operation and Maintenance Fund-BOG	*Equivalent to 55 days of the annual O&M budget less depreciation*	$10.5M	$10.5M
• Bond Reserve Fund - US Bank	*Fully funded- Principal and Interest (Bond Series 2010, 2013, 2014 Refunding and 2016)*	$34.9M	$34.9M
• Operation, Maintenance, Renewal and Replacement Reserve Fund-BOG Trust	*Equivalent to 1/4 of the annual O&M budget & CIP budget to be funded in 5 years ($2M/year)*	$17.4M	$17.4M
• Capital Improvement Fund	*Balance remaining in the Revenue Fund after the foregoing deposits*	$3.9K	$5.6K

GUAM WATERWORKS AUTHORITY
Restricted and Unrestricted Cash Summary
FY 2018

SCHEDULE G

Description	Unaudited February 28, 2018	Unaudited September 30, 2017	Increase (Decrease)
UNRESTRICTED			
Change Fund	2,000	2,000	-
Petty Cash	5,000	5,000	-
BOG - General Fund	3,264,825	4,836,236	(1,571,410)
BOG - PRN Payroll	30,039	30,039	-
Sub-total Unrestricted	3,301,864	4,873,275	(1,571,410)
RESTRICTED			
Bank of Hawaii	108,570	133,931	(25,361)
First Hawaiian Bank	44,150	10,261	33,889
Bank Pacific	12,984	15,825	(2,841)
Community First FCU	3,039	3,448	(410)
BOG - Customer Refunds	1,838,848	1,831,426	7,422
Bank Pacific - Surcharge	313,915	278,142	35,773
Bank Pacific - Escrow Deposit	666,222	666,140	82
BOG Emergency Reserve Fund	6,125	6,122	3
BOG - Revenue Trust	652,270	201,614	450,656
BOG Revenue Trust Fund	7,778,784	7,782,227	(3,443)
BOG Capital Improvement Fund-Bond	5,598	5,598	0
BOG Capital Improvement Revenue Fund	1,912,183	-	1,912,183
BOG-O & M Reserve	13,559,735	13,516,540	43,195
BOG-Debt Service Reserve	11,253,683	11,217,733	35,950
BOG-CAPEX Reserve	15,510,753	15,462,869	47,884
BOG Sewer Hookup Revolving Fund	64,639	63,590	1,049
BOG Subord. Sec. Fund	859,233	859,233	-
BOG Operation and Maintenance Fund	3,083,482	3,083,482	-
	57,674,213	55,138,182	2,536,031
BOG - SDC Deposit	2,919,451	1,486,219	1,433,233
BOG - SDC CDs	7,500,000	8,500,000	(1,000,000)
Total Restricted	68,093,664	65,124,400	2,969,264
Reserve Funds			
BOG Series 05 OMRRRF Fund	17,423,213	17,423,213	-
BOG Series 13 Construction Fund	57,265,927	74,461,765	(17,195,839)
BOG Series 14 Refunding Construction Fund	763,295	771,281	(7,987)
BOG Series 16 Construction Fund	125,258,757	132,811,449	(7,552,692)
BOG Series 16 Cap Int Fund	2	1,782,982	(1,782,980)
BOG Series 17 Refunding Construction Fund	8,768,666	9,299,311	(530,645)
BOG Series 17 Refunding COI Fund	47,463		47,463
Total Restricted - Held by Trustee	209,527,323	236,550,002	(27,022,680)
USB Series 2013 Debt Service Fund	1,566,065	2,336,754	(770,688)
USB Series 2013 Debt Service Reserve Fund	12,031,688	12,031,688	-
USB Series 2014 Refunding Debt Service Fund	2,943,036	1,796,559	1,146,477
USB Series 2014 Refunding Debt Service Reserve Fund	7,781,747	7,707,602	74,145
USB Series 2016 Debt Service Fund	1,195,618	130	1,195,488
USB Series 2016 Debt Service Reserve Fund	7,594,585	7,582,725	11,860
USB Series 2010 Debt Service Fund	1,378,620	2,020,121	(641,501)
USB Series 2017 Refunding Debt Service Reserve Fund	7,566,460	7,566,460	-
USB Series 2017 Debt Service Fund	952,239	-	952,239
Total Investments	43,010,059	41,042,038	1,968,020
Total Restricted and Unrestricted Cash	323,932,910	347,589,716	(23,656,806)

SCHEDULE H

Guam Waterworks Authority **Statement of Cash Flows (Unaudited)** **FY 2018**	**YTD** **Feb-18**
Increase (decrease) in cash	
Cash flows from operating activities:	
Cash received from trade and others	44,054,897
Cash payments to suppliers/contractors for goods and services	(15,487,414)
Cash payments to employees for services	(10,209,408)
Net cash provided by operating activities	18,358,075
Cash flows from capital and related financing activities:	
Contributed capital received (grants)	8,762,175
Acquisition of utility plant	(36,833,189)
Repayment of Long Term Debt	7,031,432
Interest expense	(14,953,134)
Net cash provided by (used in) capital and related financing activities	(35,992,716)
Cash flows from investing activities:	
Transfers from (to) restricted fund	15,277,448
Interest income received	785,783
Net cash provided by investing activities	16,063,231
Net increase (decrease) in cash	(1,571,410)
Unrestricted cash at beginning of the period	4,873,275
Unrestricted cash at end of period	3,301,864
Reconciliation of operating loss to net cash provided by operating activities:	
Operating Income (loss)	13,484,163
Adjustments to reconcile to net cash provided by operating activities:	
Depreciation expense	7,640,875
Other Expense/income	525,532
(Increase) decrease in assets:	
Accounts receivable	(1,775,772)
Materials and supplies inventory	106,075
Other Assets	80,711
Increase (decrease) in liabilities:	
Accounts payable, Contractors, Retention & Escrow Deposit	(1,033,719)
Accrued payroll	(662,285)
Customer deposits	(7,506)
Net cash provided by operating activities	18,358,075

Guam Waterworks Authority
Accounts Receivable - Government
As of February 28, 2018

SCHEDULE I

			AGING				
Customer Name	**No of Accounts**	**Current Balance**	**31-60 days**	**61-90 days**	**91-120 days**	**Over 120 days**	**Outstanding Bal.**
GUAM INT'L AIRPORT AUTHORITY	10	54,502	46,575	37,276	38,193	151,187	327,733
GUAM POWER AUTHORITY	25	18,771	15,346	802	17,200	142,706	194,826
GUAM MEMORIAL HOSPITAL AUTHORITY	2	43,662	35,525	-	-	-	79,187
PORT AUTHORITY OF GUAM	2	55,034	22,516	-	-	-	77,550
GUAM COMMUNITY COLLEGE	3	11,500	8,994	9,274	-	-	29,767
UNIVERSITY OF GUAM	2	9,270	-	-	-	-	9,270
GUAM HOUSING & URBAN RENEWAL AUTHORITY	7	1,218	-	-	-	92	1,310
GUAM HOUSING CORPORATION	1	29	-	-	-	-	29
AUTONOMOUS AGENCIES	**52**	**193,987**	**128,955**	**47,352**	**55,394**	**293,984**	**719,672**
DEPT OF EDUCATION	50	222,019	171,572	26,841	11,468	119,892	551,793
DEPT OF PARKS & RECREATION	18	240,080	28,523	30,311	25,466	176,648	501,029
DEPT OF CORRECTIONS	8	112,418	99,603	-	-	-	212,021
DEPT OF PUBLIC HEALTH & SOCIAL SERVICES	5	1,797	674	1,010	454	103,279	107,214
MAYORS' COUNCIL OF GUAM	41	22,069	-	9	-	-	22,077
DEPT OF MENTAL HEALTH AND SUBTANCE	2	1,834	7,556	-	-	-	9,390
GUAM FIRE DEPARTMENT	10	7,546	-	-	-	-	7,546
DEPT OF PUBLIC WORKS	10	4,738	467	-	-	-	5,205
DEPT OF CHAMORRO AFFAIRS	2	3,791	1,270	-	-	-	5,061
DEPT OF YOUTH AFFAIRS	2	3,971	-	-	-	-	3,971
DEPT OF MILITARY AFFAIRS/GUARNG	1	2,797	-	-	-	-	2,797
DEPT OF ADMINISTRATION	2	945	163	161	146	576	1,991
DEPT OF AGRICULTURE	2	1,891	-	-	-	-	1,891
SANCTUARY INC	1	1,731	-	-	-	-	1,731
GHURA-AGAFU GUMAS PARK	1	229	42	26	38	831	1,167
GUAM POLICE DEPARTMENT	2	1,022	-	-	-	-	1,022
DIVISION OF SENIOR CITIZENS, DPH&SS	2	495	-	139	66	-	701
GUAM VETERANS AFFAIRS OFFICE	2	207	-	-	-	-	207
GUAM PUBLIC LIBRARY	4	161	-	-	-	-	161
MERIZO MAYOR	1	54	-	-	-	-	54
THE OFFICE OF THE DEDEDO MAYOR	1	51	-	-	-	-	51
GUAM SOLID WASTE AUTHORITY	1	23	-	-	-	-	23
							-
LINE AGENCIES	**168**	**629,869**	**309,871**	**58,497**	**37,639**	**401,227**	**1,437,102**
TOTAL February 28, 2018	**220**	**823,855**	**438,826**	**105,849**	**93,032**	**695,212**	**2,156,774**
TOTAL September 30, 2017	**253**	**715,578**	**442,522**	**169,120**	**72,476**	**396,347**	**1,796,043**
% INCREASE/ (DECREASE)	**-13%**	**15%**	**-1%**	**-37%**	**28%**	**75%**	**20%**

GUAM WATERWORKS AUTHORITY
2013 Series Bond Project Status
As of Feb. 28, 2018

SCHEDULE J

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 02/28/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 02/28/18
Santa Rita Springs Booster Pump Rehab Phase II	$ 100,000	$ 100,000	77,400	22,600	$ 100,000	$ -	$ 22,600
"A" Series Well Transmission Line	$ 400,000	$ 400,000	314,479	55,367	$ 369,846	$ 30,154	$ 85,521
Water Booster Pump Station	$ 6,000,000	$ 1,861,000	1,656,428	23,536	$ 1,679,964	$ 181,036	$ 204,572
Meter Replacement Program		$ 999,000	996,532	-	$ 996,532	$ 2,468	$ 2,468
Barrigada Tank Repair/Replacement	$ 6,000,000	$ 4,987,000	4,924,959	62,041	$ 4,987,000	$ 0	$ 62,041
Leak Detection	$ 100,000	$ 20,000	16,916	-	$ 16,916	$ 3,084	$ 3,084
Potable Water System Planning	$ 800,000	$ 624,000	598,825	25,175	$ 624,000	$ -	$ 25,175
Implement Ground Water Rule	$ 1,000,000	$ 1,000,000	1,000,000	-	$ 1,000,000	$ -	$ -
Deep Well Rehabilitation	$ 800,000	$ 200,000	189,930	10,071	$ 200,000	$ (0)	$ 10,070
New Deep Wells at Down Hard	$ 2,000,000	$ 810,000			$ -	$ 810,000	$ 810,000
Master Meters	$ 4,000,000	$ 784,000	531,188	180,872	$ 712,060	$ 71,940	$ 252,812
Ugum Water Treatment Plant Intake	$ 1,000,000	$ 982,000	578,858	280,943	$ 859,801	$ 122,199	$ 403,142
Water Wells	$ 4,200,000	$ 4,200,000	2,284,474	745,555	$ 3,030,029	$ 1,169,971	$ 1,915,527
Water Distribution System	$ 12,000,000	$ 11,151,000	5,769,840	4,085,676	$ 9,855,516	$ 1,295,484	$ 5,381,160
Pressure Zone Realignment /	$ 1,000,000	$ 431,000	336,036	1,074	$ 337,110	$ 93,890	$ 94,964
Mechanical/Electrical Equipment	$ 430,000	$ 430,000	328,686	98,112	$ 426,798	$ 3,202	$ 101,314
Water Reservoir Internal/External	$ 800,000	$ -			$ -	$ -	$ -
Water System Reservoirs 2005 Improvements	$ 21,000,000	$ 13,878,000	10,726,206	3,151,434	$ 13,877,640	$ 360	$ 3,151,794
Ugum Water Treatment Plant Reservoir	$ 7,000,000	$ 90,000			$ -	$ 90,000	$ 90,000
Agana Heights & Chaot Tanks	$ 4,500,000	$ 3,280,000	233,265	1,097,022	$ 1,330,287	$ 1,949,713	$ 3,046,735
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 13,500,000	$ 11,605,000	4,120,369	7,484,631	$ 11,605,000	$ 0	$ 7,484,631
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 8,000,000	$ -			$ -	$ -	$ -
Assessment of malojloj Elevetad & Yigo Elevated	$ 500,000	$ 485,117	461,813	23,304	$ 485,117	$ -	$ 23,304
Fire Hydrant Replacement Program	$ -	$ -			$ -	$ -	$ -
		$ -					
Wastewater System Planning	$ 800,000	$ 651,000	550,480	100,520	$ 651,000	$ (0)	$ 100,520
Lift Station Upgrades	$ 5,000,000	$ 946,000	562,785	363	$ 563,149	$ 382,852	$ 383,215
Wastewater Collection System Repl/Rehab	$ 6,500,000	$ 780,000	502,452	157,862	$ 660,314	$ 119,687	$ 277,548
Baza Gardens STP Replacement		$ 3,114,883	969,594	2,145,275	$ 3,114,869	$ 15	$ 2,145,290
Facilities Plan/Design for Umatac-Merizo WWTP		$ 473,000	335,129	36,570	$ 371,699	$ 101,301	$ 137,871
Agat/Santa Rita STP Replacement	$ 19,000,000	$ 67,200,000	39,664,920	27,686,388	$ 67,351,308	$ (151,307)	$ 27,535,080
Agana WWTP Interim Measures		$ 673,000	611,247	61,753	$ 673,000	$ (0)	$ 61,753
Umatac Merizo Replacement	$ 2,000,000	$ -			$ -	$ -	$ -
		$ -					
Wastewater Pump Station Electrical Upgrade	$ 620,000	$ 620,000	91,348	8,513	$ 99,861	$ 520,139	$ 528,652
Electrical Upgrade - Water Wells	$ 1,500,000	$ 1,500,000	1,480,769	19,230	$ 1,500,000	$ 0	$ 19,231
Electrical Upgrade - Water Booster	$ 325,000	$ 2,000			$ -	$ 2,000	$ 2,000
Electrical Upgrade -Water Booster	$ 350,000	$ 200,000	977	-	$ 977	$ 199,023	$ 199,023
Electrical Upgrade - Other Water	$ 250,000	$ 150,000	60,700	-	$ 60,700	$ 89,300	$ 89,300
SCADA Improvements – Phase 3	$ 1,850,000	$ 923,000	427,949	294,410	$ 722,359	$ 200,641	$ 495,051
SCADA Improvements – Phase 4	$ 500,000	$ -			$ -	$ -	$ -
		$ -					$ -
Laboratory Modernization	$ 1,500,000	$ 1,173,000	1,163,037	8,428	$ 1,171,465	$ 1,535	$ 9,963
Land Survey	$ 2,000,000	$ 2,000	1,038	15	$ 1,053	$ 948	$ 963
General Plant Improvements / Water	$ 2,000,000	$ 2,600,000	1,265,043	1,176,695	$ 2,441,737	$ 158,263	$ 1,334,957
Allowance for COI							$ 275,005
Interest Earned							$ 499,593
Total Construction Fund (2013 Series Revenue Bond)	**$ 139,325,000**	**$ 139,325,000**	**$ 82,833,671**	**$ 49,043,434**	**$ 131,877,105**	**$ 7,447,895**	**$ 57,265,926**

PUC's Docket 14-04 dated February 25, 2014

GUAM WATERWORKS AUTHORITY
2014 Series Refunded Bond Project Status
As of Feb. 28, 2018

SCHEDULE K

PROJECT NAME	ORIGINAL APPROVED PROJECT	ADJUSTED PROJECT COST	EXPENDITURES AS OF 02/28/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	20% PUC AS OF 02/28/18	Construction fund balance AS OF 02/28/18
Agana Treatment Plant	$ 10,475,000	$ 11,065,512	11,065,512	$ -	$ 11,065,512	$ (0)	$ 2,095,000	$ (0)
								$ -
Agana Outfall	$ 5,030,000	$ 10,127,198	10,127,198	$ -	$ 10,127,198	$ 0	$ 1,006,000	$ 0
								$ -
								$ -
Northern District (Outfall)	$ 4,700,000	$ 10,251,423	10,251,423	$ -	$ 10,251,423	$ 0	$ 940,000	$ 0
Northern District WWTP Upgrade		$ 173,681	173,681		$ 173,681	$ -		$ -
Northern Treatment Plant		$ -	-		$ -	$ -		$ -
Baza Gardens Wastewater Treatment Plant	$ 500,000	$ 297,177	297,177	$ -	$ 297,177	$ (0)	$ 100,000	$ (0)
Interim Disinfection Facilities	$ 581,000	$ 3,437,311	3,408,599	$ 28,712	$ 3,437,311	$ (0)	$ 116,200	$ 28,712
						$ -		$ -
Electrical Protection	$ 1,000,000	$ 1,512,483	1,512,483.3	$ -	$ 1,512,483	$ (0)	$ 200,000	$ (0)
Well Vulnerability Reduction	$ 600,000	$ 185,522	185,522	$ -	$ 185,522	$ 0	$ 120,000	$ 0
Old Agat Wastewater Collection (I/I Reductic	$ 2,155,000	$ 1,931,659	1,931,659	$ -	$ 1,931,659	$ (0)	$ 431,000	$ (0)
				$ -		$ -		$ -
Chaot WW Pump Station/Collection System	$ 410,000	$ 399,120	399,120	$ -	$ 399,120	$ -	$ 82,000	$ -
Lift Station Upgrades	$ 230,000	$ 149,895	149,895	$ -	$ 149,895	$ 0	$ 46,000	$ 0
Collection Line Upgrades	$ 200,000	$ 62,755	62,755	$ -	$ 62,755	$ 0	$ 40,000	$ 0
"A" Well Transmission Line	$ 2,413,000	$ 3,833,175	3,790,888	$ 42,287	$ 3,833,175	$ (0)	$ 482,600	$ 42,287
					$ -	$ -		$ -
Santa Rita Springs - Booster Pump Rehab.	$ 648,000	$ 306,841	306,841	-	$ 306,841	$ (0)	$ 129,600	$ (0)
						$ -	$ -	$ -
Fena Bypass Transmission line		$ 160,913	160,913	$ -	$ 160,913	$ (0)	$ -	$ (0)
Storage Additions	$ 950,000	$ -			$ -	$ -	$ 190,000	$ -
Booster Station Upgrades	$ 390,000	$ 66,734	66,734	$ -	$ 66,734	$ -	$ 78,000	$ -
Mangilao Tank Repair	$ 800,000	$ 398,367	397,933	$ 434	$ 398,367	$ (0)	$ 160,000	$ 434
Ugum Tank Replacement	$ 2,500,000	$ -			$ -	$ -	$ 500,000	$ -
Ugum WTPlant Refurbishment ($1.724,970EPA)		$ 6,588,473	6,531,525	$ 56,949	$ 6,588,473	$ (0)		$ 56,948
Barrigada Tank Repair/Replacement	$ 3,000,000	$ 65,019	65,019	$ -	$ 65,019	$ 0	$ 600,000	$ 0
						$ -		$ -
Water Reservoir Condition Assessment		$ 1,250,000	1,249,227.16	$ 772	$ 1,250,000	$ 0	$ -	$ 773
EarthTech Well Buyout	$ 5,000,000	$ 5,975,000	5,975,000	$ -	$ 5,975,000	$ -	$ 1,000,000	$ -
Water Wastewater Master Plan	$ 4,900,000	$ 4,881,308	4,881,308	$ -	$ 4,881,308	$ 0	$ 980,000	$ 0
Laboratory Modernization	$ 800,000	$ 135,055	135,055	$ -	$ 135,055	$ 0	$ 160,000	$ 0
Land Survey	$ 800,000	$ 577,836	576,134	$ 1,702	$ 577,836	$ 0	$ 160,000	$ 1,702
Ground Water Disinfection		$ -				$ -		$ -
GWUDI Study		$ 262,234	260,430	1,804	$ 262,234	$ -		$ 1,804
						$ -		$ -
Contingency	$ 12,276,023	$ 154	-	$ -	$ -	$ -		$ 732
						$ -		$ -
						$ -		$ -
						$ -		$ -
						$ -		$ -
						$ -		$ -
Vehicles	$ 1,100,000	$ 1,280,000	2,130,305	$ (850,305)	$ 1,280,000	$ -	$ 220,000	$ -
Generation Equipment	$ 700,000	$ 880,000	2,712	$ 877,288	$ 880,000	$ 0		$ 27,033
Leak Detection/Line Replacement	$ 8,200,000	$ 5,988,494	5,988,494	$ -	$ 5,988,494	$ -	$ 1,640,000	$ -
						$ -		$ -
						$ -		$ -
Automated Meter Reading	$ 12,572,063	$ 17,468,359	16,870,522	$ 537,157	$ 17,468,359.32	$ 0	$ 2,514,413	$ 597,837
Total Construction Fund (2014 Series Refu	$ 82,930,086	$ 89,711,698	88,891,990	$ 758,873.38	$ 89,711,543	$ 1	$ 13,990,813	$ 758,263
Interest Earned	$ 6,781,612	$ (0)				$ (0)		$ 5,032
Total Project Cost Funding	**$ 89,711,698**	**$ 89,711,698**	**88,891,990**	**$ 758,873.38**	**$ 89,711,543**	**$ 1**	**$ 13,990,813**	**$ 763,295**

GUAM WATERWORKS AUTHORITY
2016 Series Bond Project Status
As of Feb. 28, 2018

SCHEDULE L

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 02/28/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 02/28/18
Water Booster Pump Station	$ 4,139,000	$ 4,139,000			$ -	$ 4,139,000	$ 4,139,000
Meter Replacement Program	$ 4,501,000	$ 4,501,000		150,000.00	$ 150,000	$ 4,351,000	$ 4,501,000
Barrigada Tank Repair/Replacement	$ 1,013,000	$ 1,013,000		-	$ -	$ 1,013,000	$ 1,013,000
Leak Detection	$ 1,180,000	$ 1,180,000		-	$ -	$ 1,180,000	$ 1,180,000
Potable Water System Planning	$ 2,276,000	$ 2,276,000	214,954	261,339.91	$ 476,294	$ 1,799,706	$ 2,061,046
Deep Well Rehabilitation	$ 250,000	$ 250,000		110,013.00	$ 110,013	$ 139,987	$ 250,000
New Deep Wells at Down Hard	$ 1,190,000	$ 1,190,000			$ -	$ 1,190,000	$ 1,190,000
Master Meters	$ 3,616,000	$ 3,616,000	112,199	39,339.84	$ 151,539	$ 3,464,461	$ 3,503,801
Ugum Water Treatment Plant Intake	$ 18,000	$ 18,000			$ -	$ 18,000	$ 18,000
Water Wells	$ 2,500,000	$ 2,500,000			$ -	$ 2,500,000	$ 2,500,000
Water Distribution System	$ 2,049,000	$ 49,000			$ -	$ 49,000	$ 49,000
Pressure Zone Realignment /	$ 1,141,000	$ 1,141,000		668,355.20	$ 668,355	$ 472,645	$ 1,141,000
Mechanical/Electrical Equipment	$ 100,000	$ 100,000			$ -	$ 100,000	$ 100,000
Water Reservoir Internal/External	$ 800,000	$ 800,000			$ -	$ 800,000	$ 800,000
Water System Reservoirs 2005 Improvements	$ 42,350,000	$ 28,350,000	1,820,465	8,635,484.26	$ 10,455,949	$ 17,894,051	$ 26,529,535
Ugum Water Treatment Plant Reservoir	$ 6,410,000	$ -			$ -	$ -	$ -
Water Audit Program & Water Loss Control Plan	$ 1,000,000	$ 1,000,000				$ 1,000,000	$ 1,000,000
Agana Heights & Chaot Tanks	$ 1,220,000	$ 1,220,000		500,000.00	$ 500,000	$ 720,000	$ 1,220,000
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 1,895,000	$ 1,895,000		1,822,132.80	$ 1,822,133	$ 72,867	$ 1,895,000
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 10,500,000	$ 7,409,830		7,300,000.00	$ 7,300,000	$ 109,830	$ 7,409,830
Fire Hydrant Replacement Program	$ 2,000,000	$ 2,000,000			$ -	$ 2,000,000	$ 2,000,000
						$ -	
Wastewater System Planning	$ 349,000	$ 349,000	49,760	263,222.72	$ 312,983	$ 36,017	$ 299,240
Lift Station Upgrades	$ 2,404,000	$ 2,404,000	98,716	166,039.41	$ 264,755	$ 2,139,245	$ 2,305,284
Wastewater Collection System Repl/Rehab	$ 2,920,000	$ 2,920,000		224,923.00	$ 224,923	$ 2,695,077	$ 2,920,000
Baza Gardens STP Replacement	$ 16,700,000	$ 29,400,170	8,384,317	20,735,331.58	$ 29,119,649	$ 280,521	$ 21,015,853
Facilities Plan/Design for Umatac-Merizo WWTP	$ 527,000	$ 527,000	192,266	59,839.09	$ 252,105	$ 274,895	$ 334,734
Agat/Santa Rita STP Replacement	$ 3,000,000	$ 3,000,000	512,452	607,247.53	$ 1,119,700	$ 1,880,300	$ 2,487,548
Agana WWTP Interim Measures	$ 827,000	$ 827,000			$ -	$ 827,000	$ 827,000
Umatac Merizo Replacement	$ 8,000,000	$ 20,800,000	2,309,168	18,295,086.32	$ 20,604,254	$ 195,746	$ 18,490,832
						$ -	
Wastewater Pump Station Electrical Upgrade	$ 100,000	$ 100,000			$ -	$ 100,000	$ 100,000
Electrical Upgrade - Water Wells	$ 650,000	$ 650,000			$ -	$ 650,000	$ 650,000
Electrical Upgrade - Water Booster	$ 323,000	$ 323,000			$ -	$ 323,000	$ 323,000
SCADA Improvements – Phase 3	$ 1,177,000	$ 1,177,000	18,000	599,496.51	$ 617,497	$ 559,503	$ 1,159,000
SCADA Improvements – Phase 4	$ 6,500,000	$ 6,500,000			$ -	$ 6,500,000	$ 6,500,000
						$ -	
Laboratory Modernization	$ 1,127,000	$ 1,127,000	1,127,000	-	$ 1,127,000	$ -	$ -
Land Survey	$ 1,998,000	$ 1,998,000	14,147	1,246,376.39	$ 1,260,524	$ 737,476	$ 1,983,853
General Plant Improvements / Water	$ 2,769,463	$ 2,769,463	455,777	1,042,198.14	$ 1,497,975	$ 1,271,488	$ 2,313,686
Information Technology Integration Improvements	$ 500,000	$ 500,000	244,068	-	$ 244,068	$ 255,932	$ 255,932
Interest Earned		$ -					$ 792,582
Total Construction Fund (2016 Series Revenue Bond)	**$ 140,019,463**	**$ 140,019,463**	**$ 15,553,289**	**$ 62,726,426**	**$ 78,279,715**	**$ 61,739,748**	**$ 125,258,756**

GUAM WATERWORKS AUTHORITY
2017 Series Refunding Bond Project Status
As of Feb. 28, 2018

SCHEDULE M

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 02/28/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 02/28/18
Ground Water Disinfection	$ -	$ 500,000	$ 438,141	$ 61,859	$ 500,000	$ 0	$ 61,859
"A" Series Well Transmission Line	$ 600,000	$ 518,144	$ 474,434	$ 1,274	$ 475,709	$ 42,435	$ 43,710
Water Booster Pump Station	$ 500,000	$ 500,000	$ 418,844	$ 81,156	$ 500,000	$ (0)	$ 81,156
Meter Replacement Program	$ 2,500,000	$ 10,300,000	$ 10,254,220	$ 19,409	$ 10,273,628	$ 26,372	$ 45,780
Barrigada Tank Repair/Replacement	$ -	$ 5,450,000	$ 5,442,302	$ 7,698	$ 5,450,000	$ 0	$ 7,698
Leak Detection		$ 200,000	$ -	$ 200,000	$ 200,000	$ -	$ 200,000
Potable Water System Planning	$ 200,000	$ 200,000	$ 179,638	$ 20,362	$ 200,000	$ -	$ 20,362
Implement Ground Water Rule		$ 1,700,000	$ 1,499,464	$ 200,535	$ 1,700,000	$ 1	$ 200,536
Brigade II (Ugum Lift) BPS Upgrade	$ 1,200,000	$ 1,700,000	$ 135,695	$ 202,199	$ 337,895	$ 1,362,105	$ 1,564,305
Deep Well Rehabilitation	$ 548,000	$ 548,000	$ 548,000	$ -	$ 548,000	$ -	$ -
New Deep Wells at Down Hard	$ 3,773,000	$ 638,252	$ 485,743	$ -	$ 485,743	$ 152,509	$ 152,509
Rehabilitation of Asan Springs	$ 900,000	$ 900,000	$ 188,771	$ 152,068	$ 340,838	$ 559,162	$ 711,229
Master Meters	$ 1,600,000	$ 1,600,000	$ 1,421,267	$ 68,690	$ 1,489,957	$ 110,043	$ 178,733
Ugum Water Treatment Plant Intake	$ 3,670,000	$ 700,000	$ 543,615	$ 156,385	$ 700,000	$ -	$ 156,385
Water Wells	$ 2,000,000	$ -	$ -		$ -	$ -	$ -
Water Distribution System	$ 384,000	$ 3,174,748	$ 3,174,748	$ -	$ 3,174,748	$ (0)	$ (0)
Pressure Zone Realignment /	$ 3,550,000	$ -	$ -		$ -	$ -	$ -
Northern System Water Distribution	$ 2,725,000	$ -	$ -	$ -	$ -	$ -	$ -
Central Water Distribution System 2005	$ 1,200,000	$ 900,000	$ 728,780	$ 46,222	$ 775,002	$ 124,998	$ 171,220
Southern Water Distribution System	$ 1,800,000	$ -	$ -		$ -	$ -	$ -
Mechanical/Electrical Equipment	$ 1,360,000	$ 1,200,000	$ 1,079,495	$ 120,505	$ 1,200,000	$ (0)	$ 120,505
Water Reservoir Internal/External	$ 500,000	$ 2,000,000	$ 1,033,356	$ 476,027	$ 1,509,384	$ 490,616	$ 966,644
Water Reservoir Internal/External	$ 2,400,000	$ -	$ -		$ -	$ -	$ -
Water System Reservoirs 2005 Improvements	$ 11,697,000	$ 1,050,000	$ 1,050,000		$ 1,050,000	$ 0	$ 0
Distribution System Upgrades	$ 3,182,000	$ 474,160	$ 451,462	$ 22,698	$ 474,160	$ 0	$ 22,698
Ugum Water Treatment Plant Reservoir	$ 3,672,000	$ -	$ -		$ -	$ -	$ -
Water Audit Program & Water Loss Control Plan		$ 100,000	$ 15,031	$ 63,428	$ 78,459	$ 21,541	$ 84,970
Production Plan / Reduce Navy Purchases		$ 100,000	$ 94,286	$ 5,714	$ 100,000	$ -	$ 5,714
Hydraulic Asessment of Tank		$ 500,000	$ 497,004	$ 2,996	$ 500,000	$ -	$ 2,996
Agana Heights & Chaot Tanks		$ 4,700,000	$ 4,327,370	$ 372,630	$ 4,700,000	$ -	$ 372,630
Tank Major Repair Yigo#1 Mangilao#2 Agat#2		$ 1,900,000	$ 1,750,355	$ 97,659	$ 1,848,013	$ 51,987	$ 149,645
Tank Major Repair Yigo#1 Mangilao#2 Agat#2		$ -			$ -	$ -	$ -
Assessment of malojloj Elevetad & Yigo Elevated		$ 200,000	$ 200,000	$ -	$ 200,000	$ -	$ -
Public Water System Asser Inventory/Condition Assesment		$ 100,000	$ 96,554	$ 3,446	$ 100,000	$ -	$ 3,446
Public Water System GIS & Mapping		$ 50,000	$ 50,000	$ -	$ 50,000	$ -	$ -
		$ -			$ -	$ -	$ -
Wastewater System Planning	$ 1,500,000	$ 1,500,000	$ 1,465,858	$ 8,142	$ 1,474,000	$ 26,000	$ 34,142
Wastewater Vehicles	$ 235,000	$ 235,000	$ 209,795	$ 25,205	$ 235,000	$ 0	$ 25,205
NDWWTP - Chlorine Tanks	$ 250,000	$ 250,000	$ 250,000		$ 250,000	$ -	$ -
Tumon Bay Sewer Upgrades	$ 100,000	$ -	$ -		$ -	$ -	$ -
Wastewater Collection System Repl/Rehab		$ 1,105,000	$ 718,036	$ 283,287	$ 1,001,323	$ 103,677	$ 386,964
Facilities Plan/Design for Baza Gardens WWTP	$ 1,250,000	$ 1,250,000	$ 1,239,250	$ 10,750	$ 1,250,000	$ -	$ 10,750
Facilities Plan/Design for Agat-Santa Rita WWTP	$ 900,000	$ 899,630	$ 881,749	$ 17,881	$ 899,630	$ -	$ 17,881
Priority 1 Sewer Upgrades – Baza Gardens WWTP	$ 650,000	$ -	$ -		$ -	$ -	$ -
Baza Gardens STP Replacement	$ 3,567,000	$ 1,301,947	$ 316,686	$ 314	$ 317,000	$ 984,947	$ 985,261
Facilities Plan/Design for Umatac Merizo WWTP		$ 900,000	$ 739,957	$ 113,901	$ 853,858	$ 46,142	$ 160,043
Agat/Santa Rita STP Replacement	$ 2,968,000	$ 2,218,000	$ 2,217,314	$ 387	$ 2,217,701	$ 300	$ 686
Northern District WWTP Primary Treatment Upgrades	$ -	$ 11,750,000	$ 11,532,253	$ 211,261	$ 11,743,514	$ 6,486	$ 217,747
Biosolids Management Plan		$ 200,000	$ 196,414	$ 3,586	$ 200,000	$ -	$ 3,586
Agana WWTP Interim Measures	$ -	$ 11,500,000	$ 11,242,386	$ 57,614	$ 11,300,000	$ 200,000	$ 257,614
I&I SSES Southern		$ 800,000	$ 778,374	$ 21,626	$ 800,000	$ (0)	$ 21,626
I&I SSES Central		$ 850,000	$ 794,325	$ 55,675	$ 850,000	$ -	$ 55,675
I&I SSES Northern		$ -			$ -	$ -	$ -
Umatac Merizo Replacement		$ 250,000	$ 247,431	$ 2,569	$ 250,000	$ -	$ 2,569
Northern District WWTP Secondary Treatment Upgrades		$ 1,000,000	$ -	$ 1,000,000	$ 1,000,000	$ -	$ 1,000,000
		$ -					
Well Electrical Protection	$ 26,000	$ -	$ -		$ -	$ -	$ -
SCADA Pilot Project	$ 300,000	$ 61,950	$ 19,812	$ 42,138	$ 61,950	$ (0)	$ 42,138
Electrical Upgrade - Water Wells	$ 3,000,000	$ 354,227	$ 335,378	$ 18,849	$ 354,227	$ 0	$ 18,849
Electrical Upgrade - Water Booster	$ 325,000	$ -	$ -		$ -	$ -	$ -
Electrical Upgrade -Water Booster	$ 350,000	$ -	$ -		$ -	$ -	$ -
Electrical Upgrade - Other Water	$ 250,000	$ -			$ -	$ -	$ -
SCADA Improvements – Phase 1	$ 250,000	$ 250,000	$ 193,989	$ 56,011	$ 250,000	$ -	$ 56,011
SCADA Improvements – Phase 2	$ 1,100,000	$ 1,056,986	$ 1,027,424	$ 29,562	$ 1,056,986	$ -	$ 29,562
SCADA Improvements – Phase 3	$ 2,500,000	$ 24,956	$ 24,956	$ -	$ 24,956	$ 0	$ 0
SCADA Improvements – Phase 4	$ 850,000	$ -	$ -		$ -	$ -	$ -
		$ -					
Laboratory Modernization	$ 1,200,000	$ -	$ -		$ -	$ -	$ -
Land Survey	$ 1,500,000	$ 500,000	$ 470,590	$ 29,097	$ 499,687	$ 313	$ 29,410
General Plant Improvements / Water	$ 14,370,000	$ 7,241,000	$ 7,241,000	$ 0	$ 7,241,000	$ 0	$ 0
Interest Earned							$ 88,218
Total Construction Fund (2010 Series Revenue Bond)	**$ 87,402,000**	**$ 87,402,000**	**$ 78,721,552**	**$ 4,370,814**	**$ 83,092,366**	**$ 4,309,634**	**$ 8,768,666**

1.) PUC's Docket 11-01 $29,000,000.00 dated
09/19/11authorized GWA for reallocation
2) PUC's Docket 11-01 Reallocation of $23,246,000.00 dated 07/30/12
3) PUC's Dockect Reallocation dated February 2013

GUAM WATERWORKS AUTHORITY
Schedule of Series 2013, 2014 Refunding, 2016 and 2017 Refunding Bond Bank Accounts
As of February 28, 2018

SCHEDULE N

	2/28/2018
BANK OF GUAM	
BOG - Revenue Account	7,778,784
BOG - Operations and Maintenance Reserve	3,083,482
BOG - Operations, Maintenance, Renewal and Replacement Reserve Fund	17,423,213
BOG - Capital Improvement Fund	1,917,781
BOG - O & M Reserve	13,559,735
BOG - Debt Service Reserve	11,253,683
BOG - CAPEX Reserve	15,510,753
Total BOG Bank Account Balance	**70,527,432**
Series 2013 Bond:	
BOG - Construction Fund	57,265,927
USB - Debt Service Fund	1,566,065
USB - Debt Service Reserve Fund	12,031,688
Total Series 2013 Bond Bank Balance	**70,863,680**
Series 2014 Refunding Bond:	
BOG - Construction Fund	763,295
USB - Debt Service Fund	2,943,036
USB - Debt Service Reserve Fund	7,781,747
Total Series 2014 Refunding Bond Bank Balance	**11,488,077**
Series 2016 Bond:	
BOG - Construction Account	125,258,757
BOG - Capitalized Interest Fund	2
USB - Debt Service Fund	1,195,618
USB - Debt Service Reserve Fund	7,594,585
Total Series 2016 Bond Bank Balance	**134,048,962**
Series 2017 Refunding Bond:	
BOG - Construction Account	8,768,666
BOG - Cost of Issuance Fund	47,463
USB - Debt Service Fund	2,330,859
USB - Debt Service Reserve Fund	7,566,460
Total Series 2017 Refunding Bond Bank Balance	**18,713,448**

GUAM WATERWORKS AUTHORITY

Guam Waterworks Authority

VEHICLE FLEET STATUS

3/9/2018

EQUIPMENT STATUS				
Description	Number of Equipment	Number of Equipment Available	Number of Equipment Not Available	Percentage
Backhoe	5	2	3	40%
Bobcat	1	1	0	100%
Boom Truck	2	0	2	0%
Crane	2	0	2	0%
Dump Truck	3	2	1	67%
Flat Bed	1	0	1	0%
Forklift	7	6	1	86%
Fuel Tanker	1	1	0	100%
Heavy Duty	3	0	3	0%
Light	150	101	49	67%
Mini Backhoe	4	1	3	25%
Pumper Truck	1	1	0	100%
Sludge Truck	4	3	1	75%
Tow	1	0	1	0%
Tractor	2	2	0	100%
Trailer	12	8	4	67%
Trencher	1	1	0	100%
Vaccon	1	1	0	100%
Vacuum Truck	3	3	0	100%
Water Buffalo	2	2	0	100%
Water Tanker	5	1	4	20%
Total	211	136	75	

SUMMARY						
Operational	Operational w/Rprs Pending	In Shop-Accident Repairs	In Shop-Assessment Pending	In Shop-Repairs Pending	In Shop-Vendor Repairs	Recommend Survey
2	0	0	0	1	0	2
1	0	0	0	0	0	0
0	0	0	0	2	0	0
0	0	0	0	0	1	1
1	1	0	0	1	0	0
0	0	0	0	0	0	1
6	0	0	0	0	0	1
1	0	0	0	0	0	0
0	0	0	0	0	2	1
98	3	0	7	5	6	31
1	0	0	1	2	0	0
0	1	0	0	0	0	0
3	0	0	0	0	1	0
0	0	0	0	0	0	1
2	0	0	0	0	0	0
8	0	0	0	1	1	2
1	0	0	0	0	0	0
1	0	0	0	0	0	0
3	0	0	0	0	0	0
2	0	0	0	0	0	0
1	0	0	0	3	0	1
131	5	0	8	15	11	41

Guam Waterworks Authority	Date: 3/9/2018
	Time:

REVIEWS			
TOTAL PUMPS INSTALLED	51	OVERAL AVERAGE	95%
TOTAL PUMPS OPERATIONAL	48	% OF OPERATING PUMPS	94%
TOTAL BOOSTER PUMP STATIONS	25		

GUAM WATERWORKS AUTHORITY

WATER DISTRIBUTION FACILITIES REPORT

Northern District

NO:	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	PUMP AND MOTOR INVENTORY
1	Gayinero	20	2	2	100%	OP	A						
2	Mataguac	25	2	1	50%	OP	A	Pump motor burnt.					
3	Santa Rosa	15	2	2	100%	OP	A						
4	Hyundai	40	2	1	50%	OP	A	Pump # 1 requires pump and motor. Station to undergo renovation during reservoir project.					
5	Access	60	2	2	100%	OP	A						
6	Chln. Palauan	5	2	2	100%	N/A							
7	Nimitz Hill	7.5	2	2	100%	N/A							
8	Adawag	1.5	2	1	50%	N/A				Electrical for pump control defective. Materials being procured.			
9	Pale Kiren	1	1	1	100%	N/A							
10	Ulloa/Untalan	1	2	2	100%	OP	A						
11	Latte Heights	15	2	2	100%	OP	A						
	TOTAL = 11		**21**	**18**	**86%**								
pump availability =no of operational pumps/no of pumps*100%													

Central District

NO:	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	UPDATES
1	Pago	150 / 100	3	3	100%	0P	A	Pump 2 leaking at seal, pump operational, work ongoing.					
2	Brigade	60	3	3	100%	OP	A						
3	Windward Hills	200 / 75	3	3	100%	OP	A						
4	Santa Rita Springs	40	2	2	100%	OP	A						
5	Santa Ana (Lower)	25	2	2	100%	N/A						CIP required for new unit and electrical for generator	
6	Camacho	1	1	1	100%	N/A						CIP required for new unit and electrical for generator	
7	Tenorio	1.5	1	1	100%	N/A						CIP required for new unit and electrical for generator	
	Total=7		**15**	**15**	**100%**								
pump availability =no of operational pumps/no of pumps*100%													

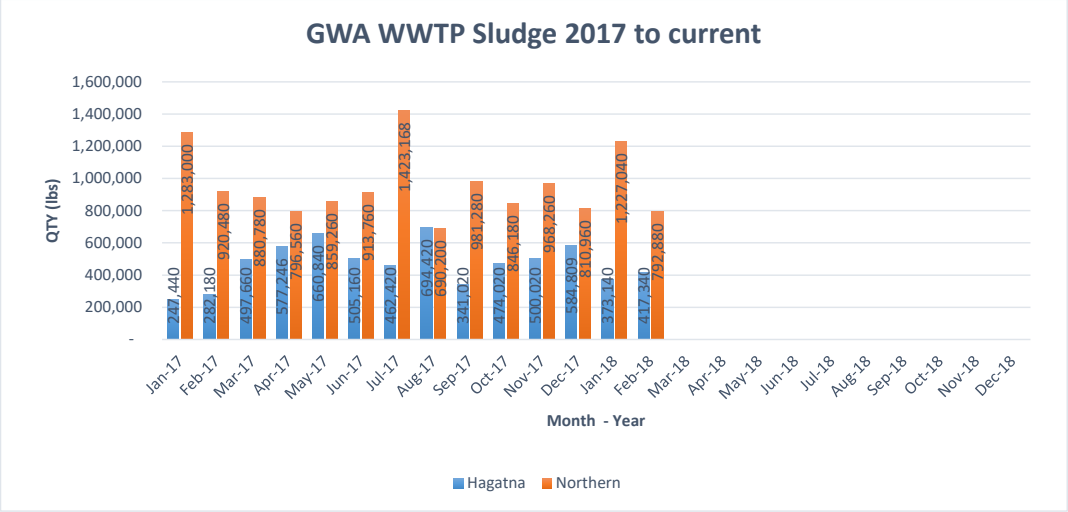
Southern District

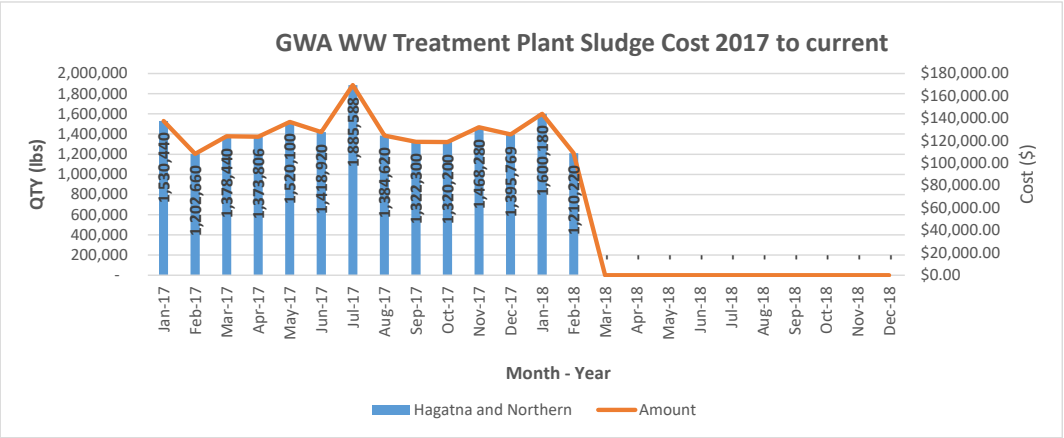
NO:	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	UPDATES
1	Malojloj Line	125 / 50	3	3	100%	OP	A						
2	Geus	25	2	2	100%	OP	A						
3	Pigua	7.5	2	2	100%	N/A							
4	Toguan	25	2	2	100%	OP	A						
5	WBP-2	25	2	2	100%	OP	A						
6	WBP-1	5	2	2	100%	OP	A						
7	Malojloj Elevated	15	2	2	100%	OP	A						
	Total=7		**15**	**15**	**100%**								
pump availability =no of operational pumps/no of pumps*100%													

	Hagatna		Northern		Hagatna and Northern	
2017	Qty	Amount	Qty	Amount	Qty	Amount
Month- Yr	lbs	$	lbs	$	lbs	$
Jan-17	247,440	$22,269.60	1,283,000	$115,470.00	1,530,440	$137,739.60
Feb-17	282,180	$25,396.20	920,480	$82,843.20	1,202,660	$108,239.40
Mar-17	497,660	$44,789.40	880,780	$79,270.20	1,378,440	$124,059.60
Apr-17	577,246	$51,952.14	796,560	$71,690.40	1,373,806	$123,642.54
May-17	660,840	$59,475.60	859,260	$77,333.40	1,520,100	$136,809.00
Jun-17	505,160	$45,464.40	913,760	$82,238.40	1,418,920	$127,702.80
Jul-17	462,420	$41,617.80	1,423,168	$128,085.12	1,885,588	$169,702.92
Aug-17	694,420	$62,497.80	690,200	$62,118.00	1,384,620	$124,615.80
Sep-17	341,020	$30,691.80	981,280	$88,315.20	1,322,300	$119,007.00
Oct-17	474,020	$42,661.80	846,180	$76,156.20	1,320,200	$118,818.00
Nov-17	500,020	$45,001.80	968,260	$87,143.40	1,468,280	$132,145.20
Dec-17	584,809	$52,632.81	810,960	$72,986.40	1,395,769	$125,619.21
Grand Total	5827235	$524,451.15	11373888	$1,023,649.92	17201123	$1,548,101.07

	Hagatna		Northern		Hagatna and Northern	
2018	Qty	Amount	Qty	Amount	Qty	Amount
Month- Yr	lbs	$	lbs	$	lbs	$
Jan-18	373,140	$33,582.60	1,227,040	$110,433.60	1,600,180	$144,016.20
Feb-18	417,340	$37,560.60	792,880	$71,359.20	1,210,220	$108,919.80
Mar-18		$0.00		$0.00	-	$0.00
Apr-18		$0.00		$0.00	-	$0.00
May-18		$0.00		$0.00	-	$0.00
Jun-18		$0.00		$0.00	-	$0.00
Jul-18		$0.00		$0.00	-	$0.00
Aug-18		$0.00		$0.00	-	$0.00
Sep-18		$0.00		$0.00	-	$0.00
Oct-18		$0.00		$0.00	-	$0.00
Nov-18		$0.00		$0.00	-	$0.00
Dec-18		$0.00		$0.00	-	$0.00
Grand Total	790480	$71,143.20	2019920	$181,792.80	2810400	$252,936.00

Hagatna and Northern WWTP Sludge Report 2016, GWA Operations kcog / df, 3/14/2018





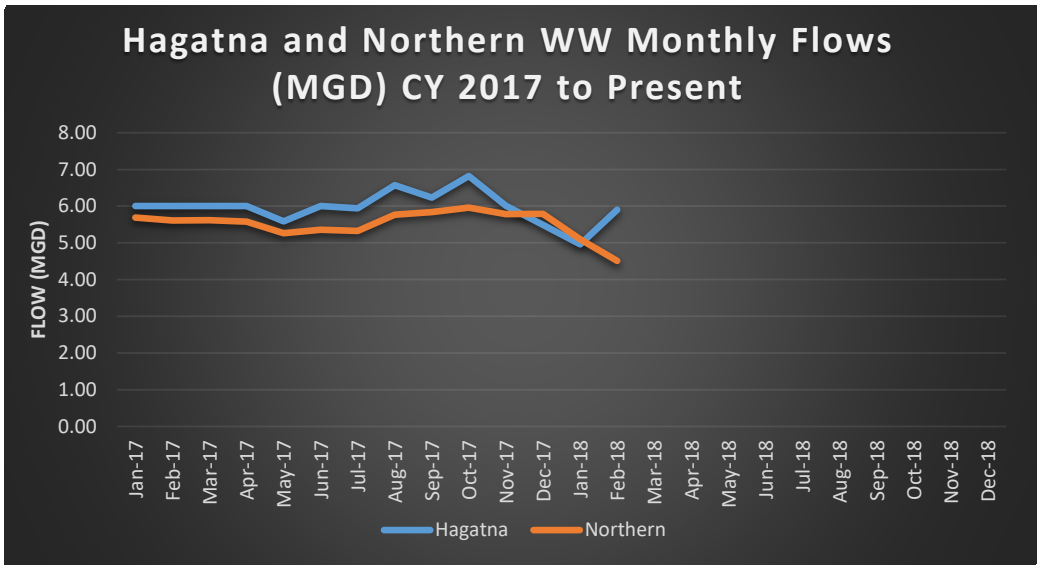
Hagatna and Northern WWTP Sludge Report 2016, GWA Operations kcog / df, 3/14/2018

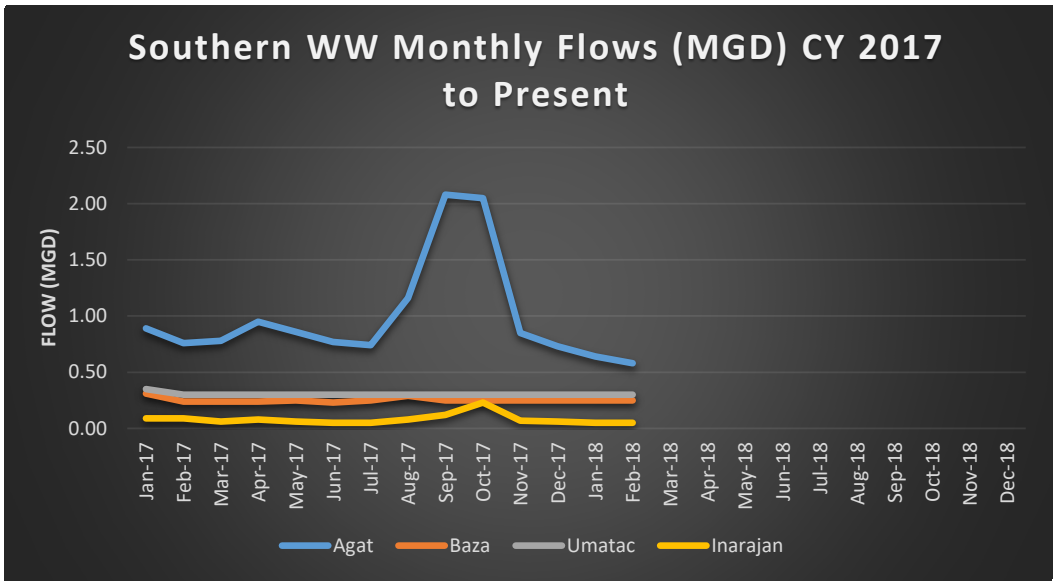
Wastewater Treatment Plant Average Monthy Flows Million Gallons Per Day

2017	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
Jan-17	6.00	5.69	0.89	0.31	0.35	0.09
Feb-17	6.00	5.61	0.76	0.24	0.30	0.09
Mar-17	6.00	5.62	0.78	0.24	0.30	0.06
Apr-17	6.00	5.58	0.95	0.24	0.30	0.08
May-17	5.59	5.26	0.86	0.25	0.30	0.06
Jun-17	6.00	5.36	0.77	0.23	0.30	0.05
Jul-17	5.94	5.33	0.74	0.25	0.30	0.05
Aug-17	6.57	5.77	1.16	0.29	0.30	0.08
Sep-17	6.23	5.84	2.08	0.25	0.30	0.12
Oct-17	6.82	5.96	2.05	0.25	0.30	0.23
Nov-17	6.01	5.78	0.85	0.25	0.30	0.07
Dec-17	5.49	5.79	0.73	0.25	0.30	0.06
2017 Average MGD	**6.05**	**5.63**	**1.05**	**0.25**	**0.30**	**0.09**
2017 Total MGY	2,210	2,056	384	93	111	32

2018	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
Jan-18	4.96	5.10	0.64	0.25	0.30	0.05
Feb-18	5.90	4.51	0.58	0.25	0.30	0.05
Mar-18						
Apr-18						
May-18						
Jun-18						
Jul-18						
Aug-18						
Sep-18						
Oct-18						
Nov-18						
Dec-18						
2018 Average MGD	**5.43**	**4.81**	**0.61**	**0.25**	**0.30**	**0.05**
2018 Total MGY	1,982	1,754	223	91	110	18

GWA WWT Flow Report 2013 to Present, prepared by kcog/df, 3/14/2018





GWA WWT Flow Report 2013 to Present, prepared by kcog/df, 3/14/2018

Wastewater Treatment Plant Average Monthy Flows Million Gallons Per Day

	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
DESIGN FLOWS (MGD)	12.0	12.0	0.75	0.60	0.39	0.19

2013	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
Jan-13	5.72	5.23	0.83	0.06	0.16	0.07
Feb-13	5.94	5.38	0.71	0.05	0.11	0.07
Mar-13	5.70	5.34	0.75	0.06	0.16	0.07
Apr-13	5.50	5.23	0.69	0.05	0.09	0.08
May-13	5.72	5.15	0.92	0.07	0.14	0.07
Jun-13	5.69	5.27	0.80	0.06	0.25	0.06
Jul-13	5.82	5.48	0.80	0.08	0.24	0.08
Aug-13	6.02	5.68	1.02	0.08	0.22	0.08
Sep-13	6.56	6.33	1.42	0.04	0.75	0.04
Oct-13	6.88	6.20	1.63	0.05	0.63	0.05
Nov-13	5.99	5.67	1.07	0.12	0.57	0.12
Dec-13	5.92	5.56	0.80	0.06	0.67	0.06
2013 Ave MGD	**5.96**	**5.54**	**0.95**	**0.07**	**0.33**	**0.07**
2013 Total MGY	2,174	2,023	348	24	121	26

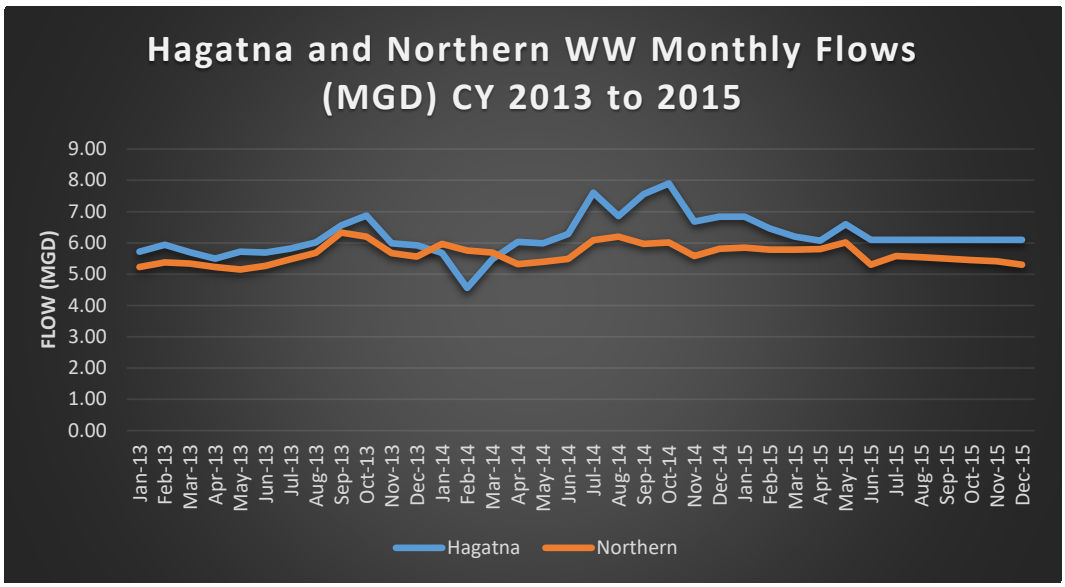
2014	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
Jan-14	5.68	5.97	1.13	0.09	0.72	0.07
Feb-14	4.56	5.76	1.12	0.11	0.99	0.16
Mar-14	5.48	5.69	0.7	0.14	0.78	0.06
Apr-14	6.03	5.32	0.67	0.09	0.52	0.05
May-14	5.99	5.4	0.66	0.09	0.31	0.05
Jun-14	6.28	5.49	0.67	0.09	0.28	0.05
Jul-14	7.61	6.09	1.34	0.09	0.39	0.13
Aug-14	6.86	6.2	1.46	0.09	0.27	0.15
Sep-14	7.56	5.97	1.45	0.37	0.35	0.11
Oct-14	7.9	6.02	2.01	0.38	0.93	0.19
Nov-14	6.68	5.58	1.35	0.22	0.27	0.14
Dec-14	6.84	5.81	0.86	0.15	0.16	0.07
2014 Ave MGD	**6.46**	**5.78**	**1.12**	**0.16**	**0.50**	**0.10**
2014 Total MGY	2,356	2,108	408	58	182	37

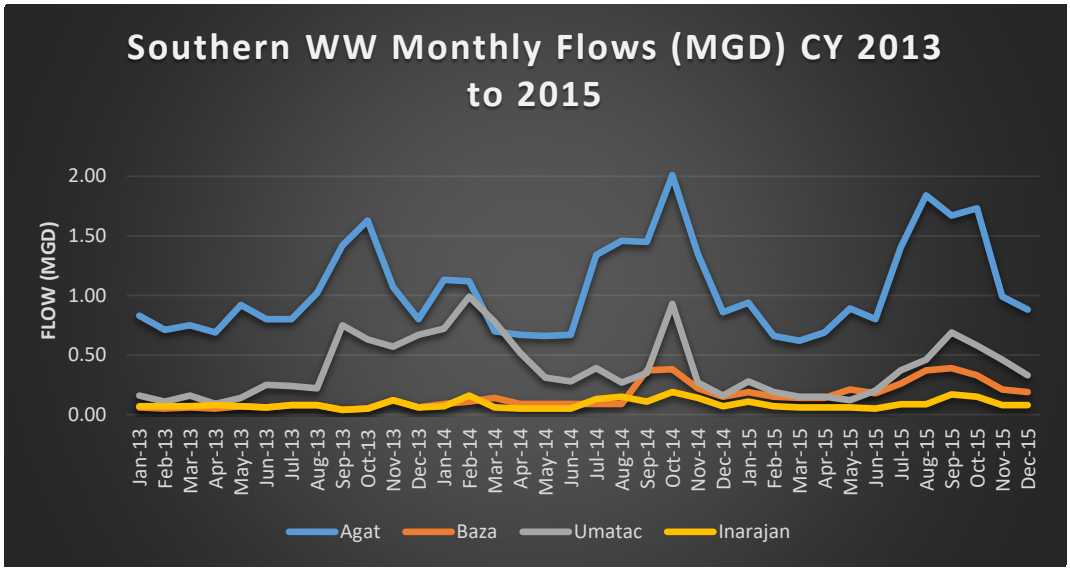
2015	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
Jan-15	6.84	5.85	0.94	0.19	0.28	0.11
Feb-15	6.46	5.78	0.66	0.15	0.19	0.07
Mar-15	6.20	5.78	0.62	0.14	0.15	0.06
Apr-15	6.07	5.80	0.69	0.14	0.15	0.06
May-15	6.60	6.02	0.89	0.21	0.12	0.06
Jun-15	6.10	5.30	0.80	0.18	0.20	0.05
Jul-15	6.10	5.58	1.40	0.26	0.37	0.09
Aug-15	6.10	5.54	1.84	0.37	0.46	0.09
Sep-15	6.10	5.50	1.67	0.39	0.69	0.17
Oct-15	6.10	5.45	1.73	0.33	0.58	0.15
Nov-15	6.10	5.41	0.99	0.21	0.46	0.08
Dec-15	6.10	5.30	0.88	0.19	0.33	0.08
2015 Ave MGD	**6.24**	**5.61**	**1.09**	**0.23**	**0.33**	**0.09**
2015 Total MGY	2,277	2,047	399	84	121	32

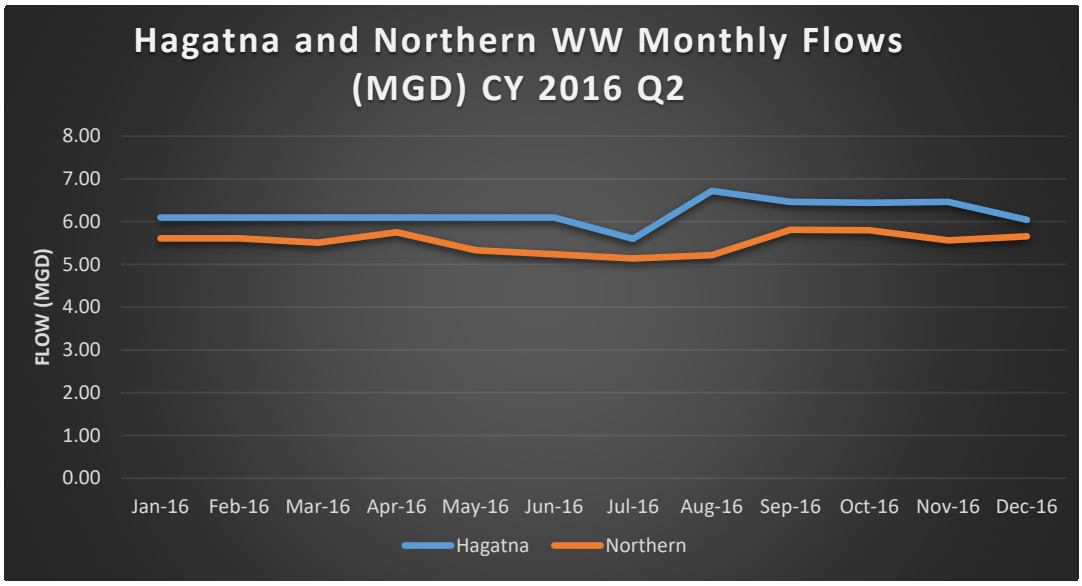
GWA WWT Flow Report 2013 to Present, prepared by kcog/df, 3/14/2018

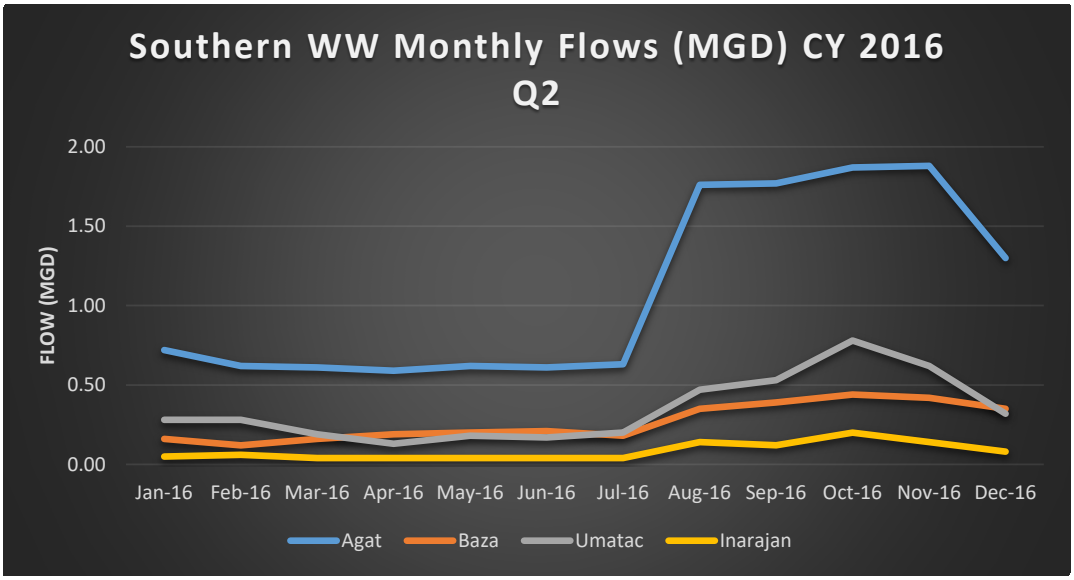
2016	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
Jan-16	6.10	5.61	0.72	0.16	0.28	0.05
Feb-16	6.10	5.61	0.62	0.12	0.28	0.06
Mar-16	6.10	5.51	0.61	0.16	0.19	0.04
Apr-16	6.10	5.75	0.59	0.19	0.13	0.04
May-16	6.10	5.33	0.62	0.20	0.18	0.04
Jun-16	6.10	5.24	0.61	0.21	0.17	0.04
Jul-16	5.60	5.14	0.63	0.18	0.20	0.04
Aug-16	6.72	5.22	1.76	0.35	0.47	0.14
Sep-16	6.46	5.81	1.77	0.39	0.53	0.12
Oct-16	6.44	5.80	1.87	0.44	0.78	0.20
Nov-16	6.46	5.56	1.88	0.42	0.62	0.14
Dec-16	6.04	5.66	1.30	0.35	0.32	0.08
Average MGD	**6.19**	**5.52**	**1.08**	**0.26**	**0.35**	**0.08**
2016 Total MGY	**2,261**	**2,015**	**395**	**96**	**126**	**30**

GWA WWT Flow Report 2013 to Present, prepared by kcog/df, 3/14/2018

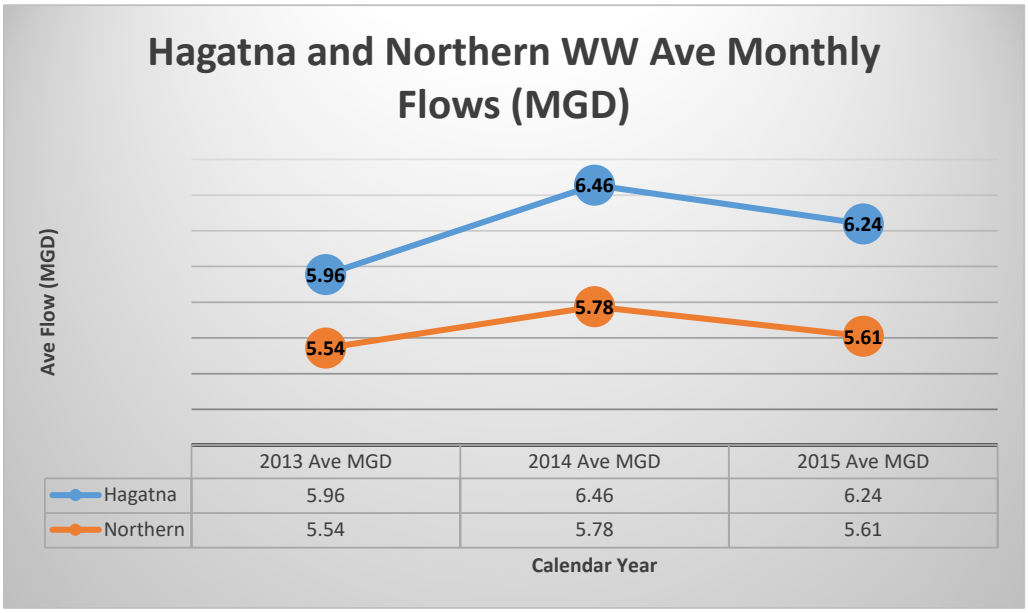

Hagatna and Northern WW Monthly Flows (MGD) CY 2013 to 2015
FLOW (MGD)
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
Jan-13 Feb-13 Mar-13 Apr-13 May-13 Jun-13 Jul-13 Aug-13 Sep-13 Oct-13 Nov-13 Dec-13 Jan-14 Feb-14 Mar-14 Apr-14 May-14 Jun-14 Jul-14 Aug-14 Sep-14 Oct-14 Nov-14 Dec-14 Jan-15 Feb-15 Mar-15 Apr-15 May-15 Jun-15 Jul-15 Aug-15 Sep-15 Oct-15 Nov-15 Dec-15
Hagatna
Northern

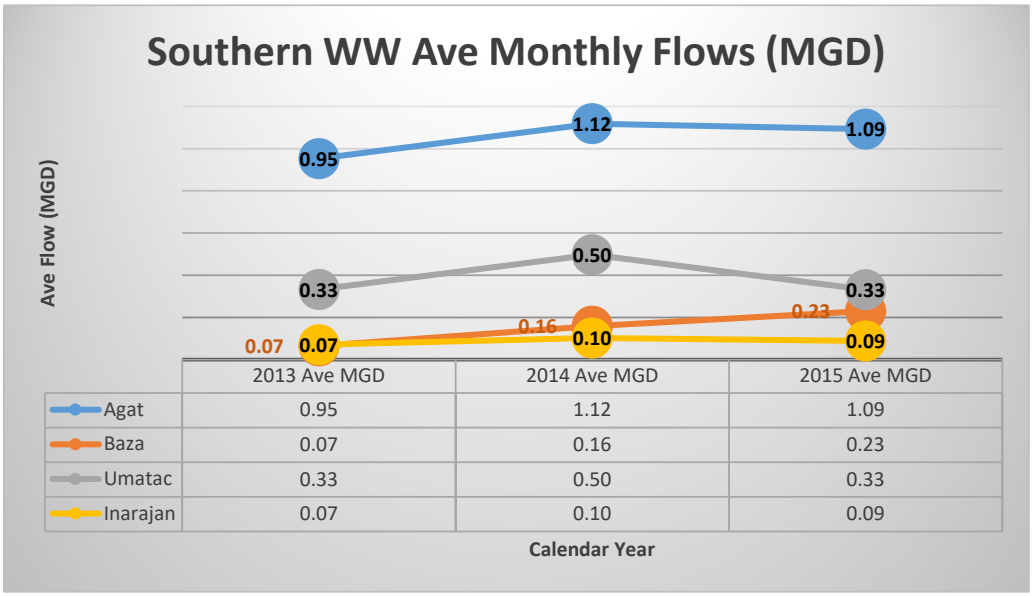

Southern WW Monthly Flows (MGD) CY 2013 to 2015
FLOW (MGD)
2.00
1.50
1.00
0.50
0.00
Jan-13 Feb-13 Mar-13 Apr-13 May-13 Jun-13 Jul-13 Aug-13 Sep-13 Oct-13 Nov-13 Dec-13 Jan-14 Feb-14 Mar-14 Apr-14 May-14 Jun-14 Jul-14 Aug-14 Sep-14 Oct-14 Nov-14 Dec-14 Jan-15 Feb-15 Mar-15 Apr-15 May-15 Jun-15 Jul-15 Aug-15 Sep-15 Oct-15 Nov-15 Dec-15
Agat
Baza
Umatac
Inarajan



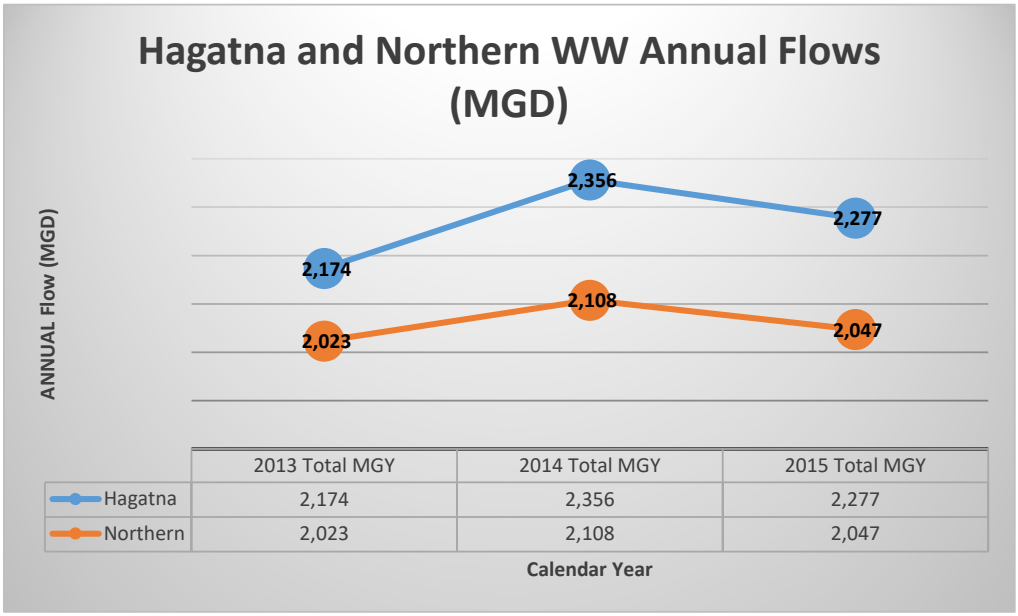


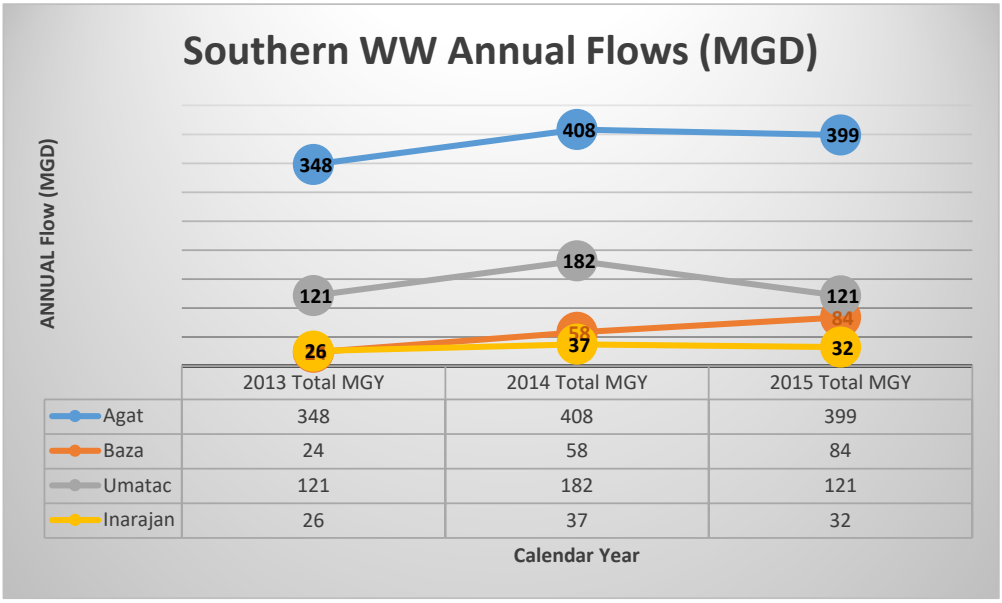
GWA WWT Flow Report 2013 to Present, prepared by kcog/df, 3/14/2018





GWA WWT Flow Report 2013 to Present, prepared by kcog/df, 3/14/2018





GWA WWT Flow Report 2013 to Present, prepared by kcog/df, 3/14/2018

Guam Waterworks Authority	Date: 3/1/2018 Time:

REVIEWS			
TOTAL PUMPS INSTALLED	169	OVERAL AVERAGE	84%
TOTAL PUMPS OPERATIONAL	141	% OF OPERATING PUMPS	83%
TOTAL PUMP STATIONS	78		

GUAM WATERWORKS AUTHORITY

WASTEWATER FACILITIES REPORT

Northern District

NO:	FACILITY	Priority Listing	NO OF INSTALLED	NO OF OPERATIONAL	PUMP AVAILABILITY %	Pump NO.	Action Required	Ref. No./Date	PUMP UNIT REMARKS	Additional Remarks
1	FUJITA					1	Pump #1 installed back from line #2 to line #1(still off-line) ***awaiting electrician's assessment on pump***	2/28/2018		Check valve installed on line #1 on 2/27/18
						2	Pump #2 original installed	2/28/2018		
							*Back online	3/1/2018		
						3				
						4				
			4	3	75%					
2	Southern Link					1				
						2				
						3				
						4	Pump #4 suction clogged			
			4	3	75%					
3	Route #16					1				
						2				
						3				
						4	VFD Issues			
			4	4	100%					
4	HARMON					1				
						2	Pump #2 at Washland for open winding	PO #301753		
			2	1	50%					
5	MACHECHE					1				
						2				
			2	2	100%					
6	LATTE DOUBLE TROUBLE					1				
						2				
			2	2	100%					
7	LATTE SUBMARINE					1				
						2				
			2	2	100%					
8	MACHANAO					1				
						2				
			2	2	100%					
9	YPAOPAO ESTATES					1				
						2				
						3				
			3	3	100%					
10	PGD					1				
						2				
			2	2	100%					
11	LATTE PLANTATION					1				
						2				
			2	2	100%					
12	PASEO DE ORO					1				
						2				
			2	2	100%					
13	ASTUMBO #1					1				
						2				
			2	2	100%					
14	ASTUMBO #2					1				
						2				
			2	2	100%					
15	FEMA '96					1				
						2				
			2	2	100%					
						1				

16	LATTE SUN RISE					2				
			2	2	100%					
17	HAFA ADAI					1				
						2				
			2	2	100%					
18	PACIFIC LATTE					1				
						2				
			2	2	100%					
19	SANTA ANA					1				
						2				
			2	2	100%					
20	ZERO DOWN					1				
						2				
			2	2	100%					
21	Yigo PS					1				
						2	Pump #2 at JMI for rewinding	PO 301754		
						3	Pump #3 awaiting installation of discharge valve. Shutdown of station needed. Detry, Ben Lujan & PGE Pumpper Trucks.	OQ #s 31651, 31652, 31654		
			3	1	33%					
22	Ypao PS					1	**Cooling chamber jacket welded. Pump #1 back online**	**2/20/2018**		
						2				
			2	2	100%					
	Northern TP									
	TOTAL = 22		**52**	**47**	**90%**					
Central District										

NO:	FACILITY	Priority Listing	NO OF INSTALLED	NO OF OPERATIONAL	PUMP AVAILABILITY %	Pump NO.	Action Required	Ref. No./Date	PUMP UNIT REMARKS	Additional Remarks
1	AGANA MAIN					1				
						2	Pump #2 taken out (2/13/18) and sent to JMI due to seals leaking	OQ#32161 OR#31950 2/21/18		
						3				
						4				
			4	3	75.00%					
2	CHAOT					1				
						2				
						3				
			3	3	100.00%					
3	MAMAJANAO					1	Off-line awaiting eccentric reducer	OQ#31721 (12/07/18) OR #31551(12/14/17)		
						2				
						3				
			3	2	66.67%					
4	BARRIGADA					1	Pump #1 secured due to tripping as per John Blas	3/1/2018		
						2				
			2	1	50.00%					
5	BAYSIDE					1				
			1	1	100.00%					
6	TA'I MANGILAO					1				
						2	Seal failure/pump at Washland for rewinding	OQ#31870(01/02/18) OR#31663(01/05/18)		
						3				
			3	2	66.67%					
7	MONGMONG/TOTO					1				
						2				
			2	2	100.00%					
8	PAGO DOUBLE					1	secured & needs to be replaced/**CIP** approved pending final review from finance			
						2				
						3				
			3	2	66.67%					
9	MANGILAO					1	Impeller needed for pump #1	OQ#31892(01/05/18) OR#31765(01/25/18)		
							Pump #1 at JMI for repair (SULZER ABS Ser. No. 001922)	OQ#31890(01/05/18) OR#31686(01/09/18)		
						2	Awaiting eccentric reducers for discharge line / Pump #2 temporary on line #1	OQ#31461(11/01/17) OR#31558(12/15/18)		
			2	1	50.00%					
10	PITI					1	Upon installation of pump found cooling jacket to be leaking and sent back to JMI on 02/20/18(Still under warranty)	2/20/2018		
						2				
			2	1	50.00%					
						1				

11	ASAN					2				
			2	2	100.00%					
12	SINAJANA					1				
						2				
			2	2	100.00%					
13	DAIRY ROAD					1	Pump #1 at Washland for rewinding	?		
						2				
			2	1	50.00%					
14	FADIAN					1				
						2				
			2	2	100.00%					
15	FLORA GARDENS					1				
						2				
			2	2	100.00%					
16	ORDOT					1				
						2	**Pump #2 removed as per John Blas**	**3/1/2018**		
			2	1	50.00%					
17	CHALAN PAGO #5					1	Pump #1 at @Washland for rewinding			
						2				
			2	1	50.00%					
18	COMMERCIAL PORT					1				
						2				
						3				
			3	3	100.00%					
19	CHALAN PAGO #3					1				
						2				
			2	2	100.00%					
20	CABRAS ISLAND					1				
						2				
			2	2	100.00%					
						1				

GUAM WATERWORKS AUTHORITY

WASTEWATER COLLECTION REPORT

MONTHLY REPORT

FEBRUARY 2018



CCTV INSPECTIONS AND SEWER CLEANING

FEB. 01 - FEB. 07	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3267		6,534
Feet Completed	4873			4873
	149.16%	0.00%		75%

FEB. 08 – FEB. 14	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3267		6,534
Feet Completed	4193.9			4193.9
	128%	0%		64%

FEB.15 – FEB 21	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3267		6,534
Feet Completed	10,959.00			10959
	335%	0%		168%

FEB. 22 – FEB. 28	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3267		6,534
Feet Completed	6123			6123
	187%	0%		94%

	January	February	March	April	May	June
CCTV/Jetting	2.86	4.95	0.00	0.00	0.00	0.00

PUMPING STATION TROUBLE CALLS

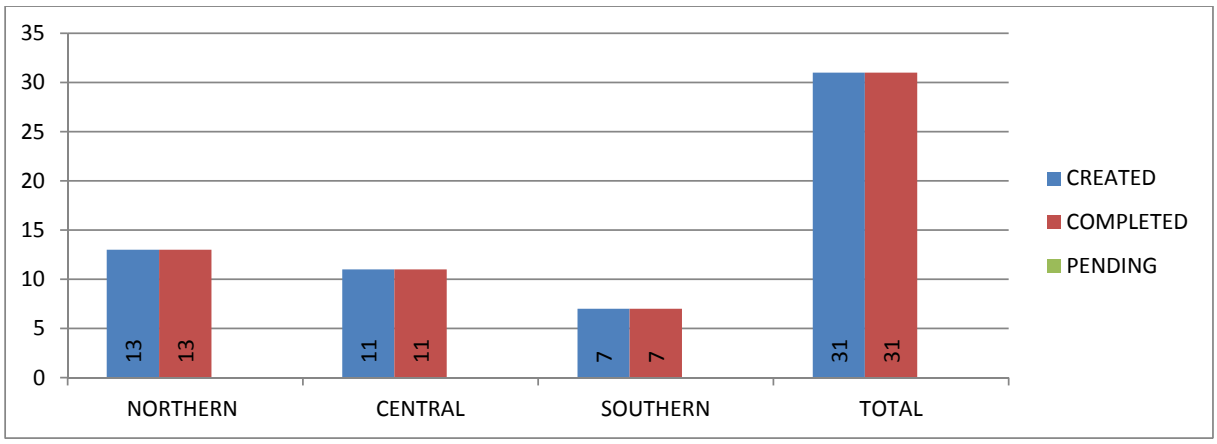
Feb. 01 - Feb. 07	CREATED	COMPLETED	PENDING
NORTHERN	6	6	0
CENTRAL	3	3	0
SOUTHERN	1	1	0
TOTAL	10	10	0

Feb. 08 – Feb. 14	CREATED	COMPLETED	PENDING
NORTHERN	4	4	0
CENTRAL	4	4	0
SOUTHERN	2	2	0
TOTAL	10	10	0

Feb.15 – Feb. 21	CREATED	COMPLETED	PENDING
NORTHERN	1	1	0
CENTRAL	1	1	0
SOUTHERN	3	3	0
TOTAL	5	5	0

Feb. 22 – Feb. 28	CREATED	COMPLETED	PENDING
NORTHERN	2	2	0
CENTRAL	3	3	0
SOUTHERN	1	1	0
TOTAL	6	6	0

	CREATED	COMPLETED	PENDING
NORTHERN	13	13	0
CENTRAL	11	11	0
SOUTHERN	7	7	0
TOTAL	31	31	0



MAINTENANCE PREVENTIVE AND CORRECTIVE CALL OUTS

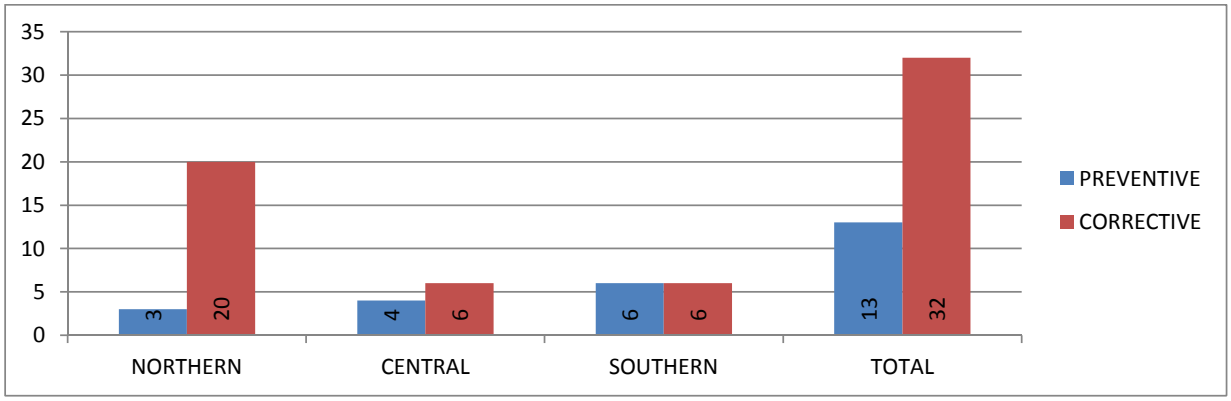
01/29/18 – 02/02/18	PREVENTIVE	CORRECTIVE
NORTHERN	1	5
CENTRAL	0	0
SOUTHERN	0	0
TOTAL	1	5

02/05/18 -02/09/18	PREVENTIVE	CORRECTIVE
NORTHERN	1	5
CENTRAL	4	0
SOUTHERN	0	1
TOTAL	5	6

02/12/18 – 02/16/18	PREVENTIVE	CORRECTIVE
NORTHERN	0	2
CENTRAL	0	0
SOUTHERN	6	2
TOTAL	6	4

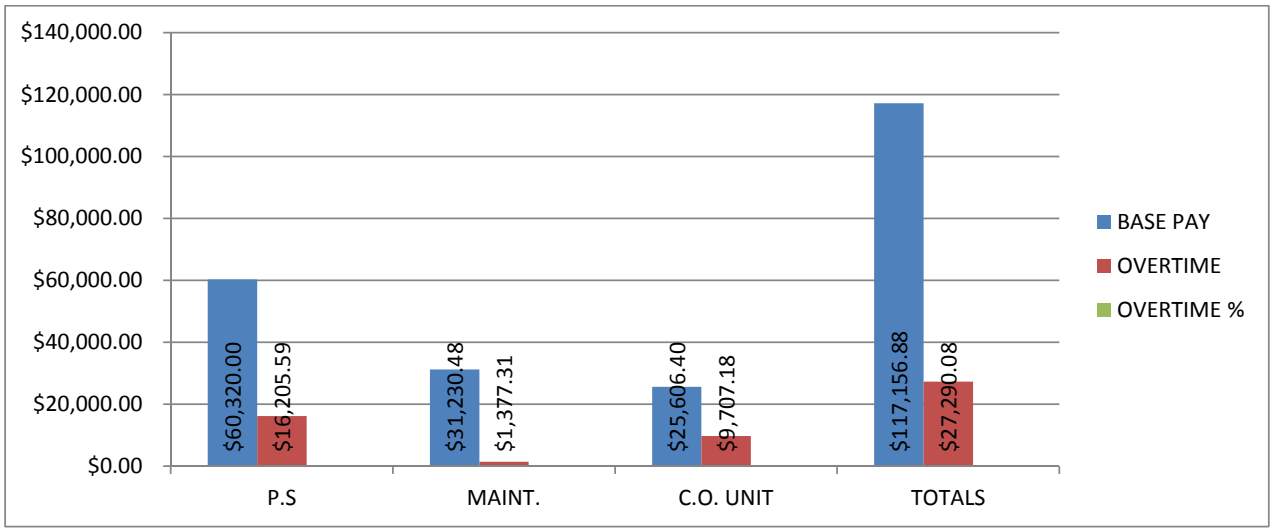
02/19/18 – 02/23/18	PREVENTIVE	CORRECTIVE
NORTHERN	1	4
CENTRAL	0	5
SOUTHERN	0	1
TOTAL	1	10

	PREVENTIVE	CORRECTIVE
NORTHERN	3	20
CENTRAL	4	6
SOUTHERN	6	6
TOTAL	13	32



BASE PAY VS OVERTIME

	BASE PAY	OVERTIME	OVERTIME %
PUMPING STATION	$60,320.00	$16,205.59	27%
MAINTENANCE	$31,230.48	$1,377.31	4%
COURT ORDER UNIT	$25,606.40	$9,707.18	38%
TOTALS	$117,156.88	$27,290.08	23%



CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671) 648-3002 | guamccu.org

GUAM WATERWORKS AUTHORITY
SPECIAL WORK SESSION
CCU Conference Room
4:00 p.m., April 10, 2018

AGENDA

1. **ISSUES FOR DISCUSSION**
   - **1.1 DRAFT GWA Master Plan**

2. **ANNOUNCEMENTS**
   - **2.1 Next CCU Meetings: GWA Work Session - 4/17; GPA Work Session 4/19; CCU Meeting: 4/20**

3. **EXECUTIVE SESSION**
   - **3.1 Litigation Matter**
   - **3.2 Personnel Matter**

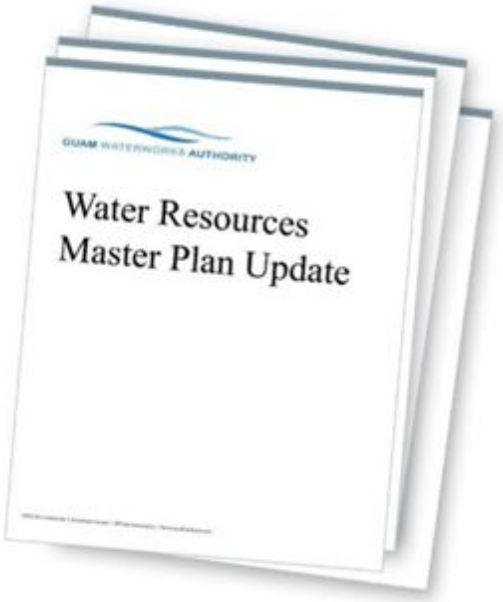
4. **ADJOURNMENT**

GUAM WATERWORKS AUTHORITY

Water Resources Master Plan Update



What is the Master Plan?



An Opportunity To:

- Look at the entire GWA system and make recommendations for capital and organization/procedural improvements
- Review in detail future requirements for the Water and Wastewater Systems including:
  - Provide an assessment of the current condition of pipelines, pump stations, treatment plants, reservoirs, production wells, etc.
  - Make projections for capacity necessary to meet future needs to 2037.
  - Develop projects to address the needs outlined by the condition assessments and capacity analysis.
- Plan also looks into other components of the GWA system to:
  - Define new expectations for utility performance
  - Review population projections, proposed developments and requirements for future water supply.
  - Review water supply sources and availability on Guam
  - Review objectives and set goals for things like Leak Detection and Non Revenue Water
- Develop a list of capital improvement projects for the next 20 years
- Present a financial plan to fund and execute improvements without excessive burden to customers



GUAM WATERWORKS AUTHORITY

GWA's Extensive Infrastructure

Water System

- ~47,800 customers
- 580+ miles of distribution piping
- 26 storage tanks
- 22 booster pump stations
- 120 water supply wells
- 1 surface water treatment plant

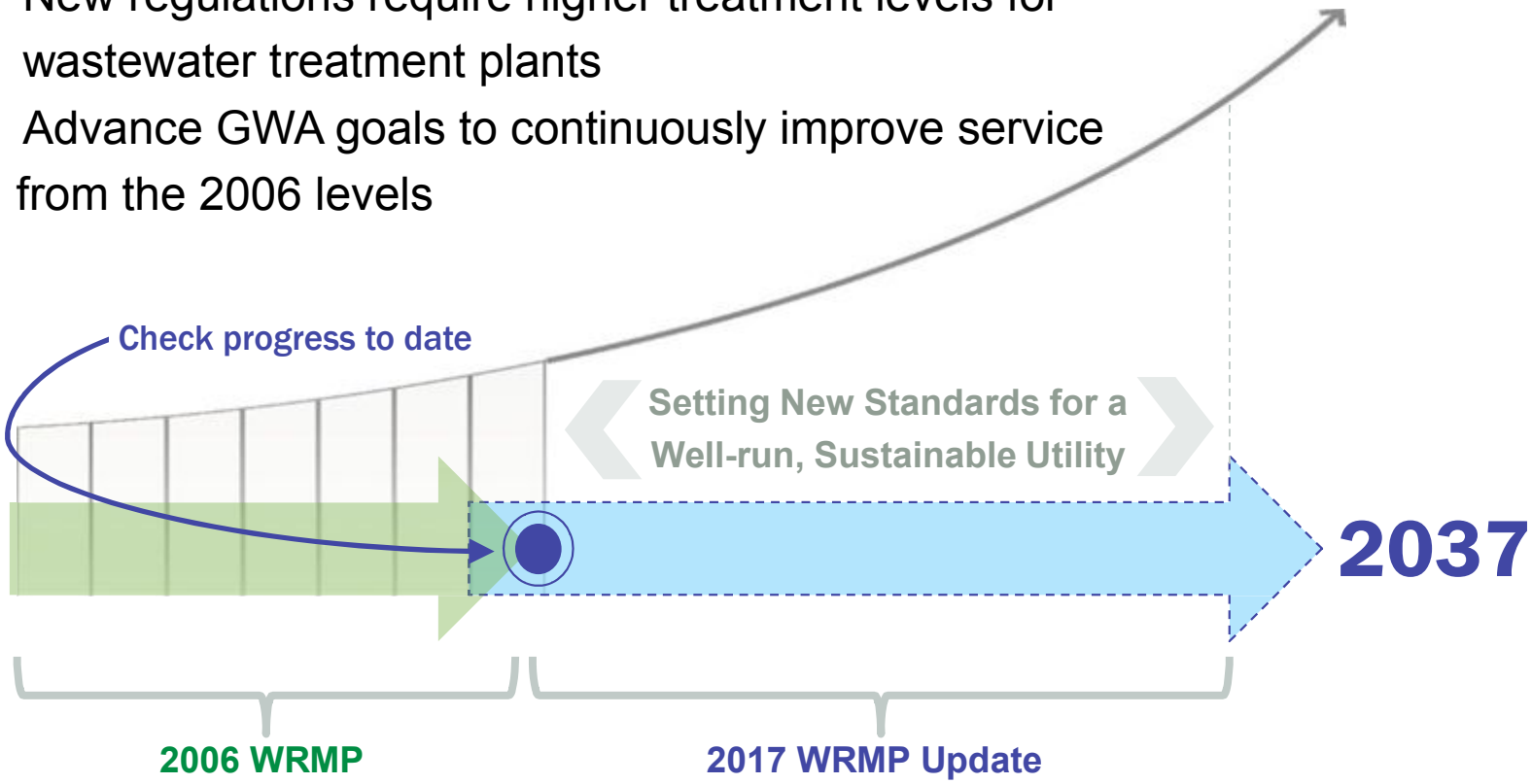
Wastewater System

- ~30,400 customers
- 320+ miles of collection system piping
- 82 wastewater lift stations
- 7 wastewater treatment plants

GUAM WATERWORKS AUTHORITY

Why update the WRMP?

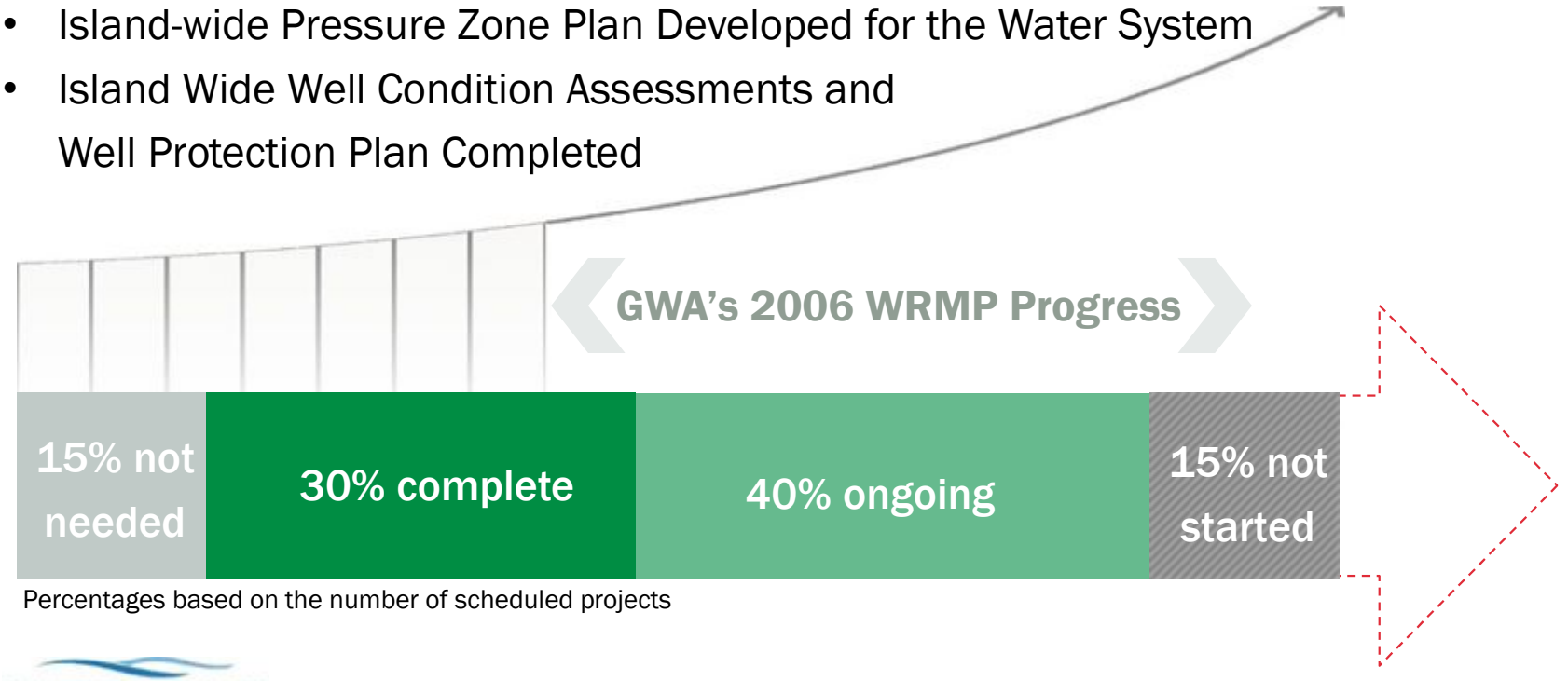
- GWA infrastructure has aged 10 years since the first WRMP
- Military relocation brings 5,000 marines to Guam
- New regulations require higher treatment levels for wastewater treatment plants
- Advance GWA goals to continuously improve service from the 2006 levels



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A decade of progress is paying off

- Ugum Treatment Plant Upgrade Completed
- Hagåtña and Northern District WWTP Upgrades Completed
- Six Water Storage Tanks Constructed with Capacity of 6 Million Gallons
- Water and Wastewater System Hydraulic Models Significantly Updated
- Navy Water Use Reduced By Over 50 Percent Between 2004 And 2016
- Island-wide Pressure Zone Plan Developed for the Water System
- Island Wide Well Condition Assessments and Well Protection Plan Completed



Percentages based on the number of scheduled projects

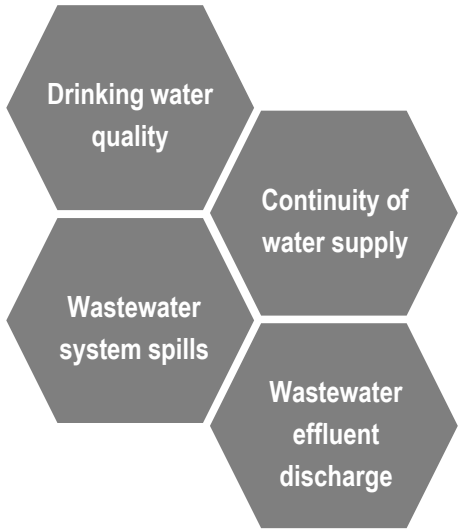
GUAM WATERWORKS AUTHORITY

New Expectations Set for GWA

New Levels of Service goals set in 2017 Plan

2006 WRMP

Limited to 4 fundamental Service Level Goals



2017 WRMP Update

Increased to 16 Service Level Goals



See Volume 1, Section 3 for complete Service Level list

GUAM WATERWORKS AUTHORITY

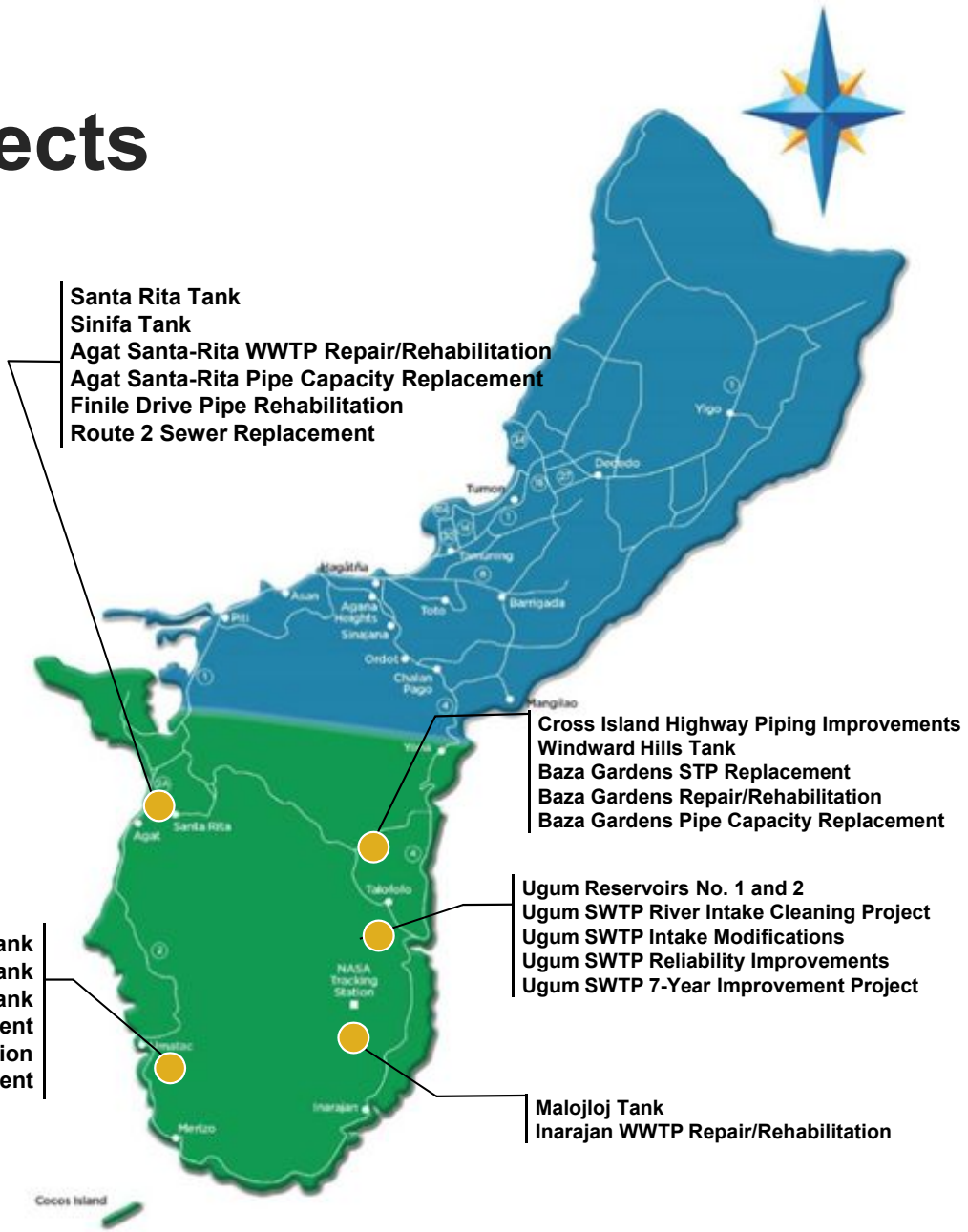
Island-wide improvement projects/programs



- **Well Development and Construction - $4.6M every 3 yrs**
- **Well Rehabilitation - $5.8M every 3 yrs**
- **PRV Rehabab and Replacement – $1.5M/yr for 5-yrs**
- **Water Reservoir Inspections - $215K/yr**
- **Leak Detection Program - $380K every 5 yrs**
- **Fire Hydrant Replacement $970K/yr for 5yrs, $530k/yr after**
- **2-Inch Pipe Replacement -$1.75M/yr**
- **Asbestos Cement Pipe Replacement -$3.85M/yr (start in 2022)**
- **Force Main Rehabilitation/Replacement -$1.6M every 3 yrs**
- **Gravity Sewer Rehabilitation/Replacement - $8.5M/yr**
- **Lift Station Rehabilitation/Replacement – 5.5M every 2yrs**
- **I/I and SSES Assessments - $400K every 3 yrs**
- **Septic/Cesspool System Reduction - $5.2M/yr**

Southern villages improvement projects

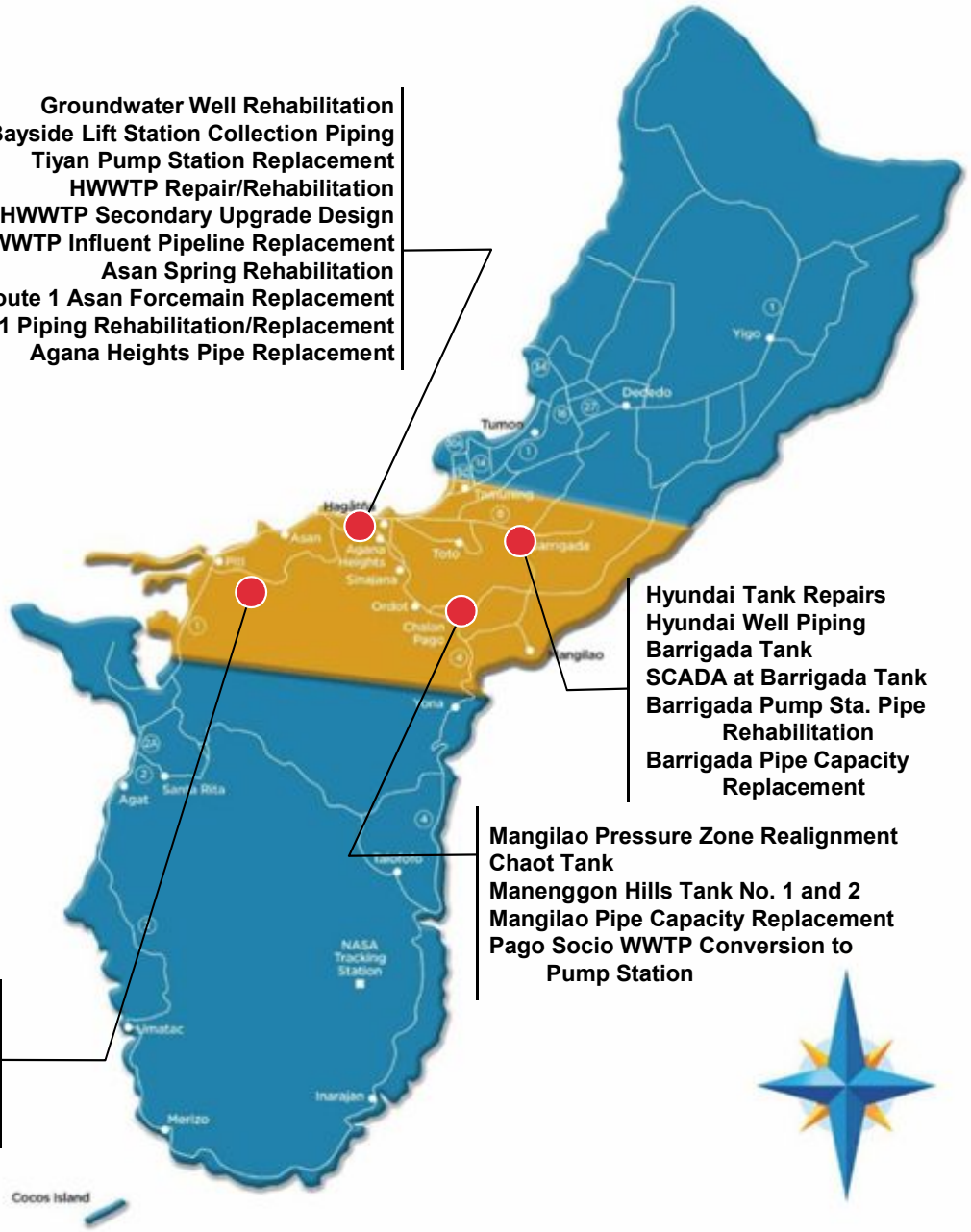
- Improve water quality and Water System reliability
- Reduce number of water outages
- Replace AC and galvanized steel water lines
- Rehabilitate/replace sewer lines
- Upgrade WW treatment plants/ Federal Permit compliance
- Reduce wastewater overflows



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Central villages improvement projects

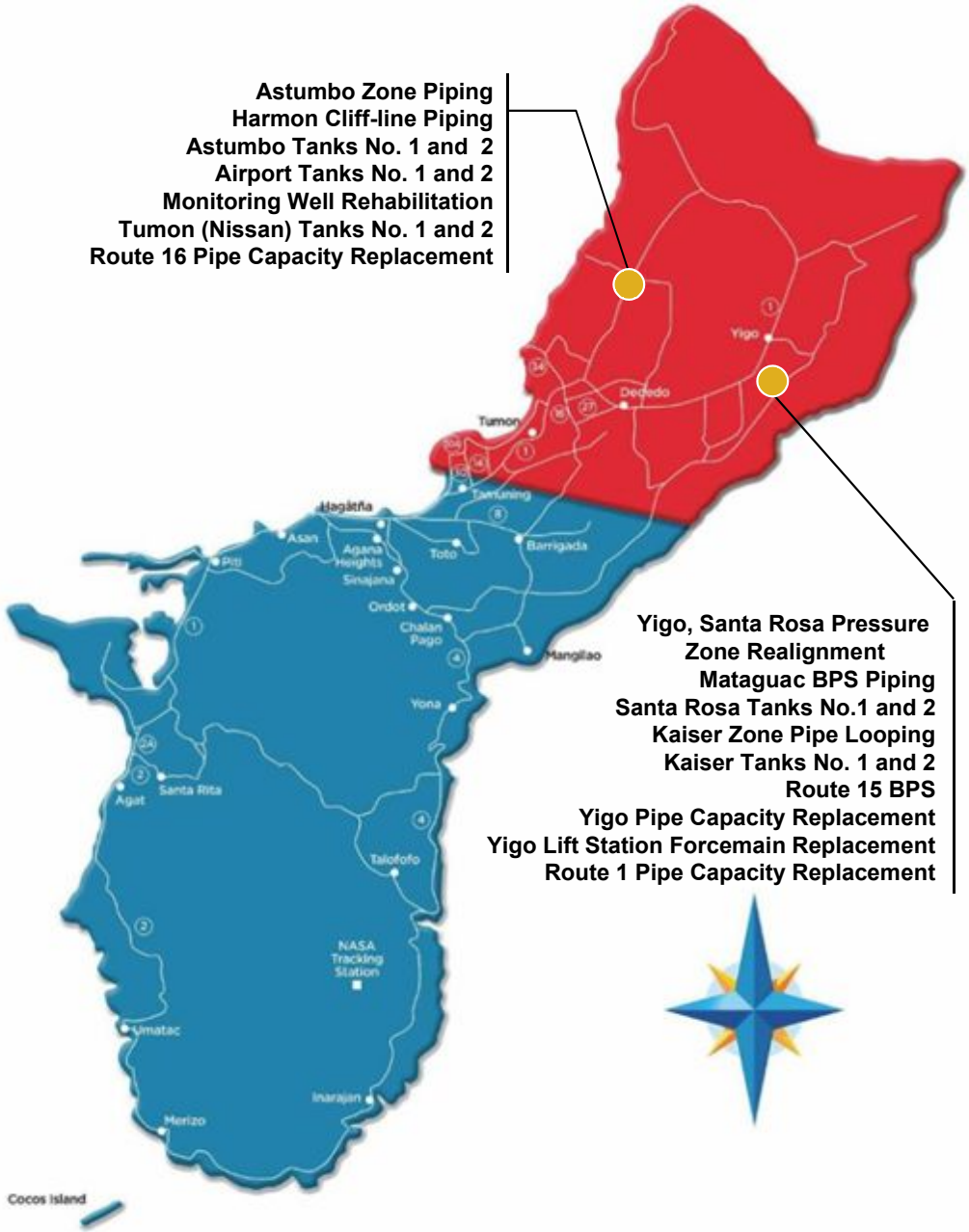
- Improve water quality and Water System reliability
- Reduce number of water outages
- Replace AC and galvanized steel water lines
- Rehabilitate/replace sewer lines
- Upgrade WW treatment plants/ Federal Permit compliance
- Reduce wastewater overflows



GUAM WATERWORKS AUTHORITY

Northern villages improvement projects

- Improve water quality and Water System reliability
- Reduce number of water outages
- Replace AC and galvanized steel water lines
- Rehabilitate/replace sewer lines
- Upgrade WW treatment plants/ Federal Permit compliance
- Reduce wastewater overflows

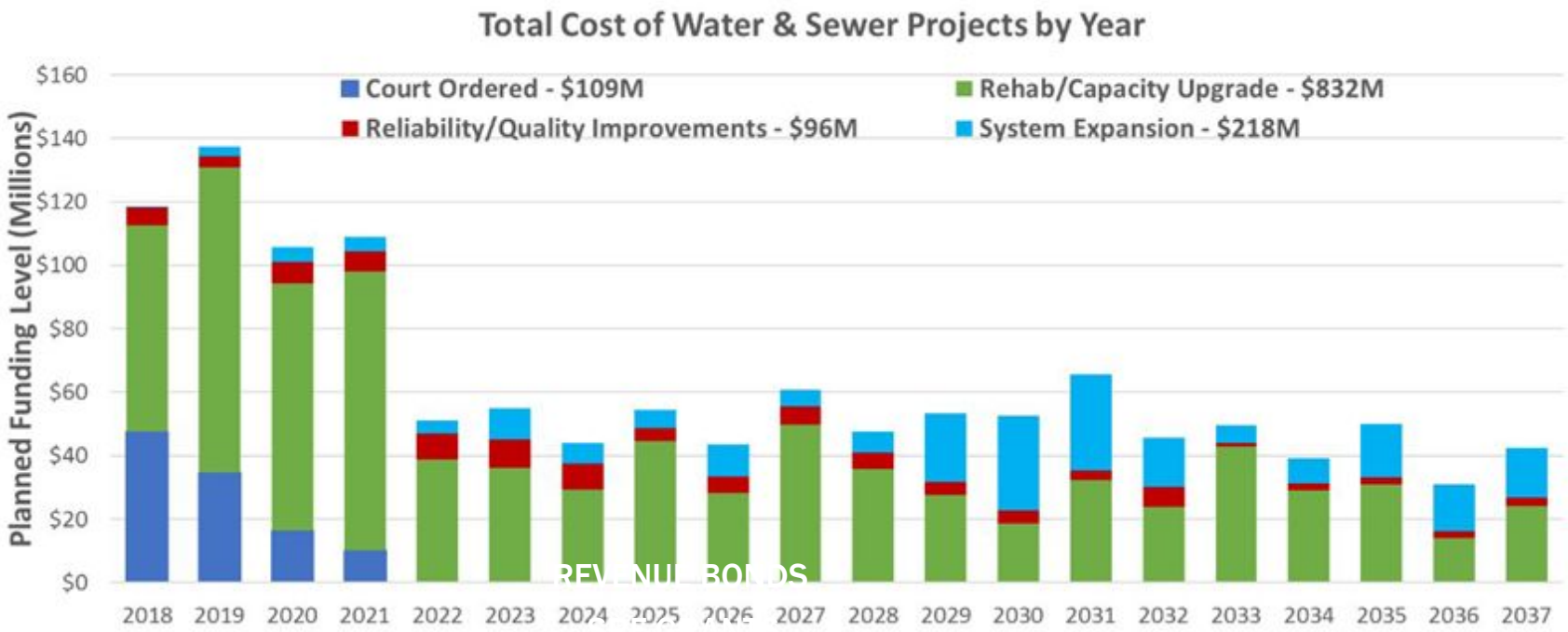


GUAM WATERWORKS AUTHORITY

Capital Improvement Projects Summary

Project Category	Number of New Projects	Estimated Cost WRMPU Proposed CIP	Number of Ongoing Projects	Estimated Cost Current/Ongoing CIP
Water System Improvements				
Pipeline Projects	17	$204,402,000	2	$2,500,000
Storage Tank and BPS Projects	30	$120,082,000	5	$30,808,000
Water Production Projects	10	$123,216,000	3	$8,667,000
Other Water System Projects/Studies	5	$14,449,000	4	$5,500,000
Total Water System Improvements	62	$462,149,000	14	$47,475,000
Wastewater System Improvements				
Gravity Sewer Projects	27	$250,247,000	7	$69,230,000
Force main Projects	4	$22,498,000		
Lift Station Projects	3	$68,156,000	2	$4,293,000
Wastewater Treatment Facilities	9	$71,238,000	3	$151,946,000
Other Wastewater System Projects/Studies	5	$10,978,000		
Total Wastewater System Improvements	48	$423,117,000	12	$225,469,000
General Systems Improvements				
General Facilities / Equipment Improvements	10	$59,800,000	1	
SCADA / Electrical	4	$37,176,000	2	$5,175,000
Total General System Improvements	14	96,976,000	3	$5,175,000
Total (rounded)	124	$982,242,000	29	$278,119,000

Funding needed for improvements



DoD buildup projects

$30-50M/year for first 4 years

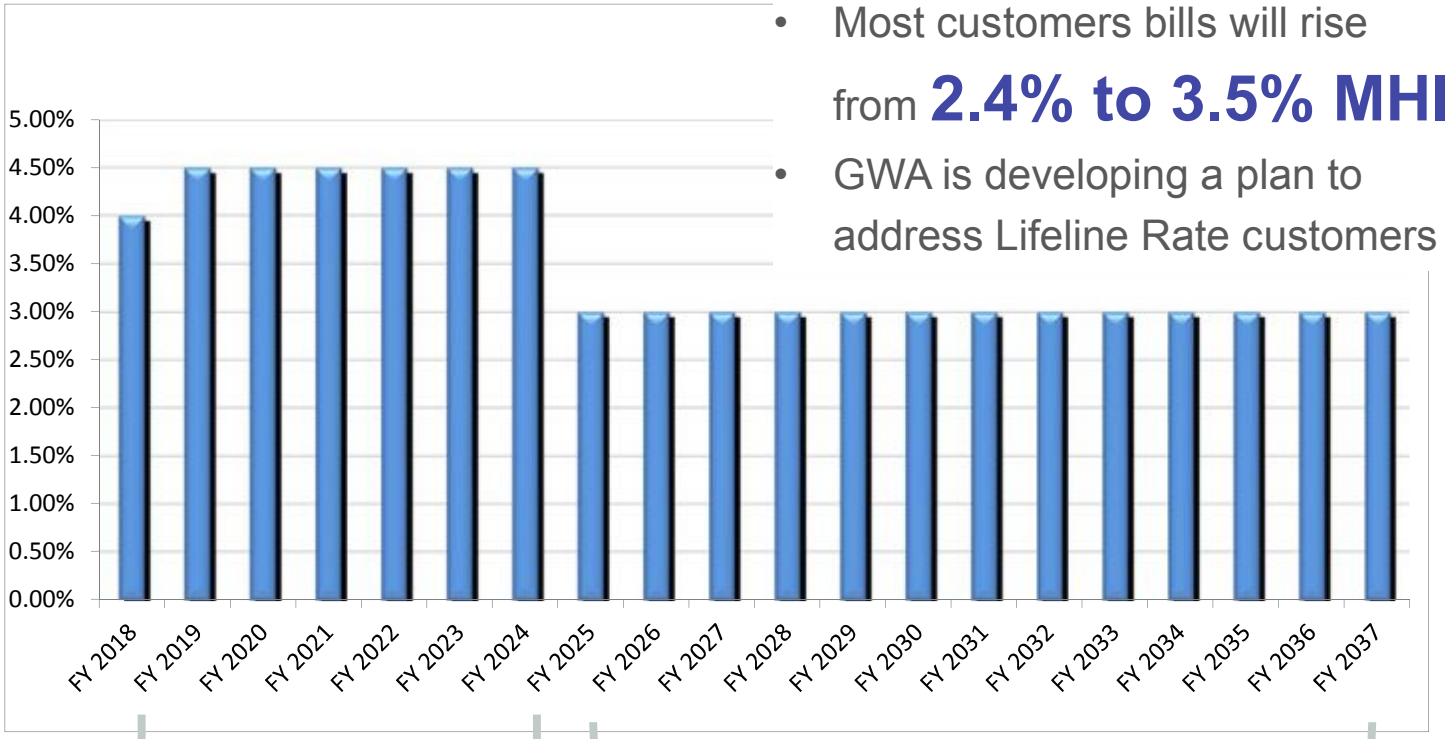
Average Annual Funding

$49M/year

GUAM WATERWORKS AUTHORITY

How will these funding needs affect service rates?

- Most customers bills will rise from **2.4% to 3.5% MHI**
- GWA is developing a plan to address Lifeline Rate customers

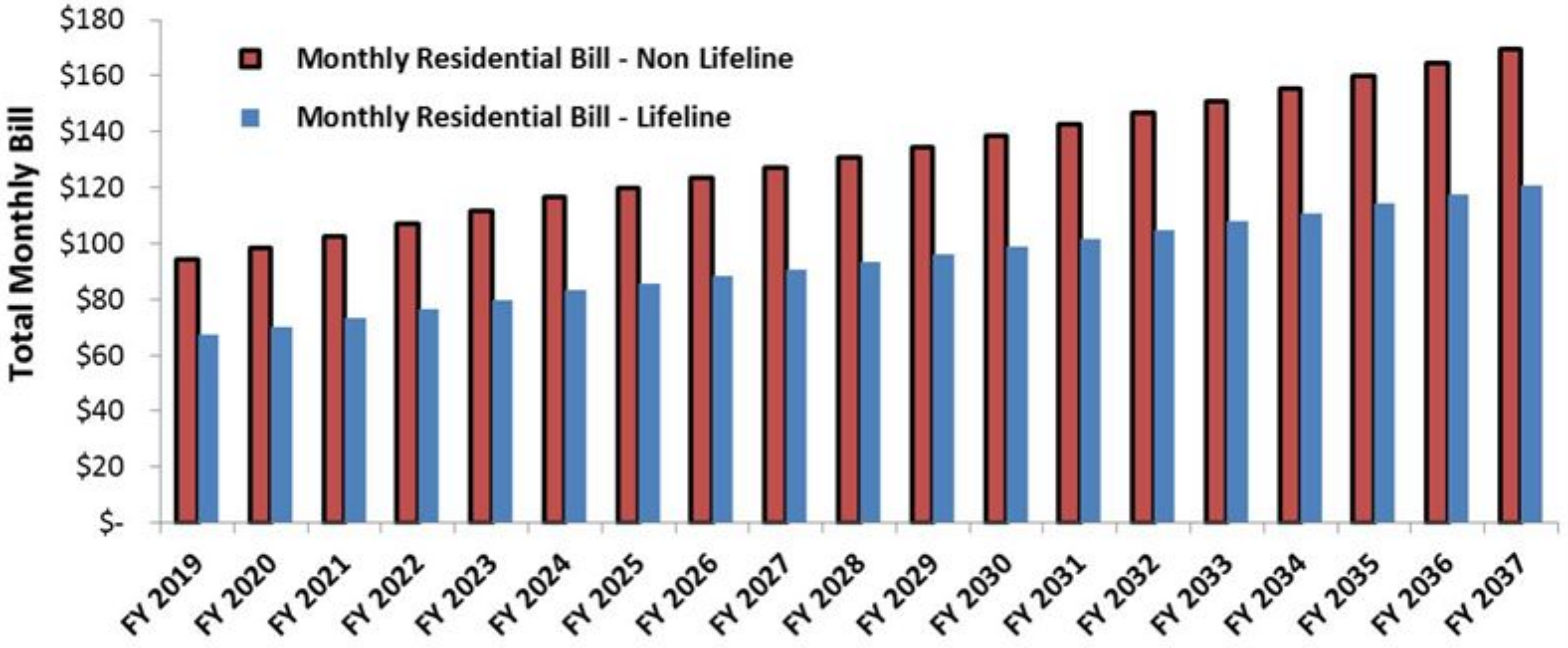


4.0–4.5%
for first 7 years

3.0%
annual rate increases

GUAM WATERWORKS AUTHORITY

How will this affect Your Monthly Bill?

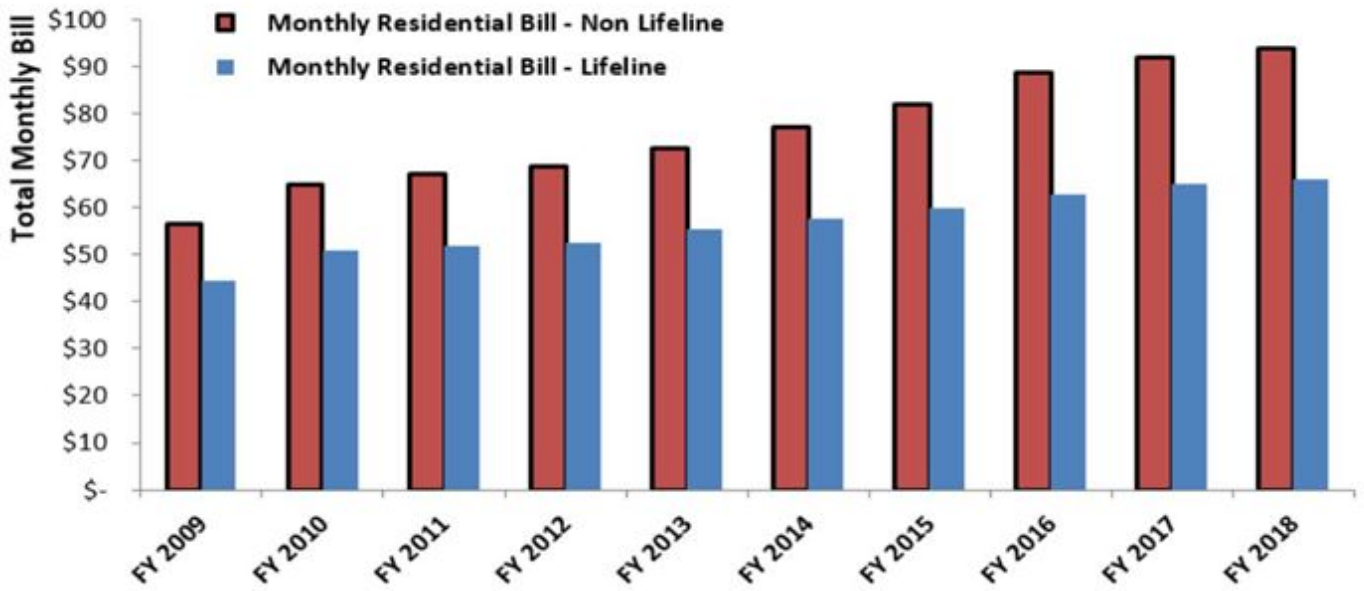


Projected Monthly Bill Increase Per Year 2018 - 2027	
Non-Lifeline	$4.04
Lifeline	$2.89

- Non-lifeline residential bill - 7,500 gallons
- Lifeline residential bill - 5,000 gallons

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Historic Residential Bills 2009 - 2018



Average Monthly Bill Increase Per Year 2009 - 2018	
Non-Lifeline	$3.90
Lifeline	$2.40

GUAM WATERWORKS AUTHORITY

Summary

GWA has spent over 2-years preparing this WRMP Update to plan for a well-run, sustainable utility. The WRMP Update:

- Addresses significant legacy issues such as replacement of small diameter galvanized steel pipes
- Includes regularly scheduled projects to refurbish production wells, treatment plants and pump stations
- Includes projects to refurbish/replace failing and under capacity gravity sewer piping.
- Produces an optimized CIP program to improve our Level of Service with consideration to the impact on service rates
- Provides a realistic combination of projects with a modest impact on our required rates.

GWA is committed to implementing water affordability programs to continue services for our Lifeline customers at reasonable rates.

Access the plan

- Copies of the proposed WRMP Update will be available to view at:
  - All GWA Customer Service locations
  - Agat, Tamuning, and Yigo mayors' offices

- Interested persons can also visit the GWA website at **www.guamwaterworks.org** and to learn more, download the plan, and submit your comments

GUAM WATERWORKS AUTHORITY
ATURIDAT KINALAMTEN HANOM GUAHAN
Gloria B. Nelson Public Service Building
688 Route 15, Mangilao, GU 96913
Phone: (671) 300-6853 Fax: (671) 648-3290

AFFIDAVIT OF KELLY O. CLARK, ESQ.

1. I am over the age of eighteen (18) years and have no disability that would prevent me from rendering testimony;

2. I make this affidavit based on my own personal knowledge of the events and facts stated herein;

3. I attended the special board meeting of the Guam Waterworks Authority (GWA) on April 10th, 2018 and acted as legal counsel for GWA during said board meeting;

4. Based on my oral and written recommendation, and after an affirmative vote of all the members of the Consolidated Commission on Utilities at said board meeting, an executive session was held wherein the following matters were discussed in my presence:

    1. a GWA litigation matter
    2. a GWA personnel matter

5. Affiant further sayeth naught.

Respectfully filed with the Guam Waterworks Authority Board Secretary for the Consolidated Commission on Utilities on this April 10th, 2018.

Respectfully,

Kelly O. Clark
GWA General Counsel

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671) 648-3002 | guamccu.org

GUAM WATERWORKS AUTHORITY WORK SESSION

CCU Conference Room
4:30 p.m., April 17, 2018

AGENDA

1. **ISSUES FOR DECISION**
   - **1.1 Relative to Approval of Change Order Work and Increase in Project Funding for Construction Management Services for the Rehabilitation of GWA Wells (D-03, D-17, D-18, D-22, M-09) Project W11-008-BDN / Resolution No. 26-FY2018**

2. **GM REPORT**
   - **2.1 Updates**

3. **ISSUES FOR DISCUSSION**

4. **DIVISION REPORTS**
   - **4.1 Communications**
   - **4.2 Compliance & Safety**
   - **4.3 Customer Service**
   - **4.4 Engineering**
   - **4.5 Finance**
   - **4.6 Operations**

5. **ANNOUNCEMENTS**
   - **5.1 Next CCU Meetings: GPA Work Session: 4/19/18; CCU Meeting: 4/20/18**

6. **ADJOURNMENT**

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 26-FY2018
Relative to Approval of Change Order No. 4 Work and an Increase in Project Funding for Construction Management Services for the Rehabilitation of GWA Wells (D-03, D-17, D-18, D-22, and M-09) Project W11-008-BDN

What are the project's objectives of the proposed changes and are they necessary and urgent? The objective of Change Order No. 4, is to extend the duration of the Construction Management (CM) services. There have been unexpected issues during well commissioning with respect to the developed well pump capacity, drive and control issues and equipment repairs that have extended the completion of the Contractor's work. The CM's input is necessary to monitor the contractor's work until the project is complete. Additional funding is needed for Change Order No. 4 to manage the construction, on a time and materials basis.

Where is the project located?
This project is located at Groundwater Wells D-03, D-17, D-18, D-22, and M-09 within the villages of Dededo and Mangilao. Construction activities will be limited to the property boundaries of the well sites.

How much will it cost?
The original funding authorization for the CM Services was Seven Hundred Forty-Nine Thousand One Hundred Eighty-Four Dollars ($749,184.00), plus a ten percent (10%) contingency of Seventy-Four Thousand Nine Hundred Eighteen Dollars and Forty Cents ($74,918.40). GWA management executed two change orders via the 10% contingency in the amount of Seventy-Four Thousand Seven Hundred Ninety-Six Dollars and Thirty-Two Cents ($74,796.32) and further sought CCU approval for Change Order No. 3 in the amount of One Hundred Nineteen Thousand Three Hundred Eighty-One Dollars ($119,381.00). The proposed Change Order No. 4 is in the amount of Ninety-Eight Thousand Two Hundred Twenty-Two and Zero cents ($98,222.00) which will to bring the total authorized funding amount to a maximum of One Million Forty-One Thousand Five Hundred Eighty-Three dollars and Thirty-Two cents ($1,041,583.32).

When will it be completed?
The project is scheduled to be substantially completed for four of the wells by end of May 2018 with final project completion by August 2018.

What is the funding source?
The funding for this project will be from USEPA Grant and, if necessary, GWA Bond Funds with a maximum project budget of One Million Forty-One Thousand Five Hundred Eighty-Three Dollars and Thirty-Two Cents ($1,041,583.32).

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

RESOLUTION NO. 26–FY2018

RELATIVE TO APPROVAL OF CHANGE ORDER NO. 4 WORK AND AN INCREASE IN PROJECT FUNDING FOR CONSTRUCTION MANAGEMENT SERVICES FOR THE REHABILITATION OF GWA WELLS (D-03, D-17, D-18, D-22, AND M-09) PROJECT W11-008-BDN

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual, and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established, and existing under the laws of Guam; and

WHEREAS, GWA has received a grant from the United States Environmental Protection Agency ("USEPA") under the State Revolving Fund ("SRF") program to repair and rehabilitate the water and wastewater system infrastructure; and

WHEREAS, GWA has a number of important USEPA SRF projects including the rehabilitation, repair, or replacement of groundwater wells D-03, D-17, D-18, D-22, and M-09, which have been inoperable for a significant amount of time; and

WHEREAS, on December 30, 2015, GWA entered into a contract with EA Engineering, Science and Technology, Inc., PBC (EA) to perform the Construction Management (CM) Services for the Rehabilitation of GWA Wells D-03, D-17, D-18, D-22, and M-09 project; and

WHEREAS, on August 22, 2016, GWA awarded the construction contract for the Island-wide Well Site Rehabilitation (D-03, D-17, D-18, D-22, and M-09) to Pacific Rim Corporation with a completion date of August 22, 2017, but extended the completion date to

November 25, 2017 due to capacity issues with some initial wells that required re-drilling and changes that were required for the electrical systems; and

WHEREAS, on November 25, 2017, GWA extended the construction contract for the Island-wide Well Site Rehabilitation (D-03, D-17, D-18, D-22, and M-09) to January 19, 2018, to allow extra time for the completion of the associated wells due to revised permits, additional GPA requirements, and issues associated with isolation of and connection to the watermain; and

WHEREAS, since January 19, 2018 the contractor has been submitting claims of further delays which GWA's project Manager and Construction Manager have been sorting out and which may result in the construction contract period being extended; and

WHEREAS, one significant problem experienced on the project was the final capacity achievable at well D-03 that was significantly lower than expected based on the pilot well tests which required additional time to review the well development process and determine appropriate action to complete the well construction; and

WHEREAS, other complications discovered at startup and commissioning of the associated wells, including issues with the Variable Frequency Drives (VFD), chlorination systems, level sensors, has caused all parties to verify deliverable requirements and timelines; and

WHEREAS, due to the projected end of the construction period to resolve all issues noted above, GWA requested a proposal from EA to extend their CM contract to a new completion date of August 31, 2018 and received a final proposal from EA on March 19, 2018, in the amount of Ninety-Eight Thousand Two Hundred Twenty-Two Dollars ($98,222.00) on a Time and Materials basis (SEE EXHIBIT A); and

WHEREAS, GWA along with Brown and Caldwell reviewed the proposal and determined the proposal as fair and reasonable; and

WHEREAS, GWA has discussed the proposal with the USEPA (the funding agency for this project) and received the USEPA's support to use the SRF grant to fund CM contract extension for the Island-wide Well Site Rehabilitation project; and

WHEREAS, CCU approved the original contract value for this project in the amount of Seven Hundred Forty-Nine Thousand One Hundred Eighty-Four Dollars ($749,184.00), plus a ten percent (10%) contingency of Seventy-Four Thousand Nine Hundred Eighteen Dollars and Forty Cents ($74,918.40), which brings the total authorized funding amount to a maximum of Eight Hundred Twenty-Four Thousand One Hundred Two Dollars and Forty Cents ($824,102.40); and

WHEREAS, GWA management executed via the 10% contingency two change Orders in the amount of Seventy Four Thousand Seven Hundred Ninety Six Dollars and Thirty Two Cents ($74,796.32), then further sought and received approval from the CCU via Resolution 06-FY2018 that approved Change Order No. 3 for One Hundred Nineteen Thousand Three Hundred Eighty One Dollars ($119,381.00) that brought the total contract value to Nine Hundred Forty Three Thousand Three Hundred Sixty One Dollars and Thirty-Two Cents ($943,361.32); and

WHEREAS, GWA Management further seeks CCU approval of the proposed Change Order No. 4 to proceed with the CM contract extension in the amount of Ninety-Eight Thousand Two Hundred Twenty-Two Dollars ($98,222.00); and

WHEREAS, funding for the change order work will be from the USEPA State Revolving Fund and, if necessary, GWA Bond funds and will bring the total budget for the entire project to One Million Forty-One Thousand Five Hundred Eighty-Three Dollars and Thirty-Two Cents ($1,041,583.32); and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.

2. The CCU finds that the terms of the fee proposal submitted by EA Engineering, Science and Technology, Inc., PBC (EA) are fair and reasonable.
3. The CCU hereby authorizes the management of GWA to approve Change Order No. 4 in the amount of Ninety-Eight Thousand Two Hundred Twenty-Two Dollars ($98,222.00).
4. The CCU hereby further approves increasing the total funding amount for this project to a maximum of One Million Forty-One Thousand Five Hundred Eighty-Three Dollars and Thirty-Two Cents ($1,041,583.32).
5. The CCU herby further approves GWA management informing the PUC of the fact that the contract value for the CM services, which is intended to be fully funded by USEPA State Revolving Funds, will be greater than One Million Dollars ($1,000,000.00).

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 20th day of April 2018.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS **J. GEORGE BAMBA**
Chairperson Secretary

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DRAFT

SECRETARY'S CERTIFICATE

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

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DRAFT

Exhibit A (1 of 5)

EA Engineering, Science, and Technology, Inc., PBC

1001 Army Drive, Suite 103
Barrigada, Guam 96913
Telephone: 671-646-5231
Fax: 671-646-5230
www.eaest.com

Date: March 19, 2018

To: Mr. Miguel C. Bordallo, PE
Guam Waterworks Authority
Engineering Division, Room 202
Gloria B. Nelson Public Service Building
688 Route 15, Mangilao, GU 96913

Delivered via email

RE: CHANGE ORDER No. 004 to Extend Construction Management Services from November 25, 2017 to August 31, 2018.
GWA Project No. W11-008-BND

Mr. Bordallo:

EA Engineering, Science, and Technology, Inc., PBC (EA) hereby submits Change Order (CO) No. 004 for GWA Project No. PW W11-008-BND for your review and approval. This CO will extend construction management services from the current completion date of November 25, 2017 to August 31, 2018 on a time and materials cost up to $98,222. This cost estimate also includes; re-obligating the engineer of record (EOR) to complete CADD as-built drawings and a final inspection by the Project electrical consultant.

This time extension is needed to address the following conditions needed to complete the Project and ensure proper commissioning of the wells:

- Acquisition and installation of the appropriate variable frequency drives to replace the undersized units currently in use.
- Troubleshooting and repairs for each chlorination system, including parts replacement.
- Submission of all warranties and manuals
- Pending punch list items
- Level sensor functionality
- Replacement of power supply cable for well M-9
- Spare parts hand-off
- Equipment training
- Commissioning of wells D-17, D-18 and D-22

EOR services are complete with the exception of the as-built drawings. This work was de-obligated to utilize existing funding for management costs incurred as a result of the extended Project schedule. The closeout and post-construction services authorized per the original contract remain unchanged.

Exhibit A (2 of 5)

EA Engineering, Science, and Technology, Inc., PBC

1001 Army Drive, Suite 103
Barrigada, Guam 96913
Telephone: 671-646-5231
Fax: 671-646-5230
www.eaest.com

EA estimates that this project will be substantially complete by August 31, 2018. The timeline of this CO is driven by equipment lead times and associated installations. The opinion of probable cost and the estimated staff utilization are presented in Attachment A and B, respectively. Periods of low utilization reflect the anticipated equipment lead times and periods of minimal construction activity.

Please do not hesitate to contact me if you have any questions or comments regarding this CO at jjaskowiak@eaest.com.

Sincerely,

Jason Jaskowiak, P.E. *(New York)*
Owner's Representative
EA Engineering, Science, and Technology, Inc., PBC

Attachments:
Cost Estimate
Utilization Estimate

cc: Kurt Bilz, BC
George Watson, BC
Matthew Bowman, EA
Richard Price, EA
Shelly Rice, EA
File

Exhibit A (3 of 5)

Attachment A

COST PROPOSAL

(1) DIRECT LABOR COSTS

				Project Controls (Project Troubleshooting and Closeout)		Construction Inspection (Drill through D-03)		TOTAL	
STAFF	***CLASSIFICATION***	**Units**	**Rate**	**No.**	**Amount**	**No.**	**Amount**	**No.**	**Amount**
J. Jaskowiak	Construction Manager	Hour	**$151**	385	$58,058.00	0	$0.00	385	$58,058.00
B. Shambach	Deputy Construction Manager	Hour	**$156**	24	$3,744.00	0	$0.00	24	$3,744.00
T. Chargualaf	Construction Field Coordinator	Hour	**$88**	54	$4,773.60	0	$0.00	54	$4,773.60
M. Heppe	Administration	Hour	**$121**	40	$4,836.00	0	$0.00	40	$4,836.00
M. Dina	Procurement Administrator	Hour	**$175**	9	$1,577.19	0	$0.00	9	$1,577.19
R. Price	Principal	Hour	**$208**	8	$1,664.00	0	$0.00	8	$1,664.00
C. Brown	Program Manager	Hour	**$172**	13	$2,230.80	0	$0.00	13	$2,230.80
M. Bowman	Construction Quality Engineer	Hour	**$187**	10	$1,872.00	0	$0.00	10	$1,872.00
TOTAL LABOR COSTS					**$78,755.59**		**$0.00**		**$78,755.59**

(2) OTHER DIRECT COSTS

OTHER DIRECT COSTS		**Units**	**Rate**	**No.**	**Amount**	**No.**	**Amount**	**No.**	**Amount**
1. Equipment and Supplies Usage									
Vehicle		mo	**$848.89**		$0.00	0	$0.00	0	$0.00
Mileage		ea	**$0.26**		$0.00	0	$0.00	0	$0.00
Procore CM Software		year	**$5,500.00**		$0.00	0	$0.00	0	$0.00
Total Equipment and Supplies Usage					**$0.00**		**$0.00**		**$0.00**
2. Travel and Per Diem Costs									
Airfare		ea	**$2,500.00**	0	$0.00		$0.00	0	$0.00
Lodging		mo	**$2,232.00**	0	$0.00	0	$0.00	0	$0.00
Total Travel and Per Diem					**$0.00**		**$0.00**		**$0.00**
3. Subcontractor Costs									
See subcontractor detail for breakdown		T&M	**$18,058.00**		$0.00		$18,058.00		$18,058.00
Total Subcontractors					**$0.00**		**$18,058.00**		**$18,058.00**
G&A Applied to Subcontractor Costs and ODCs			**7.80%**		**$0.00**		**$1,408.52**		**$1,408.52**
Fee Applied to Subcontractos Costs and ODCs			**0.00%**		**$0.00**		**$0.00**		**$0.00**
TOTAL OTHER DIRECT COSTS					**$0.00**		**$19,466.52**		**$19,466.52**

(3) TOTAL COST

TOTAL COST	**$78,756**	**$19,467**	**$98,222**

Exhibit A (4 of 5)

SUBCONTRACTOR COST PROPOSAL

(1) SUBCONTRACTOR DIRECT LABOR COSTS

				Project Controls (Project Troubleshooting and Closeout)		TOTAL	
STAFF	*CLASSIFICATION*	Units	Rate	No.	Amount	No.	Amount
TOTAL LABOR COSTS					$0.00		$0.00

(2) SUBCONTRACTOR OTHER DIRECT COSTS

SUBCONTRACTOR COSTS		Units	Rate	No.	Amount	No.	Amount
1. Equipment and Supplies Usage							
Stanley - Includes 10% fee		T&M	$1,400.00	1	$1,400.00	1	$1,400.00
GHD - Reobligation		T&M	$16,658.00	1	$16,658.00	1	$16,658.00
Total Equipment and Supplies Usage					$18,058.00		$18,058.00
2. Travel and Per Diem Costs							
Total Travel and Per Diem					$0.00		$0.00
TOTAL OTHER DIRECT COSTS					$18,058.00		$18,058.00

(3) TOTAL COST

Subtotal Labor, Other Direct Costs, NOT Including G&A and Fee	$18,058.00	$18,058.00

Exhibit A (5 of 5)

Attachment B

Utilization

Utilization Assumptions	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Construction Manager	75%	35%	50%	30%	10%	10%	30%	30%
J.Jaskowiak								
Deputy Construction Manager	10%	0%	5%	0%	0%	0%	0%	5%
B. Shambach								
Construction Field Coordinator	5%	10%	10%	5%	0%	0%	0%	5%
T. Chargualaf								
Administration	15%	5%	3%	0%	0%	0%	0%	10%
M. Heppe								
Procurement Administrator	1%	0%	0%	0%	0%	0%	0%	5%
P. Occhiogrosso								
Principal	2%	1%	1%	0%	0%	0%	1%	1%
R. Price								
Program Manager	2%	1%	1%	1%	1%	1%	1%	1%
C. Brown								
Construction Quality Engineer	3%	2%	1%	0%	0%	0%	1%	1%
M. Bowman/K. Lindsey								

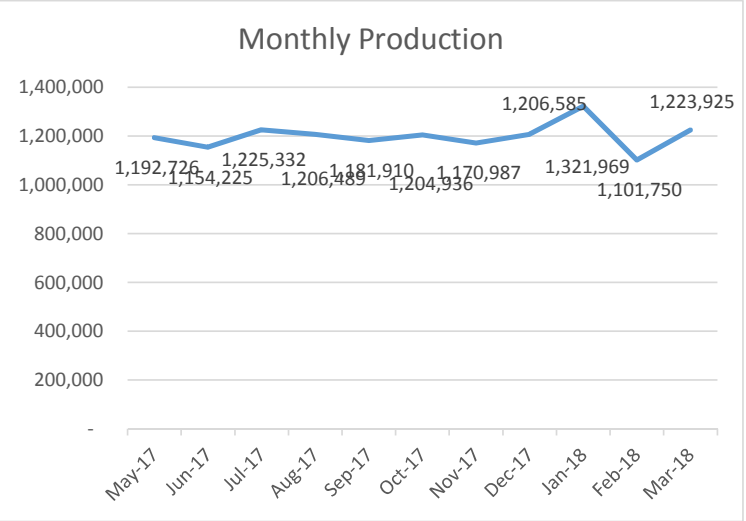
GUAM WATERWORKS AUTHORITY

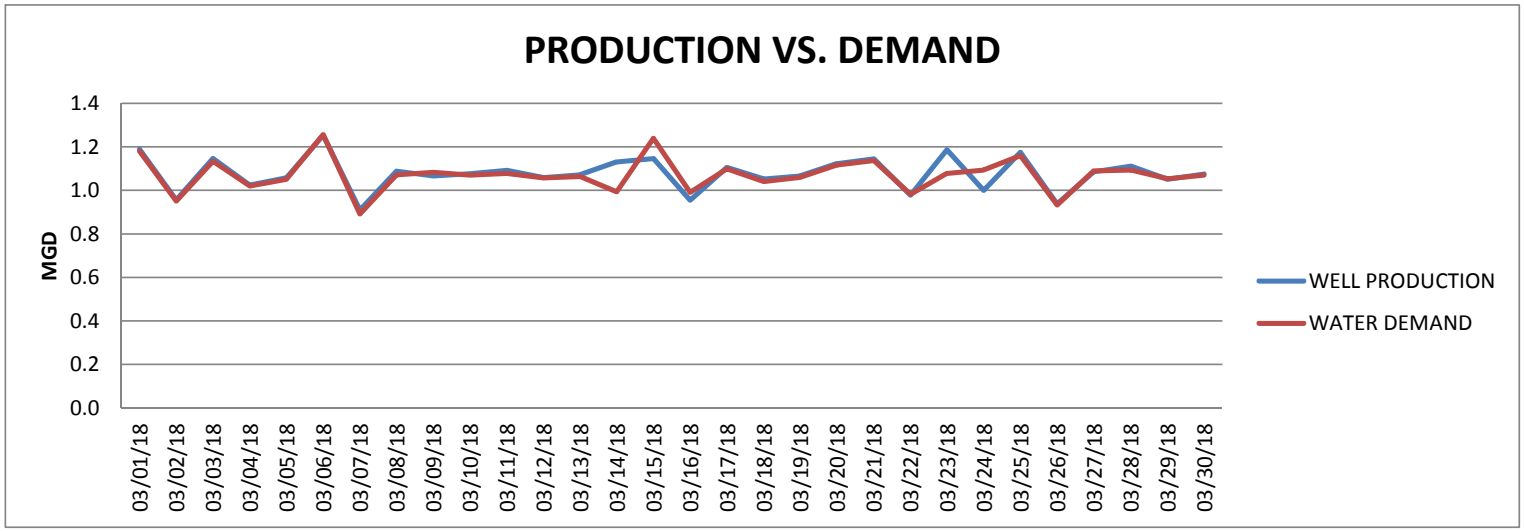
General Manager's Report
GWA Work Session, April 17, 2018

Operations Update

Production

Monthly Production Summary - March 2018					
Deep Wells				36.2	MGD
	Active wells =	97	of 120		
	Avg days in operation =	31.00	days		
	Total Production =	1,121,415	Kgals		
Springs				0.00	MGD
	Avg days in operation =	0	days	*placed on standby	
	Total Production =	0	Kgals		
Ugum Surface Water Plant				2.2	MGD
	Avg days in operation =	31	days		
	Total Production =	69,014	Kgals		
Tumon Maui Well				1.08	MGD
	Avg days in operation =	31	days		
	Total Production =	33,496	Kgals		
		1,223,925	Kgals	39.5	MGD

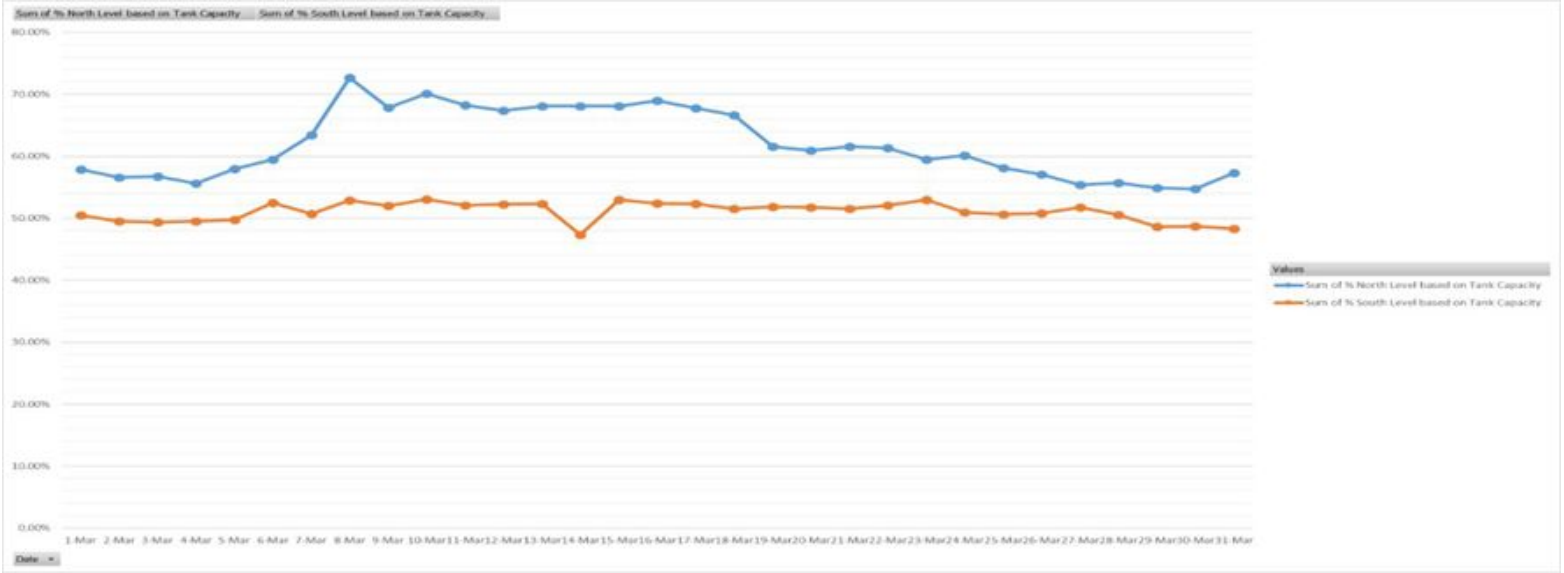




Distribution

Monthly Distribution Summary - March 2018					
Water Booster Pump Stations					
	District	No. of Stations	Total Pumps	Pumps Operating	% Operational
	Northern	11	21	19	90.5%
	Central	7	15	13	86.7%
	Southern	7	15	14	93.3%
		25	51	46	90.2%





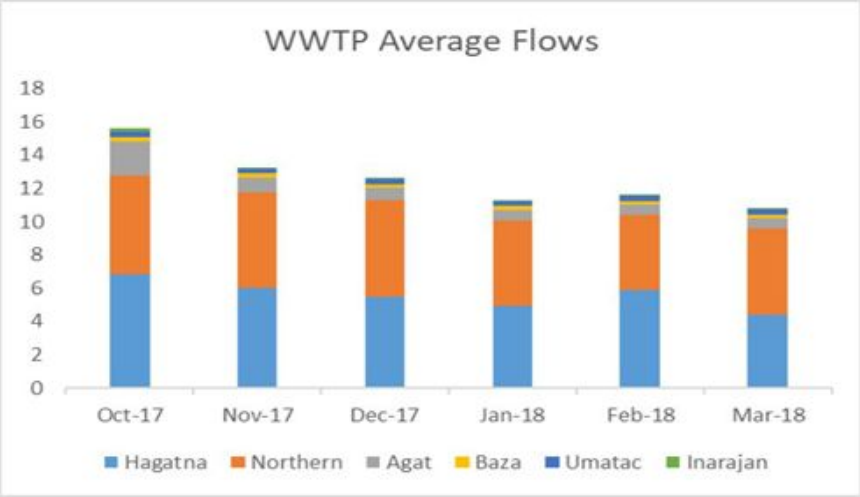
Wastewater Collections

Monthly Collections Summary - March 2018					
Wastewater Pump Stations					
	District	No. of Stations	Total Pumps	Pumps Operating	% Operational
	Northern	22	52	48	92.3%
	Central	29	63	55	87.3%
	Southern	27	54	43	79.6%
		78	169	146	86.4%

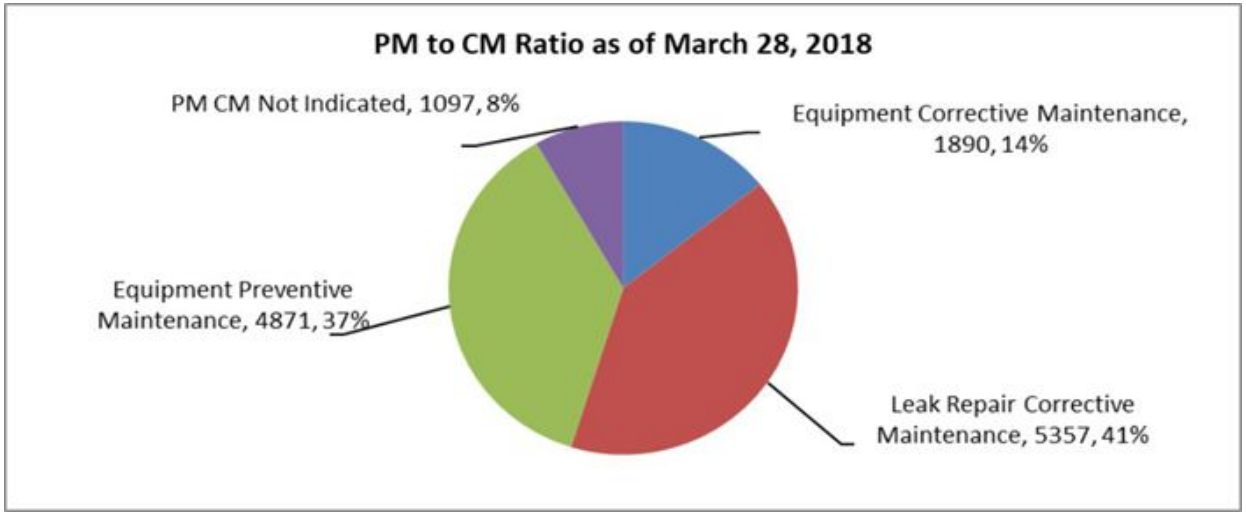


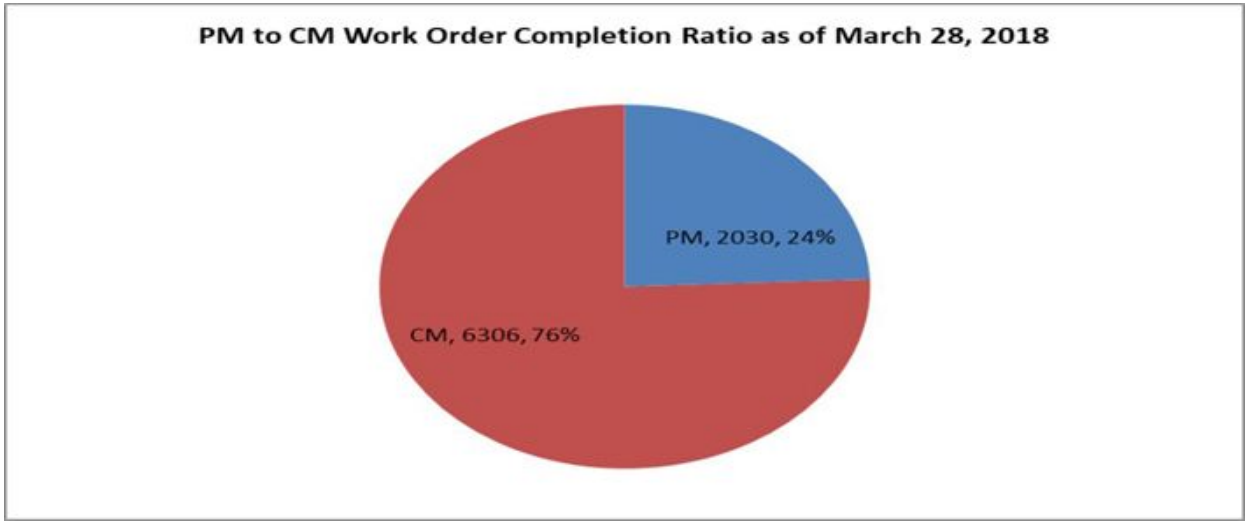
Wastewater Treatment

Monthly Wastewater Treatment Summary - March 2018				
WW Treatment Plants - Flows				
	Facility	**Avg. Daily Flows**	**Sludge (lbs)**	**Sludge Disp. ($)**
	Hagatna	4.40	540,600	$ 48,654
	Northern	5.2	953,280	$ 85,795
	Agat	0.58		
	Baza	0.25		
	Umatac	0.30		
	Inarajan	0.05		
		10.78	1,493,880	$ 134,449



Asset Management





6

Operational Issues

- Update to water audit being conducted
- AWWA Benchmarking Survey being conducted
- USEPA Inspections of WWTPs conducted and reports issued
    - NDWWTP – inspection results were good
    - Hagatna WWTP – several issues identified in report; have been addressed.
        - Effluent pump was down – repair on one pump completed, critical spare motor in procurement
        - Digester mixer was down – repairs in progress
        - Floc chamber mixers down – repairs have been completed
        - Centrifuge was down – repairs underway
        - Safety issue – motor guards not in place during operation; were removed for refurbishment (corrosion); have been reinstalled.

Production & Distribution

- Leak repair
    - backlog has been significantly cleared; less than 60 pending repairs, less than 20 backhoe required repairs
    - pending IFB for leak repair services
    - pending for advanced remote leak detection services pending
- Ugum WTP – assessment of existing SCADA system completed; meeting to discuss potential scope additions on basis of findings.
- GAC Treatment Systems for wells affected by PFOS
    - NAS-1
        - Permanent modifications to NAS-1 GAC Treatment System pending – confirmed for summer break;
        - Replacement Carbon being ordered
    - A-23/A-25:
        - existing GAC canisters for re-use have been isolated from the system and are being cleaned;
        - GWA evaluating potential to re-program DOI grant funding to expedite this work.
    - GIAA System: GIAA advised to provide replacement GAC
- 2018 Pump/Motor order – released on February 16, 2018
- GWA Crane Repair –repairs have been made and unit is finally working; last error code being investigated; anticipate release this month
- Well Maintenance Rig – received; staff has been trained; deployment being planned

Wastewater Collection & Treatment

- CCTV:
  - Crews completed approximately 5 miles in February; work schedule impacted by smoke testing and inspections cross connections to storm drainage system in Hagatna per USEPA request.
  - Additional training for software and equipment maintenance being planned.
- Pump station facility maintenance efforts underway – more than 50% complete for initial in-house efforts.
- FOG Program
  - Program Manual revisions completed
  - 2nd Residential Collection Program being coordinated for Central service area
- Agana WWTP outfall pump repairs completed; mixer motors for floc basin repairs completed.

Meters

COMPLETED FIELD ACTIVITY JAN 2017 THRU MAR 2018 (POSTED IN CIS)	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	TOTAL:	MARCH 2018 COMPLETED FIELD ACTIVITIES (IN PROCESS) TO BE POSTED IN CIS
GWA - Test Meter	30	9	9	371	745	87	393	743	1000	1007	434	378	750	969	1213	8138	484
GWA - Meter Exchange	393	179	220	276	482	353	501	807	1526	1039	452	259	239	1086	2120	9932	0
GWA - Verify Zero Report	30	124	114	94	96	402	261	199	550	89	82	169	356	106	117	2789	18
GWA - Verify Low Usage	0	0	0	2	37	36	196	488	657	202	127	612	858	1122	1055	5392	268
TOTAL:	453	312	343	743	1360	878	1351	2237	3733	2337	1095	1418	2203	3283	4505	26251	770

# OF METERS TESTED AS PER METER TEST FACILITY REPORTS:	345	350	144	252	305	210	302	397	1013	1130	927	704	721	1041	1347	9188	
# OF BACKBILLINGS APPLIED AS PER FINANCE REPORTS:	0	0	0	20	122	84	29	111	219	80	77	4	136	23	323	1228	$ 849,025.16

# OF FIELD CREW PERFORMING CHANGE OUTS:	19	10	13	9	21	21	14	24	35	28	28 *	28 *	5	13	13
# OF ADMIN STAFF TO CREATE AND POST FIELD ACTIVITIES IN CIS:	7	4	5	6	9	9	10	13	15	15	13	13	8	11	9
# OF SUPPLY STAFF TO ISSUE MATERIALS AND PROGRAM NEW METERS:	2	2	2	2	2	2	2	2	2	2	2	2	2	4	0
# OF TEST FACILITY PERSONNEL TESTING METERS:	2	2	2	3	3	3	3	3	3	3	3	3	3	2	2
# OF ACCOUNTANTS CALCULATING BACK BILLS:	0	0	0	2	3	2	2	3	3	2	2	2	2	2	2
TOTAL:	30	18	22	22	38	37	31	45	58	50	48	48	20	32	26

*Project overtime on hold Nov 18, 2017 thru Dec 16, 2017. During this period, 4 personnel performed work on this project during the regular work day with a majority of the work completed during Nov and Dec month occuring before and after the OT moratorium.

Marbo (Andy-South) Wells – Status

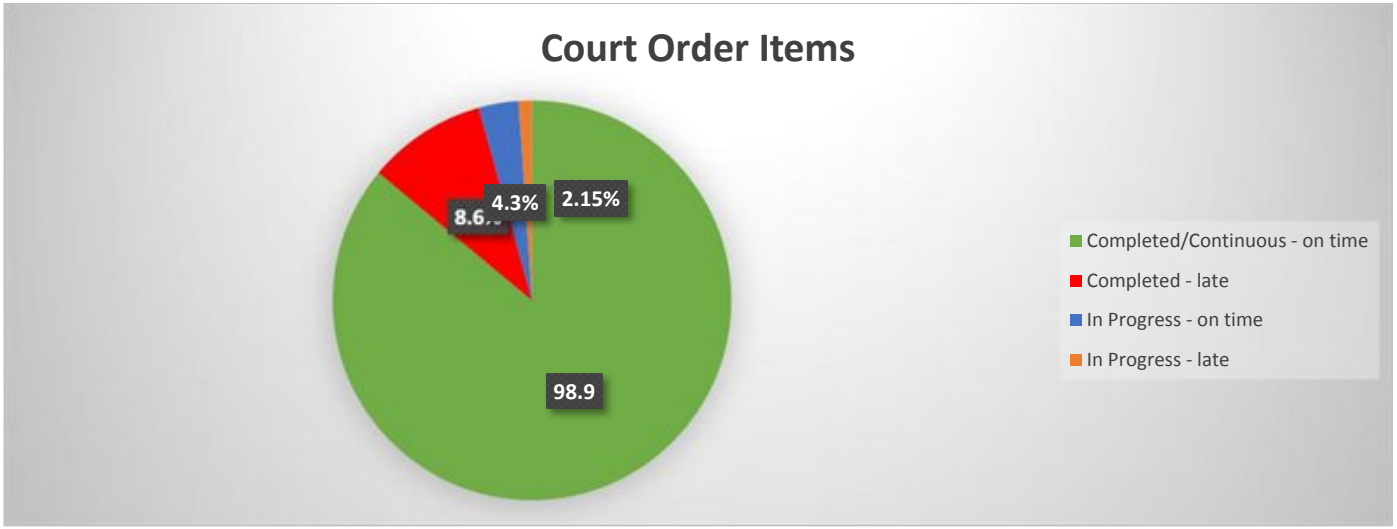
- Governor's Counsel provided recommended modifications to re-conveyance document to GSA
- GSA has not accepted the proposed changes
- Involuntary reversion appears imminent; GWA Counsel transmitted draft easement documents to GSA for consideration with DoD

One Guam Update

- Tumon Maui Well:
  - For the vent shaft leaks, GWA's Consultant B&C needs a work authorization so they will draft a proposal. Initial water flow from the vent shaft was caused by a failure of the level indicator which allowed the tank to overflow. A new level indicator will be employed to avoid the problem in the future.
- Santa Rosa Tank:
  - GWA and DOD finally decided on the location of the infrastructure required for the intertie.
  - GWA's Contractor will finalize the property maps for the intertie. It was agreed by all parties that the valve boxes will be located on GWA's property.
  - Once the maps are completed, the letter to General Cox will be finalized for the temporary easement.
- Although the construction of GWA's tank at Santa Rosa is underway, the intertie will be done as soon as the approval of the navy, the resolution of the temporary easement and the completion of the SOP and MOU for the intertie.
- Agat Santa Rita WWTP:
  - Navy heard there was an ordnance found on the site. NFM would like to know where it was found, on GWA's property or Navy's with GWA's easement. GWA will email the GPS coordinates
- Distribution Systems:
  - GWA continues to work with DOD to resolve wastewater line issues in the Leon Guerrero area.

Court Order

	Items	On-time Items Completed/Continuous	Items Delayed	Completed Late	Items on Schedule	Performance %
Court order total	93	80	1	9	3	98.9%



Status Information

- 1 item delayed
  - Meters
- Final Date to complete all Court Order items is December 31, 2020.
- Overflow or Bypass events reported to USEPA:
  - Southern SSES Phase II Location – Santa Rita;
  - Redondo Luchan, Dededo;
  - South Mariposa Court, Dededo.

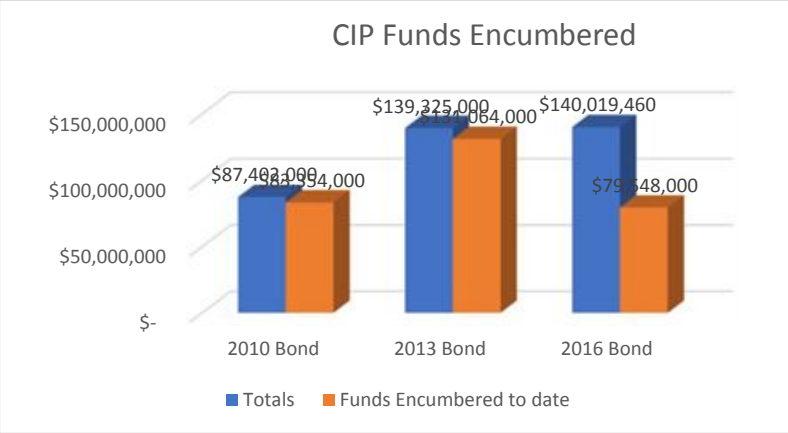
CIP Summary

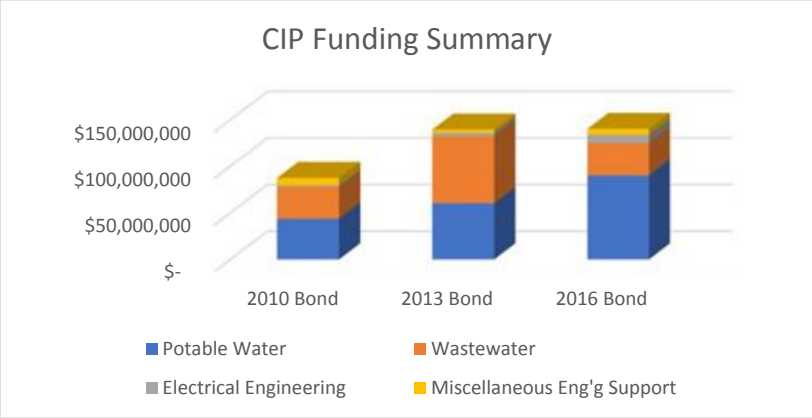
CIP Summary - Project Encumbrance

	2010 Bond		2013 Bond		2016 Bond			
	Funded	Complete	Funded	Complete	Funded	Complete	Total CIP Projects	%
Potable Water	28	17	21	7	20	0	35	49%
Wastewater	16	13	7	3	8	1	22	31%
Electrical Engineering	5	5	6	1	5	0	10	14%
Miscellaneous Eng'g Support	2	0	3	1	4	1	4	6%
Totals	51	35	37	12	37	2	71	100%
% of Total CIP by Fund Source	72%		52%		52%			

CIP Summary - Project Amounts

	2010 Bond		2013 Bond		2016 Bond			
	Funded	%	Funded	%	Funded	%	Total CIP Projects	%
Potable Water	$ 41,903,305	48%	$ 58,317,117	42%	$ 64,647,830	46%	$ 164,868,252	45%
Wastewater	$ 36,009,577	41%	$ 73,837,883	53%	$ 60,227,170	43%	$ 170,074,630	46%
Electrical Engineering	$ 1,748,118	2%	$ 3,395,000	2%	$ 8,750,000	6%	$ 13,893,118	4%
Miscellaneous Eng'g Support	$ 7,741,000	9%	$ 3,775,000	3%	$ 6,394,460	5%	$ 17,910,460	5%
Totals	$ 87,402,000	100%	$ 139,325,000	100%	$ 140,019,460	100%	$ 366,746,460	100%
Funds Encumbered to date	$ 83,354,000	95%	$ 131,064,000	94%	$ 79,548,000	57%		
% of Total CIP Funding	23.8%		38.0%		38.2%			

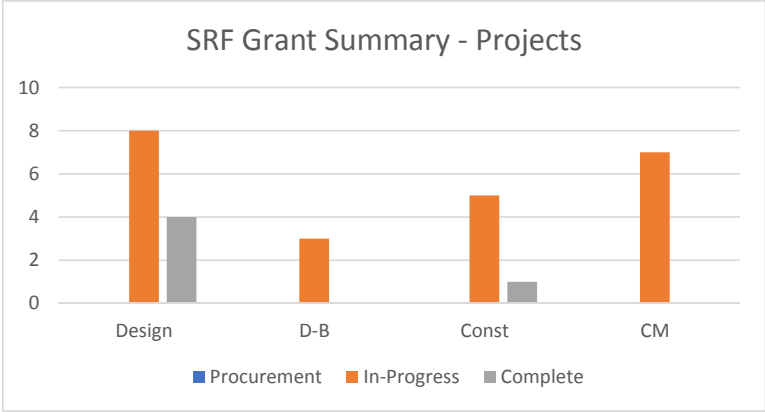




SRF Grant Summary

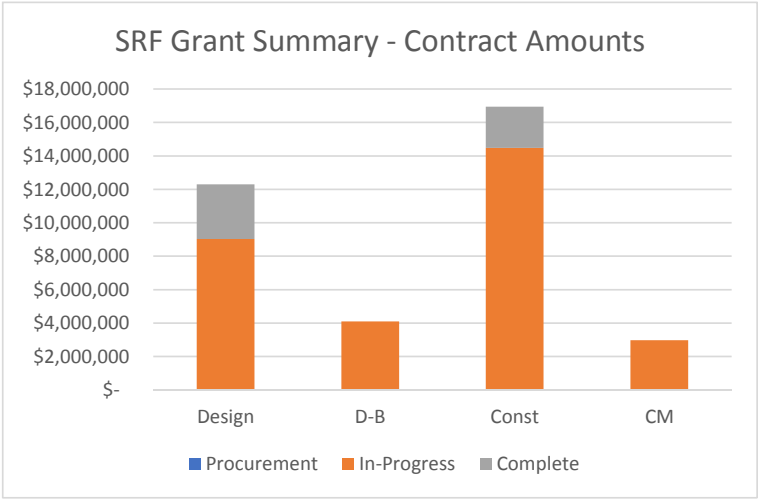
SRF Grant Summary - Projects

	Procurement	In-Progress	Complete	Totals	%
Design	0	8	4	12	43%
D-B	0	3	0	3	11%
Const	0	5	1	6	21%
CM	0	7	0	7	25%
Totals	0	23	5	28	
%	0%	82%	18%		



SRF Grant Summary - Contract Amounts

	Procurement	In-Progress	Complete	Totals	%
Design	$ -	$ 9,025,796	$ 3,279,629	$ 12,305,425	34%
D-B	$ -	$ 4,096,694		$ 4,096,694	11%
Const	$ -	$ 14,480,091	$ 2,470,658	$ 16,950,749	47%
CM	$ -	$ 2,977,793	$ -	$ 2,977,793	8%
Totals	$ -	$ 30,580,374	$ 5,750,287	$ 36,330,661	
%	0%	84%	16%		



OEA Grant Summary

- NDWWTP Upgrades
  - Design workshops for solids processes completed in early March; process and facility decisions finalized to allow design to proceed
  - USEPA NEPA Document preparation on-going; 30% Design Submittal is next major milestone
- Outfall Diffuser:
  - IFB has been issued (1/16/18);
  - Pre-bid meeting 1/26/18;
  - One bid received 2/23/18 – bid was rejected; GWA soliciting input to improve bid package; re-bid intended in coming months.
- Sewer Line Interceptor Design-Build
  - Multi-Step IFB has been issued.
  - Technical Proposal Due 3/15/18.
  - Several packages received and will be scored and evaluated.
  - Price Proposal Due 4/12/18.
  - B&C are preparing TFI documents to wave the MEC requirements.
  - GWA made the payment for the Right of Entry in the amount of $3,425.
- NGLA Observation wells – Design work on-going
  - There are no issues with the observation wells right now. Awaiting if the ROM (rough order of magnitude) is still pending from the DOD.

Action Item	Date (Target)	Date (Actual)	Status	Remarks
Project Funds Available	July-16	AUG-30-16	Completed	
Land Acquisition	Jan-17	Jan-17 (Compensation Pending)	Pending	Survey complete, appraisals complete – under review
Procure PM/CM Firm	Jan-17	Jan-17 (NTP Issued Feb 10th)	Completed	
Procure Design Firm	Jul-17		Completed	Contract issued; kickoff pending
Design -- 30/60/90/Final -- Review	Jun-18		On-target	Project design schedule under review by PM/CM
NEPA Analysis and Determination	Feb-17		Delayed	USEPA work on-going; procurement of contractor completed
Procure Construction Firm	Dec-18		On-target	
Construction Complete/Commence Operations	Nov-21		On-target	
Sewer line connection from MCB to GWA infrastructure	Jul-19		On-target	
MCB Initial Operating Capability	Jul-22		On-target	

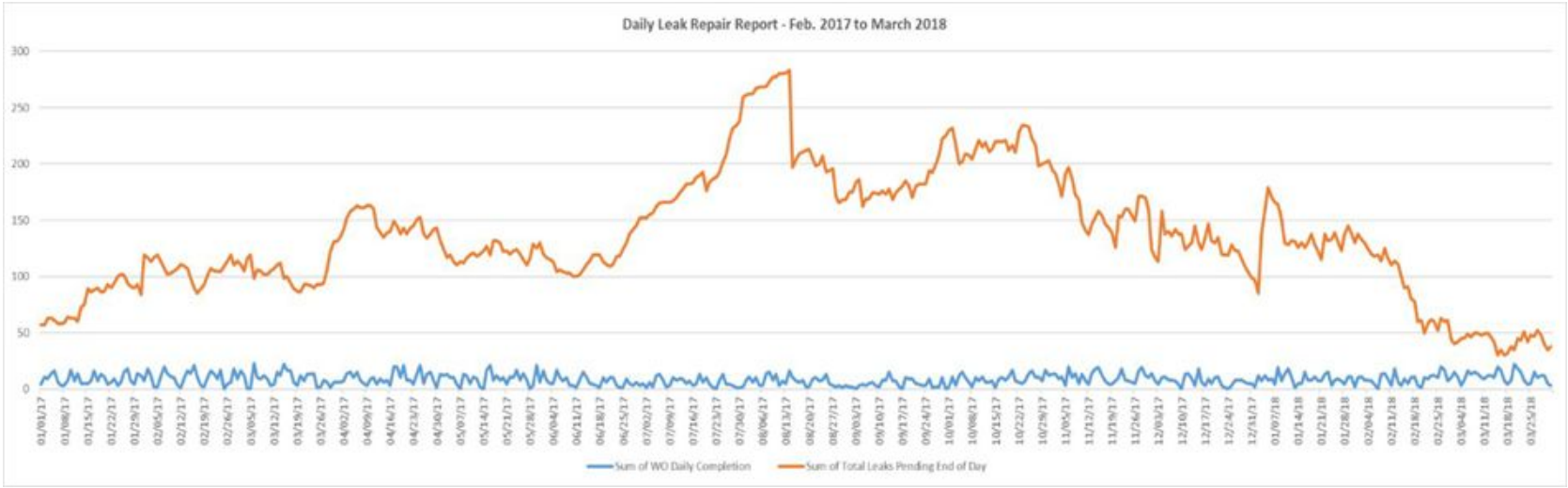
Land Acquisition Summary

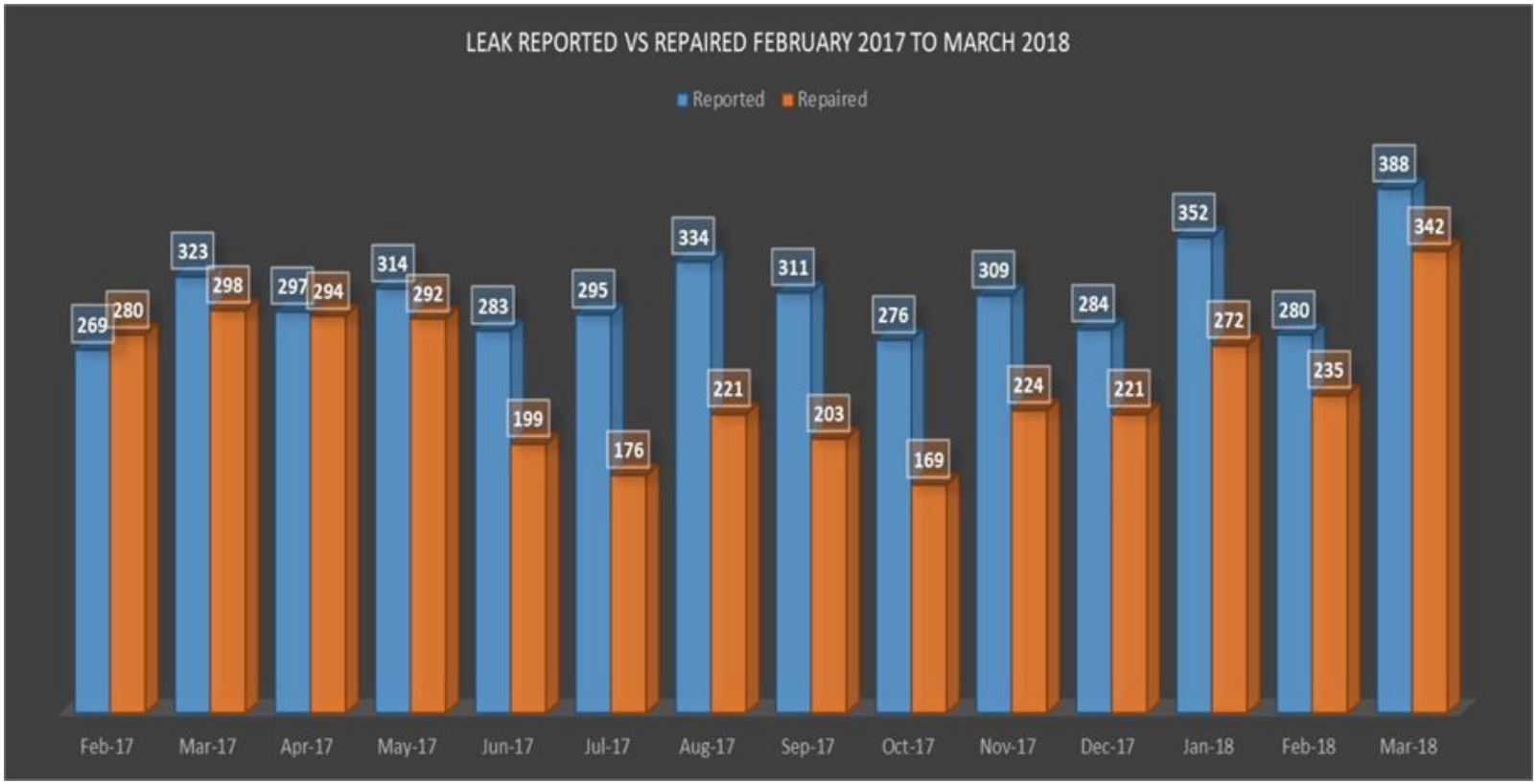
GWA Facility	Location	Gov't./Private/Other	Land Acquisition Status
Tanks	Ugum	Private	TGE to draft Letter of Decision for private property owners 11/09/17. Appraisal Services requested by TGE 04/02/18.
	Astumbo	Gov't./CLTC	GWA and DoLM working together on Land Registration process. Pending Notification of surrounding lot owner information from DoLM.
	Piti	Private	Letters of Intent letters received from private property owner to authorize GWA to begin preliminary geotechnical investigation and archaeological investigation 2/27/18.
Expansion of the Northern District Wastewater Treatment Plant (NDWWTP)	Dededo	Gov't./GALC	Funding Approval Request Sent to Finance 11/30/17; DoLM to draft Grant Deed 02/28/18. Title & Escrow Company have acknowledged underwriter approval of land acquisition 03/06/18. PUC approval 03/29/18.
Deep Well	A-12	Private	Property ownership vested in GWA 10/16/17.
	AG-12	Dept. of Agriculture/Manhita Farms	DCA is still verifying suspected buildings/concrete houses encroachments along the northerly and southerly boundaries 04/02/18.
	Y-8	Gov't./CLTC	GWA Land Agent to draft Grant Deed for property ownership under PL 22-18 - 04/09/18.
Booster Pump Station	Agfayan	Private	2nd follow up Letter of Intent delivered to private property owner on 04/09/18.
Sewer Pump Stations	Property adjacent to Southern Link	Private	GWA started acquisition process on 12/23/2016. Property ownership vested in GWA 08/11/2017.
Asan Springs	Asan	Gov't./Private	GWA working to determine ownership 04/10/18.

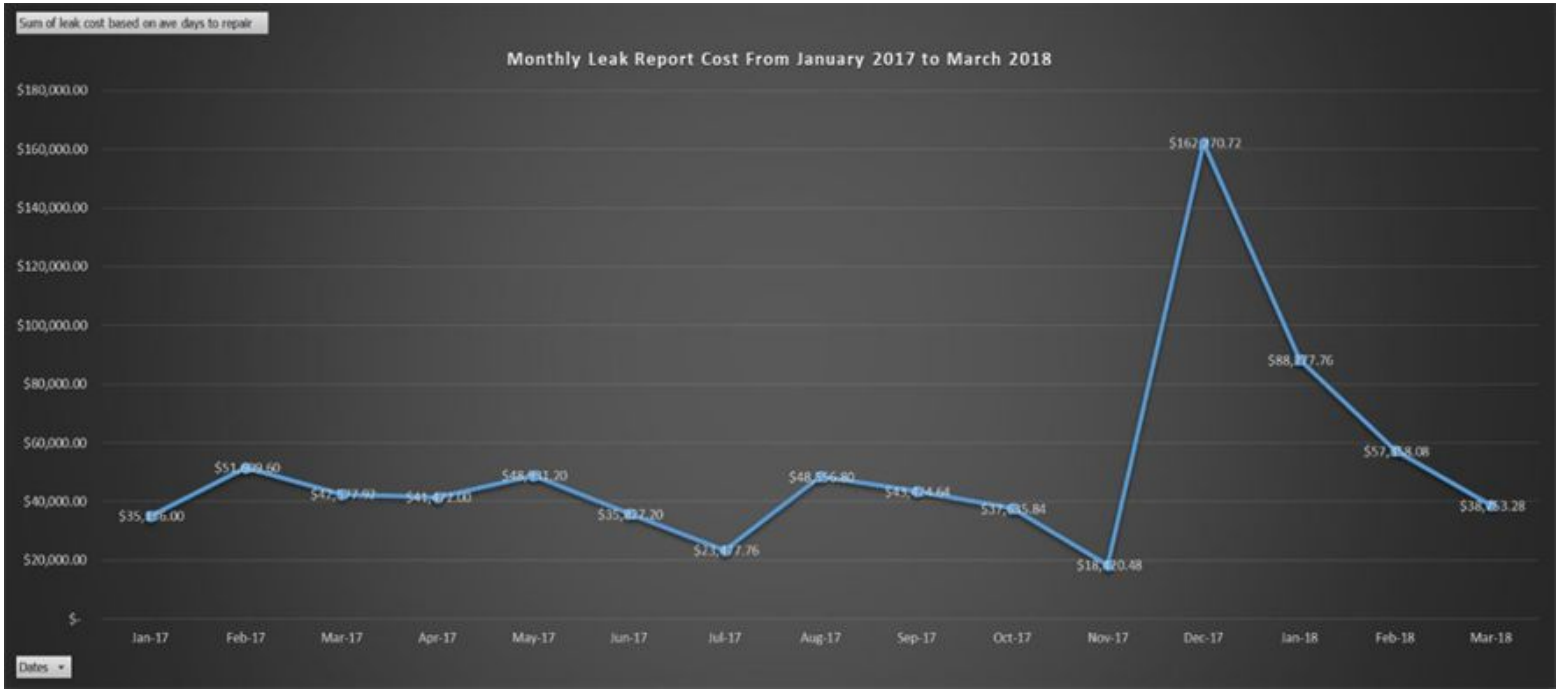
NRW – Update

- Water Audit update on-going
  - Production rates are being reviewed for accuracy and refined
  - Unmetered, Authorized uses are being quantified
  - Meter and billing inaccuracies are being reviewed and refined

Leak Repair Summary




LEAK REPORTED VS REPAIRED FEBRUARY 2017 TO MARCH 2018
Reported
Repaired
269
280
323
298
297
294
314
292
283
199
295
176
334
221
311
203
276
169
309
224
284
221
352
272
280
235
388
342
Feb-17
Mar-17
Apr-17
May-17
Jun-17
Jul-17
Aug-17
Sep-17
Oct-17
Nov-17
Dec-17
Jan-18
Feb-18
Mar-18



Assumptions:

1. Leak rate = 4 gpm
2. Cost per kgal = $4.00

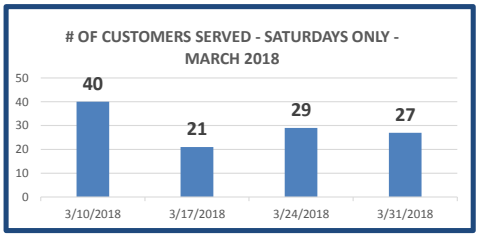
GWA Utility Services Division
Monthly Status Report
Month ending March 30, 2018

UTILITY SERVICES DIVISION ACTIVITIES:	WEEKLY AVERAGE FEB 2018	FEB 2018 MONTHLY TOTAL	WEEK ENDING: 3/9/2018	WEEK ENDING: 3/16/2018	WEEK ENDING: 3/23/2018	WEEK ENDING: 3/30/2018	WEEKLY AVERAGE MARCH 2018	MARCH 2018 MONTHLY TOTAL
Collections Unit								
I. Number of accounts cut for nonpayment:	65	261	46	104	83	81	79	314
II. Number of accounts restored for nonpayment:	51	204	43	57	47	76	56	223
III. Number of No water reports responded to:	2	9	3	3	4	3	3	13
IV. Number of Secure/Unsecure valve reports responded to:	2	8	2	0	0	1	1	3
V. Number of Verify reads responded to:	1	4	0	0	0	0	0	0
VI. Number of new pay plans negotiated for **active** accounts :	192	768	189	210	203	195	199	797
VII. Number of active pay plans negotiated and ongoing :	1999		1834	1966	2101	2224	2031	
VIII. Number of **inactive** accounts with a payment arrangement:	6		14	14	14	14	14	
IX. Number of broken payment plans:	82	326	97	78	68	72	79	315
Customer Service Unit								
I. Service Delivery Points:								
a. GBN Public Service Building – Fadian								
i. Total Customers Assisted :	246	1232	267	243	245	288	261	1043
ii. Total Abandoned Requests :	16	78	11	17	22	24	19	74
iii. Average Wait Time:	9 minutes		10 minutes	7 minutes	6 minutes	8 minutes	8 minutes	
iv. Average Service Time:	13 minutes		11 minutes	14 minutes	13 minutes	13 minutes	13 minutes	
v. Breakdown by request type:								
1. Apply for water	57	283	63	61	64	65	63	253
2. Restore water cut for non payment	10	48	10	19	5	11	11	45
3. Terminate Water	15	76	23	11	14	19	17	67
4. Copy of Bill	33	167	43	24	38	29	34	134
5. Billing Dispute	59	295	49	52	61	75	59	237
6. Billing Dispute follow up	3	14	3	8	2	6	5	19
7. General Questions & Other	39	196	36	28	31	39	34	134
8. Report a water leak	3	13	3	1	1	3	2	8
9. Report water theft	0	1	0	1	0	0	0	1
10. Payment Arrangement	26	132	36	38	29	41	36	144
b. Julale Satellite Office – Hagatna								
i. Total Customers Assisted :	267	1334	226	283	227	261	249	997
ii. Total Abandoned Requests :	19	95	5	23	15	18	15	61
iii. Average Wait Time:	7 minutes		5 minutes	8 minutes	5 minutes	7 minutes	6 minutes	
iv. Average Service Time:	9 minutes		9 minutes	9 minutes	9 minutes	10 minutes	9 minutes	
v. Breakdown by request type:								
1. Apply for water	47	236	45	50	48	45	47	188
2. Restore water cut for non payment	10	48	9	7	3	10	7	29
3. Terminate Water	20	98	9	21	16	25	18	71
4. Copy of Bill	58	290	63	64	49	46	56	222
5. Billing Dispute	69	345	53	69	58	63	61	243
6. Billing Dispute follow up	2	8	1	3	4	8	4	16
7. General Questions & Other	35	177	17	29	24	23	23	93
8. Report a water leak	1	6	2	2	2	2	2	8
9. Report water theft	0	0	0	0	0	0	0	0
10. Payment Arrangement	30	148	29	41	29	44	36	143
c. Upper Tumon Satellite Office – Upper Tumon								
i. Total Customers Assisted :	325	1627	303	316	331	356	327	1306
ii. Total Abandoned Requests :	12	58	13	2	4	31	13	50
iii. Average Wait Time:	6 minutes		12 minutes	5 minutes	7 minutes	12 minutes	9 minutes	
iv. Average Service Time:	14 minutes		11 minutes	13 minutes	12 minutes	9 minutes	11 minutes	
v. Breakdown by request type:								
1. Apply for water	76	379	68	73	70	81	73	292
2. Restore water cut for non payment	12	62	15	20	22	29	22	86
3. Terminate Water	26	129	17	15	24	38	24	94
4. Copy of Bill	51	253	64	61	64	44	58	233
5. Billing Dispute	78	389	64	72	74	82	73	292
6. Billing Dispute follow up	5	25	2	1	2	3	2	8
7. General Questions & Other	35	173	46	38	38	28	38	150
8. Report a water leak	3	16	0	2	6	5	3	13
9. Report water theft	0	0	0	0	0	0	0	0
10. Payment Arrangement	42	209	28	42	37	49	39	156

GWA Utility Services Division
Monthly Status Report
Month ending March 30, 2018

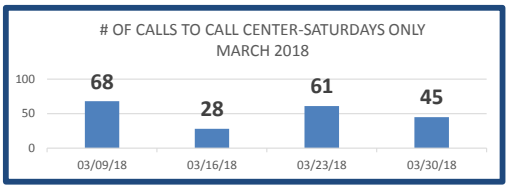
UTILITY SERVICES DIVISION ACTIVITIES:	WEEKLY AVERAGE FEB 2018	FEB 2018 MONTHLY TOTAL	WEEK ENDING: 3/9/2018	WEEK ENDING: 3/16/2018	WEEK ENDING: 3/23/2018	WEEK ENDING: 3/30/2018	WEEKLY AVERAGE MARCH 2018	MARCH 2018 MONTHLY TOTAL
d. Customer Call Center								
i. Calls Recieved :	1301	6503	1262	1322	1088	1221	1223	4893
ii. Calls Immediately Answered :	747	3733	691	823	707	835	764	3056
iii. Calls Abandoned	47	236	37	54	50	41	46	182
iv. Calls Handled by Voice mail:	505	2525	534	445	329	345	413	1653
v. Average duration of calls answered	6 minutes		5 minutes	4.5 minutes	4 minutes	4 minutes	4 minutes	
vi. Breakdown by request type:								
1. Apply for water			18	15	25	25	21	83
2. Restore water cut for non payment			18	23	30	42	28	113
3. Terminate Water			6	6	5	12	7	29
4. Copy of Bill			1	2	2	0	1	5
5. Billing Dispute			15	15	22	26	20	78
6. Billing Dispute follow up			10	26	32	51	30	119
7. General Questions & Other			296	220	334	298	287	1148
8. Report a water leak			2	12	27	18	15	59
9. Report water theft			0	1	2	1	1	4
10. Payment Arrangement			69	97	96	70	83	332
11. Pay by Phone			180	106	69	100	114	455
12. Other GWA Staff			79	59	117	126	95	381
13. Online Services			43	30	36	26	34	135
14. ATC/Email/Text/SMS issues			25	16	13	34	22	88
15. Dispatch			58	56	33	60	52	207
16. Back Billing			1	2	4	14	5	21
17. Secure/Unsecure Valve			26	22	6	13	17	67
18. No Water			11	57	25	28	30	121
e. Customer Emails:								
i. Emails Recieved :								
1. customers@guamwaterworks.org	42	208	43	88	100	86	79	317
Breakdown by request type (email):								
a. Apply for water	2	8	0	3	0	3	2	6
b. Terminate Water	1	7	1	3	3	3	3	10
c. Copy of Bill	2	9	2	3	0	0	1	5
d. Billing Dispute & follow up	8	42	8	13	18	12	13	51
e. General Questions & Other	18	88	14	23	24	17	20	78
f. Report a water leak	3	16	1	3	4	6	4	14
g. Report water theft	0	1	0	0	0	0	0	0
h. Online services inquiry	7	37	9	7	7	10	8	33
2. gwaservesme@guamwaterworks.org (realtors and prop	0	0	0	2	4	3	2	9
ii. Emails Replied (both):	32	158	8	31	40	32	28	111

f. Saturday Services: 9AM TO 1PM ONLY	AVERAGE	3/10/2018	3/17/2018	3/24/2018	3/31/2018	AVERAGE
	29	40	21	29	27	29
i. VISITS: Breakdown by request type:						
1. Apply for water	6	7	2	10	4	6
2. Restore water cut for non payment	1	1	0	1	0	1
3. Terminate Water	0	0	0	2	3	1
4. Copy of Bill	6	14	7	6	2	7
5. Billing Dispute	7	7	5	6	9	7
6. Billing Dispute follow up	0	0	0	0	0	0
7. General Questions & Other	4	5	1	1	3	3
8. Report a water leak	0	0	0	0	0	0
9. Report water theft	0	0	0	0	0	0
10. Payment Arrangement	6	6	6	3	6	5



GWA Utility Services Division
Monthly Status Report
Month ending March 30, 2018

UTILITY SERVICES DIVISION ACTIVITIES:	WEEKLY AVERAGE FEB 2018	FEB 2018 MONTHLY TOTAL	WEEK ENDING: 3/9/2018	WEEK ENDING: 3/16/2018	WEEK ENDING: 3/23/2018	WEEK ENDING: 3/30/2018	WEEKLY AVERAGE MARCH 2018	MARCH 2018 MONTHLY TOTAL
ii. CALLS TO CALL CENTER (Saturday services only):			03/09/18	03/16/18	03/23/18	03/30/18		
			68	28	61	45		



Dispute Resolution & Document Control

I. Dispute Resolution:			03/09/18	03/16/18	03/23/18	03/30/18		
a. Number of disputed accounts resolved:	7	33	9	5	3	6	6	23
b. Number of disputed accounts under review:	179	895	179	179	179	179	179	716
II. Document Control:								
a. Number of field activities posted :	404	2018	428	519	450	548	486	1945
b. Number of field activities pending:	628	3142	446	782	565	401	549	2194

Disconnect/Reconnect Unit

I. Number of field activities received:	294	1471	246	234	252	271	251	1003
II. Number of field activities completed:	302	1511	258	267	271	281	269	1077
III.Number of field activities pending field action:	2	12	4	3	2	3	3	12

Meter Reading Unit

I. Number of meters read:			03/09/18	03/16/18	03/23/18	03/30/18		
a. Electronically Read Meters:	10089	50443	8421	11736	11581	5723	9365	37461
b. Manually Read Meters:	43	214	28	32	48	47	39	155
i. Unread meters (Meters scheduled to be read but not read):	50	252	33	49	55	27	41	164
ii. Number of data logs received:	38	188	29	31	29	39	32	128
iii. Number of data logs retrieved:	33	164	15	43	23	55	34	136
iv. Number of data logs pending field action:	16	79	25	20	24	0	17	69
v. Communication Errors/Reprogramming requests:	2	12	3	6	8	8	6	25
vi. Number of estimated readings (for the week):	37	185	27	39	39	27	33	132
vii. Reasons for Estimations:								
1. Cant locate meter:	2	8	0	0	2	3	1	5
2. Temporary Obstruction	1	3	0	0	3	1	1	4
3. Vicious Dog	1	3	0	1	0	0	0	1
4. Flooded meter	1	6	0	1	2	0	1	3
5. Corrective action requested (database corrections needed)	3	13	4	2	8	3	4	17
6. Possible changed out meter:	21	106	6	10	16	0	8	32
7. Communication/Programming error (code 92's):	8	40	9	6	6	1	6	22
8. Other:	7	35	1	5	9	2	4	17
1. Leaks detected on customer's private line:	1220	6102	1098	1198	1415	604	1079	4315
2. Reverse Flow Detected	47	235	29	32	28	30	30	119
3. No Usage Detected	325	1625	250	246	359	209	266	1064
4. Tamper Code	14	71	14	12	23	11	15	60
c. Electronic Read Percentage:	98%		98%	100%	99%	100%	99%	

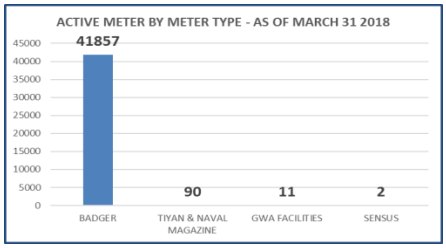
Revenue Protection Unit

I. Number of Inactive Still Consuming Reports rec'd & investigated:	1	5	2	1	2	1	2	6
II.Number of Illegal Connection reports rec'd & investigated:	1	3	0	1	0	0	0	1

III. Meter Replacement Project – Post 2010 Metron Farnier & Sensus Status Report :

METER TYPE	COUNT
SENSUS	2
METRON FARNIER	0
	2

a. Account & Meter Type Count :



GUAM WATERWORKS AUTHORITY

Engineering Monthly Report
April 2018

Prepared By:
Thomas Cruz, P.E. Chief Engineer

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A. Summary Table of 2010, 2013 and 2016 Bond

Potable Water

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
PW 05-01	Ground Water Disinfection	$ 500,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 05-03	Santa Rita Springs Booster Pump Rehab Phase II	$ -	N/A	N/A	$ 100,000.00	100.00%	0.00%	$ -	N/A	N/A
PW-05-05	"A Series Well Transmission Line	$ 518,143.96	100.00%	0.00%	$ 400,000.00	92.46%	7.54%	$ -	N/A	N/A
PW 05-06	Water Booster Pump Station	$ 500,000.00	100.00%	0.00%	$ 1,861,000.00	99.09%	0.91%	$ 4,139,000.00	0.00%	100.00%
PW 05-07	Meter Replacement Program	$ 10,300,000.00	99.84%	0.16%	$ 999,000.00	99.75%	0.25%	$ 4,501,000.00	3.33%	96.67%
PW 05-08	Barrigada Tank Repair/Replacement	$ 5,450,000.00	99.92%	0.08%	$ 4,987,000.00	99.32%	0.68%	$ 1,013,000.00	0.00%	100.00%
PW 05-09	Leak Detection	$ 200,000.00	100.06%	-0.06%	$ 20,000.00	84.58%	15.42%	$ 1,180,000.00	0.00%	100.00%
PW 05-10	Potable Water System Planning	$ 200,000.00	100.00%	0.00%	$ 624,000.00	100.00%	0.00%	$ 2,276,000.00	20.93%	61.50%
PW 05-11	Implement Ground Water Rule	$ 1,700,000.00	100.00%	0.00%	$ 1,000,000.00	100.00%	0.00%	$ -	N/A	N/A
PW 05-12	Brigade II (Ugum Lift) BPS Upgrade	$ 1,700,000.00	18.03%	81.97%	$ -	N/A	N/A	$ -	N/A	N/A
PW 05-13	Deep Well Rehabilitation	$ 548,000.00	100.00%	0.00%	$ 200,000.00	100.00%	0.00%	$ 250,000.00	44.01%	0.00%
PW 05-14	New Deep Wells at Dow n Hard	$ 638,252.85	76.11%	23.89%	$ 810,000.00	0.00%	100.00%	$ 1,190,000.00	0.00%	100.00%
PW 05-15	Rehabilitation of Asan Springs	$ 900,000.00	37.87%	62.13%	$ -	N/A	N/A	$ -	N/A	N/A
PW 05-16	Master Meters	$ 1,600,000.00	99.44%	0.56%	$ 784,000.00	99.88%	0.12%	$ 3,616,000.00	4.19%	95.81%
PW 09-01	Ugum Water Treatment Plant Intake	$ 700,000.00	99.47%	0.53%	$ 982,000.00	100.00%	0.00%	$ 18,000.00	0.00%	100.00%
PW 09-02	Water Wells	$ -	N/A	N/A	$ 4,200,000.00	46.77%	53.23%	$ 2,500,000.00	0.00%	100.00%
PW 09-03	Water Distribution System	$ 3,174,748.00	100.00%	0.00%	$ 11,151,000.00	87.97%	4.85%	$ 49,000.00	0.00%	100.00%
PW 09-04	Pressure Zone Realignment	$ -	N/A	N/A	$ 431,000.00	99.95%	0.05%	$ 1,141,000.00	58.58%	35.06%
PW 09-06	Central Water Distribution System 2005	$ 900,000.00	91.67%	8.33%	$ -	N/A	N/A	$ -	N/A	N/A
PW 09-08	Mechanical/Electrical Equipment	$ 1,200,000.00	100.00%	0.00%	$ 430,000.00	99.60%	0.40%	$ 100,000.00	0.00%	100.00%
PW 09-09	Water Reservoir Internal/External	$ 2,000,000.00	73.20%	24.53%	$ -	N/A	N/A	$ -	N/A	N/A
PW 09-10	Water Reservoir Internal/External	$ -	N/A	N/A	$ -	N/A	N/A	$ 800,000.00	0.00%	100.00%
PW 09-11	Water System Reservoirs 2005 Improvements	$ 1,050,000.00	100.00%	0.00%	$ 13,878,000.00	99.99%	0.01%	$ 28,350,000.00	48.33%	51.67%
PW 11-01	Distribution System Upgrades	$ 474,159.85	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 11-02	Ugum Water Treatment Plant Reservoir	$ -	N/A	N/A	$ 90,000.00	0.00%	100.00%	$ -	N/A	N/A
PW 12-01	Water Audit Program & Water Loss Control Plan	$ 100,000.00	78.46%	21.54%	$ -	N/A	N/A	$ 1,000,000.00	0.00%	100.00%
PW 12-02	Production Plan / Reduce Navy Purchases	$ 100,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 12-03	Hydraulic Assessment of Tanks	$ 500,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 12-04	Agana Heights & Chaot Tanks	$ 4,700,000.00	100.00%	0.00%	$ 3,280,000.00	40.52%	59.48%	$ 1,220,000.00	40.98%	59.02%
PW 12-05	Tank Major Repair Yigo #1, Mangilao #2, Astumbo#1	$ 1,900,000.00	95.16%	4.84%	$ 11,605,000.00	99.99%	0.01%	$ 1,895,000.00	96.15%	3.85%
PW 12-06	Tank Replacement Piti & Hyundai	$ -	N/A	N/A	$ -	N/A	N/A	$ 7,409,830.00	98.52%	1.48%
PW 12-07	Assessment of Malojloj Elevated & Yigo Elevated	$ 200,000.00	100.00%	0.00%	$ 485,117.00	100.00%	0.00%	$ -	N/A	N/A
PW 12-08	Public Water System Asset Inventory/ Condition Assessment	$ 100,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 12-09	Public Water System GIS & Mapping	$ 50,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 14-01	Fire Hydrant Replacement Program	$ -	N/A	N/A	$ -	N/A	N/A	$ 2,000,000.00	0.00%	100.00%
		$ 41,903,304.66			$ 58,317,117.00			$ 64,647,830.00		

Wastewater

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
WW 05-04	Wastew ater System Planning	$ 1,500,000.00	100.00%	0.00%	$ 651,000.00	100.00%	0.00%	$ 349,000.00	89.68%	9.15%
WW 05-05	Wastew ater Vehicles	$ 235,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 05-07	NDWWTP - Chlorine Tanks	$ 250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 09-01	Lift station upgrades	$ -	N/A	N/A	$ 946,000.00	70.40%	29.60%	$ 2,404,000.00	12.21%	87.79%
WW 09-06	Wastew ater Collection System Repl/ Rehabilitation	$ 1,105,000.00	99.93%	0.07%	$ 780,000.00	97.11%	2.89%	$ 2,920,000.00	0.00%	46.73%
WW 09-08	Facilities Plan/Design for Baza Gardens WWTP	$ 1,250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 09-10	Facilities Plan/Design for Agat-Santa Rita WWTP	$ 899,630.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 11-03	Baza Gardens STP Replacement	$ 1,301,947.00	24.27%	11.57%	$ 3,114,883.00	100.00%	0.00%	$ 29,400,170.00	98.99%	1.01%
WW 11-04	Facilities Plan/Design for Umatac-Merizo WWTP	$ 900,000.00	100.00%	0.00%	$ 473,000.00	100.00%	0.00%	$ 527,000.00	47.44%	52.16%
WW 11-08	Agat/Santa Rita STP Replacement	$ 2,218,000.00	99.91%	0.09%	$ 67,200,000.00	99.43%	0.57%	$ 3,000,000.00	37.32%	62.68%
WW 12-01	Northern District WWTP Primary Treatment Upgrade	$ 11,750,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-02	Biosolids Management Plan	$ 200,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-03	Agana WWTP Interim Measures	$ 11,500,000.00	100.00%	0.00%	$ 673,000.00	100.00%	0.00%	$ 827,000.00	0.00%	90.22%
WW 12-04	I&I SSES Southern	$ 800,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-05	I&I SSES Central	$ 850,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-06	I&I SSES Northern	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 12 -07	Umatac Merizo Replacement	$ 250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ 20,800,000.00	99.06%	0.94%
WW 12-08	Wastew ater System GIS & Mapping	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-09	Wastew ater Facility Back Up Pow er	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-10	Wastew ater System Asset Inventory	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 17-01	Wastew ater Sew er System Expansion									
WW 17-02	Northern District WWTP Secondary Treatment Upgrade	$ 1,000,000.00	0.00%	100.00%						
		$ 36,009,577.00			$ 73,837,883.00			$ 60,227,170.00		

Electrical Engineering Support

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
EE 05-02	SCADA Pilot Project	$ 61,950.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
EE 09-01	Wastewater Pumping Station Electrical Upgrade	$ -	N/A	N/A	$ 620,000.00	16.13%	83.87%	$ 100,000.00	0.00%	100.00%
EE 09-02	Electrical Upgrade - Water Wells	$ 354,226.63	100.00%	0.00%	$ 1,500,000.00	100.00%	0.00%	$ 650,000.00	0.00%	100.00%
EE 09-03	Electrical Upgrade - Water Booster	$ -	N/A	N/A	$ 2,000.00	0.00%	100.00%	$ 323,000.00	0.00%	100.00%
EE 09-04	Electrical Upgrade - Water Booster	$ -	N/A	N/A	$ 200,000.00	0.49%	99.51%	$ -	N/A	N/A
EE 09-05	Electrical Upgrade - Other Water	$ -	N/A	N/A	$ 150,000.00	40.47%	59.53%	$ -	N/A	N/A
EE 09-06	SCADA Improvements - Phase I	$ 250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
EE 09-07	SCADA Improvements - Phase 2	$ 1,056,986.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
EE 09-08	SCADA Improvements - Phase 3	$ 24,955.71	100.00%	0.00%	$ 923,000.00	78.26%	21.74%	$ 1,177,000.00	52.46%	47.54%
EE 09-09	SCADA Improvements - Phase 4	$ -	N/A	N/A	$ -	N/A	N/A	$ 6,500,000.00	0.00%	93.08%
		$ 1,748,118.34			$ 3,395,000.00			$ 8,750,000.00		

Miscellaneous Engineering Support

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
MC 05-01	Laboratory Modernization	$ -	N/A	N/A	$ 1,173,000.00	100.00%	0.00%	$ 1,127,000.00	100.00%	0.00%
MC 05-02	Land Survey	$ 500,000.00	99.94%	0.06%	$ 2,000.00	0.00%	100.00%	$ 1,998,000.00	63.09%	36.91%
MC 09-01	General Plant Improvements	$ 7,241,000.00	99.58%	0.42%	$ 2,600,000.00	82.00%	18.00%	$ 2,769,460.00	53.83%	45.89%
MC 15-01	Information Technology Intergration Improvements							$ 500,000.00	48.81%	51.19%
		$ 7,741,000.00			$ 3,775,000.00			$ 6,394,460.00		

	2010 Bond Allotment	2013 Bond Allotment	2016 Bond Allotment
CIP Water	$ 41,903,304.66	$ 58,317,117.00	$ 64,647,830.00
CIP Wastewater	$ 36,009,577.00	$ 73,837,883.00	$ 60,227,170.00
CIP Electrical	$ 1,748,118.34	$ 3,395,000.00	$ 8,750,000.00
CIP Miscellaneous	$ 7,741,000.00	$ 3,775,000.00	$ 6,394,460.00
	$ 87,402,000.00	$ 139,325,000.00	$ 140,019,460.00

Bond Fund	Construction Fund Amount ($M)	Estimated # of months fund available for use		Total Funds encumbered to date ($M)	% of fund used	Rate of Spending: ($M) per year
2005	$82.930	82	*	$82.930	100.00%	12.14
2010	$87.402	87	**	$83.354	95.37%	11.50
2013	$139.325	50	**	$132.278	94.94%	31.75
2015	$140.019	20		$81.534	58.23%	48.92
	* - End date November 2013 via CCU Resolution 06-FY2014					
	** - Includes month of March 2018					

B. Projects Procurement

Percentage Key:

100%	Approved by GM
99%	Signature required from either Accounting/Legal/GM
98%	Processing engineering service or construction contract (with legal)
95%	Request for CCU approval (GM/engineering)
90%	A/E fee negotiation or contractor bid evaluation (engineering)
80%	Selected A/E or Conducted bid opening (engineering)
70%	Advertised RFP/IFB (engineering)
60%	RFP/IFB Package under legal review
50%	RFP/IFB Package completed (engineering)
Less than 50%	Project Scope of work development in progress

- Red text anywhere indicates a change from the last report.

BOX KEY FOR PROCUREMENT:

(Type of Procurement) (Relevant CIP NO. or Funding Source)	**(Project Title)**	
(Percentage complete for procurement)	**Activities/Notes:** (see percentage key above)	**Consultant** (listed when selected)
Project Description	Summary of project description	

BID PACKAGE PW 09-02	**New Well Construction**	
<50% Complete	**Activities/Notes:** GWA engineering continuing discussion with Dept. of Agriculture and lessee on options of acquisition of property for well site at AG-12. Internal GWA discussions underway for survey and appraisal services as well as continuing services form Designer.	
Project Description:	The project is to construct three new production wells for GWA as well as installation of a water main to connect the new production wells to the Ysengsong Reservoirs.	

RFP PW 09-02	**New Well Construction (Construction Management)**	
<50% Complete	**Activities/Notes:** SOW being developed	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of up to three (3) new production wells for GWA. GWA plans to increase source water production to improve system redundancy that allows for operating the water production wells more effectively. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

BID PACKAGE PW 14-01	**Fire Hydrant Replacement Phase I**	
<50% Complete	**Activities/Notes:** Bid package being prepared.	
Project Description:	The work performed under this project consist of replacing all know dry barrel fire hydrants down to the lateral as well as any defective wet barrel fire hydrant. Where necessary the gate valve for the fire hydrant may also be replaced.	

RFP WW 09-01	**Yigo SPS Flood Protection and Rehabilitation Design**	
90% Complete	**Activities/Notes:** GWA in negotiation with AECOM on SOW and fee proposal.	
Project Description:	The work performed under this project procurement shall consist of a design services to implement storm water mitigation measures to protect the facility during extreme weather as well as rehabilitate the facility to provide better redundancy and operate efficiently.	

RFP PW 09-11	**Northern and Southern Tank Phase I (Santa Rosa, Sinifa, Santa Rita) Construction Management**	
100% Complete	**Activities/Notes:** Contract fully executed. NTP issued April 6, 2018.	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of three water reservoirs; 1MG Santa Rosa, 1MG Sinifa and 1MG Santa Rita. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

BID PACKAGE PW 09-03, PW 09-04 AND PW 09-11	**Northern Tank Phase I (Santa Rosa) Construction**	
<50% Complete	**Activities/Notes:** GWA will issue only a bid for Santa Rosa Tank and off-site improvements first.	
Project Description:	The work performed under this project procurement shall consist of Construction of a 1MG Santa Rosa reservoir and booster pump station. Some piping work off site from the reservoir is also required to ensure the reservoirs function optimally.	

BID PACKAGE EE 09-08, EE 09-09	**SCADA Phase A1 Construction**	
70% Complete	**Activities/Notes:** IFB advertised 1/30/18, Pre-bid conference completed. Bid opening 3/28/18.	
Project Description:	The work performed under this project procurement shall consist of	

	Construction of SCADA ready instrumentation at several water and waste water facilities throughout he island.

RFP EE 09-08, EE 09-09	**SCADA Phase A1 Construction Management**	
90% Complete	**Activities/Notes:** GWA and CM firm currently in scope and fee negotiations.	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of all SCADA ready instrumentation at the various facilities through Guam. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

RFP PW 09-04, PW 09-11	**Design Services for the Project Pressure Zone Realignment and Tank Repair/Replacement**	
90% Complete	**Activities/Notes:** GWA and design firm currently in scope and fee negotiations.	
Project Description:	The work performed under this project procurement shall consist of design services for the remaining GWA reservoirs that required major repairs or replacement. The design will also address the required pressure zone realignment throughout the island so as to improve the distribution system functionality. .	

BOX KEY FOR PROJECT:

(Type of Project) (Relevant CIP NO.)	**(Project Title) (Contractor or consultant)**	**Start Date:** (month and year)
(Percentage complete for project)	**Activities/Notes:** (brief description of activity)	**Completion Date:** (month and year)
(Court Order Paragraph No.)	(Project type)	
Project Description	Project Description Narrative	

C. CIP Water Section

INSPECTION CIP PW 05-02	**Inspection & Maintenance Repairs to GWA Island-Wide Steel Water Tank Reservoirs Phase 2 (DCA)**	**Start Date:** April 2010
80% Complete	**Activities/Notes:** Still waiting for Quotes for tank bypass/take down for Umatac #1 and Pigua. Still working on plan for Kaiser, Windward. Qoute for Agat #1 take down with contractor. WBP2 Controls working properly now which allows Agat Umatac Tank to be taken down.	**Completion Date:** Anticipate December 2021
CO 38C	Engineering inspection services	
Project Description:	The Court Order requires GWA to inspect all active and in some cases inactive water reservoirs. The inspection results will allow GWA to determine if a reservoir requires repair or replacement.	

DESIGN CIP PW 05-12	**Brigade II BPS Upgrade (EM Chen)**	**Start Date:** April 2012
100% complete (Basis of Design) 45% (Design)	**Activities/Notes:** Designer still working on 60% design submittal. Expect by third week in April.	**Completion Date:** Due to property acquisition issues GWA anticipate May 2018
N/A	Engineering design services	
Project Description:	The design project is intended to assess system water supply feed from the north as well as Ugum WTP and the water demands downstream from the Brigade BPS so as to reconfigure the piping into the BPS and resize the pumps to me system head requirements.	

DESIGN CIP PW 12-05	**Yigo and Astumbo 2MG Tank Design Project (Lyons)**	**Start Date:** September 2013
99% complete	**Activities/Notes:** Design firm to provide RFI support during the construction.	**Completion Date:** January 2016
CO 9 (b)(4)	Engineering design services	
Project Description:	Develop the construction documents for two (2) 2.0 million-gallon (MG) nominal capacity concrete reservoirs in the Yigo service zones and one (1) 2.0 MG reservoir in the Astumbo service area. The design services will consist of preparation of plans, specifications, and estimates	

	(PS&E), including Basis of Design, design calculations, construction schedule, topographical survey, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic resources, hazardous materials survey, construction documents, design drawings in Auto CAD (latest version), and relevant permits. Other services will include construction bid support service, meetings, and response to request for interpretation/information during construction. The consultant is required to incorporate and modify existing GWA concrete reservoir specifications to meet the project objective.

DESIGN PW 09-11	**Northern and Southern Guam Reservoir Design** **(TG Engineers)**	**Start Date:** May 2015
60% Complete	**Activities/Notes:** Santa Rosa – 100% design in hand. Santa Rita – 100% design in hand. Inarajan – Land procurement second site related to new BPS's still on-going. Sinifa – 100% design in hand. Ugum – GWA still in discussion with re-evaluation and discussion with property owner of alternative property on-going.	**Completion Date:** Update: Due to property acquisitions issues for Piti and Tumon #1, design completion 6 months after property issue resolved.
CO 29 (b)(4)	Engineering design services	
Project Description:	The design services will consist of preparation of plans, specifications, and estimates (PS&E), which includes Basis of Design, design calculations, hydraulic modeling (EPANET), computational fluid dynamic modeling (CFD), construction schedule, topographical survey, property research, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic resources, hazardous materials survey, construction documents, design drawings in Auto CAD, relevant permit, construction bid support service, and response to request for interpretation/information during construction. The tank locations are Ugum, Santa Rita, Santa Rosa, Inarajan and Sinifa.	

DESIGN PW 12-04	**Central Guam Reservoirs Design** **(GHD Inc.)**	**Start Date:** May 2015
65% Complete	**Activities/Notes:** Chaot #2 – Chaot off-site work part of base bid. Chaot Tank work expected to be Change Order in once funding available. Tumon #2 – Tumon tank part of base bid. Hyundai – Hyundai tank part of base bid. Piti – GWA still evaluating alternative solutions to storage needs in Piti area. Manenggon –60% design near complete. Tumon #1 – GWA working on land issues.	**Completion Date:** Update: Due to property acquisitions issues for Piti and Tumon #1, design completion 6 months after property issue resolved.
CO 29 (b)(4)	Engineering design services	
Project Description:	The design services will consist of preparation of plans, specifications, and estimates (PS&E), which includes Basis of Design, design calculations, hydraulic modeling (EPANET), computational fluid dynamic modeling (CFD), construction schedule, topographical survey, property research, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic resources, hazardous	

	materials survey, construction documents, design drawings in Auto CAD, relevant permit, construction bid support service, and response to request for interpretation/information during construction The tank locations are Hyundai, Pulantat, Chaot #2, Tumon #2, Piti and Tumon #1.

CONSTRUCTION PW 09-03	**Line Replacement Phase IV (Giant Construction)**	**Start Date:** 02/14/16
80% Complete	**Activities/Notes:** Contractor completing work in Santa Rita (Santa Rosa Subd.)/terminating exiting service lateral. Continuing pipe installation at Asumption Drive and Agafa Gumas. GWA working on property and archeological issue with contractor.	**Completion Date:** 12/30/18 per Change Order.
	Construction Services	
Project Description:	The project is intended for a contractor to replace existing water lines that have been found by operations to be leaking and/or are causing service delivery to less than what GWA is required to provide. The project will replace water mains and ten known locations throughout the island and there is a component within the bid where line replacement work for unknown locations is accounted for.	

DESIGN PW 05-15	**Asan Spring Rehabilitation Design (HDR)**	**Start Date:** August 24, 2016
45% Complete	**Activities/Notes:** Designer still working on 60% design submittal.	**Completion Date:** Due to delays from the Park Services related to property access the anticipated completion of the design is May 2018.
	Engineering design services	
Project Description:	- Perform site visits and condition assessment for site conditions to determine demolition and rehabilitation requirement, process equipment condition, structural condition, and electrical system. Site condition assessment shall include all disciplines to execute the project. - Review and validate the current property boundary information to confirm the available space for the project development. - Perform an environmental impact study and prepare all required permits as needed. - Perform an archeological and historical resources study to identify potential impact to the project, prepare all required permits as needed. - Coordinate with Guam Historic Resources Division State Historic Preservation Office (SHPO) on historical resources study. Prepare all necessary reports and documents as required by SHPO. - Coordinate with Guam Department of Agriculture, Division of Aquatic and Wildlife Resources (DAWR) on vegetation clearance. Prepare all necessary reports and documents required by DAWR. - Identify the existing and projected service area, period of design. - Identify and recommend conceptual water treatment system. - Perform a Class 4 engineering cost estimate according to the	

	American Association of Cost Engineers (AACE) International Cost Estimate Classification System for construction fee. Cost must include all disciplines, permit, construction and administration that are necessary to execute the project. All costs will be in current dollars and escalated to the estimated midpoint of construction.

CONSTRUCTION PW 09-11, PW 12-05	**Yigo/Astumbo Tank Construction (Pernix)**	**Start Date:** 12/1/16
75% Complete	**Activities/Notes:** Yigo #1 finishing on-going. Yigo #2 concrete roof ongoing. Astumbo #1 shotcrete work curing. On-site pipe work at both sites on-going.	**Completion Date:** 07/31/18
	Construction Services	
Project Description:	This project will involve construction of two (2) 2MG concrete tanks and Booster Pump Station at the Yigo site and a one (1) 2MG concrete tank at the Astumbo site. Work will involve new pipe line, valves, electrical controls, pumps and motors, site drainage, paving, generator for the BPS, SCADA, etc.	

CONSTRUCTION MANAGEMENT PW 09-11, PW 12-05	**Yigo/Astumbo Tank Construction Management (GHD)**	**Start Date:** December 2016
75% complete	**Activities/Notes:** Processing submittals and on-site inspection	**Completion Date:** July 2018
N/A	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the demolition of existing steel elevate and ground tanks as well as the construction of the 2MG concrete tanks at the Yigo tank location and Astumbo tank location. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

CONSTRUCTION MANAGEMENT PW 12-04-11, PW 12-06 AND PW 09-11	**Central Tank Phase I (Chaot #2, Tumon #2, Hyundai) Construction Management (TG Engineers, PC)**	**Start Date:** December 2017
0% complete	**Activities/Notes:** Establishing project communications protocol, initiating project schedule review.	**Completion Date:** February 2019
N/A	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of three water reservoirs; 0.5MG Chaot #2, 1MG Tumon #2 (Nissan) and 1MG Hyundai. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

CONSTRUCTION PW 12-04, PW 12-06 AND PW 09-11	**Central Tank Phase I (Chaot #2, Tumon #2, Hyundai) Construction (AIC)**	**Start Date:** 02/8/18
5% Complete	**Activities/Notes:** Clearing at Nissan on-going, waiting for GEPA sign off on permit.	**Completion Date:** 02/31/19
	Construction Services	
Project Description:	The work performed under this project procurement shall consist of Construction of three water reservoirs; 0.5MG Chaot #2, 1MG Tumon #2 (Nissan) and 1MG Hyundai. Some piping work off site from the reservoir is also required to ensure the reservoirs function optimally.	

CONSTRUCTION MANAGEMENT PW 09-11	**Northern and Southern Tank Phase I (Santa Rosa, Sinifa, Santa Rita) Construction Management (GHD)**	**Start Date:** April 2018
0% complete	**Activities/Notes:** No activities until bid for Santa Rosa Tank.	**Completion Date:** June 2019
N/A	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of three water reservoirs; 1MG Santa Rosa, 1MG Sinifa and 1MG Santa Rita. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

D. CIP Wastewater Section

DESIGN WW 11-08	**Agat-Santa Rita WWTP Replacement (DCA)**	**Start Date:** October 2014
99% Complete	**Activities/Notes:** Change Order to extend design services during construction executed.	**Completion Date:** Nov. 2015 (design); June 2018 (construction)
CO 11	Engineering design services	
Project Description:	The engineering design consultant is required to design a new wastewater treatment facility that will meet secondary treatment limits. The new facilities will incorporate provisions for redundancy to improve reliability and facilitate operations and maintenance activities at the existing facility	

INSPECTION 2010 BOND WW 12-05 2010 BOND WW 05-04 2013 BOND WW 05-04	**SSES Central Sewer System (HDR)**	**Start Date:** November 2014
100% Complete	**Activities/Notes:** Final report received from HDR. Project to close.	**Completion Date:** January 2018
CO 8 (c)	Engineering Inspection Services	
Project Description:	Work specifically required includes data analysis, development of hydraulic modeling, and development of an SSES fieldwork plan, manhole inspections, smoke testing, CCTV inspection and preparation of a Project Report.	

CONSTRUCTION MANAGEMENT WW 11-08	**Agat Santa Rita WWTP CM (GHD)**	**Start Date:** November 2014
100% (PH 1) 100% Complete (PH 2, Part 1) 90% Complete (PH 2, Part B)	**Activities/Notes:** Typical CM inspections on-going. Change order required to continue services through April 2018.	**Completion Date:** December 2017, projected through April 2018
CO 11	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of the Agat Santa Rita WWTP Phase II project. GWA plans to replace the existing wastewater treatment plant for a new plant that can meets permit limits. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

CONSTRUCTION WW 11-08	**Agat Santa Rita WWTP Phase II (Sumitomo Construction)**	**Start Date:** January 2016
Part 1 of Phase II- 100% Complete Part 2 of Phase II- 90% complete	**Activities/Notes:** Contractor still working on headworks, aerobic digester, equalization basin, admin and maintenance buildings.	**Completion Date:** Phase A: 03/15/17 Phase B: 12/31/17 will not be met, April 2018 projected
CO 11	Construction services	
Project Description:	This project includes construction of the head works, clarifier, oxidation ditches and UV disinfection and administration facilities. Rehabilitation work at the existing WWTP will also occur to ensure the wastewater can be pumped to the new plant. The new plant will also tie into the Tipalao SPS.	

DESIGN WW 09-08, WW11-03	**Baza Gardens Cross Island Sewer Design (DCA)**	**Start Date:** 02/05/16
99% Complete	**Activities/Notes:** DCA providing engineering services during construction.	**Completion Date:** 04/30/18(this completion date will have to be extended.)
CO 11	Engineering design services	
Project Description:	The intent of this project for an engineering firm to prepare design drawings and specification for a sewer conveyance from the Baza Garden WWTP to the new Agat Santa-Rite WWTP. The design will take into account growth in the Baza Gardens/Talofofo areas as wells as new connection along the Route 17 route.	

DESIGN WW 09-06	**Bayside SPS Improvements Design (EMPSCO)**	**Start Date:** July 29, 2016
99% Complete	**Activities/Notes:** Due to change in design Army Corp of	**Completion Date:** Due to issue with

	Engineers permit viewed as not necessary. GWA received 100% design and under review. GWA working on Change order to address snail and archeological report that was not part of original scope.	ACOE anticipate December 2017 for design only.
	Engineering design services	
Project Description:	The intent of this project for an engineering firm to prepare design drawings and specification to upgrade the Bayside Sewer Pump Station given the facility is in major disrepair and the adjacent river is eroding away the access road to the facility which is causing maintenance challenges.	
CONSTRUCTION WW 09-08, WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance Construction Phase I (BME and Sons)**	**Start Date:** October 2016
65% Complete	**Activities/Notes:** New SPS, force main and gravity line installation along Route 17 on-going.	**Completion Date:** Phase I: 03/01/18 (this completion date will have to be extended.)
	Construction services	
Project Description:	The work performed under this project consist of construction of 14,714' of gravity main, 2,767' of force main and sewer pump station #3 next to the Aplacho River in Santa Rita.	

CONSTRUCTION MANAGEMENT WW 09-08 WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance (Construction Management) (SSFM)**	**Start Date:** December 5, 2016
55% Complete	**Activities/Notes:** Field inspection, project coordination and invoice review on-gong.	**Completion Date:** April 2018 (this completion date will have to be extended.)
	Construction Management services	
Project Description:	The work performed under this project shall consist of Construction Management and Inspection Services for the construction of gravity main, force mains and sewer pump station as well as an equalization basin at the Baza Garden WWTP.	

CONSTRUCTION WW 09-08, WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance Construction Phase II (BME and Sons)**	**Start Date:** March 2017
75% Complete	**Activities/Notes:** New SPS, force main and gravity line installation along Route 17 on-going.	**Completion Date:** Phase II: 03/16/18 (this completion date will have to be extended.)
	Construction services	
Project Description:	The work performed under this project consist of construction of 1,767' of gravity main, 14,400' of force mains and sewer pump station #2 along Route 17.	

CONSTRUCTION WW 09-08, WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance Construction Phase III (Sumitomo Construction)**	**Start Date:** June 2017
20% Complete	**Activities/Notes:** Contractor continuing pipeline and SPS construction work on Route 17 along with work at wet well at Baza Gardens WWTP.	**Completion Date:** Phase III: 03/16/18 (this completion date will have to be extended.)
	Construction services	
Project Description:	The work performed under this project consist of construction of, but not limited to, 10,481' of force mains and sewer pump station at existing WWTP, equalization tanks, stand-by generator, improved headworks, grit removal system, and associated equipment.	

CONSTRUCTION WW 11-04	**Umatac Merizo WWTP Design Build Improvements Project (CoreTech)**	**Start Date:** June 2017
90% design 10% construction	**Activities/Notes:** BMPs and temporary facilities are being installed. Clearing & Grading is on-going.	**Completion Date:** December 31, 2018
	Construction services	
Project Description:	The project is intended to improve the aeration basin, construct a new sewer pump station, regrade the overland field, construct a new effluent storage tank and disinfection facility. The overland percolation basin will undergo regarding work to ensure appropriate distribution of effluent through the whole basin.	

CONSTRUCTION MANAGEMENT WW 11-04	**Umatac Merizo WWTP Design Build Improvements Project (SSFM Inc)**	**Start Date:** September 7, 2017
15%	**Activities/Notes:** Continuing on-site inspection of field activities.	**Completion Date:** December 31, 2018
	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the improvements works at the aeration basin, new sewer pump station, overland field improvements, effluent storage tank. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

E. CIP Engineering Support

DESIGN EE 09-08	**SCADA System for Water and Wastewater Facilities Phase A-1 (AECOM)**	**Start Date:** June 2015
100% complete	**Activities/Notes:** Final design in hand. AECOM to provide assistance during bidding process.	**Completion Date:** November 2017 - Design January 2019 - (Bid and

		Construction Support)
N/A	Engineering design services	
Project Description:	The A/E firm will design an integrated, robust and secure Supervisory Control and Data Acquisition (SCADA) system for GWA's water and wastewater systems, and to provide support services during bid and construction. The 22 sites will consist of a combination of water facilities such as production wells, reservoirs, booster pump station and wastewater sites include sewer treatment plants and sewer pump stations. Executed by approved change orders, number of sites in original design scope has changed from 22 sites to 19 sites and design of High Water Alarm for 20 critical sewer pump stations has been added. Scope also includes bid and construction support of the design-build project of GPWA SCADA EMS project.	

CONSTRUCTION MC 05-01	**New GWA Lab Construction (Mega United Construction)**	**Start Date:** NTP issued August 18, 2016
99% Complete	**Activities/Notes:** Permanent communication installed. Awaiting O&M manuals and as-build plans.	**Completion Date:** Early March 2018.
	Construction services	
Project Description:	The project will involve construction of a new building at the GWA Upper Tumon compound to house the laboratory section. The facility will include office, laboratory and storage space for the lab employees. The facility will also include a back-up generator.	

F. GIS Section

MAPPING MC 05-02	**Island Wide Survey-** **(Duenas, Camacho & Ass.)**	**Start Date:** December 2007
94% complete	**Activities/Notes:** Task #13 NTP issued, work near compete. Task #14 work on-going.	**Completion Date:** New anticipated complete is April 2018.
	Survey services	
Project Description:	The contracted land surveyor is required to conduct title research, property valuation and mapping of property boundaries where GWA facilities are located but the lot is not registered under GWA's name.	

MAPPING MC 05-02	**Island Wide Survey PH II -** **(Duenas, Camacho & Ass.)**	**Start Date:** August 30, 2017
35% complete	**Activities/Notes:** Surveyor continuing field work for 15 additional parcels.	**Completion Date:** December 2018
	Survey services	
Project Description:	The work performed under this project procurement shall consist of a professional land surveyor conducting field work to mark corners of existing government properties as a means of severing out portions of the larger property to be deeded to GWA. Surveyor shall also prepare all necessary maps and documents for recording at DLM	

G. Permits Section

PERMITS
MONTHLY REPORT 2017

	2018						
Description	Jan	Feb	Mar	April			
Building Permit	11	9	1	13			
Occupancy Permit	3	10	18	16			
New Installation	14	8	7	9			
Sewer Application	15	14	7	6			
Sewer Inspection	0	1	3	0			
Private Utility Acceptance	0	0	0	0			
Relocation of Water Meter	0	0	0	0			
Tapping-Water	1	1	0	0			
Tapping-Sewer	0	1	0	0			
Clearance-Water	3	2	7	10			
Clearance-Sewer	3	2	7	10			
Highway Encroachment	0	4	41	22			
Verification of Utilities	4	4	5	4			
Fire Flow Test	0	0	1	0			
Schedule Water Outage	0	1	0	0			

H. SRF Project Status Report

- Projects listed below that are noted to be in the procurement phase will follow the "Percentage Key" below.

Percentage Key:

100%	Approved by GM
99%	Signature required from either Accounting/Legal/GM
98%	Processing engineering service or construction contract (with legal)
95%	Request for CCU approval (GM/engineering)
90%	A/E fee negotiation or contractor bid evaluation (engineering)
80%	Selected A/E or Conducted bid opening (engineering)
70%	Advertised RFP/IFB (engineering)
60%	RFP/IFB Package under legal review
50%	RFP/IFB Package completed (engineering)
Less than 50%	Project Scope of work development in progress

- Red text anywhere indicates a change from the last report.
- Cells highlighted in green indicate contract amount certified and project active.

	Project	Project Description	Project Manager	Phase		Start Date (NTP Issued)	Anticipated Completion Date	Contract Amount (+) change orders	Contractor	Status as of 04/16/18
1	Northern District SSES & I/I Study	Sanitary sewer system evaluation study (SSES) and inflow and infiltration (I/I) study designed to evaluate high I/I areas within the Northern sewer basin with the goal of identifying projects to eliminate them.	J. Davis	Design	1	10/10/2014	2/29/2016	$ 792,979.97	Stanley	100% Complete.
				Construction				*The project does not involve construction.*		
				Const. Mgmt						
2	Southern SSES Rehabilitation (Agat-Santa Rita-Umatac-Merizo)	Rehabilitation of segments of sewer lines in Umatac, Merizo, Agat, and Santa Rita where the Sanitary Sewer Evaluation Study recommends rehabilitation.	Brown & Caldwell	Design				*The design was previously completed under bond funding.*		
				Construction	1	10/30/2015	2/28/2017	$ 1,170,583.82	Reliable Builders	RBI working on thrid location in Umatac.
				Const. Mgmt	1	11/10/2015	3/30/2017	$ 226,980.23	TG Engineers	CM Services complete.
3	Asan-Adelup-Hagatna RT1 Sewer Line Rehabilitation and Replacement	Rehabilitation of sewer lines from the War in the Pacific Asan Park to the Governor's Complex in Adelup. This line is asbestos concrete that is dilapidated and some areas have disintegrated crowns.	Brown & Caldwell	Design	2	12/11/2015	3/30/2017 for Design requirements	$ 1,780,210.00	HDR	Route 1 rebid: HDR to provide services during bid process. .
				Construction		10/16/2016	6/30/2019			Procurement 75%. GWA to advertise rebid for thrid time by 04/30/18.
				Const. Mgmt		6/30/2017	6/30/2019			Procurement 90%. CM fee proposal received 6/23/17 ($698K); received revised proposal for Schedule A ($748K), and Schedule B ($718K) on 4/2/18. Will send recommendation by 4/20.

4	RT2 Agat War in the Pacific Sewer Line Rehabilitation and Replacement	Rehabilitation of a large segment of sewer line fronting the War in the Pacific Park in Agat that has collapsed.	Brown & Caldwell	Design	3	11/17/2015	3/30/2017 for Design requirements	$ 316,681.00	SSFM	SSFM providing services during bidding process as well as construction phase.
				Construction	6	8/31/2017	10/1/2018	$ 4,554,451.00		· Contractor conducting exploratory excavations to resolve manhole relocation issue. · Existing concrete-encased utilities are preventing contractor from installing some manholes (especially MH#9 and MH#10) per the original design. CM coordinating between contractor, designer (SSFM), and BC to relocate these manholes as needed. BC/GWA (and maybe SSFM) would make the final call. · Precast manhole & surface concrete collar shop drawing is unacceptable to designer (SSFM) due to structural differences -- 5" vs. 10" top slab. PPBC has been instructed that they may proceed if they can find their own PE to stamp the design. · Flowable fill around manholes may be acceptable on a case-by-casis basis, where there are major existing utility conflicts. No additional cost to GWA would be permitted. · PCO #1: 52 calendar day extension mainly due to permitting delays. CM reviewing contractor's CO request. · PPBC has back-paid workers, Davis-Bacon requirements are satisfied and invoice #3 can be released.
				Const. Mgmt	8	9/19/2017	10/1/2018	$ 584,725.00		CM reviewing and commenting on submittals.
5	Brown & Caldwell Project Management	Brown & Caldwell to provide program management services and support.	T. Cruz	Design	4	3/24/2015	2/28/2019	$ 1,819,850.00	B&C	Project underway.
				Construction				*The project does not involve construction.*		
				Const. Mgmt						
6	Wastewater, Water and Source Water System Master Plan Upgrade	Update of the existing water and wastewater master plan while factoring in military integration and secondary treatment plant options.	Brown & Caldwell	Design	5	7/6/2015	01/30/2018 (revised due to financial workshop)	$ 2,623,300.00	B&C	· Volumes 1, 2 and 3 Final Public Review Draft submitted on 4/10. · CCU approved Master Plan release at special work session on 4/10. · WRMPU Flyer and public meeting presentation will need to be updated for final financial plan. · Budget is expended - additional work for the public meetings and SFO Presentation ~$28,000. · Public meetings to be scheduled.
				Construction				*The project does not involve construction.*		
				Const. Mgmt						

7	Groundwater Wells Rehabilitation (F-3, A-2, A-7, A-12, D-5)	Rehabilitation of existing deep wells and/or in cases where pipe column needs replacing, wells will be re-drilled. The deep wells to be rehabilitated are A-2, A-7, A-12, D-5, & F-3.	Brown & Caldwell	Design	6	5/27/2016	2/28/2018 (for design only)	$ 1,758,247.00	AECOM	· AECOM submitted final design package to BC by 3/19/18. A-12: Design rate of 200 gpm (45.5 ft drawdown). D-05: Design rate of 125 gpm (39 ft drawdown). A-02: Design rate of 250 gpm (34.6 ft drawdown). F-03: Design rate of 200 gpm (1.5 ft drawdown).
				Construction		9/30/2018	9/30/2019			SRF grant funds specific to project pending FY18 grant approvals and award.
				Const. Mgmt		9/30/2018	9/30/2019			· Draft CM scope submitted to GWA.
8	Tumon Sewer Hot Spots	Investigation, evaluation, and repair of possible solutions, to long plaguing issues where sewer overflows are known to occur in Tumon San Vitores.	Brown & Caldwell	Design	7	6/24/2016	10/30/2017 for design only	$ 572,089.00	TG Engineers	· TGE to provide engineering services during bid process.
				Construction		3/23/2017	3/22/2018			Procurement 50%; bid pacakge being prepared.
				Const. Mgmt		3/23/2017	3/22/2018			Procurement 50%: RFP package beiing preapred.
9	Critical Sewer Pump Stations (7 stations)	Rehabilitation of various components of 7 pump stations that were identified to by the CDM design team: Macheche, Ypaopao, Astumbo 1, Fujita, Santa Ana, Southern Link, and Route 1.	CDM	Design				*The design will be incorporated into the design/build package.*		
			J. Davis	Design/Build	1	8/8/2016	3/30/2018	$ 1,531,456.33	ProPacific	-Route 16 Pump Stations- Structural Evaluation done. Waiting for the report from the Structural Engineer. Additional cost and time extension is anticipated. Change Order #5 with finace for fund cert. - Fujita Pump Station- all work complete, - Macheche PS- all work complete - Santa Ana PS- all work complete, - Southern Link Pump Station - Pending Change ORder for Roll up door. - Ypaopao : all worl complete - Astumbo : all wrk complete
				Const. Mgmt	2	9/9/2016	3/30/2018	$ 299,519.00	Stanley	CM work ongoing. GWA working on Change Order proposal to extend contract to match constructions activities.
10	Sewer Pump Station High Water Alarm Systems (20 stations)	This project will design and installed telemetry equipment/SCADA type alarms that will alert when pump station failure occurs.	C. Yam	Design				*The design will be incorporated into the design/build package.*		
				Design	8	8/12/2016	02/30/2017	$ 183,171.00	AECOM	Design complete
				Construction	5	4/5/2017	9/30/2017	$ 1,444,888.00	Pacific Rim	Project complete
				Const. Mgmt	3	02/30/2017	9/30/2017	$ 195,269.00	EMSPCO	CM work complete

11	Sewer Pump Station Backup Power (2 stations)	Construction of the housing and installation of new generators for the Casimero pump station (Mongmong) and the Namo pump station (Yona central).	B. Cruz	Design				*The design will be incorporated into the design/build package.*		
				Design/Build	2	6/24/2016	9/30/2017	$ 362,692.53	ProPacific	Design Build project complete.
				Const. Mgmt				*B. Cruz is the construction manager.*		
12	RT4 Relief Sewer Line Rehabilitation and Replacement	Rehabilitation of sewer lines that are located from Agana McDonalds to Marine Drive that have been known to overflow due to structural issues.	Brown & Caldwell	Design	9	3/1/2016	4/22/2017	$ 794,000.00	AECOM	· AECOM to provided services during bidding process.
				Construction		6/30/2018	09/31/2019			Procurement 70%, · Rebid advertised on 3/23, Prebid on 4/11, Bid opening on 5/4. · Pre-bid meeting (4/11): Granite, Insituform, Propacific, BME, EMPSCO, Giant.
				Const. Mgmt		4/23/2017	12/31/2018	$ 647,000.00		Procurement 90%, EMPSCO original CM fee ($647K); revised fee is $647K + $157K if two contractors.
13	Groundwater Wells Rehabilitation (D-3, D-17, D-18, D-22, M-9)	Rehabilitation of existing deep wells and/or in cases where pipe column needs replacing will be re-drilled. D-3, D-17, D-18, D-22, and M-9.	Brown & Caldwell	Design				*The design was previously completed under bond funding.*		
				Construction	2	8/19/2016	3/30/2018	$ 6,120,353.44	Pacific Rim	· Main issues · EA/PRC still working on level sensor issues. · D-17/22 commissioned on Tuesday (4/10); GWA monitoring now. · Provided EA summary of VFD issues; PRC/EA working on determining VFD needed for D-18. · M-09: pump rate at 120 gpm; trying to determine actual pump in hole. · Response for D-03 submitted to PRC (4/5), and received response back 4/11. Met to discuss D-03 (4/12) with GWA, BC, EA.
				Const. Mgmt	4	3/22/2016	3/30/2018	$ 943,361.24	EA	GWA to present CCU resolution relative to proposed CM Change Order #4.

14	Southern SSES Sewer Rehabilitation (Baza Gardens-Talofofo)	Rehabilitation of segments of sewer lines in Windward Hills, Talofofo area where the Sanitary Sewer Evaluation Study recommends rehabilitation.	Brown & Caldwell	Design				*The design was previously completed under bond funding.*		
				Construction	3	8/2/2016	7/2/2017	$ 1,189,815.00	ProPacific	· Contractor on notice since 12/01/2017 (via formal GWA letter) that continuing delays are unacceptable and grounds for potential default. · Santa Rita Wetland area (drawing AG-101): · On 3/15, Contractor notified BC/GWA that progress could not be made on sewer line MH5678 -- MH5679 due to the line filling with rocks. BC and GWA have discussed alternatives. Open cut through wetland may be least costly to GWA, but problematic construction-wise. Contractor prefers to construct a lift station. · Meeting scheduled for 4/13 with Tom, Kelly Clark, and Tony Chargualaf (and BC) to determine path forward. · On 3/30, BC/GWA held site visit with USACE. On 4/3, BC held site visit with GEPA. · PPBC continually bypass pumping through the wetland area. · Contractor also working on additional CIPP defects at 5680-5681. Awaiting IMS robotic cutter, currently in transit. · Baza Gardens area: Contractor awaiting IMS robotic cutter to finish reinstating laterals.
				Const. Mgmt	5	7/29/2016	5/28/2017	$ 347,945.93	EMPSCO	· PM to work on Change Order to extend contract and amount.
15	Tamuning Sewer Hot Spots	Sewer rehabilitation for lines at Winner Apartments, Segund Leon Guerrero, and behind Guam Premium Outlets.	Brown & Caldwell	Design	10	9/9/2016	10/31/2017 (for design only)	$ 663,629.00	TG Engineers	· TGE to provide engineering services during bid process.
				Construction		4/29/2017	4/30/2018			Procurement 50%; bid pacakge being prepared.
				Const. Mgmt		4/29/2017	4/30/2018			Procurement 50%: RFP package beiing preapred.
16	Talofofo Sewer Pump Stations (4 stations)	Design and construction of 4 sewer lift stations in the Talofofo village where sewer lines are installed but never completed.	J. Davis	Design (for Talofofo and Chalan Pago PS)	11	8/17/2016	11/30/2017	$ 477,999.50	EMPSCO	Talafofo Pump Station design /bid ackage recieced. Final Design of Chalan Pago Pump Station project under review by GWA. Change Order related to snails to be excuted.
				Construction		4/29/2017	4/30/2018			
				Const. Mgmt		4/29/2017	4/30/2018			

17	Chalan Pago Sewer Pump Station	Design and construction of sewer lift stations and gravity lines in Scott Laguana, Santa Cruz Street Chalan Pago.	J. Davis	Design		8/17/2016	11/30/2017	*The design will be included with the Talofofo Pump Station design project.*		
				Construction		4/29/2017	4/30/2018			
				Const. Mgmt		4/29/2017	4/30/2018			
18	Water Hydraulic Model (SCADA ready instruments to update Model)	Design and construction of instrumentation at key water sites in the Barrigada service area necessary to update GWA Water hydraulic model.	Barbara Cruz	Design	12	8/3/2016	3/15/2017	$ 523,268.00	GHD	Design complete.
				Construction		2/1/2017	12/30/2019			Funding for construction project to be from FY18 grant that is still pending.
				Const. Mgmt		2/1/2017	12/30/2019			
19	Macheche Hill Sewer Rehabilitation/ Replacement	Rehabilitation of sewer lines on Macheche road. Segments of this sewer line has collapsed recently and is consider a high priority.	J. Davis	Design-Build	3	8/29/2016	3/30/2018	$ 2,202,545.47	Giant Const.	Construtcion project complete.
				Const. Mgmt	6	9/16/2016	3/30/2018	$ 379,994.38	Am Orient	CM work complete.
20	Asan-Adelup-Hagatna Rt. 1 Sewer Line Rehabilitation and Replacement Emergency Repairs	Rehabilitation of sewer line in Asan that collapsed and which is current fitted with a temporary pumping system.	Brown & Caldwell	Design				Design cost covered under 3A above.		
				Construction	4	3/8/2017	12/30/2017	$ 2,470,658.00		GWA waiting on as-builts.
				Const. Mgmt	7	1/24/2017	12/30/2017	covered under 3A		CM work complete.

DASHBOARD

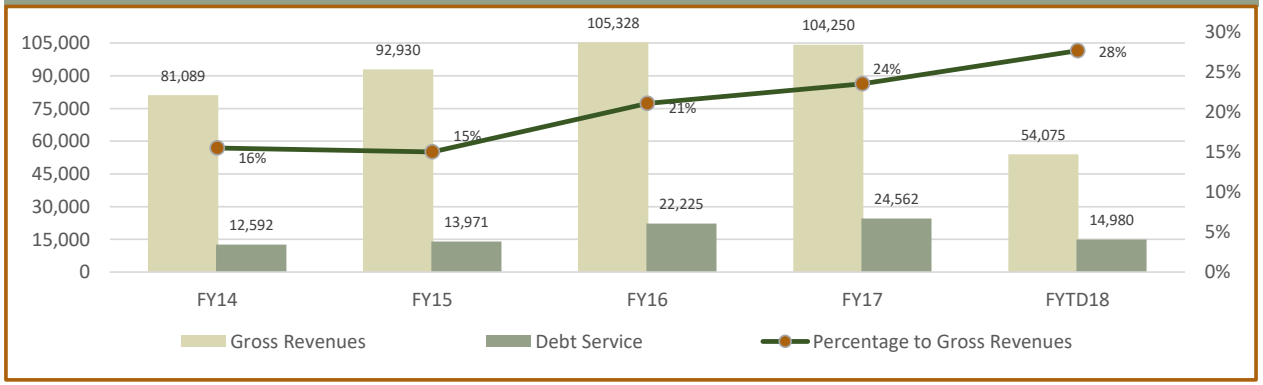
FYTD March 2018 Budget vs Actual ($000)

Category	Description	Budget FYTD18	Actual FYTD18	Variance
Rate Based Revenues	Water	$35,649	$34,054	($1,595)
	Wastewater	19,931	19,815	(115)
	Total	55,580	53,870	(1,710)
Operations & Maintenance	Salaries & Benefits	13,258	11,824	1,434
	Power	6,348	7,117	(769)
	Water Purchases	4,327	4,515	(188)
	A&G	6,433	5,255	1,179
	Contractual	2,239	2,229	11
	Total	$42,261	$41,830	$431

Key Financial Ratios ($000)

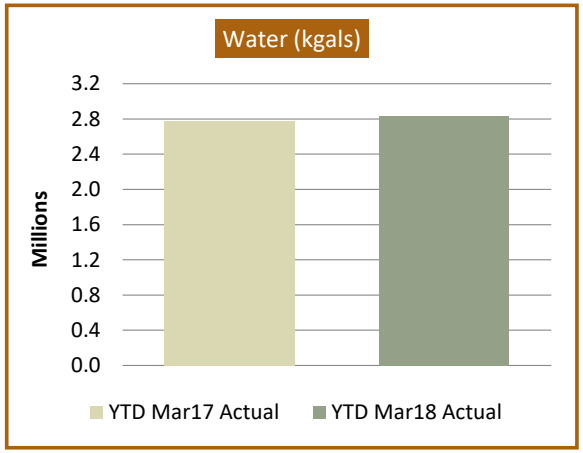
Category	FY18	FY17
Accounts Payable $$/Days	$4,234 / 38 days	$5,390 / 59 days
Accounts Receivable $$/Days	$15,522 / 51 days	$15,451 / 51 days
Days Cash On Hand	188 days	184 days
Annual Debt Service (Revenue Bonds)	$29,961	$24,563
Debt Service Coverage (Bond/PUC)	1.46 / 1.83	1.99 / 2.44

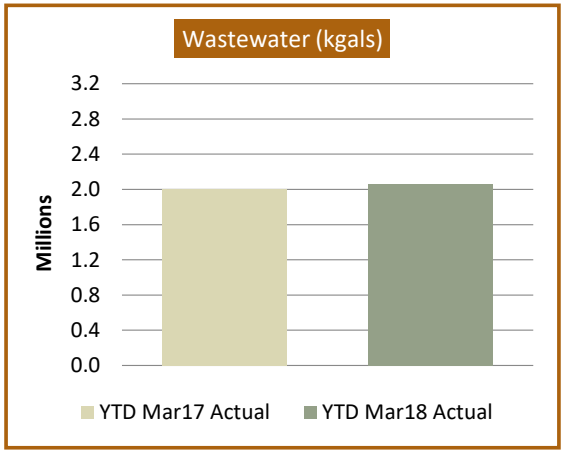
Debt as a Percent to Gross Revenue

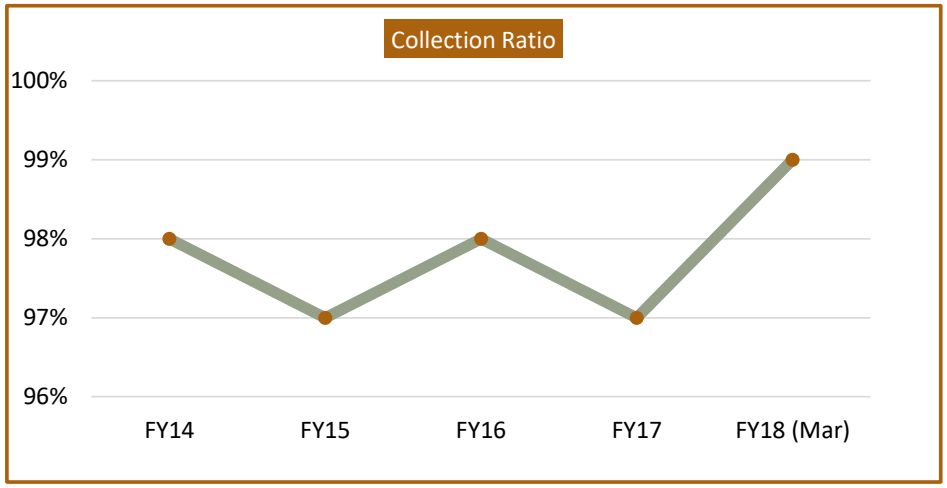


(1) Gross Revenues excludes SDC
(2) Debt Service Excludes Cap I

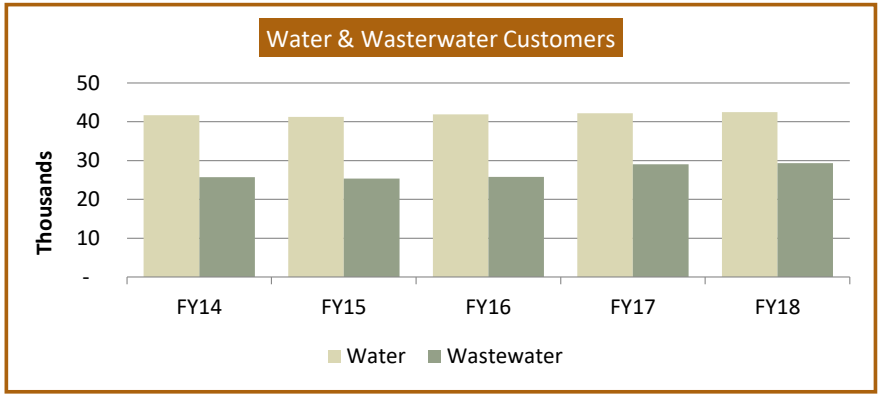
Water & Wastewater Analytics

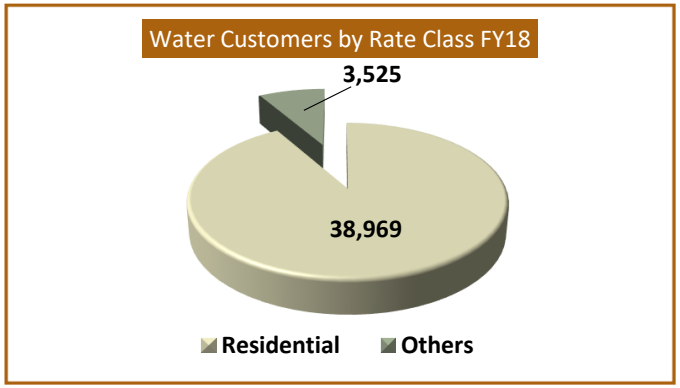


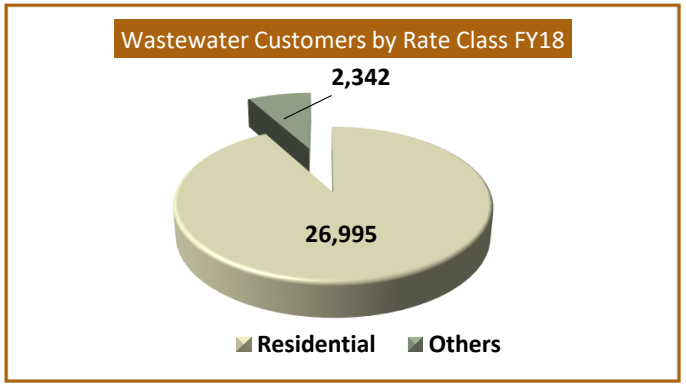


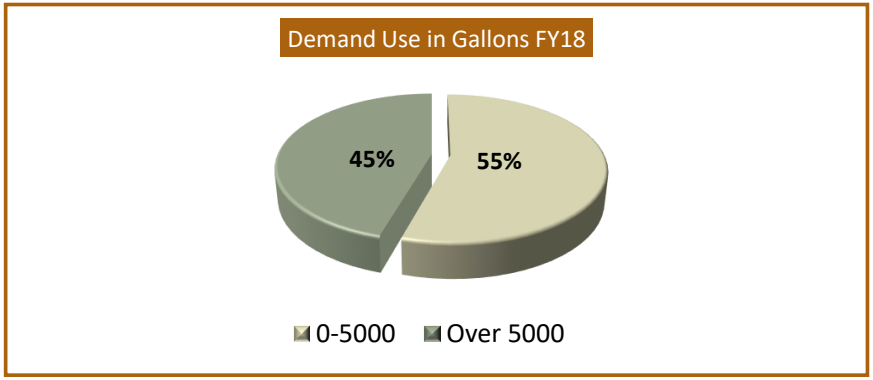


Water & Wastewater Customers





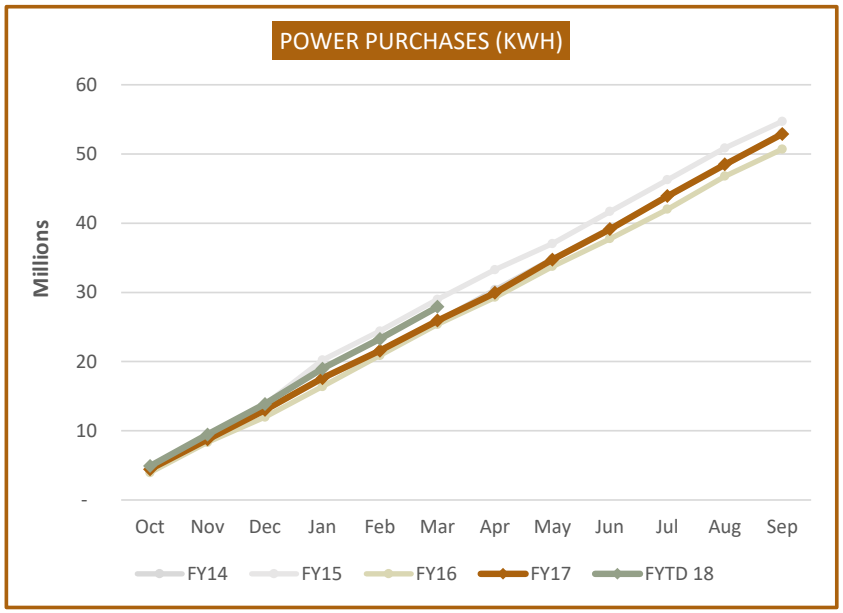


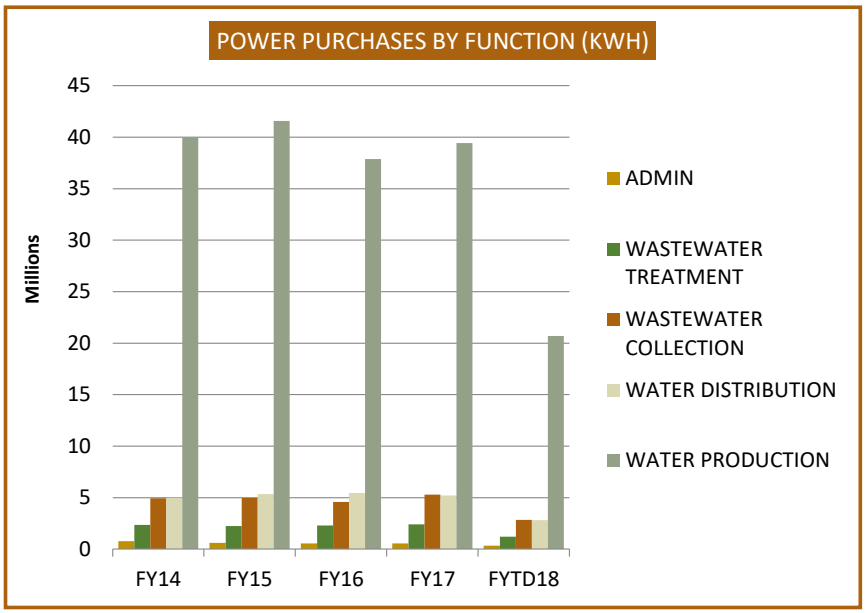


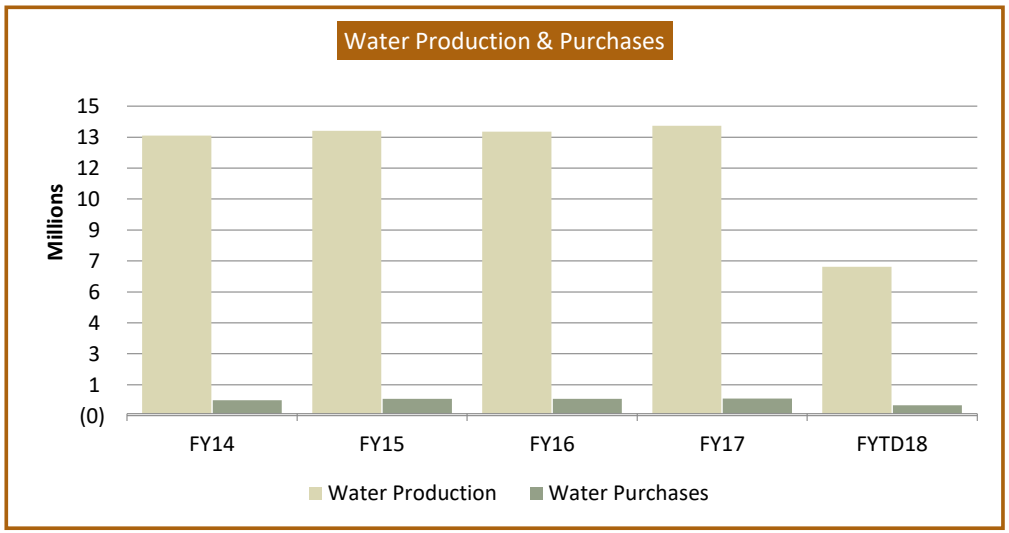
Top Ten Largest Water and Wastewater Customers – March 2018

Water			Wastewater		
Customer Name	FYTD18 Revenues	% of Total	Customer Name	FYTD18 Revenues	% of Total
1) MDI GUAM CORPORATION/LEOPALACE	$673,102	1.97%	1) AIR FORCE DOD	$1,838,771	9.28%
2) PACIFIC ISLANDS CLUB	572,714	1.68%	2) NAVY DOD	1,234,250	6.23%
3) HOTELS OF THE MARIANAS INC	494,531	1.45%	3) HOTELS OF THE MARIANAS INC	528,826	2.67%
4) HYATT	455,448	1.33%	4) HYATT	487,598	2.46%
5) HOTEL NIKKO GUAM	443,061	1.30%	5) HOTEL NIKKO GUAM	473,539	2.39%
6) GUAM REEF HOTEL INC	412,701	1.21%	6) GUAM REEF HOTEL INC	441,680	2.23%
7) SHERATON LAGUNA GUAM RESORT	393,433	1.15%	7) SHERATON LAGUNA GUAM RESORT	420,983	2.12%
8) MDI GUAM CORPORATION/WESTIN	320,996	0.94%	8) MDI GUAM CORPORATION/WESTIN	343,173	1.73%
9) OUTRIGGER GUAM RESORT	314,965	0.92%	9) OUTRIGGER GUAM RESORT	337,449	1.70%
10) TANOTA DEVELOPMENT LLC	304,080	0.89%	10) TANOTA DEVELOPMENT LLC	326,284	1.65%
Total	**$4,385,031**	**12.83%**	**Total**	**$6,432,553**	**32.47%**

Power, Water Purchases and Water Production

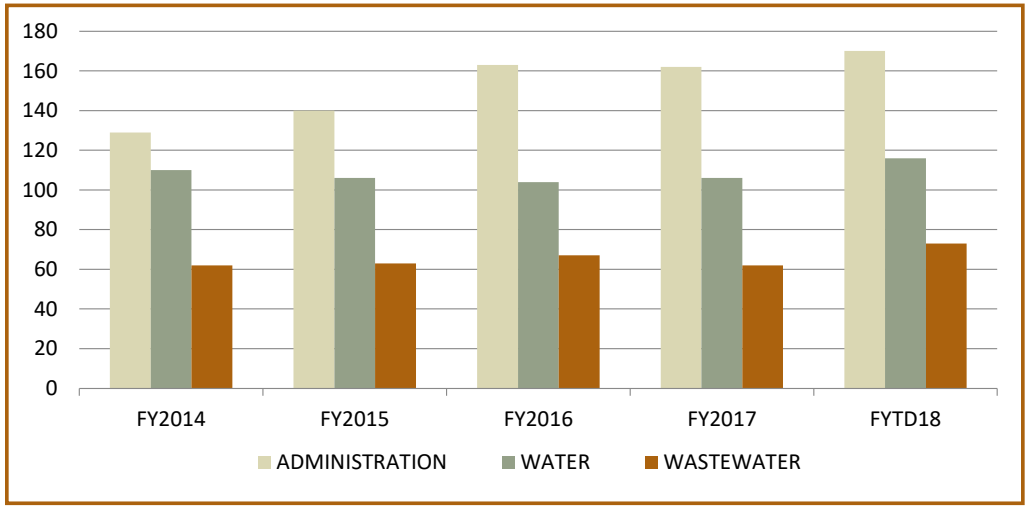




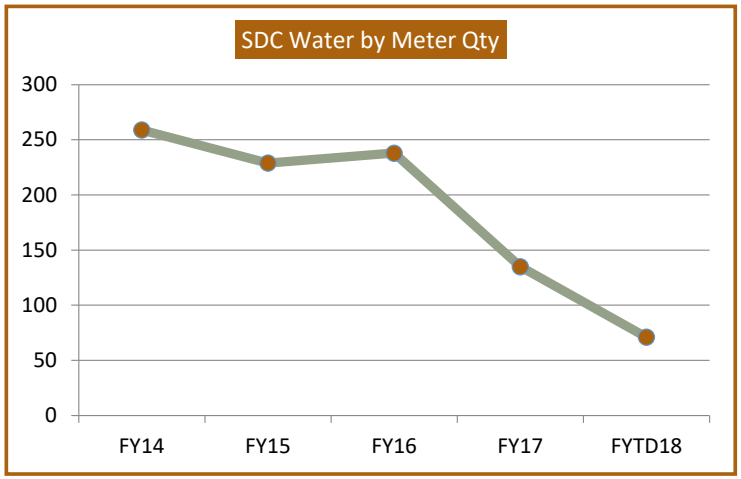


FTE by Major Division

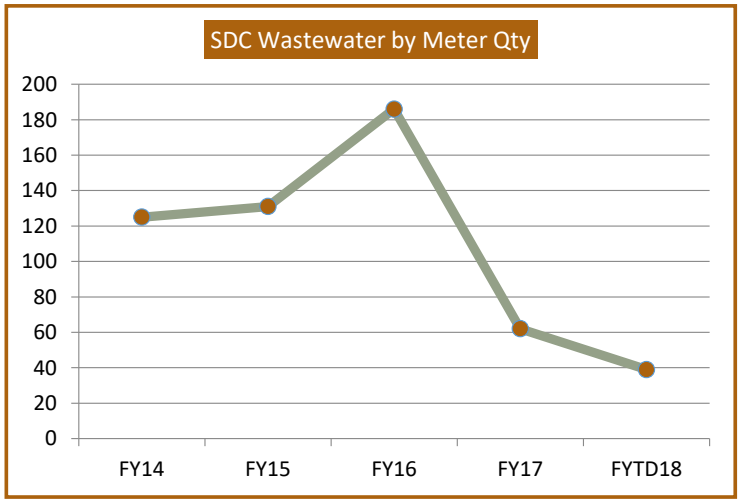
DIVISION	FY2014	FY2015	FY2016	FY2017	FYTD18
ADMINISTRATION	129	140	163	162	170
WATER	110	106	104	106	116
WASTEWATER	62	63	67	62	73
TOTAL NUMBER OF STAFF	301	309	334	330	359
Gross Salaries & Wages ($000)	15,532	15,805	16,442	17,210	8,896
Water Customers	41,702	41,274	41,858	42,181	42,494
Staff to Customers Ratio	0.72%	0.75%	0.80%	0.78%	0.84%



SDC Water & Wastewater (Meter Quantity)



Actual Meter Sizes (Inches)	FY 2014	FY 2015	FY 2016	FY 2017	FYTD18
5/8 x 3/4	248	220	239	129	63
1	5	5	7	2	1
1 1/2	1	1	1	1	3
2	3	2	4	2	3
3	1	-	1	-	-
4	-	1	-	-	1
6	-	-	-	1	-
8	1	-	-	-	-
10	-	-	-	-	-
Total SDC by Water	259	229	252	135	71



Actual Meter Sizes (Inches)	FY 2014	FY 2015	FY 2016	FY 2017	FYTD18
5/8 x 3/4	115	124	179	58	31
1	4	3	2	-	1
1 1/2	1	1	1	1	3
2	3	2	3	2	3
3	1	-	1	-	-
4	-	1	-	-	-
6	-	-	-	1	1
8	1	-	-	-	-
10	-	-	-	-	-
Total SDC by Wastewater	125	131	186	62	39

GUAM WATERWORKS AUTHORITY
MARCH 31, 2018
FINANCIAL AND RELATED REPORTS
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GUAM WATERWORKS AUTHORITY
Balance Sheet
March 31, 2018

SCHEDULE A

ASSETS	Unaudited March 31, 2018	Unaudited September 30, 2017	Increase (Decrease)
Current Assets:			
Cash:			
Unrestricted (Schedule G)	3,532,281	4,873,275	(1,340,994)
Restricted Funds (Schedule G)	69,847,981	65,124,400	4,723,580
Accounts Receivable Trade, Net of Allowance for Doubtful Receivables of $12,961,650 at Mar 31, 2018 and $12,619,034 at Sep 30, 2017	15,521,507	15,450,733	70,773
Other Receivable	2,546,374	8,433,446	(5,887,071)
Materials & Supplies Inventory, Net of Allowance for Obsolescence of $457,370 at Mar 31, 2018 and Sep 30, 2017	2,140,862	2,166,557	(25,695)
Total Current Assets	93,589,005	96,048,411	(2,459,406)
Property, Plant and Equipment			
Utility plant in service:			
Water system	327,940,050	327,484,191	455,858
Wastewater system	286,534,706	286,394,940	139,767
Non-utility property	18,945,633	18,938,255	7,378
Total property	633,420,389	632,817,387	603,003
Less Accumulated Depreciation	(295,212,630)	(286,043,580)	(9,169,050)
Land	1,163,298	1,110,998	52,300
Construction Work in Progress	152,253,920	111,695,887	40,558,033
Property, Plant and Equipment, net	491,624,977	459,580,691	32,044,286
Other noncurrent assets			
Restricted cash (Schedule G)	203,839,411	236,550,002	(32,710,591)
Investments (Schedule G)	45,441,883	41,042,038	4,399,844
Other Prepaid Expenses	375,173	551,128	(175,955)
Total other noncurrent assets	249,656,467	278,143,169	(28,486,702)
TOTAL ASSETS	834,870,449	833,772,271	1,098,178
Deferred outflows of resources:			
Debt defeasance due to bond refunding	8,060,648	1,695,981	6,364,667
Deferred outflows from pension	3,126,183	3,414,242	(288,060)
Total Assets and Deferred Outflows of Resources	**846,057,279**	**838,882,494**	**7,174,785**
LIABILITIES AND NET ASSETS			
Current Liabilities:			
Current maturities of long-term debt			
-Series 2010 Bond	-	1,655,000	(1,655,000)
-Series 2014 Refunding	3,385,000	3,385,000	-
-Notes Payable	2,873,988	2,873,988	-
Accounts Payable -Trade	4,234,374	5,390,256	(1,155,881)
Interest Payable	6,541,593	6,656,499	(114,906)
Accrued Payroll and Employee Benefits	2,295,757	2,604,471	(308,714)
Accrued Annual Leave	1,729,291	1,729,291	-
Current portion of employee annual leave	567,057	567,057	-
Contractors' Payable	7,956,409	13,950,287	(5,993,878)
Customer and Other Deposits	2,069,700	2,087,207	(17,507)
Total Current Liabilities	31,653,170	40,899,057	(9,245,887)
Long Term Debt, less current maturities			
Series 2010 Revenue Bond	-	112,870,000	(112,870,000)
Series 2013 Revenue Bond	172,630,000	172,630,000	-
Series 2014 Refunding	72,610,000	72,610,000	-
Series 2016 Revenue Bond	143,310,000	143,310,000	-
Series 2017 Refunding Bond	107,660,000	-	107,660,000
Unamortized Discount - Bond 2010	-	(1,867,525)	1,867,525
Unamortized Discount - Bond 2013	(1,313,201)	(1,338,751)	25,550
Unamortized Premium - Bond 2014	4,671,387	4,804,694	(133,307)
Unamortized Premium - Bond 2016	16,959,228	17,262,975	(303,747)
Unamortized Premium - Bond 2017	12,517,954	-	12,517,954
Notes Payable	4,229,815	5,697,499	(1,467,684)
Unfunded Ret Liability (GASB 67/68)	38,195,938	38,195,938	-
Employee Annual Leave, Less Current Portion	783,992	783,992	-
TOTAL LIABILITIES	603,908,282	605,857,879	(1,949,597)
Net Assets	**242,148,998**	**233,024,615**	**9,124,383**
Total Liabilities and Net Assets	**846,057,279**	**838,882,494**	**7,174,785**

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited) **SCHEDULE B**
Comparative Budget vs. Actual for the period ending March 31, 2018

	Month to Date		Variance
	Budget March-18	Actual (Unaudited) March-18	Favorable / (Unfavorable)
OPERATING REVENUES			
Water Revenues	5,743,160	5,351,350	(391,810)
Wastewater Revenues	3,228,257	3,118,362	(109,895)
Legislative Surcharge	291,896	278,288	(13,608)
Other Revenues	57,638	42,056	(15,582)
System Development Charge	46,136	101,825	55,689
Total Operating Revenues	9,367,087	8,891,880	(475,207)
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	721,113	737,916	(16,802)
Power Purchases	1,057,997	1,275,115	(217,118)
Total Utility Costs	1,779,110	2,013,030	(233,920)
Salaries and Wages	1,625,056	1,653,002	(27,946)
Pension and Benefits	584,558	529,011	55,547
Total Salaries and Benefits	2,209,614	2,182,014	27,601
Capitalized Labor and Benefits	(208,333)	-	(208,333)
Net Salaries and Benefits	2,001,281	2,182,014	(180,733)
Administrative and General Expenses			
Sludge removal	174,514	105,997	68,517
Chemicals	229,997	114,592	115,404
Materials & Supplies	237,400	146,914	90,486
Transportation	61,370	52,744	8,626
Communications	16,182	9,522	6,660
Claims	17,600	23,719	(6,119)
Insurance	97,757	75,480	22,277
Training & Travel	21,814	14,181	7,633
Advertising	13,910	19,950	(6,040)
Miscellaneous	115,515	60,506	55,009
Regulatory Expense	29,086	19,828	9,259
Bad Debts Provision	57,103	58,334	(1,231)
Total Administrative and General Expense	1,072,248	701,767	370,481
Depreciation Expense	1,528,175	1,528,175	(0)
Contractual Expense			
Audit & Computer Maint.	78,630	61,912	16,718
Building rental	37,955	37,028	927
Equipment rental	57,375	57,106	269
Legal	4,167	600	3,567
Laboratory	64,752	1,999	62,753
Other	130,363	93,461	36,902
Total Contractual Expense	373,241	252,105	121,136
Retiree Supp. Annuities and health care costs	240,008	236,940	3,068
Contribution to Government of Guam	49,500	49,833	(333)
Total Retiree Benefits	289,508	286,774	2,735
Total Operating Expenses	7,043,563	6,963,865	79,699
Earnings (Loss) from Operations	2,323,524	1,928,016	395,508
Interest Income-2013/14/16/17 Series Bond	15,727	196,587	180,860
Interest Income-Other Funds	2,935	32,637	29,702
Interest Income-SDC	2,414	1,772	(642)
Interest Expense- 2013/14/16/17 Series Bond	(2,625,587)	(2,224,260)	401,327
Interest Expense- ST BOG	(33,288)	(35,806)	(2,518)
Federal Expenditures	(51,332)	(60,070)	(8,738)
Loss on Asset Disposal	-	-	-
AFUDC	625,000	625,000	-
Amortization of Discount, Premium and Issuance Costs	(61,861)	(77,542)	(15,681)
Loss on Defeasance Bond05 Refunding	(15,218)	(12,444)	2,775
Deferred outflows from pension	(105,281)	(48,010)	57,271
Prior Year Adjustment	-	-	-
Total non-operating revenues (expenses)	(2,246,492)	(1,602,136)	644,356
Net Income (Loss) before capital contributions	77,032	325,880	248,848
Capital Contributions			
Grants from US Government	873,108	1,152,604	279,496
Grants from GovGuam & Others	-	-	-
Other Contributions	-	-	-
Total Capital Contributions	873,108	1,152,604	279,496
Change in Net Assets	950,140	1,478,485	528,344
Debt Service Calculation			
Earnings From Operations	2,323,524	1,928,016	
System Development Charge	(46,136)	(101,825)	
Retiree COLA	49,500	49,833	
Interest/Investment Income	2,935	32,637	
Depreciation	1,528,175	1,528,175	
Balance Available for Debt Service per Section 6.12	3,857,998	3,436,836	
Working Capital Reserve Available for Debt Service	935,321	935,321	
Transfer to Working Capital- Debt Service Reserve	(150,000)	-	
Transfer to Working Capital- O&M Reserve	(266,667)	-	
Balance Available for Debt Service inclusive of reserves	4,376,652	4,372,157	
Debt Service			
Principal	433,333	433,333	
Interest	2,063,402	2,063,402	
Total	2,496,736	2,496,736	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.55	1.38	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	1.75	1.75	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited) **SCHEDULE C**
Comparative for the period ending March 31, 2018 and 2017

	Month to Date Actual (Unaudited) March-18	Month to Date Actual (Unaudited) March-17	Variance Favorable / (Unfavorable)
OPERATING REVENUES			
Water Revenues	5,351,350	5,331,404	19,946
Wastewater Revenues	3,118,362	3,099,528	18,834
Legislative Surcharge	278,288	267,269	11,019
Other Revenues	42,056	36,293	5,763
System Development Charge	101,825	72,662	29,162
Total Operating Revenues	8,891,880	8,807,155	84,725
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	737,916	609,094	(128,822)
Power Purchases	1,275,115	1,006,355	(268,760)
Total Utility Costs	2,013,030	1,615,449	(397,581)
Salaries and Wages	1,653,002	1,413,608	(239,394)
Pension and Benefits	529,011	477,546	(51,466)
Total Salaries and Benefits	2,182,014	1,891,154	(290,859)
Capitalized Labor and Benefits	-	(262,516)	(262,516)
Net Salaries and Benefits	2,182,014	1,628,638	(553,375)
Administrative and General Expenses			
Sludge removal	105,997	140,487	34,490
Chemicals	114,592	174,001	59,409
Materials & Supplies	146,914	128,788	(18,126)
Transportation	52,744	53,744	1,000
Communications	9,522	10,884	1,362
Claims	23,719	22,151	(1,568)
Insurance	75,480	90,603	15,123
Training & Travel	14,181	23,055	8,873
Advertising	19,950	8,988	(10,962)
Miscellaneous	60,506	71,997	11,490
Regulatory Expense	19,828	24,134	4,307
Bad Debts Provision	58,334	109,700	51,366
Total Administrative and General Expense	701,767	858,530	156,763
Depreciation Expense	1,528,175	1,402,038	(126,137)
Contractual Expense			
Audit & Computer Maint.	61,912	76,901	14,989
Building rental	37,028	36,557	(471)
Equipment rental	57,106	59,374	2,268
Legal	600	414	(186)
Laboratory	1,999	10,627	8,628
Other	93,461	156,747	63,286
Total Contractual Expense	252,105	340,619	88,514
Retiree Supp. Annuities and health care costs	236,940	231,895	(5,045)
Contribution to Government of Guam	49,833	49,500	(333)
Total Retiree Benefits	286,774	281,395	(5,378)
Total Operating Expenses	6,963,865	6,126,670	(837,194)
Earnings (Loss) from Operations	1,928,016	2,680,485	(752,469)
Interest Income-2013/14/16/17 Series Bond	196,587	65,354	131,233
Interest Income-Other Funds	32,637	10,032	22,605
Interest Income-SDC	1,772	1,060	713
Interest Expense- 2013/14/16/17 Series Bond	(2,224,260)	(2,220,744)	(3,516)
Interest Expense- ST BOG	(35,806)	(43,736)	7,930
Federal Expenditures	(60,070)	(42,501)	(17,569)
Loss on Asset Disposal	-	(81,105)	81,105
AFUDC	625,000	1,172,241	(547,241)
Amortization of Discount, Premium and Issuance Costs	(77,542)	61,861	(139,403)
Loss on Defeasance Bond05 Refunding	(12,444)	(15,218)	2,775
Deferred outflows from pension	(48,010)	(104,481)	56,471
Prior Year Adjustment	-	(26,756)	26,756
Total non-operating revenues (expenses)	(1,602,136)	(1,223,993)	(378,142)
Net Income (Loss) before capital contributions	325,880	1,456,492	(1,130,611)
Capital Contributions			
Grants from US Government	1,152,604	1,815,921	(663,317)
Grants from GovGuam & Others	-	1,664	(1,664)
Other Contributions	-	-	-
Total Capital Contributions	1,152,604	1,817,586	(664,981)
Change in Net Assets	1,478,485	3,274,078	(1,795,593)
Debt Service Calculation			
Earnings From Operations	1,928,016	2,680,485	
System Development Charge	(101,825)	(72,662)	
Retiree COLA	49,833	49,500	
Interest/Investment Income	32,637	10,032	
Depreciation	1,528,175	1,402,038	
Balance Available for Debt Service per Section 6.12	3,436,836	4,069,392	
Working Capital Reserve Available for Debt Service	935,321	932,134	
Transfer to Working Capital- Debt Service Reserve	-	-	
Transfer to Working Capital- O&M Reserve	-	-	
Balance Available for Debt Service inclusive of reserves	4,372,157	5,001,527	
Debt Service			
Principal	433,333	420,000	
Interest	2,063,402	1,626,858	
Total	2,496,736	2,046,858	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.38	1.99	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	1.75	2.44	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited) **SCHEDULE D**
Comparative Budget vs. Actual for the period ending March 31, 2018

	Year to Date			Variance
	Budget March-18	Encumbered March-18	Actual (Unaudited) March-18	Favorable / (Unfavorable)
OPERATING REVENUES				
Water Revenues	34,458,960		32,913,919	(1,545,042)
Wastewater Revenues	19,369,544		19,258,143	(111,401)
Legislative Surcharge	1,751,376		1,697,671	(53,705)
Other Revenues	345,828		205,242	(140,586)
System Development Charge	276,815		655,080	378,266
Total Operating Revenues	56,202,523		54,730,055	(1,472,468)
OPERATING AND MAINTENANCE EXPENSES				
Water Purchases	4,326,679		4,514,543	(187,865)
Power Purchases	6,347,981		7,116,770	(768,788)
Total Utility Costs	10,674,660		11,631,313	(956,653)
Salaries and Wages	9,750,336		8,896,287	854,049
Pension and Benefits	3,507,350		2,927,571	579,779
Total Salaries and Benefits	13,257,685		11,823,858	1,433,827
Capitalized Labor and Benefits	(1,250,000)		-	(1,250,000)
Net Salaries and Benefits	12,007,685		11,823,858	183,827
Administrative and General Expenses				
Sludge removal	1,047,084		620,314	426,769
Chemicals	1,229,981		1,169,476	60,505
Materials & Supplies	1,667,399	207,509	1,288,814	171,076
Transportation	314,223	74,404	231,886	7,933
Communications	97,091	6,517	90,325	249
Claims	66,600	9,000	32,209	25,391
Insurance	628,539		454,581	173,958
Training & Travel	130,885	33,170	49,599	48,116
Advertising	83,460	35,103	47,293	1,064
Miscellaneous	693,093	73,973	505,791	113,329
Regulatory Expense	132,518		114,266	18,252
Bad Debts Provision	342,616		650,000	(307,385)
Total Administrative and General Expense	6,433,489	439,676	5,254,555	739,257
Depreciation Expense	9,169,048		9,169,050	(2)
Contractual Expense				
Audit & Computer Maint.	486,782	142,082	343,948	752
Building rental	227,730		222,165	5,565
Equipment rental	344,248		468,545	(124,297)
Legal	25,000		3,000	22,000
Laboratory	373,510	181,312	191,923	275
Other	782,179	-	999,014	(216,836)
Total Contractual Expense	2,239,447	323,394	2,228,595	(312,542)
Retiree Supp. Annuities and health care costs	1,440,050		1,423,935	16,115
Contribution to Government of Guam	297,000		299,000	(2,000)
Total Retiree Benefits	1,737,050	-	1,722,935	14,115
Total Operating Expenses	42,261,380	763,071	41,830,306	(331,997)
Earnings (Loss) from Operations	13,941,144	(763,071)	12,899,750	(1,804,465)
Interest Income-2013/14/16/17 Series Bond	94,360		1,064,453	970,094
Interest Income-Other Funds	17,608		169,036	151,427
Interest Income-SDC	14,486		22,381	7,896
Interest Expense- 2013/14/16/17 Series Bond	(15,753,523)		(13,174,667)	2,578,857
Interest Expense- ST BOG	(199,729)		(218,891)	(19,162)
Federal Expenditures	(307,993)		(260,186)	47,807
Loss on Asset Disposal	-		-	-
AFUDC	3,750,000		3,750,000	-
Amortization of Discount, Premium and Issuance Costs	(371,165)		(47,044)	324,121
Loss on Defeasance Bond05 Refunding	(91,310)		(74,661)	16,649
Deferred outflows from pension	(631,684)		(288,060)	343,624
Prior Year Adjustment	-		9,284	9,284
Total non-operating revenues (expenses)	(13,478,951)	-	(9,048,355)	4,430,596
Net Income (Loss) before capital contributions	462,193	(763,071)	3,851,395	2,626,132
Capital Contributions				
Grants from US Government	5,238,649		5,135,255	(103,394)
Grants from GovGuam & Others	-		137,733	137,733
Other Contributions	-		-	-
Total Capital Contributions	5,238,649	-	5,272,988	34,338
Change in Net Assets	5,700,842	(763,071)	9,124,383	2,660,470
Debt Service Calculation				
Earnings From Operations	13,941,144		12,899,750	
System Development Charge	(276,815)		(655,080)	
Retiree COLA	297,000		299,000	
Interest/Investment Income	17,608		169,036	
Depreciation	9,169,048		9,169,050	
Balance Available for Debt Service per Section 6.12	23,147,985		21,881,755	
Working Capital Reserve Available for Debt Service	5,611,926		5,592,805	
Transfer to Working Capital- Debt Service Reserve	(900,000)		-	
Transfer to Working Capital- O&M Reserve	(1,600,000)		-	
Balance Available for Debt Service inclusive of reserves	26,259,912		27,474,560	
Debt Service				
Principal	2,600,000		2,600,000	
Interest	12,380,413		12,380,413	
Total	14,980,413		14,980,413	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.55		1.46	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	1.75		1.83	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited)
Comparative for the period ending March 31, 2018 and 2017

SCHEDULE E

	Year to Date ACTUAL (Unaudited) March-18	Year to Date ACTUAL (Unaudited) March-17	Variance Favorable / (Unfavorable)
OPERATING REVENUES			
Water Revenues	32,913,919	31,988,421	925,497
Wastewater Revenues	19,258,143	18,597,166	660,977
Legislative Surcharge	1,697,671	1,603,613	94,058
Other Revenues	205,242	217,757	(12,515)
System Development Charge	655,080	435,973	219,107
Total Operating Revenues	54,730,055	52,842,931	1,887,125
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	4,514,543	3,654,562	(859,981)
Power Purchases	7,116,770	6,038,131	(1,078,638)
Total Utility Costs	11,631,313	9,692,694	(1,938,619)
Salaries and Wages	8,896,287	8,481,651	(414,636)
Pension and Benefits	2,927,571	2,865,274	(62,297)
Total Salaries and Benefits	11,823,858	11,346,925	(476,933)
Capitalized Labor and Benefits	-	(1,575,095)	(1,575,095)
Net Salaries and Benefits	11,823,858	9,771,831	(2,052,027)
Administrative and General Expenses			
Sludge removal	620,314	842,921	222,606
Chemicals	1,169,476	1,044,007	(125,470)
Materials & Supplies	1,288,814	772,726	(516,088)
Transportation	231,886	322,466	90,581
Communications	90,325	65,303	(25,022)
Claims	32,209	132,906	100,697
Insurance	454,581	543,616	89,035
Training & Travel	49,599	138,327	88,728
Advertising	47,293	53,927	6,633
Miscellaneous	505,791	431,979	(73,811)
Regulatory Expense	114,266	144,807	30,541
Bad Debts Provision	650,000	658,198	8,198
Total Administrative and General Expense	5,254,555	5,151,183	(103,372)
Depreciation Expense	9,169,050	8,412,227	(756,823)
Contractual Expense			
Audit & Computer Maint.	343,948	461,406	117,458
Building rental	222,165	219,339	(2,826)
Equipment rental	468,545	356,243	(112,301)
Legal	3,000	2,484	(516)
Laboratory	191,923	63,759	(128,164)
Other	999,014	940,483	(58,531)
Total Contractual Expense	2,228,595	2,043,714	(184,881)
Retiree Supp. Annuities and health care costs	1,423,935	1,391,372	(32,562)
Contribution to Government of Guam	299,000	297,000	(2,000)
Total Retiree Benefits	1,722,935	1,688,372	(34,562)
Total Operating Expenses	41,830,306	36,760,021	(5,070,284)
Earnings (Loss) from Operations	12,899,750	16,082,909	(3,183,159)
Interest Income-2013/14/16/17 Series Bond	1,064,453	392,126	672,327
Interest Income-Other Funds	169,036	60,191	108,845
Interest Income-SDC	22,381	6,359	16,023
Interest Expense- 2013/14/16/17 Series Bond	(13,174,667)	(13,324,463)	149,796
Interest Expense- ST BOG	(218,891)	(262,418)	43,526
Federal Expenditures	(260,186)	(255,009)	(5,178)
Loss on Asset Disposal	-	(486,627)	486,627
AFUDC	3,750,000	7,033,446	(3,283,446)
Amortization of Discount, Premium and Issuance Costs	(47,044)	371,164	(418,208)
Loss on Defeasance Bond05 Refunding	(74,661)	(91,310)	16,649
Deferred outflows from pension	(288,060)	(626,884)	338,824
Prior Year Adjustment	9,284	(160,534)	169,818
Total non-operating revenues (expenses)	(9,048,355)	(7,343,959)	(1,704,396)
Net Income (Loss) before capital contributions	3,851,395	8,738,950	(4,887,555)
Capital Contributions			
Grants from US Government	5,135,255	10,895,529	(5,760,274)
Grants from GovGuam & Others	137,733	9,986	127,746
Other Contributions	-	-	-
Total Capital Contributions	5,272,988	10,905,515	(5,632,528)
Change in Net Assets	9,124,383	19,644,466	(10,520,083)
Debt Service Calculation			
Earnings From Operations	12,899,750	16,082,909	
System Development Charge	(655,080)	(435,973)	
Retiree COLA	299,000	297,000	
Interest/Investment Income	169,036	60,191	
Depreciation	9,169,050	8,412,227	
Balance Available for Debt Service per Section 6.12	21,881,755	24,416,355	
Working Capital Reserve Available for Debt Service	5,592,805	5,592,805	
Transfer to Working Capital- Debt Service Reserve	-	-	
Transfer to Working Capital- O&M Reserve	-	-	
Balance Available for Debt Service inclusive of reserves	27,474,560	30,009,160	
Debt Service			
Principal	2,600,000	2,520,000	
Interest	12,380,413	9,761,151	
Total	14,980,413	12,281,151	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.46	1.99	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	1.83	2.44	

SCHEDULE F

Bond Compliance

		($$$) Per Indenture	As of 3/31/18 ($$$) Bond 2013/2014/2016/2017
• Operation and Maintenance Fund-BOG	*Equivalent to 55 days of the annual O&M budget less depreciation*	$10.5M	$10.5M
• Bond Reserve Fund - US Bank	*Fully funded- Principal and Interest (Bond Series 2013, 2014 Refunding, 2016 and 2017 Refunding)*	$34.9M	$34.9M
• Operation, Maintenance, Renewal and Replacement Reserve Fund-BOG Trust	*Equivalent to 1/4 of the annual O&M budget & CIP budget to be funded in 5 years ($2M/year)*	$17.4M	$17.4M
• Capital Improvement Fund	*Balance remaining in the Revenue Fund after the foregoing deposits*	$3.9K	$5.6K

GUAM WATERWORKS AUTHORITY
Restricted and Unrestricted Cash Summary
FY 2018

SCHEDULE G

Description	Unaudited March 31, 2018	Unaudited September 30, 2017	Increase (Decrease)
UNRESTRICTED			
Change Fund	2,000	2,000	0
Petty Cash	5,000	5,000	0
BOG - General Fund	3,495,242	4,836,236	(1,340,994)
BOG - PRN Payroll	30,039	30,039	0
Sub-total Unrestricted	3,532,281	4,873,275	(1,340,994)
RESTRICTED			
BOG - On Line Payment	-	-	0
BOG - Sweep Account	-	-	0
Bank of Hawaii	127,213	133,931	(6,718)
ANZ Bank	-	(0)	0
First Hawaiian Bank	30,972	10,261	20,711
Bank Pacific	11,550	15,825	(4,276)
Community First FCU	5,191	3,448	1,743
BOG - Customer Refunds	1,847,650	1,831,426	16,224
Bank Pacific - Surcharge	395,053	278,142	116,911
Bank Pacific - Escrow Deposit	666,636	666,140	496
BOG Emergency Reserve Fund	6,125	6,122	4
BOG - Revenue Trust	698,048	201,614	496,434
BOG Revenue Trust Fund	8,812,897	7,782,227	1,030,670
BOG Capital Improvement Fund-Bond	5,598	5,598	0
BOG Capital Improvement Revenue Fund	2,223,146	-	2,223,146
BOG-O & M Reserve	13,569,935	13,516,540	53,395
BOG-Debt Service Reserve	11,262,149	11,217,733	44,415
BOG-CAPEX Reserve	15,522,420	15,462,869	59,551
BOG Sewer Hookup Revolving Fund	64,645	63,590	1,056
BOG Subord. Sec. Fund	859,233	859,233	0
BOG Operation and Maintenance Fund	3,083,482	3,083,482	0
	59,191,944	55,138,182	4,053,762
BOG - SDC Deposit	4,906,037	1,486,219	3,419,819
BOG - SDC CDs	5,750,000	8,500,000	(2,750,000)
Total Restricted	69,847,981	65,124,400	4,723,580
Reserve Funds			
BOG Series 05 OMRRRF Fund	17,423,213	17,423,213	0
BOG Series 13 Construction Fund	53,924,084	74,461,765	(20,537,682)
BOG Series 14 Refunding Construction Fund	736,669	771,281	(34,612)
BOG Series 16 Construction Fund	123,114,351	132,811,449	(9,697,098)
BOG Series 16 Cap Int Fund	-	1,782,982	(1,782,982)
BOG Series 17 Refunding Construction Fund	8,593,596	9,299,311	(705,716)
BOG Series 17 Refunding COI Fund	47,499	-	47,499
Total Restricted - Held by Trustee	203,839,411	236,550,002	(32,710,591)
USB Series 2013 Debt Service Fund	2,344,613	2,336,754	7,859
USB Series 2013 Debt Service Reserve Fund	12,031,688	12,031,688	0
USB Series 2014 Refunding Debt Service Fu	3,542,300	1,796,559	1,745,742
USB Series 2014 Refunding Debt Service Re	7,760,536	7,707,602	52,934
USB Series 2016 Debt Service Fund	1,793,435	130	1,793,305
USB Series 2016 Debt Service Reserve Fund	7,594,587	7,582,725	11,862
USB Series 2010 Debt Service Fund	1,379,476	2,020,121	(640,645)
USB Series 2017 Refunding Debt Service Re	7,566,460	7,566,460	0
USB Series 2017 Debt Service Fund	1,428,787	-	1,428,787
Total Investments	45,441,883	41,042,038	4,399,844
Total Restricted and Unrestricted Cash	322,661,556	347,589,716	(24,928,160)

SCHEDULE H

Guam Waterworks Authority
Statement of Cash Flows (Unaudited)
FY 2018

	YTD Mar-18
Increase (decrease) in cash	
Cash flows from operating activities:	
Cash received from trade and others	54,337,490
Cash payments to suppliers/contractors for goods and services	(19,526,968)
Cash payments to employees for services	(13,075,902)
Net cash provided by operating activities	21,734,620
Cash flows from capital and related financing activities:	
Contributed capital received (grants)	10,875,442
Acquisition of utility plant	(43,457,213)
Repayment of Long Term Debt	7,108,975
Interest expense	(15,376,629)
Net cash provided by (used in) capital and related financing activities	(40,849,426)
Cash flows from investing activities:	
Transfers from (to) restricted fund	16,517,943
Interest income received	1,255,870
Net cash provided by investing activities	17,773,813
Net increase (decrease) in cash	(1,340,994)
Unrestricted cash at beginning of the period	4,873,275
Unrestricted cash at end of period	3,532,281
Reconciliation of operating loss to net cash provided by operating activities:	
Operating Income (loss)	13,391,355
Adjustments to reconcile to net cash provided by operating activities:	
Depreciation expense	9,169,050
Other Expense/income	829,726
(Increase) decrease in assets:	
Accounts receivable	(375,058)
Materials and supplies inventory	25,695
Other Assets	175,955
Increase (decrease) in liabilities:	
Accounts payable, Contractors, Retention & Escrow Deposit	(1,155,881)
Accrued payroll	(308,714)
Customer deposits	(17,507)
Net cash provided by operating activities	21,734,620

Guam Waterworks Authority
Accounts Receivable - Government
As of March 31, 2018

SCHEDULE I

		AGING				
Customer Name	**No of Accounts**	**Current Balance**	**31-60 days**	**61-90 days**	**91-120 days**	**Over 120 days**	**Outstanding Bal.**
Guam International Airport Authority	4	39,519	52,685	45,217	10,169	132,845	280,436
Guam Power Authority	14	16,007	482	370	370	157,779	175,008
Guam Memorial Hospital Authority	2	37,148	41,583	35,525	-	-	114,256
Port Authority of Guam	3	56,626	48,265	-	-	-	104,891
Guam Community College	3	12,618	11,500	8,994	9,274	-	42,385
University of Guam	2	11,778	-	-	-	-	11,778
Guam Housing & Urban Renewal Authority	7	1,185	-	-	-	92	1,277
Guam Housing Corporation	1	31	-	-	-	-	31
Autonomous Agencies	**36**	**174,911**	**154,516**	**90,106**	**19,814**	**290,716**	**730,062**
Department of Education	51	188,335	204,781	18,685	10,139	123,314	545,254
Department of Parks & Recreation	16	46,550	239,934	27,309	25,816	204,251	543,860
Department of Corrections	8	114,685	48,768	50,835	-	-	214,287
Department of Public Health & Social Services	5	3,480	1,499	219	382	103,711	109,291
Mayors' Council of Guam	48	15,749	124	-	-	-	15,873
Department of Mental Health and Subtance	3	7,642	1,088	7,134	-	-	15,863
Department of Youth Affairs	4	3,069	3,944	-	-	-	7,012
Department of Public Works	10	5,893	-	-	-	-	5,893
Guam Fire Department	8	5,600	-	-	-	-	5,600
Sanctuary Inc	1	2,569	-	-	-	-	2,569
Department of Military Affairs/GUARNG	1	2,560	-	-	-	-	2,560
Department of Administration	2	415	945	163	161	542	2,226
Department of Agriculture	3	2,042	-	-	-	-	2,042
Guam Police Department	2	1,092	-	-	-	-	1,092
Division of Senior Citizens, DPH&SS	2	355	152	145	53	-	706
Guam Public Library	4	157	-	-	-	-	157
Guam Veterans Affairs office	2	89	-	-	-	-	89
The Office of the Dededo Mayor	1	53	-	-	-	-	53
Merizo Mayor	1	26	-	-	-	-	26
Guam Solid Waste Authority	1	24	-	-	-	-	24
Line Agencies	**173**	**400,384**	**501,234**	**104,490**	**36,552**	**431,819**	**1,474,479**
TOTAL March 31, 2018	**209**	**575,295**	**655,750**	**194,596**	**56,366**	**722,534**	**2,204,541**
TOTAL September 30, 2017	**253**	**715,578**	**442,522**	**169,120**	**72,476**	**396,347**	**1,796,043**
% INCREASE/ (DECREASE)	**-17%**	**-20%**	**48%**	**15%**	**-22%**	**82%**	**23%**

GUAM WATERWORKS AUTHORITY
2013 Series Bond Project Status
As of March 31, 2018

SCHEDULE J

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 03/31/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 03/31/18
Santa Rita Springs Booster Pump Rehab Phase II	$ 100,000	$ 100,000	77,400	22,600	$ 100,000	$ -	$ 22,600
"A" Series Well Transmission Line	$ 400,000	$ 400,000	332,861	36,985	$ 369,846	$ 30,154	$ 67,139
Water Booster Pump Station	$ 6,000,000	$ 1,861,000	1,656,428	23,536	$ 1,679,964	$ 181,036	$ 204,572
Meter Replacement Program		$ 999,000	996,532	-	$ 996,532	$ 2,468	$ 2,468
Barrigada Tank Repair/Replacement	$ 6,000,000	$ 4,987,000	4,924,959	62,041	$ 4,987,000	$ 0	$ 62,041
Leak Detection	$ 100,000	$ 20,000	16,916	-	$ 16,916	$ 3,084	$ 3,084
Potable Water System Planning	$ 800,000	$ 624,000	603,390	20,610	$ 624,000	$ -	$ 20,610
Implement Ground Water Rule	$ 1,000,000	$ 1,000,000	1,000,000	-	$ 1,000,000	$ -	$ -
Deep Well Rehabilitation	$ 800,000	$ 200,000	189,930	10,071	$ 200,000	$ (0)	$ 10,070
New Deep Wells at Down Hard	$ 2,000,000	$ 810,000			$ -	$ 810,000	$ 810,000
Master Meters	$ 4,000,000	$ 784,000	531,188	180,872	$ 712,060	$ 71,940	$ 252,812
Ugum Water Treatment Plant Intake	$ 1,000,000	$ 982,000	578,858	280,943	$ 859,801	$ 122,199	$ 403,142
Water Wells	$ 4,200,000	$ 4,200,000	2,284,474	745,555	$ 3,030,029	$ 1,169,971	$ 1,915,527
Water Distribution System	$ 12,000,000	$ 11,151,000	6,113,951	4,798,502	$ 10,912,453	$ 238,547	$ 5,037,049
Pressure Zone Realignment /	$ 1,000,000	$ 431,000	336,036	1,074	$ 337,110	$ 93,890	$ 94,964
Mechanical/Electrical Equipment	$ 430,000	$ 430,000	328,686	98,112	$ 426,798	$ 3,202	$ 101,314
Water Reservoir Internal/External	$ 800,000	$ -			$ -	$ -	$ -
Water System Reservoirs 2005 Improvements	$ 21,000,000	$ 13,878,000	10,765,657	3,112,344	$ 13,878,000	$ (0)	$ 3,112,343
Ugum Water Treatment Plant Reservoir	$ 7,000,000	$ 90,000			$ -	$ 90,000	$ 90,000
Agana Heights & Chaot Tanks	$ 4,500,000	$ 3,280,000	233,265	1,097,022	$ 1,330,287	$ 1,949,713	$ 3,046,735
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 13,500,000	$ 11,605,000	5,299,747	6,305,253	$ 11,605,000	$ 0	$ 6,305,253
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 8,000,000	$ -			$ -	$ -	$ -
Assessment of malojloj Elevetad & Yigo Elevated	$ 500,000	$ 485,117	461,813	23,304	$ 485,117	$ -	$ 23,304
Fire Hydrant Replacement Program	$ -	$ -			$ -	$ -	$ -
Wastewater System Planning	$ 800,000	$ 651,000	550,968	99,933	$ 650,900	$ 100	$ 100,032
Lift Station Upgrades	$ 5,000,000	$ 946,000	562,785	363	$ 563,149	$ 382,852	$ 383,215
Wastewater Collection System Repl/Rehab	$ 6,500,000	$ 780,000	555,848	104,465	$ 660,314	$ 119,687	$ 224,152
Baza Gardens STP Replacement		$ 3,114,883	969,594	2,145,275	$ 3,114,869	$ 15	$ 2,145,290
Facilities Plan/Design for Umatac-Merizo WWTP		$ 473,000	341,226	30,473	$ 371,699	$ 101,301	$ 131,774
Agat/Santa Rita STP Replacement	$ 19,000,000	$ 67,200,000	41,408,528	25,791,471	$ 67,200,000	$ 0	$ 25,791,472
Agana WWTP Interim Measures		$ 673,000	611,247	61,753	$ 673,000	$ (0)	$ 61,753
Umatac Merizo Replacement	$ 2,000,000	$ -			$ -	$ -	$ -
Wastewater Pump Station Electrical Upgrade	$ 620,000	$ 620,000	91,348	8,513	$ 99,861	$ 520,139	$ 528,652
Electrical Upgrade - Water Wells	$ 1,500,000	$ 1,500,000	1,480,769	19,230	$ 1,500,000	$ 0	$ 19,231
Electrical Upgrade - Water Booster	$ 325,000	$ 2,000			$ -	$ 2,000	$ 2,000
Electrical Upgrade -Water Booster	$ 350,000	$ 200,000	977	-	$ 977	$ 199,023	$ 199,023
Electrical Upgrade - Other Water	$ 250,000	$ 150,000	60,700	-	$ 60,700	$ 89,300	$ 89,300
SCADA Improvements – Phase 3	$ 1,850,000	$ 923,000	427,949	294,410	$ 722,359	$ 200,641	$ 495,051
SCADA Improvements – Phase 4	$ 500,000	$ -			$ -	$ -	$ -
Laboratory Modernization	$ 1,500,000	$ 1,173,000	1,163,037	8,428	$ 1,171,465	$ 1,535	$ 9,963
Land Survey	$ 2,000,000	$ 2,000	1,038	15	$ 1,053	$ 948	$ 963
General Plant Improvements / Water	$ 2,000,000	$ 2,600,000	1,265,043	1,176,695	$ 2,441,737	$ 158,263	$ 1,334,957
Allowance for COI							$ 275,005
Interest Earned							$ 547,225
Total Construction Fund (2013 Series Revenue Bond)	**$ 139,325,000**	**$ 139,325,000**	**$ 86,223,146**	**$ 46,559,848**	**$ 132,782,994**	**$ 6,542,006**	**$ 53,924,084**

PUC's Docket 14-04 dated February 25, 2014

GUAM WATERWORKS AUTHORITY
2014 Series Refunded Bond Project Status
As of March 31, 2018

SCHEDULE K

PROJECT NAME	ORIGINAL APPROVED PROJECT	ADJUSTED PROJECT COST	EXPENDITURES AS OF 03/31/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	20% PUC AS OF 03/31/18	Construction fund balance AS OF 03/31/18
Agana Treatment Plant	$ 10,475,000	$ 11,065,512	11,065,512	$ -	$ 11,065,512	$ (0)	$ 2,095,000	$ (0)
Agana Outfall	$ 5,030,000	$ 10,127,198	10,127,198	$ -	$ 10,127,198	$ 0	$ 1,006,000	$ 0
Northern District (Outfall)	$ 4,700,000	$ 10,251,423	10,251,423	$ -	$ 10,251,423	$ 0	$ 940,000	$ 0
Northern District WWTP Upgrade		$ 173,681	173,681		$ 173,681	$ -		$ -
Northern Treatment Plant		$ -	-		$ -	$ -		$ -
Baza Gardens Wastewater Treatment Plant Upgrade	$ 500,000	$ 297,177	297,177	$ -	$ 297,177	$ (0)	$ 100,000	$ (0)
Interim Disinfection Facilities	$ 581,000	$ 3,437,311	3,408,599	$ 28,712	$ 3,437,311	$ (0)	$ 116,200	$ 28,712
Electrical Protection	$ 1,000,000	$ 1,512,483	1,512,483.3	$ -	$ 1,512,483	$ (0)	$ 200,000	$ (0)
Well Vulnerability Reduction	$ 600,000	$ 185,522	185,522	$ -	$ 185,522	$ 0	$ 120,000	$ 0
Old Agat Wastewater Collection (I/I Reduction)	$ 2,155,000	$ 1,931,659	1,931,659	$ -	$ 1,931,659	$ (0)	$ 431,000	$ (0)
Chaot WW Pump Station/Collection System	$ 410,000	$ 399,120	399,120	$ -	$ 399,120	$ -	$ 82,000	$ -
Lift Station Upgrades	$ 230,000	$ 149,895	149,895	$ -	$ 149,895	$ 0	$ 46,000	$ 0
Collection Line Upgrades	$ 200,000	$ 62,755	62,755	$ -	$ 62,755	$ 0	$ 40,000	$ 0
"A" Well Transmission Line	$ 2,413,000	$ 3,833,175	3,818,088	$ 15,087	$ 3,833,175	$ (0)	$ 482,600	$ 15,087
Santa Rita Springs - Booster Pump Rehab.	$ 648,000	$ 306,841	306,841	-	$ 306,841	$ (0)	$ 129,600	$ (0)
Fena Bypass Transmission line		$ 160,913	160,913	$ -	$ 160,913	$ (0)	$ -	$ (0)
Storage Additions	$ 950,000	$ -			$ -	$ -	$ 190,000	$ -
Booster Station Upgrades	$ 390,000	$ 66,734	66,734	$ -	$ 66,734	$ -	$ 78,000	$ -
Mangilao Tank Repair	$ 800,000	$ 398,367	397,933	$ 434	$ 398,367	$ (0)	$ 160,000	$ 434
Ugum Tank Replacement	$ 2,500,000	$ -			$ -	$ -	$ 500,000	$ -
Ugum WTPlant Refurbishment ($1.724,970EPA)		$ 6,588,473	6,531,525	$ 56,949	$ 6,588,473	$ (0)		$ 56,948
Barrigada Tank Repair/Replacement	$ 3,000,000	$ 65,019	65,019	$ -	$ 65,019	$ 0	$ 600,000	$ 0
Water Reservoir Condition Assessment		$ 1,250,000	1,249,227.16	$ 772	$ 1,250,000	$ 0	$ -	$ 773
EarthTech Well Buyout	$ 5,000,000	$ 5,975,000	5,975,000	$ -	$ 5,975,000	$ -	$ 1,000,000	$ -
Water Wastewater Master Plan	$ 4,900,000	$ 4,881,308	4,881,308	$ -	$ 4,881,308	$ 0	$ 980,000	$ 0
Laboratory Modernization	$ 800,000	$ 135,055	135,055	$ -	$ 135,055	$ 0	$ 160,000	$ 0
Land Survey	$ 800,000	$ 577,836	576,134	$ 1,702	$ 577,836	$ 0	$ 160,000	$ 1,702
Ground Water Disinfection		$ -				$ -		$ -
GWUDI Study		$ 262,234	260,430	1,804	$ 262,234	$ -		$ 1,804
Contingency	$ 12,276,023	$ 154	-	$ -	$ -	$ -		$ 732
Vehicles	$ 1,100,000	$ 1,280,000	2,130,305	$ (850,305)	$ 1,280,000	$ -	$ 220,000	$ -
Generation Equipment	$ 700,000	$ 880,000	2,712	$ 877,288	$ 880,000	$ 0		$ 27,033
Leak Detection/Line Replacement	$ 8,200,000	$ 5,988,494	5,988,494	$ -	$ 5,988,494	$ -	$ 1,640,000	$ -
Automated Meter Reading	$ 12,572,063	$ 17,468,359	16,870,522	$ 537,157	$ 17,468,359.32	$ 0	$ 2,514,413	$ 597,837
Total Construction Fund (2014 Series Refunded Revenue Bond)	$ 82,930,086	$ 89,711,698	88,891,990	$ 758,873.38	$ 89,711,543	$ 1	$ 13,990,813	$ 731,063
Interest Earned	$ 6,781,612	$ (0)				$ (0)		$ 5,606
Total Project Cost Funding	**$ 89,711,698**	**$ 89,711,698**	**88,891,990**	**$ 758,873.38**	**$ 89,711,543**	**$ 1**	**$ 13,990,813**	**$ 736,669**

GUAM WATERWORKS AUTHORITY
2016 Series Bond Project Status
As of March 31, 2018

SCHEDULE L

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 03/31/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 03/31/18
Water Booster Pump Station	$ 4,139,000	$ 4,139,000			$ -	$ 4,139,000	$ 4,139,000
Meter Replacement Program	$ 4,501,000	$ 4,501,000	8,638	141,362.32	$ 150,000	$ 4,351,000	$ 4,492,362
Barrigada Tank Repair/Replacement	$ 1,013,000	$ 1,013,000		-	$ -	$ 1,013,000	$ 1,013,000
Leak Detection	$ 1,180,000	$ 1,180,000		-	$ -	$ 1,180,000	$ 1,180,000
Potable Water System Planning	$ 2,276,000	$ 2,276,000	247,056	229,237.54	$ 476,294	$ 1,799,706	$ 2,028,944
Deep Well Rehabilitation	$ 250,000	$ 250,000		110,013.00	$ 110,013	$ 139,987	$ 250,000
New Deep Wells at Down Hard	$ 1,190,000	$ 1,190,000			$ -	$ 1,190,000	$ 1,190,000
Master Meters	$ 3,616,000	$ 3,616,000	151,539	-	$ 151,539	$ 3,464,461	$ 3,464,461
Ugum Water Treatment Plant Intake	$ 18,000	$ 18,000			$ -	$ 18,000	$ 18,000
Water Wells	$ 2,500,000	$ 2,500,000			$ -	$ 2,500,000	$ 2,500,000
Water Distribution System	$ 2,049,000	$ 49,000			$ -	$ 49,000	$ 49,000
Pressure Zone Realignment /	$ 1,141,000	$ 1,141,000		668,355.20	$ 668,355	$ 472,645	$ 1,141,000
Mechanical/Electrical Equipment	$ 100,000	$ 100,000			$ -	$ 100,000	$ 100,000
Water Reservoir Internal/External	$ 800,000	$ 800,000			$ -	$ 800,000	$ 800,000
Water System Reservoirs 2005 Improvements	$ 42,350,000	$ 28,350,000	1,820,465	12,448,322.67	$ 14,268,787	$ 14,081,213	$ 26,529,535
Ugum Water Treatment Plant Reservoir	$ 6,410,000	$ -			$ -	$ -	$ -
Water Audit Program & Water Loss Control Plan	$ 1,000,000	$ 1,000,000				$ 1,000,000	$ 1,000,000
Agana Heights & Chaot Tanks	$ 1,220,000	$ 1,220,000		500,000.00	$ 500,000	$ 720,000	$ 1,220,000
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 1,895,000	$ 1,895,000		1,822,132.80	$ 1,822,133	$ 72,867	$ 1,895,000
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 10,500,000	$ 7,409,830		7,300,000.00	$ 7,300,000	$ 109,830	$ 7,409,830
Fire Hydrant Replacement Program	$ 2,000,000	$ 2,000,000			$ -	$ 2,000,000	$ 2,000,000
Wastewater System Planning	$ 349,000	$ 349,000	101,034	211,949.36	$ 312,983	$ 36,017	$ 247,966
Lift Station Upgrades	$ 2,404,000	$ 2,404,000	174,340	340,415.47	$ 514,755	$ 1,889,245	$ 2,229,660
Wastewater Collection System Repl/Rehab	$ 2,920,000	$ 2,920,000		224,923.00	$ 224,923	$ 2,695,077	$ 2,920,000
Baza Gardens STP Replacement	$ 16,700,000	$ 29,400,170	9,343,305	19,776,343.49	$ 29,119,649	$ 280,521	$ 20,056,865
Facilities Plan/Design for Umatac-Merizo WWTP	$ 527,000	$ 527,000	224,705	27,399.52	$ 252,105	$ 274,895	$ 302,295
Agat/Santa Rita STP Replacement	$ 3,000,000	$ 3,000,000	902,989	216,710.57	$ 1,119,700	$ 1,880,300	$ 2,097,011
Agana WWTP Interim Measures	$ 827,000	$ 827,000			$ -	$ 827,000	$ 827,000
Umatac Merizo Replacement	$ 8,000,000	$ 20,800,000	2,752,013	17,850,241.18	$ 20,602,254	$ 197,746	$ 18,047,987
Wastewater Pump Station Electrical Upgrade	$ 100,000	$ 100,000			$ -	$ 100,000	$ 100,000
Electrical Upgrade - Water Wells	$ 650,000	$ 650,000			$ -	$ 650,000	$ 650,000
Electrical Upgrade - Water Booster	$ 323,000	$ 323,000			$ -	$ 323,000	$ 323,000
SCADA Improvements – Phase 3	$ 1,177,000	$ 1,177,000	18,000	599,496.51	$ 617,497	$ 559,503	$ 1,159,000
SCADA Improvements – Phase 4	$ 6,500,000	$ 6,500,000			$ -	$ 6,500,000	$ 6,500,000
Laboratory Modernization	$ 1,127,000	$ 1,127,000	1,127,000	-	$ 1,127,000	$ -	$ -
Land Survey	$ 1,998,000	$ 1,998,000	46,677	1,213,846.39	$ 1,260,524	$ 737,476	$ 1,951,323
General Plant Improvements / Water	$ 2,769,463	$ 2,769,463	631,745	912,014.41	$ 1,543,760	$ 1,225,703	$ 2,137,718
Information Technology Integration Improvements	$ 500,000	$ 500,000	244,068	-	$ 244,068	$ 255,932	$ 255,932
Interest Earned		$ -					$ 888,462
Total Construction Fund (2016 Series Revenue Bond)	**$ 140,019,463**	**$ 140,019,463**	**$ 17,793,574**	**$ 64,592,763**	**$ 82,386,338**	**$ 57,633,125**	**$ 123,114,350**

GUAM WATERWORKS AUTHORITY
2017 Series Refunded Bond Project Status
As of March 31, 2018

SCHEDULE M

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 03/31/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 03/31/18
Ground Water Disinfection	$ -	$ 500,000	$ 438,141	$ 61,859	$ 500,000	$ 0	$ 61,859
"A" Series Well Transmission Line	$ 600,000	$ 518,144	$ 474,434	$ 1,274	$ 475,709	$ 42,435	$ 43,710
Water Booster Pump Station	$ 500,000	$ 500,000	$ 418,844	$ 81,156	$ 500,000	$ (0)	$ 81,156
Meter Replacement Program	$ 2,500,000	$ 10,300,000	$ 10,254,841	$ 18,787	$ 10,273,628	$ 26,372	$ 45,159
Barrigada Tank Repair/Replacement	$ -	$ 5,450,000	$ 5,442,302	$ 7,698	$ 5,450,000	$ 0	$ 7,698
Leak Detection		$ 200,000	$ -	$ 200,000	$ 200,000	$ -	$ 200,000
Potable Water System Planning	$ 200,000	$ 200,000	$ 179,638	$ 20,362	$ 200,000	$ -	$ 20,362
Implement Ground Water Rule		$ 1,700,000	$ 1,499,464	$ 200,535	$ 1,700,000	$ 1	$ 200,536
Brigade II (Ugum Lift) BPS Upgrade	$ 1,200,000	$ 1,700,000	$ 210,007	$ 127,887	$ 337,895	$ 1,362,105	$ 1,489,993
Deep Well Rehabilitation	$ 548,000	$ 548,000	$ 548,000	$ -	$ 548,000	$ -	$ -
New Deep Wells at Down Hard	$ 3,773,000	$ 638,252	$ 485,743	$ -	$ 485,743	$ 152,509	$ 152,509
Rehabilitation of Asan Springs	$ 900,000	$ 900,000	$ 188,771	$ 152,068	$ 340,838	$ 559,162	$ 711,229
Master Meters	$ 1,600,000	$ 1,600,000	$ 1,421,267	$ 68,690	$ 1,489,957	$ 110,043	$ 178,733
Ugum Water Treatment Plant Intake	$ 3,670,000	$ 700,000	$ 543,615	$ 156,385	$ 700,000	$ -	$ 156,385
Water Wells	$ 2,000,000	$ -	$ -		$ -	$ -	$ -
Water Distribution System	$ 384,000	$ 3,174,748	$ 3,174,748	$ -	$ 3,174,748	$ (0)	$ (0)
Pressure Zone Realignment /	$ 3,550,000	$ -	$ -		$ -	$ -	$ -
Northern System Water Distribution	$ 2,725,000	$ -	$ -	$ -	$ -	$ -	$ -
Central Water Distribution System 2005	$ 1,200,000	$ 900,000	$ 730,182	$ 44,820	$ 775,002	$ 124,998	$ 169,818
Southern Water Distribution System	$ 1,800,000	$ -	$ -		$ -	$ -	$ -
Mechanical/Electrical Equipment	$ 1,360,000	$ 1,200,000	$ 1,079,495	$ 120,505	$ 1,200,000	$ (0)	$ 120,505
Water Reservoir Internal/External	$ 500,000	$ 2,000,000	$ 1,033,356	$ 476,027	$ 1,509,384	$ 490,616	$ 966,644
Water Reservoir Internal/External	$ 2,400,000	$ -	$ -		$ -	$ -	$ -
Water System Reservoirs 2005 Improvements	$ 11,697,000	$ 1,050,000	$ 1,050,000		$ 1,050,000	$ 0	$ 0
Distribution System Upgrades	$ 3,182,000	$ 474,160	$ 456,678	$ 17,481	$ 474,160	$ 0	$ 17,482
Ugum Water Treatment Plant Reservoir	$ 3,672,000	$ -	$ -		$ -	$ -	$ -
Water Audit Program & Water Loss Control Plan		$ 100,000	$ 15,031	$ 63,428	$ 78,459	$ 21,541	$ 84,970
Production Plan / Reduce Navy Purchases		$ 100,000	$ 94,286	$ 5,714	$ 100,000	$ -	$ 5,714
Hydraulic Asessment of Tank		$ 500,000	$ 497,004	$ 2,996	$ 500,000	$ -	$ 2,996
Agana Heights & Chaot Tanks		$ 4,700,000	$ 4,350,014	$ 349,986	$ 4,700,000	$ -	$ 349,986
Tank Major Repair Yigo#1 Mangilao#2 Agat#2		$ 1,900,000	$ 1,750,355	$ 97,659	$ 1,848,013	$ 51,987	$ 149,645
Tank Major Repair Yigo#1 Mangilao#2 Agat#2		$ -			$ -	$ -	$ -
Assessment of malojloj Elevetad & Yigo Elevated		$ 200,000	$ 200,000	$ -	$ 200,000	$ -	$ -
Public Water System Asser Inventory/Condition Assesment		$ 100,000	$ 98,414	$ 1,586	$ 100,000	$ -	$ 1,586
Public Water System GIS & Mapping		$ 50,000	$ 50,000	$ -	$ 50,000	$ -	$ -
		$ -			$ -	$ -	$ -
Wastewater System Planning	$ 1,500,000	$ 1,500,000	$ 1,465,858	$ 8,142	$ 1,474,000	$ 26,000	$ 34,142
Wastewater Vehicles	$ 235,000	$ 235,000	$ 209,795	$ 25,205	$ 235,000	$ 0	$ 25,205
NDWWTP - Chlorine Tanks	$ 250,000	$ 250,000	$ 250,000		$ 250,000	$ -	$ -
Tumon Bay Sewer Upgrades	$ 100,000	$ -	$ -		$ -	$ -	$ -
Wastewater Collection System Repl/Rehab		$ 1,105,000	$ 720,836	$ 283,287	$ 1,004,123	$ 100,877	$ 384,164
Facilities Plan/Design for Baza Gardens WWTP	$ 1,250,000	$ 1,250,000	$ 1,245,244	$ 4,756	$ 1,250,000	$ -	$ 4,756
Facilities Plan/Design for Agat-Santa Rita WWTP	$ 900,000	$ 899,630	$ 891,702	$ 7,928	$ 899,630	$ -	$ 7,928
Priority 1 Sewer Upgrades – Baza Gardens WWTP	$ 650,000	$ -	$ -		$ -	$ -	$ -
Baza Gardens STP Replacement	$ 3,567,000	$ 1,301,947	$ 316,686	$ 314	$ 317,000	$ 984,947	$ 985,261
Facilities Plan/Design for Umatac Merizo WWTP		$ 900,000	$ 760,845	$ 93,013	$ 853,858	$ 46,142	$ 139,155
Agat/Santa Rita STP Replacement	$ 2,968,000	$ 2,218,000	$ 2,217,314	$ 387	$ 2,217,701	$ 300	$ 686
Northern District WWTP Primary Treatment Upgrades	$ -	$ 11,750,000	$ 11,532,253	$ 211,261	$ 11,743,514	$ 6,486	$ 217,747
Biosolids Management Plan		$ 200,000	$ 196,414	$ 3,586	$ 200,000	$ -	$ 3,586
Agana WWTP Interim Measures	$ -	$ 11,500,000	$ 11,254,925	$ 45,075	$ 11,300,000	$ 200,000	$ 245,075
I&I SSES Southern		$ 800,000	$ 794,722	$ 5,278	$ 800,000	$ (0)	$ 5,278
I&I SSES Central		$ 850,000	$ 794,325	$ 55,675	$ 850,000	$ -	$ 55,675
I&I SSES Northern		$ -			$ -	$ -	$ -
Umatac Merizo Replacement		$ 250,000	$ 247,431	$ 2,569	$ 250,000	$ -	$ 2,569
Northern District WWTP Secondary Treatment Upgrades		$ 1,000,000	$ -	$ 1,000,000	$ 1,000,000	$ -	$ 1,000,000
Well Electrical Protection	$ 26,000	$ -	$ -		$ -	$ -	$ -
SCADA Pilot Project	$ 300,000	$ 61,950	$ 19,812	$ 42,138	$ 61,950	$ (0)	$ 42,138
Electrical Upgrade - Water Wells	$ 3,000,000	$ 354,227	$ 339,948	$ 14,278	$ 354,227	$ 0	$ 14,279
Electrical Upgrade - Water Booster	$ 325,000	$ -	$ -		$ -	$ -	$ -
Electrical Upgrade -Water Booster	$ 350,000	$ -	$ -		$ -	$ -	$ -
Electrical Upgrade - Other Water	$ 250,000	$ -			$ -	$ -	$ -
SCADA Improvements – Phase 1	$ 250,000	$ 250,000	$ 194,849	$ 55,151	$ 250,000	$ -	$ 55,151
SCADA Improvements – Phase 2	$ 1,100,000	$ 1,056,986	$ 1,028,284	$ 28,702	$ 1,056,986	$ -	$ 28,702
SCADA Improvements – Phase 3	$ 2,500,000	$ 24,956	$ 24,956	$ -	$ 24,956	$ 0	$ 0
SCADA Improvements – Phase 4	$ 850,000	$ -	$ -		$ -	$ -	$ -
Laboratory Modernization	$ 1,200,000	$ -	$ -		$ -	$ -	$ -
Land Survey	$ 1,500,000	$ 500,000	$ 471,450	$ 28,237	$ 499,687	$ 313	$ 28,550
General Plant Improvements / Water	$ 14,370,000	$ 7,241,000	$ 7,241,000	$ 0	$ 7,241,000	$ 0	$ 0
Interest Earned							$ 94,874
Total Construction Fund (2010 Series Revenue Bond)	**$ 87,402,000**	**$ 87,402,000**	**$ 78,903,279**	**$ 4,191,887**	**$ 83,095,166**	**$ 4,306,834**	**$ 8,593,595**

1.) PUC's Docket 11-01 $29,000,000.00 dated
09/19/11authorized GWA for reallocation
2) PUC's Docket 11-01 Reallocation of $23,246,000.00 dated 07/30/12
3) PUC's Dockect Reallocation dated February 2013

GUAM WATERWORKS AUTHORITY
Schedule of Series 2013, 2014 Refunding, 2016 and 2017 Refunding Bond Bank Accounts
As of March 31, 2018

SCHEDULE N

	3/31/2018
BANK OF GUAM	
BOG - Revenue Account	8,812,897
BOG - Operations and Maintenance Reserve	3,083,482
BOG - Operations, Maintenance, Renewal and Replacement Reserve Fund	17,423,213
BOG - Capital Improvement Fund	2,228,744
BOG - O & M Reserve	13,569,935
BOG - Debt Service Reserve	11,262,149
BOG - CAPEX Reserve	15,522,420
Total BOG Bank Account Balance	**71,902,840**
Series 2013 Bond:	
BOG - Construction Fund	53,924,084
USB - Debt Service Fund	2,344,613
USB - Debt Service Reserve Fund	12,031,688
Total Series 2013 Bond Bank Balance	**68,300,385**
Series 2014 Refunding Bond:	
BOG - Construction Fund	736,669
USB - Debt Service Fund	3,542,300
USB - Debt Service Reserve Fund	7,760,536
Total Series 2014 Refunding Bond Bank Balance	**12,039,506**
Series 2016 Bond:	
BOG - Construction Account	123,114,351
BOG - Capitalized Interest Fund	-
USB - Debt Service Fund	1,793,435
USB - Debt Service Reserve Fund	7,594,587
Total Series 2016 Bond Bank Balance	**132,502,372**

GUAM WATERWORKS AUTHORITY

Guam Waterworks Authority

VEHICLE FLEET STATUS

4/11/2018

EQUIPMENT STATUS				
Description	Number of Equipment	Number of Equipment Available	Number of Equipment Not Available	Percentage
Backhoe	5	1	4	20%
Bobcat	1	1	0	100%
Boom Truck	2	1	1	50%
Crane	2	0	2	0%
Dump Truck	3	1	2	33%
Flat Bed	1	0	1	0%
Forklift	7	6	1	86%
Fuel Tanker	1	1	0	100%
Heavy Duty	3	0	3	0%
Light	160	107	53	67%
Mini Backhoe	4	0	4	0%
Pumper Truck	1	1	0	100%
Skidster	1	1	0	100%
Sludge Truck	5	5	0	100%
Tow	1	0	1	0%
Tractor	2	2	0	100%
Tractor Mower	1	1	0	100%
Trailer	14	11	3	79%
Trencher	1	1	0	100%
Vaccon	1	1	0	100%
Vacuum Truck	3	1	2	33%
Water Buffalo	2	2	0	100%
Water Tanker	5	1	4	20%
Total	226	145	81	

SUMMARY						
Operational	Operational w/Rprs Pending	In Shop-Accident Repairs	In Shop-Assessment Pending	In Shop-Repairs Pending	In Shop-Vendor Repairs	Recommend Survey
1	0	0	0	2	0	2
1	0	0	0	0	0	0
1	0	0	0	1	0	0
0	0	0	0	0	1	1
1	0	0	0	2	0	0
0	0	0	0	0	0	1
6	0	0	0	0	0	1
1	0	0	0	0	0	0
0	0	0	0	0	2	1
106	1	1	7	8	5	32
0	0	0	0	2	2	0
1	0	0	0	0	0	0
1	0	0	0	0	0	0
5	0	0	0	0	0	0
0	0	0	0	0	0	1
2	0	0	0	0	0	0
1	0	0	0	0	0	0
11	0	0	0	1	0	2
1	0	0	0	0	0	0
1	0	0	0	0	0	0
1	0	0	0	1	1	0
2	0	0	0	0	0	0
1	0	0	0	0	3	1
144	1	1	7	17	14	42

Guam Waterworks Authority	Date: 4/11/2018 Time:

GUAM WATERWORKS AUTHORITY

WATER DISTRIBUTION FACILITIES REPORT

REVIEWS

TOTAL PUMPS INSTALLED	51	OVERAL AVERAGE	*90%*
TOTAL PUMPS OPERATIONAL	46	% OF OPERATING PUMPS	*90%*
TOTAL BOOSTER PUMP STATIONS	25		

Northern District

NO:	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	PUMP AND MOTOR INVENTORY
1	Gayinero	20	2	2	100%	OP	A						
2	Mataguac	25	2	1	50%	OP	A	mechanical seal replacement needed				Removed and at vendor	
3	Santa Rosa	15	2	2	100%	OP	A						
4	Hyundai	40	2	1	50%	OP	A	Pump # 1 requires pump and motor.					
5	Access	60	2	2	100%	OP	A						
6	Chln. Palauan	5	2	2	100%	N/A						CIP required for new unit and electrical for generator	
7	Nimitz Hill	7.5	2	2	100%	N/A						CIP required for new unit and electrical for generator	
8	Adawag	1.5	2	2	100%	N/A						CIP required for new unit and electrical for generator	
9	Pale Kiren	1	1	1	100%	N/A						CIP required for new unit and electrical for generator	
10	Ulloa/Untalan	1	2	2	100%	OP	A						
11	Latte Heights	15	2	2	100%	OP	A						
	TOTAL = 11		**21**	**19**	**90%**								
pump availability =no of operational pumps/no of pumps*100%													

Central District

NO:	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	UPDATES
1	Pago	150 / 100	3	2	67%	0P	A			ASSESING PUMP 3 MOTOR		Removed and at vendor 4/25/18 (Rewind)	
2	Brigade	60	3	3	100%	OP	A			Generator inadequate for 2 pump operation			
3	Windward Hills	200 / 75	3	3	100%	OP	A	All pumps operational.					
4	Santa Rita Spring	40	2	2	100%	OP	A						
5	Santa Ana (Lower)	25	2	1	50%	N/A		CHECK VALVE P1 NOT OPENING		Unable to secure discharge valve. Need to schedule an outage for area to make repairs		CIP required for new unit and electrical for generator	Need to schedule valve repairs
6	Camacho	1	1	1	100%	N/A						CIP required for new unit and electrical for generator	
7	Tenorio	1.5	1	1	100%	N/A						CIP required for new unit and electrical for generator	
	Total=7		**15**	**13**	**87%**								
pump availability =no of operational pumps/no of pumps*100%													

Southern District

NO:	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	UPDATES
1	Malojloj Line	125 / 50	3	2	67%	OP	A	PUMP 3		ASSESING P3 MOTOR		Removed and at vendor 4/25/18 (Rewind)	
2	Geus	25	2	2	100%	OP	A						
3	Pigua	7.5	2	2	100%	N/A						CIP required for new unit and electrical for generator	
4	Toguan	25	2	2	100%	OP	A						
5	WBP-2	25	2	2	100%	OP	A						
6	WBP-1	5	2	2	100%	OP	A						
7	Malojloj Elevated	15	2	2	100%	OP	A						
	Total=7		**15**	**14**	**93%**								
pump availability =no of operational pumps/no of pumps*100%													

Guam Waterworks Authority	Date: 3/30/2018 Time:

GUAM WATERWORKS AUTHORITY

WASTEWATER FACILITIES REPORT

REVIEWS

TOTAL PUMPS INSTALLED	169	OVERAL AVERAGE	86%
TOTAL PUMPS OPERATIONAL	146	% OF OPERATING PUMPS	86%
TOTAL PUMP STATIONS	78		

Northern District

NO.	FACILITY	Priority Listing	NO OF INSTALLED	NO OF OPERATIONAL	PUMP AVAILABILITY %	Pump NO.	Action Required	Ref. No./Date	PUMP UNIT REMARKS	Additional Remarks
1	FUJITA					1				
						2				
						3				
						4				
			4	3	75%					
2	Southern Link					1				
						2				
						3				
						4	Pump #4 suction clogged			
			4	3	75%					
3	Route #16					1				
						2				
						3				
						4	VFD Issues			
			4	4	100%					
4	HARMON					1				
						2	Pump #2 at Washland for open winding. Vendor is still waiting on parts for pump as of 3/30/18	PO #301753		
			2	1	50%					
5	MACHECHE					1				
						2				
			2	2	100%					
6	LATTE DOUBLE TROUBLE					1				
						2				
			2	2	100%					
7	LATTE SUBMARINE					1				
						2				
			2	2	100%					
8	MACHANAO					1				
						2				
			2	2	100%					
9	YPAOPAO ESTATES					1				
						2				
						3				
			3	3	100%					
10	PGD					1				
						2				
			2	2	100%					
11	LATTE PLANTATION					1				
						2				
			2	2	100%					
12	PASEO DE ORO					1				
						2				
			2	2	100%					
13	ASTUMBO #1					1				
						2				
			2	2	100%					
14	ASTUMBO #2					1				
						2				
			2	2	100%					
15	FEMA '96					1				
						2				
			2	2	100%					
16	LATTE SUN RISE					1				
						2				
			2	2	100%					
17	HAFA ADAI					1				
						2				
			2	2	100%					
18	PACIFIC LATTE					1				
						2				
			2	2	100%					
19	SANTA ANA					1				
						2				
			2	2	100%					
20	ZERO DOWN					1				
						2				
			2	2	100%					
21	Yigo PS					1				
						2				
						3	Pump #3 awaiting installation of discharge valve. Shutdown of station needed. Detry, Ben Lujan & PGE Pumper Trucks.	OQ #s 31651, 31652, 31654		
			3	2	67%					
22	Ypao PS					1				
						2				
			2	2	100%					
	Northern TP						Bar Screen still off-line. Solenoid valve for the water line is defective causing auger not to operate. Still trouble shooting root cause.	3/30/2018		
	TOTAL = 22		52	48	92%					

Central District

NO.	FACILITY	Priority Listing	NO OF INSTALLED	NO OF OPERATIONAL	PUMP AVAILABILITY %	Pump NO.	Action Required	Ref. No./Date	PUMP UNIT REMARKS	Additional Remarks
1	AGANA MAIN					1				
						2	Pump #2 taken out (2/13/18) and sent to JMI due to seals leaking	OQ#32161 OR#31950 2/21/18		
						3				
						4				
			4	3	75.00%					
2	CHAOT					1				
						2				
						3				
			3	3	100.00%					
3	MAMAJANAO					1	Off-line awaiting eccentric reducer	OQ#31721 (12/07/18) OR#31551(12/14/17)		
						2				
						3				
			3	2	66.67%					
4	BARRIGADA					1				
						2				
			2	2	100.00%					
5	BAYSIDE					1				
			1	1	100.00%					
6	TAYMANGILAO					1				
						2	Seal failure/pump at Washland for rewinding.	OQ#31870(01/02/18) OR#31663(01/05/18)		
						3				
			3	2	66.67%					
7	MONGMONG/TOTO					1				
						2				
			2	2	100.00%					
8	PAGO DOUBLE					1	secured & needs to be replaced/**CIP** approved pending final review from finance.			
						2				
						3				
			3	2	66.67%					
9	MANGILAO					1	Impeller needed for pump #1	OQ#31892(01/05/18) OR#31765(01/25/18)		
							Pump #1 at JMI for repair (SULZER ABS Ser. No. 001922)	OQ#31990(01/05/18) OR#31688(01/09/18)		
						2	Awaiting eccentric reducers for discharge line / Pump #2 temporary online on line #1	OQ#31461(11/01/17) OR#31558(12/15/18)		
			2	1	50.00%					
10	PITI					1	**Pump #1 Back on-line. Gasket replaced and retapped mounting bolts.**	**3/29/2018**		
						2				
			2	2	100.00%					
						1				

11	ASAN					2					
			2	2	100.00%						
12	SINAJANA					1					
						2					
			2	2	100.00%						
13	DAIRY ROAD					1	Pump #1 at Washland for rewinding	?			
						2					
			2	1	50.00%		On going electrical upgrades on this pump station as of 3/30/18	3/30/2018			
14	FADIAN					1					
						2					
			2	2	100.00%						
15	FLORA GARDENS					1					
						2					
			2	2	100.00%						
16	ORDOT					1					
						2					
			2	2	100.00%						
17	CHALAN PAGO #5					1	Pump #1 at @Washland for rewinding.	?			
						2					
			2	1	50.00%						
18	COMMERCIAL PORT					1					
						2					
						3					
			3	3	100.00%						
19	CHALAN PAGO #3					1					
						2					
			2	2	100.00%						
20	CABRAS ISLAND					1					
						2					
			2	2	100.00%						
21	ALUPANG COVE					1					
						2					
			2	2	100.00%						
22	MAITE EJECTOR					1					
						2					
			2	2	100.00%						
23	TOTO GARDENS					1					
						2					
			2	2	100.00%						
24	CASIMERO					1					
						2					
			2	2	100.00%						
25	LEYANG					1					
						2					
			2	2	100.00%						
26	SAGAN BONITA 1					1					
						2					
			2	2	100.00%						
27	SAGAN BONITA 2					1					
						2					
			2	2	100.00%						
28	Namo					1					
			1	1	100.00%						
29	DERO ROAD					1					
						2	Replaced pump #2 with a spare pump on 3/26/18. Still off-line, waiting for electrical part (Overload Heating Element).	OQ#32353 3/30/2018			
			2	1	50.00%						
	Total=29		**63**	**55**	**87.30%**						

GUAM WATERWORKS AUTHORITY

WASTEWATER COLLECTION REPORT

MONTHLY REPORT

MARCH 2018



CCTV INSPECTIONS AND SEWER CLEANING

MAR. 01-MAR. 07	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3267		6,534
Feet Completed	4053.8			4873
	124.08%	0.00%		62%

MAR. 08 – MAR. 14	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3267		6,534
Feet Completed	1896			1896
	58%	0%		29%

MAR.15 – MAR 21	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3267		6,534
Feet Completed	3249			2839.8
	87%	0%		43%

MAR. 22 – MAR. 28	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3267		6,534
Feet Completed	3249			3249
	99%	0%		50%

MAR. 29 – MAR. 31	Team #1	Team #2	Vendor	Total
Feet Scheduled	832	3267		832
Feet Completed				0
		0%		0%

	January	**February**	**March**	**April**	**May**	**June**
CCTV/Jetting	2.86	4.95	2.30	0.00	0.00	0.00

- Performed CCTV and smoke Testing in the Agana bay area which deferred from completing the miles required.

PUMPING STATION TROUBLE CALLS

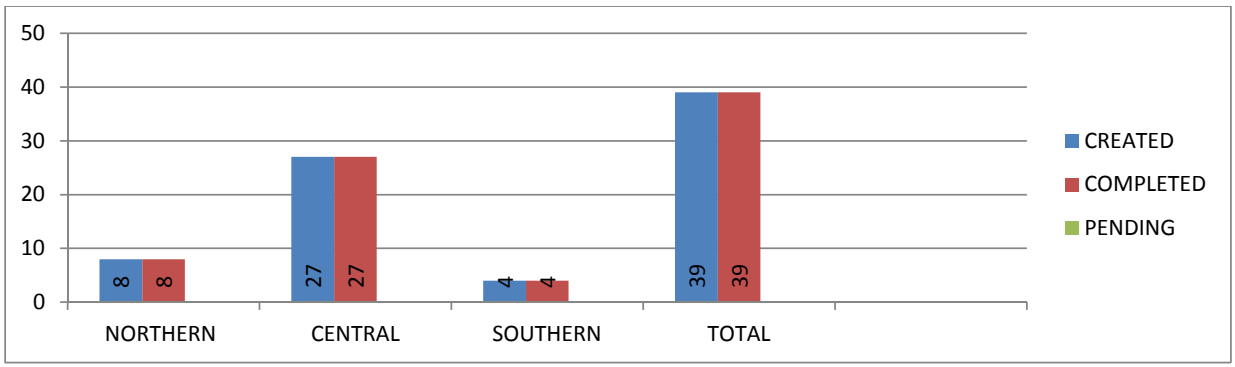
MAR. 01 - MAR. 07	CREATED	COMPLETED	PENDING
NORTHERN	1	1	0
CENTRAL	5	5	0
SOUTHERN	3	3	0
TOTAL	9	9	0

MAR. 08 – MAR. 14	CREATED	COMPLETED	PENDING
NORTHERN	1	1	0
CENTRAL	7	7	0
SOUTHERN	0	0	0
TOTAL	8	8	0

MAR.15 – MAR. 21	CREATED	COMPLETED	PENDING
NORTHERN	3	3	0
CENTRAL	9	9	0
SOUTHERN	0	0	0
TOTAL	12	12	0

MAR.22– MAR. 31	CREATED	COMPLETED	PENDING
NORTHERN	3	3	0
CENTRAL	6	6	0
SOUTHERN	1	1	0
TOTAL	10	10	0

	CREATED	COMPLETED	PENDING
NORTHERN	8	8	0
CENTRAL	27	27	0
SOUTHERN	4	4	0
TOTAL	39	39	0



MAINTENANCE PREVENTIVE AND CORRECTIVE CALL OUTS

FEB. 26 – MAR. 02	PREVENTIVE	CORRECTIVE
NORTHERN	4	3
CENTRAL	0	0
SOUTHERN	6	3
TOTAL	10	6

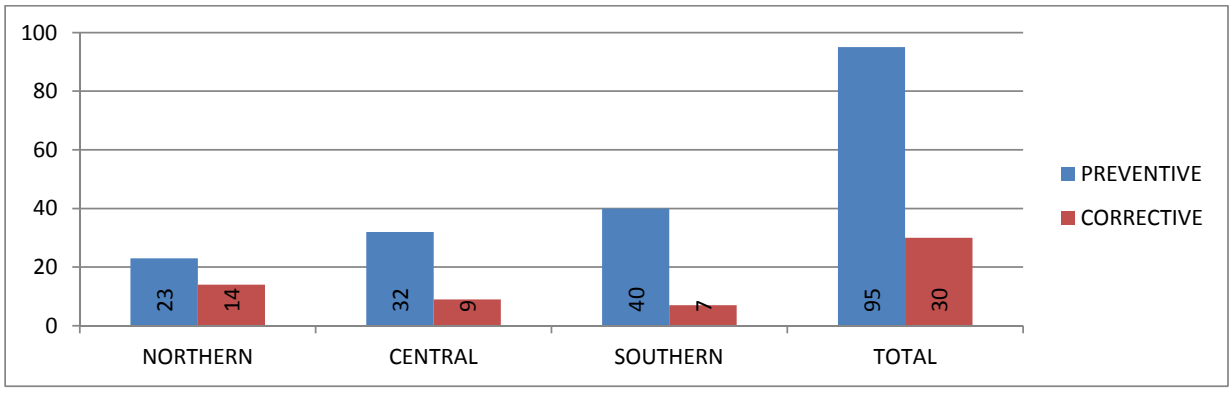
MAR. 05 – MAR. 09	PREVENTIVE	CORRECTIVE
NORTHERN	0	1
CENTRAL	11	5
SOUTHERN	5	2
TOTAL	16	8

MAR. 12 – MAR. 16	PREVENTIVE	CORRECTIVE
NORTHERN	4	4
CENTRAL	1	2
SOUTHERN	0	0
TOTAL	5	6

MAR. 19 – MAR. 23	PREVENTIVE	CORRECTIVE
NORTHERN	6	3
CENTRAL	20	0
SOUTHERN	3	1
TOTAL	29	4

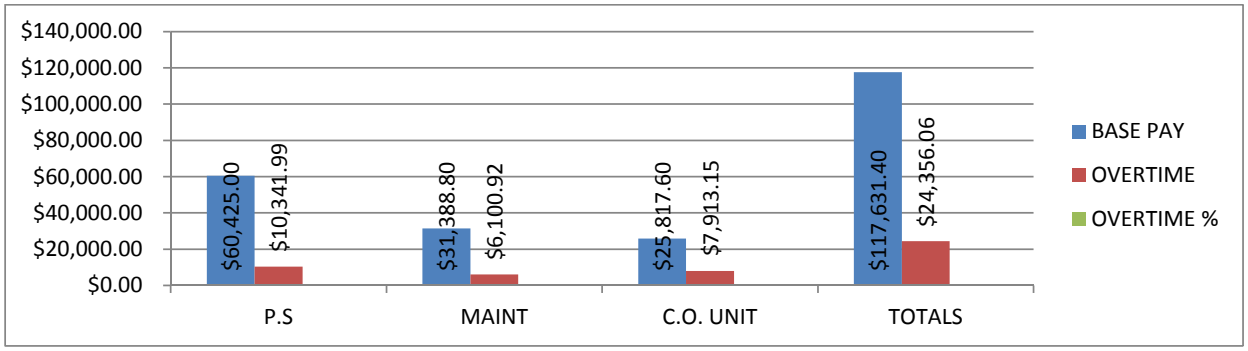
MAR. 26 – MAR.30	PREVENTIVE	CORRECTIVE
NORTHERN	9	3
CENTRAL	0	2
SOUTHERN	26	1
TOTAL	35	6

	PREVENTIVE	CORRECTIVE
NORTHERN	23	14
CENTRAL	32	9
SOUTHERN	40	7
TOTAL	95	30



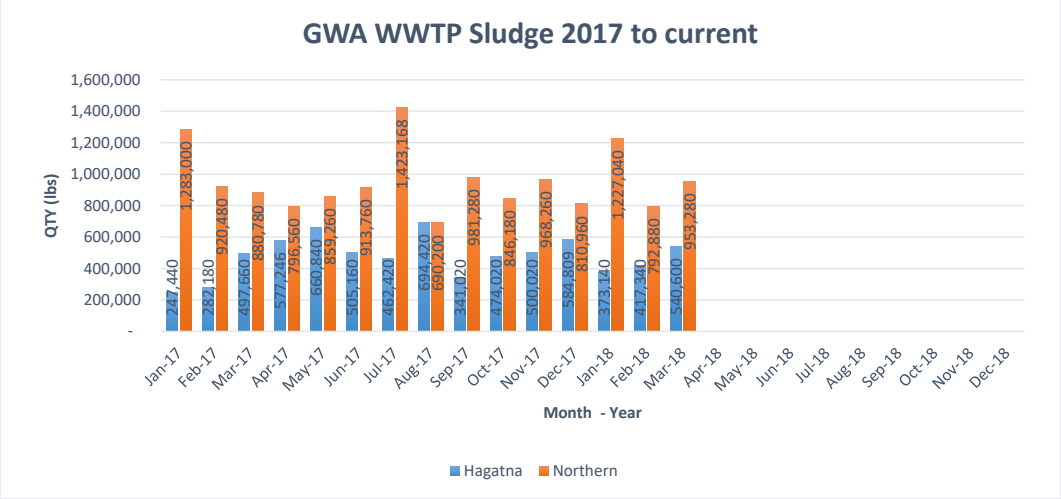
BASE PAY VS OVERTIME

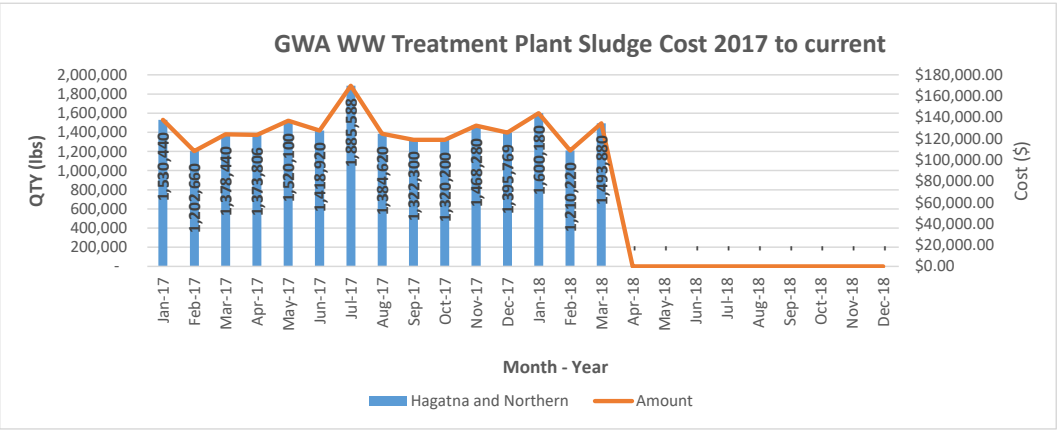
	BASE PAY	OVERTIME	OVERTIME %
PUMPING STATION	$60,425.00	$10,341.99	17%
MAINTENANCE	$31,388.8	$6,100.92	19%
COURT ORDER UNIT	$25,817.60	$7,913.15	31%
TOTALS	$117,631.4	$24,356.06	20%



	Hagatna		Northern		Hagatna and Northern	
2017	Qty	Amount	Qty	Amount	Qty	Amount
Month- Yr	lbs	$	lbs	$	lbs	$
Jan-17	247,440	$22,269.60	1,283,000	$115,470.00	1,530,440	$137,739.60
Feb-17	282,180	$25,396.20	920,480	$82,843.20	1,202,660	$108,239.40
Mar-17	497,660	$44,789.40	880,780	$79,270.20	1,378,440	$124,059.60
Apr-17	577,246	$51,952.14	796,560	$71,690.40	1,373,806	$123,642.54
May-17	660,840	$59,475.60	859,260	$77,333.40	1,520,100	$136,809.00
Jun-17	505,160	$45,464.40	913,760	$82,238.40	1,418,920	$127,702.80
Jul-17	462,420	$41,617.80	1,423,168	$128,085.12	1,885,588	$169,702.92
Aug-17	694,420	$62,497.80	690,200	$62,118.00	1,384,620	$124,615.80
Sep-17	341,020	$30,691.80	981,280	$88,315.20	1,322,300	$119,007.00
Oct-17	474,020	$42,661.80	846,180	$76,156.20	1,320,200	$118,818.00
Nov-17	500,020	$45,001.80	968,260	$87,143.40	1,468,280	$132,145.20
Dec-17	584,809	$52,632.81	810,960	$72,986.40	1,395,769	$125,619.21
Grand Total	5827235	$524,451.15	11373888	$1,023,649.92	17201123	$1,548,101.07

	Hagatna		Northern		Hagatna and Northern	
2018	Qty	Amount	Qty	Amount	Qty	Amount
Month- Yr	lbs	$	lbs	$	lbs	$
Jan-18	373,140	$33,582.60	1,227,040	$110,433.60	1,600,180	$144,016.20
Feb-18	417,340	$37,560.60	792,880	$71,359.20	1,210,220	$108,919.80
Mar-18	540,600	$48,654.00	953,280	$85,795.20	1,493,880	$134,449.20
Apr-18		$0.00		$0.00	-	$0.00
May-18		$0.00		$0.00	-	$0.00
Jun-18		$0.00		$0.00	-	$0.00
Jul-18		$0.00		$0.00	-	$0.00
Aug-18		$0.00		$0.00	-	$0.00
Sep-18		$0.00		$0.00	-	$0.00
Oct-18		$0.00		$0.00	-	$0.00
Nov-18		$0.00		$0.00	-	$0.00
Dec-18		$0.00		$0.00	-	$0.00
Grand Total	1331080	$119,797.20	2973200	$267,588.00	4304280	$387,385.20





Hagatna and Northern WWTP Sludge Report 2016, GWA Operations kcog / df, 4/15/2018

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671) 648-3002 | guamccu.org

GUAM WATERWORKS AUTHORITY WORK SESSION

CCU Conference Room
4:30 p.m., May 15, 2018

AGENDA

1. **ISSUES FOR DECISION**
   - 1.1 **Relative to Approval of the Construction Contract for the SCADA System for Water and Wastewater Facilities Phase A-1 / Resolution No. 28-FY2018**
   - 1.2 **Relative to Approval of Change Order to the Yigo and Astumbo Reservoir Construction Management Contract / Resolution No. 29-FY2018**
   - 1.3 **Relative to Approval of the Construction Management Contract for the Route 1 Asan-Adelup-Hagatna Sewer Line Rehabilitation Project / Resolution No. 30-FY2018**
   - 1.4 **Relative to Approval of the 2013 and 2016 Bond Reallocation / Resolution No. 31-FY2018**
   - 1.5 **Relative to Approval of Contract for Design and Construction of the GWA Interceptor Sewer Refurbishment Project for Northern District / Resolution No. 32-FY2018**
   - 1.6 **Relative to Approval of Funding Match Commitment for Bureau of Reclamation Grant as it Relates to GWA District Metering Project Grant Application / Resolution No. 33-FY2018**

2. **GM REPORT**
   - 2.1 **Updates**

3. **ISSUES FOR DISCUSSION**

4. **DIVISION REPORTS**
   - 4.1 **Communications**
   - 4.2 **Compliance & Safety**
   - 4.3 **Customer Service**
   - 4.4 **Engineering**
   - 4.5 **Finance**
   - 4.6 **Operations**

5. **ANNOUNCEMENTS**
   - 5.1 **Next CCU Meetings: GPA Work Session: 5/17/18; CCU Meeting: 5/22/18**

6. **ADJOURNMENT**

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 28-FY2018
Relative to Approval of the Construction Contract for the SCADA System for Water and Wastewater Facilities Phase A-1

What is the project's objective and is it necessary and urgent?
GWA is developing and installing a SCADA System to monitor the operations of its water and wastewater systems, and to promptly alert operators when a fault or alarm condition occurs. This project primarily focuses on installing industrial controls, field instrumentation, and communications equipment to enable connectivity between 19 GWA assets with the Central SCADA Server located in Fadian through the use of GPA's TropOS wireless mesh network to enable continuous monitoring of these assets.

An important objective of the project is to implement SCADA for several of the GWA facilities that are part of Phase A-1 project so as to enhance GWA's ability to "monitor flow, pressure, tank levels and chlorine throughout the services area…" as required in Court Order Paragraph 28.

Where is the location?
Well A-01, Well A-03, Well A-05, Well A-06, Well A-12, Well A-23, Well A-25, Well A-29, Well A-30, Well A-31, Well A-32, Well M-17B, Well M-20A, Chaot Reservoir, Agana Heights Reservoir, Agana Heights Booster Pump Station, Hagatna Wastewater Treatment Plant, Fujita Sewer Pump Station, and Route 16 Sewer Pump Station.

How much will it cost?
GWA Management seeks CCU approval to enter into contract with G4S in the amount of Two Million Six Hundred Twenty-One Thousand Sixteen Dollars and Eighty-Five Cents ($2,621,016.85). GWA Management also seeks approval of a 10% contingency in the amount of Two Hundred Sixty-Two Thousand One Hundred One Dollars ($262,101.00) which will bring the total authorized funding amount to a maximum of Two Million Eight Hundred Eighty-Three Thousand One Hundred Seventeen Dollars and Eighty-Five Cents ($2,883,117.85).

When will it be completed?
The contract time is 365 calendar days.

What is the funding source?
The funding source will be from CIP EE 09-09, SCADA Improvement – Phase 4.

The RFP/BID responses (if applicable):
Three (3) out of twelve (12) interested parties submitted bids. Please refer to EXHIBIT A - Bid Abstract and EXHIBIT B - Recommendation Memo for details.

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

RESOLUTION NO. 28-FY2018

RELATIVE TO APPROVAL OF THE CONSTRUCTION CONTRACT FOR THE SCADA SYSTEM FOR WATER AND WASTEWATER FACILITIES PHASE A-1

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA was successful in completing the SCADA Master Plan with the intent to lay out a coordinated, prioritized sequence of SCADA Improvements to enhance operations, provide reliable and efficient systems, maintain desired service levels, contribute to protection of health and safety, and achieve regulatory compliance; and

WHEREAS, the GWA SCADA Master Plan proposed to accomplish the SCADA implementation in 3 main phases; and

WHEREAS, SCADA Phase A will consist of the central SCADA infrastructure and high priority facilities as identified by GWA Operations and Management at the time of the SCADA Master Plan development, which includes 210 GWA sites; and

WHEREAS, SCADA Phase B will consist of adding second tier high priority facilities as identified by GWA Operations and Management at the time of the SCADA Master Plan development, and integrate these locations into the SCADA system; and

WHEREAS, SCADA Phase C will consist of adding additional instruments and equipment to the facilities already implemented with SCADA under phase A and B; and

WHEREAS, due to funding limitations GWA is further separating Phase A into multiple implementations, with Phase A-1 consisting of 19 GWA facilities; and

WHEREAS, the implementation of SCADA for several of the GWA facilities that are part of Phase A-1 project are directly linked to the Court Order Paragraph 28 wherein the completion of the SCADA project will enhance GWA's ability to "monitor flow, pressure, tank levels and chlorine throughout the services area…"; and

WHEREAS, GWA has advertised the Invitation for Bid (IFB-02-ENG-2018) soliciting bid proposals from experienced, responsible, and responsive bidders to the SCADA System for Water and Wastewater Facilities Phase A-1 Project; and

WHEREAS, IFB packages were picked up by 12 interested parties, from which GWA received bid proposals from 3 of the 12 parties before the bid proposal deadline (see EXHIBIT A – Abstract of Bids); and

WHEREAS, GWA engineering analyzed all bid proposals received on March 28th, 2018 and determined that G4S Security Systems (Guam), Inc. ("G4S"), who submitted the lowest bid, as being the responsive and responsible bidder and met all the bid requirements set forth by GWA (see EXHIBIT B – Recommendation Memorandum); and

WHEREAS, GWA Management finds G4S's bid proposal of Two Million Six Hundred Twenty-One Thousand Sixteen Dollars and Eighty-Five Cents ($2,621,016.85) to be acceptable (See EXHIBIT C – Bid Proposal); and

WHEREAS, GWA Management seeks CCU approval to enter into contract with G4S for IFB-02-ENG-2018 in the amount of Two Million Six Hundred Twenty-One Thousand Sixteen Dollars and Eighty-Five Cents ($2,621,016.85) along with 10% contingency in the amount of Two Hundred Sixty-Two Thousand One Hundred One Dollars ($262,101.00) to bring

the total requested authorized funding amount to a maximum of Two Million Eight Hundred Eighty-Three Thousand One Hundred Seventeen Dollars and Eighty-Five Cents ($2,883,117.85); and

WHEREAS, GWA Management further seeks CCU approval to inform the PUC of the project intent given its relation to the Court Order Paragraph 28, and the contract amount of Two Million Eight Hundred Eighty-Three Thousand One Hundred Seventeen Dollars and Eighty-Five Cents ($2,883,117.85); and

WHEREAS, GWA Management further seeks CCU approval to petition the PUC to approve the total authorized funding amount of Two Million Eight Hundred Eighty-Three Thousand One Hundred Seventeen Dollars and Eighty-Five Cents ($2,883,117.85) and for GWA to enter into a contract with G4S; and

WHEREAS, the funding source for the construction project will be from CIP EE 09-09, SCADA Improvement – Phase 4; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve and authorize the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms of the bid proposal submitted by G4S are fair and reasonable.
3. The CCU hereby authorizes the management of GWA to accept the bid proposal from G4S attached hereto as EXHIBIT C, and which is also incorporated into this Resolution in its entirety.
4. The CCU hereby further authorizes the management of GWA to enter into a contract with G4S in the amount of Two Million Six Hundred Twenty-One Thousand Sixteen Dollars and Eighty-Five Cents ($2,621,016.85).
5. The CCU hereby further approves the requested total maximum authorized funding amount of Two Million Eight Hundred Eighty-Three Thousand One Hundred Seventeen Dollars and Eighty-Five Cents ($2,883,117.85), funded by CIP EE 09-09, SCADA Improvement – Phase 4.

3

DRAFT

6. The CCU hereby further authorizes the management of GWA to inform the PUC of the project intent given its relation to the Court Order Paragraph 28, and the contract amount of Two Million Eight Hundred Eighty-Three Thousand One Hundred Seventeen Dollars and Eighty-Five Cents ($2,883,117.85)

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 22nd day of May 2018.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS **J. GEORGE BAMBA**
Chairperson Secretary

SECRETARY'S CERTIFICATE

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

//

EXHIBIT A ORIGINAL

GUAM WATERWORKS AUTHORITY
ABSTRACT OF BIDS

Project Name: **SCADA SYSTEM FOR GWA'S WATER AND WASTEWATER FACILITIES, PHASE A-1**

Bid Opening Date: March 28, 2018
Time: 3:00 p.m.

Project Number: E14-002-BND IFB NO.: IFB-02-ENG-2018

	Bidders Name	Section A-5 Bid Bond	CERTIFICATIONS								Addendum			Lump Sum Bid Price
			Qualifications Statement	Non-Collusion Affidavit	EEO Certification	Non-Segregated Facilities	Sex Offender Certification	Wage & Benefit Determination	Major Shareholders Affidavit	Special Instructions to Bidders	1	2	3	
1.	CHI CONSTRUCTION INC.	Dongbu Insurance Company Ltd. 15% of total bid amount	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	$3,300,000.00
2.	GREG PEREZ	no bid submitted												
3.	USSI	no bid submitted												
4.	G4S	Safeco Insurance Company of America 15% of amount bid	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	$2,621,016.91
5.	MOTOROLA SOLUTIONS INC.	no bid submitted												
6.	AYM INTERNATIONAL	no bid submitted												
7.	GPME	no bid submitted												
8.	PACIFIC DEVELOPMENTS	no bid submitted												
9.	HES MICRONESIA	no bid submitted												
10.	JMI EDISON	no bid submitted												
11.	EMC2/HYDROAIRE MECHANICAL SYSTEM	no bid submitted												
12.	KINDEN CORPORATION	Fidelity and Deposit Company of Maryland 15% of total bid amount	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	$3,679,000.00
	GWA Estimate													$2,977,458.00

Bids Opened and Read by:
GLORIA P. BENSAN
(Name and Signature)

Tabulated By:
Nicole Ann Villaluz
(Name and Signature)

GWA Procurement Representative:
Victoria Heacock
(Name and Signature)

Witnesses:
3/28/18
03.28.18
3-28-18
3/28/18

EXHIBIT B

GUAM WATERWORKS AUTHORITY
"Better Water. Better Lives."
Gloria B. Nelson Public Service Building | 688 Route 15, Mangilao, Guam 96913
P.O. Box 3010, Hagatna, Guam 96932
Tel. No. (671) 300-6035

IFB No.: IFB-02-ENG-2018

Project: SCADA SYSTEM FOR GWA'S WATER AND WASTEWATER FACILITIES, PHASE A-I
GWA Project No. E14-002-BND

Subject: Bid Evaluation

Gloria Bensan and Calvin Yam have reviewed the bid proposals submitted by Chi Construction Inc., G4S, and Kinden Corporation for the referenced project submitted on March 28, 2018. All requirements of the bid were all submitted by three proposers.

The apparent low bidder, G4S' bid price as indicated in the Abstract of Bids was $2,621,016.91. Upon tallying bid estimates, G4S Base Bid total for individual locations were all correct, however, minor discrepancies were found in the Summary of Bid wherein total bid amount indicated for five (5) locations were off by few cents. The correct amount would have been **$2,621,016.85.** Upon computation, G4S correct bid price was 12 percent (12%) below Engineer's opinion of probable construction cost and 21% below the next lowest bid received.

Chi Construction Inc. submitted bid price of $3,300,000 which was 10.83% higher than GWA Engineer's estimate. Kinden Corporation submitted the bid price of $3,679,000 which was 23.6% higher than GWA Estimate.

After a meeting with G4S on April 4, 2018 to confirm the bid price and detail scope of work, it is recommended to award the project with G4S to provide construction services for the aforementioned project as their bid proposal was within reason for the scope of the project. Attached bid evaluation details and summarizes the proposed bids from all interested parties.

Gloria P. Bensan

IFB-02-ENG-2018

Addendum 1 – Attachment A

BID FORM

EXHIBIT C

BID RECIPIENT

This Bid is submitted to:

Guam Waterworks Authority
Engineering Division, Room 202
Gloria B. Nelson Public Service Building
688 Route 15
Mangilao, Guam 96913

The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into a Contract with Buyer in the form included in the Bidding Documents to furnish the Goods and Special Services as specified or indicated in the Bidding Documents, for the prices and within the times indicated in this Bid, and in accordance with the other terms and conditions of the Bidding Documents.

BIDDER'S ACKNOWLEDGMENTS

Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Buyer.

BIDDER'S REPRESENTATIONS

In submitting this Bid, Bidder represents that:

Bidder has examined and carefully studied the Bidding Documents, the related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged:

Addendum No.	Addendum Date
01	February 27, 2018
02	March 8, 2018
03	March 14, 2018

Bidder has visited the Point of Destination and site where the Goods are to be installed or Special Services will be provided and become familiar with and is satisfied as to the observable local conditions that may affect cost, progress, or the furnishing of Goods and Special Services, if required to do so by the Bidding Documents, or if, in Bidder's judgment, any local condition may affect cost, progress, or the furnishing of Goods and Special Services.

Bidder is familiar with and is satisfied as to all Laws and Regulations in effect as of the date of the Bid that may affect cost, progress, and the furnishing of Goods and Special Services.

EJCDC P-400, Suggested Bid Form for Procurement Contracts.
Copyright © 2010 National Society of Professional Engineers, American Council of Engineering Companies, American Society of Civil Engineers, and Associated General Contractors of America. All rights reserved.

Bidder has carefully studied, considered, and correlated the information known to Bidder; information commonly known to sellers of similar goods doing business in the locality of the Point of Destination and the site where the Goods will be installed or where Special Services will be provided; information and observations obtained from Bidder's visits, if any, to the Point of Destination and the site where the Goods will be installed or Special Services will be provided; and any reports and drawings identified in the Bidding Documents regarding the Point of Destination and the site where the Goods will be installed or where Special Services will be provided, with respect to the effect of such information, observations, and documents on the cost, progress, and performance of Seller's obligations under the Bidding Documents.

Bidder has given Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution (if any) thereof by Engineer is acceptable to Bidder.

The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for furnishing the Goods and Special Services for which this Bid is submitted.

BIDDER'S CERTIFICATIONS

Bidder certifies that:

This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

Bidder has not solicited or induced any individual or entity to refrain from bidding; and

Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Buyer, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Buyer of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Buyer, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process.

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IFB-02-ENG-2018 Addendum 1 – Attachment A

BASIS OF BID

Bidder will furnish the Goods and Special Services in accordance with the Contract Documents for the following price(s):

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IFB-02-ENG-2018 Addendum 1 – Attachment A

Table 1: Base Bid for General Work

Base Bid Description of Work for General Work:
General Work consists of all activities necessary for successful execution of project work.

Item 1.01: Mobilization and Demobilization bid amount shall not exceed (5%) of total base bid amount.
Item 1.02: Insurance and Bonds bid amount shall not exceed (1%) of total base bid amount.
Item 1.06: bid amount shall include Asset Inventory, Operation and Maintenance Data, As-Built Plans, and As-Built Shop Drawings.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
1.00	General Work				
1.01	Mobilization and Demobilization (5%)	LS	131,050.85	1	131,050.85
1.02	Insurance and Bonds (1%)	LS	26,210.17	1	26,210.17
1.03	Permits	LS	39,315.25	1	39,315.25
1.04	Project Management	LS	183,960.47	1	183,960.47
1.05	Training	LS	44,504.04	1	44,504.04
1.06	Documentation	LS	49,441.50	1	49,441.50
1.07	Spare Parts	LS	19,992.70	1	19,992.70
			Base Bid for General Work:		494,474.98

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IFB-02-ENG-2018 Addendum 1 – Attachment A

Table 2: Base Bid for Deep Well A-1

Base Bid Description of Work for Deep Well A-1:

Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Item 2.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.

Item 2.03: bid amount shall include all work relating to the modification of existing control panel which may include control relays, terminal blocks, signal isolators, powers supplies, batteries, operator terminals, etc. per design requirements.

Items 2.04 through 2.15: bid amounts shall include all work relating to proper installation and function in accordance with the design.

Item 2.16: bid amount shall include all work relating to checking and testing per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
2.00	Deep Well A-1				
2.01	Temporary Facilities	LS	0.00	1	0.00
2.02	General Electrical Work	LS	34,048.49	1	34,048.49
2.03	RTU / Control Panel Modification	LS		0	
2.04	Surge Protection Device	LS	545.55	1	545.55
2.05	Power Monitor	LS	2,131.31	1	2,131.31
2.06	Motor Starter (Well Pump)	LS	2,350.04	1	2,350.04
2.07	Motor Starter (Booster Pump)	LS	1,803.22	1	1,803.22
2.08	Control Panel (CP-1)	LS	44,345.54	1	44,345.54
2.09	Level Sensor (Well)	LS	3,990.49	1	3,990.49
2.10	Level Sensor (Fuel)	LS	4,756.03	1	4,756.03
2.11	Temperature Sensor (Well Motor Casing)	LS		0	
2.12	Flow Indicator Transmitter	LS		0	
2.13	Pressure Indicator Transmitter	LS		0	
2.14	Intrusion Switch	LS	464.16	2	928.32
2.15	RTU Antenna	LS	3,224.95	1	3,224.95
2.16	Testing	LS	1,475.13	1	1,475.13
			Base Bid for Deep Well A-1 Subtotal:		99,599.07

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Table 3: Base Bid for Deep Well A-3

Base Bid Description of Work for Deep Well A-3:

Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Item 3.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.

Item 3.03: bid amount shall include all work relating to the modification of existing control panel which may include control relays, terminal blocks, signal isolators, powers supplies, batteries, operator terminals, etc. per design requirements.

Items 3.04 through 3.15: bid amounts shall include all work relating to proper installation and function in accordance with the design.

Item 3.16: bid amount shall include all work relating to checking and testing per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
3.00	Deep Well A-3				
3.01	Temporary Facilities	LS	0.00	1	0.00
3.02	General Electrical Work	LS	34,048.49	1	34,048.49
3.03	RTU / Control Panel Modification	LS		0	
3.04	Surge Protection Device	LS	545.55	1	545.55
3.05	Power Monitor	LS	2,131.31	1	2,131.31
3.06	Motor Starter (Well Pump)	LS	2,350.04	1	2,350.04
3.07	Motor Starter (Booster Pump)	LS	1,803.22	1	1,803.22
3.08	Control Panel (CP-1)	LS	44,345.54	1	44,345.54
3.09	Level Sensor (Well)	LS	3,990.49	1	3,990.49
3.10	Level Sensor (Fuel)	LS	4,756.03	1	4,756.03
3.11	Temperature Sensor (Well Motor Casing)	LS		0	
3.12	Flow Indicator Transmitter	LS		0	
3.13	Pressure Indicator Transmitter	LS		0	
3.14	Intrusion Switch	LS	464.16	2	928.32
3.15	RTU Antenna	LS	3,224.95	1	3,224.95
3.16	Testing	LS	1,475.13	1	1,475.13
			Base Bid for Deep Well A-3 Subtotal:		99,599.07

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Table 4: Base Bid for Deep Well A-5

Base Bid Description of Work for Deep Well A-5:

Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Item 4.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.

Item 4.03: bid amount shall include all work relating to the modification of existing control panel which may include control relays, terminal blocks, signal isolators, powers supplies, batteries, operator terminals, etc. per design requirements.

Items 4.04 through 4.15: bid amounts shall include all work relating to proper installation and function in accordance with the design.

Item 4.16: bid amount shall include all work relating to checking and testing per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
4.00	Deep Well A-5				
4.01	Temporary Facilities	LS	0.00	1	0.00
4.02	General Electrical Work	LS	39,723.09	1	39,723.09
4.03	RTU / Control Panel Modification	LS		0	
4.04	Surge Protection Device	LS	545.55	1	545.55
4.05	Power Monitor	LS	2,131.31	1	2,131.31
4.06	Motor Starter (Well Pump)	LS	2,350.04	1	2,350.04
4.07	Motor Starter (Booster Pump)	LS	1,803.22	1	1,803.22
4.08	Control Panel (CP-1)	LS	44,345.54	1	44,345.54
4.09	Level Sensor (Well)	LS	3,990.49	1	3,990.49
4.10	Level Sensor (Fuel)	LS	4,756.03	1	4,756.03
4.11	Temperature Sensor (Well Motor Casing)	LS		0	
4.12	Flow Indicator Transmitter	LS		0	
4.13	Pressure Indicator Transmitter	LS		0	
4.14	Intrusion Switch	LS	464.16	2	928.32
4.15	RTU Antenna	LS	3,224.95	1	3,224.95
4.16	Testing	LS	1,475.13	1	1,475.13
	Base Bid for Deep Well A-5 Subtotal:				105,273.67

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Table 5: Base Bid for Deep Well A-6

Base Bid Description of Work for Deep Well A-6:

Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Item 5.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.

Item 5.03: bid amount shall include all work relating to the modification of existing control panel which may include control relays, terminal blocks, signal isolators, powers supplies, batteries, operator terminals, etc. per design requirements.

Items 5.04 through 5.15: bid amounts shall include all work relating to proper installation and function in accordance with the design.

Item 5.16: bid amount shall include all work relating to checking and testing per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
5.00	Deep Well A-6				
5.01	Temporary Facilities	LS	0.00	1	0.00
5.02	General Electrical Work	LS	39,723.09	1	39,723.09
5.03	RTU / Control Panel Modification	LS		0	
5.04	Surge Protection Device	LS	545.55	1	545.55
5.05	Power Monitor	LS	2,131.31	1	2,131.31
5.06	Motor Starter (Well Pump)	LS	2,350.04	1	2,350.04
5.07	Motor Starter (Booster Pump)	LS	1,803.22	1	1,803.22
5.08	Control Panel (CP-1)	LS	44,345.54	1	44,345.54
5.09	Level Sensor (Well)	LS	3,990.49	1	3,990.49
5.10	Level Sensor (Fuel)	LS	4,756.03	1	4,756.03
5.11	Temperature Sensor (Well Motor Casing)	LS		0	
5.12	Flow Indicator Transmitter	LS		0	
5.13	Pressure Indicator Transmitter	LS		0	
5.14	Intrusion Switch	LS	464.16	2	928.32
5.15	RTU Antenna	LS	3,224.95	1	3,224.95
5.16	Testing	LS	1,475.13	1	1,475.13
			Base Bid for Deep Well A-6 Subtotal:		105,273.67

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Table 6: Base Bid for Deep Well A-12

Base Bid Description of Work for Deep Well A-12:

Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Item 6.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.

Item 6.03: bid amount shall include all work relating to the modification of existing control panel which may include control relays, terminal blocks, signal isolators, powers supplies, batteries, operator terminals, etc. per design requirements.

Items 6.04 through 6.15: bid amounts shall include all work relating to proper installation and function in accordance with the design.

Item 6.16: bid amount shall include all work relating to checking and testing per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
6.00	Deep Well A-12				
6.01	Temporary Facilities	LS	0.00	1	0.00
6.02	General Electrical Work	LS	39,723.09	1	39,723.09
6.03	RTU / Control Panel Modification	LS		0	
6.04	Surge Protection Device	LS	545.55	1	545.55
6.05	Power Monitor	LS	2,131.31	1	2,131.31
6.06	Motor Starter (Well Pump)	LS	2,350.04	1	2,350.04
6.07	Motor Starter (Booster Pump)	LS	1,803.22	1	1,803.22
6.08	Control Panel (CP-1)	LS	44,345.54	1	44,345.54
6.09	Level Sensor (Well)	LS	3,990.49	1	3,990.49
6.10	Level Sensor (Fuel)	LS	4,756.03	1	4,756.03
6.11	Temperature Sensor (Well Motor Casing)	LS		0	
6.12	Flow Indicator Transmitter	LS		0	
6.13	Pressure Indicator Transmitter	LS		0	
6.14	Intrusion Switch	LS	464.16	2	928.32
6.15	RTU Antenna	LS	3,224.95	1	3,224.95
6.16	Testing	LS	1,475.13	1	1,475.13
			Base Bid for Deep Well A-12 Subtotal:		105,273.67

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Table 7: Base Bid for Deep Wells A-23 and A-25

Base Bid Description of Work for Deep Wells A-23 and Deep Well A25:
Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Location of existing equipment as indicated on plans may have changed. Contractor is responsible for assessing and accounting for actual condition.

Item 7.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.
Item 7.03: bid amount shall include all work relating to the modification of existing control panel which may include control relays, terminal blocks, signal isolators, powers supplies, batteries, operator terminals, etc. per design requirements.
Items 7.04 through 7.15: bid amounts shall include all work relating to proper installation and function in accordance with the design.
Item 7.16: bid amount shall include all work relating to checking and testing per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
7.00	Deep Wells A-23 and A-25				
7.01	Temporary Facilities	LS	0.00	1	0.00
7.02	General Electrical Work	LS	79,445.66	1	79,445.66
7.03	RTU / Control Panel Modification	LS	28,343.38	2	56,686.76
7.04	Surge Protection Device	LS	510.42	2	1,020.84
7.05	Power Monitor	LS	2,096.19	2	4,192.38
7.06	Motor Starter (Well Pump)	LS		0	
7.07	Motor Starter (Booster Pump)	LS		0	
7.08	Control Panel (CP-1)	LS		0	
7.09	Level Sensor (Well)	LS	3,955.37	2	7,910.74
7.10	Level Sensor (Fuel)	LS	4,848.56	1	4,848.56
7.11	Well Motor Temperature Sensor	LS		0	
7.12	Flow Indicator Transmitter	LS		0	
7.13	Pressure Indicator Transmitter	LS		0	
7.14	Intrusion Switch	LS	467.87	3	1,403.61
7.15	RTU Antenna	LS	3,317.48	1	3,317.48
7.16	Testing	LS	2,880.03	1	2,880.03
	Base Bid for Deep Wells A-23 and A-25 Subtotal:				161,706.06

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IFB-02-ENG-2018 Addendum 1 – Attachment A

Table 8: Base Bid for Deep Well A-29

Base Bid Description of Work for Deep Well A-29:

Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Item 8.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.

Item 8.03: bid amount shall include all work relating to the modification of existing control panel which may include control relays, terminal blocks, signal isolators, powers supplies, batteries, operator terminals, etc. per design requirements.

Items 8.04 through 8.15: bid amounts shall include all work relating to proper installation and function in accordance with the design.

Item 8.16: bid amount shall include all work relating to checking and testing per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
8.00	Deep Well A-29				
8.01	Temporary Facilities	LS	0.00	1	0.00
8.02	General Electrical Work	LS	39,723.09	1	39,723.09
8.03	RTU / Control Panel Modification	LS		0	
8.04	Surge Protection Device	LS	545.55	1	545.55
8.05	Power Monitor	LS	2,131.31	1	2,131.31
8.06	Motor Starter (Well Pump)	LS	2,350.04	1	2,350.04
8.07	Motor Starter (Booster Pump)	LS	1,803.22	1	1,803.22
8.08	Control Panel (CP-1)	LS	44,345.54	1	44,345.54
8.09	Level Sensor (Well)	LS	3,990.49	1	3,990.49
8.10	Level Sensor (Fuel)	LS	4,756.03	1	4,756.03
8.11	Temperature Sensor (Well Motor Casing)	LS		0	
8.12	Flow Indicator Transmitter	LS		0	
8.13	Pressure Indicator Transmitter	LS		0	
8.14	Intrusion Switch	LS	464.16	2	928.32
8.15	RTU Antenna	LS	3,224.95	1	3,224.95
8.16	Testing	LS	1,475.13	1	1,475.13
			Base Bid for Deep Well A-29 Subtotal:		105,273.67

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IFB-02-ENG-2018 Addendum 1 – Attachment A

Table 9: Base Bid for Deep Well A-30

Base Bid Description of Work for Deep Well A-30:

Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Item 9.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.

Item 9.03: bid amount shall include all work relating to the modification of existing control panel which may include control relays, terminal blocks, signal isolators, powers supplies, batteries, operator terminals, etc. per design requirements.

Items 9.04 through 9.15: bid amounts shall include all work relating to proper installation and function in accordance with the design.

Item 9.16: bid amount shall include all work relating to checking and testing per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
9.00	Deep Well A-30				
9.01	Temporary Facilities	LS	0.00	1	0.00
9.02	General Electrical Work	LS	39,723.09	1	39,723.09
9.03	RTU / Control Panel Modification	LS		0	
9.04	Surge Protection Device	LS	560.69	1	560.69
9.05	Power Monitor	LS	2,146.46	1	2,146.46
9.06	Motor Starter (Well Pump)	LS		0	
9.07	Motor Starter (Booster Pump)	LS	1,818.37	1	1,818.37
9.08	Control Panel (CP-1)	LS	44,360.69	1	44,360.69
9.09	Level Sensor (Well)	LS	4,005.64	1	4,005.64
9.10	Level Sensor (Fuel)	LS	4,771.18	1	4,771.18
9.11	Temperature Sensor (Well Motor Casing)	LS		0	
9.12	Flow Indicator Transmitter	LS		0	
9.13	Pressure Indicator Transmitter	LS		0	
9.14	Intrusion Switch	LS	418.36	5	2,091.80
9.15	RTU Antenna	LS	3,240.09	1	3,240.09
9.16	Testing	LS	1,490.28	1	1,490.28
			Base Bid for Deep Well A-30 Subtotal:		104,208.29

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IFB-02-ENG-2018 Addendum 1 – Attachment A

Table 10: Base Bid for Deep Well A-31

Base Bid Description of Work for Deep Well A-31:
Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Item 10.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.
Item 10.03: bid amount shall include all work relating to the modification of existing control panel which may include control relays, terminal blocks, signal isolators, powers supplies, batteries, operator terminals, etc. per design requirements.
Items 10.04 through 10.15: bid amounts shall include all work relating to proper installation and function in accordance with the design.
Item 10.16: bid amount shall include all work relating to checking and testing per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
10.00	Deep Well A-31				
10.01	Temporary Facilities	LS	0.00	1	0.00
10.02	General Electrical Work	LS	39,723.09	1	39,723.09
10.03	RTU / Control Panel Modification	LS		0	
10.04	Surge Protection Device	LS	557.45	1	557.45
10.05	Power Monitor	LS	2,143.22	1	2,143.22
10.06	Motor Starter (Well Pump)	LS		0	
10.07	Motor Starter (Booster Pump)	LS	1,815.13	1	1,815.13
10.08	Control Panel (CP-1)	LS	44,357.45	1	44,357.45
10.09	Level Sensor (Well)	LS	4,002.39	1	4,002.39
10.10	Level Sensor (Fuel)	LS	4,767.93	1	4,767.93
10.11	Temperature Sensor (Well Motor Casing)	LS		0	
10.12	Flow Indicator Transmitter	LS		0	
10.13	Pressure Indicator Transmitter	LS		0	
10.14	Intrusion Switch	LS	470.11	2	940.22
10.15	RTU Antenna	LS	3,236.85	1	3,236.85
10.16	Testing	LS	1,487.04	1	1,487.04
			Base Bid for Deep Well A-31 Subtotal:		103,030.77

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Table 11: Base Bid for Deep Well A-32

Base Bid Description of Work for Deep Well A-32:

Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Item 11.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.

Item 11.03: bid amount shall include all work relating to the modification of existing control panel which may include control relays, terminal blocks, signal isolators, powers supplies, batteries, operator terminals, etc. per design requirements.

Items 11.04 through 11.15: bid amounts shall include all work relating to proper installation and function in accordance with the design.

Item 11.16: bid amount shall include all work relating to checking and testing per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
11.00	Deep Well A-31				
11.01	Temporary Facilities	LS	0.00	1	0.00
11.02	General Electrical Work	LS	39,723.09	1	39,723.09
11.03	RTU / Control Panel Modification	LS		0	
11.04	Surge Protection Device	LS	545.55	1	545.55
11.05	Power Monitor	LS	2,131.31	1	2,131.31
11.06	Motor Starter (Well Pump)	LS	2,350.04	1	2,350.04
11.07	Motor Starter (Booster Pump)	LS	1,803.22	1	1,803.22
11.08	Control Panel (CP-1)	LS	44,345.54	1	44,345.54
11.09	Level Sensor (Well)	LS	3,990.49	1	3,990.49
11.10	Level Sensor (Fuel)	LS	4,756.03	1	4,756.03
11.11	Temperature Sensor (Well Motor Casing)	LS		0	
11.12	Flow Indicator Transmitter	LS		0	
11.13	Pressure Indicator Transmitter	LS		0	
11.14	Intrusion Switch	LS	464.16	2	928.32
11.15	RTU Antenna	LS	3,224.95	1	3,224.95
11.16	Testing	LS	1,475.13	1	1,475.13
			Base Bid for Deep Well A-32 Subtotal:		105,273.67

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IFB-02-ENG-2018 Addendum 1 – Attachment A

Table 12: Base Bid for Deep Well M-17B

Base Bid Description of Work for Deep Well M-17B:
Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Item 12.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.
Item 12.03: bid amount shall include all work relating to the modification of existing control panel which may include control relays, terminal blocks, signal isolators, powers supplies, batteries, operator terminals, etc. per design requirements.
Items 12.04 through 12.15: bid amounts shall include all work relating to proper installation and function in accordance with the design.
Item 12.16: bid amount shall include all work relating to checking and testing per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
12.00	Deep Well M-17B				
12.01	Temporary Facilities	LS	0.00	1	0.00
12.02	General Electrical Work	LS	39,723.09	1	39,723.09
12.03	RTU / Control Panel Modification	LS	28,363.47	1	28,363.47
12.04	Surge Protection Device	LS	530.51	1	530.51
12.05	Power Monitor	LS	2,116.28	1	2,116.28
12.06	Motor Starter (Well Pump)	LS		0	
12.07	Motor Starter (Booster Pump)	LS	1,788.19	1	1,788.19
12.08	Control Panel (CP-1)	LS		0	
12.09	Level Sensor (Well)	LS	6,053.36	1	6,053.36
12.10	Level Sensor (Fuel)	LS	4,741.00	1	4,741.00
12.11	Temperature Sensor (Well Motor Casing)	LS		0	
12.12	Flow Indicator Transmitter	LS	13,982.20	1	13,982.20
12.13	Pressure Indicator Transmitter	LS	1,145.63	2	2,291.26
12.14	Intrusion Switch	LS	456.64	2	913.28
12.15	RTU Antenna	LS	3,209.91	1	3,209.91
12.16	Testing	LS	1,460.10	1	1,460.10
	Base Bid for Deep Well M-17B Subtotal:				105,172.65

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IFB-02-ENG-2018 Addendum 1 – Attachment A

Table 13: Base Bid for Deep Well M-20A

Base Bid Description of Work for Deep Well M-20A:
Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Item 13.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.
Item 13.03: bid amount shall include all work relating to the modification of existing control panel which may include control relays, terminal blocks, signal isolators, powers supplies, batteries, operator terminals, etc. per design requirements.
Items 13.04 through 13.15: bid amounts shall include all work relating to proper installation and function in accordance with the design.
Item 13.16: bid amount shall include all work relating to checking and testing per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
13.00	Deep Well M-20A				
13.01	Temporary Facilities	LS	0.00	1	0.00
13.02	General Electrical Work	LS	39,723.09	1	39,723.09
13.03	RTU / Control Panel Modification	LS	28,376.99	1	28,376.99
13.04	Surge Protection Device	LS	544.04	1	544.04
13.05	Power Monitor	LS	2,129.80	1	2,129.80
13.06	Motor Starter (Well Pump)	LS		0	
13.07	Motor Starter (Booster Pump)	LS		0	
13.08	Control Panel (CP-1)	LS		0	
13.09	Level Sensor (Well)	LS	6,066.88	1	6,066.88
13.10	Level Sensor (Fuel)	LS	4,754.52	1	4,754.52
13.11	Temperature Sensor (Well Motor Casing)	LS		0	
13.12	Flow Indicator Transmitter	LS	13,995.72	1	13,995.72
13.13	Pressure Indicator Transmitter	LS	1,152.39	2	2,304.78
13.14	Intrusion Switch	LS	415.02	5	2,075.10
13.15	RTU Antenna	LS	3,223.44	1	3,223.44
13.16	Testing	LS	1,473.62	1	1,473.62
	Base Bid for Deep Well M-20A Subtotal:				104,667.98

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Table 14: Base Bid for Agana Heights Reservoir and Booster Pump Station

Base Bid Description of Work for Agana Heights Reservoir and Booster Pump Station:
Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Item 14.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.
Item 14.03: bid amount shall include all work relating to the modification of existing RTU panel which may include control relays, terminal blocks, signal isolators, powers supplies, batteries, operator terminals, etc. per design requirements.
Items 14.04 through 14.05: bid amounts shall include labor, material and related appurtenances needed for proper installation and function in accordance with the design.
Item 14.06: bid amount shall include all checking and testing work per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
14.00	Agana Heights Booster Pump Station				
14.01	Temporary Facilities	LS	0.00	1	0.00
14.02	General Electrical Work	LS	34,048.49	1	34,048.49
14.03	RTU / Control Panel Modification	LS	28,426.05	1	28,426.05
14.04	Power Monitor	LS	2,178.86	1	2,178.86
14.05	Intrusion Switch	LS	435.35	4	1,741.40
14.06	Testing	LS	1,522.68	1	1,522.68
	Base Bid for Agana Heights Reservoir and Booster Pump Station Subtotal:				67,917.48

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IFB-02-ENG-2018 Addendum 1 – Attachment A

Table 15: Base Bid for Chaot Reservoir

Base Bid Description of Work for Chaot Reservoir:

Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Item 15.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.

Item 15.03: bid amount shall include all work relating to the modification of existing RTU panel which may include control relays, terminal blocks, signal isolators, powers supplies, batteries, operator terminals, etc. per design requirements.

Items 15.04 through 15.06: bid amounts shall include labor, material and related appurtenances needed for proper installation and function in accordance with the design.

Item 15.07: bid amount shall include all checking and testing work per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
15.00	Chaot Reservoir Station				
15.01	Temporary Facilities	LS	0.00	1	0.00
15.02	General Electrical Work	LS	34,048.49	1	34,048.49
15.03	RTU / Control Panel Modification	LS	28,416.82	1	28,416.82
15.04	Level Sensor (Fuel)	LS	4,794.35	1	4,794.35
15.05	Intrusion Switch	LS	416.29	6	2,497.74
15.06	RTU Antenna	LS	3,263.27	1	3,263.27
15.07	Testing	LS	1,513.46	1	1,513.46
			Base Bid for Chaot Reservoir Subtotal:		74,534.13

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IFB-02-ENG-2018 Addendum 1 – Attachment A

Table 16: Base Bid for Hagatna STP

Base Bid Description of Work for Hagatna STP:
Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Item 16.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.
Items 16.03 through 16.06: bid amounts shall include labor, material and related appurtenances needed for proper installation and function in accordance with the design.
Item 16.07: bid amount shall include all checking and testing work per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
16.00	Hagatna STP				
16.01	Temporary Facilities	LS	0.00	1	0.00
16.02	General Electrical Work	LS	34,048.49	1	34,048.49
16.03	Power Monitor	LS	2,120.72	2	4,241.44
16.04	RTU Panel	LS	44,487.13	1	44,487.13
16.05	Level Sensor (Fuel)	LS	6,209.98	1	6,209.98
16.06	RTU Antenna	LS	3,366.54	1	3,366.54
16.07	Testing	LS	2,983.77	1	2,983.77
			Base Bid for Hagatna STP Subtotal:		95,337.35

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Table 17: Base Bid for Route 16 SPS

Base Bid Description of Work for Route 16 SPS:
Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Item 17.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.
Items 17.03 through 17.08: bid amounts shall include labor, material and related appurtenances needed for proper installation and function in accordance with the design.
Item 17.09: bid amount shall include all checking and testing work per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
17.00	Route 16 SPS				
17.01	Temporary Facilities	LS	0.00	1	0.00
17.02	General Electrical Work	LS	371,910.59	1	371,910.59
17.03	MSB/MCC	LS	59,000.35	1	59,000.35
17.04	RTU / Instrument Control Panel	LS	44,480.47	1	44,480.47
17.05	45kVA Transformer	LS	11,711.66	1	11,711.66
17.06	Level Sensor (Fuel)	LS	6,203.32	1	6,203.32
17.07	Intrusion Switch	LS	425.30	7	2,977.10
17.08	RTU Antenna	LS	3,359.88	1	3,359.88
17.09	Testing	LS	2,922.42	1	2,922.42
			Base Bid for Route 16 SPS Subtotal:		502,565.79

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IFB-02-ENG-2018 Addendum 1 – Attachment A

Table 18: Base Bid for Fujita SPS

Base Bid Description of Work for Fujita SPS:

Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Item 18.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.

Item 18.03: bid amount shall include all labor, material and related appurtenances need for the modification of RTU / Control Panel on site.

Items 18.04 through 18.08: bid amounts shall include labor, material and related appurtenances needed for proper installation and function in accordance with the design.

Item 18.09: bid amount shall include all checking and testing work per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
18.00	Fujita SPS				
18.01	Temporary Facilities	LS	0.00	1	0.00
18.02	General Electrical Work	LS	39,723.09	1	39,723.09
18.03	RTU / Control Panel Modification	LS	28,365.14	1	28,365.14
18.04	Power Monitor	LS	2,117.95	1	2,117.95
18.05	Surge Protection Device	LS	532.19	1	532.19
18.06	Level Sensor (Fuel)	LS	3,977.13	1	3,977.13
18.07	Intrusion Switch	LS	407.67	6	2,446.02
18.08	RTU Antenna	LS	3,211.59	1	3,211.59
18.09	Testing	LS	1,461.77	1	1,461.77
			Base Bid for Fujita SPS Subtotal:		81,834.88

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Table 19: Base Bid Total

Item No.	Description	Unit	Bid Amount [USD]
1.00	General Work		494,474.98
2.00	Deep Well A-1	LS	99,599.07
3.00	Deep Well A-3	LS	99,599.07
4.00	Deep Well A-5	LS	105,273.67
5.00	Deep Well A-6	LS	105,273.67
6.00	Deep Well A-12	LS	105,273.67
7.00	Deep Wells A-23 and A-25	LS	161,706.06
8.00	Deep Well A-29	LS	105,273.67
9.00	Deep Well A-30	LS	104,208.29
10.00	Deep Well A-31	LS	103,030.77
11.00	Deep Well A-32	LS	105,273.67
12.00	Deep Well M-17B	LS	105,172.65
13.00	Deep Well M-20A	LS	104,667.98
14.00	Agana Heights Reservoir and Booster Pump Station	LS	67,917.48
15.00	Chaot Reservoir	LS	74,534.13
16.00	Hagatna STP	LS	95,337.35
17.00	Route 16 SPS	LS	502,565.79
18.00	Fujita SPS	LS	81,834.88
	Base Bid Total:		2,621,016.85

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Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents. Bidder also acknowledges that each unit price includes an amount considered by Bidder to be adequate to cover Bidder's overhead and profit for each separately identified item.

TIME OF COMPLETION

Bidder agrees that the furnishing of Goods and Special Services will conform to the schedule set forth in Article 5 of the Agreement.

Bidder accepts the provisions of the Agreement as to liquidated damages.

ATTACHMENTS TO THIS BID

The following documents are attached to and made a condition of this Bid:

Required Bid security in the form of 15% of the bid price.

List of Proposed Major Suppliers;

Required Bidder Qualification Statement with Supporting Data.

DEFINED TERMS

The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

BID SUBMITTAL

This Bid submitted by:

If Bidder is:

An Individual

Name (typed or printed): n/a

By: _____

(Individual's signature)

Doing business as: _____

Business address: _____

_____

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Phone: _____ Facsimile: _____

E-mail address: _____ _____

A Partnership

Partnership Name: n/a (SEAL)

By: _____

(Signature of general partner - attach evidence of authority to sign)

Name (typed or printed): _____

Business address: _____

_____

Phone: _____ Facsimile: _____

E-mail address: _____

A Corporation

Corporation Name: G4S Security Systems (Guam), Inc.

State of Incorporation: Guam

Type (General Business, Professional, Service, other): Retail and Service

By: _____

(Signature - attach evidence of authority to sign)

Name (typed or printed): Vincent J. Walker

Title: Country Managing Director

(CORPORATE SEAL)

Attest David W. Dooley

(Signature of Corporate Secretary)

Business address: 1851 Army DR

Tamuning, Guam 96913

Phone: (671) 646-2307 Facsimile: (671) 649-7245

E-mail address: guam@gu.g4s.com

A Limited Liability Company (LLC)

LLC Name: n/a

State in which organized: _____

By: _____

(Signature - attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Business address: _____

_____

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Phone: _____ Facsimile: _____

E-mail address: _____

A Joint Venture

First Joint Venturer Name: n/a (SEAL)

By: _____

(Signature - attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Business address: _____

Phone: _____ Facsimile: _____

E-mail address: _____

Second Joint Venturer Name: _____ (SEAL)

By: _____

(Signature - attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Business address: _____

Phone: _____ Facsimile: _____

E-mail address: _____

Phone and Facsimile Number, and Address for receipt of official communications to Joint Venture: _____

(Each joint venturer must sign. The manner of signing for each individual, partnership, corporation, and limited liability company that is a party to the joint venture should be in the manner indicated above.)

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GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building | 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 29-FY2018
Relative to Approval of Change Order to the Yigo and Astumbo Reservoir Construction Management Contract

What is the project's objective and is it necessary and urgent?
The objective of the change order is to continue the construction management services for the Yigo No. 1, Yigo No. 3, and Astumbo No. 2 reservoir construction project and increase funding to the contract. The continued services are required due to delay by the contractor (Pernix) in completing the project. The Contractor has agreed through a Memorandum of Understanding to pay for the additional construction management cost for the duration of the project until final completion.

The Yigo and Astumbo Tank Construction project is a Court Order project, thus the urgency is to complete the project as soon as possible but maintain adequate Construction Management oversight.

Where is the project located?
The construction management services will be at the Yigo reservoirs site along Route 1 near the entrance to Anderson Air Force Base and the Astumbo reservoir is located off Ysengsong Road on Chalan Paluan.

How much will it cost?
GWA and the construction management firm has negotiated the cost of Four Hundred Eighty-One Thousand Five Hundred Sixty-Three Dollars ($481,563.00) to extend the services from February 19, 2018 to November 21, 2018 for the Astumbo site and from July 30, 2018 to November 21, 2018 for the Yigo site.

When will it be completed?
The construction management services will continue up until November 21, 2018. Should the contractor delay the project past the projected November 21, 2018 deadline, GWA will negotiate to extend the construction management contract. Cost will be covered by the contractor.

What is the funding source?
The funding for this project will be from the bond funds under the line item - PW 09-11 "Water System Reservoirs 2005 Improvements" and PW 12-05 "Tank Major Repair Yigo #1, Mangilao #2, Astumbo #1".

The funding sources will be replenished by money received from the contractor through a deductive change order from the contractor's contract.

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

GWA RESOLUTION NO. 29-FY2018

RELATIVE TO APPROVAL OF CHANGE ORDER TO THE YIGO AND ASTUMBO RESERVOIR CONSTRUCTION MANAGEMENT CONTRACT

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA is currently working on critical reservoir projects under the 2011 Court Order ("CO") Paragraph 29 – Storage Tank/Reservoir Repair, Replacement, and Relocation Program; and

WHEREAS, Resolution No. 02–FY2015 and Resolution No. 43-FY2017 authorized the total funding of One Million Eight Hundred Forty-Nine Thousand Eight Hundred Forty Dollars and Thirty Cents ($1,849,840.30) for the construction management services of the Yigo No.1 reservoir, Yigo No. 3 reservoir, Yigo Elevated booster pump station, and Astumbo No. 1 reservoir construction; and

WHEREAS, the original completion date for the Yigo and Astumbo sites are as follows:

- Yigo No. 1 and pump station – October 31, 2017
- Yigo No. 3 – July 31, 2018
- Astumbo No. 1 – October 31, 2017; and

WHEREAS, GWA issued Change Order No. 1 to Change Order No. 3 for construction management services for the Yigo No. 3 reservoir and extension of construction management services to July 29, 2018 for the Yigo site and February 18, 2018 for the Astumbo site due to the Contractor's delay in completing the project; and

WHEREAS, due to continued delay by the Contractor, the revised final completion date is projected to be November 21, 2018; and

WHEREAS, the Contractor has agreed through a Memorandum of Understanding (EXHIBIT A) to pay for the additional construction management cost for the period of February 19, 2018 to November 21, 2018 for the Astumbo No. 1 Reservoir site and from July 30, 2018 to November 21, 2018 for the Yigo No. 1 and No. 3 Reservoir site; and

WHEREAS, GWA and GHD has negotiated a price of Four Hundred Eighty-One Thousand Five Hundred Sixty-Three Dollars ($481,563.00) for the construction management services described above (EXHIBIT B); and

WHEREAS, if the project is delayed further than the revised completion date of November 21, 2018 by the Contractor, the Contractor shall cover any additional construction management services and all other associated cost until final completion; and

WHEREAS, GWA management is requesting authorization to increase the funding amount by Four Hundred Eighty-One Thousand Five Hundred Sixty-Three Dollars ($481,563.00) to bring the total authorized funding to Two Million Three Hundred Thirty-One Thousand Four Hundred Three Dollars and Thirty Cents ($2,331,403.30); and

WHEREAS, the funding source to address paying the CM services due to the extended completion date will be from Internal Funded CIP, PW 09-11 "Water System Reservoirs 2005 Improvements", and PW 12-05 "Tank Major Repair Yigo No. 1, Mangilao No. 2, and Astumbo No. 1"; and

DRAFT

WHEREAS, money received from the Contractor through a deductive change order from Contractor's contract will be applied to replenish the funding sources used for the additional construction management work; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms of the fee proposal submitted by GHD are fair and reasonable.
3. The CCU hereby authorizes GWA management to accept the fee proposal of Four Hundred Eighty-One Thousand Five Hundred Sixty-Three Dollars ($481,563.00) from GHD (EXHIBIT B) and execute a Change Order.
4. The CCU hereby approves the total funding amount to Two Million Three Hundred Thirty-One Thousand Four Hundred Three Dollars and Thirty Cents ($2,331,403.30.)
5. The CCU approves the funding sources from Internal Funded CIP; PW 09-11: Water System Reservoirs 2005 Improvements; and PW 12-05: Tank Major Repair Yigo No. 1, Mangilao No. 2, and Astumbo No. 1
6. The CCU approves that money received from the Contractor through a deductive change order from the Contractor's contract will be applied to replenish funding sources for the additional construction management work.

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

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DULY AND REGULARLY ADOPTED, this 22nd day of May 2018.

Certified by:

Attested by:

_____
JOSEPH T. DUENAS
Chairperson

_____
J. GEORGE BAMBA
Secretary

SECRETARY'S CERTIFICATE

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

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EXHIBIT A

Memorandum

16 March 2018

To:	Abhyash Chand, Pernix Guam, LLC Steve Greco, Pernix Guam, LLC Tom Cruz, GWA Brett Railey, GWA Garrett Yeoh, GWA Bryan Ryley, GHD Inc.		
From:	Aaron Sutton, GHD Inc.	**Tel:**	(671) 472-6792
Subject:	Contract Extension Memorandum of Understanding	**Job No:**	W13-001-BND
Project:	PW 12-05 GWA Construction of Yigo and Astumbo Reservoir		

This Memorandum of Understanding ("MOU) supplements the Contract between the Guam Waterworks Authority ("GWA) and Pernix Guam LLC ("Contractor) and will be attached to a Modification to that Contract. This MOU results from the meeting held at the Gloria B. Nelson Public Services Building, 688 Route 15, Mangilao, Guam, Multi-Purpose Room, 3rd Floor, on February 2, 2018 and a subsequent discussion on March 6, 2018 concerning the delays of construction of the Yigo Reservoir No. 1 and Astumbo Reservoir. This MOU details the time extensions and responsibilities for costs as agreed by the GWA and Contractor.

1. **Time Extension** GWA shall extend the Substantial Completion dates for the Astumbo Reservoir, Yigo No. 1 Reservoir and Yigo No. 2 Reservoir to October 15, 2018. The Final Completion of Yigo No. 1 & 2 Reservoirs and Astumbo Reservoir shall be achieved no later than November 21, 2018. With respect to the Astumbo Reservoir, Contractor may use the existing waterline to achieve Substantial Completion but the new waterline must be operational to achieve Final Completion.

   The time extensions above will cover any and all delays in connection with;

   - Change Orders No. 1, 2 and 3,
   - the asbestos abatement (Contract Change Request (CCR) No. 12),
   - the sub-contractor changes from RPG Construction to HSG Co. Ltd.,
   - the construction permit,
   - check valve vaults at both sites (CO No. 2),
   - flexible pipe fittings (CO No. 2 and CCR No. 14),

GHD I c. 865 S Marine Corps Drive Suite 202 Tamuning Guam 96913
T 1 671 472 6792 **F** 1 671 477 6229 **E** guam@ghd.com **W** www.ghd.com

- vault size increases (CCR No. 6, 10 and 23),
- Victaulic fittings (CCR No. 13),
- washdown pipe change (CCR No. 16),
- louver and door hardware change (CCR No. 19),
- conduits to the existing tank (CCR No. 20),
- stainless steel pump controller enclosure (CCR No. 22),
- changes resulting from Requests For Information up to and including RFI No. 73 for Yigo and RFI No. 22 for Astumbo.

Contract change requests after the date of the Contract Modification including this MOU may be considered to the extent allowed by the Contract Documents provided they are considered reasonable and justified in the opinion of GWA.

2. **Costs** GWA will carry the costs for extended Construction Management services through February 17, 2018 at the Astumbo Reservoir site. From February 18, 2018 to the date of Final Completion, costs for Construction Management services at the Astumbo site shall be borne by the Contractor.

   GWA will carry the costs for extended Construction Management services through July 31, 2018 at the Yigo No. 1 and 2 Reservoir sites. From July 31, 2018 to the date of Final Completion, costs for Construction Management services at the Yigo sites shall be borne by the Contractor.

   The additional Construction Management services shall be invoiced to GWA by GHD directly, on a time and material basis, and are estimated to be in the total amount of $8,000 to $9,500 per week per site for the Astumbo and Yigo sites. GWA and Contractor agree that the total Construction Management costs shall not exceed $9,500 per week per site, or $19,000 per week for both sites. On a monthly basis, GWA shall provide a copy of the GHD invoice to Contractor and GWA may deduct the applicable portion of the CM's invoice amount as a deductive change order under the Contract with Pernix.

   GWA's agreement to cover the additional costs for Construction Management services through February 17, 2018 (Astumbo) and July 31, 2018 (Yigo) in lieu of assessing liquidated damages is contingent upon Final Completion of all work no later than November 21, 2018. Any delay in the Final Completion dates beyond November 21, 2018 will be considered eligible for liquidated damages at $4,500 per day per reservoir per site at the discretion of GWA.

   In the event that GWA is assessed fines for not complying with the November 11, 2011 Order For Preliminary Relief of the Federal District Court of Guam in Civil Case No. 02-00035 with respect to completion of the Astumbo and Yigo No. 1 and No. 2 reservoirs, Contractor shall reimburse GWA for the full amount of such fines.

   Except as revised by this MOU and related Change Order No. 4, all other terms and conditions of the Contract as revised by Change Orders No. 1, 2 and 3, including the provisions for inclement weather in Paragraph 1.10 of Section 01311, shall continue to apply.

By signing this MOU, all parties are agreeing to the above conditions.

Abhyash Chand
Pernix Guam, Inc.
(Contractor)

Thomas Cruz, PE
Guam Waterworks Authority
(Owner)

Aaron Sutton, PE
Construction Manager, **GHD Inc.**

Bryan Ryley
Construction Manager, **GHD Inc.**

Cc: Brett Railey, GWA
Garrett Yeoh, GWA
Steve Greco, Pernix

EXHIBIT B

April 20, 2018

Mr. Tom Cruz , P.E.
Chief Engineer
Guam Waterworks Authority
Gloria B. Nelson Public Service Building
688 Route 15
Mangilao, Guam 96913

RE: Change Proposal 04 (CP-4) for Construction Management Services for PW12-05 GWA Yigo and Astumbo Replacement Reservoirs, GWA Project W13-001-BND
Additional CM Services for Astumbo and Yigo No. 1 and 2 Reservoirs Construction Due to Construction Delay

Dear Mr. Cruz:

GHD is pleased to submit this proposal for an amendment to our Scope of Work and Fee for the above referenced project. This scope of work defines the construction management services that will be provided by GHD Inc. and their subconsultants for additional CM services due to construction delays of Astumbo and Yigo No. 1 and 2 Reservoirs. The additional scope for **CP-04** as discussed with GWA is detailed below. The original project scope will be charged on a time and material (T&M) basis per the fees in the table below.

SCOPE OF WORK

General: GHD shall provide additional Construction Management (CM) Services for the nine (8) month period of February 19, 2018 through October 15, 2018, with final completion and closeout services to November 21, 2018 for the Astumbo Reservoir and an additional four (4) month period, from July 30, 2018 to October 15, 2018, with final completion and closeout services to November 21, 2018 for the Yigo No. 1 and 2 Reservoirs. This is based on the construction schedule submitted by the Contractor for the month of December 2017. The original contract completion date for CM services was for twelve (12) months following the notice to proceed for the Contractor on December 5, 2016 with an extended month for closeout. This CP is in conjunction with a Memorandum of Understanding (MOU) dated March 16, 2018 and signed by GHD, Pernix and GWA. The October 15, 2018 substantial completion date and November 21, 2018 final completion date are agreed upon in the MOU.

The extended CM services included in this Change Proposal will be billed on a Time and Material basis. GHD's invoices will be paid by GWA directly, and the same amount will be deducted from Pernix's contract as agreed upon in the before mentioned MOU.

Details: The Scope of Work will provide an extension of the construction phase tasks detailed in our original Scope of Work that relate to the construction of Astumbo and Yigo No. 1 and 2 Reservoirs. No additional QA testing and survey service are included as they were covered in the original Scope of Work and Change Order No. 2.

Data and Assumptions:

a. These CM Services are being provided for the construction of improvements shown on the construction plans and included in the bid schedule that was awarded to Pernix at the Astumbo and Yigo No. 1 and 2 Reservoir sites. If additional improvements are added to the construction contract then fees for additional CM Services will be negotiated with GWA.

b. For the Astumbo Reservoir, it is understood that the intent is for GHD to provide eight (8) consecutive months (171 work days or 238 concurrent calendar days) of half-time Resident Engineer (RE)/Project Manager (PM) services and eight (8) consecutive months of full time onsite inspection. RE/PM services have been estimated at 20 hours per week and onsite inspector at 40 hours per week up to a maximum of $9,500 per week. Five and a half (5.5) additional consecutive weeks (27 work days or 37 concurrent calendar days) of reduced time will be provided for the final completion time period per the MOU. During final construction phase (after substantial completion) of construction, GHD will provide RE/PM services estimated at 10 hours per week and onsite inspector at 20 hours per week. This is based upon a standard 40 hour work week.

   For the Yigo No. 1 and 2 Reservoirs, it is understood that the intent is for GHD to provide two and a half (2.5) consecutive months (54 work days or 76 calendar days) of half-time Resident Engineer (RE)/Project Manager (PM) services and two and a half (2.5) consecutive months of full time onsite inspection. RE/PM services have been estimated at 20 hours per week up to a maximum of $9,500 per week. Five and a half (5.5) additional consecutive weeks (27 work days or 37 concurrent calendar days) of reduced time will be provided for the final completion time period per the MOU. During final construction phase (after substantial completion) of construction, GHD will provide RE/PM services estimated at 10 hours per week and onsite inspection at 20 hours per week. This is based upon a standard 40 hour work week.

c. GWA agrees to negotiate with GHD for change orders for additional construction phase services for substantial completion beyond October 15, 2018 and final completion beyond November 21, 2018 at either site due to construction delays, adverse weather delays, or any other reason not due to the negligent acts of GHD until final acceptance of the project is achieved.

Our time and material fees are summarized in the following Fee Schedule:

FEE SCHEDULE FOR ADDITIONAL CONSTRUCTION MANAGEMENT SERVICES FOR ASTUMBO AND YIGO NO. 1 AND 2 RESERVOIRS

TASKS	TOTALS
Original Contract Amount	$1,387,982
Contract Amount with CO #1	$1,422,905
Contract Amount with CO #2	$1,820,471

Contract Amount with CO#3	$1,849,840.30
CP-04 Astumbo Reservoir CM Services from Construction Delay	$335,377
CP-04 Yigo Reservoirs CM Services from Construction Delay	$123,254
SUBTOTAL COST	**$458,631**
GUAM GRT (at 5%)	$22,932
TOTAL CHANGE PROPOSAL COST	**$481,563**
AMENDED CONTRACT AMOUNT	**$2,331,403.30**

* Work which exceeds the scope of this proposal will be brought to your attention for review, approval and fee adjustment. Such extra services, will be performed on a time and materials basis (per our Fee Schedule in effect at the time services are performed), or for a mutually agreed upon lump sum fees. Work performed will be billed monthly based on estimated percent complete. Payment is due within 30 days of receipt and acceptance of the invoice. We stand ready to provide the professional services necessary to assist GWA in this endeavor.

Sincerely,

Aaron Sutton
Construction Manager

Reviewed by

Bryan Ryley
Construction Manager

Attachments: GHD Change Proposal Fees for Astumbo and Yigo sites dated 04/20/2018
Cc: file

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 30-FY2018
Relative to Approval of Construction Management Contract for the Asan-Adelup-Hagatna, Route 1 Sewerline Rehabilitation and Replacement Project with Duenas, Camacho & Associates, Inc.

What are the project's objectives and are they necessary and urgent?
The objective of this is to manage the construction of the sewerline work to be completed along Route 1 in the Asan and Hagatna area, on a time and materials basis. The work during construction could include pipe replacement, cured-in-place-pipe installation, and manhole repairs along approximately 4,500 linear feet of sewerline pipe. The area of gravity sewerline from Asan into Adelup has deteriorated and experienced a number of collapses in the past two years, and requires immediate attention.

Where is the project located?
This project is located in the villages of Asan and Hagatna, along Route 1, from the Asan "War in the Pacific" National Historic Park to the Agana Main Pump Station. Construction activities will be limited to the government easements of the sewer infrastructure elements.

How much will it cost?
The construction management services contract value relative to the construction of Bid Schedule B, includes construction management, inspection, and project coordination services during construction for the amount of Eight Hundred Seventy Thousand Six Hundred Ten Dollars and Forty-One Cents ($870,610.41), plus a ten percent (10%) contingency of Eighty-Seven Thousand Sixty-One Dollars and Four Cents ($87,061.04), for a total amount of Nine Hundred Fifty-Seven Thousand Six Hundred Seventy-One Dollars and Forty-Five Cents ($957,671.45). This contract amount will be based on a Time and Materials basis.

When will it be completed?
The construction contract length of this project is 650 calendar days after an NTP is issued to the construction contractor. The construction management services will be for the whole time of the construction project and is estimated to be completed in May 2020.

What is the funding source?
The funding for this project will be from USEPA Grant and, if necessary, GWA Bond Funds.

The RFP/BID responses (if applicable):
Eight (8) proposal were received and evaluated.

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

GUAM CONSOLIDATED COMMISSION ON UTILITIES

RESOLUTION NO. 30-FY2018

RELATIVE TO APPROVAL OF A CONSTRUCTION MANAGEMENT CONTRACT FOR THE ASAN-ADELUP-HAGATNA, ROUTE 1 SEWERLINE REHABILITATION AND REPLACEMENT PROJECT S15-002-EPA

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual, and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established, and existing under the laws of Guam; and

WHEREAS, GWA has received a grant from the United States Environmental Protection Agency ("USEPA") under the State Revolving Fund ("SRF") program to improve the sewer collection system, which included the gravity sewer line along Route 1, from the Asan "War in the Pacific" National Historical Park to the Agana Main Pump Station; and

WHEREAS, the segments of gravity sewer line indicated is deteriorating and has experienced collapses, bellies in the sewer line, offsets, and sections of missing or badly corroded pipe, and the intent of this project is to rehabilitate, repair or replace these sections; and

WHEREAS, GWA procured engineering design services through RFP-02-ENG-2015 that included general civil engineering, geotechnical engineering, and archeological investigation for wastewater collection system evaluation, analysis and detailed design; and

WHEREAS, the professional engineering design services have been completed by HDR Engineering, Inc. through contract, which was signed on December 10, 2015, and all rendered design documents have been accepted by GWA in May 2017; and

WHEREAS, GWA and USEPA agree that efforts to rehabilitate, repair or replace these sewer lines are necessary and the proceeding order to accomplish such task is through services that include construction management; and

WHEREAS, GWA has advertised the Request for Proposal (RFP-04-ENG-2017) dated March 30, 2017, soliciting statement of qualifications from experienced and qualified engineering firms to provide construction management services for the ASAN-ADELUP-HAGATNA, ROUTE 1 SEWERLINE REHABILITATION AND REPLACEMENT PROJECT; and

WHEREAS, RFP packages were downloaded by multiple interested parties, from which GWA received proposal submittal from eight (8) engineering firms before the RFP submittal deadline; and

WHEREAS, the GWA A-E Selection Committee reviewed and evaluated the eight (8) proposals (see EXHIBIT A-Evaluation Score) and generated a short list of the top three (3) firms with a recommendation to award a contract to the firm DUENAS, CAMACHO & ASSOCIATES, INC. ("DCA") and any successor at interest thereto (see EXHIBIT B- GM Determination); and

WHEREAS, GWA advertised the initial Invitation to Bid (IFB-06-ENG-2017) for the construction of this project on May 12, 2017, and received no responsive and responsible bidders; and

WHEREAS, GWA advertised a second time, with the Invitation to Re-Bid (IFB-11-ENG-2017) on October 31, 2017, and again received no responsive and responsible bidders; and

WHEREAS, Following the second attempt, GWA revised the bid documents and Bid Form to include two separate, independent Bid Schedules, Bid Schedule A and Bid Schedule B, with Bid Schedule A being primarily repairs by Cured-In-Place-Pipe installation, and Bid Schedule B being repairs entirely by Open Cut and Replacement; and

WHEREAS, GWA advertised the next Invitation to Re-Bid (IFB-05-ENG-2018) on May 4, 2018, with the two revised Bid Schedules; and

WHEREAS, Bid Schedule A will be opened first, and if bids should be opened and found to be responsive and responsible, the lowest responsive and responsible bid will be selected; and

WHEREAS, if no Contractors submit for Bid Schedule A, Bid Schedule B will then be opened, and the lowest responsive and responsible bid will be selected from Bid Schedule B; and

WHEREAS, DCA and GWA negotiated the price for the construction management services to be provided if either Bid Schedule A or Bid Schedule B is selected; and

WHEREAS, If Bid Schedule A is selected, the construction management services with DCA will be in the amount of Six Hundred Eighty-Three Thousand Nine Hundred Thirty-One Dollars and Thirty-Four Cents ($683,931.34) on a Time and Materials basis (See EXHIBIT C – Fee Proposal); and

WHEREAS, If Bid Schedule B is selected, the construction management services with DCA will be in the amount of Eight Hundred Seventy Thousand Six Hundred Ten Dollars and Forty-One Cents ($870,610.41) on a Time and Materials basis (See EXHIBIT C – Fee Proposal); and

WHEREAS, GWA Management seeks approval of the fee proposal for the Scope of Work relative to the construction Bid Schedule B, which includes construction management, inspection, and project coordination services during construction of Eight Hundred Seventy Thousand Six Hundred Ten Dollars and Forty-One Cents ($870,610.41), plus a ten percent

(10%) contingency of Eighty-Seven Thousand Sixty-One Dollars and Four Cents ($87,061.04), for a total amount of Nine Hundred Fifty-Seven Thousand Six Hundred Seventy-One Dollars and Forty-Five Cents ($957,671.45); and

WHEREAS, funding for this project will be from the USEPA State Revolving Fund and, if necessary, GWA Bond funds applicable to the project; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms of the fee proposal submitted by Duenas, Camacho & Associates, Inc. (DCA) are fair and reasonable.
3. The CCU finds that the terms of the conditions set by GWA relative to commencement of work activities are fair and reasonable and serve as a measure of Quality Assurance/Quality Control (QA/QC).
4. The CCU hereby authorizes the management of GWA to enter into a contract with DCA in the amount of Eight Hundred Seventy Thousand Six Hundred Ten Dollars and Forty-One Cents ($870,610.41) (EXHIBIT C).
5. The CCU hereby further approves the total funding amount for this project of Eight Hundred Seventy Thousand Six Hundred Ten Dollars and Forty-One Cents ($870,610.41), plus a ten percent (10%) contingency of Eighty-Seven Thousand Sixty-One Dollars and Four Cents ($87,061.04), to bring the total authorized funding amount to a maximum of Nine Hundred Fifty-Seven Thousand Six Hundred Seventy-One Dollars and Forty-Five Cents ($957,671.45).

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

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DULY AND REGULARLY ADOPTED, this 22nd day of May 2018.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS **J. GEORGE BAMBA**
Chairperson Secretary

SECRETARY'S CERTIFICATE

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

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Exhibit A (1 of 2)

GUAM WATERWORKS AUTHORITY
Gloria B. Nelson Public Service Building • 688 Route 15 • Mangilao, Guam 96913

May 19, 2017

To: Thomas F. Cruz, P.E., Chief Engineer

From: Gloria P. Bensan
Chairperson, Consultant Selection Board

Subject: RFP-04-ENG-2017
Construction Management Services for the Asan-Adelup-Hagatna, Route 1 Sewerline Rehabilitation and Replacement
GWA Project No. S15-002-EPA

The following information is intended to document the evaluation process undertaken for the referenced solicitation.

EVALUATION COMMITTEE MEMBERS	
Name	**Title**
Clinton Huntington II	Senior Engineer
Rylma Carino	Junior Engineer
Anthony Chargualaf	Operations Manager
George Watson	Brown & Caldwell, PMO

Consultant	Evaluation Score				Total	Rank
1. AmOrient	85	89	81	75	330	4
2. EMPSCO Engineering Consultants	62	90	86	86	324	5
3. LYON	80	85	80	70	315	7
4. E.M. Chen & Associates, Inc.	77	88	81	70	316	6
5. Duenas, Camacho & Associates	82	92	92	90	356	1
6. TG Engineers, PC	83	91	90	85	349	2
7. Coeval Design Partners	70	84	74	66	294	8
8. AECOM	75	89	86	89	339	3

Scores were evaluated based on sum of the individual scores. The recommendation of the evaluation committee is shown in the ranking above.

Please review and approve at your earliest convenience so that we may proceed with the notification letters.

Exhibit A (2 of 2)

GUAM WATERWORKS AUTHORITY
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Gloria B. Nelson Public Service Building
688 Route 15, Mangilao, Guam 96913

MEMORANDUM

TO: Thomas F. Cruz, P.E., Chief Engineer

FROM: Gloria P. Bensan

SUBJECT: CM Selection

DATE: May 18, 2017

Per our discussion with the General Manager and Legal Counsel on May 15, 2017, the CM selection team reconvened on May 16, 2017 at 2:30 pm to discuss the merits of evaluation for each proposal submitted for the following projects:

1. Asan-Adelup-Hagatna, Route 1 Sewerline Rehabilitation and Replacement
2. Route 2 War in the Pacific National Park Sewerline Rehabilitation and Replacement

Each selection committee reviewed the RFP proposals and reevaluated them based on the predetermined set of criteria. Committee members obtained reasonable, rational and consistent basis for their scores in comparison to the evaluation criteria outlined in the solicitation documents and determined the final ranking of proposers as shown in the attached evaluation summary.

Exhibit B (1 of 1)

GUAM WATERWORKS AUTHORITY
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Gloria B. Nelson Public Service Building
688 Route 15, Mangilao, Guam 96913

MEMORANDUM

To: Miguel C. Bordallo, P.E., General Manager

From: Thomas F. Cruz, P.E., Chief Engineer

Subject: RFP-04-ENG-2017
Construction Management Services for the Asan-Adelup-Hagatna, Route 1 Sewerline Rehabilitation and Replacement
GWA Project No. S15-002-EPA

Date: May 19, 2017

The Selection Committee has completed all necessary actions for selecting the most qualified consultant for the referenced solicitation. All proposals were reviewed and scored according to the conditions established in the solicitation. The evaluation summary sheet is attached for your information.

The committee recommends the following top three (3) firms in order of preference for the project:

1. Duenas, Camacho & Associates
2. TG Engineers, PC
3. AECOM

Concurred:

VINCENT E. GUERRERO
Supply Management Administrator

5/22/2017
Date

GENERAL MANAGER'S DETERMINATION

Consultant Firm Selected:

Duenas Camacho & Assoc.

Remarks:

MIGUEL C. BORDALLO, P.E.
General Manager

5.23.17
Date

Exhibit C (1 of 9)

Website: www.dcaguam.com
Email: dca@dcaguam.com

April 23, 2018

Guam Waterworks Authority
Engineering Division, Room 202
Gloria B. Nelson Public Service Building
688 Route 15, Mangilao, GU 96913

Attention: **Mr. Thomas F. Cruz, Chief Engineer, GWA / George Watson, Brown & Caldwell**

Subject: **GWA RFP-04-ENG--2017, Construction Management Services for Asan-Adelup-Hagatna Route 1 Sewerline Rehabilitation and Replacement, GWA Project No. S15-002-EPA**

Re: *Revised* Fee Proposal Related to Bid Schedules A and B

Hafa Adai:

Duenas, Camacho & Associates, Inc. is pleased to submit this *revised* fee proposal for **GWA RFP-04-ENG-2017, Construction Management Services for Asan-Adelup-Hagatna Route 1 Sewerline Rehabilitation and Replacement, GWA Project No. S15-002-EPA.** The revisions and updates include the following:

1. Fee estimates for:
   a. CM Services under Base Bid Schedule A – CIPP Rehabilitation of Existing Sewer Lines
      Revised Fee Estimate: $683.931.34 including a $10,000 Time & Material allowance for Material Testing
   b. ~~CM Services under Base Bid Schedule B – Cut and Cover Construction of New Sewer Lines~~
      ~~**Fee Estimate: $654,143.21 including a $20,000 Time & Material allowance for Material Testing**~~
      Revised estimate for Bid Schedule B attached.
2. 2018 (current) DCA Personnel Labor and OH Rates
3. A GRT Tax Rate of 5% (recently enacted into law)

Our revised fee estimates for construction management services for each Bid Schedule are supported by the following:

- Detailed Fee Breakdown showing an estimate of effort and expenses
- Exhibit A – Estimated expenses for DCA and CH2M submitted earlier (no change)
- Deletion of Secure Safe Solutions for video surveillance (as requested by GWA)

As indicated in our Proposal submitted in response to the subject RFP, DCA will retain CH2M (our CM Team CIPP Specialist) if a Construction Contract is awarded under Base Bid Schedule A – CIPP Rehabilitation of Existing Sewer Lines. Geo-Engineering & Testing Inc. will provide geotechnical consultation and quality assurance material testing services. The cost for video surveillance by Secure Safe Solutions has been removed at GWA's request.

The estimate of CM effort is based on the following assumptions:

1. The Scope of CM services and tasks as described in the RFP;
2. Base Bid Schedules A and B as described in the amended Bid Form provided to DCA;
3. Project construction duration of 450 calendar days;
4. Full-time resident inspection and supplementary inspection (25% of resident inspection effort for CM Services under Base Bid Schedule A and 50% of resident inspection effort for CM services under Base Bid Schedule B);

Exhibit C (2 of 9)

April 23, 2018

5. Part-time CM support by our CIPP Specialist from CH2M under Base Bid Schedule A;
6. Current (2018) DCA personnel rates (loaded).

We look forward to negotiations.

Sincerely,

||Signed
JOHN P. DUENAS, P.E.
President
Enclosures

ENGINEERING * PLANNING * SURVEYING * ENVIRONMENTAL SERVICES * GEOGRAPHIC INFORMATION SYSTEM * CONSTRUCTION MANAGEMENT
GUAM P.O. Box 8900, Tamuning, Guam 96931/238 E. Marine Corps Drive, Suite 201 Diamond Plaza, Hagatña, GU 96910-5194 Tel: (671) 477-7991/Fax: (671) 479-6315
SAIPAN PMB 164, Box 10000, Saipan, MP 96950/Island Commercial Ctr., Chalan Pale Arnold Road, Gualo Rai, Saipan 96950 / Tel: (670) 234-9017/Fax: (670) 234-3842

Exhibit C (3 of 9)

Consolidated Fee Estimate

EXHIBIT A - BASE BID SCHEDULE A
DCA EXPENSES

DUENAS, CAMACHO & ASSOCIATES, INC MANAGEMENT SERVICES FOR ASAN-ADELUP-HAGATNA ROUTE 1 SEWERLINE CONSTRUCTION REHABILITATION AND					
	CM Inspection Related Expenses	Unit	Quan	Rate	Cost
1	**Miscellaneous Expenses**	LS			$ 500.00
2	Mileage (Inspection)	mi	3200	$ 0.33	$ 1,161.60
3	Mileage (miscellaneous)	mi	2800	$ 0.33	$ 1,016.40
4	Pictures, video, etc.	LS			$ 250.00
5	Reproduction	LS			$ 3,500.00
6	Communications, etc.	LS			$ 500.00
7	Miscellaneous Survey Materials	LS			$ 250.00
		GRT	5.25%		**$ 376.85**
		DCA EXPENSES			**$ 7,554.85**

CH2M EXPENSES

CH2M MANAGEMENT SERVICES FOR ASAN-ADELUP-HAGATNA ROUTE 1 SEWERLINE REPLACEMENT, GWA PROJECT NO. S15-002-EPA CONSTRUCTION REHABILITATION AND					
		Unit	Quan	Rate	Cost
1	Travel expenses for CH2M CIPPSpec Site Visit		3	$ 3,000.00	$ 9,000.00
2	Lodging (28 days total)	Days	28	$ 215.00	$ 6,622.00
3	Meals	Days	28	$ 75.00	$ 2,310.00
4	Rental Car	Days	28	$ 50.00	$ 1,540.00
5	Misc. Expenses	Trip	3	$ 100.00	$ 330.00
	Subtotal				**$ 19,802.00**
		CH2M EXPENSES			**$ 19,802.00**

Exhibit C (4 of 9)

GUAM WATERWORKS AUTHORITY
CONSTRUCTION MANAGEMENT SERVICES FOR ASAN-ADELUP-HAGATNA ROUTE 1 SEWERLINE REHABILITATION AND REPLACEMENT,
GWA PROJECT NO. S15-002-EPA

SCHEDULE A - BASE BID: CIPP

			Duenas, Camacho & Associates, Inc. (DCA)													CH2M				Geo-Engineering & Testing (CM Support)			
Task No.	Task Description		Principal In Charge	Construction Manager	Project Construction Manager	Resident Construction Inspector	Construction Inspector (Supplementary)	Civil Engineer (CM Support)	Staff Engineer (CM Support)	Engineering Technician (CM Support)	Chief Environmental Scientist	3-Man Crew	Chief Surveyor	Administrative Assistant (CM Support)	TOTALS	CH2M Project Manager (CM Support)	CH2M Project Engineer (CIPP QC Specialist)	CH2M Administrative Manager (CM Support)	TOTALS	Principal Geotechnical Engineer	Staff Engineer	Administrative Assistant	TOTAL
			PRIN	CM	PCM	RCI	CI	CE	SED	ET	CES	3MSC	RLS	ADM									
	Loaded 2018 DCA Labor Rates >>>>>	No.	$ 182.58	$ 160.30	$ 111.04	$ 72.93	$ 72.93	$ 136.21	$ 87.66	$ 58.00	$ 100.61	$ 166.06	$ 121.33	$ 71.90		$ 308.58	$ 189.90	$ 141.18		$ 170.00	$ 90.00	$ 60.00	
		Units																					
	CM SERVICES - TOTALS		90	285	1299	2571	707	138	156	100	76	144	48	403	$ 546,042.01	38	377	38	$88,548.25	22	0	0	$ 3,740.00
	CONSTRUCTION MANAGEMENT SERVICES																						
A.	General Construction Management Tasks		90	261	501	0	0	4	0	0	64	0	4	265	$ 140,368.74	16.5	165	16.5	$38,754.54	0	0	0	$ -
1	Project Controls		90	257	0	0	0	4	0	0	4	0	4	129	$68,329.09	12	120	12	$28,185.12				$0.00
2	Project Correspondence		0	0	129	0	0	0	0	0	0	0	0	0	$14,276.57	0	0	0	$0.00				$0.00
a.	*Daily Construction Log*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
b.	*Weekly Status Report*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
c.	*Material Testing Forms*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
d.	*Photo Log*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
3	Review & Processing of Payment Requests	15	0	0	60	0	0	0	0	0	0	0	0	15	$7,740.90	1.5	15	1.5	$3,523.14				$0.00
4	Conduct Project Meetings		0	0	60	0	0	0	0	0	0	0	0	8	$7,237.60	0	0	0	$0.00				$0.00
5	Pre-construction Conference		0	4	4	0	0	0	0	0	0	0	0	1	$1,157.26	0	0	0	$0.00				$0.00
6	Progress Meetings		0	0	30	0	0	0	0	0	0	0	0	15	$4,409.70	0	0	0	$0.00				$0.00
7	Other Meetings		0	0	10	0	0	0	0	0	0	0	0	8	$1,685.60	1	10	1	$2,348.76				$0.00
8	Project Coordination		0	0	10	0	0	0	0	0	0	0	0	30	$3,267.40	0	0	0	$0.00				$0.00
9	Requests for Information		0	0	30	0	0	0	0	0	0	0	0	0	$3,331.20	1.2	12	1.2	$2,818.51				$0.00
10	General Compliance Monitoring	15	0	0	30	0	0	0	0	0	30	0	0	15	$7,428.00	0	0	0	$0.00				$0.00
a.	*Regulations & Laws*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
b.	*Labor Laws*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
c.	*Licensure*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
d.	*Permits*		0	0	0	0	0	0	0	0	30	0	0	0	$3,018.30	0	0	0	$0.00				$0.00
e.	*Insurance*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
11	Claims and Disputes		0	0	60	0	0	0	0	0	0	0	0	8	$7,237.60	0	0	0	$0.00				$0.00
a.	*Records*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
b.	*Claims*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
12	Stop Work Orders		0	0	15	0	0	0	0	0	0	0	0	6	$2,097.00	0	0	0	$0.00				$0.00
13	Schedule Monitoring		0	0	45	0	0	0	0	0	0	0	0	15	$6,075.30	0	0	0	$0.00				$0.00
14	Acceptance		0	0	18	0	0	0	0	0	0	0	0	15	$3,077.22	0.8	8	0.8	$1,879.01				$0.00
B.	Interpretations and Clarifications		0	2	15	0	0	0	0	0	12	0	0	12	$4,056.32	0	0	0	$0.00	8			$1,360.00
C.	Shop Drawings/Submittals (Review and Coordination)	60	0	4	120	0	0	60	120	60	0	0	0	60	$40,451.80	2	20	2	$4,697.52				$0.00
D.	Substitutes (Evaluation and Coordination)		0	4	30	0	0	0	0	0	0	0	0	0	$3,972.40	0.4	4	0.4	$939.50				$0.00
E.	Inspections & Tests		0	0	446	2571	643	32	0	0	0	0	0	60	$ 292,582.69	3.2	32	3.2	7516.032	8	0	0	1360
1	Resident Inspections		0	0	386	0	0	0	0	0	0	0	0	0	$42,829.71	0	0	0	$0.00	8			$1,360.00
a.	*Resident Inspector*		0	0	0	2571	643	0	0	0	0	0	0	0	$234,417.86	0	0	0	$0.00				$0.00
b.	*Special Inspections*		0	0	0	0	0	32	0	0	0	0	0	0	$4,358.72	3.2	32	3.2	$7,516.03				$0.00
2	Testing		0	0	60	0	0	0	0	0	0	0	0	60	$10,976.40	0	0	0	$0.00				$0.00
F.	Change Management	4	0	0	80	0	0	24	0	0	0	0	0	0	$ 12,152.24	0.8	8	0.8	$ 1,879.01	2	0	0	$ 340.00
1	Change Order Review		0	0	16	0	0	4	0	0	0	0	0	0	$2,321.48	0.2	2	0.2	$469.75	2			$340.00
2	Design Change		0	0	8	0	0	4	0	0	0	0	0	0	$1,433.16	0.2	2	0.2	$469.75				$0.00
3	Design Change/Verification Request		0	0	16	0	0	4	0	0	0	0	0	0	$2,321.48	0.2	2	0.2	$469.75				$0.00
4	Negotiation with Contractor		0	0	16	0	0	4	0	0	0	0	0	0	$2,321.48	0	0	0	$0.00				$0.00
5	Change Order Documents		0	0	16	0	0	4	0	0	0	0	0	0	$2,321.48	0.2	2	0.2	$469.75				$0.00
6	Estabish Change Order Pricing Bases		0	0	8	0	0	4	0	0	0	0	0	0	$1,433.16	0	0	0	$0.00				$0.00
G.	Construction Survey Services	12	0	0	12	0	0	0	0	0	0	144	44	0	$30,583.64	0	0	0	$0.00				$0.00
H.	Disputes (Handling and Resolution)		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00	4			$680.00
I.	Contractor Completion Documents		0	0	64	0	48	14	32	36	0	0	0	0	$ 17,407.26	2.2	22	2.2	$ 5,167.27	0	0	0	$ -
1	Substantial Completion		0	0	8	0	0	0	0	0	0	0	0	0	$888.32	0.8	8	0.8	$1,879.01				$0.00
2	Project Records		0	0	8	0	0	0	8	24	0	0	0	0	$2,981.60	0	0	0	$0.00				$0.00
3	Punch List Development		0	0	8	0	24	4	4	0	0	0	0	0	$3,534.12	0.8	8	0.8	$1,879.01				$0.00
4	Closing Inspections		0	0	16	0	8	4	4	0	0	0	0	0	$3,255.56	0.4	4	0.4	$939.50				$0.00
a.	*Agency Acceptance Inspections*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
b.	*Pre-Final Inspection*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
c.	*Final Inspection*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
5	Final Report		0	0	16	0	8	2	0	0	0	0	0	0	$2,632.50	0.2	2	0.2	$469.75				$0.00
6	Record Drawings		0	0	8	0	8	4	16	12	0	0	0	0	$4,115.16	0	0	0	$0.00				$0.00
J.	Commissioning and Startup		0	4	8	0	0	0	0	0	0	0	0	0	$1,529.52	0	0	0	$0.00				$0.00
K.	Training		0	4	12	0	16	4	4	4	0	0	0	6	$4,699.44	12	120	12	$28,185.12				$0.00
L.	Warranties		0	4	8	0	0	0	0	0	0	0	0	0	$1,529.52	0.6	6	0.6	$1,409.26				$0.00
M.	Spare Parts		0	2	4	0	0	0	0	0	0	0	0	0	$764.76	0	0	0	$0.00				$0.00

Exhibit C (5 of 9)

Task No.	Task Description	Principal In Charge	Construction Manager	Project Construction Manager	Resident Construction Inspector	Construction Inspector (Supplementary)	Civil Engineer (CM Support)	Staff Engineer (CM Support)	Engineering Technician (CM Support)	Chief Environmental Scientist	3-Man Crew	Chief Surveyor	Administrative Assistant (CM Support)	TOTALS	CH2M Project Manager (CM Support)	CH2M Project Engineer (CIPP QC Specialist)	CH2M Administrative Manager (CM Support)	TOTALS	Principal Geotechnical Engineer	Staff Engineer	Administrative Assistant	TOTAL
		PRIN	CM	PCM	RCI	CI	CE	SED	ET	CES	3MSC	RLS	ADM									
	Loaded 2018 DCA Labor Rates >>>>>	No.	$ 182.58	$ 160.30	$ 111.04	$ 72.93	$ 72.93	$ 136.21	$ 87.66	$ 58.00	$ 100.61	$ 166.06	$ 121.33	$ 71.90		$ 308.58	$ 189.90	$ 141.18		$ 170.00	$ 90.00	$ 60.00	
	Subconsultants	Expenses	Services		Totals		Reference	**ADDITIONAL TIME & MATERIAL COSTS**														
1	CH2M	$ 19,802.00	$ 88,548.25		$ 108,350.25		Exhibit A															
2	GeoEngineering & Testing, Inc. (Consultation)		$ 3,740.00		$ 3,740.00			Item No.	Category of Cost			Estimated Cost										
3	Secure Safe Solutions (months|cost/month)	13	$ -		$ -		Exhibit B															
		Exhibit B, Op 3						1	QA Material Testing			$ 10,000.00										
	Subtotal - Subconsultants	$ 19,815.00	$ 92,288.25		$ 112,090.25																	
	Coordination & Handling @	2.0%	$ 1,845.77		$ 2,241.81																	
	Subtotal - Subconsultants + DCA Handling		$ 94,134.02		$ 114,332.06																	

COST SUMMARY			
DCA LABOR		$	546,042.01
DCA EXPENSES	Exhibit A	$	7,554.85
DCA	**Subtotal**	**$**	**553,596.85**
SUBCONSULTANTS	CH2M	$	108,350.25
	GeoEngineering & Testing	$	3,740.00
	Secure Safe Solutions	$	-
	Subtotal	$	112,090.25
	DCA Handling 2%	$	2,241.81
	GRT 5.25%	$	6,002.43
SUBTOTAL		**$**	**673,931.34**
QA Testing Time & Material (Estimated)		*$*	*10,000.00*

Website: www.dcaguam.com
Email: dca@dcaguam.com

Exhibit C (6 of 9)

April 23, 2018

Guam Waterworks Authority
Engineering Division, Room 202
Gloria B. Nelson Public Service Building
688 Route 15, Mangilao, GU 96913

Attention: **Mr. Thomas F. Cruz, Chief Engineer, GWA / George Watson, Brown & Caldwell**

Subject: **GWA RFP-04-ENG--2017, Construction Management Services for Asan-Adelup-Hagatna Route 1 Sewerline Rehabilitation and Replacement, GWA Project No. S15-002-EPA**

Re: *Revised* Fee Proposal Related to Bid Schedule B

Hafa Adai:

Duenas, Camacho & Associates, Inc. is pleased to submit this *revised* fee proposal for **GWA RFP-04-ENG-2017, Construction Management Services for Asan-Adelup-Hagatna Route 1 Sewerline Rehabilitation and Replacement, GWA Project No. S15-002-EPA.** The revisions address the following changes:

1. Fee estimate for CM Services under Base Bid Schedule B – Cut and Cover Construction of New Sewer Lines based on the projected Construction Contract Completion Period from 450 to **650** calendar days. **Fee Estimate: $870,610.41 including a $20,000 Time & Material allowance for Material Testing**
2. 2018 (current) DCA Personnel Labor and OH Rates
3. A GRT Tax Rate of 5% (recently enacted into law)

Our revised fee estimate for construction management services for Base Bid Schedule B is supported by the attached detailed fee breakdown showing an estimate of effort and expenses for a construction period of 650 calendar days and the *deletion* of Secure Safe Solutions for video surveillance (as requested by GWA). Geo-Engineering & Testing Inc. will provide geotechnical consultation and quality assurance material testing services.

The estimate of CM effort is based on the following assumptions for Base Bid Schedule B:

1. The Scope of CM services and tasks as described in the RFP;
2. Base Bid Schedule B as described in the amended Bid Form provided to DCA;
3. Revised projected construction duration of from 450 to 650 calendar days;
4. Full-time resident inspection and supplementary inspection of 50% of the resident inspection effort;
5. Current (2018) DCA personnel rates (loaded).

We look forward to negotiations.

Sincerely,

||Signed
JOHN P. DUENAS, P.E.
President

Enclosures

Consolidated Fee Estimate

Exhibit C(7 of 9)

EXHIBIT A - BASE BID SCHEDULE B

DCA EXPENSES

DUENAS, CAMACHO & ASSOCIATES, INC CONSTRUCTION MANAGEMENT SERVICES FOR ASAN-ADELUP-HAGATNA ROUTE 1 SEWERLINE					
	CM Inspection Related Expenses	Unit	Quan	Rate	Cost
1	**Miscellaneous Expenses**	LS			$ 500.00
2	Mileage (Inspection)	mi	4650	$ 0.33	$ 1,687.95
3	Mileage (miscellaneous)	mi	3150	$ 0.33	$ 1,143.45
4	Pictures, video, etc.	LS			$ 250.00
5	Reproduction	LS			$ 3,500.00
6	Communications, etc.	LS			$ 500.00
7	Miscellaneous Survey Materials	LS			$ 500.00
		GRT	5.25%		**$ 424.27**
		DCA EXPENSES			**$ 8,505.67**

CH2M EXPENSES

CH2M CONSTRUCTION MANAGEMENT SERVICES FOR ASAN-ADELUP-HAGATNA ROUTE 1 SEWERLINE REHABILITATION AND REPLACEMENT, GWA PROJECT NO. S15-002-EPA					
		Unit	Quan	Rate	Cost
1	Travel expenses for CH2M CIPPSpec Site Visit		0	$ 3,000.00	$ -
2	Lodging (28 days total)	Days	0	$ 215.00	$ -
3	Meals	Days	0	$ 75.00	$ -
4	Rental Car	Days	0	$ 50.00	$ -
5	Misc. Expenses	Trip	0	$ 100.00	$ -
	Subtotal				**$ -**
		CH2M EXPENSES			**$ -**

Exhibit C (8 of 9)

Task No.	Task Description		Principal In Charge	Construction Manager	Project Construction Manager	Resident Construction Inspector	Construction Inspector (Supplementary)	Civil Engineer (CM Support)	Staff Engineer (CM Support)	Engineering Technician (CM Support)	Chief Environmental Scientist	3-Man Crew	Chief Surveyor	Administrative Assistant (CM Support)	TOTALS	CH2M Project Manager (CM Support)	CH2M Project Engineer (CIPP QC Specialist)	CH2M Administrative Manager (CM Support)	TOTALS	Principal Geotechnical Engineer	Staff Engineer	Administrative Assistant	TOTAL
			PRIN	CM	PCM	RCI	CI	CE	SED	ET	CES	3MSC	RLS	ADM									
	Loaded 2018 DCA Labor Rates >>>>>	No.	$ 182.58	$ 160.30	$ 111.04	$ 72.93	$ 72.93	$ 136.21	$ 87.66	$ 58.05	$ 100.61	$ 166.06	$ 121.33	$ 71.90		$ 308.58	$ 189.90	$ 141.18		$ 170.00	$ 90.00	$ 60.00	
	CONSTRUCTION MANAGEMENT SERVICES																						
A.	General Construction Management Tasks		130	375	718	0	0	4	0	0	91	0	4	322	$ 196,894.98	0	0	0	$ -	4	0	0	$ 680.00
1	Project Controls		130	371	0	0	0	4	0	0	4	0	4	186	$98,060.86	0	0	0	$0.00	4			$680.00
2	Project Correspondence		0	0	186	0	0	0	0	0	0	0	0	0	$20,621.71	0	0	0	$0.00				$0.00
a.	*Daily Construction Log*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
b.	*Weekly Status Report*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
c.	*Material Testing Forms*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
d.	*Photo Log*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
3	Review & Processing of Payment Requests	22	0	0	87	0	0	0	0	0	0	0	0	15	$10,701.97	0	0	0	$0.00				$0.00
4	Conduct Project Meetings		0	0	87	0	0	0	0	0	0	0	0	8	$10,198.67	0	0	0	$0.00				$0.00
5	Pre-construction Conference		0	4	4	0	0	0	0	0	0	0	0	1	$1,157.26	0	0	0	$0.00				$0.00
6	Progress Meetings		0	0	43	0	0	0	0	0	0	0	0	15	$5,890.23	0	0	0	$0.00				$0.00
7	Other Meetings		0	0	14	0	0	0	0	0	0	0	0	8	$2,179.11	0	0	0	$0.00				$0.00
8	Project Coordination		0	0	14	0	0	0	0	0	0	0	0	30	$3,760.91	0	0	0	$0.00				$0.00
9	Requests for Information		0	0	43	0	0	0	0	0	0	0	0	0	$4,811.73	0	0	0	$0.00				$0.00
10	General Compliance Monitoring	22	0	0	43	0	0	0	0	0	43	0	0	15	$10,250.00	0	0	0	$0.00				$0.00
a.	*Regulations & Laws*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
b.	*Labor Laws*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
c.	*Licensure*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
d.	*Permits*		0	0	0	0	0	0	0	0	43	0	0	0	$4,359.77	0	0	0	$0.00				$0.00
e.	*Insurance*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
11	Claims and Disputes		0	0	87	0	0	0	0	0	0	0	0	8	$10,198.67	0	0	0	$0.00				$0.00
a.	*Records*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
b.	*Claims*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
12	Stop Work Orders		0	0	22	0	0	0	0	0	0	0	0	6	$2,837.27	0	0	0	$0.00				$0.00
13	Schedule Monitoring		0	0	65	0	0	0	0	0	0	0	0	15	$8,296.10	0	0	0	$0.00				$0.00
14	Acceptance		0	0	22	0	0	0	0	0	0	0	0	15	$3,570.73	0	0	0	$0.00				$0.00
B.	Interpretations and Clarifications		0	2	22	0	0	0	0	0	12	0	0	12	$4,796.59	0	0	0	$0.00	8			$1,360.00
C.	Shop Drawings/Submittals (Review and Coordination)	60	0	4	120	0	0	60	120	60	0	0	0	60	$40,451.80	0	0	0	$0.00				$0.00
D.	Substitutes (Evaluation and Coordination)		0	4	43	0	0	0	0	0	0	0	0	0	$5,452.93	0	0	0	$0.00				$0.00
E.	Inspections & Tests		0	0	617	3714	1857	32	0	0	0	0	0	60	$ 483,524.55	0	0	0	0	24	0	0	4080
1	Resident Inspections		0	0	557	0	0	0	0	0	0	0	0	0	$61,865.14	0	0	0	$0.00	24			$4,080.00
a.	*Resident Inspector*		0	0	0	3714	1857	0	0	0	0	0	0	0	$406,324.29	0	0	0	$0.00				$0.00
b.	*Special Inspections*		0	0	0	0	0	32	0	0	0	0	0	0	$4,358.72	0	0	0	$0.00				$0.00
2	Testing		0	0	60	0	0	0	0	0	0	0	0	60	$10,976.40	0	0	0	$0.00				$0.00
F.	Change Management	4	0	0	80	0	0	24	0	0	0	0	0	0	$ 12,152.24	0	0	0	$ -	8	0	0	$ 1,360.00
1	Change Order Review		0	0	16	0	0	4	0	0	0	0	0	0	$2,321.48	0	0	0	$0.00	8			$1,360.00
2	Design Change		0	0	8	0	0	4	0	0	0	0	0	0	$1,433.16	0	0	0	$0.00				$0.00
3	Design Change/Verification Request		0	0	16	0	0	4	0	0	0	0	0	0	$2,321.48	0	0	0	$0.00				$0.00
4	Negotiation with Contractor		0	0	16	0	0	4	0	0	0	0	0	0	$2,321.48	0	0	0	$0.00				$0.00
5	Change Order Documents		0	0	16	0	0	4	0	0	0	0	0	0	$2,321.48	0	0	0	$0.00				$0.00
6	Establish Change Order Pricing Bases		0	0	8	0	0	4	0	0	0	0	0	0	$1,433.16	0	0	0	$0.00				$0.00
G.	Construction Survey Services	30	0	0	30	0	0	0	0	0	0	360	45	0	$68,572.65	0	0	0	$0.00				$0.00
H.	Disputes (Handling and Resolution)		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00	6			$1,020.00
I.	Contractor Completion Documents		0	0	64	0	48	14	32	36	0	0	0	0	$ 17,407.26	0	0	0	$ -	0	0	0	$ -
1	Substantial Completion		0	0	8	0	0	0	0	0	0	0	0	0	$888.32	0	0	0	$0.00				$0.00
2	Project Records		0	0	8	0	0	0	8	24	0	0	0	0	$2,981.60	0	0	0	$0.00				$0.00
3	Punch List Development		0	0	8	0	24	4	4	0	0	0	0	0	$3,534.12	0	0	0	$0.00				$0.00
4	Closing Inspections		0	0	16	0	8	4	4	0	0	0	0	0	$3,255.56	0	0	0	$0.00				$0.00
a.	*Agency Acceptance Inspections*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
b.	*Pre-Final Inspection*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
c.	*Final Inspection*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
5	Final Report		0	0	16	0	8	2	0	0	0	0	0	0	$2,632.50	0	0	0	$0.00				$0.00
6	Record Drawings		0	0	8	0	8	4	16	12	0	0	0	0	$4,115.16	0	0	0	$0.00				$0.00
J.	Commissioning and Startup		0	4	8	0	0	0	0	0	0	0	0	0	$1,529.52	0	0	0	$0.00				$0.00
K.	Training		0	4	12	0	16	4	4	4	0	0	0	6	$4,699.44	0	0	0	$0.00				$0.00
L.	Warranties		0	4	8	0	0	0	0	0	0	0	0	0	$1,529.52	0	0	0	$0.00				$0.00
M.	Spare Parts		0	2	4	0	0	0	0	0	0	0	0	0	$764.76	0	0	0	$0.00				$0.00

	Subconsultants	Expenses	Services	Totals	Reference
1	CH2M	$ -	$ -	$ -	Exhibit A
2	GeoEngineering & Testing, Inc. (Consultation)		$ 8,500.00	$ 8,500.00	

ADDITIONAL TIME & MATERIAL COSTS			
Item No.	Category of Cost		Estimated Cost

COST SUMMARY	
DCA LABOR	$ 832,979.66

Exhibit C (9 of 9)

Task No.	Task Description	Principal In Charge	Construction Manager	Project Construction Manager	Resident Construction Inspector	Construction Inspector (Supplementary)	Civil Engineer (CM Support)	Staff Engineer (CM Support)	Engineering Technician (CM Support)	Chief Environmental Scientist	3-Man Crew	Chief Surveyor	Administrative Assistant (CM Support)	TOTALS	CH2M Project Manager (CM Support)	CH2M Project Engineer (CIPP QC Specialist)	CH2M Administrative Manager (CM Support)	TOTALS
		PRIN	CM	PCM	RCI	CI	CE	SED	ET	CES	3MSC	RLS	ADM					
	Loaded 2018 DCA Labor Rates >>>>>	No.	$ 182.58	$ 160.30	$ 111.04	$ 72.93	$ 72.93	$ 136.21	$ 87.66	$ 58.88	$ 100.61	$ 166.66	$ 121.33	$ 71.90		$ 308.58	$ 189.90	$ 141.18	
3	Secure Safe Solutions (months|cost/month)	13		$ -		$ -	Exhibit B											
		Exhibit B, Op 3						1	QA Material Testing			$	20,000.00					
	Subtotal - Subconsultants	$ 13.00	$ 8,500.00		$ 8,500.00													
	Coordination & Handling @	2.0%	$ 170.00		$ 170.00													
	Subtotal - Subconsultants + DCA Handling		$ 8,670.00		$ 8,670.00													

DCA EXPENSES			
		DCA	
SUBCONSULTANTS			
	Principal Geotechnical Engineer	$ 170.00	
	Staff Engineer	$ 90.00	
	Administrative Assistant	$ 60.00	
	TOTAL		
	Exhibit A		$ 8,505.67
	Subtotal		$ 841,485.33
	CH2M		$ -
	GeoEngineering & Testing		$ 8,500.00
	Secure Safe Solutions		$ -
	Subtotal		$ 8,500.00
	DCA Handling	2%	$ 170.00
	GRT	5.25%	$ 455.18
	SUBTOTAL		**$ 850,610.51**
	QA Testing Time & Material (Estimated)		*$ 20,000.00*
	TOTAL		**$ 870,610.51**

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building | 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 31-FY2018
Relative to Approval of the 2013 and 2016 Bond Proceeds Reallocation

What is the project's objective and is it necessary and urgent?
The objective of the 2013 bond reallocation is to move "unobligated" funds to CIP line item WW 11-02 Baza Gardens STP Replacement as a means of expending the fund as expeditiously as possible to comply with the 2013 Bond indenture requirements. WW 11-02 is the CP line item that funds the Baza Gardens Wastewater Conveyance projects which has a completion deadline in FY2018.

The objective of the 2016 bond reallocation is to "focus" a little less than half of the current unobligated funds to the Court Order tank projects as a means of maintaining the design and construction activities to meet as best as possible the December 2020 deadline. An important note is that this reallocation of the 2016 bond funds will not completely address the required design and construction needs of the court order but will help GWA accelerate some of the projects which will help management the remaining tank projects to come. The planned 2019 bond issuance is still required to help complete the court order deadline requirements of December 2020.

Where is the project located?
The result of the bond reallocation will affect the fund certification for the Baza Gardens Wastewater Conveyance Projects, as well as help accelerate the procurement of the next set of tank improvements.

How much will it cost?
Six Million Five Hundred Forty-Two Thousand Six Dollars ($6,542,006.00) that are still identified as "Unobligated Project Cost" from the 2013 Bond proceeds will be reallocated to WW 11-03 Baza Gardens STP Replacement. Thirty Million Four Hundred Eighty Thousand One Hundred Fifty-Five Dollars ($30,480,155.00) that are also identified as "Unobligated Project Cost" from the 2016 Bond proceeds will be reallocated into PW 09-11 Water System Reservoirs 2005 Improvements.

When will it be completed?
The 2013 bond funds that will be reallocated is expected to be expended by end of FY2018. The 2016 bond funds that will be reallocated is expected to be encumbered by end of FY2019.

What is the funding source?
N/A

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

RESOLUTION NO. 31–FY2018

RELATIVE TO APPROVAL OF THE 2013 AND 2016 BOND PROCEEDS REALLOCATION

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA management is working towards expending all unobligated 2013 Bond proceeds as expeditiously as possible to comply with bond indenture requirements; and

WHEREAS, GWA currently also has critical Court Order ("CO") projects related to Paragraph 29 of the 2011 Court Order which required GWA to "Repair, Rehabilitate, Replace or Relocate" all the water reservoir throughout the island and as such management seeks to focus efforts and funding to CIP line items directly linked to the tank projects; and

WHEREAS, GWA accounting has reconciled the 2013 Bond Capital Improvements Project (CIP) accounts and have determined there are several CIP line items with a remaining balance under the "Unobligated Project Cost" in the amount of Six Million Five Hundred Forty-Two Thousand Six Dollars ($6,542,006.00) (See EXHIBIT A); and

WHEREAS, GWA accounting has further reconciled the 2016 Bond Capital Improvements Project (CIP) accounts and have determined there are several CIP line items with a remaining balance under the "Unobligated Project Cost" in the amount of Fifty-Eight Million

Eight Hundred Sixteen Thousand Four Hundred Thirty-Six Dollars ($56,816,436.00) respectively (See EXHIBIT B); and

WHEREAS, GWA management seeks to reallocate Six Million Five Hundred Forty-One Thousand Nine Hundred Ninety-One Dollars ($6,541,991.00) of 2013 Bond proceeds from various CIP line items to the on-going Baza Gardens Wastewater Sewer Conveyance project (See EXHIBIT C); and

WHEREAS, GWA management further seeks to use Thirty-Two Million Eight Hundred Seventy-Eight Thousand Two Hundred Seventy-Two Dollars ($32,878,272.00) of the 2016 bond funds still identified in the un-obligated project cost to various on-going CIP projects such as the new production wells at AG-10, AG-12 and Y-8, production well meter replacement Phase I, fire hydrant replacement program, Bayside Sewer Pump Station rehabilitation, just to name a few, with the remainder of the unobligated funds being "focus" to the Court Order tank projects as a means of maintaining the design and construction activities to meet as best as possible the December 2020 deadline; and

WHEREAS, critical to this 2013 and 2016 bond reallocation is the necessary sequence of actions that need to be taken wherein the reallocation of the 2013 bond proceeds to the WW 11-03 Baza Gardens STP Replacement for which the Baza Gardens Wastewater Conveyance projects have funds certified under, will allow for funding to this project, other than the 2013 bond, to be "reimbursed" which in this case involves some funding from 2016 bond proceeds under the same CIP line item; and

WHEREAS, due to the 2016 bond funds that are certified to the Baza Gardens Wastewater Conveyance project being "reclassified" as a result of the completion of the 2013 bond reallocation, the 2016 bond expenditures under WW 11-03 Baza Gardens STP Replacement to increase by Six Million Seven Hundred Thirty-Six Thousand Three Hundred Seventy-Nine Dollars ($6,736,379.00) (See EXHIBIT D) which would then also be included in the funds "focused" to the tank projects; and

WHEREAS, the cumulative actions of the 2013 and 2016 bond reallocation as well as the application of Thirty-Two Million Eight Hundred Seventy-Eight Thousand Two Hundred Seventy-Two Dollars ($32,878,272.00) as noted above, will result in Thirty Million Four Hundred Eighty Thousand One Hundred Fifty-Five Dollars ($30,480,155.00) (See EXHIBIT E) being able to be directed into PW 09-11 Water System Reservoirs 2005 Improvements to ensure available funding is on hand to complete procurement of the next set of tanks requiring rehabilitation, repair or relocation; and

WHEREAS, the 2016 bond reallocation as it relates to addressing the tank projects is not intended to fully fund the needs for the remaining tanks as there will still need for funding from the next planned bond borrowing in 2019 however GWA management finds that this bond reallocation is necessary to focus efforts to continue to comply as best as possible with the Court Order project deadlines; and

WHEREAS, GWA management seeks CCU approval to petition the PUC to reallocate the 2013 and 2016 bond as indicated above; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve and authorize the following:

1. The CCU finds the justification for the 2013 and 2016 bond reallocation to be acceptable.
2. The CCU approves Six Million Five Hundred Forty-One Thousand Nine Hundred Ninety-One Dollars ($6,541,991.00) of 2013 Bond proceeds from various CIP line items to be reallocated to WW 11-03 to fund the on-going Baza Gardens Wastewater Sewer Conveyance projects.
3. The CCU further approves Thirty Million Four Hundred Eighty Thousand One Hundred Fifty-Five Dollars ($30,480,155.00) of 2016 bond proceeds from various CIP line items to be reallocated to PW 09-11 Water System Reservoirs 2005 Improvements.
4. The CCU further approves GWA management seek PUC approval for the reallocation of 2013 and 2016 bond funds as indicated herein.

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 22nd day of May 2018.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS **J. GEORGE BAMBA**
Chairperson Secretary

SECRETARY'S CERTIFICATE

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

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DRAFT

Exhibit A (1 of 1)

GUAM WATERWORKS AUTHORITY
2013 Series Bond Project Status
As of April 30,2018

SCHEDULE J

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 04/30/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 04/30/18
Santa Rita Springs Booster Pump Rehab Phase II	$ 100,000	$ 100,000	77,400	22,600	$ 100,000	$ -	$ 22,600
"A" Series Well Transmission Line	$ 400,000	$ 400,000	369,846	(0)	$ 369,846	$ 30,154.27	$ 30,154
Water Booster Pump Station	$ 6,000,000	$ 1,861,000	1,656,428	23,536	$ 1,679,964	$ 181,035.67	$ 204,572
Meter Replacement Program		$ 999,000	996,532	-	$ 996,532	$ 2,467.67	$ 2,468
Barrigada Tank Repair/Replacement	$ 6,000,000	$ 4,987,000	4,924,959	62,041	$ 4,987,000	$ 0.49	$ 62,041
Leak Detection	$ 100,000	$ 20,000	16,916	-	$ 16,916	$ 3,083.75	$ 3,084
Potable Water System Planning	$ 800,000	$ 624,000	603,390	20,610	$ 624,000	$ -	$ 20,610
Implement Ground Water Rule	$ 1,000,000	$ 1,000,000	1,000,000	-	$ 1,000,000	$ -	$ -
Deep Well Rehabilitation	$ 800,000	$ 200,000	189,930	10,071	$ 200,000	$ (0.27)	$ 10,070
New Deep Wells at Down Hard	$ 2,000,000	$ 810,000			$ -	$ 810,000.00	$ 810,000
Master Meters	$ 4,000,000	$ 784,000	531,188	180,872	$ 712,060	$ 71,939.97	$ 252,812
Ugum Water Treatment Plant Intake	$ 1,000,000	$ 982,000	578,858	280,943	$ 859,801	$ 122,199.03	$ 403,142
Water Wells	$ 4,200,000	$ 4,200,000	2,284,474	745,555	$ 3,030,029	$ 1,169,971.27	$ 1,915,527
Water Distribution System	$ 12,000,000	$ 11,151,000	6,718,325	4,194,128	$ 10,912,453	$ 238,547.16	$ 4,432,675
Pressure Zone Realignment /	$ 1,000,000	$ 431,000	336,036	1,074	$ 337,110	$ 93,890.09	$ 94,964
Mechanical/Electrical Equipment	$ 430,000	$ 430,000	328,686	98,112	$ 426,798	$ 3,201.64	$ 101,314
Water Reservoir Internal/External	$ 800,000	$ -			$ -	$ -	$ -
Water System Reservoirs 2005 Improvements	$ 21,000,000	$ 13,878,000	10,857,217	3,020,784	$ 13,878,000	$ (0.30)	$ 3,020,783
Ugum Water Treatment Plant Reservoir	$ 7,000,000	$ 90,000			$ -	$ 90,000.00	$ 90,000
Agana Heights & Chaot Tanks	$ 4,500,000	$ 3,280,000	241,603	1,088,684	$ 1,330,287	$ 1,949,712.96	$ 3,038,397
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 13,500,000	$ 11,605,000	5,398,068	6,206,932	$ 11,605,000	$ 0.30	$ 6,206,932
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 8,000,000	$ -			$ -	$ -	$ -
Assessment of malojloj Elevetad & Yigo Elevated	$ 500,000	$ 485,117	461,813	23,304	$ 485,117	$ -	$ 23,304
Fire Hydrant Replacement Program	$ -	$ -			$ -	$ -	$ -
		$ -					
Wastewater System Planning	$ 800,000	$ 651,000	550,968	99,933	$ 650,900	$ 99.53	$ 100,032
Lift Station Upgrades	$ 5,000,000	$ 946,000	562,785	363	$ 563,149	$ 382,851.50	$ 383,215
Wastewater Collection System Repl/Rehab	$ 6,500,000	$ 780,000	555,848	104,465	$ 660,314	$ 119,686.50	$ 224,152
Baza Gardens STP Replacement		$ 3,114,883	969,594	2,145,275	$ 3,114,869	$ 14.50	$ 2,145,290
Facilities Plan/Design for Umatac-Merizo WWTP		$ 473,000	341,226	30,473	$ 371,699	$ 101,301.00	$ 131,774
Agat/Santa Rita STP Replacement	$ 19,000,000	$ 67,200,000	43,563,454	23,636,545	$ 67,200,000	$ 0.17	$ 23,636,546
Agana WWTP Interim Measures		$ 673,000	611,247	61,753	$ 673,000	$ (0.19)	$ 61,753
Umatac Merizo Replacement	$ 2,000,000	$ -			$ -	$ -	$ -
		$ -					
Wastewater Pump Station Electrical Upgrade	$ 620,000	$ 620,000	91,348	8,513	$ 99,861	$ 520,139.31	$ 528,652
Electrical Upgrade - Water Wells	$ 1,500,000	$ 1,500,000	1,480,769	19,230	$ 1,500,000	$ 0.32	$ 19,231
Electrical Upgrade - Water Booster	$ 325,000	$ 2,000			$ -	$ 2,000.00	$ 2,000
Electrical Upgrade -Water Booster	$ 350,000	$ 200,000	977	-	$ 977	$ 199,023.00	$ 199,023
Electrical Upgrade - Other Water	$ 250,000	$ 150,000	60,700	-	$ 60,700	$ 89,300.00	$ 89,300
SCADA Improvements – Phase 3	$ 1,850,000	$ 923,000	427,949	294,410	$ 722,359	$ 200,641.00	$ 495,051
SCADA Improvements – Phase 4	$ 500,000	$ -			$ -	$ -	$ -
		$ -					$ -
Laboratory Modernization	$ 1,500,000	$ 1,173,000	1,163,037	8,428	$ 1,171,465	$ 1,535.20	$ 9,963
Land Survey	$ 2,000,000	$ 2,000	1,038	15	$ 1,053	$ 947.50	$ 963
General Plant Improvements / Water	$ 2,000,000	$ 2,600,000	1,265,043	1,176,695	$ 2,441,737	$ 158,262.64	$ 1,334,957
Allowance for COI							$ 275,005
Interest Earned							$ 602,317
Total Construction Fund (2013 Series Revenue Bond)	**$ 139,325,000**	**$ 139,325,000**	**$ 89,217,649**	**$ 43,565,345**	**$ 132,782,994**	**$ 6,542,006**	**$ 50,984,672**

PUC's Docket 14-04 dated February 25, 2014

ts are new projects added thru the reallocation of PUC's Docket 15-02

Exhibit B (1 of 1)

GUAM WATERWORKS AUTHORITY
2016 Series Bond Project Status
As of April 30,2018

SCHEDULE L

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 04/30/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 04/30/18
Water Booster Pump Station	$ 4,139,000	$ 4,139,000			$ -	$ 4,139,000	$ 4,139,000
Meter Replacement Program	$ 4,501,000	$ 4,501,000	27,351	122,648.72	$ 150,000	$ 4,351,000	$ 4,473,649
Barrigada Tank Repair/Replacement	$ 1,013,000	$ 1,013,000		-	$ -	$ 1,013,000	$ 1,013,000
Leak Detection	$ 1,180,000	$ 1,180,000		-	$ -	$ 1,180,000	$ 1,180,000
Potable Water System Planning	$ 2,276,000	$ 2,276,000	257,062	619,231.76	$ 876,294	$ 1,399,706	$ 2,018,938
Deep Well Rehabilitation	$ 250,000	$ 250,000		110,013.00	$ 110,013	$ 139,987	$ 250,000
New Deep Wells at Down Hard	$ 1,190,000	$ 1,190,000			$ -	$ 1,190,000	$ 1,190,000
Master Meters	$ 3,616,000	$ 3,616,000	151,539	-	$ 151,539	$ 3,464,461	$ 3,464,461
Ugum Water Treatment Plant Intake	$ 18,000	$ 18,000			$ -	$ 18,000	$ 18,000
Water Wells	$ 2,500,000	$ 2,500,000			$ -	$ 2,500,000	$ 2,500,000
Water Distribution System	$ 2,049,000	$ 49,000			$ -	$ 49,000	$ 49,000
Pressure Zone Realignment /	$ 1,141,000	$ 1,141,000		668,355.20	$ 668,355	$ 472,645	$ 1,141,000
Mechanical/Electrical Equipment	$ 100,000	$ 100,000			$ -	$ 100,000	$ 100,000
Water Reservoir Internal/External	$ 800,000	$ 800,000			$ -	$ 800,000	$ 800,000
Water System Reservoirs 2005 Improvements	$ 42,350,000	$ 28,350,000	1,923,069	12,345,718.67	$ 14,268,787	$ 14,081,213	$ 26,426,931
Ugum Water Treatment Plant Reservoir	$ 6,410,000	$ -			$ -	$ -	$ -
Water Audit Program & Water Loss Control Plan	$ 1,000,000	$ 1,000,000				$ 1,000,000	$ 1,000,000
Agana Heights & Chaot Tanks	$ 1,220,000	$ 1,220,000		500,000.00	$ 500,000	$ 720,000	$ 1,220,000
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 1,895,000	$ 1,895,000		1,822,132.80	$ 1,822,133	$ 72,867	$ 1,895,000
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 10,500,000	$ 7,409,830		7,300,000.00	$ 7,300,000	$ 109,830	$ 7,409,830
Fire Hydrant Replacement Program	$ 2,000,000	$ 2,000,000			$ -	$ 2,000,000	$ 2,000,000
						$ -	
Wastewater System Planning	$ 349,000	$ 349,000	118,587	194,396.23	$ 312,983	$ 36,017	$ 230,413
Lift Station Upgrades	$ 2,404,000	$ 2,404,000	193,511	321,243.53	$ 514,755	$ 1,889,245	$ 2,210,489
Wastewater Collection System Repl/Rehab	$ 2,920,000	$ 2,920,000		555,478.00	$ 555,478	$ 2,364,522	$ 2,920,000
Baza Gardens STP Replacement	$ 16,700,000	$ 29,400,170	10,030,819	19,174,963.36	$ 29,205,782	$ 194,388	$ 19,369,351
Facilities Plan/Design for Umatac-Merizo WWTP	$ 527,000	$ 527,000	225,258	26,846.67	$ 252,105	$ 274,895	$ 301,742
Agat/Santa Rita STP Replacement	$ 3,000,000	$ 3,000,000	902,989	216,710.57	$ 1,119,700	$ 1,880,300	$ 2,097,011
Agana WWTP Interim Measures	$ 827,000	$ 827,000			$ -	$ 827,000	$ 827,000
Umatac Merizo Replacement	$ 8,000,000	$ 20,800,000	2,803,249	17,799,005.51	$ 20,602,254	$ 197,746	$ 17,996,751
						$ -	
Wastewater Pump Station Electrical Upgrade	$ 100,000	$ 100,000			$ -	$ 100,000	$ 100,000
Electrical Upgrade - Water Wells	$ 650,000	$ 650,000			$ -	$ 650,000	$ 650,000
Electrical Upgrade - Water Booster	$ 323,000	$ 323,000			$ -	$ 323,000	$ 323,000
SCADA Improvements – Phase 3	$ 1,177,000	$ 1,177,000	18,000	599,496.51	$ 617,497	$ 559,503	$ 1,159,000
SCADA Improvements – Phase 4	$ 6,500,000	$ 6,500,000			$ -	$ 6,500,000	$ 6,500,000
						$ -	
Laboratory Modernization	$ 1,127,000	$ 1,127,000	1,127,000	-	$ 1,127,000	$ -	$ -
Land Survey	$ 1,998,000	$ 1,998,000	130,370	1,130,153.37	$ 1,260,524	$ 737,476	$ 1,867,630
General Plant Improvements / Water	$ 2,769,463	$ 2,769,463	647,695	896,065.14	$ 1,543,760	$ 1,225,703	$ 2,121,768
Information Technology Integration Improvements	$ 500,000	$ 500,000	244,068	-	$ 244,068	$ 255,932	$ 255,932
Interest Earned							$ 1,007,853
Total Construction Fund (2016 Series Revenue Bond)	**$ 140,019,463**	**$ 140,019,463**	**$ 18,800,568**	**$ 64,402,459**	**$ 83,203,027**	**$ 56,816,436**	**$ 122,226,749**

Exhibit C (1 of 1)

2013 Bond Reallocation			
CIP No.	Name	Additional Funds	Reduction Funds
PW 05-05	"A" Series Well Transmission Line		$ 30,154
PW 05-06	Water Booster Pump Station		$ 181,036
PW 05-07	Meter Replacement Program		$ 2,468
PW 05-09	Leak Detection		$ 3,084
PW 05-14	New Deep Wells at Down Hard		$ 810,000
PW 05-16	Master Meters		$ 71,940
PW 09-01	Ugum Water Treatment Plant Intake		$ 122,199
PW 09-02	Water Wells		$ 1,169,971
PW 09-03	Water Distribution System		$ 238,547
PW 09-04	Pressure Zone Realignment /		$ 93,890
PW 09-08	Mechanical/Electrical Equipment		$ 3,201
PW 11-02	Ugum Water Treatment Plant Reservoir		$ 90,000
PW 12-04	Agana Heights & Chaot Tanks		$ 1,949,713
WW 05-04	Wastewater System Planning		$ 99
WW 09-01	Lift Station Upgrades		$ 382,852
WW 09-06	Wastewater Collection System Repl/Rehab		$ 119,687
WW 11-03	Baza Gardens STP Replacement	$ 6,541,991	
WW 11-04	Facilities Plan/Design for Umatac-Merizo WWTP		$ 101,301
EE 09-01	Wastewater Pump Station Electrical Upgrade		$ 520,139
EE 09-03	Electrical Upgrade - Water Booster		$ 2,000
EE 09-04	Electrical Upgrade -Water Booster		$ 199,023
EE 09-05	Electrical Upgrade - Other Water		$ 89,300
EE 09-08	SCADA Improvements – Phase 3		$ 200,641
MC 05-01	Laboratory Modernization		$ 1,535
MC 05-02	Land Survey		$ 948
MC 09-01	General Plant Improvements / Water		$ 158,263
		$ 6,541,991	$ 6,541,991

14.5

$ 6,542,006

Exhibit D (1 of 1)

GUAM WATERWORKS AUTHORITY
2016 Series Bond Project Status
As of April 30,2018

SCHEDULE L

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 04/30/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 04/30/18
Water Booster Pump Station	$ 4,139,000	$ 4,139,000			$ -	$ 4,139,000	$ 4,139,000
Meter Replacement Program	$ 4,501,000	$ 4,501,000	27,351	122,648.72	$ 150,000	$ 4,351,000	$ 4,473,649
Barrigada Tank Repair/Replacement	$ 1,013,000	$ 1,013,000		-	$ -	$ 1,013,000	$ 1,013,000
Leak Detection	$ 1,180,000	$ 1,180,000		-	$ -	$ 1,180,000	$ 1,180,000
Potable Water System Planning	$ 2,276,000	$ 2,276,000	257,062	619,231.76	$ 876,294	$ 1,399,706	$ 2,018,938
Deep Well Rehabilitation	$ 250,000	$ 250,000		110,013.00	$ 110,013	$ 139,987	$ 250,000
New Deep Wells at Down Hard	$ 1,190,000	$ 1,190,000			$ -	$ 1,190,000	$ 1,190,000
Master Meters	$ 3,616,000	$ 3,616,000	151,539	-	$ 151,539	$ 3,464,461	$ 3,464,461
Ugum Water Treatment Plant Intake	$ 18,000	$ 18,000			$ -	$ 18,000	$ 18,000
Water Wells	$ 2,500,000	$ 2,500,000			$ -	$ 2,500,000	$ 2,500,000
Water Distribution System	$ 2,049,000	$ 49,000			$ -	$ 49,000	$ 49,000
Pressure Zone Realignment /	$ 1,141,000	$ 1,141,000		668,355.20	$ 668,355	$ 472,645	$ 1,141,000
Mechanical/Electrical Equipment	$ 100,000	$ 100,000			$ -	$ 100,000	$ 100,000
Water Reservoir Internal/External	$ 800,000	$ 800,000			$ -	$ 800,000	$ 800,000
Water System Reservoirs 2005 Improvements	$ 42,350,000	$ 28,350,000	1,923,069	12,345,718.67	$ 14,268,787	$ 14,081,213	$ 26,426,931
Ugum Water Treatment Plant Reservoir	$ 6,410,000	$ -			$ -	$ -	$ -
Water Audit Program & Water Loss Control Plan	$ 1,000,000	$ 1,000,000				$ 1,000,000	$ 1,000,000
Agana Heights & Chaot Tanks	$ 1,220,000	$ 1,220,000		500,000.00	$ 500,000	$ 720,000	$ 1,220,000
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 1,895,000	$ 1,895,000		1,822,132.80	$ 1,822,133	$ 72,867	$ 1,895,000
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 10,500,000	$ 7,409,830		7,300,000.00	$ 7,300,000	$ 109,830	$ 7,409,830
Fire Hydrant Replacement Program	$ 2,000,000	$ 2,000,000			$ -	$ 2,000,000	$ 2,000,000
						$ -	
Wastewater System Planning	$ 349,000	$ 349,000	118,587	194,396.23	$ 312,983	$ 36,017	$ 230,413
Lift Station Upgrades	$ 2,404,000	$ 2,404,000	193,511	321,243.53	$ 514,755	$ 1,889,245	$ 2,210,489
Wastewater Collection System Repl/Rehab	$ 2,920,000	$ 2,920,000		555,478.00	$ 555,478	$ 2,364,522	$ 2,920,000
Baza Gardens STP Replacement	$ 16,700,000	$ 29,400,170	3,488,813	19,174,963.36	$ 22,663,776	$ 6,736,394	$ 25,911,357
Facilities Plan/Design for Umatac-Merizo WWTP	$ 527,000	$ 527,000	225,258	26,846.67	$ 252,105	$ 274,895	$ 301,742
Agat/Santa Rita STP Replacement	$ 3,000,000	$ 3,000,000	902,989	216,710.57	$ 1,119,700	$ 1,880,300	$ 2,097,011
Agana WWTP Interim Measures	$ 827,000	$ 827,000			$ -	$ 827,000	$ 827,000
Umatac Merizo Replacement	$ 8,000,000	$ 20,800,000	2,803,249	17,799,005.51	$ 20,602,254	$ 197,746	$ 17,996,751
						$ -	
Wastewater Pump Station Electrical Upgrade	$ 100,000	$ 100,000			$ -	$ 100,000	$ 100,000
Electrical Upgrade - Water Wells	$ 650,000	$ 650,000			$ -	$ 650,000	$ 650,000
Electrical Upgrade - Water Booster	$ 323,000	$ 323,000			$ -	$ 323,000	$ 323,000
SCADA Improvements – Phase 3	$ 1,177,000	$ 1,177,000	18,000	599,496.51	$ 617,497	$ 559,503	$ 1,159,000
SCADA Improvements – Phase 4	$ 6,500,000	$ 6,500,000			$ -	$ 6,500,000	$ 6,500,000
						$ -	
Laboratory Modernization	$ 1,127,000	$ 1,127,000	1,127,000	-	$ 1,127,000	$ -	$ -
Land Survey	$ 1,998,000	$ 1,998,000	130,370	1,130,153.37	$ 1,260,524	$ 737,476	$ 1,867,630
General Plant Improvements / Water	$ 2,769,463	$ 2,769,463	647,695	896,065.14	$ 1,543,760	$ 1,225,703	$ 2,121,768
Information Technology Integration Improvements	$ 500,000	$ 500,000	244,068	-	$ 244,068	$ 255,932	$ 255,932
Interest Earned							$ 1,007,853
Total Construction Fund (2016 Series Revenue Bond)	**$ 140,019,463**	**$ 140,019,463**	**$ 12,258,562**	**$ 64,402,459**	**$ 76,661,021**	**$ 63,358,442**	**$ 128,768,755**

2016 Bond Reallocation			
CIP No.	Name	Additional Funds	Reduction Funds
PW 05-06	Water Booster Pump Station		$ 4,139,000
PW 05-07	Meter Replacement Program		$ 3,101,000
PW 05-08	Barrigada Tank Repair/Replacement		$ 1,013,000
PW 05-09	Leak Detection		$ 1,080,000
PW 05-10	Potable Water System Planning		$ 1,399,706
PW 05-16	Master Meters		$ 1,464,461
PW 09-01	Ugum Water Treatment Plant Intake		$ 18,000
PW 09-03	Water Distribution System		$ 49,000
PW 09-08	Mechanical/Electrical Equipment		$ 100,000
PW 09-11	Water System Reservoirs 2005 Improvements	$ 30,480,170.00	
PW 12-01	Water Audit Program & Water Loss Control Plan		$ 450,000
PW 12-05	Tank Major Repair Yigo#1 Mangilao#2 Agat#2		$ 72,867
PW 12-06	Tank Major Repair Yigo#1 Mangilao#2 Agat#2		$ 109,830
PW 14-01	Fire Hydrant Replacement Program		$ 800,000
WW 05-04	Wastewater System Planning		$ 36,017
WW 09-01	Lift Station Upgrades		$ 689,245
WW 09-06	Wastewater Collection System Repl/Rehab		$ 1,864,522
WW 11-03	Baza Gardens STP Replacement		$ 6,736,394
WW 11-04	Facilities Plan/Design for Umatac-Merizo WWTP		$ 274,895
WW 11-08	Agat/Santa Rita STP Replacement		$ 997,669
WW 12-03	Agana WWTP Interim Measures		$ 827,000
EE 09-01	Wastewater Pump Station Electrical Upgrade		$ 100,000
EE 09-02	Electrical Upgrade - Water Wells		$ 650,000
EE 09-03	Electrical Upgrade - Water Booster		$ 323,000
EE 09-08	SCADA Improvements – Phase 3		$ 99,503
EE 09-09	SCADA Improvements – Phase 4		$ 2,121,882
MC 05-02	Land Survey		$ 737,476
MC 09-01	General Plant Improvements / Water		$ 1,225,703
		$ 30,480,170	$ 30,480,170

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 32-FY2018
Relative to Approval of a Contract for Design and Construction of the GWA Interceptor Sewer Refurbishment Project, Northern District, GWA Project No. S-18-003-OEA, (OEA Grant OCON 676-16-01)

What is the project's objective and is it necessary and urgent?
The objective of the Interceptor Sewer Refurbishment project is to maintain wastewater collection service to Andersen Air Force Base, provide service to the military forces being relocated to Guam, and to mitigate impacts to groundwater resources. The sewer refurbishment project is necessary to protect the groundwater aquifer by improving the wastewater collection system to ensure that the relocation of military assets to Guam do not adversely affect the civilian infrastructure or resources. The installation is urgent to meet the scheduled military relocation.

Where is the location?
The interceptor sewer is located near the entrance to Andersen AFB at the north gate and runs generally west along Route 9 and south along Route 3 and terminates at the Northern District Wastewater Treatment Plant. The sewer comprises approximately 8.4 miles of 18-inch to 42-inch diameter pipe.

How much will it cost?
GWA Management seeks CCU approval for the proposed bid price of Twenty-Two Million Eight Hundred Ninety-Seven Thousand Eight Hundred Eight Dollars ($22,897,808.00) plus a ten percent (10%) contingency of Two Million Two Hundred Eighty-Nine Thousand Seven Hundred Eighty Dollars and Eighty Cents ($2,289,780.80) to bring the total authorized funding amount requested to Twenty-Five Million One Hundred Eighty-Seven Thousand Five Hundred Eighty-Eight Dollars and Eighty Cents ($25,187,588.80)

When will it be completed?
The anticipated completion of the construction activities by the contractor is October 2020, however this is dependent on weather conditions.

What is the funding source?
Funding for the Interceptor Sewer Refurbishment project is from the General Assistance Grant for water and wastewater improvements in support of the relocation of U.S. Marines and their dependents to Guam OEA Grant No. OCON676-16-01, dated August 26, 2016, for $30,600,000.

The RFP/BID responses (if applicable):
- 13 firms registered for and picked up the bidding documents
- 3 firms submitted bids
- Core Tech-Hawaiian Dredging, LLC is recommended as the lowest priced, responsive and responsible bidder.

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

RESOLUTION NO. 32–FY2018

RELATIVE TO APPROVAL OF CONTRACT FOR DESIGN AND CONSTRUCTION OF THE GWA INTERCEPTOR SEWER REFURBISHMENT PROJECT, NORTHERN DISTRICT, GWA PROJECT NO. S18-003-OEA (OEA GRANT OCO N676-16-01)

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, the U.S. Department of Defense, Office of Economic Adjustment awarded to GWA a General Assistance Grant (OCON676-16-01) for community investment August 26, 2016 for $30,600,000, of which funding for the interceptor sewer refurbishment is included; and

WHEREAS, the General Assistance Grant is to be used for water and wastewater improvements in support of the relocation of U.S. Marines and their dependents to Guam; and

WHEREAS, the report "Final Guam Water and Wastewater Assessment Report in Support of the Economic Adjustment Committee Implementation Plan," (NAVFAC, Department of the Navy, February 2015) has recommended the refurbishment of GWA's Interceptor Sewer from the Andersen Air Force Base (AAFB) gate on Rt. 9 to the Northern District Wastewater Treatment Plant; and

WHEREAS, the refurbishment is necessary to prevent sewer collapses and the resultant loss of wastewater sewer services to proposed Marine Corps housing at AAFB and cantonment at Finegayan; and

WHEREAS, GWA has advertised an Invitation for Bid IFB-03-ENG-2018 dated January 23, 2018, soliciting bid proposals from experienced, responsible, and responsive bidders to design and construct refurbishments to the interceptor sewer through a multi-step bid; and

WHEREAS, the Pre-Bid Conference was attended by thirteen (13) interested firms and thirteen (13) firms picked up the appropriate documents on flash drive, from which GWA received bid submittals from three (3) firms before the bid submittal deadline (See EXHIBIT A – Abstract of Bids); and

WHEREAS, Step 1 of the multi-step bid was conducted by GWA where firms presented their qualifications and a technical offer on March 15, 2018; and

WHEREAS, GWA Engineering evaluated the proposals and technical offers and issued a Qualified Bidders List on March 19, 2018 qualifying all three (3) firms that submitted technical offers and requested them to submit price proposals by April 26, 2018 as Step 2 of the multi-step bid; and

WHEREAS, GWA Engineering and the Program Manager (PM/CM) analyzed all bid price proposals received and determined that Core Tech-Hawaiian Dredging, LLC, who submitted the lowest bid as being the responsive and responsible bidder and met all the bid requirements set forth by GWA (See EXHIBIT B – Recommendation Memorandum); and

WHEREAS, GWA Management finds the Core Tech-Hawaiian Dredging, LLC bid proposal of Twenty-Two Million Eight Hundred Ninety-Seven Thousand Eight Hundred Eight Dollars ($22,897,808.00) to be acceptable (See EXHIBIT C – Bid Proposal); and

WHEREAS, GWA Management is seeking approval to enter into contract with Core Tech-Hawaiian Dredging, LLC for IFB-03-ENG-2018 in the amount Twenty-Two Million Eight Hundred Ninety-Seven Thousand Eight Hundred Eight Dollars ($22,897,808.00), and

WHEREAS, GWA Management further seeks CCU approval of a ten percent (10%) contingency of Two Million Two Hundred Eighty-Nine Thousand Seven Hundred Eighty Dollars

and Eighty Cents (2,289,780.80) to bring the total authorized funding to Twenty-Five Million One Hundred Eighty-Seven Thousand Five Hundred Eighty-Eight Dollars and Eighty Cents ($25,187,588.80); and

WHEREAS, the funding source for the project will be from the General Assistance Grant (OCON676-16-01); and

WHEREAS, GWA management intends to inform the Public Utilities Commission of the project and contract amount in accordance to the PUC Contract Review Protocol given the funding source is a federal grant; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms of the bid proposal submitted by Core Tech-Hawaiian Dredging, LLC are fair and reasonable.
3. The CCU hereby authorizes the management of GWA to accept the bid from Core Tech-Hawaiian Dredging, LLC attached hereto as EXHIBIT C, and which is also incorporated into this Resolution in its entirety.
4. The CCU hereby authorizes the management of GWA to execute an Agreement with Core Tech-Hawaiian Dredging, LLC in the amount of. Twenty-Two Million Eight Hundred Ninety-Seven Thousand Eight Hundred Eight Dollars ($22,897,808.00)
5. The CCU hereby authorizes the funding total of Twenty-Two Million Eight Hundred Ninety-Seven Thousand Eight Hundred Eight Dollars ($22,897,808.00), along with a ten percent (10%) contingency of Two Million Two Hundred Eighty-Nine Thousand Seven Hundred Eighty Dollars and Eighty Cents (2,289,780.80), bringing the total requested funding amount to Twenty-Five Million One Hundred Eighty-Seven Thousand Five Hundred Eighty-Eight Dollars and Eighty Cents ($25,187,588.80).

6. The CCU hereby further approves the funding source for the project will be from the General Assistance Grant (OCON676-16-01).
7. The CCU authorizes GWA management to inform the PUC of the project and contract cost per the PUC Contract Review Protocol.

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 22nd day of May 2018.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS **J. GEORGE BAMBA**
Chairperson Secretary

SECRETARY'S CERTIFICATE

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

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Exhibit A - Abstract of Bids (1 of 2)

Guam Waterworks Authority **Interceptor Sewer Refurbishment** **Bid Tab** **4/26/2018**

				Engineer's Estimate		Core Tech		Granite		Insituform	
Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price	Bid Unit Price	Bid Price	Bid Unit Price	Bid Price	Bid Unit Price	Bid Price
1	Mobilization, Insurance, Bonds, and Demobilization	LS	1			$ 2,254,477.84	$ 2,254,477.84	$ 2,100,000.00	$ 2,100,000.00	$ 2,079,800.00	$ 2,079,800.00
2	All work to provide survey and legal descriptions for preparation of permanent easements on Ancestral Lands	LS	1			$ 38,795.00	$ 38,795.00	$ 40,000.00	$ 40,000.00	$ 21,100.00	$ 21,100.00
3	All work required for field verification, design and Design Professional Services, including but not limited to design submittals, flow management plans, meetings, permitting assistance, coordination, and other services to provide full design support for the project	LS	1			$ 1,528,978.00	$ 1,528,978.00	$ 1,871,284.00	$ 1,871,284.00	$ 819,700.00	$ 819,700.00
4	Archaeological Survey and Report for complete project	LS	Allowance	$40,000	$40,000	$ 40,000.00	$40,000	$ 40,000.00	$40,000	$ 40,000.00	$40,000
5	Building Permit Fees	LS	Allowance	$85,000	$85,000	$ 85,000.00	$85,000	$ 85,000.00	$85,000	$ 85,000.00	$85,000
6	Plan Check Fee	LS	Allowance	$55,000	$55,000	$ 55,000.00	$55,000	$ 55,000.00	$55,000	$ 55,000.00	$55,000
7	Highway Encroachment Permit Fee	LS	Allowance	$20,000	$20,000	$ 20,000.00	$20,000	$ 20,000.00	$20,000	$ 20,000.00	$20,000
8	ProjectWise Construction Management Software	EA	Allowance	$25,000	$25,000	$ 25,000.00	$25,000	$ 25,000.00	$25,000	$ 25,000.00	$25,000
9	Furnish new 12-inch diameter HDPE bypass piping, to be transferred to GWA at completion of project	LF	5,000			$ 26.03	$ 130,147.00	$ 15.00	$ 75,000.00	$ 29.00	$ 145,000.00
10	Furnish new 18-inch diameter HDPE bypass piping, to be transferred to GWA at completion of project	LF	5,000			$ 50.42	$ 252,096.00	$ 30.00	$ 150,000.00	$ 47.00	$ 235,000.00
11	Sum of all work associated with unexploded ordinance survey and compliance on DoD	LS	1			$ 104,148.00	$ 104,148.00	$ 650,000.00	$ 650,000.00	$ 215,900.00	$ 215,900.00
12	Sum of all work associated with unexploded ordinance survey and compliance off DoD	LS	1			$ 6,719.00	$ 6,719.00	$ 60,000.00	$ 60,000.00	$ 54,700.00	$ 54,700.00
	Phase 1 Bid Items (Manhole 2492 to Manhole 6016)										
13	Sum of all work to make repair at 178 feet downstream of MH	LS	1			$ 38,891.00	$ 38,891.00	$ 500.00	$ 500.00	$ 27,300.00	$ 27,300.00
14	Sum of all work to make repair at 109 feet upstream of MH	LS	1			$ 38,891.00	$ 38,891.00	$ 50,000.00	$ 50,000.00	$ 21,900.00	$ 21,900.00
15	Furnish and install 30-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work	LF	3,779			$ 333.64	$ 1,260,841.05	$ 400.00	$ 1,511,600.00	$ 522.00	$ 1,972,638.00
16	Furnish and install 36-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work	LF	7,397			$ 403.42	$ 2,984,105.14	$ 470.00	$ 3,476,590.00	$ 501.00	$ 3,705,897.00
17	Sum of all work to Rehabilitate Manholes	EA	29			$ 11,902.52	$ 345,173.00	$ 25,000.00	$ 725,000.00	$ 5,800.00	$ 168,200.00
18	Furnish and Install New Manhole to replace MH 6018 with new 24-inch diameter PVC stub-out to accommodate Route 3 widening project, complete in	LS	1			$ 22,827.00	$ 22,827.00	$ 50,000.00	$ 50,000.00	$ 71,100.00	$ 71,100.00
19	Record Drawings	LS	1			$ 5,282.00	$ 5,282.00	$ 500.00	$ 500.00	$ 15,300.00	$ 15,300.00
	Phase 2 Bid Items (Manhole 6016 to Manhole 5916)										
20	Sum of all work to make repair at 6 feet downstream of MH	LS	1			$ 38,891.00	$ 38,891.00	$ 500.00	$ 500.00	$ 27,300.00	$ 27,300.00
21	Sum of all work to make repair at 102 feet downstream of MH	LS	1			$ 38,891.00	$ 38,891.00	$ 80,000.00	$ 80,000.00	$ 27,300.00	$ 27,300.00
22	Sum of all work to make repair at 220 feet downstream of MH	LS	1			$ 38,891.00	$ 38,891.00	$ 500.00	$ 500.00	$ 27,300.00	$ 27,300.00
23	Sum of all work to make repair at 98 feet upstream of MH 5917	LS	1			$ 38,891.00	$ 38,891.00	$ 500.00	$ 500.00	$ 16,400.00	$ 16,400.00
24	Sum of all work to make repair at 202 feet upstream of MH	LS	1			$ 38,891.00	$ 38,891.00	$ 500.00	$ 500.00	$ 16,400.00	$ 16,400.00
25	Furnish and install 18-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work	LF	1,071			$ 268.49	$ 287,553.00	$ 340.00	$ 364,140.00	$ 870.00	$ 931,770.00
26	Furnish and install 24-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work	LF	2,157			$ 305.25	$ 658,425.98	$ 350.00	$ 754,950.00	$ 1,029.00	$ 2,219,553.00
27	Furnish and install 30-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work	LF	13,763			$ 367.50	$ 5,057,869.47	$ 400.00	$ 5,505,200.00	$ 469.00	$ 6,454,847.00
28	Furnish and install 36-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work	LF	3,199			$ 431.27	$ 1,379,620.89	$ 470.00	$ 1,503,530.00	$ 771.00	$ 2,466,429.00
29	Sum of all work to Rehabilitate Manholes	EA	70			$ 11,231.66	$ 786,216.00	$ 25,000.00	$ 1,750,000.00	$ 5,800.00	$ 406,000.00
30	Record Drawings	LS	1			$ 9,356.00	$ 9,356.00	$ 500.00	$ 500.00	$ 15,300.00	$ 15,300.00
	Phase 3A Bid Items (Manhole 2511 to Manhole 2492)										
31	Furnish and install 30-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work	LF	3,077			$ 345.42	$ 1,062,858.88	$ 370.00	$ 1,138,490.00	$ 340.00	$ 1,046,180.00

Exhibit A - Abstract of Bids (2 of 2)

Guam Waterworks Authority **Interceptor Sewer Refurbishment** **Bid Tab** **4/26/2018**

				Engineer's Estimate		Core Tech		Granite		Insituform	
Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price	Bid Unit Price	Bid Price	Bid Unit Price	Bid Price	Bid Unit Price	Bid Price
32	Furnish and install 36-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work	LF	3,932			$ 365.36	$ 1,436,584.90	$ 450.00	$ 1,769,400.00	$ 225.00	$ 884,700.00
33	Sum of all work to Rehabilitate Manholes	EA	23			$ 9,960.35	$ 229,088.00	$ 25,000.00	$ 575,000.00	$ 5,800.00	$ 133,400.00
34	Record Drawings	LS	1			$ 4,770.00	$ 4,770.00	$ 500.00	$ 500.00	$ 6,800.00	$ 6,800.00
Phase 3B Bid Items (Northern District WWTP Influent to Manhole 2511)											
35	Furnish and install 30-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work	LF	433			$ 287.11	$ 124,319.02	$ 370.00	$ 160,210.00	$ 860.00	$ 372,380.00
36	Furnish and install 42-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work	LF	5611			$ 403.88	$ 2,266,185.83	$ 390.00	$ 2,188,290.00	$ 326.00	$ 1,829,186.00
37	Sum of all work to Rehabilitate Manholes	EA	16			$ 9,960.25	$ 159,364.00	$ 25,000.00	$ 400,000.00	$ 5,800.00	$ 92,800.00
38	Record Drawings	LS	1			$ 4,770.00	$ 4,770.00	$ 500.00	$ 500.00	$ 5,800.00	$ 5,800.00
BASE BID Total of All Unit Price Bid Items					$ 35,534,558.00		**$ 22,897,808.00**		**$ 27,178,184.00**		**$ 26,758,380.00**
Bid Alternate A					$ 30,585,767.00		$ 20,989,504.00		$ 23,856,001.00		$ 25,222,549.00
Bid Alternate B					$ 24,471,257.00		$ 19,123,798.00		$ 21,246,013.00		$ 23,419,705.00

EXHIBIT B - Recommendation Memorandum

Memorandum

414 Soledad Avenue, Suite 602
Hagatna, Guam 96910

T: 671.300.4220

Prepared for:	Guam Waterworks Authority
Project Title:	GWA Interceptor Refurbishment Project, Northern District
Project No.:	S18-003-OEA (OEA Grant OCON 676-16-001)
Subject:	Bid Evaluation and Recommendation of Award
Date:	May 8, 2018
To:	Miguel C. Bordallo, P.E., General Manager, GWA
From:	William P. Gilman, P.E., Brown and Caldwell
Copy to:	Gloria Bensan, GWA

This memorandum summarizes the evaluation of Multi-Step Bids received for the GWA Interceptor Sewer Refurbishment Project, Northern District, GWA IFB-03-ENG-2018 and presents recommendation for award.

GWA issued an Invitation For Bid for Technical Proposals (Step 1) on January 23, 2018. The following Design-Build firms submitted Technical Proposals on February 13, 2018:

- Core Tech-Hawaiian Dredging, LLC
- Granite Construction Company Guam
- Insituform Technologies, LLC

Scoring and evaluation of Step 1 Technical Proposals was performed by a GWA Evaluation Committee that found all proposals acceptable and instructed all three firms to submit price proposals and required documentation for Step 2.

Price Proposals were received from all three firms on April 26, 2018 and publicly read aloud.

Brown and Caldwell tabulated the Bids, checked quantities and extensions for accuracy (see attached Bid Tabulation sheet) and finds Core Tech-Hawaiian Dredging, LLC the apparent low bidder with a Total Base Bid Price of $22,897.808.00. Further examination of Core Tech-Hawaiian Dredging, LLC's bid indicated no unbalance, where prices are out of proportion or unusually low. Consequently, Brown and Caldwell believes Core Tech-Hawaiian Dredging, LLC to be the lowest, responsive, responsible bidder and recommends issuance of a Notice of Award.

EXHIBIT C - Bid Proposal

Core Tech - Hawaiian Dredging, LLC

388 South Marine Corps Drive, Suite 400, Tamuning, Guam 96913 T 671 473 5000 • F 671 473 5500

April 26, 2018

Mr. Miguel C. Bordallo, P.E.
General Manager
Guam Waterworks Authority
Gloria B. Nelson Public Service Building
688 Route 15
Mangilao, GU 96913

Re: Multi-Step Bid for the Design and Construction of the GWA Interceptor Sewer Refurbishment Project Northern – Technical Proposal, IFB-03-ENG-2018, GWA Project No. S18-003-OEA

Hafa Adai Mr. Bordallo,

Core Tech-Hawaiian Dredging, LLC (CHL) is pleased to submit Step 2 Price Proposal to Guam Waterworks Authority in response to this Multi-Step Bid for the Design and Construction of the GWA Interceptor Sewer Refurbishment Project, Northern District, IFB-03-ENG-2018, GWA Project No. S18-003-OEA, offering our team expertise and commitment in completing the requirements of this solicitation.

The undersigned hereby acknowledges receipt of Addendum 1, 2, 3, 4, 5, 6 & 7.

As required by the IFB, the following is authorized to negotiate on the Offeror's behalf in connection with this solicitation as stated on page 10 of CHL's Operating Agreement provided in Step 1 and which is found in the last section entitled 'Forms/Documents Required by Bid/Addendum Not Referred to Above':

Name: Conchita D. Bathan
Title: Member of Management Committee
Phone: (671) 473-5000
Fax: (671) 473-5500
Email: chit.bathan@coretechintl.com

Core Tech-Hawaiian Dredging, LLC looks forward to delivering this project for the Guam Waterworks Authority. Should you have any questions regarding our Step 2 proposal, please contact the undersigned through email or telephone.

Sincerely,

Conchita D. Bathan
Member, Management Committee
and CTI Chief Executive Officer

Cc: Ho S. Eun, CTI Chairman
J. Majkut, HDCC President
Kenneth Rekdahl P.E., DCA Vice President

This proposal includes data that shall not be disclosed outside the Government and shall not be duplicated, used, or disclosed - in whole or in part - for any purpose other than to evaluate this proposal. If, however, a contract is awarded to this offerors as a result of - or in connection with - the submission of this data, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction is contained in this proposal.

Core Tech - Hawaiian Dredging, LLC

GUAM WATERWORKS AUTHORITY
Interceptor Sewer Refurbishment Project, Northern district
GWA Project No. IFB-03-ENG-2018, OEA Grant OCON676-16-01

PRICE PROPOSAL (Step 2)

Core Tech-Hawaiian Dredging, LLC
388 South Marine Corps Drive, STE 400
Tamuning, Guam 96913
Phone: (671) 473-5000
Fax: (671) 473-5500

"Core Tech-Hawaiian Dredging, LLC (CHL) agrees to abide by all terms, conditions, and provisions included in **Guam Waterworks Authority's Invitation for Project No. IFB-03-ENG-2018 GWA Interceptor Sewer Refurbishment Project** and agrees to furnish any or all items upon which prices are offered at the price set opposite each item."

The following person is authorized to sign this proposal and negotiate on CHL's behalf with the Government in connection with this proposal:

Ms. Conchita D. Bathan
Authorized Representative and
Member of Management Committee for
Core Tech-Hawaiian Dredging, LLC
E-mail: chit.bathan@coretechintl.com

4/26/2018

Conchita D. Bathan Date

This proposal includes data that shall not be disclosed outside the Government and shall not be duplicated, used, or disclosed - in whole or in part - for any purpose other than to evaluate this proposal. If, however, a contract is awarded to this offeror as a result of - or in connection with - the submission of this data, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction is contained in this proposal.



Core Tech - Hawaiian Dredging, LLC

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Procurement Checklist

Bid Bond

Bid Proposal and Bid Schedule (Bid Form - Section 00410)

Certification of Bidder Regarding Equal Employment Opportunity (Appendix H)

Special Instructions to Bidders – Estimated Quantities (Appendix K)

Forms/Documents Required by Bid/Addendum Not Referred to Above

CHL Operating Agreement (Page 10 – Evidence of Authority to Sign)
with Company Resolution for GWA IFB-03-ENG-2018

List of Proposed Subcontractors and Proposed Suppliers

Acknowledgement of Addenda

Use or disclosure of data contained on this sheet is subject to the restriction on the cover page of this proposal.

BID BOND

Any singular reference to Bidder, Surety, Owner or other party shall be considered plural where applicable.

BIDDER *(Name and Address)*:
Core Tech - Hawaiian Dredging, LLC
388 South Marine Corps Drive, Suite 400
Tamuning, Guam 96913

SURETY *(Name, and Address of Principal Place of Business)*:
Fidelity and Deposit Company of Maryland
1299 Zurich Way, 5th Floor
Schaumburg, IL 60196 - 1056

OWNER *(Name and Address)*:
Guam Waterworks Authority
Gloria B. Nelson Public Service Building
688 Route 15, Mangilao, Guam 96913

BID
Bid Due Date: April 26, 2018
Description *(Project Name— Include Location)*
GWA Interceptor Sewer Refurbishment Project, Northern District
Bid No. IFB-03-ENG-2018
GWA Project No. S18-003-OEA

BOND
Bond Number: N/A
Date: April 4, 2018
Penal sum ***Fifteen Percent (15%) of Bid Amount*** (Words) $ ---------- (Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

BIDDER	**SURETY**
Core Tech - Hawaiian Dredging, LLC (Seal)	Fidelity and Deposit Company of Maryland (Seal)
Bidder's Name and Corporate Seal	Surety's Name and Corporate Seal
By: _____	By: _____
Signature	Signature (Attach Power of Attorney)
Conchita D. Bathan	Pamela A. Cruz
Print Name	Print Name
Member, Management Committee Chief Executive Officer	Attorney-In-Fact
Title	Title
Attest: _____	Attest: _____
Signature Johann Cruz	Signature

Countersigned by: _____
Takagi & Associates, Inc.
Resident General Agent

Title Chief Financial Officer

Title

Note: Addresses are to be used for giving any required notice.
Provide execution by any additional parties, such as joint venturers, if necessary.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.

2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.

3. This obligation shall be null and void if:

3.1 Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or

3.2 All Bids are rejected by Owner, or

3.3 Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).

4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.

5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.

6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after the Bid due date.

7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.

8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.

9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.

10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.

11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND
POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Maryland, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Maryland (herein collectively called the "Companies"), by **MICHAEL BOND, Vice President,** in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint **Hidenobu TAKAGI, Pamela A. CRUZ and Jo TAKAGI, all of Tumon, Guam, EACH** its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: **any and all bonds and undertakings,** and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York., the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland., and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland., in their own proper persons.

The said Vice President does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article V, Section 8, of the By-Laws of said Companies, and is now in force.

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said **ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND,** this 23rd day of November, A.D. 2016.

ATTEST:

ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND

By: _____

Secretary
Eric D. Barnes

_____

Vice President
Michael Bond

State of Maryland
County of Baltimore

On this 23rd day of November, A.D. 2016, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **MICHAEL BOND, Vice President, and ERIC D. BARNES, Secretary,** of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, deposeth and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year first above written.

_____

Constance A. Dunn, Notary Public
My Commission Expires: July 9, 2019

POA-F 016-0012A

GOVERNMENT OF GUAM
DEPARTMENT OF REVENUE AND TAXATION
OFFICE OF THE BANKING AND INSURANCE COMMISSIONER

CERTIFICATE OF AUTHORITY

RENEWAL 239

Know All Men By These Presents That:

Name **FIDELITY AND DEPOSIT COMPANY OF MARYLAND**

Address 1400 AMERICAN LANE
SCHAUMBURG IL 60196 1056

Classes of Insurance Authorized

ACCIDENT & HEALTH
FIDELITY & SURETY
FIRE
MARINE
MISCELLANEOUS
MOTOR VEHICLE
PROP. DAMAGE & LIABILITY
WORKMENS COMP

Having complied with the Insurance Law of Guam, is hereby authorized to transact as an insurer, the above named Classes of Insurance in Guam from the 01 ***day of*** July , ***20*** 17 , ***to the*** 01 ***day of*** July , ***20*** 18 , ***unless authority is revoked for failure to comply with the law.***

General Agent(s):

TAKAGI & ASSOCIATES INC
CASSIDY'S ASSOCIATED INSURERS INC

In Witness Whereof, I have hereunto subscribed my name officially and have hereon impressed my Seal of Office at the City of Hagatña, Guam on this 06 ***day of*** June ***A.D. 20*** 17.

Artemio B Ilagan

ARTEMIO B. ILAGAN
Banking and Insurance Commissioner

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GWA Work Session - May 15, 2018 - ISSUES FOR DECISION

SECTION 00410

BID FORM

GWA Interceptor Sewer Refurbishment

GWA IFB-03-ENG-2018

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ARTICLE 9 – Bid Submittal 11

ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

Guam Waterworks Authority
GWA Engineering Division, Rm 202
Gloria B. Nelson Public Service Building
688 Route 15
Mangilao, GU 96913

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER'S ACKNOWLEDGEMENTS

2.01 Bidder accepts all the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 120 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

Addendum No.	Addendum, Date
1	February 8, 2018
2	February 23, 2018
3	March 2, 2018

Refer to attachment for additional Addendum No./Date List.

B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.

E. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.

F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.

I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.

J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the e execution of the Contract.

ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
1	Mobilization, Insurance, Bonds, and Demobilization	LS	1	2,254,477.84	$2,254,477.84
2	All work to provide survey and legal descriptions for preparation of permanent easements on Ancestral Lands.	LS	1	38,795.00	$38,795.00
3	All work required for field verification, design and Design Professional Services, including but not limited to design submittals, flow management plans, meetings, permitting assistance, coordination, and other services to provide full design support for the project	LS	1	1,528,978.00	$1,528,978.00
4	Archaeological Survey and Report for complete project	LS	Allowance	40,000.00	$40,000
5	Building Permit Fees	LS	Allowance	85,000.00	$85,000
6	Plan Check Fee	LS	Allowance	55,000.00	$55,000
7	Highway Encroachment Permit Fee	LS	Allowance	20,000.00	$20,000
8	ProjectWise Construction Management Software	EA	Allowance	25,000.00	$25,000
9	Furnish new 12-inch diameter HDPE bypass piping, to be transferred to GWA at completion of project	LF	5,000	26.0294	$130,147.00
10	Furnish new 18-inch diameter HDPE bypass piping, to be transferred to GWA at completion of project	LF	5,000	50.4192	$252,096.00
11	Sum of all work associated with unexploded ordinance survey and compliance on DoD property	LS	1	104,148.00	$104,148.00
12	Sum of all work associated with unexploded ordinance survey and compliance off DoD property	LS	1	6,719.00	$6,719.00
Phase 1 Bid Items (Manhole 2492 to Manhole 6016)					
13	Sum of all work to make repair at 178 feet downstream of MH 6036	LS	1	38,891.00	$38,891.00
14	Sum of all work to make repair at 109 feet upstream of MH 6017	LS	1	38,891.00	$38,891.00

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
15	Furnish and install 30-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place,	LF	3,779	333.6441	$1,260,841.05
16	Furnish and install 36-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	7,397	403.4210	$2,984,105.14
17	Sum of all work to Rehabilitate Manholes	EA	29	11,902.5172	$345,173.00
18	Furnish and Install New Manhole to replace MH 6018 with new 24- inch diameter PVC stub-out to accommodate Route 3 widening project, complete in place	LS	1	22,827.00	$22,827.00
19	Record Drawings	LS	1	5,282.00	$5,282.00
Phase 2 Bid Items (Manhole 6016 to Manhole 5916)					
20	Sum of all work to make repair at 6 feet downstream of MH 5926	LS	1	38,891.00	$38,891.00
21	Sum of all work to make repair at 102 feet downstream of MH 5929	LS	1	38,891.00	$38,891.00
22	Sum of all work to make repair at 220 feet downstream of MH 5432	LS	1	38,891.00	$38,891.00
23	Sum of all work to make repair at 98 feet upstream of MH 5917	LS	1	38,891.00	$38,891.00
24	Sum of all work to make repair at 202 feet upstream of MH 5917	LS	1	38,891.00	$38,891.00
25	Furnish and install 18-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	1,071	268.4902	$287,553.00
26	Furnish and install 24-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	2,157	305.2508	$658,425.98
27	Furnish and install 30-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	13,763	367.4976	$5,057,869.47
28	Furnish and install 36-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	3,199	431.2663	$1,379,620.89

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
29	Sum of all work to Rehabilitate Manholes	EA	70	11,231.6571	$786,216.00
30	Record Drawings	LS	1	9,356.00	$9,356.00
Phase 3A Bid Items (Manhole 2511 to Manhole 2492)					
31	Furnish and install 30-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place.	LF	3,077	345.4205	$1,062,858.88
32	Furnish and install 36-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place.	LF	3,932	365.3573	$1,436,584.90
33	Sum of all work to Rehabilitate Manholes	EA	23	9,960.3478	$229,088.00
34	Record Drawings	LS	1	4,770.00	$4,770.00
Phase 3B Bid Items (Northern District WWTP Influent to Manhole 2511)					
35	Furnish and install 30-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	433	287.1109	$124,319.02
36	Furnish and install 42-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	5611	403.8827	$2,266,185.83
37	Sum of all work to Rehabilitate Manholes	EA	16	9,960.2500	$159,364.00
38	Record Drawings	LS	1	4,770.00	$4,770.00
BASE BID Total of All Unit Price Bid Items					$22,897,808.00

Bidder acknowledges that (1) each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and (2) estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

Total of Unit Price Bids = Total Base Bid Price $ 22,897,808.00

5.02 **Bid Alternate A:** Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
1	Mobilization, Insurance, Bonds, and Demobilization	LS	1	2,168,766.00	$2,168,766.00
2	All work to provide survey and legal descriptions for preparation of permanent easements on Ancestral Lands.	LS	1	38,815.00	$38,815.00
3	All work required for field verification, design and Design Professional Services, including but not limited to design submittals, flow management plans, meetings, permitting assistance, coordination, and other services to provide full design support for the project	LS	1	1,500,472.00	$1,500,472.00
4	Archaeological Survey and Report for complete project	LS	Allowance	40,000.00	$40,000
5	Building Permit Fees	LS	Allowance	85,000.00	$85,000
6	Plan Check Fee	LS	Allowance	55,000.00	$55,000
7	Highway Encroachment Permit Fee	LS	Allowance	20,000.00	$20,000
8	ProjectWise Construction Management Software	EA	Allowance	25,000.00	$25,000
9	Furnish new 12-inch diameter HDPE bypass piping, to be transferred to GWA at completion of project	LF	5,000	26.0428	$130,214.00
10	Furnish new 18-inch diameter HDPE bypass piping, to be transferred to GWA at completion of project	LF	5,000	50.4452	$252,226.00
11	Sum of all work associated with unexploded ordinance survey and compliance on DoD property	LS	1	104,202.00	$104,202.00
12	Sum of all work associated with unexploded ordinance survey and compliance off DoD property	LS	1	6,723.00	$6,722.00
Phase 1 Bid Items (Manhole 2492 to Manhole 6016)					
13	Sum of all work to make repair at 178 feet downstream of MH 6036	LS	1	38,911.00	$38,911.00
14	Sum of all work to make repair at 109 feet upstream of MH 6017	LS	1	38,911.00	$38,911.00
15	Furnish and install 30-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place,	LF	3,779	340.5279	$1,286,855.00
16	Furnish and install 36-inch diameter CIPP, including service	LF	7,397	411.6834	$3,045,222.00

	connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place				
17	Sum of all work to Rehabilitate Manholes	EA	29	12,110.0000	$351,190.00
18	Furnish and Install New Manhole to replace MH 6018 with new 24- inch diameter PVC stub-out to accommodate Route 3 widening project, complete in place	LS	1	22,839.00	$22,839.00
19	Record Drawings	LS	1	5,284.00	$5,284.00
Phase 2 Bid Items (Manhole 6016 to Manhole 5916)					
20	Sum of all work to make repair at 6 feet downstream of MH 5926	LS	1	38,911.00	$38,911.00
21	Sum of all work to make repair at 102 feet downstream of MH 5929	LS	1	38,911.00	$38,911.00
22	Sum of all work to make repair at 220 feet downstream of MH 5432	LS	1	38,911.00	$38,911.00
23	Sum of all work to make repair at 98 feet upstream of MH 5917	LS	1	38,911.00	$38,911.00
24	Sum of all work to make repair at 202 feet upstream of MH 5917	LS	1	38,911.00	$38,911.00
25	Furnish and install 18-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	1,071	276.6825	$296,327.00
26	Furnish and install 24-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	2,157	312.1196	$673,242.00
27	Furnish and install 30-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	13,763	374.3991	$5,152,855.00
28	Furnish and install 36-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	3,199	438.2010	$1,401,805.00
29	Sum of all work to Rehabilitate Manholes	EA	70	11,438.7857	$800,715.00
30	Record Drawings	LS	1	9,360.00	$9,360.00
Phase 3A Bid Items (Manhole 2511 to Manhole 2492)					
31	Perform cleaning and CCTV inspection of 30-inch diameter sewer	LF	3,077	91.1505	$280,470.00

32	Perfrom cleaning and CCTV inspection of 36-inch diameter sewer.	LF	3,932	101.5918	$399,459.00
Phase 3B Bid Items (Northern District WWTP Influent to Manhole 2511)					
33	Furnish and install 30-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	433	287.6051	$124,533.00
34	Furnish and install 42-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	5611	404.5855	$2,270,129.00
35	Sum of all work to Rehabilitate Manholes	EA	16	10,353.0000	$165,648.00
36	Record Drawings	LS	1	$4,777.00	$4,777.00
Bid Alternate A: Total of All Unit Price Bid Items					$20,989,504.00

Bidder acknowledges that (1) each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and (2) estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

Total of Unit Price Bids = Total Bid Alternate A Price $ 20,989,504.00

5.03 **Bid Alternate B:** Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
1	Mobilization, Insurance, Bonds, and Demobilization	LS	1	2,113,085.73	$2,113,085.73
2	All work to provide survey and legal descriptions for preparation of permanent easements on Ancestral Lands.	LS	1	38,837.00	$38,837.00
3	All work required for field verification, design and Design Professional Services, including but not limited to design submittals, flow management plans, meetings, permitting assistance, coordination, and other services to provide full design support for the project	LS	1	1,475,150.00	$1,475,150.00
4	Archaeological Survey and Report for complete project	LS	Allowance	40,000.00	$40,000
5	Building Permit Fees	LS	Allowance	85,000.00	$85,000
6	Plan Check Fee	LS	Allowance	55,000.00	$55,000
7	Highway Encroachment Permit Fee	LS	Allowance	20,000.00	$20,000
8	ProjectWise Construction Management Software	EA	Allowance	25,000.00	$25,000
9	Furnish new 12-inch diameter HDPE bypass piping, to be transferred to GWA at completion of project	LF	5,000	26.0574	$130,287.00
10	Furnish new 18-inch diameter HDPE bypass piping, to be transferred to GWA at completion of project	LF	5,000	50.4734	$252,367.00
11	Sum of all work associated with unexploded ordinance survey and compliance on DoD property	LS	1	104,261.00	$104,261.00
12	Sum of all work associated with unexploded ordinance survey and compliance off DoD property	LS	1	6,727.00	$6,727.00
Phase 1 Bid Items (Manhole 2492 to Manhole 6016)					
13	Sum of all work to make repair at 178 feet downstream of MH 6036	LS	1	38,933.00	$38,933.00
14	Sum of all work to make repair at 109 feet upstream of MH 6017	LS	1	38,933.00	$38,933.00
15	Furnish and install 30-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place,	LF	3,779	347.4345	$1,312,954.98
16	Furnish and install 36-inch diameter CIPP, including service connection reinstatement, flow	LF	7,397	418.6303	$3,096,608.33

	management, traffic control, and all other necessary work, complete-in-place				
17	Sum of all work to Rehabilitate Manholes	EA	29	12,452.5172	$361,123.00
18	Furnish and Install New Manhole to replace MH 6018 with new 24- inch diameter PVC stub-out to accommodate Route 3 widening project, complete in place	LS	1	22,852.00	$22,852.00
19	Record Drawings	LS	1	5,286.00	$5,286.00
Phase 2 Bid Items (Manhole 6016 to Manhole 5916)					
20	Sum of all work to make repair at 6 feet downstream of MH 5926	LS	1	38,933.00	$38,933.00
21	Sum of all work to make repair at 102 feet downstream of MH 5929	LS	1	38,933.00	$38,933.00
22	Sum of all work to make repair at 220 feet downstream of MH 5432	LS	1	38,933.00	$38,933.00
23	Sum of all work to make repair at 98 feet upstream of MH 5917	LS	1	38,933.00	$38,933.00
24	Sum of all work to make repair at 202 feet upstream of MH 5917	LS	1	38,933.00	$38,933.00
25	Furnish and install 18-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	1,071	283.5537	$303,686.01
26	Furnish and install 24-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	2,157	319.0107	$688,106.01
27	Furnish and install 30-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	13,763	381.3249	$5,248,174.60
28	Furnish and install 36-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	3,199	445.1629	$1,424,076.12
29	Sum of all work to Rehabilitate Manholes	EA	70	11,780.96	$824,667.00
30	Record Drawings	LS	1	9,364.00	$9,364.00
Phase 3A Bid Items (Manhole 2511 to Manhole 2492)					
31	Perform cleaning and CCTV inspection of 30-inch diameter sewer.	LF	3,077	91.33	$281,034.10
32	Perform cleaning and CCTV inspection of 36-inch diameter sewer.	LF	3,932	101.80	$400,261.09

Phase 3B Bid Items (Northern District WWTP Influent to Manhole 2511)					
33	Perform cleaning and CCTV inspection of 30-inch diameter sewer	LF	433	62.64	$27,121.00
34	Perform cleaning and CCTV inspection of 42-inch diameter sewer	LF	5611	89.15	$500,238.04
Bid Alternate B: Total of All Unit Price Bid Items					$19,123,798.00

Bidder acknowledges that (1) each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and (2) estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

Total of Unit Price Bids = Total Bid Alternate B Price $ 19,123,798.00

ARTICLE 6 – TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 14.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 – ATTACHMENTS TO THIS BID

7.01 The following documents are submitted with and made a condition of this Bid:

A. Required Bid security;
B. List of Proposed Subcontractors;
C. List of Proposed Suppliers;

ARTICLE 8 – DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 – BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*

Core Tech-Hawaiian Dredging, LLC

By:

[Signature]

[Printed name] Conchita D. Bathan, Member of Management Committee

(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:
[Signature]

[Printed name] Johann Cruz

Title: Chief Financial Officer

Submittal Date: April 26, 2018

Address for giving notices:

388 South Marine Corps Drive, STE 400

Tamuning, GU 96913

Telephone Number: (671) 473-5000

Fax Number: (671) 473-5500

Contact Name and e-mail address: Conchita D. Bathan

chit.bathan@coretechintl.com

Bidder's License No.: License#CLB15-1204 (2018 Contractor's License)
(where applicable)

APPENDIX H

CERTIFICATION OF BIDDER REGARDING EQUAL EMPLOYMENT OPPORTUNITY

GENERAL

In accordance with Executive Order 11246 (30 F.R. 12319-25), the implementing rules and regulations thereof, and orders of the Secretary of Labor, a Certification regarding Equal Opportunity is required of bidders or prospective Contractors and their proposed sub-contractors prior to the award of Contract or sub-contracts.

CERTIFICATION OF BIDDER

Bidder's Name: Core Tech-Hawaiian Dredging, LLC

Address: 388 South Marine Corps Drive, STE 400, Tamuning, Guam 96913

Internal Revenue Service Employer Identification No.: 66-0848212

1. Participation in a previous Contract or sub-contract.

   a. Bidder has participated in a previous Contract or sub-contract subject to the Equal Opportunity *clause* *[ ] Yes [X] No*

   b. Compliance reports were required to be filled in connection with such Contract or sub-contract ..... [ ] Yes [X] No

   c. Bidder has filed all compliance reports required by Executive Orders 10925, 11114, 11246 or by regulations of the Equal Employment Opportunity Commission issued pursuant to Title VII or the Civil Rights Act of 1964 ..... [ ] Yes [ ] No N/A

   d. If answer to item c is "NO", please explain in detail on reverse side of this certification.

2. Dollar Amount of Bid: $ See attached Bid Proposal Form.

3. Anticipated performance period 860 days.

4. Expected total number of employees who will perform the proposed construction:
Approximately 30 employees.

5. Non-segregated Facilities

a. Notice to Prospective Contractor.

(1) A Certification of Non-segregated Facilities, as required by the May 9, 1967, order (32 F.R. 7439, May 19, 1967) on Elimination of Segregated Facilities, by the Secretary of Labor, must be submitted to the recipient prior to the award of a Contract exceeding $10,000 which is not exempt from the provisions of the Equal Opportunity Clause.

(2) Contractors receiving Contract awards exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity Clause will be required to provide for the forwarding of the following notice to prospective sub-contractors for supplies and construction Contracts where the sub-contracts exceed $10,000 and are not exempt from the provisions of the Equal Opportunity Clause.

b. Notice to Prospective sub-contractors of Requirements for Certification of Non-segregated Facilities.

(1) A Certification of Non-segregated Facilities, as required by the May 9, 1967, order (32 F.R. 7439, May 19, 1967) on Elimination of Segregated Facilities, by the Secretary of Labor, must be submitted prior to the award of a sub-contract exceeding $10,000 which is not exempt from the provisions of the Equal Opportunity Clause.

(2) Contractors receiving sub-contract awards exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity Clause will be required to provide for the forwarding of this notice to prospective sub-contractors for supplies and construction Contracts, where the sub-contractors exceed $10,000 and are not exempt from the provisions of the Equal Opportunity Clause.

c. Certification of Non-segregated Facilities.

The Contractor certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The Contractor agrees that a breach of this certification is a violation of the Equal Opportunity Clause in this Contract.

As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, or housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, or national origin because of habit, local custom, or otherwise. The Contractor agrees that (except where he has obtained identical certifications from proposed sub-contractors for specific time periods) he will obtain identical certifications in duplicate from proposed sub-contractors prior to the award of sub-contracts exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity Clause, and that he will retain the duplicate of such certifications in his files. The Contractor will include the original in his Bid Package.

6. Race of ethnic group designation of bidder. Enter race or ethnic group in the appropriate box:

[ ]	African American	[ ] Spanish American	[ ] Oriental
[ ]	Aleut	[ ] American Indian	[ ] Eskimo
[ ]	White (other than Spanish American)		
[X]	Pacific Islander		

REMARKS:
Certification: the information above is true and complete to the best of my knowledge and belief.

Name and Title of Signer:

Conchita D. Bathan, Member of Management Committee

(Please Type)

(Signature)

04/26/2018

(Date)

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

APPENDIX K

SPECIAL INSTRUCTIONS TO BIDDERS – ESTIMATED QUANTITIES

For use only in indefinite quantity Contracts or where there has been an estimated amount included in GWA's bid specifications that is to be used to determine the bid price

Bidders are hereby served notice that the following Directives or information described below must be taken into account when preparing the Bid Proposal. The Bidder shall acknowledge the directives by signing and submitting this section with their Bid Proposal.

Directive #1

The bidder is cautioned to note that while the quantities specified in the Bid Schedule are based upon the best information available to GWA, the quantities for the items listed in the Bid Schedule may or may not be completely accurate. Thus, GWA makes no assurances or warranty to any bidder that the quantities listed are 100% accurate.

I, Conchita D. Bathan being an Authorized Representative acknowledge the directive as describe above and ensure the Bid Proposal as submitted addresses the directive.

Core Tech-Hawaiian Dredging, LLC
(Company Name)

(Signature)

04/26/2018
(Date)



Evidence of Authority to Sign

Core Tech-Hawaiian Dredging, LLC

Operating Agreement

Use or disclosure of data contained on this sheet is subject to the restriction on the cover page of this proposal.

LLC-2104

DEPT. OF REVENUE & TAXATION
GOVERNMENT OF GUAM
OCT 30 2015
BUSINESS REGISTRATION

OPERATING AGREEMENT

Of

CORE TECH – HAWAIIAN DREDGING, LLC

October 23, 2015

DEPT OF REVENUE & TAXATION
GOVERNMENT OF GUAM
OCT 30 2015
BUSINESS REGISTRATION

Operating Agreement

Of

CORE TECH – Hawaiian Dredging, LLC
A Guam Limited Liability Company

THIS AGREEMENT ("Agreement") is effective as of October 23, 2015, by and between **CORE TECH INTERNATIONAL CORPORATION ("CTI")**, a Guam corporation, and **HDCC GUAM, LLC ("HDCC")**, a Nevada limited liability company, and is the Operating Agreement of **CORE TECH – HAWAIIAN DREDGING, LLC**, a Guam limited liability company (the "Company"). CTI and HDCC referred to herein individually as a "Member" and collectively as the "Members."

RECITALS:

A. WHEREAS, the Interim General Manager, Mark G. Miller, of Guam Waterworks Authority, has issued on August 31, 2015, an INVITATION TO BID, IFB-07-ENG-2015 for a Multi-step bid for the construction of Agat-Santa Rita Wastewater Treatment Plant Replacement, GWA Project No. S14-002-BND ("Project");

B. WHEREAS, HDCC and CTI believe that they have complementary capabilities for the pursuit of bidding on the Project and, if successful, enter into a contract or contracts with to perform the work on the Project; and

C. WHEREAS, the Members believe there are other future construction projects in Guam which they may want the Company to pursue on a case-by-case basis;

NOW, THEREFORE, in consideration of the mutual agreements, promises, and undertakings hereinafter set forth, the receipt and sufficiency of which are hereby acknowledged, the Members hereto agree that the following shall constitute the operating agreement of the Company.

Article 1
The Project

1.1 **The Contract.** The Members have agreed to form a limited liability company for the sole purpose of preparing and submitting a proposal (the "Proposal") to the Government of Guam ("Client") in response to the Invitation to Bid ("IFB") for the Project and, if successful, enter into a contract to perform the Project ("Contract"). The terms and conditions of this Agreement govern the relationship of the Members and the rendering of services required under this Agreement and under any subsequent contractual agreement with the Client relating to the Project, unless otherwise agreed to by the Members in writing.

1.2 **Services.** In connection with the Project, each Member shall perform services in the functional areas as set forth in **Attachment 1** - Scope of Work/ Percentage Interests to this Agreement. It is the intent of the Members, as part of each section or portion of the work as set forth in Attachment 1, to mutually agree upon division of responsibility among the Members such that the full work scope of each section or portion can be accomplished in the most efficient and cost effective manner. Except as specified in Section 4.5 of this Agreement, no Member to this Agreement shall enter into a separate agreement directly with the Client or any third party for services in connection with the Project without the prior written approval of the other Member.

1.4 **Expenses.** Except as may be mutually agreed upon in writing by the Management Committee, each Member shall bear its own costs and expenses in connection with the negotiation of this Agreement, preparation of the Proposal for the Project, negotiation and execution of the Contract, including, but not limited to, the fees of any attorney, financial advisor, or other consultant services.

1.5 **Employees.** Unless otherwise agreed by the Management Committee, the Company shall have no employees. Each Member's personnel will remain on the payroll of the Member that employs them.

1.6 **Future Projects.** Should the Members agree to have the Company pursue future projects on Guam, this Agreement shall be amended to set forth the details concerning such project or projects and the interests and responsibility of the Members with regard to the same.

Article 2
Formation of the Company

2.1 **Company.** Subject to the terms and conditions of this Agreement, the Members hereby agree to jointly form this Guam limited liability company named "Core Tech – Hawaiian Dredging, LLC", under and in accordance with the laws of the Guam, which shall engage in the business described herein.

2.2 **Purpose.** The purpose and business of the Company shall be (a) to prepare and submit a Proposal for and, if successful, perform the Project; (b) to exercise all other powers necessary and reasonably connected with the Company's business (as limited hereinabove) which may legally be exercised by limited liability companies under Guam law; and (c) to engage in all activities necessary, customary, convenient, or incident to perform the Project.

2.3 **Place of Business.** The principal place of business of the Company shall be located at 388 South Marine Corps Drive, Suite 400, Tamuning, Guam 96913, or such other place as the Management Committee may from time to time determine.

2.4 **Term.** Unless terminated sooner pursuant to this Article 7, this Agreement shall remain in full force and effect until the earliest of:

2.4.1 Dissolution by written agreement of the Members;

2.4.2 Completion of the Contract and all work and obligations under the Contract represented by the later of the issuance of a final payment release under the Contract awarded to the Company and satisfaction of any warranty obligations or ten years from the substantial completion of the Contract;

2.4.3 An official government announcement that the IFB for the Project has been canceled; or

2.4.4 Sixty (60) days after the award of the contract(s) for the Project to another contractor to the exclusion of the Company, except that, should a bid protest be filed challenging the award, the Agreement shall remain in effect throughout the protest period and during any corrective action other than cancellation of the IFB and re-solicitation.

Article 3
Capital – Ownership Interests – Bank Account

3.1 **Capital Structure**. The capital structure of the Company shall consist of one (1) class of ownership. The Company shall maintain a separate capital account of each Member of the Company. Each Member shall contribute initial capital, in such amount or amounts as the Management Committee shall determine, to cover administrative costs of the Company. Such capital contributions shall be made by each Member in proportion to their respective ownership interests. The interests of each Member in the Company shall be as set forth in **Attachment 1 -** Scope of Work/ Percentage Interests to this Agreement.

3.2 **Additional Contributions.** The Management Committee may require Members to make any additional Capital Contributions to their respect ownership accounts in proportion to their respective percentage interests.

3.3 **Failure to Contribute.** If a Member fails to timely provide a required Capital Contribution, the Company may take such action as it deems necessary and appropriate including but not limited to instituting a court proceeding to obtain payment, canceling the Member's Company Interest, or exercising any other right or remedy available at law or equity.

3.4 **Allocation of Profits and Losses.** Profits and losses for any Fiscal Year (and each item of income, gain, loss, and deduction entering into the computation thereof) shall be allocated among the Members (and credited to their respective Capital Accounts) in accordance with their Ownership Interests set forth in Section 3.1 above.

3.5 **Accounting**. The Company shall jointly retain an accountant to perform such duties as may be determined by the Management Committee. For the purposes of this Agreement, certified account balances of the accountant shall be final, conclusive and binding upon the Members.

3.6 **Bank Accounts.** The Company will establish and maintain bank accounts in the name of Core Tech – Hawaiian Dredging, LLC. Such bank accounts (the "LLC Accounts") may be opened in such financial institutions as may be determined by the Management Committee. Each Member shall designate an individual or individuals authorized on its behalf to endorse checks deposited into the LLC Accounts and to sign checks drawn against the LL Accounts. Except as otherwise authorized by the Management Committee, all checks drawn against the LLC Accounts shall require the signature of the each Member of the Company or their authorized representative. All payments received by the Company in connection with this Agreement shall be promptly deposited in the LLC Accounts and invoices received by the Company shall be paid promptly by wire transfer or by check drawn against such account.

Article 4
Rights and Obligations of Members

4.1 **Limited Liability.** Except as otherwise provided for in this Agreement, no Member shall be personally liable for any debts, liabilities, or obligations of the Company; provided that each Member shall be responsible for the making of any Capital Contribution required to be made to the Company by such Member pursuant to the terms hereof, and for the amount of any distribution made to such Member that must be returned to the Company pursuant to the terms hereof.

4.2 **Liability of a Member to the Company.** When a Member has received a distribution made by the Company in violation of this Agreement or Guam law, the Member is liable to the Company for a period of six (6) years after such a prohibited distribution for the amount of the wrongful distribution. This provision is intended to be in compliance with Guam law.

4.3 **Survival of Obligations.** Dissolution of the Company shall not release any Member from any liability which at the time of dissolution has already accrued to such Member or for any obligations to the other Members that explicitly survive dissolution.

4.5 **Exclusivity.** Except as indicated below or as otherwise indicated in this Agreement, no Member or its affiliates shall participate in any manner in the submission of a proposal to Client in response to the IFB or include the use of a Member's name or experience in any such proposal for either the Project or any competitive proposal with respect to the Project thereunder, nor take any action detrimental to, or in conflict with, the Company's opportunity with respect to such proposal. Except as provided above with respect to the Project, this Agreement shall in no manner prevent any Member from pursuing work for any current or potential client (including, but not limited to, Client), and associating with any other persons or companies for such purposes, so long as the contemplated work or association does not involve, or create a conflict of interest for, the Project. Should the Parties execute an agreement to pursue other projects on Guam, the Members' obligations with respect to such work shall be set forth in a separate written agreement.

Article 5
Management of the Company

5.1 **Management of the Company.** The Managing Member of the Company shall be CTI. The business and affairs of the Company including, but not limited to, assignment and reassignment of services between the Members, preparation of the schedule of services, settlement of disputes with the Client, and any other matters affecting the performance of services under this Agreement, shall be managed by and under the direction of the Company's management team known as the "Management Committee", which shall be composed of four (4) representatives (the "Management Committee representatives") two (2) of which shall be from (or designated by) CTI, and two (2) of which shall be from HDCC. A representative of the Managing Member shall preside over all meetings of the Management Committee. Each Member shall designate, in writing, the names of its representatives and an alternate for each. In no event shall the Project Manager or Deputy Project Manager serve as a Management Committee representative. The power to act for or to bind the Company shall be vested in the Management Committee, subject to the Management Committee's authority to delegate powers and duties and the terms of this Agreement.

The initial members of the Management Committee are:

For CTI	Ho S. Eun Chit Bathan
For HDCC:	Gerry Majkut Tom Valentine

5.2 **Vacancy on the Management Committee.** Each Member agrees to maintain its number of designated representatives on the Management Committee for the duration of this Agreement and the Project. If, for any reason, a Management Committee representative position becomes vacant, the Member holding that position shall replace promptly the position with a new representative.

5.3 **Manner of Acting – Consent, Disagreements and Deadlock.**

5.3.1 Unanimous Consent. The Members agree that every act or decision done or made by the Management Committee shall be by unanimous vote at a meeting duly held by the Management Committee representatives.

5.3.2 Actions or Decisions. The following actions must be agreed upon unanimously by the Members prior to implementation by the Company: (i) act in contravention of this Agreement or the Company's Articles of Organization; (ii) act in a manner that would make it impossible to carry on the business of the Company except in furtherance of an approved sale of the assets of the Company or dissolution and liquidation of the Company; (iii) act in a manner that would subject any Member to liability in any jurisdiction; (iv) voluntarily take any act of bankruptcy; (v) change the Company's fiscal year; (vi) refusal to be taxable as a partnership for federal or state income tax purposes; (vii) submit any matter to litigation or other binding dispute resolution process, confess any judgment against the Company, settle any lawsuit or claim; (viii) acquire, sell, license, or lease, or otherwise dispose of any asset of the Company, including in a series of connected transactions; (ix) assign or incur

any debt; (x) loan any money; (xi) make any distributions to any Member in conflict with this Agreement or the Ownership Interests specified herein; (xii) enter into or offer to enter into any contract or agreement to perform services or provide products; (xiii) issue any performance, bonding or process guarantees; (xiv) allow any lien to be placed on any major asset; (xv) select any auditors, accountants, attorneys, officers, or bankers of the Company; (xvi) enter into any lease, sale or purchase of any Company property; (xvii) issue any public release or advertisement regarding this Agreement or the Contract without the written approval of all Members, such consent not to be unreasonably withheld and such approved public release or advertisement shall mention all Members; (xviii) take any other action required of the Management Committee by this Agreement; (xix) take any action arising out of any matter brought to Management Committee by a Member; (xx) proposed bid price to submit to the Client; (xxi) dissolve the Company; or (xxii) do any of the following which by Guam law, 18 GCA §15114(D)(2), requires the unanimous decision of the Members: (A) to continue the business after dissolution; (B) Approval of transfer of a membership interest and admission of the assignee as a member; (C) Any amendment of the Articles of Organization or this Operating Agreement.

5.3.3 Consent Disagreement. The Members shall attempt in an amicable and expeditious manner to settle any disagreement that may arise between them in connection with implementing any action that requires unanimous consent ("Consent Disagreement"). The Members recognize the possibility that a Consent Disagreement will lead to deadlock and, in such event, agree to follow the procedures set forth in Sections 5.3.4 below to resolve the matter, notwithstanding any other provision in this Agreement; provided, however, that pending the review of such matter by the Referee, the performance of the project and this Agreement shall not be delayed or hindered by reason thereof.

5.3.4 Resolution by Referee. Should the Members, or their authorized representatives, fail to resolve the Consent Disagreement within five (5) days after having convened, the Members agree to appoint a neutral person ("Referee") with appropriate qualifications and experience to facilitate resolution of the disagreement. The Referee shall be selected from a list furnished by the American Arbitration Association, unless otherwise agreed to in writing by the Members. If the Members are unable to agree on the Referee, the Members shall proceed in accordance with the Wind Down provision below. If the Members are able to agree on the Referee, the cost of the Referee will be shared equally among the Members. The Referee will be bound to confidentiality and will be given wide latitude to review available information from the Members. Within five (5) days (or such longer period as may be necessary as determined by the Referee or as agreed upon in writing by the Members), the Referee will document in a written memorandum to the Members the Referee's recommendation to resolve the Consent Disagreement. The Referee's recommendation shall be adopted and implemented by the Members after five (5) days of the recommendation (or sooner if mutually agreed in writing by the Members) unless one Member gives notice (the "Rejection Notice") to the other Member(s) within such five (5) day period

stating that the implementation of the Referee's decision will be materially adverse to the interests of such Member.

5.3.5 Wind Down. If the Members are unable to agree on the Referee or if one Member issues a Rejection Notice, then, within ten (10) days of one Member determining that the Members are unable to agree on the Referee or five (5) days of the giving of the Rejection Notice (as the case may be), one Member may issue a notice in writing ("Deadlock Notice") to the other Members. The Deadlock Notice shall contain a proposed course of action to break the deadlock.

If the Members receiving the Deadlock Notice agree in writing within seven (7) days to the proposed course of action described in the Deadlock Notice, then the Consent Disagreement shall be resolved on such basis. If the Members receiving the Deadlock Notice do not so agree, then the following provisions shall apply:

5.3.5.1 All work under the Contract existing at such time will be performed in accordance with the Company's contractual obligations, and the Members agree to satisfactorily perform and complete their portions of the work in good faith and in accordance with their respective contractual obligations;

5.3.5.2 The Company will pursue such course of action as may be in the best interests of all members.

Any notice given under this Section 5.3.5 will be made by certified mail, return-receipt requested.

5.4 **Staffing.**

5.4.1 The Members expect that the work of the Company will be performed through agreements with the Members to perform work under the Contract. Notwithstanding the foregoing, the Members understand and recognize that certain tasks with respect to the overall management of the Company need to be performed by the Company outside of such agreements, such as, but not limited to, retaining and supervising the Company's auditors (the "G&A Tasks"). With respect to such G&A Tasks, the Members agree that they shall supply to the Company such of the Member's supervisory, managerial, and other personnel as shall reasonably be required in order to successfully perform the tasks related to overall management of the Company, as determined by the Management Committee.

5.4.2 The Project Manager: The Project Manager shall, subject to the direction and control of the Management Committee, have overall management responsibilities for the Project.

Article 6
Insurance- Bonds

6.1 **Company-Placed Insurance**

6.1.1 The Members shall make certain that the Company purchases and maintains, in a company or companies lawfully authorized to do business in place in which the Project work is located insurance required by the Contract. The Members shall also make certain that the Company purchases and maintains, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project work is located, the types and limits of insurance sufficient to cover reasonably foreseeable third party personal injury, property damages and loss or damage to the project during construction and other risks, as considered appropriate for scope being undertaken or required by the Contract and Task Orders thereunder ("Company-placed insurance")

6.1.2 The exact limits of insurance to be purchased, as well as the overall structure of the insurance Project will be determined by the Management Committee during the Proposal preparation process and prior to the submission of a proposal for any Task Order, including the seed project.

6.1.3 The Management Committee will approve the purchase of the insurance with consideration as to price, terms, conditions, exclusions, limitation, reputation, solvency and other factors related to assuring that the insurance will respond to the perils for which it was obtained. All Company-placed insurance will be agreed upon by the Members and placed by the Members.

6.1.4 The Company-placed insurance shall be maintained by the Company from the commencement of any services under the Contract until all services to be performed by the Members under the Contract have been completed or until such time as this Agreement has been terminated, whichever is later.

6.2 **Bonding**

The Company will provide the Client with the bonding required by the IFB, including, but not limited to, a bid bond and performance and payment bonds Project. It is understood that if the Contract for the Project is awarded to the Company it will be necessary for the Members to each indemnify the surety or sureties on performance and payment bonds required by the Client. Each of the Members agrees to execute any and all indemnity agreements as may be necessary to procure the execution by such sureties of such bonds. Each of the Members agrees to indemnify and hold harmless the other Members from any liability on any such bond indemnity in excess of such Member's pro-rata share of any such liability agreed to in writing by the Members prior to bidding on the Project.

Article 7
Default, Termination and Dissolution

7.1 **Default**

7.1.1 Events of Default: A Member shall be in default ("Defaulting Member") when:

.1 it has committed a material breach of this Agreement that is not corrected within fourteen (14) days after receipt of written notice of such breach from the non-defaulting Members or either one of them;

.2 there exists an uncured failure of a Member to follow the direction of the Project Manager with respect to completion of a Member's scope of work under a task order;

.3 the actual (or notice of the proposed) suspension or debarment by the Client of any Member that, if not cured, would preclude performance by the other Members to perform the Project;

.4 the insolvency of a Member;

.5 the filing by or against any Member for a petition in bankruptcy or insolvency, or for the reorganization, or for the appointment of a receiver or trustee, or the making of an assignment for the benefit of creditors;

.6 there exists an uncured failure of a Member to make a capital contribution when due; or

.7 a Disposition by one Member without the unanimous consent of the other Members.

7.1.2 Effect of Default. Following an event of default:

.1 The other Member referred to as the "Surviving Member" shall be entitled to take possession of the Defaulting Member's plant, equipment, subcontractors, employees, drawings, and designs as well as materials on site and materials in progress to allow the Company to complete the balance of the project at the time of the default.

.2 The "Surviving Member" shall, upon notice or discovery thereof, do whatever is necessary to continue performing the Contract, and the Defaulting Member, or its administrators, trustees or representatives, shall make every effort to aid the Surviving Member in continuing performance of the Contract.

.3 The Defaulting Member shall grant the Surviving Member a paid up license in any of the Defaulting Member's intellectual property necessary for the timely and efficient performance of the Contract, but for no other purpose.

.4 The Defaulting Member shall assign, in the sole discretion of the Surviving Member, any subcontracts, purchase orders, or labor agreements relating to the performance of the Contract to the Surviving Member.

.5 The Defaulting Member shall be liable to and shall indemnify, defend and hold harmless the Company and the Surviving Member from all loss, cost, liability and damages that the Company or the other Member shall incur as a result of such default.

.6 The Defaulting Member shall be entitled to the unpaid balance of compensation otherwise due the Defaulting Member to the extent that it exceeds the cost of completing the work of such Member, the expenses incurred as a result of the default, and all other obligations of the defaulting Member hereunder; the Defaulting Member shall be obligated to pay to the Surviving Member such costs and obligations that exceed the unpaid balance of compensation.

.7 The Defaulting Member shall remain subject to the exclusivity provisions of Section 4.5.

.8 The Surviving Member shall be free to carry on the business of the Company.

.9 The Defaulting Member shall not be entitled to serve or vote on the Management Committee.

7.2 **Right to Terminate.** Except as specifically provided in this Agreement, no Member shall have the right to terminate this Agreement.

Article 8
Responsibilities Regarding the Project

8.1 **Negotiation of the Contract.** The Members shall be jointly responsible for the preparation of the material terms of the Company's response to the IFB and negotiation of the Contract.

8.2 **Lower Tier Subcontracts.** Each Member shall be responsible for subcontracting and material procurement within its scope of work, unless otherwise agreed to in writing or as contemplated by the final estimate approved by the Members.

8.3 **Performance of the Project.** Each Member agrees to ensure performance of the Project and to complete performance despite the withdrawal, liquidation, or any other incapacity of any other Members. The responsibilities of the Members with regard to the performance of the Project shall be as provided in this Agreement, including its **Attachment 1.**

Article 9
Binding Authority

9.1 **Project Specific Authority.** The Members agree that for purposes of the Project only, Ho S. Eun or Conchita D. Bathan are authorized to execute and deliver to the Client on behalf of the Company all bids, proposals, agreements, contracts, modifications, amendments, bonds, applications, certifications, representations, permits, acknowledgments, and any and all other documents of whatever kind and nature relating to the Project and required under or pursuant to the IFB, and any bid guarantee being submitted therefor. In addition, the Members agree that Ho S. Eun or Conchita D. Bathan (for CTI) or Tom Valentine, Gerry Majkut or Gary M. Yokoyama (for HDCC) are individually authorized to sign teaming agreements between the Company and the Company's proposed subcontractors for the Project.

9.2 **General Authority; Authorized Representatives.** No Member, agent, or employee of the Company shall have any power or authority to bind the Company in any way or to pledge its credit or to render it pecuniarily liable for any purpose, unless authorized to do so by this Agreement or by the Management Committee. Except as provided in Section 9.1 or as otherwise determined by the Management Committee, all contracts, agreements, and other instruments shall be signed by both CTI and HDCC through their respective authorized representatives. The initial authorized representatives for each Member are as follows:

For CTI:	Ho S. Eun Conchita D. Bathan
For HDCC:	Tom Valentine Gerry Majkut

Each Member may designate additional authorized representatives, or replace its initial authorized representatives, by giving written notice thereof to the other Member.

Article 10
Miscellaneous

10.1 **Amendments.** Amendments and modifications to this Agreement may be made only in writing with the prior written approval of all Members.

10.2 **Representation of Shares of Other Entities Held by the Company.** The Management Committee, or any other Person authorized by the Management Committee, is authorized to vote or represent on behalf of the Company any and all shares of any corporation, partnership, trust, or other Entity, foreign or domestic, standing in the name of the Company. The authority granted may be exercised in person or by a proxy duly executed by such designated Person.

10.3 **Governing Law and Venue.** This Agreement shall be governed by and construed in accordance with federal contract law to the extent applicable; otherwise, the laws of the Territory of Guam shall apply. The parties consent to the exclusive jurisdiction of the U.S. District Court of Guam.

10.4 **Further Action.** Each Member agrees to perform all further acts and execute, acknowledge, and deliver any documents which may be reasonably necessary, appropriate, or desirable to carry out the provisions of this Agreement.

10.5 **Entire Agreement.** The terms and conditions contained in this Agreement (including attachments) constitute the entire agreement between the Members concerning the subject matter hereof, and shall supersede all previous communications, either oral or written, between the Members hereto, and no agreement or understanding varying or extending this Agreement shall be binding upon a Member unless in writing, signed by a duly authorized officer or representative of each Member, and adopted as provided in this Agreement.

10.6 **Confidentiality.** Each Member agrees to enforce non-disclosure agreements with teaming subcontractors who may participate in bid and proposal activities, strategy meetings, reviews, or other project meetings. The Members shall, during and after the term of this Agreement, keep in strict confidence and consider as proprietary, all information of a

commercial nature, including business and financial information of each Member and agreements, including this Agreement, and arrangements between the Members, and all information of a technical nature, including patents, know-how, designs, copyrights, licenses or sub-licenses, trademarks and trade secrets, provided or disclosed to any Member, except such commercial or technical information which is in or becomes part of the public domain or which a Member already had in its possession and not subject to non-disclosure obligations or which a Member is required to disclose by law, judicial process or governmental agency.

10.7 **Government Compliance.** Each of the Members represents and warrants that it and its affiliates that may become involved in the Project satisfy all relevant government financial compliance requirements, including the development, preparation and maintenance of government pricing and costing rates, as necessary and as required under applicable law. In the event the Company is awarded the Contract, the Members shall cause the Company and any affiliates involved with the Contract, and all appropriate subcontractors, to satisfy all governmental compliance requirements. Any costs incurred by a Member to satisfy such requirements shall be borne by that Member (or its Affiliate, as applicable) and the Member shall not seek reimbursement from the other Member or the Company for any such costs. The Management Committee shall ensure that all lower-tier subcontracts meet United States Contractor Purchasing System Review standards.

10.8 **Recruitment of Employees.** The Members agree that no Member shall solicit or employ the personnel of the other Members assigned to support the Project from the effective date of this Agreement until one (1) year after its termination. This provision shall not restrict the right of any Member to solicit generally in the media for required personnel, nor does it restrict the hiring of any employee of a Member who (i) who responds to any public advertisement placed by a hiring Member; or (ii) has been terminated by an employing Member prior to commencement of employment discussions between a Member and such employee. Violations of this Section shall be specifically enforceable only and shall not be deemed a material breach of this Agreement.

10.9 **Notices.** All notices, certificates, acknowledgments and other reports ("Notices") sent by a Member shall be in writing and deemed properly delivered when duly mailed by certified mail to the other Members at their addresses as follows, or to such other address as the Members may designate by written notice to the others. Additionally, Notices sent by any other means (e.g., email, facsimile, overnight delivery, or courier) are acceptable subject to written confirmation of both the transmission and receipt of the Notice.

To CTI:

Core Tech International Corporation:
Attn: Ho S. Eun, Chairman
388 S. Marine Corps Drive
Suite 400
Tamuning, Guam 96913

Ph: 671-473-5000 (Office), 671-486-5000 (Cell)

To HDCC:

HDCC Guam, LLC
Attn: Mr. Tom Valentine
201 Merchant Street, 9th Floor
Honolulu, Hawaii 96813

Telephone: (808) 735-3244 (Office) / (808) 224-8235 (mobile)

With copy to:

Gary M. Yokoyama, General Counsel
Hawaiian Dredging Construction Company, Inc.
201 Merchant Street, 11th Floor
Honolulu, Hawaii 96813

Email: gyokoyama@hdcc.com
Telephone: (808) 735-3323 (Office)

A Member may change the individuals identified above by notice to the other Members without formal amendment of this Agreement.

10.10 **Computation of Time**. Unless otherwise indicated, all references in this Agreement to "days" shall mean calendar days.

10.11 **Counterpart Signatures.** This Agreement may be executed in counterparts, each of which shall be deemed an original, and said counterparts shall together constitute one and the same agreement, binding on all of the parties hereto, notwithstanding all of the parties are not signatory to the original or same counterparts.

IN WITNESS WHEREOF, the Members have caused this Agreement to be executed by their duly authorized representatives as of the day and year first set forth above.

CORE TECH INTERNATIONAL CORPORATION

By: _____
Ho S. Eun, President

("CTI")

HDCC GUAM, LLC
By Hawaiian Dredging Construction Company, Inc., Its Member

By: _____
J. Majkut, President

("HDCC")

Attachment 1
Scope of Services/Percentage Interests

As of the date of formation of the Company, the Client has not issued 100% plans and specifications for the Project. Consequently, CTI and HDCC acknowledge and agree that they are presently unable to determine responsibility for the scopes of work to be performed by each of them, or to finally allocate the Percentage Interests in the Company. Therefore, the scopes of work and Percentage Interest set forth below are preliminary and are subject to change pending the Client's issuance of 100% plans and specifications. Once such plans and specifications have been prepared and reviewed by CTI and HDCC, they shall jointly determine whether the scopes of work and Percentage Interest should be adjusted.

A. Scopes of Work:

CTI shall be primarily responsible for procuring all labor, material, equipment and facilities necessary to complete the Project, except for the following scopes of work which shall be the responsibility of HDCC:

a. overall project management
b. procurement of processing equipment
c. installation of processing equipment
d. start-up and testing of processing equipment

B. MEMBER'S PERCENTAGE INTEREST IN THE COMPANY:
Unless otherwise agreed by CTI and HDCC, the following percentages shall be each Member's interest in the Company:

HDCC Guam, LLC:		30%
Core Tech International Corporation		70%
	Total:	100%

C. INITIAL CAPITAL CONTRIBUTION

HDCC Guam, LLC:		$30,000
Core Tech International Corporation		$70,000
	Total:	$100,000

COMPANY RESOLUTION

For New Project

GWA Project No. IFB-03-ENG-2018

OEA Grant OCON676-16-01

This Resolution is dated: March 13, 2018.

Members of Core Tech-Hawaiian Dredging, LLC are:

Core Tech International Corporation: "Core Tech"

HDCC Guam, LLC: "HDCC"

Whereas, Core Tech-Hawaiian Dredging, LLC, ("Company") has received information concerning a new **"Project"** described as follows:

Invitation to Bid: IFB-03-ENG-2018
For the GWA Interceptor Sewer Refurbishment Project, Northern District

Whereas, the Members of the Company desire to bid for the **Project**;

Whereas, this Resolution is made pursuant to the "Third Amendment to Operating Agreement", dated April 28, 2017, which allows for future projects to be memorialized without requiring a formal amendment of the Operating Agreement;

Now Therefore, all the Members of Core Tech-Hawaiian Dredging, LLC, ("Company"), hereby unanimously adopt and approve the following ***Resolutions*** for a new **Project**, known as "GWA Project No. IFB-03-ENG-2018":

Resolved – the Project. That the Company shall bid on the Project known as the "GWA Project No. IFB-03-ENG-2018"

Resolved – Share of Responsibilities. The work, responsibilities and liabilities for this project shall be split or basically shared as near as possible to 50/50.

Resolved – Member's Ownership Profit & Loss Temporary 50-50 split. The Company's Management Committee has agreed to make a temporary change in the percentage splits in the profit and loss for this project. The Company's by-laws sets the percentage split on the ownership and sharing of profit and loss as: Core Tech – 70%; and HDCC – 30% (hereafter referred to as the "Basic Split"). The Basic Split shall not apply to this project only, instead, the percentage split for this project shall be 50-50 for the profit and loss. The Company shall make all accounting and record adjustments necessary to accommodate this temporary split.

Resolved – Record Keeping and Compensation. That if and upon the Company being awarded the contract for the Project, the Parties agreed to accumulate, track, and report to the other Party, its direct labor, materials, and other project costs. In addition, each Party agreed that the labor, stockyard, plant and equipment rates to be charged to the Project shall be at the rates agreed upon in writing by the Parties and is attached to this Resolution as Exhibit 1.

As specified in Exhibit 1, the Parties agreed to recover the Home Office Overhead Cost (HOOHC) at a budgeted amount, which will be included in the bid price for this Project. This amount will cover each Parties HOOHC including but not limited to home office management, facilities, depreciation of company assets, vehicles, travel for home office staff, salaries of home office staff, legal and accounting. This amount will be split by the Parties based on agreed profit and loss percentage split for this Project. The Parties agreed to bill the Company for HOOHC based on the percentage of completion billed by the Company for the Project.

Each Party agreed to bill the Company for the actual hours incurred by the Field salaried staff for the Project at actual pay rates multiplied by a fixed multiplier or fringe rate of 55.52% for Core Tech and 45% for HDCC. Craft labor provided by Core Tech shall be billed to the Company at an agreed rate as shown on exhibit 1. HCCC will bill the project at the actual payrates plus a fringe rate of 74.85% plus travel and subsistence costs as defined in the appropriate trade union agreement. The fringe rate covers all fringe related expenses including but not limited to workers comp, retirement benefits, bonuses, all vehicle costs, computer health insurance. HDCC assigned Project Manager vehicle costs, travel and housing costs shall be a direct cost to the project and shall be billed to the company at cost without any mark up. All labor charges to the Project must be supported by timesheets showing hours worked on the Project, signed by the employees and approved by their supervisors / managers and can be traced back to actual payment to the employee. Either Party has the right to audit the other Party's books and records to validate the charges to the Contract.

Each Party agreed to get reimbursed for the actual cost paid on behalf of the Company with no mark up.

Each Party agreed that the rental rates for equipment owned by Core Tech, if used by the Company for the Project shall be at an agreed upon rate as shown on Exhibit 2.

Warehouse space shall be charged at a monthly agreed rate of .90/SF , stockyard at $.45/SF.

Resolved - Company's Management Committee. The approval of the Company's Management Committee is required form many things as stated in this Agreement. Since the Management Committee is made up of a representative of each party, then, for practical purposes, whenever the work, actions, costs, etc. of a Party would normally require the approval of the Company's Management Committee, then the written approval by the other Party shall be sufficient for the requesting Party to proceed.

IN WITNESS WHEREOF, the Members have executed this Resolution by their duly authorized representatives as of March 13 2018.

MEMBER:

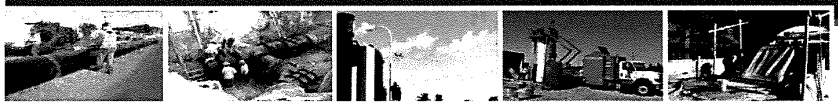
CORE TECH INTERNATIONAL CORPORATION

By: _____
Ho Sang Eun, its Chairman

MEMBER:

HDCC GUAM, LLC
By Hawaiian Dredging Company, Inc.,

By: _____
J. Majkut, its President



Core Tech - Hawaiian Dredging, LLC

List of Proposed
Subcontractors and Suppliers

Use or disclosure of data contained on this sheet is subject to the restriction on the cover page of this proposal.



Core Tech - Hawaiian Dredging, LLC

List of Proposed Subcontractors and Suppliers

Michels Corporation

817 W. Main Street
P.O. Box 128
Brownsville, WI 53006

Scope of Work

- Television Inspection of Sewers
- Water Cured-in-Place Pipe or Ultraviolet (UV) Cured-in-Place Pipe (CIPP)
- Manhole Rehabilitation

Duenas, Camacho & Associates, Inc.

238 East Marine Corps Drive
Suite 201
Hagatna, GU 96910
(671) 477-7991

Scope of Work

- Designer
- Land Surveying

Note: Bypass pumping will be self-performed by Core Tech-Hawaiian Dredging, LLC (bidder).

Use or disclosure of data contained on this sheet is subject to the restriction on the cover page of this proposal.



Core Tech - Hawaiian Dredging, LLC

Acknowledgement of Addenda

Use or disclosure of data contained on this sheet is subject to the restriction on the cover page of this proposal.



Acknowledgement of Receipt of Addenda

Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

Addendum No.	Addendum Date
1	February 8, 2018
2	February 23, 2018
3	March 2, 2018
4	March 6, 2018
5	April 4, 2018
6	April 10, 2018
7	April 18, 2018

Use or disclosure of data contained on this sheet is subject to the restriction on the cover page of this proposal.

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 33-FY2018
Relative to Approval of Funding Match Commitment for Bureau of Reclamation Grant as it Relates to GWA District Metering Project Grant Application

What is the project's objective and is it necessary and urgent?
GWA management seeks CCU approval of the project intent as well as CCU commitment to the legal and financial obligations associated with the 50% matching requirement per Department of Interior, Bureau of Reclamation, Water-Smart Program.

The project intends to install distribution main meters at fourteen locations including vault boxes and related piping. Included in the scope will be all related equipment & infrastructure for power and communication which will allow the meters to have AMI capabilities. With the AMI infrastructure in-place at those locations, given ideal conditions customers meters may also be brought into the AMI infrastructure, although this is not directly related to the project. Data from the distribution main meters and customer meters can be examined in real-time; any sharp deviation from normal water supply levels would indicate a possible distribution main break. This will allow GWA to dispatch leak detection crews to identify possible line breaks in a relatively narrower area, thereby reducing response time. This project is urgent given that GWA water loss rate is relatively high.

Where is the location?
Distribution main meters will be located at key supply entry points in the following location: Hagatna; Asan; Agat-Santa Rita; Anao Point; Yigo; Baza Gardens, Yona; East Gayinero, Yigo; Ipan, Talofofo; Bear Rock, Inarajan; Nimitz Hill, Piti; Pago Bay, OCP; Paradise Estates, Dededo; Piti; TaloVerde, Tamuning; Talofofo;

How much will it cost?
Estimated overall total project cost is $2,000,000.00

When will it be completed?
Estimated project completion will be 36 months from the time funding/NEPA is secured.

What is the funding source?
The grant proposal is to the Bureau of Reclamation, that includes a 50-50 match requirement. If successful, Bureau of Reclamation will be providing fifty-percent (50%) of total project costs estimated at $1M.

The RFP/BID responses (if applicable):
Not Applicable

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

GWA RESOLUTION NO. 33-FY2017

RELATIVE TO APPROVAL OF FUNDING MATCH COMMITMENT FOR BUREAU OF RECLAMATION GRANT AS IT RELATES TO GWA DISTRICT METERING PROJECT GRANT APPLICATION

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual, and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA is submitting a distribution main metering grant proposal (See EXHIBIT A) to the Department of Interior, Bureau of Reclamation, Water-Smart Program, wherein the project intends to install district meters at 14 closed water subset-systems at various locations to allow the Agency to record and analyze quantity supply and quantity consumed; spikes in supply without a corresponding spike in consumption may indicate a water line break for that specific closed system being metered, thus narrowing the area for leak detection, thereby reducing water loss and O&M costs; and

WHEREAS, some critical aspects of the project are installation of related equipment & infrastructure for power and communication which will allow the district meters to have AMI capabilities; and

WHEREAS, the GWA Engineering acknowledges that the intended purpose of the proposed project is to reduce real water loses and increase water savings; and

DRAFT

WHEREAS, the estimated total grant proposal project cost is Two Million Dollars ($2,000,000.00) which includes design and construction with a fifty percent (50%) matching requirement of One Million Dollars ($1,000,000.00) from GWA of total eligible project costs; and

WHEREAS, all grantee's submitting proposals to the Department of Interior, Bureau of Reclamation, Water-Smart Program are required to include as part of the grant application financial and legal commitment from its board of directors; due within thirty (30) days of grant submittal; and

WHEREAS, the General Manager & Chief Engineer advocates the implementation of the proposed grant project and intends to set aside One Million Dollars ($1,000,000.00) in matching requirement to be provided from bond proceeds applicable to the project such as PW 05-06 Master Meters, PW 12-01 Water Audit Program & Water Loss Control Plan; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that this project's intent will assist in water loss reduction by making line break detection more efficient and tracking of quantity of supply data more reliable in those subset water system metered sectors and recognizes water and costs savings.
3. The CCU hereby supports the management of GWA to enter into a grant or cooperative agreement with the Department of Interior, Bureau of Reclamation, for the purposes of the WaterSmart grant program.
4. The CCU hereby further authorizes the management of GWA to commit to the legal and financial obligations associated with the fifty percent (50%) matching requirement per Department of Interior, Bureau of Reclamation, Water-Smart Program in the amount of One Million Dollars ($1,000,000.00).

//

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RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 22nd day of May, 2018.

Certified by: Attested by:

_____ _____
JOSEPH T. DUENAS **J. GEORGE BAMBA**
Chairperson Secretary

SECRETARY'S CERTIFICATE

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

///

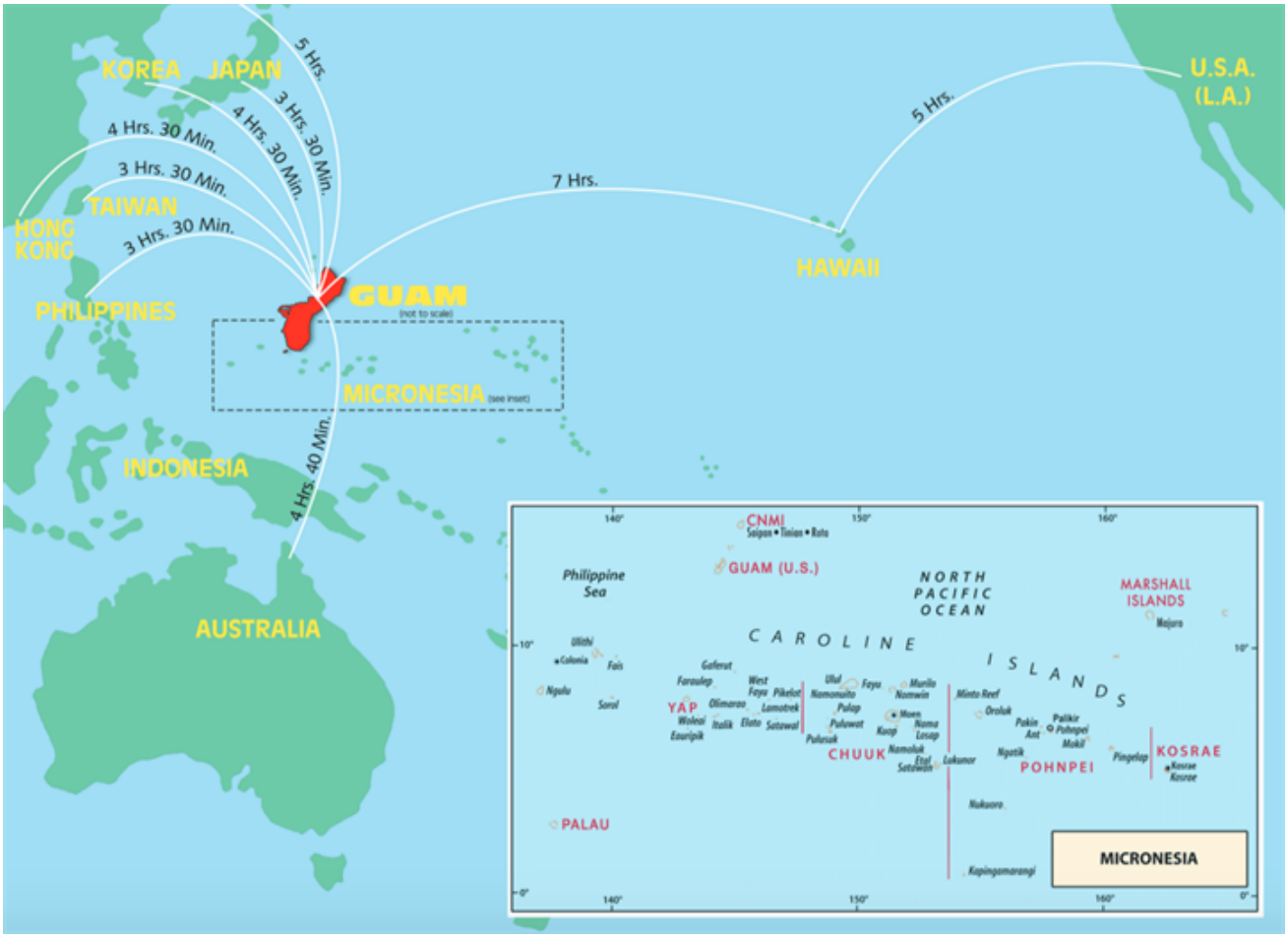
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EXHIBIT A

GUAM WATERWORKS AUTHORITY

"Better Water. Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
P.O. Box 3010, Hagatna, Guam 96932
Tel. No. (671) 300-6846/48 Fax No. (671) 648-3290



Guam Waterworks Authority

Distribution Main Metering Project

Grant Proposal

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Appendices

Appendix A - Guam Waterworks Authority FY 2017 Financial Highlights Report (Apr. 24, 2018)

Appendix B – Letter of Endorsement – Madeleine Z. Bordallo, Congresswoman, U.S. House of Representatives (May 9, 2018)

Appendix C – Resolution – Consolidated Commission on Utilities (Forthcoming)

Appendix D – Memorandum of Understanding - GWA – GPA MOU relative to Smart Grid Network Usage (Jul. 9, 2015)

Project Summary

The Guam Waterworks Authority (GWA) is submitting this application on May 10, 2018 Guam Pacific time to be considered for the Department of Interior (DOI), Bureau of Reclamation(BOR) 2018 WaterSmart Program, catalog of federal domestic assistance (CFDA) number 15.507, funding opportunity number BOR-DO-18-F006. Total project cost is estimated at $2,000,000 and is expected to take 3 years from the time funding is approved. The GWA will contribute 50% of the total project costs estimated at $1,000,000 and will be paid out of its existing revenue bonds. The requirement of the governing board resolution funding commitment will be forthcoming within 30 days of our submittal, a meeting is scheduled later this month.

The proposed BOR project is one component of GWA's Water Loss Program, it aims to install distribution main meters within fourteen key locations within the water system. Included in the project will be the architecture and engineering design analysis of each of the fourteen sites, design & construction of concrete meter vault boxes, design & construction of power and communication infrastructure (to allow remote reading). The proposed BOR project will compliment other on-going and in-progress GWA projects that are part of the Water Loss Program. These projects are:

- Production Metering Project (60 identified deep well sites),
- Water Hydraulic Modeling Refinement Project,
- Replacement of Customer Meters Project (21,000 balance of 44,000),
- Pressure Zone Realignment and District Metering,
- Line Replacement Program Project (3rd year),
- Leak Detection & Response Unit Creation & Implementation.

The GWA's water loss rate/non-revenue water is pegged somewhere between 50-58% based solely on sales and production. Note this is still up for discussion due to questions surrounding the validity of production well data. The GWA pumps approximately 38 million gallons of water per day through its deep wells. Because the proposed project aims to install remote reading distribution meters, GWA will be alerted to specific narrowed areas of potential water distribution main breaks, therefore improving response time, thus saving vast sums of water. Note that it is the intent of this proposal to identify water savings, it also acknowledges that production meters at the deep wells have flaws which the on-going deep well project aims to correct or validate. Although GWA has a number projects currently on-going to support water loss, the proposed BOR project will immediately aid in controlling water loss by alerting GWA to specific narrowed areas where distribution main meters are located by providing metering data in real-time, thereby improving response time in leak detection and repair. An ancillary benefit of the project will be the opportunity to allow customer meters in those areas to be read remotely. Currently, the GWA reads its customer meters via Automatic Meter Read (AMR); although, they are also equipped for Advanced Metering Infrastructure (AMI). If initial cursory review assumptions are correct, the transition to AMI will have minimal costs.

The GWA, Engineering Department & Grants Planning Section, have no knowledge of any previous grant funding from the Department of Interior, Bureau of Reclamation to this date and believes this is the GWA's first application to DOI, BOR. The GWA has earned the designation of "low risk auditee" status from the independent auditor Deloitte and Touche, LLP in FY 2016 & FY 2017. Congressional endorsement has been obtained and can be found in Appendix B.

Background_ About Guam Waterworks Authority

The island of Guam is located in the western Pacific Ocean approximately 3,800 miles west-southwest of Honolulu, Hawaii, 1,550 miles south-southeast of Tokyo, Japan and 1,600 miles east of Manila, Philippines. The island, which is the western most Territory of the United States, is approximately 30 miles long and ranges from 4 to 9 miles wide with a total land area of approximately 212 square miles. The Guam Waterworks Authority (GWA) system provides water to all of the civilian population of Guam and sewer service to a large percentage of the civilian population, Andersen Air Force Base and several Navy facilities.

The GWA has over 42,000 water service connections and approximately 26,000 wastewater service connections to a civilian population of approximately 180,000 on the island including tourists and military. The GWA manages three drinking water systems across the island, producing approximately 42 million gallons per day (MGD) of drinking water from about 120 deep wells, military purchases and a surface water treatment plant. Of the 42 MGD, GWA purchases water from the U.S. Navy 4 MGD. The system includes 23 in-service storage water tanks/reservoirs, over 100 chlorination stations, 25 water booster pump stations, and over 500 miles of island-wide water distribution lines. On the wastewater side, GWA owns and operates seven wastewater treatment plants that can treat an average total flow rate of about 14 MGD of sewage, 78 wastewater pump stations and ejectors, and approximately 300 miles of sewer collection lines and conveyance lines. Additionally, there are currently two major military installations, Andersen Air Force Base and Naval Base Guam, which occupy large areas on the island. Andersen AFB has its own water system and wastewater collection system; however, it does not have a separate wastewater treatment plant; it discharges its wastewater into GWA's Northern District wastewater system.

The Guam Organic Act of 1950 is the United States federal law that designated the island of Guam as an unincorporated territory of the United States. Among other things, it created the Government of Guam and conveyed all water rights to it. The GWA operates as an Autonomous Agency of the Government of Guam, more specifically a "state-operated" Government Public Corporation. The GWA is governed by the Consolidated Commission on Utilities (CCU), a five-member non-partisan board, with members elected individually in a general election to a four-year term. The CCU is also charged with oversight of the Guam Power Authority (electrical power). The CCU makes decisions regarding policy, management, budget and finance of the Authority's operations.

Upon taking office in January 2003, the original members of the CCU were faced with more than $25 million in debt and pending federal lawsuits for violations of water quality and environmental standards that had accumulated over the previous several decades. Since 2003, a number of changes have been made to move the Authority operations towards a self-supporting economic model and environmental compliance. Currently, both the CCU and the GWA management and staff are focused on meeting the requirements of a 2011 Court Order resulting from the federal lawsuits, by refurbishing and/or upgrading facilities to improve reliability, to implement operational systems and procedures consistent with current utility practices, and to meet regulatory standards, i.e. Safe Drinking Water Act/Clean Water Act, American Water Works Association (AWWA) standards. The Authority has made great strides in improving fiscal management, and in obtaining external funding through the bond markets to fund its

Capital Improvement Program (CIP), including projects identified in the court order. To date it has borrowed and implemented approximately $500 million in infrastructure improvements mainly in water tanks, configuration of transmission lines, and wastewater treatment plants. An important accomplishment by GWA is its recent investment grade credit designations by Moody's, Standard & Poor's, and Fitch rating agencies, and also obtaining a low risk designation by auditors related to federal grants for years 2016 and 2017.

The Water System

The GWA's water supply system primarily consists of 120 wells, the Ugum Water Treatment Plant, the Tumon-Maui well(leased military deep well), 25 water booster pump stations, 23 in-service tanks/reservoirs which contain an active maximum volume of about 30 million gallons, approximately 586 miles of water distribution pipelines, and roughly 3,814 fire hydrants.

Guam's primary water source is from groundwater, with additional supplies drawn from a single surface water source and two springs, all of which are replenished by rainfall throughout the year on Guam. The largest amounts of rain for the island come during the months of June through December. The annual rainfall can average 80 inches in central to northern areas, and in the southern areas as much as 110 inches. Guam's geologic features divide the island into distinct northern and southern areas. The northern part of the island is primarily flat, limestone plateau, where the island's groundwater occurs, while the southern part of the island has a more mountainous, volcanic geology and contains the majority of rivers and surface water. The north's limestone plateau, with steep cliffs, slopes gently southwesterly from an elevation of 600 feet to less than 100 feet above mean sea level at the middle of the island. The main groundwater source is located under the plateau. Guam's rainfall percolates through the limestone and forms a freshwater "lens" that floats at sea level above dense brackish and salt water. Studies have shown that Guam's aquifer can provide a water supply of up to 80 million gallons per day.

The Wastewater System

GWA's wastewater system serves primarily all of the civilian population of Guam, as well as for Andersen Air Force Base and some U.S. Naval facilities in the northern end of the island. However, there is a significant portion of the civilian population in the north that is not served by GWA's wastewater system. The system includes wastewater treatment plants, sewage pump stations and extensive collection systems in each of its 7 districts. GWA's wastewater collection system consist of an estimated 314 miles of gravity sewers and force mains that collect sewage from the various communities served and transport it to the respective wastewater treatment plant in that district.

The Institutional Capacity Building & Project Introduction/Background

The Guam Waterworks Authority has recently undergone several key upgrades towards operating its systems. Significant efforts have been expended towards decreasing expenditures, improving leak repair times, implementing a meter replacement program, and launching a computer maintenance management system as part of a comprehensive asset management program and committing vast time and resources to develop and continuously improve its Water and Wastewater Hydraulic Models and developing a GIS. GWA continues to work diligently in

making needed improvements to both the water and wastewater systems, including upgrades required in the 2011 Court Order, projects to accommodate growth in the island's population centers, as well as normal renewals, and replacements. As part of our efforts to achieve operational improvements and readiness, GWA is implementing asset management principles and improved maintenance management practices within the four Operations divisions responsible for operating and maintaining the island's water and wastewater infrastructure.

Currently GWA has contracted with a national engineering firm to update its Water Resources Master Plan (WRMP) and is currently undergoing the comment period with the public and all interested stakeholders for the draft report. Note that the existing firm has also been responsible for completing the 2006 WRMP report. A copy of the draft WRMP report and/or 2006 WRMP report can be made available to anyone interested in receiving a digital copy. The 2018 draft WRMP report objectives were to summarize the condition of GWA's water and wastewater system facilities and outline improvements needed over the subsequent 20 years to achieve regulatory compliance and improve the reliability of GWA's infrastructure and services. Specifically, the draft WRMP currently in the public comment period assesses GWA's progress towards achieving the recommendations outlined in the 2006 WRMP and further develops a capital improvement plan for the next 20 years, through 2037, to meet acceptable levels of service and maintain compliance with drinking water standards and clean water regulations.

Both the 2006 WRMP and the 2018 draft WRMP identifies key recommendations specific to projects that the utility could do to help stem GWA's arguably water loss rate/non-revenue water pegged at 50%-59%. Although this is an astounding number given that 42 million gallons are produced daily, and which it implies we are losing approximately 50 percent; GWA is cautious when using this number. Aiding in resolving this data validity issue are steps being taken now by the GWA, demonstrated by initiating projects such as the production deep well meter project, and other projects as part of the Water Loss Program listed earlier. Difficulty in understanding the system is said to be the manner it was constructed. For the most part the water system was constructed piece mill over the decades since post World War II (WWII) Guam. GWA's water system is described as a "legacy system" originally built by the U.S. Navy during the post WWII reconstruction of Guam that went well into the 1960s and 1970s. Most of that system is still in place and used and the newer/recent improvements have mostly been extensions on top of the older legacy system. GWA Management understands the importance of resolving this long-standing issue and has plans to incrementally replace the system.

It is in addressing non-revenue water which GWA is putting forth for this grant proposal through design and construction of distribution main meters, including various AMI components to allow for real time reading. The GWA views two types of distribution main meters, 1) pressure zone meter, and 2) district meters/distribution main meter which is a subset of the pressure zone meters. The project aims mainly to meter large housing tracks or clusters of commercial buildings to obtain real time consumption data; data from these meters will provide better analysis of the quantity of water losses in real-time for a controlled specific area. Data will be used to compare to the consumption for those areas. Currently, all GWA customer meters are read via AMR, although they are AMI capable. Therefore, the project has a dual benefit in that it intends to provide residential customers meters that are currently being read through AMR technology to switch to AMI technology along with the district meter for the specified area of

study. This will allow immediate analysis and notification when there are substantial irregularities in those areas making leak detection much more efficient and effective. Other benefits of the project in include better data for non-revenue water accounting, and in refining the water system hydraulic model. Information provided by the proposed project will help in removing some of the assumptions the model may have relied on due to the absence of data.

Both the 2006WRMP and the 2018 draft WRMP reports outline key tasks to perform in order to reduce water losses including apparent and real. To date GWA has performed the following as recommended in WRMP reports:

1. Revenue enhancement- Replaced thus far 20,000 customer meters; in progress to address the balance of 42,000
2. Revenue enhancement- Line Replacement program in progress
3. Continuous testing of meters- Purchased meter test bend & constructed a Meter Test Bench facility, staffed meter testing program
4. Quantifying Production - in contract to design and construct production water well meters
5. System/Pressure Zone Meters – in contract design to reconfigure zoning according to best engineering design practices
6. Leak Detection study- performed (2) contracted whole water system sweeps
    a. Currently performing tactical leak detection tasks internally
    b. Currently in process of obtaining equipment and more staffing to accommodate 2 crews

Technical Project Description

This project proposes to design and construct complete in place including installation of distribution main meters at fourteen locations throughout the island. It will include underground vaults, valving and miscellaneous piping, excavation, backfill, restoration of pavements and connection to island power and communication grid. All work related to the proposed project will be located on government easements or utilities right of way. The proposed project will install meters within the existing water system, therefore all work will occur on previously disturbed areas, rights of way or utility easements.

The Guam Power Authority (GPA), a sister company of the GWA both report to the Consolidated Commission on Utilities Board. The GPA currently has successfully constructed a fully functional AMI network used for its power customers throughout the island. There is a memorandum of understanding to allow the GWA to utilize its network for AMI purposes eliminating a portion of upfront costs associated with the AMI infrastructure. Within the MOU the GWA & the GPA agreed to share in the cost of implementation of specific AMI components such as the expansion of the data control center, and the expansion of the routers/collectors within the network to increase coverage. It is the intent of this project to utilize the GPA AMI infrastructure either fully or partially for the use of the distribution main meters. It will depend on the conditions that will be revealed during the design phase of the project. Customer's water meters in the metered tracks although not directly related to the project could potentially be able to be able to utilize the AMI network. The initial cursory review by the GWA & GPA engineering department suggests that minimal costs will be involved, as GWA's customer meters are already AMI capable. Additions

to the AMI infrastructure may include expanding the number of routers and collectors. Once more information is obtained during the design phase and it appears to be viable to bring on its customer meters with little or no additional cost, the GWA may provide funding and/or request DOI, BOR for approval to amend project scope; provided that it will be within established budget thresholds.

The project will allow GWA to determine real water losses for a specific customer track or rather isolated areas related to the water system. Fourteen housing/customer tracks have been identified as good candidates by the GWA Water Engineering Section and the GWA Water Operation sections due to having one or two water supply lines feeding it; allowing the capability to meter water supply at entry points and/or exit point. With meters at the entry/exit point leading into the customer track, the GWA will be able to validate the quantity of supply. The GWA Operations sometimes refer to this as a closed system. Data from the distribution main meters (supply) will be compared to data coming from the customer meters (demand). Data will be reviewed and analyzed by the GWA System Control Center (SCC) unit, they are a 24-hour data call center and highly skilled in water & wastewater system operations than a typical dispatcher. Any variations from normal operations from the data comparison may prompt the SCC personnel to cut a workorder for the Leak Detection Unit to investigate for possible breaks. Any leaks identified will be reported to SCC to cut a work order for repair crews to immediately address the leak.

Below are specific projects locations for each of the fourteen identified sites where the distribution main meters will be constructed. As stated earlier in the introduction of the project, GWA's rate of non-revenue water is roughly 50-59%. This number is considered rough at this point due to the inability to obtain hard data or inability to valid data at this time. All projects in the Water Loss Program including the proposed BOR Distribution Main Metering project will aid in validating information related to non-revenue/water loss rate. Water loss/ non-revenue ranges depending on the source. The 2017 single audit describes GWA water loss at 59%, the draft WRMP (Brown & Caldwell) reported it to be 49% and the GWA Water Accountability section pegged it at 38%. Therefore, for the analysis related to water saving assumed that each of the fourteen housing track locations identified for distribution main meters construction have a 59% water loss rate. Furthermore, GWA is confident that it will be able to track and reduce this rate be at least 40%. Below you will find project location in relation to Guam, customer consumption in acre feet for those locations and water savings from the reduction of 19 percentage point for each of track housing.

The 36-month project schedule is shown in Table A, and a breakdown of major tasks is shown in Table B.

Table A. Project Schedule

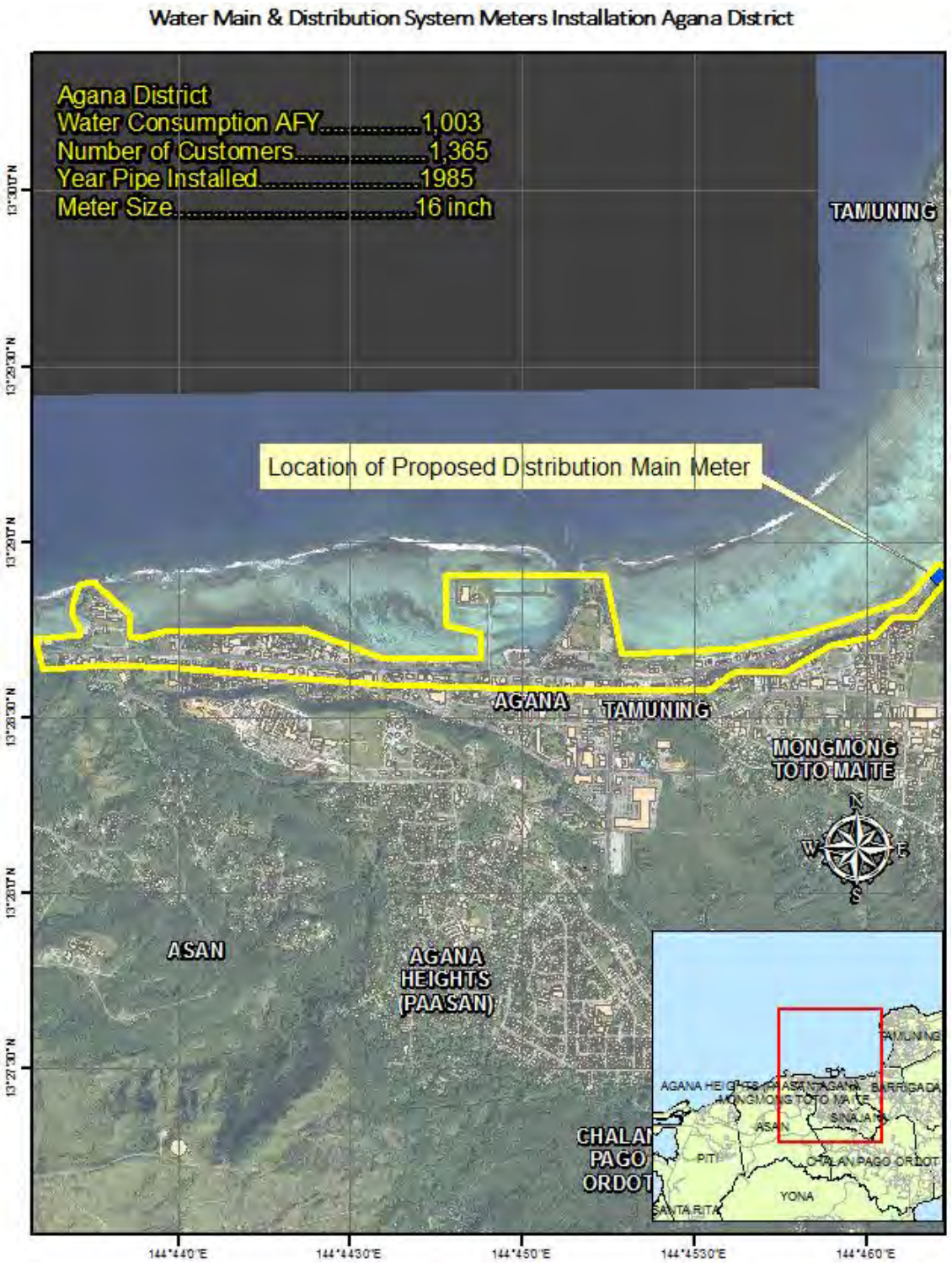
Task No.	Timeline Major Project Tasks	FY 2018 Quarters		FY 2019 Quarters				FY 2020 Quarters				FY 2021 Quarters				FY 2022 Quarters	
		3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2
1	Grant Application																
2	Project Design Procurement																
3	NEPA Compliance																
4	Project Design																
5	District Meter Installation																
6	AMI Data Center Configuration																
7	Performance Monitoring																

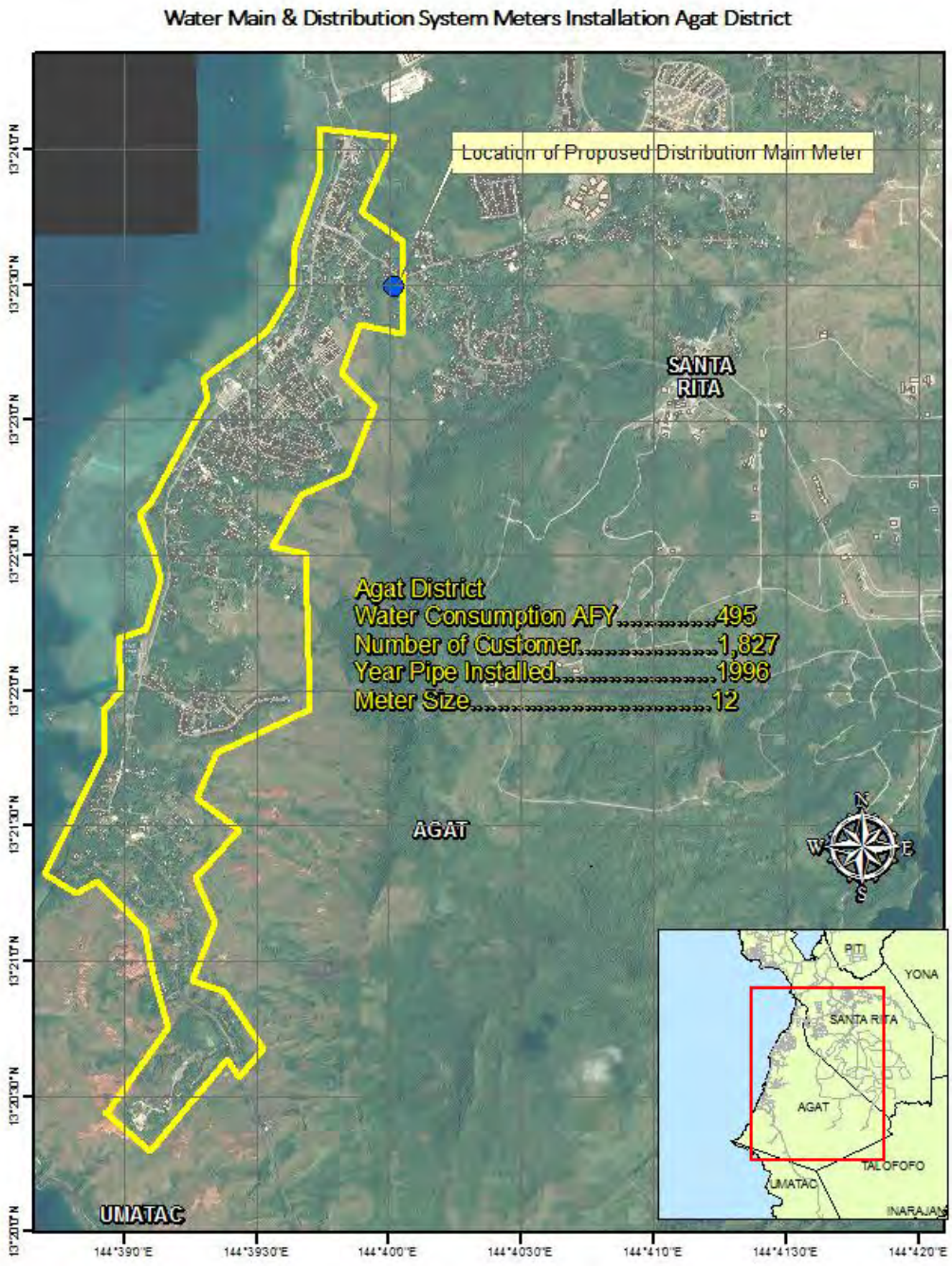
Table B. Project Task Breakdown

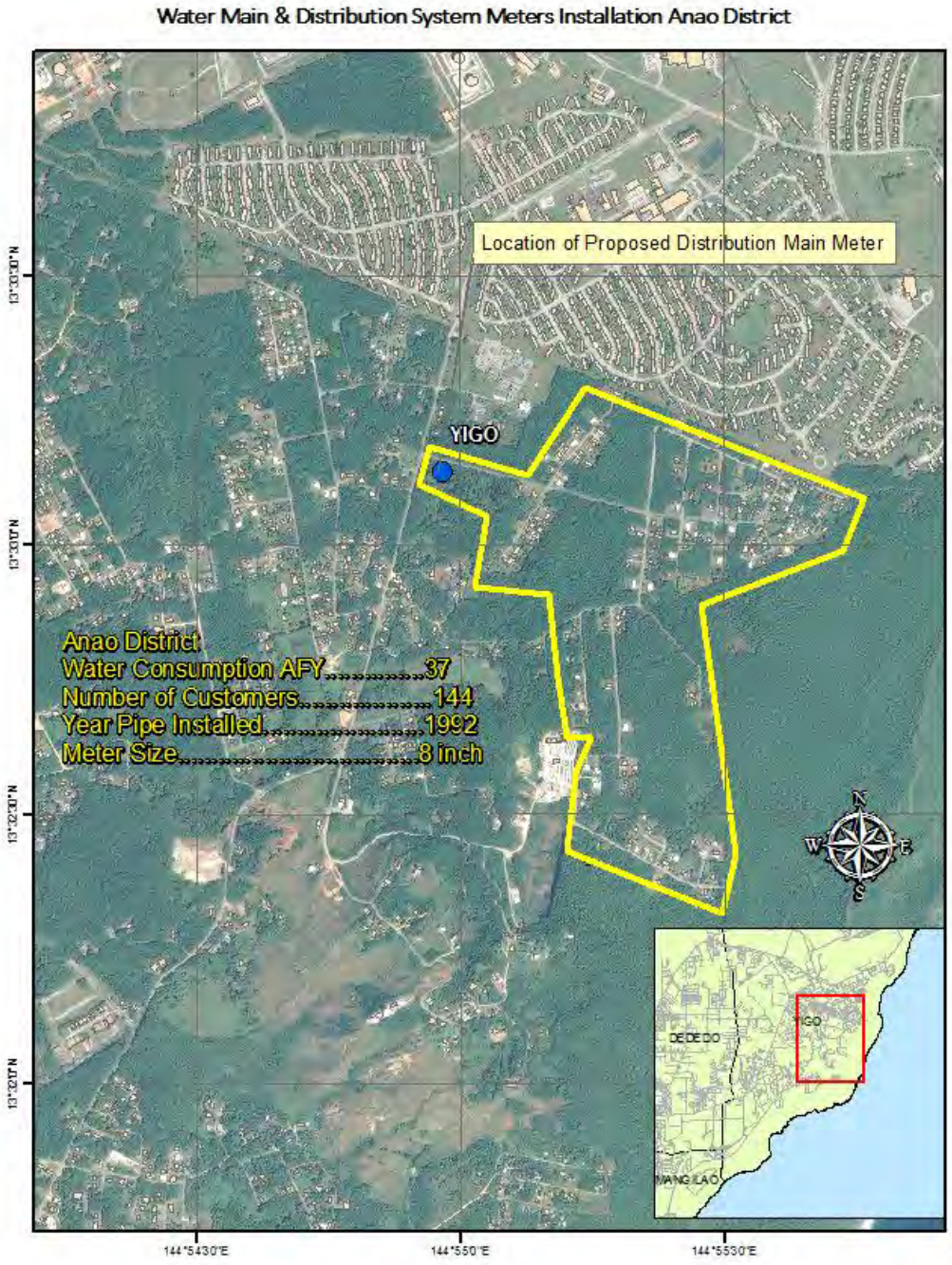
Main Task / *Subtask Description*	Date Start	Duration (Days)	Duration (Months)	Duration (Years)	Date Complete
Grant Application	**5/1/2018**	**244**	**8.1**	**0.7**	**12/31/2018**
Grant application draft and submittal					
Evaluation and selection of grant application					
Grant award and kickoff meeting					
Project Design Procurement	**1/1/2019**	**211**	**7**	**0.6**	**7/31/2019**
Document assembly for design services competitive bid					
Advertise design bid and collect packages					
Bid package opening, evaluation, short listing					
Design firm interviews					
Final evaluation and selection					
Fee negotiation					
Consolidated Commission on Utilities notification					
Contract processing					
Certification of funds					
Notice to proceed issued					
National Environmental Policy Act Compliance	**1/1/2019**	**180**	**6**	**0.5**	**6/30/2019**
Environmental consultation with local agencies					
Submit agency responses to Bureau of Reclamation					
Review of documentation					
Issuance of Categorical Exclusion					
Project Design	**8/1/2019**	**183**	**6.1**	**0.5**	**1/31/2020**
Design kickoff meeting					
Field survey of district meter sites					
Selection of meter and communication equipment					
Project plan drafting					
Design review and acceptance					
Distribution Main Meter Installation	**2/1/2020**	**699**	**23.3**	**1.9**	**12/31/2021**
Procure equipment and materials					
Acquire clearances and permits					
Meter installation and testing					
AMI Data Center Configuration	**7/1/2020**	**91**	**3**	**0.3**	**9/30/2020**
Procure data center vendor services					
Configuration and testing of existing data center to receive meter data through AMI					
Training for GWA staff					
Total Project Duration	**1/1/2019**	**1095**	**36.5**	**3.0**	**12/31/2021**

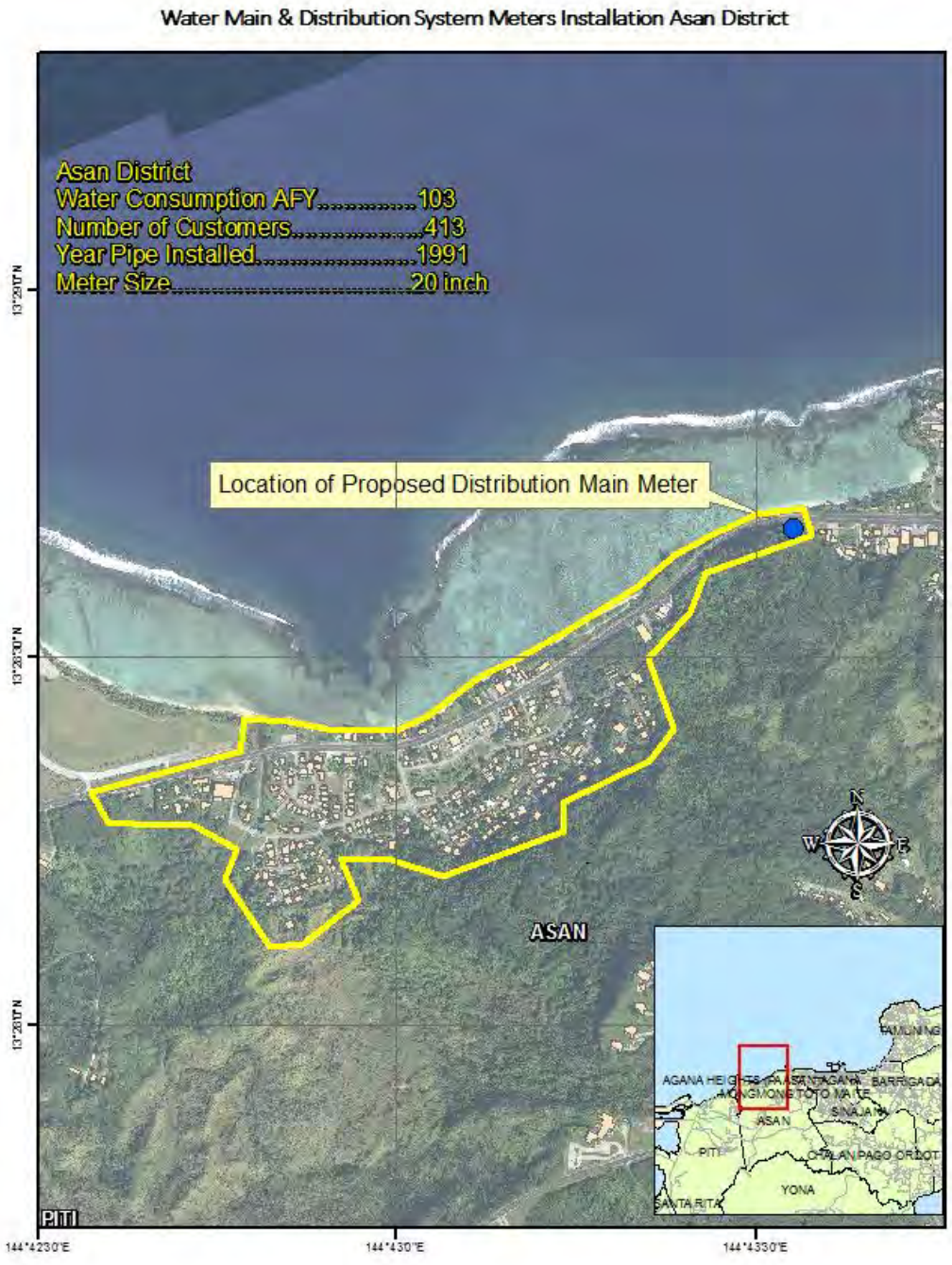
Project Location & Unique Information

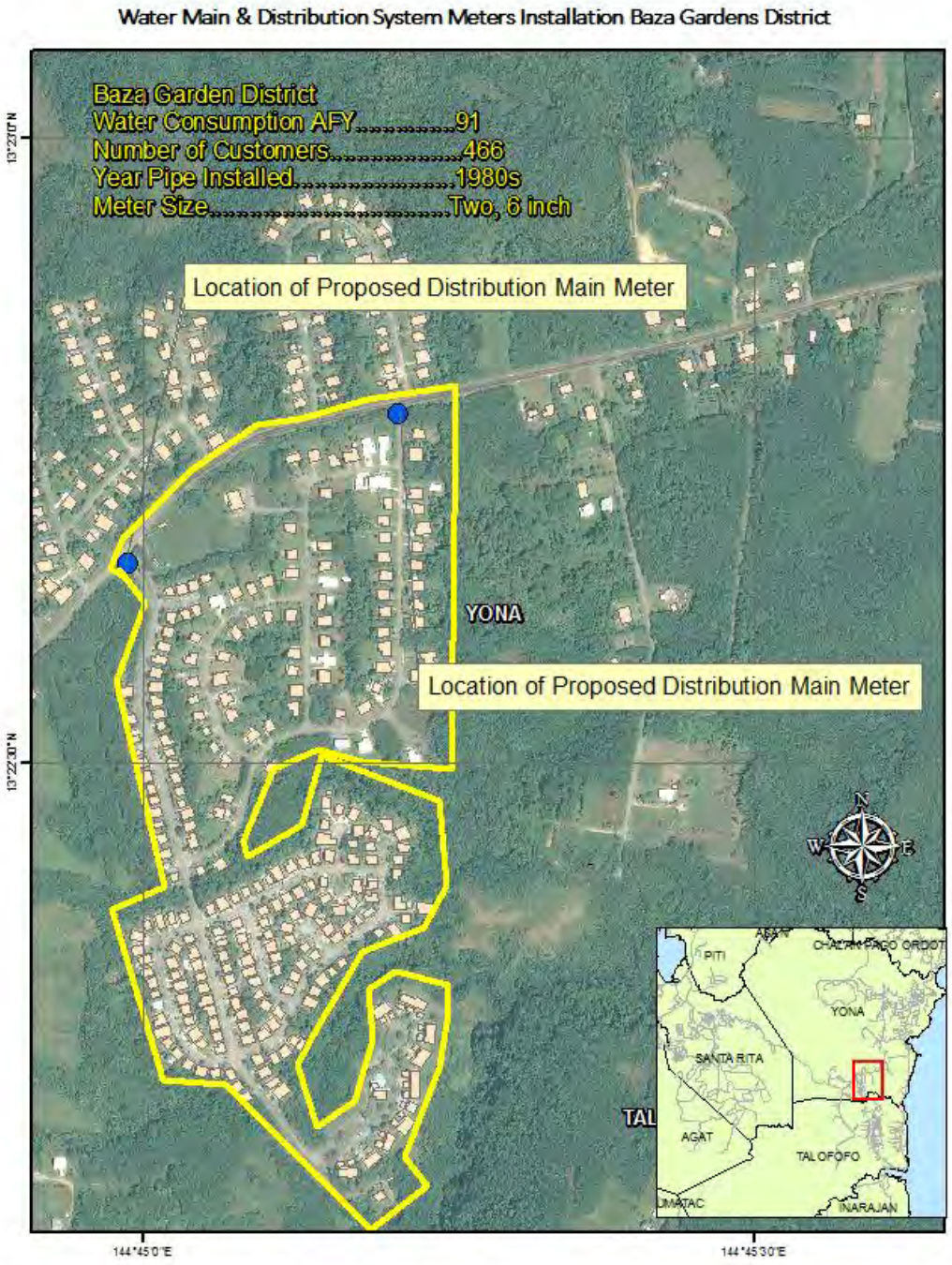
Maps are presented in the following pages.

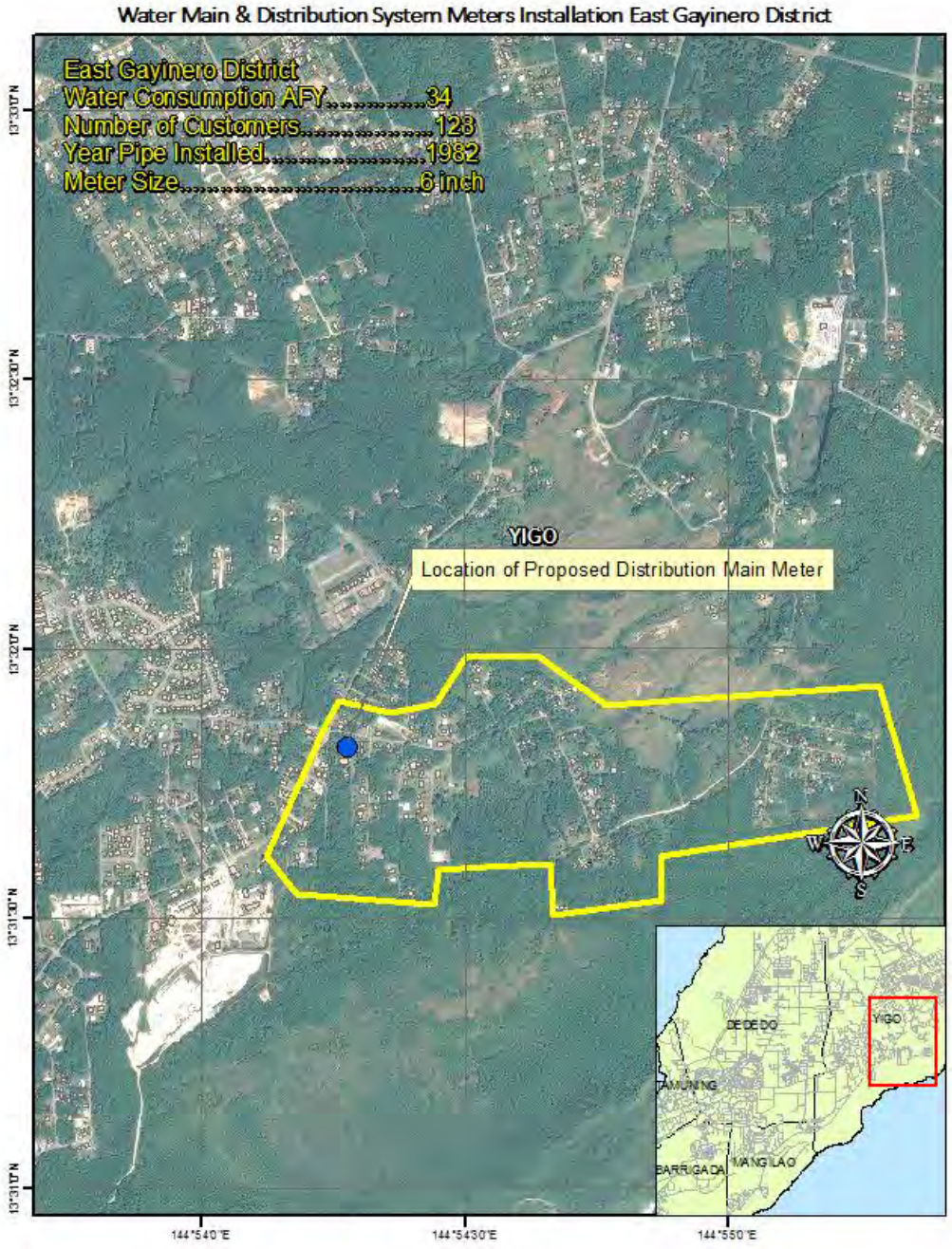

Water Main & Distribution System Meters Installation Agana District
Agana District
Water Consumption AFY.....1,003
Number of Customers.....1,365
Year Pipe Installed.....1985
Meter Size.....16 inch
Location of Proposed Distribution Main Meter
TAMUNING
AGANA
TAMUNING
MONGMONG
TOTO MAITE
ASAN
AGANA
HEIGHTS
(PAASAN)
CHALAN
PAGO
ORDOT
N
W
E
S
13°30'0"N
13°29'30"N
13°29'0"N
13°28'30"N
13°28'0"N
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144°44'0"E
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144°45'0"E
144°45'30"E
144°46'0"E

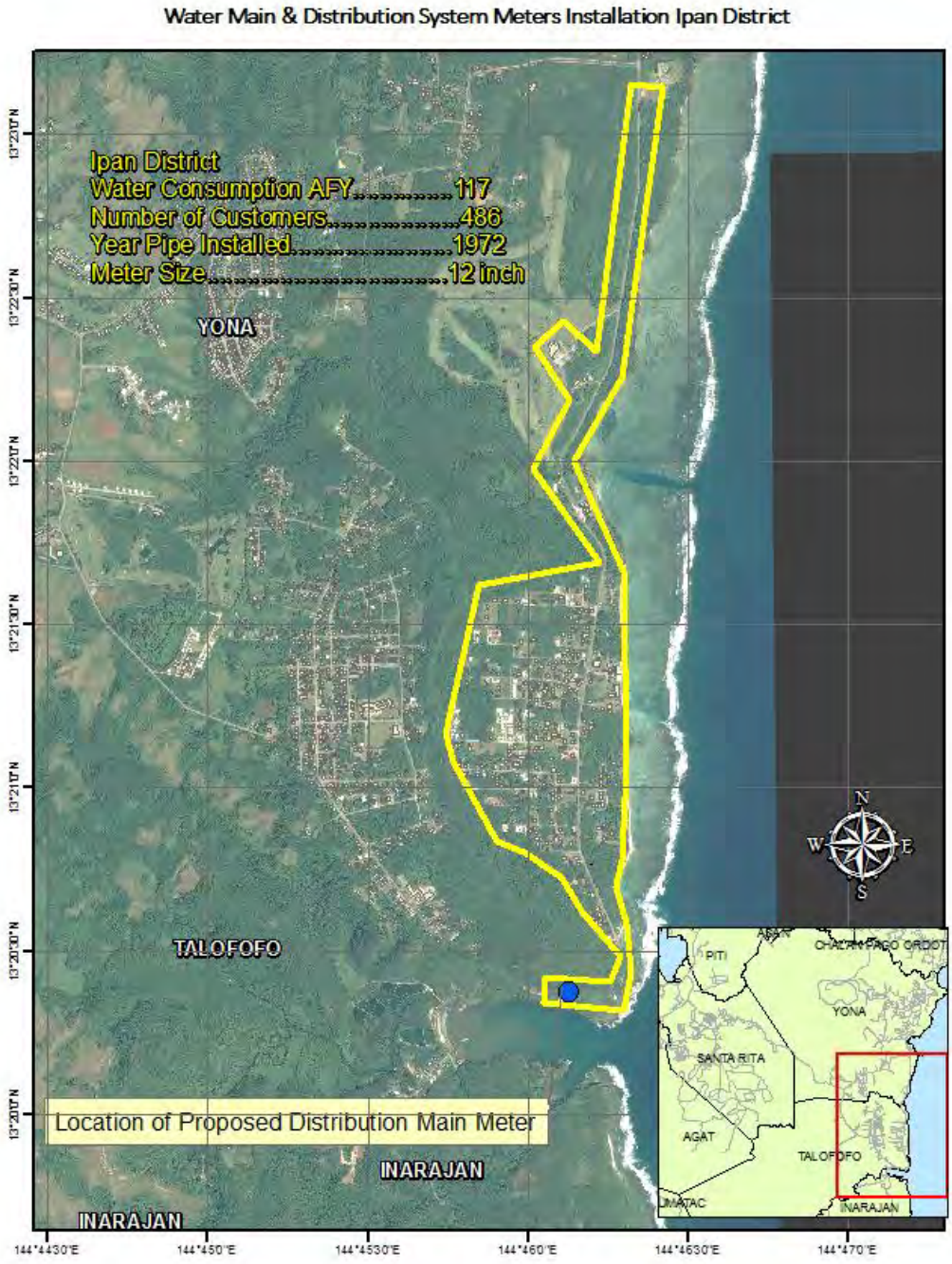

Water Main & Distribution System Meters Installation Agat District
Location of Proposed Distribution Main Meter
SANTA RITA
Agat District
Water Consumption AFY.....495
Number of Customer.....1,827
Year Pipe Installed.....1996
Meter Size.....12
AGAT
UMATAC
N
W
E
S
PITI
YONA
SANTA RITA
AGAT
TALOFOFO
UMATAC
INARAJAN
13°24'0"N
13°23'0"N
13°23'0"N
13°22'0"N
13°22'0"N
13°21'0"N
13°21'0"N
13°20'0"N
13°20'0"N
144°39'0"E
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144°41'0"E
144°41'30"E
144°42'0"E

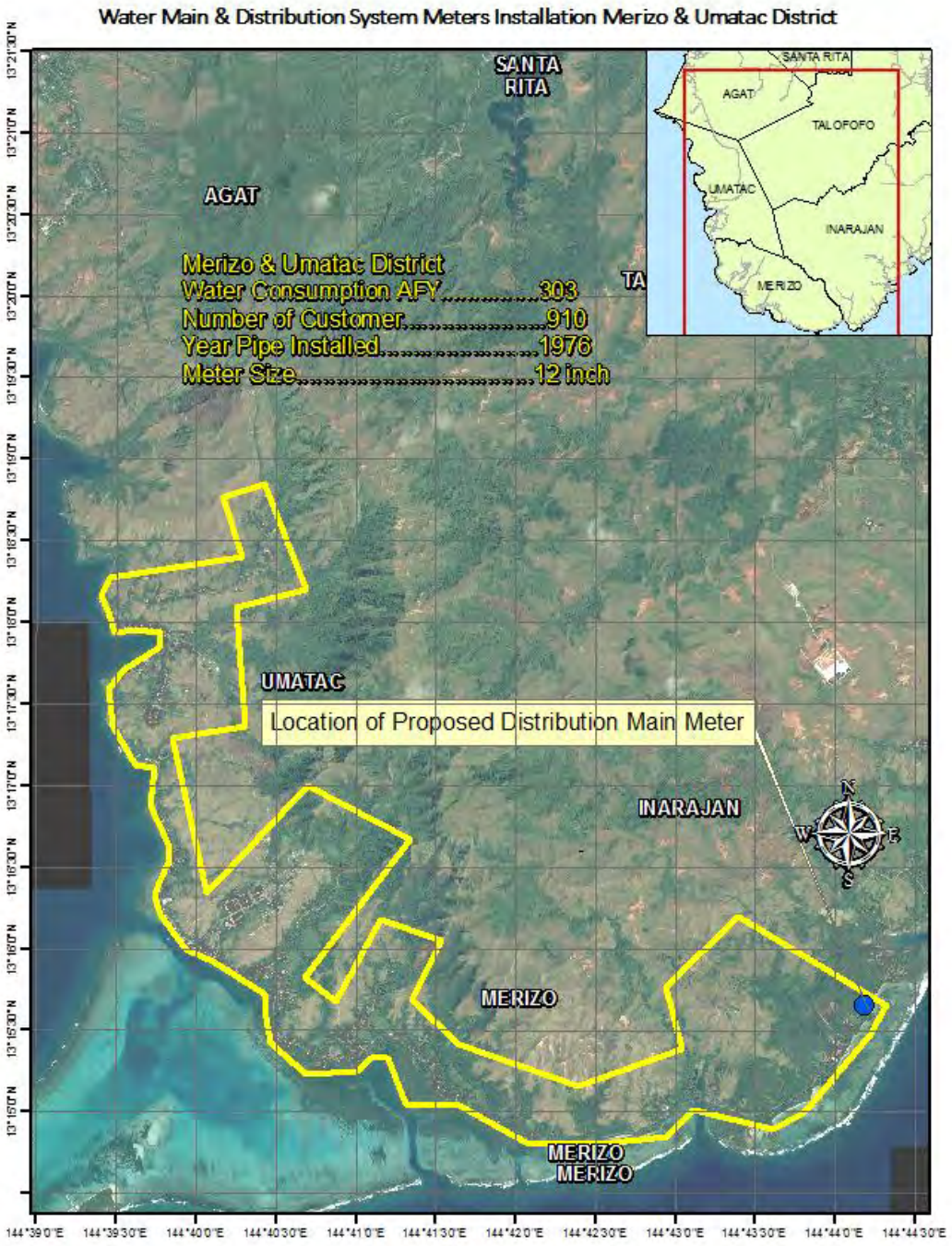

Water Main & Distribution System Meters Installation Anao District
Location of Proposed Distribution Main Meter
YIGO
Anao District
Water Consumption AFY.....37
Number of Customers.....144
Year Pipe Installed.....1992
Meter Size.....8 inch
N
W
E
S
DEDEDO
YIGO
MANGILAO
13°33'0"N
13°32'30"N
13°32'0"N
144°54'30"E
144°55'0"E
144°55'30"E

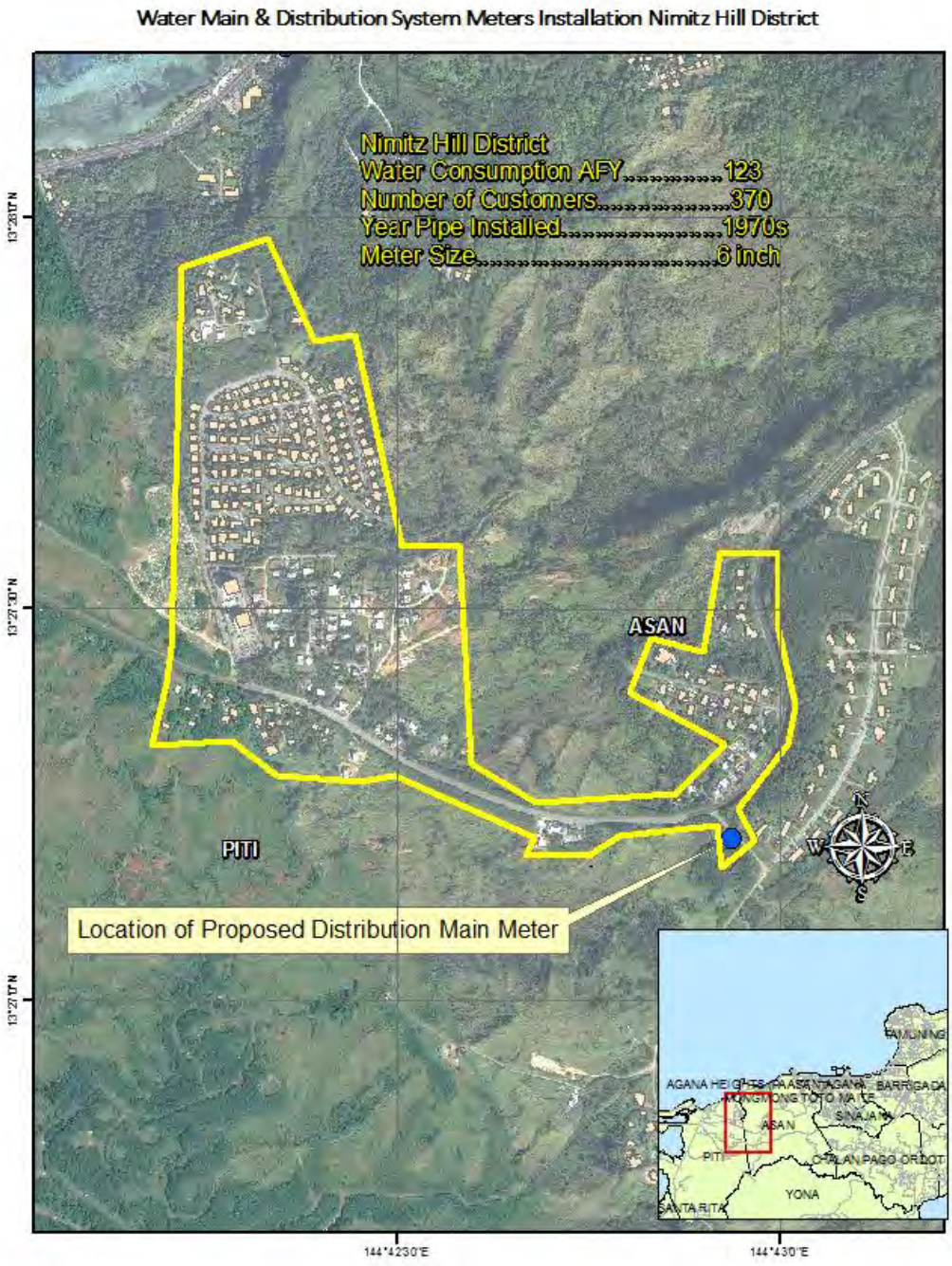

Water Main & Distribution System Meters Installation Asan District
Asan District
Water Consumption AFY.....103
Number of Customers.....413
Year Pipe Installed.....1991
Meter Size.....20 inch
Location of Proposed Distribution Main Meter
ASAN
PITI
13°29'0"N
13°28'30"N
13°28'0"N
144°42'30"E
144°43'0"E
144°43'30"E
N
W
E
S
AGANA HEIGHTS
SINAJANA
ASAN
PITI
YONA
SANTA RITA

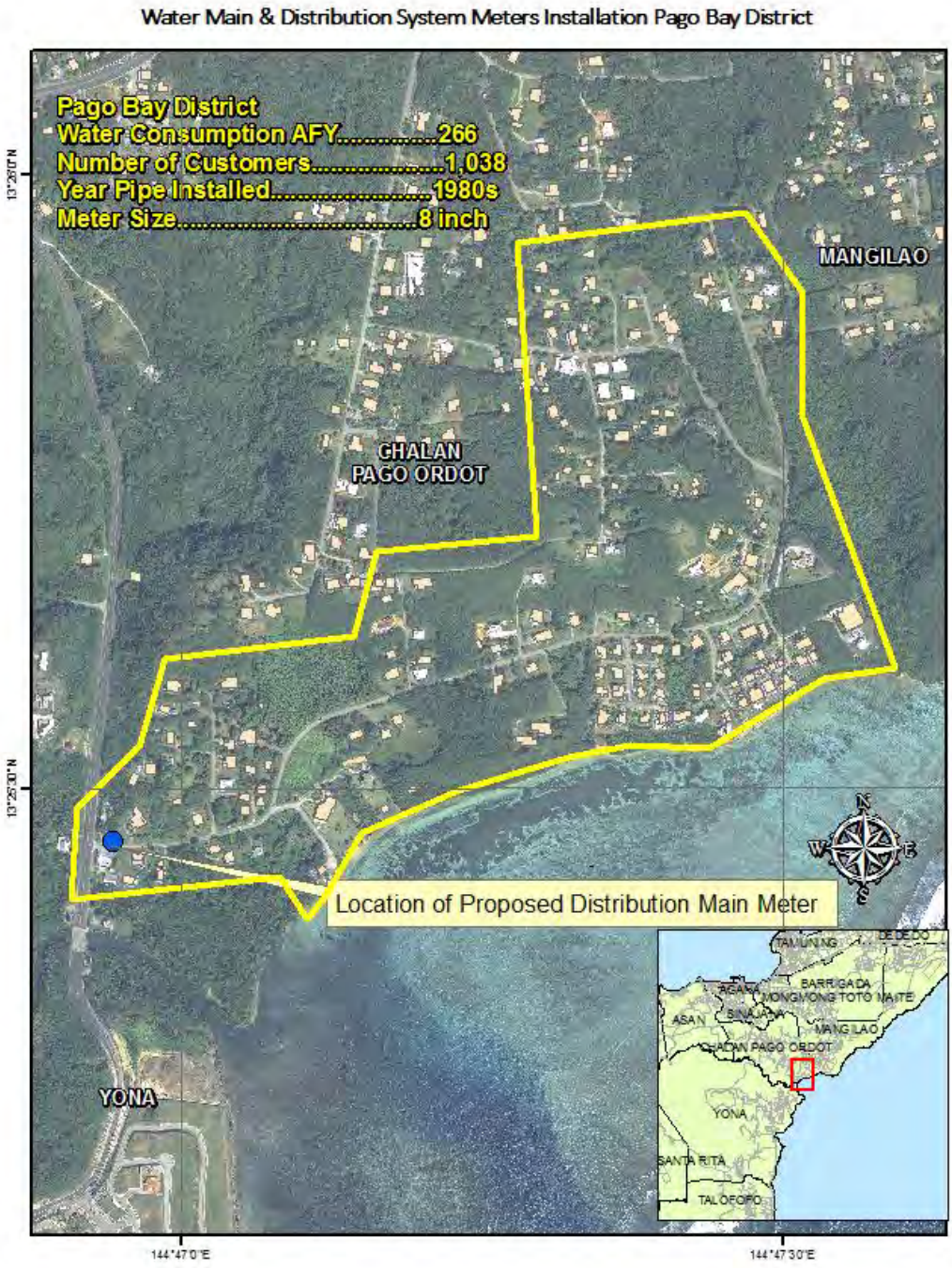

Water Main & Distribution System Meters Installation Baza Gardens District
Baza Garden District
Water Consumption AFY.....91
Number of Customers.....466
Year Pipe Installed.....1980s
Meter Size.....Two, 6 inch
Location of Proposed Distribution Main Meter
YONA
Location of Proposed Distribution Main Meter
13°23'0"N
13°22'30"N
144°45'0"E
144°45'30"E
N
W
E
S
PITI
YONA
SANTA RITA
AGAT
TALOFOFO
INARAJAN
DMATAC

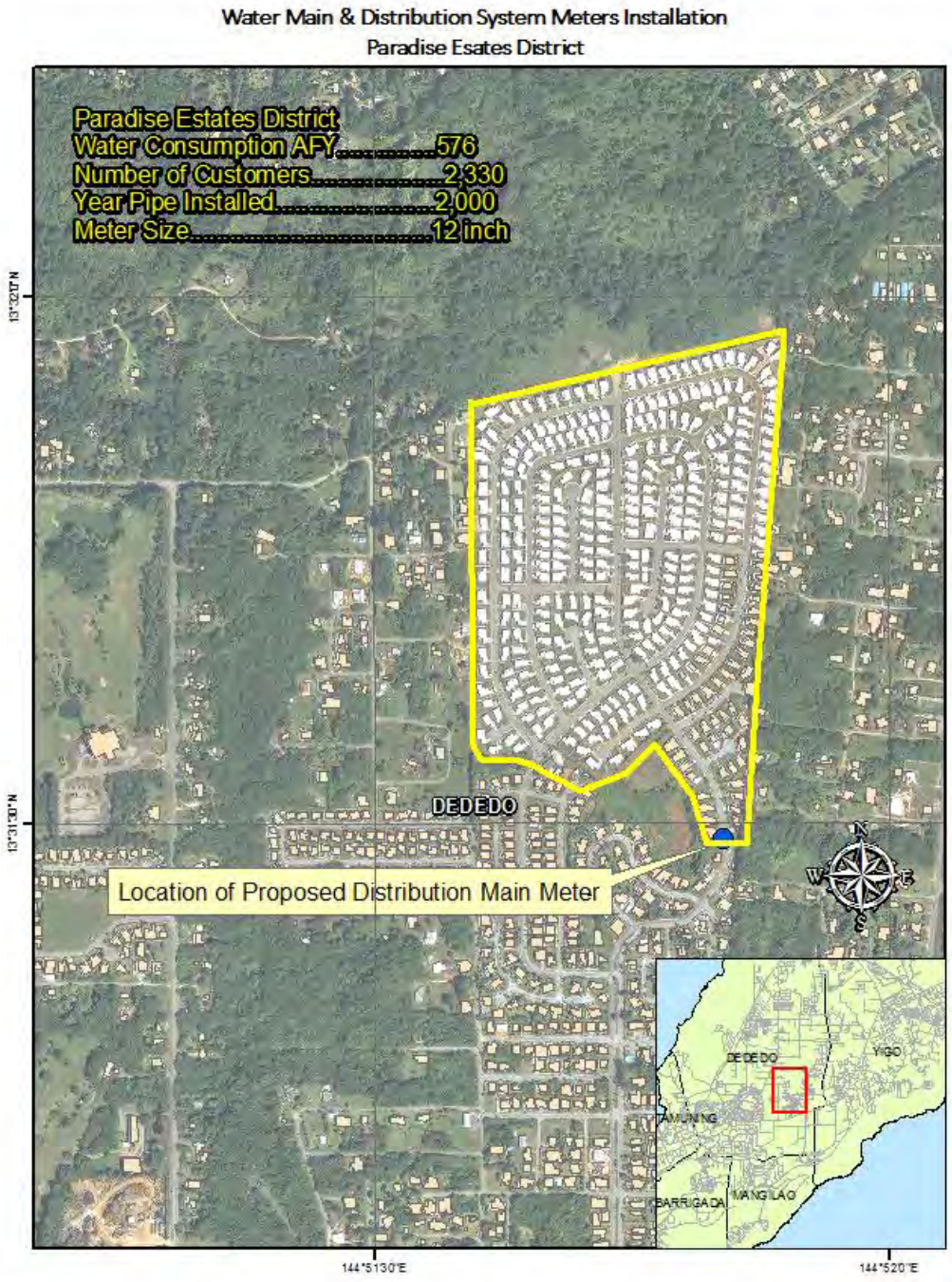

Water Main & Distribution System Meters Installation East Gayinero District
East Gayinero District
Water Consumption AFY.....34
Number of Customers.....123
Year Pipe Installed.....1982
Meter Size.....6 inch
YIGO
Location of Proposed Distribution Main Meter
N
W
E
S
DEDEDO
YIGO
TAMUNING
BARRIGADA
MANGILAO
13°33'0"N
13°32'30"N
13°32'0"N
13°31'30"N
13°31'0"N
144°54'0"E
144°54'30"E
144°55'0"E

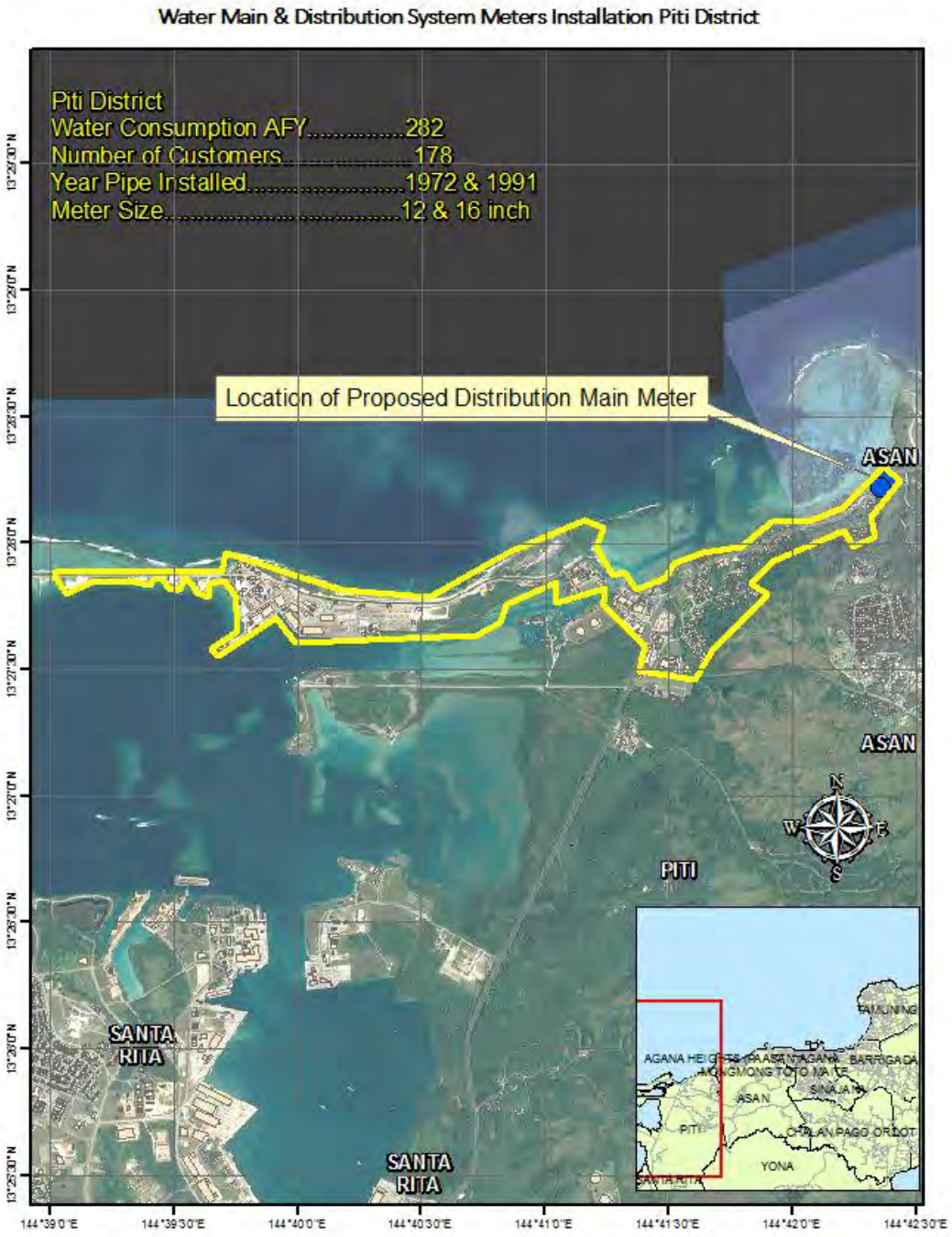

Water Main & Distribution System Meters Installation Ipan District
Ipan District
Water Consumption AFY.....117
Number of Customers.....486
Year Pipe Installed.....1972
Meter Size.....12 inch
YONA
TALOFOFO
INARAJAN
INARAJAN
Location of Proposed Distribution Main Meter
PITI
CHALAN PAGO ORDOT
YONA
SANTA RITA
AGAT
TALOFOFO
INARAJAN
JMATAC
144°44'30"E
144°45'0"E
144°45'30"E
144°46'0"E
144°46'30"E
144°47'0"E


Water Main & Distribution System Meters Installation Merizo & Umatac District
SANTA RITA
AGAT
Merizo & Umatac District
Water Consumption AFY.....303
Number of Customer.....910
Year Pipe Installed.....1976
Meter Size.....12 inch
TA
SANTA RITA
AGAT
TALOFOFO
UMATAC
INARAJAN
MERIZO
UMATAG
Location of Proposed Distribution Main Meter
INARAJAN
MERIZO
MERIZO
MERIZO
N
W
E
S
144°39'0"E
144°39'30"E
144°40'0"E
144°40'30"E
144°41'0"E
144°41'30"E
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144°44'0"E
144°44'30"E

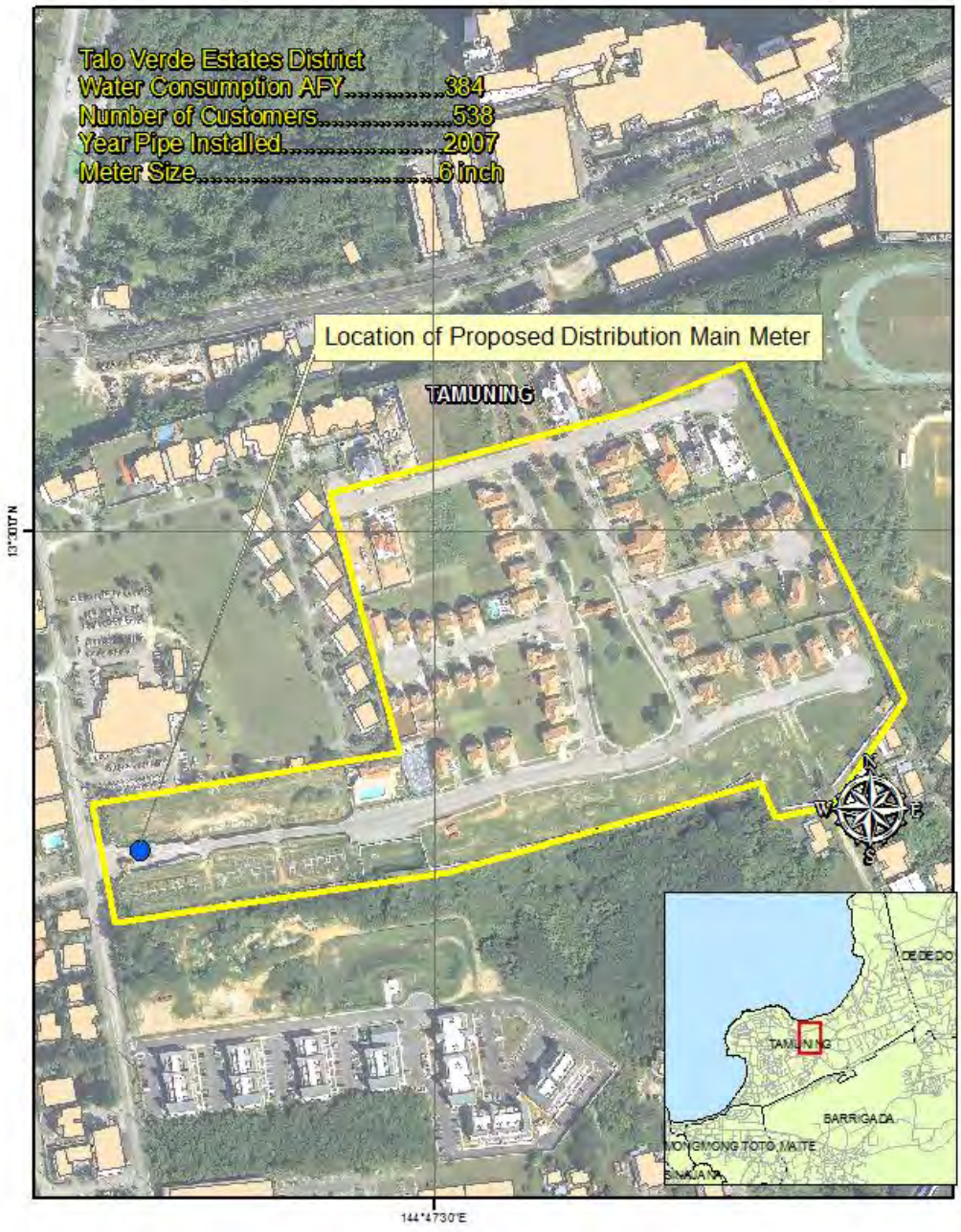

Water Main & Distribution System Meters Installation Nimitz Hill District
Nimitz Hill District
Water Consumption AFY.....123
Number of Customers.....370
Year Pipe Installed.....1970s
Meter Size.....6 inch
ASAN
PITI
Location of Proposed Distribution Main Meter
13°28'0"N
13°27'30"N
13°27'0"N
144°42'30"E
144°43'0"E
N
W
E
S
AGANA HEIGHTS
SINAJANA
ASAN
PITI
YONA
SANTA RITA

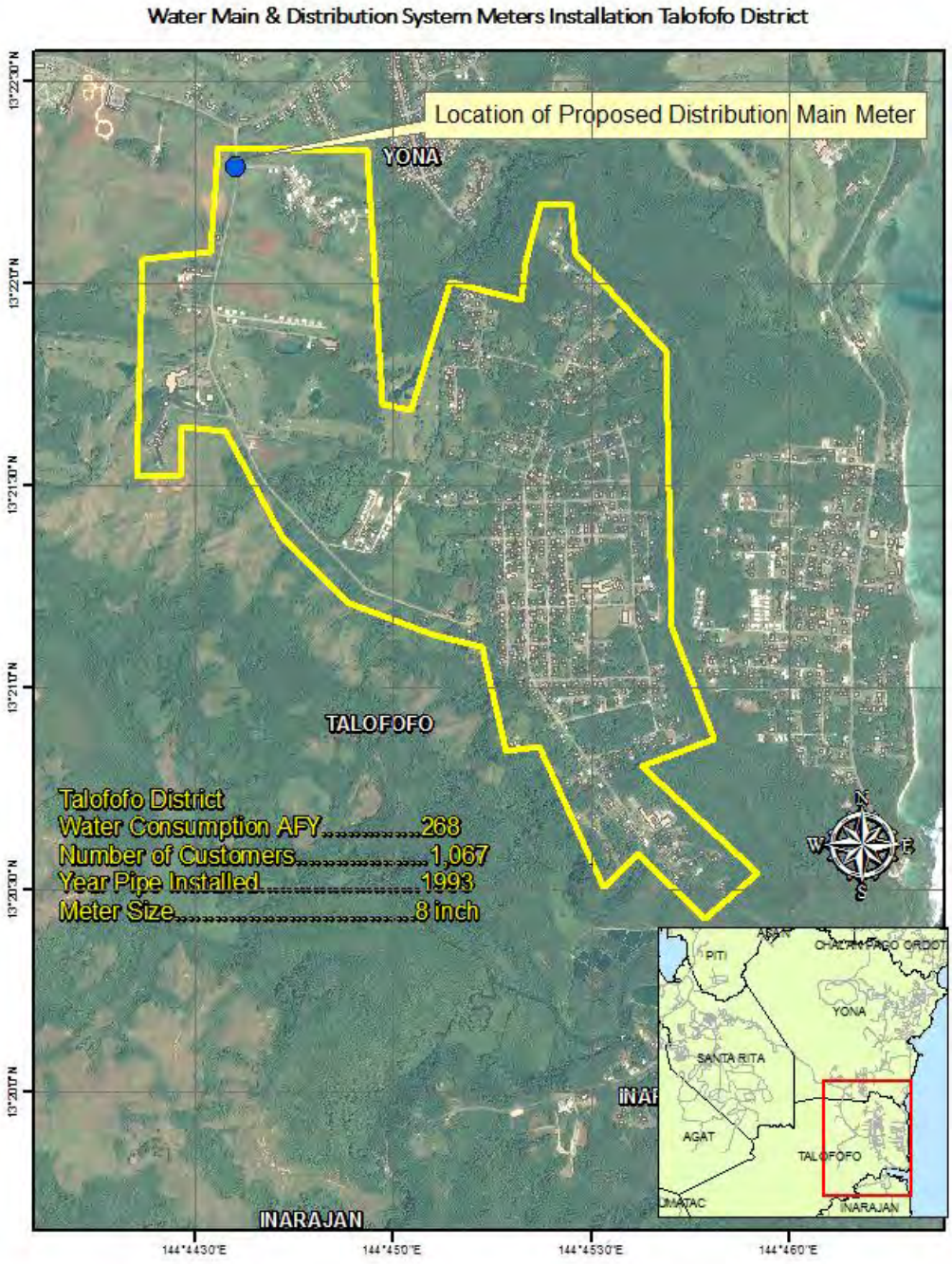

Water Main & Distribution System Meters Installation Pago Bay District
Pago Bay District
Water Consumption AFY.....266
Number of Customers.....1,038
Year Pipe Installed.....1980s
Meter Size.....8 inch
MANGILAO
GHALAN
PAGO ORDOT
YONA
Location of Proposed Distribution Main Meter
13°26'0"N
13°25'30"N
144°47'0"E
144°47'30"E
N
W
E
S
TAMUNING
DEDEDO
BARRIGADA
AGANA
MONGMONG TOTO MAITE
ASAN
SINAJANA
MANGILAO
GHALAN PAGO ORDOT
YONA
SANTA RITA
TALOFOFO


Water Main & Distribution System Meters Installation
Paradise Esates District
Paradise Estates District
Water Consumption AFY.....576
Number of Customers.....2,330
Year Pipe Installed.....2,000
Meter Size.....12 inch
DEDEDO
Location of Proposed Distribution Main Meter
144°51'30"E
144°52'0"E


Water Main & Distribution System Meters Installation Piti District
Piti District
Water Consumption AFY.....282
Number of Customers.....178
Year Pipe Installed.....1972 & 1991
Meter Size.....12 & 16 inch
Location of Proposed Distribution Main Meter
ASAN
ASAN
PITI
SANTA RITA
SANTA RITA
N
W
E
S
144°39'0"E
144°39'30"E
144°40'0"E
144°40'30"E
144°41'0"E
144°41'30"E
144°42'0"E
144°42'30"E
13°29'0"N
13°28'0"N
13°27'0"N
13°26'0"N
13°25'0"N

Water Main & Distribution System Meters Installation Talo Verde Estates District




Water Main & Distribution System Meters Installation Talofofo District
Location of Proposed Distribution Main Meter
YONA
TALOFOFO
INARAJAN
Talofofo District
Water Consumption AFY.....268
Number of Customers.....1,067
Year Pipe Installed.....1993
Meter Size.....8 inch
PITI
SANTA RITA
AGAT
YONA
TALOFOFO
INARAJAN
144°44'30"E
144°45'0"E
144°45'30"E
144°46'0"E

Evaluation Criteria

Evaluation Criteria A - Quantifiable Water Savings

MUNICIPAL METERING

A. How has the estimated average annual water savings that will result from the project been determined?

The percentage of water loss fluctuates, but it had been pegged at 59% in a recent GWA audit report. Given that GWA does not yet have any system meters in place, an assumption has to be made that the loss value is an average for all locations. An assumed district total volume received and assumed loss can be calculated by:

Assumed District Total Received = Metered Consumption / 0.41
Assumed District Loss = Assumed District Total Received – Metered Consumption

Based on this, the 14 project districts have a total assumed loss of 5,871.54 AFY. With an effort to reduce water loss to a minimum of 40% using leak detection and repair, a water savings is calculated by:

*Water Savings = Assumed District Loss – (Assumed District Total Received * 0.40)*

Thus, a total water savings of 1,890.84 AFY can be achieved.

Project District Totals	
Metered Consumption (gal/yr)	1,329,544,793.00
Metered Consumption (gal/day)	3,640,170.00
Metered Consumption (AFY)	4,080.22
Assumed District Total Received (gal/yr)	3,242,792,178.05
Assumed District Total Received (gal/day)	8,878,463.43
Assumed District Total Received (AFY)	9,951.76
Assumed Loss (gal/yr)	1,913,247,385.05
Assumed Loss (gal/day)	5,238,293.42
Assumed Loss (AFY)	5,871.54
Assumed Leak Rate (gpm)	3,637.70
Water Conserved Upon Meeting Yr1 Target Loss Goal (gal/yr)	616,130,513.83
Water Conserved Upon Meeting Yr1 Target Loss Goal (gal/day)	1,686,908.05
Water Conserved Upon Meeting Yr1 Target Loss Goal (AFY)	1,890.84
Annual Cost Savings	$ 903,740.24
Daily Cost Savings	$ 2,474.36

B. How have current distribution system losses and/or the potential for reductions in water use by individual users been determined?

The potential for reductions in water use by individual users has not yet been determined. Current distribution system losses have been determined by calculating the difference between the metered water production and metered water consumption. GWA's water system is large and it is difficult to target the locations of where the loss occurs without district and/or pressure zone meters.

C. For installing individual water user meters, refer to studies in the region or in the applicant's service area that are relevant to water use patterns and the potential for reducing such use. In the absence of such studies, please explain in detail how expected water use reductions have been estimated and the basis for the estimations.

Not applicable.

D. If installing distribution main meters will result in conserved water, please provide support for this determination (including, but not limited to leakage studies, previous leakage reduction projects, etc.). Please provide details underlying any assumptions being made in support of water savings estimates (e.g., how leakage will be reduced once identified with improved meter data).

Installation of distribution main/district meters will not directly result in conserved water. However, it will allow GWA to calculate the actual water loss for that area. Given the water loss threshold (40%) for a metered district, leak detection and repair crews can focus their work in a zone until losses meet or drop below it.

E. What types (manufacturer and model) of devices will be installed and what quantity of each?

Makes and models of meters will be determined during the design phase of the project. However, the preferred metering technologies are electromagnetic and ultrasonic, and it must be capable of transmitting data through the Badger/Orion AMI environment. A total of 16 meters will be required for the 14 project sites; five 6", three 8", five 12", two 16", and one 20".

F. How will actual water savings be verified upon completion of the project?

Data collection for metered consumption and production is ongoing on a monthly basis. As the distribution main meters go live, GWA will be able to transition the districts from assumed losses to actual, calculated losses using metered water received and metered consumption data, creating a baseline. GWA will then produce a simple monthly water audit of each district, and this report will be submitted to operations and management. It is expected that district imports will be reduced as water loss is addressed and will be reflected in successive reports.

Evaluation Criteria E - Department of the Interior Priorities

This project does not appear to fit under any of the established Department of the Interior priorities. However, Guam is under the administrative oversight of DOI as per Executive Order 10077.

Evaluation Criteria F - Implementation and Results

GWA does not have a Water Conservation Plan and/or a System Optimization Review in place.

Evaluation Criteria G - Nexus to Reclamation Project Activities

This project has no connections to any existing Reclamation project activities.

Evaluation Criteria H - Additional Non-Federal Funding

GWA's non-federal cost share of 50% meets the minimum requirement as follows:

A.	*Total Project Cost =*	*$2,000,000 (100%: B+C)*
B.	*Local Non-Federal Cost Share =*	*$1,000,000 (50%: B/A)*
C.	*BOR Grant Request =*	*$1,000,000 (50%: C/A)*

Program Questions: Environmental and Cultural Resources Compliance

Question:	Yes/Explanation	No
1. Will the proposed project impact the surrounding environment(soil,[dust], air, water [quality and quantity], animal habitat)?	Earthmoving will be limited to previously disturbed areas on existing right of way.	
2. Are you aware of any species listed or proposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the project area? If so, would they be affected by any activities associated with the proposed project?		X
3. Are there wetlands or other surface waters inside the project boundaries that potentially fall under CWA jurisdiction as "waters of the United States?" If so, please describe and estimate any impacts the project may have.		X
4. When was the water delivery system constructed?	Much of the water system was constructed between 1970 through 1990. The newest project site was constructed in 2007.	
5. Will the project result in any modification of or effects to, individual features of an irrigation system (e.g. head gates, canals, or flumes)?		X
6. Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places?		X
7. Are there any known archeological sites in the proposed project area?		X
8. Will the project have a disproportionately high and adverse effect on low income or minority populations?		X
9. Will the project limit access to a ceremonial use of Indian scared sites or result in other impacts on tribal lands?		X
10. Will the proposed project contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area?		X

The project involves work that will be accomplished on exiting and disturbed land, specifically on the government rights of way; therefore, minimal environmental impact is expected. It is anticipated that the project will be eligible for a categorical exclusion. The GWA will consult environmental and historic agencies (below) concerning the project, although a letter authorizing the GWA to initiate the National Environmental Policy Act (NEPA) and Section 106 process on behalf of the Bureau of Reclamation is required. The GWA expects to be able to forward

consultations with no significant affects to the Bureau of Reclamation, the Planning and Grants section has performed dozens of consultations for its EPA Safe Drinking & Clean water programs.

Agencies that will be consulted for a record of environmental consideration as applicable:

- Guam Department of Agriculture, Fish and Wildlife Division
- Guam Department of Agriculture, Forestry Division
- Guam Environmental Agency, Water Quality Division
- U.S. Fish & Wildlife
- Parks & Recreation, Guam Historic Preservation Office

Required Permits or Approvals

All work will be competitively procured abiding by the Government of Guam Procurement Code. Architectural and Engineering contracts awarded will follow the standard contracting documents established by the Engineers Joint Contract Documents Committee (EJCDC) and as an addendum pertinent grant requirement included. Engineering firms and construction firms doing business with the GWA is contractually required to obtain all required municipal building permits. All building permits require that it runs through a process similar to NEPA & section 106. Having performed NEPA prior to the project start date will ensure a smooth municipal building permitting review and approval. All construction work will be on contract. The GWA will intervene in the process in special cases where it is beyond the control of the firm or construction contractor; and it deems it is in the best interest of GWA and the project to do so.

Letters of Project Support

Guam Congress Delegate, the Honorable Madeline Z. Bordallo's endorsement letter can be found in Appendix B.

Consolidated Commission on Utilities Official Resolution

The GWA is unable to submit an official board resolution with this application, because of the timing of meeting. Later this month on May 22, 2018 a meeting is scheduled and GWA expects the resolution to pass in approving this project and obligating the GWA to cover the cost of its share of the match of $1,000,000 or 50 percent of total project costs.

Key Management

Miguel C. Bordallo P.E., General Manager was selected by the CCU effective January 4, 2016. Mr. Bordallo has over 25 years of experience in environmental/mechanical engineering and construction in California, Guam and Micronesia. Prior to joining GWA, Mr. Bordallo was a consulting engineer providing design and design-build services for water and wastewater infrastructure projects and was also vice-president of a large construction company on Guam. Mr. Bordallo holds a B.S. in Mechanical Engineering with honors from Marquette University in Milwaukee, Wisconsin, and is a licensed professional engineer on Guam.

Greg P. Cruz, CPA has served as Chief Financial Officer for GWA since his appointment in July 2007. He has over 25 years of experience in the accounting profession, including 15 years in management capacity. He has held positions in the telecommunications industry, public

accounting and various Government of Guam agencies. Mr. Cruz earned a B.A. in accounting from Western Washington University in Bellingham, Washington, and is a Certified Public Accountant and licensed to practice in Guam.

Paul J. Kemp, Assistant General Manager, Compliance and Safety has 56 years of experience in management related to water quality and chemistry for natural waters, drinking water, water for industrial applications, ultra-high purity water, wastewater treatment, water recovery for reuse, and environmental and safety compliance and training. Prior to joining GWA in 2003, he has held engineering and management positions in private laboratories, research and manufacturing companies as well as teaching and research positions in higher education. Mr. Kemp was trained as an analytical chemist specializing in spectroscopic methods and water analysis and received a B.S. in chemistry from Iowa State University and an M.S. in Analytical Chemistry from Oregon State University.

Budget

Funding Plan and Letters of Commitment

1. How you will make your contribution to the cost-share requirement, such as monetary and/or in-kind contributions and source funds contributed by the applicant (e.g., reserve account, tax revenue, and/or assessments).

The entire project cost is $2,000,000. We respectfully request funding from the BOR in the amount of one million dollars. GWA's cost share towards the project is $1 million in cash from GWA's Revenue Bond funds. The local cost share of the project is 50% and the BOR funding is 50%. Funding from BOR will support the entire three-year project period.

2. Describe any donations or in-kind costs incurred before the anticipated Project start date that you seek to include as project costs.

There are no costs incurred before the project start date that are included as project costs.

3. Describe any funding requested or received from other Federal partners.

The proposed project does not include Federal partners. See Table C.

Table C. Summary of Non-Federal and Federal Funding Sources

Funding Sources	Amount
Non-Federal Entities	
Guam Waterworks Authority	$ 1,000,000.00
Other Federal Entities	
None	$ -
Requested Reclamation Funding	$ 1,000,000.00
Total Project Cost	**$ 2,000,000.00**

4. Describe any pending funding requests that have not yet been approved, and explain how the project will be affected if such funding is denied.

There are no pending funding requests.

Budget Proposal

Table D. GWA Distribution Main Metering Project Budget Proposal

Budget Item Description	Computation			Total Cost
	Qty	Unit	Unit Cost	
Salaries and Wages				
Personnel costs are not included in the scope of the grant application.				$ -
Fringe Benefits				
Not Applicable				$ -
Travel				
Not Applicable				$ -
Equipment				
Not Applicable				$ -
Supplies and Materials				
Meter Field Verification Device	1	EA	$ 4,000.00	$ 4,000.00
Contractual/Construction				
Project Design	1	LS	$ 500,000.00	$ 500,000.00
Installation of 6" Distribution Main Meter	5	EA	$ 30,840.00	$ 154,200.00
Installation of 8" Distribution Main Meter	3	EA	$ 40,000.00	$ 120,000.00
Installation of 12" Distribution Main Meter	5	EA	$ 60,000.00	$ 300,000.00
Installation of 16" Distribution Main Meter	2	EA	$ 121,000.00	$ 242,000.00
Installation of 20" Distribution Main Meter	1	EA	$ 193,000.00	$ 193,000.00
Site Electrical and Communications Installation	14	EA	$ 31,200.00	$ 436,800.00
Orion Data Center Software Configuration	1	LS	$ 10,000.00	$ 10,000.00
Environmental Review				
Equal to approximately 2% of total project cost	1	LS	$ 40,000.00	$ 40,000.00
Other				
Not Applicable				$ -
Indirect				
Not Applicable				$ -
Total Estimated Project Costs				**$ 2,000,000.00**

Budget Narrative

1. Salaries and Wages

Total BOR Request: $0

Personnel costs (salaries and wages) for the project are not included in the project budget to facilitate ease of GWA's reporting to BOR. Personnel costs will be provided by GWA outside of the grant scope. Design, construction, and installation components of this project will be procured through competitive bids.

2. Fringe Benefits

Not applicable.

3. Travel

Not applicable.

4. Equipment

Not applicable.

5. Materials and Supplies

Total BOR Request: $0

The costs for the materials and supplies portion of the project will go towards a meter verification device. It will allow the distribution main meters to be verified on site without interruption of water service. This tool is necessary to ensure that meter readings are accurate within the manufacturer's specified tolerances.

6. Contractual

Total BOR Request: $960,000

This grant request includes the costs of the materials and installation of the distribution main flow meters. The make and models of meters and isolation valves are to be determined during the design phase of the project. It is anticipated and recommended that the distribution main meters will be compatible with the Badger/Orion automated metering infrastructure (AMI) environment as all current GWA service meters are AMI-capable. Work to be conducted at each site includes equipment mobilization, erosion control, traffic control, pavement removal and restoration, excavation, vault installation, pipe work, meter installation, backfilling, and testing and inspection of the distribution main meter.

GWA will be responsible for the costs of all the remaining project activities in the Contractual category, and these include:

- Project design
- Electrical site improvements
- Communications installation and setup
- Data Center application configuration

Upon completion of the project, the customer meters within the established districts may be migrated over to a fixed network operation mode which would allow GWA the ability to perform a district water audit at a moment's notice. This task is outside the scope of the project and costs will be incurred by GWA.

Costs for the Contractual category were based on past GWA projects with similar scope.

7. Environmental and Regulatory Compliance Costs

Total BOR Request: $40,000

The project will be evaluated for NEPA compliance during Year 1 of the project, and it is expected that the project will be designated a Categorical Exclusion for NEPA because the it will result in minor construction activities and will utilize existing facilities. Therefore, the total project budget includes costs of approximately 2% ($40,000) of the total project cost to cover GWA's staff time to prepare, submit, and coordinate environmental documents, and Reclamation's cost to review the documents.

8. Other Expenses

Not applicable.

9. Indirect Costs

Not applicable.

10. Total Costs

The cost of the entire distribution main metering project is $2,000,000, of which $1,000,000 is requested from the Bureau of Reclamation, and $1,000,000 is Guam Waterworks Authority's cost share. Project costs stated herein are estimates and may be adjusted upon work contracting. A breakdown of costs is shown in Table E.

Table E. Budget Cost Breakdown

Budget Item Description	Computation			Total Cost
	Qty	Unit	Unit Cost	
Project Design	1	LS	$500,000.00	$ 500,000.00
6" Electromagnetic Flow Meter	5	EA	$ 4,000.00	$ 20,000.00
6" Isolation Valve	10	EA	$ 1,500.00	$ 15,000.00
Vault for 6" Meter	5	EA	$ 4,000.00	$ 20,000.00
Site Work for 6" Meter	5	EA	$ 19,840.00	$ 99,200.00
8" Electromagnetic Flow Meter	3	EA	$ 5,000.00	$ 15,000.00
8" Isolation Valve	6	EA	$ 2,500.00	$ 15,000.00
Vault for 8" Meter	3	EA	$ 7,000.00	$ 21,000.00
Site Work for 8" Meter	3	EA	$ 23,000.00	$ 69,000.00
12" Electromagnetic Flow Meter	5	EA	$ 10,000.00	$ 50,000.00
12" Isolation Valve	10	EA	$ 5,000.00	$ 50,000.00
Vault for 12" Meter	5	EA	$ 8,000.00	$ 40,000.00
Site Work for 12" Meter	5	EA	$ 32,000.00	$ 160,000.00
16" Electromagnetic Flow Meter	2	EA	$ 15,000.00	$ 30,000.00
16" Isolation Valve	4	EA	$ 14,000.00	$ 56,000.00
Vault for 16" Meter	2	EA	$ 13,000.00	$ 26,000.00
Site Work for 16" Meter	2	EA	$ 65,000.00	$ 130,000.00
20" Electromagnetic Flow Meter	1	EA	$ 25,000.00	$ 25,000.00
20" Isolation Valve	2	EA	$ 24,000.00	$ 48,000.00
Vault for 20" Meter	1	EA	$ 20,000.00	$ 20,000.00
Site Work for 20" Meter	1	EA	$ 100,000.00	$ 100,000.00
AMI Data Collector/Network Gateway	14	EA	$ 6,000.00	$ 84,000.00
Outdoor Broadband Wireless Mesh Router	14	EA	$ 6,000.00	$ 84,000.00
AMI Fixed Network Endpoint	14	EA	$ 200.00	$ 2,800.00
Pressure Transmitter	14	EA	$ 2,000.00	$ 28,000.00
Communications Setup and Testing	14	EA	$ 2,000.00	$ 28,000.00
Electrical Site Improvements	14	EA	$ 15,000.00	$ 210,000.00
Environmental Review	1	LS	$ 40,000.00	$ 40,000.00
Meter Field Verification Device	1	EA	$ 4,000.00	$ 4,000.00
Orion Data Center Software Configuration	1	EA	$ 10,000.00	$ 10,000.00
			Grand Total	**$ 2,000,000.00**

Appendix A

Guam Waterworks Authority FY 2017 Financial Highlights Report

April 24, 2018

Guam Waterworks Authority
FY 2017 Financial Highlights

April 24, 2018

For the second consecutive year, the Guam Waterworks Authority (GWA) qualified as a low-risk auditee. No findings pertaining to federal funds were identified in fiscal year (FY) 2017. Independent auditors Deloitte and Touche, LLP rendered an unmodified "clean" opinion on GWA's financial statements and compliance over major federal programs. GWA closed FY 2017 with a significant increase in net position (net income) of $40.4 million (M), primarily due to the $21.8M in federal capital grants, compared to the 27.2M in net income the prior year. The 2016 financial statements were restated due to the implementation of the Governmental Accounting Standards Board (GASB) Statement No. 73.

GWA Capital Improvement Plan, Debt Service, and Future Borrowings
In FY 2017, capital assets increased by $72.0M. The increase is attributable to on-going major capital improvement projects associated with the 2011 Federal Court Order and GWA's five-year Capital Improvement Plan (CIP). CIP project costs were estimated at $450M-$500M. On-going construction projects included replacement of wastewater treatment plant, transmission lines, booster pump upgrades, sewer line rehabilitation or replacements, deep well rehabilitations, acquisition of mechanical and electrical equipment, and general plant improvements. GWA is currently working with Guam contractors on the H-2B visa issue due to the industry's decreasing availability of foreign workers. This poses a conundrum for the local construction industry and has already led to construction delays, escalating costs, and fewer bidders for GWA projects due to the size and complex nature of GWA's project.

In fall 2016, GWA was awarded $55.3M in grants from the U.S. Department of Defense Office of Economic Adjustment. This was to initiate projects associated with the design and construction of improvements needed to bring the Northern District Wastewater Treatment Plant (NDWWTP) to full secondary treatment capability as required by the new National Pollutant Discharge Elimination System permit issued by the U.S. Environmental Protection Agency. GWA is on schedule to complete the NDWWTP upgrades by December 2021. In late 2017, GWA received an additional grant totaling $117.9M for construction of wastewater improvements related to the build-up.

GWA had a long-term debt outstanding of $515.0M in FY 2017. This is a $7.9M decrease from the $522.9M in FY 2016. In December 2017, GWA refinanced the 2010 revenue bond series.

Decrease in Operating Revenues and Increase in Operating Expenses
GWA's total net position (net income) increased by $40.4M from $182.5M in FY 2016 to $222.9M in FY 2017.

Operating revenues totaled $104.4M or a 1% decrease compared to $105.4M in the prior year. The decline was primarily due to a 2% or $645 thousand (K) decrease in water and wastewater revenues. Of GWA's $104.4M operating revenues (net of bad debts expense), water revenues ($66.6M) accounted for 64% and wastewater revenues ($38.7M) accounted for 37%. The residential (48%), commercial (21%), and hotel (20%) sectors continue to account for 89% of water revenues. While hotel water revenues increased by $383K, residential water revenues decreased by $650K.

Operating and maintenance expenses increased by $3.5M from $68.8M in FY 2016 to $72.4M in FY 2017. The top two contributing factors were increases in depreciation expenses and water purchases. Navy water purchases increased due to a combination of approximately 17.6K additional kgals of water purchases and a 15% increase in the Navy's tariff. As a result, operating income was $32.0M compared to $36.5M, a decline of $4.5M.

Unaccounted Water
Historically, one of GWA's most challenging problems is the amount of unaccounted for (non-revenue) water. In FY 2017, approximately 59% of water produced annually is not consumed or contributing to GWA's revenue due to water losses (leaks or breaks) and unauthorized or unbilled consumption. Leaks, for the most part, account for the largest source of unaccounted for water. GWA has engaged in a water loss prevention program that includes leak detection to help reduce non-revenue water.

FY 2016 Financial Statements Restatement
In FY 2017, GWA implemented GASB No. 73, which aligns the reporting of pensions, ad hoc cost-of-living adjustments (COLA) and supplemental annuity payments. The implementation of this statement had a material effect on GWA resulting in the restatement of its FY 2016 financial statements. GWA's FY 2016 salaries, wages, and benefits increased by $1.4M and beginning net position was reduced by $9.8M. This resulted in an $11.2M decrease in total net position from $193.7M to $182.5M for FY 2016 and corresponding increase in net pension liability by $12.7M to $50.9M.

As of FY 2017, GWA's net pension liability of $49.2M includes its proportionate share of the Government of Guam's (GovGuam) pension, ad hoc COLA, and supplemental annuity payments. Of the $49.2M, $8.9M was for the ad hoc COLA/supplemental annuity plan for Defined Benefit retirees and $1.6M was for ad hoc COLA plan for Defined Contribution Retiree System retirees. Pension expense amounted to $4.6M in FY 2017 and $5.8M in FY 2016.

Other Post-Employment Benefits (OPEB)
GASB No. 75 (Post-Employment Benefits Other than Pensions) is effective and will be recorded in GWA's FY 2018 financial statements. This pertains to post-employment medical, dental, and life insurance benefits to retirees, spouses, children, and survivors. Upon implementation, it is anticipated that GWA will record an additional $36.4M liability as of FY 2017 arising from other post-employment benefits.

Reports on Compliance and on Internal Control and Major Federal Programs
GWA received an unmodified "clean" opinion on the Report on Compliance and Internal Controls and on major federal programs. The auditors did not identify any findings in FY 2017. In addition, the Management Letter identified seven deficiencies pertaining to internal control over information technology environment.

The Letter to Those Charged with Governance identified two deficiencies pertaining to: 1) Construction in Progress projects not timely transferred to the fixed assets account, and 2) Inactive Accounts Receivable balance increased due to failure to timely disconnect meters and terminate accounts for non-payment.

For more details, refer to the Management Discussion and Analysis in the audit report at www.opaguam.org and at www.guamwaterworks.org.

Appendix B

Letter of Endorsement

Madeleine Z. Bordallo, Congresswoman, U.S. House of Representatives

May 9, 2018

MADELEINE Z. BORDALLO
GUAM
ARMED SERVICES COMMITTEE
RANKING MEMBER, SUBCOMMITTEE ON READINESS
SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES
NATURAL RESOURCES COMMITTEE
SUBCOMMITTEE ON INDIAN, INSULAR, AND ALASKA NATIVE AFFAIRS
SUBCOMMITTEE ON WATER, POWER AND OCEANS

Congress of the United States
House of Representatives

WASHINGTON, D.C. OFFICE:
2441 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515
(202) 225–1188
FAX: (202) 226–0341
DISTRICT OFFICE:
120 FATHER DUENAS AVENUE
SUITE 107
HAGÅTÑA, GUAM 96910
(671) 477–4272
FAX: (671) 477–2587
http://www.house.gov/bordallo

May 9, 2018

The Honorable Brenda Burman, Commissioner
Bureau of Reclamation
U.S. Department of the Interior
1849 C Street NW, Mail Code #91-00000
Washington, DC 20240

RE: Guam Waterworks Authority's Application for WaterSMART Grant

Dear Commissioner Burman:

I write in strong support of the Guam Waterworks Authority's grant application under the Bureau's WaterSMART Program. In 1986, Congress made Guam and the other Insular Area territories eligible "Reclamation states" (Public Law 99-396). To date, Guam has never received, or to my knowledge applied for, Reclamation grant funding. I therefore urge you to give all due consideration to the Guam Waterworks Authority's application and, ultimately, approve this critical grant funding for our island's *only* public water utility.

As noted in the application, the Guam Waterworks Authority intends to use this WaterSMART grant, if approved, to install remote-reading district meters (also called "system" or "pressure-zone" meters) to address unaccounted for water loss, estimated at an alarming 58 percent. This will allow the Guam Waterworks Authority to better detect leaks, focus waterline repairs where they are needed most, and capture lost revenue. This would complement the Guam Waterworks Authority's very substantial investment in our public water system, which serves both civilian households *and* U.S. military bases on island, financed by a recent revenue-bond offering.

The Administration has committed publicly to supporting economic development in the U.S. territories and making federal investments to modernize our infrastructure. I hope that the Bureau will do its part to meet that commitment, in full, by approving the Guam Waterworks Authority's application for this WaterSMART grant. Given legacy systems and limited territorial resources, much-needed upgrades like installing meters to account for significant water loss across our waterlines are unlikely to happen without federal support.

Please do not hesitate to contact me to discuss further the importance of the Guam Waterworks Authority's continued modernization efforts and the need for this Reclamation funding. For additional information, your staff may contact my Legislative Assistant, Iain Hart. Thank you for your leadership and for considering my views in support of this application under the WaterSMART Program.

Sincerely,

Madeleine Z. Bordallo

MADELEINE Z. BORDALLO
Member of Congress

Appendix C

Resolution

Consolidated Commission on Utilities

(Forthcoming)

Appendix D

Memorandum of Understanding

GWA-GPA MOU relative to Smart Grid Network Usage

July 9, 2015

GUAM WATERWORKS AUTHORITY
Gloria B. Nelson Public Service Building
688 Route 15, Mangilao, Guam 96913

MEMORANDUM

Guam Waterworks Authority
GM's Office
Received By: Silma B Ku
Date: 7/9/15
Time: 2:45 pm

Date: July 9, 2015

To: Samuel Taylor, Acting Interim General Manager
Guam Waterworks Authority

John M. Benavente, Interim General Manager
Guam Power Authority

From: Thomas F. Cruz, P.E., Chief Engineer, GWA

Cc: Mark Miller, Interim General Manager, GWA
Greg Cruz, Chief Financial Officer, GWA
Victor Torres, IT Manager, GWA
Barbara Cruz, P.E., Senior Engineer Supervisor, GWA

GUAM WATERWORKS AUTHORITY
BUDGET OFFICE
JOCEPHINE D. EVANGELISTA, PMBA
BUDGET OFFICER
ACTING MA IV
DATE: 07.10.15 TIME 4:57 PM

Subject: GWA - GPA MOU relative to Smart Grid Network Usage

Engineering requests your approval for GWA to enter into an agreement with GPA to allow GWA to have joint use of GPA's Smart Grid Network for GWA SCADA system, Standby Generator Control, AMI, CCTV and other future applications.

A MOU agreement between GPA and GWA, re-executed on June 2009, covers any type of work to be performed by GWA for GPA or vice versa, and remains in effect indefinitely. Enclosed are the specific terms and conditions relating to the GWA-GPA consolidated usage of the Smart Grid Network for your review and approval.

GWA's Estimated Budget Amount:

Estimated budget amount for GWA to carry out this agreement is provided in the table below. The estimated budget is based on estimated costs provided in the GWA SCADA Master Plan.

However, the estimated budget only includes GWA SCADA System and Standby Generator Control. The estimated budget for other applications is not available at this time.

PHASE	BUDGET AMOUNT
Phase A-1	$ 200,000
Phase A-2	347,000
Phase A-3	347,000
Phase B	332,000
Phase C	35,100
TOTAL	1,261,100

GWA FINANCE & ACCOUNTING ADMINISTRATIVE OFFICE
RECEIVED BY:
JUL 10 2015
BY:

GWA is only ready to certify funding for Phase A-1 in the amount of $200,000 using 2013 Bond Funds under CIP EE 09-08. Other requests will follow when funding is available.

Source of Funds:

Source of funds for Phase A-1 will be 2013 Bond Funds under CIP EE 09-08 in the amount of $200,000.

Recommend Approval by:

Thomas F. Cruz, P.E. Chief Engineer, GWA — Date: 7/9/15

Budget Review:

Greg Cruz, Chief Financial Officer, GWA — Date: 7.20.15

Approved by:

Samuel Taylor, Acting Interim General Manager, GWA — Date: 7/10/15

John M. Benavente, Interim General Manager, ~~GWA~~ GPA — Date: 7/23/15

Attachments:
1. Memorandum of Understanding between the Guam Waterworks Authority and the Guam Power Authority for Services Rendered, June 23, 2009
2. Terms and Conditions |Relative to Joint Usage of the Smart Grid Communications and Network Infrastructure

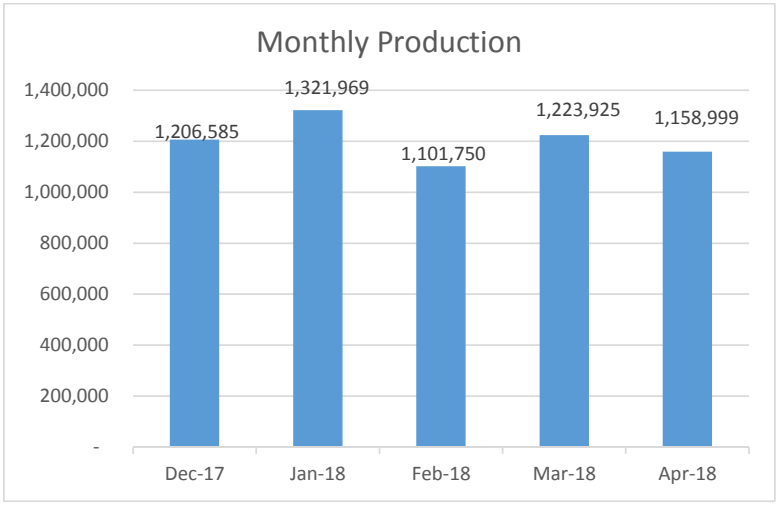
GUAM WATERWORKS AUTHORITY

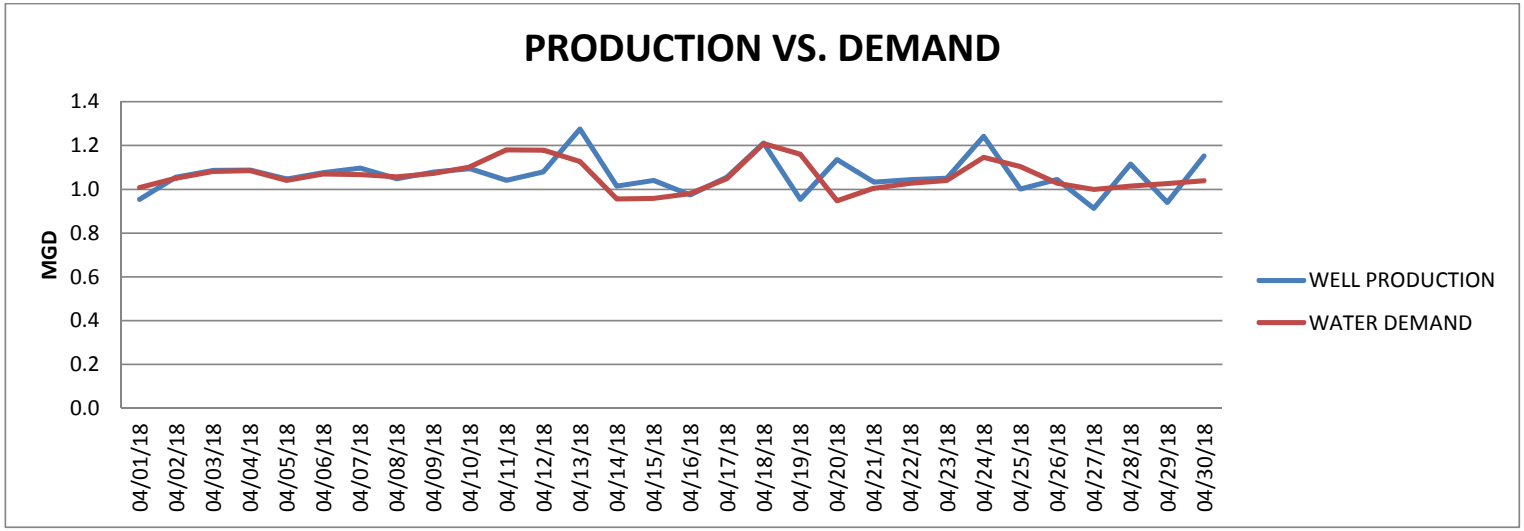
General Manager's Report
GWA Work Session, May 15, 2018

Operations Update

Production

Monthly Production Summary - April 2018					
Deep Wells				35.4	MGD
	Active wells =	95	of 120		
	Avg days in operation =	30.00	days		
	Total Production =	1,063,306	Kgals		
Springs				0.00	MGD
	Avg days in operation =	0	days	*placed on standby	
	Total Production =	0	Kgals		
Ugum Surface Water Plant				2.1	MGD
	Avg days in operation =	30	days		
	Total Production =	63,763	Kgals		
Tumon Maui Well				1.03	MGD
	Avg days in operation =	30	days		
	Total Production =	31,930	Kgals		
		1,158,999	Kgals	38.6	MGD





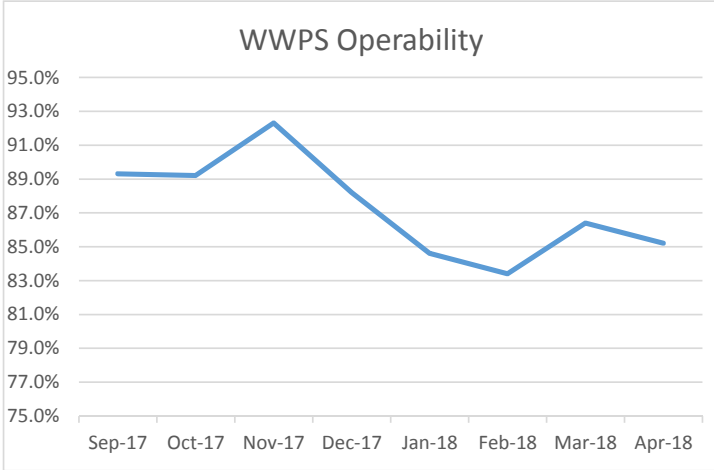
Distribution

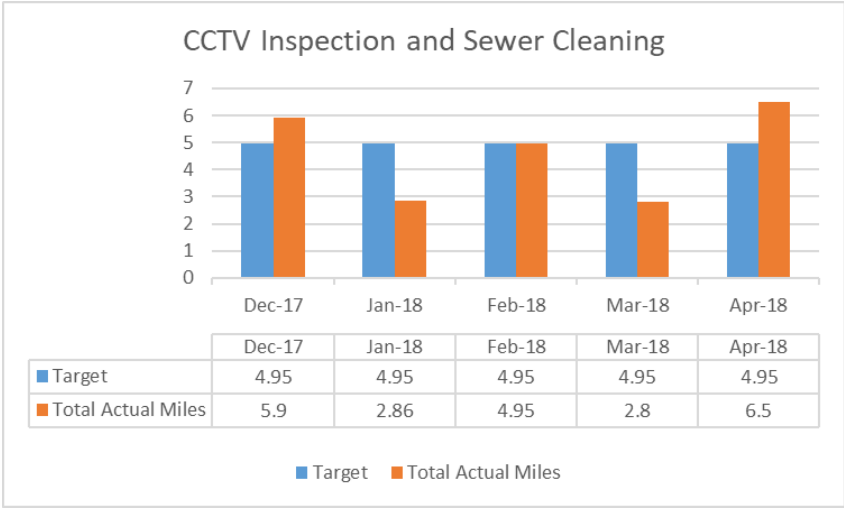
Monthly Distribution Summary - April 2018					
Water Booster Pump Stations					
	District	No. of Stations	Total Pumps	Pumps Operating	% Operational
	Northern	11	21	20	95.2%
	Central	7	15	13	86.7%
	Southern	7	15	14	93.3%
		25	51	47	92.2%



Wastewater Collections

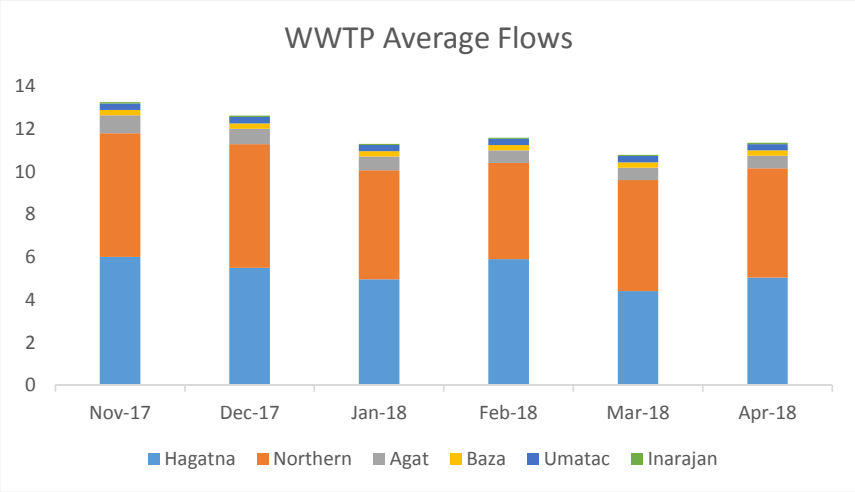
Monthly Collections Summary - April 2018					
Wastewater Pump Stations					
	District	No. of Stations	Total Pumps	Pumps Operating	% Operational
	Northern	22	52	46	88.5%
	Central	29	63	55	87.3%
	Southern	27	54	43	79.6%
		78	169	144	85.2%



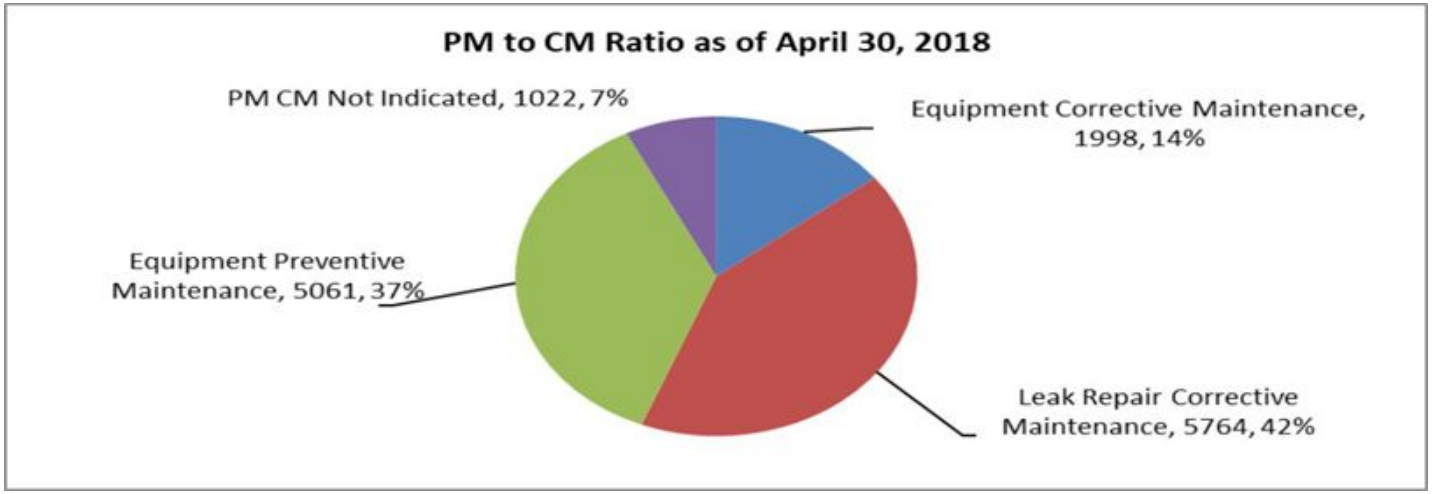


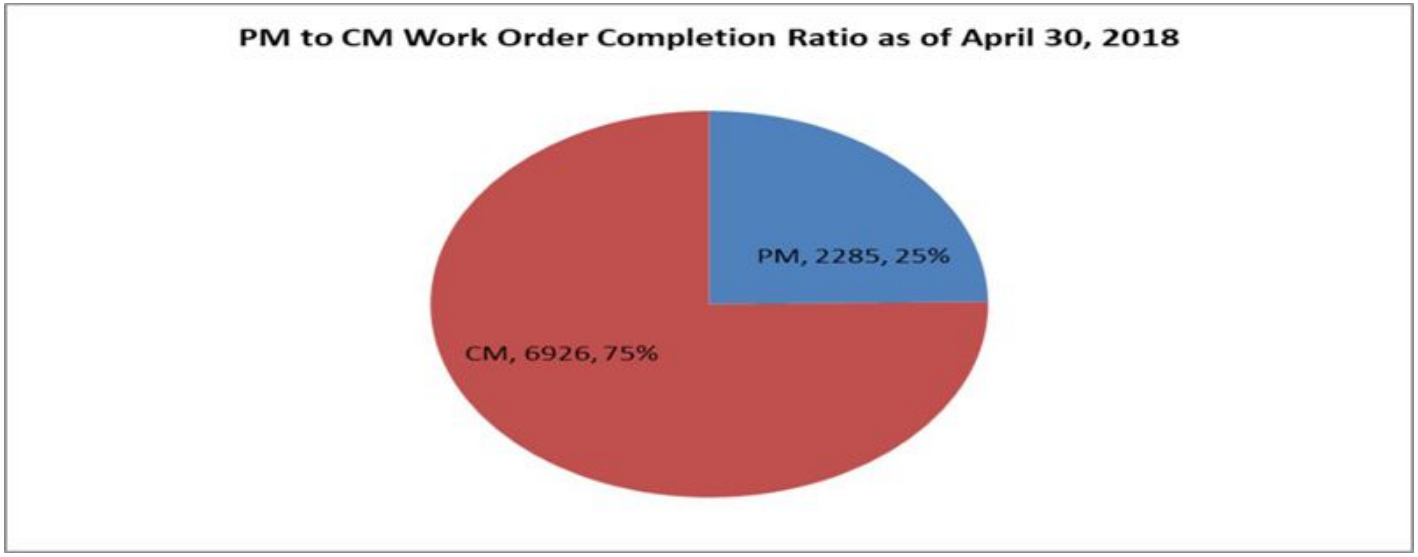
Wastewater Treatment

Monthly Wastewater Treatment Summary - April 2018				
WW Treatment Plants - Flows				
	Facility	**Avg. Daily Flows**	**Sludge (lbs)**	**Sludge Disp. ($)**
	Hagatna	5.03	527,980	$ 47,518
	Northern	5.12	934,500	$ 84,105
	Agat	0.59		
	Baza	0.25		
	Umatac	0.30		
	Inarajan	0.06		
		11.35	1,462,480	$ 131,623



Asset Management





Operational Issues

Production & Distribution

- Leak repair
  - Crews maintaining performance - less than 60 pending repairs, less than 20 backhoe required repairs
  - pending IFB for leak repair services
  - pending for advanced remote leak detection services
- Ugum WTP – scope of SCADA improvements finalized – pending pricing adjustments and change order.
- 2018 Pump/Motor order – released on February 16, 2018; delivery pending.
- GWA Crane Repair –repairs have been made and unit is finally working; last error code found to be software issue that the factory rep is still working to resolve.

Wastewater Collection & Treatment

- O&M Manager retired suddenly – Management is evaluating options and temporary detail appointment has been made
- CCTV:
  - Crews completed approximately 2.8 miles in March
- Pump station facility maintenance efforts still underway
- FOG Program
  - Program Manual revisions completed
  - 2nd Residential Collection Program was very successful - 840 gallons collected
- All issues related to USEPA inspection at Hagatna WWTP have been addressed with two items pending.
  - Effluent pump was down – repair on one pump completed, critical spare motor in procurement
  - Digester mixer was down – pending gearbox repair
  - Floc chamber mixers down – repairs have been completed, four in operation, one pending electrical connection
  - Centrifuge was down – both units now operational
  - Safety issue – motor guards have been reinstalled.

Meters

COMPLETED FIELD ACTIVITY JAN 2017 THRU APRIL 2018 (POSTED IN CIS)	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	TOTAL:	COMPLETED FIELD ACTIVITIES (IN PROCESS) TO BE POSTED IN CIS
GWA - Test Meter	30	9	9	371	745	87	393	743	1000	1007	434	378	750	969	1213	1429	9567	224
GWA - Meter Exchange	393	179	220	276	482	353	501	807	1526	1039	452	259	239	1086	2120	121	10053	0
GWA - Verify Zero Report	30	124	114	94	96	402	261	199	550	89	82	169	356	106	117	69	2858	3
GWA - Verify Low Usage	0	0	0	2	37	36	196	488	657	202	127	612	858	1122	1055	463	5855	21
TOTAL:	453	312	343	743	1360	878	1351	2237	###	###	1095	1418	###	3283	4505	2082	28333	248

# OF METERS TESTED AS PER METER TEST FACILITY REPORTS:	345	350	144	252	305	210	302	397	1013	1130	927	704	721	1041	1347	815	10003	
# OF BACKBILLINGS APPLIED AS PER FINANCE REPORTS:	0	0	0	20	122	84	29	111	219	80	77	4	136	23	323	48	1276	$ 869,123.79

# OF FIELD CREW PERFORMING CHANGE OUTS:	19	10	13	9	21	21	14	24	35	28	28 *	28 *	5	13	2
# OF ADMIN STAFF TO CREATE AND POST FIELD ACTIVITIES IN CIS:	7	4	5	6	9	9	10	13	15	15	13	13	8	11	5
# OF SUPPLY STAFF TO ISSUE MATERIALS AND PROGRAM NEW METERS:	2	2	2	2	2	2	2	2	2	2	2	2	2	4	0
# OF TEST FACILITY PERSONNEL TESTING METERS:	2	2	2	3	3	3	3	3	3	3	3	3	3	2	2
# OF ACCOUNTANTS CALCULATING BACK BILLS:	0	0	0	2	3	2	2	3	3	2	2	2	2	2	2
TOTAL:	30	18	22	22	38	37	31	45	58	50	48	48	20	32	11

*Project overtime on hold Nov 18, 2017 thru Dec 16, 2017. During this period, 4 personnel performed work on this project during the regular work day with a majority of the work completed during Nov and Dec month occuring before and after the OT moratorium.

NOTE: MARCH 18, 2018 - PROJECT ON HOLD PENDING ARRIVAL OF METERS

REMAINING ACTIVE BADGER LP MODELS AS OF APRIL 30, 2018:

ACTIVE LP MODELS - PURCHASE MO & YEAR	COUNT	
2012	8904	WARRANTY EXPIRED
Jan-13	2161	
Feb-13	764	
Mar-13	628	
May-13	1445	ACTIVE WARRANTY
Aug-13	2595	
Sep-13	1	
Nov-13	1	
Jan-14	1	
Feb-14	650	
Apr-14	2446	
Jun-14	71	
Aug-14	1405	
TOTAL :	21072	

12457	WARRANTY EXPIRED
8615	ACTIVE WARRANTY

Marbo (Andy-South) Wells – Status

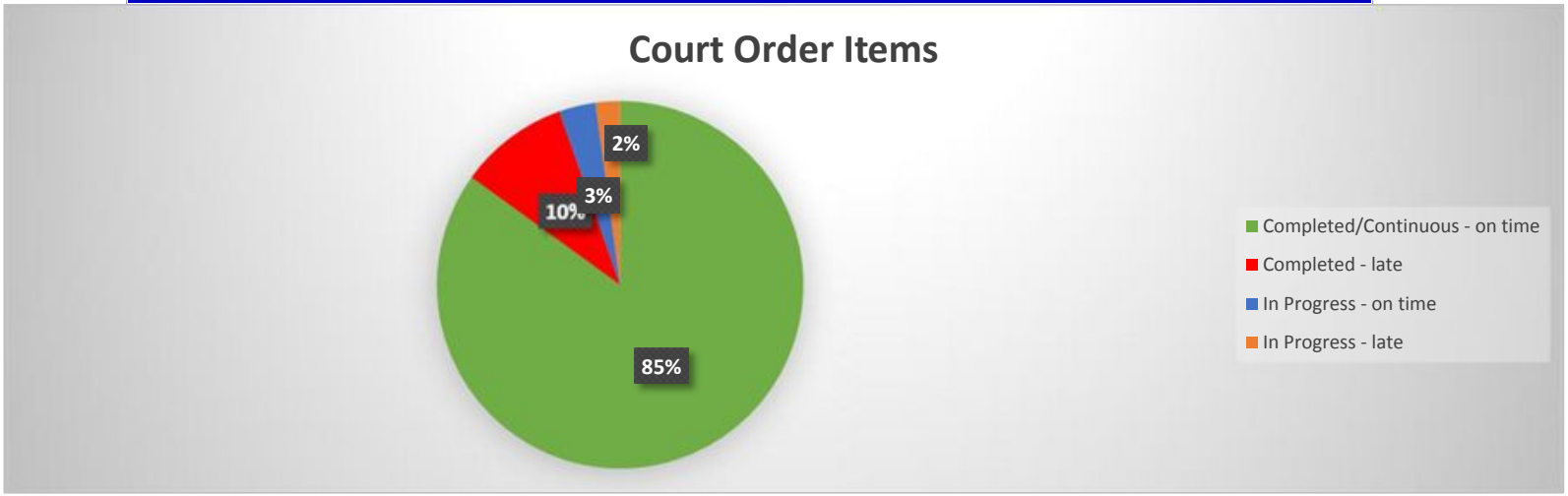
- Involuntary reversion appears imminent; GWA Counsel transmitted draft easement documents to GSA for consideration with DoD
- GM and General Counsel attempted to meet with GSA Counsel in SFO this month, but meeting had to be rescheduled
- No information on timing, but Management remains hopeful that parceling of lots as 'easements' will be accomplished

One Guam Update

- Tumon Maui Well:
  - For the vent shaft leaks, GWA's Consultant B&C needs a work authorization so they will draft a proposal. Initial water flow from the vent shaft was caused by a failure of the level indicator which allowed the tank to overflow. A new level indicator will be employed to avoid the problem in the future.
- Captain Jones' last day will be June 22, 2018. Her replacement, Captain Dan Turner will participate in the One Guam meetings.
- Santa Rosa Tank:
  - GWA and DOD are finalizing the design of the Intertie. All the property maps will be completed and submitted to DOD.
  - Once the maps are completed, the letter to General Cox will be finalized for the temporary easement.
  - The After-Action Report format is being reviewed.
  - The Standard Operation Procedure (SOP) and MOU are being reviewed by DOD.
  - Captain Jones would like to wrap this up before she leaves.
- Agat-Santa Rita WWTP
  - Compensation for the Agat-Santa Rita easement is still under discussion.
- DOD Distribution Lines
  - Southern High, Leon Guerrero property and Murray road wastewater and water lines are resolved, including how the customers will be charged for the service.
- Date Sharing MOU is being drafted
  - This MOU will outline the standards for GIS, hydraulic and other data to be shared between DOD and GWA. Review expected in May.

Court Order

	Items	On-time Items Completed/Continuous	Items Delayed	Completed Late	Items on Schedule	Performance %
Court order total	93	79	2	9	3	97.8%



Status Information

- 2 items delayed
  - Meters
  - Baza Gardens Sewer Line
- Final Date to complete all Court Order items is December 31, 2020.
- Overflow or Bypass events reported to USEPA:
  - 04/08/2018 - Redondo Luchan, Dededo – Manhole overflow. Combination of mostly rocks and some grease. Probable damaged sewer line;
  - 05/09/2018 – Aga Drive, Santa Rita – Sewer Overflow to wetland. Under investigation as a possible sewer refurbishment contractor problem.

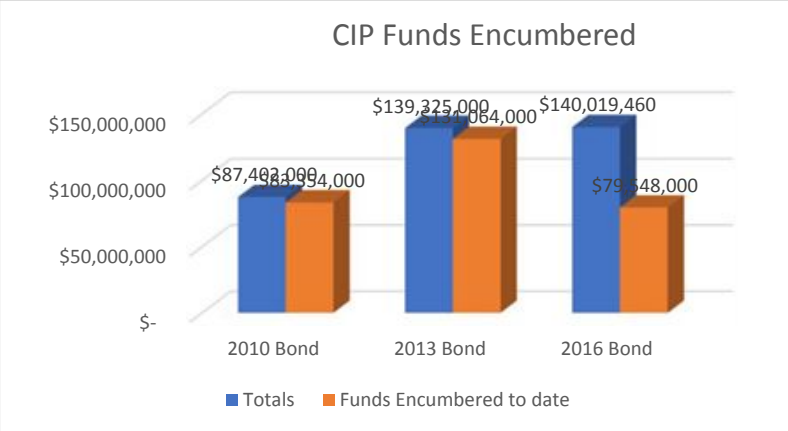
CIP Summary

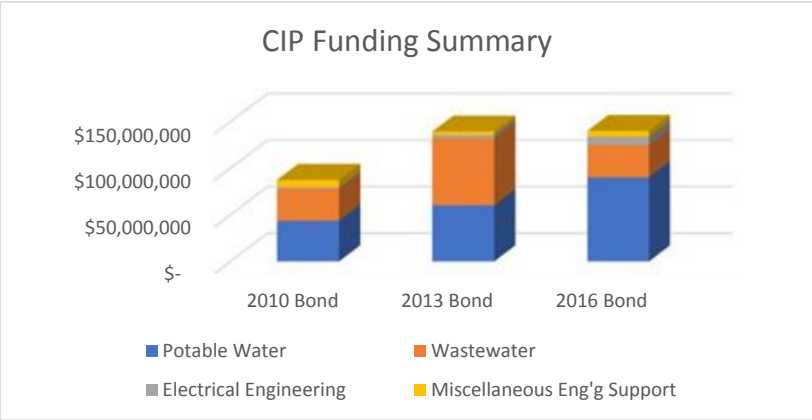
CIP Summary - Project Encumbrance

	2010 Bond		2013 Bond		2016 Bond			
	Funded	Complete	Funded	Complete	Funded	Complete	Total CIP Projects	%
Potable Water	28	17	21	7	20	0	35	49%
Wastewater	16	13	7	3	8	1	22	31%
Electrical Engineering	5	5	6	1	5	0	10	14%
Miscellaneous Eng'g Support	2	0	3	1	4	1	4	6%
Totals	51	35	37	12	37	2	71	100%
% of Total CIP by Fund Source	72%		52%		52%			

CIP Summary - Project Amounts

	2010 Bond		2013 Bond		2016 Bond			
	Funded	%	Funded	%	Funded	%	Total CIP Projects	%
Potable Water	$ 41,903,305	48%	$ 58,317,117	42%	$ 64,647,830	46%	$ 164,868,252	45%
Wastewater	$ 36,009,577	41%	$ 73,837,883	53%	$ 60,227,170	43%	$ 170,074,630	46%
Electrical Engineering	$ 1,748,118	2%	$ 3,395,000	2%	$ 8,750,000	6%	$ 13,893,118	4%
Miscellaneous Eng'g Support	$ 7,741,000	9%	$ 3,775,000	3%	$ 6,394,460	5%	$ 17,910,460	5%
Totals	$ 87,402,000	100%	$ 139,325,000	100%	$ 140,019,460	100%	$ 366,746,460	100%
Funds Encumbered to date	$ 83,354,000	95%	$ 131,064,000	94%	$ 79,548,000	57%		
% of Total CIP Funding	23.8%		38.0%		38.2%			

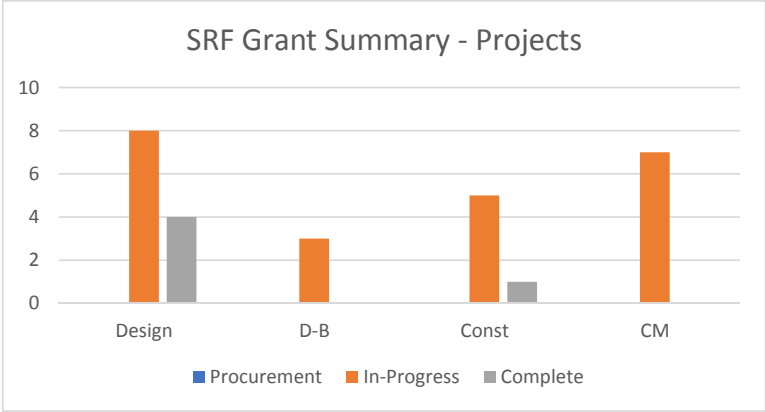




SRF Grant Summary

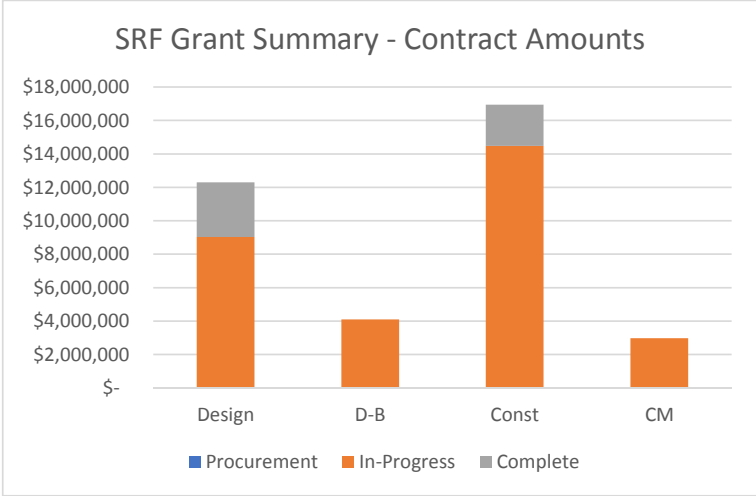
SRF Grant Summary - Projects

	Procurement	In-Progress	Complete	Totals	%
Design	0	8	4	12	43%
D-B	0	3	0	3	11%
Const	0	5	1	6	21%
CM	0	7	0	7	25%
Totals	0	23	5	28	
%	0%	82%	18%		



SRF Grant Summary - Contract Amounts

	Procurement	In-Progress	Complete	Totals	%
Design	$ -	$ 9,025,796	$ 3,279,629	$ 12,305,425	34%
D-B	$ -	$ 4,096,694		$ 4,096,694	11%
Const	$ -	$ 14,480,091	$ 2,470,658	$ 16,950,749	47%
CM	$ -	$ 2,977,793	$ -	$ 2,977,793	8%
Totals	$ -	$ 30,580,374	$ 5,750,287	$ 36,330,661	
%	0%	84%	16%		



OEA Grant Summary

- NDWWTP Upgrades
  - 30% design submittal is in internal QC review; GWA expects receipt in Mid-May.
  - USEPA reported recently that two potential but likely insignificant cultural resources may have been found, waiting on more detail
- Outfall Diffuser:
  - Post-bid Input from bidders received
  - Bid package being revised based on comments; re-design of anchors being evaluated;
  - GWA expects review set in a few weeks.
- Sewer Line Interceptor Design-Build
  - Multi-Step IFB has been issued.
  - Technical Proposal received and Qualified Bidder List established – 3 bidders qualified.
  - Price Proposal extended to 4/26/18.
- NGLA Observation wells – Design work on-going
  - Workshop for 30% design scheduled for this month.

Action Item	Date (Target)	Date (Actual)	Status	Remarks
Project Funds Available	July-16	AUG-30-16	Completed	
Land Acquisition	Jan-17	Jan-17 (Compensation Pending)	Pending	Survey complete, appraisals complete – under review
Procure PM/CM Firm	Jan-17	Jan-17 (NTP Issued Feb 10th)	Completed	
Procure Design Firm	Jul-17		Completed	Contract issued; kickoff pending
Design -- 30/60/90/Final -- Review	Jun-18		On-target	Project design schedule under review by PM/CM
NEPA Analysis and Determination	Feb-17		Delayed	USEPA work on-going; procurement of contractor completed
Procure Construction Firm	Dec-18		On-target	
Construction Complete/Commence Operations	Nov-21		On-target	
Sewer line connection from MCB to GWA infrastructure	Jul-19		On-target	
MCB Initial Operating Capability	Jul-22		On-target	

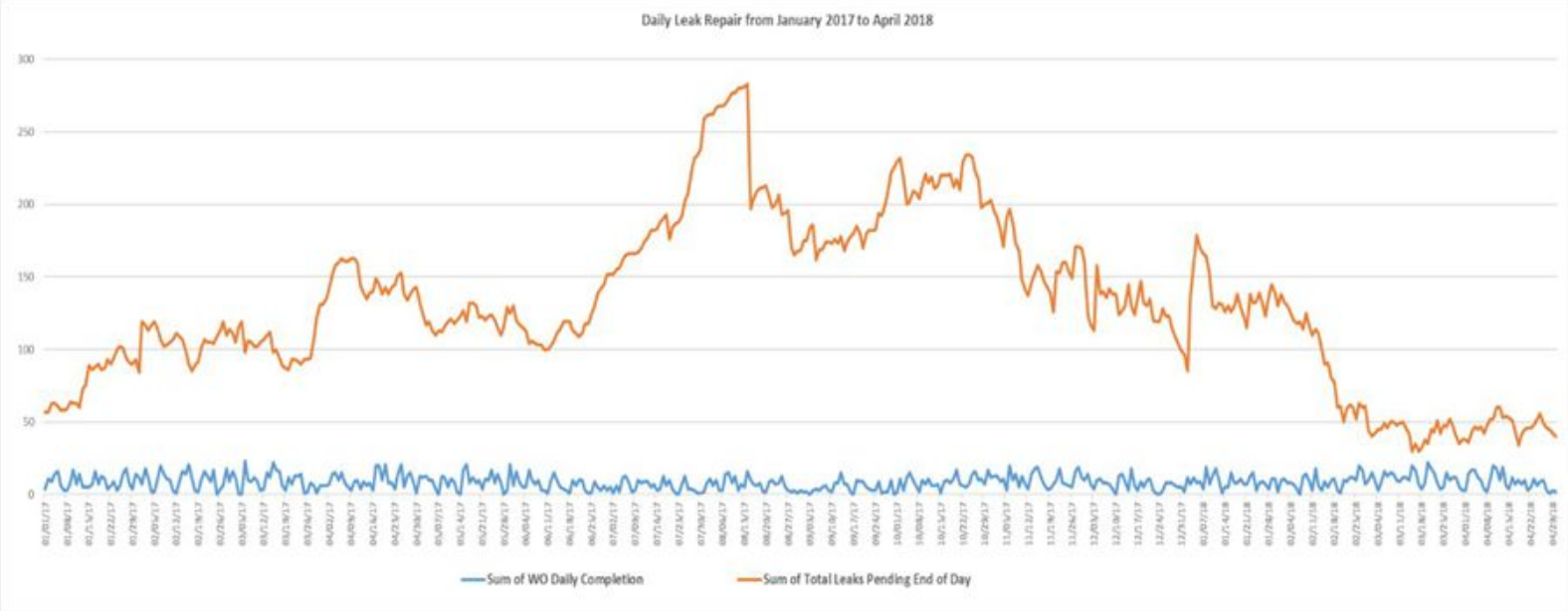
Land Acquisition Summary

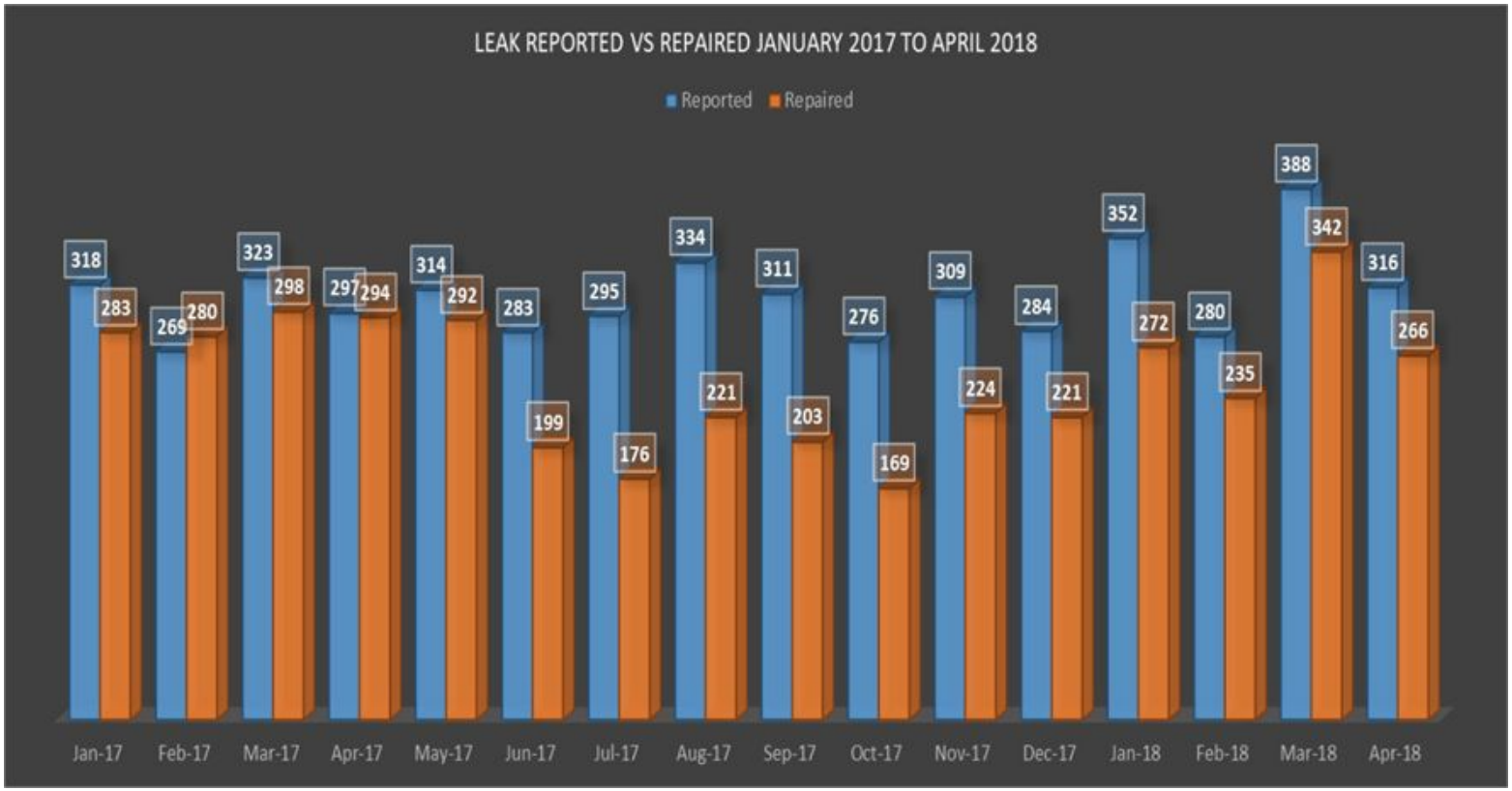
GWA Facility	Location	Gov't./Private/Other	Land Acquisition Status
Tanks	Ugum	Private	Appraisal Services completed 05/09/18.
	Astumbo	Gov't./CLTC	GWA and DoLM working together on Land Registration process. Pending Notification of surrounding lot owner information from DoLM.
	Piti	Private	Preliminary geotechnical investigation and archaeological investigation in the process 05/01/18.
Expansion of the Northern District Wastewater Treatment Plant (NDWWTP)	Dededo	Gov't./GALC	Pending Grant Deed from DoLM 05/02/18.
Deep Well	A-12	Private	Property ownership vested in GWA 10/16/17.
	AG-12	Dept. of Agriculture/Manhita Farms	DCA is still verifying suspected buildings/concrete houses encroachments along the northerly and southerly boundaries 04/02/18.
	Y-8	Gov't./CLTC	Deed of Dedication drafted for legal counsel approval 05/01/18.
Booster Pump Station	Agfayan	Private	No response from private property owner as of 05/11/18. TGE will conduct physical visit for response letter received 05/11/18.
Sewer Pump Stations	Property adjacent to Southern Link	Private	GWA started acquisition process on 12/23/2016. Property ownership vested in GWA 08/11/2017.
Asan Springs	Asan	Gov't./Private	Pending meeting confirmation from GHURA regarding property ownership 05/11/18.

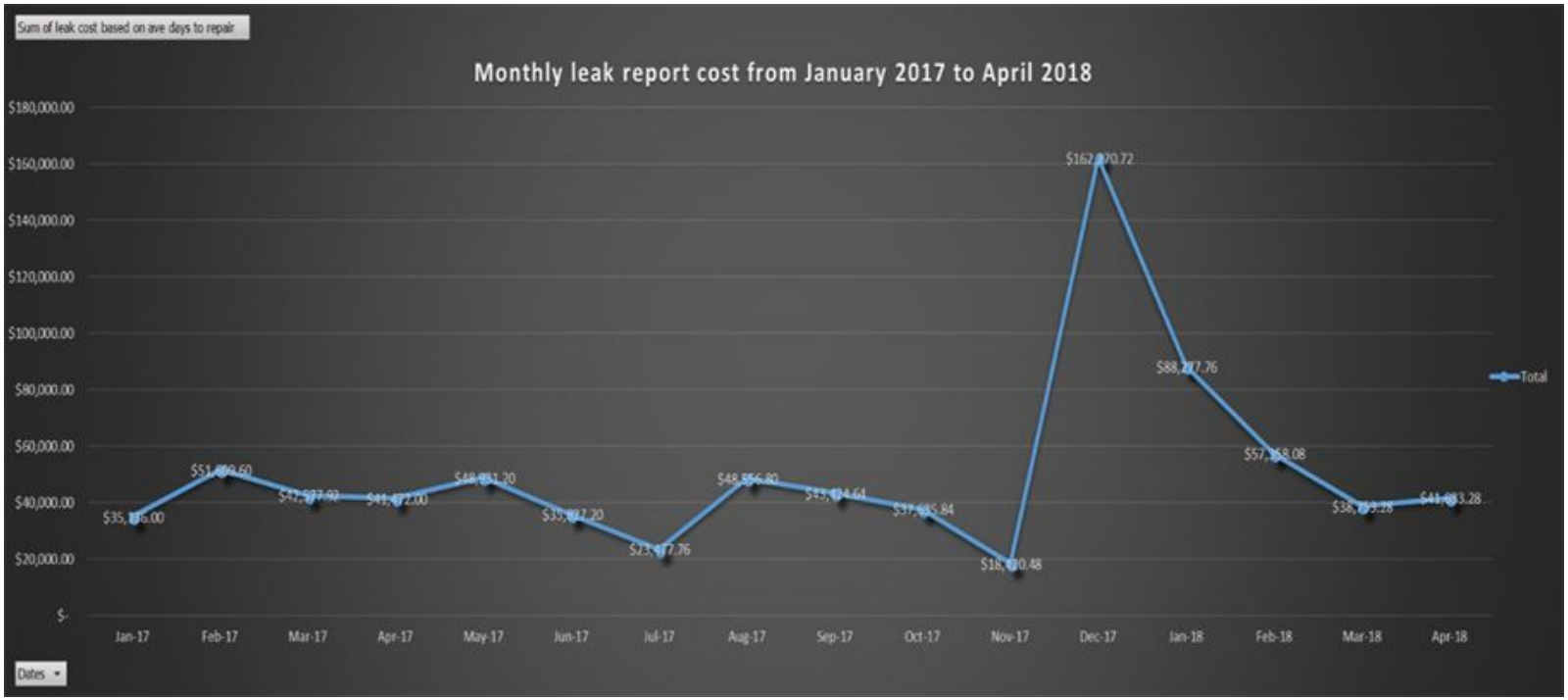
NRW – Update

- Water Audit update on-going
  - Production rates are being reviewed for accuracy and refined
  - Unmetered, Authorized uses are being quantified
  - Meter and billing inaccuracies are being reviewed and refined

Leak Repair Summary

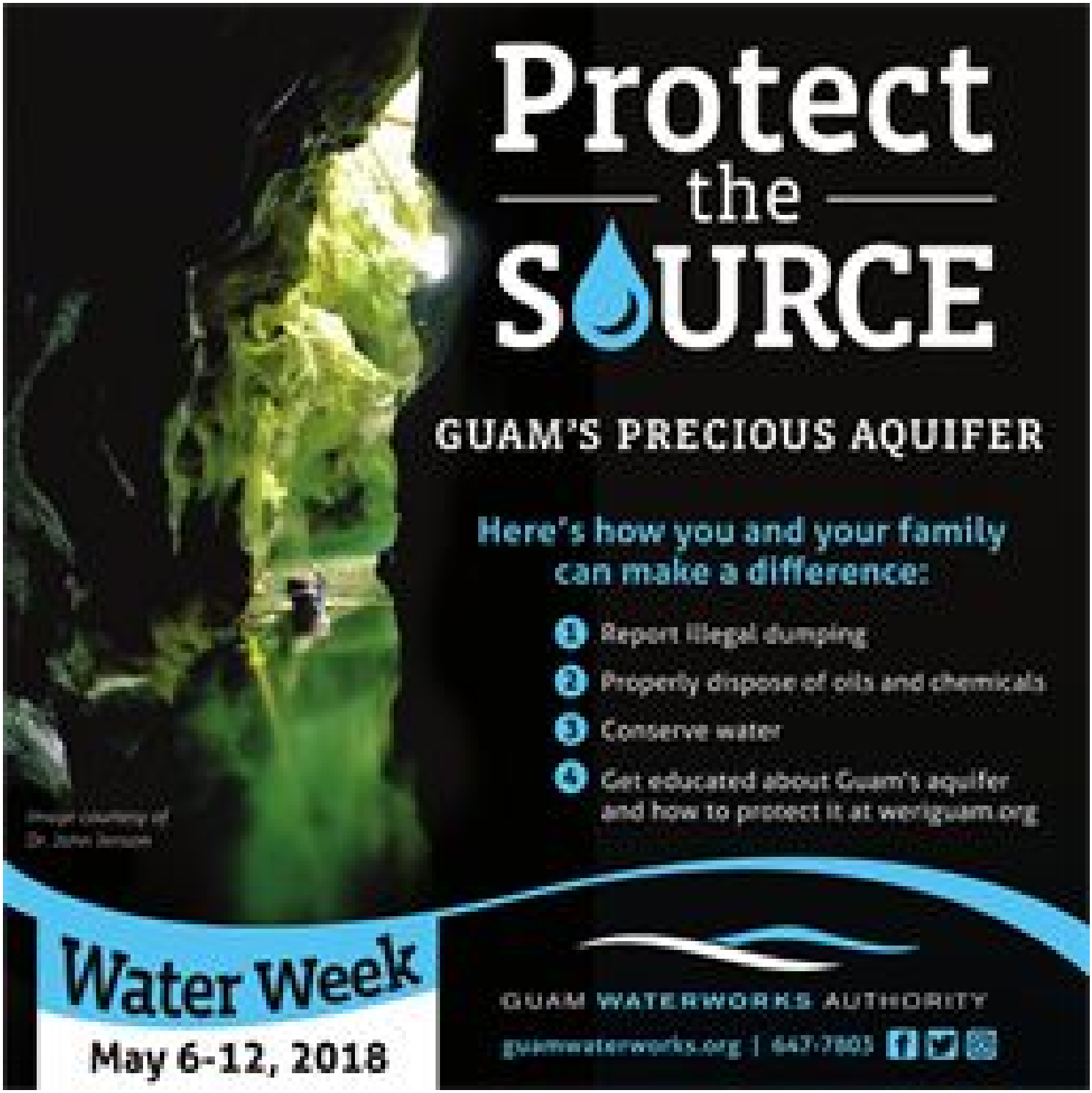



LEAK REPORTED VS REPAIRED JANUARY 2017 TO APRIL 2018
Reported
Repaired
318
283
269
280
323
298
297
294
314
292
283
199
295
176
334
221
311
203
276
169
309
224
284
221
352
272
280
235
388
342
316
266
Jan-17
Feb-17
Mar-17
Apr-17
May-17
Jun-17
Jul-17
Aug-17
Sep-17
Oct-17
Nov-17
Dec-17
Jan-18
Feb-18
Mar-18
Apr-18



Assumptions:

1. Leak rate = 4 gpm
2. Cost per kgal = $4.00


Protect
the
SOURCE
GUAM'S PRECIOUS AQUIFER
Here's how you and your family
can make a difference:
1 Report illegal dumping
2 Properly dispose of oils and chemicals
3 Conserve water
4 Get educated about Guam's aquifer
and how to protect it at weriguam.org
Water Week
May 6-12, 2018
GUAM WATERWORKS AUTHORITY
guamwaterworks.org | 647-7803

2011 Court Order Performance Report Card / Dashboard as of 04/30/2018

GUAM WATERWORKS AUTHORITY

Court Order Performance Report Card

	Items	On-time Items Completed/Continuous	Items Delayed	Completed Late	Items on Schedule	Performance %
Court order total	93	79	2	9	3	97.8%

Legend in detail section below.

Fill Color	Meaning
Lime green	Done/Completed
Yellow	On Schedule
Blue	Behind Schedule
Violet	Completed Behind Schedule
Yellow Green	Ongoing and Continuous

2011 Court Order Performance Report Card / Dashboard as of 04/30/2018

Name	SO #	No	Project	GWA SO Timeline	Due to EPA	Status
Northern District WWTP Primary Treatment Upgrades.	2	1	Interim Primary Treatment Improvements Complete	09/30/2012	@EPA	**Done** Construction completed 12/13/2012
	3(a)	2	Interim Effluent to meet Table 1	09/30/2012 monitoring started	@EPA	**Done** Table 1 compliance beginning January 9, 2013.
	3(a)(1)	3	PE Review (Application for 7.5 MGD pending)	3 months after compliance with 3(a)	@EPA	3(a)(1) Application to increase to 7.5 MGD Approved 08/13/2017
	3(a)(2)	4	(Application for 9 MGD)	3 months after compliance with 3(a)(1)	TBD	Not considered necessary because of OEA Upgrade of NDWWTP
	3(c)	5	Effluent monitoring (calendar-year quarter)	**Completed**	@EPA	**Done. Full year completed 01/08/2012**
	4(a)	6	Sludge & Biosolids Management Plan	12/31/2011	@EPA	**Done.** Biosolids to Landfill EPA Approval 08/17/2014
	4(a)	7	Adequate stabilization and dewatering	9/30/2012	@EPA	**Done.** By Design-Build contract.
	4(b)	8	Biosolids Management, Quarterly Report	Quarterly Report	@EPA	Routine Monitoring Report, **Repeats Quarterly**
	4(c)	9	Biosolids Management, repair & replace facilities	09/30/2012	@EPA	**Done** Construction Complete 12/13/2012. Biosolids to Landfill
	4(d)	10	Biosolids Management, implement plan	9/30/2012	@EPA	**Done** - Biosolids to Landfill
Agaña WWTP Interim Measures.	5	11	Primary Treatment Plant Upgrades	06/30/2013	@EPA	**Done.** CEPT is operational and in final tune-up stages.
	5(a)	12	Scope and schedule	09/30/2011	@EPA	
	5(b)	13	Septage Handling Complete	06/30/2013	@EPA	**Done.** Septage Receiving is completed at the NDWWTP (location option) reported 06/26/2013.
	5(b) 1	14	Septage handling design contract signed	12/31/2011	@EPA	
	5(b) 2	15	Septage handling construction notice to proceed	06/30/2012	@EPA	
	5(c)	16	Grit and FOG Complete	06/30/2013	@EPA	Phase III CEPT is in operations.)
	5(c) 1	17	Grit and FOG design contract signed	12/31/2011	@EPA	**Done** Grit and FOG reported 06/06/2013
	5(c) 2	18	Grit and FOG construction notice to proceed	06/30/2012	@EPA	**Done** Submitted 11/17/2011
	5(d)	19	Repair Solids handling	11/17/2011	@EPA	**Done** O & M Plan reported 05/31/2012
	5(e)	20	O & M Plan	05/31/2013	@EPA	
	5(f)	21	Effluent monitoring (calendar-year quarter)	**Completed**	@EPA	**Done. Full year completed 01/08/2012**
	6	22	Prevent Effluent Back Surge	06/30/2013	@EPA	**Done** Old outfall decommissioned (plugged) 06/25/2013 **Done** Old outfall
	6	23	Effluent Back Surge Plan	12/30/2011	@EPA	decommissioned (plugged) 06/25/2013
I&I SSES	7	24	Collection System SSES and I/I evaluation	**Done**.	@EPA	**Done**.
SSES Work Plan	8	25	Work Plan	180 days	@EPA	**Done** Reported 08/13/2012
	8(a)	26	Flow and rainfall data	N/A	@EPA	**Done** Reported 04/25/2013
	8(b)	27	I/I Southern	540 days	@EPA	**Done** Reported 04/25/2013
	8(c)	28	I/I Central	900 days	@EPA	**Done** Reported 04/28/2014
	8(d)	29	SSES Southern	540 days	@EPA	**Done** Reported 04/30/2013 – update 04/29.2016
	8(e)	30	SSES Central	900 days 09/15/2015 EPA Disap. Ltr.	@EPA	**Done** – Completed June 2, 2017
	8(e) 2	31	SSES Central Report	09/15/2015 EPA Disapproval Letter	@EPA	**Done** – Completed June 2, 2017
Agat / Santa Rita,	9(a)	32	By Pass Report	60 days	@EPA	**Done** Reported 01/04/2012
	9(b)	33	Flow Meter	180 days	@EPA	**Done** Reported 07/26/2012
	9(c)1,2,3	34	Report evaluating near term measures	180 days response sent 09/29/2014	@EPA	**Done** Reported 05/07/2012 GWA response 09/292014.
	9(d)	35	Implement near term measures d - Disinfection	03/23/2016	@EPA	**EPA specifications of 9(c), 9(d) and 9(f) on 09/24/2015.**
	9(e)	36	Implement near term measures e – sludge mgmt.	03/23/2016	@EPA	
	9(f)	37	Implement near term measures f – 75% Bypass Red.	03/23/2016	@EPA	
	10	38	System Evaluation	12/31/2013 response sent 09/29/2014	@EPA	CO **Done** Reported 12/28/2013 GWA response 09/29/2014.- update 04/29/2016
	11	39	System Upgrades	03/14/2017 Plant became operational.	@EPA	New Agat WWTP on line 03/14/2017
	11(a)	40	System Upgrades design	06/30/2014-NTP 10/13/2014	@EPA	CCU approval 08/26/2014. NTP was issued on 10/13/2014
	11(b)	41	System Upgrades notice to proceed	06/30/2015-NTP 10/02/2015	@EPA	NTP Ph.1 issued 10/02/2015 - NTP Ph.2 due 01/04/2016
Baza Gardens	12(a)	42	Interim Measures Evaluation (Independent PE)	180 days	@EPA	**Done** Reported 05/07/2012, PMO task
	12(b)	43	Interim Measures Complete	540 days	@EPA	**Done** Reported 05/01/2013 PMO task
	12(c)	44	Evaluation Bio Solids Report	180 days	@EPA	**Done**-EPA Approval 08/28/2014
	12(d)	45	Complete Bio Solids	360 days	@EPA	**Done** Reported 03/21/2013
	13	46	System Evaluation	04/30/2014	@EPA	**Done** Reported 04/30/2014 GWA response 10/02/2014
	14	47	System Upgrades	04/31/2018	@EPA	Critical path, need to complete I&I/SSES
	14(a)	48	System Upgrades, Design Starts	10/31/2015 NTP DCA 02/05/2016	@EPA	Linked to new Agat WWTP NTP DCA 02/05/2016
	14(b)	49	System Upgrades, Construction Starts	10/31/2016	@EPA	US Fish and Wildlife Permitting Delays will make completion late.

2011 Court Order Performance Report Card / Dashboard as of 04/30/2018

Name	SO #	No	Project	GWA SO Timeline	Due to EPA	Status
Umatac-Merizo	15	50	Complete Evaluation	12/31/2013	@EPA	CO 15 **Done** Reported 12/31/2013 -- Critical path, completed I&I/SSES
	16	51	System Upgrades	12/31/2018	@EPA	Design Build contract executed 06/29/2017
	16(a)	52	System Upgrades, Design Starts	06/30/2016	@EPA	Design Build contract executed 06/29/2017
	16(b)	53	System Upgrades, Notice to Proceed	06/30/2017	@EPA	NTP Issued 06/30/2017
Sewer Cleaning	17	54	Sewer Cleaning (in annual and quarterly reports)	2017-2022 Preliminary Goal set.	@EPA	2017-2022 Preliminary Goal set.
Hot Spot Plan	18	55	Hot Spot Plan	EPA Revision letter o9/08/2015	@EPA	Last Revision submitted 10/23/2015 GWA WW Ops
CCTV	19	56	CCTV (in annual and quarterly reports)	2017-2022 Preliminary Goal set.--- Entire System Every5 years	@EPA	2017-2022 Preliminary Goal set.--- Entire System Every5 years
Sewer Hook-Up	20	57	Sewer Hook-Up	In Operation	@EPA	**Done –** available on GWA web site or at GWA Customer Service
Groundwater Chlorination	21	58	Groundwater Chlorination	540 days	@EPA	**Done** Reported 04/29/2013
Chlorine Residual Monitors	22	59	Plan	180 days	@EPA	**Done** Reported 09/94/2012
	22(a)	60	High Risk Wells	540 days	@EPA	**Done** Reported 05/02/2013
	22(b)	61	Moderate Risk Wells	2 years	@EPA	**Done** Reported 07/31/2013
	22(c)	62	All Other Wells	Completed 07/31/2017	@EPA	Completed 07/31/2017
Water Metering	23(a)	63	Plan & schedule	180 days	@EPA	**Done** Reported 05/08/2012
	23(a)	64	All connections are metered and mapped	2 years	@EPA	10/31/2016 Substantially complete-- **1** Sensus, **0** Metron left
	23(b)	65	Plan repair & maintain	180 days	@EPA	**Done** GWA Test facility operational 06/28/2013
Ugum Surface Water Treatment Plant	24	66	Construction complete	One year	@EPA	**Done** Reported 11/09/2012
	24	67	PE Inspection	60 days before start-up	@EPA	**Done** EPA Approval 08/26/2014
	25	68	PE Performance Operation Assessment	60 days before start-up	@EPA	**Done** EPA Approval 08/26/2014
	26	69	O&M Plan and Procedures	90 days before start-up	@EPA	**Done** Reported 08/10/2012 EPA Approval 08/17/2014
	27	70	Plant compliance	365 days	@EPA	**Done** Reported 02/07/2013
Sinajana Water Transmission Line	28(a)	71	Existing Construction Complete	180 days	@EPA	**Done** Reported 12/23/2011
	28(b)	72	Hydraulic Evaluation	180 days	@EPA	**Done** EPA No Further Comment 08/26/2014
	28(c)	73	Construction Complete (2 tanks)	540 days from 11/21/2013	@EPA	**GEPA Delays** Tank Constr. Completed August 2015: **In Service July 2016.**
	28(d) 1	74	Monitoring Plan	90 days prior	@EPA	**Done** Reported 09/07/2012
	28(d) 1	75	Implement- Monitoring Plan	For one year after start up	@EPA	GWA Compliance
	28(d) 2	76	Monitoring Plan	180 days prior	@EPA	**Done** EPA Approval 08/26/2014
	28(e)	77	Implement- Monitoring Plan	For one year after start up	@EPA	**Start 09/01/2015 – end 08/31/2016**
Storage Tank/Reservoir Rehabilitation and Replacement Program.	29(a) 1	78	Plan hydraulic analysis	90 days	@EPA	**Done** Reported 11/09/2012
	29(a) 2	79	Hydraulic analysis	540 days	@EPA	**Done** EPA No Further Comment 08/26/2014
	29(b) 1	80	Plan minimize service interruptions	90 days after approval	@EPA	**Done** EPA approval 08/26/2014
	29(b) 2	81	Tank inspection schedule	540 days	@EPA	**Done** EPA approval 08/26/2014
	29(b) 3	82	Complete Barrigada (1 @ 2 MG tank)	540 days	@EPA	**Done**
	29(b) 4	83	Assess additional 7 tanks	5 years (11/10/2016)	@EPA	**Done** DCA contract task
	29(b) 5	84	RRRR 7 additional tanks	5 years (11/10/2016)	@EPA	**Done** PMO executed procurement
	29(b) 6 i	85	RRRR 10 additional tanks	7 years (11/10/3018)	@EPA	**Ongoing** - Completed the hydraulic analysis
	29(b) 6 ii	86	RRRR remaining	12/31/2020	@EPA	
	29(c)	87	In Quarterly / Annual Report	Quarterly / Annual Report	@EPA	GWA Compliance **Repeats Quarterly**
Section III REPORTING REQUIREMENTS	31(a)(1)	88	Quarterly Report	Jan., April, July, Sept. Continuous	@EPA	Due by the 30th of the specified months
	31(a)(2)	89	Reports on Non Compliance	Within 30 days from determination of delay	@EPA	As determined by GWA
	31(b)	90	SSO and Bypass Report	Jan., April, July, Sept. Continuous	@EPA	Due by the 30th of the specified months
	31(c)	91	Annual Report	January each year	@EPA	Included with 31(a) each Year
Section IV NOTICES	35	92	CO contacts		@EPA	GWA Compliance report 06/29/2016
	36	93	Formal notices of change in CO contacts	Whenever specified staffing changes	@EPA	GWA Compliance report 06/29/2016

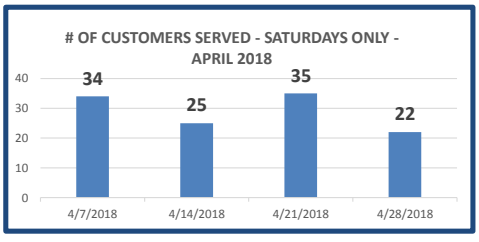
GWA Utility Services Division
Monthly Status Report
Month ending April 28, 2018

UTILITY SERVICES DIVISION ACTIVITIES:	WEEKLY AVERAGE MARCH 2018	MARCH 2018 MONTHLY TOTAL	WEEK ENDING: 4/7/2018	WEEK ENDING: 4/14/2018	WEEK ENDING: 4/21/2018	WEEK ENDING: 4/28/2018	WEEKLY AVERAGE APRIL 2018	APRIL 2018 MONTHLY TOTAL
Collections Unit								
I. Number of accounts cut for nonpayment:	79	314	263	260	265	166	239	954
II. Number of accounts restored for nonpayment:	56	223	184	140	227	126	169	677
III. Number of No water reports responded to:	3	13	0	0	0	0	0	0
IV. Number of Secure/Unsecure valve reports responded to:	1	3	0	0	0	0	0	0
V. Number of Verify reads responded to:	0	0	0	0	0	0	0	0
VI. Number of new pay plans negotiated for **active** accounts :	199	797	243	289	228	240	250	1000
VII. Number of active pay plans negotiated and ongoing :	2031		2184	2383	2519	2660	2437	
VIII. Number of **inactive** accounts with a payment arrangement:	14		9	9	9	9	9	
IX. Number of broken payment plans:	79	315	90	90	92	99	93	371
Customer Service Unit								
I. Service Delivery Points:								
a. GBN Public Service Building – Fadian								
i. Total Customers Assisted :	261	1043	333	303	311	295	311	1242
ii. Total Abandoned Requests :	19	74	47	17	38	27	32	129
iii. Average Wait Time:	8 minutes		6 minutes	9 minutes	11 minutes	13 minutes	10 minutes	
iv. Average Service Time:	13 minutes		9 minutes	12 minutes	13 minutes	13 minutes	12 minutes	
v. Breakdown by request type:								
1. Apply for water	63	253	76	62	56	70	66	264
2. Restore water cut for non payment	11	45	36	39	45	33	38	153
3. Terminate Water	17	67	27	23	11	19	20	80
4. Copy of Bill	34	134	37	34	35	25	33	131
5. Billing Dispute	59	237	71	60	79	66	69	276
6. Billing Dispute follow up	5	19	5	2	2	7	4	16
7. General Questions & Other	34	134	47	48	51	35	45	181
8. Report a water leak	2	8	1	1	2	1	1	5
9. Report water theft	0	1	0	0	0	1	0	1
10. Payment Arrangement	36	144	36	40	35	40	38	151
b. Julale Satellite Office – Hagatna								
i. Total Customers Assisted :	249	997	376	302	244	384	327	1306
ii. Total Abandoned Requests :	15	61	22	16	7	13	15	58
iii. Average Wait Time:	6 minutes		14 minutes	12 minutes	9 minutes	10 minutes	11 minutes	
iv. Average Service Time:	9 minutes		10 minutes	10 minutes	11 minutes	11 minutes	11 minutes	
v. Breakdown by request type:								
1. Apply for water	47	188	64	48	49	44	51	205
2. Restore water cut for non payment	7	29	24	35	15	24	25	98
3. Terminate Water	18	71	36	21	23	27	27	107
4. Copy of Bill	56	222	65	65	43	49	56	222
5. Billing Dispute	61	243	97	69	62	68	74	296
6. Billing Dispute follow up	4	16	5	1	1	1	2	8
7. General Questions & Other	23	93	43	36	20	37	34	136
8. Report a water leak	2	8	3	1	1	1	2	6
9. Report water theft	0	0	0	0	1	0	0	1
10. Payment Arrangement	36	143	57	32	32	39	40	160
c. Upper Tumon Satellite Office – Upper Tumon								
i. Total Customers Assisted :	327	1306	462	341	493	370	417	1666
ii. Total Abandoned Requests :	13	50	16	12	32	10	18	70
iii. Average Wait Time:	9 minutes		9 minutes	6 minutes	13 minutes	6 minutes	9 minutes	
iv. Average Service Time:	11 minutes		10 minutes	9 minutes	9 minutes	10 minutes	10 minutes	
v. Breakdown by request type:								
1. Apply for water	73	292	97	52	73	84	77	306
2. Restore water cut for non payment	22	86	54	54	104	28	60	240
3. Terminate Water	24	94	58	23	34	18	33	133
4. Copy of Bill	58	233	59	74	87	69	72	289
5. Billing Dispute	73	292	100	64	117	98	95	379
6. Billing Dispute follow up	2	8	1	6	5	3	4	15
7. General Questions & Other	38	150	39	23	30	36	32	128
8. Report a water leak	3	13	4	4	4	3	4	15
9. Report water theft	0	0	0	0	0	0	0	0
10. Payment Arrangement	39	156	54	49	51	33	47	187

GWA Utility Services Division
Monthly Status Report
Month ending April 28, 2018

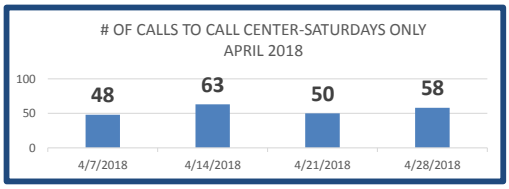
UTILITY SERVICES DIVISION ACTIVITIES:	WEEKLY AVERAGE MARCH 2018	MARCH 2018 MONTHLY TOTAL	WEEK ENDING: 4/7/2018	WEEK ENDING: 4/14/2018	WEEK ENDING: 4/21/2018	WEEK ENDING: 4/28/2018	WEEKLY AVERAGE APRIL 2018	APRIL 2018 MONTHLY TOTAL
d. Customer Call Center								
i. Calls Recieved :	1223	4893	1400	1710	1849	1728	1672	6687
ii. Calls Immediately Answered :	764	3056	880	967	989	1039	969	3875
iii. Calls Abandoned	46	182	65	68	66	85	71	284
iv. Calls Handled by Voice mail:	413	1653	455	674	794	604	632	2527
v. Average duration of calls answered	4 minutes		4 minutes	4 minutes	6 minutes	6 minutes	5 minutes	
vi. Breakdown by request type:								
1. Apply/Terminate info.	22	88	26	42	38	42	37	148
2. Automated Telphone Call	23	92	29	30	44	37	35	140
3. Balance Inquiry	0	0	118	174	163	170	156	625
4. Call Back	0	0	22	31	28	42	31	123
5. Dispatch	48	191	33	42	23	47	36	145
6. Dispute	14	55	26	16	31	25	25	98
7. Follow up	22	88	44	51	150	92	84	337
8. General Questions & Other	288	1153	151	102	144	170	142	567
9. GWA Staff	90	360	166	140	127	143	144	576
10. No Water	26	105	37	21	17	42	29	117
11. Online/Phone App Help	36	144	23	47	28	47	36	145
12. Pay by Phone	118	470	113	104	112	175	126	504
13. Pay Plan	87	348	62	110	72	73	79	317
14. Restore Non-payment	22	86	83	126	93	35	84	337
15. Secure/Unsecure Valve	25	98	10	15	3	4	8	32
16. Voice Mail	0	0	43	71	74	56	61	244
17. Water leak	12	45	12	7	15	17	13	51
e. Customer Emails:								
i. Emails Recieved :								
1. customers@guamwaterworks.org	79	317	48	57	83	29	54	217
Breakdown by request type (email):								
a. Apply for water	2	6	6	2	6	2	4	16
b. Terminate Water	3	10	0	2	1	1	1	4
c. Copy of Bill	1	5	3	0	0	0	1	3
d. Billing Dispute & follow up	13	51	7	19	33	5	16	64
e. General Questions & Other	20	78	20	20	22	15	19	77
f. Report a water leak	4	14	2	5	5	2	4	14
g. Report water theft	0	0	0	0	0	0	0	0
h. Online services inquiry	8	33	10	9	16	4	10	39
2. gwaservesme@guamwaterworks.org (realtors and prop	2	9	0	0	1	0	0	1
ii. Emails Replied (both):	28	111	28	22	62	21	33	133

	AVERAGE	4/7/2018	4/14/2018	4/21/2018	4/28/2018	AVERAGE
f. Saturday Services: 9AM TO 1PM ONLY	29	34	25	35	22	29
i. VISITS: Breakdown by request type:						
1. Apply for water	6	4	3	2	6	4
2. Restore water cut for non payment	1	5	1	4	1	3
3. Terminate Water	1	3	2	2	1	2
4. Copy of Bill	7	7	4	5	3	5
5. Billing Dispute	7	6	8	11	4	7
6. Billing Dispute follow up	0	1	0	0	0	0
7. General Questions & Other	3	1	5	6	2	4
8. Report a water leak	0	0	0	0	0	0
9. Report water theft	0	0	0	0	0	0
10. Payment Arrangement	5	7	2	5	5	5



GWA Utility Services Division
Monthly Status Report
Month ending April 28, 2018

UTILITY SERVICES DIVISION ACTIVITIES:	WEEKLY AVERAGE MARCH 2018	MARCH 2018 MONTHLY TOTAL	WEEK ENDING: 4/7/2018	WEEK ENDING: 4/14/2018	WEEK ENDING: 4/21/2018	WEEK ENDING: 4/28/2018	WEEKLY AVERAGE APRIL 2018	APRIL 2018 MONTHLY TOTAL
ii. CALLS TO CALL CENTER (Saturday services only):			4/7/2018	4/14/2018	4/21/2018	4/28/2018		
			48	63	50	58		



Dispute Resolution & Document Control

I. Dispute Resolution:			4/7/2018	4/14/2018	4/21/2018	4/28/2018		
a. Number of disputed accounts resolved:	6	23	11	12	12	12	12	47
b. Number of disputed accounts under review:	179	716	179	178	178	178	178	713
II. Document Control:								
a. Number of field activities posted :	486	1945	499	386	599	475	490	1959
b. Number of field activities pending:	549	2194	715	643	172	137	417	1667

Disconnect/Reconnect Unit

I. Number of field activities received:	251	1003	438	222	234	223	279	1117
II. Number of field activities completed:	269	1077	399	257	242	210	277	1108
III.Number of field activities pending field action:	3	12	3	4	8	4	5	19

Meter Reading Unit

I. Number of meters read:			4/7/2018	4/14/2018	4/21/2018	4/28/2018		
a. Electronically Read Meters:	9365	37461	7940	10747	10401	10186	9819	39274
b. Manually Read Meters:	39	155	22	40	36	38	34	136
i. Unread meters (Meters scheduled to be read but not read):	41	164	38	40	37	60	44	175
ii. Number of data logs received:	32	128	26	32	37	27	31	122
iii. Number of data logs retrieved:	34	136	30	32	25	24	28	111
iv. Number of data logs pending field action:	17	69	5	5	18	21	12	49
v. Communication Errors/Reprogramming requests:	6	25	2	0	1	1	1	4
vi. Number of estimated readings (for the week):	33	132	28	30	10	35	26	103
vii. Reasons for Estimations:								
1. Cant locate meter:	1	5	0	7	8	7	6	22
2. Temporary Obstruction	1	4	0	0	2	5	2	7
3. Vicious Dog	0	1	0	0	1	0	0	1
4. Flooded meter	1	3	0	1	2	2	1	5
5. Corrective action requested (database corrections needed)	4	17	1	0	4	2	2	7
6. Possible changed out meter:	8	32	2	2	28	4	9	36
7. Communication/Programming error (code 92's):	6	22	2	8	6	4	5	20
8. Other:	4	17	0	1	10	20	8	31
1. Leaks detected on customer's private line:	1079	4315	1019	1444	1293	1136	1223	4892
2. Reverse Flow Detected	30	119	22	48	24	57	38	151
3. No Usage Detected	266	1064	243	310	377	366	324	1296
4. Tamper Code	15	60	7	21	14	17	15	59
c. Electronic Read Percentage:	99%		98%	98%	99%	98%	98%	

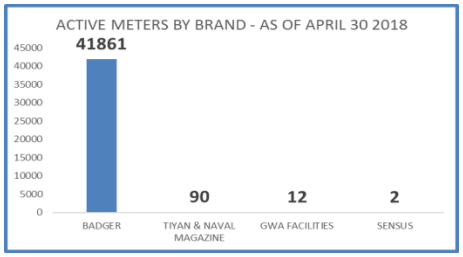
Revenue Protection Unit

I. Number of Inactive Still Consuming Reports rec'd & investigated:	2	6	1	1	1	0	1	3
II.Number of Illegal Connection reports rec'd & investigated:	0	1	1	0	1	3	1	5

III. Meter Replacement Project – Post 2010 Metron Farnier & Sensus Status Report :

METER TYPE	COUNT
SENSUS	2
METRON FARNIER	0
	2

a. Account & Meter Type Count :



GUAM WATERWORKS AUTHORITY

Engineering Monthly Report
May 2018

Prepared By:
Thomas Cruz, P.E. Chief Engineer

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A. Summary Table of 2010, 2013 and 2016 Bond

Potable Water

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
PW 05-01	Ground Water Disinfection	$ 500,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 05-03	Santa Rita Springs Booster Pump Rehab Phase II	$ -	N/A	N/A	$ 100,000.00	100.00%	0.00%	$ -	N/A	N/A
PW-05-05	"A Series Well Transmission Line	$ 518,143.96	100.00%	0.00%	$ 400,000.00	92.46%	7.54%	$ -	N/A	N/A
PW 05-06	Water Booster Pump Station	$ 500,000.00	100.00%	0.00%	$ 1,861,000.00	99.09%	0.91%	$ 4,139,000.00	0.00%	100.00%
PW 05-07	Meter Replacement Program	$ 10,300,000.00	99.84%	0.16%	$ 999,000.00	99.75%	0.25%	$ 4,501,000.00	3.33%	96.67%
PW 05-08	Barrigada Tank Repair/Replacement	$ 5,450,000.00	99.92%	0.08%	$ 4,987,000.00	99.32%	0.68%	$ 1,013,000.00	0.00%	100.00%
PW 05-09	Leak Detection	$ 200,000.00	100.06%	-0.06%	$ 20,000.00	84.58%	15.42%	$ 1,180,000.00	0.00%	100.00%
PW 05-10	Potable Water System Planning	$ 200,000.00	100.00%	0.00%	$ 624,000.00	100.00%	0.00%	$ 2,276,000.00	38.50%	61.50%
PW 05-11	Implement Ground Water Rule	$ 1,700,000.00	100.00%	0.00%	$ 1,000,000.00	100.00%	0.00%	$ -	N/A	N/A
PW 05-12	Brigade II (Ugum Lift) BPS Upgrade	$ 1,700,000.00	18.03%	81.97%	$ -	N/A	N/A	$ -	N/A	N/A
PW 05-13	Deep Well Rehabilitation	$ 548,000.00	100.00%	0.00%	$ 200,000.00	100.00%	0.00%	$ 250,000.00	44.01%	55.99%
PW 05-14	New Deep Wells at Dow n Hard	$ 638,252.85	76.11%	23.89%	$ 810,000.00	0.00%	100.00%	$ 1,190,000.00	0.00%	100.00%
PW 05-15	Rehabilitation of Asan Springs	$ 900,000.00	37.87%	62.13%	$ -	N/A	N/A	$ -	N/A	N/A
PW 05-16	Master Meters	$ 1,600,000.00	99.44%	0.56%	$ 784,000.00	99.88%	0.12%	$ 3,616,000.00	4.19%	95.81%
PW 09-01	Ugum Water Treatment Plant Intake	$ 700,000.00	99.47%	0.53%	$ 982,000.00	100.00%	0.00%	$ 18,000.00	0.00%	100.00%
PW 09-02	Water Wells	$ -	N/A	N/A	$ 4,200,000.00	46.77%	53.23%	$ 2,500,000.00	0.00%	100.00%
PW 09-03	Water Distribution System	$ 3,174,748.00	100.00%	0.00%	$ 11,151,000.00	87.97%	4.85%	$ 49,000.00	0.00%	100.00%
PW 09-04	Pressure Zone Realignment	$ -	N/A	N/A	$ 431,000.00	99.95%	0.05%	$ 1,141,000.00	58.58%	35.06%
PW 09-06	Central Water Distribution System 2005	$ 900,000.00	91.67%	8.33%	$ -	N/A	N/A	$ -	N/A	N/A
PW 09-08	Mechanical/Electrical Equipment	$ 1,200,000.00	100.00%	0.00%	$ 430,000.00	99.60%	0.40%	$ 100,000.00	0.00%	100.00%
PW 09-09	Water Reservoir Internal/External	$ 2,000,000.00	73.20%	24.53%	$ -	N/A	N/A	$ -	N/A	N/A
PW 09-10	Water Reservoir Internal/External	$ -	N/A	N/A	$ -	N/A	N/A	$ 800,000.00	0.00%	100.00%
PW 09-11	Water System Reservoirs 2005 Improvements	$ 1,050,000.00	100.00%	0.00%	$ 13,878,000.00	99.99%	0.01%	$ 28,350,000.00	48.33%	49.98%
PW 11-01	Distribution System Upgrades	$ 474,159.85	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 11-02	Ugum Water Treatment Plant Reservoir	$ -	N/A	N/A	$ 90,000.00	0.00%	100.00%	$ -	N/A	N/A
PW 12-01	Water Audit Program & Water Loss Control Plan	$ 100,000.00	78.46%	21.54%	$ -	N/A	N/A	$ 1,000,000.00	0.00%	95.00%
PW 12-02	Production Plan / Reduce Navy Purchases	$ 100,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 12-03	Hydraulic Assessment of Tanks	$ 500,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 12-04	Agana Heights & Chaot Tanks	$ 4,700,000.00	100.00%	0.00%	$ 3,280,000.00	40.52%	59.48%	$ 1,220,000.00	40.98%	59.02%
PW 12-05	Tank Major Repair Yigo #1, Mangilao #2, Astumbo#1	$ 1,900,000.00	95.16%	4.84%	$ 11,605,000.00	99.99%	0.01%	$ 1,895,000.00	96.15%	3.85%
PW 12-06	Tank Replacement Piti & Hyundai	$ -	N/A	N/A	$ -	N/A	N/A	$ 7,409,830.00	98.52%	1.48%
PW 12-07	Assessment of Malojloj Elevated & Yigo Elevated	$ 200,000.00	100.00%	0.00%	$ 485,117.00	100.00%	0.00%	$ -	N/A	N/A
PW 12-08	Public Water System Asset Inventory/ Condition Assessment	$ 100,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 12-09	Public Water System GIS & Mapping	$ 50,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 14-01	Fire Hydrant Replacement Program	$ -	N/A	N/A	$ -	N/A	N/A	$ 2,000,000.00	0.00%	100.00%
		$ 41,903,304.66			$ 58,317,117.00			$ 64,647,830.00		

Wastewater

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
WW 05-04	Wastew ater System Planning	$ 1,500,000.00	100.00%	0.00%	$ 651,000.00	100.00%	0.00%	$ 349,000.00	89.68%	10.32%
WW 05-05	Wastew ater Vehicles	$ 235,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 05-07	NDWWTP - Chlorine Tanks	$ 250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 09-01	Lift station upgrades	$ -	N/A	N/A	$ 946,000.00	70.40%	29.60%	$ 2,404,000.00	12.21%	87.79%
WW 09-06	Wastew ater Collection System Repl/ Rehabilitation	$ 1,105,000.00	99.93%	0.07%	$ 780,000.00	97.11%	2.89%	$ 2,920,000.00	19.02%	80.98%
WW 09-08	Facilities Plan/Design for Baza Gardens WWTP	$ 1,250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 09-10	Facilities Plan/Design for Agat-Santa Rita WWTP	$ 899,630.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 11-03	Baza Gardens STP Replacement	$ 1,301,947.00	24.27%	11.57%	$ 3,114,883.00	100.00%	0.00%	$ 29,400,170.00	98.99%	1.01%
WW 11-04	Facilities Plan/Design for Umatac-Merizo WWTP	$ 900,000.00	100.00%	0.00%	$ 473,000.00	100.00%	0.00%	$ 527,000.00	47.44%	52.16%
WW 11-08	Agat/Santa Rita STP Replacement	$ 2,218,000.00	99.91%	0.09%	$ 67,200,000.00	99.43%	0.57%	$ 3,000,000.00	37.32%	62.68%
WW 12-01	Northern District WWTP Primary Treatment Upgrade	$ 11,750,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-02	Biosolids Management Plan	$ 200,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-03	Agana WWTP Interim Measures	$ 11,500,000.00	100.00%	0.00%	$ 673,000.00	100.00%	0.00%	$ 827,000.00	0.00%	100.00%
WW 12-04	I&I SSES Southern	$ 800,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-05	I&I SSES Central	$ 850,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-06	I&I SSES Northern	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 12 -07	Umatac Merizo Replacement	$ 250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ 20,800,000.00	99.06%	0.94%
WW 12-08	Wastew ater System GIS & Mapping	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-09	Wastew ater Facility Back Up Pow er	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-10	Wastew ater System Asset Inventory	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 17-01	Wastew ater Sew er System Expansion									
WW 17-02	Northern District WWTP Secondary Treatment Upgrade	$ 1,000,000.00	0.00%	100.00%						
		$ 36,009,577.00			$ 73,837,883.00			$ 60,227,170.00		

Electrical Engineering Support

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
EE 05-02	SCADA Pilot Project	$ 61,950.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
EE 09-01	Wastew ater Pumping Station Electrical Upgrade	$ -	N/A	N/A	$ 620,000.00	16.13%	83.87%	$ 100,000.00	0.00%	100.00%
EE 09-02	Electrical Upgrade - Water Wells	$ 354,226.63	100.00%	0.00%	$ 1,500,000.00	100.00%	0.00%	$ 650,000.00	0.00%	100.00%
EE 09-03	Electrical Upgrade - Water Booster	$ -	N/A	N/A	$ 2,000.00	0.00%	100.00%	$ 323,000.00	0.00%	100.00%
EE 09-04	Electrical Upgrade - Water Booster	$ -	N/A	N/A	$ 200,000.00	0.49%	99.51%	$ -	N/A	N/A
EE 09-05	Electrical Upgrade - Other Water	$ -	N/A	N/A	$ 150,000.00	40.47%	59.53%	$ -	N/A	N/A
EE 09-06	SCADA Improvements - Phase I	$ 250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
EE 09-07	SCADA Improvements - Phase 2	$ 1,056,986.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
EE 09-08	SCADA Improvements - Phase 3	$ 24,955.71	100.00%	0.00%	$ 923,000.00	78.26%	21.74%	$ 1,177,000.00	52.46%	47.54%
EE 09-09	SCADA Improvements - Phase 4	$ -	N/A	N/A	$ -	N/A	N/A	$ 6,500,000.00	0.00%	80.66%
		$ 1,748,118.34			$ 3,395,000.00			$ 8,750,000.00		

Miscellaneous Engineering Support

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
MC 05-01	Laboratory Modernization	$ -	N/A	N/A	$ 1,173,000.00	100.00%	0.00%	$ 1,127,000.00	100.00%	0.00%
MC 05-02	Land Survey	$ 500,000.00	99.94%	0.06%	$ 2,000.00	0.00%	100.00%	$ 1,998,000.00	63.09%	36.91%
MC 09-01	General Plant Improvements	$ 7,241,000.00	99.58%	0.42%	$ 2,600,000.00	82.00%	18.00%	$ 2,769,460.00	53.83%	45.89%
MC 15-01	Information Technology Intergration Improvements							$ 500,000.00	48.81%	51.19%
		$ 7,741,000.00			$ 3,775,000.00			$ 6,394,460.00		

	2010 Bond Allotment	2013 Bond Allotment	2016 Bond Allotment
CIP Water	$ 41,903,304.66	$ 58,317,117.00	$ 64,647,830.00
CIP Wastewater	$ 36,009,577.00	$ 73,837,883.00	$ 60,227,170.00
CIP Electrical	$ 1,748,118.34	$ 3,395,000.00	$ 8,750,000.00
CIP Miscellaneous	$ 7,741,000.00	$ 3,775,000.00	$ 6,394,460.00
	$ 87,402,000.00	$ 139,325,000.00	$ 140,019,460.00

Bond Fund	Construction Fund Amount ($M)	Estimated # of months fund available for use		Total Funds encumbered to date ($M)	% of fund used	Rate of Spending: ($M) per year
2005	$82.930	82	*	$82.930	100.00%	12.14
2010	$87.402	88	**	$83.354	95.37%	11.37
2013	$139.325	51	**	$132.278	94.94%	31.12
2015	$140.019	21		$82.226	58.72%	46.99
	* - End date November 2013 via CCU Resolution 06-FY2014					
	** - Includes month of April 2018					

B. Projects Procurement

Percentage Key:

100%	Approved by GM
99%	Signature required from either Accounting/Legal/GM
98%	Processing engineering service or construction contract (with legal)
95%	Request for CCU approval (GM/engineering)
90%	A/E fee negotiation or contractor bid evaluation (engineering)
80%	Selected A/E or Conducted bid opening (engineering)
70%	Advertised RFP/IFB (engineering)
60%	RFP/IFB Package under legal review
50%	RFP/IFB Package completed (engineering)
Less than 50%	Project Scope of work development in progress

- Red text anywhere indicates a change from the last report.

BOX KEY FOR PROCUREMENT:

(Type of Procurement) (Relevant CIP NO. or Funding Source)	**(Project Title)**	
(Percentage complete for procurement)	**Activities/Notes:** (see percentage key above)	**Consultant** (listed when selected)
Project Description	Summary of project description	

BID PACKAGE PW 09-02	**New Well Construction**	
<50% Complete	**Activities/Notes:** GWA engineering continuing discussion with Dept. of Agriculture and lessee on options of acquisition of property for well site at AG-12. Internal GWA discussions underway for survey and appraisal services as well as continuing services form Designer.	
Project Description:	The project is to construct three new production wells for GWA as well as installation of a water main to connect the new production wells to the Ysengsong Reservoirs.	

RFP PW 09-02	**New Well Construction (Construction Management)**	
<50% Complete	**Activities/Notes:** SOW being developed	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of up to three (3) new production wells for GWA. GWA plans to increase source water production to improve system redundancy that allows for operating the water production wells more effectively. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

BID PACKAGE PW 14-01	**Fire Hydrant Replacement Phase I**	
<50% Complete	**Activities/Notes:** Bid package being prepared.	
Project Description:	The work performed under this project consist of replacing all know dry barrel fire hydrants down to the lateral as well as any defective wet barrel fire hydrant. Where necessary the gate valve for the fire hydrant may also be replaced.	

RFP WW 09-01	**Yigo SPS Flood Protection and Rehabilitation Design**	
90% Complete	**Activities/Notes:** GWA in negotiation with AECOM on SOW and fee proposal.	
Project Description:	The work performed under this project procurement shall consist of a design services to implement storm water mitigation measures to protect the facility during extreme weather as well as rehabilitate the facility to provide better redundancy and operate efficiently.	

BID PACKAGE PW 09-03, PW 09-04 AND PW 09-11	**Northern Tank Phase I (Santa Rosa) Construction**	
<50% Complete	**Activities/Notes:** GWA will issue only a bid for Santa Rosa Tank and off-site improvements first.	
Project Description:	The work performed under this project procurement shall consist of Construction of a 1MG Santa Rosa reservoir and booster pump station. Some piping work off site from the reservoir is also required to ensure the reservoirs function optimally.	

BID PACKAGE EE 09-08, EE 09-09	**SCADA Phase A1 Construction**	
95% Complete	**Activities/Notes:** GWA management seeking CCU approval of contract with lowest bidder.	
Project Description:	The work performed under this project procurement shall consist of Construction of SCADA ready instrumentation at several water and waste water facilities throughout he island.	

RFP EE 09-08, EE 09-09	**SCADA Phase A1 Construction Management**	
90% Complete	**Activities/Notes:** GWA and CM firm currently in scope and fee negotiations.	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of all SCADA ready instrumentation at the various facilities through Guam. The overall goal of the Construction Manager (CM) is to	

	manage the entire construction process so that the project can be delivered efficiently and professionally.

RFP PW 09-04, PW 09-11	**Design Services for the Project Pressure Zone Realignment and Tank Repair/Replacement**	
90% Complete	**Activities/Notes:** GWA and design firm currently in scope and fee negotiations.	
Project Description:	The work performed under this project procurement shall consist of design services for the remaining GWA reservoirs that required major repairs or replacement. The design will also address the required pressure zone realignment throughout the island so as to improve the distribution system functionality. .	

BOX KEY FOR PROJECT:

(Type of Project) (Relevant CIP NO.)	**(Project Title)** **(Contractor or consultant)**	**Start Date:** (month and year)
(Percentage complete for project)	**Activities/Notes:** (brief description of activity)	**Completion Date:** (month and year)
(Court Order Paragraph No.)	(Project type)	
Project Description	Project Description Narrative	

C. CIP Water Section

INSPECTION CIP PW 05-02	**Inspection & Maintenance Repairs to GWA Island-Wide Steel Water Tank Reservoirs Phase 2 (DCA)**	**Start Date:** April 2010
80% Complete	**Activities/Notes:** GWA needs to modify design for Toguan BPS. Still working on plan for Kaiser, Windward. Quote for Agat #1 take down with contractor. GWA working to get quotes for by-pass for Malojloj tank.	**Completion Date:** Anticipate December 2021
CO 38C	Engineering inspection services	
Project Description:	The Court Order requires GWA to inspect all active and in some cases inactive water reservoirs. The inspection results will allow GWA to determine if a reservoir requires repair or replacement.	

DESIGN CIP PW 05-12	**Brigade II BPS Upgrade** **(EM Chen)**	**Start Date:** April 2012
100% complete (Basis of Design) 60% (Design)	**Activities/Notes:** 60% design submittal received and under review.	**Completion Date:** Due to property acquisition issues GWA anticipate May 2018
N/A	Engineering design services	
Project Description:	The design project is intended to assess system water supply feed from the north as well as Ugum WTP and the water demands downstream from the Brigade BPS so as to reconfigure the piping into the BPS and resize the pumps to me system head requirements.	

DESIGN CIP PW 12-05	**Yigo and Astumbo 2MG Tank Design Project (Lyons)**	**Start Date:** September 2013
99% complete	**Activities/Notes:** Design firm to provide RFI support during the construction.	**Completion Date:** January 2016
CO 9 (b)(4)	Engineering design services	
Project Description:	Develop the construction documents for two (2) 2.0 million-gallon (MG) nominal capacity concrete reservoirs in the Yigo service zones and one (1) 2.0 MG reservoir in the Astumbo service area. The design services will consist of preparation of plans, specifications, and estimates (PS&E), including Basis of Design, design calculations, construction	

	schedule, topographical survey, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic resources, hazardous materials survey, construction documents, design drawings in Auto CAD (latest version), and relevant permits. Other services will include construction bid support service, meetings, and response to request for interpretation/information during construction. The consultant is required to incorporate and modify existing GWA concrete reservoir specifications to meet the project objective.

DESIGN PW 09-11	**Northern and Southern Guam Reservoir Design** **(TG Engineers)**	**Start Date:** May 2015
60% Complete	**Activities/Notes:** Santa Rosa – 100% design in hand. Santa Rita – 100% design in hand. Inarajan – Land procurement second site related to new BPS's still on-going. Sinifa – 100% design in hand. Ugum – GWA still in discussion with re-evaluation and discussion with property owner of alternative property on-going.	**Completion Date:** Update: Due to property acquisitions issues for Piti and Tumon #1, design completion 6 months after property issue resolved.
CO 29 (b)(4)	Engineering design services	
Project Description:	The design services will consist of preparation of plans, specifications, and estimates (PS&E), which includes Basis of Design, design calculations, hydraulic modeling (EPANET), computational fluid dynamic modeling (CFD), construction schedule, topographical survey, property research, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic resources, hazardous materials survey, construction documents, design drawings in Auto CAD, relevant permit, construction bid support service, and response to request for interpretation/information during construction. The tank locations are Ugum, Santa Rita, Santa Rosa, Inarajan and Sinifa.	

DESIGN PW 12-04	**Central Guam Reservoirs Design** **(GHD Inc.)**	**Start Date:** May 2015
65% Complete	**Activities/Notes:** Chaot #2 – Chaot off-site work part of base bid. Chaot Tank work expected to be Change Order in once funding available. Tumon #2 – tank under construction. Hyundai – tank under construction. Piti – GWA still evaluating alternative solutions to storage needs in Piti area. Manenggon –70% design near complete. Tumon #1 – GWA working on land issues.	**Completion Date:** Update: Due to property acquisitions issues for Piti and Tumon #1, design completion 6 months after property issue resolved.
CO 29 (b)(4)	Engineering design services	
Project Description:	The design services will consist of preparation of plans, specifications, and estimates (PS&E), which includes Basis of Design, design calculations, hydraulic modeling (EPANET), computational fluid dynamic modeling (CFD), construction schedule, topographical survey, property research, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic resources, hazardous materials survey, construction documents, design drawings in Auto	

	CAD, relevant permit, construction bid support service, and response to request for interpretation/information during construction The tank locations are Hyundai, Pulantat, Chaot #2, Tumon #2, Piti and Tumon #1.

CONSTRUCTION PW 09-03	**Line Replacement Phase IV (Giant Construction)**	**Start Date:** 02/14/16
80% Complete	**Activities/Notes:** Contractor continuing pipe installation at Asumption Drive and Agafa Gumas. GWA working on property and archeological issue with contractor.	**Completion Date:** 12/30/18 per Change Order.
	Construction Services	
Project Description:	The project is intended for a contractor to replace existing water lines that have been found by operations to be leaking and/or are causing service delivery to less than what GWA is required to provide. The project will replace water mains and ten known locations throughout the island and there is a component within the bid where line replacement work for unknown locations is accounted for.	

DESIGN PW 05-15	**Asan Spring Rehabilitation Design (HDR)**	**Start Date:** August 24, 2016
60% Complete	**Activities/Notes:** 60% design submittal received and under review.	**Completion Date:** Due to delays from the Park Services related to property access the anticipated completion of the design is May 2018.
	Engineering design services	
Project Description:	- Perform site visits and condition assessment for site conditions to determine demolition and rehabilitation requirement, process equipment condition, structural condition, and electrical system. Site condition assessment shall include all disciplines to execute the project. - Review and validate the current property boundary information to confirm the available space for the project development. - Perform an environmental impact study and prepare all required permits as needed. - Perform an archeological and historical resources study to identify potential impact to the project, prepare all required permits as needed. - Coordinate with Guam Historic Resources Division State Historic Preservation Office (SHPO) on historical resources study. Prepare all necessary reports and documents as required by SHPO. - Coordinate with Guam Department of Agriculture, Division of Aquatic and Wildlife Resources (DAWR) on vegetation clearance. Prepare all necessary reports and documents required by DAWR. - Identify the existing and projected service area, period of design. - Identify and recommend conceptual water treatment system. - Perform a Class 4 engineering cost estimate according to the American Association of Cost Engineers (AACE) International Cost Estimate Classification System for construction fee. Cost must	

	include all disciplines, permit, construction and administration that are necessary to execute the project. All costs will be in current dollars and escalated to the estimated midpoint of construction.

CONSTRUCTION PW 09-11, PW 12-05	**Yigo/Astumbo Tank Construction (Pernix)**	**Start Date:** 12/1/16
80% Complete	**Activities/Notes:** Contractor working to fill Yigo #1. Yigo #2 concrete roof near complete and prestressing to start soon. Yigo pump station also near complete. Astumbo #1 tank structure complete, working on finishes. On-site pipe work at both sites on-going.	**Completion Date:** 07/31/18
	Construction Services	
Project Description:	This project will involve construction of two (2) 2MG concrete tanks and Booster Pump Station at the Yigo site and a one (1) 2MG concrete tank at the Astumbo site. Work will involve new pipe line, valves, electrical controls, pumps and motors, site drainage, paving, generator for the BPS, SCADA, etc.	

CONSTRUCTION MANAGEMENT PW 09-11, PW 12-05	**Yigo/Astumbo Tank Construction Management (GHD)**	**Start Date:** December 2016
75% complete	**Activities/Notes:** Processing submittals and on-site inspection	**Completion Date:** July 2018
N/A	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the demolition of existing steel elevate and ground tanks as well as the construction of the 2MG concrete tanks at the Yigo tank location and Astumbo tank location. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

CONSTRUCTION MANAGEMENT PW 12-04-11, PW 12-06 AND PW 09-11	**Central Tank Phase I (Chaot #2, Tumon #2, Hyundai) Construction Management (TG Engineers, PC)**	**Start Date:** December 2017
5% complete	**Activities/Notes:** Reviewing submittals from contractor.	**Completion Date:** February 2019
N/A	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of three water reservoirs; 0.5MG Chaot #2, 1MG Tumon #2 (Nissan) and 1MG Hyundai. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

CONSTRUCTION PW 12-04, PW 12-06 AND PW 09-11	**Central Tank Phase I (Chaot #2, Tumon #2, Hyundai) Construction (AIC)**	**Start Date:** 02/8/18
5% Complete	**Activities/Notes:** Clearing at Nissan on-going, waiting for DPW to issue final permit.	**Completion Date:** 02/31/19
	Construction Services	
Project Description:	The work performed under this project procurement shall consist of Construction of three water reservoirs; 0.5MG Chaot #2, 1MG Tumon #2 (Nissan) and 1MG Hyundai. Some piping work off site from the reservoir is also required to ensure the reservoirs function optimally.	

CONSTRUCTION MANAGEMENT PW 09-11	**Northern and Southern Tank Phase I (Santa Rosa, Sinifa, Santa Rita) Construction Management (GHD)**	**Start Date:** April 2018
0% complete	**Activities/Notes:** Providing constructability review for Santa Rosa Tank.	**Completion Date:** June 2019
N/A	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of three water reservoirs; 1MG Santa Rosa, 1MG Sinifa and 1MG Santa Rita. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

D. CIP Wastewater Section

DESIGN WW 11-08	**Agat-Santa Rita WWTP Replacement (DCA)**	**Start Date:** October 2014
99% Complete	**Activities/Notes:** Change Order to extend design services during construction executed.	**Completion Date:** Nov. 2015 (design); June 2018 (construction)
CO 11	Engineering design services	
Project Description:	The engineering design consultant is required to design a new wastewater treatment facility that will meet secondary treatment limits. The new facilities will incorporate provisions for redundancy to improve reliability and facilitate operations and maintenance activities at the existing facility	

CONSTRUCTION MANAGEMENT WW 11-08	**Agat Santa Rita WWTP CM (GHD)**	**Start Date:** November 2014
100% (PH 1) 100% Complete (PH 2, Part 1) 93% Complete (PH 2, Part B)	**Activities/Notes:** Typical CM inspections on-going. Change order required to continue services through April 2018.	**Completion Date:** December 2017, projected through April 2018
CO 11	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of	

	Construction Management and Inspection Services for the construction of the Agat Santa Rita WWTP Phase II project. GWA plans to replace the existing wastewater treatment plant for a new plant that can meets permit limits. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.

CONSTRUCTION WW 11-08	**Agat Santa Rita WWTP Phase II (Sumitomo Construction)**	**Start Date:** January 2016
Part 1 of Phase II- 100% Complete Part 2 of Phase II- 93% complete	**Activities/Notes:** Contractor still working on headworks, aerobic digester, equalization basin, admin and maintenance buildings.	**Completion Date:** Phase A: 03/15/17 Phase B: 12/31/17 will not be met, August 2018 projected
CO 11	Construction services	
Project Description:	This project includes construction of the head works, clarifier, oxidation ditches and UV disinfection and administration facilities. Rehabilitation work at the existing WWTP will also occur to ensure the wastewater can be pumped to the new plant. The new plant will also tie into the Tipalao SPS.	

DESIGN WW 09-08, WW11-03	**Baza Gardens Cross Island Sewer Design (DCA)**	**Start Date:** 02/05/16
99% Complete	**Activities/Notes:** DCA providing engineering services during construction.	**Completion Date:** 04/30/18(this completion date will have to be extended.)
CO 11	Engineering design services	
Project Description:	The intent of this project for an engineering firm to prepare design drawings and specification for a sewer conveyance from the Baza Garden WWTP to the new Agat Santa-Rite WWTP. The design will take into account growth in the Baza Gardens/Talofofo areas as wells as new connection along the Route 17 route.	

DESIGN WW 09-06	**Bayside SPS Improvements Design (EMPSCO)**	**Start Date:** July 29, 2016
99% Complete	**Activities/Notes:** Due to change in design Army Corp of Engineers permit viewed as not necessary. GWA received 100% design and under review. GWA working on Change order to address snail and archeological report that was not part of original scope.	**Completion Date:** Due to issue with ACOE anticipate December 2017 for design only.
	Engineering design services	
Project Description:	The intent of this project for an engineering firm to prepare design drawings and specification to upgrade the Bayside Sewer Pump Station given the facility is in major disrepair and the adjacent river is eroding away the access road to the facility which is causing maintenance challenges.	

CONSTRUCTION WW 09-08, WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance Construction Phase I (BME and Sons)**	**Start Date:** October 2016
70% Complete	**Activities/Notes:** New SPS, force main and gravity line installation along Route 17 on-going.	**Completion Date:** Phase I: 03/01/18 (this completion date will have to be extended.)
	Construction services	
Project Description:	The work performed under this project consist of construction of 14,714' of gravity main, 2,767' of force main and sewer pump station #3 next to the Aplacho River in Santa Rita.	

CONSTRUCTION MANAGEMENT WW 09-08 WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance (Construction Management) (SSFM)**	**Start Date:** December 5, 2016
55% Complete	**Activities/Notes:** Field inspection, project coordination and invoice review on-gong.	**Completion Date:** April 2018 (this completion date will have to be extended.)
	Construction Management services	
Project Description:	The work performed under this project shall consist of Construction Management and Inspection Services for the construction of gravity main, force mains and sewer pump station as well as an equalization basin at the Baza Garden WWTP.	

CONSTRUCTION WW 09-08, WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance Construction Phase II (BME and Sons)**	**Start Date:** March 2017
80% Complete	**Activities/Notes:** New SPS, force main and gravity line installation along Route 17 on-going.	**Completion Date:** Phase II: 03/16/18 (this completion date will have to be extended.)
	Construction services	
Project Description:	The work performed under this project consist of construction of 1,767' of gravity main, 14,400' of force mains and sewer pump station #2 along Route 17.	
CONSTRUCTION WW 09-08, WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance Construction Phase III (Sumitomo Construction)**	**Start Date:** June 2017
25% Complete	**Activities/Notes:** Contractor continuing pipeline and SPS construction work on Route 17 along with work at wet well at Baza Gardens WWTP.	**Completion Date:** Phase III: 03/16/18 (this completion date will have to be extended.)
	Construction services	

Project Description:	The work performed under this project consist of construction of, but not limited to, 10,481' of force mains and sewer pump station at existing WWTP, equalization tanks, stand-by generator, improved headworks, grit removal system, and associated equipment.

CONSTRUCTION WW 11-04	**Umatac Merizo WWTP Design Build Improvements Project (CoreTech)**	**Start Date:** June 2017
90% design 10% construction	**Activities/Notes:** CHL has finished clearing and smoothing the North Overland Flow System (OFS). Berming South OFS channel to help dry North Terrace channel (water has been seeping through the center road).	**Completion Date:** December 31, 2018
	Construction services	
Project Description:	The project is intended to improve the aeration basin, construct a new sewer pump station, regrade the overland field, construct a new effluent storage tank and disinfection facility. The overland percolation basin will undergo regarding work to ensure appropriate distribution of effluent through the whole basin.	

CONSTRUCTION MANAGEMENT WW 11-04	**Umatac Merizo WWTP Design Build Improvements Project (SSFM Inc)**	**Start Date:** September 7, 2017
15%	**Activities/Notes:** Continuing on-site inspection of field activities.	**Completion Date:** December 31, 2018
	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the improvements works at the aeration basin, new sewer pump station, overland field improvements, effluent storage tank. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

E. CIP Engineering Support

DESIGN EE 09-08	**SCADA System for Water and Wastewater Facilities Phase A-1 (AECOM)**	**Start Date:** June 2015
100% complete (design) 0% Services during construction	**Activities/Notes:** Final design in hand. AECOM to provide assistance during bidding process.	**Completion Date:** November 2017 - Design January 2019 - (Bid and Construction Support)
N/A	Engineering design services	
Project Description:	The A/E firm will design an integrated, robust and secure Supervisory Control and Data Acquisition (SCADA) system for GWA's water and wastewater systems, and to provide support services during bid and construction. The 22 sites will consist of a combination of water facilities	

	such as production wells, reservoirs, booster pump station and wastewater sites include sewer treatment plants and sewer pump stations. Executed by approved change orders, number of sites in original design scope has changed from 22 sites to 19 sites and design of High Water Alarm for 20 critical sewer pump stations has been added. Scope also includes bid and construction support of the design-build project of GPWA SCADA EMS project.

CONSTRUCTION MC 05-01	**New GWA Lab Construction (Mega United Construction)**	**Start Date:** NTP issued August 18, 2016
100% Complete	**Activities/Notes:** O&M manuals and as-build plans received. Final payment being processed. Project complete.	**Completion Date:** Early March 2018.
	Construction services	
Project Description:	The project will involve construction of a new building at the GWA Upper Tumon compound to house the laboratory section. The facility will include office, laboratory and storage space for the lab employees. The facility will also include a back-up generator.	

F. GIS Section

MAPPING MC 05-02	**Island Wide Survey-** **(Duenas, Camacho & Ass.)**	**Start Date:** December 2007
94% complete	**Activities/Notes:** Task #13 NTP issued, work near compete. Task #14 work on-going.	**Completion Date:** New anticipated complete is April 2018.
	Survey services	
Project Description:	The contracted land surveyor is required to conduct title research, property valuation and mapping of property boundaries where GWA facilities are located but the lot is not registered under GWA's name.	

MAPPING MC 05-02	**Island Wide Survey PH II -** **(Duenas, Camacho & Ass.)**	**Start Date:** August 30, 2017
35% complete	**Activities/Notes:** Surveyor continuing field work for 20 additional parcels.	**Completion Date:** December 2018
	Survey services	
Project Description:	The work performed under this project procurement shall consist of a professional land surveyor conducting field work to mark corners of existing government properties as a means of severing out portions of the larger property to be deeded to GWA. Surveyor shall also prepare all necessary maps and documents for recording at DLM	

G. Permits Section

PERMITS
MONTHLY REPORT 2017

	2018						
Description	Jan	Feb	Mar	April	May		
Building Permit	11	9	1	13	11		
Occupancy Permit	3	10	18	16	18		
New Installation	14	8	7	9	3		
Sewer Application	15	14	7	6	3		
Sewer Inspection	0	1	3	0	0		
Private Utility Acceptance	0	0	0	0	0		
Relocation of Water Meter	0	0	0	0	0		
Tapping-Water	1	1	0	0	3		
Tapping-Sewer	0	1	0	0	0		
Clearance-Water	3	2	7	10	20		
Clearance-Sewer	3	2	7	10	20		
Highway Encroachment	0	4	41	22	25		
Verification of Utilities	4	4	5	4	1		
Fire Flow Test	0	0	1	0	0		
Schedule Water Outage	0	1	0	0	0		

H. SRF Project Status Report

- Projects listed below that are noted to be in the procurement phase will follow the "Percentage Key" below.

  Percentage Key:

100%	Approved by GM
99%	Signature required from either Accounting/Legal/GM
98%	Processing engineering service or construction contract (with legal)
95%	Request for CCU approval (GM/engineering)
90%	A/E fee negotiation or contractor bid evaluation (engineering)
80%	Selected A/E or Conducted bid opening (engineering)
70%	Advertised RFP/IFB (engineering)
60%	RFP/IFB Package under legal review
50%	RFP/IFB Package completed (engineering)
Less than 50%	Project Scope of work development in progress

- Red text anywhere indicates a change from the last report.
- Cells highlighted in green indicate contract amount certified and project active.

	Project	Project Description	Project Manager	Phase		Start Date (NTP Issued)	Anticipated Completion Date	Contract Amount (+) change orders	Contractor	Status as of 05/15/18
1	Northern District SSES & I/I Study	Sanitary sewer system evaluation study (SSES) and inflow and infiltration (I/I) study designed to evaluate high I/I areas within the Northern sewer basin with the goal of identifying projects to eliminate them.	J. Davis	Design	1	10/10/2014	2/29/2016	$ 792,979.97	Stanley	100% Complete.
				Construction				*The project does not involve construction.*		
				Const. Mgmt						
2	Southern SSES Rehabilitation (Agat-Santa Rita-Umatac-Merizo)	Rehabilitation of segments of sewer lines in Umatac, Merizo, Agat, and Santa Rita where the Sanitary Sewer Evaluation Study recommends rehabilitation.	Brown & Caldwell	Design				*The design was previously completed under bond funding.*		
				Construction	1	10/30/2015	2/28/2017	$ 1,170,583.82	Reliable Builders	RBI working on repairs in Merizo.
				Const. Mgmt	1	11/10/2015	3/30/2017	$ 226,980.23	TG Engineers	CM Services complete.
3	Asan-Adelup-Hagatna RT1 Sewer Line Rehabilitation and Replacement	Rehabilitation of sewer lines from the War in the Pacific Asan Park to the Governor's Complex in Adelup. This line is asbestos concrete that is dilapidated and some areas have disintegrated crowns.	Brown & Caldwell	Design	2	12/11/2015	3/30/2017 for Design requirements	$ 1,780,210.00	HDR	Route 1 rebid: HDR to provide services during bid process. .
				Construction		10/16/2016	6/30/2019			Procurement 75%. GWA advertise rebid 05/04/18. Bid opening 06/15/18.
				Const. Mgmt		6/30/2017	6/30/2019			Procurement 95%. Recommendation letter received from B&C. GWA to present resolution for board aproval in May CCU meeting.

4	RT2 Agat War in the Pacific Sewer Line Rehabilitation and Replacement	Rehabilitation of a large segment of sewer line fronting the War in the Pacific Park in Agat that has collapsed.	Brown & Caldwell	Design	3	11/17/2015	3/30/2017 for Design requirements	$ 316,681.00	SSFM	SSFM providing services during bidding process as well as construction phase.
				Construction	6	8/31/2017	10/1/2018	$ 4,554,451.00		• Per BC/CM request and specs requirement, PPBC is now starting work at downstream end (near MH #2, connection point to Ga'an Pump Station). • PPBC encountering issues with shallow groundwater, small trash pump is inadequate, but may be procuring submersible pump. • PPBC's trench box (6' x 6') is smaller than recommended -- CM expressed concerns about how safe and proper manhole installation will be done. • PPBC conducting exploratory excavations as needed to help resolve manhole relocation issue due to existing utilities. CM/BC working with PPBC to determine the final alignment determination. • Existing concrete-encased utilities are preventing contractor from installing some manholes (especially MH#8B, MH#9 and MH#10) per the original design. CM coordinating between contractor, designer (SSFM), and BC to relocate these manholes as needed. BC/GWA (and maybe SSFM) would make the final call. • SSFM requesting additional funds for design services during construction.
				Const. Mgmt	8	9/19/2017	10/1/2018	$ 584,725.00		• PCO #1: 52 calendar day extension request, due to permitting delays. CM negotiating contractor's CO request.
5	Brown & Caldwell Project Management	Brown & Caldwell to provide program management services and support.	T. Cruz	Design	4	3/24/2015	2/28/2019	$ 1,819,850.00	B&C	Project underway.
				Construction				*The project does not involve construction.*		
				Const. Mgmt						
6	Wastewater, Water and Source Water System Master Plan Upgrade	Update of the existing water and wastewater master plan while factoring in military integration and secondary treatment plant options.	Brown & Caldwell	Design	5	7/6/2015	01/30/2018 (revised due to financial workshop)	$ 2,623,300.00	B&C	• CCU approved Master Plan release at special work session on 4/10. Master Plan is out for Public review. • Currently only providing assistance for Public Meetings. • Meetings are currently planned going into June so final completion may be July/August? • Budget is expended - additional work for the public meetings and SFO Presentation ~$52,000.
				Construction				*The project does not involve construction.*		
				Const. Mgmt						

7	Groundwater Wells Rehabilitation (F-3, A-2, A-7, A-12, D-5)	Rehabilitation of existing deep wells and/or in cases where pipe column needs replacing, wells will be re-drilled. The deep wells to be rehabilitated are A-2, A-7, A 12, D-5, & F-3.	Brown & Caldwell	Design	6	5/27/2016	2/28/2018 (for design only)	$ 1,758,247.00	AECOM	• AECOM submitted final design package on 3/19. • Approved final design invoice #13.
				Construction		9/30/2018	9/30/2019			SRF grant funds specific to project pending FY18 grant approvals and award.
				Const. Mgmt		9/30/2018	9/30/2019			· Draft CM scope submitted to GWA.
8	Tumon Sewer Hot Spots	Investigation, evaluation, and repair of possible solutions, to long plaguing issues where sewer overflows are known to occur in Tumon San Vitores.	Brown & Caldwell	Design	7	6/24/2016	10/30/2017 for design only	$ 572,089.00	TG Engineers	· TGE to provide engineering services during bid process.
				Construction		3/23/2017	3/22/2018			Procurement 50%; bid pacakge being prepared. Expect to advertised mid-May.
				Const. Mgmt		3/23/2017	3/22/2018			Procurement 50%: RFP package beiing preapred.
9	Critical Sewer Pump Stations (7 stations)	Rehabilitation of various components of 7 pump stations that were identified to by the CDM design team: Macheche, Ypaopao, Astumbo 1, Fujita, Santa Ana, Southern Link, and Route 1.	CDM	Design				*The design will be incorporated into the design/build package.*		
			J. Davis	Design/Build	1	8/8/2016	3/30/2018	$ 1,531,456.33	ProPacific	-Route 16 Pump Stations- Structural Evaluation done. Waiting for the report from the Structural Engineer. Additional cost and time extension is anticipated. Change Order #5 with finace for fund cert. - Fujita Pump Station- all work complete, - Macheche PS- all work complete - Santa Ana PS- all work complete, - Southern Link Pump Station - Pending Change ORder for Roll up door. - Ypaopao : all worl complete - Astumbo : all wrk complete
				Const. Mgmt	2	9/9/2016	3/30/2018	$ 299,519.00	Stanley	CM work ongoing. GWA working on Change Order proposal to extend contract to match constructions activities.
10	Sewer Pump Station High Water Alarm Systems (20 stations)	This project will design and installed telemetry equipment/SCADA type alarms that will alert when pump station failure occurs.	C. Yam	Design				*The design will be incorporated into the design/build package.*		
				Design	8	8/12/2016	02/30/2017	$ 183,171.00	AECOM	Design complete
				Construction	5	4/5/2017	9/30/2017	$ 1,444,888.00	Pacific Rim	Project complete
				Const. Mgmt	3	02/30/2017	9/30/2017	$ 195,269.00	EMSPCO	CM work complete

11	Sewer Pump Station Backup Power (2 stations)	Construction of the housing and installation of new generators for the Casimero pump station (Mongmong) and the Namo pump station (Yona central).	B. Cruz	Design				*The design will be incorporated into the design/build package.*		
				Design/Build	2	6/24/2016	9/30/2017	$ 362,692.53	ProPacific	Design Build project complete.
				Const. Mgmt				*B. Cruz is the construction manager.*		
12	RT4 Relief Sewer Line Rehabilitation and Replacement	Rehabilitation of sewer lines that are located from Agana McDonalds to Marine Drive that have been known to overflow due to structural issues.	Brown & Caldwell	Design	9	3/1/2016	4/22/2017	$ 794,000.00	AECOM	· AECOM to provided services during bidding process.
				Construction		6/30/2018	09/31/2019			Procurement 70%, · Rebid advertised on 3/23, Prebid on 4/11, Bid opening on 5/25.
				Const. Mgmt		4/23/2017	12/31/2018	$ 647,000.00		Procurement 90%, EMPSCO original CM fee ($647K); revised fee is $647K + $56K if two contractors. GWA working on contract documents for execution.
13	Groundwater Wells Rehabilitation (D-3, D-17, D-18, D-22, M-9)	Rehabilitation of existing deep wells and/or in cases where pipe column needs replacing will be re-drilled. D-3, D-17, D-18, D-22, and M-9.	Brown & Caldwell	Design				*The design was previously completed under bond funding.*		
				Construction	2	8/19/2016	3/30/2018	$ 6,120,353.44	Pacific Rim	• EA/PRC still working on level sensor issues. • EA working to get GHD onboard with VFDs needed, and any additional changes the VFDs could cause. • D-03: Meeting with GWA/EA on 5/14.
				Const. Mgmt	4	3/22/2016	3/30/2018	$ 943,361.24	EA	CCU approved resolution relative to proposed CM Change Order #4. Change Order being proceed.

14	Southern SSES Sewer Rehabilitation (Baza Gardens-Talofofo)	Rehabilitation of segments of sewer lines in Windward Hills, Talofofo area where the Sanitary Sewer Evaluation Study recommends rehabilitation.	Brown & Caldwell	Design				*The design was previously completed under bond funding.*		
				Construction	3	8/2/2016	7/2/2017	$ 1,189,815.00	ProPacific	• PPBC on notice since 12/01/2017 (via formal GWA letter) that continuing delays are unacceptable and grounds for potential default. • Santa Rita Wetland area (drawing AG-101): • On 3/15, Contractor notified BC/GWA that progress could not be made on sewer line MH5678 -- MH5679 due to the line filling with rocks. • On 3/30, BC/GWA held site visit with USACE. On 4/3, BC held site visit with GEPA. A third sewage spill into the wetland was observed and reported. Contractor immediately repaired the leak. • Meeting held on 4/13 with Tom, Kelly Clark, Frankie Meno (and BC) to discuss completion alternatives, course of action, and default position. • PPBC also has remaining punch list work for additional CIPP defects at 5680-5681. • Baza Gardens area: IMS robotic cutter arrived on island during week of 4/23. • PPBC informed that GWA considering its options for failed CIPP through wetland.
				Const. Mgmt	5	7/29/2016	5/28/2017	$ 347,945.93	EMPSCO	· PM to work on Change Order to extend contract and amount.
15	Tamuning Sewer Hot Spots	Sewer rehabilitation for lines at Winner Apartments, Segund Leon Guerrero, and behind Guam Premium Outlets.	Brown & Caldwell	Design	10	9/9/2016	10/31/2017 (for design only)	$ 663,629.00	TG Engineers	· TGE to provide engineering services during bid process.
				Construction		4/29/2017	4/30/2018			Procurement 50%; bid pacakge being prepared. Expect to advertised mid-May.
				Const. Mgmt		4/29/2017	4/30/2018			Procurement 50%: RFP package beiing preapred.
16	Talofofo Sewer Pump Stations (4 stations)	Design and construction of 4 sewer lift stations in the Talofofo village where sewer lines are installed but never completed.	J. Davis	Design (for Talofofo and Chalan Pago PS)	11	8/17/2016	11/30/2017	$ 477,999.50	EMPSCO	Talafofo Pump Station design /bid ackage recieced. Final Design of Chalan Pago Pump Station project under review by GWA. Change Order related to snails to be excuted.
				Construction		4/29/2017	4/30/2018			
				Const. Mgmt		4/29/2017	4/30/2018			

17	Chalan Pago Sewer Pump Station	Design and construction of sewer lift stations and gravity lines in Scott Laguana, Santa Cruz Street Chalan Pago.	J. Davis	Design		8/17/2016	11/30/2017	*The design will be included with the Talofofo Pump Station design project.*		
				Construction		4/29/2017	4/30/2018			
				Const. Mgmt		4/29/2017	4/30/2018			
18	Water Hydraulic Model (SCADA ready instruments to update Model)	Design and construction of instrumentation at key water sites in the Barrigada service area necessary to update GWA Water hydraulic model.	Barbara Cruz	Design	12	8/3/2016	3/15/2017	$ 523,268.00	GHD	Design complete.
				Construction		2/1/2017	12/30/2019			Funding for construction project to be from FY18 grant that is still pending.
				Const. Mgmt		2/1/2017	12/30/2019			
19	Macheche Hill Sewer Rehabilitation/ Replacement	Rehabilitation of sewer lines on Macheche road. Segments of this sewer line has collapsed recently and is consider a high priority.	J. Davis	Design-Build	3	8/29/2016	3/30/2018	$ 2,202,545.47	Giant Const.	Construtcion project complete.
				Const. Mgmt	6	9/16/2016	3/30/2018	$ 379,994.38	Am Orient	CM work complete.
20	Asan-Adelup-Hagatna Rt. 1 Sewer Line Rehabilitation and Replacement Emergency Repairs	Rehabilitation of sewer line in Asan that collapsed and which is current fitted with a temporary pumping system.	Brown & Caldwell	Design				Design cost covered under 3A above.		
				Construction	4	3/8/2017	12/30/2017	$ 2,470,658.00		GWA waiting on as-builts.
				Const. Mgmt	7	1/24/2017	12/30/2017	covered under 3A		CM work complete.

DASHBOARD

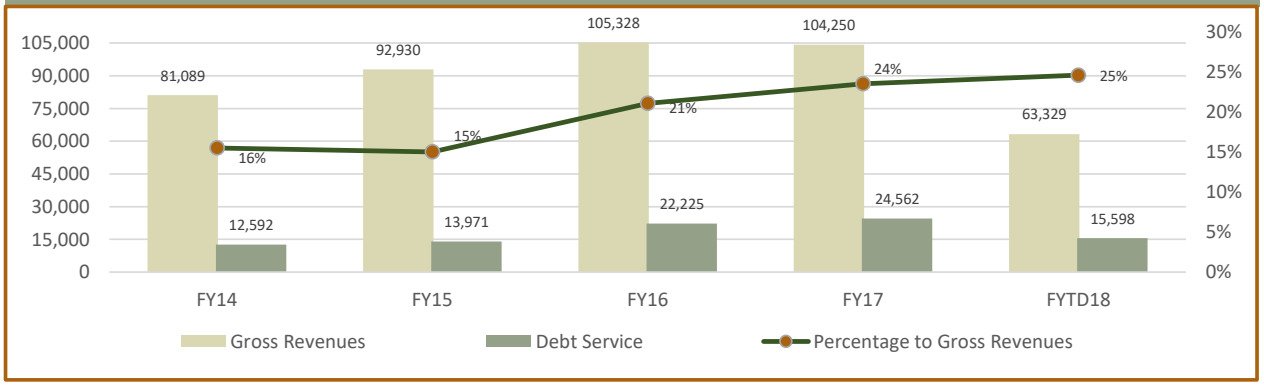
FYTD April 2018 Budget vs Actual ($000)

Category	Description	Budget FYTD18	Actual FYTD18	Variance
Rate Based Revenues	Water	$41,591	$39,959	($1,631)
	Wastewater	23,253	23,123	(129)
	Total	64,843	63,083	(1,760)
Operations & Maintenance	Salaries & Benefits	15,467	13,437	(2,030)
	Power	7,406	8,392	986
	Water Purchases	5,048	5,208	161
	A&G	7,506	5,976	(1,530)
	Contractual	2,613	2,482	(130)
	Total	$49,305	$46,630	($2,675)

Key Financial Ratios ($000)

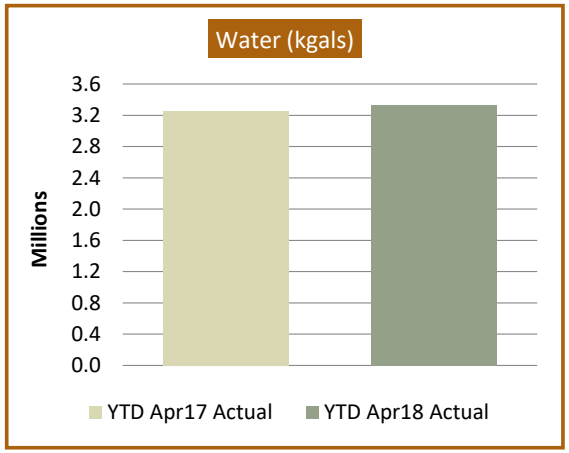
Category	FY18	FY17
Accounts Payable $$/Days	$4,149 / 46 days	$5,390 / 59 days
Accounts Receivable $$/Days	$15,531 / 61 days	$15,451 / 51 days
Days Cash On Hand	189 days	184 days
Annual Debt Service (Revenue Bonds)	$26,739	$24,563
Debt Service Coverage (Bond/PUC)	1.79 / 2.21	1.98 / 2.44

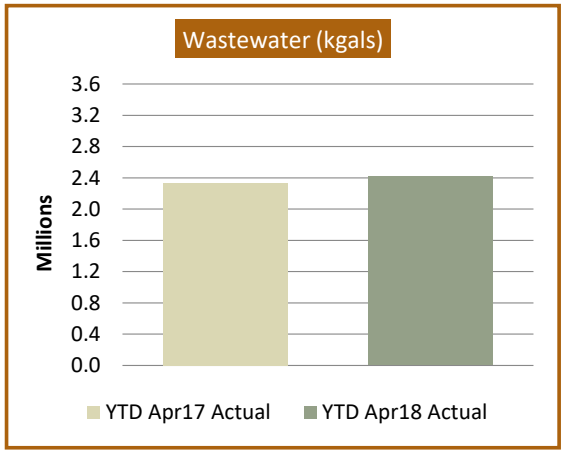
Debt as a Percent to Gross Revenue

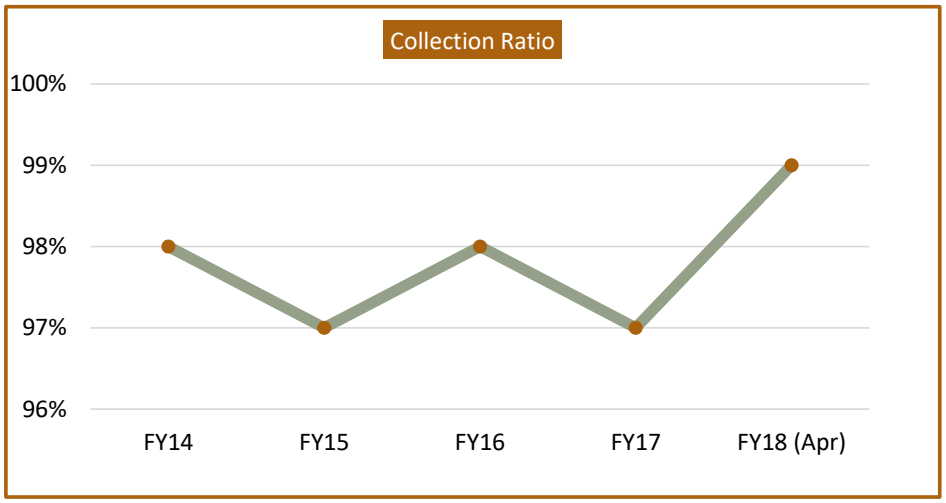


(1) Gross Revenues excludes SDC
(2) Debt Service Excludes Cap I

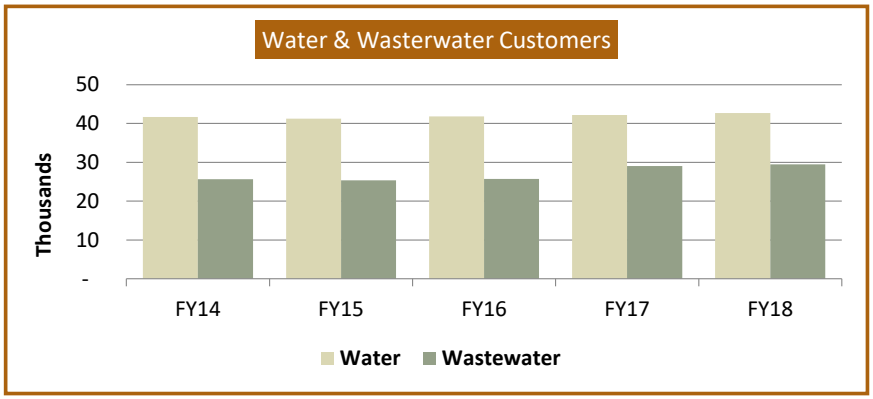
Water & Wastewater Analytics

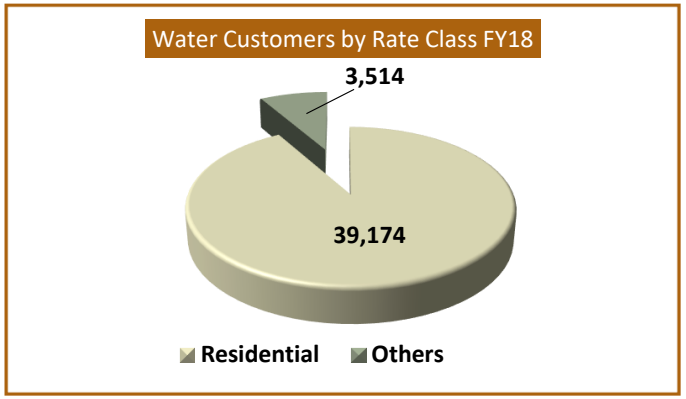


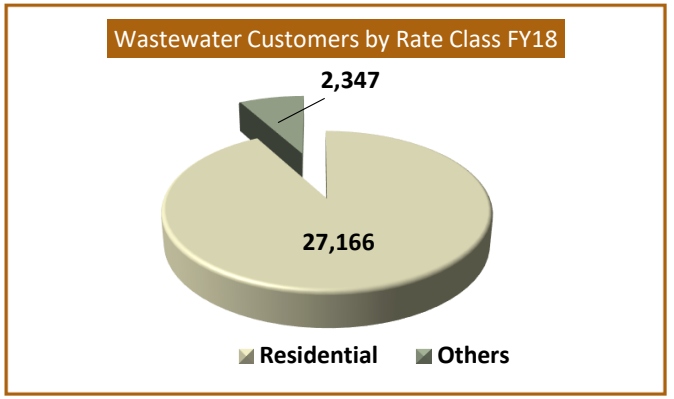


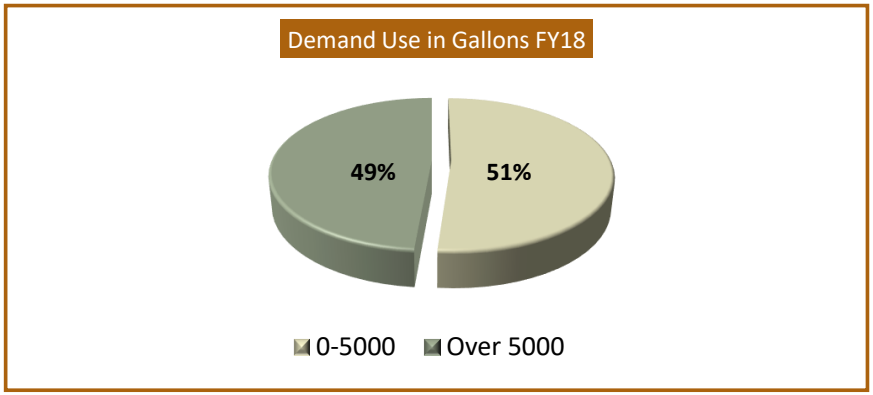


Water & Wastewater Customers





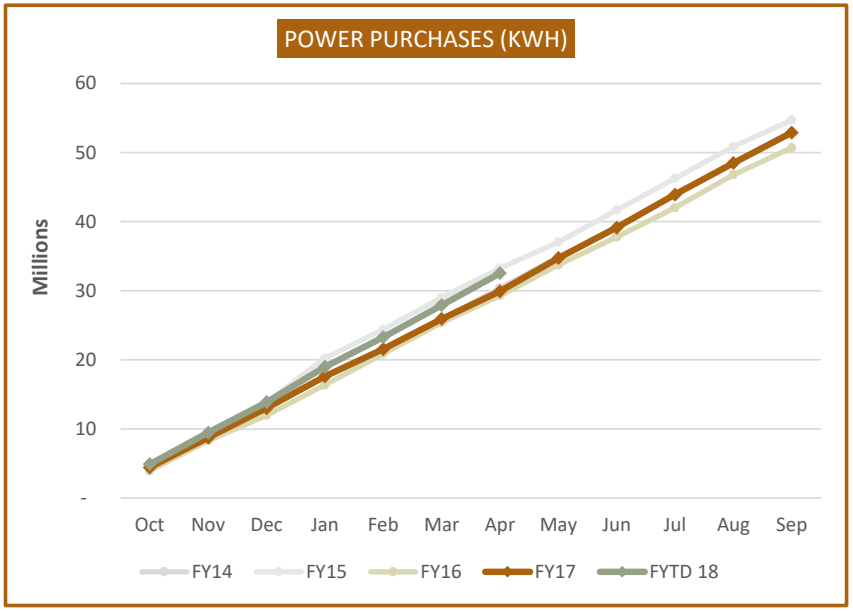


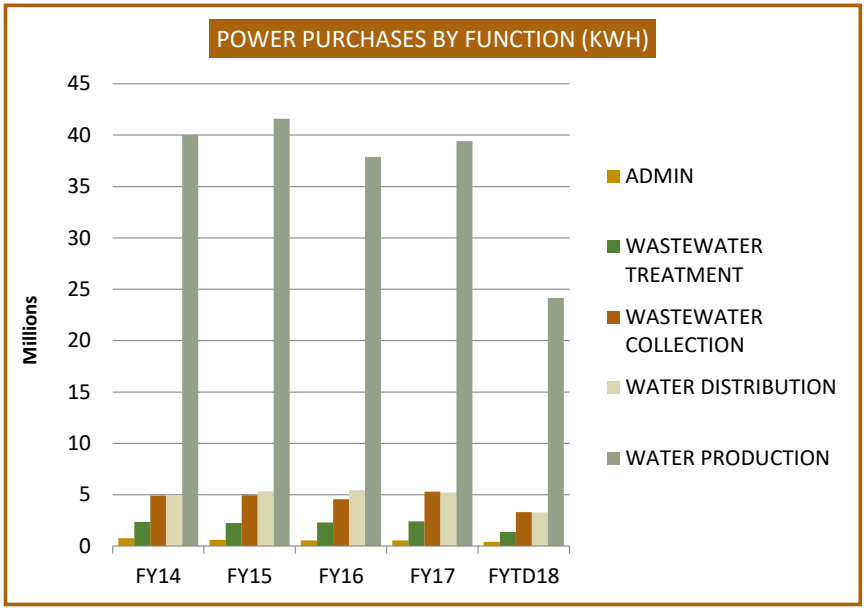


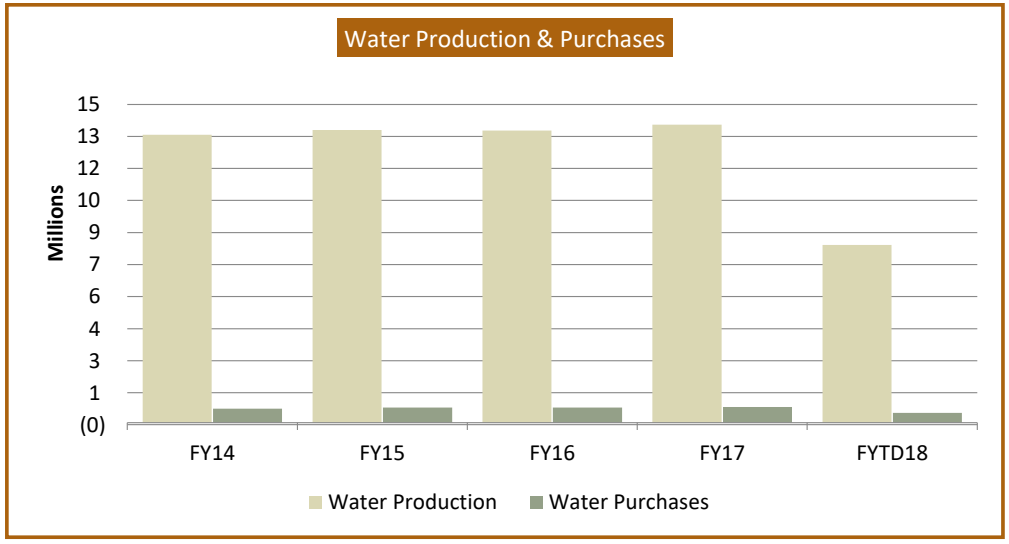
Top Ten Largest Water and Wastewater Customers – April 2018

Water			Wastewater		
Customer Name	FYTD18 Revenues	% of Total	Customer Name	FYTD18 Revenues	% of Total
1) MDI GUAM CORPORATION/LEOPALACE	$787,175	1.97%	1) AIR FORCE DOD	$2,200,025	9.52%
2) PACIFIC ISLANDS CLUB	687,809	1.72%	2) NAVY DOD	1,355,393	5.86%
3) HOTELS OF THE MARIANAS INC	579,823	1.45%	3) HOTELS OF THE MARIANAS INC	620,048	2.68%
4) HYATT	532,712	1.33%	4) HYATT	570,321	2.47%
5) HOTEL NIKKO GUAM	514,361	1.29%	5) HOTEL NIKKO GUAM	549,729	2.38%
6) GUAM REEF HOTEL INC	486,635	1.22%	6) GUAM REEF HOTEL INC	520,827	2.25%
7) SHERATON LAGUNA GUAM RESORT	458,360	1.15%	7) SHERATON LAGUNA GUAM RESORT	490,454	2.12%
8) MDI GUAM CORPORATION/WESTIN	379,827	0.95%	8) MDI GUAM CORPORATION/WESTIN	406,096	1.76%
9) OUTRIGGER GUAM RESORT	373,016	0.93%	9) OUTRIGGER GUAM RESORT	399,659	1.73%
10) GOODWIND DEVELOPMENT CORP/MICROMALL	355,457	0.89%	10) GOODWIND DEVELOPMENT CORP	379,039	1.64%
Total	**$5,155,176**	**12.90%**	**Total**	**$7,491,589**	**32.41%**

Power, Water Purchases and Water Production

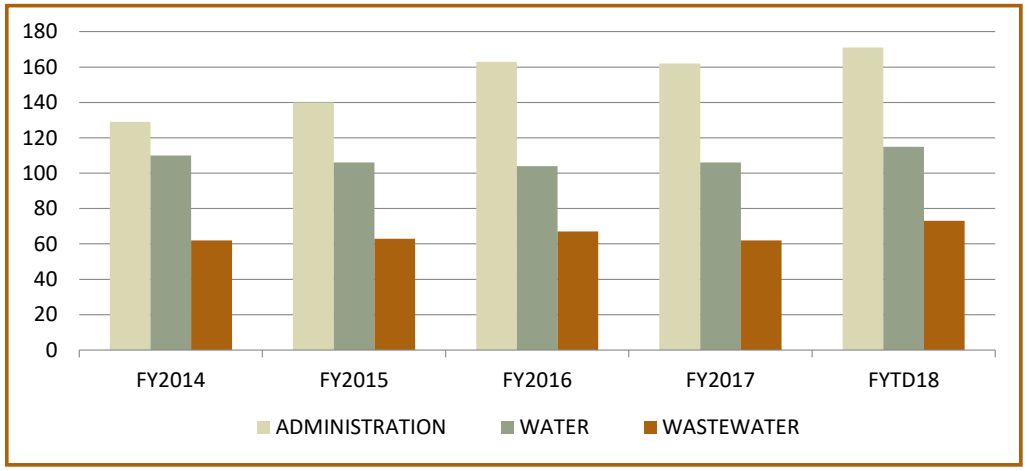




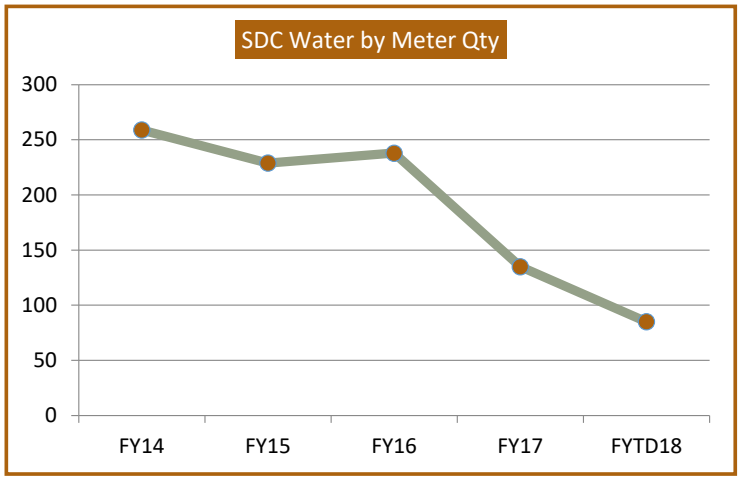


FTE by Major Division

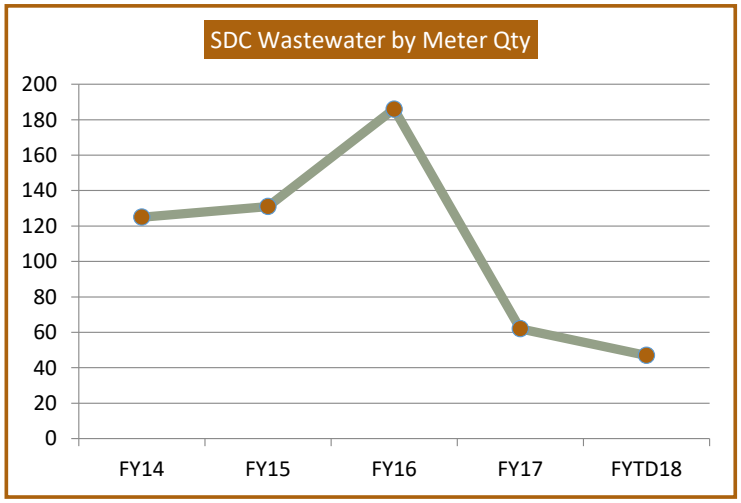
DIVISION	FY2014	FY2015	FY2016	FY2017	FYTD18
ADMINISTRATION	129	140	163	162	171
WATER	110	106	104	106	115
WASTEWATER	62	63	67	62	73
TOTAL NUMBER OF STAFF	301	309	334	330	359
Gross Salaries & Wages ($000)	15,532	15,805	16,442	17,210	10,102
Water Customers	41,702	41,274	41,858	42,181	42,688
Staff to Customers Ratio	0.72%	0.75%	0.80%	0.78%	0.84%



SDC Water & Wastewater (Meter Quantity)



Actual Meter Sizes (Inches)	FY 2014	FY 2015	FY 2016	FY 2017	FYTD18
5/8 x 3/4	248	220	239	129	77
1	5	5	7	2	1
1 1/2	1	1	1	1	3
2	3	2	4	2	3
3	1	-	1	-	-
4	-	1	-	-	1
6	-	-	-	1	-
8	1	-	-	-	-
10	-	-	-	-	-
Total SDC by Water	259	229	252	135	85



Actual Meter Sizes (Inches)	FY 2014	FY 2015	FY 2016	FY 2017	FYTD18
5/8 x 3/4	115	124	179	58	39
1	4	3	2	-	1
1 1/2	1	1	1	1	3
2	3	2	3	2	3
3	1	-	1	-	-
4	-	1	-	-	-
6	-	-	-	1	1
8	1	-	-	-	-
10	-	-	-	-	-
Total SDC by Wastewater	125	131	186	62	47

GUAM WATERWORKS AUTHORITY
APRIL 30, 2018
FINANCIAL AND RELATED REPORTS
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GUAM WATERWORKS AUTHORITY
Balance Sheet
April 30, 2018

SCHEDULE A

ASSETS	Unaudited April 30, 2018	Audited September 30, 2017	Increase (Decrease)
Current Assets:			
Cash:			
Unrestricted (Schedule G)	3,346,422	4,873,275	(1,526,852)
Restricted Funds (Schedule G)	70,446,434	65,124,400	5,322,033
Accounts Receivable Trade, Net of Allowance for Doubtful Receivables of $13,386,932 at Apr 30, 2018 and $12,619,034 at Sep 30, 2017	15,531,111	15,450,733	80,378
Other Receivable	2,810,119	8,433,446	(5,623,327)
Materials & Supplies Inventory, Net of Allowance for Obsolescence of $457,370 at Apr 30, 2018 and Sep 30, 2017	2,639,304	2,166,557	472,747
Total Current Assets	94,773,390	96,048,411	(1,275,021)
Property, Plant and Equipment			
Utility plant in service:			
Water system	328,363,021	327,484,191	878,829
Wastewater system	287,216,056	286,394,940	821,117
Non-utility property	19,042,110	18,938,255	103,854
Total property	634,621,187	632,817,387	1,803,800
Less Accumulated Depreciation	(296,730,554)	(286,043,580)	(10,686,974)
Land	1,163,298	1,110,998	52,300
Construction Work in Progress	159,330,343	111,695,887	47,634,456
Property, Plant and Equipment, net	498,384,273	459,580,691	38,803,582
Other noncurrent assets			
Restricted cash (Schedule G)	200,010,796	236,550,002	(36,539,206)
Investments (Schedule G)	48,086,827	41,042,038	7,044,788
Other Prepaid Expenses	291,179	551,128	(259,949)
Total other noncurrent assets	248,388,801	278,143,169	(29,754,368)
TOTAL ASSETS	841,546,465	833,772,271	7,774,194
Deferred outflows of resources:			
Debt defeasance due to bond refunding	13,468,204	1,695,981	11,772,223
Deferred outflows from pension	4,655,717	4,943,777	(288,060)
Total Assets and Deferred Outflows of Resources	**859,670,386**	**840,412,029**	**19,258,358**
LIABILITIES AND NET ASSETS			
Current Liabilities:			
Current maturities of long-term debt			
-Series 2010 Revenue Bond	1,725,000	1,725,000	-
-Series 2014 Refunding Bond	3,475,000	3,475,000	-
-Series 2017 Refunding Bond	295,000	-	295,000
-Notes Payable	2,873,988	3,037,569	(163,581)
Accounts Payable -Trade	4,149,073	5,390,256	(1,241,183)
Interest Payable	8,722,124	6,656,499	2,065,624
Accrued Payroll and Employee Benefits	2,073,277	2,604,471	(531,195)
Accrued Annual Leave	1,729,291	1,729,291	-
Current portion of employee annual leave	567,057	567,057	-
Contractors' Payable	8,622,608	13,950,287	(5,327,679)
Customer and Other Deposits	1,985,411	2,014,435	(29,024)
Other Liabilities	72,817	72,772	45
Total Current Liabilities	36,290,645	41,222,638	(4,931,992)
Long Term Debt, less current maturities			
Series 2010 Revenue Bond	3,695,000	112,800,000	(109,105,000)
Series 2013 Revenue Bond	172,630,000	172,630,000	-
Series 2014 Refunding Bond	72,520,000	72,520,000	-
Series 2016 Revenue Bond	143,310,000	143,310,000	-
Series 2017 Refunding Bond	107,365,000	-	107,365,000
Unamortized Discount - Bond 2010	-	(1,867,525)	1,867,525
Unamortized Discount - Bond 2013	(1,308,943)	(1,338,751)	29,808
Unamortized Premium - Bond 2014	4,649,169	4,804,694	(155,524)
Unamortized Premium - Bond 2016	16,908,603	17,262,975	(354,372)
Unamortized Premium - Bond 2017	12,664,079	-	12,664,079
Notes Payable	3,982,421	5,533,918	(1,551,497)
Unfunded Ret Liability (GASB 67/68)	49,243,798	49,243,798	-
Employee Annual Leave, Less Current Portion	783,992	783,992	-
TOTAL LIABILITIES	622,733,765	616,905,739	5,828,026
Deferred inflows of resources:			
Deferred inflows from pension	564,514	564,514	-
Total Liabilities and Deferred Inflows of Resources	623,298,279	617,470,253	5,828,026
Net Assets	**236,372,107**	**222,941,776**	**13,430,331**
Total Liabilities, Deferred Inflows of Resources and Net Assets	**859,670,386**	**840,412,029**	**19,258,358**

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited) **SCHEDULE B**
Comparative Budget vs. Actual for the period ending April 30, 2018

	Month to Date		Variance
	Budget April-18	Actual (Unaudited) April-18	Favorable / (Unfavorable)
OPERATING REVENUES			
Water Revenues	5,743,160	5,717,778	(25,382)
Wastewater Revenues	3,228,257	3,207,613	(20,645)
Legislative Surcharge	291,896	287,605	(4,292)
Other Revenues	57,638	40,764	(16,874)
System Development Charge	46,136	56,404	10,268
Total Operating Revenues	9,367,087	9,310,164	(56,923)
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	721,113	693,782	27,331
Power Purchases	1,057,997	1,275,268	(217,271)
Total Utility Costs	1,779,110	1,969,050	(189,940)
Salaries and Wages	1,625,056	1,218,622	406,434
Pension and Benefits	584,558	412,315	172,244
Total Salaries and Benefits	2,209,614	1,630,936	578,678
Capitalized Labor and Benefits	(208,333)	(208,333)	(0)
Net Salaries and Benefits	2,001,281	1,422,603	578,677
Administrative and General Expenses			
Sludge removal	174,514	113,563	60,951
Chemicals	229,997	183,145	46,852
Materials & Supplies	237,400	129,820	107,580
Transportation	61,370	58,336	3,034
Communications	16,182	17,862	(1,680)
Claims	17,600	21,014	(3,414)
Insurance	97,757	75,480	22,276
Training & Travel	21,814	25,192	(3,377)
Advertising	13,910	18,500	(4,589)
Regulatory Expense	29,086	19,088	9,998
Bad Debts Provision	57,103	109,692	(52,590)
Miscellaneous	115,515	83,816	31,700
Total Administrative and General Expense	1,072,248	855,507	216,741
Depreciation Expense	1,528,175	1,528,175	(0)
Contractual Expense			
Audit & Computer Maint.	78,630	33,241	45,389
Building rental	37,955	37,028	927
Equipment rental	57,375	19,168	38,207
Legal	4,167	600	3,567
Laboratory	64,752	39,875	24,877
Other	130,363	177,106	(46,743)
Total Contractual Expense	373,241	307,017	66,224
Retiree Supp. Annuities and health care costs	240,008	236,940	3,068
Contribution to Government of Guam	49,500	49,833	(333)
Total Retiree Benefits	289,508	286,774	2,735
Total Operating Expenses	7,043,563	6,369,126	674,437
Earnings (Loss) from Operations	2,323,524	2,941,038	(617,514)
Interest Income-2010/13/14/16/17 Series Bond	15,727	247,291	231,564
Interest Income-Other Funds	2,935	42,752	39,817
Interest Income-SDC	2,414	440	(1,974)
Interest Expense- 2010/13/14/16/17 Series Bond	(2,625,587)	(2,180,531)	445,056
Interest Expense- ST BOG	(33,288)	(37,606)	(4,318)
Federal Expenditures	(51,332)	(43,562)	7,770
Loss on Asset Disposal	-	-	-
AFUDC	625,000	625,000	-
Amortization of Discount, Premium and Issuance Costs	(61,861)	(77,542)	(15,681)
Defeasance due to bond refunding	(15,218)	(12,444)	2,775
Deferred outflows from pension	(105,281)	-	105,281
Prior Year Adjustment	-	-	-
Total non-operating revenues (expenses)	(2,246,492)	(1,436,201)	810,290
Net Income (Loss) before capital contributions	77,032	1,504,836	1,427,804
Capital Contributions			
Grants from US Government	873,108	1,213,886	340,778
Grants from GovGuam & Others	-	20,084	20,084
Other Contributions	-	-	-
Total Capital Contributions	873,108	1,233,970	360,862
Change in Net Assets	950,140	2,738,806	1,788,666
Debt Service Calculation			
Earnings From Operations	2,323,524	2,941,038	
System Development Charge	(46,136)	(56,404)	
Retiree COLA	49,500	49,833	
Interest/Investment Income	2,935	42,752	
Depreciation	1,528,175	1,528,175	
Balance Available for Debt Service per Section 6.12	3,857,998	4,505,394	
Working Capital Reserve Available for Debt Service	935,321	935,321	
Transfer to Working Capital- Debt Service Reserve	(150,000)	-	
Transfer to Working Capital- O&M Reserve	(266,667)	-	
Balance Available for Debt Service inclusive of reserves	4,376,652	5,440,715	
Debt Service			
Principal	433,333	433,333	
Interest	2,063,402	1,794,910	
Total	2,496,736	2,228,243	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.55	2.02	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	1.75	2.44	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited) **SCHEDULE C**
Comparative for the period ending April 30, 2018 and 2017

	Month to Date		Variance
	Actual (Unaudited) April-18	Actual (Audited) April-17	Favorable / (Unfavorable)
OPERATING REVENUES			
Water Revenues	5,717,778	5,331,404	386,375
Wastewater Revenues	3,207,613	3,099,528	108,085
Legislative Surcharge	287,605	267,269	20,336
Other Revenues	40,764	36,293	4,471
System Development Charge	56,404	72,662	(16,258)
Total Operating Revenues	9,310,164	8,807,155	503,009
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	693,782	609,094	(84,688)
Power Purchases	1,275,268	1,006,355	(268,913)
Total Utility Costs	1,969,050	1,615,449	(353,601)
Salaries and Wages	1,218,622	1,413,608	194,987
Pension and Benefits	412,315	490,400	78,086
Total Salaries and Benefits	1,630,936	1,904,009	273,072
Capitalized Labor and Benefits	(208,333)	(262,516)	(54,183)
Net Salaries and Benefits	1,422,603	1,641,493	218,890
Administrative and General Expenses			
Sludge removal	113,563	140,487	26,924
Chemicals	183,145	174,001	(9,144)
Materials & Supplies	129,820	128,788	(1,032)
Transportation	58,336	53,744	(4,592)
Communications	17,862	10,884	(6,978)
Claims	21,014	22,151	1,137
Insurance	75,480	90,603	15,123
Training & Travel	25,192	23,055	(2,137)
Advertising	18,500	8,988	(9,512)
Regulatory Expense	19,088	24,134	5,046
Bad Debts Provision	109,692	109,700	8
Miscellaneous	83,816	71,997	(11,819)
Total Administrative and General Expense	855,507	858,530	3,023
Depreciation Expense	1,528,175	1,402,038	(126,137)
Contractual Expense			
Audit & Computer Maint.	33,241	76,901	43,660
Building rental	37,028	36,557	(471)
Equipment rental	19,168	59,374	40,206
Legal	600	414	(186)
Laboratory	39,875	10,627	(29,249)
Other	177,106	156,747	(20,359)
Total Contractual Expense	307,017	340,619	33,602
Retiree Supp. Annuities and health care costs	236,940	231,895	(5,045)
Contribution to Government of Guam	49,833	49,500	(333)
Total Retiree Benefits	286,774	281,395	(5,378)
Total Operating Expenses	6,369,126	6,139,525	(229,602)
Earnings (Loss) from Operations	2,941,038	2,667,630	273,407
Interest Income-2010/13/14/16/17 Series Bond	247,291	65,354	181,937
Interest Income-Other Funds	42,752	10,032	32,720
Interest Income-SDC	440	1,060	(620)
Interest Expense- 2010/13/14/16/17 Series Bond	(2,180,531)	(2,220,744)	40,213
Interest Expense- ST BOG	(37,606)	(43,736)	6,131
Federal Expenditures	(43,562)	(42,501)	(1,061)
Loss on Asset Disposal	-	(81,105)	81,105
AFUDC	625,000	1,172,241	(547,241)
Amortization of Discount, Premium and Issuance Costs	(77,542)	61,861	(139,403)
Defeasance due to bond refunding	(12,444)	(15,218)	2,775
Deferred outflows from pension	-	-	-
Prior Year Adjustment	-	(26,756)	26,756
Total non-operating revenues (expenses)	(1,436,201)	(1,119,512)	(316,689)
Net Income (Loss) before capital contributions	1,504,836	1,548,118	(43,282)
Capital Contributions			
Grants from US Government	1,213,886	1,815,921	(602,036)
Grants from GovGuam & Others	20,084	1,664	18,420
Other Contributions	-	-	-
Total Capital Contributions	1,233,970	1,817,586	(583,616)
Change in Net Assets	2,738,806	3,365,704	(626,897)
Debt Service Calculation			
Earnings From Operations	2,941,038	2,667,630	
System Development Charge	(56,404)	(72,662)	
Retiree COLA	49,833	49,500	
Interest/Investment Income	42,752	10,032	
Depreciation	1,528,175	1,402,038	
Balance Available for Debt Service per Section 6.12	4,505,394	4,056,538	
Working Capital Reserve Available for Debt Service	935,321	932,134	
Transfer to Working Capital- Debt Service Reserve	-	-	
Transfer to Working Capital- O&M Reserve	-	-	
Balance Available for Debt Service inclusive of reserves	5,440,715	4,988,672	
Debt Service			
Principal	433,333	420,000	
Interest	1,794,910	1,626,858	
Total	2,228,243	2,046,858	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	2.02	1.98	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	2.44	2.44	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited) **SCHEDULE D**
Comparative Budget vs. Actual for the period ending April 30, 2018

	Year to Date			Variance
	Budget April-18	Encumbered April-18	Actual (Unaudited) April-18	Favorable / (Unfavorable)
OPERATING REVENUES				
Water Revenues	40,202,121		38,631,697	(1,570,423)
Wastewater Revenues	22,597,801		22,465,756	(132,045)
Legislative Surcharge	2,043,272		1,985,275	(57,997)
Other Revenues	403,466		246,006	(157,460)
System Development Charge	322,951		711,484	388,534
Total Operating Revenues	65,569,611		64,040,219	(1,529,391)
OPERATING AND MAINTENANCE EXPENSES				
Water Purchases	5,047,792		5,208,325	(160,533)
Power Purchases	7,405,978		8,392,038	(986,059)
Total Utility Costs	12,453,770		13,600,363	(1,146,592)
Salaries and Wages	11,375,392		10,101,787	1,273,605
Pension and Benefits	4,091,908		3,335,466	756,442
Total Salaries and Benefits	15,467,300		13,437,253	2,030,047
Capitalized Labor and Benefits	(1,458,333)		(1,572,614)	114,280
Net Salaries and Benefits	14,008,966		11,864,639	2,144,327
Administrative and General Expenses				
Sludge removal	1,221,598		938,370	283,228
Chemicals	1,434,978		1,353,358	81,619
Materials & Supplies	1,945,298	308,512	1,068,296	568,490
Transportation	366,593	50,860	293,647	22,086
Communications	113,273		108,187	5,086
Claims	77,700	10,000	53,223	14,477
Insurance	733,296		530,061	203,235
Training & Travel	152,699	10,891	74,791	67,017
Advertising	97,370		65,793	31,578
Regulatory Expense	154,604		132,754	21,850
Bad Debts Provision	399,718		767,853	(368,135)
Miscellaneous	808,608	49,990	589,607	169,011
Total Administrative and General Expense	7,505,737	430,253	5,975,941	1,099,543
Depreciation Expense	10,697,223		10,697,225	(2)
Contractual Expense				
Audit & Computer Maint.	565,412	111,103	310,503	143,807
Building rental	265,685		272,193	(6,508)
Equipment rental	401,622		487,712	(86,090)
Legal	29,167		4,200	24,967
Laboratory	438,261	109,837	231,798	96,626
Other	912,542		1,176,060	(263,518)
Total Contractual Expense	2,612,689	220,940	2,482,466	(90,717)
Retiree Supp. Annuities and health care costs	1,680,058		1,660,875	19,183
Contribution to Government of Guam	346,500		348,833	(2,333)
Total Retiree Benefits	2,026,558	-	2,009,708	16,850
Total Operating Expenses	49,304,943	651,193	46,630,341	2,023,409
Earnings (Loss) from Operations	16,264,668		17,409,878	494,017
Interest Income-2010/13/14/16/17 Series Bond	110,086		1,311,744	1,201,658
Interest Income-Other Funds	20,543		211,787	191,244
Interest Income-SDC	16,900		22,821	5,921
Interest Expense- 2010/13/14/16/17 Series Bond	(18,379,111)		(15,355,198)	3,023,913
Interest Expense- ST BOG	(233,017)		(256,497)	(23,480)
Federal Expenditures	(359,325)		(303,748)	55,577
Loss on Asset Disposal	-		-	-
AFUDC	4,375,000		4,375,000	-
Amortization of Discount, Premium and Issuance Costs	(433,026)		(124,585)	308,440
Defeasance due to bond refunding	(106,529)		(87,105)	19,424
Deferred outflows from pension	(736,964)		(288,060)	448,905
Prior Year Adjustment	-		7,336	7,336
Total non-operating revenues (expenses)	(15,725,443)		(10,486,504)	5,238,939
Net Income (Loss) before capital contributions	539,225		6,923,374	5,732,956
Capital Contributions				
Grants from US Government	6,111,757		6,349,141	237,383
Grants from GovGuam & Others	-		157,817	157,817
Other Contributions	-		-	-
Total Capital Contributions	6,111,757		6,506,958	395,200
Change in Net Assets	6,650,982		13,430,332	6,128,156
Debt Service Calculation				
Earnings From Operations	16,264,668		17,409,878	
System Development Charge	(322,951)		(711,484)	
Retiree COLA	346,500		348,833	
Interest/Investment Income	20,543		211,787	
Depreciation	10,697,223		10,697,225	
Balance Available for Debt Service per Section 6.12	27,005,983		27,956,239	
Working Capital Reserve Available for Debt Service	6,547,247		6,524,939	
Transfer to Working Capital- Debt Service Reserve	(1,050,000)		-	
Transfer to Working Capital- O&M Reserve	(1,866,667)		-	
Balance Available for Debt Service inclusive of reserves	30,636,564		34,481,178	
Debt Service				
Principal	3,033,333		3,033,333	
Interest	14,443,815		12,564,370	
Total	17,477,149		15,597,703	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.55		1.79	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	1.75		2.21	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited)
Comparative for the period ending April 30, 2018 and 2017

SCHEDULE E

	Year to Date		Variance
	ACTUAL (Unaudited) April-18	Actual (Audited) April-17	Favorable / (Unfavorable)
OPERATING REVENUES			
Water Revenues	38,631,697	37,319,825	1,311,872
Wastewater Revenues	22,465,756	21,696,694	769,062
Legislative Surcharge	1,985,275	1,870,882	114,393
Other Revenues	246,006	254,050	(8,044)
System Development Charge	711,484	508,635	202,849
Total Operating Revenues	64,040,219	61,650,086	2,390,134
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	5,208,325	4,263,656	(944,669)
Power Purchases	8,392,038	7,044,486	(1,347,551)
Total Utility Costs	13,600,363	11,308,143	(2,292,220)
Salaries and Wages	10,101,787	9,895,259	(206,527)
Pension and Benefits	3,335,466	3,432,802	97,336
Total Salaries and Benefits	13,437,253	13,328,062	(109,191)
Capitalized Labor and Benefits	(1,572,614)	(1,837,610)	(264,996)
Net Salaries and Benefits	11,864,639	11,490,451	(374,187)
Administrative and General Expenses			
Sludge removal	938,370	983,408	45,038
Chemicals	1,353,358	1,218,008	(135,351)
Materials & Supplies	1,068,296	901,514	(166,783)
Transportation	293,647	376,211	82,564
Communications	108,187	76,187	(32,001)
Claims	53,223	155,057	101,834
Insurance	530,061	634,219	104,158
Training & Travel	74,791	161,382	86,591
Advertising	65,793	62,914	(2,878)
Regulatory Expense	132,754	168,941	36,187
Bad Debts Provision	767,853	767,898	45
Miscellaneous	589,607	503,976	(85,631)
Total Administrative and General Expense	5,975,941	6,009,713	33,772
Depreciation Expense	10,697,225	9,814,265	(882,960)
Contractual Expense			
Audit & Computer Maint.	310,503	538,307	227,804
Building rental	272,193	255,896	(16,298)
Equipment rental	487,712	415,617	(72,095)
Legal	4,200	2,898	(1,302)
Laboratory	231,798	74,386	(157,413)
Other	1,176,060	1,097,230	(78,830)
Total Contractual Expense	2,482,466	2,384,334	(98,132)
Retiree Supp. Annuities and health care costs	1,660,875	1,623,268	(37,607)
Contribution to Government of Guam	348,833	346,500	(2,333)
Total Retiree Benefits	2,009,708	1,969,768	(39,941)
Total Operating Expenses	46,630,341	42,976,674	(3,653,668)
Earnings (Loss) from Operations	17,409,878	18,673,412	(1,263,534)
Interest Income-2010/13/14/16/17 Series Bond	1,311,744	457,481	854,264
Interest Income-Other Funds	211,787	70,223	141,565
Interest Income-SDC	22,821	7,418	15,403
Interest Expense- 2010/13/14/16/17 Series Bond	(15,355,198)	(15,545,206)	190,009
Interest Expense- ST BOG	(256,497)	(306,154)	49,657
Federal Expenditures	(303,748)	(297,510)	(6,238)
Loss on Asset Disposal	-	(567,732)	567,732
AFUDC	4,375,000	8,205,687	(3,830,687)
Amortization of Discount, Premium and Issuance Costs	(124,585)	433,025	(557,610)
Defeasance due to bond refunding	(87,105)	(106,529)	19,424
Deferred outflows from pension	(288,060)	-	(288,060)
Prior Year Adjustment	7,336	(187,290)	194,626
Total non-operating revenues (expenses)	(10,486,504)	(7,836,587)	(2,649,917)
Net Income (Loss) before capital contributions	6,923,374	10,836,825	(3,913,451)
Capital Contributions			
Grants from US Government	6,349,141	12,711,450	(6,362,310)
Grants from GovGuam & Others	157,817	11,651	146,166
Other Contributions	-	-	-
Total Capital Contributions	6,506,958	12,723,101	(6,216,143)
Change in Net Assets	13,430,332	23,559,926	(10,129,594)
Debt Service Calculation			
Earnings From Operations	17,409,878	18,673,412	
System Development Charge	(711,484)	(508,635)	
Retiree COLA	348,833	346,500	
Interest/Investment Income	211,787	70,223	
Depreciation	10,697,225	9,814,265	
Balance Available for Debt Service per Section 6.12	27,956,239	28,395,765	
Working Capital Reserve Available for Debt Service	6,524,939	6,524,939	
Transfer to Working Capital- Debt Service Reserve	-	-	
Transfer to Working Capital- O&M Reserve	-	-	
Balance Available for Debt Service inclusive of reserves	34,481,178	34,920,704	
Debt Service			
Principal	3,033,333	2,940,000	
Interest	12,564,370	11,388,009	
Total	15,597,703	14,328,009	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.79	1.98	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	2.21	2.44	

SCHEDULE F

Bond Compliance

		($$$) Per Indenture	As of 4/30/18 ($$$) Bond 2013/2014/2016/2017
• Operation and Maintenance Fund-BOG	*Equivalent to 55 days of the annual O&M budget less depreciation*	$10.5M	$10.5M
• Bond Reserve Fund - US Bank	*Fully funded- Principal and Interest (Bond Series 2010, 2013, 2014 Refunding and 2016)*	$34.9M	$34.9M
• Operation, Maintenance, Renewal and Replacement Reserve Fund-BOG Trust	*Equivalent to 1/4 of the annual O&M budget & CIP budget to be funded in 5 years ($2M/year)*	$17.4M	$17.4M
• Capital Improvement Fund	*Balance remaining in the Revenue Fund after the foregoing deposits*	$3.9K	$5.6K

GUAM WATERWORKS AUTHORITY
Restricted and Unrestricted Cash Summary
FY 2018

SCHEDULE G

Description	Unaudited April 30, 2018	Audited September 30, 2017	Increase (Decrease)
UNRESTRICTED			
Change Fund	2,000	2,000	-
Petty Cash	5,000	5,000	-
BOG - General Fund	3,309,383	4,836,236	(1,526,852)
BOG - PRN Payroll	30,039	30,039	-
Sub-total Unrestricted	3,346,422	4,873,275	(1,526,852)
RESTRICTED			
BOG - On Line Payment	8,708	-	8,708
BOG - Sweep Account	207	-	207
Bank of Hawaii	163,770	133,931	29,839
First Hawaiian Bank	8,352	10,261	(1,909)
Bank Pacific	9,779	15,825	(6,046)
Community First FCU	2,919	3,448	(530)
BOG - Customer Refunds	1,854,367	1,831,426	22,941
Bank Pacific - Surcharge	475,891	278,142	197,749
Bank Pacific - Escrow Deposit	659,756	666,140	(6,384)
BOG Emergency Reserve Fund	6,126	6,122	4
BOG - Revenue Trust	533,724	201,614	332,110
BOG Revenue Trust Fund	7,422,662	7,782,227	(359,565)
BOG Capital Improvement Fund-Bond	5,598	5,598	0
BOG Capital Improvement Revenue Fund	4,193,955	-	4,193,955
BOG-O & M Reserve	13,583,288	13,516,540	66,747
BOG-Debt Service Reserve	11,273,230	11,217,733	55,497
BOG-CAPEX Reserve	15,537,694	15,462,869	74,825
BOG Sewer Hookup Revolving Fund	64,767	63,590	1,178
BOG Subord. Sec. Fund	859,233	859,233	-
BOG Operation and Maintenance Fund	3,083,482	3,083,482	-
	59,747,509	55,138,182	4,609,327
BOG - SDC Deposit	3,448,925	1,486,219	1,962,707
BOG - SDC CDs	7,250,000	8,500,000	(1,250,000)
Total Restricted	70,446,434	65,124,400	5,322,033
Reserve Funds			
BOG Series 05 OMRRRF Fund	17,423,213	17,423,213	-
BOG Series 13 Construction Fund	50,984,673	74,461,765	(23,477,093)
BOG Series 14 Refunding Construction Fund	737,399	771,281	(33,882)
BOG Series 16 Construction Fund	122,226,749	132,811,449	(10,584,699)
BOG Series 16 Cap Int Fund	-	1,782,982	(1,782,982)
BOG Series 17 Refunding Construction Fund	8,591,217	9,299,311	(708,094)
BOG Series 17 Refunding COI Fund	47,545	-	47,545
Total Restricted - Held by Trustee	200,010,796	236,550,002	(36,539,206)
USB Series 2013 Debt Service Fund	3,124,124	2,336,754	787,370
USB Series 2013 Debt Service Reserve Fund	12,031,688	12,031,688	-
USB Series 2014 Refunding Debt Service Fu	4,142,670	1,796,559	2,346,112
USB Series 2014 Refunding Debt Service Re	7,789,571	7,707,602	81,969
USB Series 2016 Debt Service Fund	2,391,990	130	2,391,860
USB Series 2016 Debt Service Reserve Fund	7,594,589	7,582,725	11,864
USB Series 2010 Debt Service Fund	1,539,811	2,020,121	(480,310)
USB Series 2017 Refunding Debt Service Re	7,566,460	7,566,460	-
USB Series 2017 Debt Service Fund	1,905,924	-	1,905,924
Total Investments	48,086,827	41,042,038	7,044,788
Total Restricted and Unrestricted Cash	321,890,478	347,589,716	(25,699,237)

SCHEDULE H

Guam Waterworks Authority
Statement of Cash Flows (Unaudited)
FY 2018

	YTD Apr-18
Increase (decrease) in cash	
Cash flows from operating activities:	
Cash received from trade and others	63,371,655
Cash payments to suppliers/contractors for goods and services	(22,744,897)
Cash payments to employees for services	(15,341,263)
Net cash provided by operating activities	25,285,495
Cash flows from capital and related financing activities:	
Contributed capital received (grants)	11,617,891
Acquisition of utility plant	(50,453,486)
Repayment of Long Term Debt	7,186,516
Interest expense	(15,753,563)
Net cash provided by (used in) capital and related financing activities	(47,402,641)
Cash flows from investing activities:	
Transfers from (to) restricted fund	19,043,942
Interest income received	1,546,352
Net cash provided by investing activities	20,590,294
Net increase (decrease) in cash	(1,526,852)
Unrestricted cash at beginning of the period	4,873,275
Unrestricted cash at end of period	3,346,423
Reconciliation of operating loss to net cash provided by operating activities:	
Operating Income (loss)	16,228,964
Adjustments to reconcile to net cash provided by operating activities:	
Depreciation expense	10,697,225
Other Expense/income	1,055,913
(Increase) decrease in assets:	
Accounts receivable	(639,586)
Materials and supplies inventory	(472,747)
Other Assets	259,949
Increase (decrease) in liabilities:	
Accounts payable, Contractors, Retention & Escrow Deposit	(1,284,050)
Accrued payroll	(531,195)
Customer deposits	(28,979)
Net cash provided by operating activities	25,285,495

Guam Waterworks Authority
Accounts Receivable - Government
As of April 30, 2018

SCHEDULE I

Customer Name	No of Accounts	Current Balance	AGING 31-60 days	61-90 days	91-120 days	Over 120 days	Outstanding Bal.
Guam Int'l Airport Authority	8	43,763	39,519	52,685	45,217	143,014	324,198
Guam Memorial Hospital Authority	3	39,356	34,786	-	-	-	74,142
Port Authority of Guam	1	37,242	31,271	-	-	-	68,514
Guam Power Authority	20	47,298	112	-	-	-	47,409
Guam Community College	3	5,083	12,618	11,500	8,771	8,877	46,848
University of Guam	2	13,776	-	-	-	-	13,776
Guam Housing & Urban Renewal Authority	5	1,262	-	-	-	92	1,354
Guam Housing Corporation	1	39	-	-	-	-	39
AUTONOMOUS AGENCIES	**43**	**187,818**	**118,306**	**64,185**	**53,988**	**151,983**	**576,280**
Department of Parks & Recreation	16	41,400	46,439	239,341	27,309	217,078	571,568
Department of Education	51	178,786	187,948	47,986	8,800	123,847	547,367
Department of Public Health & Social Services	3	1,407	3,154	1,044	-	101,613	107,218
Department of Corrections	2	39,157	43,322	17,124	-	-	99,603
Mayors' Council of Guam	41	12,661	931	20	-	-	13,611
Office of the Governor	2	6,739	-	-	-	-	6,739
Guam Fire Department	7	6,340	-	-	-	-	6,340
Department of Public Works	10	2,490	3,552	-	-	-	6,042
Department of Youth Affairs	1	23	650	3,294	-	-	3,967
Sanctuary Inc.	1	3,120	-	-	-	-	3,120
Guam Police Department	2	2,519	-	-	-	-	2,519
Department of Agriculture	2	2,201	-	-	-	-	2,201
Department of Military Affairs/GUARNG	1	2,115	-	-	-	-	2,115
Guam Solid Waste Authority	2	987	-	-	-	-	987
Division of Senior Citizens, DPH&SS	2	372	135	152	64	-	723
Department of Chamorro Affairs	1	401	-	-	-	-	401
Department of Customs & Quarantine	1	389	-	-	-	-	389
Department of Mental Health and Substance Abuse	1	278	-	-	-	-	278
Department of Agriculture - Fisheries	1	90	134	-	-	-	224
Guam Veterans Affairs Office	2	218	-	-	-	-	218
The Office of the Dededo Mayor	1	167	-	-	-	-	167
Guam Public Library	3	144	-	-	-	-	144
Merizo Mayor	1	25	26	-	-	-	50
LINE AGENCIES	**154**	**302,030**	**286,290**	**308,960**	**36,174**	**442,538**	**1,375,992**
TOTAL April 30, 2018	**197**	**489,848**	**404,596**	**373,146**	**90,161**	**594,521**	**1,952,272**
TOTAL September 30, 2017	**253**	**715,578**	**442,522**	**169,120**	**72,476**	**396,347**	**1,796,043**
% INCREASE/ (DECREASE)	**-22%**	**-32%**	**-9%**	**121%**	**24%**	**50%**	**9%**

GUAM WATERWORKS AUTHORITY
2013 Series Bond Project Status
As of April 30,2018

SCHEDULE J

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 04/30/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 04/30/18
Santa Rita Springs Booster Pump Rehab Phase II	$ 100,000	$ 100,000	77,400	22,600	$ 100,000	$ -	$ 22,600
"A" Series Well Transmission Line	$ 400,000	$ 400,000	369,846	(0)	$ 369,846	$ 30,154	$ 30,154
Water Booster Pump Station	$ 6,000,000	$ 1,861,000	1,656,428	23,536	$ 1,679,964	$ 181,036	$ 204,572
Meter Replacement Program		$ 999,000	996,532	-	$ 996,532	$ 2,468	$ 2,468
Barrigada Tank Repair/Replacement	$ 6,000,000	$ 4,987,000	4,924,959	62,041	$ 4,987,000	$ 0	$ 62,041
Leak Detection	$ 100,000	$ 20,000	16,916	-	$ 16,916	$ 3,084	$ 3,084
Potable Water System Planning	$ 800,000	$ 624,000	603,390	20,610	$ 624,000	$ -	$ 20,610
Implement Ground Water Rule	$ 1,000,000	$ 1,000,000	1,000,000	-	$ 1,000,000	$ -	$ -
Deep Well Rehabilitation	$ 800,000	$ 200,000	189,930	10,071	$ 200,000	$ (0)	$ 10,070
New Deep Wells at Down Hard	$ 2,000,000	$ 810,000			$ -	$ 810,000	$ 810,000
Master Meters	$ 4,000,000	$ 784,000	531,188	180,872	$ 712,060	$ 71,940	$ 252,812
Ugum Water Treatment Plant Intake	$ 1,000,000	$ 982,000	578,858	280,943	$ 859,801	$ 122,199	$ 403,142
Water Wells	$ 4,200,000	$ 4,200,000	2,284,474	745,555	$ 3,030,029	$ 1,169,971	$ 1,915,527
Water Distribution System	$ 12,000,000	$ 11,151,000	6,718,325	4,194,128	$ 10,912,453	$ 238,547	$ 4,432,675
Pressure Zone Realignment /	$ 1,000,000	$ 431,000	336,036	1,074	$ 337,110	$ 93,890	$ 94,964
Mechanical/Electrical Equipment	$ 430,000	$ 430,000	328,686	98,112	$ 426,798	$ 3,202	$ 101,314
Water Reservoir Internal/External	$ 800,000	$ -			$ -	$ -	$ -
Water System Reservoirs 2005 Improvements	$ 21,000,000	$ 13,878,000	10,857,217	3,020,784	$ 13,878,000	$ (0)	$ 3,020,783
Ugum Water Treatment Plant Reservoir	$ 7,000,000	$ 90,000			$ -	$ 90,000	$ 90,000
Agana Heights & Chaot Tanks	$ 4,500,000	$ 3,280,000	241,603	1,088,684	$ 1,330,287	$ 1,949,713	$ 3,038,397
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 13,500,000	$ 11,605,000	5,398,068	6,206,932	$ 11,605,000	$ 0	$ 6,206,932
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 8,000,000	$ -			$ -	$ -	$ -
Assessment of maloiloi Elevetad & Yigo Elevated	$ 500,000	$ 485,117	461,813	23,304	$ 485,117	$ -	$ 23,304
Fire Hydrant Replacement Program	$ -	$ -			$ -	$ -	$ -
Wastewater System Planning	$ 800,000	$ 651,000	550,968	99,933	$ 650,900	$ 100	$ 100,032
Lift Station Upgrades	$ 5,000,000	$ 946,000	562,785	363	$ 563,149	$ 382,852	$ 383,215
Wastewater Collection System Repl/Rehab	$ 6,500,000	$ 780,000	555,848	104,465	$ 660,314	$ 119,687	$ 224,152
Baza Gardens STP Replacement		$ 3,114,883	969,594	2,145,275	$ 3,114,869	$ 15	$ 2,145,290
Facilities Plan/Design for Umatac-Merizo WWTP		$ 473,000	341,226	30,473	$ 371,699	$ 101,301	$ 131,774
Agat/Santa Rita STP Replacement	$ 19,000,000	$ 67,200,000	43,563,454	23,636,545	$ 67,200,000	$ 0	$ 23,636,546
Agana WWTP Interim Measures		$ 673,000	611,247	61,753	$ 673,000	$ (0)	$ 61,753
Umatac Merizo Replacement	$ 2,000,000	$ -			$ -	$ -	$ -
Wastewater Pump Station Electrical Upgrade	$ 620,000	$ 620,000	91,348	8,513	$ 99,861	$ 520,139	$ 528,652
Electrical Upgrade - Water Wells	$ 1,500,000	$ 1,500,000	1,480,769	19,230	$ 1,500,000	$ 0	$ 19,231
Electrical Upgrade - Water Booster	$ 325,000	$ 2,000			$ -	$ 2,000	$ 2,000
Electrical Upgrade -Water Booster	$ 350,000	$ 200,000	977	-	$ 977	$ 199,023	$ 199,023
Electrical Upgrade - Other Water	$ 250,000	$ 150,000	60,700	-	$ 60,700	$ 89,300	$ 89,300
SCADA Improvements – Phase 3	$ 1,850,000	$ 923,000	427,949	294,410	$ 722,359	$ 200,641	$ 495,051
SCADA Improvements – Phase 4	$ 500,000	$ -			$ -	$ -	$ -
Laboratory Modernization	$ 1,500,000	$ 1,173,000	1,163,037	8,428	$ 1,171,465	$ 1,535	$ 9,963
Land Survey	$ 2,000,000	$ 2,000	1,038	15	$ 1,053	$ 948	$ 963
General Plant Improvements / Water	$ 2,000,000	$ 2,600,000	1,265,043	1,176,695	$ 2,441,737	$ 158,263	$ 1,334,957
Allowance for COI							$ 275,005
Interest Earned							$ 602,317
Total Construction Fund	**$ 139,325,000**	**$ 139,325,000**	**$ 89,217,649**	**$ 43,565,345**	**$ 132,782,994**	**$ 6,542,006**	**$ 50,984,672**

PUC's Docket 14-04 dated February 25, 2014

GUAM WATERWORKS AUTHORITY
2014 Series Refunded Bond Project Status
As of April 30,2018

SCHEDULE K

PROJECT NAME	ORIGINAL APPROVED PROJECT	ADJUSTED PROJECT COST	EXPENDITURES AS OF 04/30/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	20% PUC AS OF 04/30/18	Construction fund balance AS OF 04/30/18
Agana Treatment Plant	$ 10,475,000	$ 11,065,512	11,065,512	$ -	$ 11,065,512	$ (0)	$ 2,095,000	$ (0)
Agana Outfall	$ 5,030,000	$ 10,127,198	10,127,198	$ -	$ 10,127,198	$ 0	$ 1,006,000	$ 0
Northern District (Outfall)	$ 4,700,000	$ 10,251,423	10,251,423	$ -	$ 10,251,423	$ 0	$ 940,000	$ 0
Northern District WWTP Upgrade		$ 173,681	173,681		$ 173,681	$ -		$ -
Northern Treatment Plant		$ -	-		$ -	$ -		$ -
Baza Gardens Wastewater Treatment Plant Upgrade	$ 500,000	$ 297,177	297,177	$ -	$ 297,177	$ (0)	$ 100,000	$ (0)
Interim Disinfection Facilities	$ 581,000	$ 3,437,311	3,408,599	$ 28,712	$ 3,437,311	$ (0)	$ 116,200	$ 28,712
Electrical Protection	$ 1,000,000	$ 1,512,483	1,512,483.3	$ -	$ 1,512,483	$ (0)	$ 200,000	$ (0)
Well Vulnerability Reduction	$ 600,000	$ 185,522	185,522	$ -	$ 185,522	$ 0	$ 120,000	$ 0
Old Agat Wastewater Collection (I/I Reduction)	$ 2,155,000	$ 1,931,659	1,931,659	$ -	$ 1,931,659	$ (0)	$ 431,000	$ (0)
Chaot WW Pump Station/Collection System	$ 410,000	$ 399,120	399,120	$ -	$ 399,120	$ -	$ 82,000	$ -
Lift Station Upgrades	$ 230,000	$ 149,895	149,895	$ -	$ 149,895	$ 0	$ 46,000	$ 0
Collection Line Upgrades	$ 200,000	$ 62,755	62,755	$ -	$ 62,755	$ 0	$ 40,000	$ 0
"A" Well Transmission Line	$ 2,413,000	$ 3,833,175	3,818,088	$ 15,087	$ 3,833,175	$ (0)	$ 482,600	$ 15,087
Santa Rita Springs - Booster Pump Rehab.	$ 648,000	$ 306,841	306,841	-	$ 306,841	$ (0)	$ 129,600	$ (0)
Fena Bypass Transmission line		$ 160,913	160,913	$ -	$ 160,913	$ (0)	$ -	$ (0)
Storage Additions	$ 950,000	$ -			$ -	$ -	$ 190,000	$ -
Booster Station Upgrades	$ 390,000	$ 66,734	66,734	$ -	$ 66,734	$ -	$ 78,000	$ -
Mangilao Tank Repair	$ 800,000	$ 398,367	397,933	$ 434	$ 398,367	$ (0)	$ 160,000	$ 434
Ugum Tank Replacement	$ 2,500,000	$ -			$ -	$ -	$ 500,000	$ -
Ugum WTPlant Refurbishment ($1.724,970EPA)		$ 6,588,473	6,531,525	$ 56,949	$ 6,588,473	$ (0)		$ 56,948
Barrigada Tank Repair/Replacement	$ 3,000,000	$ 65,019	65,019	$ -	$ 65,019	$ 0	$ 600,000	$ 0
Water Reservoir Condition Assessment		$ 1,250,000	1,249,227.16	$ 772	$ 1,250,000	$ 0	$ -	$ 773
EarthTech Well Buyout	$ 5,000,000	$ 5,975,000	5,975,000	$ -	$ 5,975,000	$ -	$ 1,000,000	$ -
Water Wastewater Master Plan	$ 4,900,000	$ 4,881,308	4,881,308	$ -	$ 4,881,308	$ 0	$ 980,000	$ 0
Laboratory Modernization	$ 800,000	$ 135,055	135,055	$ -	$ 135,055	$ 0	$ 160,000	$ 0
Land Survey	$ 800,000	$ 577,836	576,134	$ 1,702	$ 577,836	$ 0	$ 160,000	$ 1,702
Ground Water Disinfection		$ -				$ -		$ -
GWUDI Study		$ 262,234	260,430	1,804	$ 262,234	$ -		$ 1,804
Contingency	$ 12,276,023	$ 154	-	$ -	$ -	$ -		$ 732
Vehicles	$ 1,100,000	$ 1,280,000	2,130,305	$ (850,305)	$ 1,280,000	$ -	$ 220,000	$ -
Generation Equipment	$ 700,000	$ 880,000	2,712	$ 877,288	$ 880,000	$ 0		$ 27,033
Leak Detection/Line Replacement	$ 8,200,000	$ 5,988,494	5,988,494	$ -	$ 5,988,494	$ -	$ 1,640,000	$ -
Automated Meter Reading	$ 12,572,063	$ 17,468,359	16,870,522	$ 537,157	$ 17,468,359	$ 0	$ 2,514,413	$ 597,837
Total Construction Fund	$ 82,930,086	$ 89,711,698	$ 88,981,263	$ 669,600	$ 89,711,543	$ 1	$ 13,990,813	$ 731,063
Interest Earned	$ 6,781,612							$ 6,337
Total Project Cost Funding	**$ 89,711,698**	**$ 89,711,698**	**88,981,263**	**$ 669,600**	**$ 89,711,543**	**$ 1**	**$ 13,990,813**	**$ 737,400**

GUAM WATERWORKS AUTHORITY
2016 Series Bond Project Status
As of April 30,2018

SCHEDULE L

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 04/30/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 04/30/18
Water Booster Pump Station	$ 4,139,000	$ 4,139,000			$ -	$ 4,139,000	$ 4,139,000
Meter Replacement Program	$ 4,501,000	$ 4,501,000	27,351	122,648.72	$ 150,000	$ 4,351,000	$ 4,473,649
Barrigada Tank Repair/Replacement	$ 1,013,000	$ 1,013,000		-	$ -	$ 1,013,000	$ 1,013,000
Leak Detection	$ 1,180,000	$ 1,180,000		-	$ -	$ 1,180,000	$ 1,180,000
Potable Water System Planning	$ 2,276,000	$ 2,276,000	257,062	619,231.76	$ 876,294	$ 1,399,706	$ 2,018,938
Deep Well Rehabilitation	$ 250,000	$ 250,000		110,013.00	$ 110,013	$ 139,987	$ 250,000
New Deep Wells at Down Hard	$ 1,190,000	$ 1,190,000			$ -	$ 1,190,000	$ 1,190,000
Master Meters	$ 3,616,000	$ 3,616,000	151,539	-	$ 151,539	$ 3,464,461	$ 3,464,461
Ugum Water Treatment Plant Intake	$ 18,000	$ 18,000			$ -	$ 18,000	$ 18,000
Water Wells	$ 2,500,000	$ 2,500,000			$ -	$ 2,500,000	$ 2,500,000
Water Distribution System	$ 2,049,000	$ 49,000			$ -	$ 49,000	$ 49,000
Pressure Zone Realignment /	$ 1,141,000	$ 1,141,000		668,355.20	$ 668,355	$ 472,645	$ 1,141,000
Mechanical/Electrical Equipment	$ 100,000	$ 100,000			$ -	$ 100,000	$ 100,000
Water Reservoir Internal/External	$ 800,000	$ 800,000			$ -	$ 800,000	$ 800,000
Water System Reservoirs 2005 Improvements	$ 42,350,000	$ 28,350,000	1,923,069	12,345,718.67	$ 14,268,787	$ 14,081,213	$ 26,426,931
Ugum Water Treatment Plant Reservoir	$ 6,410,000	$ -			$ -	$ -	$ -
Water Audit Program & Water Loss Control Plan	$ 1,000,000	$ 1,000,000				$ 1,000,000	$ 1,000,000
Agana Heights & Chaot Tanks	$ 1,220,000	$ 1,220,000		500,000.00	$ 500,000	$ 720,000	$ 1,220,000
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 1,895,000	$ 1,895,000		1,822,132.80	$ 1,822,133	$ 72,867	$ 1,895,000
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 10,500,000	$ 7,409,830		7,300,000.00	$ 7,300,000	$ 109,830	$ 7,409,830
Fire Hydrant Replacement Program	$ 2,000,000	$ 2,000,000			$ -	$ 2,000,000	$ 2,000,000
Wastewater System Planning	$ 349,000	$ 349,000	118,587	194,396.23	$ 312,983	$ 36,017	$ 230,413
Lift Station Upgrades	$ 2,404,000	$ 2,404,000	193,511	321,243.53	$ 514,755	$ 1,889,245	$ 2,210,489
Wastewater Collection System Repl/Rehab	$ 2,920,000	$ 2,920,000		555,478.00	$ 555,478	$ 2,364,522	$ 2,920,000
Baza Gardens STP Replacement	$ 16,700,000	$ 29,400,170	10,030,819	19,174,963.36	$ 29,205,782	$ 194,388	$ 19,369,351
Facilities Plan/Design for Umatac-Merizo WWTP	$ 527,000	$ 527,000	225,258	26,846.67	$ 252,105	$ 274,895	$ 301,742
Agat/Santa Rita STP Replacement	$ 3,000,000	$ 3,000,000	902,989	216,710.57	$ 1,119,700	$ 1,880,300	$ 2,097,011
Agana WWTP Interim Measures	$ 827,000	$ 827,000			$ -	$ 827,000	$ 827,000
Umatac Merizo Replacement	$ 8,000,000	$ 20,800,000	2,803,249	17,799,005.51	$ 20,602,254	$ 197,746	$ 17,996,751
Wastewater Pump Station Electrical Upgrade	$ 100,000	$ 100,000			$ -	$ 100,000	$ 100,000
Electrical Upgrade - Water Wells	$ 650,000	$ 650,000			$ -	$ 650,000	$ 650,000
Electrical Upgrade - Water Booster	$ 323,000	$ 323,000			$ -	$ 323,000	$ 323,000
SCADA Improvements – Phase 3	$ 1,177,000	$ 1,177,000	18,000	599,496.51	$ 617,497	$ 559,503	$ 1,159,000
SCADA Improvements – Phase 4	$ 6,500,000	$ 6,500,000			$ -	$ 6,500,000	$ 6,500,000
Laboratory Modernization	$ 1,127,000	$ 1,127,000	1,127,000	-	$ 1,127,000	$ -	$ -
Land Survey	$ 1,998,000	$ 1,998,000	130,370	1,130,153.37	$ 1,260,524	$ 737,476	$ 1,867,630
General Plant Improvements / Water	$ 2,769,463	$ 2,769,463	647,695	896,065.14	$ 1,543,760	$ 1,225,703	$ 2,121,768
Information Technology Integration Improvements	$ 500,000	$ 500,000	244,068	-	$ 244,068	$ 255,932	$ 255,932
Interest Earned							$ 1,007,853
Total Construction Fund	**$ 140,019,463**	**$ 140,019,463**	**$ 18,800,568**	**$ 64,402,459**	**$ 83,203,027**	**$ 56,816,436**	**$ 122,226,749**

GUAM WATERWORKS AUTHORITY
2017 Series Refunded Bond Project Status
As of April 30,2018

SCHEDULE M

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 04/30/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 04/30/18
Ground Water Disinfection	$ -	$ 500,000	$ 438,141	$ 61,859	$ 500,000	$ 0	$ 61,859
"A" Series Well Transmission Line	$ 600,000	$ 518,144	$ 474,434	$ 1,274	$ 475,709	$ 42,435	$ 43,710
Water Booster Pump Station	$ 500,000	$ 500,000	$ 418,844	$ 81,156	$ 500,000	$ (0)	$ 81,156
Meter Replacement Program	$ 2,500,000	$ 10,300,000	$ 10,255,079	$ 18,549	$ 10,273,628	$ 26,372	$ 44,921
Barrigada Tank Repair/Replacement	$ -	$ 5,450,000	$ 5,442,302	$ 7,698	$ 5,450,000	$ 0	$ 7,698
Leak Detection		$ 200,000	$ -	$ 200,000	$ 200,000	$ -	$ 200,000
Potable Water System Planning	$ 200,000	$ 200,000	$ 180,927	$ 19,073	$ 200,000	$ -	$ 19,073
Implement Ground Water Rule		$ 1,700,000	$ 1,499,464	$ 200,535	$ 1,700,000	$ 1	$ 200,536
Brigade II (Ugum Lift) BPS Upgrade	$ 1,200,000	$ 1,700,000	$ 210,007	$ 127,887	$ 337,895	$ 1,362,105	$ 1,489,993
Deep Well Rehabilitation	$ 548,000	$ 548,000	$ 548,000	$ -	$ 548,000	$ -	$ -
New Deep Wells at Down Hard	$ 3,773,000	$ 638,252	$ 485,743	$ -	$ 485,743	$ 152,509	$ 152,509
Rehabilitation of Asan Springs	$ 900,000	$ 900,000	$ 188,771	$ 152,068	$ 340,838	$ 559,162	$ 711,229
Master Meters	$ 1,600,000	$ 1,600,000	$ 1,421,267	$ 68,690	$ 1,489,957	$ 110,043	$ 178,733
Ugum Water Treatment Plant Intake	$ 3,670,000	$ 700,000	$ 543,615	$ 156,385	$ 700,000	$ -	$ 156,385
Water Wells	$ 2,000,000	$ -	$ -		$ -	$ -	$ -
Water Distribution System	$ 384,000	$ 3,174,748	$ 3,174,748	$ -	$ 3,174,748	$ (0)	$ (0)
Pressure Zone Realignment /	$ 3,550,000	$ -	$ -		$ -	$ -	$ -
Northern System Water Distribution	$ 2,725,000	$ -	$ -	$ -	$ -	$ -	$ -
Central Water Distribution System 2005	$ 1,200,000	$ 900,000	$ 730,182	$ 44,820	$ 775,002	$ 124,998	$ 169,818
Southern Water Distribution System	$ 1,800,000	$ -	$ -		$ -	$ -	$ -
Mechanical/Electrical Equipment	$ 1,360,000	$ 1,200,000	$ 1,079,495	$ 120,505	$ 1,200,000	$ (0)	$ 120,505
Water Reservoir Internal/External	$ 500,000	$ 2,000,000	$ 1,037,655	$ 471,729	$ 1,509,384	$ 490,616	$ 962,345
Water Reservoir Internal/External	$ 2,400,000	$ -	$ -		$ -	$ -	$ -
Water System Reservoirs 2005 Improvements	$ 11,697,000	$ 1,050,000	$ 1,050,000		$ 1,050,000	$ 0	$ 0
Distribution System Upgrades	$ 3,182,000	$ 474,160	$ 456,678	$ 17,481	$ 474,160	$ 0	$ 17,482
Ugum Water Treatment Plant Reservoir	$ 3,672,000	$ -	$ -		$ -	$ -	$ -
Water Audit Program & Water Loss Control Plan		$ 100,000	$ 15,031	$ 63,428	$ 78,459	$ 21,541	$ 84,970
Production Plan / Reduce Navy Purchases		$ 100,000	$ 94,286	$ 5,714	$ 100,000	$ -	$ 5,714
Hydraulic Asessment of Tank		$ 500,000	$ 497,004	$ 2,996	$ 500,000	$ -	$ 2,996
Agana Heights & Chaot Tanks		$ 4,700,000	$ 4,350,014	$ 349,986	$ 4,700,000	$ -	$ 349,986
Tank Major Repair Yigo#1 Mangilao#2 Agat#2		$ 1,900,000	$ 1,750,355	$ 97,659	$ 1,848,013	$ 51,987	$ 149,645
Tank Major Repair Yigo#1 Mangilao#2 Agat#2		$ -			$ -	$ -	$ -
Assessment of malojloj Elevetad & Yigo Elevated		$ 200,000	$ 200,000	$ -	$ 200,000	$ -	$ -
Public Water System Asser Inventory/Condition Assesment		$ 100,000	$ 98,414	$ 1,586	$ 100,000	$ -	$ 1,586
Public Water System GIS & Mapping		$ 50,000	$ 50,000	$ -	$ 50,000	$ -	$ -
Wastewater System Planning	$ 1,500,000	$ 1,500,000	$ 1,468,176	$ 5,824	$ 1,474,000	$ 26,000	$ 31,824
Wastewater Vehicles	$ 235,000	$ 235,000	$ 209,795	$ 25,205	$ 235,000	$ 0	$ 25,205
NDWWTP - Chlorine Tanks	$ 250,000	$ 250,000	$ 250,000		$ 250,000	$ -	$ -
Tumon Bay Sewer Upgrades	$ 100,000	$ -	$ -		$ -	$ -	$ -
Wastewater Collection System Repl/Rehab		$ 1,105,000	$ 723,591	$ 283,287	$ 1,006,878	$ 98,122	$ 381,409
Facilities Plan/Design for Baza Gardens WWTP	$ 1,250,000	$ 1,250,000	$ 1,245,244	$ 4,756	$ 1,250,000	$ -	$ 4,756
Facilities Plan/Design for Agat-Santa Rita WWTP	$ 900,000	$ 899,630	$ 891,702	$ 7,928	$ 899,630	$ -	$ 7,928
Priority 1 Sewer Upgrades – Baza Gardens WWTP	$ 650,000	$ -	$ -		$ -	$ -	$ -
Baza Gardens STP Replacement	$ 3,567,000	$ 1,301,947	$ 316,686	$ 314	$ 317,000	$ 984,947	$ 985,261
Facilities Plan/Design for Umatac Merizo WWTP		$ 900,000	$ 760,845	$ 93,013	$ 853,858	$ 46,142	$ 139,155
Agat/Santa Rita STP Replacement	$ 2,968,000	$ 2,218,000	$ 2,217,314	$ 387	$ 2,217,701	$ 300	$ 686
Northern District WWTP Primary Treatment Upgrades	$ -	$ 11,750,000	$ 11,532,253	$ 211,261	$ 11,743,514	$ 6,486	$ 217,747
Biosolids Management Plan		$ 200,000	$ 196,414	$ 3,586	$ 200,000	$ -	$ 3,586
Agana WWTP Interim Measures	$ -	$ 11,500,000	$ 11,254,925	$ 45,075	$ 11,300,000	$ 200,000	$ 245,075
I&I SSES Southern		$ 800,000	$ 794,722	$ 5,278	$ 800,000	$ (0)	$ 5,278
I&I SSES Central		$ 850,000	$ 794,325	$ 55,675	$ 850,000	$ -	$ 55,675
I&I SSES Northern		$ -			$ -	$ -	$ -
Umatac Merizo Replacement		$ 250,000	$ 247,431	$ 2,569	$ 250,000	$ -	$ 2,569
Northern District WWTP Secondary Treatment Upgrades		$ 1,000,000	$ -	$ 1,000,000	$ 1,000,000	$ -	$ 1,000,000
Well Electrical Protection	$ 26,000	$ -	$ -		$ -	$ -	$ -
SCADA Pilot Project	$ 300,000	$ 61,950	$ 19,812	$ 42,138	$ 61,950	$ (0)	$ 42,138
Electrical Upgrade - Water Wells	$ 3,000,000	$ 354,227	$ 339,948	$ 14,278	$ 354,227	$ 0	$ 14,279
Electrical Upgrade - Water Booster	$ 325,000	$ -	$ -		$ -	$ -	$ -
Electrical Upgrade -Water Booster	$ 350,000	$ -	$ -		$ -	$ -	$ -
Electrical Upgrade - Other Water	$ 250,000	$ -			$ -	$ -	$ -
SCADA Improvements – Phase 1	$ 250,000	$ 250,000	$ 194,849	$ 55,151	$ 250,000	$ -	$ 55,151
SCADA Improvements – Phase 2	$ 1,100,000	$ 1,056,986	$ 1,028,284	$ 28,702	$ 1,056,986	$ -	$ 28,702
SCADA Improvements – Phase 3	$ 2,500,000	$ 24,956	$ 24,956	$ -	$ 24,956	$ 0	$ 0
SCADA Improvements – Phase 4	$ 850,000	$ -	$ -		$ -	$ -	$ -
Laboratory Modernization	$ 1,200,000	$ -	$ -		$ -	$ -	$ -
Land Survey	$ 1,500,000	$ 500,000	$ 471,450	$ 28,237	$ 499,687	$ 313	$ 28,550
General Plant Improvements / Water	$ 14,370,000	$ 7,241,000	$ 7,241,000	$ 0	$ 7,241,000	$ 0	$ 0
Interest Earned							$ 103,395
Total Construction Fund	**$ 87,402,000**	**$ 87,402,000**	**$ 78,914,178**	**$ 4,183,743**	**$ 83,097,921**	**$ 4,304,079**	**$ 8,591,217**

1) PUC's Docket 11-01 $29,000,000.00 dated 09/19/11authorized GWA for reallocation
2) PUC's Docket 11-01 Reallocation of $23,246,000.00 dated 07/30/12
3) PUC's Dockect Reallocation dated February 2013

GUAM WATERWORKS AUTHORITY
Schedule of Series 2013, 2014 Refunding, 2016 and 2017 Refunding Bond Bank Accounts
As of April 30, 2018

SCHEDULE N

	4/30/2018
BANK OF GUAM	
BOG - Revenue Account	7,422,662
BOG - Operations and Maintenance Reserve	3,083,482
BOG - Operations, Maintenance, Renewal and Replacement Reserve Fund	17,423,213
BOG - Capital Improvement Fund	4,199,553
BOG - O & M Reserve	13,583,288
BOG - Debt Service Reserve	11,273,230
BOG - CAPEX Reserve	15,537,694
Total BOG Bank Account Balance	**72,523,121**
Series 2013 Bond:	
BOG - Construction Fund	50,984,673
USB - Debt Service Fund	3,124,124
USB - Debt Service Reserve Fund	12,031,688
Total Series 2013 Bond Bank Balance	**66,140,484**
Series 2014 Refunding Bond:	
BOG - Construction Fund	737,399
USB - Debt Service Fund	4,142,670
USB - Debt Service Reserve Fund	7,789,571
Total Series 2014 Refunding Bond Bank Balance	**12,669,640**
Series 2016 Bond:	
BOG - Construction Account	122,226,749
BOG - Capitalized Interest Fund	-
USB - Debt Service Fund	2,391,990
USB - Debt Service Reserve Fund	7,594,589
Total Series 2016 Bond Bank Balance	**132,213,329**
Series 2017 Refunding Bond:	
BOG - Construction Account	8,591,217
BOG - Cost of Issuance Fund	47,545
USB - Debt Service Fund	3,445,735
USB - Debt Service Reserve Fund	7,566,460
Total Series 2017 Refunding Bond Bank Balance	**19,650,956**

Guam Waterworks Authority	Date: 5/3/2018 Time:

GUAM WATERWORKS AUTHORITY

WATER DISTRIBUTION FACILITIES REPORT

REVIEWS			
TOTAL PUMPS INSTALLED	51	OVERAL AVERAGE	92%
TOTAL PUMPS OPERATIONAL	47	% OF OPERATING PUMPS	92%
TOTAL BOOSTER PUMP STATIONS	25		

Northern District

NO:	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	PUMP AND MOTOR INVENTORY
1	Gayinero	20	2	2	100%	OP	A						
2	Mataguac	25	2	2	100%	OP	A						
3	Santa Rosa	15	2	2	100%	OP	A						
4	Hyundai	40	2	1	50%	OP	A	Pump # 1 requires pump and motor.					
5	Access	60	2	2	100%	OP	A						
6	Chln. Palauan	5	2	2	100%	N/A						CIP required for new unit and electrical for generator	
7	Nimitz Hill	7.5	2	2	100%	N/A						CIP required for new unit and electrical for generator	
8	Adawag	1.5	2	2	100%	N/A						CIP required for new unit and electrical for generator	
9	Pale Kiren	1	1	1	100%	N/A						CIP required for new unit and electrical for generator	
10	Ulloa/Untalan	1	2	2	100%	OP	A						
11	Latte Heights	15	2	2	100%	OP	A						
	TOTAL = 11		**21**	**20**	**95%**								
pump availability =no of operational pumps/no of pumps*100%													

Central District

NO:	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	UPDATES
1	Pago	150 / 100	3	2	67%	0P	A			ASSESING PUMP 3 MOTOR		Removed and at vendor 4/25/18 (Rewind)	PENDING RFQ APPROVAL
2	Brigade	60	3	3	100%	OP	A			Generator inadequate for 2 pump operation			
3	Windward Hills	200 / 75	3	3	100%	OP	A	All pumps operational.					
4	Santa Rita Spring	40	2	2	100%	OP	A						
5	Santa Ana (Lower)	25	2	1	50%	N/A		CHECK VALVE P1 NOT OPENING		Unable to secure discharge valve. Need to schedule an outage for area to make repairs		CIP required for new unit and electrical for generator	Need to schedule valve repairs
6	Camacho	1	1	1	100%	N/A						CIP required for new unit and electrical for generator	
7	Tenorio	1.5	1	1	100%	N/A						CIP required for new unit and electrical for generator	
	Total=7		**15**	**13**	**87%**								
pump availability =no of operational pumps/no of pumps*100%													

Southern District

NO:	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	UPDATES
1	Malojloj Line	125 / 50	3	2	67%	OP	A	PUMP 3		ASSESING P3 MOTOR		Removed and at vendor 4/25/18 (Rewind)	PENDING RFQ APPRVAL
2	Geus	25	2	2	100%	OP	A						
3	Pigua	7.5	2	2	100%	N/A						CIP required for new unit and electrical for generator	
4	Toguan	25	2	2	100%	OP	A						
5	WBP-2	25	2	2	100%	OP	A						
6	WBP-1	5	2	2	100%	OP	A						
7	Malojloj Elevated	15	2	2	100%	OP	A						
	Total=7		**15**	**14**	**93%**								
pump availability =no of operational pumps/no of pumps*100%													

GUAM WATERWORKS AUTHORITY

Guam Waterworks Authority

VEHICLE FLEET STATUS

5/8/2018

EQUIPMENT STATUS				
Description	Number of Equipment	Number of Equipment Available	Number of Equipment Not Available	Percentage
Backhoe	5	2	3	40%
Bobcat	1	1	0	100%
Boom Truck	2	1	1	50%
Crane	2	1	1	50%
Dump Truck	3	1	2	33%
Flat Bed	1	0	1	0%
Forklift	7	6	1	86%
Fuel Tanker	1	1	0	100%
Heavy Duty	3	1	2	33%
Light	160	109	51	68%
Mini Backhoe	4	0	4	0%
Pumper Truck	1	1	0	100%
Skidster	1	1	0	100%
Sludge Truck	5	5	0	100%
Tow	1	0	1	0%
Tractor	2	2	0	100%
Tractor Mower	1	1	0	100%
Trailer	14	11	3	79%
Trencher	1	1	0	100%
Vaccon	1	1	0	100%
Vacuum Truck	3	2	1	67%
Water Buffalo	2	2	0	100%
Water Tanker	5	1	4	20%
Total	226	151	75	

SUMMARY						
Operational	Operational w/Rprs Pending	In Shop-Accident Repairs	In Shop-Assessment Pending	In Shop-Repairs Pending	In Shop-Vendor Repairs	Recommend Survey
2	0	0	0	1	0	2
1	0	0	0	0	0	0
1	0	0	0	1	0	0
0	1	0	0	0	0	1
1	0	0	0	2	0	0
0	0	0	0	0	0	1
6	0	0	0	0	0	1
1	0	0	0	0	0	0
1	0	0	0	0	1	1
108	1	1	4	5	8	33
0	0	0	0	2	2	0
1	0	0	0	0	0	0
1	0	0	0	0	0	0
5	0	0	0	0	0	0
0	0	0	0	0	0	1
2	0	0	0	0	0	0
1	0	0	0	0	0	0
11	0	0	0	1	0	2
1	0	0	0	0	0	0
1	0	0	0	0	0	0
2	0	0	0	0	1	0
2	0	0	0	0	0	0
1	0	0	0	0	3	1
149	2	1	4	12	15	43

GUAM WATERWORKS AUTHORITY

WASTEWATER COLLECTION REPORT

MONTHLY REPORT

APRIL 2018



CCTV INSPECTIONS AND SEWER CLEANING
APRIL 2018

APR. 01 - APR. 07	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3267		6,534
Feet Completed	7255			7255
	222.07%	0.00%		111%

APR. 08 – APR. 14	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3267		6,534
Feet Completed	5883			5883
	180%	0%		90%

APR. 15 – APR. 21	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3267		6,534
Feet Completed	7,692.00			7692
	235%	0%		118%

APR. 22 – APR. 28	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3267		6,534
Feet Completed	13517			13517
	414%	0%		207%

APR. 29 – APR. 30	Team #1	Team #2	Vendor	Total
Feet Scheduled				
Feet Completed				

	January	February	March	April	May	June
SEWER CLEANING	2.86	6.09	2.81	6.50	0.00	0.00

TOTAL FEET SCHEDULED	26,136
TOTAL FEET COMPLETED	34,347
TOTAL MILES FOR THE MONTH	6.5
TOTAL MILES SCHEDULED	5.0
PERCENTAGE COMPLETED	130%

PUMPING STATION TROUBLE CALLS 2018

Apr. 01 - 07	CREATED	COMPLETED	PENDING
NORTHERN	3	3	0
CENTRAL	5	5	0
SOUTHERN	1	1	0
TOTAL	9	9	0

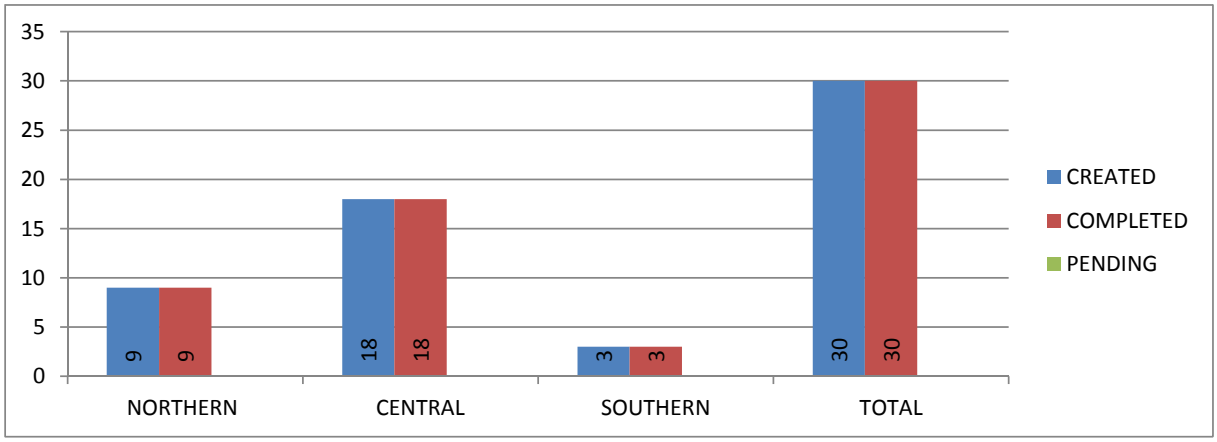
Apr. 08 – 14	CREATED	COMPLETED	PENDING
NORTHERN	3	3	0
CENTRAL	4	4	0
SOUTHERN	0	0	0
TOTAL	7	7	0

Apr. 15 – 21	CREATED	COMPLETED	PENDING
NORTHERN	1	1	0
CENTRAL	5	5	0
SOUTHERN	1	1	0
TOTAL	7	7	0

Apr. 22 – 28	CREATED	COMPLETED	PENDING
NORTHERN	2	2	0
CENTRAL	4	4	0
SOUTHERN	1	1	0
TOTAL	7	7	0

Apr. 29 – 30	CREATED	COMPLETED	PENDING
NORTHERN	0	0	0
CENTRAL	0	0	0
SOUTHERN	0	0	0
TOTAL	0	0	0

	CREATED	COMPLETED	PENDING
NORTHERN	9	9	0
CENTRAL	18	18	0
SOUTHERN	3	3	0
TOTAL	30	30	0



MAINTENANCE PREVENTIVE AND CORRECTIVE CALL OUTS

04/02/18 – 04/06/18	PREVENTIVE	CORRECTIVE
NORTHERN	14	2
CENTRAL	12	6
SOUTHERN	16	1
TOTAL	42	9

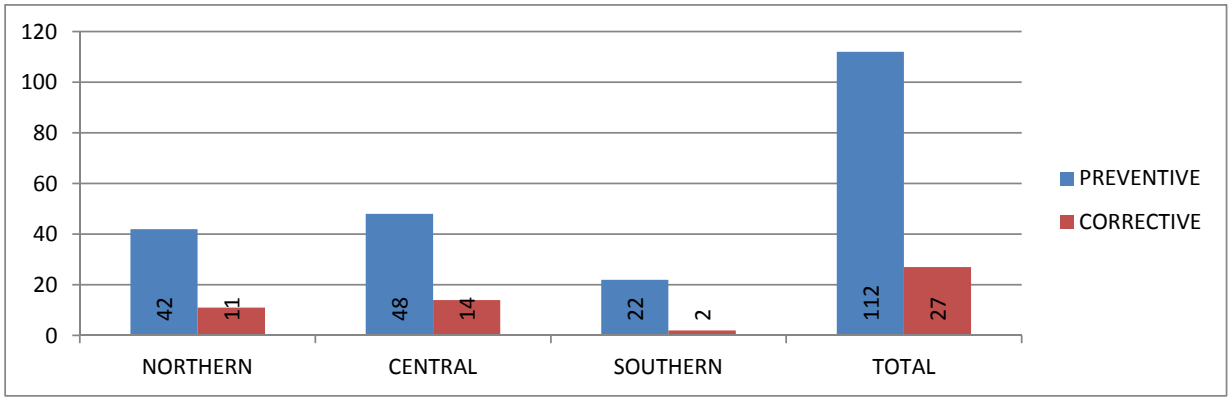
04/09/18 – 04/13/18	PREVENTIVE	CORRECTIVE
NORTHERN	16	3
CENTRAL	20	2
SOUTHERN	6	0
TOTAL	42	5

04/16/18 – 04/20/18	PREVENTIVE	CORRECTIVE
NORTHERN	0	5
CENTRAL	8	1
SOUTHERN	0	0
TOTAL	8	6

04/23/18 – 04/27/18	PREVENTIVE	CORRECTIVE
NORTHERN	12	1
CENTRAL	0	3
SOUTHERN	0	1
TOTAL	12	5

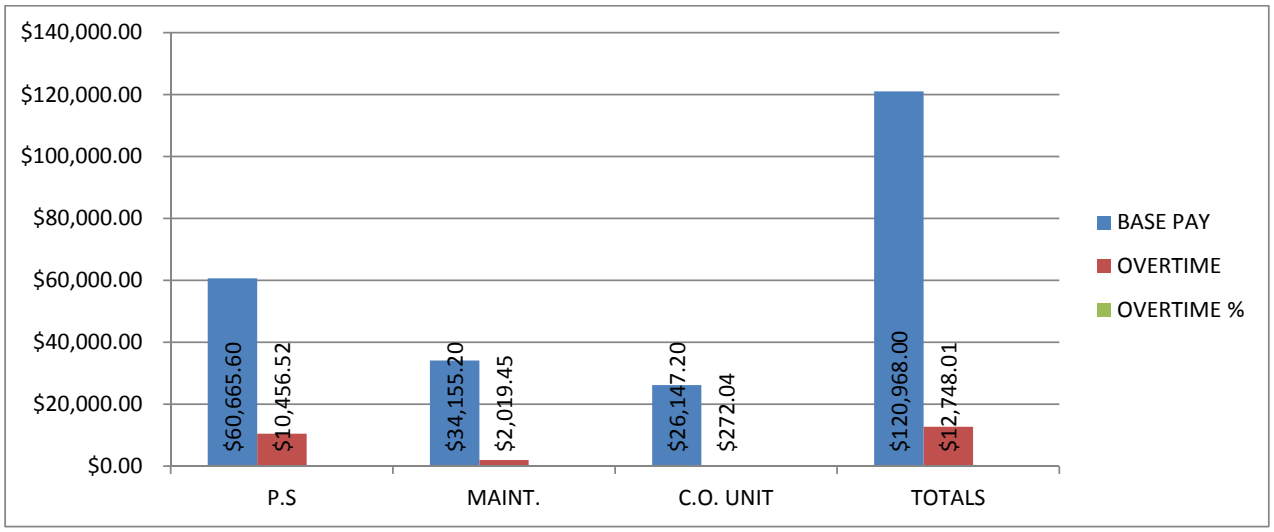
04/30/18	PREVENTIVE	CORRECTIVE
NORTHERN	0	0
CENTRAL	8	2
SOUTHERN	0	0
TOTAL	8	2

04/01/18 – 04/30/18	PREVENTIVE	CORRECTIVE
NORTHERN	42	11
CENTRAL	48	14
SOUTHERN	22	2
TOTAL	112	27



BASE PAY VS OVERTIME

	BASE PAY	OVERTIME	OVERTIME %
PUMPING STATION	$60,665.60	$10,456.52	17%
MAINTENANCE	$34,155.20	$2,019.45	6%
COURT ORDER UNIT	$26,147.20	$272.04	1%
TOTALS	$120,968.00	$12,748.01	24%



Guam Waterworks Authority	Date: 5/4/2018
	Time:

REVIEWS

TOTAL PUMPS INSTALLED	169	OVERAL AVERAGE	85%
TOTAL PUMPS OPERATIONAL	144	% OF OPERATING PUMPS	85%
TOTAL PUMP STATIONS	78		

GUAM WATERWORKS AUTHORITY

WASTEWATER FACILITIES REPORT

Northern District

NO:	FACILITY	Priority Listing	NO OF INSTALLED	NO OF OPERATIONAL	PUMP AVAILABILITY %	Pump NO.	Action Required	Ref. No./Date	PUMP UNIT REMARKS	Additional Remarks
1	FUJITA					1				
						2				
						3	Pump #3 suction valve damaged (unable to close). 4.12.18 found replacement valve in the warehouse, working with engineers on the OMCP to shut down the station to make change out to the valve. Pumper trucks OR's awaiting			
						4				
			4	4	100%					
2	Southern Link					1				
						2				
						3				
						4	Pump #4 suction clogged			VFD place on CIP funding awaiting approval 11/16/17
			4	3	75%					
3	Route #16					1	Said pump burnt and removed on 4/13/18.			
							Pump #1 taken to Washland on 5/04/18 for repairs.	PO #302211 OQ#32462		
						2				
						3	Pump #3 impeller and bolt on shaft broken and removed for repairs. Pump #4 being utilized temporarily on line#3. 4/13/18			
						4	Pump #4 removed and installed on pump line #3 on 4/13/18. Pump VFD Issues			working with JMI on VFD issues.
			4	2	50%					
4	HARMON					1				
						2	Pump #2 at Washland for open winding. Vendor is still waiting on parts for pump as of 3/30/18.	PO #301753		
			2	1	50%					
5	MACHECHE					1				
							PS #20 pump			
			2	2	100%					
6	LATTE DOUBLE TROUBLE					1				
						2				
			2	2	100%					
7	LATTE SUBMARINE					1				
						2				
			2	2	100%					
8	MACHANAO					1				
						2				
			2	2	100%					
9	YPAOPAO ESTATES					1				
						2				
						3				
			3	3	100%					
10	PGD					1				
						2	Removed on 4/26/18 as per Ed Aguon.			
							Said pump sent to JMI EDISON for bearing replacement and repair of mechanical seals. Awaiting PO	OQ #32496 / OR #32287		
			2	1	50%					

11	LATTE PLANTATION					1					
						2					
			2	2	100%						
12	PASEO DE ORO					1					
						2					
			2	2	100%						
13	ASTUMBO #1					1					
						2					
			2	2	100%						
14	ASTUMBO #2					1					
						2					
			2	2	100%						
15	FEMA '96					1					
						2					
			2	2	100%						
16	LATTE SUN RISE					1					
						2					
			2	2	100%						
17	HAFA ADAI					1					
						2					
			2	2	100%						
18	PACIFIC LATTE					1					
						2					
			2	2	100%						
19	SANTA ANA					1					
						2					
			2	2	100%						
20	ZERO DOWN					1					
						2					
			2	2	100%						
21	Yigo PS					1					
						2					
						3	Pump #3 awaiting installation of discharge valve. Shutdown of station needed. Detry, Ben Lujan & PGE Pumper Trucks. **Awaiting approval on other pumper trucks.**	**Detry: PO 302076 Ben Lujan: OR #31652 PGE: OR #31659**			
			3	2	67%						
22	Ypao PS					1					
						2					
			2	2	100%						
	Northern TP						**Bar Screen still off-line. Solenoid valve for the water line is defective causing auger not to operate.**	**3/30/2018**			
							Awaiting SCADA system part for solenoid. 4/13/18	**OQ#32361 / OR #32335**			awaiting for vendor's feed back. JMI / Frontiers
	TOTAL = 22		**52**	**46**	**88%**						

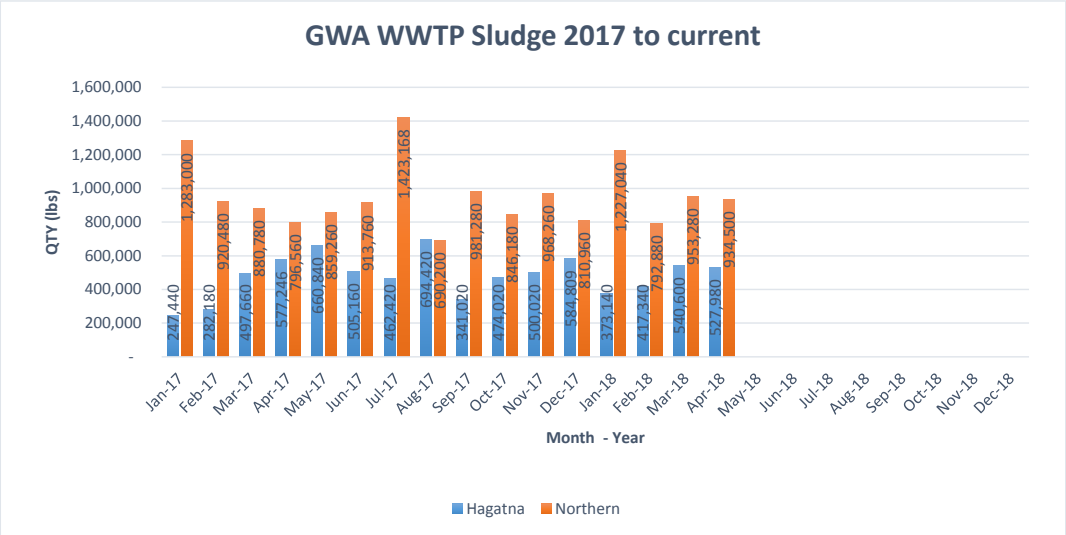
Central District

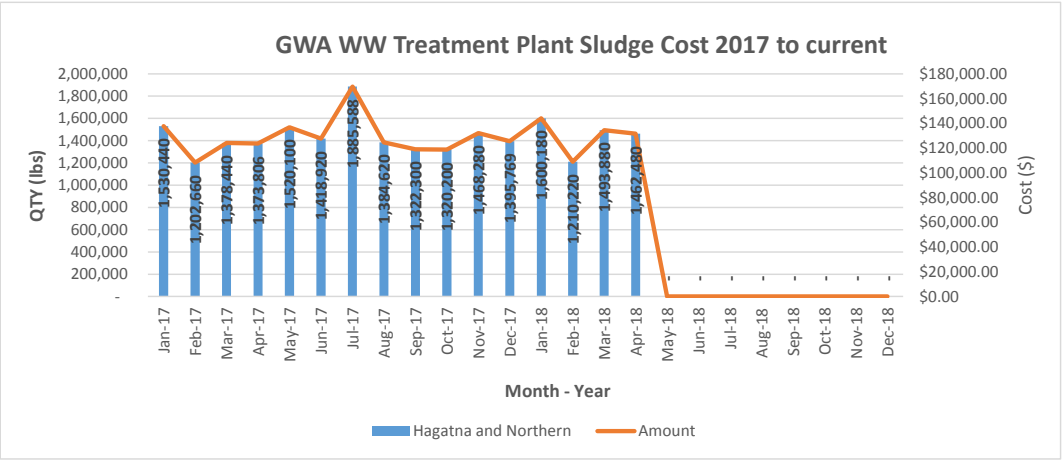
NO:	FACILITY	Priority Listing	NO OF INSTALLED	NO OF OPERATIONAL	PUMP AVAILABILITY %	Pump NO.	Action Required	Ref. No./Date	PUMP UNIT REMARKS	Additional Remarks
1	AGANA MAIN					1				
						2	Pump #2 taken out (2/13/18) and sent to JMI due to seals leaking. Awaiting PO.	OQ#32161 OR#31950 2/21/18		
						3				
						4				
			4	3	75.00%					
2	CHAOT					1				
						2				
						3				
			3	3	100.00%					
3	MAMAJANAO					1	Off-line awaiting eccentric reducer	OQ#31721 (12/07/18) OR #31551(12/14/17)		looking at flygt pump on there new horizontal installation. And replacing the DWF pump to a WWF pump.
						2				
						3				
			3	2	66.67%					
4	BARRIGADA					1				
						2				
			2	2	100.00%					
5	BAYSIDE					1	Existing pump was extracted due to experiencing surges. Bigger pump (Sulzer Sn0006585) installed. Requested J. Quinata to monitor pumping operations due to line being surged upon new **Upon observation by J. Quinata. Surging still happening at the pump station wet well. Maintenance is coordinating with Engineering Dept. to see if abondoning manhole in place would alleviate I&I.**	**4/13/2018**		
			1	1	100.00%					
6	TA'I MANGILAO					1				
						2	Seal failure/pump at Washland for rewinding.	OQ#31870(01/02/18) OR#31663(01/05/18)		
						3				
			3	2	66.67%					
7	MONGMONG/TOTO					1				
						2				
			2	2	100.00%					
8	PAGO DOUBLE					1	secured & needs to be replaced**/CIP** approved pending final review from finance.			
						2				
						3				
			3	2	66.67%					
9	MANGILAO					1	Impeller needed for pump #1	OQ#31892(01/05/18) OR#31765(01/25/18)		
							Pump #1 at JMI for repair (SULZER ABS Ser. No. 001922)	OQ#31890(01/05/18) OR#31686(01/09/18)		
						2	Awaiting eccentric reducers for discharge line / Pump #2 temporary online on line #1	OQ#31461(11/01/17) OR#31558(12/15/18)		
			2	1	50.00%					
10	PITI					1				
						2	**Pump #2 taken to JMI EDISON due to water in the oil chamber. Said pump is supposedly still under warranty.**			
			2	1	50.00%					
						1				

11	ASAN					2				
			2	2	100.00%					
12	SINAJANA					1				
						2				
			2	2	100.00%					
13	DAIRY ROAD					1				
						2				
			2	2	100.00%					
14	FADIAN					1				
						2				
			2	2	100.00%					
15	FLORA GARDENS					1				
						2				
			2	2	100.00%					
16	ORDOT					1				
						2				
			2	2	100.00%					
17	CHALAN PAGO #5					1	Pump #1 at @Washland for rewinding.	?		
						2				
			2	1	50.00%					
18	COMMERCIAL PORT					1				
						2				
						3				
			3	3	100.00%					
19	CHALAN PAGO #3					1				
						2				
			2	2	100.00%					
20	CABRAS ISLAND					1				
						2				
			2	2	100.00%					
						1				

	Hagatna		Northern		Hagatna and Northern	
2017	Qty	Amount	Qty	Amount	Qty	Amount
Month- Yr	lbs	$	lbs	$	lbs	$
Jan-17	247,440	$22,269.60	1,283,000	$115,470.00	1,530,440	$137,739.60
Feb-17	282,180	$25,396.20	920,480	$82,843.20	1,202,660	$108,239.40
Mar-17	497,660	$44,789.40	880,780	$79,270.20	1,378,440	$124,059.60
Apr-17	577,246	$51,952.14	796,560	$71,690.40	1,373,806	$123,642.54
May-17	660,840	$59,475.60	859,260	$77,333.40	1,520,100	$136,809.00
Jun-17	505,160	$45,464.40	913,760	$82,238.40	1,418,920	$127,702.80
Jul-17	462,420	$41,617.80	1,423,168	$128,085.12	1,885,588	$169,702.92
Aug-17	694,420	$62,497.80	690,200	$62,118.00	1,384,620	$124,615.80
Sep-17	341,020	$30,691.80	981,280	$88,315.20	1,322,300	$119,007.00
Oct-17	474,020	$42,661.80	846,180	$76,156.20	1,320,200	$118,818.00
Nov-17	500,020	$45,001.80	968,260	$87,143.40	1,468,280	$132,145.20
Dec-17	584,809	$52,632.81	810,960	$72,986.40	1,395,769	$125,619.21
Grand Total	5827235	$524,451.15	11373888	$1,023,649.92	17201123	$1,548,101.07

	Hagatna		Northern		Hagatna and Northern	
2018	Qty	Amount	Qty	Amount	Qty	Amount
Month- Yr	lbs	$	lbs	$	lbs	$
Jan-18	373,140	$33,582.60	1,227,040	$110,433.60	1,600,180	$144,016.20
Feb-18	417,340	$37,560.60	792,880	$71,359.20	1,210,220	$108,919.80
Mar-18	540,600	$48,654.00	953,280	$85,795.20	1,493,880	$134,449.20
Apr-18	527,980	$47,518.20	934,500	$84,105.00	1,462,480	$131,623.20
May-18		$0.00		$0.00	-	$0.00
Jun-18		$0.00		$0.00	-	$0.00
Jul-18		$0.00		$0.00	-	$0.00
Aug-18		$0.00		$0.00	-	$0.00
Sep-18		$0.00		$0.00	-	$0.00
Oct-18		$0.00		$0.00	-	$0.00
Nov-18		$0.00		$0.00	-	$0.00
Dec-18		$0.00		$0.00	-	$0.00
Grand Total	1859060	$167,315.40	3907700	$351,693.00	5766760	$519,008.40


GWA WWTP Sludge 2017 to current
QTY (lbs)
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
-
247,440
1,283,000
282,180
920,480
497,660
880,780
577,246
796,560
660,840
859,260
505,160
913,760
462,420
1,423,168
694,420
690,200
341,020
981,280
474,020
846,180
500,020
968,260
584,809
810,960
373,140
1,227,040
417,340
792,880
540,600
953,280
527,980
934,500
Jan-17
Feb-17
Mar-17
Apr-17
May-17
Jun-17
Jul-17
Aug-17
Sep-17
Oct-17
Nov-17
Dec-17
Jan-18
Feb-18
Mar-18
Apr-18
May-18
Jun-18
Jul-18
Aug-18
Sep-18
Oct-18
Nov-18
Dec-18
Month - Year
Hagatna
Northern

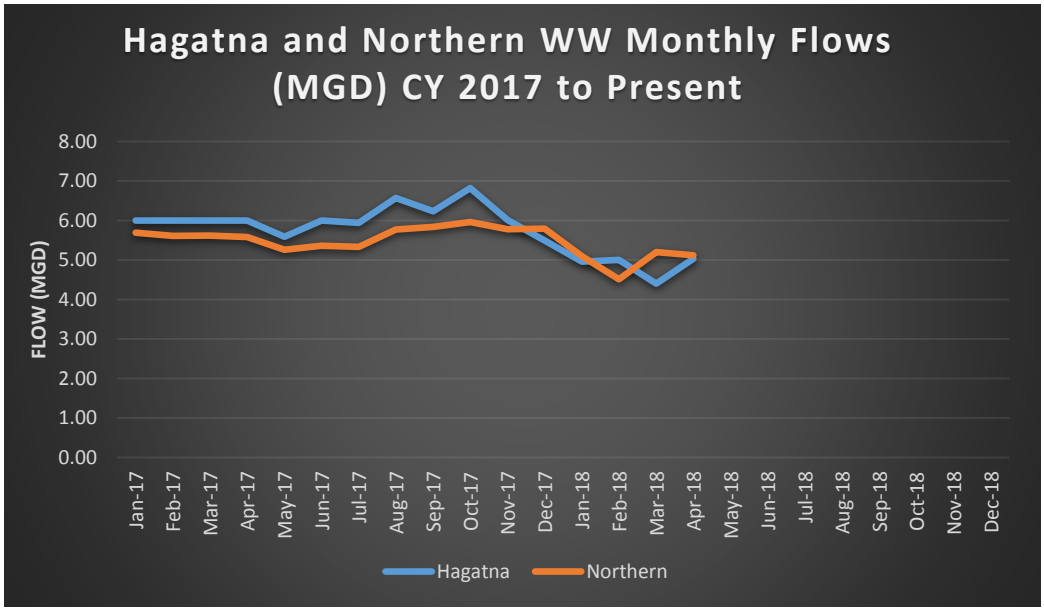

GWA WW Treatment Plant Sludge Cost 2017 to current
QTY (lbs)
2,000,000
1,800,000
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
-
Cost ($)
$180,000.00
$160,000.00
$140,000.00
$120,000.00
$100,000.00
$80,000.00
$60,000.00
$40,000.00
$20,000.00
$0.00
1,530,440
1,202,660
1,378,440
1,373,806
1,520,100
1,418,920
1,885,589
1,384,620
1,322,300
1,320,200
1,468,280
1,395,769
1,600,180
1,210,220
1,493,880
1,462,480
Jan-17
Feb-17
Mar-17
Apr-17
May-17
Jun-17
Jul-17
Aug-17
Sep-17
Oct-17
Nov-17
Dec-17
Jan-18
Feb-18
Mar-18
Apr-18
May-18
Jun-18
Jul-18
Aug-18
Sep-18
Oct-18
Nov-18
Dec-18
Month - Year
Hagatna and Northern
Amount

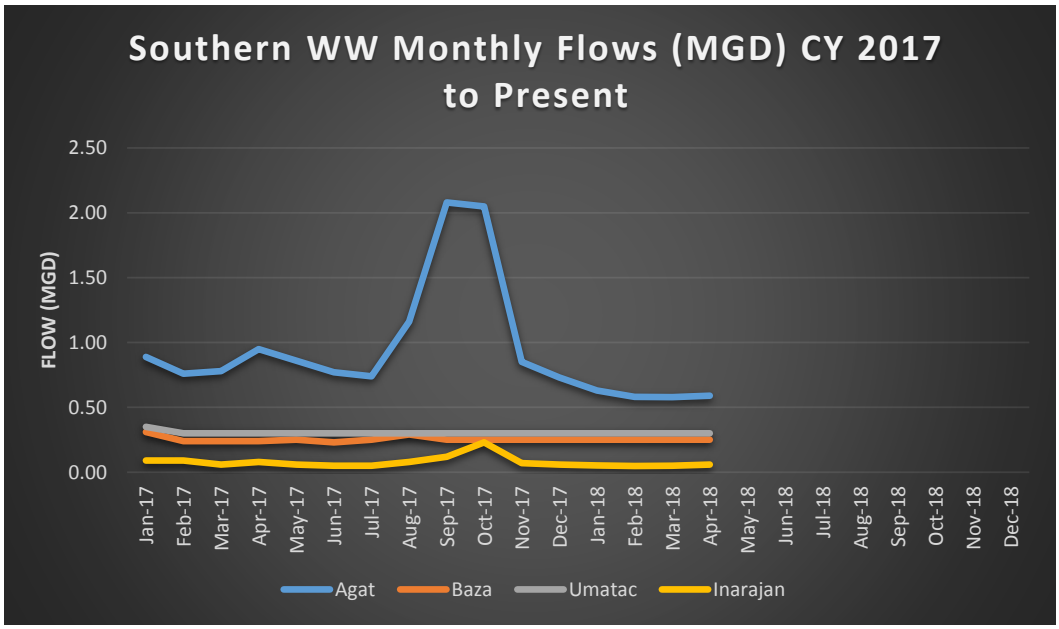
Wastewater Treatment Plant Average Monthy Flows Million Gallons Per Day

2017	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
Jan-17	6.00	5.69	0.89	0.31	0.35	0.09
Feb-17	6.00	5.61	0.76	0.24	0.30	0.09
Mar-17	6.00	5.62	0.78	0.24	0.30	0.06
Apr-17	6.00	5.58	0.95	0.24	0.30	0.08
May-17	5.59	5.26	0.86	0.25	0.30	0.06
Jun-17	6.00	5.36	0.77	0.23	0.30	0.05
Jul-17	5.94	5.33	0.74	0.25	0.30	0.05
Aug-17	6.57	5.77	1.16	0.29	0.30	0.08
Sep-17	6.23	5.84	2.08	0.25	0.30	0.12
Oct-17	6.82	5.96	2.05	0.25	0.30	0.23
Nov-17	6.01	5.78	0.85	0.25	0.30	0.07
Dec-17	5.49	5.79	0.73	0.25	0.30	0.06
2017 Average MGD	**6.05**	**5.63**	**1.05**	**0.25**	**0.30**	**0.09**
2017 Total MGY	2,210	2,056	384	93	111	32

2018	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
Jan-18	4.96	5.10	0.63	0.25	0.30	0.05
Feb-18	5.00	4.51	0.58	0.25	0.30	0.05
Mar-18	4.40	5.20	0.58	0.25	0.30	0.05
Apr-18	5.03	5.12	0.59	0.25	0.30	0.06
May-18						
Jun-18						
Jul-18						
Aug-18						
Sep-18						
Oct-18						
Nov-18						
Dec-18						
2018 Average MGD	**4.85**	**4.98**	**0.60**	**0.25**	**0.30**	**0.05**
2018 Total MGY	1,769	1,819	217	91	110	19

GWA WWT Flow Report 2013 to Present, prepared by kcog/df, 5/9/2018





GWA WWT Flow Report 2013 to Present, prepared by kcog/df, 5/9/2018

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671) 648-3002 | guamccu.org

GUAM WATERWORKS AUTHORITY WORK SESSION
CCU Conference Room
4:30 p.m., Thurs., July 19, 2018

AGENDA

1. **ISSUES FOR DECISION**
   - 1.1 **Relative to the Approval of the GPA-GWA SOP for Computer, Software, License, E-Mail, Internet, and Standard of Conduct / GWA Resolution 38-FY2018 & GPA Resolution 2018-14**
   - 1.2 **Relative to the Creation of the Utility Laboratory Technician Series of Positions / Resolution No. 39-FY2018**
   - 1.3 **Relative to Approval of Contracts for the Route 4 Relief Sewer Line Rehabilitation and Replacement Project / Resolution No. 40-FY2018**

2. **GM REPORT**
   - 2.1 **GM Summary**

3. **ISSUES FOR DISCUSSION**

4. **DIVISION REPORTS**
   - 4.1 **Communications**
   - 4.2 **Compliance & Safety**
   - 4.3 **Customer Service**
   - 4.4 **Engineering**
   - 4.5 **Finance**
   - 4.6 **Operations**

5. **ANNOUNCEMENTS**
   - 5.1 **Next CCU Meetings: CCU Meeting: 7/24/18**

6. **ADJOURNMENT**

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

Issues for Decision

Resolution No. GPA 2018-14 & GWA 38-FY2018:

Relative to CCU CYBERSECURITY POLICIES AND PROCEDURES

What is the project's objective and is it necessary and urgent?

The CCU instituted the Cybersecurity Committee in 2017 to serve as the advisory and oversight group regarding information technology, infrastructure, and cybersecurity. The committee's responsibilities include the Guam Power Authority and Guam Waterworks Authority (GPWA) information technology systems, which includes policies, controls, risk mitigation, and infrastructure asset protection. A network security assessment recommended that GPWA develop common objectives and controls by establishing common policies, procedures, and business processes to manage risks.

The Cybersecurity initiative resulted in the formation of guidelines to ensure consistency and adequate protection and safeguards to GPWA systems, and resulted in the Password Creation and Protection Policy, the Computer, Software, License, E-mail, Internet, and Standard of Conduct policy, and the Network and Data System Access Policy.

Where is it located or covers?

This will cover all GPWA infrastructure, assets and information technology systems.

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
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GPA RESOLUTION NO. 2018-14
GWA RESOLUTION NO. 38-FY2018

CCU CYBERSECURITY POLICIES AND PROCEDURES

WHEREAS, the CCU instituted the Cybersecurity Committee in 2017 to serve as the advisory and oversight group regarding information technology, infrastructure, and cybersecurity. The committee's responsibilities include the Guam Power Authority and Guam Waterworks Authority (GPWA) information technology systems, which includes policies, controls, risk mitigation, and infrastructure asset protection; and

WHEREAS, a network security assessment recommended that GPWA develop common objectives and controls by establishing common policies, procedures, and business processes to manage risks; and

WHEREAS, the Cybersecurity initiative resulted in the formation of guidelines to ensure consistency and adequate protection and safeguards to GPWA systems, and resulted in the Password Creation and Protection Policy, the Computer, Software, License, E-mail, Internet, and Standard of Conduct policy, and the Network and Data System Access Policy.

NOW THEREFORE, BE IT RESOLVED, by the Consolidated Commission on Utilities, as follows:

1. The Guam Power Authority and Guam Waterworks Authority General Managers are hereby authorized to implement and update the Cybersecurity policies for GPWA as required.

RESOLVED, that the Chairman of the Commission certifies and the Secretary of the Commission attests the adoption of this Resolution.

DULY and REGULARLY ADOPTED this 24th day of July,2018.

Certified by: **Attested by:**

JOSEPH T. DUENAS
CHAIRMAN

J. GEORGE BAMBA
SECRETARY

I, J. GEORGE BAMBA, Secretary for the Consolidated Commission on Utilities do hereby certify that the foregoing is a full, true, and correct copy of the resolution duly adopted at a regular meeting of the members of Guam's Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

Ayes: _____

Nays: _____

Absent: _____

Abstain: _____

GUAM WATERWORKS AUTHORITY
"Better Water. Better Lives."
Suite 200; Gloria B. Nelson Public Service Building | 688 Route 15, Mangilao, Guam 96913
P.O. Box 3010, Hagatna, Guam 96932
Tel. No. (671) 300-6846 Fax No. (671) 300-6896

Issues for Decision

Resolution No. 39-FY2018
Relative to the Creation of the Utility Laboratory Technician I, Utility Laboratory Technician II, Laboratory Technician Leader and Utility Laboratory Technician Supervisor positions at the Guam Waterworks Authority.

What is the project's objective and is it necessary and urgent?
The Guam Waterworks Authority (GWA) has determined a need to update the job standards for Laboratory Technician series positions to efficiently and effectively perform duties and functions of the GWA's Laboratory section. The creation of these positions is necessary to help direct and manage GWA's wide sampling activities in connection with water and wastewater operations.

The job specifications currently being utilized by GWA was initially created for use at the Government of Guam's line departments and agencies, established in 1980. Furthermore, the existing job standards are inconsistent with the updated and current operating procedures and practices of our laboratory technicians. GWA Laboratory technicians are unique in duties and responsibilities compared to other government of Guam agencies.

GWA laboratory technicians collect samples from shorelines, wastewater treatment plants, rivers, production wells, water treatment facilities and various locations within our distribution system and analyze water samples for various physical and chemical constituents (Calcium and Total Hardness, Chlorides, Alkalinity, Conductivity, pH, Temperature, Turbidity and Bacteria content) which makes it unique from other government of Guam agencies.

Where is the location?
The Utility Laboratory Technician series will be organizationally located within the Compliance and Safety Department, under the direction of the Monitoring Laboratory Services Administrator.

How much will it cost?
There is no cost to create positions. Upon approval of the proposed positions, GWA HR will conduct a classification review of the existing staff to ensure appropriate classification of the positions considered for approval. There will be no impact on the slotting to the updated implementation ranges based on the 10th market percentile (2017 market data) approved by the CCU.

When will it be completed?
Public Law 28-159, Section 7.0.3 (c) requires GPA and GWA to post a petition on their websites for ten (10) days (not including Saturdays, Sundays and government of Guam holidays). After the 10 days posting, the petition can then be forwarded to the CCU for their disposition at any regularly scheduled meeting. GWA has met the posting requirements.

Additionally, Guam law requires notice of such posting to each newspaper of general circulation and broadcasting station which airs regular news programs within Guam.

What is the funding source?
GWA will certify funding for the position available for the filling and retention of its certified, technical and professional newly created position. The funding of this position does not have an impact on the General Fund.

The RFP/BID responses (if applicable): N/A

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

RESOLUTION NO. 39-FY2018

RELATIVE TO THE CREATION OF THE UTILITY LABORATORY TECHNICIAN SERIES OF POSITIONS

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, the GWA General Manager requests the CCU to approve the creation of the Utility Laboratory Technician series of positions; and

WHEREAS, the GWA General Manager requests the CCU to approve the classification standards of the Utility Laboratory Technician series of positions in the classified status; and

WHEREAS, Public Law 28-112 and 4 GCA §6303 (d) authorizes the creation of positions in Autonomous Agencies and Public Corporations; and

WHEREAS, GWA Personnel Rules and Regulations as amended by Public Law 28-159 Section 3 (C) authorizes the CCU to amend, modify or add a position to the list of certified, technical and professional positions;

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities, as the Governing Body of the Guam Waterworks Authority, does hereby approve and authorize the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The creation and the job classification standards for the Utility Laboratory Technician series of positions in the classified status is hereby approved and attached herein as Exhibit A.
3. The Utility Laboratory Technician series of positions is hereby added to the certified, technical and professional list of positions at GWA.

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 24th day of July, 2018.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS **J. GEORGE BAMBA**
Chairperson Secretary

SECRETARY'S CERTIFICATE

I, **J. George Bamba**, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

2

DRAFT

Exhibit A

UTILITY LABORATORY TECHNICIAN I

NATURE OF WORK:

Utility Laboratory Technician I performs routine technical laboratory duties after initial training and work under closer supervision on a variety of semi complex developmental assignments.

Employees in this class assist in the collection and perform routine analysis of water and wastewater samples for chemical and micro-biological content in accordance with Standard Methods for the Examination of water and wastewater, the Safe Drinking Water Act and the Clean Water Act.

ILLUSTRATIVE EXAMPLES OF WORK: (Any one position may not include all the duties listed, nor do the examples cover all the duties which may be performed)

Provides routine support and assistance to laboratory personnel in processing and field testing of various laboratory duties.

Prepares samples for field testing, sterilizes equipment, basic calibration of equipment as recommended and general cleaning duties.

Conducts routine maintenance work of equipment to ensure working order of equipment and ensures necessary supplies are available to perform field testing.

Performs routine work collecting samples from the distribution lines, deep well and surface water sources.

Performs routine work collecting water samples from customer complaints of dirty water, bad odor, or high chlorine contents.

Assists in disinfecting tankers and new water lines.

Performs routine work testing water for bacteriological contamination and chlorine residual.

Performs routine work collection of samples of off shore, shoreline, wastewater treatment plant influent/effluent and various rivers as well as any discharges into the rivers as required.

Conducts routine field tests on potable water samples for chemical analysis such as: Calcium and Total Hardness, Chlorides, Alkalinity, Conductivity, pH, Temperature, Turbidity and Bacteria content.

Conducts routine field tests on Settleable, Suspended and Total Solids, ph Fecal Coliform, E-Coli, Enterococci and Biochemical Oxygen Demand.

Logs data into assigned logbooks and inputs required information into the LIMS (Laboratory Information Management System) computer program daily, after initial training.

Creates work orders for daily assigned tasks.

Assists in minor repair of laboratory equipment.

Performs related duties as assigned.

MINIMUM KNOWLEDGE, ABILITIES AND SKILLS:

Knowledge of laboratory testing procedures, principles, techniques, terminology, protocols and equipment.

Knowledge of basic laboratory equipment maintenance, calibration and troubleshooting and sterilization.

Knowledge of laboratory safety protocols, including, but not limited to, use of personal protective equipment (PPE's), proper laboratory techniques, disposal of bio-hazard, etc.

Knowledge of basic of LIMS (Laboratory Information Management System) computer program.

Ability to learn and apply basic principles of the physical and biological sciences, as applied to particular laboratory assignment.

Ability to operate and conduct basic maintenance of laboratory equipment.

Ability to maintain records and prepare reports.

Ability to work effectively with the public and employees.

Ability to communicate effectively, orally and in writing.

Ability to follow specific procedures and observe and record results accurately.

Ability to work with computer systems and multiple software programs as required, according to company and departmental procedures.

MINIMUM EXPERIENCE AND TRAINING:

A. High School Diploma or successful completion of General Education Development (GED) test or any equivalent education high school program and successful completion of 18 credit hours in biology, chemistry, or closely related field and One (1) year of experience in a laboratory work; or

B) Any equivalent combination of experience and training which provides the minimum knowledge, abilities and skills.

ESTABLISHED: July 2018

PAYGRADE: MINIMUM: F3-A $30,811
MAXIMUM: F4-A $32,062

JOB EVALUATION POINTS: 469

JOSEPH T. DUENAS, CHAIRMAN
CONSOLIDATED COMMISSION ON UTILITIES

2 OF 2 – UTILITY LABORATORY TECHNICIAN I

UTILITY LABORATORY TECHNICIAN II

NATURE OF WORK:

Utility Laboratory Technician II performs semi-complex technical laboratory duties independently after initial training and works under closer supervision on a variety of complex developmental assignments.

Employees in this class collect and perform semi-complex analysis of water and wastewater samples for chemical and micro-biological content in accordance with Standard Methods for the Examination of water and wastewater, the Safe Drinking Water Act and the Clean Water Act.

ILLUSTRATIVE EXAMPLES OF WORK: (Any one position may not include all the duties listed, nor do the examples cover all the duties which may be performed)

Provides semi-complex support and assistance in processing samples for analysis, sterilizes equipment, more intricate calibration of equipment as recommended.

Maintains working order of equipment and supplies necessary to perform analysis of samples to include minor repairs on laboratory equipment when needed.

Performs semi-complex work collecting samples from the distribution lines, deep well and surface water sources.

Collects semi-complex water samples from customer complaints of dirty water, bad odor, or high chlorine contents.

Disinfects tankers and new water lines to include determining the amount of chlorine needed to provide a certain dosage.

Performs semi-complex analysis water for bacteriological contamination and chlorine residue.

Collects semi-complex sample collection for off shore, shoreline, wastewater treatment plant influent/effluent and various rivers as well as any discharges into the rivers as required.

Performs semi-complex analysis of potable water samples and analyzes for chemical analysis such as: Calcium and Total Hardness, Chlorides, Alkalinity, Conductivity, pH, Temperature, Turbidity and Bacteria content.

Performs semi-complex analysis of Settleable, Suspended and Total Solids, ph Fecal Coliform, E-Coli, Enterococci and Biochemical Oxygen Demand.

Performs semi-complex, non-routine chemical, biological or physical test and analysis as required in control operations of water and sewage.

Maintains records of all analytical work according to Laboratory Quality Assurance (QA) and Quality Control (QC) Plans and Standard Operating Procedures. Ensures all data is in compliance with the requirements of pre-schedule intervals.

Maintains various laboratory records and prepares reports. Inputs required information into the LIMS (Laboratory Information Management System) computer program.

Creates work orders for daily assigned tasks.

Repairs laboratory equipment as needed.

Performs related duties as assigned.

MINIMUM KNOWLEDGE, ABILITIES AND SKILLS:

Knowledge of laboratory testing procedures, principles, techniques, terminology, protocols and equipment in a water utility.

Knowledge of laboratory equipment maintenance, calibration and troubleshooting and sterilization used in a water utility.

Knowledge of laboratory safety protocols, including, but not limited to, use of personal protective equipment (PPE's), proper laboratory techniques, disposal of bio-hazard, etc. in a water utility.

Knowledge of basic principles of the physical and biological sciences, as applied to particular laboratory assignment in a utility.

Knowledge of computer systems and multiple software programs as required, according to company and departmental procedures used in a water utility.

Knowledge of LIMS (Laboratory Information Mana

gement System) computer program.

Ability to maintain records and prepare reports.

Ability to work effectively with the public and employees.

Ability to communicate effectively, orally and in writing.

Ability to make decisions in accordance with appropriate program guidelines

Ability to follow specific standard operating procedures and observe and record results accurately.

MINIMUM EXPERIENCE AND TRAINING;

A. Graduation from a recognized college or university with an Associate's degree in science or water technology with courses in microbiology, chemistry or related natural science; ***and*** two (2) years of experience as a Utility Laboratory Technician I; or

B) Any equivalent combination of experience and training which provides the minimum knowledge, abilities and skills.

ESTABLISHED: July 2018

PAYGRADE: MINIMUM: I2-D $39,476
MAXIMUM: I3-D $41,079

JOB EVALUATION POINTS: 576

JOSEPH T. DUENAS, CHAIRMAN
CONSOLIDATED COMMISSION ON UTILITIES

UTILITY LABORATORY TECHNICIAN LEADER

NATURE OF WORK:

Utility Laboratory Technician Leader performs complex technical laboratory duties independently.

Employees in this class collect and analyze more complex analysis of water and wastewater samples for chemical and micro-biological content in accordance with Standard Methods for the Examination of water and wastewater, the Safe Drinking Water Act and the Clean Water Act.

Employees often serves as team or group leader over less experienced technical laboratory staff.

ILLUSTRATIVE EXAMPLES OF WORK: (Any one position may not include all the duties listed, nor do the examples cover all the duties which may be performed)

Leads the processing of samples for analysis, sterilizes equipment, more intricate calibration of equipment as recommended and general cleaning duties.

Maintains working order of equipment and supplies necessary to performs analysis for samples to include minor repairs on laboratory equipment when needed.

Schedules the use of equipment, washing of glassware and other instruments and preparation of media, solutions, and other materials.

Leads the collection of samples from the Distribution lines, deep well and surface water source.

Leads the collection of water samples from consumer's complaints of dirty water, bad odor, or high chlorine content.

Maintains inventory, establishes supply levels and orders chemicals, equipment, and supplies.

Assists with research or study involving use of various equipment.

Schedules all required QA/QC and safety checks as required.

Disinfects tankers and new water lines to include determining the amount of chlorine needed to provide a certain dosage.

Analyzes water for bacteriological contamination and chlorine residue.

Leads in the collection of sample for off shore, shoreline, wastewater treatment plant influent/effluent and various rivers as well as any discharges into the rivers as required.

Analyzes potable water samples and analyzes for chemical analysis such as: Calcium and Total Hardness, Chlorides, Alkalinity, Conductivity, pH, Temperature, Turbidity and Bacteria content.

Analyzes oil and grease, Settleable, Suspended and Total Solids, ph Fecal Coliform, E-Coli, Enterococci and Biochemical Oxygen Demand.

Performs complex analysis, non-routine chemical, biological or physical test and analysis as required in control operations of water and sewage.

Leads and conducts training of other lower laboratory technicians.

Maintains records of all analytical work according to the Laboratory Quality Assurance (QA) and Quality Control (QC) Plans and Standard Operating Procedures. Ensures all data is in compliance with the requirements of pre-schedule intervals.

Maintains various laboratory records and prepares reports. Inputs required information into the LIMS (Laboratory Information Management System) computer program.

Creates work orders for daily assigned tasks.

May assist and participate in the budget preparation process.

Leads in the repair of laboratory equipment as needed.

Performs related duties as assigned.

MINIMUM KNOWLEDGE, ABILITIES AND SKILLS:

Knowledge of laboratory testing procedures, principles, techniques, terminology, protocols and equipment of a variety of standardized laboratory tests.

Ability to perform difficult laboratory tests requiring some technical judgment in determining and using proper procedures and interpreting results.

Knowledge of laboratory equipment maintenance, calibration and troubleshooting and sterilization.

Knowledge of laboratory safety protocols, including, but not limited to, use of personal protective equipment (PPE's), proper laboratory techniques, disposal of bio-hazard, etc.

Knowledge of principles of the physical and biological sciences, as applied to particular laboratory assignment.

Knowledge of computer systems and various software/application programs as required, according to company and departmental procedures.

Knowledge of LIMS (Laboratory Information Management System) computer program.

Ability to maintain records and prepare reports.

Ability to lead the work of others.

Ability to work effectively with the public and employees.

Ability to communicate effectively, orally and in writing.

Ability to make decisions in accordance with appropriate program guidelines

Ability to follow specific procedures and observe and record results accurately.

MINIMUM EXPERIENCE AND TRAINING:

A. Graduation from a recognized college or university with an Associate's degree in science or water technology with courses in microbiology, chemistry or related natural science; ***and*** two (2) years of experience as a Utility Laboratory Technician II; or

B) Any equivalent combination of experience and training which provides the minimum knowledge, abilities and skills.

ESTABLISHED: July 2018

PAYGRADE: MINIMUM: J5-C $49,327
MAXIMUM: J6-C $51,330

JOB EVALUATION POINTS: 711

JOSEPH T. DUENAS, CHAIRMAN
CONSOLIDATED COMMISSION ON UTILITIES

PROPOSED

UTILITY LABORATORY TECHNICIAN SUPERVISOR

NATURE OF WORK:

Utility Laboratory Technician Supervisor performs supervisory laboratory work in the water and/or wastewater utility.

Employees in this class assesses complex techniques and methodologies in collecting and analyzing water and wastewater samples for chemical and micro-biological content in accordance with Standard Methods for the Examination of water and wastewater, the Safe Drinking Water Act and the Clean Water Act.

Employees in this class supervise a unit performing a variety of complex technical laboratory duties.

ILLUSTRATIVE EXAMPLES OF WORK: (Any one position may not include all the duties listed, nor do the examples cover all the duties which may be performed)

Supervises the laboratory personnel in processing and analysis of various laboratory duties in a water and/or wastewater utility.

Supervises the processing of samples for analysis, sterilizes of equipment and more intricate calibration of equipment and general cleaning duties in a water and/or wastewater utility.

Supervises the maintenance of equipment and supplies necessary to performs analysis for samples to include minor repairs on laboratory equipment when needed.

Supervises the collection of samples from the Distribution lines, deep well and surface water source.

Supervises the collection of samples from consumer complaints of dirty water, bad odor, or high chlorine content, etc.; diagnoses issues and coordinating with other divisions to help determine the cause and solve the problem.

Supervises the disinfection of tankers and new water lines to include determining the amount of chlorine needed to provide cartage dosage in a water and/or wastewater utility.

Supervises the analysis of water for bacteriological contamination and chlorine residue in a water and/or wastewater utility.

Supervises the collection of sample for off shore, shoreline, wastewater treatment plant influent/effluent and various rivers as well as any discharges into the rivers as required in a water and/or wastewater utility.

Supervises the analysis of potable water samples and analyzes for chemical analysis such as: Calcium and Total Hardness, Chlorides, Alkalinity, Conductivity, ph, Temperature, Turbidity and Bacteria content.

Supervises the analysis of Settleable, Suspended and Total Solids, ph Fecal Coliform, E-Coli, Enterococci and Biochemical Oxygen Demand.

Conducts research on new technologies or methods that might be beneficial or cost effective. This may include updating to new equipment and supplies necessary to perform analysis.

Conducts training of other lower level Utility Laboratory Technicians.

Maintains records of all analytical work according to Laboratory Quality Assurance (QA) and Quality Control (QC) Plans and Standard Operating Procedures. Ensures all data is in compliance with the requirements of pre-schedule intervals.

Reviews various laboratory records and reports into the LIMS (Laboratory Information Management System) computer program.

Reviews and validates daily chain of custody for field analysis in LIMS (Laboratory Information Management System) for water and wastewater.

Supervises the processes a number of procedures including samples for analysis, sterilizes equipment, calibration of equipment as recommended and general cleaning duties.

Supervises the schedules use of equipment, washing of glassware and other instruments and preparation of media, solutions, and other materials.

Supervises the work of lower level technicians performing various laboratory maintenance, preparation of media and specimens, and participates in performing standardized analysis.

Supervises the storage areas and dispenses of materials. Supervises the inventory and establishes supply levels and orders chemicals, equipment, and supplies.

Participates and submits recommendations in the section's budget process.

Participates in the research or study involving use of various equipment.

Supervises more complex, non-routine chemical, biological or physical test and analysis as required in control operations of water and sewage.

Performs related duties as assigned.

MINIMUM KNOWLEDGE, ABILITIES AND SKILLS:

Knowledge of laboratory testing procedures, principles, techniques, terminology, protocols and equipment of a variety of standardized laboratory tests.

Knowledge of laboratory equipment maintenance, calibration and troubleshooting and sterilization.

Knowledge of laboratory safety protocols, including, but not limited to, use of personal protective equipment (PPE's), proper laboratory techniques, disposal of bio-hazard, etc.

Knowledge of principles of the physical and biological sciences, as applied to particular laboratory assignment.

Extensive Knowledge of LIMS (Laboratory Information Management System) computer program.

Knowledge of computer systems and multiple software programs as required, according to company and departmental procedures.

Knowledge to perform complex laboratory tests requiring technical judgment in determining and using proper procedures and interpreting results.

Ability to maintain records and prepare reports.

Ability to supervise the work of others.

Ability to work effectively with the public and employees.

Ability to communicate effectively, orally and in writing.

Ability to make decisions in accordance with appropriate program guidelines

Ability to follow specific procedures and observe and record results accurately.

MINIMUM EXPERIENCE AND TRAINING:

Graduation from a recognized college or university with a Bachelor's degree in biology, chemistry, microbiology or closely related field; and 4 (four) years as a Utility Laboratory Technician Leader.

ESTABLISHED: July 2018

PAYGRADE: MINIMUM: K5-D $60,283
MAXIMUM: K6-D $62,731

JOB EVALUATION POINTS: 837

JOSEPH T. DUENAS, CHAIRMAN
CONSOLIDATED COMMISSION ON UTILITIES

PROPOSED

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 40-FY2018
Relative to Approval of the Route 4 Relief Sewerline Rehabilitation and Replacement Construction Contract with ProPacific Builder Corporation and Insituform Technologies, LLC.

What is the project's objective and is it necessary and urgent?
The objective of this USEPA SRF project is to improve the sewer collection system, which included repairing and/or replacing sewer manholes and over 4,200 linear feet of gravity sewer line along Route 4 and Route 1 in the village of Hagatna. These sewer infrastructure elements have been identified by GWA, through an SSES investigation, to be subjected to either inactivity due to incomplete construction work or excessive infiltration and inflow (I&I). Successful completion of this project will result in proper maintenance and operation of the sewer collection system and USEPA agree that efforts to rehabilitate, repair or replace the sewer line are necessary.

Where is the project located?
This project is located along Route 4 and Route 1, from the area in front of Vons Chicken in Agana to the Agana Main Pump Station. Construction activities will be limited to the government easements of the sewer infrastructure elements.

How much will it cost?
The Invitation to Re-bid (IFB-04-ENG-2018) for the Route 4 Relief Sewer Line Rehabilitation and Replacement was structured in a manner wherein GWA could potentially acquire two separate construction companies for the necessary work. As such a lowest responsible and responsive bid from ProPacific Builder Corporation for Schedule A was received at a total of Three Million Four Hundred Seven Thousand Eight Hundred Forty-Eight Dollars **(**$3,407,848.00). Furthermore, a lowest responsive and responsible service bid from Insituform Technologies, LLC for Schedule B was received at a total of Three Million Nine Hundred Ninety-Eight Thousand Six Hundred Eighty-Eight Dollars **(**$3,998,688.00). These contract amounts, which is primarily based on unit pricing, includes the furnishing of all labor, tools, equipment and materials, and government agency coordination needed to complete the sewer infrastructure replacement in the aforementioned locations.

GWA management is also seeking a ten percent (10%) contingency of the total contract amount of Three Hundred Forty Thousand Seven Hundred Eighty-Four Dollars and Eighty Cents **(**$340,784.80) for Schedule A and Three Hundred Ninety-Nine Thousand Eight Hundred Sixty-Eight Dollars and Eighty Cents **(**$399,868.80) for Schedule B, which brings the total authorized funding amount to a maximum of Eight Million One Hundred Forty-Seven Thousand One Hundred Eighty-Nine Dollars and Sixty Cents ($8,147,189.60) for the project.

When will it be completed?
The construction contract length of this project is 450 calendar days for Schedule A and 450 calendar days for Schedule B. Estimated completion of construction is end of 2019.

What is the funding source?
The funding for this project will be from USEPA SRF Grant Funds and, if necessary, GWA Bond funds and System Development Charge Fund applicable to the project intent.

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

RESOLUTION NO. 40–FY2018

RELATIVE TO CONTRACTS APPROVAL FOR THE ROUTE 4 RELIEF SEWER LINE REHABILITATION AND REPLACEMENT PROJECT S15-006-EPA

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA has received a grant from USEPA under the State Revolving Fund program to improve the sewer collection system, which included over 4,200 linear feet of gravity sewer line along Route 4 from the bottom of the hill in Agana to Route 1, and along Route 1 to the Agana Main Pump Station; and

WHEREAS, the gravity sewer line noted above has a section that has been inactive since its original installation due to incomplete construction work, and sections that are in need of repair due to high infiltration and inflow (I/I), and the intent of this project is to rehabilitate, repair or replace these sections along with associated roadway surface improvements; and

WHEREAS, GWA and USEPA agree that efforts to rehabilitate, repair or replace these sewer lines are necessary to provide sufficient capacity, and properly maintain and operate the sewer collection system, and the first step in doing so is through scope of services that includes general civil engineering, geotechnical engineering, and archeological investigation for wastewater collection system evaluation, analysis and design; and

DRAFT

WHEREAS, in July 2015 GWA Management began the procurement process to find a consulting engineering team to design the sewer rehabilitation and replacement, and via Resolution No. 16-FY2016, approved by the CCU in January 2016, GWA Management was authorized to enter into a contract with AECOM to design the sewer rehabilitation and replacement; and

WHEREAS, in February of 2016 GWA Management entered into a contract with AECOM to design the sewer rehabilitation and replacement, and in May of 2017 the final design was completed; and

WHEREAS, on August 25, 2017, GWA advertised the Invitation to Bid (IFB-10-ENG-2017) for the Route 4 Relief Sewer Line Rehabilitation and Replacement soliciting bid proposals from experienced and responsive bidders to repair and/or replace segments of gravity sewer lines and manholes subjected to I&I in the village of Hagatna, but ultimately GWA received no bids at that time; and

WHEREAS, following the initial Invitation to Bid, GWA discussed with contractors the challenges that may have prevented them from bidding, reviewed all the available information, and split the contract into two separate parts, a Schedule A and a Schedule B; and

WHEREAS, on March 23, 2018, GWA advertised another Invitation to Bid (IFB-04-ENG-2018) for the Route 4 Relief Sewer Line Rehabilitation and Replacement soliciting bid proposals from experienced and responsive bidders to repair and/or replace segments of gravity sewer lines and manholes subjected to I&I in the village of Hagatna; and

WHEREAS, this project consists of furnishing all labor, tools, equipment and materials, necessary to install, replace, and repair sewer along Rt.4 and Rt.1, including coordination with GWA Wastewater Operations, GWA Engineering, the Construction Manager, the project Design Engineer, GWA's Program Management Office and the Department of Public Works; and

WHEREAS, IFB packages were obtained by multiple interested parties, from which GWA received bid proposals from three (3) parties (SEE EXHIBIT A – Abstract of Bids) before

the bid proposal deadline, with one (1) party submitting a proposal for only Schedule A, one (1) party submitting a proposal for only Schedule B, and one (1) party submitting a proposal for both Schedule A and B; and

WHEREAS, the project Design Engineer, in conjunction with GWA, analyzed the bid proposals received (SEE EXHIBIT B – Evaluation) on June 8, 2018 and determined that the bid proposal submitted by ProPacific Builder Corporation (PPBC) (SEE EXHIBIT C – ProPacific Bid) for Schedule A, and the bid proposal submitted by Insituform Technologies, LLC (Insituform) (SEE EXHIBIT D – Insituform Bid) for Schedule B, were the lowest responsive and responsible bids and met all the bid requirements set forth by GWA; and

WHEREAS, GWA Management finds both PPBC's bid proposal for Schedule A, and Insituform's bid proposal for Schedule B acceptable; and

WHEREAS, for Schedule A, PPBC's bid proposal in the amount of Three Million Four Hundred Seven Thousand Eight Hundred Forty-Eight Dollars **(**$3,407,848.00), plus a ten percent (10%) contingency of Three Hundred Forty Thousand Seven Hundred Eighty-Four Dollars and Eighty Cents **(**$340,784.80) to bring the authorized funding amount for Schedule A to a total of Three Million Seven Hundred Forty-Eight Thousand Six Hundred Thirty-Two Dollars and Eighty Cents ($3,748,632.80); and

WHEREAS, for Schedule B, Insituform's bid proposal in the amount of Three Million Nine Hundred Ninety-Eight Thousand Six Hundred Eighty-Eight Dollars **(**$3,998,688.00), plus a ten percent (10%) contingency of Three Hundred Ninety-Nine Thousand Eight Hundred Sixty-Eight Dollars and Eighty Cents **(**$399,868.80) to bring the authorized funding amount for Schedule B to a total of Four Million Three Hundred Ninety-Eight Thousand Five Hundred Fifty-Six Dollars and Eighty Cents ($4,398,556.80); and

WHEREAS, GWA Management seeks CCU approval of PPBC's bid proposal plus the 10% contingency for Schedule A of Three Million Seven Hundred Forty-Eight Thousand Six Hundred Thirty-Two Dollars and Eighty Cents ($3,748,632.80), and Insituform's bid proposal plus contingency for Schedule B of Four Million Three Hundred Ninety-Eight Thousand Five

Hundred Fifty-Six Dollars and Eighty Cents ($4,398,556.80), to bring the total authorized funding amount to Eight Million One Hundred Forty-Seven Thousand One Hundred Eighty-Nine Dollars and Sixty Cents ($8,147,189.60); and

WHEREAS, funding for this project will be from the USEPA State Revolving Fund and, if necessary, GWA Bond funds and System Development Charge funds applicable to the project intent; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms and conditions set by GWA relative to commencement of work activities are fair and reasonable and serve as a measure of Quality Assurance/Quality Control (QA/QC).
3. The CCU hereby authorizes the management of GWA to accept the bid proposals from "ProPacific Builder Corporation" and "Insituform Technologies, LLC." (EXHIBITS C and D)
4. The CCU hereby further authorizes the management of GWA to enter into a contract with "ProPacific Builder Corporation" in the amount of Three Million Four Hundred Seven Thousand Eight Hundred Forty-Eight Dollars **(**$3,407,848.00).
5. The CCU hereby further authorizes the management of GWA to enter into a contract with "Insituform Technologies, LLC" in the amount of Three Million Nine Hundred Ninety-Eight Thousand Six Hundred Eighty-Eight Dollars **(**$3,998,688.00).
6. The CCU hereby further approves the funding total for Schedule A of Three Million Four Hundred Seven Thousand Eight Hundred Forty-Eight Dollars **(**$3,407,848.00), plus a ten percent (10%) contingency of Three Hundred Forty Thousand Seven Hundred Eighty-Four Dollars and Eighty Cents **(**$340,784.80), and for Schedule B of Three Million Nine Hundred Ninety-Eight Thousand Six Hundred Eighty-Eight Dollars ($3,998,688.00), plus a ten percent (10%) contingency of Three Hundred Ninety-Nine Thousand Eight Hundred Sixty-Eight

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Dollars and Eighty Cents **(**$399,868.80), for a total authorized funding amount of Eight Million One Hundred Forty-Seven Thousand One Hundred Eighty-Nine Dollars and Sixty Cents ($8,147,189.60).

7. The CCU hereby further approves the funding for this project will be from the USEPA State Revolving Fund and, if necessary, GWA Bond funds and System Development Charge Funds applicable to the project.
8. In the event funds other than SRF are used and they exceed One Million Dollars ($1,000,000.00), GWA is authorized to petition the PUC for approval.

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 24th day of July 2018.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS **J. GEORGE BAMBA**
Chairperson Secretary

SECRETARY'S CERTIFICATE

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

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ORIGINAL

GUAM WATERWORKS AUTHORITY
ABSTRACT OF BIDS

Exhibit A (1 of 1)

Project Name: **ROUTE 4 RELIEF SEWERLINE REHABILITATION AND REPLACEMENT (RE-BID)**

Bid Opening Date: May 29, 2018
Time: 3:00 PM

Project Number: S15-006-EPA IFB NO.: IFB-04-ENG-2018

	Qualified Bidders Name	Section A-5 Bid Bond	CERTIFICATIONS											SCHEDULE A		SCHEDULE B		
										Addendum								
			QS	NCA	EEO	NSF	SOC	WBD	MSA	SIB	1	2	3	4	BASE BID	ADDITIVE BID	BASE BID	ADDITIVE BID NO. 1	ADDITIVE BID NO. 2
1.	PRO PACIFIC BUILDER CORP.	Endurance Assurance Corporation 15% of total bid amount	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	$3,407,848.00	$150,000.00	no bid submitted	no bid submitted	no bid submitted
2.	CANTON CONSTRUCTION CORP.	no bid submitted																	
3.	GIANT CONSTRUCTION CORP.	no bid submitted																	
4.	INSITUFORM	Travelers Casualty & Surety Company 15% of bid amount	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	no bid submitted	no bid submitted	$3,998,088.00	$1,296,700.00 ~~$5,245,388.00~~	$35,000.00 ~~$5,370,388.00~~
5.	GRANITE CONSTRUCTION COMPANY	no bid submitted																	
6.	INFRATECH INT'L. LLC	no bid submitted																	
7.	CHI CONSTRUCTION INC.	no bid submitted																	
8.	HES MICRONESIA	no bid submitted																	
9.	CORE TECH/HDCC GUAM, LLC	Fidelity & Deposit Company of Maryland 15% of bid amount	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	$6,191,463.28	$20,592.67	$7,570,573.71	$799,818.94	$20,583.15
10.	BME & SONS	no bid submitted																	
	GWA Estimate																		

Bids Opened and Read by:
GLORIA O. BENSAN
(Name and Signature)

Tabulated By:
Nicole Quan
(Name and Signature)

GWA Procurement Representative:
Victoria Heacock
(Name and Signature)

Witnesses:
EMPSCO
Fausto Lagen
EMPSCO
PPBC
CHL

AECOM
414 W. Soledad Avenue
Suite 708
Hagåtña, GU 96932
www.aecom.com

671 477 8326/7 tel
671 472 8324 fax

Exhibit B (1 of 1)

June 8, 2018

The Guam Waterworks Authority
Thomas F. Cruz, P.E., Chief Engineer
Engineering Division
Gloria B. Nelson Public Service Building
688 Route 15, Mangilao, GU 96913

Subject: Bid Review and Recommendation for the Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-bid) Project, GWA Project No. S15-006-EPA, IFB No. IFB-04-ENG-2018.

Håfa Adai Tom,

The bids for this project were opened on May 29, 2018. Out of 10 bidders who expressed interest in the project, only 3 bid proposals were received and included ProPacific Builder Corporation (ProPacific), Insituform Technologies, LLC (Insituform), and Core Tech/Hawaiian Dredging, LLC (CHL). Pro Pacific submitted a bid for only Schedule A. Insituform submitted a bid for only Schedule B. CHL submitted a bid for both schedules. A summary of the bids prices along with the Engineer's Opinion of Construction Cost Estimate are provided in the table below.

Bid Schedule	Engineer's Estimate	ProPacific	Insituform	CHL
SCHEDULE A - Base Bid	$ 2,701,217.00	$ 3,407,848.00	No Bid	$ 6,191,463.33
SCHEDULE A – Additive Bid No. 1	$ 7,000.00	$ 150,000.00	No Bid	$ 20,592.67
SCHEDULE A – Total	$ 2,708,217.00	$ 3,557,848.00	No Bid	$ 6,212,056.00
SCHEDULE B - Base Bid	$ 2,482,494.00	No Bid	$ 3,998,688.00	$ 7,570,573.65
SCHEDULE B – Additive Bid No. 1	$ 62,880.00	No Bid	$ 1,296,700.00	$ 799,818.94
SCHEDULE B – Additive Bid No. 2	$ 7,000.00	No Bid	$ 35,000.00	$ 20,583.15
SCHEDULE B – Total	$ 2,552,374.00	No Bid	$ 5,330,388.00	$ 8,390,975.74

It is understood that the bids are to be evaluated by each schedule separately and contract(s) awarded using the Base Bid. After contract award, GWA may consider adding items in the additive bids into the contract by change orders. If the bid is within the amount of funds available to finance the construction Contract, then the award will be made to the lowest responsive and responsible bidder. In the event all bids exceed the available budget, GWA may reject bids by individual line items until the individual line items fit within the available budget.

AECOM conducted an evaluation of the bids received and provide recommendations for award to the responsible Bidder submitting the lowest responsive Bid. The following is a brief summary of the bid evaluation:

- Overall, the CHL bid prices appeared to be excessive in comparison with the other bidders and the Engineer's Estimate for both bid schedules evaluated separately.
- For Schedule A – Base Bid, ProPacific's bid price was approximately 26% more than the Engineer's Estimate and is the lowest responsive bid. ProPacific's total bid including the bid additive was approximately 31% more than the Engineer's Estimate.
- For Schedule B – Base Bid, Insituform's bid price was approximately 61% more than the Engineer's Estimate and is the lowest responsive bid. Insituform's total bid including the bid additives was approximately double the Engineer's Estimate.

Based on the bid evaluation conducted, it is recommended that ProPacific be awarded a construction contract for Schedule A – Base Bid and Insituform be awarded a separate construction contract for Schedule B – Base Bid. It is also recommended that if needed, GWA can consider rejecting individual line items to fit within the available budget; particularly for all the bid additives.

Respectfully,

Agapito (Pete) Diaz, PE
Project Manager
671-477-8326/7
pete.diaz@aecom.com

Exhibit C (1 of 15)

GUAM WATERWORKS AUTHORITY

BID INVITATION NO.
IFB-04-ENG-2018
GWA Project No.: S15-006-EPA

Route 4 Relief Sewer Line Rehabilitation and Replacement

BID PROPOSAL

Submitted by:

PROPACIFIC BUILDER CORPORATION
(formerly Guam Yooshin Corporation)
750 Route 8 Suite 202 Hanam Plaza,
Barrigada, Guam 96913
T. 671.477.3109 | F. 671.477.7424 | jgyc@guam.net

Exhibit C (2 of 15)

Procurement Checklist

CHECKLIST OF FORMS AND DOCUMENTS REQUIRED TO BE SUBMITTED IN CONJUNCTION WITH BIDS

A.	Form or document that must be submitted with bid	Initial if Submitted:
1.	Bid Bond Equal to 15% of total amount of bid	
2.	Bidder Qualification Form	
3.	Bid Proposal and Bid Schedule	
4.	Non-Collusion Affidavit	
5.	Certification of Bidder Regarding Equal Employment Opportunity	
6.	Certification Regarding Non-Segregated Facilities	
7.	Sex Offender Certification	
8.	Wage and Benefit Determination	
9.	Major Shareholders Disclosure Affidavit	
10.	Special Instructions to Bidders	
11.	Proof of Licensure to Perform Work Called For by the Bid	
12.	Financial Statements	
13.	Proof of Status as Veteran (if applies)	N/A
14.	Forms or Documents Required by Bid or Bid Amendments not referred to above	

I, Jean Yeon Yu, a duly authorized representative of PPBC, do hereby certify, that the forms list above have in fact been submitted with my firm's bid. I acknowledge that, failure to submit any of the above documents will result in my firm being deemed non-responsive and having my firm's bid rejected.

Signed: _____

Date: 05/29/2018

Exhibit C (3 of 15)

BID FORM

ARTICLE 1 - BID RECIPIENT

1.01 This Bid is submitted to:

Guam Waterworks Authority
Engineering Division, Room 202
Gloria B. Nelson Public Service Building
688 Route 15
Mangilao, Guam 96913

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into a Contract with Buyer in the form included in the Bidding Documents to furnish the Goods and Special Services as specified or indicated in the Bidding Documents, for the prices and within the times indicated in this Bid, and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 - BIDDER'S ACKNOWLEDGMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Buyer.

ARTICLE 3 - BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, the related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged:

Addendum No.	Addendum Date
Addendum No. 1	April 19, 2018
Addendum No. 2	April 26, 2018
Addendum No. 3	May 15, 2018
Addendum No. 4	May 18, 2018

B. Bidder has visited the Point of Destination and site where the Goods are to be installed or Special Services will be provided and become familiar with and is satisfied as to the observable local conditions that may affect cost, progress, or the furnishing of Goods and Special Services, if required to do so by the Bidding Documents, or if, in Bidder's judgment, any local condition may affect cost, progress, or the furnishing of Goods and Special Services.

EJCDC P-400, Suggested Bid Form for Procurement Contracts.
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Exhibit C (4 of 15)

C. Bidder is familiar with and is satisfied as to all Laws and Regulations in effect as of the date of the Bid that may affect cost, progress, and the furnishing of Goods and Special Services.

D. Bidder has carefully studied, considered, and correlated the information known to Bidder; information commonly known to sellers of similar goods doing business in the locality of the Point of Destination and the site where the Goods will be installed or where Special Services will be provided; information and observations obtained from Bidder's visits, if any, to the Point of Destination and the site where the Goods will be installed or Special Services will be provided; and any reports and drawings identified in the Bidding Documents regarding the Point of Destination and the site where the Goods will be installed or where Special Services will be provided, with respect to the effect of such information, observations, and documents on the cost, progress, and performance of Seller's obligations under the Bidding Documents.

E. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution (if any) thereof by Engineer is acceptable to Bidder.

F. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for furnishing the Goods and Special Services for which this Bid is submitted.

ARTICLE 4 - BIDDER'S CERTIFICATIONS

4.01 Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Buyer, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Buyer of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Buyer, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

EJCDC P-400, Suggested Bid Form for Procurement Contracts.
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Exhibit C (5 of 15)

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process.

ARTICLE 5 - BASIS OF BID AND AWARD OF CONTRACTS

5.01 This contract is a multi-award contract through which more than one contract may be awarded through this solicitation. The Bid Schedule contains two schedules, Schedule A and Schedule B. Bidder will furnish the Goods and Special Services in accordance with the Contract Documents for the prices indicated under this article. The Bidder can elect to provide prices under Schedule A or Schedule B or both schedules. Bids must include all items under Schedule A or Schedule B, or both Schedule A and B. Each of Schedules A and B comprise Base Bid items and Additive Bid items. The Bidder shall provide base bid and additive bid(s) prices under each elected schedule.

Bids shall be evaluated by Schedule. Each of Schedules A and B shall be evaluated separately. The lowest responsive and responsible bidder shall be determined for each of Schedule A and Schedule B. Separate contracts will be awarded under Schedule A and Schedule B. One contract will be awarded to the lowest responsive and responsible bidder for Schedule A and one contract will be awarded to the lowest responsive and responsible bidder for Schedule B. If the same contractor is the lowest responsive and responsible bidder for both Schedules A and B, one contract for all the work under Schedules A and B will be awarded.

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Exhibit C (6 of 15)

Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE A – Base Bid

Description of Work: Work consists of replacing 24" Spirolite pipe with 30" PVC pipe, installation of new 18" PVC pipe intertie, construction of precast concrete manholes, sewer manhole rehabilitation with epoxy coating, channel construction, disconnection and re-connection of lateral sewer pipes, abandoning existing sewer pipes and providing temporary bypass and traffic control as necessary to complete the rehabilitation and replacement work.

				SCHEDULE A – Base Bid	
Item No.	Description	Unit	Unit Price	Qty	Bid Amount
1	Mobilization and Demobilization	LS	$293,780.00	1	$ 293,780.00
2	Insurance and Bonds	LS	$132,201.00	1	$ 132,201.00
3	Permits	LS	$44,067.00	1	$ 44,067.00
4	12" PVC pipe, installed by open trench, including PVC pipe, fittings, warning/identification tape, cleaning, connections to manholes, adjustment existing channel and bench, testing, and all incidentals, in place complete.	LF	$1,500.00	22	$ 33,000.00
5	18" PVC pipe, installed by open trench, including PVC pipe, fittings, warning/identification tape, cleaning, connections to existing manholes, adjustment existing channel and bench, testing, and all incidentals, in place complete.	LF	$1,800.00	12	$ 21,600.00
6	30" PVC pipe, installed by open trench, including existing pipe removal, pipe, fittings, warning/identification tape, cleaning, manhole connections, testing, and all incidentals, in place complete.	LF	$2,000.00	461	$ 922,000.00
7	Unclassified Trench Excavation and Backfill, including protection of existing utilities if necessary, excavation, installation of sheet piles, cutting and removal of sheet piles, shoring, groundwater cutoff wall, dewatering and dewatering effluent disposal, muck handling and disposal, backfill, pipe bedding, CLSM, temporary erosion control measures, traffic control work, miscellaneous restoration work, and all incidentals required to complete the work.	CY	$600.00	913	$ 547,800.00
8	Precast Sewer Manhole, SMH-6901A and 493A, including reinforced concrete base, precast concrete riser and cone, flexible pipe seals and connectors, grade adjustment ring(s), frame and cover, epoxy-coating, channelized inverts, testing, CLSM, temporary erosion control measures, traffic control work, incidentals, and all necessary labor, materials and equipment, in place complete.	EA	$30,000.00	2	$ 60,000.00

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Exhibit C (7 of 15)

Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE A – Base Bid

Description of Work: Work consists of replacing 24" Spirolite pipe with 30" PVC pipe, installation of new 18" PVC pipe intertie, construction of precast concrete manholes, sewer manhole rehabilitation with epoxy coating, channel construction, disconnection and re-connection of lateral sewer pipes, abandoning existing sewer pipes and providing temporary bypass and traffic control as necessary to complete the rehabilitation and replacement work.

				SCHEDULE A – Base Bid	
Item No.	Description	Unit	Unit Price	Qty	Bid Amount
9	Drop Precast Sewer Manhole, SMH-6908B, including demolition of existing SMH-10312, reinforced concrete base, precast concrete riser and cone, chimney, flexible pipe seals and connectors, grade adjustment ring(s), frame and cover, epoxy-coating, channelized inverts, testing, CLSM, temporary erosion control measures, traffic control work, incidentals, and all necessary labor, materials and equipment, in place complete.	EA	$ 30,000.00	1	$ 30,000.00
10	Rehabilitation of sewer manhole with epoxy coating, including cleaning, surface preparation, cementitious underlayment, concrete channel and bench construction, existing pipe cut & connection, plugging existing pipe, epoxy topcoat, grout injection for leak repair, traffic control work, and all incidentals, in place complete.	EA	$ 22,500.00	14	$ 315,000.00
11	Abandon existing sewer pipes including plugging and filling with CLSM, all incidentals, in place complete.	LF	$ 250.00	280	$ 70,000.00
12	Unplug 21" existing pipe, plug 15" existing SL-9650 and channel & bench reconstruction at SMH-6897	LS	$ 30,000.00	1	$ 30,000.00
13	Sewer Flow Control, including diversion and bypass pumping plan, temporary bypass piping and pumps, pipe plugs, bypassing at sewer laterals (including locating and exposing cleanouts), temporary trenches (including pavement demolition, excavation, backfill, trench covers, temporary and permanent asphalt concrete (AC) pavement, muck handling and disposal), electrical and standby power/pumps, monitoring, spill containment/mitigation, traffic control work, temporary erosion control measures, all related restoration work, in place complete.	LS	$ 300,000.00	1	$ 300,000.00
14	Removal of existing pavement including all necessary labor, materials and equipment, in place complete	SY	$ 50.00	2,867	$ 143,350.00

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Exhibit C (8 of 15)

Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE A – Base Bid

Description of Work: Work consists of replacing 24" Spirolite pipe with 30" PVC pipe, installation of new 18" PVC pipe intertie, construction of precast concrete manholes, sewer manhole rehabilitation with epoxy coating, channel construction, disconnection and re-connection of lateral sewer pipes, abandoning existing sewer pipes and providing temporary bypass and traffic control as necessary to complete the rehabilitation and replacement work.

				SCHEDULE A – Base Bid	
Item No.	Description	Unit	Unit Price	Qty	Bid Amount
15	AC Pavement Resurfacing, including asphalt concrete base, cold planing, pavement transitions, prime coat, tack coat, traffic striping, miscellaneous restoration, and all necessary labor, materials and equipment, in place complete	SY	$ 150.00	2,867	$ 430,050.00
16	Pavement marking including all necessary labor, materials and equipment, in place complete	LS	$25,000.00	1	$ 25,000.00
17	As-Built drawings	LS	$10,000.00	1	$ 10,000.00
				SCHEDULE A – Base Bid (TOTAL Items 1 through 17, inclusive)	$ 3,407,848.00

Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE A – Additive Bid No. 1

Description of Work: Archaeological monitoring.

				SCHEDULE A – Additive Bid No. 1	
1	Archaeological and cultural resource services to add new laydown staging areas outside of the suggested areas or outside of the area of potential effect as defined the Archaeological Monitoring and Data Recovery Plan for the project and resubmit to the Department of Parks and Recreation, Guam Historic Resources Division/State Historic Preservation Office for approval and acceptance.	LS	$ 150,000.00	1	$ 150,000.00
				SCHEDULE A - Additive Bid No. 1 (TOTAL Items 1, inclusive)	$ 150,000.00

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Exhibit C (9 of 15)

Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE B –Base Bid

Description of Work: CIPP lining 21", 24", 30" and 36" existing sewer pipes, providing temporary bypass and traffic control as necessary to complete the rehabilitation and replacement work.

				Schedule B – Base Bid	
Item No.	Description	Unit	Unit Price	Qty	Bid Amount
1	Mobilization and Demobilization	LS	$_____	1	$_____
2	Insurance and Bonds	LS	$_____	1	$_____
3	Permits	LS	$_____	1	$_____
4	Installation of cured in place pipe (CIPP) lining in existing 21" sewer line, including all labor, materials, supplies, equipment, tools, and incidentals for the complete installation of the liner, cleaning, wet out, preparation, leak repair, transition sections, removal and restoration of sewer manhole cone (if required for access), restoration of pavement and landscaping, removal of protruding laterals, liner termination at manholes, reworking manhole inverts and benches, testing of installed liner, Closed Circuit Television (CCTV) inspection for pre- and post- rehabilitation, traffic control work, and for all other related work.	LF	$_____	674	$_____
5	Installation of cured in place pipe (CIPP) lining in existing 24" sewer line, including all labor, materials, supplies, equipment, tools, and incidentals for the complete installation of the liner, cleaning, wet out, preparation, leak repair, transition sections, removal and restoration of sewer manhole cone (if required for access), restoration of pavement and landscaping, removal of protruding laterals, liner termination at manholes, reworking manhole inverts and benches, testing of installed liner, Closed Circuit Television (CCTV) inspection for pre- and post- rehabilitation, traffic control work, and for all other related work.	LF	$_____	723	$_____

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Exhibit C (10 of 15)

Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE B –Base Bid

Description of Work: CIPP lining 21", 24", 30" and 36" existing sewer pipes, providing temporary bypass and traffic control as necessary to complete the rehabilitation and replacement work.

				Schedule B – Base Bid	
Item No.	Description	Unit	Unit Price	Qty	Bid Amount
6	Installation of cured in place pipe (CIPP) lining in existing 30" sewer line, including all labor, materials, supplies, equipment, tools, and incidentals for the complete installation of the liner, cleaning, wet out, preparation, leak repair, transition sections, removal and restoration of sewer manhole cone (if required for access), restoration of pavement and landscaping, removal of protruding laterals, liner termination at manholes, reworking manhole inverts and benches, testing of installed liner, Closed Circuit Television (CCTV) inspection for pre- and post- rehabilitation, traffic control work, and for all other related work.	LF	$_____	1,590	$_____
7	Installation of cured in place pipe (CIPP) lining in existing 36" sewer line, including all labor, materials, supplies, equipment, tools, and incidentals for the complete installation of the liner, cleaning, wet out, preparation, leak repair, transition sections, removal and restoration of sewer manhole cone (if required for access), restoration of pavement and landscaping, removal of protruding laterals, liner termination at manholes, reworking manhole inverts and benches, testing of installed liner, Closed Circuit Television (CCTV) inspection for pre- and post- rehabilitation, traffic control work, and for all other related work.	LF	$_____	798	$_____
8	Sewer Flow Control, including diversion and bypass pumping plan, temporary bypass piping and pumps, pipe plugs, bypassing at sewer laterals (including locating and exposing cleanouts), temporary trenches (including pavement demolition, excavation, backfill, trench covers, temporary and permanent AC pavement, muck handling and disposal), electrical and standby power/pumps, monitoring, spill containment/mitigation, traffic control work, temporary erosion control measures, all related restoration work, in place complete.	LS	$_____	1	$_____

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Exhibit C (11 of 15)

Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE B –Base Bid

Description of Work: CIPP lining 21", 24", 30" and 36" existing sewer pipes, providing temporary bypass and traffic control as necessary to complete the rehabilitation and replacement work.

				Schedule B – Base Bid	
Item No.	Description	Unit	Unit Price	Qty	Bid Amount
	Schedule B – BASE BID (TOTAL Items 1 through 8, inclusive)				$_____

Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE B – Additive Bid No. 1

Description of Work: CIPP part-liner or chemical grouting to control infiltration/inflow prior to CIPP lining.

				Schedule B – Additive Bid No. 1	
1	CIPP part-liner or grouting to control infiltration on the existing 21" sewer line, where approved by the Owner, including full compensation for all labor, materials, supplies, equipment, tools, and all incidentals for completed work.	LF	$_____	70	$_____
2	CIPP part-liner or grouting to control infiltration on the existing 24" sewer line, where approved by the Owner, including full compensation for all labor, materials, supplies, equipment, tools, and all incidentals for completed work.	LF	$_____	80	$_____
3	CIPP part-liner or grouting to control infiltration on the existing 30" sewer line, where approved by the Owner, including full compensation for all labor, materials, supplies, equipment, tools, and all incidentals for completed work.	LF	$_____	160	$_____
4	CIPP part-liner or grouting to control infiltration on the existing 36" sewer line, where approved by the Owner, including full compensation for all labor, materials, supplies, equipment, tools, and all incidentals for completed work.	LF	$_____	160	$_____
	SCHEDULE B – Additive Bid No. 1 (TOTAL Items 1 through 4, inclusive)				$_____

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Exhibit C (12 of 15)

Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE B - Additive Bid No. 2
Description of Work: Archaeological monitoring.

				SCHEDULE B – Additive Bid No. 2	
1	Archaeological and cultural resource services to add new laydown staging areas outside of the suggested areas or outside of the area of potential effect as defined the Archaeological Monitoring and Data Recovery Plan for the project and resubmit to the Department of Parks and Recreation, Guam Historic Resources Division/State Historic Preservation Office for approval and acceptance.	LS	$_____	1	$_____
SCHEDULE B - Additive Bid No. 2 (TOTAL Items 1, inclusive)					$_____

Bidder acknowledges that estimated quantities are not guaranteed and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents. Bidder also acknowledges that each unit price includes an amount considered by Bidder to be adequate to cover Bidder's overhead and profit for each separately identified item.

ARTICLE 6 - TIME OF COMPLETION

6.01 Bidder agrees that the furnishing of Goods and Special Services will conform to the schedule set forth in Article 5 of the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 - ATTACHMENTS TO THIS BID

7.01 The following documents are attached to and made a condition of this Bid:

A. Required Bid security in the form of Bid Bond.

B. List of Proposed Major Suppliers;

C. Required Bidder Qualification Statement with Supporting Data.

ARTICLE 8 - DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

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Exhibit C (13 of 15)

ARTICLE 9 - BID SUBMITTAL

9.01 This Bid submitted by:

If Bidder is:

An Individual

Name (typed or printed): _____

By: _____
(Individual's signature)

Doing business as: _____

Business address: _____

_____

Phone: _____ Facsimile: _____

E-mail address: _____

A Partnership

Partnership Name: _____ (SEAL)

By: _____
(Signature of general partner - attach evidence of authority to sign)

Name (typed or printed): _____

Business address: _____

_____

Phone: _____ Facsimile: _____

E-mail address: _____

A Corporation

Corporation Name: PROPACIFIC BUILDER CORPORATION

State of Incorporation: GUAM

Type (General Business, Professional, Service, other): General Contractor

By: _____
(Signature - attach evidence of authority to sign)

Name (typed or printed): Jean Yeon Yu

Title: President

(CORPORATE SEAL)

Attest _____
(Signature of Corporate Secretary)

Business address: 750 Route 8 Suite 202 Hanam Plaza, Barrigada, GU 96913

_____

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Exhibit C (14 of 15)

Phone: 671-477-3109 Facsimile: 671-477-7424
E-mail address: jgyc@guam.net

A Limited Liability Company (LLC)

LLC Name: _____
State in which organized: _____

By: _____
(Signature - attach evidence of authority to sign)

Name (typed or printed): _____
Title: _____
Business address: _____

_____

Phone: _____ Facsimile: _____
E-mail address: _____

A Joint Venture

First Joint Venturer Name: _____ (SEAL)

By: _____
(Signature - attach evidence of authority to sign)

Name (typed or printed): _____
Title: _____
Business address: _____

_____

Phone: _____ Facsimile: _____
E-mail address: _____

Second Joint Venturer Name: _____ (SEAL)

By: _____
(Signature - attach evidence of authority to sign)

Name (typed or printed): _____
Title: _____
Business address: _____

_____

Phone: _____ Facsimile: _____
E-mail address: _____

Phone and Facsimile Number, and Address for receipt of official communications to Joint Venture:

_____

_____

_____

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(Each joint venturer must sign. The manner of signing for each individual, partnership, corporation, and limited liability company that is a party to the joint venture should be in the manner indicated above.)

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Exhibit D (1 of 17)

AEGION
Stronger. Safer. Infrastructure.™

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SEALED BID FOR: ROUTE 4 RELIEF SEWER LINE REHABILITATION AND REPLACEMENT (RE-BID)

BIDDER: INSITUFORM TECHNOLOGIES, LLC
17988 EDISON AVE
CHESTERFIELD, MO 63005

GWA PROJECT NO. S15-006-EPA

CLOSING DATE AND TIME
~~5/25/2018~~ 5/29/2018
3:00 PM

ATTENTION: GUAM WATERWORKS AUTHORITY
GLORIA B. NELSON PUBLIC SERVICES BUILDING
688 ROUTE 15
MANGILAO, GUAM 96913

Vol. 1 of 2

Exhibit D (2 of 17)

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Exhibit D (3 of 17)

BID FORM

ARTICLE 1 - BID RECIPIENT

1.01 This Bid is submitted to:

Guam Waterworks Authority
Engineering Division, Room 202
Gloria B. Nelson Public Service Building
688 Route 15
Mangilao, Guam 96913

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into a Contract with Buyer in the form included in the Bidding Documents to furnish the Goods and Special Services as specified or indicated in the Bidding Documents, for the prices and within the times indicated in this Bid, and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 - BIDDER'S ACKNOWLEDGMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Buyer.

ARTICLE 3 - BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, the related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged:

Addendum No.	Addendum Date
1	April 19, 2018
2	April 24, 2018
3	May 15, 2018
4	May 18, 2018

ED

B. Bidder has visited the Point of Destination and site where the Goods are to be installed or Special Services will be provided and become familiar with and is satisfied as to the observable local conditions that may affect cost, progress, or the furnishing of Goods and Special Services, if required to do so by the Bidding Documents, or if, in Bidder's judgment, any local condition may affect cost, progress, or the furnishing of Goods and Special Services.

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Exhibit D (4 of 17)

C. Bidder is familiar with and is satisfied as to all Laws and Regulations in effect as of the date of the Bid that may affect cost, progress, and the furnishing of Goods and Special Services.

D. Bidder has carefully studied, considered, and correlated the information known to Bidder; information commonly known to sellers of similar goods doing business in the locality of the Point of Destination and the site where the Goods will be installed or where Special Services will be provided; information and observations obtained from Bidder's visits, if any, to the Point of Destination and the site where the Goods will be installed or Special Services will be provided; and any reports and drawings identified in the Bidding Documents regarding the Point of Destination and the site where the Goods will be installed or where Special Services will be provided, with respect to the effect of such information, observations, and documents on the cost, progress, and performance of Seller's obligations under the Bidding Documents.

E. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution (if any) thereof by Engineer is acceptable to Bidder.

F. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for furnishing the Goods and Special Services for which this Bid is submitted.

ARTICLE 4 - BIDDER'S CERTIFICATIONS

4.01 Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Buyer, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Buyer of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Buyer, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

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Exhibit D (5 of 17)

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process.

ARTICLE 5 - BASIS OF BID AND AWARD OF CONTRACTS

5.01 This contract is a multi-award contract through which more than one contract may be awarded through this solicitation. The Bid Schedule contains two schedules, Schedule A and Schedule B. Bidder will furnish the Goods and Special Services in accordance with the Contract Documents for the prices indicated under this article. The Bidder can elect to provide prices under Schedule A or Schedule B or both schedules. Bids must include all items under Schedule A or Schedule B, or both Schedule A and B. Each of Schedules A and B comprise Base Bid items and Additive Bid items. The Bidder shall provide base bid and additive bid(s) prices under each elected schedule.

Bids shall be evaluated by Schedule. Each of Schedules A and B shall be evaluated separately. The lowest responsive and responsible bidder shall be determined for each of Schedule A and Schedule B. Separate contracts will be awarded under Schedule A and Schedule B. One contract will be awarded to the lowest responsive and responsible bidder for Schedule A and one contract will be awarded to the lowest responsive and responsible bidder for Schedule B. If the same contractor is the lowest responsive and responsible bidder for both Schedules A and B, one contract for all the work under Schedules A and B will be awarded.

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Exhibit D (6 of 17)

No bid on Schedule A

Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE A – Base Bid

Description of Work: Work consists of replacing 24" Spirolite pipe with 30" PVC pipe, installation of new 18" PVC pipe intertie, construction of precast concrete manholes, sewer manhole rehabilitation with epoxy coating, channel construction, disconnection and re-connection of lateral sewer pipes, abandoning existing sewer pipes and providing temporary bypass and traffic control as necessary to complete the rehabilitation and replacement work.

				SCHEDULE A – Base Bid	
Item No.	Description	Unit	Unit Price	Qty	Bid Amount
1	Mobilization and Demobilization	LS	$_____	1	$_____
2	Insurance and Bonds	LS	$_____	1	$_____
3	Permits	LS	$_____	1	$_____
4	12" PVC pipe, installed by open trench, including PVC pipe, fittings, warning/identification tape, cleaning, connections to manholes, adjustment existing channel and bench, testing, and all incidentals, in place complete.	LF	$_____	22	$_____
5	18" PVC pipe, installed by open trench, including PVC pipe, fittings, warning/identification tape, cleaning, connections to existing manholes, adjustment existing channel and bench, testing, and all incidentals, in place complete.	LF	$_____	12	$_____
6	30" PVC pipe, installed by open trench, including existing pipe removal, pipe, fittings, warning/identification tape, cleaning, manhole connections, testing, and all incidentals, in place complete.	LF	$_____	461	$_____
7	Unclassified Trench Excavation and Backfill, including protection of existing utilities if necessary, excavation, installation of sheet piles, cutting and removal of sheet piles, shoring, groundwater cutoff wall, dewatering and dewatering effluent disposal, muck handling and disposal, backfill, pipe bedding, CLSM, temporary erosion control measures, traffic control work, miscellaneous restoration work, and all incidentals required to complete the work.	CY	$_____	913	$_____
8	Precast Sewer Manhole, SMH-6901A and 493A, including reinforced concrete base, precast concrete riser and cone, flexible pipe seals and connectors, grade adjustment ring(s), frame and cover, epoxy-coating, channelized inverts, testing, CLSM, temporary erosion control measures, traffic control work, incidentals, and all necessary labor, materials and equipment, in place complete.	EA	$_____	2	$_____

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No bid on Schedule A

Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE A – Base Bid

Description of Work: Work consists of replacing 24" Spirolite pipe with 30" PVC pipe, installation of new 18" PVC pipe intertie, construction of precast concrete manholes, sewer manhole rehabilitation with epoxy coating, channel construction, disconnection and re-connection of lateral sewer pipes, abandoning existing sewer pipes and providing temporary bypass and traffic control as necessary to complete the rehabilitation and replacement work.

				SCHEDULE A – Base Bid	
Item No.	Description	Unit	Unit Price	Qty	Bid Amount
9	Drop Precast Sewer Manhole, SMH-6908B, including demolition of existing SMH-10312, reinforced concrete base, precast concrete riser and cone, chimney, flexible pipe seals and connectors, grade adjustment ring(s), frame and cover, epoxy-coating, channelized inverts, testing, CLSM, temporary erosion control measures, traffic control work, incidentals, and all necessary labor, materials and equipment, in place complete.	EA	$_____	1	$_____
10	Rehabilitation of sewer manhole with epoxy coating, including cleaning, surface preparation, cementitious underlayment, concrete channel and bench construction, existing pipe cut & connection, plugging existing pipe, epoxy topcoat, grout injection for leak repair, traffic control work, and all incidentals, in place complete.	EA	$_____	14	$_____
11	Abandon existing sewer pipes including plugging and filling with CLSM, all incidentals, in place complete.	LF	$_____	280	$_____
12	Unplug 21" existing pipe, plug 15" existing SL-9650 and channel & bench reconstruction at SMH-6897	LS	$_____	1	$_____
13	Sewer Flow Control, including diversion and bypass pumping plan, temporary bypass piping and pumps, pipe plugs, bypassing at sewer laterals (including locating and exposing cleanouts), temporary trenches (including pavement demolition, excavation, backfill, trench covers, temporary and permanent asphalt concrete (AC) pavement, muck handling and disposal), electrical and standby power/pumps, monitoring, spill containment/mitigation, traffic control work, temporary erosion control measures, all related restoration work, in place complete.	LS	$_____	1	$_____
14	Removal of existing pavement including all necessary labor, materials and equipment, in place complete	SY	$_____	2,867	$_____

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Exhibit D (8 of 17)

No Bid Schedule A

Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE A – Base Bid

Description of Work: Work consists of replacing 24" Spirolite pipe with 30" PVC pipe, installation of new 18" PVC pipe intertie, construction of precast concrete manholes, sewer manhole rehabilitation with epoxy coating, channel construction, disconnection and re-connection of lateral sewer pipes, abandoning existing sewer pipes and providing temporary bypass and traffic control as necessary to complete the rehabilitation and replacement work.

				SCHEDULE A – Base Bid	
Item No.	Description	Unit	Unit Price	Qty	Bid Amount
15	AC Pavement Resurfacing, including asphalt concrete base, cold planing, pavement transitions, prime coat, tack coat, traffic striping, miscellaneous restoration, and all necessary labor, materials and equipment, in place complete	SY	$_____	2,867	$_____
16	Pavement marking including all necessary labor, materials and equipment, in place complete	LS		1	
17	As-Built drawings	LS		1	
	SCHEDULE A – Base Bid (TOTAL Items 1 through 17, inclusive)				$_____

Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE A – Additive Bid No. 1

Description of Work: Archaeological monitoring.

				SCHEDULE A – Additive Bid No. 1	
1	Archaeological and cultural resource services to add new laydown staging areas outside of the suggested areas or outside of the area of potential effect as defined the Archaeological Monitoring and Data Recovery Plan for the project and resubmit to the Department of Parks and Recreation, Guam Historic Resources Division/State Historic Preservation Office for approval and acceptance.	LS	$_____	1	$_____
	SCHEDULE A - Additive Bid No. 1 (TOTAL Items 1, inclusive)				$_____

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Exhibit D (9 of 17)

Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE B –Base Bid

Description of Work: CIPP lining 21", 24", 30" and 36" existing sewer pipes, providing temporary bypass and traffic control as necessary to complete the rehabilitation and replacement work.

				Schedule B – Base Bid	
Item No.	Description	Unit	Unit Price	Qty	Bid Amount
1	Mobilization and Demobilization	LS	$800,000	1	$800,000
2	Insurance and Bonds	LS	$100,000	1	$100,000
3	Permits	LS	$34,300	1	$34,300
4	Installation of cured in place pipe (CIPP) lining in existing 21" sewer line, including all labor, materials, supplies, equipment, tools, and incidentals for the complete installation of the liner, cleaning, wet out, preparation, leak repair, transition sections, removal and restoration of sewer manhole cone (if required for access), restoration of pavement and landscaping, removal of protruding laterals, liner termination at manholes, reworking manhole inverts and benches, testing of installed liner, Closed Circuit Television (CCTV) inspection for pre- and post- rehabilitation, traffic control work, and for all other related work.	LF	$310.00	674	$208,940
5	Installation of cured in place pipe (CIPP) lining in existing 24" sewer line, including all labor, materials, supplies, equipment, tools, and incidentals for the complete installation of the liner, cleaning, wet out, preparation, leak repair, transition sections, removal and restoration of sewer manhole cone (if required for access), restoration of pavement and landscaping, removal of protruding laterals, liner termination at manholes, reworking manhole inverts and benches, testing of installed liner, Closed Circuit Television (CCTV) inspection for pre- and post- rehabilitation, traffic control work, and for all other related work.	LF	$412.00	723	$297 876

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Exhibit D (10 of 17)

Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE B –Base Bid

Description of Work: CIPP lining 21", 24", 30" and 36" existing sewer pipes, providing temporary bypass and traffic control as necessary to complete the rehabilitation and replacement work.

				Schedule B – Base Bid	
Item No.	Description	Unit	Unit Price	Qty	Bid Amount
6	Installation of cured in place pipe (CIPP) lining in existing 30" sewer line, including all labor, materials, supplies, equipment, tools, and incidentals for the complete installation of the liner, cleaning, wet out, preparation, leak repair, transition sections, removal and restoration of sewer manhole cone (if required for access), restoration of pavement and landscaping, removal of protruding laterals, liner termination at manholes, reworking manhole inverts and benches, testing of installed liner, Closed Circuit Television (CCTV) inspection for pre- and post- rehabilitation, traffic control work, and for all other related work.	LF	$667.00	1,590	$1,060,530
7	Installation of cured in place pipe (CIPP) lining in existing 36" sewer line, including all labor, materials, supplies, equipment, tools, and incidentals for the complete installation of the liner, cleaning, wet out, preparation, leak repair, transition sections, removal and restoration of sewer manhole cone (if required for access), restoration of pavement and landscaping, removal of protruding laterals, liner termination at manholes, reworking manhole inverts and benches, testing of installed liner, Closed Circuit Television (CCTV) inspection for pre- and post- rehabilitation, traffic control work, and for all other related work.	LF	$929.00	798	$741,342
8	Sewer Flow Control, including diversion and bypass pumping plan, temporary bypass piping and pumps, pipe plugs, bypassing at sewer laterals (including locating and exposing cleanouts), temporary trenches (including pavement demolition, excavation, backfill, trench covers, temporary and permanent AC pavement, muck handling and disposal), electrical and standby power/pumps, monitoring, spill containment/mitigation, traffic control work, temporary erosion control measures, all related restoration work, in place complete.	LS	$755,700	1	$755,700

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Exhibit D (11 of 17)

Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE B –Base Bid

Description of Work: CIPP lining 21", 24", 30" and 36" existing sewer pipes, providing temporary bypass and traffic control as necessary to complete the rehabilitation and replacement work.

				Schedule B – Base Bid	
Item No.	Description	Unit	Unit Price	Qty	Bid Amount
	Schedule B – BASE BID (TOTAL Items 1 through 8, inclusive)				$3,998,688

Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE B – Additive Bid No. 1

Description of Work: CIPP part-liner or chemical grouting to control infiltration/inflow prior to CIPP lining.

				Schedule B – Additive Bid No. 1	
1	CIPP part-liner or grouting to control infiltration on the existing 21" sewer line, where approved by the Owner, including full compensation for all labor, materials, supplies, equipment, tools, and all incidentals for completed work.	LF	$2330.00	70	$163,100.00
2	CIPP part-liner or grouting to control infiltration on the existing 24" sewer line, where approved by the Owner, including full compensation for all labor, materials, supplies, equipment, tools, and all incidentals for completed work.	LF	$2330.00	80	$186,400.00
3	CIPP part-liner or grouting to control infiltration on the existing 30" sewer line, where approved by the Owner, including full compensation for all labor, materials, supplies, equipment, tools, and all incidentals for completed work.	LF	$2960.00	160	$473,600.00
4	CIPP part-liner or grouting to control infiltration on the existing 36" sewer line, where approved by the Owner, including full compensation for all labor, materials, supplies, equipment, tools, and all incidentals for completed work.	LF	$2960	160	$473,600.00
	SCHEDULE B – Additive Bid No. 1 (TOTAL Items 1 through 4, inclusive)				$5,295,388.00

$1,296,700

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Exhibit D (12 of 17)

Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE B - Additive Bid No. 2
Description of Work: Archaeological monitoring.

					SCHEDULE B – Additive Bid No. 2
1	Archaeological and cultural resource services to add new laydown staging areas outside of the suggested areas or outside of the area of potential effect as defined the Archaeological Monitoring and Data Recovery Plan for the project and resubmit to the Department of Parks and Recreation, Guam Historic Resources Division/State Historic Preservation Office for approval and acceptance.	LS	$35,000	1	$35,000
			SCHEDULE B - Additive Bid No. 2 (TOTAL Items 1, inclusive)		$5,330,388.00

Bidder acknowledges that estimated quantities are not guaranteed and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents. Bidder also acknowledges that each unit price includes an amount considered by Bidder to be adequate to cover Bidder's overhead and profit for each separately identified item.

ARTICLE 6 - TIME OF COMPLETION

6.01 Bidder agrees that the furnishing of Goods and Special Services will conform to the schedule set forth in Article 5 of the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 - ATTACHMENTS TO THIS BID

7.01 The following documents are attached to and made a condition of this Bid:

A. Required Bid security in the form of bidder's bond.

B. List of Proposed Major Suppliers;

C. Required Bidder Qualification Statement with Supporting Data.

ARTICLE 8 - DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

$35,000

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Exhibit D (13 of 17)

Insituform® Technologies, LLC

World HQ: 17988 Edison Avenue Chesterfield MO 63005 636-530-8000 Fax: 636-530-8701

Local Off: 9654 Titan Court Littleton CO 80125 303-791-7199 Fax: 303-791-7399

GWA Route 4 Releif Sewer Line Rehabilitation and Replacement, Project No. S15-006-EPA

LIST OF SUBCONTRACTORS Selection for Insituform

1. CCTV/CLEARING - MOCON
2. BYPASS - MOCON
3. _____
4. _____
5. _____
6. _____

Exhibit D (14 of 17)

Insituform® Technologies, LLC

World HQ: 17988 Edison Avenue Chesterfield MO 63005 636-530-8000 Fax: 636-530-8701

Local Off: 9654 Titan Court Littleton CO 80125 303-791-7199 Fax: 303-791-7399

GWA Route 4 Releif Sewer Line Rehabilitation and Replacement, Project No. S15-006-EPA

LIST OF Suppliers Selection for Insituform

1. CIPP—Insituform
2. _____
3. _____
4. _____
5. _____

Exhibit D (15 of 17)

ARTICLE 9 - BID SUBMITTAL

9.01 This Bid submitted by:

If Bidder is:

An Individual

Name (typed or printed): N/A

By: _____
(Individual's signature)

Doing business as: _____

Business address: _____

_____

Phone: _____ Facsimile: _____

E-mail address: _____

A Partnership

Partnership Name: N/A (SEAL)

By: _____
(Signature of general partner - attach evidence of authority to sign)

Name (typed or printed): _____

Business address: _____

_____

Phone: _____ Facsimile: _____

E-mail address: _____

A Corporation

Corporation Name: N/A

State of Incorporation: _____

Type (General Business, Professional, Service, other): _____

By: _____
(Signature - attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

(CORPORATE SEAL)

Attest _____
(Signature of Corporate Secretary)

Business address: _____

_____

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Exhibit D (16 of 17)

Phone: _____ Facsimile: _____

E-mail address: _____

A Limited Liability Company (LLC)

LLC Name: Insituform Technologies, LLC

State in which organized: Delaware

By: Whittney Schulte

(Signature - attach evidence of authority to sign)

Name (typed or printed): Whittney Schulte

Title: Contracting & Attesting Officer

Business address: 17988 Edison Avenue
Chesterfield, MO 63005

Phone: 636-530-8000 Facsimile: 636-530-8701

E-mail address: WSchulte@Aegion.com

A Joint Venture

First Joint Venturer Name: N/A (SEAL)

By: _____

(Signature - attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Business address: _____

Phone: _____ Facsimile: _____

E-mail address: _____

Second Joint Venturer Name: _____ (SEAL)

By: _____

(Signature - attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Business address: _____

Phone: _____ Facsimile: _____

E-mail address: _____

Phone and Facsimile Number, and Address for receipt of official communications to Joint Venture: _____

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Exhibit D (17 of 17)

INSITUFORM TECHNOLOGIES, LLC

PRESIDENT APPOINTMENT OF OFFICERS

Pursuant to the authority set forth in the Limited Liability Company Agreement of Insituform Technologies, LLC (the "Company"), I hereby determine that:

1. Christlanda Adkins, Laura M. Andreski, Janet Hass, Jana Lause, Diane Partridge, Whittney Schulte, and Ursula Youngblood are appointed as Contracting and Attesting Officers of the Company, each with the authority, individually and in the absence of the others, subject to the control of the Board of Managers of the Company, (i) to certify and to attest the signature of any officer of the Company, (ii) to enter into and to bind the Company to perform pipeline rehabilitation activities of the Company and all matters related thereto, including the maintenance of one or more offices and facilities of the Company, (iii) to execute and to deliver documents on behalf of the Company, and (iv) to take such other action as is or may be necessary and appropriate to carry out the project, activities and work of the Company; and

2. All other Contracting and Attesting Officers of the Company appointed by the President of the Company prior to the date of this appointment are hereby removed from office.

Dated: September 20, 2017

Frank R. Firsching
President

GUAM WATERWORKS AUTHORITY

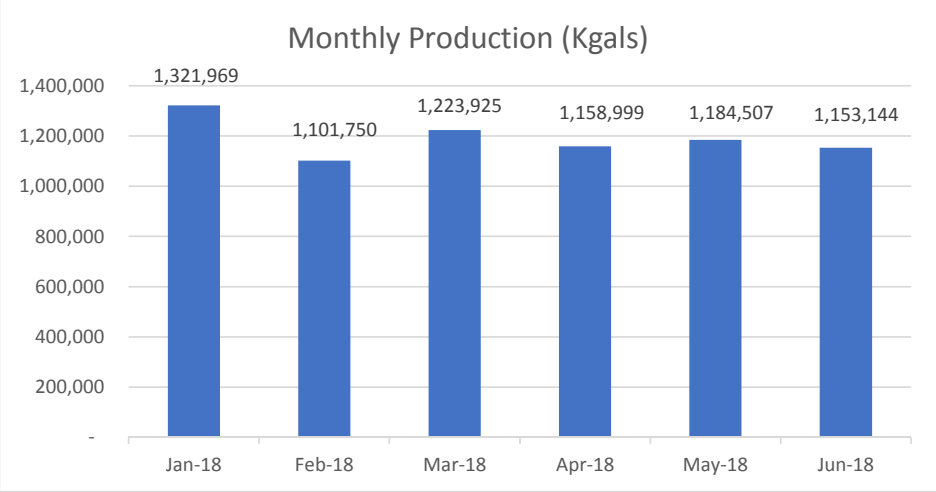
General Manager's Report
GWA Work Session, July 19, 2018

Operations Update

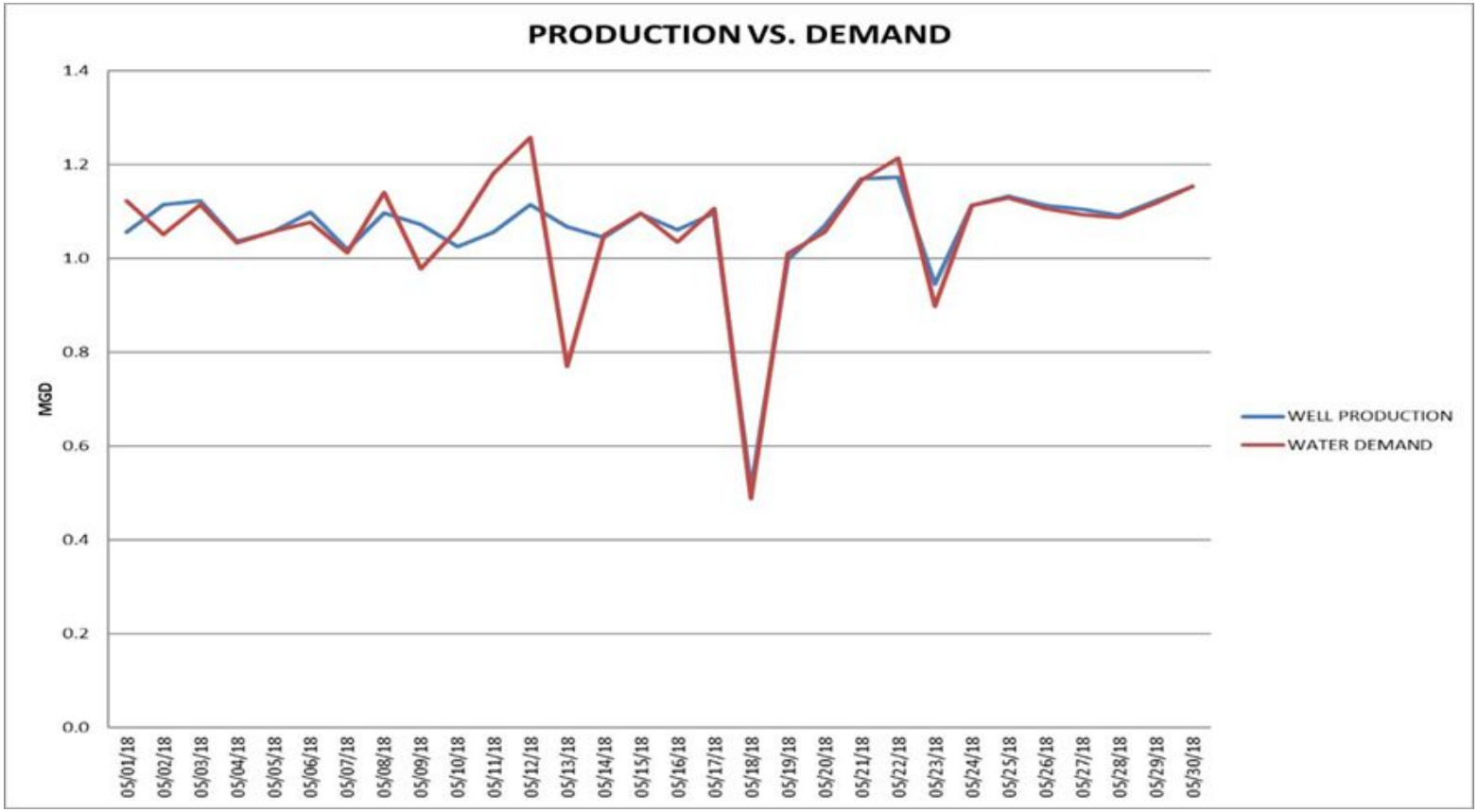
Production

Monthly Production Summary - May 2018					
Deep Wells				35.2	MGD
	Active wells =	95	of 120		
	Avg days in operation =	31.00	days		
	Total Production =	1,089,902	Kgals		
Springs				0.00	MGD
	Avg days in operation =	0	days	*placed on standby	
	Total Production =	0	Kgals		
Ugum Surface Water Plant				2.0	MGD
	Avg days in operation =	31	days		
	Total Production =	61,545	Kgals		
Tumon Maui Well				1.07	MGD
	Avg days in operation =	31	days		
	Total Production =	33,060	Kgals		
		1,184,507	Kgals	38.2	MGD

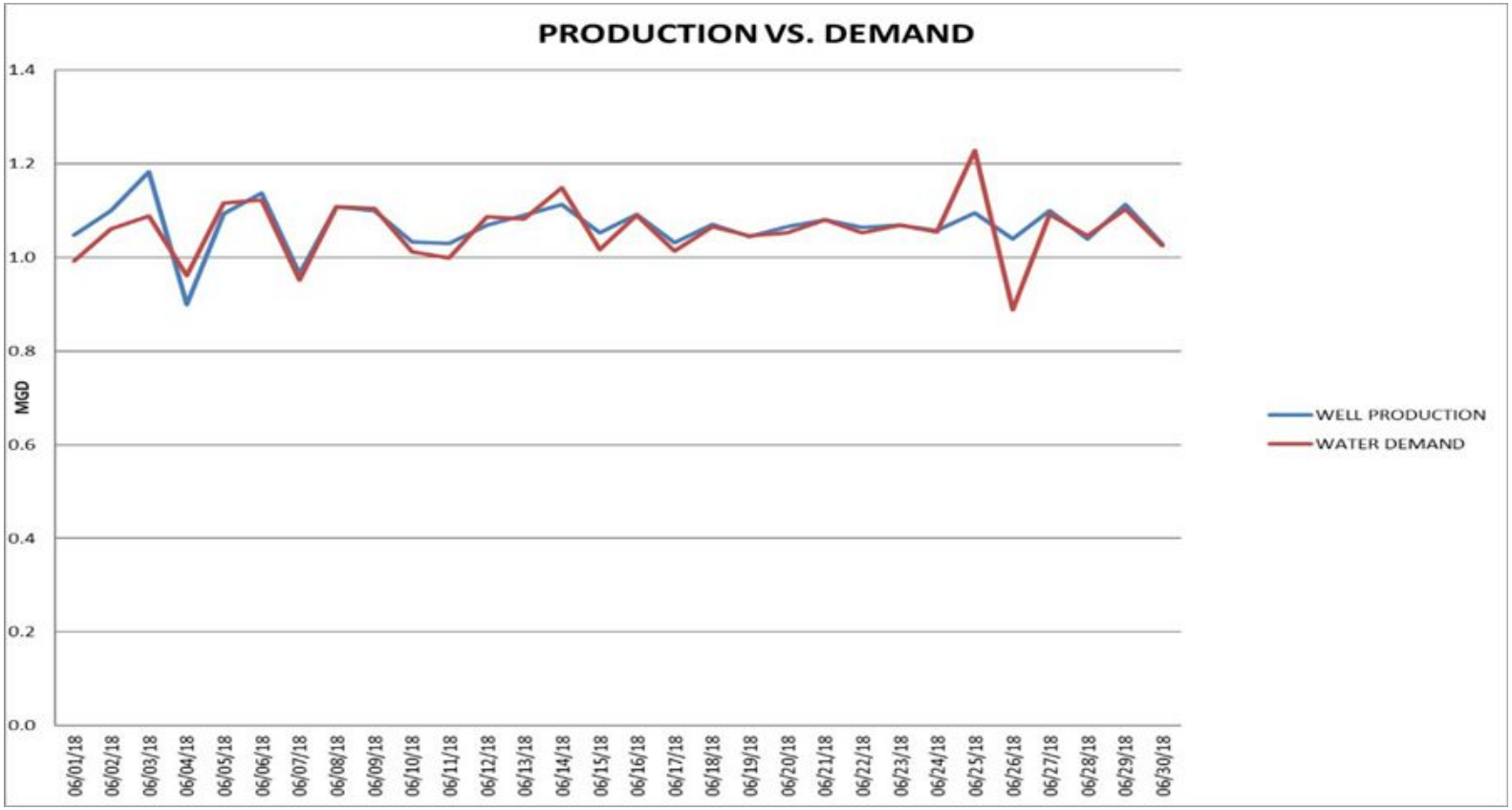
Monthly Production Summary - June 2018					
Deep Wells				35.4	MGD
	Active wells =	94	of 120		
	Avg days in operation =	30.00	days		
	Total Production =	1,062,758	Kgals		
Springs				0.00	MGD
	Avg days in operation =	0	days	*placed on standby	
	Total Production =	0	Kgals		
Ugum Surface Water Plant				1.9	MGD
	Avg days in operation =	30	days		
	Total Production =	58,373	Kgals		
Tumon Maui Well				1.03	MGD
	Avg days in operation =	30	days		
	Total Production =	32,013	Kgals		
		1,153,144	Kgals	38.4	MGD



Tumon Maui Well Production vs. Demand for May 2018



Tumon Maui Well Production vs. Demand for June 2018

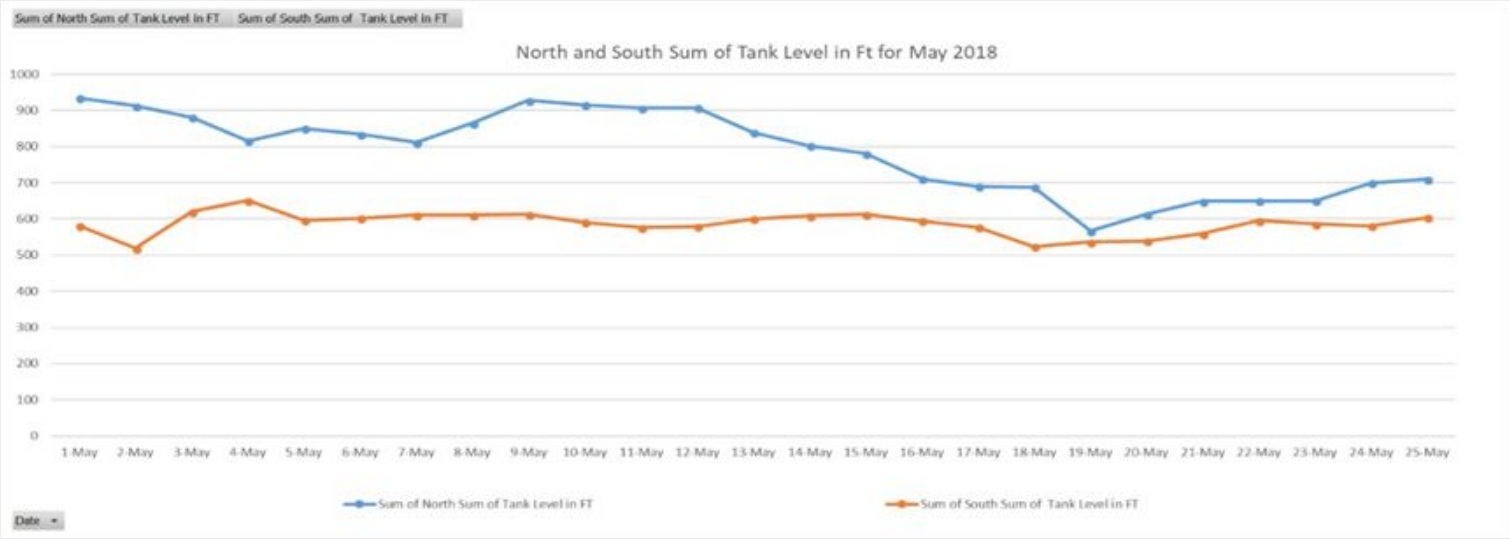


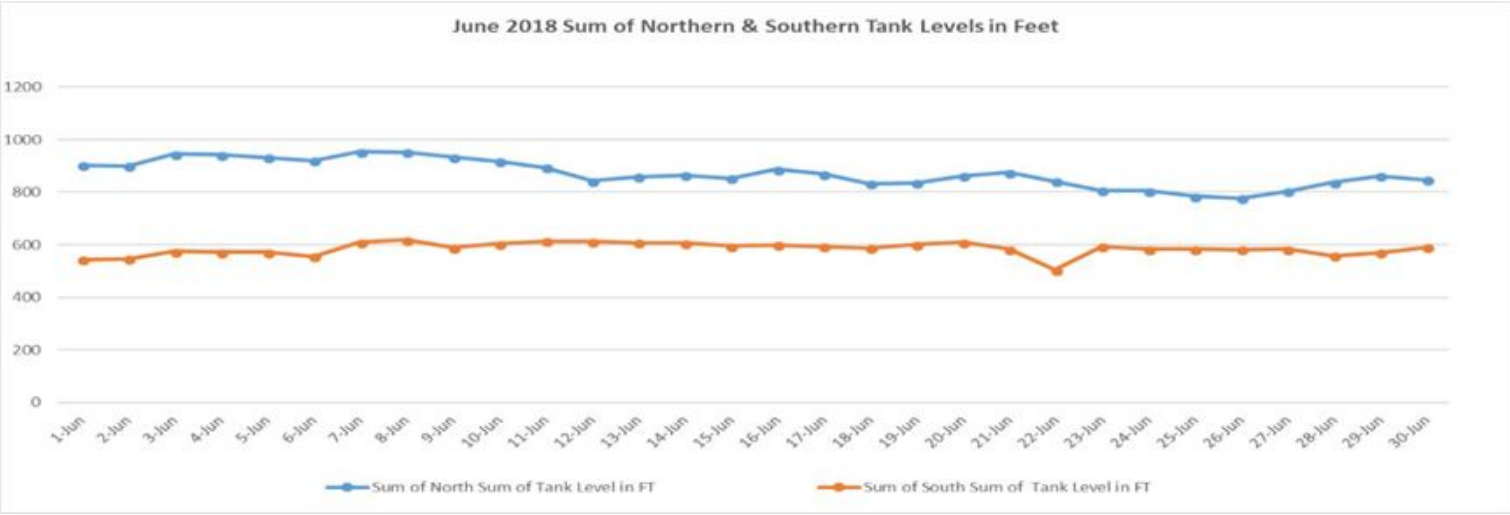
Distribution

Monthly Distribution Summary - May 2018					
Water Booster Pump Stations					
	District	No. of Stations	Total Pumps	Pumps Operating	% Operationa
	Northern	11	21	20	95.2%
	Central	7	15	13	86.7%
	Southern	7	15	14	93.3%
		25	51	47	92.2%

Monthly Distribution Summary - June 2018					
Water Booster Pump Stations					
	District	No. of Stations	Total Pumps	Pumps Operating	% Operational
	Northern	11	21	20	95.2%
	Central	7	15	13	86.7%
	Southern	7	15	15	100.0%
		25	51	48	94.1%

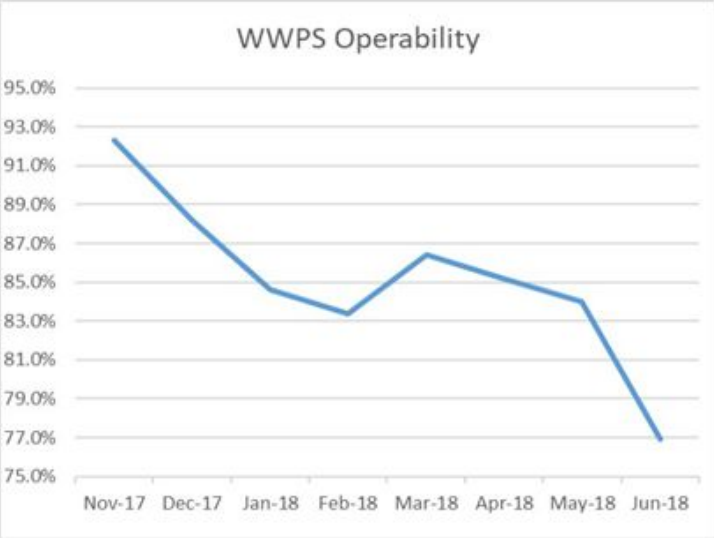


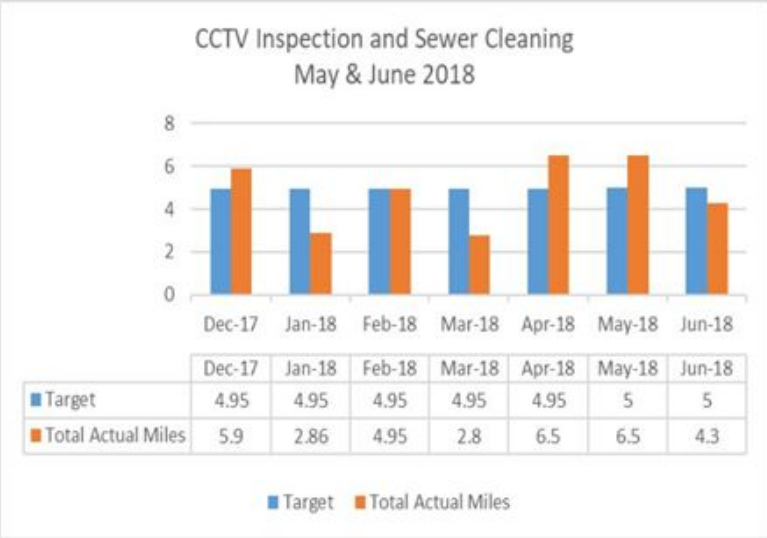

Sum of North Sum of Tank Level in FT
Sum of South Sum of Tank Level in FT
North and South Sum of Tank Level in Ft for May 2018
1000
900
800
700
600
500
400
300
200
100
0
1 May
2 May
3 May
4 May
5 May
6 May
7 May
8 May
9 May
10 May
11 May
12 May
13 May
14 May
15 May
16 May
17 May
18 May
19 May
20 May
21 May
22 May
23 May
24 May
25 May
Sum of North Sum of Tank Level in FT
Sum of South Sum of Tank Level in FT
Date


June 2018 Sum of Northern & Southern Tank Levels in Feet
1200
1000
800
600
400
200
0
1-Jun
2-Jun
3-Jun
4-Jun
5-Jun
6-Jun
7-Jun
8-Jun
9-Jun
10-Jun
11-Jun
12-Jun
13-Jun
14-Jun
15-Jun
16-Jun
17-Jun
18-Jun
19-Jun
20-Jun
21-Jun
22-Jun
23-Jun
24-Jun
25-Jun
26-Jun
27-Jun
28-Jun
29-Jun
30-Jun
Sum of North Sum of Tank Level in FT
Sum of South Sum of Tank Level in FT

Wastewater Collections

Monthly Collections Summary - May 2018						Monthly Collections Summary - June 2018					
Wastewater Pump Stations						Wastewater Pump Stations					
	District	No. of Stations	Total Pumps	Pumps Operating	% Operational		District	No. of Stations	Total Pumps	Pumps Operating	% Operational
	Northern	22	52	45	86.5%		Northern	22	52	44	84.6%
	Central	29	63	54	85.7%		Central	29	63	45	71.4%
	Southern	27	54	43	79.6%		Southern	27	54	41	75.9%
		78	169	142	84.0%			78	169	130	76.9%

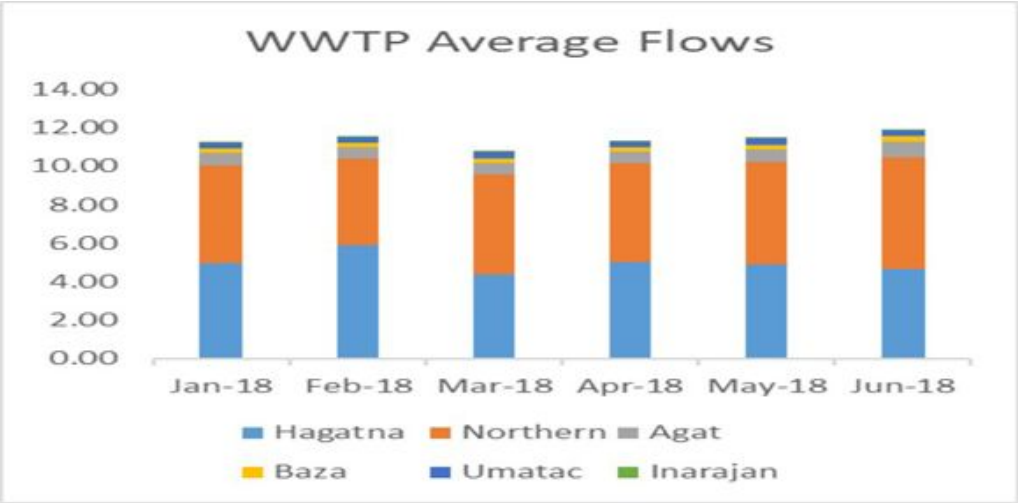




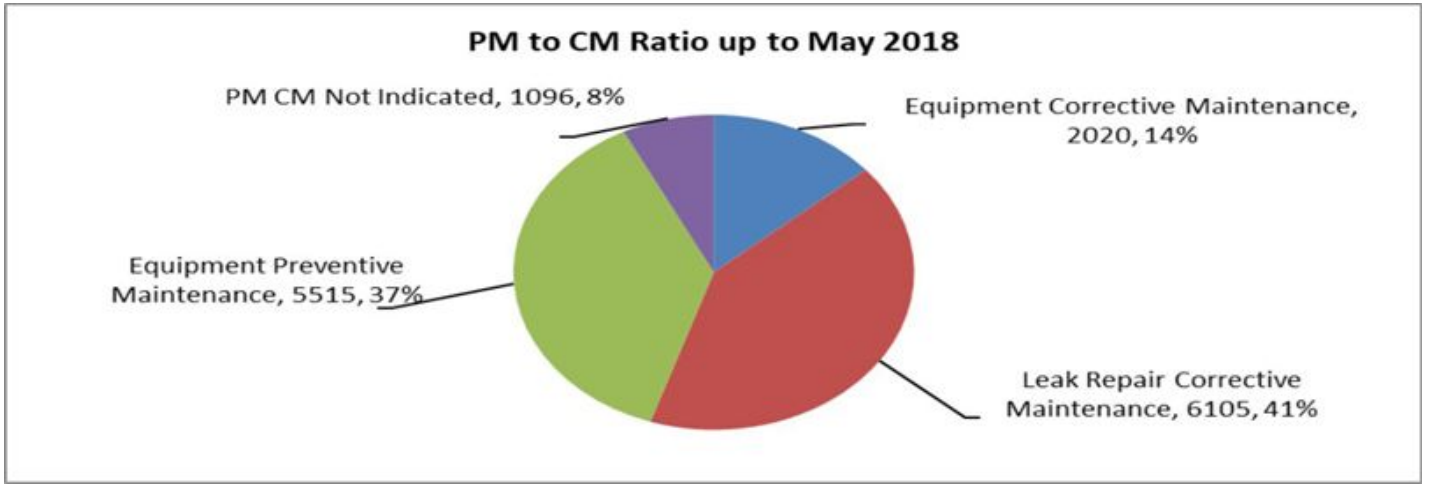
Wastewater Treatment

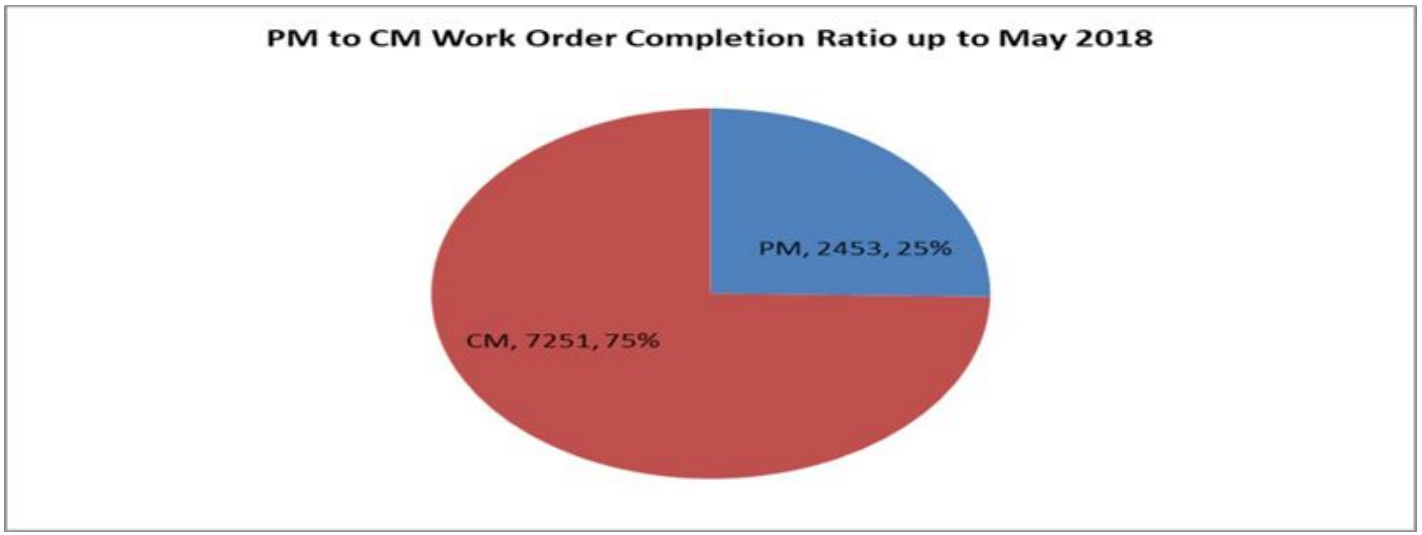
Monthly Wastewater Treatment Summary - May 2018				
WW Treatment Plants - Flows				
	Facility	**Avg. Daily Flows**	**Sludge (lbs)**	**Sludge Disp. ($)**
	Hagatna	4.93	583,080	$ 52,477
	Northern	5.32	786,700	$ 70,803
	Agat	0.63		
	Baza	0.25		
	Umatac	0.30		
	Inarajan	0.07		
		11.50	1,369,780	$ 123,280

Monthly Wastewater Treatment Summary - June 2018				
WW Treatment Plants - Flows				
	Facility	**Avg. Daily Flows**	**Sludge (lbs)**	**Sludge Disp. ($)**
	Hagatna	4.67	717,120	$ 64,541
	Northern	5.78	836,600	$ 75,294
	Agat	0.86		
	Baza	0.25		
	Umatac	0.30		
	Inarajan	0.06		
		11.92	1,553,720	$ 139,835

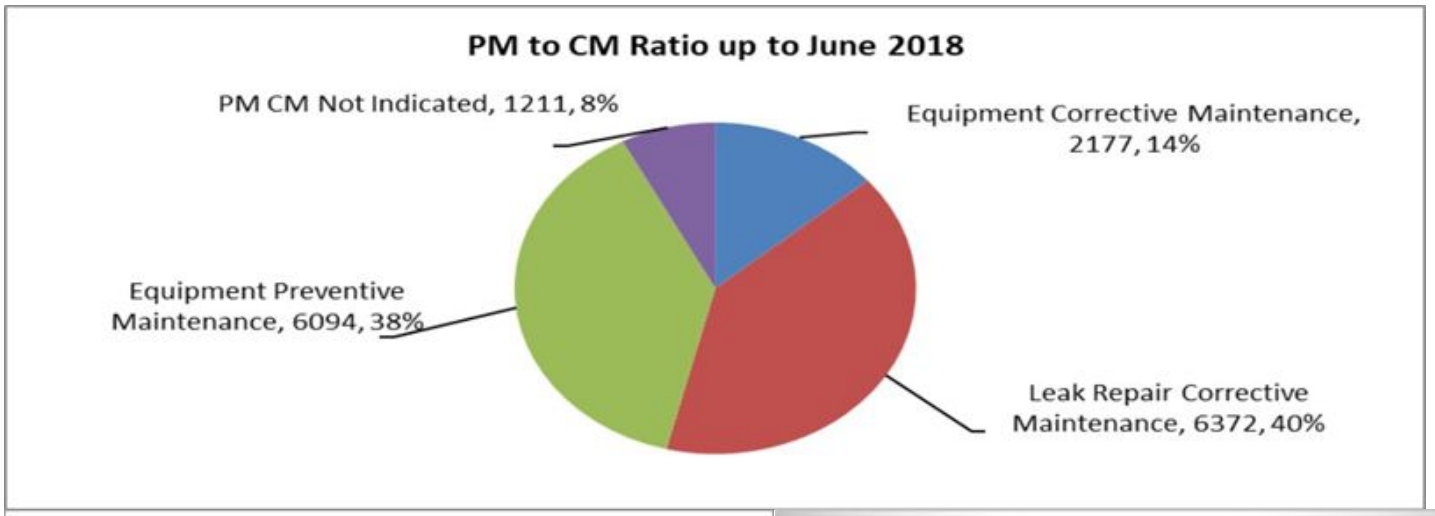


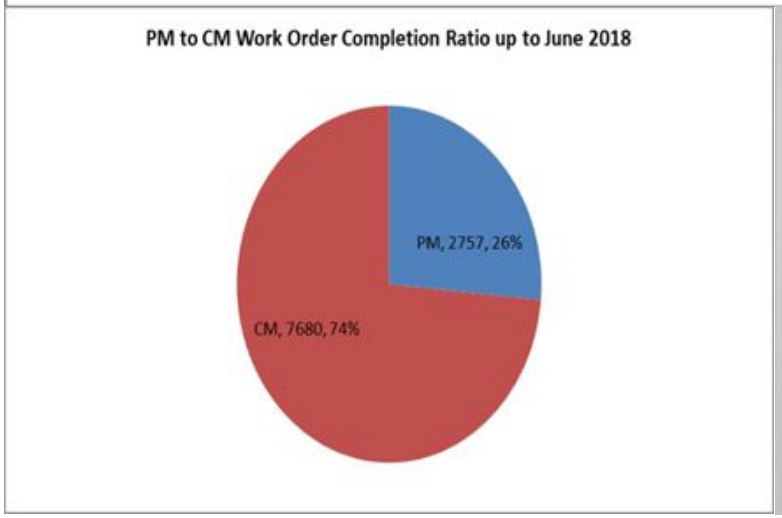
Asset Management for May 2018

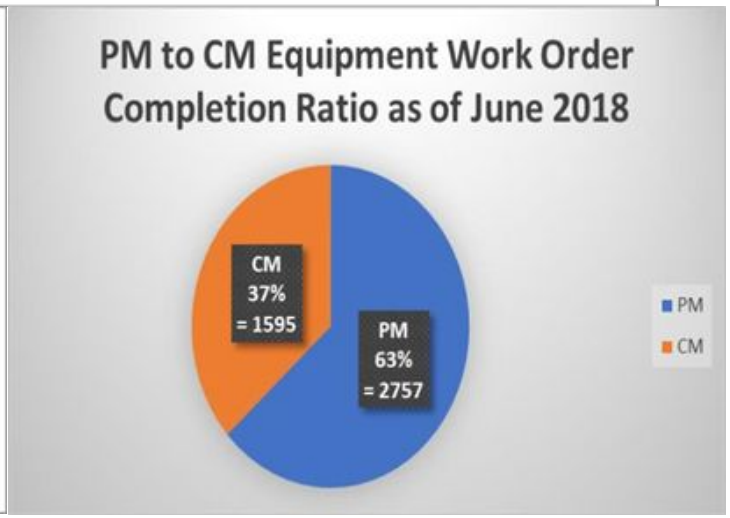




Asset Management for June 2018







Operational Issues

Production & Distribution

- Leak repair
  - Crews maintaining performance - As of June 30th, there were less than 40 pending repairs
    - 88% reduction from 2017-2018 Maximum of 283 pending
    - 80% reduction from 2018 Maximum of 179 pending
  - IFB for advanced remote leak detection services should be advertised next month
- WSCC –
  - SCADA FAT completed
  - Coordination of WSCC – PSCC layout on-going
  - SCADA equipment and installation requirements on-going
- Pump and motor inventories okay; additional orders for recent replacements are being made
- GWA Crane Repair –new cable installation pending; load testing completed.

Wastewater Collection & Treatment

- CCTV & Collections System:
  - Planning department assisting CCTV Crews to revise completed reports to meet appropriate industry standards
  - SSES and CCTV-based repairs to collection lines and SMHs are being conducted by Ops personnel
- Pump stations
  - Facility maintenance efforts have been completed
  - Minimum pump and motor inventory levels being established (similar to effort with deep-wells)
  - Critical spares and replacements procurement is on-going
- Treatment Plants
  - Hagatna WWTP
    - Effluent pumps back up
    - Centrifuges: one operational, repairs to 2nd are almost complete.
  - Northern WWTP
    - Both centrifuges back in operation
  - Agat-Santa Rita WWTP
    - Solids process commissioning (GBTs, Centrifuges) to be completed in the next 2 weeks
    - With that, critical process facilities all operating and substantially complete
  - U-M WWTP
    - Work on-going at the site
    - Significant delays have occurred because of USF&W / EPA permitting issues
  - Baza Gardens
    - Work on-going for all 3 phases
    - Anticipated completion is now Sep 30th
    - Delay letter has been sent to USEPA

Meters for month of May 2018

COMPLETED FIELD ACTIVITY JAN 2017 THRU MAY 2018 (POSTED IN CIS)	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	TOTAL:	COMPLETED FIELD ACTIVITIES (IN PROCESS) TO BE POSTED IN CIS
GWA - Test Meter	30	9	9	371	745	87	393	743	1000	1007	434	378	750	969	1213	1429	84	9651	856
GWA - Meter Exchange	393	179	220	276	482	353	501	807	1526	1039	452	259	239	1086	2120	121	121	10174	0
GWA - Verify Zero Report	30	124	114	94	96	402	261	199	550	89	82	169	356	106	117	69	13	2871	0
GWA - Verify Low Usage	0	0	0	2	37	36	196	488	657	202	127	612	858	1122	1055	463	19	5874	0
TOTAL:	453	312	343	743	1360	878	1351	2237	###	###	1095	1418	###	3283	4505	2082	237	28570	856

# OF METERS TESTED AS PER METER TEST FACILITY REPORTS:	345	350	144	252	305	210	302	397	1013	1130	927	704	721	1041	1347	815	671	10674	
# OF BACKBILLINGS APPLIED AS PER FINANCE REPORTS:	0	0	0	20	122	84	29	111	219	80	77	4	136	23	323	48	75	1351	$ 912,582.81

# OF FIELD CREW PERFORMING CHANGE OUTS:	19	10	13	9	21	21	14	24	35	28	28 *	28 *	5	13	2	2	2
# OF ADMIN STAFF TO CREATE AND POST FIELD ACTIVITIES IN CIS:	7	4	5	6	9	9	10	13	15	15	13	13	8	11	5	4	1
# OF SUPPLY STAFF TO ISSUE MATERIALS AND PROGRAM NEW METERS:	2	2	2	2	2	2	2	2	2	2	2	2	2	4	0	0	0
# OF TEST FACILITY PERSONNEL TESTING METERS:	2	2	2	3	3	3	3	3	3	3	3	3	3	2	2	2	2
# OF ACCOUNTANTS CALCULATING BACK BILLS:	0	0	0	2	3	2	2	3	3	2	2	2	2	2	2	2	2
TOTAL:	30	18	22	22	38	37	31	45	58	50	48	48	20	32	11	10	7

*Project overtime on hold Nov 18, 2017 thru Dec 16, 2017. During this period, 4 personnel performed work on this project during the regular work day with a majority of the work completed during Nov and Dec month occuring before and after the OT moratorium.

NOTE: MARCH 18, 2018 - PROJECT ON HOLD PENDING ARRIVAL OF METERS

Project resumed June 04 2018

REMAINING ACTIVE BADGER LP MODELS AS OF MAY 31, 2018: 20936

ACTIVE LP MODELS - PURCHASE YEAR	COUNT	WARRANTY STATUS
2012	8892	13843 METERS WITH EXPIRED WARRANTY
Jan-13	2133	
Feb-13	743	
Mar-13	629	
Apr-13	0	
May-13	1446	
Aug-13	2546	7093 METER WITH AN ACTIVE WARRANTY
Sep-13	1	
Oct-13	0	
Nov-13	1	
Dec-13	0	
Jan-14	1	
Feb-14	646	
Mar-14	0	
Apr-14	2434	
May-14	0	
Jun-14	72	
Jul-14	0	
Aug-14	1392	
TOTAL:	20936	

Meters for month of June 2018

COMPLETED FIELD ACTIVITY JAN 2017 THRU JUNE 2018 (POSTED IN CIS)	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	TOTAL:	COMPLETED FIELD ACTIVITIES (IN PROCESS) TO BE POSTED IN CIS
GWA - Test Meter	30	9	9	371	745	87	393	743	1000	1007	434	378	750	969	1213	1429	84	1299	10950	122
GWA - Meter Exchange	393	179	220	276	482	353	501	807	1526	1039	452	259	239	1086	2120	121	121	1056	11230	284
GWA - Verify Zero Report	30	124	114	94	96	402	261	199	550	89	82	169	356	106	117	69	13	2	2873	0
GWA - Verify Low Usage	0	0	0	2	37	36	196	488	657	202	127	612	858	1122	1055	463	19	5	5879	0
TOTAL:	453	312	343	743	1360	878	1351	2237	###	###	1095	1418	###	3283	4505	2082	237	2362	30932	406

# OF METERS TESTED AS PER METER TEST FACILITY REPORTS:	345	350	144	252	305	210	302	397	1013	1130	927	704	721	1041	1347	815	671	544	11218	
# OF BACKBILLINGS APPLIED AS PER FINANCE REPORTS:	0	0	0	20	122	84	29	111	219	80	77	4	136	23	323	48	75	20	1371	$ 916,550.91

# OF FIELD CREW PERFORMING CHANGE OUTS:	19	10	13	9	21	21	14	24	35	28	28 *	28 *	5	13	2	2	2	28
# OF ADMIN STAFF TO CREATE AND POST FIELD ACTIVITIES IN CIS:	7	4	5	6	9	9	10	13	15	15	13	13	8	11	5	4	1	13
# OF SUPPLY STAFF TO ISSUE MATERIALS AND PROGRAM NEW METERS:	2	2	2	2	2	2	2	2	2	2	2	2	2	4	0	0	0	2
# OF TEST FACILITY PERSONNEL TESTING METERS:	2	2	2	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2
# OF ACCOUNTANTS CALCULATING BACK BILLS:	0	0	0	2	3	2	2	3	3	2	2	2	2	2	2	2	2	2
TOTAL:	30	18	22	22	38	37	31	45	58	50	48	48	20	32	11	10	7	47

*Project overtime on hold Nov 18, 2017 thru Dec 16, 2017. During this period, 4 personnel performed work on this project during the regular work day with a majority of the work completed during Nov and Dec month occuring before and after the OT moratorium.

NOTE: MARCH 18, 2018 - PROJECT ON HOLD PENDING ARRIVAL OF METERS

Project resumed June 04 2018; added 2 hrs per weekday field work on June 18, 2018

REMAINING ACTIVE BADGER LP MODELS AS OF JUNE 30, 2018: 20054

AS OF JUNE 30 2018

ACTIVE LP MODELS - PURCHASE MO & YEAR	COUNT	
2012	8908	WARRANTY EXPIRED
Jan-13	2129	
Feb-13	742	
Mar-13	640	
Apr-13	0	
May-13	1452	
Jun-13	0	
Jul-13	0	
Aug-13	1614	ACTIVE WARRANTY
Sep-13	1	
Oct-13	0	
Nov-13	1	
Dec-13	0	
Jan-14	1	
Feb-14	648	
Mar-14	1	
Apr-14	2445	
May-14	0	
Jun-14	72	
Jul-14	0	
Aug-14	1400	
TOTAL :	20054	
	13871	WARRANTY EXPIRED
	6183	ACTIVE WARRANTY

Marbo (Andy-South) Wells – Status

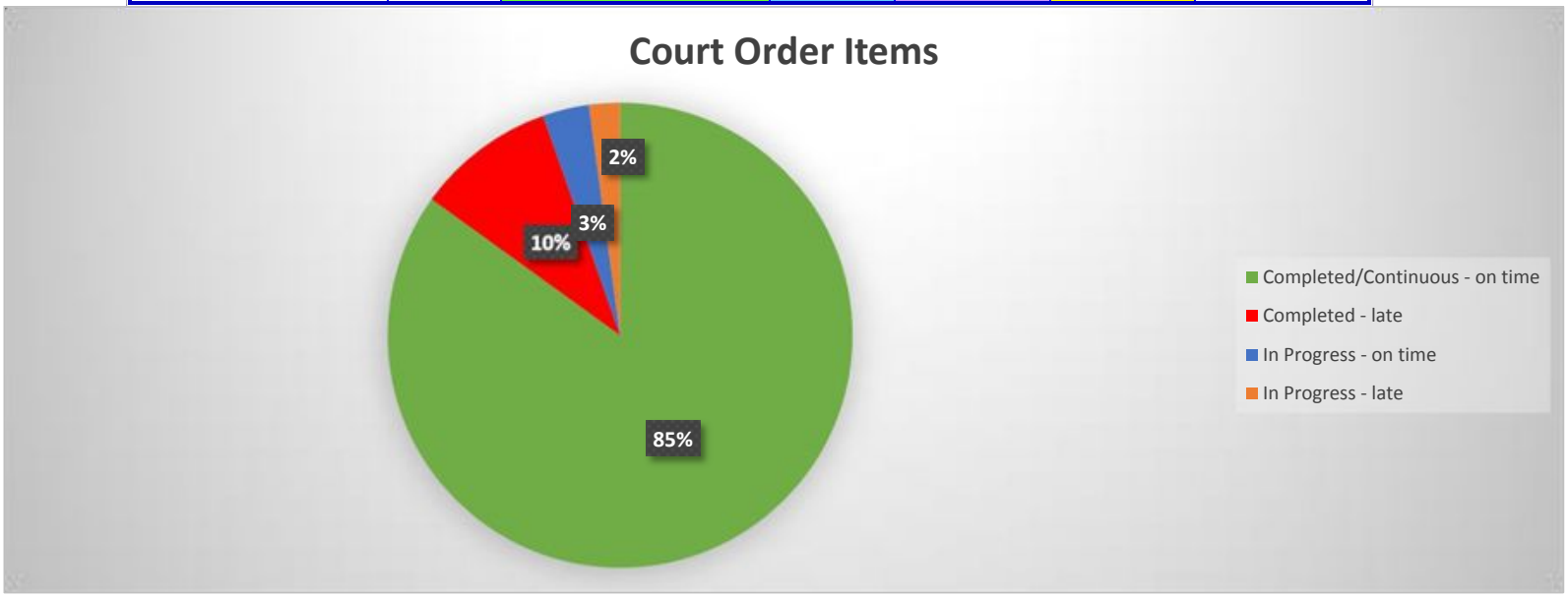
- Involuntary reversion appears imminent; GWA Counsel transmitted draft easement documents to GSA for consideration with DoD
- No updates - Waiting on response from GSA

One Guam Update

- Santa Rosa Tank:
  - GWA and DOD are finalizing the design of the Intertie. All the property maps were completed and submitted to DOD.
  - Once the maps are completed, the letter to General Cox will be finalized for the temporary easement.
  - The After-Action Report format is being reviewed.
  - The Standard Operation Procedure (SOP) and MOU are being reviewed by DOD.
- Agat-Santa Rita WWTP
  - Compensation for the Agat-Santa Rita easement is still under discussion. Waiting on Navy Real Estate
- Date Sharing MOU has been drafted – under review and comment
  - This MOU will outline the standards for GIS, hydraulic and other data to be shared between DOD and GWA.

Court Order

	Items	On-time Items Completed/Continuous	Items Delayed	Completed Late	Items on Schedule	Performance %
Court order total	**93**	**79**	**2**	**9**	**3**	**97.8%**



Status Information

- 2 items delayed
  - Meters
  - Baza Gardens Sewer Line
- Final Date to complete all Court Order items is December 31, 2020.
- Overflow or Bypass events reported to USEPA:
  - 06/18/2018 - Tun Jesus Crisostomo St., Tamuning; MH OF -- FOG
  - 06/25/2018 - BOH Marine Corps Dr., Tamuning; MH OF -- FOG
  - 06/27/2018 - Aga Dr., Santa Rita; sewer overflow -- debris aggravated by FOG
  - 06/27/2018 - Chagamin Lago St., Inarajan; sewer overflow -- Control problems
  - 06/30/2018 - Ypao Rd., Tamuning; manhole over flow -- rocks and misc. debris aggravated by FOG
  - 07/03/2018 - Dairy Pump Station -- Control Problem
  - 07/05/2018 - Vietnam Veterans Highway; ATS failure, generator not running - generator manual start failed (no island power)
  - 07/05/2018 - Mamajanao Pump Station; ATS failure, generator not running (no island power)
  - 07/05/2018 - Alupang Sunset Condo, Tamuning; FOG
  - 07/06/2018 - Sereno Ave., Tamuning; rags and debris
  - 07/05/2018 - Route 1, Marine Corp Drive, Asan; control problems due to storm related issues
  - 07/06/2018 - Route 2, Agat; Sewer main break, Contractor damage to GWA sewer
  - 07/06/2018 - Chagamin Lago, Inarajan; sewer overflow - only one pump in a two-pump station, couldn’t keep up with heavy rain
  - 07/08/2018 - Umatac-Merizo WWTP; Lower Lagoon (Bypass - ongoing) -- Heavy rainfall

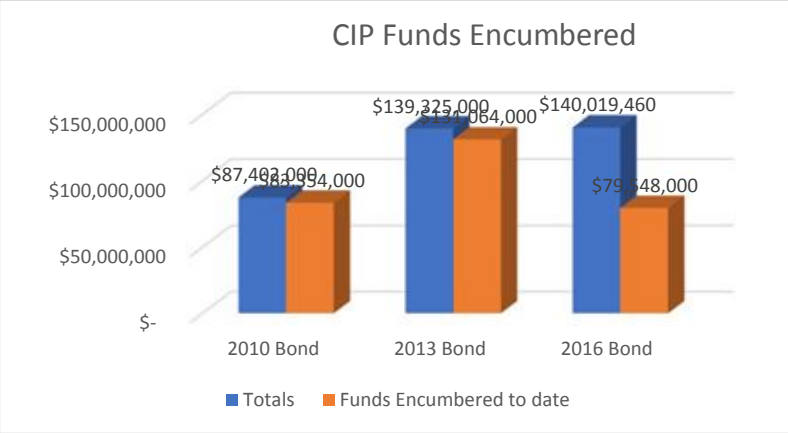
CIP Summary

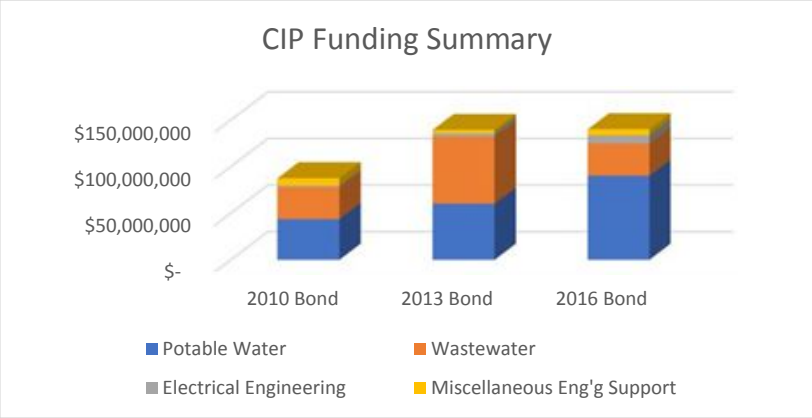
CIP Summary - Project Encumbrance

	2010 Bond		2013 Bond		2016 Bond			
	Funded	Complete	Funded	Complete	Funded	Complete	Total CIP Projects	%
Potable Water	28	17	21	7	20	0	35	49%
Wastewater	16	13	7	3	8	1	22	31%
Electrical Engineering	5	5	6	1	5	0	10	14%
Miscellaneous Eng'g Support	2	0	3	1	4	1	4	6%
Totals	51	35	37	12	37	2	71	100%
% of Total CIP by Fund Source	72%		52%		52%			

CIP Summary - Project Amounts

	2010 Bond		2013 Bond		2016 Bond			
	Funded	%	Funded	%	Funded	%	Total CIP Projects	%
Potable Water	$ 41,903,305	48%	$ 58,317,117	42%	$ 64,647,830	46%	$ 164,868,252	45%
Wastewater	$ 36,009,577	41%	$ 73,837,883	53%	$ 60,227,170	43%	$ 170,074,630	46%
Electrical Engineering	$ 1,748,118	2%	$ 3,395,000	2%	$ 8,750,000	6%	$ 13,893,118	4%
Miscellaneous Eng'g Support	$ 7,741,000	9%	$ 3,775,000	3%	$ 6,394,460	5%	$ 17,910,460	5%
Totals	$ 87,402,000	100%	$ 139,325,000	100%	$ 140,019,460	100%	$ 366,746,460	100%
Funds Encumbered to date	$ 83,354,000	95%	$ 131,064,000	94%	$ 79,548,000	57%		
% of Total CIP Funding	23.8%		38.0%		38.2%			





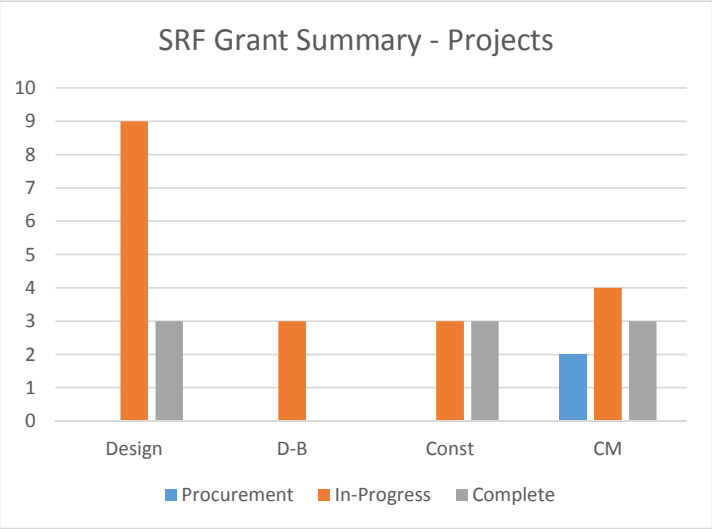
SRF Grant Summary

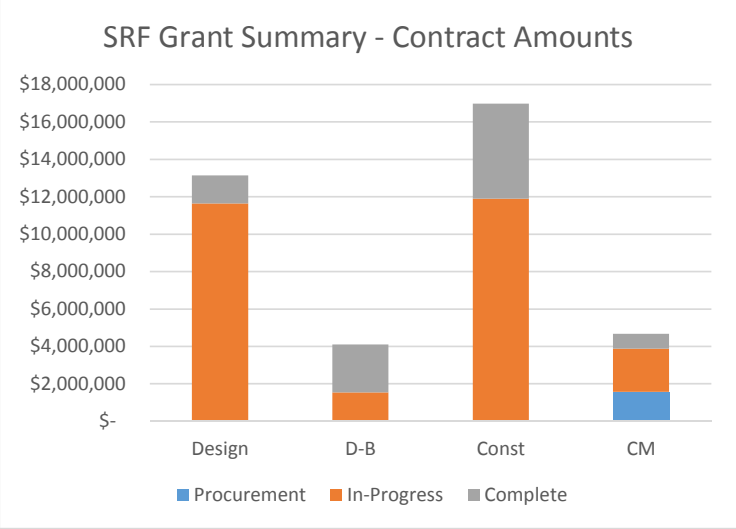
SRF Grant Summary - Projects

	Procurement	In-Progress	Complete	Totals	%
Design	0	9	3	12	40%
D-B	0	3		3	10%
Const	0	3	3	6	20%
CM	2	4	3	9	30%
Totals	2	19	9	30	
%	7%	63%	30%		

SRF Grant Summary - Contract Amounts

	Procurement	In-Progress	Complete	Totals	%
Design	$ -	$ 11,642,195	1,499,418	$ 13,141,613	34%
D-B	$ -	$ 1,542,979	$ 2,565,237	$ 4,108,216	11%
Const		$ 11,902,506	$ 5,086,129	$ 16,988,635	44%
CM	$ 1,572,000	$ 2,303,747	$ 802,243	$ 4,677,990	12%
Totals	$ 1,572,000	$ 27,391,427	$ 9,953,027	$ 38,916,454	
%	4%	70%	26%		





OEA Grant Summary

- NDWWTP Upgrades
  - 60% design submittal scheduled for Sep 24th.
  - Sitework bid package to be issued Sep 12th
  - Vertical bid package planned for issuance Mar 2019

- Outfall Diffuser:
  - Re-bid package under review by GWA
  - To be advertised by end of July
  - Bids expected in September

- Sewer Line Interceptor Design-Build
  - Contract Award / NTP pending insurance requirements
  - Design and prep work is set to start
  - Construction start expected in January

- NGLA Observation wells – Design work completed
  - Bid package drawings and specs under review by GWA
  - Permitting issues being resolved and permits being obtained by PM/CM
  - Bid package to be issued once permits approved – expected in Mar 2019

Action Item	Date (Target)	Date (Actual)	Status	Remarks
Project Funds Available	July-16	AUG-30-16	Completed	
Land Acquisition	Jan-17	Jan-17 (Compensation Pending)	Pending	Survey complete, appraisals complete – under review
Procure PM/CM Firm	Jan-17	Jan-17 (NTP Issued Feb 10th)	Completed	
Procure Design Firm	Jul-17		Completed	Contract issued; kickoff pending
Design -- 30/60/90/Final -- Review	Jun-18	30% - completed May 60% - expected Sep	On-target	Project design schedule has been revised / delayed
NEPA Analysis and Determination	Feb-17	Pending final SHPO concurrence	Delayed	USEPA work on-going; procurement of contractor completed
Procure Construction Firm	Dec-18		On-target	
Construction Complete/Commence Operations	Nov-21		On-target	
Sewer line connection from MCB to GWA infrastructure	Jul-19		On-target	
MCB Initial Operating Capability	Jul-22		On-target	

Land Acquisition Summary

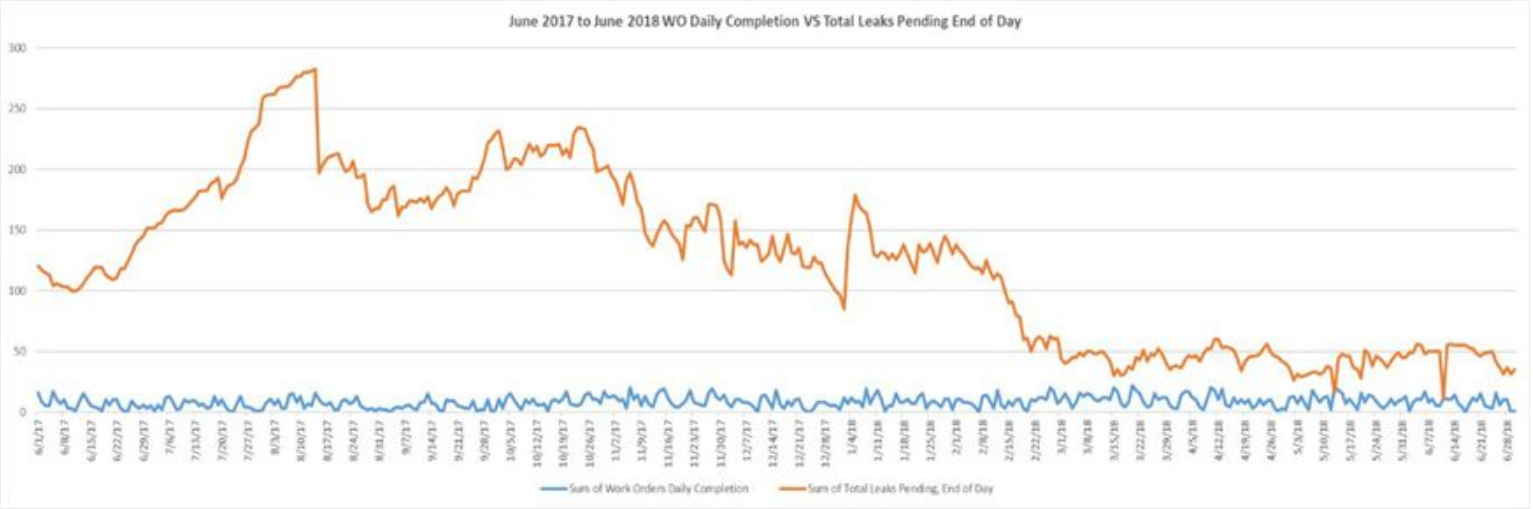
GWA Facility	Location	Gov't./Private/Other	Land Acquisition Status
Tanks	Ugum	Private	Appraisal Services completed 05/09/18.
	Astumbo	Gov't./CLTC	GWA and DoLM working together on Land Registration process. Pending Notification of surrounding lot owner information from DoLM.
	Piti	Private	Preliminary geotechnical investigation and archaeological investigation in the process 05/01/18.
Expansion of the Northern District Wastewater Treatment Plant (NDWWTP)	Dededo	Gov't./GALC	Pending Grant Deed approval from GALC 07/09/18.
Deep Well	A-12	Private	Property ownership vested in GWA 10/16/17.
	AG-12	Dept. of Agriculture/Manhita Farms	Land Registration has been approved by Superior Court of Guam. Pending release and recordation of the Decree Establishing Title at DoLM. DCA will be submitting Retracement Survey Check Print Map to DoLM for review and comments 07/13/18.
	Y-8	Gov't./CLTC	Deed of Dedication approved by legal counsel 07/03/18.
Booster Pump Station	Agfayan	Private	Denial Letter received from private property owner on Lot 61-R2, Inarajan - 06/07/18. Pending response from CLTC on L28, B19, T3734, Inarajan - 07/09/18.
Sewer Pump Stations	Property adjacent to Southern Link	Private	GWA started acquisition process on 12/23/2016. Property ownership vested in GWA 08/11/2017.
Asan Springs	Asan	Gov't./Private	GWA request for land acquisition to be reviewed and approved by GHURA board 06/29/18. LA Bobbie Cruz to send follow-up to GHURA 07/19/2018. Package submitted to DOI for portion of land from Park Service.

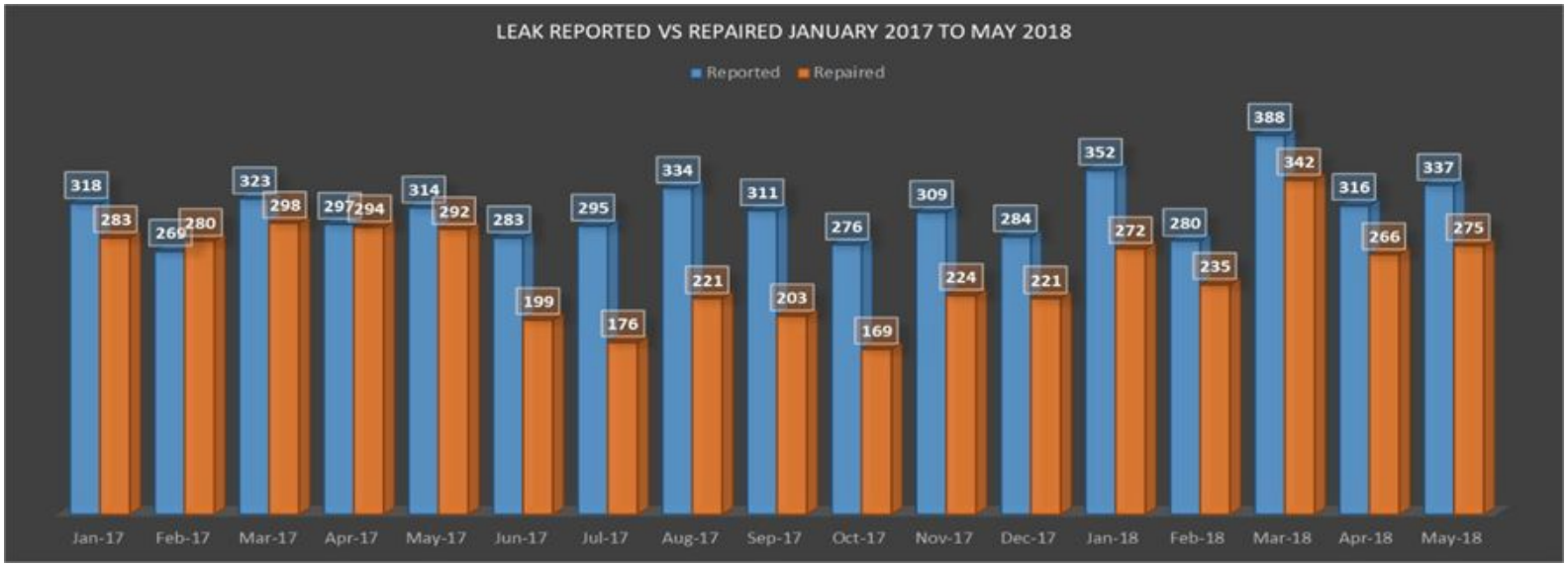
NRW – Update

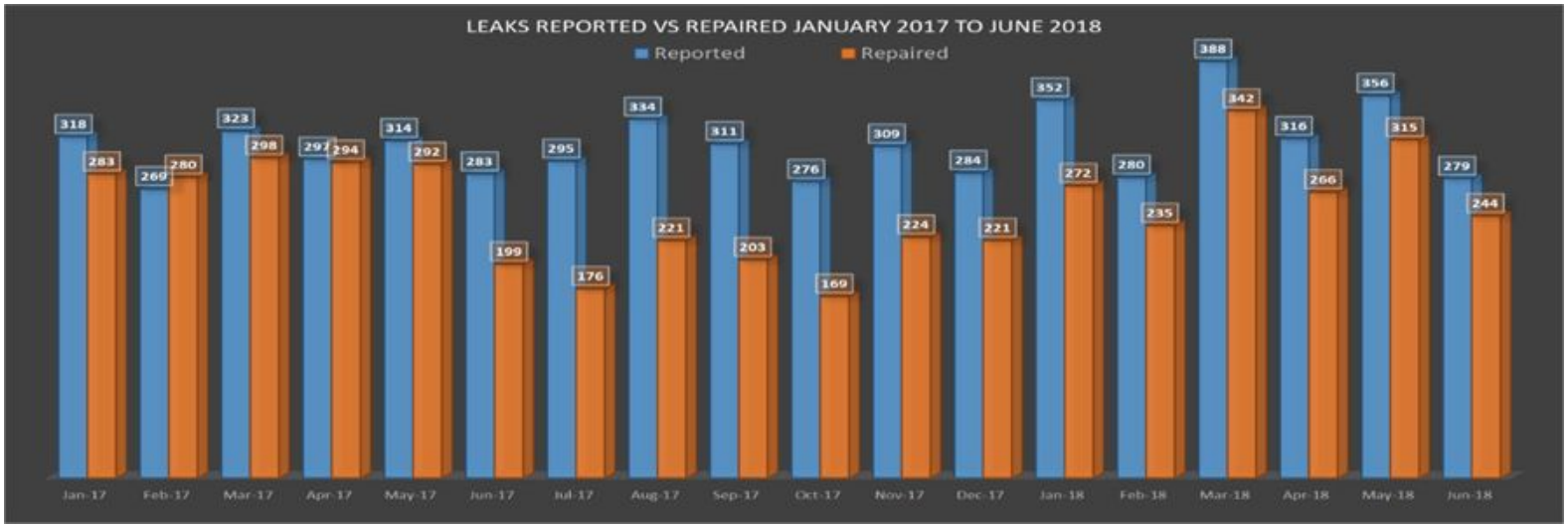
- Water Loss Control Program activities are on-going
    - Latest water audit results reviewed by Technical Consultant under EPA grant. Scope modifications being proposed for Consultant due to GWA's progress on refining audit results
    - Production meter replacement program is under design for 65 well sites. Portable flow meter is being procured to calibrate existing meters.
    - District Metering Areas are currently being developed for pilot project. Locations have been identified. Grant application was submitted for this pilot project
    - DOI Grant application has been approved for training and equipment.

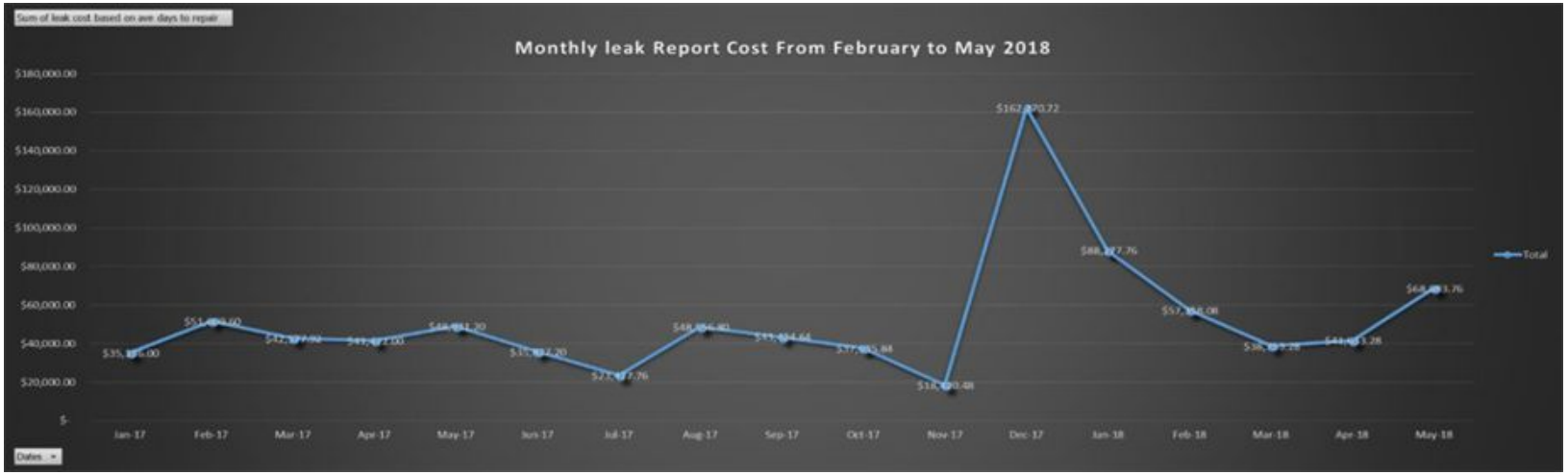
Leak Repair Summary for May and June 2018

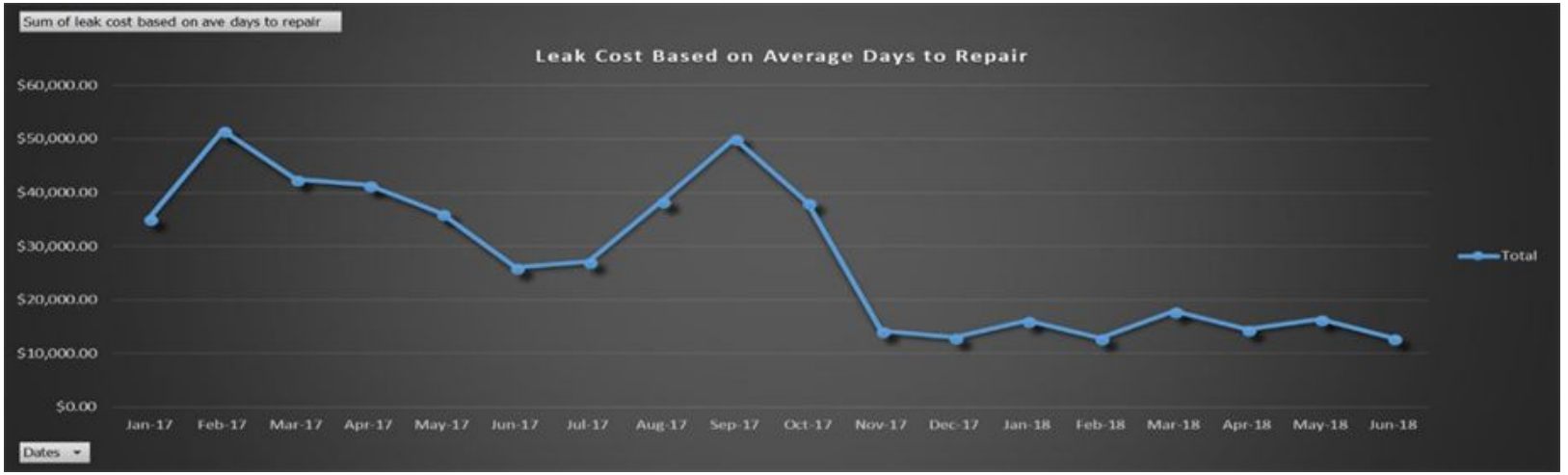





LEAK REPORTED VS REPAIRED JANUARY 2017 TO MAY 2018
Reported
Repaired
318
283
269
280
323
298
297
294
314
292
283
199
295
176
334
221
311
203
276
169
309
224
284
221
352
272
280
235
388
342
316
266
337
275
Jan-17
Feb-17
Mar-17
Apr-17
May-17
Jun-17
Jul-17
Aug-17
Sep-17
Oct-17
Nov-17
Dec-17
Jan-18
Feb-18
Mar-18
Apr-18
May-18


LEAKS REPORTED VS REPAIRED JANUARY 2017 TO JUNE 2018
Reported
Repaired
318
283
269
280
323
298
297
294
314
292
283
199
295
176
334
221
311
203
276
169
309
224
284
221
352
272
280
235
388
342
316
266
356
315
279
244
Jan-17
Feb-17
Mar-17
Apr-17
May-17
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Aug-17
Sep-17
Oct-17
Nov-17
Dec-17
Jan-18
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Mar-18
Apr-18
May-18
Jun-18





Assumptions:

1. Leak rate = 4 gpm
2. Cost per kgal = $4.00

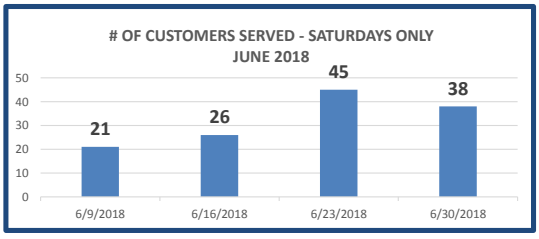
GWA Utility Services Division
Monthly Status Report
Month ending June 30, 2018

UTILITY SERVICES DIVISION ACTIVITIES:	WEEKLY AVERAGE MAY 2018	MAY 2018 MONTHLY TOTAL	WEEK ENDING: 6/9/2018	WEEK ENDING: 6/16/2018	WEEK ENDING: 6/23/2018	WEEK ENDING: 6/30/2018	WEEKLY AVERAGE JUNE 2018	JUNE 2018 MONTHLY TOTAL
Collections Unit								
I. Number of accounts cut for nonpayment:	107	536	68	44	66	71	62	249
II. Number of accounts restored for nonpayment:	102	510	81	55	47	64	62	247
III. Number of No water reports responded to:	3	13	1	2	3	0	2	6
IV. Number of Secure/Unsecure valve reports responded to:	1	3	2	5	2	2	3	11
V. Number of Verify reads responded to:	0	0	0	0	0	0	0	0
VI. Number of new pay plans negotiated for **active** accounts :	198	989	236	164	204	137	185	741
VII. Number of active pay plans negotiated and ongoing :	1840		1856	2003	2102	2167	2032	
VIII. Number of **inactive** accounts with a payment arrangement:	2		15	15	16	15	15	
IX. Number of broken payment plans:	149	745	122	17	105	72	79	316
Customer Service Unit								
I. Service Delivery Points:								
a. GBN Public Service Building – Fadian								
i. Total Customers Assisted :	296	1478	250	259	248	246	251	1003
ii. Total Abandoned Requests :	22	111	16	18	10	21	16	65
iii. Average Wait Time:	11 minutes		7 minutes	7 minutes	6 minutes	5 minutes	6 minutes	
iv. Average Service Time:	12 minutes		12 minutes	11 minutes	12 minutes	11 minutes	12 minutes	
v. Breakdown by request type:								
1. Apply for water	59	295	60	53	63	59	59	235
2. Restore water cut for non payment	26	129	17	11	13	4	11	45
3. Terminate Water	21	103	12	18	18	28	19	76
4. Copy of Bill	34	170	28	40	35	41	36	144
5. Billing Dispute	68	342	71	67	55	50	61	243
6. Billing Dispute follow up	7	35	8	4	4	3	5	19
7. General Questions & Other	40	202	30	33	37	38	35	138
8. Report a water leak	2	10	2	0	2	1	1	5
9. Report water theft	0	0	0	0	0	0	0	0
10. Payment Arrangement	42	209	29	37	29	27	31	122
b. Julale Satellite Office – Hagatna								
i. Total Customers Assisted :	295	1476	288	241	251	305	271	1085
ii. Total Abandoned Requests :	15	75	8	5	3	11	7	27
iii. Average Wait Time:	9 minutes		7 minutes	4 minutes	5 minutes	13 minutes	7 minutes	
iv. Average Service Time:	13 minutes		9 minutes	9 minutes	10 minutes	10 minutes	10 minutes	
v. Breakdown by request type:								
1. Apply for water	57	284	53	43	58	66	55	220
2. Restore water cut for non payment	12	60	13	6	11	28	15	58
3. Terminate Water	23	114	23	29	19	37	27	108
4. Copy of Bill	61	303	74	51	65	58	62	248
5. Billing Dispute	77	383	61	62	71	71	66	265
6. Billing Dispute follow up	3	17	8	5	0	0	3	13
7. General Questions & Other	33	166	28	36	26	35	31	125
8. Report a water leak	1	7	1	0	0	1	1	2
9. Report water theft	0	0	0	0	0	0	0	0
10. Payment Arrangement	33	165	39	30	19	36	31	124
c. Upper Tumon Satellite Office – Upper Tumon								
i. Total Customers Assisted :	392	1958	383	325	307	352	342	1367
ii. Total Abandoned Requests :	19	94	44	18	12	12	22	86
iii. Average Wait Time:	10 minutes		10 minutes	5 minutes	5 minutes	5 minutes	6 minutes	
iv. Average Service Time:	10 minutes		8 minutes	10 minutes	9 minutes	10 minutes	9 minutes	
v. Breakdown by request type:								
1. Apply for water	76	382	80	83	64	89	79	316
2. Restore water cut for non payment	27	134	21	22	17	9	17	69
3. Terminate Water	32	160	21	19	23	34	24	97
4. Copy of Bill	80	399	82	74	73	72	75	301
5. Billing Dispute	91	453	85	58	76	77	74	296
6. Billing Dispute follow up	5	27	0	5	0	3	2	8
7. General Questions & Other	38	190	48	32	21	31	33	132
8. Report a water leak	3	17	3	1	3	5	3	12
9. Report water theft	0	1	0	0	0	1	0	1
10. Payment Arrangement	44	220	48	32	34	32	37	146

GWA Utility Services Division
Monthly Status Report
Month ending June 30, 2018

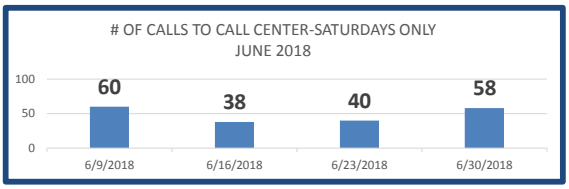
UTILITY SERVICES DIVISION ACTIVITIES:	WEEKLY AVERAGE MAY 2018	MAY 2018 MONTHLY TOTAL	WEEK ENDING: 6/9/2018	WEEK ENDING: 6/16/2018	WEEK ENDING: 6/23/2018	WEEK ENDING: 6/30/2018	WEEKLY AVERAGE JUNE 2018	JUNE 2018 MONTHLY TOTAL
d. Customer Call Center								
i. Calls Recieved :	1460	7302	1359	1061	966	852	1060	4238
ii. Calls Immediately Answered :	927	4634	932	797	717	577	756	3023
iii. Calls Abandoned	59	295	49	41	29	40	40	159
iv. Calls Handled by Voice mail:	462	2308	377	222	220	235	264	1054
v. Average duration of calls answered	16 minutes		5 minutes	3 minutes	3 minutes	3 minutes	4 minutes	
vi. Breakdown by request type:								
1. Apply/Terminate info.	31	157	51	42	38	22	38	153
2. Automated Telphone Call	27	137	19	22	16	30	22	87
3. Balance Inquiry	142	709	139	115	147	90	123	491
4. Call Back	39	196	51	86	60	60	64	257
5. Dispatch	46	229	74	47	21	15	39	157
6. Dispute	18	89	12	13	5	6	9	36
7. Follow up	59	296	64	44	35	31	44	174
8. General Questions & Other	113	563	110	132	119	92	113	453
9. GWA Staff	126	632	160	116	124	90	123	490
10. No Water	25	126	41	18	13	19	23	91
11. Online/Phone App Help	25	127	30	22	35	23	28	110
12. Pay by Phone	139	693	139	156	106	92	123	493
13. Pay Plan	75	375	120	93	75	48	84	336
14. Restore Non-payment	58	289	31	22	27	28	27	108
15. Secure/Unsecure Valve	7	35	8	7	19	12	12	46
16. Voice Mail	41	205	28	22	30	16	24	96
17. Water leak	10	49	6	12	11	12	10	41
e. Customer Emails:								
i. Emails Recieved :								
1. customers@guamwaterworks.org	49	247	37	24	33	27	30	121
Breakdown by request type (email):								
a. Apply for water	2	12	3	2	1	1	2	7
b. Terminate Water	3	17	1	0	4	1	2	6
c. Copy of Bill	2	8	1	0	0	0	0	1
d. Billing Dispute & follow up	12	61	7	5	13	11	9	36
e. General Questions & Other	19	95	0	9	0	0	2	9
f. Report a water leak	4	18	25	2	10	12	12	49
g. Report water theft	0	0	0	0	5	2	2	7
h. Online services inquiry	7	36	0	6	0	0	2	6
2. gwaservesme@guamwaterworks.org (realtors and prop m	1	7	8	1	7	5	5	21
ii. Emails Replied (both):	40	200	34	26	43	33	34	136

	AVERAGE	6/9/2018	6/16/2018	6/23/2018	6/30/2018	AVERAGE
f. Saturday Services: 9AM TO 1PM ONLY	35	21	26	45	38	33
i. VISITS: Breakdown by request type:						
1. Apply for water	5	2	4	8	3	4
2. Restore water cut for non payment	1	3	0	1	0	1
3. Terminate Water	2	1	0	3	7	3
4. Copy of Bill	10	3	5	11	10	7
5. Billing Dispute	7	7	10	13	10	10
6. Billing Dispute follow up	0	1	0	0	0	0
7. General Questions & Other	4	1	2	1	3	2
8. Report a water leak	0	0	0	0	0	0
9. Report water theft	0	0	0	0	0	0
10. Payment Arrangement	7	3	5	8	5	5



GWA Utility Services Division
Monthly Status Report
Month ending June 30, 2018

UTILITY SERVICES DIVISION ACTIVITIES:	WEEKLY AVERAGE MAY 2018	MAY 2018 MONTHLY TOTAL	WEEK ENDING: 6/9/2018	WEEK ENDING: 6/16/2018	WEEK ENDING: 6/23/2018	WEEK ENDING: 6/30/2018	WEEKLY AVERAGE JUNE 2018	JUNE 2018 MONTHLY TOTAL
ii. CALLS TO CALL CENTER (Saturday services only):			6/9/2018	6/16/2018	6/23/2018	6/30/2018		
			60	38	40	**58**		



Dispute Resolution & Document Control

I. Dispute Resolution:			6/9/2018	6/16/2018	6/23/2018	6/30/2018		
a. Number of disputed accounts resolved:	5	25	6	12	12	5	9	35
b. Number of disputed accounts under review:	178	890	178	178	178	178	178	712
II. Document Control:								
a. Number of field activities posted :	263	1314	381	382	515	601	470	1879
b. Number of field activities pending:	480	2398	713	647	760	434	639	2554

Disconnect/Reconnect Unit

I. Number of field activities received:	275	1374	295	247	241	293	269	1076
II. Number of field activities completed:	271	1357	398	279	247	286	303	1210
III.Number of field activities pending field action:	1	7	4	3	2	4	3	13

Meter Reading Unit

I. Number of meters read:			6/9/2018	6/16/2018	6/23/2018	6/30/2018		
a. Electronically Read Meters:	9481	47403	7585	12156	11738	7760	9810	39239
b. Manually Read Meters:	41	205	25	42	44	45	39	156
i. Unread meters (Meters scheduled to be read but not read):	35	173	25	60	36	39	40	160
ii. Number of data logs received:	37	183	39	28	26	25	30	118
iii. Number of data logs retrieved:	33	163	40	19	33	30	31	122
iv. Number of data logs pending field action:	16	80	7	14	12	2	9	35
v. Communication Errors/Reprogramming requests:	1	6	0	5	4	2	3	11
vi. Number of estimated readings (for the week):	20	101	14	34	22	38	27	108
vii. Reasons for Estimations:								
1. Cant locate meter:	4	21	2	6	0	3	3	11
2. Temporary Obstruction	3	15	2	1	1	1	1	5
3. Vicious Dog	1	5	0	0	0	0	0	0
4. Flooded meter	2	11	0	2	0	3	1	5
5. Corrective action requested (database corrections needed)	3	16	0	2	2	3	2	7
6. Possible changed out meter:	8	41	5	6	7	1	5	19
7. Communication/Programming error (code 92's):	4	18	2	5	4	4	4	15
8. Other:	10	51	8	9	5	8	8	30
1. Leaks detected on customer's private line:	1144	5719	925	1472	1356	811	1141	4564
2. Reverse Flow Detected	49	243	84	93	28	73	70	278
3. No Usage Detected	352	1761	262	494	466	337	390	1559
4. Tamper Code	17	87	17	21	22	18	20	78
c. Electronic Read Percentage:	99%		100%	100%	100%	99%	100%	

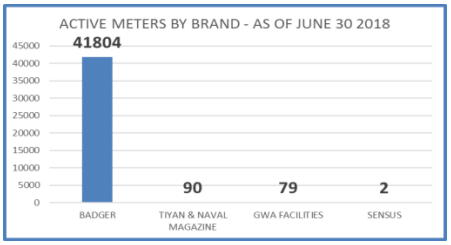
Revenue Protection Unit

I. Number of Inactive Still Consuming Reports rec'd & investigated:	1	3	0	0	0	0	0	0
II.Number of Illegal Connection reports rec'd & investigated:	1	3	1	1	0	1	1	3

III. Meter Replacement Project – Post 2010 Metron Farnier & Sensus Status Report :

METER TYPE	COUNT
SENSUS	2
METRON FARNIER	0
	2

a. Account & Meter Type Count :



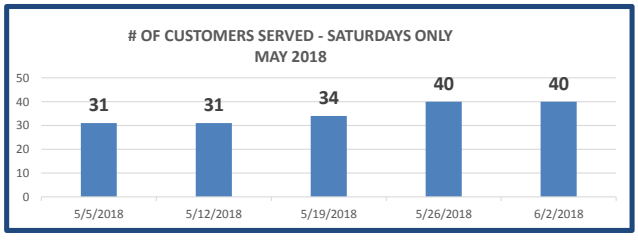
GWA Utility Services Division
Monthly Status Report
Month ending April 28, 2018

UTILITY SERVICES DIVISION ACTIVITIES:	WEEKLY AVERAGE APRIL 2018	APRIL 2018 MONTHLY TOTAL	WEEK ENDING: 5/5/2018	WEEK ENDING: 5/12/2018	WEEK ENDING: 5/19/2018	WEEK ENDING: 5/26/2018	WEEK ENDING: 6/2/2018	WEEKLY AVERAGE MAY 2018	MAY 2018 MONTHLY TOTAL
Collections Unit									
I. Number of accounts cut for nonpayment:	239	954	126	139	106	117	48	107	536
II. Number of accounts restored for nonpayment:	169	677	129	134	87	84	76	102	510
III. Number of No water reports responded to:	0	0	3	3	4	0	3	3	13
IV. Number of Secure/Unsecure valve reports responded to:	0	0	2	0	0	0	1	1	3
V. Number of Verify reads responded to:	0	0	0	0	0	0	0	0	0
VI. Number of new pay plans negotiated for **active** accounts :	250	1000	245	207	162	210	165	198	989
VII. Number of active pay plans negotiated and ongoing :	2437		1767	1878	1785	1910	1861	1840	
VIII. Number of **inactive** accounts with a payment arrangement:	9		0	0	4	3	3	2	
IX. Number of broken payment plans:	93	371	220	96	255	85	89	149	745
Customer Service Unit									
I. Service Delivery Points:									
a. GBN Public Service Building – Fadian									
i. Total Customers Assisted :	311	1242	415	263	248	294	258	296	1478
ii. Total Abandoned Requests :	32	129	29	29	23	16	14	22	111
iii. Average Wait Time:	10 minutes		12 minutes	10 minutes	8 minutes	11 minutes	12 minutes	11 minutes	
iv. Average Service Time:	12 minutes		14 minutes	12 minutes	12 minutes	13 minutes	11 minutes	12 minutes	
v. Breakdown by request type:									
1. Apply for water	66	264	80	50	48	58	59	59	295
2. Restore water cut for non payment	38	153	35	42	20	17	15	26	129
3. Terminate Water	20	80	31	14	12	19	27	21	103
4. Copy of Bill	33	131	41	31	38	36	24	34	170
5. Billing Dispute	69	276	95	51	55	82	59	68	342
6. Billing Dispute follow up	4	16	7	12	3	7	6	7	35
7. General Questions & Other	45	181	61	31	34	41	35	40	202
8. Report a water leak	1	5	1	2	1	2	4	2	10
9. Report water theft	0	1	0	0	0	0	0	0	0
10. Payment Arrangement	38	151	66	35	40	38	30	42	209
b. Julale Satellite Office – Hagatna									
i. Total Customers Assisted :	327	1306	402	277	284	281	232	295	1476
ii. Total Abandoned Requests :	15	58	15	12	17	21	10	15	75
iii. Average Wait Time:	11 minutes		10 minutes	9 minutes	7 minutes	8 minutes	13 minutes	9 minutes	
iv. Average Service Time:	11 minutes		8 minutes	28 minutes	9 minutes	10 minutes	10 minutes	13 minutes	
v. Breakdown by request type:									
1. Apply for water	51	205	76	56	48	53	51	57	284
2. Restore water cut for non payment	25	98	20	13	10	12	5	12	60
3. Terminate Water	27	107	35	16	19	18	26	23	114
4. Copy of Bill	56	222	84	57	63	49	50	61	303
5. Billing Dispute	74	296	102	79	70	87	45	77	383
6. Billing Dispute follow up	2	8	7	2	2	3	3	3	17
7. General Questions & Other	34	136	38	25	40	28	35	33	166
8. Report a water leak	2	6	2	0	2	3	0	1	7
9. Report water theft	0	1	0	0	0	0	0	0	0
10. Payment Arrangement	40	160	43	33	33	32	24	33	165
c. Upper Tumon Satellite Office – Upper Tumon									
i. Total Customers Assisted :	417	1666	476	347	378	387	370	392	1958
ii. Total Abandoned Requests :	18	70	21	19	20	8	26	19	94
iii. Average Wait Time:	9 minutes		21 minutes	4 minutes	8 minutes	4 minutes	13 minutes	10 minutes	
iv. Average Service Time:	10 minutes		10 minutes	10 minutes	10 minutes	10 minutes	9 minutes	10 minutes	
v. Breakdown by request type:									
1. Apply for water	77	306	97	55	74	66	90	76	382
2. Restore water cut for non payment	60	240	47	34	22	23	8	27	134
3. Terminate Water	33	133	42	21	26	27	44	32	160
4. Copy of Bill	72	289	93	68	76	95	67	80	399
5. Billing Dispute	95	379	111	87	87	93	75	91	453
6. Billing Dispute follow up	4	15	9	4	7	3	4	5	27
7. General Questions & Other	32	128	34	33	44	39	40	38	190
8. Report a water leak	4	15	3	3	2	7	2	3	17
9. Report water theft	0	0	0	0	1	0	0	0	1
10. Payment Arrangement	47	187	46	46	48	38	42	44	220

GWA Utility Services Division
Monthly Status Report
Month ending April 28, 2018

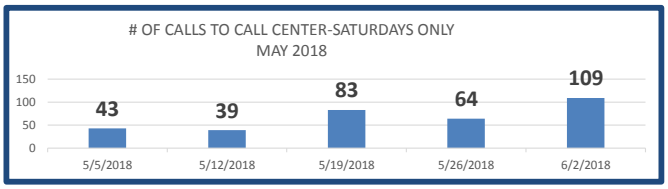
UTILITY SERVICES DIVISION ACTIVITIES:	WEEKLY AVERAGE APRIL 2018	APRIL 2018 MONTHLY TOTAL	WEEK ENDING: 5/5/2018	WEEK ENDING: 5/12/2018	WEEK ENDING: 5/19/2018	WEEK ENDING: 5/26/2018	WEEK ENDING: 6/2/2018	WEEKLY AVERAGE MAY 2018	MAY 2018 MONTHLY TOTAL
d. Customer Call Center									
i. Calls Recieved :	1672	6687	1822	1459	1256	1419	1346	1460	7302
ii. Calls Immediately Answered :	969	3875	1064	882	843	961	884	927	4634
iii. Calls Abandoned	71	284	69	58	65	42	61	59	295
iv. Calls Handled by Voice mail:	632	2527	689	518	347	368	386	462	2308
v. Average duration of calls answered	5 minutes		15 minutes	15 minutes	19 minutes	16 minutes	16 minutes	16 minutes	
vi. Breakdown by request type:									
1. Apply/Terminate info.	37	148	38	24	21	37	37	31	157
2. Automated Telphone Call	35	140	34	31	11	37	24	27	137
3. Balance Inquiry	156	625	140	116	188	150	115	142	709
4. Call Back	31	123	43	20	51	39	43	39	196
5. Dispatch	36	145	39	26	53	74	37	46	229
6. Dispute	25	98	14	13	22	21	19	18	89
7. Follow up	84	337	69	67	58	56	46	59	296
8. General Questions & Other	142	567	109	125	91	115	123	113	563
9. GWA Staff	144	576	110	129	112	163	118	126	632
10. No Water	29	117	23	18	26	29	30	25	126
11. Online/Phone App Help	36	145	27	21	26	30	23	25	127
12. Pay by Phone	126	504	148	137	134	132	142	139	693
13. Pay Plan	79	317	83	71	62	93	66	75	375
14. Restore Non-payment	84	337	64	83	54	61	27	58	289
15. Secure/Unsecure Valve	8	32	13	12	3	4	3	7	35
16. Voice Mail	61	244	62	37	46	34	26	41	205
17. Water leak	13	51	6	6	17	14	6	10	49
e. Customer Emails:									
i. Emails Recieved :									
1. customers@guamwaterworks.org	54	217	52	49	51	49	46	49	247
Breakdown by request type (email):									
a. Apply for water	4	16	6	1	2	2	1	2	12
b. Terminate Water	1	4	2	9	2	2	2	3	17
c. Copy of Bill	1	3	2	2	0	4	0	2	8
d. Billing Dispute & follow up	16	64	16	8	12	12	13	12	61
e. General Questions & Other	19	77	19	23	18	20	15	19	95
f. Report a water leak	4	14	1	3	5	5	4	4	18
g. Report water theft	0	0	0	0	0	0	0	0	0
h. Online services inquiry	10	39	6	3	12	4	11	7	36
2. gwaservesme@guamwaterworks.org (realtors and prop m	0	1	0	0	5	2	0	1	7
ii. Emails Replied (both):	33	133	58	34	42	34	32	40	200

	AVERAGE	5/5/2018	5/12/2018	5/19/2018	5/26/2018	6/2/2018	AVERAGE
f. Saturday Services: 9AM TO 1PM ONLY	29	31	31	34	40	40	35
i. VISITS: Breakdown by request type:							
1. Apply for water	4	8	3	1	8	4	5
2. Restore water cut for non payment	3	1	2	1	0	1	1
3. Terminate Water	2	1	0	3	1	3	2
4. Copy of Bill	5	8	6	10	14	11	10
5. Billing Dispute	7	5	7	9	6	9	7
6. Billing Dispute follow up	0	0	0	0	0	0	0
7. General Questions & Other	4	4	6	2	1	6	4
8. Report a water leak	0	0	0	0	0	0	0
9. Report water theft	0	0	0	0	0	0	0
10. Payment Arrangement	5	4	7	8	10	6	7



GWA Utility Services Division
Monthly Status Report
Month ending April 28, 2018

UTILITY SERVICES DIVISION ACTIVITIES:	WEEKLY AVERAGE APRIL 2018	APRIL 2018 MONTHLY TOTAL	WEEK ENDING: 5/5/2018	WEEK ENDING: 5/12/2018	WEEK ENDING: 5/19/2018	WEEK ENDING: 5/26/2018	WEEK ENDING: 6/2/2018	WEEKLY AVERAGE MAY 2018	MAY 2018 MONTHLY TOTAL
ii. CALLS TO CALL CENTER (Saturday services only):			5/5/2018	5/12/2018	5/19/2018	5/26/2018	6/2/2018		
			43	39	83	64	109		



Dispute Resolution & Document Control

I. Dispute Resolution:			5/5/2018	5/12/2018	5/19/2018	5/26/2018	6/2/2018		
a. Number of disputed accounts resolved:	12	47	12	3	2	4	4	5	25
b. Number of disputed accounts under review:	178	713	178	178	178	178	178	178	890
II. Document Control:									
a. Number of field activities posted :	490	1959	215	214	244	310	331	263	1314
b. Number of field activities pending:	417	1667	314	492	504	516	572	480	2398

Disconnect/Reconnect Unit

I. Number of field activities received:	279	1117	349	249	210	251	315	275	1374
II. Number of field activities completed:	277	1108	345	284	218	248	262	271	1357
III.Number of field activities pending field action:	5	19	2	1	0	3	1	1	7

Meter Reading Unit

I. Number of meters read:			5/5/2018	5/12/2018	5/19/2018	5/26/2018	6/2/2018		
a. Electronically Read Meters:	9819	39274	7261	8466	11721	13314	6641	9481	47403
b. Manually Read Meters:	34	136	44	31	40	50	40	41	205
i. Unread meters (Meters scheduled to be read but not read):	44	175	24	33	26	60	30	35	173
ii. Number of data logs received:	31	122	52	39	37	35	20	37	183
iii. Number of data logs retrieved:	28	111	38	54	15	40	16	33	163
iv. Number of data logs pending field action:	12	49	37	1	18	10	14	16	80
v. Communication Errors/Reprogramming requests:	1	4	1	3	2	0	0	1	6
vi. Number of estimated readings (for the week):	26	103	13	15	8	49	16	20	101
vii. Reasons for Estimations:									
1. Cant locate meter:	6	22	8	2	6	3	2	4	21
2. Temporary Obstruction	2	7	4	3	1	3	4	3	15
3. Vicious Dog	0	1	2	1	1	1	0	1	5
4. Flooded meter	1	5	2	1	2	5	1	2	11
5. Corrective action requested (database corrections needed)	2	7	5	7	1	3	0	3	16
6. Possible changed out meter:	9	36	5	7	24	3	2	8	41
7. Communication/Programming error (code 92's):	5	20	2	2	4	5	5	4	18
8. Other:	8	31	6	8	8	16	13	10	51
1. Leaks detected on customer's private line:	1223	4892	916	1108	1400	1470	825	1144	5719
2. Reverse Flow Detected	38	151	35	53	31	91	33	49	243
3. No Usage Detected	324	1296	257	305	462	486	251	352	1761
4. Tamper Code	15	59	14	16	20	23	14	17	87
c. Electronic Read Percentage:	98%		98%	100%	100%	100%	98%	99%	

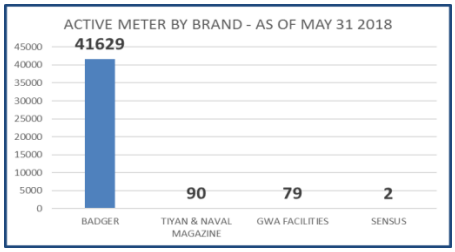
Revenue Protection Unit

I. Number of Inactive Still Consuming Reports rec'd & investigated:	1	3	0	0	1	1	1	1	3
II.Number of Illegal Connection reports rec'd & investigated:	1	5	0	0	0	2	1	1	3

III. Meter Replacement Project – Post 2010 Metron Farnier & Sensus Status Report :

METER TYPE	COUNT
SENSUS	2
METRON FARNIER	0
	2

a. Account & Meter Type Count :



GUAM WATERWORKS AUTHORITY

Engineering Monthly Report
June - July 2018

Prepared By:
Thomas Cruz, P.E. Chief Engineer

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A. Summary Table of 2010, 2013 and 2016 Bond

Potable Water

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
PW 05-01	Ground Water Disinfection	$ 500,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 05-03	Santa Rita Springs Booster Pump Rehab Phase II	$ -	N/A	N/A	$ 100,000.00	100.00%	0.00%	$ -	N/A	N/A
PW-05-05	"A Series Well Transmission Line	$ 518,143.96	100.00%	0.00%	$ 400,000.00	92.46%	7.54%	$ -	N/A	N/A
PW 05-06	Water Booster Pump Station	$ 500,000.00	100.00%	0.00%	$ 1,861,000.00	99.09%	0.91%	$ 4,139,000.00	0.00%	100.00%
PW 05-07	Meter Replacement Program	$ 10,300,000.00	99.84%	0.16%	$ 999,000.00	99.75%	0.25%	$ 4,501,000.00	3.33%	96.67%
PW 05-08	Barrigada Tank Repair/Replacement	$ 5,450,000.00	99.92%	0.08%	$ 4,987,000.00	99.32%	0.68%	$ 1,013,000.00	0.00%	100.00%
PW 05-09	Leak Detection	$ 200,000.00	100.06%	-0.06%	$ 20,000.00	84.58%	15.42%	$ 1,180,000.00	0.00%	100.00%
PW 05-10	Potable Water System Planning	$ 200,000.00	100.00%	0.00%	$ 624,000.00	100.00%	0.00%	$ 2,276,000.00	38.50%	61.50%
PW 05-11	Implement Ground Water Rule	$ 1,700,000.00	100.00%	0.00%	$ 1,000,000.00	100.00%	0.00%	$ -	N/A	N/A
PW 05-12	Brigade II (Ugum Lift) BPS Upgrade	$ 1,700,000.00	18.03%	81.97%	$ -	N/A	N/A	$ -	N/A	N/A
PW 05-13	Deep Well Rehabilitation	$ 548,000.00	100.00%	0.00%	$ 200,000.00	100.00%	0.00%	$ 250,000.00	44.01%	55.99%
PW 05-14	New Deep Wells at Dow n Hard	$ 638,252.85	76.11%	23.89%	$ 810,000.00	0.00%	100.00%	$ 1,190,000.00	0.00%	100.00%
PW 05-15	Rehabilitation of Asan Springs	$ 900,000.00	37.87%	62.13%	$ -	N/A	N/A	$ -	N/A	N/A
PW 05-16	Master Meters	$ 1,600,000.00	99.44%	0.56%	$ 784,000.00	99.88%	0.12%	$ 3,616,000.00	4.19%	95.81%
PW 09-01	Ugum Water Treatment Plant Intake	$ 700,000.00	99.47%	0.53%	$ 982,000.00	100.00%	0.00%	$ 18,000.00	0.00%	100.00%
PW 09-02	Water Wells	$ -	N/A	N/A	$ 4,200,000.00	46.77%	53.23%	$ 2,500,000.00	0.00%	100.00%
PW 09-03	Water Distribution System	$ 3,174,748.00	100.00%	0.00%	$ 11,151,000.00	95.15%	4.85%	$ 49,000.00	0.00%	100.00%
PW 09-04	Pressure Zone Realignment	$ -	N/A	N/A	$ 431,000.00	99.95%	0.05%	$ 1,141,000.00	58.58%	41.42%
PW 09-06	Central Water Distribution System 2005	$ 900,000.00	91.67%	8.33%	$ -	N/A	N/A	$ -	N/A	N/A
PW 09-08	Mechanical/Electrical Equipment	$ 1,200,000.00	100.00%	0.00%	$ 430,000.00	99.60%	0.40%	$ 100,000.00	0.00%	100.00%
PW 09-09	Water Reservoir Internal/External	$ 2,000,000.00	73.20%	26.80%	$ -	N/A	N/A	$ -	N/A	N/A
PW 09-10	Water Reservoir Internal/External	$ -	N/A	N/A	$ -	N/A	N/A	$ 800,000.00	0.00%	100.00%
PW 09-11	Water System Reservoirs 2005 Improvements	$ 1,050,000.00	100.00%	0.00%	$ 13,878,000.00	99.99%	0.01%	$ 28,350,000.00	48.33%	51.67%
PW 11-01	Distribution System Upgrades	$ 474,159.85	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 11-02	Ugum Water Treatment Plant Reservoir	$ -	N/A	N/A	$ 90,000.00	0.00%	100.00%	$ -	N/A	N/A
PW 12-01	Water Audit Program & Water Loss Control Plan	$ 100,000.00	78.46%	21.54%	$ -	N/A	N/A	$ 1,000,000.00	0.00%	100.00%
PW 12-02	Production Plan / Reduce Navy Purchases	$ 100,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 12-03	Hydraulic Assessment of Tanks	$ 500,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 12-04	Agana Heights & Chaot Tanks	$ 4,700,000.00	100.00%	0.00%	$ 3,280,000.00	40.52%	59.48%	$ 1,220,000.00	40.98%	59.02%
PW 12-05	Tank Major Repair Yigo #1, Mangilao #2, Astumbo#1	$ 1,900,000.00	95.16%	4.84%	$ 11,605,000.00	99.99%	0.01%	$ 1,895,000.00	96.15%	3.85%
PW 12-06	Tank Replacement Piti & Hyundai	$ -	N/A	N/A	$ -	N/A	N/A	$ 7,409,830.00	98.52%	1.48%
PW 12-07	Assessment of Malojloj Elevated & Yigo Elevated	$ 200,000.00	100.00%	0.00%	$ 485,117.00	100.00%	0.00%	$ -	N/A	N/A
PW 12-08	Public Water System Asset Inventory/ Condition Assessment	$ 100,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 12-09	Public Water System GIS & Mapping	$ 50,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 14-01	Fire Hydrant Replacement Program	$ -	N/A	N/A	$ -	N/A	N/A	$ 2,000,000.00	0.00%	100.00%
		$ 41,903,304.66			$ 58,317,117.00			$ 64,647,830.00		

Wastewater

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
WW 05-04	Wastew ater System Planning	$ 1,500,000.00	100.00%	0.00%	$ 651,000.00	100.00%	0.00%	$ 349,000.00	89.68%	10.32%
WW 05-05	Wastew ater Vehicles	$ 235,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 05-07	NDWWTP - Chlorine Tanks	$ 250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 09-01	Lift station upgrades	$ -	N/A	N/A	$ 946,000.00	70.40%	29.60%	$ 2,404,000.00	12.21%	87.79%
WW 09-06	Wastew ater Collection System Repl/ Rehabilitation	$ 1,105,000.00	99.93%	0.07%	$ 780,000.00	97.11%	2.89%	$ 2,920,000.00	19.02%	80.98%
WW 09-08	Facilities Plan/Design for Baza Gardens WWTP	$ 1,250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 09-10	Facilities Plan/Design for Agat-Santa Rita WWTP	$ 899,630.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 11-03	Baza Gardens STP Replacement	$ 1,301,947.00	88.43%	11.57%	$ 3,114,883.00	100.00%	0.00%	$ 29,400,170.00	98.99%	1.01%
WW 11-04	Facilities Plan/Design for Umatac-Merizo WWTP	$ 900,000.00	100.00%	0.00%	$ 473,000.00	100.00%	0.00%	$ 527,000.00	47.84%	52.16%
WW 11-08	Agat/Santa Rita STP Replacement	$ 2,218,000.00	99.91%	0.09%	$ 67,200,000.00	99.43%	0.57%	$ 3,000,000.00	51.50%	48.50%
WW 12-01	Northern District WWTP Primary Treatment Upgrade	$ 11,750,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-02	Biosolids Management Plan	$ 200,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-03	Agana WWTP Interim Measures	$ 11,500,000.00	100.00%	0.00%	$ 673,000.00	100.00%	0.00%	$ 827,000.00	0.00%	100.00%
WW 12-04	I&I SSES Southern	$ 800,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-05	I&I SSES Central	$ 850,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-06	I&I SSES Northern	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 12 -07	Umatac Merizo Replacement	$ 250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ 20,800,000.00	99.06%	0.94%
WW 12-08	Wastew ater System GIS & Mapping	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-09	Wastew ater Facility Back Up Pow er	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-10	Wastew ater System Asset Inventory	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 17-01	Wastew ater Sew er System Expansion									
WW 17-02	Northern District WWTP Secondary Treatment Upgrade	$ 1,000,000.00	0.00%	100.00%						
		$ 36,009,577.00			$ 73,837,883.00			$ 60,227,170.00		

Electrical Engineering Support

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
EE 05-02	SCADA Pilot Project	$ 61,950.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
EE 09-01	Wastewater Pumping Station Electrical Upgrade	$ -	N/A	N/A	$ 620,000.00	16.13%	83.87%	$ 100,000.00	0.00%	100.00%
EE 09-02	Electrical Upgrade - Water Wells	$ 354,226.63	100.00%	0.00%	$ 1,500,000.00	100.00%	0.00%	$ 650,000.00	0.00%	100.00%
EE 09-03	Electrical Upgrade - Water Booster	$ -	N/A	N/A	$ 2,000.00	0.00%	100.00%	$ 323,000.00	0.00%	100.00%
EE 09-04	Electrical Upgrade - Water Booster	$ -	N/A	N/A	$ 200,000.00	0.49%	99.51%	$ -	N/A	N/A
EE 09-05	Electrical Upgrade - Other Water	$ -	N/A	N/A	$ 150,000.00	40.47%	59.53%	$ -	N/A	N/A
EE 09-06	SCADA Improvements - Phase I	$ 250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
EE 09-07	SCADA Improvements - Phase 2	$ 1,056,986.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
EE 09-08	SCADA Improvements - Phase 3	$ 24,955.71	100.00%	0.00%	$ 923,000.00	78.26%	21.74%	$ 1,177,000.00	52.46%	47.54%
EE 09-09	SCADA Improvements - Phase 4	$ -	N/A	N/A	$ -	N/A	N/A	$ 6,500,000.00	0.00%	100.00%
		$ 1,748,118.34			$ 3,395,000.00			$ 8,750,000.00		

Miscellaneous Engineering Support

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
MC 05-01	Laboratory Modernization	$ -	N/A	N/A	$ 1,173,000.00	100.00%	0.00%	$ 1,127,000.00	100.00%	0.00%
MC 05-02	Land Survey	$ 500,000.00	99.94%	0.06%	$ 2,000.00	0.00%	100.00%	$ 1,998,000.00	63.09%	36.91%
MC 09-01	General Plant Improvements	$ 7,241,000.00	99.58%	0.42%	$ 2,600,000.00	82.00%	18.00%	$ 2,769,460.00	54.11%	45.89%
MC 15-01	Information Technology Intergration Improvements							$ 500,000.00	48.81%	51.19%
		$ 7,741,000.00			$ 3,775,000.00			$ 6,394,460.00		

	2010 Bond Allotment	2013 Bond Allotment	2016 Bond Allotment
CIP Water	$ 41,903,304.66	$ 58,317,117.00	$ 64,647,830.00
CIP Wastewater	$ 36,009,577.00	$ 73,837,883.00	$ 60,227,170.00
CIP Electrical	$ 1,748,118.34	$ 3,395,000.00	$ 8,750,000.00
CIP Miscellaneous	$ 7,741,000.00	$ 3,775,000.00	$ 6,394,460.00
	$ 87,402,000.00	$ 139,325,000.00	$ 140,019,460.00

Bond Fund	Construction Fund Amount ($M)	Estimated # of months fund available for use		Total Funds encumbered to date ($M)	% of fund used	Rate of Spending: ($M) per year
2005	$82.930	82	*	$82.930	100.00%	12.14
2010	$87.402	90	**	$83.354	95.37%	11.11
2013	$139.325	53	**	$132.278	94.94%	29.95
2015	$140.019	23		$82.691	59.06%	43.14
	* - End date November 2013 via CCU Resolution 06-FY2014					
	** - Includes month of May and June 2018					

B. Projects Procurement

Percentage Key:

100%	Approved by GM
99%	Signature required from either Accounting/Legal/GM
98%	Processing engineering service or construction contract (with legal)
95%	Request for CCU approval (GM/engineering)
90%	A/E fee negotiation or contractor bid evaluation (engineering)
80%	Selected A/E or Conducted bid opening (engineering)
70%	Advertised RFP/IFB (engineering)
60%	RFP/IFB Package under legal review
50%	RFP/IFB Package completed (engineering)
Less than 50%	Project Scope of work development in progress

- Red text anywhere indicates a change from the last report.

BOX KEY FOR PROCUREMENT:

(Type of Procurement) (Relevant CIP NO. or Funding Source)	**(Project Title)**	
(Percentage complete for procurement)	**Activities/Notes:** (see percentage key above)	**Consultant** (listed when selected)
Project Description	Summary of project description	

BID PACKAGE PW 09-02	**New Well Construction**	
<50% Complete	**Activities/Notes:** GWA engineering continuing discussion with Dept. of Agriculture and lessee on options of acquisition of property for well site at AG-12. Internal GWA discussions underway for survey and appraisal services as well as continuing services form Designer.	
Project Description:	The project is to construct three new production wells for GWA as well as installation of a water main to connect the new production wells to the Ysengsong Reservoirs.	

RFP PW 09-02	**New Well Construction (Construction Management)**	
<50% Complete	**Activities/Notes:** SOW being developed	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of up to three (3) new production wells for GWA. GWA plans to increase source water production to improve system redundancy that allows for operating the water production wells more effectively. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

BID PACKAGE PW 14-01	**Fire Hydrant Replacement Phase I**	
<50% Complete	**Activities/Notes:** Bid package being prepared.	
Project Description:	The work performed under this project consist of replacing all know dry barrel fire hydrants down to the lateral as well as any defective wet barrel fire hydrant. Where necessary the gate valve for the fire hydrant may also be replaced.	

RFP WW 09-01	**Yigo SPS Flood Protection and Rehabilitation Design**	
98% Complete	**Activities/Notes:** Fee negotiation complete and Engineering service contract being prepared after which the contract will be routed for signatures.	
Project Description:	The work performed under this project procurement shall consist of a design services to implement storm water mitigation measures to protect the facility during extreme weather as well as rehabilitate the facility to provide better redundancy and operate efficiently.	

BID PACKAGE PW 09-03, PW 09-04 AND PW 09-11	**Northern Tank Phase I (Santa Rosa) Construction**	
<50% Complete	**Activities/Notes:** GWA will issue only a bid for Santa Rosa Tank and off-site improvements first.	
Project Description:	The work performed under this project procurement shall consist of Construction of a 1MG Santa Rosa reservoir and booster pump station. Some piping work off site from the reservoir is also required to ensure the reservoirs function optimally.	

BID PACKAGE EE 09-08, EE 09-09	**SCADA Phase A1 Construction**	
99% Complete	**Activities/Notes:** CCU approval of contract approved. Contract routed for signatures.	
Project Description:	The work performed under this project procurement shall consist of Construction of SCADA ready instrumentation at several water and waste water facilities throughout he island.	

RFP EE 09-08, EE 09-09	**SCADA Phase A1 Construction Management**	
98% Complete	**Activities/Notes:** Fee negotiation complete and Engineering service contract being prepared after which the contract will be routed for signatures.	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction	

	of all SCADA ready instrumentation at the various facilities through Guam. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.

RFP PW 09-04, PW 09-11	**Design Services for the Project Pressure Zone Realignment and Tank Repair/Replacement**	
98% Complete	**Activities/Notes:** Scope and fee negotiations completed. Design Contract presented to CCU in June meeting and approved. Contract submitted to design firm for signature.	
Project Description:	The work performed under this project procurement shall consist of design services for the remaining GWA reservoirs that required major repairs or replacement. The design will also address the required pressure zone realignment throughout the island so as to improve the distribution system functionality. .	

BOX KEY FOR PROJECT:

(Type of Project) (Relevant CIP NO.)	**(Project Title)** **(Contractor or consultant)**	**Start Date:** (month and year)
(Percentage complete for project)	**Activities/Notes:** (brief description of activity)	**Completion Date:** (month and year)
(Court Order Paragraph No.)	(Project type)	
Project Description	Project Description Narrative	

C. CIP Water Section

INSPECTION CIP PW 05-02	**Inspection & Maintenance Repairs to GWA Island-Wide Steel Water Tank Reservoirs Phase 2 (DCA)**	**Start Date:** April 2010
80% Complete	**Activities/Notes:** GWA needs to modify design for Toguan BPS. Still working on plan for Kaiser, Windward. Quote for Agat #1 take down with contractor. GWA working to get quotes for by-pass for Malojloj tank.	**Completion Date:** Anticipate December 2021
CO 38C	Engineering inspection services	
Project Description:	The Court Order requires GWA to inspect all active and in some cases inactive water reservoirs. The inspection results will allow GWA to determine if a reservoir requires repair or replacement.	

DESIGN CIP PW 05-12	**Brigade II BPS Upgrade (EM Chen)**	**Start Date:** April 2012
100% complete (Basis of Design) 80% (Design)	**Activities/Notes:** Design firm working to 90% design submittal.	**Completion Date:** Due to property acquisition issues GWA anticipate May 2018
N/A	Engineering design services	
Project Description:	The design project is intended to assess system water supply feed from the north as well as Ugum WTP and the water demands downstream from the Brigade BPS so as to reconfigure the piping into the BPS and resize the pumps to me system head requirements.	

DESIGN CIP PW 12-05	**Yigo and Astumbo 2MG Tank Design Project (Lyons)**	**Start Date:** September 2013
99% complete	**Activities/Notes:** Design firm to provide RFI support during the construction.	**Completion Date:** January 2016
CO 9 (b)(4)	Engineering design services	
Project Description:	Develop the construction documents for two (2) 2.0 million-gallon (MG) nominal capacity concrete reservoirs in the Yigo service zones and one (1) 2.0 MG reservoir in the Astumbo service area. The design services will consist of preparation of plans, specifications, and estimates (PS&E), including Basis of Design, design calculations, construction	

	schedule, topographical survey, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic resources, hazardous materials survey, construction documents, design drawings in Auto CAD (latest version), and relevant permits. Other services will include construction bid support service, meetings, and response to request for interpretation/information during construction. The consultant is required to incorporate and modify existing GWA concrete reservoir specifications to meet the project objective.

DESIGN PW 09-11	**Northern and Southern Guam Reservoir Design** **(TG Engineers)**	**Start Date:** May 2015
60% Complete	**Activities/Notes:** Santa Rosa – 100% design in hand. Santa Rita – 100% design in hand. Inarajan – Land procurement second site related to new BPS's still on-going. Sinifa – 100% design in hand. Ugum – GWA still in discussion with re-evaluation and discussion with property owner of alternative property on-going.	**Completion Date:** Update: Due to property acquisitions issues for Piti and Tumon #1, design completion 6 months after property issue resolved.
CO 29 (b)(4)	Engineering design services	
Project Description:	The design services will consist of preparation of plans, specifications, and estimates (PS&E), which includes Basis of Design, design calculations, hydraulic modeling (EPANET), computational fluid dynamic modeling (CFD), construction schedule, topographical survey, property research, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic resources, hazardous materials survey, construction documents, design drawings in Auto CAD, relevant permit, construction bid support service, and response to request for interpretation/information during construction. The tank locations are Ugum, Santa Rita, Santa Rosa, Inarajan and Sinifa.	

DESIGN PW 12-04	**Central Guam Reservoirs Design** **(GHD Inc.)**	**Start Date:** May 2015
65% Complete	**Activities/Notes:** Chaot #2 – Chaot off-site work part of base bid. Chaot Tank work expected to be Change Order in once funding available. Tumon #2 – tank under construction. Hyundai – tank under construction. Piti – GWA still evaluating alternative solutions to storage needs in Piti area. Manenggon –70% design near complete. Tumon #1 – GWA working on land issues.	**Completion Date:** Update: Due to property acquisitions issues for Piti and Tumon #1, design completion 6 months after property issue resolved.
CO 29 (b)(4)	Engineering design services	
Project Description:	The design services will consist of preparation of plans, specifications, and estimates (PS&E), which includes Basis of Design, design calculations, hydraulic modeling (EPANET), computational fluid dynamic modeling (CFD), construction schedule, topographical survey, property research, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic resources, hazardous materials survey, construction documents, design drawings in Auto	

	CAD, relevant permit, construction bid support service, and response to request for interpretation/information during construction The tank locations are Hyundai, Pulantat, Chaot #2, Tumon #2, Piti and Tumon #1.

CONSTRUCTION PW 09-03	**Line Replacement Phase IV (Giant Construction)**	**Start Date:** 02/14/16
85% Complete	**Activities/Notes:** Contractor completed pipe installation at Asumption Drive and Agafa Gumas. Started work along Chalan Koda and Matguac. Issue regarding property and archeological issue with contractor completed. Work related to line replacement at GPA fuel farm on hold.	**Completion Date:** 12/30/18 per Change Order.
	Construction Services	
Project Description:	The project is intended for a contractor to replace existing water lines that have been found by operations to be leaking and/or are causing service delivery to less than what GWA is required to provide. The project will replace water mains and ten known locations throughout the island and there is a component within the bid where line replacement work for unknown locations is accounted for.	

DESIGN PW 05-15	**Asan Spring Rehabilitation Design (HDR)**	**Start Date:** August 24, 2016
80% Complete	**Activities/Notes:** Design firm working to 90% design submittal.	**Completion Date:** Due to delays from the Park Services related to property access the anticipated completion of the design is May 2018.
	Engineering design services	
Project Description:	- Perform site visits and condition assessment for site conditions to determine demolition and rehabilitation requirement, process equipment condition, structural condition, and electrical system. Site condition assessment shall include all disciplines to execute the project. - Review and validate the current property boundary information to confirm the available space for the project development. - Perform an environmental impact study and prepare all required permits as needed. - Perform an archeological and historical resources study to identify potential impact to the project, prepare all required permits as needed. - Coordinate with Guam Historic Resources Division State Historic Preservation Office (SHPO) on historical resources study. Prepare all necessary reports and documents as required by SHPO. - Coordinate with Guam Department of Agriculture, Division of Aquatic and Wildlife Resources (DAWR) on vegetation clearance. Prepare all necessary reports and documents required by DAWR. - Identify the existing and projected service area, period of design. - Identify and recommend conceptual water treatment system. - Perform a Class 4 engineering cost estimate according to the	

	American Association of Cost Engineers (AACE) International Cost Estimate Classification System for construction fee. Cost must include all disciplines, permit, construction and administration that are necessary to execute the project. All costs will be in current dollars and escalated to the estimated midpoint of construction.

CONSTRUCTION PW 09-11, PW 12-05	**Yigo/Astumbo Tank Construction (Pernix)**	**Start Date:** 12/1/16
85% Complete	**Activities/Notes:** Yigo #1: GWA still working to fill for Leak testing and disinfection. Yigo #2: concrete roof complete, filling to commence next week. Yigo pump station: two off-site connection pending. Astumbo #1: disinfection work started	**Completion Date:** 07/31/18
	Construction Services	
Project Description:	This project will involve construction of two (2) 2MG concrete tanks and Booster Pump Station at the Yigo site and a one (1) 2MG concrete tank at the Astumbo site. Work will involve new pipe line, valves, electrical controls, pumps and motors, site drainage, paving, generator for the BPS, SCADA, etc.	

CONSTRUCTION MANAGEMENT PW 09-11, PW 12-05	**Yigo/Astumbo Tank Construction Management (GHD)**	**Start Date:** December 2016
85% complete	**Activities/Notes:** Processing submittals and on-site inspection	**Completion Date:** July 2018
N/A	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the demolition of existing steel elevate and ground tanks as well as the construction of the 2MG concrete tanks at the Yigo tank location and Astumbo tank location. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

CONSTRUCTION MANAGEMENT PW 12-04-11, PW 12-06 AND PW 09-11	**Central Tank Phase I (Chaot #2, Tumon #2, Hyundai) Construction Management (TG Engineers, PC)**	**Start Date:** December 2017
5% complete	**Activities/Notes:** Reviewing submittals from contractor.	**Completion Date:** February 2019
N/A	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of three water reservoirs; 0.5MG Chaot #2, 1MG Tumon #2 (Nissan) and 1MG Hyundai. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

CONSTRUCTION PW 12-04, PW 12-06 AND PW 09-11	**Central Tank Phase I (Chaot #2, Tumon #2, Hyundai) Construction (AIC)**	**Start Date:** 02/8/18
5% Complete	**Activities/Notes:** GWA working on issue of asbestos found at Nissan site. Waiting for DPW to issue final permit (permits applied for in Feb 2018).	**Completion Date:** 02/31/19
	Construction Services	
Project Description:	The work performed under this project procurement shall consist of Construction of three water reservoirs; 0.5MG Chaot #2, 1MG Tumon #2 (Nissan) and 1MG Hyundai. Some piping work off site from the reservoir is also required to ensure the reservoirs function optimally.	

CONSTRUCTION MANAGEMENT PW 09-11	**Northern and Southern Tank Phase I (Santa Rosa, Sinifa, Santa Rita) Construction Management (GHD)**	**Start Date:** April 2018
0% complete	**Activities/Notes:** Providing constructability review for Santa Rosa Tank.	**Completion Date:** June 2019
N/A	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of three water reservoirs; 1MG Santa Rosa, 1MG Sinifa and 1MG Santa Rita. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

D. CIP Wastewater Section

DESIGN WW 11-08	**Agat-Santa Rita WWTP Replacement (DCA)**	**Start Date:** October 2014
99% Complete	**Activities/Notes:** Change Order to extend design services during construction executed.	**Completion Date:** Nov. 2015 (design); June 2018 (construction)
CO 11	Engineering design services	
Project Description:	The engineering design consultant is required to design a new wastewater treatment facility that will meet secondary treatment limits. The new facilities will incorporate provisions for redundancy to improve reliability and facilitate operations and maintenance activities at the existing facility	

CONSTRUCTION MANAGEMENT WW 11-08	**Agat Santa Rita WWTP CM (GHD)**	**Start Date:** November 2014
100% (PH 1) 100% Complete (PH 2, Part 1)	**Activities/Notes:** Typical CM inspections on-going. Change order required to continue services through April	**Completion Date:** December 2017, projected through

93% Complete (PH 2, Part B)	2018.	April 2018
CO 11	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of the Agat Santa Rita WWTP Phase II project. GWA plans to replace the existing wastewater treatment plant for a new plant that can meets permit limits. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

CONSTRUCTION WW 11-08	**Agat Santa Rita WWTP Phase II (Sumitomo Construction)**	**Start Date:** January 2016
Part 1 of Phase II- 100% Complete Part 2 of Phase II- 93% complete	**Activities/Notes:** Contractor still working on headworks, aerobic digester, equalization basin, admin and maintenance buildings.	**Completion Date:** Phase A: 03/15/17 Phase B: 12/31/17 will not be met, August 2018 projected
CO 11	Construction services	
Project Description:	This project includes construction of the head works, clarifier, oxidation ditches and UV disinfection and administration facilities. Rehabilitation work at the existing WWTP will also occur to ensure the wastewater can be pumped to the new plant. The new plant will also tie into the Tipalao SPS.	

DESIGN WW 09-08, WW11-03	**Baza Gardens Cross Island Sewer Design (DCA)**	**Start Date:** 02/05/16
99% Complete	**Activities/Notes:** DCA providing engineering services during construction.	**Completion Date:** 04/30/18(this completion date will have to be extended.)
CO 11	Engineering design services	
Project Description:	The intent of this project for an engineering firm to prepare design drawings and specification for a sewer conveyance from the Baza Garden WWTP to the new Agat Santa-Rite WWTP. The design will take into account growth in the Baza Gardens/Talofofo areas as wells as new connection along the Route 17 route.	

DESIGN WW 09-06	**Bayside SPS Improvements Design (EMPSCO)**	**Start Date:** July 29, 2016
99% Complete	**Activities/Notes:** Due to change in design Army Corp of Engineers permit viewed as not necessary. GWA received 100% design and under review. GWA working on Change order to address snail and archeological report that was not part of original scope.	**Completion Date:** Due to issue with ACOE anticipate December 2017 for design only.
	Engineering design services	
Project Description:	The intent of this project for an engineering firm to prepare design	

	drawings and specification to upgrade the Bayside Sewer Pump Station given the facility is in major disrepair and the adjacent river is eroding away the access road to the facility which is causing maintenance challenges.

CONSTRUCTION WW 09-08, WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance Construction Phase I (BME and Sons)**	**Start Date:** October 2016
82% Complete	**Activities/Notes:** New SPS, force main and gravity line installation along Route 17 on-going.	**Completion Date:** Phase I: 03/01/18 (this completion date will have to be extended. Under negotiations)
	Construction services	
Project Description:	The work performed under this project consist of construction of 14,714' of gravity main, 2,767' of force main and sewer pump station #3 next to the Aplacho River in Santa Rita.	

CONSTRUCTION MANAGEMENT WW 09-08 WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance (Construction Management) (SSFM)**	**Start Date:** December 5, 2016
70% Complete	**Activities/Notes:** Field inspection, project coordination and invoice review on-gong.	**Completion Date:** April 2018 (this completion date will have to be extended. Under negotiations)
	Construction Management services	
Project Description:	The work performed under this project shall consist of Construction Management and Inspection Services for the construction of gravity main, force mains and sewer pump station as well as an equalization basin at the Baza Garden WWTP.	

CONSTRUCTION WW 09-08, WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance Construction Phase II (BME and Sons)**	**Start Date:** March 2017
95% Complete	**Activities/Notes:** New SPS, force main and gravity line installation along Route 17 on-going.	**Completion Date:** April 2018 (this completion date will have to be extended. Under negotiations)
	Construction services	
Project Description:	The work performed under this project consist of construction of 1,767' of gravity main, 14,400' of force mains and sewer pump station #2 along Route 17.	

CONSTRUCTION WW 09-08, WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance Construction Phase III (Sumitomo Construction)**	**Start Date:** June 2017
35% Complete	**Activities/Notes:** Contractor continuing pipeline and SPS construction work on Route 17 along with work at wet well at Baza Gardens WWTP.	**Completion Date:** Phase III: 03/16/18 (this completion date will have to be extended. Under negotiations)
	Construction services	
Project Description:	The work performed under this project consist of construction of, but not limited to, 10,481' of force mains and sewer pump station at existing WWTP, equalization tanks, stand-by generator, improved headworks, grit removal system, and associated equipment.	

CONSTRUCTION WW 11-04	**Umatac Merizo WWTP Design Build Improvements Project (CoreTech)**	**Start Date:** June 2017
90% design 10% construction	**Activities/Notes:** • CHL continuing excavation and grading of the North Overland Flow System (OFS). Breaking rock to achieve grade. • FM from effluent pump station to OFS tank being installed. Compaction irregularities being reported and addressed. • Culvert repair work started -- CO done. Culvert under road reported separating. Documenting condition and potential repair/replace method.	**Completion Date:** December 31, 2018
	Construction services	
Project Description:	The project is intended to improve the aeration basin, construct a new sewer pump station, regrade the overland field, construct a new effluent storage tank and disinfection facility. The overland percolation basin will undergo regarding work to ensure appropriate distribution of effluent through the whole basin.	

CONSTRUCTION MANAGEMENT WW 11-04	**Umatac Merizo WWTP Design Build Improvements Project (SSFM Inc)**	**Start Date:** September 7, 2017
15%	**Activities/Notes:** Continuing on-site inspection of field activities.	**Completion Date:** December 31, 2018
	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the improvements works at the aeration basin, new sewer pump station, overland field improvements, effluent storage tank. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

E. CIP Engineering Support

DESIGN EE 09-08	**SCADA System for Water and Wastewater Facilities Phase A-1 (AECOM)**	**Start Date:** June 2015
100% complete (design) 0% Services during construction	**Activities/Notes:** Final design in hand. AECOM to provide assistance during bidding process.	**Completion Date:** November 2017 - Design January 2019 - (Bid and Construction Support)
N/A	Engineering design services	
Project Description:	The A/E firm will design an integrated, robust and secure Supervisory Control and Data Acquisition (SCADA) system for GWA's water and wastewater systems, and to provide support services during bid and construction. The 22 sites will consist of a combination of water facilities such as production wells, reservoirs, booster pump station and wastewater sites include sewer treatment plants and sewer pump stations. Executed by approved change orders, number of sites in original design scope has changed from 22 sites to 19 sites and design of High Water Alarm for 20 critical sewer pump stations has been added. Scope also includes bid and construction support of the design-build project of GPWA SCADA EMS project.	

F. GIS Section

MAPPING MC 05-02	**Island Wide Survey- (Duenas, Camacho & Ass.)**	**Start Date:** December 2007
99% complete	**Activities/Notes:** Task #13 complete. Task #14 scope negotiating ongoing.	**Completion Date:** New anticipated complete is April 2018.
	Survey services	
Project Description:	The contracted land surveyor is required to conduct title research, property valuation and mapping of property boundaries where GWA facilities are located but the lot is not registered under GWA's name.	

MAPPING MC 05-02	**Island Wide Survey PH II - (Duenas, Camacho & Ass.)**	**Start Date:** August 30, 2017
45% complete	**Activities/Notes:** Surveyor submitted 25 property maps for GM signature. Surveyor continuing additional field work for another 20 parcels.	**Completion Date:** December 2018
	Survey services	
Project Description:	The work performed under this project procurement shall consist of a professional land surveyor conducting field work to mark corners of existing government properties as a means of severing out portions of the larger property to be deeded to GWA. Surveyor shall also prepare all necessary maps and documents for recording at DLM	

G. Permits Section

PERMITS
MONTHLY REPORT 2017

	2018						
Description	Jan	Feb	Mar	April	May	Jun/July	
Building Permit	11	9	1	13	11	28	
Occupancy Permit	3	10	18	16	18	32	
New Installation	14	8	7	9	3	18	
Sewer Application	15	14	7	6	3	0	
Sewer Inspection	0	1	3	0	0	1	
Private Utility Acceptance	0	0	0	0	0	0	
Relocation of Water Meter	0	0	0	0	0	0	
Tapping-Water	1	1	0	0	3	1	
Tapping-Sewer	0	1	0	0	0	0	
Clearance-Water	3	2	7	10	20	41	
Clearance-Sewer	3	2	7	10	20	41	
Highway Encroachment	0	4	41	22	25	31	
Verification of Utilities	4	4	5	4	1	7	
Fire Flow Test	0	0	1	0	0	0	
Schedule Water Outage	0	1	0	0	0	0	

H. SRF Project Status Report

- Projects listed below that are noted to be in the procurement phase will follow the "Percentage Key" below.

Percentage Key:

100%	Approved by GM
99%	Signature required from either Accounting/Legal/GM
98%	Processing engineering service or construction contract (with legal)
95%	Request for CCU approval (GM/engineering)
90%	A/E fee negotiation or contractor bid evaluation (engineering)
80%	Selected A/E or Conducted bid opening (engineering)
70%	Advertised RFP/IFB (engineering)
60%	RFP/IFB Package under legal review
50%	RFP/IFB Package completed (engineering)
Less than 50%	Project Scope of work development in progress

- Red text anywhere indicates a change from the last report.
- Cells highlighted in green indicate contract amount certified and project active.

	Project	Project Description	Project Manager	Phase		Start Date (NTP Issued)	Anticipated Completion Date	Contract Amount (+) change orders	Contractor	Status as of 07/15/18
1	Northern District SSES & I/I Study	Sanitary sewer system evaluation study (SSES) and inflow and infiltration (I/I) study designed to evaluate high I/I areas within the Northern sewer basin with the goal of identifying projects to eliminate them.	J. Davis	Design	1	10/10/2014	2/29/2016	$ 792,979.97	Stanley	100% Complete.
				Construction				*The project does not involve construction.*		
				Const. Mgmt						
2	Southern SSES Rehabilitation (Agat-Santa Rita-Umatac-Merizo)	Rehabilitation of segments of sewer lines in Umatac, Merizo, Agat, and Santa Rita where the Sanitary Sewer Evaluation Study recommends rehabilitation.	Brown & Caldwell	Design				*The design was previously completed under bond funding.*		
				Construction	1	10/30/2015	2/28/2017	$ 1,170,583.82	Reliable Builders	Warranty work complete .
				Const. Mgmt	1	11/10/2015	3/30/2017	$ 226,980.23	TG Engineers	CM Services complete.
3	Asan-Adelup-Hagatna RT1 Sewer Line Rehabilitation and Replacement	Rehabilitation of sewer lines from the War in the Pacific Asan Park to the Governor's Complex in Adelup. This line is asbestos concrete that is dilapidated and some areas have disintegrated crowns.	Brown & Caldwell	Design	2	12/11/2015	3/30/2017 for Design requirements	$ 1,780,210.00	HDR	Route 1 rebid: HDR to provide services during bid process. .
				Construction		10/16/2016	6/30/2019	$5,920,000		Procurement 90%. Bid opening complete and GWA review lowest bid package for responsiveness.
				Const. Mgmt	2	6/30/2017	6/30/2019	$ 870,610.41		Procurement 99%. Resolution passed. Contract routed for signatures.

4	RT2 Agat War in the Pacific Sewer Line Rehabilitation and Replacement	Rehabilitation of a large segment of sewer line fronting the War in the Pacific Park in Agat that has collapsed.	Brown & Caldwell	Design	3	11/17/2015	3/30/2017 for Design requirements	$ 316,681.00	SSFM	SSFM providing services during bidding process as well as construction phase.
				Construction	2	8/31/2017	10/1/2018	$ 4,554,451.00		• PPBC installing MH #5, and exploring area for MH #6; utilities continue to be a constant issues. • PPBC currently discharging/dewatering water to sewer, as needed; GWA metering discharge. PPBC wrapped pump intake with a fine mesh to prevent sand and solids from entering into sewer. • PPBC continuing exploratory excavations as needed; CM/BC working with PPBC to determine the final alignment. • Existing concrete-encased utilities are preventing contractor from installing some manholes per original design. CM coordinating with contractor and BC to recommend new manhole locations as needed. BC/GWA would make the final call. • BC/CM working with PPBC to look at options for diverting sewer flow from existing system to new system around SMH#4/EMH#6; GWA requested to allow for removal of current bypass in front of park.
				Const. Mgmt	3	9/19/2017	10/1/2018	$ 584,725.00		• SSFM requesting additional funds for services during construction. Need to review recent submittal of last invoice. • PCO #1: Contractor agreed to 30 days additional time. Started CO#1; will route to GWA for signature.
5	Brown & Caldwell Project Management	Brown & Caldwell to provide program management services and support.	T. Cruz	Design	4	3/24/2015	2/28/2019	$ 2,640,220.00	B&C	Project underway.
				Construction				*The project does not involve construction.*		
				Const. Mgmt						
6	Wastewater, Water and Source Water System Master Plan Upgrade	Update of the existing water and wastewater master plan while factoring in military integration and secondary treatment plant options.	Brown & Caldwell	Design	5	7/6/2015	01/30/2018 (revised due to financial workshop)	$ 2,623,300.00	B&C	• Target Acceptance date for MP - August CCU meeting. • Currently only providing assistance for Public Meetings. • Public meetings held in Yigo, Tamuning, Agat, GHRA, and before Senate. At this point 4 meetings still scheduled. • Budget is expended - additional work for the public meetings and SFO Presentation ~$57,000. GWA to re-budget from other SRF projects per discussion with BC.
				Construction				*The project does not involve construction.*		
				Const. Mgmt						

7	Groundwater Wells Rehabilitation (F-3, A-2, A-7, A-12, D-5)	Rehabilitation of existing deep wells and/or in cases where pipe column needs replacing, wells will be re-drilled. The deep wells to be rehabilitated are A-2, A-7, A-12, D-5, & F-3.	Brown & Caldwell	Design	6	5/27/2016	2/28/2018 (for design only)	$ 1,758,247.00	AECOM	• AECOM submitted final design package on 3/19. Approved final design invoice #13. • Project in holding pattern until construction IFB is issued (funding source TBD).
				Construction		9/30/2018	9/30/2019			SRF grant funds specific to project pending FY18 grant approvals and award.
				Const. Mgmt		9/30/2018	9/30/2019			· Draft CM scope submitted to GWA.
8	Tumon Sewer Hot Spots	Investigation, evaluation, and repair of possible solutions, to long plaguing issues where sewer overflows are known to occur in Tumon San Vitores.	Brown & Caldwell	Design	7	6/24/2016	10/30/2017 for design only	$ 572,089.00	TG Engineers	· TGE to provide engineering services during bid process.
				Construction		12/1/2018	12/31/2019			Procurement 70%; bid package advertised 5/15/18, Pre-bid occurred on 6/1/18. Bid opening 6/19/18.
				Const. Mgmt		12/1/2018	12/31/2019			Procurement 70%: RFP package advertised 6//5/18. Proposals received 6/29/18. Proposal evaluation being completed.
9	Critical Sewer Pump Stations (7 stations)	Rehabilitation of various components of 7 pump stations that were identified to by the CDM design team: Macheche, Ypaopao, Astumbo 1, Fujita, Santa Ana, Southern Link, and Route 1.	CDM	Design				*The design will be incorporated into the design/build package.*		
			J. Davis	Design/Build	1	8/8/2016	3/30/2018	$ 1,542,979.01	ProPacific	-Route 16 Pump Stations- Structural Evaluation done. Waiting for the report from the Structural Engineer. Additional cost and time extension is anticipated. Change Order #5 with finance for fund cert. - Fujita Pump Station- all work complete, - Macheche PS- all work complete - Santa Ana PS- all work complete, - Southern Link Pump Station - Pending Change Order for Roll up door. Ypaopao : all work complete - Astumbo : all work complete
				Const. Mgmt	4	9/9/2016	3/30/2018	$ 329,353.52	Stanley	CM work ongoing. GWA working on Change Order proposal to extend contract to match constructions activities.
10	Sewer Pump Station High Water Alarm Systems (20 stations)	This project will design and installed telemetry equipment/SCADA type alarms that will alert when pump station failure occurs.	C. Yam	Design				*The design will be incorporated into the design/build package.*		
				Design	8	8/12/2016	02/30/2017	$ 183,171.00	AECOM	Design complete
				Construction	3	4/5/2017	9/30/2017	$ 1,444,888.00	Pacific Rim	Project complete
				Const. Mgmt	5	02/30/2017	9/30/2017	$ 195,269.00	EMSPCO	CM work complete

11	Sewer Pump Station Backup Power (2 stations)	Construction of the housing and installation of new generators for the Casimero pump station (Mongmong) and the Namo pump station (Yona central).	B. Cruz	Design				*The design will be incorporated into the design/build package.*		
				Design/Build	2	6/24/2016	9/30/2017	$ 362,692.53	ProPacific	Design Build project complete.
				Const. Mgmt				*B. Cruz is the construction manager.*		
12	RT4 Relief Sewer Line Rehabilitation and Replacement	Rehabilitation of sewer lines that are located from Agana McDonalds to Marine Drive that have been known to overflow due to structural issues.	Brown & Caldwell	Design	9	3/1/2016	4/22/2017	$ 794,000.00	AECOM	· AECOM to provided services during bidding process.
				Construction		11/15/2018	12/31/2019			Procurement 95%, · • Rebid contracts for Schedule A, ProPacific ($3.4M), and for Schedule B, Insituform ($4M); resolution/summary to be presented in July CCU. • AECOM routing drawing sets to get a head start on permitting.
				Const. Mgmt	6	11/15/2018	12/31/2019	$ 702,678.13		Procurement 100%, • EMPSCO CM contract ($647K + $56K for two contractors) approved and signed
13	Groundwater Wells Rehabilitation (D-3, D-17, D-18, D-22, M-9)	Rehabilitation of existing deep wells and/or in cases where pipe column needs replacing will be re-drilled. D-3, D-17, D-18, D-22, and M-9.	Brown & Caldwell	Design				*The design was previously completed under bond funding.*		
				Construction	4	8/19/2016	3/30/2018 (completion date under analysis)	$ 6,158,240.67	Pacific Rim	• Substantial Completion Certificates issues for D-17, D-18 and D-22. • Main issues remain - EA/PRC still working on level sensor/sounding tube issues. - Still working with GHD to confirm electrical requirements for the larger drives. - D-03: Working with GWA/EA to figure out path forward. • Contractor is not cooperating and CM has currently recommended terminating PRC. Looking at ways to resolve the issues and get to completion.
				Const. Mgmt	7	3/22/2016	3/30/2018 (completion date under analysis)	$ 1,041,722.56	EA	• CM CO#4 executed. • Processing PRC Invoice #20.

14	Southern SSES Sewer Rehabilitation (Baza Gardens-Talofofo)	Rehabilitation of segments of sewer lines in Windward Hills, Talofofo area where the Sanitary Sewer Evaluation Study recommends rehabilitation.	Brown & Caldwell	Design				*The design was previously completed under bond funding.*		
				Construction	5	8/2/2016	Due to issue related to Santa Rita sewer project completion under analysis.	$ 1,189,815.00	ProPacific	• On 5/16, meeting held with PPBC's bonding agency (Takagi & Associates) and Kelly Clark (and PPBC, GWA, BC, EMPSCO) • PPBC seems amenable to paying for design and construction of pump station and force main. • If PPBC installs a pump station for the project, should we look at what the ultimate capacity could be for other connections? • BC sent draft performance requirements for a design-build project to install pump station and force main to contractor and GWA on 6/14. GWA informed BC, and BC in turn PPBC, that EMPSCO may be the designer of the proposed Lift Station. PPBC initiated preparation of the Lift Station proposal. • PPBC on notice since 12/01/2017 (via formal GWA letter) that continuing delays are unacceptable and grounds for potential default. • Santa Rita Wetland (drawing AG-101): • On 3/15, Contractor notified BC/GWA that progress could not be made on sewer line MH5678 -- MH5679 due to the line filling with rocks. • On 3/30, BC/GWA held site visit with USACE. On 4/3, BC held site visit with GEPA. A third sewage spill into the wetland was observed and reported. Contractor immediately repaired the leak. • Baza Gardens: PPBC using IMS robotic cutter to correct punch list items. CM/BC remarked that the final CCTV revealed deficiencies to correct. Contractor advised same. • Talofofo: Final Inspection held on 5/25 -- all defects were corrected and work is complete.
				Const. Mgmt	8	7/29/2016	5/28/2017	$ 347,945.93	EMPSCO	· PM to work on Change Order to extend contract and amount.
15	Tamuning Sewer Hot Spots	Sewer rehabilitation for lines at Winner Apartments, Segund Leon Guerrero, and behind Guam Premium Outlets.	Brown & Caldwell	Design	10	9/9/2016	10/31/2017 (for design only)	$ 663,629.00	TG Engineers	· TGE to provide engineering services during bid process.
				Construction		12/1/2018	12/31/2019			Procurement 70%; bid package advertised 5/15/18, Pre-bid occurred on 6/1/18. Bid opening 6/19/18.
				Const. Mgmt		12/1/2018	12/31/2019			Procurement 70%: RFP package advertised 6//5/18. Proposals received 6/29/18. Proposal evaluation being completed.
16	Talofofo Sewer Pump Stations (4 stations)	Design and construction of 4 sewer lift stations in the Talofofo village where sewer lines are installed but never completed.	J. Davis	Design (for Talofofo and Chalan Pago PS)	11	8/17/2016	11/30/2017	$ 493,818.86	EMPSCO	Talafofo Pump Station design /bid package received. Final Design of Chalan Pago Pump Station project under review by GWA. Change Order related to snails to be executed.
				Construction		12/1/2018	12/31/2019			Procurement 70%; bid package advertised 6/19/18, Bid opening scheduled for 8/3/18.
				Const. Mgmt		12/1/2018	12/31/2019			Procurement 50%; RFP package being prepared.

17	Chalan Pago Sewer Pump Station	Design and construction of sewer lift stations and gravity lines in Scott Laguana, Santa Cruz Street Chalan Pago.	J. Davis	Design		8/17/2016	11/30/2017	*The design will be included with the Talofofo Pump Station design project.*		
				Construction		4/29/2017	4/30/2018			
				Const. Mgmt		4/29/2017	4/30/2018			
18	Water Hydraulic Model (SCADA ready instruments to update Model)	Design and construction of instrumentation at key water sites in the Barrigada service area necessary to update GWA Water hydraulic model.	Barbara Cruz	Design	12	8/3/2016	3/15/2017	$ 523,268.00	GHD	Design complete.
				Construction		2/1/2017	12/30/2019			Funding for construction project to be from FY18 grant that is still pending.
				Const. Mgmt		2/1/2017	12/30/2019			
19	Macheche Hill Sewer Rehabilitation/ Replacement	Rehabilitation of sewer lines on Macheche road. Segments of this sewer line has collapsed recently and is consider a high priority.	J. Davis	Design-Build	3	8/29/2016	3/30/2018	$ 2,202,545.47	Giant Const.	Construction project complete.
				Const. Mgmt	9	9/16/2016	3/30/2018	$ 379,994.38	Am Orient	CM work complete.
20	Asan-Adelup-Hagatna Rt. 1 Sewer Line Rehabilitation and Replacement Emergency Repairs	Rehabilitation of sewer line in Asan that collapsed and which is current fitted with a temporary pumping system.	Brown & Caldwell	Design				Design cost covered under Project 3 above.		
				Construction	6	3/8/2017	12/30/2017	$ 2,470,658.00		GWA waiting on as-builts.
				Const. Mgmt	10	1/24/2017	12/30/2017	covered under Project 3		CM work complete.
21	Valve Maintenance Equipment Trailer (2 each)	Acquire two sets of valve exercise equipment mounted on trailers to be used to exercise existing valves in the distribution system as a means of maintaining the valves functionality so the valves to not "freeze up" and required replacement	Grants/Operations	Equipment	1			$ 167,814.94		Complete
22	Heavy Duty Trucks to Haul Valve Maintenance Equipment Trailer (2 each)	Acquire two heavy duty trucks with extended to pull the valve exercise equipment trailer	Grants/Operations	Equipment	2			$ 139,790.00	Triple J	Complete
23	Project Advertisement	Each IFB or RFP requires advertising	Engineering/ Procurement	MISC	1			$ 25,172.50	PDN/Post	On-going

DASHBOARD

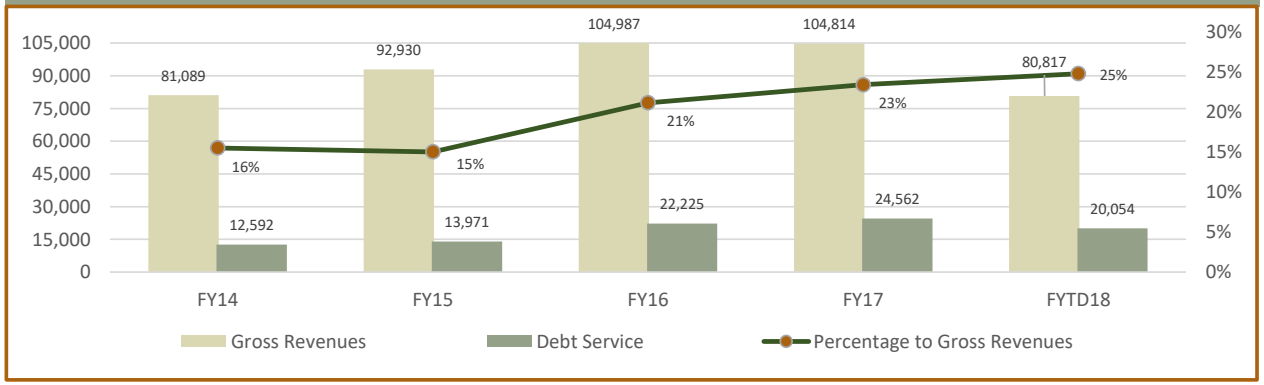
FYTD June 2018 Budget vs Actual ($000)

Category	Description	Budget FYTD18	Actual FYTD18	Variance
Rate Based Revenues	Water	$53,474	$50,921	($2,552)
	Wastewater	29,896	29,557	(339)
	Total	83,370	80,479	(2,891)
Operations & Maintenance	Salaries & Benefits	18,012	14,849	(3,163)
	Power	9,522	10,931	1,409
	Water Purchases	6,490	6,811	321
	A&G	9,070	8,010	(1,061)
	Contractual	3,939	3,402	(537)
	Total	$63,392	$60,345	($3,047)

Key Financial Ratios ($000)

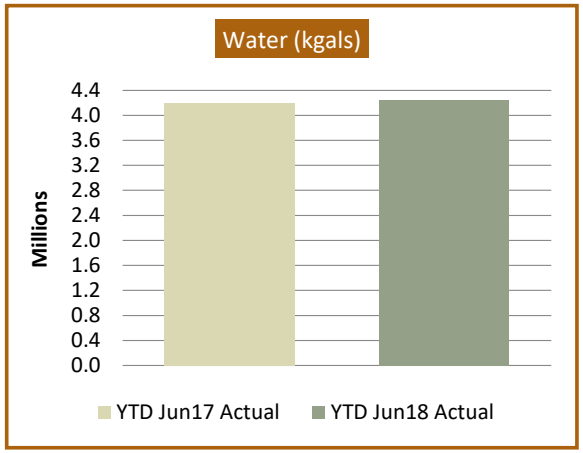
Category	FY18	FY17
Accounts Payable $$/Days	$4,342 / 46 days	$5,390 / 59 days
Accounts Receivable $$/Days	$15,848 / 59 days	$15,451 / 51 days
Days Cash On Hand	156 days	184 days
Annual Debt Service (Revenue Bonds)	$26,739	$24,563
Debt Service Coverage (Bond/PUC)	1.74 / 2.16	1.98 / 2.44

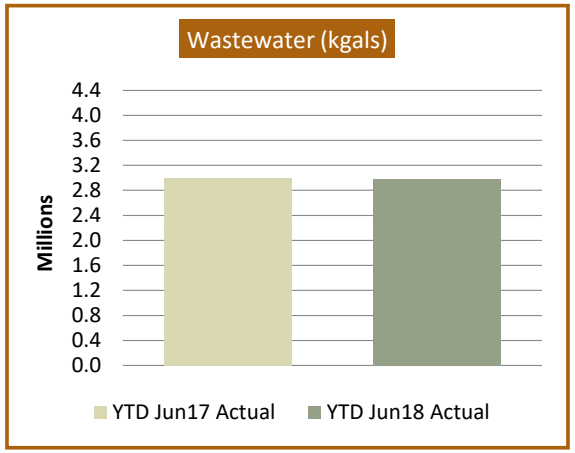
Debt as a Percent to Gross Revenue

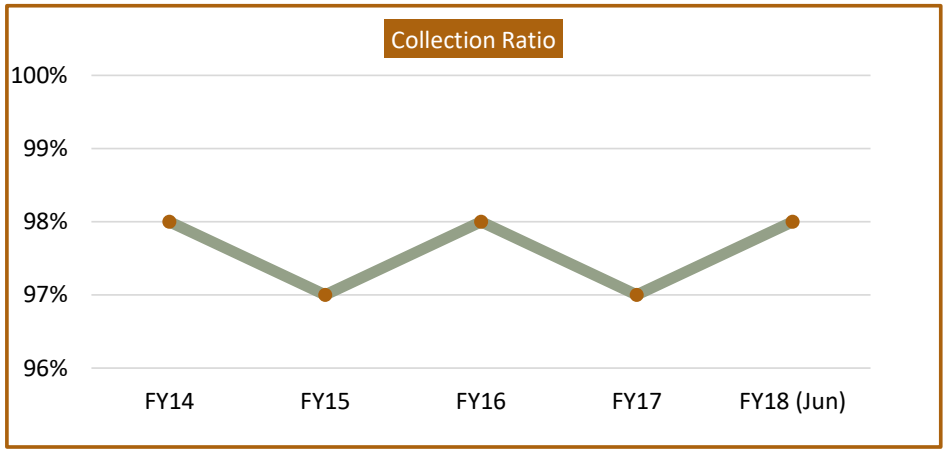


(1) Gross Revenues excludes SDC
(2) Debt Service Includes Cap I

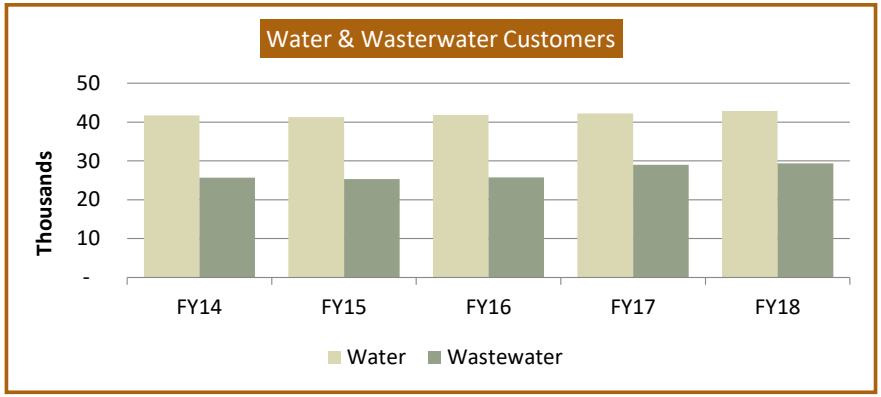
Water & Wastewater Analytics

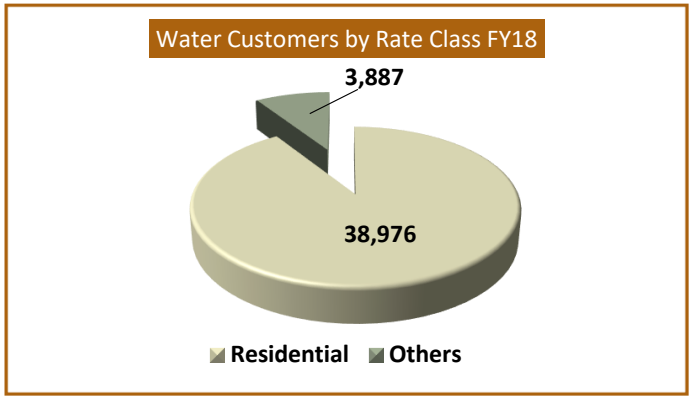


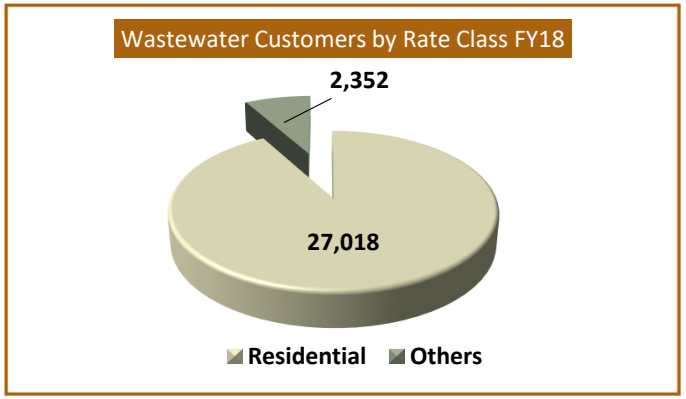


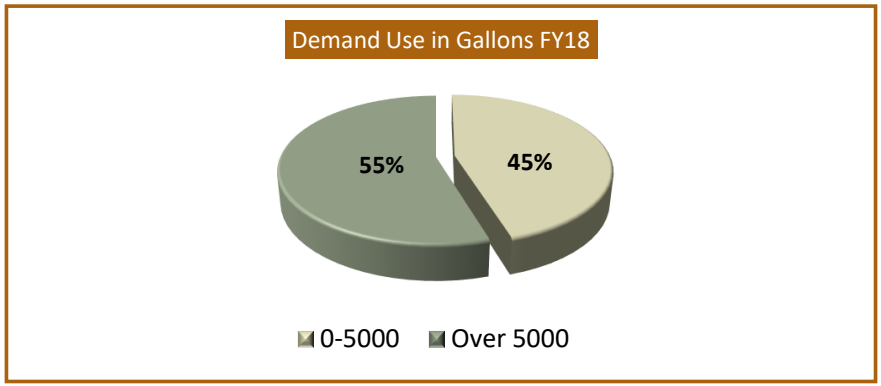


Water & Wastewater Customers





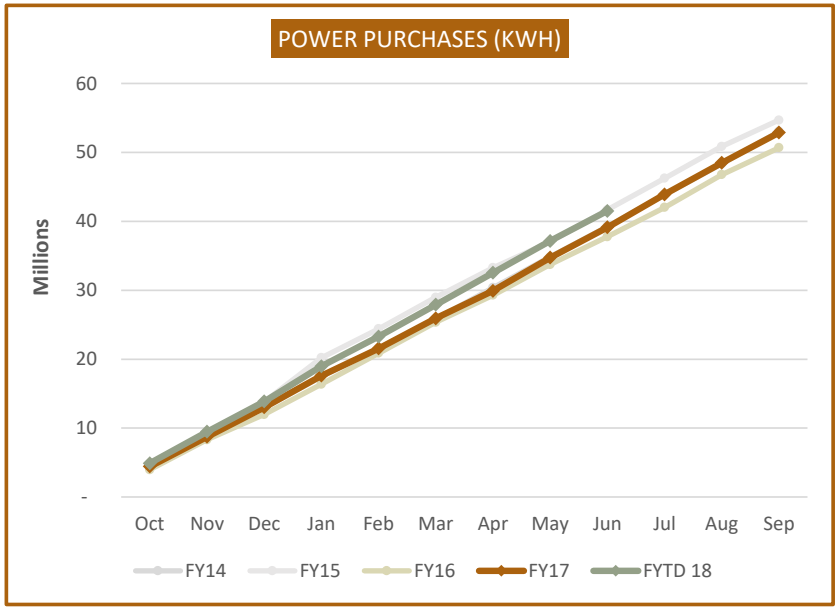


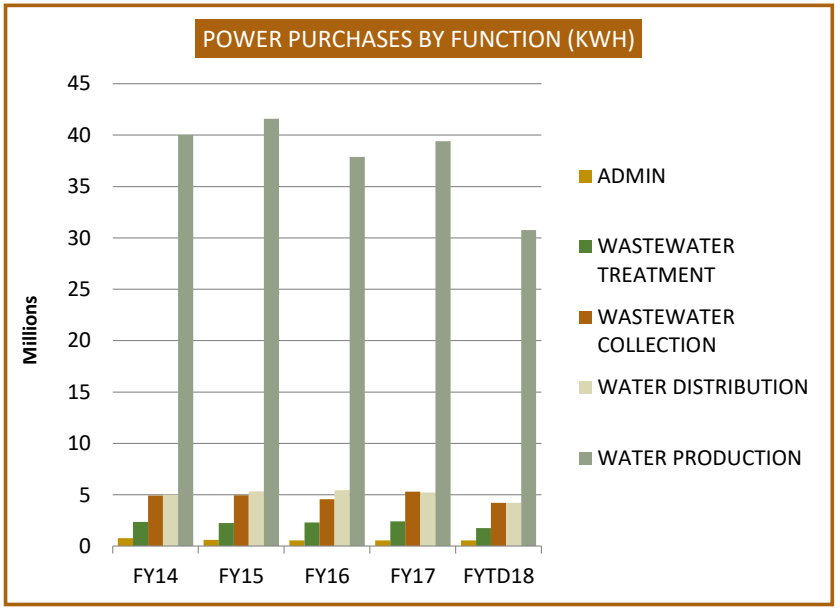


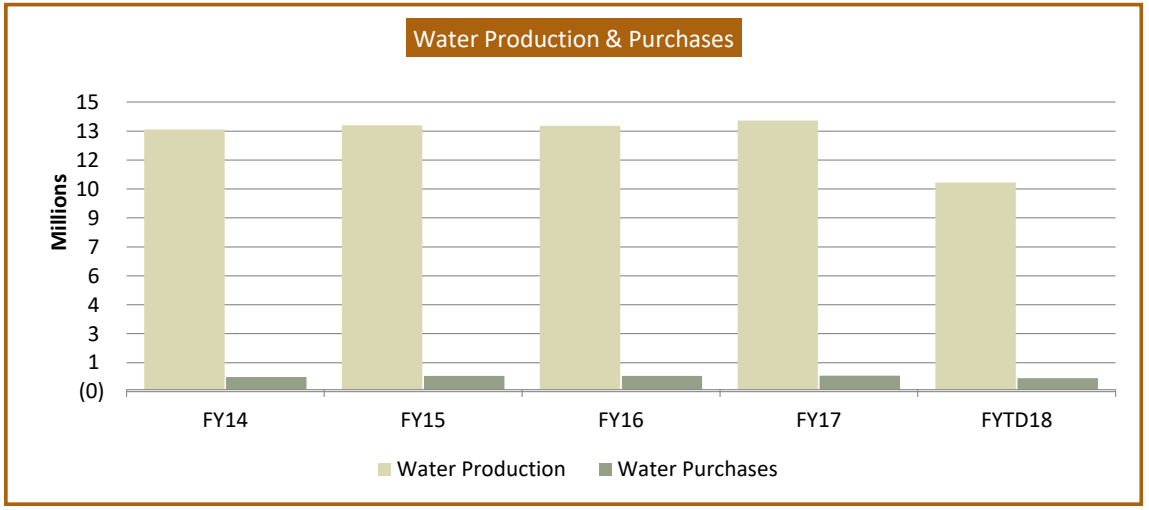
Top Ten Largest Water and Wastewater Customers – June 2018

Water			Wastewater		
Customer Name	FYTD18 Revenues	% of Total	Customer Name	FYTD18 Revenues	% of Total
1) MDI GUAM CORPORATION/LEOPALACE	$985,874	1.94%	1) AIR FORCE DOD	$2,700,025	9.12%
2) PACIFIC ISLANDS CLUB	909,167	1.79%	2) NAVY DOD	1,755,393	5.93%
3) HOTELS OF THE MARIANAS INC	739,619	1.45%	3) HOTELS OF THE MARIANAS INC	790,900	2.67%
4) HYATT	669,134	1.31%	4) HYATT	716,318	2.42%
5) HOTEL NIKKO GUAM	631,022	1.24%	5) HOTEL NIKKO GUAM	674,248	2.28%
6) GUAM REEF HOTEL INC	615,987	1.21%	6) GUAM REEF HOTEL INC	659,228	2.23%
7) SHERATON LAGUNA GUAM RESORT	569,039	1.12%	7) SHERATON LAGUNA GUAM RESORT	608,798	2.06%
8) MDI GUAM CORPORATION/WESTIN	494,833	0.97%	8) MDI GUAM CORPORATION/WESTIN	529,088	1.79%
9) OUTRIGGER GUAM RESORT	478,263	0.94%	9) OUTRIGGER GUAM RESORT	512,420	1.73%
10) GOODWIND DEVELOPMENT CORP	466,501	0.92%	10) GOODWIND DEVELOPMENT CORP	497,524	1.68%
Total	**$6,559,440**	**12.89%**	**Total**	**$9,443,943**	**31.91%**

Power, Water Purchases and Water Production

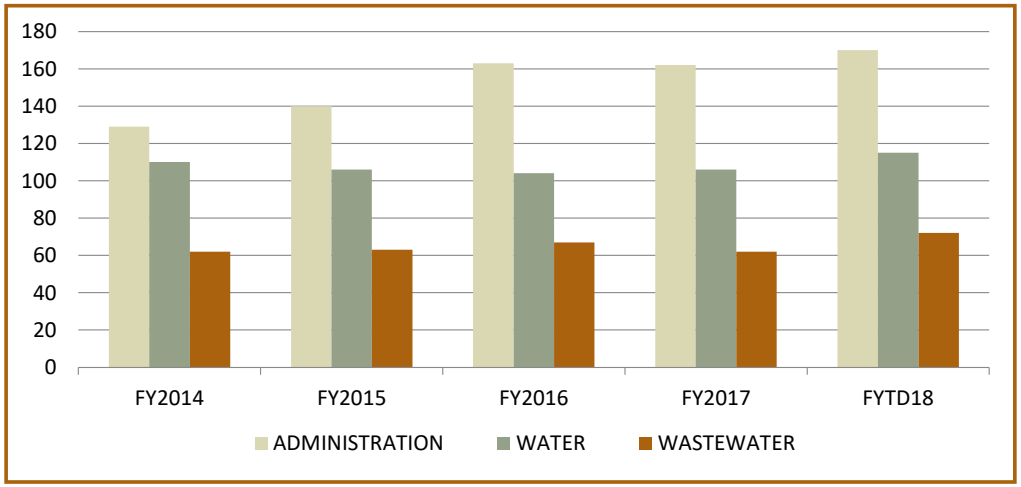




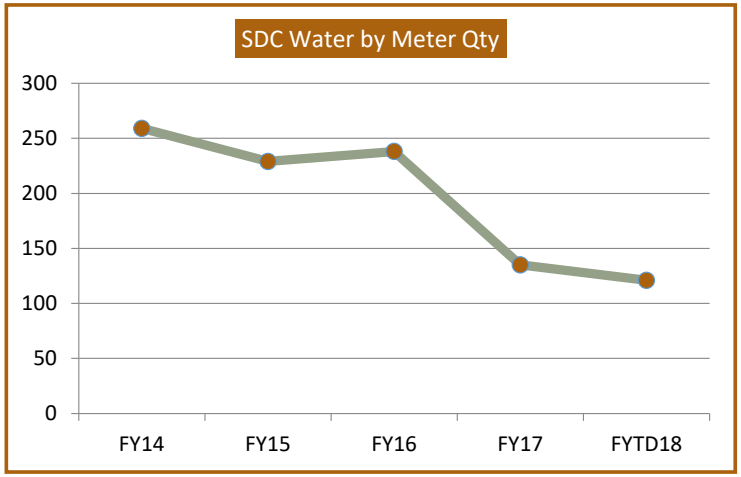


FTE by Major Division

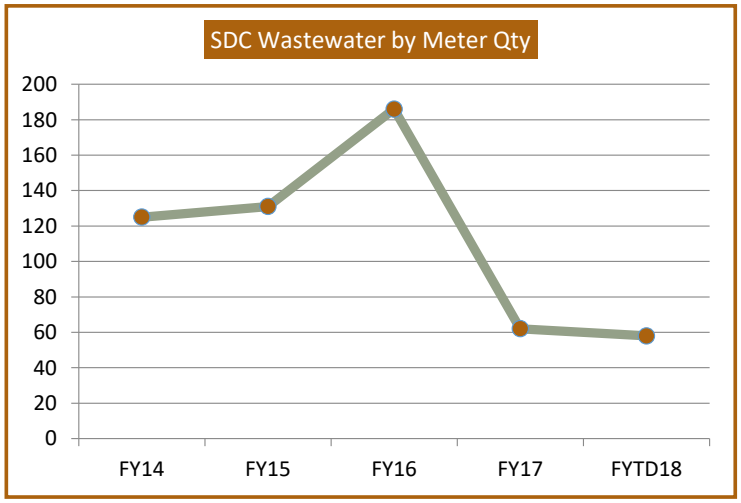
DIVISION	FY2014	FY2015	FY2016	FY2017	FYTD18
ADMINISTRATION	129	140	163	162	170
WATER	110	106	104	106	115
WASTEWATER	62	63	67	62	72
TOTAL NUMBER OF STAFF	**301**	**309**	**334**	**330**	**357**
Gross Salaries & Wages ($000)	15,585	17,590	16,008	16,963	12,488
Water Customers	41,702	41,274	41,858	42,181	42,863
Staff to Customers Ratio	0.72%	0.75%	0.80%	0.78%	0.83%



SDC Water & Wastewater (Meter Quantity)



Actual Meter Sizes (Inches)	FY 2014	FY 2015	FY 2016	FY 2017	FYTD18
5/8 x 3/4	248	220	239	129	113
1	5	5	7	2	1
1 1/2	1	1	1	1	3
2	3	2	4	2	3
3	1	-	1	-	-
4	-	1	-	-	1
6	-	-	-	1	-
8	1	-	-	-	-
10	-	-	-	-	-
Total SDC by Water	259	229	252	135	121



Actual Meter Sizes (Inches)	FY 2014	FY 2015	FY 2016	FY 2017	FYTD18
5/8 x 3/4	115	124	179	58	50
1	4	3	2	-	1
1 1/2	1	1	1	1	3
2	3	2	3	2	3
3	1	-	1	-	-
4	-	1	-	-	1
6	-	-	-	1	-
8	1	-	-	-	-
10	-	-	-	-	-
Total SDC by Wastewater	125	131	186	62	58

GUAM WATERWORKS AUTHORITY
JUNE 30, 2018
FINANCIAL AND RELATED REPORTS
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GUAM WATERWORKS AUTHORITY
Balance Sheet
June 30, 2018

SCHEDULE A

ASSETS	Unaudited June 30, 2018	Audited September 30, 2017	Increase (Decrease)
Current Assets:			
Cash:			
Unrestricted (Schedule G)	1,799,133	4,873,275	(3,074,142)
Restricted Funds (Schedule G)	70,347,742	65,124,400	5,223,342
Accounts Receivable Trade, Net of Allowance for Doubtful Receivables of $13,606,332 at Jun 30, 2018 and $12,619,034 at Sep 30, 2017	15,848,312	15,450,733	397,579
Other Receivable	944,691	8,433,446	(7,488,755)
Materials & Supplies Inventory, Net of Allowance for Obsolescence of $457,370 at Jun 30, 2018 and Sep 30, 2017	3,706,640	2,166,557	1,540,083
Total Current Assets	92,646,518	96,048,411	(3,401,893)
Property, Plant and Equipment			
Utility plant in service:			
Water system	328,674,340	327,484,191	1,190,148
Wastewater system	287,213,495	286,394,940	818,556
Non-utility property	19,042,110	18,938,255	103,854
Total property	634,929,945	632,817,387	2,112,558
Less Accumulated Depreciation	(299,786,904)	(286,043,580)	(13,743,324)
Land	1,163,298	1,110,998	52,300
Construction Work in Progress	176,284,494	111,695,887	64,588,607
Property, Plant and Equipment, net	512,590,833	459,580,691	53,010,142
Other noncurrent assets			
Restricted cash (Schedule G)	188,795,816	236,550,002	(47,754,186)
Investments (Schedule G)	53,394,313	41,042,038	12,352,275
Other Prepaid Expenses	714,934	551,128	163,806
Total other noncurrent assets	242,905,064	278,143,169	(35,238,105)
TOTAL ASSETS	848,142,414	833,772,271	14,370,143
Deferred outflows of resources:			
Debt defeasance due to bond refunding	13,443,317	1,695,981	11,747,336
Deferred outflows from pension	4,940,682	4,943,777	(3,095)
Total Assets and Deferred Outflows of Resources	**866,526,412**	**840,412,029**	**26,114,384**
LIABILITIES AND NET ASSETS			
Current Liabilities:			
Current maturities of long-term debt			
-Series 2010 Bond	1,725,000	1,725,000	-
-Series 2014 Refunding	3,475,000	3,475,000	-
-Series 2017 Refunding	295,000	-	295,000
-Notes Payable	3,145,406	3,037,569	107,837
Accounts Payable -Trade	4,342,284	5,390,256	(1,047,972)
Interest Payable	13,083,185	6,656,499	6,426,686
Accrued Payroll and Employee Benefits	1,728,748	2,604,471	(875,724)
Accrued Annual Leave	1,047,784	1,729,291	(681,507)
Current portion of employee annual leave	411,887	567,057	(155,170)
Contractors' Payable	9,094,542	13,950,287	(4,855,745)
Customer and Other Deposits	2,009,799	2,014,435	(4,636)
Other Liabilities	72,817	72,772	45
Total Current Liabilities	40,431,452	41,222,638	(791,186)
Long Term Debt, less current maturities			
Series 2010 Revenue Bond	3,695,000	112,800,000	(109,105,000)
Series 2013 Revenue Bond	172,630,000	172,630,000	-
Series 2014 Refunding	72,520,000	72,520,000	-
Series 2016 Revenue Bond	143,310,000	143,310,000	-
Series 2017 Refunding Bond	107,365,000	-	107,365,000
Unamortized Discount - Bond 2010	-	(1,867,525)	1,867,525
Unamortized Discount - Bond 2013	(1,300,426)	(1,338,751)	38,325
Unamortized Premium - Bond 2014	4,604,734	4,804,694	(199,960)
Unamortized Premium - Bond 2016	16,807,354	17,262,975	(455,621)
Unamortized Premium - Bond 2017	12,956,331	-	12,956,331
Notes Payable	3,157,989	5,533,918	(2,375,930)
Unfunded Ret Liability (GASB 67/68)	49,243,798	49,243,798	-
Employee Annual Leave, Less Current Portion	991,413	783,992	207,421
TOTAL LIABILITIES	626,412,644	616,905,739	9,506,905
Deferred inflows of resources:			
Deferred inflows from pension	268,091	564,514	(296,423)
Total Liabilities and Deferred Inflows of Resources	626,680,735	617,470,253	9,210,482
Net Assets	**239,845,678**	**222,941,776**	**16,903,902**
Total Liabilities, Deferred Inflows of Resources and Net Assets	**866,526,412**	**840,412,029**	**26,114,384**

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited) **SCHEDULE B**
Comparative Budget vs. Actual for the period ending June 30, 2018

	Month to Date		Variance
	Budget June-18	Actual (Unaudited) June-18	Favorable / (Unfavorable)
OPERATING REVENUES			
Water Revenues	5,743,160	5,242,430	(500,730)
Wastewater Revenues	3,228,257	3,119,241	(109,016)
Legislative Surcharge	291,896	255,565	(36,331)
Other Revenues	57,638	32,495	(25,144)
System Development Charge	46,136	32,218	(13,917)
Total Operating Revenues	9,367,087	8,681,948	(685,139)
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	721,113	758,606	(37,493)
Power Purchases	1,057,997	1,239,501	(181,504)
Total Utility Costs	1,779,110	1,998,108	(218,998)
Salaries and Wages	1,625,056	1,473,510	151,546
Pension and Benefits	584,558	483,256	101,302
Total Salaries and Benefits	2,209,614	1,956,766	252,848
Capitalized Labor and Benefits	(208,333)	(208,333)	(0)
Net Salaries and Benefits	2,001,281	1,748,433	252,848
Administrative and General Expenses			
Sludge removal	137,014	136,083	931
Chemicals	154,497	153,442	1,055
Materials & Supplies	237,400	283,114	(45,714)
Transportation	91,370	90,766	604
Communications	16,182	13,437	2,745
Claims	17,600	12,196	5,404
Insurance	77,757	77,626	131
Training & Travel	29,314	29,242	72
Advertising	28,910	28,408	502
Regulatory Expense	34,086	32,999	1,087
Bad Debts Provision	110,103	109,723	380
Miscellaneous	82,515	81,981	534
Total Administrative and General Expense	1,016,748	1,049,017	(32,269)
Depreciation Expense	1,528,175	1,528,175	(0)
Contractual Expense			
Audit & Computer Maint.	27,630	27,374	257
Building rental	37,955	36,262	1,693
Equipment rental	59,875	59,417	458
Legal	4,167	600	3,567
Laboratory	10,752	9,925	827
Other	288,363	288,305	58
Total Contractual Expense	428,741	421,883	6,858
Retiree Supp. Annuities and health care costs	240,008	247,607	(7,599)
Contribution to Government of Guam	49,500	49,833	(333)
Total Retiree Benefits	289,508	297,441	(7,932)
Total Operating Expenses	7,043,563	7,043,056	507
Earnings (Loss) from Operations	2,323,524	1,638,892	684,632
Interest Income-2010/13/14/16/17 Series Bond	15,727	287,012	271,285
Interest Income-Other Funds	2,935	52,729	49,794
Interest Income-SDC	2,414	9,767	7,353
Interest Expense- 2010/13/14/16/17 Series Bond	(2,625,587)	(2,180,531)	445,056
Interest Expense- ST BOG	(33,288)	(30,186)	3,102
Federal Expenditures	(51,332)	(69,983)	(18,651)
Loss on Asset Disposal	-	-	-
AFUDC	625,000	625,000	-
Amortization of Discount, Premium and Issuance Costs	(61,861)	(77,542)	(15,681)
Defeasance due to bond refunding	(15,218)	(12,444)	2,775
Deferred outflows from pension	(105,281)	32,592	137,873
Prior Year Adjustment	-	-	-
Total non-operating revenues (expenses)	(2,246,492)	(1,363,585)	882,907
Net Income (Loss) before capital contributions	77,032	275,307	198,275
Capital Contributions			
Grants from US Government	873,108	580,257	(292,851)
Grants from GovGuam & Others	-	-	-
Other Contributions	-	-	-
Total Capital Contributions	873,108	580,257	(292,851)
Change in Net Assets	950,140	855,564	(94,576)
Debt Service Calculation			
Earnings From Operations	2,323,524	1,638,892	
System Development Charge	(46,136)	(32,218)	
Retiree COLA	49,500	49,833	
Interest/Investment Income	2,935	52,729	
Depreciation	1,528,175	1,528,175	
Balance Available for Debt Service per Section 6.12	3,857,998	3,237,411	
Working Capital Reserve Available for Debt Service	932,265	935,321	
Transfer to Working Capital- Debt Service Reserve	(150,000)	-	
Transfer to Working Capital- O&M Reserve	(266,667)	-	
Balance Available for Debt Service inclusive of reserves	4,373,596	4,172,732	
Debt Service			
Principal	433,333	433,333	
Interest	2,063,402	1,794,910	
Total	2,496,736	2,228,243	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.55	1.45	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	1.75	1.87	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited)
Comparative for the period ending June 30, 2018 and 2017

SCHEDULE C

	Month to Date		Variance
	Actual (Unaudited) June-18	Actual (Audited) June-17	Favorable / (Unfavorable)
OPERATING REVENUES			
Water Revenues	5,242,430	5,331,404	(88,974)
Wastewater Revenues	3,119,241	3,099,528	19,713
Legislative Surcharge	255,565	267,269	(11,704)
Other Revenues	32,495	36,293	(3,798)
System Development Charge	32,218	72,662	(40,444)
Total Operating Revenues	8,681,948	8,807,155	(125,207)
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	758,606	609,094	(149,513)
Power Purchases	1,239,501	1,006,355	(233,146)
Total Utility Costs	1,998,108	1,615,449	(382,659)
Salaries and Wages	1,473,510	1,413,608	(59,902)
Pension and Benefits	483,256	490,400	7,144
Total Salaries and Benefits	1,956,766	1,904,009	(52,758)
Capitalized Labor and Benefits	(208,333)	(262,516)	(54,183)
Net Salaries and Benefits	1,748,433	1,641,493	(106,940)
Administrative and General Expenses			
Sludge removal	136,083	140,487	4,404
Chemicals	153,442	174,001	20,559
Materials & Supplies	283,114	128,788	(154,326)
Transportation	90,766	53,744	(37,022)
Communications	13,437	10,884	(2,553)
Claims	12,196	22,151	9,955
Insurance	77,626	90,603	12,977
Training & Travel	29,242	23,055	(6,188)
Advertising	28,408	8,988	(19,420)
Regulatory Expense	32,999	24,134	(8,865)
Bad Debts Provision	109,723	109,700	(23)
Miscellaneous	81,981	71,997	(9,985)
Total Administrative and General Expense	1,049,017	858,530	(190,486)
Depreciation Expense	1,528,175	1,402,038	(126,137)
Contractual Expense			
Audit & Computer Maint.	27,374	76,901	49,527
Building rental	36,262	36,557	295
Equipment rental	59,417	59,374	(43)
Legal	600	414	(186)
Laboratory	9,925	10,627	702
Other	288,305	156,747	(131,558)
Total Contractual Expense	421,883	340,619	(81,264)
Retiree Supp. Annuities and health care costs	247,607	231,895	(15,712)
Contribution to Government of Guam	49,833	49,500	(333)
Total Retiree Benefits	297,441	281,395	(16,045)
Total Operating Expenses	7,043,056	6,139,525	(903,532)
Earnings (Loss) from Operations	1,638,892	2,667,630	(1,028,738)
Interest Income-2010/13/14/16/17 Series Bond	287,012	65,354	221,657
Interest Income-Other Funds	52,729	10,032	42,697
Interest Income-SDC	9,767	1,060	8,708
Interest Expense- 2010/13/14/16/17 Series Bond	(2,180,531)	(2,220,744)	40,213
Interest Expense- ST BOG	(30,186)	(43,736)	13,551
Federal Expenditures	(69,983)	(42,501)	(27,482)
Loss on Asset Disposal	-	(81,105)	81,105
AFUDC	625,000	1,172,241	(547,241)
Amortization of Discount, Premium and Issuance Costs	(77,542)	61,861	(139,403)
Defeasance due to bond refunding	(12,444)	(15,218)	2,775
Deferred outflows from pension	32,592	-	32,592
Prior Year Adjustment	-	(26,756)	26,756
Total non-operating revenues (expenses)	(1,363,585)	(1,119,512)	(244,073)
Net Income (Loss) before capital contributions	275,307	1,548,118	(1,272,811)
Capital Contributions			
Grants from US Government	580,257	1,815,921	(1,235,664)
Grants from GovGuam & Others	-	1,664	(1,664)
Other Contributions	-	-	-
Total Capital Contributions	580,257	1,817,586	(1,237,329)
Change in Net Assets	855,564	3,365,704	(2,510,140)
Debt Service Calculation			
Earnings From Operations	1,638,892	2,667,630	
System Development Charge	(32,218)	(72,662)	
Retiree COLA	49,833	49,500	
Interest/Investment Income	52,729	10,032	
Depreciation	1,528,175	1,402,038	
Balance Available for Debt Service per Section 6.12	3,237,411	4,056,538	
Working Capital Reserve Available for Debt Service	935,321	932,134	
Transfer to Working Capital- Debt Service Reserve	-	-	
Transfer to Working Capital- O&M Reserve	-	-	
Balance Available for Debt Service inclusive of reserves	4,172,732	4,988,672	
Debt Service			
Principal	433,333	420,000	
Interest	1,794,910	1,626,858	
Total	2,228,243	2,046,858	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.45	1.98	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	1.87	2.44	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited) **SCHEDULE D**
Comparative Budget vs. Actual for the period ending June 30, 2018

	Year to Date			Variance
	Budget June-18	Encumbered June-18	Actual (Unaudited) June-18	Favorable / (Unfavorable)
OPERATING REVENUES				
Water Revenues	51,688,441		49,186,331	(2,502,110)
Wastewater Revenues	29,054,316		28,772,970	(281,346)
Legislative Surcharge	2,627,064		2,519,484	(107,581)
Other Revenues	518,742		338,107	(180,635)
System Development Charge	415,222		824,645	409,423
Total Operating Revenues	84,303,785		81,641,536	(2,662,249)
OPERATING AND MAINTENANCE EXPENSES				
Water Purchases	6,490,018		6,811,054	(321,036)
Power Purchases	9,521,972		10,931,010	(1,409,038)
Total Utility Costs	16,011,990		17,742,064	(1,730,074)
Salaries and Wages	14,625,503		12,488,306	2,137,197
Pension and Benefits	5,261,025		4,349,365	911,660
Total Salaries and Benefits	19,886,528		16,837,671	3,048,857
Capitalized Labor and Benefits	(1,875,000)		(1,989,280)	114,280
Net Salaries and Benefits	18,011,528		14,848,391	3,163,137
Administrative and General Expenses				
Sludge removal	1,570,626		1,006,993	563,632
Chemicals	1,844,971		1,790,869	54,103
Materials & Supplies	2,061,098	360,675	1,648,010	52,413
Transportation	496,334		494,381	1,953
Communications	145,637		135,398	10,240
Claims	99,900		75,501	24,399
Insurance	942,809		682,859	259,950
Training & Travel	196,328	16,567	118,081	61,680
Advertising	125,190		106,305	18,885
Regulatory Expense	198,777		182,326	16,451
Bad Debts Provision	513,924		987,260	(473,336)
Miscellaneous	874,639		781,726	92,913
Total Administrative and General Expense	9,070,233	377,242	8,009,708	683,283
Depreciation Expense	13,753,572		13,753,575	(3)
Contractual Expense				
Audit & Computer Maint.	722,673	188,385	499,104	35,184
Building rental	341,595		318,119	23,476
Equipment rental	656,371		654,340	2,032
Legal	37,500		5,400	32,100
Laboratory	567,764	147,391	312,148	108,225
Other	1,613,268	-	1,613,010	258
Total Contractual Expense	3,939,171	335,776	3,402,121	201,274
Retiree Supp. Annuities and health care costs	2,160,075		2,140,386	19,689
Contribution to Government of Guam	445,500		448,500	(3,000)
Total Retiree Benefits	2,605,575		2,588,886	16,689
Total Operating Expenses	63,392,070	713,018	60,344,745	2,334,307
Earnings (Loss) from Operations	20,911,716	(713,018)	21,296,792	(327,942)
Interest Income-2010/13/14/16/17 Series Bond	141,539		1,868,579	1,727,040
Interest Income-Other Funds	26,413		313,692	287,279
Interest Income-SDC	21,728		67,119	45,390
Interest Expense- 2010/13/14/16/17 Series Bond	(23,630,285)		(19,716,259)	3,914,026
Interest Expense- ST BOG	(299,594)		(273,483)	26,111
Federal Expenditures	(461,990)		(468,519)	(6,529)
Loss on Asset Disposal	-		-	-
AFUDC	5,625,000		5,625,000	-
Amortization of Discount, Premium and Issuance Costs	(556,747)		(279,669)	277,078
Defeasance due to bond refunding	(136,966)		(111,992)	24,973
Deferred outflows from pension	(947,525)		293,328	1,240,853
Prior Year Adjustment	-		45,808	45,808
Total non-operating revenues (expenses)	(20,218,427)	-	(12,636,397)	7,582,029
Net Income (Loss) before capital contributions	693,289	(713,018)	8,660,394	7,254,087
Capital Contributions				
Grants from US Government	7,857,974		8,243,507	385,533
Grants from GovGuam & Others	-		-	-
Other Contributions	-		-	-
Total Capital Contributions	7,857,974	-	8,243,507	385,533
Change in Net Assets	8,551,263	(713,018)	16,903,901	7,639,621
Debt Service Calculation				
Earnings From Operations	20,911,716		21,296,792	
System Development Charge	(415,222)		(824,645)	
Retiree COLA	445,500		448,500	
Interest/Investment Income	26,413		313,692	
Depreciation	13,753,572		13,753,575	
Balance Available for Debt Service per Section 6.12	34,721,978		34,987,913	
Working Capital Reserve Available for Debt Service	8,390,385		8,389,208	
Transfer to Working Capital- Debt Service Reserve	(1,350,000)		-	
Transfer to Working Capital- O&M Reserve	(2,400,000)		-	
Balance Available for Debt Service inclusive of reserves	39,362,363		43,377,121	
Debt Service				
Principal	3,900,000		3,900,000	
Interest	18,570,620		16,154,190	
Total	22,470,620		20,054,190	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.55		1.74	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	1.75		2.16	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited)
Comparative for the period ending June 30, 2018 and 2017

SCHEDULE E

	Year to Date ACTUAL (Unaudited) June-18	ACTUAL (Audited) June-17	Variance Favorable / (Unfavorable)
OPERATING REVENUES			
Water Revenues	49,186,331	47,982,632	1,203,699
Wastewater Revenues	28,772,970	27,895,749	877,221
Legislative Surcharge	2,519,484	2,405,420	114,064
Other Revenues	338,107	326,636	11,471
System Development Charge	824,645	653,959	170,685
Total Operating Revenues	81,641,536	79,264,396	2,377,141
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	6,811,054	5,481,844	(1,329,210)
Power Purchases	10,931,010	9,057,197	(1,873,813)
Total Utility Costs	17,742,064	14,539,040	(3,203,024)
Salaries and Wages	12,488,306	12,722,476	234,170
Pension and Benefits	4,349,365	4,413,603	64,238
Total Salaries and Benefits	16,837,671	17,136,079	298,408
Capitalized Labor and Benefits	(1,989,280)	(2,362,642)	(373,362)
Net Salaries and Benefits	14,848,391	14,773,437	(74,953)
Administrative and General Expenses			
Sludge removal	1,006,993	1,264,381	257,388
Chemicals	1,790,869	1,566,010	(224,859)
Materials & Supplies	1,648,010	1,159,089	(488,921)
Transportation	494,381	483,699	(10,682)
Communications	135,398	97,954	(37,443)
Claims	75,501	199,359	123,858
Insurance	682,859	815,424	132,566
Training & Travel	118,081	207,491	89,410
Advertising	106,305	80,890	(25,416)
Regulatory Expense	182,326	217,210	34,884
Bad Debts Provision	987,260	987,297	37
Miscellaneous	781,726	647,969	(133,757)
Total Administrative and General Expense	8,009,708	7,726,774	(282,934)
Depreciation Expense	13,753,575	12,618,341	(1,135,234)
Contractual Expense			
Audit & Computer Maint.	499,104	692,109	193,005
Building rental	318,119	329,009	10,890
Equipment rental	654,340	534,365	(119,974)
Legal	5,400	3,726	(1,674)
Laboratory	312,148	95,639	(216,510)
Other	1,613,010	1,410,724	(202,286)
Total Contractual Expense	3,402,121	3,065,572	(336,549)
Retiree Supp. Annuities and health care costs	2,140,386	2,087,059	(53,327)
Contribution to Government of Guam	448,500	445,500	(3,000)
Total Retiree Benefits	2,588,886	2,532,559	(56,327)
Total Operating Expenses	60,344,745	55,255,723	(5,089,022)
Earnings (Loss) from Operations	21,296,792	24,008,673	(2,711,881)
Interest Income-2010/13/14/16/17 Series Bond	1,868,579	588,189	1,280,390
Interest Income-Other Funds	313,692	90,286	223,405
Interest Income-SDC	67,119	9,538	57,581
Interest Expense- 2010/13/14/16/17 Series Bond	(19,716,259)	(19,986,694)	270,434
Interest Expense- ST BOG	(273,483)	(393,626)	120,144
Federal Expenditures	(468,519)	(382,513)	(86,006)
Loss on Asset Disposal	-	(729,941)	729,941
AFUDC	5,625,000	10,550,169	(4,925,169)
Amortization of Discount, Premium and Issuance Costs	(279,669)	556,746	(836,416)
Defeasance due to bond refunding	(111,992)	(136,966)	24,973
Deferred outflows from pension	293,328	-	293,328
Prior Year Adjustment	45,808	(240,801)	286,609
Total non-operating revenues (expenses)	(12,636,397)	(10,075,612)	(2,560,785)
Net Income (Loss) before capital contributions	8,660,394	13,933,060	(5,272,666)
Capital Contributions			
Grants from US Government	8,243,507	16,343,293	(8,099,786)
Grants from GovGuam & Others	-	14,979	(14,979)
Other Contributions	-	-	-
Total Capital Contributions	8,243,507	16,358,273	(8,114,766)
Change in Net Assets	16,903,901	30,291,333	(13,387,432)
Debt Service Calculation			
Earnings From Operations	21,296,792	24,008,673	
System Development Charge	(824,645)	(653,959)	
Retiree COLA	448,500	445,500	
Interest/Investment Income	313,692	90,286	
Depreciation	13,753,575	12,618,341	
Balance Available for Debt Service per Section 6.12	34,987,913	36,508,841	
Working Capital Reserve Available for Debt Service	8,389,208	8,389,208	
Transfer to Working Capital- Debt Service Reserve	-	-	
Transfer to Working Capital- O&M Reserve	-	-	
Balance Available for Debt Service inclusive of reserves	43,377,121	44,898,048	
Debt Service			
Principal	3,900,000	3,780,000	
Interest	16,154,190	14,641,726	
Total	20,054,190	18,421,726	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.74	1.98	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	2.16	2.44	

SCHEDULE F

Bond Compliance		($$$) Per Indenture	As of 6/30/18 ($$$) Bond 2013/2014/2016/2017
• Operation and Maintenance Fund-BOG	*Equivalent to 55 days of the annual O&M budget less depreciation*	$10.5M	$10.5M
• Bond Reserve Fund - US Bank	*Fully funded- Principal and Interest (Bond Series 2010, 2013, 2014 Refunding and 2016)*	$34.9M	$34.9M
• Operation, Maintenance, Renewal and Replacement Reserve Fund-BOG Trust	*Equivalent to 1/4 of the annual O&M budget & CIP budget to be funded in 5 years ($2M/year)*	$17.4M	$17.4M
• Capital Improvement Fund	*Balance remaining in the Revenue Fund after the foregoing deposits*	$3.9K	$5.6K

GUAM WATERWORKS AUTHORITY
Restricted and Unrestricted Cash Summary
FY 2018

SCHEDULE G

Description	Unaudited June 30, 2018	Audited September 30, 2017	Increase (Decrease)
UNRESTRICTED			
Change Fund	2,000	2,000	-
Petty Cash	5,000	5,000	-
BOG - Deposit Accounts	1,792,133	4,866,275	(3,074,142)
Total Unrestricted	1,799,133	4,873,275	(3,074,142)
RESTRICTED			
Collection Accounts	174,566	163,466	11,100
BOG Deposit Accounts	7,525,543	6,051,064	1,474,479
BP Deposit Accounts	1,005,485	944,282	61,203
BOG Revenue Trust Fund	6,339,869	7,782,227	(1,442,358)
BOG O & M Reserve	13,613,725	13,516,540	97,184
BOG Debt Service Reserve	11,298,491	11,217,733	80,757
BOG CAPEX Fund	19,528,484	15,462,869	4,065,615
	59,486,162	55,138,182	4,347,980
BOG SDC Deposit	2,111,580	1,486,219	625,362
BOG SDC CDs	8,750,000	8,500,000	250,000
Total Restricted	70,347,742	65,124,400	5,223,342
Reserve Funds			
BOG Series 05 OMRRRF Fund	17,423,213	17,423,213	-
BOG Series 13 Construction Fund	42,931,804	74,461,765	(31,529,961)
BOG Series 14 Refunding Construction Fund	739,052	771,281	(32,229)
BOG Series 16 Construction Fund	120,014,245	132,811,449	(12,797,203)
BOG Series 16 Cap Int Fund	-	1,782,982	(1,782,982)
BOG Series 17 Refunding Construction Fund	7,687,502	9,299,311	(1,611,809)
Total Reserves - Held by Trustee	188,795,816	236,550,002	(47,754,186)
USB Series 2013 Debt Service Fund	4,685,886	2,336,754	2,349,132
USB Series 2013 Debt Service Reserve Fund	12,031,688	12,031,688	-
USB Series 2014 Refunding Debt Service Fund	5,345,907	1,796,559	3,549,349
USB Series 2014 Refunding Debt Service Reserve Fund	7,855,490	7,707,602	147,888
USB Series 2016 Debt Service Fund	3,591,204	130	3,591,074
USB Series 2016 Debt Service Reserve Fund	7,594,594	7,582,725	11,869
USB Series 2010 Debt Service Fund	1,861,213	2,020,121	(158,908)
USB Series 2017 Refunding Debt Service Reserve Fund	7,566,460	7,566,460	-
USB Series 2017 Debt Service Fund	2,861,872	-	2,861,872
Total Investments	53,394,313	41,042,038	12,352,275
Total Restricted and Unrestricted Cash	314,337,004	347,589,716	(33,252,711)

SCHEDULE H

Guam Waterworks Authority
Statement of Cash Flows (Unaudited)
FY 2018

	YTD Jun-18
Increase (decrease) in cash	
Cash flows from operating activities:	
Cash received from trade and others	80,698,892
Cash payments to suppliers/contractors for goods and services	(30,713,510)
Cash payments to employees for services	(19,235,584)
Net cash provided by operating activities	30,749,797
Cash flows from capital and related financing activities:	
Contributed capital received (grants)	14,816,957
Acquisition of utility plant	(66,199,445)
Repayment of Long Term Debt	12,761,600
Interest expense	(15,883,673)
Net cash provided by (used in) capital and related financing activities	(54,504,561)
Cash flows from investing activities:	
Transfers from (to) restricted fund	18,431,232
Interest income received	2,249,390
Net cash provided by investing activities	20,680,622
Net increase (decrease) in cash	(3,074,141)
Unrestricted cash at beginning of the period	4,873,275
Unrestricted cash at end of period	1,799,133
Reconciliation of operating loss to net cash provided by operating activities:	
Operating Income (loss)	21,296,792
Adjustments to reconcile to net cash provided by operating activities:	
Depreciation expense	13,753,575
Other Expense/income	693,932
(Increase) decrease in assets:	
Accounts receivable	(938,053)
Materials and supplies inventory	(1,540,083)
Other Assets	(163,806)
Increase (decrease) in liabilities:	
Accounts payable, Contractors, Retention & Escrow Deposit	(842,988)
Accrued payroll	(1,504,980)
Customer deposits	(4,591)
Net cash provided by operating activities	30,749,797

Guam Waterworks Authority
Accounts Receivable - Government
As of June 30, 2018

SCHEDULE I

			AGING				
Customer Name	**No of Accounts**	**Current Balance**	**31-60 days**	**61-90 days**	**91-120 days**	**Over 120 days**	**Outstanding Bal.**
Guam Int'l Airport Authority	4	42,613	19,076	42,341	38,927	149,435	292,391
Guam Memorial Hospital Authority	3	35,244	38,480	36,415	-	-	110,138
Port Authority of Guam	3	43,219	42,051	4,824	-	-	90,094
Guam Community College	1	5,724	4,920	4,590	11,997	27,566	54,798
Guam Power Authority	23	42,013	-	-	-	-	42,013
University of Guam	2	12,983	-	-	-	-	12,983
Guam Housing & Urban Renewal Authority	6	1,556	-	-	-	-	1,556
Guam Housing Corporation	1	31	-	-	-	-	31
AUTONOMOUS AGENCIES	**43**	**183,384**	**104,527**	**88,170**	**50,924**	**177,001**	**604,005**
Department of Parks & Recreation	17	68,584	60,647	41,400	46,439	483,729	700,799
Department of Education	50	196,716	220,515	121,060	10,484	127,532	676,307
Department of Corrections	7	97,867	40,183	39,103	20,316	-	197,470
Department of Public Health & Social Services	5	2,473	1,505	635	2,481	101,190	108,284
Mayors' Council of Guam	44	11,144	7,761	123	-	-	19,028
Guam Fire Department	10	7,565	-	-	-	-	7,565
Department of Youth Affairs	2	78	23	23	650	3,247	4,022
Department of Agriculture	3	2,216	1,398	2	-	-	3,617
Guam Police Department	5	3,456	-	-	-	-	3,456
Sanctuary Inc.	1	2,917	-	-	-	-	2,917
Department of Public Works	11	2,372	-	-	-	-	2,372
Division of Senior Citizens, DPH&SS	2	353	164	159	28	-	703
Department of Mental Health & Substance Abuse	1	341	-	-	-	-	341
Guam Veterans' Affairs Office	2	262	-	-	-	-	262
Guam Public Library	4	229	-	-	-	-	229
The Office of the Dededo Mayor	1	208	-	-	-	-	208
Guam Energy Office	1	75	-	-	-	-	75
Merizo Mayor	1	30	24	-	-	-	54
Guam Solid Waste Authority	1	23	-	-	-	-	23
							-
LINE AGENCIES	**168**	**396,910**	**332,220**	**202,506**	**80,399**	**715,697**	**1,727,732**
TOTAL June 30, 2018	**211**	**580,294**	**436,747**	**290,676**	**131,323**	**892,698**	**2,331,737**
TOTAL September 30, 2017	**253**	**715,578**	**442,522**	**169,120**	**72,476**	**396,347**	**1,796,043**
% INCREASE/ (DECREASE)	**-17%**	**-19%**	**-1%**	**72%**	**81%**	**125%**	**30%**

GUAM WATERWORKS AUTHORITY
2013 Series Bond Project Status
As of June 30, 2018

SCHEDULE J

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 06/30/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 06/30/18
Santa Rita Springs Booster Pump Rehab Phase II	$ 100,000	$ 100,000	90,163	9,837	$ 100,000	$ -	$ 9,837
"A" Series Well Transmission Line	$ 400,000	$ 400,000	369,846	(0)	$ 369,846	$ 30,154	$ 30,154
Water Booster Pump Station	$ 6,000,000	$ 1,861,000	1,656,428	23,536	$ 1,679,964	$ 181,036	$ 204,572
Meter Replacement Program		$ 999,000	996,532	-	$ 996,532	$ 2,468	$ 2,468
Barrigada Tank Repair/Replacement	$ 6,000,000	$ 4,987,000	4,924,959	62,041	$ 4,987,000	$ 0	$ 62,041
Leak Detection	$ 100,000	$ 20,000	16,916	-	$ 16,916	$ 3,084	$ 3,084
Potable Water System Planning	$ 800,000	$ 624,000	603,390	20,610	$ 624,000	$ -	$ 20,610
Implement Ground Water Rule	$ 1,000,000	$ 1,000,000	1,000,000	-	$ 1,000,000	$ -	$ -
Deep Well Rehabilitation	$ 800,000	$ 200,000	189,930	10,071	$ 200,000	$ (0)	$ 10,070
New Deep Wells at Down Hard	$ 2,000,000	$ 810,000			$ -	$ 810,000	$ 810,000
Master Meters	$ 4,000,000	$ 784,000	531,188	180,872	$ 712,060	$ 71,940	$ 252,812
Ugum Water Treatment Plant Intake	$ 1,000,000	$ 982,000	578,858	280,943	$ 859,801	$ 122,199	$ 403,142
Water Wells	$ 4,200,000	$ 4,200,000	2,284,474	745,555	$ 3,030,029	$ 1,169,971	$ 1,915,527
Water Distribution System	$ 12,000,000	$ 11,151,000	6,924,172	3,988,281	$ 10,912,453	$ 238,547	$ 4,226,828
Pressure Zone Realignment /	$ 1,000,000	$ 431,000	336,036	1,074	$ 337,110	$ 93,890	$ 94,964
Mechanical/Electrical Equipment	$ 430,000	$ 430,000	328,686	98,112	$ 426,798	$ 3,202	$ 101,314
Water Reservoir Internal/External	$ 800,000	$ -			$ -	$ -	$ -
Water System Reservoirs 2005 Improvements	$ 21,000,000	$ 13,878,000	10,897,321	2,980,680	$ 13,878,000	$ (0)	$ 2,980,679
Ugum Water Treatment Plant Reservoir	$ 7,000,000	$ 90,000			$ -	$ 90,000	$ 90,000
Agana Heights & Chaot Tanks	$ 4,500,000	$ 3,280,000	241,603	1,088,684	$ 1,330,287	$ 1,949,713	$ 3,038,397
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 13,500,000	$ 11,605,000	8,464,563	3,140,437	$ 11,605,000	$ 0	$ 3,140,437
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 8,000,000	$ -			$ -	$ -	$ -
Assessment of malojloj Elevetad & Yigo Elevated	$ 500,000	$ 485,117	461,813	23,304	$ 485,117	$ -	$ 23,304
Fire Hydrant Replacement Program	$ -	$ -			$ -	$ -	$ -
Wastewater System Planning	$ 800,000	$ 651,000	550,968	99,933	$ 650,900	$ 100	$ 100,032
Lift Station Upgrades	$ 5,000,000	$ 946,000	562,785	363	$ 563,149	$ 382,852	$ 383,215
Wastewater Collection System Repl/Rehab	$ 6,500,000	$ 780,000	578,438	81,875	$ 660,314	$ 119,687	$ 201,562
Baza Gardens STP Replacement		$ 3,114,883	1,712,862	1,402,007	$ 3,114,869	$ 15	$ 1,402,021
Facilities Plan/Design for Umatac-Merizo WWTP		$ 473,000	341,226	30,473	$ 371,699	$ 101,301	$ 131,774
Agat/Santa Rita STP Replacement	$ 19,000,000	$ 67,200,000	47,621,200	19,262,992	$ 66,884,192	$ 315,808	$ 19,578,800
Agana WWTP Interim Measures		$ 673,000	611,247	61,753	$ 673,000	$ (0)	$ 61,753
Umatac Merizo Replacement	$ 2,000,000	$ -			$ -	$ -	$ -
Wastewater Pump Station Electrical Upgrade	$ 620,000	$ 620,000	91,348	8,513	$ 99,861	$ 520,139	$ 528,652
Electrical Upgrade - Water Wells	$ 1,500,000	$ 1,500,000	1,480,769	19,230	$ 1,500,000	$ 0	$ 19,231
Electrical Upgrade - Water Booster	$ 325,000	$ 2,000			$ -	$ 2,000	$ 2,000
Electrical Upgrade -Water Booster	$ 350,000	$ 200,000	977	-	$ 977	$ 199,023	$ 199,023
Electrical Upgrade - Other Water	$ 250,000	$ 150,000	60,700	-	$ 60,700	$ 89,300	$ 89,300
SCADA Improvements – Phase 3	$ 1,850,000	$ 923,000	445,447	276,912	$ 722,359	$ 200,641	$ 477,553
SCADA Improvements – Phase 4	$ 500,000	$ -			$ -	$ -	$ -
Laboratory Modernization	$ 1,500,000	$ 1,173,000	1,163,037	8,428	$ 1,171,465	$ 1,535	$ 9,963
Land Survey	$ 2,000,000	$ 2,000	1,038	15	$ 1,053	$ 948	$ 963
General Plant Improvements / Water	$ 2,000,000	$ 2,600,000	1,265,043	1,176,695	$ 2,441,737	$ 158,263	$ 1,334,957
Allowance for COI							$ 275,005
Interest Earned							$ 715,759
Total Construction Fund (2013 Series Revenue Bond)	**$ 139,325,000**	**$ 139,325,000**	**$ 97,383,960**	**$ 35,083,227**	**$ 132,467,187**	**$ 6,857,813**	**$ 42,931,804**

PUC's Docket 14-04 dated February 25, 2014

GUAM WATERWORKS AUTHORITY
2014 Series Refunded Bond Project Status
As of June 30, 2018

SCHEDULE K

PROJECT NAME	ORIGINAL APPROVED PROJECT	ADJUSTED PROJECT COST	EXPENDITURES AS OF 06/30/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	20% PUC AS OF 06/30/18	Construction fund balance AS OF 06/30/18
Agana Treatment Plant	$ 10,475,000	$ 11,065,512	11,065,512	$ -	$ 11,065,512	$ (0)	$ 2,095,000	$ (0)
Agana Outfall	$ 5,030,000	$ 10,127,198	10,127,198	$ -	$ 10,127,198	$ 0	$ 1,006,000	$ 0
Northern District (Outfall)	$ 4,700,000	$ 10,251,423	10,251,423	$ -	$ 10,251,423	$ 0	$ 940,000	$ 0
Northern District WWTP Upgrade		$ 173,681	173,681		$ 173,681	$ -		$ -
Northern Treatment Plant		$ -	-		$ -	$ -		$ -
Baza Gardens Wastewater Treatment Plant Upgrade	$ 500,000	$ 297,177	297,177	$ -	$ 297,177	$ (0)	$ 100,000	$ (0)
Interim Disinfection Facilities	$ 581,000	$ 3,437,311	3,408,599	$ 28,712	$ 3,437,311	$ (0)	$ 116,200	$ 28,712
Electrical Protection	$ 1,000,000	$ 1,512,483	1,512,483.3	$ -	$ 1,512,483	$ (0)	$ 200,000	$ (0)
Well Vulnerability Reduction	$ 600,000	$ 185,522	185,522	$ -	$ 185,522	$ 0	$ 120,000	$ 0
Old Agat Wastewater Collection (I/I Reduction)	$ 2,155,000	$ 1,931,659	1,931,659	$ -	$ 1,931,659	$ (0)	$ 431,000	$ (0)
Chaot WW Pump Station/Collection System	$ 410,000	$ 399,120	399,120	$ -	$ 399,120	$ -	$ 82,000	$ -
Lift Station Upgrades	$ 230,000	$ 149,895	149,895	$ -	$ 149,895	$ 0	$ 46,000	$ 0
Collection Line Upgrades	$ 200,000	$ 62,755	62,755	$ -	$ 62,755	$ 0	$ 40,000	$ 0
"A" Well Transmission Line	$ 2,413,000	$ 3,833,175	3,818,088	$ 15,087	$ 3,833,175	$ (0)	$ 482,600	$ 15,087
Santa Rita Springs - Booster Pump Rehab.	$ 648,000	$ 306,841	306,841	-	$ 306,841	$ (0)	$ 129,600	$ (0)
Fena Bypass Transmission line		$ 160,913	160,913	$ -	$ 160,913	$ (0)	$ -	$ (0)
Storage Additions	$ 950,000	$ -			$ -	$ -	$ 190,000	$ -
Booster Station Upgrades	$ 390,000	$ 66,734	66,734	$ -	$ 66,734	$ -	$ 78,000	$ -
Mangilao Tank Repair	$ 800,000	$ 398,367	397,933	$ 434	$ 398,367	$ (0)	$ 160,000	$ 434
Ugum Tank Replacement	$ 2,500,000	$ -			$ -	$ -	$ 500,000	$ -
Ugum WTPlant Refurbishment ($1.724,970EPA)		$ 6,588,473	6,531,525	$ 56,949	$ 6,588,473	$ (0)		$ 56,948
Barrigada Tank Repair/Replacement	$ 3,000,000	$ 65,019	65,019	$ -	$ 65,019	$ 0	$ 600,000	$ 0
Water Reservoir Condition Assessment		$ 1,250,000	1,249,227.16	$ 772	$ 1,250,000	$ 0	$ -	$ 773
EarthTech Well Buyout	$ 5,000,000	$ 5,975,000	5,975,000	$ -	$ 5,975,000	$ -	$ 1,000,000	$ -
Water Wastewater Master Plan	$ 4,900,000	$ 4,881,308	4,881,308	$ -	$ 4,881,308	$ 0	$ 980,000	$ 0
Laboratory Modernization	$ 800,000	$ 135,055	135,055	$ -	$ 135,055	$ 0	$ 160,000	$ 0
Land Survey	$ 800,000	$ 577,836	576,134	$ 1,702	$ 577,836	$ 0	$ 160,000	$ 1,702
Ground Water Disinfection		$ -				$ -		$ -
GWUDI Study		$ 262,234	260,430	1,804	$ 262,234	$ -		$ 1,804
Contingency	$ 12,276,023	$ 154	-	$ -	$ -	$ -		$ 732
Vehicles	$ 1,100,000	$ 1,280,000	2,130,305	$ (850,305)	$ 1,280,000	$ -	$ 220,000	$ -
Generation Equipment	$ 700,000	$ 880,000	2,712	$ 877,288	$ 880,000	$ 0		$ 27,033
Leak Detection/Line Replacement	$ 8,200,000	$ 5,988,494	5,988,494	$ -	$ 5,988,494	$ -	$ 1,640,000	$ -
Automated Meter Reading	$ 12,572,063	$ 17,468,359	16,870,522	$ 537,157	$ 17,468,359.32	$ 0	$ 2,514,413	$ 597,837
Total Construction Fund (2014 Series Refunded Revenue Bond)	$ 82,930,086	$ 89,711,698	$ 88,981,263	$ 669,600	$ 89,711,543	$ 1	$ 13,990,813	$ 731,063
Interest Earned	$ 6,781,612	$ (0)				$ (0)		$ 7,989
Total Project Cost Funding	**$ 89,711,698**	**$ 89,711,698**	**$ 88,981,263**	**$ 669,600**	**$ 89,711,543**	**$ 1**	**$ 13,990,813**	**$ 739,052**

GUAM WATERWORKS AUTHORITY
2016 Series Bond Project Status
As of June 30, 2018

SCHEDULE L

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 06/30/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 06/30/18
Water Booster Pump Station	$ 4,139,000	$ 4,139,000			$ -	$ 4,139,000	$ 4,139,000
Meter Replacement Program	$ 4,501,000	$ 4,501,000	64,531	85,469.44	$ 150,000	$ 4,351,000	$ 4,436,469
Barrigada Tank Repair/Replacement	$ 1,013,000	$ 1,013,000		-	$ -	$ 1,013,000	$ 1,013,000
Leak Detection	$ 1,180,000	$ 1,180,000		-	$ -	$ 1,180,000	$ 1,180,000
Potable Water System Planning	$ 2,276,000	$ 2,276,000	260,131	616,163.05	$ 876,294	$ 1,399,706	$ 2,015,869
Deep Well Rehabilitation	$ 250,000	$ 250,000		110,013.00	$ 110,013	$ 139,987	$ 250,000
New Deep Wells at Down Hard	$ 1,190,000	$ 1,190,000			$ -	$ 1,190,000	$ 1,190,000
Master Meters	$ 3,616,000	$ 3,616,000	151,539	-	$ 151,539	$ 3,464,461	$ 3,464,461
Ugum Water Treatment Plant Intake	$ 18,000	$ 18,000			$ -	$ 18,000	$ 18,000
Water Wells	$ 2,500,000	$ 2,500,000			$ -	$ 2,500,000	$ 2,500,000
Water Distribution System	$ 2,049,000	$ 49,000			$ -	$ 49,000	$ 49,000
Pressure Zone Realignment /	$ 1,141,000	$ 1,141,000		668,355.20	$ 668,355	$ 472,645	$ 1,141,000
Mechanical/Electrical Equipment	$ 100,000	$ 100,000			$ -	$ 100,000	$ 100,000
Water Reservoir Internal/External	$ 800,000	$ 800,000			$ -	$ 800,000	$ 800,000
Water System Reservoirs 2005 Improvements	$ 42,350,000	$ 28,350,000	2,008,486	12,741,864.67	$ 14,750,350	$ 13,599,650	$ 26,341,514
Ugum Water Treatment Plant Reservoir	$ 6,410,000	$ -			$ -	$ -	$ -
Water Audit Program & Water Loss Control Plan	$ 1,000,000	$ 1,000,000				$ 1,000,000	$ 1,000,000
Agana Heights & Chaot Tanks	$ 1,220,000	$ 1,220,000		500,000.00	$ 500,000	$ 720,000	$ 1,220,000
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 1,895,000	$ 1,895,000		1,822,132.80	$ 1,822,133	$ 72,867	$ 1,895,000
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 10,500,000	$ 7,409,830		7,300,000.00	$ 7,300,000	$ 109,830	$ 7,409,830
Fire Hydrant Replacement Program	$ 2,000,000	$ 2,000,000			$ -	$ 2,000,000	$ 2,000,000
Wastewater System Planning	$ 349,000	$ 349,000	193,899	119,084.26	$ 312,983	$ 36,017	$ 155,101
Lift Station Upgrades	$ 2,404,000	$ 2,404,000	222,568	42,186.67	$ 264,755	$ 2,139,245	$ 2,181,432
Wastewater Collection System Repl/Rehab	$ 2,920,000	$ 2,920,000	911	554,566.54	$ 555,478	$ 2,364,522	$ 2,919,089
Baza Gardens STP Replacement	$ 16,700,000	$ 29,400,170	11,310,394	17,895,388.58	$ 29,205,782	$ 194,388	$ 18,089,776
Facilities Plan/Design for Umatac-Merizo WWTP	$ 527,000	$ 527,000	239,045	13,060.42	$ 252,105	$ 274,895	$ 287,955
Agat/Santa Rita STP Replacement	$ 3,000,000	$ 3,000,000	1,077,404	467,684.07	$ 1,545,088	$ 1,454,912	$ 1,922,596
Agana WWTP Interim Measures	$ 827,000	$ 827,000			$ -	$ 827,000	$ 827,000
Umatac Merizo Replacement	$ 8,000,000	$ 20,800,000	3,548,815	17,053,439.69	$ 20,602,254	$ 197,746	$ 17,251,185
Wastewater Pump Station Electrical Upgrade	$ 100,000	$ 100,000			$ -	$ 100,000	$ 100,000
Electrical Upgrade - Water Wells	$ 650,000	$ 650,000			$ -	$ 650,000	$ 650,000
Electrical Upgrade - Water Booster	$ 323,000	$ 323,000			$ -	$ 323,000	$ 323,000
SCADA Improvements – Phase 3	$ 1,177,000	$ 1,177,000	18,000	599,496.51	$ 617,497	$ 559,503	$ 1,159,000
SCADA Improvements – Phase 4	$ 6,500,000	$ 6,500,000		2,883,117.85	$ 2,883,118	$ 3,616,882	$ 6,500,000
Laboratory Modernization	$ 1,127,000	$ 1,127,000	1,127,000	-	$ 1,127,000	$ -	$ -
Land Survey	$ 1,998,000	$ 1,998,000	130,370	1,130,153.37	$ 1,260,524	$ 737,476	$ 1,867,630
General Plant Improvements / Water	$ 2,769,463	$ 2,769,463	687,927	855,833.30	$ 1,543,760	$ 1,225,703	$ 2,081,536
Information Technology Integration Improvements	$ 500,000	$ 500,000	244,068	-	$ 244,068	$ 255,932	$ 255,932
Interest Earned		$ -					$ 1,279,868
Total Construction Fund (2016 Series Revenue Bond)	**$ 140,019,463**	**$ 140,019,463**	**$ 21,285,086**	**$ 65,458,009**	**$ 86,743,095**	**$ 53,276,368**	**$ 120,014,245**

GUAM WATERWORKS AUTHORITY
2010 Series Bond Project Status
As of June 30, 2018

SCHEDULE M

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 06/30/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 06/30/18
Ground Water Disinfection	$ -	$ 500,000	$ 438,141	$ 61,859	$ 500,000	$ 0	$ 61,859
"A" Series Well Transmission Line	$ 600,000	$ 518,144	$ 474,434	$ 1,274	$ 475,709	$ 42,435	$ 43,710
Water Booster Pump Station	$ 500,000	$ 500,000	$ 418,844	$ 81,156	$ 500,000	$ (0)	$ 81,156
Meter Replacement Program	$ 2,500,000	$ 10,300,000	$ 10,255,079	$ 18,549	$ 10,273,628	$ 26,372	$ 44,921
Barrigada Tank Repair/Replacement	$ -	$ 5,450,000	$ 5,442,302	$ 7,698	$ 5,450,000	$ 0	$ 7,698
Leak Detection		$ 200,000	$ -	$ 200,000	$ 200,000	$ -	$ 200,000
Potable Water System Planning	$ 200,000	$ 200,000	$ 180,927	$ 19,073	$ 200,000	$ -	$ 19,073
Implement Ground Water Rule		$ 1,700,000	$ 1,499,464	$ 200,535	$ 1,700,000	$ 1	$ 200,536
Brigade II (Ugum Lift) BPS Upgrade	$ 1,200,000	$ 1,700,000	$ 251,134	$ 86,760	$ 337,895	$ 1,362,105	$ 1,448,866
Deep Well Rehabilitation	$ 548,000	$ 548,000	$ 548,000	$ -	$ 548,000	$ -	$ -
New Deep Wells at Down Hard	$ 3,773,000	$ 638,252	$ 485,743	$ -	$ 485,743	$ 152,509	$ 152,509
Rehabilitation of Asan Springs	$ 900,000	$ 900,000	$ 188,771	$ 152,068	$ 340,838	$ 559,162	$ 711,229
Master Meters	$ 1,600,000	$ 1,600,000	$ 1,421,267	$ 68,690	$ 1,489,957	$ 110,043	$ 178,733
Ugum Water Treatment Plant Intake	$ 3,670,000	$ 700,000	$ 543,615	$ 156,385	$ 700,000	$ -	$ 156,385
Water Wells	$ 2,000,000	$ -	$ -		$ -	$ -	$ -
Water Distribution System	$ 384,000	$ 3,174,748	$ 3,174,748	$ -	$ 3,174,748	$ (0)	$ (0)
Pressure Zone Realignment /	$ 3,550,000	$ -	$ -		$ -	$ -	$ -
Northern System Water Distribution	$ 2,725,000	$ -	$ -	$ -	$ -	$ -	$ -
Central Water Distribution System 2005	$ 1,200,000	$ 900,000	$ 730,182	$ 44,820	$ 775,002	$ 124,998	$ 169,818
Southern Water Distribution System	$ 1,800,000	$ -	$ -		$ -	$ -	$ -
Mechanical/Electrical Equipment	$ 1,360,000	$ 1,200,000	$ 1,079,495	$ 120,505	$ 1,200,000	$ (0)	$ 120,505
Water Reservoir Internal/External	$ 500,000	$ 2,000,000	$ 1,083,817	$ 425,567	$ 1,509,384	$ 490,616	$ 916,183
Water Reservoir Internal/External	$ 2,400,000	$ -	$ -		$ -	$ -	$ -
Water System Reservoirs 2005 Improvements	$ 11,697,000	$ 1,050,000	$ 1,050,000		$ 1,050,000	$ 0	$ 0
Distribution System Upgrades	$ 3,182,000	$ 474,160	$ 456,678	$ 17,481	$ 474,160	$ 0	$ 17,482
Ugum Water Treatment Plant Reservoir	$ 3,672,000	$ -	$ -		$ -	$ -	$ -
Water Audit Program & Water Loss Control Plan		$ 100,000	$ 15,031	$ 63,428	$ 78,459	$ 21,541	$ 84,970
Production Plan / Reduce Navy Purchases		$ 100,000	$ 94,286	$ 5,714	$ 100,000	$ -	$ 5,714
Hydraulic Asessment of Tank		$ 500,000	$ 497,004	$ 2,996	$ 500,000	$ -	$ 2,996
Agana Heights & Chaot Tanks		$ 4,700,000	$ 4,350,014	$ 349,986	$ 4,700,000	$ -	$ 349,986
Tank Major Repair Yigo#1 Mangilao#2 Agat#2		$ 1,900,000	$ 1,750,355	$ 97,659	$ 1,848,013	$ 51,987	$ 149,645
Tank Major Repair Yigo#1 Mangilao#2 Agat#2		$ -			$ -	$ -	$ -
Assessment of malojloj Elevetad & Yigo Elevated		$ 200,000	$ 200,000	$ -	$ 200,000	$ -	$ -
Public Water System Asser Inventory/Condition Assesment		$ 100,000	$ 98,414	$ 1,586	$ 100,000	$ -	$ 1,586
Public Water System GIS & Mapping		$ 50,000	$ 50,000	$ -	$ 50,000	$ -	$ -
Wastewater System Planning	$ 1,500,000	$ 1,500,000	$ 1,468,176	$ 5,824	$ 1,474,000	$ 26,000	$ 31,824
Wastewater Vehicles	$ 235,000	$ 235,000	$ 209,795	$ 25,205	$ 235,000	$ 0	$ 25,205
NDWWTP - Chlorine Tanks	$ 250,000	$ 250,000	$ 250,000		$ 250,000	$ -	$ -
Tumon Bay Sewer Upgrades	$ 100,000	$ -	$ -		$ -	$ -	$ -
Wastewater Collection System Repl/Rehab		$ 1,105,000	$ 723,591	$ 283,287	$ 1,006,878	$ 98,122	$ 381,409
Facilities Plan/Design for Baza Gardens WWTP	$ 1,250,000	$ 1,250,000	$ 1,245,244	$ 4,756	$ 1,250,000	$ -	$ 4,756
Facilities Plan/Design for Agat-Santa Rita WWTP	$ 900,000	$ 899,630	$ 891,702	$ 7,928	$ 899,630	$ -	$ 7,928
Priority 1 Sewer Upgrades – Baza Gardens WWTP	$ 650,000	$ -	$ -		$ -	$ -	$ -
Baza Gardens STP Replacement	$ 3,567,000	$ 1,301,947	$ 1,151,947	$ 314	$ 1,152,261	$ 149,686	$ 150,000
Facilities Plan/Design for Umatac Merizo WWTP		$ 900,000	$ 760,845	$ 93,013	$ 853,858	$ 46,142	$ 139,155
Agat/Santa Rita STP Replacement	$ 2,968,000	$ 2,218,000	$ 2,217,314	$ 387	$ 2,217,701	$ 300	$ 686
Northern District WWTP Primary Treatment Upgrades	$ -	$ 11,750,000	$ 11,532,253	$ 211,261	$ 11,743,514	$ 6,486	$ 217,747
Biosolids Management Plan		$ 200,000	$ 196,414	$ 3,586	$ 200,000	$ -	$ 3,586
Agana WWTP Interim Measures	$ -	$ 11,500,000	$ 11,254,925	$ 45,075	$ 11,300,000	$ 200,000	$ 245,075
I&I SSES Southern		$ 800,000	$ 794,722	$ 5,278	$ 800,000	$ (0)	$ 5,278
I&I SSES Central		$ 850,000	$ 794,325	$ 55,675	$ 850,000	$ -	$ 55,675
I&I SSES Northern		$ -			$ -	$ -	$ -
Umatac Merizo Replacement		$ 250,000	$ 247,431	$ 2,569	$ 250,000	$ -	$ 2,569
Northern District WWTP Secondary Treatment Upgrades		$ 1,000,000	$ -	$ 1,000,000	$ 1,000,000	$ -	$ 1,000,000
Well Electrical Protection	$ 26,000	$ -	$ -		$ -	$ -	$ -
SCADA Pilot Project	$ 300,000	$ 61,950	$ 19,812	$ 42,138	$ 61,950	$ (0)	$ 42,138
Electrical Upgrade - Water Wells	$ 3,000,000	$ 354,227	$ 339,948	$ 14,278	$ 354,227	$ 0	$ 14,279
Electrical Upgrade - Water Booster	$ 325,000	$ -	$ -		$ -	$ -	$ -
Electrical Upgrade -Water Booster	$ 350,000	$ -	$ -		$ -	$ -	$ -
Electrical Upgrade - Other Water	$ 250,000	$ -			$ -	$ -	$ -
SCADA Improvements – Phase 1	$ 250,000	$ 250,000	$ 194,849	$ 55,151	$ 250,000	$ -	$ 55,151
SCADA Improvements – Phase 2	$ 1,100,000	$ 1,056,986	$ 1,028,284	$ 28,702	$ 1,056,986	$ -	$ 28,702
SCADA Improvements – Phase 3	$ 2,500,000	$ 24,956	$ 24,956	$ -	$ 24,956	$ 0	$ 0
SCADA Improvements – Phase 4	$ 850,000	$ -	$ -		$ -	$ -	$ -
Laboratory Modernization	$ 1,200,000	$ -	$ -		$ -	$ -	$ -
Land Survey	$ 1,500,000	$ 500,000	$ 471,450	$ 28,237	$ 499,687	$ 313	$ 28,550
General Plant Improvements / Water	$ 14,370,000	$ 7,241,000	$ 7,241,000	$ 0	$ 7,241,000	$ 0	$ 0
Interest Earned							$ 122,230
Total Construction Fund (2010 Series Revenue Bond)	**$ 87,402,000**	**$ 87,402,000**	**$ 79,836,728**	**$ 4,096,454**	**$ 83,933,182**	**$ 3,468,818**	**$ 7,687,502**

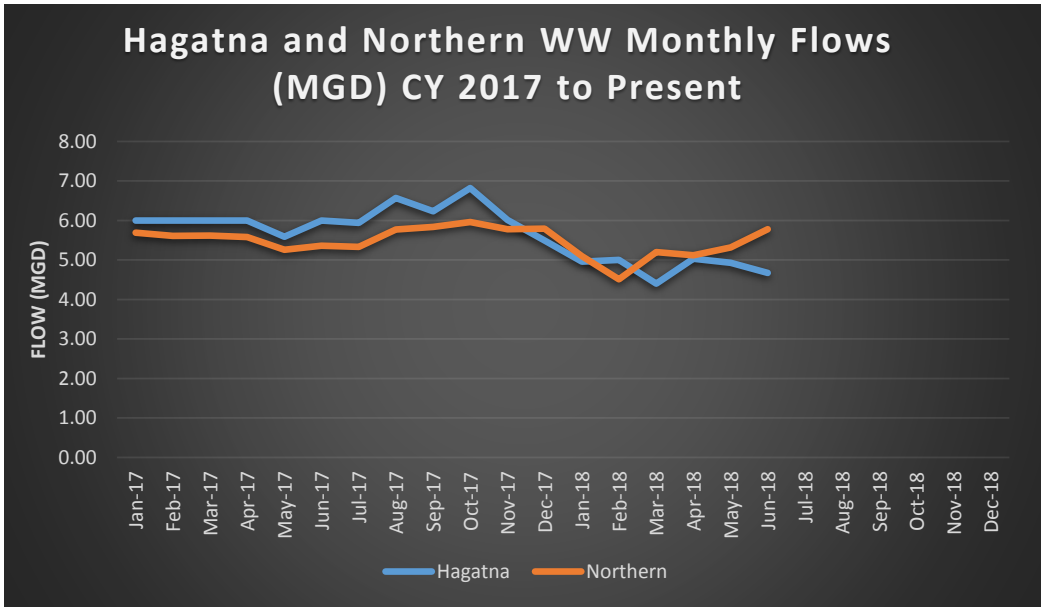
1.) PUC's Docket 11-01 $29,000,000.00 dated
09/19/11authorized GWA for reallocation
2) PUC's Docket 11-01 Reallocation of $23,246,000.00 dated 07/30/12
3) PUC's Dockect Reallocation dated February 2013

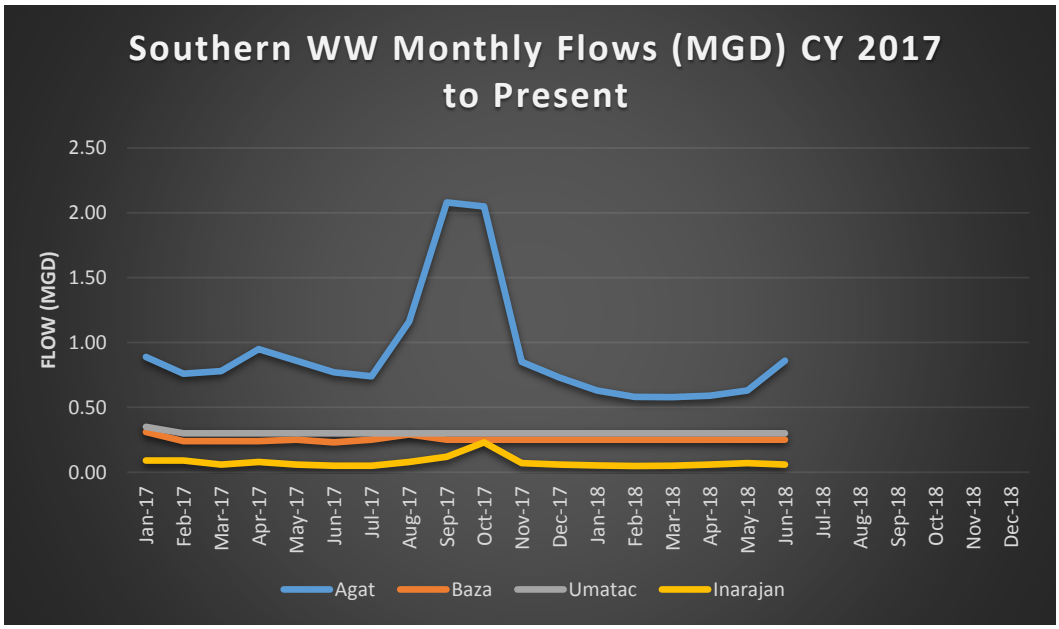
Wastewater Treatment Plant Average Monthy Flows Million Gallons Per Day

2017	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
Jan-17	6.00	5.69	0.89	0.31	0.35	0.09
Feb-17	6.00	5.61	0.76	0.24	0.30	0.09
Mar-17	6.00	5.62	0.78	0.24	0.30	0.06
Apr-17	6.00	5.58	0.95	0.24	0.30	0.08
May-17	5.59	5.26	0.86	0.25	0.30	0.06
Jun-17	6.00	5.36	0.77	0.23	0.30	0.05
Jul-17	5.94	5.33	0.74	0.25	0.30	0.05
Aug-17	6.57	5.77	1.16	0.29	0.30	0.08
Sep-17	6.23	5.84	2.08	0.25	0.30	0.12
Oct-17	6.82	5.96	2.05	0.25	0.30	0.23
Nov-17	6.01	5.78	0.85	0.25	0.30	0.07
Dec-17	5.49	5.79	0.73	0.25	0.30	0.06
2017 Average MGD	**6.05**	**5.63**	**1.05**	**0.25**	**0.30**	**0.09**
2017 Total MGY	2,210	2,056	384	93	111	32

2018	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
Jan-18	4.96	5.10	0.63	0.25	0.30	0.05
Feb-18	5.00	4.51	0.58	0.25	0.30	0.05
Mar-18	4.40	5.20	0.58	0.25	0.30	0.05
Apr-18	5.03	5.12	0.59	0.25	0.30	0.06
May-18	4.93	5.32	0.63	0.25	0.30	0.07
Jun-18	4.67	5.78	0.86	0.25	0.30	0.06
Jul-18						
Aug-18						
Sep-18						
Oct-18						
Nov-18						
Dec-18						
2018 Average MGD	**4.83**	**5.17**	**0.65**	**0.25**	**0.30**	**0.06**
2018 Total MGY	1,764	1,888	235	91	110	21

GWA WWT Flow Report 2013 to Present, prepared by kcog/df, 7/5/2018



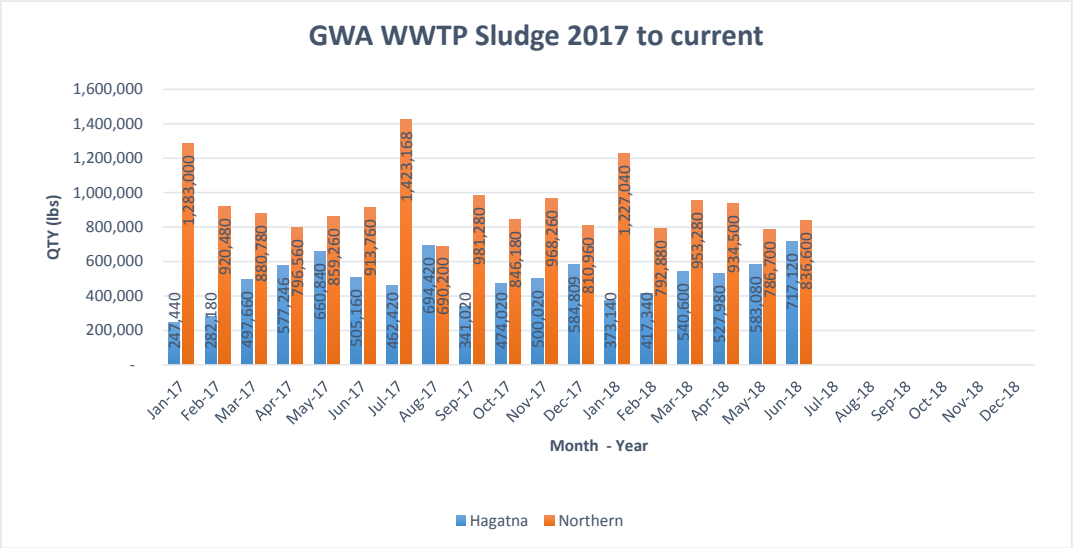


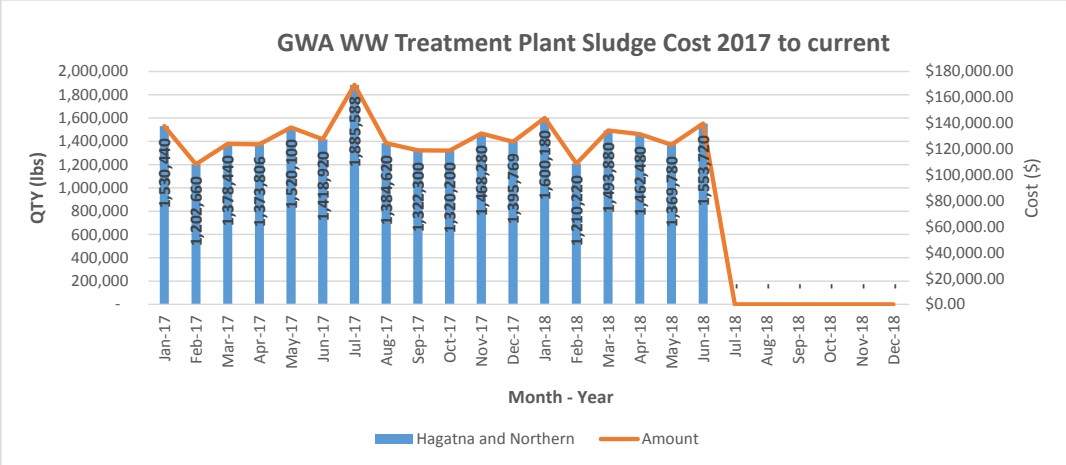
GWA WWT Flow Report 2013 to Present, prepared by kcog/df, 7/5/2018

Sludge Disposal To Landfill Weight and Cost

	Hagatna		Northern		Hagatna and Northern	
2017	Qty	Amount	Qty	Amount	Qty	Amount
Month- Yr	lbs	$	lbs	$	lbs	$
Jan-17	247,440	$22,269.60	1,283,000	$115,470.00	1,530,440	$137,739.60
Feb-17	282,180	$25,396.20	920,480	$82,843.20	1,202,660	$108,239.40
Mar-17	497,660	$44,789.40	880,780	$79,270.20	1,378,440	$124,059.60
Apr-17	577,246	$51,952.14	796,560	$71,690.40	1,373,806	$123,642.54
May-17	660,840	$59,475.60	859,260	$77,333.40	1,520,100	$136,809.00
Jun-17	505,160	$45,464.40	913,760	$82,238.40	1,418,920	$127,702.80
Jul-17	462,420	$41,617.80	1,423,168	$128,085.12	1,885,588	$169,702.92
Aug-17	694,420	$62,497.80	690,200	$62,118.00	1,384,620	$124,615.80
Sep-17	341,020	$30,691.80	981,280	$88,315.20	1,322,300	$119,007.00
Oct-17	474,020	$42,661.80	846,180	$76,156.20	1,320,200	$118,818.00
Nov-17	500,020	$45,001.80	968,260	$87,143.40	1,468,280	$132,145.20
Dec-17	584,809	$52,632.81	810,960	$72,986.40	1,395,769	$125,619.21
Grand Total	5827235	$524,451.15	11373888	$1,023,649.92	17201123	$1,548,101.07

	Hagatna		Northern		Hagatna and Northern	
2018	Qty	Amount	Qty	Amount	Qty	Amount
Month- Yr	lbs	$	lbs	$	lbs	$
Jan-18	373,140	$33,582.60	1,227,040	$110,433.60	1,600,180	$144,016.20
Feb-18	417,340	$37,560.60	792,880	$71,359.20	1,210,220	$108,919.80
Mar-18	540,600	$48,654.00	953,280	$85,795.20	1,493,880	$134,449.20
Apr-18	527,980	$47,518.20	934,500	$84,105.00	1,462,480	$131,623.20
May-18	583,080	$52,477.20	786,700	$70,803.00	1,369,780	$123,280.20
Jun-18	717,120	$64,540.80	836,600	$75,294.00	1,553,720	$139,834.80
Jul-18		$0.00		$0.00	-	$0.00
Aug-18		$0.00		$0.00	-	$0.00
Sep-18		$0.00		$0.00	-	$0.00
Oct-18		$0.00		$0.00	-	$0.00
Nov-18		$0.00		$0.00	-	$0.00
Dec-18		$0.00		$0.00	-	$0.00
Grand Total	3159260	$284,333.40	5531000	$497,790.00	8690260	$782,123.40


GWA WWTP Sludge 2017 to current
QTY (lbs)
Month - Year
Hagatna
Northern


GWA WW Treatment Plant Sludge Cost 2017 to current
QTY (lbs)
Cost ($)
Month - Year
Hagatna and Northern
Amount

GUAM WATERWORKS AUTHORITY

Guam Waterworks Authority

VEHICLE FLEET STATUS

7/12/2018

EQUIPMENT STATUS				
Description	**Number of Equipment**	**Number of Equipment Available**	**Number of Equipment Not Available**	**Percentage**
Backhoe	5	2	3	40%
Bobcat	1	1	0	100%
Boom Truck	2	1	1	50%
Crane	2	0	1	0%
Dump Truck	3	1	2	33%
Flat Bed	1	0	1	0%
Forklift	7	6	1	86%
Fuel Tanker	1	1	0	100%
Heavy Duty	7	4	3	57%
Hoist Rig	1	1	0	100%
Light	161	110	58	68%
Mini Backhoe	4	0	4	0%
Pumper Truck	1	1	0	100%
Skidster	1	1	0	100%
Sludge Truck	5	4	1	80%
Tow	1	0	1	0%
Tractor	2	2	0	100%
Tractor Mower	1	1	0	100%
Trailer	15	13	2	87%
Trencher	1	1	0	100%
Vaccon	1	1	0	100%
Vacuum Truck	3	1	2	33%
Water Buffalo	2	2	0	100%
Water Tanker	5	4	1	80%

SUMMARY						
Operational	**Operational w/Rprs Pending**	**In Shop-Accident Repairs**	**In Shop-Assessment Pending**	**In Shop-Repairs Pending**	**In Shop-Vendor Repairs**	**Recommend Survey**
2	0	0	0	1	0	2
1	0	0	0	0	0	0
1	0	0	0	1	0	0
0	0	0	0	1	0	1
1	0	0	0	2	0	0
0	0	0	0	0	0	1
6	0	0	0	0	0	1
1	0	0	0	0	0	0
4	0	0	0	0	1	2
1	0	0	0	0	0	0
110	1	2	7	9	7	33
0	0	0	0	2	2	0
1	0	0	0	0	0	0
1	0	0	0	0	0	0
3	1	0	0	1	0	0
0	0	0	0	0	0	1
2	0	0	0	0	0	0
1	0	0	0	0	0	0
13	0	0	0	0	0	2
1	0	0	0	0	0	0
1	0	0	0	0	0	0
1	0	0	0	0	2	0
2	0	0	0	0	0	0
2	0	0	0	0	2	1

Compressor	1	1	0	100%	1	0	0	0	0	0	0
Total	233	157	84		156	2	2	7	17	14	44

GUAM WATERWORKS AUTHORITY

Guam Waterworks Authority

VEHICLE FLEET STATUS

5/31/2018

EQUIPMENT STATUS					SUMMARY						
Description	Number of Equipment	Number of Equipment Available	Number of Equipment Not Available	Percentage	Operational	Operational w/Rprs Pending	In Shop-Accident Repairs	In Shop-Assessment Pending	In Shop-Repairs Pending	In Shop-Vendor Repairs	Recommend Survey
Backhoe	5	1	4	20%	1	0	0	0	1	1	2
Bobcat	1	1	0	100%	1	0	0	0	0	0	0
Boom Truck	2	1	1	50%	1	0	0	0	1	0	0
Crane	2	1	1	50%	0	1	0	0	0	0	1
Dump Truck	3	1	2	33%	1	0	0	0	2	0	0
Flat Bed	1	0	1	0%	0	0	0	0	0	0	1
Forklift	7	6	1	86%	6	0	0	0	0	0	1
Fuel Tanker	1	1	0	100%	1	0	0	0	0	0	0
Heavy Duty	4	2	2	50%	2	0	0	0	0	1	1
Hoist Rig	1	1	0	100%	1	0	0	0	0	0	0
Light	161	110	56	68%	110	2	2	6	8	7	33
Mini Backhoe	4	0	4	0%	0	0	0	0	2	2	0
Pumper Truck	1	1	0	100%	1	0	0	0	0	0	0
Skidster	1	1	0	100%	1	0	0	0	0	0	0
Sludge Truck	5	4	1	80%	4	0	0	0	0	1	0
Tow	1	0	1	0%	0	0	0	0	0	0	1
Tractor	2	2	0	100%	2	0	0	0	0	0	0
Tractor Mower	1	1	0	100%	1	0	0	0	0	0	0
Trailer	15	13	2	87%	13	0	0	0	0	0	2
Trencher	1	1	0	100%	1	0	0	0	0	0	0
Vaccon	1	1	0	100%	1	0	0	0	0	0	0
Vacuum Truck	3	1	2	33%	1	0	0	0	0	2	0
Water Buffalo	2	2	0	100%	2	0	0	0	0	0	0
Water Tanker	5	2	3	40%	2	0	0	0	0	2	1

Total	230	156	81		153	3	2	6	14	16	43

GUAM WATERWORKS AUTHORITY

WASTEWATER COLLECTION REPORT

MONTHLY REPORT

JUNE 2018



CCTV INSPECTIONS AND SEWER CLEANING
JUNE 2018

JUN. 01 - JUN. 07	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3267		6,534
Feet Completed	1144			1144
	35.02%	0.00%		18%

JUN. 08 – JUN. 14	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3267		6,534
Feet Completed	4091			4091
	125%	0%		63%

JUN. 15 – JUN. 21	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3267		6,534
Feet Completed	6,201.00			6201
	190%	0%		95%

JUN. 22 – JUN. 28	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3267		6,534
Feet Completed	11,216			11216
	343%	0%		172%

JUN. 29 – JUN. 30	Team #1	Team #2	Vendor	Total
Feet Scheduled				
Feet Completed				

	January	February	March	April	May	June
SEWER CLEANING	2.86	6.09	2.81	6.50	6.49	4.29

TOTAL FEET SCHEDULED	26,136
TOTAL FEET COMPLETED	22,652
TOTAL MILES FOR THE MONTH	4.3
TOTAL MILES SCHEDULED	5.0
PERCENTAGE COMPLETED	86%

PUMPING STATION TROUBLE CALLS 2018

June. 01 - 07	CREATED	COMPLETED	PENDING
NORTHERN	4	4	0
CENTRAL	2	2	0
SOUTHERN	2	2	0
TOTAL	8	8	0

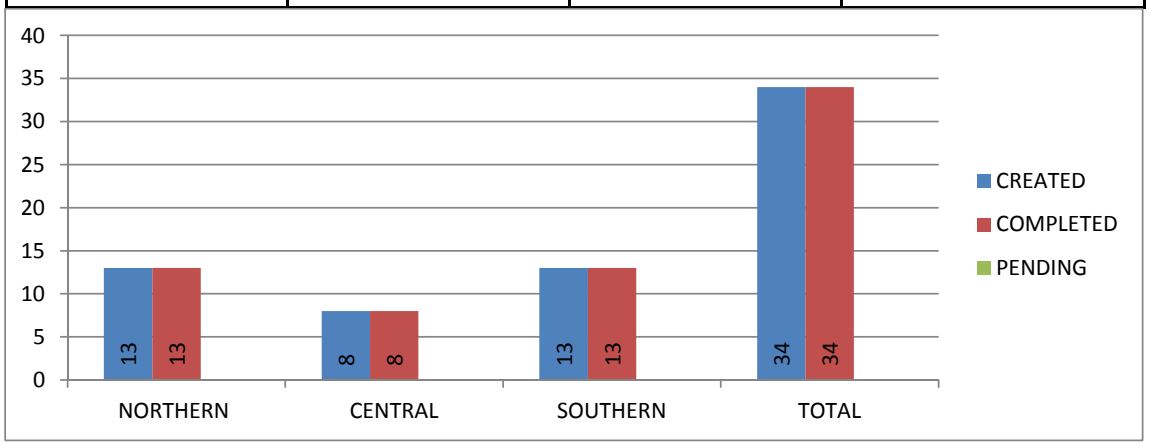
June. 08 – 14	CREATED	COMPLETED	PENDING
NORTHERN	2	2	0
CENTRAL	1	1	0
SOUTHERN	2	2	0
TOTAL	5	5	0

June. 15 – 21	CREATED	COMPLETED	PENDING
NORTHERN	1	1	0
CENTRAL	4	4	0
SOUTHERN	2	2	0
TOTAL	7	7	0

June. 22 – 28	CREATED	COMPLETED	PENDING
NORTHERN	3	3	0
CENTRAL	1	1	0
SOUTHERN	6	6	0
TOTAL	10	10	0

June. 29 – 30	CREATED	COMPLETED	PENDING
NORTHERN	3	3	0
CENTRAL	0	0	0
SOUTHERN	1	1	0
TOTAL	4	4	0

	CREATED	COMPLETED	PENDING
NORTHERN	13	13	0
CENTRAL	8	8	0
SOUTHERN	13	13	0
TOTAL	34	34	0



MAINTENANCE PREVENTIVE AND CORRECTIVE CALL OUTS

06/01/18	PREVENTIVE	CORRECTIVE
NORTHERN	0	0
CENTRAL	0	0
SOUTHERN	0	1
TOTAL	0	1

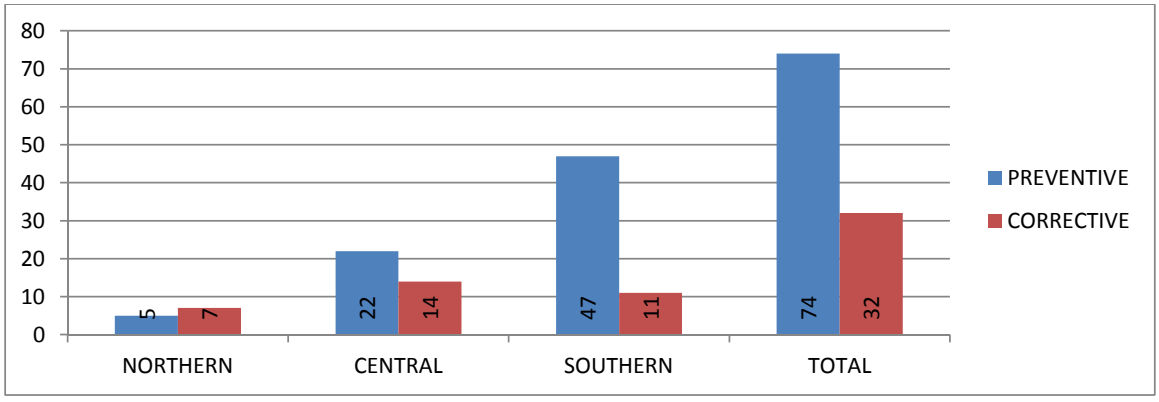
06/04/18 – 06/08/18	PREVENTIVE	CORRECTIVE
NORTHERN	3	5
CENTRAL	4	4
SOUTHERN	8	0
TOTAL	15	9

06/11/18 – 06/15/18	PREVENTIVE	CORRECTIVE
NORTHERN	0	1
CENTRAL	0	1
SOUTHERN	36	5
TOTAL	36	7

06/18/18 – 06/22/18	PREVENTIVE	CORRECTIVE
NORTHERN	0	0
CENTRAL	6	4
SOUTHERN	3	2
TOTAL	9	6

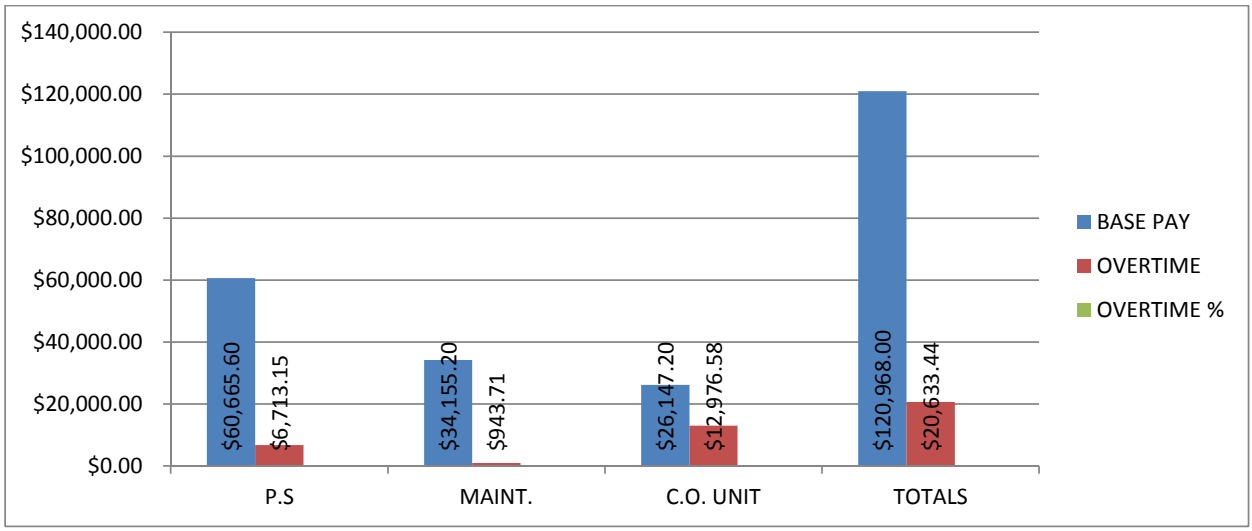
06/25/18 – 06/29/18	PREVENTIVE	CORRECTIVE
NORTHERN	2	1
CENTRAL	12	5
SOUTHERN	8	3
TOTAL	22	9

06/01/18 – 06/30/18	PREVENTIVE	CORRECTIVE
NORTHERN	5	7
CENTRAL	22	14
SOUTHERN	47	11
TOTAL	74	32



BASE PAY VS OVERTIME

	BASE PAY	OVERTIME	OVERTIME %
PUMPING STATION	$60,665.60	$6,713.15	11%
MAINTENANCE	$34,155.20	$943.71	3%
COURT ORDER UNIT	$26,147.20	$12,976.58	50%
TOTALS	$120,968.00	$20,633.44	64%



GUAM WATERWORKS AUTHORITY

WASTEWATER COLLECTION REPORT

MONTHLY REPORT

May 2018



CCTV INSPECTIONS AND SEWER CLEANING
MAY 2018

MAY. 01 - MAY. 07	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3267		6,534
Feet Completed	4272			4272
	130.76%	0.00%		65%

MAY. 08 – MAY. 14	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3267		6,534
Feet Completed	7283			7283
	223%	0%		111%

MAY. 15 – MAY. 21	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3267		6,534
Feet Completed	11297			11297
	346%	0%		173%

MAY. 22 – MAY. 28	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3267		6,534
Feet Completed	7490			7490
	229%	0%		115%

MAY. 29 – MAY. 31	Team #1	Team #2	Vendor	Total
Feet Scheduled				
Feet Completed	3934			3934

	January	February	March	April	May	June
SEWER CLEANING	2.86	6.09	2.81	6.50	6.49	0.00

TOTAL FEET SCHEDULED	26,136
TOTAL FEET COMPLETED	34,276
TOTAL MILES FOR THE MONTH	6.5
TOTAL MILES SCHEDULED	5.0
PERCENTAGE COMPLETED	130%

PUMPING STATION TROUBLE CALLS 2018

May. 01 - 07	CREATED	COMPLETED	PENDING
NORTHERN	0	0	0
CENTRAL	2	2	0
SOUTHERN	1	1	0
TOTAL	3	3	0

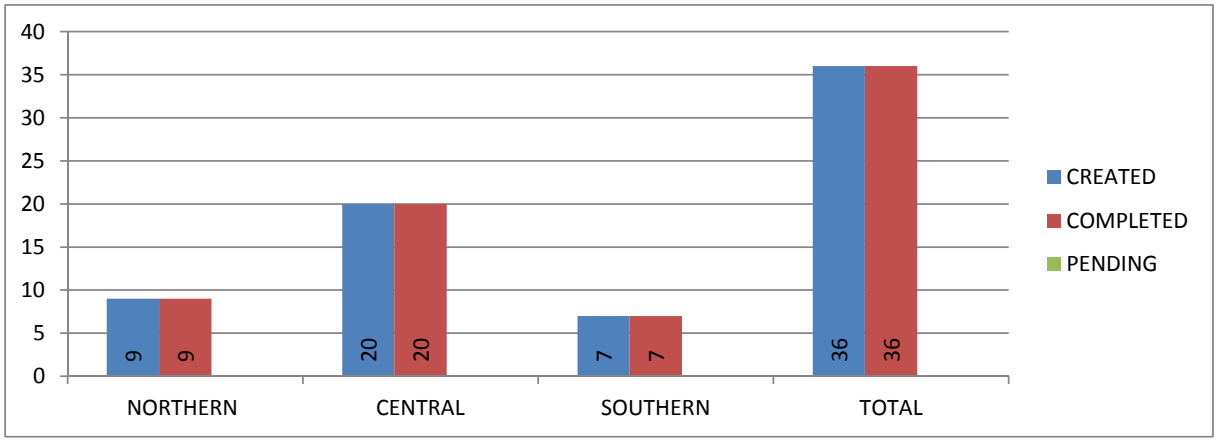
May. 08 – 14	CREATED	COMPLETED	PENDING
NORTHERN	3	3	0
CENTRAL	3	3	0
SOUTHERN	3	3	0
TOTAL	9	9	0

May. 15 – 21	CREATED	COMPLETED	PENDING
NORTHERN	4	4	0
CENTRAL	4	4	0
SOUTHERN	2	2	0
TOTAL	10	10	0

May. 22 – 28	CREATED	COMPLETED	PENDING
NORTHERN	2	2	0
CENTRAL	3	3	0
SOUTHERN	1	1	0
TOTAL	6	6	0

May. 29 – 31	CREATED	COMPLETED	PENDING
NORTHERN	0	0	0
CENTRAL	8	8	0
SOUTHERN	0	0	0
TOTAL	8	8	0

	CREATED	COMPLETED	PENDING
NORTHERN	9	9	0
CENTRAL	20	20	0
SOUTHERN	7	7	0
TOTAL	36	36	0



MAINTENANCE PREVENTIVE AND CORRECTIVE CALL OUTS

04/30/18-05/05/18	PREVENTIVE	CORRECTIVE
NORTHERN	6	7
CENTRAL	8	3
SOUTHERN	0	0
TOTAL	14	10

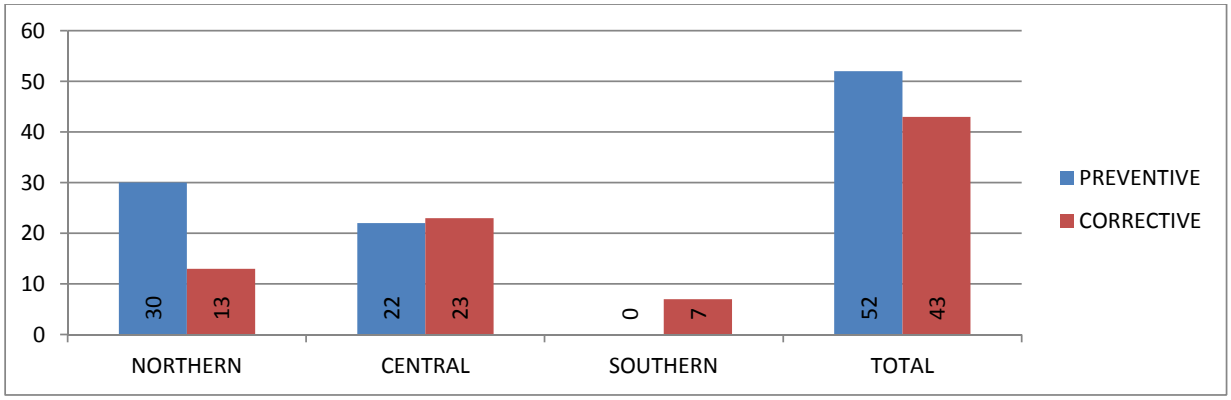
05/06/18-05/12/18	PREVENTIVE	CORRECTIVE
NORTHERN	12	4
CENTRAL	0	4
SOUTHERN	0	0
TOTAL	12	8

05/13/18-05/19/18	PREVENTIVE	CORRECTIVE
NORTHERN	12	1
CENTRAL	0	6
SOUTHERN	0	2
TOTAL	12	9

05/20/18-05/26/18	PREVENTIVE	CORRECTIVE
NORTHERN	0	1
CENTRAL	8	8
SOUTHERN	0	3
TOTAL	8	12

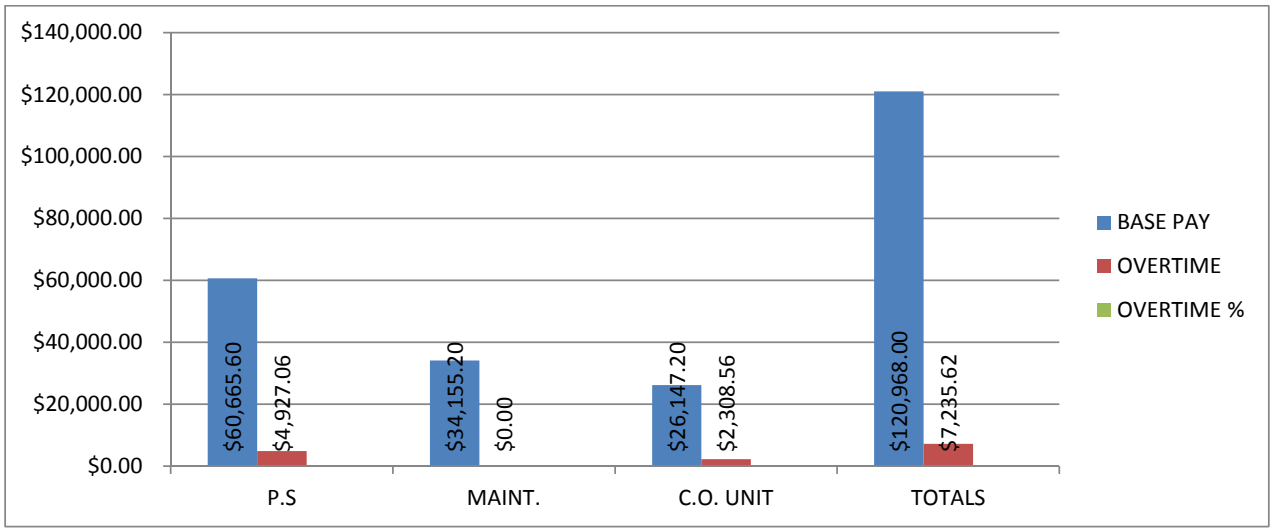
05/27/18-06/01/18	PREVENTIVE	CORRECTIVE
NORTHERN	0	0
CENTRAL	6	2
SOUTHERN	0	2
TOTAL	6	4

04/30/18-06/01/18	PREVENTIVE	CORRECTIVE
NORTHERN	30	13
CENTRAL	22	23
SOUTHERN	0	7
TOTAL	52	43



BASE PAY VS OVERTIME

	BASE PAY	OVERTIME	OVERTIME %
PUMPING STATION	$60,665.60	$4,927.06	8%
MAINTENANCE	$34,155.20	$0.00	0%
COURT ORDER UNIT	$26,147.20	$2,308.56	9%
TOTALS	$120,968.00	$7,235.62	17%



Guam Waterworks Authority	Date: 7/12/2018 Time:

REVIEWS			
TOTAL PUMPS INSTALLED	51	OVERAL AVERAGE	94%
TOTAL PUMPS OPERATIONAL	48	% OF OPERATING PUMPS	94%
TOTAL BOOSTER PUMP STATIONS	25		

GUAM WATERWORKS AUTHORITY

WATER DISTRIBUTION FACILITIES REPORT

Northern District

NO:	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	PUMP AND MOTOR INVENTORY
1	Gayinero	20	2	2	100%	OP	A						
2	Mataguac	25	2	2	100%	OP	A						
3	Santa Rosa	15	2	2	100%	OP	A						
4	Hyundai	40	2	1	50%	OP	A	Pump # 1 requires pump and motor.					
5	Access	60	2	2	100%	OP	A						
6	Chln. Palauan	5	2	2	100%	N/A						CIP required for new unit and electrical for generator	
7	Nimitz Hill	7.5	2	2	100%	N/A						CIP required for new unit and electrical for generator	
8	Adawag	1.5	2	2	100%	N/A						CIP required for new unit and electrical for generator	
9	Pale Kiren	1	1	1	100%	N/A						CIP required for new unit and electrical for generator	
10	Ulloa/Untalan	1	2	2	100%	OP	A						
11	Latte Heights	15	2	2	100%	OP	A						
	TOTAL = 11		**21**	**20**	**95%**								
pump availability =no of operational pumps/no of pumps*100%													

Central District

NO:	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	UPDATES
1	Pago	150 / 100	3	2	67%	0P	A	Pump unit #2 grounded during tropical storm Maria				Removed and at vendor 7-5-18 (Rewind)	
2	Brigade	60	3	3	100%	OP	A			Generator inadequate for 2 pump operation			
3	Windward Hills	200 / 75	3	3	100%	OP	A						
4	Santa Rita Spring	40	2	2	100%	OP	A						
5	Santa Ana (Lower)	25	2	1	50%	N/A		CHECK VALVE P1 NOT OPENING		Unable to secure discharge valve. Need to schedule an outage for area to make repairs		CIP required for new unit and electrical for generator	Need to schedule valve repairs
6	Camacho	1	1	1	100%	N/A						CIP required for new unit and electrical for generator	
7	Tenorio	1.5	1	1	100%	N/A						CIP required for new unit and electrical for generator	
	Total=7		**15**	**13**	**87%**								
pump availability =no of operational pumps/no of pumps*100%													

Southern District

NO:	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	UPDATES
1	Malojloj Line	125 / 50	3	3	100%	OP	A	Pump 3 installed by JMI 6-28-18					
2	Geus	25	2	2	100%	OP	A						
3	Pigua	7.5	2	2	100%	N/A						CIP required for new unit and electrical for generator	
4	Toguan	25	2	2	100%	OP	A						
5	WBP-2	25	2	2	100%	OP	A						
6	WBP-1	5	2	2	100%	OP	A						
7	Malojloj Elevated	15	2	2	100%	OP	A						
	Total=7		**15**	**15**	**100%**								
pump availability =no of operational pumps/no of pumps*100%													

Guam Waterworks Authority	Date: 5/30/2018 Time:

GUAM WATERWORKS AUTHORITY

WATER DISTRIBUTION FACILITIES REPORT

REVIEWS			
TOTAL PUMPS INSTALLED	51	OVERAL AVERAGE	*92%*
TOTAL PUMPS OPERATIONAL	47	% OF OPERATING PUMPS	*92%*
TOTAL BOOSTER PUMP STATIONS	25		

Northern District

NO:	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	PUMP AND MOTOR INVENTORY
1	Gayinero	20	2	2	100%	OP	A						
2	Mataguac	25	2	2	100%	OP	A						
3	Santa Rosa	15	2	2	100%	OP	A						
4	Hyundai	40	2	1	50%	OP	A	Pump # 1 requires pump and motor.					
5	Access	60	2	2	100%	OP	A						
6	Chln. Palauan	5	2	2	100%	N/A						CIP required for new unit and electrical for generator	
7	Nimitz Hill	7.5	2	2	100%	N/A						CIP required for new unit and electrical for generator	
8	Adawag	1.5	2	2	100%	N/A						CIP required for new unit and electrical for generator	
9	Pale Kiren	1	1	1	100%	N/A						CIP required for new unit and electrical for generator	
10	Ulloa/Untalan	1	2	2	100%	OP	A						
11	Latte Heights	15	2	2	100%	OP	A						
	TOTAL = 11		**21**	**20**	**95%**								
pump availability =no of operational pumps/no of pumps*100%													

Central District

NO:	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	UPDATES
1	Pago	150 / 100	3	2	67%	0P	A	Pump #3 unit being repaired by JMI. PO issued.				Removed and at vendor 4/25/18 (Rewind)	
2	Brigade	60	3	3	100%	OP	A			Generator inadequate for 2 pump operation			
3	Windward Hills	200 / 75	3	3	100%	OP	A						
4	Santa Rita Spring	40	2	2	100%	OP	A						
5	Santa Ana (Lower)	25	2	1	50%	N/A		CHECK VALVE P1 NOT OPENING		Unable to secure discharge valve. Need to schedule an outage for area to make repairs		CIP required for new unit and electrical for generator	Need to schedule valve repairs
6	Camacho	1	1	1	100%	N/A						CIP required for new unit and electrical for generator	
7	Tenorio	1.5	1	1	100%	N/A						CIP required for new unit and electrical for generator	
	Total=7		**15**	**13**	**87%**								
pump availability =no of operational pumps/no of pumps*100%													

Southern District

NO:	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	UPDATES
1	Malojloj Line	125 / 50	3	2	67%	OP	A	Pump #3 unit being repaired by JMI. PO issued.				Removed and at vendor 4/25/18 (Rewind)	PENDING RFQ APPRVAL
2	Geus	25	2	2	100%	OP	A						
3	Pigua	7.5	2	2	100%	N/A						CIP required for new unit and electrical for generator	
4	Toguan	25	2	2	100%	OP	A						
5	WBP-2	25	2	2	100%	OP	A						
6	WBP-1	5	2	2	100%	OP	A						
7	Malojloj Elevated	15	2	2	100%	OP	A						
	Total=7		**15**	**14**	**93%**								
pump availability =no of operational pumps/no of pumps*100%													

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671) 648-3002 | guamccu.org

GUAM WATERWORKS AUTHORITY WORK SESSION
CCU Conference Room
4:30 p.m., Tues., August 21, 2018

AGENDA (Amended)

1. **ISSUES FOR DECISION**
   - **1.1** **Approval of the Contract with JMI-Edison for Purchase of Vacuum Regulators and Parts for Water Production Chlorination System / Resolution No. 42-FY2018**
   - **1.2** **Approval of the 2018 Water Resource Master Plan Update / Resolution No. 43-FY2018**
   - **1.3** **Approval of Contract for Asan-Adelup-Hagatna Route 1 Sewer Line Rehabilitation and Replacement Project / Resolution No. 44-FY2018**
   - **1.4** **Approval of Change Order #1 for the Tumon #2, Hyundai and Chaot #2 Reservoirs Construction Contract / Resolution No. 45-FY2018**
   - **1.5** **Approval of Funding Source for Baza Gardens Wastewater Cross-Island Pumping and Conveyance Construction Contracts / Resolution No. 46-FY2018**
   - **1.6** **Approval and Adoption of GWA's Asset Management Policy / Resolution No. 47-FY2018**
   - **1.7** **Approve Purchases Under Indefinite Quantity Contract with JMI Edison for Submersible Pump and Motors / Resolution No. 48-FY2019**
   - ***1.8** **Approval of FY2019 Budget / Resolution No. 49-FY2018**

2. **GM REPORT**
   - **2.1** **GM Summary**

3. **ISSUES FOR DISCUSSION**

4. **DIVISION REPORTS**
   - **4.1** **Communications**
   - **4.2** **Compliance & Safety**
   - **4.3** **Customer Service**
   - **4.4** **Engineering**
   - **4.5** **Finance**
   - **4.6** **Operations**

5. **ANNOUNCEMENTS**
   - **5.1** **Next CCU Meetings: GPA WS 8/23/18 CCU Meeting: 8/28/18**

6. **ADJOURNMENT**

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 42-FY2017
Relative to the Approval of the Contract with JMI-Edison for the Purchase of Vacuum Regulators and Parts for Island Wide Water Production Chlorination Systems.

What is the project's objective and is it necessary and urgent?
This approval requested in this resolution will authorize the purchase water chlorination parts, materials and maintenance kits to improve the reliability and safety of chlorination systems employed throughout GWA's production facilities and decrease the downtime of deep well chlorination system due to corrective maintenance required.

The existing chlorination systems are showing signs of wear, with some components reaching the end of useful service life. If not properly repaired or replaced, these parts can fail, leading to an increased potential of chlorine gas leak or system malfunction. Such occurrences pose a safety hazard to employees and to the public if proper chlorination of our drinking water is not achieved.

The proposed purchase is necessary and urgent to establish a good working inventory of replacement parts to keep systems operational, and maintenance kits to extend the useful life of our existing systems. Maintenance kits can potentially double the useful life of essential chlorination system parts.

Where is the location?
GWA Island-wide Deep-well Production Facilities / Chlorination Sites.

How much will it cost?
Eight Hundred Seventeen Thousand, Four Hundred Twenty-Three and Thirty-Two Cents. ($817,423.32)

Description	Product Number	IFB 2018-22	Bid Qty (est'd)	IFB 2018-22 Unit Cost	Bid Cost
		Item No		EA	
NXT 3000 CLs Cylinder Mounted 500 PPD Max Cap	VR3000C021XX	1.0	50	$1,717.80	$85,890.00
Remote Multi-purpose Ejector Check	EJ17C101XX	2.0	224	$1,012.38	$226,773.12
Meter Assembly w/ Manual Rate Valve	MA3001C04XX	2.1	112	$809.62	$90,677.44
CR 3-10 A-FGJ-E-HQQE	Product No.: 96083216				$0.00
Flowmeter Maintenance Kit	PN 614S096U01	2.2	112	$54.91	$6,149.92
Regulator Maintenance Kit	PN 614S090U01	2.3	112	$129.54	$14,508.48
Ejector Maintenance Kit	PN 614S092U01	2.4	112	$98.56	$11,038.72
Inlet Valve Kit Double O Ring	PN 27385-1	2.5	112	$283.02	$31,698.24
Reducing Bushing, ½"MNPT x ¼"FNPT	Part# R-246	2.6	150	$9.86	$1,479.00
¼" NPT x 3/8" Tubing connector	Part# F-100-1	2.7	150	$14.08	$2,112.00
Plate, Inlet Fitting Support	Part# 22952	2.8	30	$83.08	$2,492.40
Retainer Ring	Part# U-1830	2.9	30	$15.49	$464.70
Fitting, Gas inlet	Part# 27100	3.0	30	$426.64	$12,799.20
Meter Tube Assemblies 25ppd	Part#600B060U04	3.1	30	$439.31	$13,179.30
Meter Tubes 25ppd	Part# 21496	3.2	30	$439.31	$13,179.30
					$512,441.82
Description	**Product Number**			**IFB 2018-22 Unit Cost**	**Bid Cost**
				EA	
Capital Controls Gas Detector Series 1610B Single Point Gas Detectors	P/N: 1610B-01-01-01-XX	3.3	50	$2,559.81	$127,990.50
Battery Backup Model 1640 for 1610B	P/N: 1640-01-01-XX	3.4	50	$2,365.50	$118,275.00
Gas Sensor Test Kit Part No BM-4709	BM-4709	3.5	75	$184.46	$13,834.50
Sensor for 1610B Single Point Gas Detectors Part No A-1387 (for Chlorine)	A-1387 (for Chlorine)	3.6	75	$598.42	$44,881.50
					$304,981.50

IFB 2018-22 Total	$817,423.32

When will it be completed?
The indefinite quantity contract will be in place for an initial term of 3 years and two (2) years one-year option to renew. Purchases will be ongoing on an as-needed basis over the life of the contract term.

What is the funding source(s)?
FY 2018 / FY 2019 GWA Water Production and Treatment Operations and Maintenance Budget.

The RFP / Bid Responses
IFB 2018-22 Vacuum Regulators and Parts (Re-Bid).

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

GWA RESOLUTION NO. 42-FY2018

RELATIVE TO APPROVAL OF THE CONTRACT WITH JMI-EDISON FOR THE PURCHASE OF VACUUM REGULATORS AND PARTS FOR ISLANDWIDE WATER PRODUCTION CHLORINATION SYSTEMS

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual, and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA advertised an Invitation for Bid (IFB) 2018-22 soliciting bid proposals from experienced and responsive bidders to provide island wide GWA Water Production Chlorination systems with vacuum regulators, ejectors, flow meters, maintenance kits and parts to provide adequate stock replenishment when needed to continue to operate and maintain chlorination systems required under Safe Water Drinking Act; and

WHEREAS, six entities registered for the bid procurement, and there was one responsive and responsible bidder who met the bid requirements of IFB 2018-22; and

WHEREAS, the IFB 2018-22 offers were evaluated by GWA's review committee, who determined that the offer for Vacuum Regulators and Parts made by JMI-Edison is fair and reasonable on the basis of comparison to historical procurement data [EXHIBIT A]; and

WHEREAS, GWA accepted JMI-Edison's indefinite quantity bid proposal for Vacuum Regulators and Parts [EXHIBIT B] at an estimated total amount of Eight Hundred Seventeen

Thousand Four Hundred Twenty-Three Dollars and Thirty-Two Cents ($ 817,423.32) [EXHIBIT B]; and

WHEREAS, GWA Management seeks CCU Approval of the Contract amount of Eight Hundred Seventeen Thousand Four Hundred Twenty-Three Dollars and Thirty-Two Cents ($817,423.32) for the purchase of Water Production Chlorination System Vacuum Regulators and Parts; and

WHEREAS, the source of funding for the Vacuum Regulators and Parts Bid will be from FY 2018 / FY 2019 GWA Water Production and Treatment Operations and Maintenance Budget.

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms of the bid proposal submitted by "JMI-Edison" are fair and reasonable.
3. The CCU hereby authorizes the management of GWA to proceed based on the notice of award to "JMI-Edison" attached hereto as EXHIBIT B, and which is incorporated into this Resolution in its entirety.
4. The CCU hereby further authorizes the management of GWA to enter into a contract with "JMI Edison", to purchase up to Eight Hundred Seventeen Thousand Four Hundred Twenty-Three Dollars and Thirty-Two Cents ($ 817,423.32) worth of Vacuum Regulators and Parts, on as needed basis for the contract amount on IFB 2018-22, for the duration of the initial contract term of three (3) years as specified in the IFB 2018-22 "Indefinite Quantity Bid", and two (2) one-year options to renew, subject to availability of funds and agreement between the parties.
5. The CCU hereby approves the funding total of Eight Hundred Seventeen Thousand Four Hundred Twenty-Three Dollars and Thirty-Two Cents ($ 817,423.32) [EXHIBIT B];

2

6. GWA Management is hereby authorized to seek PUC approval in the event the contract value exceeds One Million Dollars ($1,000,000.00) as required by Docket 00-04.

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 28th day of August 2018.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS **J. GEORGE BAMBA**
Chairperson Secretary

SECRETARY'S CERTIFICATE

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

3

EXHIBIT A

GUAM WATERWORKS AUTHORITY

"Better Water. Better Lives."
Gloria B. Nelson Public Service Building
688 Route 15, Mangilao GU, 96913
Tel: 671.300.6032/30 Fax: 671.649.3750

NOTICE OF CONDITIONAL AWARD

JMI Edison
125 North Marine Drive
P.O. Box 6577
Tamuning, Guam 96931

Date:

Re: Invitation for Bid Number: IFB 2018-22 (RE-BID) Vacuum Regulators and Parts

Hafa Adai Mr. Romeo I. Oriondo,

The Guam Waterworks Authority ("GWA") has considered the bid submitted by JMI Edison for the above described reference in response to its Advertisement for Bids dated May 08, 2018 and you are hereby notified that the bid price for all line Items Nos has been accepted by GWA. Please be advised that you must now deliver all other documents required by the bid, including, but not limited to, proof of insurance and the Performance and Payment Bond (which must remain in full force and effect until all performance has ended, which includes all warranty periods).

You are also advised that any obligation incurred by your firm prior to execution of the contract is entirely at your own risk and GWA shall have no obligation to reimburse costs incurred prior to execution of the contract.

Please note this Notice of Award is conditional on obtaining the approval of the Guam Consolidated Commission on Utilities for any award over $250,000 and the approval of the Guam Public Utilities Commission where the total value over the life of the contract could exceed $1M. Also, award is conditional upon providing any documents such as proof of licensure, proof of insurance or other documents required to be submitted to GWA under the Bid or Guam law.

You are required to return an acknowledged copy of this Conditional Notice of Award to the Procurement Administrator.

Sincerely,

Miguel C. Bordallo, P.E.
General Manager

REF: IFB 2018-22 Vacuum Regulators and Parts

ACCEPTANCE OF CONDITIONAL NOTICE OF AWARD

Receipt of the above Notice of Conditional Award for GWA Bid No. 2018-22 (RE-BID) is hereby acknowledged

By: mdelosreyes Title: OFFICE MANAGER

Signature (please print)

Dated this 1st day of August, 2018.

******** END OF CONDITIONAL NOTICE OF AWARD *******

REF: IFB 2018-22 Vacuum Regulators and Parts

EXHIBIT B

GUAM WATERWORKS AUTHORITY
"Better Water. Better Lives."
Gloria B. Nelson Public Services Building
688 Route 15, Mangilao, Guam 96913

MEMORANDUM

TO: General Manager

VIA: Supply Management Administrator

FROM: Evaluation Committee Members

SUBJECT: Invitation to Bid No. GWA 2018-22
Ref: (RE-BID) Vacuum Regulators and Parts

REF: Recommendation of Award

DATE: July 9, 2018

Invitation to Bid No. GWA 2018-22 was officially announced and advertised in the Pacific Daily News, Marianas Variety and Guam Waterworks Authority Website on May 08, 2018 and open as scheduled on May 24, 2018 @ 10:00 am. Six (6) prospective bidders expressed their interests by acknowledging receipt of the bid package thru GWA's website.

Bidders Register:

1. Compacific
2. Benson Guam Ent. Inc.
3. JMI Edison
4. A
5. ONVIA
6. Guam Pacific Enterprise

Of the Six (6) only One (1) submitted their bid package, namely:

- JMI Edison

An evaluation committee was formally assembled and met on May 31, 2018 @ 10:00 am to review/discuss and evaluate bid submittal. Completing the evaluation, the committee members have determined JMI Edison bid proposal is deemed responsive and have complied with all terms & conditions and requirements set for in the IFB with their cost proposal as follows:

I. BID ITEM(s)

Indefinite Quantity Bid

Item No	Description	Est. Qty	Unit Cost	Total Cost
1.0	Vacuum Regulator Series NXT3000 PPD Max Cap (Cylinder Mounted) w/Standard Accessories	50 each	$1,717.80	$85,890.00

BIDDING ON:

MFG: Denora
Brand: Denora
Place: of Origin: USA
Date of Delivery: 90 DAYS
(After Receipt of Purchase Order)

Item No	Description	Est. Qty	Unit Cost	Total Cost
2.0	Remote Multi-Purpose Ejector Check Part # EJ17C101XX	224 each	$1,012.38	$226,773.12
2.1	Flow Meter Assembly w/ Manual Rate Valve Part # MA3001C04XX	112 each	$809.62	$90,677.44
2.2	Flowmeter Maintenance Kit Part # 614S096U01	112 each	$54.91	$6,149.92
2.3	Regulator Maintenance Kit Parts # 614S090U01	112 each	$129.54	$14,508.48
2.4	Ejector Maintenance Kit Parts # 614S092U01	112 each	$98.56	$11,038.72
2.5	Inlet Valve Kit Double O Ring Parts # 27385-1	112 each	$283.02	$31,698.24
2.6	Reducing Bushing, ½" MNPT x ¼" FNPT Part # R-246	150 each	$9.86	$1,479.00

2.7	Tubing connector ¼" NPT x 3/8" Parts # F-100-1	150 each	$14.08	$2,112.00
2.8	Plate, Inlet Fitting Support Part# 22952	30 each	$83.08	$2,492.40
2.9	Retainer Ring Part # U-1830	30 each	$15.49	$464.70
3.0	Fitting, Gas inlet Part # 27100	30 each	$426.64	$12,799.20
3.1	Meter Tube Assemblies 25ppd Part # 600B060U04	30 each	$439.31	$13,179.30
3.2	Meter Tubes 25ppd	30 each	$439.31	$13,179.30
3.3	Capital Controls Gas Detector Series 1610B Single Point Gas Detectors Part # 1610B-01-01-01-XX	50 each	$2,559.81	$127,990.50
3.4	Battery Backup Model 1640 for 1610B Part # 1640-01-01-XX	50 each	$2,365.50	$118,275.00
3.5	Gas Sensor Test Kit. Part # BM-4709	75 each	$184.46	$13,834.50
3.6	Sensor for 1610B Single Point Gas Detectors Part #1387 (for Chlorine)	75 each	$598.42	$44,881.50

BIDDING ON:

MFG: Denora
Brand: Denora
Place: of Origin: USA
Date of Delivery: 90 DAYS
(After Receipt of Purchase Order)

Summary:

The Date of Delivery has been amended to 90 days stated on Response to Inquiries No. 1

Delivery:

The vendor will be responsible for all cost and all risks associated with the provision of these goods until delivery is made and the items are formally accepted by GWA. All goods shall be delivered to Guam Waterworks Authority at GWA's warehouse at Tamuning, Guam. Delivery time is **90 Days** from the date on the Notice to Proceed.

Warranty:

The successful bidder shall warrant that all goods and services to be provided hereunder are fit for the intended purpose stated in this Bid, are manufactured in the United States and meet the standards set forth in this Bid. The bidder shall also warrant all goods and services provided under this Bid to be free from manufacturer's defects for a period of not less than 3 years after receipt of goods unless the manufacturer provides for a longer standard warranty, in which case, the longer term shall apply. The warranty shall require the vendor to bear all costs to provide replacement goods within a reasonable period.

Contract Term:

GWA and the lowest responsible bidder may enter into a contract (which may be in the form of a Purchase Order) on terms acceptable to GWA which shall commence upon vendor's acknowledged receipt of a Notice to Proceed from GWA. The initial term of the contract is two (2) years, with option to renew for an additional 1-year term.

Concurred and accepted by the committee members:

7/9/2018
Ron Top, Operations and Maintenance Manager

7/9/2018
Karen Cheryl O. Grape, Management Analyst III

July 9, 2018
Mary D. Torres, Buyer II

Antonio C. Camacho, Buyer II

Your approval is greatly appreciated.

In consideration of the foregoing, please indicate your approval of this recommendation by your signature below.

[✓] CONCURRED [ ] UNCONCURRED

VINCENT ED. GUERRERO, SMA

[✓] APPROVED [ ] DISAPPROVED

7.11.18

MIGUEL C. BORDALLO, P.E. GENERAL MANAGER

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 43- FY2018
Relative to Approval of GWA's 2018 Water Resource Master Plan (WRMP) Update

What is the project's objective and is it necessary and urgent?
The Water Resource Master Plan update is a 20-year long-term planning document. The objectives and goals of the WRMP Update are to Improve water quality and system reliability, reduce number of water outages, replace asbestos cement and galvanized steel water lines, rehabilitate/replace sewer lines and sewer pump stations, upgrade WW treatment plants to achieve Federal Permit compliance, and reduce wastewater overflows. In addition, the WRMP will guide GWA towards improving operational sustainability to maintain all assets by expanding programmatic efforts in the areas of asset management, water loss control, fire hydrant repair/replacement and hydraulic modeling.

Where is the location?
WRMP Update impacts the water and wastewater systems island-wide

How much will it cost?
The 2018 WRMP Update characterizes and quantifies the cost of the water and wastewater needs from 2018 through 2037 as; 1) court order related at an estimated One Hundred Nine Million Dollars ($109,000,000); 2) improvements for system reliability/quality at an estimated Ninety-Six Million Dollars ($96,000,000.00), upgrades associated with rehabilitating the systems or increasing capacity at an estimated Eight Hundred Thirty-Two Million Dollars ($832,000,000), and overall systems expansion at an estimated Two Hundred Eighteen Million Dollars ($218,000,000).

When will it be completed?
The WRMP covers a 20-year period.

What is the funding source?
Funding for the proposed WRMP Update projects will come primarily from bonds that will be paid through rate payer revenues as well as with funds from USEPA State Revolving Fund (SRF), Internally Funded CIP (IFCIP), Federal Grants and possibly Federal Loans.

If the WRMP Update is adopted, specific funding needs and proposed sources will be developed and presented to the CCU at a later time in 5-year Capital Improvement Plans.

The RFP/BID responses (if applicable):
Not Applicable.

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

RESOLUTION NO. 43–FY2018

RELATIVE TO APPROVAL OF GWA's 2018 WATER RESOURCE MASTER PLAN (WRMP) UPDATE

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, in 2006 the Guam Waterworks Authority completed a Water Resource Master Plan that attempted to document and assess GWA's water and wastewater system at the time and made certain assumptions of the systems capacity and operability to meet the Safe Drinking Water and Clean Water Acts from which recommendations for capital improvements were made and projected out over a 20-year period; and

WHEREAS, GWA's 2006 Water Resource Mater Plan was past due for updating thus GWA initiated steps in October 2015 to engage its Program Management Office through "Work Authorization 2015-07" to update the 2006 WRMP which was funded from USEPA State Revolving Fund; and

WHEREAS, the purpose of updating the WRMP was to give GWA an opportunity to review and document progress since 2006 plan, recognize that GWA infrastructure has since aged 10 years, account for impacts resulting from the US-Japan Security Consultative Committee's "2012 Roadmap Adjustment" that outlined the relocation of 5,000 Marines to Guam by 2023, evaluate the impacts of an increasing population, address new regulations that

require higher treatment levels for GWAs wastewater treatment plants as well as advance GWA's goals to continuously improve GWA's level of service from the 2006 levels; and

WHEREAS, the objectives and goals the WRMP Update intends to establish for GWA are to improve water quality and system capacity and reliability, reduce number of water outages, replace asbestos cement and galvanized steel water lines, rehabilitate/replace sewer lines and sewer lift stations, upgrade WW treatment plants to achieve Federal Permit compliance, and reduce wastewater overflows; and

WHEREAS, the 2018 WRMP Update also reviewed and assessed GWA's operational sustainability to maintain all assets, and recommended measures to accomplish this sustainability through expanding programmatic efforts in the areas of asset management, water loss control, fire hydrant repair/replacement and hydraulic modeling, just to name a few; and

WHEREAS, the WRMP Update summarizes that there are one hundred twenty four (124) new CIP projects recommended with an estimated total cost of Nine Hundred Eighty-Two Million Two Hundred Forty-Two Thousand Dollars ($982,242,000.00) along with twenty nine (29) existing CIP projects that are estimated to cost Two Hundred Seventy-Eight Million One Hundred Nineteen Thousand Dollars ($278,119,000.00) for a total capital cost for the next 20 year period of One Billion Two Hundred Sixty Million Three Hundred Sixty-One Thousand Dollars ($1,260,361,000.00) in 2018 dollars (See Exhibit A) ; and

WHEREAS, the 2018 WRMP Update further characterizes and quantifies the cost of the water and wastewater needs as; 1) court order related at an estimated One Hundred Nine Million Dollars ($109,000,000), 2) improvements for system reliability/quality at an estimated Ninety-Six Million Dollars ($96,000,000), upgrades associated with rehabilitating the systems or increasing capacity at an estimated Eight Hundred Thirty-Two Million Dollars ($832,000,000), and overall systems expansion at an estimated Two Hundred Eighteen Million Dollars ($218,000,000) in 2018 dollars (see Exhibit B); and

WHEREAS, the costs associated with the 2018 WRMP Update was further analyzed with experts in municipal financial planning from which the WRMP Update recommended

DRAFT

annual rate increases averaging 4-4.5% for the first seven years of the plan, then reducing to 3% throughout the remainder of the plan; and

WHEREAS, in an effort to bring awareness of the 2018 WRMP Update to the rate payers on Guam, GWA management along with support from GWA staff and Program Management Office personnel held village meetings in Dededo, Tamuning and Agat, made presentations in industry forums such as the Guam Contractor Association (GCA), Guam Society of Professional Engineer (GSPE) and Guam Hotel and Restaurant Association (GHRA), made presentation to legislative, Mayors Council members, and administrative government officials as well as provided the complete draft document on the GWA website, GWA offices, and village Mayor's offices for review and comment; and

WHEREAS, GWA management has compiled all questions or comments made during each of the awareness presentations and have determined there are no questions or comments that impacted the contents of the WRMP Update therefore the WRMP Update as prepared is being submitted for CCU approval; and

WHEREAS, GWA management will prepare an updated 5-Year Capital Improvements Plan (CIP), once the 2018 WRMP Update is approved, that details each of the capital projects and the funding sources which GWA management anticipates will come primarily from bonds that will be paid through rate payer revenues as well as with USEPA State Revolving Funds (SRF), Internally Funded CIP Funds (IFCIP), Federal Grants and possibly Federal Loans; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU hereby approves the 2018 Water Resources Master Plan Update that will be identified with "Final August 2018".
3. The CCU hereby further authorizes GWA management to implement the projects and programs called for in the plan in a manner consistent with the plan.

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 28th day of August 2018.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS **J. GEORGE BAMBA**
Chairperson Secretary

SECRETARY'S CERTIFICATE

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

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Exhibit A (1 of 1)

Capital Improvement Projects Summary

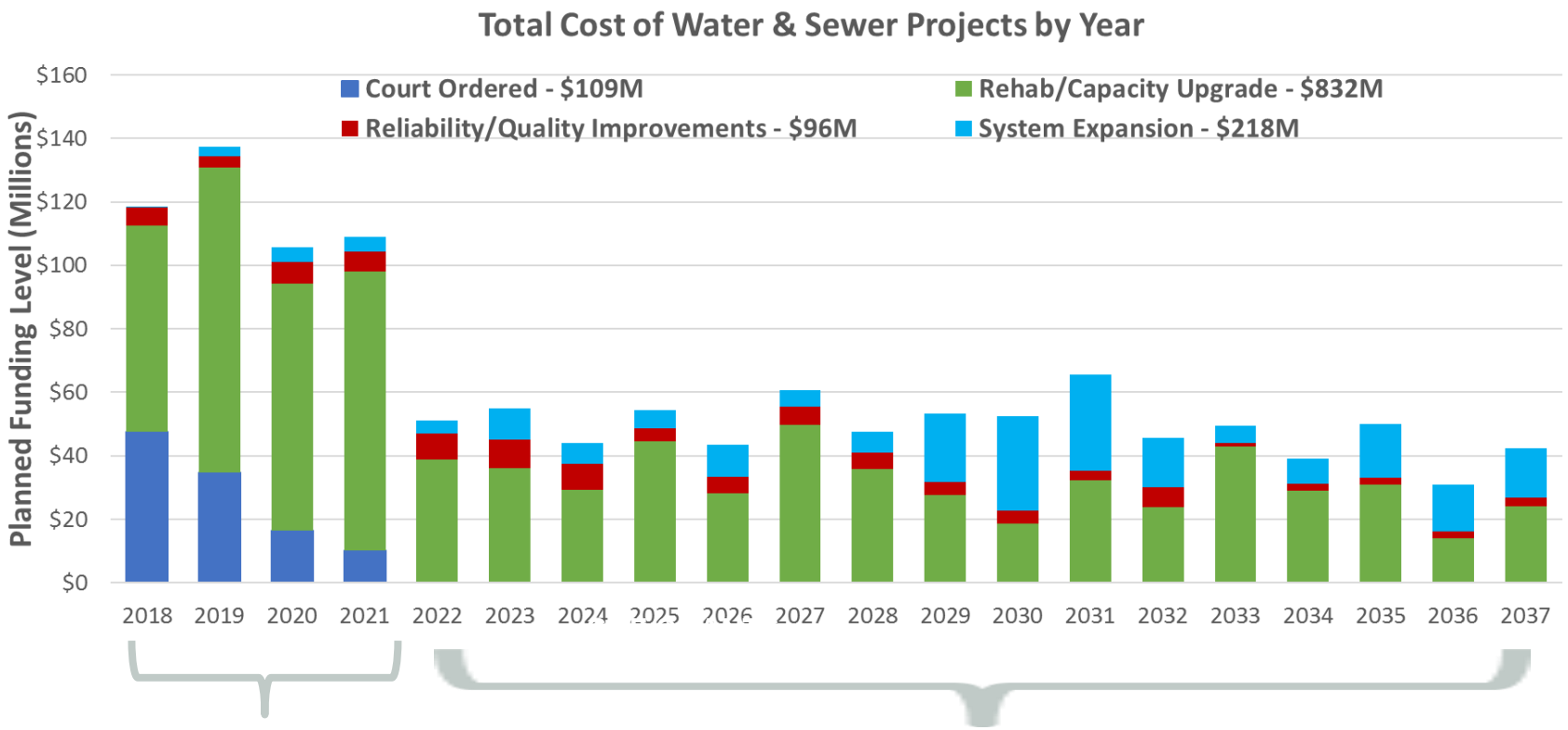
Project Category	Number of New Projects	Estimated Cost WRMPU Proposed CIP	Number of Ongoing Projects	Estimated Cost Current/Ongoing CIP
Water System Improvements				
Pipeline Projects	17	$204,402,000	2	$2,500,000
Storage Tank and BPS Projects	30	$120,082,000	5	$30,808,000
Water Production Projects	10	$123,216,000	3	$8,667,000
Other Water System Projects/Studies	5	$14,449,000	4	$5,500,000
Total Water System Improvements	62	$462,149,000	14	$47,475,000
Wastewater System Improvements				
Gravity Sewer Projects	27	$250,247,000	7	$69,230,000
Force main Projects	4	$22,498,000		
Lift Station Projects	3	$68,156,000	2	$4,293,000
Wastewater Treatment Facilities	9	$71,238,000	3	$151,946,000
Other Wastewater System Projects/Studies	5	$10,978,000		
Total Wastewater System Improvements	48	$423,117,000	12	$225,469,000
General Systems Improvements				
General Facilities / Equipment Improvements	10	$59,800,000	1	
SCADA / Electrical	4	$37,176,000	2	$5,175,000
Total General System Improvements	14	96,976,000	3	$5,175,000
Total (rounded)	124	$982,242,000	29	$278,119,000

Total Capital Improvement Program 2018 – 2037 = $ 1.26 billion

GUAM WATERWORKS AUTHORITY

Exhibit B (1 of 1)

Funding needed for improvements



Average Annual Funding
$118M/year for first 4 years
w/ ~ $40M/year DOD funding

Average Annual Funding
$49M/year

GUAM WATERWORKS AUTHORITY

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Discussion

Resolution 44-FY2018

Relative to Contract Approval for the Asan-Adelup-Hagatna, Route 1 Sewerline Rehabilitation and Replacement Project

What is the project's objective and is it necessary and urgent?
The objective of this project is to improve the sewer collection system, which included rehabilitating, repairing and/or replacing sewer manholes and over 5,000 linear feet of gravity sewer line along Route 1 in the village of Asan and Hagatna. These sewer infrastructure elements have been identified by GWA, through an SSES investigation, as requiring significant improvement to prevent adverse impact to the subsurface environment and to operation of the collection system. Successful completion of this project will result in restoring this part of the collection system to proper operation, and improve maintenance of the sewer collection system. USEPA agree that efforts to rehabilitate, repair or replace the sewer line are urgent and necessary.

Where is the project located?
This project is located along Route 1, from the Asan "War in the Pacific" National Historic Park to the Fonte River in Hagatna. Construction activities will be limited to the sewer infrastructure elements within the established government easements.

How much will it cost?
The construction services contract was proposed by Infratech at a total of Six Million Two Hundred Seventy-Five Thousand Seven Hundred Eighty-Two Dollars and Eighty-Eight Cents **(**$6,275,782.88). This contract amount, which is primarily based on unit pricing, includes the furnishing of all labor, tools, equipment and materials, and agency coordination needed to complete the sewer infrastructure replacement in the aforementioned locations.

GWA management is also seeking a 10% contingency in the amount of Six Hundred Twenty-Seven Thousand Five Hundred Seventy-Eight Dollars and Twenty-Nine Cents **(**$627,578.29), which brings the total authorized funding amount to Six Million Nine Hundred Three Thousand Three Hundred Sixty-One Dollars and Seventeen Cents ($6,903,361.17) for the project.

When will it be completed?
The construction contract duration for this project is 450 calendar days. Estimated completion of construction is beginning of 2020.

What is the funding source?
The funding for this project will be from USEPA SRF Grant Funds and, if necessary, GWA Bond Funds with a maximum project budget of Six Million Nine Hundred Three Thousand Three Hundred Sixty-One Dollars and Seventeen Cents ($6,903,361.17).

The RFP/BID responses (if applicable):
Seven (7) bid packages were picked up, only two (2) bids were received.

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

RESOLUTION NO. 44–FY2018

RELATIVE TO CONTRACT APPROVAL FOR THE ASAN-ADELUP-HAGATNA, ROUTE 1 SEWER LINE REHABILITATION AND REPLACEMENT PROJECT S15-002-EPA

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA has received a grant from USEPA under the State Revolving Fund program to improve the sewer collection system, which included the gravity sewer line along Route 1, from the Asan "War in the Pacific" National Historical Park to the Agana Main Pump Station; and

WHEREAS, the stretch of gravity sewer line indicated is deteriorating, which included over 3,600 linear feet of gravity sewer line along Route 1 in Asan, and over 1,400 liner feet in Adelup, and the intent of this project is to rehabilitate, repair or replace these sections; and

WHEREAS, GWA and USEPA agreed that efforts to rehabilitate, repair or replace these sewer lines are necessary to properly operate and improve the maintenance of the sewer collection system, and the first order of business in doing so was through a scope of design services that includes general civil engineering, geotechnical engineering, and archeological investigation for wastewater collection system evaluation, analysis and design; and

WHEREAS, in June 2015 GWA Management began the procurement process to find a consulting engineering team to design the sewer rehabilitation and replacement, and via Resolution No. 02-FY2016, approved by the CCU in October 2015, GWA Management was authorized to enter into a contract with HDR Engineering, Inc. (HDR) to design the sewer rehabilitation and replacement; and

WHEREAS, in December of 2015 GWA Management entered into a contract with HDR to design the sewer rehabilitation and replacement, and in April of 2017 the final design was completed; and

WHEREAS, on May 12, 2017, GWA advertised the Invitation to Bid (IFB-06-ENG-2017) for the Asan-Adelup-Hagatna, Route 1 Sewer Line Rehabilitation and Replacement soliciting bid proposals from experienced and responsive bidders to repair and/or replace segments of gravity sewer lines and manholes in the villages of Asan and Hagatna, but ultimately received no responsive and responsible bids; and

WHEREAS, on October 31, 2017, GWA advertised the Invitation to Re-Bid (IFB-11-ENG-2017) for the Asan-Adelup-Hagatna, Route 1 Sewer Line Rehabilitation and Replacement soliciting bid proposals from experienced and responsive bidders to repair and/or replace segments of gravity sewer lines and manholes in the villages of Asan and Hagatna, but again received no bids; and

WHEREAS, following the Invitation to Re-Bid, GWA discussed with contractors the challenges that may have prevented them from bidding, reviewed all the available information, and developed two separate bids for the contractors to bid on, Schedule A which involved Cured In Place Pipe (CIPP) and Schedule B which involved open cut trenching; and

WHEREAS, on May 4, 2018, GWA advertised the Invitation to Re-bid (IFB-05-ENG-2018) for the Asan-Adelup-Hagatna, Route 1 Sewer Line Rehabilitation and Replacement soliciting bid proposals from experienced and responsive bidders to repair and/or replace segments of gravity sewer lines and manholes in the villages of Asan and Hagatna; and

WHEREAS, this project consists of furnishing all labor, tools, equipment and materials, necessary to install, replace, and repair sewer along Rt.1, in Asan and Hagatna, including coordination with GWA Wastewater Operations, GWA Engineering, the Construction Manager, the project Design Engineer, and GWA's Program Management Office; and

WHEREAS, IFB packages were obtained by multiple interested parties, from which GWA received bid proposals from two (2) parties (SEE EXHIBIT A – Abstract of Bids) before the bid proposal deadline, with both parties submitting a proposal for Schedule A, and no bids received for Schedule B; and

WHEREAS, the project Design Engineer, in conjunction with GWA, analyzed the bid proposal received on July 13, 2018 and determined that Infratech International, LLC (Infratech) for Schedule A submitted the lowest responsive and responsible bids and met all the bid requirements set forth by GWA (SEE EXHIBIT B – Evaluation); and

WHEREAS, GWA Management finds Infratech's bid proposal for Schedule A in the amount of Five Million Nine Hundred Twenty Thousand Dollars and Zero Cents ($5,920,000.00), as well as Additive Bid No. 2 in the amount of Three Hundred Fifty-Five Thousand Seven Hundred Eighty-Two Dollars and Eighty-Eight Cents ($355,782.88), acceptable (SEE EXHIBIT C – Bid Proposal); and

WHEREAS, GWA Management seeks CCU approval of the total fee proposal for Schedule A and Additive Bid No. 2 in the amount of Six Million Two Hundred Seventy-Five Thousand Seven Hundred Eighty-Two Dollars and Eighty-Eight Cents **(**$6,275,782.88); and

WHEREAS, GWA Management further seeks CCU approval of the total fee proposal for Schedule A and Additive Bid No. 2 in the amount of Six Million Two Hundred Seventy-Five Thousand Seven Hundred Eighty-Two Dollars and Eighty-Eight Cents ($6,275,782.88) plus a ten percent (10%) contingency of Six Hundred Twenty-Seven Thousand Five Hundred Seventy-Eight Dollars and Twenty-Nine Cents **(**$627,578.29), to bring the total authorized funding amount to Six Million Nine Hundred Three Thousand Three Hundred Sixty-One Dollars and Seventeen Cents ($6,903,361.17); and

WHEREAS, funding for this project will be from the USEPA State Revolving Fund and, if necessary, GWA Bond funds applicable to the project; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms and conditions set by GWA relative to commencement of work activities are fair and reasonable and serve as a measure of Quality Assurance/Quality Control (QA/QC).
3. The CCU hereby authorizes the management of GWA to accept the bid proposal from "Infratech International, LLC." For Schedule A and Additive Bid No. 2.
4. The CCU hereby further authorizes the management of GWA to enter into a contract with "Infratech International, LLC" in the amount of Six Million Two Hundred Seventy-Five Thousand Seven Hundred Eighty-Two Dollars and Eighty-Eight Cents **(**$6,275,782.88).
5. The CCU hereby further approves the funding total of Six Million Two Hundred Seventy-Five Thousand Seven Hundred Eighty-Two Dollars and Eighty-Eight Cents **(**$6,275,782.88), plus a ten percent (10%) contingency of Six Hundred Twenty-Seven Thousand Five Hundred Seventy-Eight Dollars and Twenty-Nine Cents **(**$627,578.29), for a total authorized funding amount of Six Million Nine Hundred Three Thousand Three Hundred Sixty-One Dollars and Seventeen Cents ($6,903,361.17).
6. The CCU hereby further approves the funding for this project will be from the USEPA State Revolving Fund and, if necessary, GWA Bond funds applicable to the project.

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

4

DULY AND REGULARLY ADOPTED, this 28th day of August, 2018.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS **J. GEORGE BAMBA**
Chairperson Secretary

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

///

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Exhibit A (1 of 1)

ORIGINAL

GUAM WATERWORKS AUTHORITY
ABSTRACT OF BIDS

Project Name: **ASAN-ADELUP-HAGATNA, ROUTE 1 SEWERLINE REHABILITATION AND REPLACEMENT (RE-BID2)**

Bid Opening Date: July 13, 2018
Time: 3:00 pm

Project Number: S15-002-EPA IFB NO.: IFB-05-ENG-2018

	Qualified Bidders Name	Section A-5 Bid Bond	CERTIFICATIONS: Bidder Qualification Statement	Non-Collusion Affidavit	Equal Employment Opportunity	Non-Segregated Facilities	Non-Employment of Sexual Offender	Wage & Benefit Determination	Major Shareholders Affidavit	Special Instruction to Bidders	Addendum 1	Addendum 2	Addendum 3	Addendum 4	Addendum 5	SCHEDULE A: BASE BID	SCHEDULE A: ADDITIVE BID NO. 1	SCHEDULE A: ADDITIVE BID NO. 2	SCHEDULE B: BASE BID	SCHEDULE B: ADDITIVE BID NO. 1	SCHEDULE B: ADDITIVE BID NO. 2
1.	IAN CORPORATION																				
2.	CORE TECH INTERNATIONAL CORP.	FIDELITY AND DEPOSIT COMPANY OF MARYLAND, 15%	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	$8,754,800.00	$2,632,500.00	$272,500.00	No Bid	No Bid	No Bid
3.	GIANT CONSTRUCTION CORP.																				
4.	MCCONNELL DOWELL CONSTRUCTORS, LTD																				
5.	PROPACIFIC BUILDER CORP.																				
6.	PACIFIC DEVELOPMENT/INSITUFORM																				
7.	INFRATECH INTL., INC.	PACIFIC INDEMNITY INSURANCE COMPANY, 15%	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	$5,920,000.00	$2,898,797.80	$355,782.98	No Bid	No Bid	No Bid
	GWA Estimate															$6,542,177.40	$1,171,708.05	$284,129.80			

Bids Opened and Read by:
GLORIA B. BENSAN
(Name and Signature)

Tabulated by:
GEORGE WATSON
(Name and Signature)

GWA Procurement Representative:
Victoria Hecocke
(Name and Signature)

Witnesses:
K. Naresh Kumar

Exhibit B (1 of 15)

July 24, 2018

Mr. Thomas F. Cruz, PE
Chief Engineer
The Guam Waterworks Authority
Engineering Division
Gloria B. Nelson Public Service Building
688 Rt. 15
Mangilao, Guam 96913

SUBJECT: Asan-Adelup-Hagatna, Route 1 Sewer Line Rehabilitation and Replacement, Recommendation of Bid Award, GWA Project No. S15-002-EPA

Dear Mr. Cruz,

HDR has reviewed the two (2) bid submissions submitted for the second re-bid attempt for the Asan-Adelup-Hagatna Sewer Line Rehabilitation and Replacement project from the following construction contractors:

1. Infratech International, LLC
2. Core-Tech/Hawaiian Dredging

All bid submissions included all of the required bidding forms to be submitted as part of the bid package. All bonding requirements have been met by both contractors. There were two bid schedules, Bid Schedule “A” and Bid Schedule “B”, that were advertised as part of this bid solicitation. There were no bids provided for Schedule “B”, therefore any further reference in this letter to the bid schedule is to the Schedule “A” that was submitted by both contractors.

The bid schedules for both contractors were tabulated, reviewed and are included herein with this letter for your review. The following observations were made while tabulating each Contractor’s bid:

Infratech, International, LLC:

1. Overall, the pricing for the base bid line items were close to the engineer’s estimate, however the following items were noted for GWA to be aware of, due to their significant variance from the engineer’s estimate: Bid Item No. 2 (Unclassified Trench Excavation, 0-10’), Bid Item No. 3 (Unclassified Trench Excavation, 10-20’) and Bid Item No. 17 (A.C. Pavement Resurfacing). The engineer’s estimate for these prices were based upon review of the previous bids received by other contractor’s during the bidding of the Asan Sewer Break Repair, therefore these unit costs provided are much lower.

hdrinc.com

134 W. Soledad Ave., Suite 404, Hagatna, GU 96910
T 671.989.5558 **F** 671.989.5557

Exhibit B (2 of 15)

2. On the base bid, line item 28, the unit price provided on the bid schedule is typed as $970/LF, however after reviewing the total price and the quantity provided, it was determined that the unit cost should have been $9.70/LF.
3. The summary totals found on page 21 of the bid schedule, the total listed for the base bid is shown to be $5,224,389.99, which is incorrect and should read $5,920,000.00 as shown on page 13 of the bid schedule. This matches what was tabulated using the unit prices given in the bid schedule.
4. For Additive Bid #1, the following bid items have a significant variance from the engineer's estimate: Bid Item No. 2 (10-20'), Bid Item No. 7 (A.C. Pavement Resurfacing), Bid Item No. 8 (Milling Asphalt) and Bid Item No. 9 (Asphalt Friction Course). The engineer's estimate for these prices were based upon review of the previous bids received by other contractor's during the bidding of the Asan Sewer Break Repair, therefore these unit costs provided are much lower. For Bid Item No. 8 & 9, it was noticed that the unit price for these varies drastically lower than from the same bid line items provided under the base bid.

Coretech/Hawaiian Dredging, LLC:

1. The bid proposal had most of the unit prices to the nearest $0.0001 of accuracy. Even with this level of accuracy on the bid items unit prices and multiplying them against the unit quantities, there were some total bid item prices that did not match the totals provided on the bid schedule. These amounts were off by one to a few cents and caused the bid tabulation sum total for Coretech/Hawaiian Dredging to not match their submitted bid schedule totals.
2. For the base bid, the following items were noted due to their significant variance from the engineer's estimate: Bid Item No. 2 (Unclassified Trench Excavation, 0-10'). As stated earlier the engineer's estimate for these prices were based upon review of the previous bids received by other contractor's during the bidding of the Asan Sewer Break Repair, therefore these unit costs provided are much lower.
3. For additive bid #1, the following items were noted due to their significant variance from the engineer's estimate: Bid Item No. 2 (Unclassified Trench Excavation, 10-20'). As stated earlier the engineer's estimate for these prices were based upon review of the previous bids received by other contractor's during the bidding of the Asan Sewer Break Repair, therefore these unit costs provided are much lower.

Additional project reference verification was made on Infratech International, LLC and specifically with their proposed subconsultant, Allied Trenchless. Contact was attempted with all of the listed past project clients that Cured in Place Piping (CIPP) was conducted, but only one project reference was able to be verified. That project was with the Federal Highway Administration (FHWA) and was the WA PRA OLYM 12(2) Hurricane Ridge Rd, Phase II project. This project is still currently under construction and consists of CIPP on 18-24 in Corrugated Metal Pipe and 36-48 inch concrete pipe using UV cured in place method. I spoke with Mr. Mike Nemy with FHWA and he without hesitation gave a high recommendation for Allied Trenchless. No other client contacts returned my calls to verify the others projects and their satisfaction with the work.

Exhibit B (3 of 15)

A request was made of Infratech International, LLC and Allied Trenchless for them to provide resumes for both the CIPP Work Supervisor, CIPP work crew member and the lateral reinstatement personnel to verify they meet the minimum requirements as listed in the Contractor qualifications found in Specification Section 33 01 30.72 or Section 33 01 30.73. These resumes were provided and are included herein for your reference. Allied Trenchless meets the minimum project linear footage requirements of the CIPP Work Supervisor and the CIPP Work crew member. The CIPP Work crew member is the lateral reinstatement person, however from the resume it was not able to be determined if they meet the minimum requirements, but it is expected from the listing of the projects that they do.

Listed below is a summary table of the various bid options and their respective totals for both bidders:

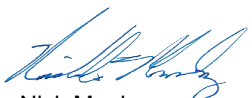
	Infratech International, LLC	Coretech/Hawaiian Dredging, LLC
Base Bid (Basis of Award)	**$5,920,000.00**	**$8,754,800.00**
Base Bid + Additive Bid #1	$8,818,797.81	$11,387,300.00
Base Bid + Additive Bid #2	$6,275,782.88	$9,027,300.00
Base Bid + Additive Bid #1 + Additive Bid #2	$9,174,580.69	$11,659,800.00

The basis of award for this project was the base bid, which resulted in the lowest bidder to be Infratech International, LLC. After reviewing the two bid options, Additive Bid #1 by Infratech International is $1.8 million higher from the engineer's estimate and therefore is not recommended to be included in this award. Additive Bid #2, although higher than the engineer's estimate, is recommended to be considered at this time, if it is within the overall budget that GWA has for this project. This additive bid would allow for GWA to have a good look at the condition of the siphon that is under the Fonte River and then be able to decide what needs to be done, if anything, in any future project(s) that will continue the repair or replacement of the rest of the overall Route 1 project limits that were excluded from this contract package, but are within the overall design project.

If you should have further questions, please feel free to call me.

Sincerely,

HDR Engineering, Inc.



Nick Manley
Project Manager

Exhibit B (4 of 15)

Asan-Adelup-Hagatna, Route 1 Sewer Rehabilitation and Replacement
IFB-05-ENG-2018
GWA Project No. S15-002-EPA

HDR Project No. 10013963
7/24/2018

Bid Tabulation

SCHEDULE A - Base Bid Description of Work:

Line A Work (SMH 1399Asan to Asan Pump Station)

Work consists of replacement of 18-inch and 20-inch diameter asbestos cement pipe (ACP) gravity sewer lines with new 18-inch and 20-inch diameter polyvinyl chloride (PVC) sewer lines, respectively, reconnecting sewer laterals after new pipe installation is complete, removing and disposing of 18-inch and 20-inch diameter ACP, abandoning 12-inch PVC sewer lines, cleaning existing 14-inch, 16-inch, 18-inch, and 20-inch diameter gravity sewer lines and rehabilitating those lines with cured-in-place pipe (CIPP) liner, reinstating sewer laterals after CIPP rehabilitation is complete, rehabilitating manholes, and providing temporary bypassing and traffic control as necessary to complete the replacement and rehabilitation work.

			Engineer's Estimate			Average Unit Price			Infratech International, LLC			Core-Tech/Hawaiian Dredging, LLC		
Item No.	Description	Unit	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount
1	Mobilization and Demobilization	Lump Sum	$ 594,743.40	1	$ 594,743.40	$ 911,001.55	1	$ 911,001.55	$ 346,337.14	1	$ 346,337.14	$ 1,475,665.9669	1	$ 1,475,665.97
2	Unclassified Trench Excavation for Pipe Repair Work, including pavement demolition, shoring, or bracing, underpinning, positive groundwater control, protection and support of structures and utilities, removal of trench support, select fill, flowable fill, traffic covers, and all incidentals required to complete the work. (0'-10' Depth)	Lin. Ft.	$ 2,500.00	458	$ 1,145,000.00	$ 478.41	458	$ 219,112.97	348.69	458	159,700.02	608.1352	458	278,525.92
3	Unclassified Trench Excavation for Pipe Repair Work, including pavement demolition, shoring, or bracing, underpinning, positive groundwater control, protection and support of structures and utilities, removal of trench support, select fill, flowable fill, traffic covers, and all incidentals required to complete the work. (10'-20' Depth)	Lin. Ft.	$ 3,000.00	223	$ 669,000.00	$ 1,471.67	223	$ 328,182.27	810.64	223	180,772.72	2,132.6987	223	475,591.81
4	Dewatering and dewatering effluent disposal	Lump Sum	$ 135,000.00	1	$ 135,000.00	$ 128,110.11	1	$ 128,110.11	$ 154,423.87	1	$ 154,423.87	$ 101,796.3459	1	$ 101,796.35
5	Removal and disposal of existing 12-inch diameter asbestos cement pipe, and all incidentals required to complete the work.	Lin. Ft.	$ 127.00	458	$ 58,166.00	$ 311.93	458	$ 142,865.27	379.80	458	173,948.40	244.0658	458	111,782.14
6	Removal and disposal of existing 12-inch diameter polyvinyl chloride pipe, and all incidentals required to complete the work.	Lin. Ft.	$ 20.00	152	$ 3,040.00	$ 37.01	152	$ 5,625.88	68.65	152	10,434.80	5.3748	152	816.97
7	Removal and disposal of existing 18-inch diameter asbestos cement pipe, and all incidentals required to complete the work.	Lin. Ft.	$ 253.00	157	$ 39,721.00	$ 396.23	157	$ 62,207.98	461.43	157	72,444.51	331.0284	157	51,971.46
8	Removal and disposal of existing 20-inch diameter asbestos cement pipe, and all incidentals required to complete the work.	Lin. Ft.	$ 329.00	66	$ 21,714.00	$ 451.34	66	$ 29,788.48	483.18	66	31,889.88	419.5012	66	27,687.08
9	Abandonment of 12-inch diameter PVC pipe, and all incidentals required to complete the work.	Lin. Ft.	$ 8.00	321	$ 2,568.00	$ 55.04	321	$ 17,668.35	77.63	321	24,919.23	32.4532	321	10,417.48
10	Abandonment of sewer manhole and all incidentals required to complete the work.	Ea.	$ 1,300.00	2	$ 2,600.00	$ 2,293.10	2	$ 4,586.20	3,768.31	2	7,536.62	817.8855	2	1,635.77
11	Crushed rock bedding including compaction and woven geotextile fabric for 16-inch PVC sewer pipe, in place complete.	Lin. Ft.	$ 63.00	458	$ 28,854.00	$ 52.17	458	$ 23,895.37	44.10	458	20,197.80	60.2466	458	27,592.94
12	Crushed rock bedding including compaction and woven geotextile fabric for 18-inch PVC sewer pipe, in place complete.	Lin. Ft.	$ 76.00	157	$ 11,932.00	$ 53.82	157	$ 8,449.58	45.24	157	7,102.68	62.3979	157	9,796.47
13	Crushed rock bedding including compaction and woven geotextile fabric for 20-inch PVC sewer pipe, in place complete.	Lin. Ft.	$ 83.00	66	$ 5,478.00	$ 71.28	66	$ 4,704.40	49.38	66	3,259.08	93.1776	66	6,149.72
14	Pipe Repair; install new 16" PVC pipe (AWWA C-905, DR 25) by open trenching, including piping, fittings, testing, warning/identification tape, and all incidentals, in place complete. (0'-10' Depth)	Lin. Ft.	$ 86.00	458	$ 39,388.00	$ 230.48	458	$ 105,560.37	199.85	458	91,531.30	261.1123	458	119,589.43
15	Pipe Repair; install new 18" PVC pipe (AWWA C-905, DR 18) by open trenching, including piping, fittings, testing, warning/identification tape, and all incidentals, in place complete. (10'-20' Depth)	Lin. Ft.	$ 101.00	157	$ 15,857.00	$ 1,004.75	157	$ 157,746.15	366.99	157	57,617.43	1,642.5151	157	257,874.87
16	Pipe Repair; install new 20" PVC pipe (AWWA C-905, DR 18) by open trenching, including piping, fittings, testing, warning/identification tape, and all incidentals, in place complete. (10'-20' Depth)	Lin. Ft.	$ 127.00	66	$ 8,382.00	$ 369.61	66	$ 24,394.22	453.65	66	29,940.90	285.5688	66	18,847.54
17	A.C. Pavement Resurfacing, including pavement transitions, prime coat, tack coat, traffic striping, miscellaneous restoration, and all necessary labor, materials and equipment, in place complete.	Sq. Yds.	$ 202.00	450	$ 90,900.00	$ 265.67	450	$ 119,552.18	90.09	450	40,540.50	441.2530	450	198,563.85
18	Milling Asphalt Friction Course, including all necessary labor, materials and equipment, in place complete.	Sq. Yds.	$ 100.00	126	$ 12,600.00	$ 317.83	126	$ 40,046.11	141.99	126	17,890.74	493.6625	126	62,201.48

HDR

Asan-Adelup-Hagatna, Route 1 Sewer Rehabilitation and Replacement
IFB-05-ENG-2018
GWA Project No. S15-002-EPA

Exhibit B (5 of 15)

HDR Project: 10026963
7/24/2018

Item No.	Description	Unit	Engineer's Estimate			Average Unit Price			Infratech International, LLC			Core-Tech/Hawaiian Dredging, LLC		
			Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount
19	Asphalt Friction Course, including pavement transitions and all necessary labor, materials and equipment, in place complete.	Sq. Yds.	$ 140.00	261	$ 36,540.00	$ 229.49	261	$ 59,897.62	108.42	261	28,297.62	350.5656	261	91,497.62
20	Sewer Line Cleaning of existing 14-inch Asbestos Cement Pipe (ACP) sewer lines, including removal and disposal of debris, and other items as necessary to complete the inspection and rehabilitation work.	Lin. Ft.	$ 22.00	1,153	$ 25,366.00	$ 13.13	1,153	$ 15,140.91	18.95	1,153	21,849.35	7.3135	1,153	8,432.47
21	Sewer Line Cleaning of existing 16-inch Asbestos Cement Pipe (ACP) and 16-inch Polyvinyl Chloride (PVC) pipe sewer lines, including removal and disposal of debris, and other items as necessary to complete the inspection and rehabilitation work.	Lin. Ft.	$ 22.00	815	$ 17,930.00	$ 14.34	815	$ 11,685.55	19.90	815	16,218.50	8.7762	815	7,152.60
22	Sewer Line Cleaning of existing 18-inch Asbestos Cement Pipe (ACP) sewer lines, including removal and disposal of debris, and other items as necessary to complete the inspection and rehabilitation work.	Lin. Ft.	$ 33.00	915	$ 30,195.00	$ 15.63	915	$ 14,297.61	19.55	915	17,888.25	11.7016	915	10,706.96
23	Sewer Line Cleaning of existing 20-inch Asbestos Cement Pipe (ACP) sewer lines, including removal and disposal of debris, and other items as necessary to complete the inspection and rehabilitation work.	Lin. Ft.	$ 39.00	35	$ 1,365.00	$ 41.60	35	$ 1,455.91	32.00	35	1,120.00	51.1946	35	1,791.81
24	Closed-Circuit Television (CCTV) inspections for initial assessment of existing 14" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 12.00	1,153	$ 13,836.00	$ 8.94	1,153	$ 10,302.52	12.02	1,153	13,859.06	5.8508	1,153	6,745.97
25	Closed-Circuit Television (CCTV) inspections for initial assessment of existing 16" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 12.00	815	$ 9,780.00	$ 10.14	815	$ 8,265.53	12.97	815	10,570.55	7.3135	815	5,960.50
26	Closed-Circuit Television (CCTV) inspections for initial assessment of existing 18" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 12.00	915	$ 10,980.00	$ 10.69	915	$ 9,784.19	12.61	915	11,538.15	8.7762	915	8,030.22
27	Closed-Circuit Television (CCTV) inspections for initial assessment of existing 20" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 12.00	35	$ 420.00	$ 30.69	35	$ 1,074.11	24.81	35	868.35	36.5676	35	1,279.87
28	Closed-Circuit Television (CCTV) inspections for pre- and post-rehabilitation of existing 14" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 12.00	2,306	$ 27,672.00	$ 8.51	2,306	$ 19,616.57	9.70	2,306	22,368.20	7.3135	2,306	16,864.93
29	Closed-Circuit Television (CCTV) inspections for pre- and post-rehabilitation of existing 16" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 12.00	1,630	$ 19,560.00	$ 9.71	1,630	$ 15,832.35	10.65	1,630	17,359.50	8.7762	1,630	14,305.21
30	Closed-Circuit Television (CCTV) inspections for pre- and post-rehabilitation of existing 18" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 12.00	1,830	$ 21,960.00	$ 10.26	1,830	$ 18,783.94	10.29	1,830	18,830.70	10.2389	1,830	18,737.19
31	Closed-Circuit Television (CCTV) inspections for pre- and post-rehabilitation of existing 20" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 12.00	70	$ 840.00	$ 18.45	70	$ 1,291.17	14.95	70	1,046.50	21.9406	70	1,535.84
32	Installation of cured-in-place pipe (CIPP) lining in existing 14-inch sewer line, including wet out, preparation, testing of installed liner, sealing at manholes, reconstructing manhole transition sections and benches, and other items as necessary to complete the work.	Lin. Ft.	$ 320.00	1,153	$ 368,960.00	$ 301.25	1,153	$ 347,339.00	361.15	1,153	416,405.95	241.3461	1,153	278,272.05
33	Installation of cured-in-place pipe (CIPP) lining in existing 16-inch sewer line, including wet out, preparation, testing of installed liner, sealing at manholes, reconstructing manhole transition sections and benches, and other items as necessary to complete the work.	Lin. Ft.	$ 330.00	815	$ 268,950.00	$ 346.76	815	$ 282,608.26	408.29	815	332,756.35	285.2272	815	232,460.17
34	Installation of cured-in-place pipe (CIPP) lining in existing 18-inch sewer line, including wet out, preparation, testing of installed liner, sealing at manholes, reconstructing manhole transition sections and benches, and other items as necessary to complete the work.	Lin. Ft.	$ 367.00	915	$ 335,805.00	$ 373.17	915	$ 341,453.62	483.06	915	441,999.90	263.2867	915	240,907.33

Exhibit B (6 of 15)

Asan-Adelup-Hagatna, Route 1 Sewer Rehabilitation and Replacement
IFB-05-ENG-2018
GWA Project No. S15-002-EPA

HDR Project: 10026963
7/24/2018

Item No.	Description	Unit	Engineer's Estimate			Average Unit Price			Infratech International, LLC			Core-Tech/Hawaiian Dredging, LLC		
			Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount
35	Installation of cured-in-place pipe (CIPP) lining in existing 20-inch sewer line, including wet out, preparation, testing of installed liner, sealing at manholes, reconstructing manhole transition sections and benches, and other items as necessary to complete the work.	Lin. Ft.	$ 405.00	35	$ 14,175.00	$ 796.43	35	$ 27,875.17	788.38	35	27,593.30	804.4871	35	28,157.05
36	Reinstatement of existing sewer laterals upon completion of CIPP lining installation, and all incidentals, in place complete.	Ea.	$ 1,012.00	20	$ 20,240.00	$ 2,534.51	20	$ 50,690.22	$ 4,337.67	20	$ 86,753.40	$ 731.3519	20	$ 14,627.04
37	Rehabilitation of Sewer Manholes with epoxy coating, including cleaning of manhole, bench repair, surface preparation, cementitious underlayment, epoxy topcoat, testing, and other items as necessary to complete the work.	Vert. Ft.	$ 1,100.00	18	$ 19,800.00	$ 4,222.83	18	$ 76,010.90	766.46	18	13,796.28	7,679.1951	18	138,225.51
38	Rehabilitation of Sewer Manholes; patching surface defects and other items as necessary to complete the work.	Ea.	$ 5,500.00	4	$ 22,000.00	$ 4,044.41	4	$ 16,177.64	$ 4,578.33	4	$ 18,313.32	$ 3,510.4892	4	$ 14,041.96
39	Cast iron manhole frame and cover, 25-inch diameter, including grade adjustment rings where required, and other items as necessary to complete the work.	Ea.	$ 900.00	18	$ 16,200.00	$ 3,146.80	18	$ 56,642.32	$ 4,747.44	18	$ 85,453.92	$ 1,546.1511	18	$ 27,830.72
40	Cast iron manhole frame and cover, 30-inch diameter, including grade adjustment rings where required, and other items as necessary to complete the work.	Ea.	$ 1,020.00	1	$ 1,020.00	$ 4,009.92	1	$ 4,009.92	$ 5,895.33	1	$ 5,895.33	$ 2,124.5115	1	$ 2,124.51
41	Sewer manhole concrete collar, including reinforcing steel, borrow material where required, and other items as necessary to complete the work.	Ea.	$ 900.00	19	$ 17,100.00	$ 3,146.04	19	$ 59,774.67	$ 5,251.09	19	$ 99,770.71	$ 1,040.9807	19	$ 19,778.63
42	Sewer Flow Control, including diversion and bypass pumping plan, temporary bypass piping and pumps, pipe plugs, bypassing at sewer laterals (including locating and exposing cleanouts), temporary trenches (including pavement demolition, excavation, backfill, trench covers, temporary and permanent AC pavement and concrete pavement), electrical and standby power/pumps, monitoring, spill containment/mitigation, additional traffic control, all related restoration work, in place complete.	Lump Sum	$ 380,000.00	1	$ 380,000.00	$ 1,023,176.95	1	$ 1,023,176.95	294,146.34	1	294,146.34	1,752,207.5657	1	1,752,207.57
43	Traffic Control Work, including obtaining approvals, redesign/modification of traffic control plans for the contractor's convenience, traffic control work, all traffic control devices, placement and removal of devices and detours, cleanup, restoration, and incidentals.	Lump Sum	$ 391,000.00	1	$ 391,000.00	$ 226,703.42	1	$ 226,703.42	145,982.52	1	145,982.52	307,424.3218	1	307,424.32
44	Point Repair for 14-inch diameter PVC sewer pipe, including pavement demolition, shoring, or bracing, underpinning, positive groundwater control, protection and support of structures and utilities, removal of trench support, select fill, flowable fill, traffic covers, and all incidentals required to complete the work. (4 LF pipe section or less, per line segment) (0'-10' Depth)	Ea.	$ 4,950.00	5	$ 24,750.00	$ 16,359.22	5	$ 81,796.09	23,602.76	5	118,013.80	9,115.6755	5	45,578.38
45	Extra Length Point Repair for 14-inch diameter PVC sewer pipe, all depths; in excess of 4 LF (Typ.)	Lin. Ft.	$ 1,320.00	321	$ 423,720.00	$ 1,262.99	321	$ 405,420.98	$ 1,568.59	321	$ 503,517.39	$ 957.3974	321	$ 307,324.57
46	Point Repair for 16-inch diameter PVC sewer pipe, including pavement demolition, shoring, or bracing, underpinning, positive groundwater control, protection and support of structures and utilities, removal of trench support, select fill, flowable fill, traffic covers, and all incidentals required to complete the work. (4 LF pipe section or less, per line segment) (0'-10' Depth)	Ea.	$ 5,060.00	4	$ 20,240.00	$ 14,764.01	4	$ 59,056.03	13,747.56	4	54,990.24	15,780.4554	4	63,121.82
47	Extra Length Point Repair for 16-inch diameter PVC sewer pipe, all depths; in excess of 4 LF (Typ.)	Lin. Ft.	$ 1,320.00	305	$ 402,600.00	$ 1,424.55	305	$ 434,488.73	$ 1,705.88	305	$ 520,293.40	$ 1,143.2264	305	$ 348,684.05
48	Point Repair for 18-inch diameter PVC sewer pipe, including pavement demolition, shoring, or bracing, underpinning, positive groundwater control, protection and support of structures and utilities, removal of trench support, select fill, flowable fill, traffic covers, and all incidentals required to complete the work. (4 LF pipe section or less, per line segment) (0'-10' Depth)	Ea.	$ 5,500.00	5	$ 27,500.00	$ 46,334.60	5	$ 231,673.00	33,399.22	5	166,996.10	59,269.9800	5	296,349.90
49	Extra Length Point Repair for 18-inch diameter PVC sewer pipe, all depths; in excess of 4 LF (Typ.)	Lin. Ft.	$ 1,430.00	351	$ 501,930.00	$ 2,063.82	351	$ 724,400.40	$ 1,670.24	351	$ 586,254.24	$ 2,457.3976	351	$ 862,546.56

Asan-Adelup-Hagatna, Route 1 Sewer Rehabilitation and Replacement
IFB-05-ENG-2018
GWA Project No. S15-002-EPA

Exhibit B (7 of 15)

HDR Project: 10026963
7/24/2018

Item No.	Description	Unit	Engineer's Estimate			Average Unit Price			Infratech International, LLC			Core-Tech/Hawaiian Dredging, LLC		
			Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount
50	Sewer Flow Control for Point Repairs of 14-inch, 16-inch, and 18-inch sewer pipe for every 4 LF of point repair, including diversion and bypass pumping plan, temporary bypass piping and pumps, pipe plugs, bypassing at sewer laterals (including locating and exposing cleanouts), temporary trenches (including pavement demolition, excavation, backfill, trench covers, temporary and permanent AC pavement and concrete pavement), electrical and standby power/pumps, monitoring, spill containment/mitigation, additional traffic control, all related restoration work, in place complete.	Ea.	$ 11,000.00	14	$ 154,000.00	$ 15,734.58	14	$ 220,284.10	14,582.88	14	204,160.32	16,886.2776	14	236,407.89
51	Traffic Control Work for Point Repairs, including traffic control work, all traffic control devices, placement and removal of devices and detours, cleanup, restoration, and incidentals.	Ea.	$ 2,200.00	14	$ 30,800.00	$ 10,492.36	14	$ 146,893.04	13,186.06	14	184,604.84	7,798.6604	14	109,181.25
	SCHEDULE A - BASE BID (TOTAL Items 1 through 51, inclusive)				**$ 6,542,177.40**			**$ 7,337,399.85**			**$ 5,920,000.00**			**$ 8,754,799.70**
	BASE BID (BASIS OF AWARD) =				**$ 6,542,177.40**			**$ 7,337,399.85**			**$ 5,920,000.00**			**$ 8,754,799.70**
	BASE BID + ADDITIVE BID #1 =				**$ 7,713,885.45**			**$ 8,370,267.78**			**$ 8,818,797.81**			**$ 11,387,299.75**
	BASE BID + ADDITIVE BID #1 + ADDITIVE BID #2 =				**$ 7,948,010.25**			**$ 8,684,409.22**			**$ 9,174,580.69**			**$ 11,659,799.75**

Exhibit B (8 of 15)

Asan-Adelup-Hagatna, Route 1 Sewer Rehabilitation and Replacement
IFB-05-ENG-2018
GWA Project No. S15-002-EPA

HDR Project: 10026963
7/24/2018

Bid Tabulation

SCHEDULE A - Additive Bid #1 Description of Work:

Line B Work (SMH 13ASAN to SMH 350AHAGA)

Work consists of cleaning existing 16-inch and 24-inch diameter gravity sewer lines, rehabilitating approximately 16-inch and 24-inch diameter sewer lines with cured-in-place pipe (CIPP) liner, reinstating sewer laterals after CIPP rehabilitation is complete, replacing sewer manhole concrete collars, and providing temporary bypassing and traffic control as necessary to complete the rehabilitation work.

Line C Work (SMH 398Asan to 355AAsan)

Work consists of abandoning an existing 12-inch ACP sewer line, installing a new 12-inch diameter polyvinyl chloride (PVC) sewer line, and providing temporary bypassing and traffic control as necessary to complete the work.

			Engineers Estimate			Average Unit Price			Infratech International, LLC			Core-Tech/Hawaiian Dredging, LLC		
Item No.	Description	Unit	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount
1	Mobilization (For costs associated with bonding, insurance and permits for Additive Bid #1)	Lump Sum	$ 98,387.05	1	$ 98,387.05	$ 109,640.79	1	$ 109,640.79	$ 96,843.00	1	$ 96,843.00	$ 122,438.5700	1	$ 122,438.57
2	Unclassified Trench Excavation for Pipe Repair Work, including pavement demolition, shoring, or bracing, underpinning, positive groundwater control, protection and support of structures and utilities, removal of trench support, select fill, flowable fill, traffic covers, and all incidentals required to complete the work. (10'-20' Depth)	Lin. Ft.	$ 3,000.00	80	$ 240,000.00	$ 634.83	80	$ 50,786.64	$ 499.16	80	$ 39,932.80	$ 770.5061	80	$ 61,640.49
3	Dewatering and dewatering effluent disposal for Additive Bid #1	Lump Sum	$ 43,000.00	1	$ 43,000.00	$ 33,337.77	1	$ 33,337.77	$ 53,509.26	1	$ 53,509.26	$ 13,166.2882	1	$ 13,166.29
4	Crushed rock bedding including compaction and woven geotextile fabric for 12-inch PVC sewer pipe, in place complete.	Lin. Ft.	$ 41.00	80	$ 3,280.00	$ 75.71	80	$ 6,056.83	$ 62.24	80	$ 4,979.20	$ 89.1807	80	$ 7,134.46
5	Abandonment of 12-inch diameter ACP pipe, and all incidentals required to complete the work.	Lin. Ft.	$ 7.00	123	$ 861.00	$ 145.45	123	$ 17,890.69	$ 228.21	123	$ 28,069.83	$ 62.6956	123	$ 7,711.56
6	Pipe Repair; install new 12" PVC pipe (AWWA C-900, DR 25) by open trenching, including piping, fittings, testing, warning/identification tape, and all incidentals, in place complete. (10'-20' Depth)	Lin. Ft.	$ 75.00	80	$ 6,000.00	$ 176.07	80	$ 14,085.60	$ 260.46	80	$ 20,836.80	$ 91.6800	80	$ 7,334.40
7	A.C. Pavement Resurfacing, including pavement transitions, prime coat, tack coat, traffic striping, miscellaneous restoration, and all necessary labor, materials and equipment, in place complete.	Sq. Yds.	$ 202.00	74	$ 14,948.00	$ 107.77	74	$ 7,975.13	$ 51.66	74	$ 3,822.84	$ 163.8840	74	$ 12,127.42
8	Milling Asphalt Friction Course, including all necessary labor, materials and equipment, in place complete.	Sq. Yds.	$ 100.00	109	$ 10,900.00	$ 56.81	109	$ 6,192.59	$ 50.36	109	$ 5,489.24	$ 63.2655	109	$ 6,895.94
9	Asphalt Friction Course, including pavement transitions and all necessary labor, materials and equipment, in place complete.	Sq. Yds.	$ 140.00	183	$ 25,620.00	$ 48.17	183	$ 8,815.23	$ 24.24	183	$ 4,435.92	$ 72.1013	183	$ 13,194.54
10	Sewer Line Cleaning of existing 16-inch Asbestos Cement Pipe (ACP) sewer lines, including removal and disposal of debris, and other items as necessary to complete the inspection and rehabilitation work.	Lin. Ft.	$ 20.00	1,324	$ 26,480.00	$ 12.07	1,324	$ 15,979.55	$ 17.16	1,324	$ 22,719.84	$ 6.9783	1,324	$ 9,239.27
11	Sewer Line Cleaning of existing 18-inch Asbestos Cement Pipe (ACP) sewer lines, including removal and disposal of debris, and other items as necessary to complete the inspection and rehabilitation work.	Lin. Ft.	$ 30.00	248	$ 7,440.00	$ 15.68	248	$ 3,889.83	$ 21.60	248	$ 5,356.80	$ 9.7696	248	$ 2,422.86
12	Sewer Line Cleaning of existing 24-inch Asbestos Cement Pipe (ACP) sewer lines, including removal and disposal of debris, and other items as necessary to complete the inspection and rehabilitation work.	Lin. Ft.	$ 35.00	408	$ 14,280.00	$ 18.09	408	$ 7,382.33	$ 19.44	408	$ 7,931.52	$ 16.7479	408	$ 6,833.14
13	Closed-Circuit Television (CCTV) inspections for initial assessment of existing 16" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 10.00	646	$ 6,460.00	$ 11.06	646	$ 7,145.60	$ 16.54	646	$ 10,684.84	$ 5.5826	646	$ 3,606.36
14	Closed-Circuit Television (CCTV) inspections for initial assessment of existing 24" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 10.00	144	$ 1,440.00	$ 12.95	144	$ 1,865.18	$ 14.74	144	$ 2,122.56	$ 11.1653	144	$ 1,607.80
15	Closed-Circuit Television (CCTV) inspections for pre- and post-rehabilitation of existing 16" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 10.00	1,292	$ 12,920.00	$ 8.45	1,292	$ 10,922.76	$ 9.93	1,292	$ 12,829.56	$ 6.9783	1,292	$ 9,015.96
16	Closed-Circuit Television (CCTV) inspections for pre- and post-rehabilitation of existing 24" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 10.00	288	$ 2,880.00	$ 12.93	288	$ 3,724.40	$ 17.49	288	$ 5,037.12	$ 8.3739	288	$ 2,411.68

Asan-Adelup-Hagatna, Route 1 Sewer Rehabilitation and Replacement
IFB-05-ENG-2018
GWA Project No. S15-002-EPA

Exhibit B (9 of 15)

HDR Project: 10026963
7/24/2018

Item No.	Description	Unit	Engineers Estimate			Average Unit Price			Infratech International, LLC			Core-Tech/Hawaiian Dredging, LLC		
			Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount
17	Installation of cured-in-place pipe (CIPP) lining in existing 16-inch sewer line, including wet out, preparation, testing of installed liner, sealing at manholes, reconstructing manhole transition sections and benches, and other items as necessary to complete the work.	Lin. Ft.	$ 300.00	646	$ 193,800.00	$ 278.62	646	$ 179,989.49	$ 285.09	646	$ 184,168.14	$ 272.1530	646	$ 175,810.84
18	Installation of cured-in-place pipe (CIPP) lining in existing 24-inch sewer line, including wet out, preparation, testing of installed liner, sealing at manholes, reconstructing manhole transition sections and benches, and other items as necessary to complete the work.	Lin. Ft.	$ 368.00	144	$ 52,992.00	$ 416.32	144	$ 59,949.76	$ 448.83	144	$ 64,631.52	$ 383.8055	144	$ 55,267.99
19	Reinstatement of existing sewer laterals upon completion of CIPP lining installation, and all incidentals, in place complete.	Ea.	$ 920.00	3	$ 2,760.00	$ 1,438.44	3	$ 4,315.31	$ 2,193.00	3	$ 6,579.00	$ 683.8717	3	$ 2,051.62
20	Sewer manhole concrete collar, including reinforcing steel, borrow material where required, and other items as necessary to complete the work.	Ea.	$ 820.00	3	$ 2,460.00	$ 2,868.49	3	$ 8,605.46	$ 4,743.71	3	$ 14,231.13	$ 993.2643	3	$ 2,979.79
21	Install new Plain Precast Concrete Manhole, including plugging or bypass pumping, excavation and backfill, crushed rock base, reinforced concrete base, precast concrete riser(s) and cone, flexible pipe seals and connectors, grade adjustment ring(s), Type "SA" frame and cover, channelized invert, testing, incidentals, and all necessary labor, materials, and equipment, in place complete.	Ea.	$ 19,000.00	1	$ 19,000.00	$ 43,194.57	1	$ 43,194.57	$ 19,189.50	1	$ 19,189.50	$ 67,199.6499	1	$ 67,199.65
22	Sewer Flow Control for new pipe installation and rehabilitation, including diversion and bypass pumping plan, temporary bypass piping and pumps, pipe plugs, bypassing at sewer laterals (including locating and exposing cleanouts), temporary trenches (including pavement demolition, excavation, backfill, trench covers, temporary and permanent AC pavement and concrete pavement), electrical and standby power/pumps, monitoring, spill containment/mitigation, additional traffic control, all related restoration work, in place complete.	Lump Sum	$ 159,400.00	1	$ 159,400.00	$ 358,824.08	1	$ 358,824.08	$ 154,328.91	1	$ 154,328.91	$ 563,319.2431	1	$ 563,319.24
23	Traffic Control Work for new pipe installation and rehabilitation, including obtaining approvals, redesign/modification of traffic control plans for the contractor's convenience, traffic control work, all traffic control devices, placement and removal of devices and detours, cleanup, restoration, and incidentals.	Lump Sum	$ 226,400.00	1	$ 226,400.00	$ 72,298.33	1	$ 72,298.33	$ 115,556.62	1	$ 115,556.62	$ 29,040.0383	1	$ 29,040.04
24	Point Repair for 16-inch diameter PVC sewer pipe, including pavement demolition, shoring, or bracing, underpinning, positive groundwater control, protection and support of structures and utilities, removal of trench support, select fill, flowable fill, traffic covers, and all incidentals required to complete the work. (4 LF pipe section or less, per line segment) (0'-10' Depth)	Ea.	$ 5,100.00	4	$ 20,400.00	$ 24,992.34	4	$ 99,969.36	$ 37,609.90	4	$ 150,439.60	$ 12,374.7809	4	$ 49,499.12
25	Extra Length Point Repair for 16-inch diameter PVC sewer pipe, all depths; in excess of 4 LF (Typ.)	Lin. Ft.	$ 1,320.00	311	$ 410,520.00	$ 1,828.99	311	$ 568,816.42	$ 2,322.87	311	$ 722,412.57	$ 1,335.1134	311	$ 415,220.27
26	Point Repair for 24-inch diameter PVC sewer pipe, including pavement demolition, shoring, or bracing, underpinning, positive groundwater control, protection and support of structures and utilities, removal of trench support, select fill, flowable fill, traffic covers, and all incidentals required to complete the work. (4 LF pipe section or less, per line segment) (0'-10' Depth)	Ea.	$ 6,500.00	3	$ 19,500.00	$ 44,914.76	3	$ 134,744.29	$ 35,207.54	3	$ 105,622.62	$ 54,621.9885	3	$ 163,865.97
27	Extra Length Point Repair for 24-inch diameter PVC sewer pipe, all depths; in excess of 4 LF (Typ.)	Lin. Ft.	$ 1,430.00	260	$ 371,800.00	$ 2,406.80	260	$ 625,768.18	$ 2,715.02	260	$ 705,905.20	$ 2,098.5814	260	$ 545,631.16
28	Sewer Flow Control for Point Repairs of 16-inch sewer pipe for every 4 LF of point repair, including diversion and bypass pumping plan, temporary bypass piping and pumps, pipe plugs, bypassing at sewer laterals (including locating and exposing cleanouts), temporary trenches (including pavement demolition, excavation, backfill, trench covers, temporary and permanent AC pavement and concrete pavement), electrical and standby power/pumps, monitoring, spill containment/mitigation, additional traffic control, all related restoration work, in place complete.	Ea.	$ 10,000.00	4	$ 40,000.00	$ 34,284.53	4	$ 137,138.10	$ 38,806.19	4	$ 155,224.76	$ 29,762.8608	4	$ 119,051.44

Asan-Adelup-Hagatna, Route 1 Sewer Rehabilitation and Replacement
IFB-05-ENG-2018
GWA Project No. S15-002-EPA

Exhibit B (10 of 15)

HDR Project No. 10126963
7/24/2018

Item No.	Description	Unit	Engineers Estimate			Average Unit Price			Infratech International, LLC			Core-Tech/Hawaiian Dredging, LLC		
			Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount
29	Sewer Flow Control for Point Repairs of 24-inch sewer pipe for every 4 LF of point repair, including diversion and bypass pumping plan, temporary bypass piping and pumps, pipe plugs, bypassing at sewer laterals (including locating and exposing cleanouts), temporary trenches (including pavement demolition, excavation, backfill, trench covers, temporary and permanent AC pavement and concrete pavement), electrical and standby power/pumps, monitoring, spill containment/mitigation, additional traffic control, all related restoration work, in place complete.	Ea.	$ 10,000.00	3	$ 30,000.00	$ 29,938.41	3	$ 89,815.23	$ 20,350.75	3	$ 61,052.25	$ 39,526.0681	3	$ 118,578.20
30	Traffic Control Work for Point Repairs, including traffic control work, all traffic control devices, placement and removal of devices and detours, cleanup, restoration, and incidentals.	Ea.	$ 2,200.00	1	$ 2,200.00	$ 76,529.42	1	$ 76,529.42	$ 114,854.86	1	$ 114,854.86	$ 38,203.9745	1	$ 38,203.97
	SCHEDULE A - ADDITIVE BID #1 (TOTAL Items 1 through 30, inclusive)				**$ 1,171,708.05**			**$ 1,032,867.93**			**$ 2,898,797.81**			**$ 2,632,500.05**

HDR

Asan-Adelup-Hagatna, Route 1 Sewer Rehabilitation and Replacement
IFB-05-ENG-2018
GWA Project No. S15-002-EPA

Exhibit B (11 of 15)

HDR Project: 10026963
7/27/2018

Bid Tabulation

SCHEDULE A - Additive Bid #2 Description of Work:
Line B Work (SMH 350AHAGA to SMH 350BHAGA)
Work consists of cleaning and inspecting one siphon consisting of two (2) - 18-inch barrels and providing temporary bypassing and traffic control as necessary to complete the rehabilitation work.

			Engineer's Estimate			Average Unit Price			Infratech International, LLC			Core-Tech/Hawaiian Dredging, LLC		
Item No.	Description	Unit	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount
1	Mobilization (For costs associated with bonding, insurance and permits for Additive Bid #2)	Lump Sum	$ 11,148.80	1	$ 11,148.80	$ 22,402.25	1	$ 22,402.25	$ 27,398.66	1	$ 27,398.66	$ 17,405.8400	1	$ 17,405.84
2	Sewer Line Cleaning of Inverted Siphon (2 - 18" Cast Iron Barrels, approximately 124 linear feet each, 22.5 degree bends), including removal and disposal of debris, and all incidentals necessary to complete work.	Lump Sum	$ 22,000.00	1	$ 22,000.00	$ 40,963.27	1	$ 40,963.27	12,120.19	1	12,120.19	69,806.3400	1	69,806.34
3	Closed-Circuit Television (CCTV) inspections for assessment of existing inverted siphon (2 - 18" Cast Iron Barrels, approximately 124 linear feet each, 22.5 degree bends) and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 12.00	248	$ 2,976.00	$ 103.33	248	$ 25,625.29	14.45	248	3,583.60	192.2056	248	47,666.99
4	Sewer Flow Control for siphon inspection and cleaning, including diversion and bypass pumping plan, temporary bypass piping and pumps, pipe plugs, bypassing at sewer laterals (including locating and exposing cleanouts), temporary trenches (including pavement demolition, excavation, backfill, trench covers, temporary and permanent AC pavement and concrete pavement), electrical and standby power/pumps, monitoring, spill containment/mitigation, additional traffic control, all related restoration work, in place complete.	Lump Sum	$ 165,000.00	1	$ 165,000.00	$ 188,637.46	1	$ 188,637.46	250,822.56	1	250,822.56	126,452.3600	1	126,452.36
5	Traffic Control Work, including obtaining approvals, redesign/modification of traffic control plans for the contractor's convenience, traffic control work, all traffic control devices, placement and removal of devices and detours, cleanup, restoration, and incidentals.	Lump Sum	$ 33,000.00	1	$ 33,000.00	$ 36,513.17	1	$ 36,513.17	61,857.87	1	61,857.87	11,168.4700	1	11,168.47
	SCHEDULE A - ADDITIVE BID #2 (TOTAL Items 1 through 5, inclusive)				**$ 234,124.80**			**$ 314,141.44**			**$ 355,782.88**			**$ 272,500.00**

Exhibit B (12 of 15)

RON SMILEY III

TRENCHLESS CIPP LINING APPLICATION INSTALLER| ALLIED TRENCHLESS

SKILLS

Specializes using the latest technologies, wet out procedures, robotics, cutters and cameras.

EXPERIENCE

TRENCHLESS/CIPP LINING INSTALLER • ALLIED TRENCHLESS • FROM 2012 TO CURRENT

Starting in 2012, we have completed roughly 250 successful CIPP projects. Continuous projects ranging from CIPP gravity, CIPP sewer mains, CIPP forced main distribution lines, CIPP pressurized water mains, CIPP gravity sewer laterals, CIPP irrigation lines, CIPP culverts, and CIPP storm drain lines
Projects sites in Oregon, Washington, and Montana

SAMPLE OF PROJECTS

QUINCY, WA
200 LF of 15 inch CIPP Lining sewer lateral

HOODRIVER, OR
200 LF of 12 inch CIPP Lining with robotic cutter to reinstate multiple laterals.
200 LF of 8 inch CIPP Lining of sewer lines with laterals. Project involved working with extreme grade.

TOPPENISH, WA
2,000 LF of 6 inch CIPP Lining sewer main.

KIRKLAND, WA
300 LF of 4 inch CIPP Lining of main sewer line.
100 LF of 6 inch CIPP Lining of main sewer line.

RENTON, WA
100 LF of 6 inch CIPP Lining of main sewer line.

Exhibit B (13 of 15)

EAST WENATCHEE, WA
600 LF of 6 inch CIPP gravity irrigation lines.
CIPP Lining of sewer pipe to city sewer.

WENATCHEE, WA
200 LF of 8 inch CIPP lining of multiple hospital lines.
400 LF of CIPP Lining of 4 inch cast iron sewer lines.
200 LF of CIPP Lining of 6 inch cast iron and clay sewer lines that are 14 feet deep and travel under the roadway.

MOSES LAKE, WA
500 LF of 4-6 inch CIPP Lining of main sewer line at several locations.

RICHLAND, WA
500 LF of 4-6 inch CIPP Lining of concrete sewer line at various locations.

LEAVENWORTH, WA
350 LF of 4 inch CIPP Lining of sewer lines.

CASHMERE, WA
250 LF of 18 inch CIPP Lining of storm drain
200 LF of 4 inch CIPP Linin of laterals and main sewer line.

YAKIMA, WA
2400 LF of 6 inch CIPP Lining of pressure sewer lines.
350 LF of 4 inch CIPP Lining of gravity sewer lines.

SPOKANE, WA
3000 LF of 8 inch CIPP Lining of sewer lines.
100 LF of 36'' CIPP Lining of culvert

TULALIP, WA
4000 LF of 8 inch CIPP Lining of sewer lines

HURRICANE RIDGE, WA
506 LF of 18'' storm drain lines
1360 LF of 24'' storm drain lines
265 LF of 36'' storm drain lines (will be completed by 8/1/18)
150 LF of 48'' storm drain lines (will be completed by 8/1/18)

Exhibit B (14 of 15)

TYLER ALLEN

TRENCHLESS CIPP LINING APPLICATION INSTALLER| ALLIED TRENCHLESS

SKILLS

Specializes using the latest technologies, wet out procedures, robotics, cutters and cameras.

EXPERIENCE

TRENCHLESS/CIPP LINING INSTALLER • ALLIED TRENCHLESS • FROM 2012 TO CURRENT

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SAMPLE OF PROJECTS

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200 LF of 15 inch CIPP Lining sewer lateral

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300 LF of 4 inch CIPP Lining of main sewer line.
100 LF of 6 inch CIPP Lining of main sewer line.

RENTON, WA
100 LF of 6 inch CIPP Lining of main sewer line.

Exhibit B (15 of 15)

EAST WENATCHEE, WA
600 LF of 6 inch CIPP gravity irrigation lines.
CIPP Lining of sewer pipe to city sewer.

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HURRICANE RIDGE, WA
506 LF of 18'' storm drain lines
1360 LF of 24'' storm drain lines
265 LF of 36'' storm drain lines (will be completed by 8/1/18)
150 LF of 48'' storm drain lines (will be completed by 8/1/18)

Addendum No. 5

Exhibit C (1 of 20)

BID FORM

ARTICLE 1 - BID RECIPIENT

1.01 This Bid is submitted to:

Guam Waterworks Authority
Gloria B. Nelson Public Service Building
688 Route 15
Mangilao, Guam 96913

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into a Contract with Buyer in the form included in the Bidding Documents to furnish the Goods and Special Services as specified or indicated in the Bidding Documents, for the prices and within the times indicated in this Bid, and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 - BIDDER'S ACKNOWLEDGMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Buyer.

ARTICLE 3 - BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, the related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged:

Addendum No.	Addendum Date
01	June 04, 2018
02	June 05, 2018
03	June 07, 2018
04	June 22, 2018
05	July 03, 2018

B. Bidder has visited the Point of Destination and site where the Goods are to be installed or Special Services will be provided and become familiar with and is satisfied as to the observable local conditions that may affect cost, progress, or the furnishing of Goods and Special Services, if required to do so by the Bidding Documents, or if, in Bidder's judgment, any local condition may affect cost, progress, or the furnishing of Goods and Special Services.

C. Bidder is familiar with and is satisfied as to all Laws and Regulations in effect as of the date of the Bid that may affect cost, progress, and the furnishing of Goods and Special Services.

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D. Bidder has carefully studied, considered, and correlated the information known to Bidder; information commonly known to sellers of similar goods doing business in the locality of the Point of Destination and the site where the Goods will be installed or where Special Services will be provided; information and observations obtained from Bidder's visits, if any, to the Point of Destination and the site where the Goods will be installed or Special Services will be provided; and any reports and drawings identified in the Bidding Documents regarding the Point of Destination and the site where the Goods will be installed or where Special Services will be provided, with respect to the effect of such information, observations, and documents on the cost, progress, and performance of Seller's obligations under the Bidding Documents.

E. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution (if any) thereof by Engineer is acceptable to Bidder.

F. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for furnishing the Goods and Special Services for which this Bid is submitted.

ARTICLE 4 - BIDDER'S CERTIFICATIONS

4.01 Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Buyer, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Buyer of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Buyer, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process.

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Exhibit C (3 of 20)

Addendum No. 5

ARTICLE 5 - BASIS OF BID

5.01 Bidder will furnish the Goods and Special Services in accordance with the Contract Documents for the following price(s). Bids shall be evaluated on the total amount of the Schedule A Base Bid (which reflects significant installation of CIPP). Award of Schedule A Additive bid items shall depend on fund availability and shall be made at the sole discretion of GWA. The successful bidder shall be the lowest responsive responsible bidder for Schedule A Base Bid. If no bids are received for Schedule A Base Bid (CIPP), GWA reserves the right to then award to the lowest responsive responsible bidder for the Alternate Schedule B Base Bid (non-CIPP Open cut). Award of Schedule B Additive bid items shall depend on fund availability and shall be made at the sole discretion of GWA. Bidders shall insert Schedule A and Schedule B bids in separate envelopes. Bid opening shall include only Schedule A submissions. **If there are no Schedule A submissions,** GWA shall open Schedule B submissions.

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Exhibit C (4 of 20)

Addendum No. 5

SCHEDULE A - Base Bid Description of Work:

Line A Work (SMH 1399Asan to Asan Pump Station)

Work consists of replacement of 18-inch and 20-inch diameter asbestos cement pipe (ACP) gravity sewer lines with new 18-inch and 20-inch diameter polyvinyl chloride (PVC) sewer lines, respectively, reconnecting sewer laterals after new pipe installation is complete, removing and disposing of 18-inch and 20-inch diameter ACP, abandoning 12-inch PVC sewer lines, cleaning existing 14-inch, 16-inch, 18-inch, and 20-inch diameter gravity sewer lines and rehabilitating those lines with cured-in-place pipe (CIPP) liner, reinstating sewer laterals after CIPP rehabilitation is complete, rehabilitating manholes, and providing temporary bypassing and traffic control as necessary to complete the replacement and rehabilitation work.

				Base Bid	
Item No.	Description	Unit	Unit Price	Qty	Bid Amount
1	Mobilization and Demobilization	Lump Sum	$ 346,337.14	1	$ 346,337.14
2	Unclassified Trench Excavation for Pipe Repair Work, including pavement demolition, shoring, or bracing, underpinning, protection and support of structures and utilities, removal of trench support, select fill, flowable fill, traffic covers, and all incidentals required to complete the work. (0'-10' Depth)	Lin. Ft.	$ 348.69	458	$ 159,700.02
3	Unclassified Trench Excavation for Pipe Repair Work, including pavement demolition, shoring, or bracing, underpinning, protection and support of structures and utilities, removal of trench support, select fill, flowable fill, traffic covers, and all incidentals required to complete the work. (10'-20' Depth)	Lin. Ft.	$ 810.64	223	$ 180,772.72
4	Dewatering and dewatering effluent disposal	Lump Sum	$ 154,423.87	1	$ 154,423.87
5	Removal and disposal of existing 12-inch diameter asbestos cement pipe, and all incidentals required to complete the work.	Lin. Ft.	$ 379.80	458	$ 173,948.40
6	Removal and disposal of existing 12-inch diameter polyvinyl chloride pipe, and all	Lin. Ft.	$ 68.65	152	$ 10,434.80

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Exhibit C (5 of 20)

	incidentals required to complete the work.				
7	Removal and disposal of existing 18-inch diameter asbestos cement pipe, and all incidentals required to complete the work.	Lin. Ft.	$ 461.43	157	$ 72,444.51
8	Removal and disposal of existing 20-inch diameter asbestos cement pipe, and all incidentals required to complete the work.	Lin. Ft.	$ 483.18	66	$ 31,889.88
9	Abandonment of 12-inch diameter PVC pipe, and all incidentals required to complete the work.	Lin. Ft.	$ 77.63	321	$ 24,919.23
10	Abandonment of sewer manhole and all incidentals required to complete the work.	Ea.	$ 3,768.31	2	$ 7,536.62
11	Crushed rock bedding including compaction and woven geotextile fabric for 16-inch PVC sewer pipe, in place complete.	Lin. Ft.	$ 44.10	458	$ 20,197.80
12	Crushed rock bedding including compaction and woven geotextile fabric for 18-inch PVC sewer pipe, in place complete.	Lin. Ft.	$ 45.24	157	$ 7,102.68
13	Crushed rock bedding including compaction and woven geotextile fabric for 20-inch PVC sewer pipe, in place complete.	Lin. Ft.	$ 49.38	66	$ 3,259.08
14	Pipe Repair; install new 16" PVC pipe (AWWA C-905, DR 25) by open trenching, including piping, fittings, testing, warning/identification tape, and all incidentals, in place complete. (0'-10' Depth)	Lin. Ft.	$ 199.85	458	$ 91,531.30
15	Pipe Repair; install new 18" PVC pipe (AWWA C-905, DR 18) by open trenching, including piping, fittings, testing, warning/identification tape, and all incidentals, in	Lin. Ft.	$ 366.99	157	$ 57,617.43

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Exhibit C (6 of 20)

Addendum No. 5

	place complete. (10'-20' Depth)				
16	Pipe Repair; install new 20" PVC pipe (AWWA C-905, DR 18) by open trenching, including piping, fittings, testing, warning/identification tape, and all incidentals, in place complete. (10'-20' Depth)	Lin. Ft.	$ 453.65	66	$ 29,940.90
17	A.C. Pavement Resurfacing, including pavement transitions, prime coat, tack coat, traffic striping, miscellaneous restoration, and all necessary labor, materials and equipment, in place complete.	Sq. Yds.	$ 90.09	450	$ 40,540.50
18	Milling Asphalt Friction Course, including all necessary labor, materials and equipment, in place complete.	Sq. Yds.	$ 141.99	126	$ 17,890.74
19	Asphalt Friction Course, including pavement transitions and all necessary labor, materials and equipment, in place complete.	Sq. Yds.	$ 108.42	261	$ 28,297.62
20	Sewer Line Cleaning of existing 14-inch Asbestos Cement Pipe (ACP) sewer lines, including removal and disposal of debris, and other items as necessary to complete the inspection and rehabilitation work.	Lin. Ft.	$ 18.95	1,153	$ 21,849.35
21	Sewer Line Cleaning of existing 16-inch Asbestos Cement Pipe (ACP) and 16-inch Polyvinyl Chloride (PVC) pipe sewer lines, including removal and disposal of debris, and other items as necessary to complete the inspection and rehabilitation work.	Lin. Ft.	$ 19.90	815	$ 16,218.50
22	Sewer Line Cleaning of existing 18-inch Asbestos Cement Pipe (ACP) sewer lines, including removal and disposal of debris, and other items as necessary to complete the inspection and rehabilitation work.	Lin. Ft.	$ 19.55	915	$ 17,888.25

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23	Sewer Line Cleaning of existing 20-inch Asbestos Cement Pipe (ACP) sewer lines, including removal and disposal of debris, and other items as necessary to complete the inspection and rehabilitation work.	Lin. Ft.	$ 32.00	35	$ 1,120.00
24	Closed-Circuit Television (CCTV) inspections for initial assessment of existing 14" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 12.02	1,153	$ 13,859.06
25	Closed-Circuit Television (CCTV) inspections for initial assessment of existing 16" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 12.97	815	$ 10,570.55
26	Closed-Circuit Television (CCTV) inspections for initial assessment of existing 18" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 12.61	915	$ 11,538.15
27	Closed-Circuit Television (CCTV) inspections for initial assessment of existing 20" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 24.81	35	$ 868.35
28	Closed-Circuit Television (CCTV) inspections for pre- and post-rehabilitation of existing 14" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 970	2,306	$ 22,368.20

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29	Closed-Circuit Television (CCTV) inspections for pre- and post-rehabilitation of existing 16" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 10.65	1,630	$ 17,359.50
30	Closed-Circuit Television (CCTV) inspections for pre- and post-rehabilitation of existing 18" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 10.29	1,830	$ 18,830.70
31	Closed-Circuit Television (CCTV) inspections for pre- and post-rehabilitation of existing 20" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 14.95	70	$ 1,046.50
32	Installation of cured-in-place pipe (CIPP) lining in existing 14-inch sewer line, including wet out, preparation, testing of installed liner, sealing at manholes, reconstructing manhole transition sections and benches, and other items as necessary to complete the work.	Lin. Ft.	$ 361.15	1,153	$ 416,405.95
33	Installation of cured-in-place pipe (CIPP) lining in existing 16-inch sewer line, including wet out, preparation, testing of installed liner, sealing at manholes, reconstructing manhole transition sections and benches, and other items as necessary to complete the work.	Lin. Ft.	$ 408.29	815	$ 332,756.35
34	Installation of cured-in-place pipe (CIPP) lining in existing 18-inch sewer line, including wet	Lin. Ft.	$ 483.06	915	$ 441,999.90

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Addendum No. 5

	out, preparation, testing of installed liner, sealing at manholes, reconstructing manhole transition sections and benches, and other items as necessary to complete the work.				
35	Installation of cured-in-place pipe (CIPP) lining in existing 20-inch sewer line, including wet out, preparation, testing of installed liner, sealing at manholes, reconstructing manhole transition sections and benches, and other items as necessary to complete the work.	Lin. Ft.	$ 788.38	35	$ 27,593.30
36	Reinstatement of existing sewer laterals upon completion of CIPP lining installation, and all incidentals, in place complete.	Ea.	$ 4,337.67	20	$ 86,753.40
37	Rehabilitation of Sewer Manholes with epoxy coating, including cleaning of manhole, bench repair, surface preparation, cementitious underlayment, epoxy topcoat, testing, and other items as necessary to complete the work.	Vert. Ft.	$ 766.46	18	$ 13,796.28
38	Rehabilitation of Sewer Manholes; patching surface defects and other items as necessary to complete the work.	Ea.	$ 4,578.33	4	$ 18,313.32
39	Cast iron manhole frame and cover, 25-inch diameter, including grade adjustment rings where required, and other items as necessary to complete the work.	Ea.	$ 4,747.44	18	$ 85,453.92
40	Cast iron manhole frame and cover, 30-inch diameter, including grade adjustment rings where required, and other items as necessary to	Ea.	$ 5,895.33	1	$ 5,895.33

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Addendum No. 5

	complete the work.				
41	Sewer manhole concrete collar, including reinforcing steel, borrow material where required, and other items as necessary to complete the work.	Ea.	$ 5,251.09	19	$ 99,770.71
42	Sewer Flow Control, including diversion and bypass pumping plan, temporary bypass piping and pumps, pipe plugs, bypassing at sewer laterals (including locating and exposing cleanouts), temporary trenches (including pavement demolition, excavation, backfill, trench covers, temporary and permanent AC pavement and concrete pavement), electrical and standby power/pumps, monitoring, spill containment/mitigation, additional traffic control, all related restoration work, in place complete.	Lump Sum	$ 294,146.34	1	$ 294,146.34
43	Traffic Control Work, including obtaining approvals, redesign/modification of traffic control plans for the contractor's convenience, traffic control work, all traffic control devices, placement and removal of devices and detours, cleanup, restoration, and incidentals.	Lump Sum	$ 145,982.52	1	$ 145,982.52
44	Point Repair for 14-inch diameter PVC sewer pipe, including pavement demolition, shoring, or bracing, underpinning, positive groundwater control, protection and support of structures and utilities, removal of trench support, select fill, flowable fill, traffic covers, and all incidentals	Ea.	$ 23,602.76	5	$ 118,013.80

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	required to complete the work. (4 LF pipe section or less, per line segment) (0'-10' Depth)				
45	Extra Length Point Repair for 14-inch diameter PVC sewer pipe, all depths; in excess of 4 LF (Typ.)	Lin. Ft.	$ 1,568.59	321	$ 503,517.39
46	Point Repair for 16-inch diameter PVC sewer pipe, including pavement demolition, shoring, or bracing, underpinning, positive groundwater control, protection and support of structures and utilities, removal of trench support, select fill, flowable fill, traffic covers, and all incidentals required to complete the work. (4 foot pipe segment) (0'-10' Depth)	Ea.	$ 13,747.56	4	$ 54,990.24
47	Extra Length Point Repair for 16-inch diameter PVC sewer pipe, all depths; in excess of 4 LF (Typ.)	Lin. Ft.	$ 1,705.88	305	$ 520,293.40
48	Point Repair for 18-inch diameter PVC sewer pipe, including pavement demolition, shoring, or bracing, underpinning, positive groundwater control, protection and support of structures and utilities, removal of trench support, select fill, flowable fill, traffic covers, and all incidentals required to complete the work. Maximum of 20 LF. (10'-20' Depth)	Ea.	$ 33,399.22	5	$ 166,996.10
49	Extra Length Point Repair for 18-inch diameter PVC sewer pipe, all depths; in excess of 4 LF (Typ.)	Lin. Ft.	$ 1,670.24	351	$ 586,254.24

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50	Sewer Flow Control for Point Repairs of 14-inch, 16-inch, and 18-inch sewer pipe for every 4 LF of point repair, including diversion and bypass pumping plan, temporary bypass piping and pumps, pipe plugs, bypassing at sewer laterals (including locating and exposing cleanouts), temporary trenches (including pavement demolition, excavation, backfill, trench covers, temporary and permanent AC pavement and concrete pavement), electrical and standby power/pumps, monitoring, spill containment/mitigation, additional traffic control, all related restoration work, in place complete.	Ea.	$ 14,582.88	14	$ 204,160.32
51	Traffic Control Work for Point Repairs, including traffic control work, all traffic control devices, placement and removal of devices and detours, cleanup, restoration, and incidentals.	Ea.	$ 13,186.06	14	$ 184,604.84
BASE BID (TOTAL Items 1 through 51, inclusive)					$ 5,920,000.00

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Addendum No. 5

SCHEDULE A - Additive Bid #1 Description of Work:

Line B Work (SMH 13ASAN to SMH 350AHAGA)

Work consists of cleaning existing 16-inch and 24-inch diameter gravity sewer lines, rehabilitating approximately 16-inch and 24-inch diameter sewer lines with cured-in-place pipe (CIPP) liner, reinstating sewer laterals after CIPP rehabilitation is complete, replacing sewer manhole concrete collars, and providing temporary bypassing and traffic control as necessary to complete the rehabilitation work.

Line C Work (SMH 398Asan to 355AAsan)

Work consists of abandoning an existing 12-inch ACP sewer line, installing a new 12-inch diameter polyvinyl chloride (PVC) sewer line, and providing temporary bypassing and traffic control as necessary to complete the work.

Item No.	Description	Unit	Unit Price	Qty	Bid Amount
1	Mobilization (For costs associated with bonding, insurance and permits for Additive Bid #1)	Lump Sum	$ 96,843.00	1	$ 96,843.00
2	Unclassified Trench Excavation for Pipe Repair Work, including pavement demolition, shoring, or bracing, underpinning, protection and support of structures and utilities, removal of trench support, select fill, flowable fill, traffic covers, and all incidentals required to complete the work. (10'-20' Depth)	Lin. Ft.	$ 499.16	80	$39,932.80
3	Dewatering and dewatering effluent disposal for Additive Bid #1	Lump Sum	$ 53,509.26	1	$ 53,509.26
4	Crushed rock bedding including compaction and woven geotextile fabric for 12-inch PVC sewer pipe, in place complete.	Lin. Ft.	$ 62.24	80	$ 4,979.20
5	Abandonment of 12-inch diameter ACP pipe, and all incidentals required to complete the work.	Lin. Ft.	$ 228.21	123	$ 28,069.83

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Addendum No. 5

6	Pipe Repair; install new 12" PVC pipe (AWWA C-900, DR 25) by open trenching, including piping, fittings, testing, warning/identification tape, and all incidentals, in place complete. (10'-20' Depth)	Lin. Ft.	$ 260.46	80	$ 20,836.80
7	A.C. Pavement Resurfacing, including pavement transitions, prime coat, tack coat, traffic striping, miscellaneous restoration, and all necessary labor, materials and equipment, in place complete.	Sq. Yds.	$ 51.66	74	$ 3,822.84
8	Milling Asphalt Friction Course, including all necessary labor, materials and equipment, in place complete.	Sq. Yds.	$ 50.36	109	$ 5,489.24
9	Asphalt Friction Course, including pavement transitions and all necessary labor, materials and equipment, in place complete.	Sq. Yds.	$ 24.24	183	$ 4,435.92
10	Sewer Line Cleaning of existing 16-inch Asbestos Cement Pipe (ACP) sewer lines, including removal and disposal of debris, and other items as necessary to complete the inspection and rehabilitation work.	Lin. Ft.	$ 17.16	1,324	$ 22,719.84
11	Sewer Line Cleaning of existing 18-inch Asbestos Cement Pipe (ACP) sewer lines, including removal and disposal of debris, and other items as necessary to complete the inspection and rehabilitation work.	Lin. Ft.	$ 21.60	248	$ 5,356.80
12	Sewer Line Cleaning of existing 24-inch Asbestos Cement Pipe (ACP) sewer lines, including removal and disposal of debris, and other items as necessary to	Lin. Ft.	$ 19.44	408	$ 7,931.52

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Addendum No. 5

	complete the inspection and rehabilitation work.				
13	Closed-Circuit Television (CCTV) inspections for initial assessment of existing 16" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 16.54	646	$ 10,684.84
14	Closed-Circuit Television (CCTV) inspections for initial assessment of existing 24" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 14.74	144	$ 2,122.56
15	Closed-Circuit Television (CCTV) inspections for pre- and post-rehabilitation of existing 16" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 9.93	1,292	$ 12,829.56
16	Closed-Circuit Television (CCTV) inspections for pre- and post-rehabilitation of existing 24" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 17.49	288	$ 5,037.12
17	Installation of cured-in-place pipe (CIPP) lining in existing 16-inch sewer line, including wet out, preparation, testing of installed liner, sealing at manholes, reconstructing manhole transition sections and benches, and other items as necessary to complete the work.	Lin. Ft.	$ 285.09	646	$ 184,168.14
18	Installation of cured-in-place pipe (CIPP) lining in existing 24-inch sewer line, including	Lin. Ft.	$ 448.83	144	$ 64,631.52

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	wet out, preparation, testing of installed liner, sealing at manholes, reconstructing manhole transition sections and benches, and other items as necessary to complete the work.				
19	Reinstatement of existing sewer laterals upon completion of CIPP lining installation, and all incidentals, in place complete.	Ea.	$ 2,193.00	3	$ 6,579.00
20	Sewer manhole concrete collar, including reinforcing steel, borrow material where required, and other items as necessary to complete the work.	Ea.	$ 4,743.71	3	$ 14,231.13
21	Install new Plain Precast Concrete Manhole, including plugging or bypass pumping, excavation and backfill, crushed rock base, reinforced concrete base, precast concrete riser(s) and cone, flexible pipe seals and connectors, grade adjustment ring(s), Type "SA" frame and cover, channelized invert, testing, incidentals, and all necessary labor, materials, and equipment, in place complete.	Ea.	$ 19,189.50	1	$ 19,189.50
22	Sewer Flow Control for new pipe installation and rehabilitation, including diversion and bypass pumping plan, temporary bypass piping and pumps, pipe plugs, bypassing at sewer laterals (including locating and exposing cleanouts), temporary trenches (including pavement demolition, excavation, backfill, trench covers, temporary and permanent AC pavement and	Lump Sum	$ 154,328.91	1	$ 154,328.91

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Addendum No. 5

	concrete pavement), electrical and standby power/pumps, monitoring, spill containment/mitigation, additional traffic control, all related restoration work, in place complete.				
23	Traffic Control Work for new pipe installation and rehabilitation, including obtaining approvals, redesign/modification of traffic control plans for the contractor's convenience, traffic control work, all traffic control devices, placement and removal of devices and detours, cleanup, restoration, and incidentals.	Lump Sum	$ 115,556.62	1	$ 115,556.62
24	Point Repair with 16-inch diameter PVC sewer pipe, including pavement demolition, shoring, or bracing, underpinning, positive groundwater control, protection and support of structures and utilities, removal of trench support, select fill, flowable fill, traffic covers, and all incidentals required to complete the work. (0'-10' Depth)	Ea.	$ 37,609.90	4	$ 150,439.60
25	Extra Length Point Repair with 16-inch diameter PVC sewer pipe, all depths; in excess of 4 LF (Typ.)	Lin. Ft.	$ 2,322.87	311	$ 722,412.57
26	Point Repair with 24-inch diameter PVC sewer pipe, including pavement demolition, shoring, or bracing, underpinning, positive groundwater control, protection and support of structures and utilities, removal of trench support, select fill, flowable fill, traffic covers, and all incidentals	Ea.	$ 35,207.54	3	$ 105,622.62

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	required to complete the work. (0'-10' Depth)				
27	Extra Length Point Repair with 24-inch diameter PVC sewer pipe, all depths; in excess of 4 LF (Typ.)	Lin. Ft.	$ 2,715.02	260	$ 705,905.20
28	Sewer Flow Control for Point Repairs of 16-inch sewer pipe for every 4 LF of point repair, including diversion and bypass pumping plan, temporary bypass piping and pumps, pipe plugs, bypassing at sewer laterals (including locating and exposing cleanouts), temporary trenches (including pavement demolition, excavation, backfill, trench covers, temporary and permanent AC pavement and concrete pavement), electrical and standby power/pumps, monitoring, spill containment/mitigation, additional traffic control, all related restoration work, in place complete.	Ea.	$ 38,806.19	4	$ 155,224.76
29	Sewer Flow Control for Point Repairs of 24-inch sewer pipe for every 4 LF of point repair, including diversion and bypass pumping plan, temporary bypass piping and pumps, pipe plugs, bypassing at sewer laterals (including locating and exposing cleanouts), temporary trenches (including pavement demolition, excavation, backfill, trench covers, temporary and permanent AC pavement and concrete pavement), electrical and standby power/pumps, monitoring, spill containment/mitigation, additional traffic control, all related restoration work, in	Ea.	$ 20,350.75	3	$ 61,052.25

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Addendum No. 5

	place complete.				
30	Traffic Control Work for Point Repairs, including obtaining approvals, redesign/modification of traffic control plans for the contractor's convenience, traffic control work, all traffic control devices, placement and removal of devices and detours, cleanup, restoration, and incidentals.	Lump Sum	$ 114,854.86	1	$ 114,854.86
			ADDITIVE BID #1 (TOTAL Items 1 through 30, inclusive)		$ 2,898,797.81

SCHEDULE A - Additive Bid #2 Description of Work:
Line B Work (SMH 350AHAGA to SMH 350BHAGA)
Work consists of cleaning and inspecting one siphon consisting of two (2) - 18-inch barrels and providing temporary bypassing and traffic control as necessary to complete the rehabilitation work.

Item No.	Description	Unit	Unit Price	Qty	Bid Amount
1	Mobilization (For costs associated with bonding, insurance and permits for Additive Bid #2)	Lump Sum	$ 27,398.66	1	$ 27,398.66
2	Sewer Line Cleaning of Inverted Siphon (2 - 18" Cast Iron Barrels, approximately 124 linear feet each, 22.5 degree bends), including removal and disposal of debris, and all incidentals necessary to complete work.	Lump Sum	$ 12,120.19	1	$ 12,120.19
3	Closed-Circuit Television (CCTV) inspections for assessment of existing inverted siphon (2 - 18" Cast Iron Barrels, approximately 124 linear feet each, 22.5 degree bends) and sewer manholes, including reports, documentation, and all incidentals necessary to complete the work.	Lin. Ft.	$ 14.45	248	$ 3,583.60

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4	Sewer Flow Control for siphon inspection and cleaning, including diversion and bypass pumping plan, temporary bypass piping and pumps, pipe plugs, bypassing at sewer laterals (including locating and exposing cleanouts), temporary trenches (including pavement demolition, excavation, backfill, trench covers, temporary and permanent AC pavement and concrete pavement), electrical and standby power/pumps, monitoring, spill containment/mitigation, additional traffic control, all related restoration work, in place complete.	Lump Sum	$ 250,822.56	1	$ 250,822.56
5	Traffic Control Work, including obtaining approvals, redesign/modification of traffic control plans for the contractor's convenience, traffic control work, all traffic control devices, placement and removal of devices and detours, cleanup, restoration, and incidentals.	Lump Sum	$ 61,857.87	1	$ 61,857.87
			ADDITIVE BID #2 (TOTAL Items 1 through 5, inclusive)		$ 355,782.88

BASE BID (BASIS OF AWARD) =	$ 5,224,389.99
BASE BID + ADDITIVE BID #1 =	$ 2,898,797.81
BASE BID + ADDITIVE BID #1 + ADDITIVE BID #2 =	$ 355,782.88

Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents. Bidder also acknowledges that each unit price includes an amount considered by Bidder to be adequate to cover Bidder's overhead and profit for each separately identified item.

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GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution 45-FY2018

Relative to Contract Modification for the Tumon No. 2, Hyundai, and Chaot No. 2 Reservoir Construction Contract

What is the projects objective and is it necessary and urgent?
The objective of the Contract Modification is to construct the Chaot No. 2 tank, Hyundai Booster Pump Station and water lines on North Sabana Street, South Sabana Street, Corenoso Street, and associated side streets.

Chaot No. 2 Reservoir
The 0.5 MG Chaot No. 2 reservoir will be constructed to bring the total storage onsite back to 1.0 MG. The current Chaot No. 1 is 0.5 MG capacity.

Hyundai Booster Pump Station and Off-Site Water Line Upgrades
The Hyundai Booster Pump Station and line upgrades will serve the Hyundai (705) Pressure Zone Upper. The pump station will serve customer that are outside of the Hyundai Reservoir service area.

This project is a Court Order project falls under the deadline requirements established. Currently under contract with AIC International is the construction of the Tumon No. 2 reservoir, Hyundai reservoir, and off-site system improvements.

Where is the project located?
Chaot No. 2 is located at the end of Dero Road.

Hyundai Booster Pump Station will be located at the Hyundai Reservoir. The water line upgrades will be along North Sabana Street, South Sabana Street, Corenoso Street, and side streets.

How much will it cost?
The additive bid price provided by AIC International was $5,953,963.00.

Breakdown
- Chaot No. 2 Reservoir: $3,728,901.00
- Hyundai Booster Pump Station: $1,213,635.00
- 8-in and 12-in water line on North and South Sabana, Corenoso, and side street: $1,011,427.00

GWA Management also seeks approval of a 10% contingency for the Contract Modification fee proposal in the amount of $595,396.30.

When will it be completed?

1. Hyundai Additive Bid Items Substantial Completion: Additive Bid Item #8 if awarded will add 60 calendar days to the Hyundai Base Bid Substantial Completion. Additive Bid Item #9 if awarded will add zero (0) calendar days to the Hyundai Base Bid Substantial Completion. Additive Bid Item #10 if awarded will add 60 calendar days to the Hyundai Base Bid Substantial Completion.
2. Chaot No. 2 Additive Bid Item Substantial Completion: Additive Bid Item #5 if awarded will add 185 calendar days to the Chaot No. 2 Base Bid Substantial Completion. Additive Bid Item #6 if awarded will add zero (0) calendar days from NTP to the Chaot No. 2 Base Bid Substantial Completion. Additive Bid Item #7 if awarded will add zero (0) calendar days from NTP to the Chaot No. 2 Base Bid Substantial Completion.

What is the funding source?

1. PW 09-11: Water System Reservoirs 2005 Improvements and PW 12-04: Agana Heights & Chaot Tanks

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

GWA RESOLUTION NO. 45-FY2018

RELATIVE TO CONTRACT MODIFICATION FOR THE TUMON NO. 2, HYUNDAI, AND CHAOT NO. 2 RESEVOIRS CONSTRUCTION CONTRACT

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA currently has a number of critical Court Order ("CO") Projects, including the construction (i.e. repair, rehabilitate, replace or relocate) of the Tumon No. 2, Hyundai, and Chaot No. 2, as stated in Paragraph 29 (b) (4), (5), and (6) of the Court Order; and

WHEREAS, GWA has advertised an Invitation for Bid (IFB-09-ENG-2017) soliciting bid proposal from experienced, responsible, and responsive bidders to construct the Tumon No. 2 reservoir, Hyundai reservoir, and Chaot-Agana Heights reservoir off-site work in the Base Bid and an Additive Bid to construct the Chaot No. 2 reservoir (Bid Schedule Table C – Item No. 5, 6, and 7), Hyundai booster pump station (Bid Schedule Table B – Item No. 8), and Hyundai off site water line improvements (Bid Schedule Table B – Item No. 9) (See Exhibit A – Bid Schedule); and

WHEREAS, Resolution No. 05-FY2018 (See Exhibit B – Resolution No. 05-FY2018) approved GWA to award the contract to AIC International, Inc. for the Base Bid; and

WHEREAS, in compliance with the Court Order, GWA has executed a construction contract with AIC International, Inc. for the Base Bid work to address the following:

1. The construction of the new Tumon No. 2 reservoir (1.0 MG) to replace the existing Tumon No. 2 steel tank; and
2. The construction of the new Hyundai reservoir (1.0 MG) to replace the existing Hyundai steel tank; and
3. The disconnection of the A-series well from the Sinajana-Agana Heights distribution lines, Chaot and Agana Heights central chlorination system modifications, and Dero Road PRV rehabilitation to improve the Sinajana-Agana Heights water system;

WHEREAS, GWA seeks to issue a contract modification with AIC International, Inc. for portions of the Additive Bid work as noted in the Bid Schedule Tables above to construct the 0.5 MG Chaot No. 2 Reservoir that will bring the Chaot site capacity back to 1.0 MG capacity, the new Hyundai booster pump station, and the Hyundai off site water line improvements that will service Hyundai (705) Pressure Zone Upper; and

WHEREAS, the contract modification work shall consist of Bid Schedule Table C – Item No. 5, Bid Schedule Table B – Item No. 8, and Bid Schedule Table C – Item No. 9 describe below:

1. Contractor furnishing all labor, tools, equipment and material necessary to complete the construction of the second 0.5 MG pre-stressed concrete tank to include, but not limited to: foundation, earthwork, pipework, retaining wall, storm water detention basin, fences, gates, improves to access roads, protective coatings, disinfection, testing and start-up, under the provision of the bid documents and in accordance with applicable GWA standards; and

2. Contractor furnishing all labor, tools, equipment and material necessary to complete the construction of the Hyundai Booster Pump Station and waterlines on North Sabana Street, South Sabana Street, Corenoso Street, and associated side streets, under the provision of the bid documents and in accordance with applicable GWA standards; and

WHEREAS, the current contract awarded to AIC International, Inc. is in the amount of

Fourteen Million Eight Hundred Twenty-Eight Thousand One Hundred Ninety-Four Dollars and Zero Cents ($14,828,194.00) with a total authorized funding for the awarded Base Bid work is Sixteen Million Three Hundred Eleven Thousand Thirteen Dollars and Forty Cents ($16,311,013.40); and

WHEREAS, GWA management seeks approval to execute Contract Modification No. 1 to include the construction of Chaot No. 2 Reservoir, Hyundai Booster Pump Station, and water lines in the amount of Five Million Nine Hundred Fifty-Three Thousand Nine Hundred Sixty-Three Dollars and Zero Cents ($5,953,963.00), plus a 10% contingency of Five Hundred Ninety-Five Thousand Three Hundred Ninety-Six Dollars and Thirty Cents ($595,396.30), to bring Contract Modification No. 1 authorized funding to Six Million Five Hundred Forty-Nine Thousand Three Hundred Fifty-Nine Dollars and Thirty Cents ($6,549,359.30); and

WHEREAS, GWA management seeks CCU approval to bring the total authorized funding for the construction project with AIC International, Inc. to Twenty-Two Million Eight Hundred Sixty Thousand Three Hundred Seventy-Two Dollars and Seventy Cents ($22,860,372.70); and

WHEREAS, the funding source for the construction project will be from the CIP PW 09-11: Water System Reservoirs 2005 Improvements and PW 12-04: Agana Heights & Chaot Tanks; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve and authorize the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms of the bid proposal submitted by AIC International, Inc. are fair and reasonable.
3. The CCU hereby authorizes GWA management to execute Contract Modification No. 1 in the amount of Five Million Nine Hundred Fifty-Three Thousand Nine Hundred Sixty-Three Dollars and Zero Cents ($5,953,963.00), to bring the total contract amount

to Twenty Million Seven Hundred Eighty-Two Thousand One Hundred Fifty-Seven Dollars and Zero Cents ($20,782,157.00).

4. The CCU hereby approves a 10% contingency for the Contract Modification No. 1 work, which brings the authorized Contract Modification No. 1 funding to Six Million Five Hundred Forty-Nine Thousand Three Hundred Fifty-Nine Dollars and Thirty Cents ($6,549,359.30).
5. The CCU hereby further approves the total authorized construction funding including contingencies to Twenty-Two Million Eight Hundred Sixty Thousand Three Hundred Seventy-Two Dollars and Seventy Cents ($22,860,372.70).
6. The CCU hereby approves the use of Bond funding from CIP PW 09-11: Water System Reservoirs 2005 Improvements and PW 12-04: Agana Heights & Chaot Tanks.

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 28th day of August 2018.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS **J. GEORGE BAMBA**
Chairperson Secretary

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

EXHIBIT A (1 OF 19)

BID FORM

ARTICLE 1 - BID RECIPIENT

1.01 This Bid is submitted to:

Guam Waterworks Authority
Engineering Division, Room 202
Gloria B. Nelson Public Service Building
688 Route 15
Mangilao, Guam 96913

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into a Contract with Buyer in the form included in the Bidding Documents to furnish the Goods and Special Services as specified or indicated in the Bidding Documents, for the prices and within the times indicated in this Bid, and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 - BIDDER'S ACKNOWLEDGMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Buyer.

ARTICLE 3 - BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, the related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged:

Addendum No.	Addendum Date
Addendum No. 1	September 26, 2017
Addendum No. 2	October 5, 2017
Addendum No. 3	October 17, 2017
Addendum No. 4	October 24, 2017

B. Bidder has visited the Point of Destination and site where the Goods are to be installed or Special Services will be provided and become familiar with and is satisfied as to the observable local conditions that may affect cost, progress, or the furnishing of Goods and Special Services, if required to do so by the Bidding Documents, or if, in Bidder's judgment, any local condition may affect cost, progress, or the furnishing of Goods and Special Services.

EXHIBIT A (2 OF 19)

C. Bidder is familiar with and is satisfied as to all Laws and Regulations in effect as of the date of the Bid that may affect cost, progress, and the furnishing of Goods and Special Services.

D. Bidder has carefully studied, considered, and correlated the information known to Bidder; information commonly known to sellers of similar goods doing business in the locality of the Point of Destination and the site where the Goods will be installed or where Special Services will be provided; information and observations obtained from Bidder's visits, if any, to the Point of Destination and the site where the Goods will be installed or Special Services will be provided; and any reports and drawings identified in the Bidding Documents regarding the Point of Destination and the site where the Goods will be installed or where Special Services will be provided, with respect to the effect of such information, observations, and documents on the cost, progress, and performance of Seller's obligations under the Bidding Documents.

E. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution (if any) thereof by Engineer is acceptable to Bidder.

F. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for furnishing the Goods and Special Services for which this Bid is submitted.

ARTICLE 4 - BIDDER'S CERTIFICATIONS

4.01 Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Buyer, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Buyer of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Buyer, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process.

ARTICLE 5 - BASIS OF BID

5.01 Bidder will furnish the Goods and Special Services in accordance with the Contract Documents for the following price(s):

EXHIBIT A (4 OF 19)

BID SCHEDULE

Interested Bidders must complete Table A, Table B, and Table C. All blanks in the tables must be filled out.

Definitions:

LS = lump sum

TABLE A
TUMON NO. 2 SITE BID SCHEDULE

(BASE BID ITEMS NO. 1 – 8)

Item No.	Description	Quantity	Unit	Extended Amount
1.	Mobilization, as specified in the Contract Documents.	1	LS	$ 331,354.00
2.	Demolition of existing facilities, including the steel tank and foundation, paving, chain link fences and gates, piping, concrete vaults, headwall, and appurtenances, as shown and specified in the Contract Documents.	1	LS	$ 97,952.00

EXHIBIT A (5 OF 19)

TABLE A
TUMON NO. 2 SITE BID SCHEDULE

(BASE BID ITEMS NO. 1 – 8)

Item No.	Description	Quantity	Unit	Extended Amount
3.	Construction of Tumon No. 2 Reservoir, including a 1.0 million gallon (MG) nominal capacity pre-stressed concrete tank, earthwork, yard piping, fences and gates, coatings, control building, electrical, instrumentation and controls, disinfection, testing, startup, and all appurtenant work, complete and operable, as shown and specified in the Contract Documents.			
	Item 3 Breakdown			
	3.1 Earthwork			$ 152,139.00
	3.2 Tank Foundation			$ 149,581.00
	3.3 Tank Piping & Valving			$ 60,904.00
	3.4 Pre-stressed Concrete Tank			$ 3,267,643.00
	3.5 Tank Appurtenances			$ 3,616.00
	3.6 Tank Coating			$ 62,181.00
	3.7 Tank & Piping Disinfection			$ 17,957.00
3.	Item 3 Breakdown (Cont.)			
	3.8 Testing & Startup			$ 2,035.00
	3.9 Electrical System			$ 99,572.00
	3.10 Instrumentation and Control			$ 134,743.00
	3.11 Yard Piping & Valving			$ 371,620.00
	3.12 Five Vaults, Piping, Valving and Overflow Discharge Basin			$ 288,571.00
	3.13 Fencing and Gates			$ 48,237.00
	3.14 All other appurtenant work			$ 245,848.00
	Subtotal	1	LS	$ 4,904,647.00
4.	Site Grading and pavement including curbs, concrete gutters, headwall, sidewalk, stormwater swales, and riprap.	1	LS	$ 355,310.00

EXHIBIT A (6 OF 19)

TABLE A
TUMON NO. 2 SITE BID SCHEDULE

(BASE BID ITEMS NO. 1 – 8)

Item No.	Description	Quantity	Unit	Extended Amount
5.	Construction of Control Building, including electrical and controls, earthwork, and all appurtenant work, complete and operable as shown and specified in accordance with the Contract Documents.	1	LS	$ 70,008.00
6.	Construction of PRV Vault and Meter Vault on the 12-inch waterline on Pale San Vitores Road. Including construction of concrete vaults, manhole covers, piping, valves, meters, pressure reducing valves, protective coating, connection to existing pipes, connection of 12-inch and 16-inch waterlines, earthwork, testing and disinfection, electrical and SCADA, and all appurtenant work, complete and operable, as shown and specified in accordance with the Contract Documents.	1	LS	$ 359,696.00
7.	Construction of PRV replacement and Meter Vault on the 16-inch waterline on Pale San Vitores Road. Including construction of concrete vault, manhole cover, piping, valves, meters, pressure reducing valve, protective coating, connection to existing pipes, earthwork, testing and disinfection, electrical and SCADA, and all appurtenant work, complete and operable, as shown and specified in accordance with the Contract Documents.	1	LS	$ 264,494.00

EXHIBIT A (7 OF 19)

TABLE A
TUMON NO. 2 SITE BID SCHEDULE

(BASE BID ITEMS NO. 1 – 8)

Item No.	Description	Quantity	Unit	Extended Amount
8.	Construction of PRV replacements and Meter Vault at St. John's on Marine Corps Drive. Including construction of concrete vault, manhole covers, piping, valves, meters, pressure reducing valves, protective coating, connection to existing pipes, 14-inch connection of 24-inch and 14-inch waterlines, earthwork, electrical, testing and disinfection, and all appurtenant work, complete and operable, as shown and specified in accordance with the Contract Documents.	1	LS	$ 314,782.00
Table A Base Bid Subtotal				$ 6,698,243.00

EXHIBIT A (8 OF 19)

TABLE B
HYUNDAI SITE BID SCHEDULE

(BASE BID ITEMS NO. 1 – 7, ADDITIVE BID ITEMS NO. 8 – 10)

Item No.	Description	Quantity	Unit	Extended Amount
1.	Mobilization, as specified in the Contract Documents.	1	LS	$ 570,933.00
2.	Demolition of existing facilities, including the steel tank, foundation, paving, electrical building, chain link fences and gates, power pole, piping, concrete vaults, headwall, and appurtenances, as shown and specified in the Contract Documents.	1	LS	$ 294,877.00
3.	Construction of Hyundai Reservoir, including a 1.0 million gallon (MG) nominal capacity pre-stressed concrete tank, earthwork, yard piping, fences and gates, protective coating, electrical, instrumentation and controls, disinfection, testing, startup, and all appurtenant work, complete and operable, as shown and specified in the Contract Documents.			
	Item 3 Breakdown			
	3.1 Earthwork			$ 123,071.00
	3.2 Tank Foundation			$ 431,508.00
	3.3 Tank Piping & Valving			$ 53,521.00
	3.4 Pre-stressed Concrete Tank			$ 3,135,529.00
	3.5 Tank Appurtenances			$ 206,711.00
	3.6 Tank Coating			$ 61,605.00

EXHIBIT A (9 OF 19)

TABLE B
HYUNDAI SITE BID SCHEDULE

(BASE BID ITEMS NO. 1 – 7, ADDITIVE BID ITEMS NO. 8 – 10)

Item No.	Description	Quantity	Unit	Extended Amount
3.	Item 3 Breakdown (Cont.)			
	3.7 Tank & Piping Disinfection			$ 17,968.00
	3.8 Testing & Startup			$ 10,182.00
	3.9 Electrical System			$ 273,146.00
	3.10 Instrumentation and Control			$ 100,681.00
	3.11 Yard Piping & Valving			$ 309,728.00
	3.12 Three Vaults, Piping, Valving, Overflow Discharge Basin and Piping			$ 247,161.00
	3.13 Fencing and Gates			$ 54,659.00
	3.14 All other appurtenant work			$ 50,918.00
	Subtotal	1	LS	$ 5,076,388.00
4.	Site Grading and pavement including curbs, concrete gutters, sidewalks, stormwater swales, headwalls, riprap, and stormwater infiltration basin and outlet structure and piping.	1	LS	$ 386,009.00
5.	Construction of 380,000 gallon temporary bolted steel tank, including earthwork, piping, electrical, instrumentation and controls, disinfection, testing, startup, and all appurtenant work, complete and operable, as shown and specified in the Contract Documents.	1	LS	$ 501,896.00
6.	Construction of Control Building, same as Tumon No. 2 Control Building if additive bid for pump station is not awarded. Locate at pump northeast corner of pump building. Complete and operable, as shown and specified in accordance with the Contract Documents.	1	LS	$ 151,149.00

EXHIBIT A (10 OF 19)

TABLE B
HYUNDAI SITE BID SCHEDULE

(BASE BID ITEMS NO. 1 – 7, ADDITIVE BID ITEMS NO. 8 – 10)

Item No.	Description	Quantity	Unit	Extended Amount
7.	Improvements to the Barrigada Pump Station including piping, meters, pumps, valves, earthwork, testing and startup, door replacement, retaining wall, and all appurtenant work, complete and operable as shown and specified in accordance with the Contract Documents. Include the painting of Barrigada Reservoir No. 2 GWA logo.	1	LS	$ 392,056.00

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EXHIBIT A (11 OF 19)

TABLE B
HYUNDAI SITE BID SCHEDULE

(BASE BID ITEMS NO. 1 – 7, ADDITIVE BID ITEMS NO. 8 – 10)

Item No.	Description	Quantity	Unit	Extended Amount
8.	Additive Bid Item: Construction of Hyundai Booster Pump Station, including triplex booster pumps, fire pump, electrical and controls, generators, fuel tank, hoist, piping, valves, meters, earthwork, testing and startup, and all appurtenant work, complete and operable as shown and specified in accordance with the Contract Documents.			
	Item No. 8 Breakdown			
	8.1 Proposed Booster Pump Building			$ 326,235.00
	8.2 Triplex Pump System			$ 71,564.00
	8.3 Fire Pump System			$ 109,398.00
	8.4 Piping and Valving			$ 356,696.00
	8.5 Flow Meters			$ 27,701.00
	8.6 Hoist System			$ 6,971.00
	8.7 Generators			$ 215,122.00
	8.8 Diesel Fuel Tank			$ 70,520.00
	8.9 Electrical System			$ 24,282.00
	8.10 Fire Sprinkler System			$ 44,295.00
	8.11 SCADA System			$ 67,052.00
	8.12 All other appurtenant work			$ 44,948.00
	8.13 Deletion of Control Building			($ 151,149.00)
	Subtotal	1	LS	$ 1,213,635.00

EXHIBIT A (12 OF 19)

TABLE B
HYUNDAI SITE BID SCHEDULE

(BASE BID ITEMS NO. 1 – 7, ADDITIVE BID ITEMS NO. 8 – 10)

Item No.	Description	Quantity	Unit	Extended Amount
9.	Additive Bid Item: Installation of 8-inch and 12-inch PVC AWWA C900, transmission and distribution waterlines on North and South Sabana Drives and sides streets as shown on sheets C-201 through C-209. Installation of inline valves shown on sheet C-228. The work will include: valves, valve boxes and valve covers, fire wet barrel hydrants, blow-off assemblies, combination air release valves, fittings, installation of service line materials and fittings, disinfection and testing, and pavement restoration complete and operable as shown and specified in accordance with the Contract Documents.	1	LS	$ 1,011,427.00
10.	Additive Bid Item: Installation of 8-inch and 12-inch PVC AWWA C900, waterlines on Bello Road, and farther west as shown on sheets C-210 through C-227. The work will include: construction of PRV concrete vault, manhole covers, piping, electrical and SCADA, pressure reducing valves, protective coating, valves, valve boxes and valve covers, fire wet barrel hydrants, blow-off assemblies, combination air release valves, fittings, installation of service line materials and fittings, disinfection and testing, and pavement restoration complete and operable as shown and specified in accordance with the Contract Documents.	1	LS	$ 1,864,644.00

EXHIBIT A (13 OF 19)

Table B Base Bid Subtotal	$	7,377,308.00
Table B Base Bid and Additive Bid Subtotal	$	11,467,014.00

EXHIBIT A (14 OF 19)

TABLE C
CHAOT NO. 2 SITE BID SCHEDULE

(BASE BID ITEMS NO. 1 – 4, ADDITIVE BID ITEMS NO. 5 – 7)

Item No.	Description	Quantity	Unit	Extended Amount
1.	Mobilization, as specified in the Contract Documents.	1	LS	$ 222,631.00
2.	Well improvements including analyzer relocations, piping disconnections, door hardware replacement, fencing replacement, and all appurtenant work, complete and operable, as shown and specified in the Contract Documents.	1	LS	$ 106,423.00
3.	Construction of PRV Vault in front of Well A-12. Including construction of concrete vault, manhole covers, piping, valves, pressure reducing valves, protective coating, connection to existing pipes, earthwork, testing and disinfection, and all appurtenant work, complete and operable, as shown and specified in accordance with the Contract Documents.	1	LS	$ 182,283.00
4.	Chlorination and analyzer improvements to Chaot and Agana Heights Reservoir Sites, including partition wall, chlorine system reduction, electrical, instrumentation and controls, and all appurtenant work, complete and operable as shown and specified in accordance with the Contract Documents.	1	LS	$ 245,306.00

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EXHIBIT A (15 OF 19)

TABLE C
CHAOT NO. 2 SITE BID SCHEDULE

(BASE BID ITEMS NO. 1 – 4, ADDITIVE BID ITEMS NO. 5 – 7)

Item No.	Description	Quantity	Unit	Extended Amount
5.	Additive Bid Item: Construction of Chaot Reservoir No. 2, including a 0.5 million gallon (MG) nominal capacity pre-stressed concrete tank, earthwork, yard piping, fences, protective coating, electrical, instrumentation and controls, disinfection, testing, startup, and all appurtenant work, complete and operable, as shown and specified in the Contract Documents.			
	Item 5 Breakdown			
	5.1 Earthwork			$ 111,060.00
	5.2 Tank Foundation			$ 280,566.00
	5.3 Tank Piping & Valving			$ 45,618.00
	5.4 Pre-stressed Concrete Tank			$ 2,219,954.00
	5.5 Tank Appurtenances			$ 323,892.00
	5.6 Tank Coating			$ 46,936.00
	5.7 Tank & Piping Disinfection			$ 4,148.00
	5.8 Testing & Startup			$ 1,125.00
	5.9 Electrical System			$ 53,299.00
	5.10 Instrumentation and Control			$ 110,265.00
	5.11 Yard Piping & Valving			$ 116,250.00
	5.12 Drain Vault, Inlet Vault, Piping and Overflow Manhole			$ 114,181.00
	5.13 Fencing			$ 15,061.00
	5.14 All other appurtenant work			$ 6,170.00
	Subtotal	1	LS	$ 3,448,525.00
6.	Additive Bid Item: Site Grading and pavement including concrete gutters, headwalls, retaining wall, stormwater swales, riprap, outlet control structure and stormwater detention basin.	1	LS	$ 160,664.00

EXHIBIT A (16 OF 19)

TABLE C
CHAOT NO. 2 SITE BID SCHEDULE

(BASE BID ITEMS NO. 1 – 4, ADDITIVE BID ITEMS NO. 5 – 7)

Item No.	Description	Quantity	Unit	Extended Amount
7.	Additive Bid Item: Grading of gravel access road from end of pavement on Dero Road to the Chaot Reservoirs east property line, including gabion repairs of culvert outlet and all appurtenant work, complete and operable as shown and specified in accordance with the Contract Documents.	1	LS	$ 119,712.00
Table C Base Bid Subtotal				$ 756,643.00
Table C Base Bid and Additive Bid Subtotal				$ 4,485,544.00
Table A, B, and C Base Bid Total				$ 14,832,194.00
Table A, B, and C Base Bid and Additive Bid Total				$ 22,650,801.00

TOTAL BASE BID PRICE FOR THE BID SCHEDULE (Table A, B and C)

For the lump sum of

$ 14,832,194.00
(Price in Figures)

FOURTEEN MILLION EIGHT HUNDRED THIRTY TWO THOUSAND ONE HUNDRED NINETY FOUR DOLLARS
(Price in Words)

Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents. Bidder also acknowledges that each unit price includes an amount considered by Bidder to be adequate to cover Bidder's overhead and profit for each separately identified item.

ARTICLE 6 - TIME OF COMPLETION

6.01 Bidder agrees that the furnishing of Goods and Special Services will conform to the schedule set forth in Article 5 of the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 - ATTACHMENTS TO THIS BID

7.01 The following documents are attached to and made a condition of this Bid:

A. Required Bid security in the form of Bid Bond.

B. List of Proposed Major Suppliers;

C. Required Bidder Qualification Statement with Supporting Data.

ARTICLE 8 - DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 - BID SUBMITTAL

9.01 This Bid submitted by:

If Bidder is:

An Individual

Name (typed or printed): N/A

By: _____

(Individual's signature)

Doing business as: _____

Business address: _____

_____

Phone: _____ Facsimile: _____

E-mail address: _____ _____

EXHIBIT A (18 OF 19)

A Partnership

Partnership Name: N/A (SEAL)

By: _____

(Signature of general partner - attach evidence of authority to sign)

Name (typed or printed): _____

Business address: _____

_____

Phone: _____ Facsimile: _____

E-mail address: _____

A Corporation

Corporation Name: AIC International, Inc.

State of Incorporation: Guam

Type (General Business, Professional, Service, other): General Contractor

By: _____

(Signature - attach evidence of authority to sign)

Name (typed or printed): Henry Stewart

Title: President

(CORPORATE SEAL)

Attest _____

(Signature of Corporate Secretary)

Business address: Route 2A, Agat Guam 96928

P.O. Box DR, Hagatña, Guam 96932

Phone: 671-565-9142 Facsimile: 671-565-9145

E-mail address: henry@aicconstruction.com

A Limited Liability Company (LLC)

LLC Name: N/A

State in which organized: _____

By: _____

(Signature - attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Business address: _____

_____

Phone: _____ Facsimile: _____

E-mail address: _____

EXHIBIT A (19 OF 19)

A Joint Venture

First Joint Venturer Name: N/A (SEAL)

By: _____

(Signature - attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Business address: _____

_____

Phone: _____ Facsimile: _____

E-mail address: _____

Second Joint Venturer Name: _____ (SEAL)

By: _____

(Signature - attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Business address: _____

_____

Phone: _____ Facsimile: _____

E-mail address: _____

Phone and Facsimile Number, and Address for receipt of official communications to Joint Venture: _____

_____

_____

(Each joint venturer must sign. The manner of signing for each individual, partnership, corporation, and limited liability company that is a party to the joint venture should be in the manner indicated above.)

Exhibit B (1 of 4)

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

GWA RESOLUTION NO. 05-FY2018

RELATIVE TO APPROVING THE CONSTRUCTION CONTRACT FOR THE TUMON NO. 2, HYUNDAI, AND CHAOT NO. 2 RESEVOIRS

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA currently has a number of critical Court Order ("CO") Projects, including the construction (i.e. repair, rehabilitate, replace or relocate) of the Tumon No. 2, Hyundai, and Chaot No. 2, as stated in Paragraph 29 (b) (4), (5), and (6) of the Court Order; and

WHEREAS, in compliance with the Court Order, GWA intends to execute a construction project to address the following:

1. The construction of the new Tumon No. 2 reservoir (1.0 MG) to replace the existing Tumon No. 2 steel tank; and
2. The construction of the new Hyundai reservoir (1.0 MG) to replace the existing Hyundai steel tank; and
3. The disconnection of the A-series well from the Sinajana-Agana Heights distribution lines, Chaot and Agana Heights central chlorination system modifications, and Dero Road PRV rehabilitation to improve the Sinajana-Agana Heights water system;

WHEREAS, GWA has advertised an Invitation for Bid (IFB) soliciting bid proposal from experienced, responsible, and responsive bidders to construct the Tumon No. 2 reservoir, Hyundai reservoir, and Chaot-Agana Heights reservoir off-site work in the Base Bid and to

EXHIBIT B (2 OF 4)

construct the Chaot No. 2 reservoir, Hyundai booster pump station, and Hyundai off site water line improvements in the Additive Bid; and

WHEREAS, the Base Bid work consists of the Contractor furnishing all labor, tools, equipment and materials necessary to complete the construction of the Tumon No. 2 and Hyundai reservoirs to include, but not limited to foundation, earthwork, pipework, retaining wall, storm water detention basin, off-site PRVs, concrete work, electrical work, fences and gates, protective coatings, SCADA, disinfection, testing and start-up under the provisions of the bid documents and in accordance with applicable GWA standards; and

WHEREAS, the Base Bid work will also consist of disconnection of the A-Series wells to the distribution lines, modification to the Chaot and Agana Heights reservoir central chlorination system, and rehabilitation of the Dero Road PRV; and

WHEREAS, IFB packages were picked up by 12 interested parties, from which GWA received bid proposals from 2 of the 12 parties before the bid proposal deadline (See EXHIBIT A – Abstract of Bids); and

WHEREAS, GWA engineering and the design team analyzed all bid proposals received on November 1st, 2017 and determined that AIC International, Inc., who submitted the lowest Base Bid as being the responsive and responsible bidder and met all the bid requirements set forth by GWA (See EXHIBIT B – Recommendation Memorandum); and

WHEREAS, GWA Management finds the AIC International, Inc. Base Bid proposal of Fourteen Million Eight Hundred Twenty Eight Thousand One Hundred Ninety Four Dollars ($14,828,194.00) to be acceptable (See EXHIBIT C – Bid Proposal); and

WHEREAS, GWA Management will assess any additional funding availability from the latest Capital Improvements Plan to ascertain if any or all the Additive bid items as part of this IFB can be awarded later through a change order or via a subsequent CCU approval process as a means of maximizing system improvements efficiently; and

EXHIBIT B (3 OF 4)

WHEREAS, GWA Management is seeking approval to enter into contract with AIC International, Inc. for IFB-09-ENG-2017 in the amount of Fourteen Million Eight Hundred Twenty Eight Thousand One Hundred Ninety Four Dollars ($14,828,194.00), along with a ten percent (10%) contingency of One Million Four Hundred Eighty Two Thousand Eight Hundred Nineteen Dollars and Forty Cents ($1,482,819.40), bringing the total requested funding amount to Sixteen Million Three Hundred Eleven Thousand Thirteen Dollars and Forty Cents ($16,311,013.40); and

WHEREAS, the funding source for the construction project will be from the CIP PW 09-11: Water System Reservoirs 2005 Improvements, PW 12-04: Agana Heights and Chaot Tank Construction, PW 12-06: Tank Replacement Piti and Hyundai Tanks, PW 09-03: Water Distribution System Pipe Replacement and Upgrades; and PW 09-04: Pressure Zone Realignment; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve and authorize the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms of the bid proposal submitted by AIC International, Inc. are fair and reasonable.
3. The CCU hereby authorizes the management of GWA to accept the bid from AIC International, Inc. attached hereto as EXHIBIT C, and which is also incorporated into this Resolution in its entirety.
4. The CCU hereby further authorizes the management to enter into a contract with AIC International, Inc. in the amount of Fourteen Million Eight Hundred Twenty Eight Thousand One Hundred Ninety Four Dollars ($14,828,194.00).
5. The CCU hereby approves the funding total of Fourteen Million Eight Hundred Twenty Eight Thousand One Hundred Ninety Four Dollars ($14,828,194.00), along with a ten percent (10%) contingency of One Million Four Hundred Eighty Two Thousand Eight Hundred Nineteen Dollars and Forty Cents ($1,482,819.40), bringing the total requested funding amount to

EXHIBIT B (4 OF 4)

Sixteen Million Three Hundred Eleven Thousand Thirteen Dollars and Forty Cents ($16,311,013.40.)

6. The CCU hereby approves the use of funding from CIP PW 09-11: Water System Reservoirs 2005 Improvements, PW 12-04: Agana Heights and Chaot Tank Construction, PW 12-06: Tank Replacement Piti and Hyundai Tanks, PW 09-03: Water Distribution System Pipe Replacement and Upgrades; and PW 09-04: Pressure Zone Realignment.

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 22nd day of November 2017.

Certified by:

JOSEPH T. DUENAS
Chairperson

Attested by:

J. GEORGE BAMBA
Secretary

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: 5

NAYS: 0

ABSTENTIONS: 0

ABSENT: 0

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GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 46-FY2018
Relative to Funding Source Approval for the Baza Gardens Wastewater Cross-Island Pumping and Conveyance Construction Contracts

What is the project's objective and is it necessary and urgent?
The objective of the resolution is to seek CCU approval to expand the available funding sources for the construction contracts related to the Baza Gardens Wastewater Cross-Island Pumping and Conveyance Construction project. CCU resolutions that previously authorized and approved the construction contracts for the subject project may have had language relative to a single funding source, or specific funding sources (relevant to the Baza Gardens WWTP), but have omitted funding sources applicable to the improvements contemplated under the project (sewer pump stations, wastewater collection system). This omission unfortunately limits GWA management's flexibility to address additional project funding needs that may arise at a later date as a result of unforeseen circumstances, and which may impact Management's ability to meet Court-Ordered deadlines.

Where is the location?
The Baza Gardens Wastewater Cross-Island Pumping and Conveyance Construction project starts from the existing Baza Gardens WWTP, runs along Route 17, Route 5 and Route 2A and ends at the new Agat WWTP.

How much will it cost?
Resolution does not specify amount of fund but sources of funds.

When will it be completed?
The Baza Gardens Wastewater Cross-Island Pumping and Conveyance Construction project is expected to be completed December 2018 thus the additional funding source may be required until then.

What is the funding source?
GWA management seeks CCU approval to include as a funding source for any of the Baza Gardens Wastewater Cross-Island Pumping and Conveyance Projects Phases I, II and III construction contracts, all CIP bond funds applicable to the Baza Gardens WWTP facility being converted to a pumping facility, any CIP bond funds applicable to wastewater collection and sewer pump stations, Internally Funded CIP and System Development funds

The RFP/BID responses (if applicable):
Not Applicable.

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

RESOLUTION NO. 46–FY2018

RELATIVE TO FUNDING SOURCE APPROVAL FOR THE BAZA GARDENS WASTEWATER CROSS-ISLAND PUMPING AND CONVEYANCE CONSTRUCTION CONTRACTS

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, the CCU has approved via Resolution 01-FY2017 (See Exhibit A), Resolution 13-FY2017 (See Exhibit B) and Resolution 29-FY2017 (See Exhibit C) construction contracts for the Baza Gardens Wastewater Cross-Island Pumping and Conveyance Projects Phases I, II and III respectively; and

WHEREAS, the resolutions noted above may have had language relative to a single source or specific funding sources relevant to the Baza Gardens WWTP, but omitted funding sources applicable to the improvements contemplated under the final project (such as sewer pump stations and wastewater collection system CIP line items), which unfortunately limits GWA management's flexibility to address additional project funding needs that may arise at a later date; and

WHEREAS, GWA management seeks CCU approval to include as a funding source for any of the Baza Gardens Wastewater Cross-Island Pumping and Conveyance Projects Phases I, II and III construction contracts, all CIP bond funds applicable to the Baza Gardens WWTP facility being converted to pumping and conveyance facilities, any CIP bond funds applicable to

wastewater collection and sewer pump stations, Internally Funded CIP and System Development funds; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU hereby approves funding source for any of the Baza Gardens Wastewater Cross-Island Pumping and Conveyance Projects Phases I, II and III construction contracts, to be from all CIP bond funds applicable to the Baza Gardens WWTP facility being converted to a pumping facility, any CIP bond funds applicable to wastewater collection and sewer pump stations, Internally Funded CIP and System Development funds.

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 28th day of August 2018.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS
Chairperson

J. GEORGE BAMBA
Secretary

SECRETARY'S CERTIFICATE

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

DRAFT

Exhibit A (1 of 1)

GUAM CONSOLIDATED COMMISSION ON UTILITIES

RESOLUTION NO. 01–FY2017

RELATIVE TO APPROVAL OF THE BAZA GARDENS WASTEWATER CROSS-ISLAND PUMPING AND CONVEYANCE PHASE I CONSTRUCTION PROJECT

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual, and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA currently has a number of critical Court Order ("CO") projects including a complete evaluation of the Baza Gardens WWTP to determine what improvements are necessary at the plant to achieve compliance with the WWTP's NDPES permit, as stated in Paragraph 13 of the 2011 Court Order as well as the completion of construction activities that were identified in the approved plan resulting from the evaluation noted above as stated in Paragraph 14 of the 2011 Court Order; and

WHEREAS, the system evaluation report required under Paragraph 13 and completed in April of 2014 by GWA's Program Management Office (PMO), Brown and Caldwell, resulted in a recommendation to GWA and the USEPA that transferring/conveying the Baza Gardens WWTP effluent flow across the Route 17 (Cross Island Road) to a new Agat-Santa Rita WWTP site was the recommended conceptual alternative to which this recommendation was found to be acceptable by all parties; and

WHEREAS, Paragraph 14, subsection (b) of the 2011 Court Order required that GWA "execute a contract and issue a notice to proceed with construction" by October 31, 2016; and

WHEREAS, in September of 2015 GWA began the procurement process to find a consulting engineering team to design the wastewater conveyance system and via Resolution 06-FY2016, approved by the CCU in October of 2015, GWA management was authorized to enter

Exhibit A (2 of 4)

into a contract with Duenas Camacho and Associates to design the wastewater conveyance and pumping system which would include new Sewer Pump Station (SPS), gravity mains, force mains and all incidentals and appurtenances to these man components; and

WHEREAS, GWA has determined that in an effort to comply with the intent of the Court Order deadline of October 31, 2016 the most expedient process was to break the construction activities into phases with the first phase covering the construction of one sewer pump station, 14,643 linear feet of gravity and 2,767 linear feet of force main which is considered approximately one third of the overall project requirements; and

WHEREAS, GWA has advertised the Invitation For Bid (IFB-08-ENG-2016) for Baza Gardens Wastewater Conveyance and Pumping Phase I Construction project wherein GWA is soliciting bid proposals from experienced and responsive bidders to construct a sewer pump station, sewer gravity and force mains; and

WHEREAS, this phase of work consists of furnishing all labor, tools, equipment and materials including coordination with GWA Wastewater Operations and Engineering and the Construction Manager to construct all components described in the 100% design drawings and technical specifications which include but are not limited to a sewer pump station with generator and wet well, 14,643 linear feet of gravity line with sizes ranging from 12" to 15" in diameter, 2,767 linear feet of 10" diameter gravity main, pavement restoration in affected areas, SPS perimeter fencing, SPS retaining walls, as well as a communication conduit for future by GWA and GPA; and

WHEREAS, IFB packages were picked up by ten (10) interested parties, from which GWA received bid proposals from two (2) of the ten (10) (SEE EXHIBIT A – Abstract of Bids) before the bid proposals deadline of September 30, 2016; and

WHEREAS, GWA's design consultant for the project along with GWA Engineering analyzed the bid proposals received, particularly the lowest bid received and determined that "BME & Son Inc." successfully submitted the lowest bid as a responsive and responsible bidder and met all the bid requirements set forth by GWA (SEE EXHIBIT B – Bid Evaluation); and

Exhibit A (3 of 4)

WHEREAS, GWA management finds BME & Son Inc.'s bid proposal acceptable and now seeks CCU approval of the bid proposal amount of Seven Million Eight Hundred Eighty Eight Thousand One Hundred Fifty One Dollars and Nineteen Cents ($7,888,151.19) attached hereto (SEE EXHIBIT C – Bid Proposal),

WHEREAS, GWA management further seeks CCU approval of a five percent (5%) contingency to the bid proposal amount or Three Hundred Ninety Four Thousand Four Hundred Seven Dollars and Fifty Six Cents ($394,407.56) to bring the total authorized funding amount to Eight Million Two Hundred Eighty Two Thousand Five Hundred Fifty Eight Dollars and Seventy Five Cents ($8,282,558.75); and

WHEREAS, funding for this project will be from the 2016 Bond Funds under the line items CIP WW 11-03 "Baza Gardens STP Replacement"; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms of the conditions set by GWA relative to commencement of work activities are fair and reasonable and serve as a measure of Quality Assurance/Quality Control (QA/QC).
3. The CCU hereby authorizes the management of GWA to accept the bid proposal from "BME & Son Inc." attached hereto as Exhibit C and which is incorporated into this Resolution in its entirety.
4. The CCU hereby further authorizes the management of GWA to enter into a contract with "BME & Son Inc." in the amount Seven Million Eight Hundred Eighty Eight Thousand One Hundred Fifty One Dollars and Nineteen Cents ($7,888,151.19).
5. The CCU hereby further approves the funding total of Seven Million Eight Hundred Eighty Eight Thousand One Hundred Fifty One Dollars and Nineteen Cents ($7,888,151.19) plus a five percent (5%) contingency of Three Hundred Ninety Four Thousand Four Hundred Seven Dollars and Fifty Six

Exhibit A (4 of 4)

Cents ($394,407.56) for a total amount of Eight Million Two Hundred Eighty Two Thousand Five Hundred Fifty Eight Dollars and Seventy Five Cents ($8,282,558.75).

6. The CCU hereby further approves funding for this project to be from the 2016 Bond Funds under the line items CIP WW 11-03"Baza Gardens STP Replacement".

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 25th day of October 2016.

Certified by:

JOSEPH T. DUENAS
Chairperson

Attested by:

J. GEORGE BAMBA
Secretary

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: 4

NAYS: 0

ABSTENTIONS: 0

ABSENT: 1

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Exhibit B (1 of 4)

GUAM CONSOLIDATED COMMISSION ON UTILITIES

RESOLUTION NO. 13–FY2017

RELATIVE TO APPROVAL OF THE BAZA GARDENS WASTEWATER CROSS-ISLAND PUMPING AND CONVEYANCE PHASE II CONSTRUCTION PROJECT

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual, and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA currently has a number of critical Court Order ("CO") projects including a complete evaluation of the Baza Gardens WWTP to determine what improvements are necessary at the plant to achieve compliance with the WWTP's NDPES permit, as stated in Paragraph 13 of the 2011 Court Order as well as the completion of construction activities that were identified in the approved plan resulting from the evaluation noted above as stated in Paragraph 14 of the 2011 Court Order; and

WHEREAS, the system evaluation report required under Paragraph 13 and completed in April of 2014 by GWA's Program Management Office (PMO), Brown and Caldwell, resulted in a recommendation to GWA and the USEPA that transferring/conveying the Baza Gardens WWTP effluent flow across the Route 17 (Cross Island Road) to a new Agat-Santa Rita WWTP site was the recommended conceptual alternative to which this recommendation was found to be acceptable by all parties; and

WHEREAS, in September of 2015 GWA began the procurement process to find a consulting engineering team to design the wastewater conveyance system and via Resolution 06-FY16, approved by the CCU in October of 2015, GWA management was authorized to enter into a contract with Duenas Camacho and Associates to design the wastewater conveyance and pumping system which would include new Sewer Pump Station (SPS), gravity mains, force mains and all incidentals and appurtenances to these man components; and

Exhibit B (2 of 4)

WHEREAS, GWA has determined that in an effort to comply with the intent of the Court Order deadline of executing "a construction contract and issue a notice to proceed with construction" by October 31, 2016 the most expedient procurement process was to break the construction activities into phases; and

WHEREAS, GWA started procurement of Phase I construction (IFB-08-ENG-2016) on September 9, 2016 which allowed GWA to issue a contract and notice to proceed on October 25, 2016 to BME & Sons Inc., meeting the intent of Court Order deadline; and

WHEREAS, GWA has further moved on the second phase of construction by advertising on November 14, 2016 the Invitation For Bid (IFB-02-ENG-2017) for Baza Gardens Wastewater Conveyance and Pumping Phase II Construction project wherein GWA solicited bid proposals from experienced and responsive bidders to construct a sewer pump station, sewer gravity and force mains; and

WHEREAS, this phase of work consists of furnishing all labor, tools, equipment and materials including coordination with GWA Wastewater Operations and Engineering and the Construction Manager to construct all components described in the 100% design drawings and technical specifications which include but are not limited to a sewer pump station with generator and wet well, 1,767 linear feet of 15" diameter gravity line, 14,298 linear feet of 12" diameter gravity main, pavement restoration in affected areas, SPS perimeter fencing, SPS retaining walls, as well as a communication conduit for future use by GWA and GPA; and

WHEREAS, IFB packages were picked up by seven (7) interested parties, from which GWA received bid proposal from four (4) of the seven (7) (SEE EXHIBIT A – Abstract of Bids) before the bid proposals deadline of December 6, 2016; and

WHEREAS, GWA's design consultant for the project along with GWA Engineering analyzed the bid proposals received, particularly the lowest bid received and determined that "BME & Son Inc." successfully submitted the lowest bid as a responsive and responsible bidder and met all the bid requirements set forth by GWA (SEE EXHIBIT B – Bid Evaluation); and

Exhibit B (3 of 4)

WHEREAS, GWA management finds BME & Sons bid proposal acceptable and now seeks CCU approval of the bid proposal amount of Five Million Nine Hundred Nineteen Thousand Forty Five Dollars and Forty Three Cents ($5,919,045.43) (SEE EXHIBIT C – Bid Proposal); and

WHEREAS, GWA management further seeks CCU approval of a five percent (5%) contingency to the bid proposal amount or Two Hundred Ninety Five Thousand Nine Hundred Fifty Two Dollars and Twenty Seven Cents ($295,952.27) to bring the total authorized funding amount to Six Million Two Hundred Fourteen Thousand Nine Hundred Ninety Seven Dollars and Seventy Cents ($6,214,997.70); and

WHEREAS, funding for this project will be from the 2016 Bond Funds under the line items CIP WW 11-03 "Baza Gardens STP Replacement" and Internally Funded CIP; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms of the conditions set by GWA relative to commencement of work activities are fair and reasonable and serve as a measure of Quality Assurance/Quality Control (QA/QC).
3. The CCU hereby authorizes the management of GWA to accept the bid proposal from "BME & Son Inc." attached hereto as Exhibit C and which is incorporated into this Resolution in its entirety.
4. The CCU hereby further authorizes the management of GWA to enter into a contract with "BME & Son Inc." in the amount Five Million Nine Hundred Nineteen Thousand Forty Five Dollars and Forty Three Cents ($5,919,045.43).
5. The CCU hereby further approves the funding total of Five Million Nine Hundred Nineteen Thousand Forty Five Dollars and Forty Three Cents ($5,919,045.43) plus a five percent (5%) contingency of Two Hundred Ninety Five Nine Hundred Fifty Two Dollars and Twenty Seven Cents ($295,952.27)

Exhibit B (4 of 4)

for a total amount of Six Million Two Hundred Fourteen Nine Hundred Ninety Seven Dollars and Seventy Cents ($ 6,214,997.70).

6. The CCU hereby further approves funding for this project to be from the 2016 Bond Funds under the line items CIP WW 11-03 "Baza Gardens STP Replacement" and Internally Funded CIP.

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 24th day of January 2017.

Certified by:

JOSEPH T. DUENAS
Chairperson

Attested by:

J. GEORGE BAMBA
Secretary

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: 4

NAYS: 0

ABSTENTIONS: 0

ABSENT: 0

NO RESPONSE TO POLL 1

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 47- FY2018
RELATIVE TO APPROVAL AND ADOPTION OF GWA's ASSET MANAGEMENT POLICY

What is the project's objective and is it necessary and urgent?
GWA has implemented a formal asset management program, and has implemented a Computerized Maintenance Management System (CMMS) to protect the investment GWA has made in our infrastructure assets as part of the adopted Capital Improvement Program.

The objective of this resolution is to formally adopt a written Asset Management Policy to reinforce the Authority's commitment to the proper maintenance, management and risk-based decision-making as part of a properly developed Asset Management System.

The adoption of this Asset Management Policy is necessary and important to achieving the following:

- Development of an Asset Management Program that conforms to and can be accredited in compliance with the ISO 55001 Asset Management Standard.
- Improved Levels of Service
- Informed asset investment decisions
- Managed risk
- Improved organizational sustainability
- Improved efficiency and effectiveness

Where is the location?
N/A.

How much will it cost?
No direct costs incurred. The adoption of the Asset Management Policy supports the development of proper operations and maintenance budgets through an effective Asset Management System which tracks maintenance costs, plans needed maintenance, and utilizes risk-based management decisions for GWA's assets.

When will it be completed?
The adoption of the Policy supports continuous improvement of an established asset management program, thus, its effectivity is continuous and without end.

What is the funding source?
N/A

The RFP/BID responses (if applicable):
N/A.

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

GWA RESOLUTION NO. 47-FY2018

RELATIVE TO APPROVAL AND ADOPTION OF GWA's ASSET MANAGEMENT POLICY

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual, and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA has invested millions of dollars under its Capital Improvement Program for new infrastructure assets as part of Water Resource Master Plan, and U.S. District Court Order requirements; and

WHEREAS, the CCU has emphasized the importance of protecting those new assets as well as maximizing the useful life of all of its infrastructure assets through a program of proper maintenance and operation; and

WHEREAS, GWA has implemented an Asset Management Program and deployed a Computerized Maintenance Management System (CMMS) in furtherance of proper management of these infrastructure assets; and

WHEREAS, GWA seeks to continuously improve its Asset Management Program and conform to industry standards in the development of the Program; and

WHEREAS, compliance with and accreditation to the ISO 55001 Asset Management Standard will best serve the interest of GWA ratepayers, for accountability, sustainability, risk management, service management and financial efficiency; and

WHEREAS, one of the requirements for accreditation to the ISO 55001 Asset Management Standard is to have an "Asset Management Policy" implemented within the GWA; and

WHEREAS, GWA developed its **Asset Management Policy dated 15 August 2018** authored by its Utility Services Administrator (Operations) and approved by the General Manager, attached as **EXHIBIT "1";** and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that continued improvement of the Asset Management Program is essential to protecting the investment in GWA's Capital Improvements, improving its Levels of Service, providing informed asset investment decisions, managing risk improving organizational sustainability, improving efficiency and effectiveness of GWA.
3. The CCU finds that the adoption of the "Asset Management Policy" is indeed necessary to confirm and reinforce the CCU's commitment to effective asset management.
4. The CCU supports the continued development of the Asset Management Program to industry standards and accreditation to the ISO 55001 Asset Management Standard.
5. The CCU hereby authorizes the management of GWA to adopt and implement the attached Asset Management Policy

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 28th day of August 2018.

Certified by:	Attested by:
_____	_____
JOSEPH T. DUENAS	**J. GEORGE BAMBA**
Chairperson	Secretary

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

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GUAM WATERWORKS AUTHORITY
"Better Water. Better Lives."
Gloria B. Nelson Public Service Building
688 Route 15, Mangilao, Guam 96913

Asset Management Policy

Document Status: **Draft**

Date Issued: **August 15, 2018**

Lead Author: **Ma. Teogenesa Q. Salayon, Utility Services Administrator - Asset Management**

Approved by: **Miguel C. Bordallo, P.E. General Manager**

Record of Policy Review:

Date Policy was Issued	Date of Review	Reason for Review	Lead Reviewer	Additional Comments

1. Purpose and Scope

The purpose of this policy is to establish the priority and commitment the Governance and Management of Guam Waterworks Authority assign to responsible management of all of its assets, specifically to maximize the useful life and minimize life-cycle costs of all relevant assets. The scope of this policy covers all identified assets within the asset management system, and as documented in the asset inventory and accounted for in the valuation of the assets.

2. Policy

It is and shall be the Policy of the Consolidated Commission on Utilities, and the Executive Management of the Guam Waterworks Authority, to develop, implement, maintain and continuously improve the GWA Asset Management System, and to promote amongst its employees, stakeholders and vendors, an effective and efficient, collaborative culture of asset management at Guam Waterworks Authority. In establishing and implementing this Policy, the CCU and GWA will:

- Develop, adopt and periodically review, revise and improve Guam Waterworks Authority's (GWA's) Strategic Asset Management Plan;
- Plan for, develop and adopt an operating budget which provides for sufficient resources to carry out necessary maintenance activities, actively monitor and replenish critical parts inventory, and acquire needed replacements or renewals;
- Require, promote, and support effective and efficient work processes and risk-based decision making in alignment with GWA's mission.
- Implement, maintain and continuously improve asset management consistent with international standard ISO 55001: 2014 *Asset Management- Management Systems-Requirements*

Further, the following shall be goals to be incorporated into the GWA Asset Management System:

- Optimizing O&M activities: GWA shall seek to achieve the most effective and efficient maintenance approaches and strategies, such as mixing preventive and predictive maintenance, as operational risk reduction options.
- Utilizing asset risk assessments: GWA shall utilize risk of failure/consequence of failure assessments and analysis to drive asset management decisions, such that those assets representing the highest risks receive the appropriate risk mitigation actions, such as capital renewal or operational enhancements.

- Utilizing life cycle cost analysis: GWA shall identify and evaluate risk mitigation options on the basis of life cycle costs, operational risk reduction, and their ability to be effectively implemented.

- Cost tracking and analysis: GWA shall implement comprehensive maintenance labor, material and equipment cost tracking to develop sufficient data for analyzing and prioritizing maintenance options for efficient funding within available budgets.

- Data collection and management: GWA shall achieve effective management of maintenance related data and information, and employ decision support tools to improve operations, maintenance, and capital investment decisions.

- Continual improvement: GWA shall obtain organizational coordination and commitment through the adoption of new business processes and implement effective change management, with respect to data integration, process improvement and decision making.

3. Responsibilities

The Utility Services Administrator is accountable for the Asset Management System.

The Operations & Maintenance Managers for the various operational divisions (Water Production and Treatment, Water Distribution, Wastewater Collections, and Wastewater Treatment) are accountable for operation and maintenance of GWA's assets in accordance with this Policy and the Asset Management Program.

The Chief Financial Officer is responsible for utilizing the cost data from the Asset Management Program to develop budgets and provide analysis in accordance with this Policy.

The General Manager is responsible for implementing this Policy.

4. Policy Review

The Policy will be reviewed every three years or following significant changes to the operational context of GWA to ensure the policy is current, effective and continuously improved.

Associated References

- GWA Water Resources Master Plan

- ISO 55001:2014 – Asset Management- Management Systems- Requirements

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 48-FY2018
Relative to Approval of Purchases Under Indefinite Quantity Contract with JMI Edison for Submersible Pump and Motor Inventory for Deep Wells

What is the project's objective and is it necessary and urgent?
The objective is to provide for adequate operational inventory of critical spares for the Water Production and Treatment Division. This requested approval will allow for purchasing pumps and motors to improve reliability of GWA's water supply system. The project is to provide submersible pumps and motors to GWA Deep Wells to ensure adequate stock is available at all times and bring back online existing down wells.

Where is the location?
GWA Island-wide Deep-well Production Facilities.

How much will it cost?
Seven Hundred Thirty-Six Thousand Eight Hundred Sixty-Six and Fifty-Five Cents ($ 736,866.55).

Actual Total Purchases	Motors	Pumps	Total	Ave / Qtrly	Start Date	End Date
	91	123	214			
3 Year contract	$679,389.14	$403,511.28	$1,082,900.42	$120,322.27	5-Jun-15	4-Jun-18

Revised Estimated Pump and Motor Purchase

	Motors	Pumps	Total	Ave / Qtrly	Start date	End Date
1 Year Renewal	53	96	149		10-Aug-18	9-Aug-19
	$415,860.18	$321,006.37	$736,866.55	$184,216.64		

*2019 Estimated Order	Est Qty Qtrly Order	Estimated Qtrly Order	One Year Order
2019 Motor Spares	4	$110,803.49	$443,213.96
2019 Pump Spares	8	$102,600.08	$410,400.32
TOTAL AMOUNT		**$213,403.57**	**$853,614.28**

*PUC Docket 18-02, Approved Nov. 30, 2017.

**2019 Estimated Order (REVISED)	Est Qty Qtrly Order	2019 Revised Order	One Year Order
2019 Motor Spares	13	$103,965.05	$415,860.18
2019 Pump Spares	24	$80,251.59	$321,006.37
TOTAL AMOUNT		**$184,216.64**	**$736,866.55**

**CCU Resolution No. 42-2018, Request for Approval.

When will it be completed?
The indefinite quantity contract was in place for an initial term of 3 years and two (2) years one-year option to renew. Purchases will be ongoing on an as-needed basis over the life of the contract term.

Contract Term	Three (3) years.
Notice to Proceed	Vendor Acceptance of Notice Dated June 4, 2015
Start of 3 Year Contract	June 5, 2018
End of 3 Year Contract	June 4, 2018
1 Year Renewal	
Start of 1 Year Renewal	August 10, 2018
End of 1 Year Renewal	August 9, 2019

What is the funding source(s)?
FY 2019 Revenue Funded Capital Improvements.

The RFP / Bid Responses
IFB 2015-03 Submersible Motors, Pumps and Pump and Motor.

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

GWA RESOLUTION NO. 48-FY2018

RELATIVE TO APPROVAL OF PURCHASES UNDER INDEFINITE QUANTITY CONTRACT WITH JMI-EDISON FOR SUBMERSIBLE PUMPS AND MOTOR INVENTORY FOR DEEPWELLS

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual, and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA advertised an Invitation for Bid (IFB) 2015-03 soliciting cost quotations from experienced and responsive bidders to provide Deepwell Submersible Pumps and Motors to provide adequate stock replenishment when needed; and

WHEREAS, there was one responsive and responsible bidder who met Submersible Pumps and Motors requirements of IFB 2015-03; and

WHEREAS, the IFB 2015-03 offers were evaluated by GWA's review committee; and

WHEREAS, GWA's review committee determined that the offer for Submersible Pumps and Motors made by JMI-Edison is fair and reasonable by the basis of past purchases made [ATTACHMENT 1 - EXHIBIT A]; and

WHEREAS, GWA accepted JMI-Edison's bid proposal of indefinite quantity bid of "All or None Bid for Franklin Electric Motors" and "All or None Bid for Franklin Electric and

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Grundfos Pump" with an estimated total amount of Seven Hundred Six Thousand Six Hundred Eighty-Seven Dollars and Thirty Cents ($ 706,687.30) [ATTACHMENT 1 - EXHIBIT B]; and

WHEREAS, CCU approved the three (3) year contract with two (2) optional one-year extensions with JMI Edison for an estimated initial term amount of Seven Hundred Six Thousand Six Hundred Eighty-Seven Dollars and Thirty Cents ($706,687.30); and

WHEREAS, CCU further approved additional purchases for FY2017 and FY2018 to round out the initial 3-year term total of Nine Hundred Sixty-Three Thousand Eighteen Dollars and Sixty-Two Cents ($963,018.62) for Submersible Pump and Motor Purchases [ATTACHMENT 1]; and

WHEREAS, PUC approved the purchase of Submersible Pumps and Motors under existing contract with JMI-Edison for FY 2018, but required that GWA submit documentation of approval of additional purchases under the contract by the CCU, which GWA estimated at that time to be at a cost of Two Hundred Thirteen Thousand Four Hundred Three Dollars and Fifty-Seven Cents ($213,403.57) per quarter [ATTACHMENT 2]; and

WHEREAS, GWA Management renewed the contract for one-year term extension [ATTACHMENT 3]; and

WHEREAS, GWA Management has assessed its operational needs for the coming year, analyzed the information available and determined that for FY2019 GWA will need to purchase additional pumps and motors to maintain proper inventory levels of critical spares in accordance with established operations and maintenance practices, which averages out to be One Hundred Eighty-Four Thousand, Two Hundred Sixteen Dollars and Sixty-Four Cents($184,216.64) per quarter; and

WHEREAS, GWA Management seeks CCU approval to purchase fifty-three (53) submersible motors of various sizes in the amount of Four Hundred Fifteen Thousand Eight Hundred Sixty and Eighteen Cents ($ 415,860.18) and ninety-six (96) submersible pumps of various types or stages in the amount of Three Hundred Twenty-One Thousand Sixty Three and

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Thirty-Seven Cents ($321,006.37) which totals to Seven Hundred Thirty-Six Thousand Eight Hundred Thirty-Size and Fifty-Five Cents ($ 736,866.55) [ATTACHMENT 4] ; and

WHEREAS, the source of funding for the purchase of fifty-three (53) submersible motors and ninety-six (96) submersible pumps of various types or stages will FY 2019 Revenue Funded Capital Improvement Projects.

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU hereby authorizes the management of GWA to proceed based on the renewal for one year contract with IFB 2015-03.
3. The CCU hereby further authorizes the management of GWA to purchase Seven Hundred Thirty-Six Thousand Eight Hundred Sixty-six and Fifty Five Cents ($736,866.55) of pumps and motors.
4. The CCU hereby further approved the funding total of Seven Hundred Thirty-Six Thousand Eight Hundred Sixty-six and Fifty Five Cents ($736,866.55) of pumps and motors.

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 28th day of August, 2018.

Certified by:

_____

JOSEPH T. DUENAS
Chairperson

Attested by:

_____

J. GEORGE BAMBA
Secretary

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SECRETARY'S CERTIFICATE

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

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GUAM CONSOLIDATED COMMISSION ON UTILITIES

RESOLUTION NO. 22-FY2017

RATIFICATION OF PURCHASES UNDER INDEFINITE QUANTITY CONTRACT WITH JMI-EDISON FOR SUBMERSIBLE PUMPS AND MOTORS FOR GWA DEEP WELLS

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA advertised an Invitation for Bid (IFB) 2015-03 soliciting cost quotations from experienced and responsive bidders to provide Deep Well Submersible Pumps and Motors and provide adequate stock replenishment when needed; and

WHEREAS, there was one responsive and responsible bidder who met the Submersible Pumps and Motors requirements of IFB 2015-03; and

WHEREAS, IFB 2015-03 offers were evaluated by GWA's review committee; and

WHEREAS, GWA's review committee determined that the offer for Submersible Pumps and Motors made by JMI-Edison was fair and reasonable by the basis of past purchases made [EXHIBIT A]; and

WHEREAS, GWA accepted JMI-Edison's bid proposal of indefinite quantity bid of "All or None Bid for Franklin Electric Motors" and "All or None Bid for Franklin Electric and Grundfos Pump" with an estimated total amount of Seven Hundred Six Thousand Six Hundred Eighty-Seven Dollars and Thirty Cents ($706,687.30) [EXHIBIT B]; and

WHEREAS, GWA management seeks CCU ratification of purchases related to IFB 2015-03 in the total amount of Seven Hundred Thirty-Six Thousand One Hundred Sixty-Four Dollars and Forty-Seven Cents ($736,164.47) [EXHIBIT C]; and

WHEREAS, GWA management seeks CCU approval to purchase additional pumps and motors for GWA Deep Wells in the total amount of Two Hundred Twenty-Six Thousand Eight Hundred Fifty-Four Dollars and Fifteen Cents ($226,854.15) [EXHIBIT D]; and

WHEREAS, GWA management seeks CCU approval and ratification of IFB 2015-03 for Submersible Pumps and Motors' indefinite quantity bid in total of Nine Hundred Sixty-Three Thousand Eighteen Dollars and Sixty-Two Cents ($963,018.62), the sum of Encumbered Purchase Orders ($736,164.47) and Purchase of Additional Pumps and Motors ($226,854.15); and

WHEREAS, the source of funding for the Submersible Pumps and Motors are Multiple Bond Fund Programs (PW 09-02 Water Wells, Bond 2013 and PW 09-08 Mechanical and Electrical Equipment Replacement Bond 2013) and Internally Funded Capital Improvement Projects.

NOW THEREFORE BE IT RESOLVED, the Consolidated Commission on Utilities does hereby approve and ratify the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms of the bid proposal submitted by "JMI-Edison" are fair and reasonable.
3. There was no indication of bad faith or fraud in any of the procurements contained therein.
4. All of the procurement herein are in the best interest of the territory of Guam and Guam Waterworks Authority.
5. The CCU ratifies the encumbered purchases under the previously issued purchase orders relative to the Indefinite Quantity Contract with JMI-Edison

in the total amount of Seven Hundred Thirty-Six Thousand One Hundred Sixty-Four Dollars and Forty-Seven Cents ($736,164.47).

6. The CCU hereby further authorizes GWA management to purchase additional pumps and motors for GWA Deep Wells in the total amount of Two Hundred Twenty-Six Thousand Eight Hundred Fifty-Four Dollars and Fifteen Cents ($226,854.15).
7. The CCU hereby further approves the funding total of Nine Hundred Sixty-Three Thousand Eighteen Dollars and Sixty-Two Cents ($963,018.62) for the initial three-year contract term.
8. GWA management is hereby authorized to seek PUC approval in the event the contract value exceeds One Million Dollars ($1,000.000.00) as required by Docket 00-04.

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 21st day of February, 2017.

Certified by:

JOSEPH T. DUENAS
Chairperson

Attested by:

J. GEORGE BAMBA
Secretary

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities, as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: 5

NAYS: 0

ABSTENTIONS: 0

ABSENT: 0

EXHIBIT A (1 of 6)

GUAM WATERWORKS AUTHORITY

"Better Water. Better Lives."
Gloria B. Nelson Public Services Building
688 Route 15, Mangilao, Guam 96913

MEMORANDUM

TO: General Manager

VIA: Supply Management Administrator

FROM: Evaluation Committee Members

SUBJECT: Invitation to Bid No. GWA 2015-03
Ref: Submersible Motors, Pumps, and Pump & Motor

Invitation for Bid No: GWA 2015-03 was officially announced and advertised in the Pacific Daily News, Marianas Variety and Guam Waterworks Authority Website on January 29, 2015 and open as scheduled on March 04, 2015 @ 10:00 am. Twelve (12) prospective bidders expressed their interests by acknowledging receipt of the bid package thru GWA's website.

Bidders Register:

1. Z Enterprises, Inc
2. Frontier Supply
3. Hikhjkj
4. JMI Edison
5. Black Const. Corp
6. Benson Guam Ent
7. HDR, Inc
8. Guam Pacific Ent
9. JJ Global
10. Inland Builders
11. Xiong's Family
12. David Meinung

Of the twelve (12), one (1) submitted their bid package, namely:

- JMI Edison

An evaluation committee was formally assembled and met on March 17, 2015 @ 9:30 am in Procurement's office to review/discuss and evaluate the bid.

Committee members consist of:

- Ron Topasna
- Karen Grape
- Peter Salas

1

EXHIBIT A (2 of 6)

Ref: IFB 2015-03 Submersible Motors, Pumps, and Pump & Motor

The committee members reviewed the bid proposal and have determined JMI Edison being the only bidder, respectfully submitted a fair cost and are as followed:

ITEM NO.	DESCRIPTION	ESTIMATED QTY		UNIT COST	EXTENSION
"All or None Bid for Franklin Electric Motors"					
1.1A	SUBMERSIBLE MOTOR 10 H.P.	1	EA	$2,218.17	$2,218.17
B	SUBMERSIBLE MOTOR 20 H.P.	2	EA	$2,797.88	$5,595.76
C	SUBMERSIBLE MOTOR 30 H.P.	1	EA	$3,487.42	$3,487.42
D	SUBMERSIBLE MOTOR 40 H.P.	3	EA	$4,023.70	$12,071.10
E	SUBMERSIBLE MOTOR 50 H.P.	3	EA	$5,332.76	$15,998.28
F	SUBMERSIBLE MOTOR 60 H.P	37	EA	$6,110.36	$226,083.32
G	SUBMERSIBLE MOTOR 75 H.P.	3	EA	$11,171.65	$33,514.95
H	SUBMERSIBLE MOTOR 100 H.P.	4	EA	$12,330.12	$49,320.48
I.	SUBMERSIBLE MOTOR 125 H.P.	2	EA	$16,179.37	$32,358.74
J.	SUBMERSIBLE MOTOR 150 H.P.	3	EA	$19,393.95	$58,181.85
				Total Cost:	**$438,830.07**

2

EXHIBIT A (3 of 6)

Ref: IFB 2015-03 Submersible Motors, Pumps, and Pump & Motor

ITEM NO.	DESCRIPTION	ESTIMATED QTY		UNIT COST	EXTENSION
"All or None Bid for Franklin Electric & Grundfos Pumps"					
2.1 A.	SUBMERSIBLE PUMP 70SR7, 6" X 8 STAGE	1	EA	$1,020.24	$1,020.24
B.	SUBMERSIBLE PUMP 70SR15, 6" X 15 STAGE	1	EA	$1,395.34	$1,395.34
C.	SUBMERSIBLE PUMP 150SR30, 6" X 14 STAGE	1	EA	$1,484.16	$1,484.16
D.	SUBMERSIBLE PUMP 150SR40, 6" X 19 STAGE	1	EA	$1,885.65	$1,885.65
E.	SUBMERSIBLE PUMP 175SR20, 6" X 8 STAGE	1	EA	$1,843.65	$1,843.64
F.	SUBMERSIBLE PUMP 175SR25, 6" X 10 STAGE	2	EA	$2,147.92	$4,295.84
G.	SUBMERSIBLE PUMP 175SR30, 6" X 12 STAGE	1	EA	$2,459.99	$2,459.99
H.	SUBMERSIBLE PUMP 175SR40, 6" X 14 STAGE	10	EA	$2,714.46	$27,144.60
I.	SUBMERSIBLE PUMP 175SR40, 6" X 16 STAGE	3	EA	$2,981.52	$8,944.56
J.	SUBMERSIBLE PUMP 175SR50, 6" X 18 STAGE	1	EA	$3,253.38	$3,253.38
K.	SUBMERSIBLE PUMP 250SR25, 6" X 9 STAGES	1	EA	$1,578.98	$1,578.98
L.	SUBMERSIBLE PUMP 250SR30, 6" X 10 STAGES	3	EA	$1,674.40	$5,023.20
M.	SUBMERSIBLE PUMP 250SR40, 6" X 12 STAGES	3	EA	$1,937.27	$5,811.81
N.	SUBMERSIBLE PUMP 250SR40, 6" X 14 STAGES	4	EA	$2,349.56	$9,398.24

3

Ref: IFB 2015-03 Submersible Motors, Pumps, and Pump & Motor

EXHIBIT A (4 of 6)

O.	SUBMERSIBLE PUMP 250SR50, 6" X 15 STAGES	10	EA	$2,327.96	$23,279.60
P.	SUBMERSIBLE PUMP 250SR50, 6" X 18 STAGES	2	EA	$2,942.51	$5,885.02
Q.	SUBMERSIBLE PUMP 250SR60, 6" X 20 STAGES	3	EA	$3,223.97	$9,671.91
R.	SUBMERSIBLE PUMP 325SR25, 6" X 7 STAGES	1	EA	$1,541.17	$1,541.17
S.	SUBMERSIBLE PUMP 325SR40, 6" X 9 STAGES	2	EA	$1,842.45	$3,684.90
T.	SUBMERSIBLE PUMP 325SR40, 6" X 11 STAGES	1	EA	$2,236.14	$2,236.14
U.	SUBMERSIBLE PUMP 325SR50, 6" X 13 STAGES	13	EA	$2,552.42	$33,181.46
V.	SUBMERSIBLE PUMP 325SR60, 6" X 18 STAGES	2	EA	$3,319.40	$6,638.80
W.	SUBMERSIBLE PUMP 325SR75, 6" X 21 STAGES	1	EA	$4,905.58	$4,905.58
X.	SUBMERSIBLE PUMP 400SR50, 8" X 7 STAGES	1	EA	$3,494.64	$3,494.64
Y.	SUBMERSIBLE PUMP 400SR75, 8" X 10 STAGES	2	EA	$4,736.93	$9,473.86
Z.	SUBMERSIBLE PUMP 400SR100, 8" X 13 STAGES	3	EA	$5,418.10	$16,254.30
AA.	SUBMERSIBLE PUMP 475SR100, 8" X 11 STAGES	3	EA	$5,426.50	$16,279.50
AB.	SUBMERSIBLE PUMP 475SR125, 8" X 14 STAGES	2	EA	$6,226.49	$12,452.98
AC.	SUBMERSIBLE PUMP 625S-1500, 8" x 7A STAGES	2	EA	$9,468.84	$18,937.68

4

AD.	SUBMERSIBLE PUMP 625S-1500, 8" x 7 STAGES	2	EA	$9,468.84	$18,937.68
AE.	SUBMERSIBLE PUMP 800S-1000, 8" x 4A STAGES	1	EA	$5,462.38	$5,462.38
				Total Cost:	**$267,857.23**

[Grand Total Cost: $706,687.30]

After a thorough evaluation, the committee members clarified and confirmed with JMI Edison on Item No: 1.1a the submitted Total Cost indicated $212,746.75. JMI responded dated on March 26, 2015 and advised the members it was a typographical error and the total cost should state $438,830.07. In closing, the committee members agreed to accept the bid offer from JMI Edison and have determined they submitted and complied with all specifications and requirements set forth in the IFB.

Summary:

This is an "Indefinite Quantity Bid" pursuant to the Guam Procurement Regulations. The quantities reflected are only estimated and not guarantee of amounts to be purchased. Quantities may increase or decrease thru the duration of the contract and continued purchase is subject to the availability of funds. No guarantee or other commitment is made to vendors in terms of purchasing quantity and the amounts set forth in this bid are only estimates of needs for the near term.

Please note: This is an Indefinite Quantity Bid so the grand total cost stated above does not mean it's a guaranteed cost that GWA will be issuing.

Contract Term:

GWA and the lowest responsible bidder may enter into a contract (which may be in the form of a Purchase Order) on terms acceptable to GWA which shall commence upon vendor's acknowledged receipt of a Notice to Proceed from GWA. The initial term of the contract is three (3) years with two (2) one year options to renew, subject to availability of funds and agreement between the parties.

Concurred and accepted by the committee members:

Ron Topasna, Water Plant Superintendent

5

Ref: IFB 2015-03 Submersible Motors, Pumps, and Pump & Motor

Karen Cheryl C. Grape, Management Analyst III, Operations

Peter Salas, Buyer II, Procurement

Your approval is greatly appreciated.

Antonio Camacho

In consideration of the foregoing, please indicate your approval of this recommendation by your signature below.

[✓] CONCURRED [ ] UNCONCURRED

VINCENT ED. GUERRERO, SMA

[✓] APPROVED [ ] DISAPPROVED

3/30/2015

MARK G. MILLER, GENERAL MANGER, INTERIM

01 33 03p m 03-31-2015 | 2 | 6716493750

6716493750 GWA Procurement Supply 01:22:59 p.m. 03-31-2015 2 /3

EXHIBIT B

GUAM WATERWORKS AUTHORITY

"Better Water. Better Lives."
Gloria B. Nelson Public Services Building
688 Route 15, Mangilao, Guam 96913
Tel: (671) 300-6026/27 Fax: (671) 649-3750

MAR 3 1 2015

JMI Edison
125 North Marine Drive
P.O. Box 6577
Tamuning, Guam 96931
Ph: 646-6400 Fax: 649-4835

RE: Notice of Award for GWA Bid No. 2015-03
For: Submersible Motors, Pumps, and Pump & Motor

Hafa Adai!

The Guam Waterworks Authority ("GWA") has considered the bid submitted by JIM Edison for the above described reference in response to its Advertisement for Bids dated January 29, 2015.

Therefore, JMI Edison is hereby notified the proposal for the Indefinite Quantity Bid has been accepted by GWA. Please be advised the Bid Bond must remain in full force and effect until all performance periods have ended **(e.g., until warranty period has ended as any warranty is a service provided in conjunction with the delivery of goods).**

You are hereby advised that any obligations incurred by JMI Edison prior to execution of the contract are at your own risk. GWA shall have no obligation to reimburse costs incurred prior to execution of the contract.

You are required to return an acknowledged copy of this Notice of Award to the Procurement & Supply Administrator.

Sincerely,

3/30/2015

Mark G. Miller
General Manager, Interim

01:33:03 p.m. 03-31-2015	3	6716493750

6716493750 GWA Procurement Supply 01:23:15 p.m. 03-31-2015 3 /3

Ref: IFB 2015-03 Submersible Motors, Pumps, and Pump & Motor

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged

Dated this 31st day of March 2015.

By JEFFREY PAESTE
Title Operations Manager

******* END OF NOTICE OF AWARD *******

EXHIBIT C

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Encumbered Purchase Orders Relative to IFB 2015-13

PO No	PO Amount	PO Date	Funding Source
297992	$42,772.51	04/16/15	PW 09-08 Mechanical and Electrical Equipment Replacement, Bond 2013
298208	$59,887.34	06/05/15	PW 09-08 Mechanical and Electrical Equipment Replacement, Bond 2013
298218	$165,918.18	06/05/15	PW 09-08 Mechanical and Electrical Equipment Replacement, Bond 2013
298345	$21,462.24	07/14/15	PW 09-08 Mechanical and Electrical Equipment Replacement, Bond 2013
298695	$32,426.64	11/18/15	PW 09-08 Mechanical and Electrical Equipment Replacement, Bond 2013
298783	$88,111.79	12/16/15	Internally Funded CIP
299504	$160,047.56	05/20/16	PW 09-02 Water Wells, Bond 2013
299589	$141,981.34	06/14/16	PW 09-02 Water Wells, Bond 2013
300204	$23,556.87	11/14/16	Internally Funded CIP
Total Amount	**$736,164.47**		

Copies of all Purchase Orders attached.

EXHIBIT D

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Additional Purchases

Submersible Motors	Qty	Unit Cost	Amount
150 hp. Franklin Motor	2	$19,393.95	$38,787.90
125 hp. Franklin Motor	1	$16,179.37	$16,179.37
100 hp. Franklin Motor	1	$12,330.12	$12,330.12
75 hp. Franklin Motor	2	$11,171.65	$22,343.30
60 hp. Franklin Motor	5	$6,110.36	$30,551.80
50 hp. Franklin Motor	6	$5,332.76	$31,996.56
40 hp. Franklin Motor	4	$4,023.70	$16,094.80
Total Submersible Motors	**21**		**$168,283.85**
Submersible Pumps	**Qty**	**Unit Cost**	**Amount**
175 SR-40F66- 1463 (6"x 14 stage)	8	$2,714.46	$21,715.68
250 SR-50F66-1563 (6"x 15 stage)	4	$2,327.96	$9,311.84
250 SR-40F66- 1263 (6"x 11 stage)	1	$1,937.27	$1,937.27
250SR-50F66-1863	1	$2,942.51	$2,942.51
250SR-40F66-1463	1	$2,349.56	$2,349.56
400 SR-100F86-1384 (8"x 13 stages)	1	$5,418.10	$5,418.10
475 SR-100F86- 1186 (8"x 13 stages)	1	$5,426.50	$5,426.50
NFPA-625S-1500 (Stages 7A)	1	$9,468.84	$9,468.84
Total Submersible Motors	**18**		**$58,570.30**
Total Pumps and Motors	**39**		**$226,854.15**

RECEIVED
NOV 3 0 2017
Public Utilities Commission
GUAM

BEFORE THE GUAM PUBLIC UTILITIES COMMISSION

IN RE: PETITION FOR APPROVAL OF INCREASED SPENDING UNDER EXISTING CONTRACT WITH JMI-EDISON FOR SUBMERSIBLE PUMPS & MOTORS	)	**GWA DOCKET 18-02**
	)	**ORDER**

INTRODUCTION

This matter comes before the Guam Public Utilities Commission (the "PUC" or the "Commission") pursuant to the Petition for Increased Spending Under An Existing Contract for Submersible Pumps and Motors to JMI-Edison (the "Petition"), filed by the Guam Waterworks Authority ("GWA") on October 18, 2017.

In January of 2015, GWA issued Invitation for Bid Number GWA 2015-03 ("IFB 2015-03") soliciting the purchase of submersible pumps and motors for GWA's drinking wells.[1] In March of 2015, GWA's procurement team evaluated and selected JMI-Edison's indefinite quantity bid.[2] Thereafter, GWA awarded the bid to JMI-Edison and entered into a three-year contract with JMI-Edison, with two (2) yearlong options to renew.

On July 28, 2017, in GWA Docket 17-08, the Commission issued an Order ratifying the underlying procurement and approving the contract between JMI-Edison for the purchase of submersible pumps and motors, for an estimated cost of $1,300,282.92.

On November 28, 2017, the Administrative Law Judge of the PUC Joephet R. Alcantara (the "ALJ") filed a report regarding the instant Petition, which included his

[1] Application to Award an Indefinite Quantity Contract for Submersible Pumps and Motors to JMI-Edison ("Docket 17-08 Petition"), p. 1 (July 12, 2017).

[2] Docket 17-08 Petition, p. 1.

findings and recommendations based on the administrative record before the PUC. The ALJ made the following findings.

DETERMINATIONS

When the PUC ratified the procurement for submersible pumps and motors, and approved the contract between GWA and JMI-Edison for the purchase of submersible pumps and motors back in July, 2017, the PUC also considered additional purchases in 2018 under the contract. With respect to the purchase of additional pumps and motors in 2018, GWA was required to return to the PUC with a listing, itemizing such additional purchases.

In this Petition, GWA submitted that "[i]n an effort to build-up the deep well pump and motor inventory, GWA management reviewed historical inventory, critical production numbers and empirical well repair schedules to create an on-hand purchase schedule and associated quarterly replenishment guidelines."[3] GWA requested PUC approval of $612,778.13 for FY2018, as well as quarterly purchases of $213,403.57 for the remainder of the contract. In support of its request, GWA provided the PUC with an inventory of its deep well submersible pumps and motors, which indicates purchases for 2017, 2018, plus three additional quarters after 2018.

The ALJ found that for FY2018, GWA intends on purchasing fifty (50) motors and around seventy (70) pumps, for a total cost of $612,778.13. Under the JMI-Edison contract, the submersible motors range from $2,218.17 to $19,393.95, depending on the strength and horsepower of the motor. The submersible pumps range from

[3] Petition for Increased Spending Under an Existing Contract with JMI-Edison for Submersible Pumps and Motors, p. 2 (Oct. 18, 2017).

$1,020.24 to $9,468.84, depending on the size of, and number of stages contained in, the pump. Back in July, GWA initially indicated that it would purchase $597,847.18 worth of pumps and motors for 2018.

With respect to purchases after FY2018, based on the listing provided by GWA, GWA will purchase on average one (1) of each pump and motor required for its wells, per quarter.

As noted in the administrative record in GWA Docket 17-08, GWA purchases submersible pumps and motors on an as needed basis, and periodically replenishes its inventory of spare parts. And it is clear that these pumps and motors are necessary to operate GWA's one hundred and four (104) deep wells.

Based on the documentation provided by GWA in this docket, and for the other reasons set forth herein, the ALJ recommended that the PUC authorize GWA's purchase of submersible pumps and motors for FY2018, at an estimated cost of $612,778.13. With respect to purchases after FY2018, GWA should be required to submit to the PUC documentation of approval of the additional purchases under the contract by the Consolidated Commission on Utilities, which GWA estimates at $213,403.57 per quarter.

ORDERING PROVISIONS

Upon careful consideration of the record herein, the November 28, 2017 ALJ Report, and for good cause shown, on motion duly made, seconded and carried by the affirmative vote of the undersigned Commissioners, the Commission hereby ORDERS the following:

1. The instant Petition is hereby APPROVED and GWA is authorized to purchase submersible pumps and motors under the existing contract with JMI-Edison for FY2018, at a cost not to exceed $612,778.13.

2. With respect to purchases after FY2018, GWA is required to submit to the PUC documentation of approval of the additional purchases under the contract by the Consolidated Commission on Utilities, which GWA estimates at $213,403.57 per quarter. The PUC shall thereafter review the need for such purchases and funding at that time.

3. GWA is ordered to pay the PUC's regulatory fees and expenses, including and without limitation, consulting and counsel fees, and the fees and expenses associated with the instant contract review proceedings. Assessment of the PUC's regulatory fees and expenses is authorized pursuant to 12 G.C.A. §§ 12103(b) and 12125(b), and Rule 40 of the Rules of Practice and Procedure before the PUC.

[SIGNATURES TO FOLLOW ON NEXT PAGE]

SO ORDERED this 30th day of November, 2017.

JEFFREY C. JOHNSON
Chairman

ROWENA E. PEREZ
Commissioner

JOSEPH M. MCDONALD
Commissioner

FILOMENA M. CANTORIA
Commissioner

MICHAEL A. PANGELINAN
Commissioner

PETER MONTINOLA
Commissioner

ANDREW L. NIVEN
Commissioner

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Gloria B. Nelson Public Services Building
688 Route 15, Mangilao, Guam 96913
Tel: (671) 300-6027 Fax: (671) 649-3750

JUN 0 1 2018

JMI Edison
125 North Marine Drive
P.O. Box 6577
Tamuning, Guam 96931
Ph: 646-6400 Fax: 649-4835

Project No: GWA IFB 2015-03
Project Name: Submersible Pumps and Motors
Ref: Contract Renewal

Hafa Adai Mr. Oriondo,

We would like to inform you IFB 2015-03 Submersible Pumps, Motors, Cables and Booster Pump bid contract is up for renewal. As stated on the bid under Contract Term: The initial term of the contract is three (3) years with two (2) one-year options to renew, subject to availability of funds and agreement between the parties.

If JMI Edison agrees to renew this contract, please acknowledge by signing below;

FOR: Romeo Oriondo,
Operations Manager.

Date: 08/10/18

Your response on this matter will be greatly appreciated

Sincerely,

FOR

Vince Guerrero, CPM
Supply Management Administrator

ATTACHMENT 4

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2019 MOTOR PURCHASE

Submersible Motor	1st Quarter Motor Qty	1st Quarter Motor Cost	2nd Quarter Motor Qty	2nd Quarter Motor Cost	3rd Quarter Motor Qty	3rd Quarter Motor Cost	4rth Quarter Motor Qty	4rth Quarter Motor Cost	2019 Motor Spare Inventory	2019 Motor Cost
10HP									0	
20HP									0	
30 HP	1	$3,487.42			1	$3,487.42			2	$6,974.84
40 HP	1	$4,023.70			1	$4,023.70	1	$4,023.70	3	$12,071.10
50 HP (critical)	5	$26,663.80	7	$37,329.32	5	$26,663.80	6	$31,996.56	23	$122,653.48
60 HP	4	$24,441.44			3	$18,331.08	3	$18,331.08	10	$61,103.60
75 HP	1	$11,171.65	1	$11,171.65	1	$11,171.65	1	$11,171.65	4	$44,686.60
100 HP (critical)	2	$24,660.24	2	$24,660.24		$0.00	1	$12,330.12	5	$61,650.60
125 HP (critical)			2	$32,358.74	1	$16,179.37		$0.00	3	$48,538.11
150 HP (critical)			1	$19,393.95	1	$19,393.95	1	$19,393.95	3	$58,181.85
TOTAL	**14**	**$94,448.25**	**13**	**$124,913.90**	**13**	**$99,250.97**	**13**	**$97,247.06**	**53**	**$415,860.18**

2019 PUMP PURCHASE

Submersible Pumps	1st Quarter Pump Qty	1st Quarter Pump Cost	2nd Quarter Pump Qty	2nd Quarter Pump Cost	3rd Quarter Pump Qty	3rd Quarter Pump Cost	4rth Quarter Pump Qty	4rth Quarter Pump Cost	2019 Pump Spare Inventory	2019 Pump Cost
250SR-50F66-1863	1	$2,942.51	1	$2,942.51	1	$2,942.51	1	$2,942.51	4	$11,770.04
250SR-40F66-1263	1	$1,937.27	1	$1,937.27	1	$1,937.27	1	$1,937.27	4	$7,749.08
250SR-30F66-1063	1	$1,674.40	1	$1,674.40	1	$1,674.40	1	$1,674.40	4	$6,697.60
400SR-75F86-1084	1	$4,736.93	0	$0.00	1	$4,736.93	1	$4,736.93	3	$14,210.79
400SR-100F86-1384 (critical)	1	$5,418.10	1	$5,418.10	1	$5,418.10		$0.00	3	$16,254.30
70SR-15F66-1763	1	$1,395.34		$0.00		$0.00	1	$1,395.34	2	$2,790.68
150SR-40F66-1963	1	$1,885.65		$0.00	1	$1,885.65	1	$1,885.65	3	$5,656.95
175SR-25F66-1063	1	$2,459.99	1	$2,459.99	1	$2,459.99		$0.00	3	$7,379.97
250SR-25F66-0963	1	$1,578.98		$0.00	1	$1,578.98	1	$1,578.98	3	$4,736.94
250SR-60F66-2063	1	$3,223.97		$0.00	1	$3,223.97	1	$3,223.97	3	$9,671.91
325SR-40F66-1164	1	$2,236.14	1	$2,236.14	1	$2,236.14		$0.00	3	$6,708.42
475SR-125F86-1486 (critical)	1	$6,226.49		$0.00	1	$6,226.49	1	$6,226.49	3	$18,679.47
NFPA-625S-1500-7 (critical)	1	$9,468.84	1	$9,468.84	1	$9,468.84		$0.00	3	$28,406.52
150SR-30F66-1463	1	$1,484.16		$0.00	1	$1,484.16	1	$1,484.16	3	$4,452.48
175SR-20F66-0863	1	$1,843.65	1	$1,843.65	1	$1,843.65		$0.00	3	$5,530.95
175SR-50F66-1863	1	$3,253.38		$0.00	1	$3,253.38	1	$3,253.38	3	$9,760.14
325SR-40F66-0964	1	$1,842.45	1	$1,842.45	1	$1,842.45		$0.00	3	$5,527.35
325SR-75F66-2184	1	$4,905.58		$0.00	1	$4,905.58	1	$4,905.58	3	$14,716.74
400SR-50F86-0764	1	$3,494.64	1	$3,494.64	1	$3,494.64		$0.00	3	$10,483.92
NFPA-800S-1000-4A (critical)	1	$5,462.38		$0.00	1	$5,462.38	1	$5,462.38	3	$16,387.14
175SR-40F66-1463	1	$2,714.46	1	$2,714.46	1	$2,714.46		$0.00	3	$8,143.38
250SR-50F66-1563	3	$6,983.88	3	$6,983.88	2	$4,655.92	3	$6,983.88	11	$25,607.56
250SR-40F66-1463	1	$2,349.56	1	$2,349.56	1	$2,349.56	2	$4,699.12	5	$11,747.80
325SR-50F66-1364			2	$5,104.84	1	$2,552.42	1	$2,552.42	4	$10,209.68
475SR-100F86-1186 (critical)			2	$10,853.00		$0.00	1	$5,426.50	3	$16,279.50
NFPA-625S-1500-7A (critical)			2	$18,937.68		$0.00	1	$9,468.84	3	$28,406.52
325SR-60F66-1864			1	$3,319.40	1	$3,319.40	1	$3,319.40	3	$9,958.20
325SR-25F66-0763			1	$1,541.17		$0.00	1	$1,541.17	2	$3,082.34
TOTAL	**25**	**$79,518.75**	**23**	**$85,121.98**	**25**	**$81,667.27**	**23**	**$74,698.37**	**96**	**$321,006.37**

2019 TOTAL (REVISED)	1st Quarter Qty	1st Quarter Cost	2nd Quarter Qty	2nd Quarter Cost	3rd Quarter Qty	3rd Quarter Cost	4rth Quarter Qty	4rth Quarter Cost	2019 TOTAL Qty	2019 TOTAL COST (REVISED)
2019 Motor Spares	14	$94,448.25	13	$124,913.90	13	$99,250.97	13	$97,247.06	53	$415,860.18
2019 Pump Spares	25	$79,518.75	23	$85,121.98	25	$81,667.27	23	$74,698.37	96	$321,006.37
	39	**$173,967.00**	**36**	**$210,035.88**	**38**	**$180,918.24**	**36**	**$171,945.43**	**149**	$736,866.55

2019 Estimated Order	Est Qty Order	Estimated Qtrly Order	One Year Order
2019 Motor Spares	4	$110,803.49	$443,213.96
2019 Pump Spares	8	$102,600.08	$410,400.32
TOTAL AMOUNT		**$213,403.57**	**$853,614.28**

2019 Estimated Order (REVISED)	Est Qty Order	2019 Revised Order	One Year Order
2019 Motor Spares	13	$103,965.05	$415,860.18
2019 Pump Spares	24	$80,251.59	$321,006.37
TOTAL AMOUNT		**$184,216.64**	**$736,866.55**

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Issues for Decision

Resolution No. 49- FY2018

Relative to Approving the Guam Waterworks Authority Fiscal Year 2019 Budget

What is the project's objective and is it necessary and urgent?

The purpose is to approve GWA's Fiscal Year 2019 Budget.

How much will it cost?

The Fiscal Year 2019 Budget totals $89 million. O&M expenses are comprised of $24 million in salaries and benefits; $15 million in power purchases; $9 million in water purchases; $11 million in administrative and general expenses; $5 million in contractual expenses; $21 million in depreciation and $4 million in retiree supplemental annuities and health care.

When will it be completed?

The FY2019 Budget represents anticipated revenues and expenditures for the fiscal period of October 1, 2018 through September 30, 2019.

What is the funding source?

The funding source is derived from water, wastewater and other sources of revenues estimated at $113 million: $69 million in water sales; $39 million in wastewater; $4 million from the legislative surcharge; and $460 thousand in other revenues.

GUAM CONSOLIDATED COMMISSION ON UTILITIES
RESOLUTION NO 49-FY2018

RELATIVE TO APPROVING THE GUAM WATERWORKS AUTHORITY FISCAL YEAR 2019 BUDGET

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA Management has formulated and thoroughly reviewed the Fiscal Year 2018 projected year end results in conjunction with the development of Management's proposed Fiscal Year 2019 (FY2019) Budget and does hereby submit said budget to the CCU for their approval as detailed in Exhibit A as attached; and

WHEREAS, the budget encompasses projections for revenues, operating expenditures, debt service, capital outlay and other cash flow requirements needed to meet financial and obligatory covenants; and

WHEREAS, after careful evaluation of several factors that include among others, recent financial data, known and measurable changes in operating conditions, financial policies, existing obligations and developing plans, the FY2019 Budget Plan recommended by Management for approval by the CCU assumes no rate relief; and

WHEREAS, operating revenue for FY2019 are predicated on this assumption and are projected to reach $113 million derived from approximately $69 million in water sales, $39 million in wastewater; $3 million from the legislative surcharge; $460 thousand in Other revenues and $1 million in System Development Charges; and

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WHEREAS, operating costs are earmarked at $24 million in salaries and benefits; $15 million in power purchases; $9 million in water purchases; $11 million in administrative and general expenses; $5 million in contractual expenses; $21 million in depreciation and $4 million in retiree supplemental annuities and health care for a combined Fiscal 2019 total of $89 million; and

WHEREAS, the budget, as recommended, allows GWA a staff level of 400 full time employees (FTE) to meet O&M activities; and

WHEREAS, the FY2019 Budget represents Management's best estimates of resources necessary to carry out its strategic objectives consonant with the Authority's mission; and

WHEREAS, it is the General Manager's desire to be granted budget transfer authority to modify or adjust budget amounts among and between budget expense categories, with the exception of salaries and benefits, in the event of changed conditions unanticipated in the FY2019 Budget request; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve and authorize the items listed herein:

Section 1. The foregoing recitals hereby constitute the findings of the CCU.

Section 2. The CCU affirms management's recommendation to maintain current rates for basic, and non-lifeline rates across all rate structures and customer classes and legislative surcharges.

Section 3. The Fiscal Year 2019 Proposed Budget of $113 million and $89 million of operating revenues and expenses, respectively, in addition to other cash flow requirements such as debt service, bond reserves, working capital and conforming to the rate covenants for the bond indenture (1.25) and PUC (1.75) are just and reasonable.

Section 4. The General Manager is authorized a staff level not to exceed 400 Full- time employees for FY2019.

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Section 5. The General Manager is authorized to transfer funds up to 10% between and among O&M Budget expenses, excluding Salaries and Benefits categories, as necessary to meet the mission of GWA. Any transfer(s) greater than 10% requires CCU approval.

RESOLVED that the Chairman certifies and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 28th day of August 2018.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS
Chairperson

J. GEORGE BAMBA
Secretary

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities, as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

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EXHIBIT A

Resolution 49-FY2018

FISCAL YEAR 2019 BUDGET

GUAM WATERWORKS AUTHORITY

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P.O. Box 3010, Hagatna, Guam 96932
Tel. No. (671) 300-6846/48 Fax No. (671) 648-3290

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HIGHLIGHTS

Presented within is the Guam Waterworks Authority Fiscal Year 2019 Budget Proposal for the approval of GWA's governing board, the Consolidated Commission on Utilities (CCU).

The 2011 Federal Court Order, advancing GWA's asset management program, improving core functions, ensuring continued financial progress, a robust debt service coverage, funding preventative maintenance and improving liquidity are the thrust of the FY2019 Budget Plan recommended by GWA management.

2011 Federal Court Order

Momentum continues to complete capital improvement projects mandated by the Federal Court Order. Ninety-eight percent (98%) of court-ordered tasks have been completed to date. The remaining projects are actively in progress at different phases of design or construction and include projects such as rehabilitating and constructing water storage tanks, deep wells and upgrading wastewater plants and conveyance systems. Regular weekly communication is ongoing with the U.S. Environment Protection Agency to report on the status of the projects.

Asset Management Program

GWA rolled out its computerized maintenance management system (CMMS) that supports a risk-based approach to drive the prioritization of maintenance spending. Funds will continue to be allocated on the basis of specific risks to assets with the highest potential of failure and having the biggest impact on levels of service, the environment and community.

To complement the functionality of the CMMS, GWA will also implement critical training intended to raise and refine the skill levels of essential operations and maintenance personnel. To realize this effort, a matching grant was recently awarded for specialized training in the maintenance of pumps and motors, predictive maintenance skills, and leak detection.

Financial Progress

The outlook for FY2019 continues to look strong. Operating income (excluding depreciation) is forecasted to reach approximately $46 million. Nominal increases are projected for revenues, operating expenses and annual debt service, however no rate relief is requested in FY2019.

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GWA will continue to strategically set priorities and allocate resouces to appropriately sustain and improve service in FY2019. GWA will continue to embark on preserving current entitlements such as federal grants and explore alternative sources of funding to help defray capital costs for unfunded mandates. Cash flow will continue to be the modus operandi for FY2019 to ensure sufficiency and liquidity in order to meet all financial obligations.

It remains paramount however that GWA continues to sustain it's historical collection ratios of 95%-99% and execute it's core fundamental functions in order to achieve the financial projections presented in the Budget Plan.

Debt Service

Debt service continues to be the largest line item in the Budget Plan and accounts for 32% of base revenues projected for FY2019. Approximately $500 million in debt is outstanding and consist largely of revenue bonds and a subordinate loan. GWA's revenue bonds are rated BBB-, Baa2 and A- by Fitch Rating, Moody's and Standard and Poors respectively.

Annual debt service in FY2019 is approximately $35 million and represents a $2 million increase from FY2018's level. Debt service coverage is estimated at 1.45 and 1.81 times respectively pursuant to the methodology established by GWA's Revenue Bond Indenture and the Guam Public Utilities Commision (PUC). These coverage levels exceed the 1.25 and 1.75 ratios set by the Bond Indenture and PUC.

No new debt is forecasted in FY2019.

Liquidity

The Budget Plan assumes revenues are adequate to continue funding cash reserves in FY2019. GWA administers two (2) reserves authorized by the CCU, an Operations and Maintenance Reserve equivalent to 180 days of budgeted operating expenses and a Debt Service Reserve equivalent to an amount sufficient to cause debt service coverage for senior long term bonds to be equal to or greater than 1.75 times. Approximately $3.3 million is identified in the Budget Plan to fund the O&M reserve. The Debt Service Reserve is presently fully funded therefore will not require additional deposits in FY2019.

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Proposed Budget

The Budget Plan encompasses projections for revenues, operating expenditures, debt service, paygo and other cash flow requirements needed to meet financial and obligatory covenants. Several factors were taken into consideration that include among others, recent financial data, known and measurable changes in operating conditions, financial policies, existing obligations and developing plans.

Alongside capital improvement projects that are replacing aged water lines and rebuilding supply and storage capacity, there are day-to-day operational schedules that require an equal balance of human and financial resources. The Budget Plan intends to achieve continuity and stability in supporting capital projects without compromising key components in operations and levels of service.

Table I on the following pages represents the Authority's financial blueprint for FY 2019. As noted earlier, all rates remain unchanged for basic, lifeline, non-lifeline and legislative surcharge and base-rate revenue projections are predicated under these assumptions.

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Table I

	Audited 2017	Annualized 2018	Projection 2019
OPERATING REVENUES			
Water Revenues	$ 63,976,842	$ 65,581,775	$ 69,758,957
Wastewater Revenues	37,194,332	38,363,960	38,967,180
Legislative Surcharge	3,207,226	3,359,312	3,536,002
Other Revenues	435,514	450,809	459,046
System Development Charge	871,946	1,099,526	1,173,270
Total Operating Revenues	**105,685,861**	**108,855,382**	**113,894,455**
O & M EXPENSES			
Power Purchases	12,076,262	14,574,680	14,775,781
Water Purchases	7,309,125	9,081,405	9,167,696
Salaries and Benefits	19,543,661	22,926,713	24,435,234
Administrative and General Expenses	10,302,366	10,679,611	10,777,027
Depreciation Expense	16,824,455	18,338,100	21,108,780
Contractual Expense	4,087,430	4,536,161	5,111,471
Retiree Supplemental Annuities/Health care costs	3,376,745	3,451,848	3,622,150
Total Operating Expenses	**73,520,044**	**83,588,518**	**88,998,140**
Earnings (Loss) from Operations	**32,165,817**	**25,266,864**	**24,896,315**
Interest Income-Bond 2013,2014 Refunding,2016,2017 Refunding	784,252	2,491,439	1,019,316
Interest Income-Other Funds	120,382	418,255	166,274
Interest Income-SDC	12,717	89,492	24,862
Interest Expense-Bond 2013,2014 Refunding,2016,2017 Refunding	(26,648,925)	(26,288,346)	(28,653,415)
Interest Expense-BOG	(524,835)	(364,643)	(237,144)
AFUDC	14,066,891	7,500,000	13,887,666
Amortization of Discount, Premium and Issuance Costs	742,328	(372,892)	(213,575)
Grants & other contributions (net of federal expenditures)	21,301,013	10,366,651	66,398,461
Deferred outflows from Pension	-	391,104	(194,412)
Recoveries of bad debts/ Miscellaneous Revenue	(217,999)	-	-
Loss on Defeasance Bond- Refunding	(182,621)	(149,323)	-
Loss on Asset Disposal	(755,256)	-	-
Loss on Inventory write-down	217,999	-	-
Prior Year Adjustment	(321,068)	61,077	-
Net Income (Loss)	**40,760,696**	**19,409,678**	**77,094,349**

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Table I - Continued

	Audited	Annualized	Projection
	2017	2018	2019
INCREASE (DECREASE) in Capital	**40,760,696**	**19,409,678**	**77,094,401**
BOND DEBT SERVICE	**24,562,301**	**26,738,920**	**31,368,415**
DEBT SERVICE COVERAGE CALCULATION - Section 6.12			
Earnings (Loss) from Operations	**32,165,817**	**25,266,864**	**24,896,367**
Investment Income-Other funds	120,382	418,255	166,274
COLA	594,000	594,000	623,700
System Development Charge	(871,946)	(1,099,526)	(1,173,322)
Depreciation	16,824,455	18,338,100	21,108,780
Balance Available for Debt Service - Section 6.12	**48,832,707**	**43,517,693**	**45,621,800**
Debt Service Coverage (1.25X) - Section 6.12	**1.99**	**1.63**	**1.45**
DEBT SERVICE COVERAGE CALCULATION - PUC Debt Ratio			
Balance Available for Debt Service	**48,832,707**	**43,517,693**	**45,621,800**
Transfer - Reserve for O & M	-	1,000,000	
Available for Debt Service -Reserve for Debt Service	11,217,733	11,217,733	11,217,733
Balance Available for Debt Service - PUC	**60,050,441**	**55,735,426**	**56,839,533**
Debt Service Coverage (1.75X) - PUC	**2.44**	**2.08**	**1.81**
CASH FLOW STATEMENT			
Net Income (Loss)	**40,760,696**	**19,409,678**	**77,094,401**
Depreciation & Amortization	17,566,783	17,965,208	20,895,205
AFUDC	(14,066,891)	(7,500,000)	(13,887,666)
Principal Payments - Bonds	(5,040,000)	(5,200,000)	(5,715,000)
Principal Payments-Subordinate loan	(2,863,988)	(3,018,019)	(3,180,334)
Loss on Defeasance Bond and other deferred cost	(559,707)	(540,427)	407,987
System Development Charge	(871,946)	(1,099,526)	(1,173,322)
PayGo/CAPEX	(11,002,200)	(10,463,516)	(13,152,585)
Working Capital Reserve for O & M	(9,498,345)	(1,000,000)	(3,347,412)
Grants and Contributions	(21,301,013)	(10,366,651)	(66,398,461)
Transfer from Capitalized Interest Fund	7,165,500	1,771,471	-
Prior Year Adjustment & Loss on Asset Disposal/Invty writedown	1,076,324	(61,077)	-
Cash Surplus (Deficit)	1,365,212	(102,859)	(8,457,186)
Beginning Balance	8,157,430	9,522,644	9,419,785
Ending Balance	**$ 9,522,644**	**$ 9,419,785**	**$ 962,599**

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REVENUES

Revenues are projected to reach $113 million in FY2019. This compares to $109 million in FY2018 and represents a 5% or $4 million increase as shown in Table II below. This increase is attributable to anticipated growth in GWA's customer base along with improved meter management. Also illustrated in Table II, water revenues are estimated to reach $69 million and wastewater $39 million combined with $5 million from legislative surcharges, Other revenues and System Development Charges.

Table II

REVENUES	Audited	Annualized	Projection
COMPARATIVE	2017	2018	2019
Category			
Water	$ 63,976,842	$ 65,581,775	$ 69,758,957
Wastewater	37,194,332	38,363,960	$ 38,967,180
Legislative Surcharge	3,207,226	3,359,312	3,536,002
Other Revenues	435,514	450,809	459,046
System Development Charge	871,946	1,099,526	1,173,270
Total	**$ 105,685,861**	**108,855,382**	**$ 113,894,455**

Tables III and IV illustrate anticipated water demand and wastewater discharge respectively by customer classes. With anticipated improvements to GWA's meter management and replacement program, a moderate increase in water billed and or charged is expected to be realized in FY2019. Water kgal demand is expected to reach six (6) million thousand gallons (kgal) or approximately thirty-three (33) million kgal or 6% above levels projected for FY2018. Concurrently, a corresponding increase in wastewater discharge is anticipated from 4,085,191 million kgals in FY2018 to 4,434,470 million kgals in FY2019.

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Table III

WATER DEMAND	Audited	Annualized	Projection
	FY2017	FY2018	FY2019
Total Demand (Kgals)	**5,711,790**	**5,676,349**	**6,007,000**
Class Type			
Residential	3,206,811	3,253,920	3,538,561
Commercial	964,639	884,347	907,887
Federal	2,508	1,341	1,327
Government	448,430	454,351	465,345
Hotel	1,004,525	1,005,396	1,005,313
Golf	5,252	2,815	2,617
Agriculture	69,482	66,704	78,009
Irrigation	10,143	7,477	7,942
	5,711,790	**5,676,349**	**6,007,000**

Table IV

WASTEWATER DISCHARGE	Audited	Annualized	Projection
	FY2017	FY2018	FY2019
Total Demand (Kgals)	**4,073,060**	**4,131,508**	**4,434,470**
Class Type			
Residential	1,861,586	1,882,541	2,169,836
Commercial 1	451,470	434,209	447,163
Commercial 2 & Hotel	740,545	742,306	742,306
Commercial 3	147,306	138,573	140,004
Federal (Navy/Air Force)	532,428	577,658	577,658
Government	339,725	356,220	357,502
	4,073,060	**4,131,508**	**4,434,470**

OPERATION & MAINTENANCE

Table V presents a comparative overview of actual operating and maintenance expenses by fiscal year to projections for FY2019. As shown, operating expenses (net of depreciation) are projected to increase 4% above annualized expenses for FY2018. Table V also summarizes budget allocations by major expense categories: $15 million for power purchases; $9 million in water purchases; $24 million for salaries and benefits; $11 million in administrative and general expenses; $5 million in contractual services; and more than $3 million for retirees' supplemental annuities and health care costs funded by the legislative surcharge.

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Utilities

- Water purchases supplement GWA's water supply for residents in certain parts of the island. In FY2019 water purchases are anticipated to remain comparable to levels observed in FY2018.

- Power purchases are driven by water production, wastewater treatment and the conveyance of both. The projected demand for kilowatt hours remain relatively unchanged from the prior year for FY2019.

Salaries & Wages

- Personnel costs are projected at $24 million to fund 400 authorized full-time employees. This projected cost represents a 7% increase from Fiscal 2018 personnel costs of $23 million.

Administrative & General

- Administrative and General expenses include sludge, training, regulatory, advertising and other costs. Combined, these expenses remain relatively flat with a 1% increase from $10.6 million in FY2018 to $10.7 million in FY2019.

Contractual Services

- Contractual services is comprised of costs for building rental, equipment rental, financial and information technology support and laboratory testing among a mix of other services. This budget plan funds an additional $580,000 for outsourcing non-core services to expedite response time to line breaks, equipment failure and scheduled corrective and preventive maintenance.

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Table V

	Audited	Annualized	Projection
	2017	2018	2019
OPERATIONS & MAINTENANCE COSTS			
Power Purchases	$ 12,076,262	14,574,680	$ 14,775,781
Water Purchases	7,309,125	9,081,405	9,167,696
Salaries and Benefits	19,543,661	22,926,713	24,435,234
Administrative and General	10,302,366	10,679,611	10,777,027
Contractual	4,087,430	4,536,161	5,111,471
Retiree Benefits	3,376,745	3,451,848	3,622,150
Total Operating Expenses	**$ 56,695,590**	**65,250,418**	**$ 67,889,359**

Table VI presents the composition of personnel costs: net salaries of $18 million which includes all overtime, night differential and holiday pay, pay for performance and costs to migrate employees to the next market percentile. Retirement is calculated at the statutory rate of 28% of base salaries and comprises the largest portion of benefit costs. Medical, dental and life insurance coverage are based on prevailing rates.

Table VI

	Audited	Annualized	Projection
Salaries & Benefits	FY 2017	FY 2018	FY 2019
Salaries *	$ 14,540,080	16,781,877	$ 17,688,381
Benefits	5,003,581	6,144,836	6,746,853
Total Salaries & Benefits	**$ 19,543,661**	**22,926,713**	**$ 24,435,234**
FTEs	**395**	**395**	**400**

* Net of Capitalized Labor

Table VII summarizes the distribution of Administrative and General expenses. Combined, these costs increase by 1%. Individual expense categories with noted increases from FY2018 year-end totals include the following:

- Training and travel will more than double from $157,000 to $365,000; a major portion ($205,000) of which will cover GWA's matching requirements for a recently approved training grant. As noted earlier, more attention is being focused on refining and strengthening GWA's workforce. This grant will jump start a comprehensive and recurring operational training program intended to fully implement a sound asset management program. The remaining travel and training funds will be used to support other staff development opportunities.

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- Regulatory expenses are costs associated with the Guam Public Utilities Commission (PUC) and other professional services required for regulatory reviews. It includes annual assessments for PUC administration, specialized professional services such as rate consultants and attorney fees for local and federal mandates. GWA anticipates additional engagements with the PUC for ongoing capital improvement projects and the update of GWA's Water Resource Master Plan, increasing regulatory costs by $57,000 from $243,000 to $300,000.

- Advertising funds are used to expand GWA's outreach for a variety of public relations strategies to include among others, reinforcing public confidence and trust in GWA, and providing relevant and quality customer service and information. In FY2019, advertising increases by 6% to $150,000. These funds will be used across multi-media platforms from traditional electronic media, to social networks, public events and industry specific forums.

Table VII

	Audited	Annualized	Projection
	2017	2018	2019
Administrative and General Expenses			
Sludge	$ 1,685,842	1,342,658	$ 1,845,255
Chemicals	2,088,043	2,387,825	2,229,617
Materials & Supplies	1,545,452	2,197,346	2,263,266
Transportation Expense	644,933	659,175	463,771
Telephone & Communication	130,606	180,530	180,650
Claims	265,812	100,668	101,000
Insurance	1,087,233	910,478	953,530
Training & Travel	276,654	157,441	365,000
Advertising	107,853	141,740	150,000
Regulatory	289,613	243,101	300,348
Bad Debts Provision	1,316,397	1,316,347	813,009
Miscellaneous	863,959	1,042,301	1,111,581
Total A&G	**$ 10,302,397**	**10,679,611**	**$ 10,777,027**

Table VIII reflects the contractual expenses by type of service. The contractual budget increases to $5 million in FY2019 from $4 million in FY2018.

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Table VIII

	Audited	Annualized	Projection
	2017	2018	2019
Contractual Expense			
Other	$ 1,880,966	2,150,680	$ 2,561,490
Rental (Building)	438,678	424,159	460,332
Rental (Equipment)	712,488	872,453	959,755
Finance & Information Technology	922,812	665,472	705,400
Lab Testing	127,518	416,197	418,349
Legal	4,969	7,200	6,145
Total Contractual	**$ 4,087,431**	**4,536,161**	**$ 5,111,471**

The increases are primarily attributable to the following categories:

- Other Contractual services classifies a myriad of services into a single budget category. This funds activites outsourced to perform grounds maintenance, road restoration, machining services, pump and motor rewinds and cover other expertise required to assess and repair equipment or instruments at facilities as well as engineering service support. Increasing funds for these particular areas will reduce any back-logs in work orders as GWA reforms its approach to preventive maintenance.

- Equipment Rental is intended to augment GWA's existing fleet. Outsourcing plans will require increase funding levels for rentals for more commonly used equipment like backhoes and dump trucks to prevent delays in line repairs when GWA-owned equipment is unavailable due to maintenance or in-use at other job sites. This plan provides a 10 percent increase for equipment rental to $960,000. Procurement of long-term leases are in progress to replace short-term rentals to provide cost benefits and equipment readiness.

- Finance and Information Technology includes costs for annual maintenance and support of computer hardware and software. Technological advances are introducing better ways to conduct business. Provisions for maintenance support of new technology that serve asset management, various reporting tools, and other computer solutions is included in this budget plan.

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CONCLUSION

While this fiscal year budget provides solely for the operational plans over the next 12 months, it sets the stage for developing GWA's next 5-year financial plan. The plan will consider all options to encompass CIP programs, enhance operating efficiencies to deliver optimal services for customers, the environment and the community.

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GUAM WATERWORKS AUTHORITY

APPENDICES

(A – G)

GUAM WATERWORKS AUTHORITY
PROPOSED FY2019 BUDGET

	Audited 2017	Annualized 2018	Projection 2019
Basic Charge -Water/Wastewater	3.50%	4.00%	0.00%
Lifeline Increase (discounted rate)	3.50%	0.00%	0.00%
Non-Lifeline Increase/Demand	3.50%	4.00%	0.00%
Legislative Surcharge	3.70%	3.75%	3.75%
Customer Growth	0.00%	0.00%	0.50%
OPERATING REVENUES			
Water Revenues	$ 63,976,842	$ 65,581,775	$ 69,758,957
Wastewater Revenues	37,194,332	38,363,960	38,967,180
Legislative Surcharge	3,207,226	3,359,312	3,536,002
Other Revenues	435,514	450,809	459,046
System Development Charge	871,946	1,099,526	1,173,270
Total Operating Revenues	105,685,861	108,855,382	113,894,455
O & M EXPENSES			
Power Purchases	12,076,262	14,574,680	14,775,781
Water Purchases	7,309,125	9,081,405	9,167,696
	19,385,388	23,656,086	23,943,477
Salaries and Benefits	19,543,661	22,926,713	24,435,234
Intentionally Left Blank			
Administrative and General Expenses	10,302,366	10,679,611	10,777,027
Intentionally Left Blank			
Depreciation Expense	16,824,455	18,338,100	21,108,780
Intentionally Left Blank			
Contractual Expense	4,087,430	4,536,161	5,111,471
Intentionally Left Blank			
Retiree Supplemental Annuities/Health care costs	3,376,745	3,451,848	3,622,150
Total Operating Expenses	73,520,044	83,588,518	88,998,139
Earnings (Loss) from Operations	32,165,817	25,266,864	24,896,316
Interest Income-Bond 2013,2014 Refunding,2016,2017 Refunding	784,252	2,491,439	1,019,316
Interest Income-Other Funds	120,382	418,255	166,274
Interest Income-SDC	12,717	89,492	24,862
Interest Expense-Bond 2013,2014 Refunding,2016,2017 Refunding	(26,648,925)	(26,288,346)	(28,653,415)
Interest Expense-BOG	(524,835)	(364,643)	(237,144)
AFUDC	14,066,891	14,750,000	13,887,666
Amortization of Discount, Premium and Issuance Costs	742,328	(372,892)	(213,575)
Grants & other contributions (net of federal expenditures)	21,301,013	10,366,651	66,398,461
Loss on Defeasance and other deferred outflows	(1,258,945)	302,858	(194,412)
Net Income (Loss)	40,760,696	26,659,677	77,094,350
INCREASE (DECREASE) in Capital	40,760,696	26,659,677	77,094,350
BOND DEBT SERVICE	**24,562,301**	**26,738,920**	**31,368,415**

GUAM WATERWORKS AUTHORITY
PROPOSED FY2019 BUDGET

	Audited 2017	Annualized 2018	Projection 2019
DEBT SERVICE COVERAGE CALCULATION - Section 6.12			
Earnings (Loss) from Operations	32,165,817	25,266,864	24,896,316
Investment Income-Other funds	120,382	418,255	166,274
COLA	594,000	594,000	623,700
System Development Charge	(871,946)	(1,099,526)	(1,173,270)
Depreciation	16,824,455	18,338,100	21,108,780
Balance Available for Debt Service - Section 6.12	48,832,707	43,517,693	45,621,800
Debt Service Coverage (1.25X) - Section 6.12	1.99	1.63	1.45
DEBT SERVICE COVERAGE CALCULATION - PUC Debt Ratio			
Balance Available for Debt Service	48,832,707	43,517,693	45,621,800
Available for Debt Service -Reserve for Debt Service	11,217,733	11,217,733	11,217,733
Balance Available for Debt Service - PUC	60,050,441	54,735,426	56,839,533
Debt Service Coverage (1.75X) - PUC	2.44	2.05	1.81
CASH FLOW STATEMENT			
Net Income (Loss)	40,760,696	26,659,677	77,094,350
Depreciation & Amortization	17,566,783	17,965,208	20,895,205
AFUDC	(14,066,891)	(14,750,000)	(13,887,666)
Principal Payments - Bonds	(5,040,000)	(5,200,000)	(5,715,000)
Principal Payments-Subordinate loan	(2,863,988)	(3,018,019)	(3,180,334)
Loss on Defeasance Bond and other deferred cost	(559,707)	(540,427)	407,987
System Development Charge	(871,946)	(1,099,526)	(1,173,270)
PayGo/CAPEX	(11,002,200)	(10,463,516)	(13,152,585)
Working Capital Reserve for O & M	(9,498,345)	(1,000,000)	(3,347,412)
Grants and Contributions	(21,301,013)	(10,366,651)	(66,398,461)
Transfer from Capitalized Interest Fund	7,165,500	1,771,471	-
Prior Year Adjustment & Loss on Asset Disposal/Invty writedown	1,076,324	(61,077)	-
Cash Surplus (Deficit)	1,365,212	(102,860)	(8,457,186)
Beginning Balance	8,157,430	9,522,642	9,419,782
Ending Balance	$ 9,522,642	$ 9,419,782	$ 962,596

GUAM WATERWORKS AUTHORITY Summary of Revenues	Audited FY 2017	Annualized FY 2018	Projection FY 2019
Water Revenues	**$ 63,976,842**	**$ 65,856,953**	**$ 69,758,957**
Residential	30,959,753	32,569,048	35,960,254
Basic Charge	10,168,845	10,617,782	**10,630,534**
Lifeline Demand Charge	4,869,888	5,061,294	**5,063,209**
Non-Lifeline Demand Charge	15,921,020	16,889,973	**20,266,511**
	30,959,753	32,569,048	**35,960,254**
Commercial	13,441,130	12,904,721	13,220,516
Basic Charge	1,055,168	1,094,120	**1,095,541**
Non-Lifeline Demand Charge	12,385,963	11,810,602	**12,124,976**
	13,441,130	12,904,721	**13,220,516**
Federal	38,059	24,038	23,862
Basic Charge	5,859	6,135	**6,135**
Non-Lifeline Demand Charge	32,201	17,903	**17,728**
	38,059	24,038	**23,862**
Government	6,012,974	6,337,425	6,485,491
Basic Charge	255,131	269,499	**270,737**
Non-Lifeline Demand Charge	5,757,844	6,067,926	**6,214,754**
	6,012,974	6,337,425	**6,485,491**
Hotel	13,009,693	13,543,555	13,542,663
Basic Charge	111,596	116,329	**116,550**
Non-Lifeline Demand Charge	12,898,098	13,427,226	**13,426,114**
	13,009,693	13,543,555	**13,542,663**
Golf	77,301	47,895	45,398
Basic Charge	9,865	10,305	**10,444**
Non-Lifeline Demand Charge	67,436	37,590	**34,953**
	77,301	47,895	**45,398**
Agriculture	383,460	386,344	434,782
Basic Charge	97,193	100,249	**100,196**
Non-Lifeline Demand Charge	286,267	286,096	**334,586**
	383,460	386,344	**434,782**
Irrigation	54,471	43,927	45,990
Basic Charge	11,161	10,736	**10,736**
Non-Lifeline Demand Charge	43,310	33,191	**35,254**
	54,471	43,927	**45,990**
Total	**$ 63,976,842**	**$ 65,856,953**	**$ 69,758,957**

GUAM WATERWORKS AUTHORITY Summary of Revenues	Audited FY 2017	Annualized FY 2018	Projection FY 2019
Wastewater Revenues	**$ 37,194,332**	**$ 38,212,328**	**$ 38,967,180**
Residential	**$ 8,834,033**	**$ 8,888,921**	**$ 9,041,603**
Lifeline Demand Charge	8,834,033	8,888,921	9,041,603
Non-Lifeline Demand Charge	-	-	-
	8,834,033	8,888,921	**9,041,603**
Commercial 1	**$ 3,245,023**	**$ 3,092,072**	**$ 3,292,551**
Lifeline Demand Charge	-	-	-
Non-Lifeline Demand Charge	3,196,409	3,092,072	3,292,551
	3,196,409	3,092,072	**3,292,551**
Commercial 2 & Hotel	**$ 12,767,000**	**$ 13,292,819**	**$ 13,309,258**
Lifeline Demand Charge	-	-	-
Non-Lifeline Demand Charge	12,767,000	13,292,819	13,309,258
	12,767,000	13,292,819	**13,309,258**
Commercial 3	**$ 3,522,087**	**$ 3,502,447**	**$ 3,481,390**
Lifeline Demand Charge	-	-	-
Non-Lifeline Demand Charge	3,522,087	3,502,447	3,481,390
	3,522,087	3,502,447	**3,481,390**
Navy/Airforce	**$ 5,388,168**	**$ 5,694,826**	**$ 6,079,738**
Lifeline Demand Charge	-	-	-
Non-Lifeline Demand Charge	5,388,168	5,694,826	6,079,738
	5,388,168	5,694,826	6,079,738
Government	**$ 3,438,021**	**$ 3,741,243**	**$ 3,762,640**
Lifeline Demand Charge	-	-	-
Non-Lifeline Demand Charge	3,438,021	3,741,243	3,762,640
	3,438,021	3,741,243	3,762,640
	$ 37,194,332	**$ 38,212,328**	**$ 38,967,180**

GUAM WATERWORKS AUTHORITY Legislative Surcharge	Audited FY 2017	Annualized FY 2018	Projection FY 2019
Water	2,166,056	2,279,837	2,413,793
Residential	944,424	1,031,541	1,146,341
Commercial	497,322	483,927	495,769
Federal	1,408	901	895
Government	222,480	237,653	243,206
Hotel	481,359	507,883	507,850
Golf	2,860	1,796	1,702
Agriculture	14,188	14,488	16,304
Irrigation	2,015	1,647	1,725
Total	2,166,056	2,279,837	2,413,793
Wastewater	1,041,170	1,099,628	1,122,209
Total	**3,207,226**	**3,379,465**	**3,536,002**

GUAM WATERWORKS AUTHORITY
Salaries & Benefits

	FY 2017	FY 2018	FY 2019
Wages (*)	13,291,184	16,808,619	19,443,381
Migration (10th & 15th Percentile)		750,000	700,000
Total Wages	**13,291,184**	**17,558,619**	**20,143,381**
Premium Pay			
Overtime	1,069,302	1,799,678	1,000,000
Night Differential	67,768	89,078	95,000
Holiday	111,827	134,502	150,000
Total Premium Pay	**1,248,896**	**2,023,258**	**1,245,000**
Gross Salaries & Premium Pay	**14,540,080**	**19,581,877**	**21,388,381**
Less Capitalized Labor		(2,800,000)	(3,700,000)
Net Salaries & Premium Pay	**14,540,080**	**16,781,877**	**17,688,381**
Benefits			
Insurance (Life, Medical & Dental)	1,017,460	1,236,887	1,409,645
Medicare	222,671	267,647	281,929
Retirement	3,763,450	4,640,302	5,444,147
Potential Savings (26%)			(388,868)
Total Benefits	**5,003,581**	**6,144,836**	**6,746,853**
Total Salaries & Benefits	**19,543,661**	**22,926,713**	**24,435,234**

* includes pay for performance

Full-Time Employee Count			
***Filled**	336	354	354
***Vacant**	59	41	41
New			5
TOTAL	**395**	**395**	**400**

* as of July 2018

PAYGO	ACTUAL FY2018	PROJECTED 2019
WATER		
1. Distribution		
PRV	$ 198,043	250,000
Valves - Main Lines	140,286	500,000
Hydrants	442,638	250,000
Pumps		500,000
Motors		300,000
Pipes		100,000
Pumping Equipments		100,000
	$ 780,967	**$ 2,000,000**
2. Production		
Submersible Pumps		$ 750,000
Submersible Motors		$ 500,000
Cables		$ 350,000
Pipes		$ 350,000
Deep Well Facility Improvements & Rehabilitation		472,585
	$ -	**$ 2,422,585**
WASTEWATER		
1. Maintenance Section		
Pump & Motor Rebuild/Rewind	250,000	-
Spare Parts Mgt.	77,272	-
Pumps		$ 450,000
Motors		300,000
Pipes		300,000
Pump Facility Equipment		200,000
Headworks		200,000
Metering Pump Polymer System		40,000
Centrifuge		65,000
Polyaluminum Chloride System Parts		40,000
Clarifiers		105,000
Coagulation/Floculation Chamber Parts		40,000
Main Water Booster Pump Parts		40,000
	327,272	**1,780,000**
2. Collection & Pumping		
Pump Station Operational Repairs and Maintenance	250,000	-
Emergency Responses	100,000	-
Rehabilitation of Sewer Lines	3,500,000	500,000
	3,850,000	500,000
3. Treatment		
Pumps		200,000
Motors		100,000
	-	**300,000**
Utility Services		
Meter Replacement - Small Meters	1,546,688	500,000
Replacement of Transponders/Transmitters	456,245	
Meter Replacement - Large Meters > 2"	-	200,000
	2,002,933	**700,000**
Transportation		
2WD Trucks (9)		360,000
Compact Cargo Van (2)		70,000
Ford, 2WD, U/T (1)		60,000
Ford, F350, U/T (2)		140,000
Dump Truck (16 cu.yd.)		120,000
Backhoe 4WD (w/Trailer)		300,000
Boom Truck (10 T)		300,000
Tractor Truck		200,000
		1,550,000

PAYGO	ACTUAL FY2018	PROJECTED 2019
Information Technology		
Network Switches-Core Switch/Cisco Switch compliance		350,000
New Computers & Software		300,000
CCB Cloud Disaster Recovery		350,000
Design Renovation Raised Floor		500,000
IBM OS Upgrade		350,000
Financial Application		500,000
		2,350,000
Other Projects		
Land Surveying/Property Delineation		200,000
Facilities Expansion(FMES & Warehouse)		500,000
Systems Planning & Facility Studies		500,000
Facility Security System- Different sites		350,000
		1,550,000
PayGo/(Master Plan)		
TOTAL	**$ 2,330,205**	**$ 13,152,585**

Guam Waterworks Authority
Schedule of Debt Service

	FY 2017	FY 2018	FY 2019
Senior Lien Debt Service			
Series 2010 Revenue Bonds - Principal	1,655,000	1,725,000	1,800,000
Series 2010 Revenue Bonds - Interest	6,410,600	262,375	184,750
Total	8,065,600	1,987,375	1,984,750
Series 2013 Revenue Bonds - Principal	-	-	-
Series 2013 Revenue Bonds - Interest	9,331,688	9,331,688	9,331,688
Total	9,331,688	9,331,688	9,331,688
Series 2014 Refunding Revenue Bonds - Principal	3,385,000	3,475,000	3,620,000
Series 2014 Refunding Revenue Bonds - Interest	3,780,014	3,694,847	3,588,477
Total	7,165,014	7,169,847	7,208,477
Series 2016 Revenue Bonds - Principal	-	-	-
Series 2016 Revenue Bonds - Interest	7,165,500	7,165,500	7,165,500
Total	7,165,500	7,165,500	7,165,500
Series 2017 Refunding Bonds - Principal	-	-	295,000
Series 2017 Refunding Bonds - Interest	-	2,855,981	5,383,000
Total	-	2,855,981	5,678,000
Bond Debt Service	**31,727,801**	**28,510,390**	**31,368,415**
Senior Lien - Bond Debt Service			
Principal	5,040,000	5,200,000	5,715,000
Interest	26,687,801	23,310,390	25,653,415
Less: Capitalized Interest	(7,165,500)	(1,771,471)	-
Interest Net of Cap I	19,522,301	21,538,920	25,653,415
Debt Service- Bonds Net of Cap I	**24,562,301**	**26,738,920**	**31,368,415**
Subordinate Loan			
Principal	2,863,988	3,018,019	3,180,334
Interest	553,489	399,458	237,144
Total Subordinate debt service	**3,417,477**	**3,417,477**	**3,417,477**
Grand Total Debt Service- Bonds and Subordinate	**27,979,778**	**30,156,397**	**34,785,892**

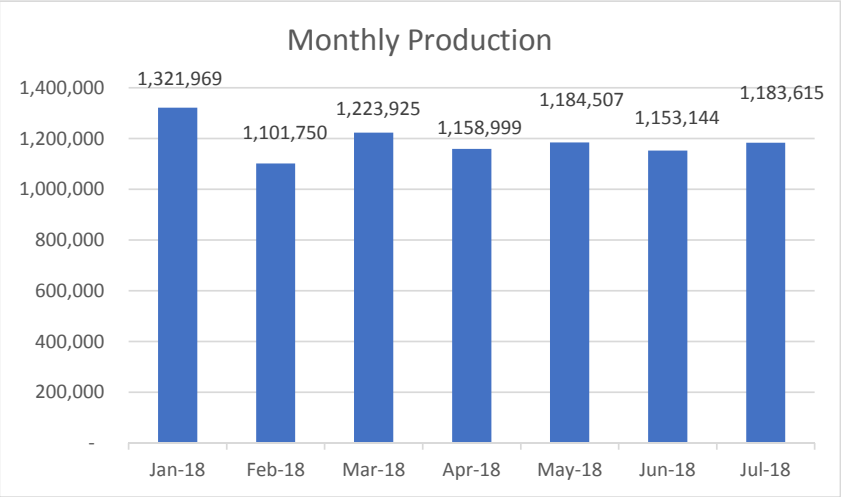
GUAM WATERWORKS AUTHORITY

General Manager's Report
CCU GWA Work Session, August 21, 2018

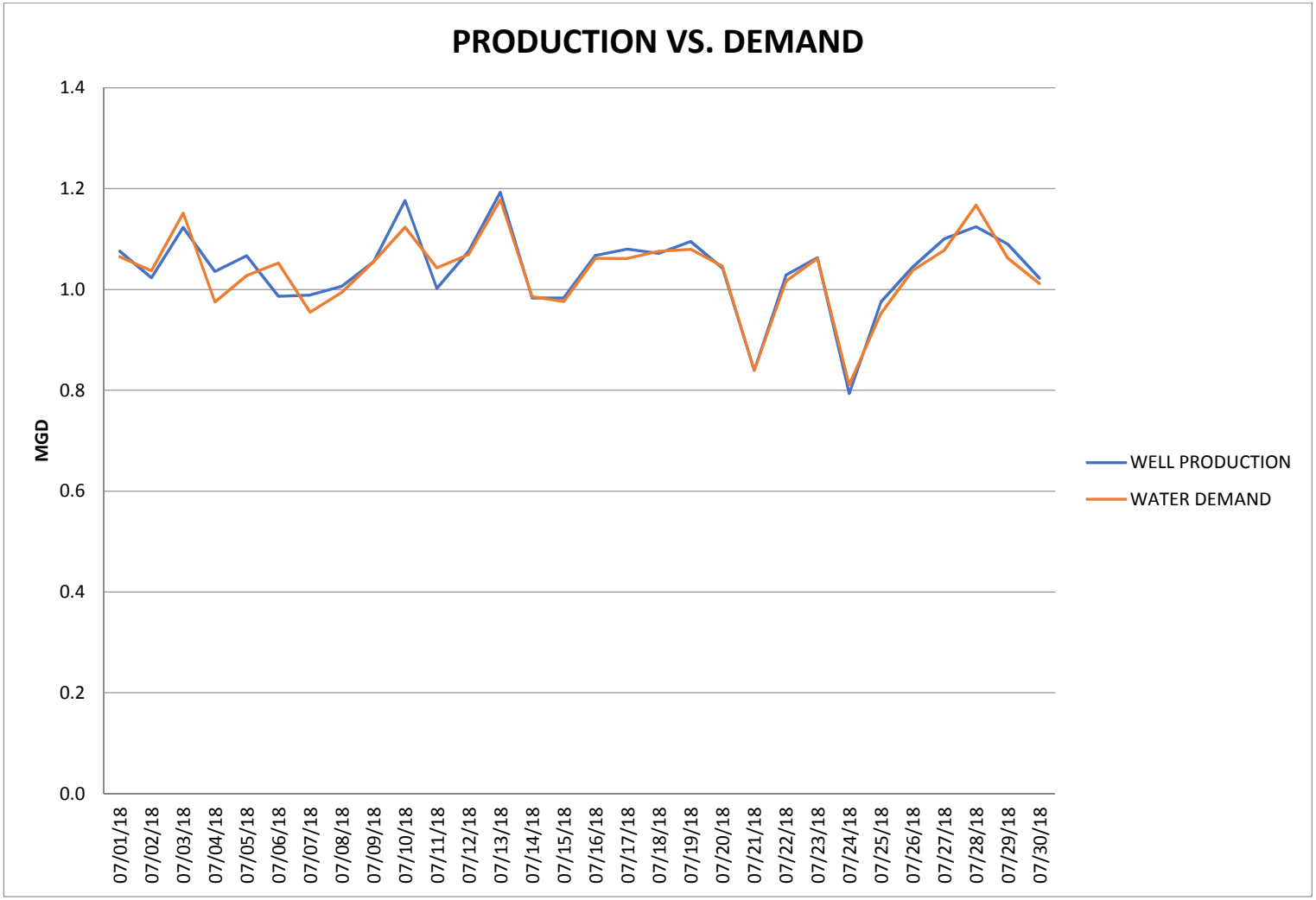
Operations Update

Production

Monthly Production Summary - July 2018					
Deep Wells				36.4	MGD
	Active wells =	95	of 120		
	Avg days in operation =	31	days		
	Total Production =	1,093,214	Kgals		
Springs				0.00	MGD
	Avg days in operation =	0	days	*placed on standby	
	Total Production =	0	Kgals		
Ugum Surface Water Plant				1.9	MGD
	Avg days in operation =	31	days		
	Total Production =	58,142	Kgals		
Tumon Maui Well				1.08	MGD
	Avg days in operation =	31	days		
	Total Production =	32,258	Kgals		
		1,183,615	Kgals	39.5	MGD

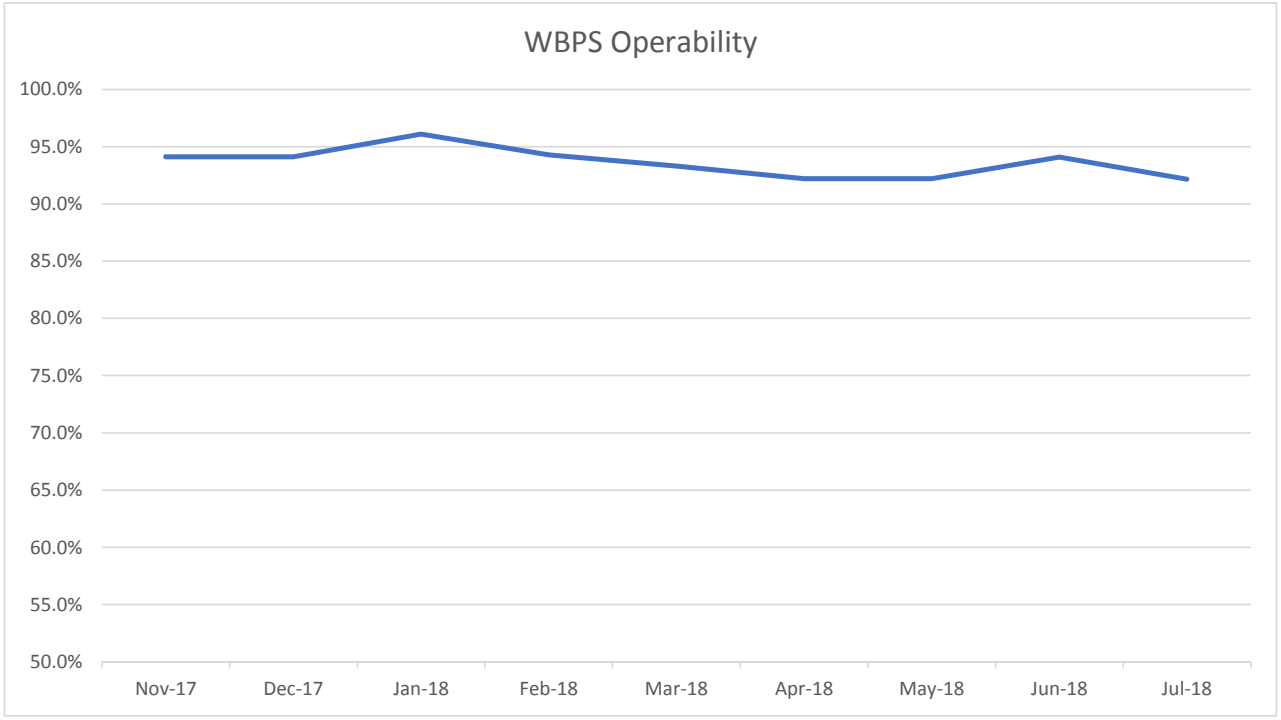


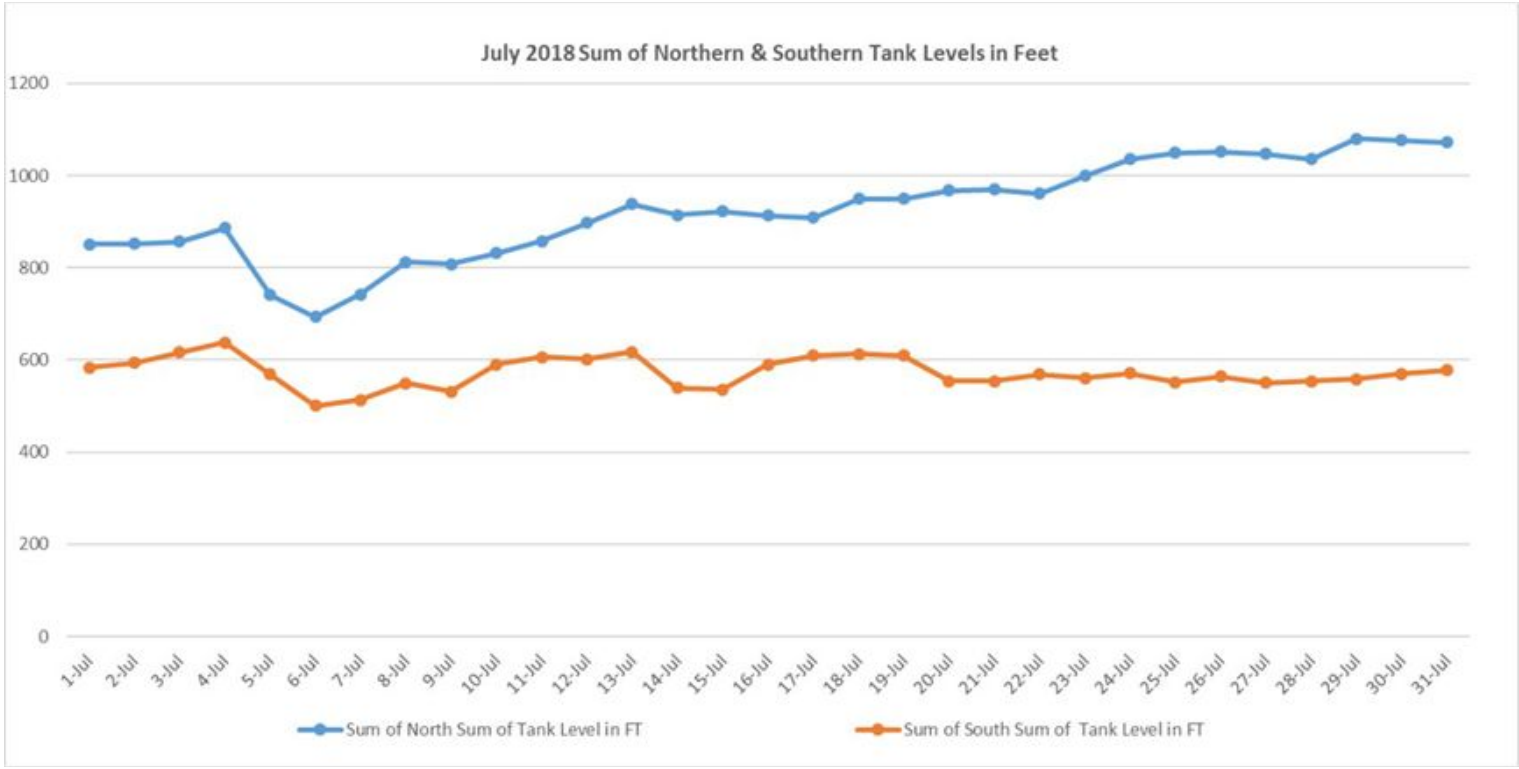
Tumon Maui Well Production vs. Demand for July 2018



Distribution

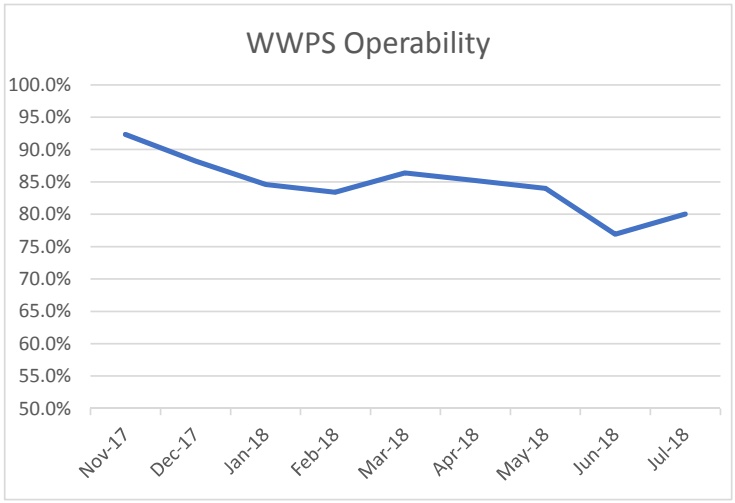
Monthly Distribution Summary - July 2018					
Water Booster Pump Stations					
	District	No. of Stations	Total Pumps	Pumps Operating	% Operational
	Northern	11	21	19	90.5%
	Central	7	15	13	86.7%
	Southern	7	15	15	100.0%
		25	51	47	92.2%

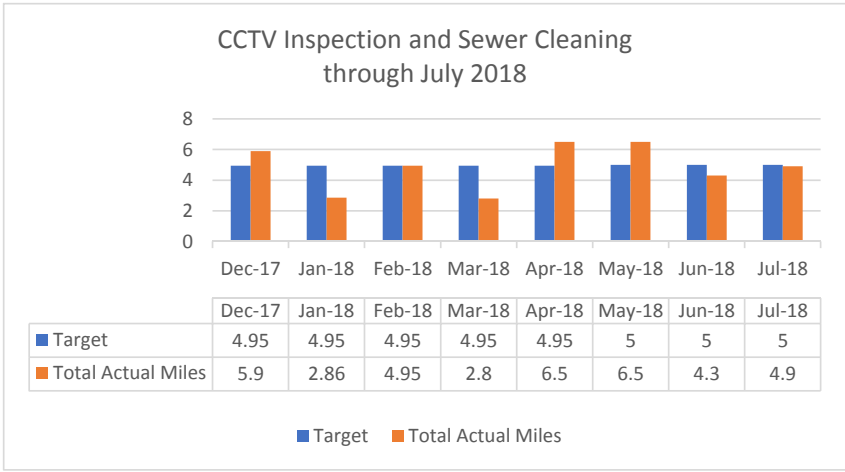



July 2018 Sum of Northern & Southern Tank Levels in Feet
1200
1000
800
600
400
200
0
1-Jul
2-Jul
3-Jul
4-Jul
5-Jul
6-Jul
7-Jul
8-Jul
9-Jul
10-Jul
11-Jul
12-Jul
13-Jul
14-Jul
15-Jul
16-Jul
17-Jul
18-Jul
19-Jul
20-Jul
21-Jul
22-Jul
23-Jul
24-Jul
25-Jul
26-Jul
27-Jul
28-Jul
29-Jul
30-Jul
31-Jul
Sum of North Sum of Tank Level in FT
Sum of South Sum of Tank Level in FT

Wastewater Collections

Monthly Collections Summary - July 2018					
Wastewater Pump Stations					
	District	No. of Stations	Total Pumps	Pumps Operating	% Operational
	Northern	22	52	43	82.7%
	Central	29	63	48	76.2%
	Southern	27	55	45	81.8%
		78	170	136	80.0%

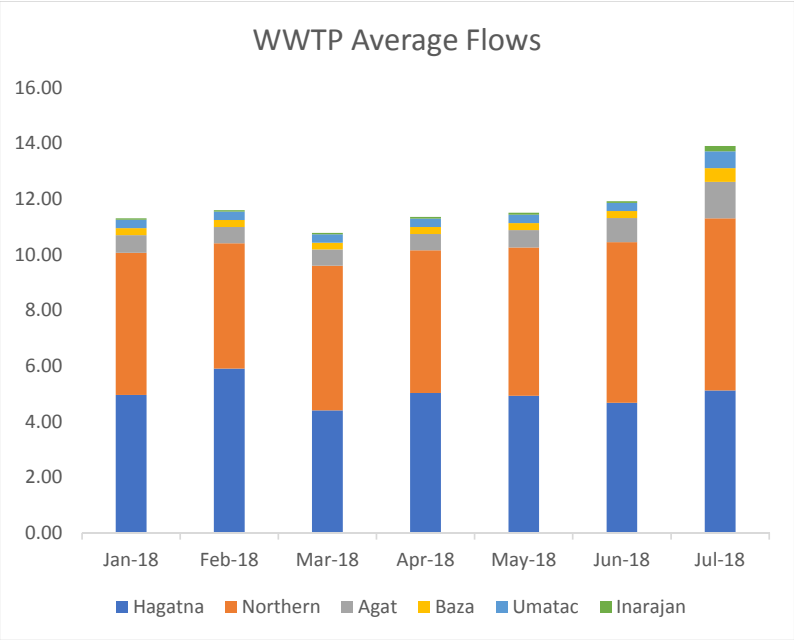




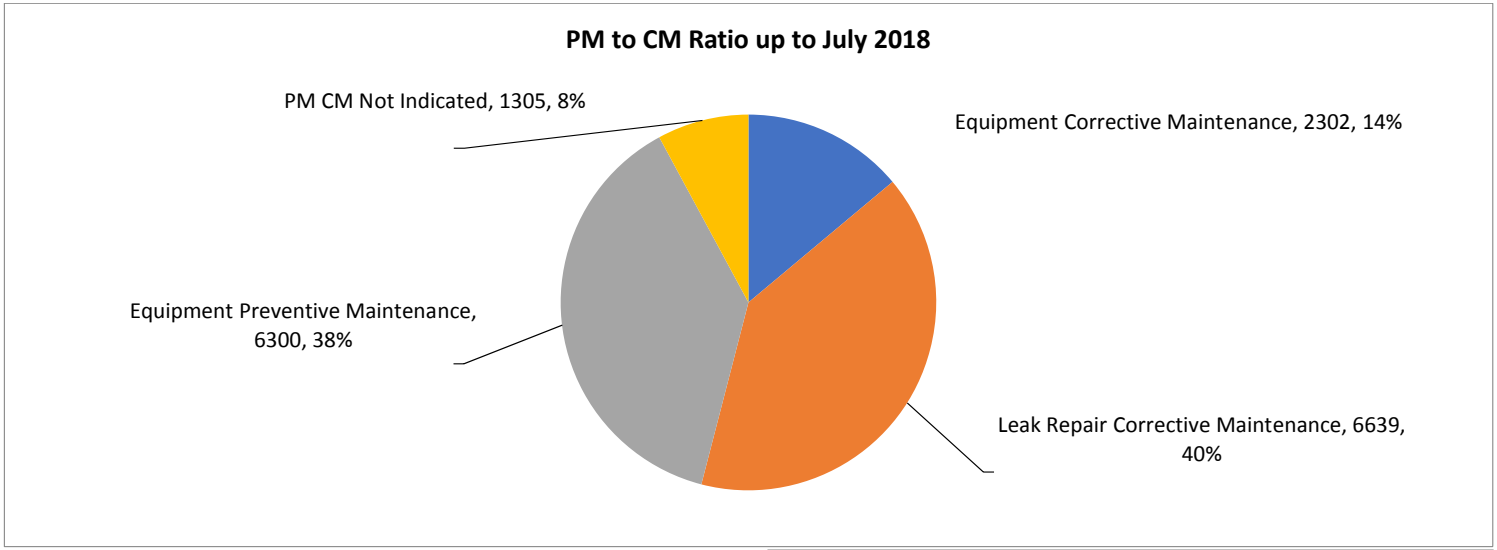
	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18
Target	4.95	4.95	4.95	4.95	4.95	5	5	5
Total Actual Miles	5.9	2.86	4.95	2.8	6.5	6.5	4.3	4.9

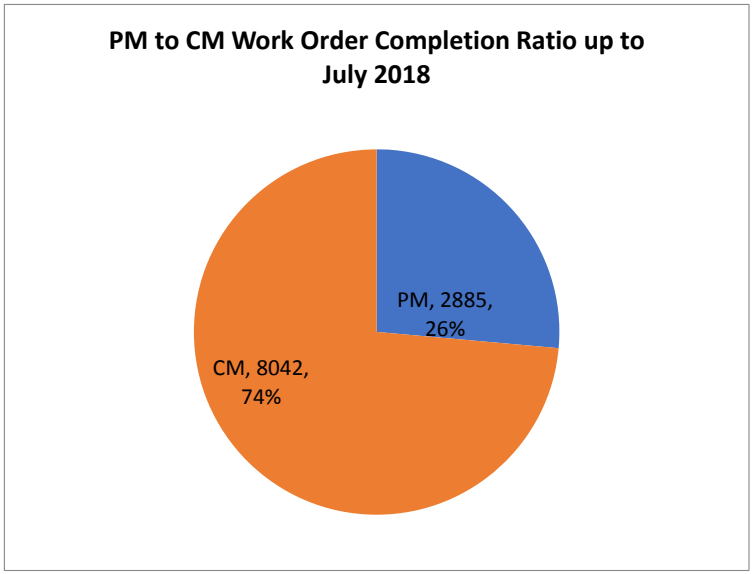
Wastewater Treatment

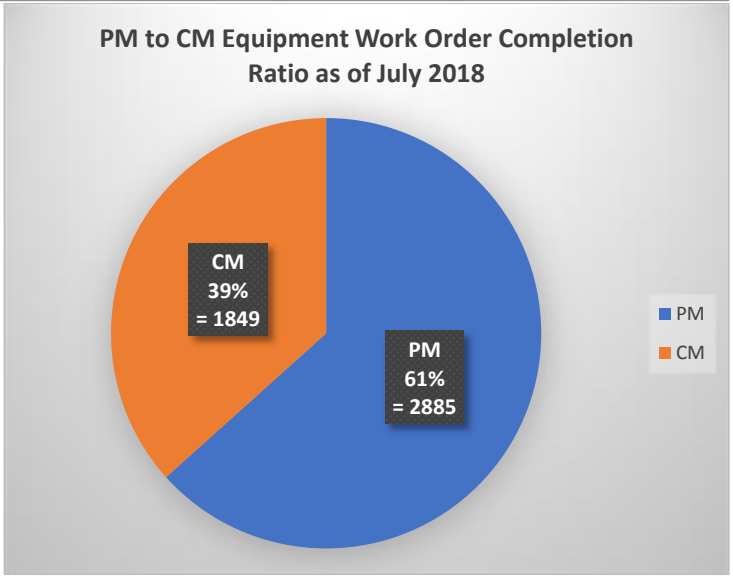
Monthly Wastewater Treatment Summary - July 2018				
WW Treatment Plants - Flows				
	Facility	**Avg. Daily Flows (MGD)**	**Sludge (lbs)**	**Sludge Disp. ($)**
	Hagatna	5.12	596,520	$ 53,687
	Northern	6.18	856,274	$ 77,065
	Agat	1.31		
	Baza	0.50		
	Umatac	0.60		
	Inarajan	0.19		
		13.90	1,452,794	$ 130,751



Asset Management for July 2018







Operational Issues

Production & Distribution

- Leak repair
  - Crews maintaining performance - As of July 31st, there were less than 24 pending repairs
    - 92% reduction from 2017-2018 Maximum of 283 pending
    - 87% reduction from 2018 Maximum of 179 pending
  - IFB for advanced remote leak detection services has been advertised
- WSCC –
  - SCADA equipment and installation requirements on-going
  - Have been coordinating the activation of new Yigo / Astumbo tanks
  - Reservoir levels have been steadily increasing
  - Deep wells placed on standby has increased to 10 (and 11 units out-of-commission).
- Pump and motor inventories okay; additional procurement up for CCU approval
- GWA Crane Repair –new cable installation complete – load test 8/22/18

Wastewater Collection & Treatment

- CCTV & Collections System:
  - Planning department assisting CCTV Crews to revise completed reports to meet appropriate industry standards
  - SSES and CCTV-based repairs to collection lines (95%) and SMHs (10%) are being conducted by Ops personnel
- Pump stations
  - Working to address pump operability issues
  - Minimum pump and motor inventory levels finalized (similar to effort with deep-wells)
  - Engineering providing support for specifications and performance points on all pumps prior to finalizing procurement
  - Critical spares and replacements procurement on-going
- Treatment Plants
  - Hagatna WWTP
    - Centrifuges: New PLC installed; programming on-going.
  - Northern WWTP
    - Both centrifuges back in operation
  - Agat-Santa Rita WWTP
    - Solids process commissioning completion pending – centrifuge #2
    - Critical process facilities all operating
  - U-M WWTP
    - Work on-going at the site

- Significant delays have occurred because of USF&W / EPA permitting issues

- Baza Gardens
  - Work on-going for all 3 phases
  - Anticipated completion is now Sep 30th
  - Delay letter has been sent to USEPA

Meters for month of July 2018

COMPLETED FIELD ACTIVITY JAN 2017 THRU JULY 2018 (POSTED IN CIS)	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	#####	Jun-18	Jul-18	TOTAL:	COMPLETED FIELD ACTIVITIES (IN PROCESS) TO BE POSTED IN CIS
GWA - Test Meter	30	9	9	371	745	87	393	743	1000	1007	434	378	750	969	1213	1429	84	1299	797	11747	665
GWA - Meter Exchange	393	179	220	276	482	353	501	807	1526	1039	452	259	239	1086	2120	121	121	1056	1248	12478	501
GWA - Verify Zero Report	30	124	114	94	96	402	261	199	550	89	82	169	356	106	117	69	13	2	2	2875	0
GWA - Verify Low Usage	0	0	0	2	37	36	196	488	657	202	127	612	858	1122	1055	463	19	5	3	5882	0
TOTAL:	453	312	343	743	1360	878	1351	2237	3733	2337	1095	1418	2203	3283	4505	2082	237	2362	2050	32982	1166

# OF METERS TESTED AS PER METER TEST FACILITY REPORTS:	345	350	144	252	305	210	302	397	1013	1130	927	704	721	1041	1347	815	671	544	1159	12377	
# OF BACKBILLINGS APPLIED AS PER FINANCE REPORTS:	0	0	0	20	122	84	29	111	219	80	77	4	136	23	323	48	75	20	30	1401	$ 928,379.83

# OF FIELD CREW PERFORMING CHANGE OUTS:	19	10	13	9	21	21	14	24	35	28	28 *	28 *	5	13	2	2	2	28	17
# OF ADMIN STAFF TO CREATE AND POST FIELD ACTIVITIES IN CIS:	7	4	5	6	9	9	10	13	15	15	13	13	8	11	5	4	1	13	9
# OF SUPPLY STAFF TO ISSUE MATERIALS AND PROGRAM NEW METERS:	2	2	2	2	2	2	2	2	2	2	2	2	2	4	0	0	0	2	2
# OF TEST FACILITY PERSONNEL TESTING METERS:	2	2	2	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2	1
# OF ACCOUNTANTS CALCULATING BACK BILLS:	0	0	0	2	3	2	2	3	3	2	2	2	2	2	2	2	2	2	2
TOTAL:	30	18	22	22	38	37	31	45	58	50	48	48	20	32	11	10	7	47	31

AS OF JULY 30 2018

ACTIVE LP MODELS - PURCHASE MO & YEAR	COUNT	
2012	8807	WARRANTY EXPIRED
Jan-13	2112	
Feb-13	731	
Mar-13	632	
May-13	1435	
Aug-13	752	ACTIVE WARRANTY
Feb-14	425	
Mar-14	1	
Apr-14	2418	
Jun-14	72	
Aug-14	1388	
TOTAL :	18773	

13717	WARRANTY EXPIRED
5056	ACTIVE WARRANTY

Marbo (Andy-South) Wells – Status

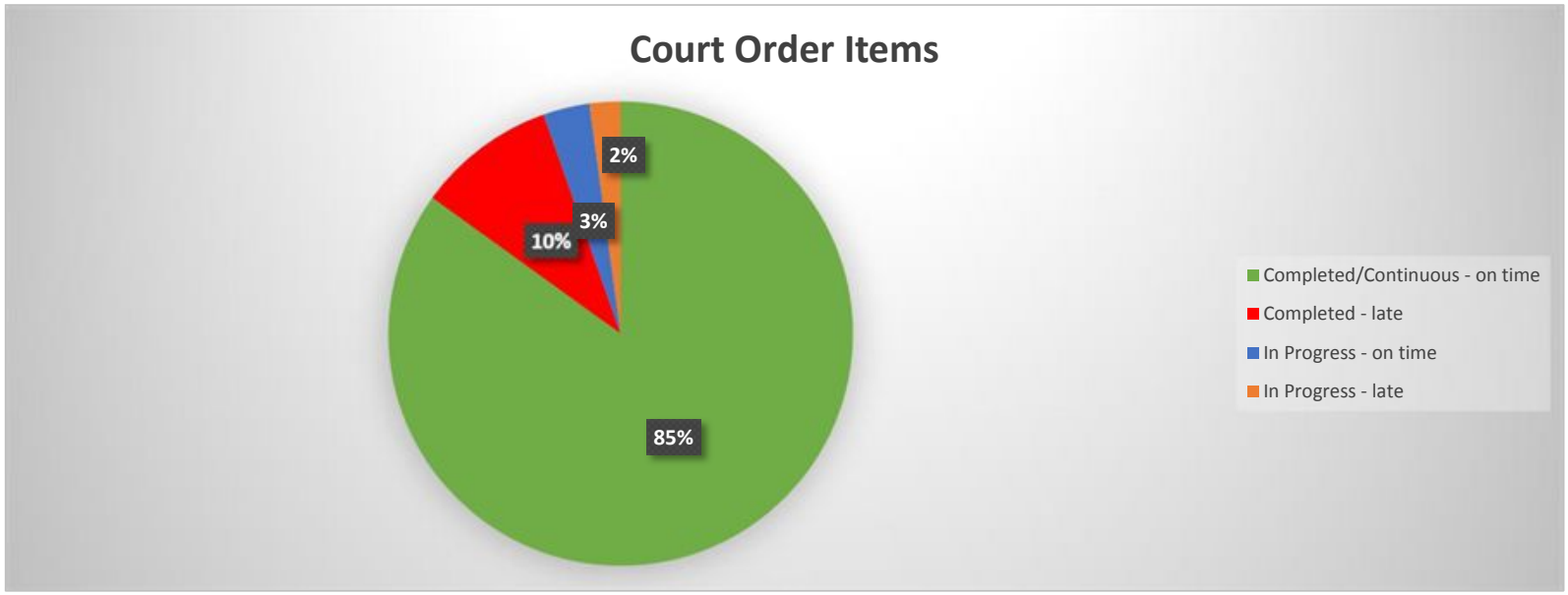
- Involuntary reversion appears imminent; GWA Counsel transmitted draft easement documents to GSA for consideration with DoD;
- No updates - Waiting on response from GSA
- Meeting requested by GWA for October 2018

One Guam Update

- Tumon Maui Well:
  - Quarterly Inspection conducted – no issues of concern.
- Santa Rosa Tank:
  - The temporary easement for the construction of the intertie is in progress. As soon as the maps are finalized, Navy will discuss the project with the Air Force
  - Navy Utilities prepared a briefing package for a meeting with the NAVFACMAR CO – Captain Dan Turner. He is on board and will brief the General at Andersen Air Force Base, but it may take 3 weeks to set the meeting
- Agat-Santa Rita WWTP
  - Maria Lewis stated the fee of $16k per annum in the Agat easement letter to GWA was supposed to be a one-time fee so the letter will be changed
  - The Grant of Easement will be amended to state Wastewater & Water
- OEA Projects
  - Observation Well coordination on-going;
  - Discussion on ownership of wells and maintenance responsibilities on going; MOU will be prepared to address maintenance cost sharing
- Training and Collaboration
  - GWA witnessed Navy "Smart Sahara" demonstration for Route 16 waterline: CCTV and sonic analysis for water pipes and leak detection
  - GWA offering CIPP training; DoD and their operators will be attending the training

Court Order

	Items	On-time Items Completed/Continuous	Items Delayed	Completed Late	Items on Schedule	Performance %
Court order total	93	79	2	9	3	97.8%



Status Information

- 2 items delayed
  - Meters
  - Baza Gardens Sewer Line
- Final Date to complete all Court Order items is December 31, 2020.
- Overflow or Bypass events reported to USEPA:
  - 07-26-18 RT-16 Tsai Building sewer back up – FOG – major – 10,000 gallons (90% recovered by GWA Operations)
  - 07-27-2018-Umatac Lower Lagoon Bypass (from 07/08/2018) Ends (2.4 MG bypassed – I&I – Weather Related)
  - 08-13-2018, Alupang street, Tamuning, MH overflow -- Rain
  - 08-16-2018, Rt Vietnam Veterans Highway, MH overflow - Rain
  - 08-16-2018, Umatac-Merizo PS 17 overflow - Rain
  - 08-16-2018, Umatac-Merizo Lagoon starts overflowing again – Rain
  - 08-20-2018, Harmon Lift Station - Rain

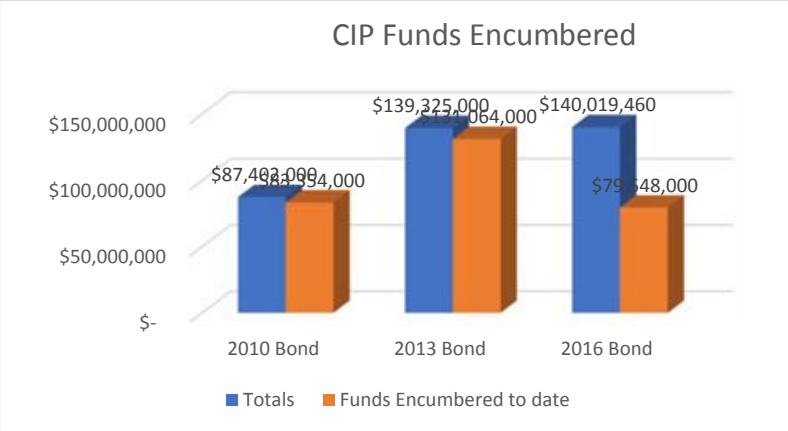
CIP Summary

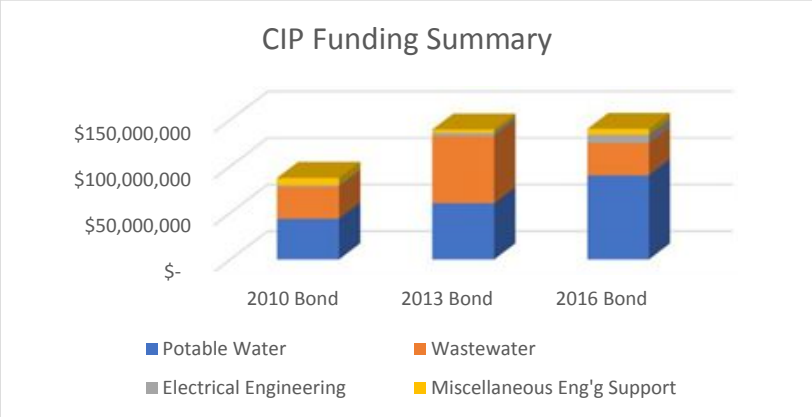
CIP Summary - Project Encumbrance

	2010 Bond		2013 Bond		2016 Bond			
	Funded	Complete	Funded	Complete	Funded	Complete	Total CIP Projects	%
Potable Water	28	17	21	7	20	0	35	49%
Wastewater	16	13	7	3	8	1	22	31%
Electrical Engineering	5	5	6	1	5	0	10	14%
Miscellaneous Eng'g Support	2	0	3	1	4	1	4	6%
Totals	51	35	37	12	37	2	71	100%
% of Total CIP by Fund Source	72%		52%		52%			

CIP Summary - Project Amounts

	2010 Bond		2013 Bond		2016 Bond			
	Funded	%	Funded	%	Funded	%	Total CIP Projects	%
Potable Water	$ 41,903,305	48%	$ 58,317,117	42%	$ 64,647,830	46%	$ 164,868,252	45%
Wastewater	$ 36,009,577	41%	$ 73,837,883	53%	$ 60,227,170	43%	$ 170,074,630	46%
Electrical Engineering	$ 1,748,118	2%	$ 3,395,000	2%	$ 8,750,000	6%	$ 13,893,118	4%
Miscellaneous Eng'g Support	$ 7,741,000	9%	$ 3,775,000	3%	$ 6,394,460	5%	$ 17,910,460	5%
Totals	$ 87,402,000	100%	$ 139,325,000	100%	$ 140,019,460	100%	$ 366,746,460	100%
Funds Encumbered to date	$ 83,354,000	95%	$ 131,064,000	94%	$ 79,548,000	57%		
% of Total CIP Funding	23.8%		38.0%		38.2%			





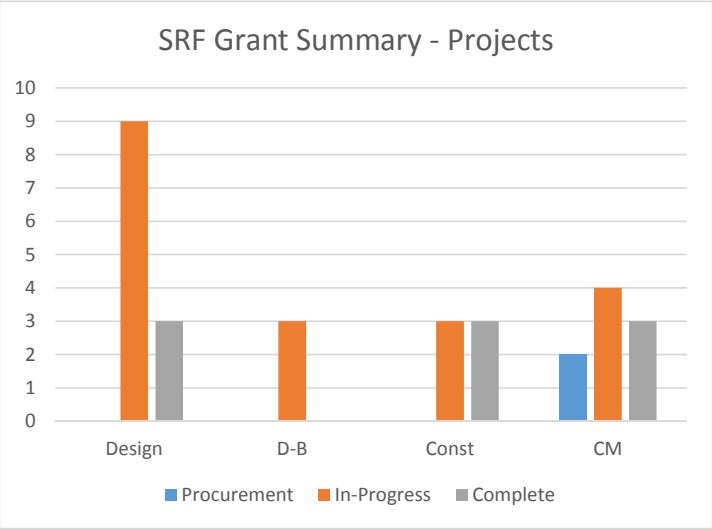
SRF Grant Summary

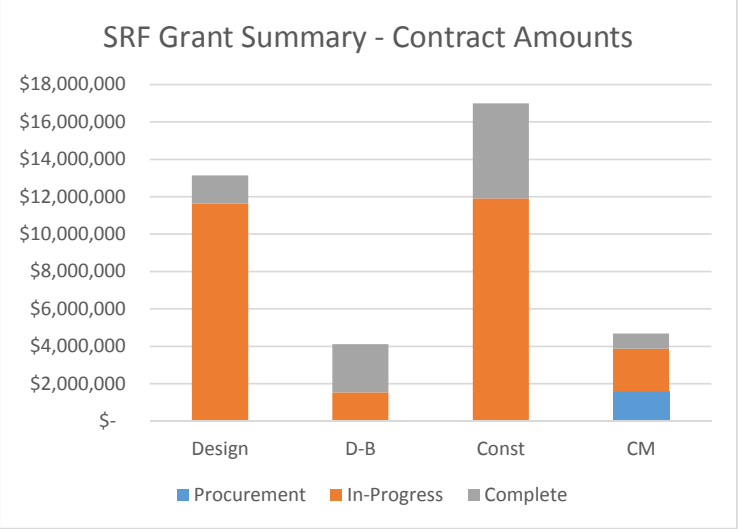
SRF Grant Summary - Projects

	Procurement	In-Progress	Complete	Totals	%
Design	0	9	3	12	40%
D-B	0	3		3	10%
Const	0	3	3	6	20%
CM	2	4	3	9	30%
Totals	2	19	9	30	
%	7%	63%	30%		

SRF Grant Summary - Contract Amounts

	Procurement	In-Progress	Complete	Totals	%
Design	$ -	$ 11,642,195	1,499,418	$ 13,141,613	34%
D-B	$ -	$ 1,542,979	$ 2,565,237	$ 4,108,216	11%
Const		$ 11,902,506	$ 5,086,129	$ 16,988,635	44%
CM	$ 1,572,000	$ 2,303,747	$ 802,243	$ 4,677,990	12%
Totals	$ 1,572,000	$ 27,391,427	$ 9,953,027	$ 38,916,454	
%	4%	70%	26%		





OEA Grant Summary

- NDWWTP Upgrades
  - 60% design submittal scheduled for Sep 24th.
  - Sitework bid package to be issued Sep 12th
  - Workshop on 60% Design – October 18th – 19th
  - Vertical bid package planned for issuance Mar 2019

- Outfall Diffuser:
  - Re-bid package issued
  - Pre-bid Conference August 22nd
  - Bids expected September 11th

- Sewer Line Interceptor Design-Build
  - Contract Award / NTP issued
  - Design and prep work has started
  - Design submittal expected in October
  - Construction start expected in January

- NGLA Observation wells – Design work completed
  - Bid package drawings and specs under review by GWA
  - Permitting issues being resolved and permits being obtained by PM/CM
  - Bid package to be issued once permits approved – expected in Mar 2019

Action Item	Date (Target)	Date (Actual)	Status	Remarks
Project Funds Available	July-16	AUG-30-16	Completed	
Land Acquisition	Jan-17	Jan-17 (Compensation Pending)	Pending	Survey complete, appraisals complete – Deed circulated for signatures
Procure PM/CM Firm	Jan-17	Jan-17 (NTP Issued Feb 10th)	Completed	
Procure Design Firm	Jul-17		Completed	Contract issued; kickoff pending
Design -- 30/60/90/Final -- Review	Jun-18	30% - completed May 60% - expected Sep	On-target	Project design schedule has been revised / delayed
NEPA Analysis and Determination	Feb-17	Pending	Delayed	USEPA received SHPO concurrence; OEA to review EPA EA
Procure Construction Firm	Dec-18		On-target	
Construction Complete/Commence Operations	Nov-21		On-target	
Sewer line connection from MCB to GWA infrastructure	Jul-19		On-target	
MCB Initial Operating Capability	Jul-22		On-target	

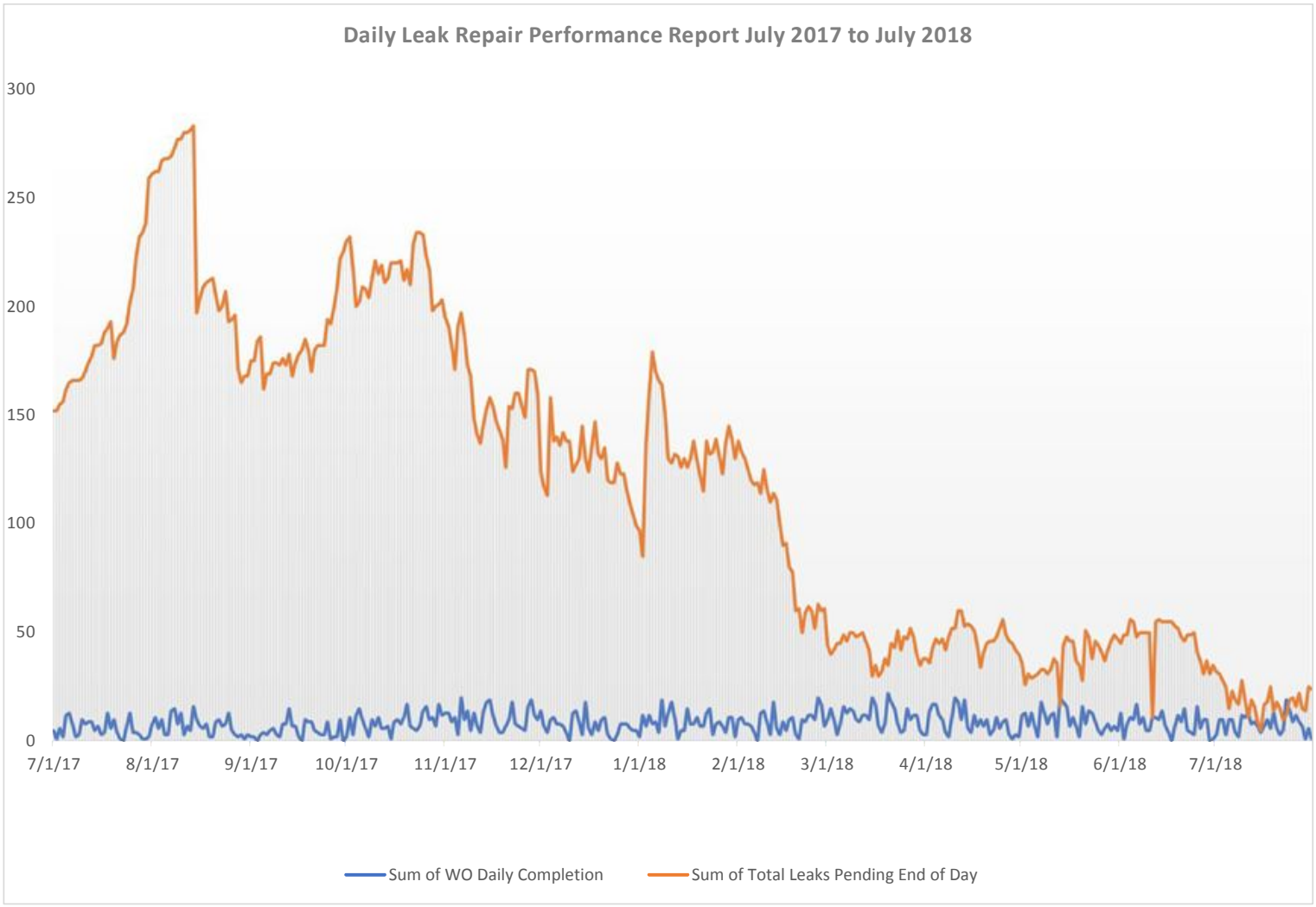
Land Acquisition Summary

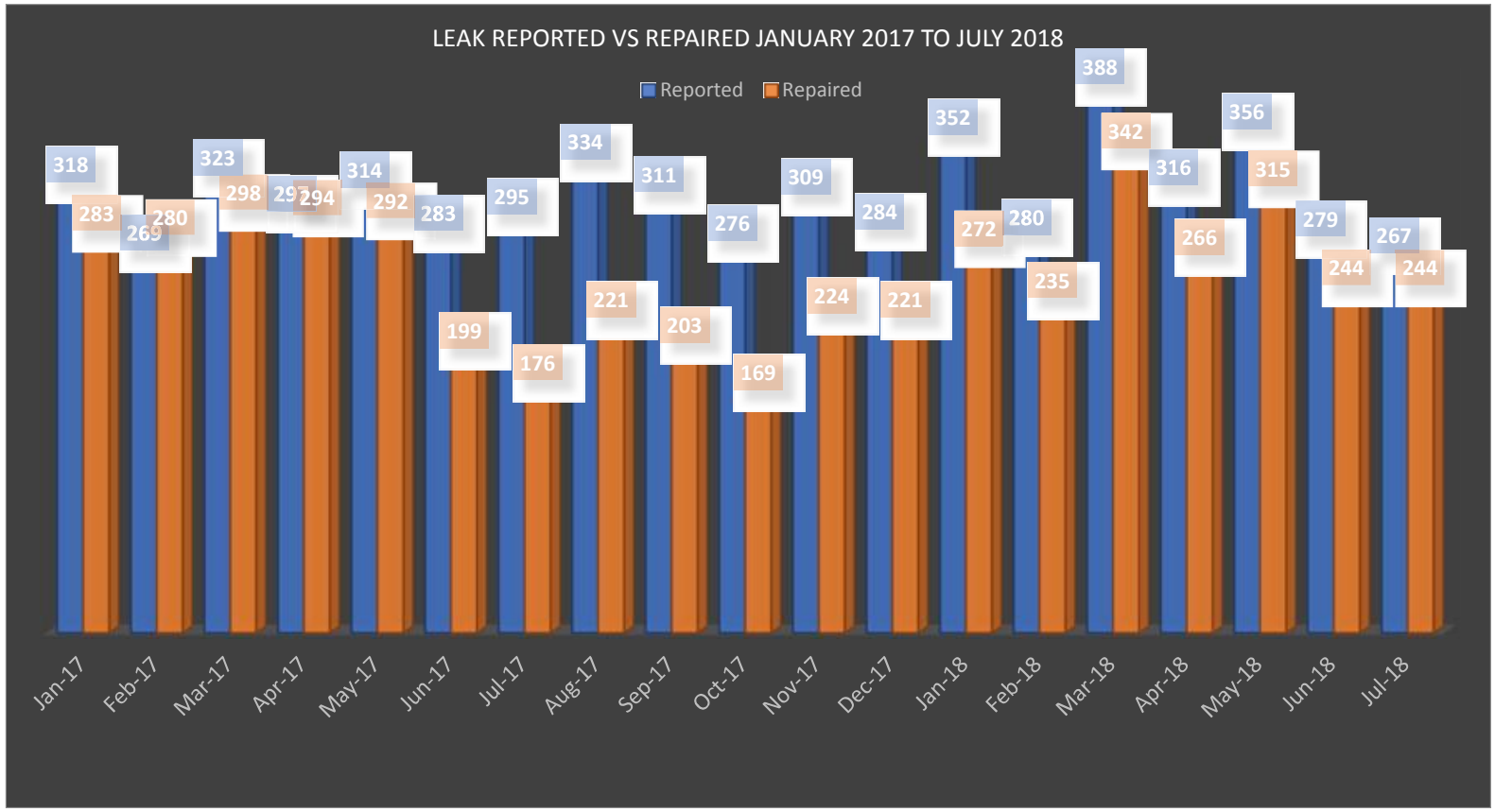
GWA Facility	Location	Gov. or Private Property	Land Acquisition Status
Tanks	Ugum	Private	Appraisal Services completed 05/09/18.
	Astumbo	Gov't. - CLTC	GWA and DLM working together on Land Registration process. Pending Notification of surrounding lot owner information from DLM
	Piti	Private	Preliminary geotechnical investigation and archaeological investigation in the process 05/01/18
Expansion of the Northern District Wastewater Treatment Plant (NDWWTP)	Dededo	Gov't - GALC	Grant Deed submitted to DLM for AG & Governor signature 08/01/18
Deep Well	A-12	Private	Property ownership vested in GWA 10/16/17
	AG-12	Dept. of Agriculture/Manhita Farms	Land Registration has been approved by Superior Court of Guam. Pending release and recordation of the Decree Establishing Title at DLM. DCA will be submitting Retracement Survey Check Print Map to DLM for review and comments 07/13/18
	Y-8	Gov't. - CLTC	Deed of Dedication approved by legal counsel 07/03/18
Booster Pump Station	Agfayan	Private	Denial Letter received from private property owner on Lot 61-R2, Inarajan 06/07/18. Sent 2nd follow up request to DLM Director on request for authorization on archeological testing for L28, B19, T3734, Inarajan 08/13/18
Sewer Pump Stations	Southern Link SPS	Private	GWA started acquisition process on 12/23/2016. Property ownership vested in GWA 08/11/2017
Asan Springs	Asan	Gov't/Private	GWA request currently is still under GHURA management review 08/07/18

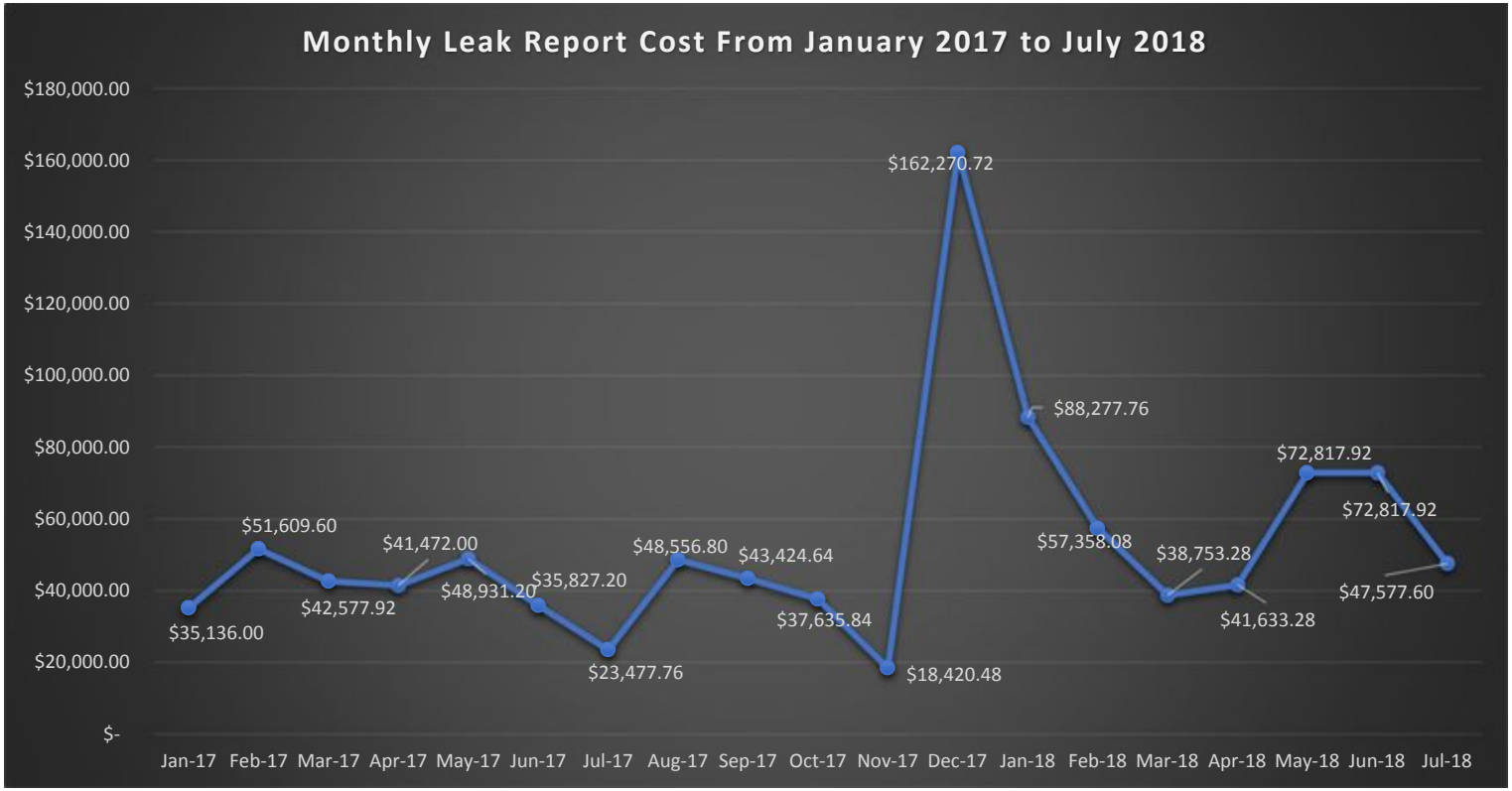
NRW – Update

- Water Loss Control Program activities are on-going
    - Review of latest numbers is underway.
    - Production meter replacement program is under design for 65 well sites. Portable flow meter is being procured to calibrate existing meters.
    - District Metering Areas are currently being developed for pilot project. Locations have been identified. Grant application was submitted for this pilot project
    - DOI Grant application has been approved for training and equipment.

Leak Repair Summary for July 2018




LEAK REPORTED VS REPAIRED JANUARY 2017 TO JULY 2018
Reported
Repaired
318
283
269
280
323
298
292
294
314
292
283
199
295
176
334
221
311
203
276
169
309
224
284
221
352
272
280
235
388
342
316
266
356
315
279
244
267
244
Jan-17
Feb-17
Mar-17
Apr-17
May-17
Jun-17
Jul-17
Aug-17
Sep-17
Oct-17
Nov-17
Dec-17
Jan-18
Feb-18
Mar-18
Apr-18
May-18
Jun-18
Jul-18



Assumptions:

1. Leak rate = 4 gpm
2. Cost per kgal = $4.00

2011 Court Order Performance Report Card / Dashboard as of 07/30/2018

GUAM WATERWORKS AUTHORITY

Court Order Performance Report Card

	Items	On-time Items Completed/Continuous	Items Delayed	Completed Late	Items on Schedule	Performance %
Court order total	93	79	2	9	3	97.8%

Legend in detail section below.

Fill Color	Meaning
Lime green	Done/Completed
Yellow	On Schedule
Blue	Behind Schedule
Violet	Completed Behind Schedule
Yellow Green	Ongoing and Continuous

2011 Court Order Performance Report Card / Dashboard as of 07/30/2018

Name	SO #	No	Project	GWA SO Timeline	Due to EPA	Status
Northern District WWTP Primary Treatment Upgrades.	2	1	Interim Primary Treatment Improvements Complete	09/30/2012	@EPA	**Done** Construction completed 12/13/2012
	3(a)	2	Interim Effluent to meet Table 1	09/30/2012 monitoring started	@EPA	**Done** Table 1 compliance beginning January 9, 2013.
	3(a)(1)	3	PE Review (Application for 7.5 MGD pending)	3 months after compliance with 3(a)	@EPA	**Done** 3(a)(1) Application to increase to 7.5 MGD Approved 08/13/2017
	3(a)(2)	4	(Application for 9 MGD)	3 months after compliance with 3(a)(1)	N/A	**Not considered necessary** because of OEA Upgrade of NDWWTP
	3(c)	5	Effluent monitoring (calendar-year quarter)	**Completed**	@EPA	**Done. Full year completed 01/08/2012**
	4(a)	6	Sludge & Biosolids Management Plan	12/31/2011	@EPA	**Done.** Biosolids to Landfill EPA Approval 08/17/2014
	4(a)	7	Adequate stabilization and dewatering	9/30/2012	@EPA	**Done.** By Design-Build contract.
	4(b)	8	Biosolids Management, Quarterly Report	Quarterly Report	@EPA	**Ongoing** Routine Monitoring Report, **Repeats Quarterly**
	4(c)	9	Biosolids Management, repair & replace facilities	09/30/2012	@EPA	**Done** Construction Complete 12/13/2012. Biosolids to Landfill
	4(d)	10	Biosolids Management, implement plan	9/30/2012	@EPA	**Done** - Biosolids to Landfill
Agaña WWTP Interim Measures.	5	11	Primary Treatment Plant Upgrades	06/30/2013	@EPA	**Done.** CEPT is operational and routine.
	5(a)	12	Scope and schedule	09/30/2011	@EPA	**Done.** CEPT is operational and routine.
	5(b)	13	Septage Handling Complete	06/30/2013	@EPA	**Done.** Septage Receiving at the NDWWTP (location option) reported 06/26/2013.
	5(b) 1	14	Septage handling design contract signed	12/31/2011	@EPA	**Done.** Septage Receiving at the NDWWTP (location option) reported 06/26/2013.
	5(b) 2	15	Septage handling construction notice to proceed	06/30/2012	@EPA	**Done.** Septage Receiving at the NDWWTP (location option) reported 06/26/2013.
	5(c)	16	Grit and FOG Complete	06/30/2013	@EPA	**Done** Phase III CEPT is in operations.)
	5(c) 1	17	Grit and FOG design contract signed	12/31/2011	@EPA	**Done** Grit and FOG reported 06/06/2013
	5(c) 2	18	Grit and FOG construction notice to proceed	06/30/2012	@EPA	**Done** Submitted 11/17/2011
	5(d)	19	Repair Solids handling	11/17/2011	@EPA	**Done** Submitted 11/17/2011
	5(e)	20	O & M Plan	05/31/2013	@EPA	**Done** O & M Plan reported 05/31/2012
	5(f)	21	Effluent monitoring (calendar-year quarter)	**Completed**	@EPA	**COMPLETED Full year as of 01/08/2012**
	6	22	Prevent Effluent Back Surge	06/30/2013	@EPA	**Done** Old outfall decommissioned (plugged) 06/25/2013
	6	23	Effluent Back Surge Plan	12/30/2011	@EPA	**Done** Old outfall decommissioned (plugged) 06/25/2013
I&I SSES	7	24	Collection System SSES and I/I evaluation	**Done.**	@EPA	**Done.**
SSES Work Plan	8	25	Work Plan	180 days	@EPA	**Done** Reported 08/13/2012
	8(a)	26	Flow and rainfall data	N/A	@EPA	**Done** Reported 04/25/2013
	8(b)	27	I/I Southern	540 days	@EPA	**Done** Reported 04/25/2013
	8(c)	28	I/I Central	900 days	@EPA	**Done** Reported 04/28/2014
	8(d)	29	SSES Southern	540 days	@EPA	**Done** Reported 04/30/2013 – update 04/29.2016
	8(e)	30	SSES Central	900 days 09/15/2015 EPA Disap. Ltr.	@EPA	**Done Late** – Completed June 2, 2017
	8(e) 2	31	SSES Central Report	09/15/2015 EPA Disapproval Letter	@EPA	**Done Late** – Completed June 2, 2017
Agat / Santa Rita,	9(a)	32	By Pass Report	60 days	@EPA	**Done** Reported 01/04/2012
	9(b)	33	Flow Meter	180 days	@EPA	**Done** Reported 07/26/2012
	9(c)1,2,3	34	Report evaluating near term measures	180 days response sent 09/29/2014	@EPA	**Done** Reported 05/07/2012 GWA response 09/292014.
	9(d)	35	Implement near term measures d - Disinfection	03/23/2016	@EPA	**Done Late EPA specifications of 9(c), 9(d) and 9(f) on 09/24/2015.**
	9(e)	36	Implement near term measures e – sludge mgmt.	03/23/2016	@EPA	**Done** Reported 03/23/2016
	9(f)	37	Implement near term measures f – 75% Bypass Red.	03/23/2016	@EPA	**Done** Reported 03/23/2016
	10	38	System Evaluation	12/31/2013 response sent 09/29/2014	@EPA	**Done** Reported 12/28/2013 GWA response 09/29/2014.- update 04/29/2016
	11	39	System Upgrades	03/14/2017 Plant became operational.	@EPA	**Done Late** New Agat WWTP on line 03/14/2017
	11(a)	40	System Upgrades design	06/30/2014-NTP 10/13/2014	@EPA	**Done Late** CCU approval 08/26/2014. NTP was issued on 10/13/2014
	11(b)	41	System Upgrades notice to proceed	06/30/2015-NTP 10/02/2015	@EPA	**Done Late** NTP Ph.1 issued 10/02/2015 - NTP Ph.2 due 01/04/2016
Baza Gardens	12(a)	42	Interim Measures Evaluation (Independent PE)	180 days	@EPA	**Done** Reported 05/07/2012, PMO task
	12(b)	43	Interim Measures Complete	540 days	@EPA	**Done** Reported 05/01/2013 PMO task
	12(c)	44	Evaluation Bio Solids Report	180 days	@EPA	**Done**-EPA Approval 08/28/2014
	12(d)	45	Complete Bio Solids	360 days	@EPA	**Done** Reported 03/21/2013
	13	46	System Evaluation	04/30/2014	@EPA	**Done** Reported 04/30/2014 GWA response 10/02/2014
	14	47	System Upgrades	04/31/2018	@EPA	**Done** Critical path need to complete I&I/SSES
	14(a)	48	System Upgrades, Design Starts	10/31/2015 NTP DCA 02/05/2016	@EPA	**Done Late** Linked to new Agat WWTP NTP DCA 02/05/2016
	14(b)	49	System Upgrades Construction (started on time)	10/31/2016	@EPA	**LATE:** US Fish and Wildlife Redesign for permit approvals have caused delays which will make completion like until the end of September

2011 Court Order Performance Report Card / Dashboard as of 07/30/2018

Name	SO #	No	Project	GWA SO Timeline	Due to EPA	Status
Umatac-Merizo	15	50	Complete Evaluation	12/31/2013	@EPA	**Done** CO 15 **Done** Reported 12/31/2013 -- Critical path, completed I&I/SSES
	16	51	System Upgrades	12/31/2018	@EPA	**Ongoing** Design Build contract executed 06/29/2017
	16(a)	52	System Upgrades, Design Starts	06/30/2016	@EPA	**Done** Design Build contract executed 06/29/2017
	16(b)	53	System Upgrades, Notice to Proceed	06/30/2017	@EPA	**Done** NTP Issued 06/30/2017
Sewer Cleaning	17	54	Sewer Cleaning (in annual and quarterly reports)	2017-2022 Goal set: Complete Every 5 years	@EPA	**Done** 2017-2022 Goal set**.** - Entire System Every5 years **– Second cycle has begun**
Hot Spot Plan	18	55	Hot Spot Plan	EPA Revision letter o9/08/2015	@EPA	**Done** Last Revision submitted 10/23/2015 GWA WW Ops
CCTV	19	56	CCTV (in annual and quarterly reports)	2017-2022 Goal set: Complete Every 5 years	@EPA	**Done** 2017-2022 Goal set. Entire System Every5 years - **– Second cycle has begun**
Sewer Hook-Up	20	57	Sewer Hook-Up Revolving Loan Support	In Operation	@EPA	**Done –** available on GWA web site or at GWA Customer Service
GW Disinfection	21	58	Groundwater Chlorination	540 days	@EPA	**Done** Reported 04/29/2013
Chlorine Residual Monitors	22	59	Plan	180 days	@EPA	**Done** Reported 09/94/2012
	22(a)	60	High Risk Wells	540 days	@EPA	**Done** Reported 05/02/2013
	22(b)	61	Moderate Risk Wells	2 years	@EPA	**Done** Reported 07/31/2013
	22(c)	62	All Other Wells	Completed 07/31/2017	@EPA	**Done Late** Completed 07/31/2017
Water Metering	23(a)	63	Plan & schedule	180 days	@EPA	**Done Late** Reported 05/08/2012
	23(a)	64	All connections are metered and mapped	2 years	@EPA	**LATE:** 10/31/2016 Substantially complete-- **2** Sensus, **0** Metron left
	23(b)	65	Plan repair & maintain	180 days	@EPA	**Done** GWA Test facility operational 06/28/2013
Ugum Surface Water Treatment Plant	24	66	Construction complete	One year	@EPA	**Done** Reported 11/09/2012
	24	67	PE Inspection	60 days before start-up	@EPA	**Done** EPA Approval 08/26/2014
	25	68	PE Performance Operation Assessment	60 days before start-up	@EPA	**Done** EPA Approval 08/26/2014
	26	69	O&M Plan and Procedures	90 days before start-up	@EPA	**Done** Reported 08/10/2012 EPA Approval 08/17/2014
	27	70	Plant compliance	365 days	@EPA	**Done** Reported 02/07/2013
Sinajana Water Transmission Line	28(a)	71	Existing Construction Complete	180 days	@EPA	**Done** Reported 12/23/2011
	28(b)	72	Hydraulic Evaluation	180 days	@EPA	**Done** EPA No Further Comment 08/26/2014
	28(c)	73	Construction Complete (2 tanks)	540 days from 11/21/2013	@EPA	**Done Late GEPA Delays** Tank Constr. Completed August 2015: **In Service July 2016.**
	28(d) 1	74	Monitoring Plan	90 days prior	@EPA	**Done** Reported 09/07/2012
	28(d) 1	75	Implement- Monitoring Plan	For one year after start up	@EPA	**COMPLETED** GWA Compliance - **Start 09/01/2015 – end 08/31/2016**
	28(d) 2	76	Monitoring Plan	180 days prior	@EPA	**Done** EPA Approval 08/26/2014
	28(e)	77	Implement- Monitoring Plan	For one year after start up	@EPA	**COMPLETED - Start 09/01/2015 – end 08/31/2016**
Storage Tank/Reservoir Rehabilitation and Replacement Program.	29(a) 1	78	Plan hydraulic analysis	90 days	@EPA	**Done** Reported 11/09/2012
	29(a) 2	79	Hydraulic analysis	540 days	@EPA	**Done** EPA No Further Comment 08/26/2014
	29(b) 1	80	Plan minimize service interruptions	90 days after approval	@EPA	**Done** EPA approval 08/26/2014
	29(b) 2	81	Tank inspection schedule	540 days	@EPA	**Done** EPA approval 08/26/2014
	29(b) 3	82	Complete Barrigada (1 @ 2 MG tank)	540 days	@EPA	**Done**
	29(b) 4	83	Assess additional 7 tanks	5 years (11/10/2016)	@EPA	**Done** DCA contract task
	29(b) 5	84	RRRR 7 additional tanks	5 years (11/10/2016)	@EPA	**Done** PMO executed procurement
	29(b) 6 i	85	RRRR 10 additional tanks	7 years (11/10/3018)	@EPA	**Ongoing** - Completed the hydraulic analysis
	29(b) 6 ii	86	RRRR remaining	12/31/2020	@EPA	**Ongoing**
	29(c)	87	In Quarterly / Annual Report	Quarterly / Annual Report	@EPA	**Ongoing** GWA Compliance **Repeats Quarterly**
Section III REPORTING REQUIREMENTS	31(a)(1)	88	Quarterly Report	Jan., April, July, Sept. Continuous	@EPA	**Ongoing** Due by the 30th of the specified months
	31(a)(2)	89	Reports on Non Compliance	Within 30 days from determination of delay	@EPA	**Ongoing** As determined by GWA
	31(b)	90	SSO and Bypass Report	Jan., April, July, Sept. Continuous	@EPA	**Ongoing** Due by the 30th of the specified months
	31(c)	91	Annual Report	January each year	@EPA	**Ongoing** Included with 31(a) each Year
Section IV NOTICES	35	92	CO contacts		@EPA	**Ongoing** GWA Compliance report 06/29/2016
	36	93	Formal notices of change in CO contacts	Whenever specified staffing changes	@EPA	**Ongoing** GWA Compliance report 06/29/2016

GUAM WATERWORKS AUTHORITY

Suite 200, Gloria B. Nelson Public Service Building, 688 Rt. 15. Mangilao, GU 96913-6203

Corrective Action Plan (CAP) (Approved 10/21/2014) Quarterly/Annual Update Report

Guam Waterworks Authority Sanitary Survey Significant Deficiencies for the Water System

Prepared By: Paul Kemp, Vangie Lujan and John Riegel **Update**: July 31, 2018

NEIC Work Product No. VP0989E01 GWA Sanitary Survey Significant Deficiency Items:

Preface to the Corrective Action Plan

Reporting

Formal updates of the status of management of the Corrective Action Plan will be submitted on a regular basis to Region 9, USEPA.

The reports will be delivered on a quarterly basis beginning at the end of the next calendar-year quarter following the approval date of this Corrective Action Plan. Reporting will continue on a schedule by mutual agreement between GWA and Region 9 USEPA.

The vehicle to be used for this reporting will be an update of this document.

For Court Order updates/reporting, see the Court Order Submittals, e. g. Quarterly Reports.

1. Sources—Lack of routine maintenance (both corrective and preventative of sources).

- Potential bacteriological and/or chemical contamination of source
- Many wells found to have leaking pipes and valves

Recommendation:

- Lack of adequate site security—missing or damaged fencing and signs of vandalism (graffiti) on structures should be repaired or replaced.
- Begin routine and corrective maintenance of all wellhead appurtenances and well facilities—meters, valves, pumps, air relief valves, piping pressure gauges, etc.

Remove unnecessary items (old lines, gauges, meters, etc.)

Action Plan:
GWA is implementing new O&M SOPs, programs and systems on an on-going basis.

Proposed Action Item Schedule	Task Description
As of 06/25/2013.	55 new SOP's Implemented (assisted by CDM, EPA Grant)
Drafts and planed	CDM continues work, particularly on Asset Management
Average one a month by 06/30/2014	Complete new SOP's and implement
Semi-annually beginning 01/2014	**Training on SOP's Repeats Continuously, Managed for GWA by Ann Borja Supported by CDM Smith funded by EPA SRF.**
Updates (Reporting per Preface)	**Supported by CDM Smith funded by EPA SRF CMMS Is being implemented.**

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Guam Waterworks Authority Sanitary Survey Significant Deficiencies for the Water System

Prepared By: Paul Kemp, Vangie Lujan and John Riegel **Update**: July 31, 2018

NEIC Work Product No. VP0989E01 GWA Sanitary Survey Significant Deficiency Items:

2.
Sources—No Wellhead Protection Plan

Many wells are located in close proximity to potential sources of fecal and other sources of contamination, and no wellhead protection plan in place for GWA wells.

- Potential bacteriological and/or chemical contamination of source
- Wells located near potential sources of contamination

Recommendation:

- Possible sewage source upstream (Talofofo Falls Park) - Should notify owner/operators of need to notify Ugum WTP if there is a spill or discharge
- Recreational activities on the Ugum River at the intake site which currently allow people in close proximity to the intake structure should be evaluated.

Action Plan:

GWA will build from the existing 1992 Guam Law, Ch. 7 section 7130 of the Water Resource Development and Operating Regulations (GEPA) entitled "Well Head Protection for Public Water Supply Well". BC to develop a plan to improve monitoring of the wellhead. Plan to be in accordance with existing Guam EPA Wellhead Protection.

Proposed Action Item Schedule	Task Description
05/30/2013	First Draft for GWA review
06/03/2014	First Draft submitted to USEPA
06/29/2015.	Final Submitted to USEPA; EA Engineering Science and Technology, Inc..
	Complete

3. Sources Ugum— Diesel fuel storage tank containment located near intake for Ugum Water Treatment Plant (WTP) is undersized;

Diesel fuel storage tank containment located near intake for Ugum Water Treatment Plant (WTP) is undersized; spill could contaminate the Ugum River. Potential chemical contamination of source

- Diesel fuel storage tank containment area at the intake was visibly undersized and was designed to discharge to the ground where it could flow downhill to the Ugum River

Comment: This item was incorrectly evaluated.

Tank is dual walled construction. Containment is adequate.

Proposed Action Item Schedule	Task Description
	Provide documentation verifying dual wall construction.
05/08/2013	Verification sent to EPA – Complete

4. Sources Well— Some wells have cracks and other openings in the well pads, well casings and improperly sealed sanitary seals.

Some wells have cracks and other openings in the well pads, well casings and improperly sealed sanitary seals. These are direct openings for contamination to enter wells. Potential bacteriological or chemical contamination of source.

- Cracks in well pads and well casings and improperly sealed sanitary seals
- Lack of well pads at some locations

Action Plan:

Initiate repair. Document completion of repair. Engage consultant for independent confirmation of repair work and production of report.

Proposed Action Item Schedule	Task Description
12/1/2013	Initiate repair work
2/1/2013	Engage consultant Brown and Caldwell
4/30/2013	Complete repair work
5/5/2013	Draft report to GWA
6/6/2013	Report sent to USEPA - Complete

GUAM WATERWORKS AUTHORITY

Suite 200, Gloria B. Nelson Public Service Building, 688 Rt. 15. Mangilao, GU 96913-6203

Corrective Action Plan (CAP) (Approved 10/21/2014) Quarterly/Annual Update Report

Guam Waterworks Authority Sanitary Survey Significant Deficiencies for the Water System

Prepared By: Paul Kemp, Vangie Lujan and John Riegel **Update**: July 31, 2018

NEIC Work Product No. VP0989E01 GWA Sanitary Survey Significant Deficiency Items:

5. Sources Well— Missing screens on well casing vents.

Potential contamination of source.

- Missing screens on well casing vents

Action Plan:
Initiate repair. Document completion of repair. Engage consultant for independent confirmation of repair work and production of report.

Proposed Action Item Schedule	Task Description
12/1/2013	Initiate repair work
2/1/2013	Engage consultant Brown and Caldwell
4/30/2013	Complete repair work
5/5/2013	Draft report to GWA
6/6/2013	Report to USEPA
5/13/2013	Report sent to USEPA - Complete

6. Sources Well— Wells have bypass lines that were routed into the ground and off-site without an air gap.

Wells have bypass lines that were routed into the ground and off-site without an air gap. Potential contamination of source.
Many wells found to have bypass lines that were routed into the ground and off-site without an air gap

Action Plan:
Initiate repair. Document completion of repair. Engage consultant for independent confirmation of repair work and production of report.

Proposed Action Item Schedule	Task Description
12/1/2013	Initiate repair work
2/1/2013	Engage consultant Brown and Caldwell
4/30/2013	Complete repair work
5/5/2013	Draft report to GWA
6/6/2013	Report to USEPA
5/23/2013	Report sent to USEPA - Complete

7. Sources Spring--Lack of operating flow meter at spring source makes operation (including chlorine dosing) problematic.

Difficulty in ensuring adequate chlorination/disinfection

Recommendation:
Remove heavy vegetative growth around the clear well structure.
Implement routine and corrective maintenance at all spring appurtenances—meters, valves, pumps, piping, pressure gauges, etc.

Action Plan:
Initiate repair. Document completion of repair.

Proposed Action Item Schedule	Task Description
12/1/2013	Initiate repair work
4/30/2013	Complete repair work
6/6/2013	Report to USEPA
5/23/2013	Report sent to USEPA - Complete

8. Sources Spring-- Santa Rita Spring Box (Clear Well) –

– Gaps between corrugated metal roof and clear well walls allow entry by animals, birds and reptiles. Allow bacteriological contamination to enter source.

Action Plan:
Initiate repair. Document completion of repair.

Proposed Action Item Schedule	Task Description
05/08/2013	Reported to USEPA - Complete

GUAM WATERWORKS AUTHORITY

Suite 200, Gloria B. Nelson Public Service Building, 688 Rt. 15. Mangilao, GU 96913-6203

Corrective Action Plan (CAP) (Approved 10/21/2014) Quarterly/Annual Update Report

Guam Waterworks Authority Sanitary Survey Significant Deficiencies for the Water System

Prepared By: Paul Kemp, Vangie Lujan and John Riegel **Update**: July 31, 2018

NEIC Work Product No. VP0989E01 GWA Sanitary Survey Significant Deficiency Items:

9. Treatment-- Lack of operations and maintenance (Ugum, Santa Rita Spring)

Recommendation:

- Implement routine and corrective maintenance at all spring appurtenances—meters, valves, pumps, piping, pressure gauges, etc.

Ugum training on O&M will be regular refresher classes on annual basis.

Action Plan:

Proposed Action Item Schedule	Task Description
Santa Rita Spring (Ground Water)	
05/08/2013	Santa Rita Spring O&M training was completed an has been sent to USEPA.
05/08/2013	O&M is now under Production Section.
05/31/2014 etc.	Santa Rita Spring O&M training will have annual refreshers.
Ugum Surface Water Treatment Plant	
11/19-23/2012	Latest Training by Siemens/Smithbridge
07/23/2013	Additional Specialized training on coagulation optimization for membranes
08/01/2013	Training certification sent to USEPA
07/01/2014 and thereafter.	**O&M training will have annual refreshers.**
Completed under Court Order	See Court Order Section II C 26 Ugum SOP's - Complete

10. Treatment-- Lack of operating turbidimeter at Santa Rita Spring source.

Action Plan:
Initiate repair. Document completion of repair.

Proposed Action Item Schedule	Task Description
05/08/2013	Verification submitted to USEPA - Complete

11. Treatment-- Plant operators do not regularly conduct jar tests and do not optimize precursor removal at Ugum WTP.

Action Plan:
Prepare Bid or Change Order for TOC. Prepare documentation of training. Provide copies of regular reporting.

Proposed Action Item Schedule	Task Description
5/15/2013	Prepare change order for installation of TOC and appurtenances. Smithbridge
08/12/2013	Completed installation of on-site TOC analyzer.
08/15/2013	Completed training of operators on site TOC analyzer.
07/23/2013	Additional Specialized training on coagulation optimization for membranes
08/01/2013	Training certification sent to USEPA – Complete

12. Treatment-- Inadequate turbidity monitoring and reporting at Ugum

Action Plan:
Address re-programming SCADA. Provide copies of daily submittals sent to GEPA and monthly submittals, and send example reports to USEPA as documentation.

Proposed Action Item Schedule	Task Description
06/06/2013	Send documentation of conformance to USEPA
05/30/2013	Sent documentation of conformance to USEPA - Complete

GUAM WATERWORKS AUTHORITY

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Guam Waterworks Authority Sanitary Survey Significant Deficiencies for the Water System

Prepared By: Paul Kemp, Vangie Lujan and John Riegel **Update**: July 31, 2018

NEIC Work Product No. VP0989E01 GWA Sanitary Survey Significant Deficiency Items:

13. Treatment-- At least one well (D-5) did not have a chlorination system in place	
Action Plan: Explain that D-5 well is not a point of entry into the potable distribution system issue.	
Proposed Action Item Schedule	**Task Description**
6/6/2013	Report to USEPA
05/31/2013	Report sent to USEPA - Complete

14. Treatment Well-- At least one well, the well log indicated chlorine gas had run out in the past (April 29, 2012) Inadequate chlorination/disinfection could result in exposure to bacteriological contamination.	
Action Plan: GWA to provide the log sheets. This finding is a result of an incorrect assessment	
Proposed Action Item Schedule	**Task Description**
6/6/2013	GWA to send USEPA the log sheet – interpretation was incorrect.
05/31/2013	Sent to USEPA - Complete

15. Water Storage-- Severe internal/external rust and corrosion including roofs, roof vents, walls, base and other welds, anchors allows contaminants to enter tanks. Recommendation: GWA should properly maintain facilities and grounds (remove overgrown vegetation, take away garbage, repair security breaches, etc.	
Action Plan: This is a Court Order project. Work performed will be in accordance with the 2011 court order.	
Proposed Action Item Schedule	**Task Description**
In Progress – Court Order.	See CO Section II C Paragraph 29, Quarterly and Annual Reports

16. Water Storage-- Bolts, many completely rusted through, compromise structural stability of tanks. Recommendation: Potential for tank failure	
Action Plan: This is a Court Order project. Work performed will be in accordance with the 2011 court order Paragraph 29.	
Proposed Action Item Schedule	**Task Description**
In Progress – Court Order.	See CO Section II C Paragraph 29, Quarterly and Annual Reports

17. Water Storage-- Inadequate Site Security (holes in fences, missing gates) and unlocked hatches allow easy access to tanks (as demonstrated by vandalism at many tanks). Potential for access by public and consequent contamination.	
Action Plan: This is a Court Order project. Work performed will be in accordance with the 2011 court order Paragraph 29. GWA will correct on tanks undergoing major repairs.	
Proposed Action Item Schedule	**Task Description**
In Progress – Court Order.	See CO Section II C Paragraph 29, Quarterly and Annual Reports

18. Water Storage-- Leaking tanks. Recommendation: Could allow contamination to enter.	
Action Plan: This is a Court Ordered project. Work performed will be in accordance with the 2011 court order Paragraph 29.	
Proposed Action Item Schedule	**Task Description**
In Progress – Court Order.	See CO Section II C Paragraph 29, Quarterly and Annual Reports

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Guam Waterworks Authority Sanitary Survey Significant Deficiencies for the Water System

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NEIC Work Product No. VP0989E01 GWA Sanitary Survey Significant Deficiency Items:

19. Water Storage-- Flooded, uncovered and unsecured valve vaults Could allow contamination to enter.	
Action Plan: This is a Court Ordered project. Work performed will be in accordance with the 2011 court order Paragraph 29. GWA will correct on tanks undergoing major repairs.	
Proposed Action Item Schedule	**Task Description**
In Progress – Court Order.	See CO Section II C Paragraph 29, Quarterly and Annual Reports- Complete

20. Water Storage-- No screen or flapper on the storage tanks' overflows. Potential for access by public and consequent contamination.	
Action Plan: This is a Court Order project. Work performed will be in accordance with the 2011 court order Paragraph 29. GWA will correct on tanks undergoing major repairs.	
Proposed Action Item Schedule	**Task Description**
In Progress – Court Order.	See CO Section II C Paragraph 29, Quarterly and Annual Reports - Complete

21. Water Storage-- Ladders not locked, allow easy potential access by vandals.	
Action Plan: This is a Court Order project. Work performed will be in accordance with the 2011 court order Paragraph 29. GWA will correct on tanks undergoing major repairs.	
Proposed Action Item Schedule	**Task Description**
In Progress – Court Order.	Repairs Complete

22. Water Storage-- Ladders severely corroded or no cage will prevent adequate maintenance	
Action Plan: This is a Court Order project. Work performed will be in accordance with the 2011 court order Paragraph 29.	
Proposed Action Item Schedule	**Task Description**
In Progress – Court Order.	Repairs Complete

23. Distribution System-- Inadequate cross connection control program exists within GWA. Potential for backflow/backpressure and contamination.	
Action Plan: Engage consultant to develop how GWA can plan for backflow prevention program. Create report documenting procedures for implementing a program.	
Proposed Action Item Schedule	**Task Description**
02/01/2013	Engage consultant Brown and Caldwell
05/05/2013	Submit draft plan for GWA review
06/05/2013	Submitted draft plan to USEPA
NTP issued.	Draft Detailed Cross-Connection Control Plan by PMO Work Order.
Pending CCU approval	GWA recruiting positions to man and execute this project..
Included in Plan	Detailed Cross-Connection Control Plan Technical Memo Completed
Program Completed	**Final plan Completed 02/16/2018. Implementation in Progress**

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NEIC Work Product No. VP0989E01 GWA Sanitary Survey Significant Deficiency Items:

24. Distribution System-- Undersized water lines impact water pressure and water quality and contribute to potential cross-connections.
Potential for backflow/backpressure and contamination.

Action Plan:
Engage consultant to develop how GWA can plan for small diameter pipeline replacement program. Create report documenting procedures for implementing a program.

Proposed Action Item Schedule	Task Description
02/01/2013	Engage consultant Brown and Caldwell
05/05/2013	Submit draft plan for GWA review
06/05/2013	Submitted draft plan to USEPA
10/01/2013	Approved Plan/CIP for line replacement.
12/31/2013	Submit Approved Plan/CIP for line replacement to PUC.
04/30/2014	Approved of Plan/CIP for line replacement by PUC.
07/01/2014	Begin line replacement program for small diameter pipelines.
01/01/2024	Complete small diameter pipeline replacement.
Updates (Reporting per Preface)	See GWA CIP at < http://guamwaterworks.org/wp-content/uploads/2016/02/GWA-CIP-2015-to-2020-CCU-102715-final-ver.pdf >.

25. Pumps-- No pump controls at many of the booster pump stations; lack of maintenance. Leaking seals in pumps and valves results in intermittent service and supply, lower reliability and decreased pressure.
Recommendation:
Implement routine and corrective maintenance at all spring appurtenances—meters, valves, pumps, piping, pressure gauges, etc.

Action Plan:
Initiate repair. Engage consultant for independent analysis and condition assessment of booster pumping stations. Consultant to develop schedule and cost estimates for implementing upgrades of booster pumping stations. Consultant to prepare a report for rehabilitation program.

Proposed Action Item Schedule	Task Description
12/01/2012	Initiate immediate repairs
02/01/2013	Engage consultant Brown and Caldwell
02/26/2013	5-year CIP approved by CCU
04/30/2013	Complete immediate repairs
05/05/2013	Submit draft report to GWA for review
09/06/2013	Submitted draft report to USEPA for approval
03/30/2014	Final plan for booster station repairs.
Updates (Reporting per Preface)	See GWA CIP at < http://guamwaterworks.org/wp-content/uploads/2016/02/GWA-CIP-2015-to-2020-CCU-102715-final-ver.pdf >.

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NEIC Work Product No. VP0989E01 GWA Sanitary Survey Significant Deficiency Items:

26. Pumps-- Lack of adequate backup pumps. Flooding of booster pump stations.
Results in intermittent service and supply, lower reliability and decreased pressure

Action Plan:
Initiate repair. Engage consultant for independent analysis and condition assessment of booster pumping stations. Consultant to develop schedule and cost estimates for implementing upgrades of booster pumping stations. Consultant to prepare a report for rehabilitation program.

Proposed Action Item Schedule	Task Description
12/01/2012	Initiate immediate repairs
02/01/2013	Engage consultant Brown and Caldwell
02/26/2013	5-year CIP approved by CCU
04/30/2013	Complete immediate repairs
05/05/2013	Submit draft report to GWA for review
09/06/2013	Submitted draft report to USEPA for approval
03/30/2014	Final plan for booster station repairs.
Updates (Reporting per Preface)	See GWA CIP at < http://guamwaterworks.org/wp-content/uploads/2016/02/GWA-CIP-2015-to-2020-CCU-102715-final-ver.pdf >.

27. Pumps-- No controls on well pumps or booster pumps.
Results in intermittent service and supply, lower reliability and decreased pressure.

Action Plan:
Initiate repair. Engage consultant for independent analysis and condition assessment of booster pumping stations. Consultant to develop schedule and cost estimates for implementing upgrades of booster pumping stations. Consultant to prepare a report for rehabilitation program.

Proposed Action Item Schedule	Task Description
12/01/2012	Initiate immediate repairs
02/01/2013	Engage consultant Brown and Caldwell
02/26/2013	5-year CIP approved by CCU
04/30/2013	Complete immediate repairs
05/05/2013	Submit draft report to GWA for review
09/06/2013	Submitted draft report to USEPA for approval
03/30/2014	Final plan for booster station repairs.
Updates (Reporting per Preface)	See GWA CIP at < http://guamwaterworks.org/wp-content/uploads/2016/02/GWA-CIP-2015-to-2020-CCU-102715-final-ver.pdf >.

28. Pumps-- Leaking pump seals, valves, lines, and highly rusted piping.
Results in intermittent service and supply, lower reliability and decreased pressure.

Action Plan:
Initiate repair. Engage consultant for independent analysis and condition assessment of booster pumping stations. Consultant to develop schedule and cost estimates for implementing upgrades of booster pumping stations. Consultant to prepare a report for rehabilitation program.

Proposed Action Item Schedule	Task Description
12/01/2012	Initiate immediate repairs
02/01/2013	Engage consultant Brown and Caldwell
02/26/2013	5-year CIP approved by CCU
04/30/2013	Complete immediate repairs
05/05/2013	Submit draft report to GWA for review
09/06/2013	Submitted draft report to USEPA for approval
Maintenance work in progress	Begin program for booster station repairs, copy to USEPA
Updates (Reporting per Preface)	See GWA CIP at < http://guamwaterworks.org/wp-content/uploads/2016/02/GWA-CIP-2015-to-2020-CCU-102715-final-ver.pdf >.

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NEIC Work Product No. VP0989E01 GWA Sanitary Survey Significant Deficiency Items:

29. Water Quality-- Inadequate monitoring and reporting – Ugum WTP and Santa Rita Spring (turbidity and chlorine residual) exceedances (violations) may be going undetected and unreported. Recommendation: Continue to improve utility-wide communications to address previous lack of complete communication between departments.	
Action Plan: GWA has made this KPI and it is managed via weekly reports	
Proposed Action Item Schedule	**Task Description**
06/06/2013	GWA to submit weekly report documentation to USEPA.
05/30/2013	GWA submitted documentation to USEPA. Complete

30. SDWA Compliance-- Lead and Copper Rule monitoring overdue.	
Action Plan: GWA has implemented the required LCR monitoring and will proceed to complete and continue as required by the rule without waiting for GEPA to approve the schedule and process. If GEPA ever decides to participate, GWA will make additions that are requested.	
Proposed Action Item Schedule	**Task Description**
12/04/2012	Routine Procedure started.
06/14/2013	Round 1 completed with all sample results below both Pb and Cu action levels.
12/31/2013	Completed second Round of Monitoring
01/31/2014.	Lab results verify GWA is in compliance. - Complete

31. SDWA Compliance-- Unaddressed Stage 2 Disinfection/Disinfectant Byproducts rule (DBP) Rule MCL Violations, required public notification.	
Action Plan: Continue to report in CCR and add quarterly mailings to Central (GU0000003) and or Southern (GU0000001) System customers. GWA to await schedule for Navy water compliance schedule from Fena Reservoir for Central (GU0000003).	
Proposed Action Item Schedule	**Task Description**
05/20/2013	Southern (GU0000001) System is now compliant with Stage 2 DBP Rule
05/20/2013	Central (GU0000003) System is compliant with Stage 2 DBP Rule in all areas except one small part of Agat. Mailings to all Central Customers will continue until clear.
06/06/2013	Initiated quarterly mailings to affected customers. [Central (GU0000003)]
Consecutive System Management	GWA continues to reduce purchases of water from the Fena SWTP which has made the difference in the Central (GU0000003) System.
Navy Water is now in compliance	DBP exceedance Central (GU0000003) System has ended with changes in the Navy Fena Surface Water Treatment Plant's operations, achieving compliance with the Stage 2 DBP Rule.
Quarterly mailings are discontinued.	Complete

32. Administration-- No formal, comprehensive training program for operators and other personnel. Can result in inappropriate or inadequate operation and negative impacts on water quality.	
Action Plan: GWA to complete an annual Workforce Development Report	
Proposed Action Item Schedule	**Task Description**
01/16/2014	First Annual Workforce Development (Training) Report.
Regular Training Scheduled	**Adapted dependent on subject matter. Assisted by PMO.**
Updates (Reporting per Preface)	**See Comprehensive management Plan 08/27/2013**

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NEIC Work Product No. VP0989E01 GWA Sanitary Survey Significant Deficiency Items:

33. Administration-- Hydraulic model is neither complete nor accurate enough to make operational or design decisions. Results in poor design and operational decisions impacting water quality.	
Action Plan: This is a Court Ordered project. Work performed will be in accordance with the 2011 court order Paragraph 29(a)(2).	
Proposed Action Item Schedule	**Task Description**
05/03/2013	Submitted Hydraulic Model report to USEPA under CO 29(a)(2). Complete

34. Administration-- No preventative maintenance programs for most operational areas. Many system components in varying levels of disrepair or failure put system at risk for contamination.	
Action Plan: GWA is working with USEPA and CDM to improve Asset Management	
Proposed Action Item Schedule	**Task Description**
In Progress	GWA/CDM-Smith Asset Management program
Continuously updated	**GWA Asset Management program – Lucity CMMS being implemented**

35. Administration-- Data are collected, but do not have the capacity to analyze the information to assist with operational decisions. Lack of understanding and use of operational data can result in poor system operations and consequent risk for contamination or failure.	
Action Plan: GWA will improve data collection and assessment function – SOP's and Training are in planning stages.	
Proposed Action Item Schedule	**Task Description**
2013	New SOP's and Training
2013 through 2018	Five year development plan for staff capacity for data retrieval and analysis.
Evolved, data collection upgraded.	**Required staff positions created**
Updates (Reporting per Preface)	**Creation of Management analyst positions is completed.**

36. Administration-- Lack of Standard Operating Procedures ("SOPs").	
Action Plan: GWA will conduct SOP training	
Proposed Action Item Schedule	**Task Description**
As of 06/25/2013.	55 new SOP's Implemented (assisted by CDM, EPA Grant)
Drafts and planed	CDM continues work, particularly on Asset Management
Average one a month my 06/30/2014	Complete new SOP's and implement
09/06/2013	Reported status to USEPA
Semi-annual - Continuous	**Training on SOP's**
Updates (Reporting per Preface)	**Generated by GWA Staff - Supplemented by CDM Smith - EPA SRF.**

37. Operator Compliance-- No proper operator certification for system type. Inadequately trained operators do not perform process control adequately, which impacts finished water quality.	
Action Plan: GWA disputes the described deficiency. **GWA has always been in compliance.**	
Proposed Action Item Schedule	**Task Description**
06/06/2013	Submit Certification information USEPA.
05/24/2013	Certification information sent to USEPA - Complete

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NEIC Work Product No. VP0989E01 GWA Sanitary Survey Significant Deficiency Items:

38. Operator Compliance-- Plant operators do not regularly conduct jar tests.
Inadequately trained operators do not perform process control adequately, which impacts finished water quality.

Proposed Action Item Schedule	Task Description
5/15/2013	Prepare change order for installation of TOC and appurtenances. Smithbridge
08/12/2013	Completed installation of on site TOC analyzer.
08/15/2013	Completed training of operators on site TOC analyzer.
07/23/2013	Additional Specialized training on coagulation optimization for membranes
08/01/2013	Training certification sent to USEPA - Complete

39. Operator Compliance-- Plant operators and engineering staff did not understand the correlation between ineffective coagulant dosing.
Inadequately trained operators do not perform process control adequately, which impacts finished water quality.

Proposed Action Item Schedule	Task Description
5/15/2013	Prepare change order for installation of TOC and appurtenances. Smithbridge
08/12/2013	Completed installation of on site TOC analyzer.
08/15/2013	Completed training of operators on site TOC analyzer.
07/23/2013	Additional Specialized training on coagulation optimization for membranes
08/01/2013	Training certification sent to USEPA - Complete

40. Operator Compliance-- No level 4 Operator is actually located on site at the Ugum WTP, as required.
Violation of Guam Operator Certification requirement.

Action Plan:
Level 4 operators are not required at Ugum, Current status requires only Level 3 operators. **GWA has always been in compliance.**

Proposed Action Item Schedule	Task Description
06/06/2013	Submit Certification information USEPA.
05/24/2013	Certification information sent to USEPA - Complete

Status Summary: as of Julyy 30, 2018

Corrective Action Plan Legend	Fill Color	No. of Items
Information and/or future steps	**No Fill**	
Completed – no further action-or pending EPA approval	Green	**37**
Court Order Managed items (some are completed- the others are on schedule)	Blue	**9**
On Schedule or Continuous (Long Term Commitment/Reporting)	Orange	**10**

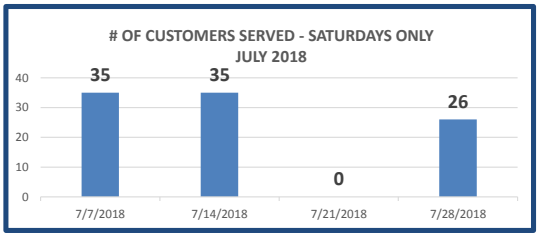
GWA Utility Services Division
Monthly Status Report
Month ending July 28, 2018

UTILITY SERVICES DIVISION ACTIVITIES:	WEEKLY AVERAGE JUNE 2018	JUNE 2018 MONTHLY TOTAL	WEEK ENDING: 7/7/2018	WEEK ENDING: 7/14/2018	WEEK ENDING: 7/21/2018	WEEK ENDING: 7/28/2018	WEEKLY AVERAGE JULY 2018	JULY 2018 MONTHLY TOTAL
Collections Unit								
I. Number of accounts cut for nonpayment:	62	249	28	93	60	39	55	220
II. Number of accounts restored for nonpayment:	62	247	33	67	49	47	49	196
III. Number of No water reports responded to:	2	6	0	0	7	2	2	9
IV. Number of Secure/Unsecure valve reports responded to:	3	11	0	2	1	1	1	4
V. Number of Verify reads responded to:	0	0	0	0	0	0	0	0
VI. Number of new pay plans negotiated for **active** accounts :	185	741	147	233	196	142	180	718
VII. Number of active pay plans negotiated and ongoing :	2032		1775	1957	2083	2171	1997	
VIII. Number of **inactive** accounts with a payment arrangement:	15		1	0	0	0	0	
IX. Number of broken payment plans:	79	316	114	51	70	54	72	289
Customer Service Unit								
I. Service Delivery Points:								
a. GBN Public Service Building – Fadian								
i. Total Customers Assisted :	251	1003	254	192	201	210	214	857
ii. Total Abandoned Requests :	16	65	8	11	14	15	12	48
iii. Average Wait Time:	6 minutes		7 minutes	4 minutes	5 minutes	8 minutes	6 minutes	
iv. Average Service Time:	12 minutes		11 minutes	11 minutes	9 minutes	11 minutes	12 minutes	
v. Breakdown by request type:								
1. Apply for water	59	235	48	38	44	44	44	174
2. Restore water cut for non payment	11	45	9	20	13	14	14	56
3. Terminate Water	19	76	21	11	10	14	14	56
4. Copy of Bill	36	144	22	43	40	34	35	139
5. Billing Dispute	61	243	35	51	42	46	44	174
6. Billing Dispute follow up	5	19	2	3	2	3	3	10
7. General Questions & Other	35	138	28	37	23	34	31	122
8. Report a water leak	1	5	1	1	1	0	1	3
9. Report water theft	0	0	1	0	0	0	0	1
10. Payment Arrangement	31	122	22	30	30	25	27	107
b. Julale Satellite Office – Hagatna								
i. Total Customers Assisted :	271	1085	274	223	190	236	231	923
ii. Total Abandoned Requests :	7	27	13	6	5	11	9	35
iii. Average Wait Time:	7 minutes		8 minutes	3 minutes	3 minutes	7 mintes	7 minutes	
iv. Average Service Time:	10 minutes		9 minutes	8 minutes	8 minutes	12 minutes	10 minutes	
v. Breakdown by request type:								
1. Apply for water	55	220	49	58	29	44	45	180
2. Restore water cut for non payment	15	58	1	2	9	20	8	32
3. Terminate Water	27	108	12	31	16	20	20	79
4. Copy of Bill	62	248	45	82	52	68	62	247
5. Billing Dispute	66	265	35	41	38	46	40	160
6. Billing Dispute follow up	3	13	1	1	0	0	1	2
7. General Questions & Other	31	125	32	35	19	15	25	101
8. Report a water leak	1	2	0	3	1	1	1	5
9. Report water theft	0	0	0	0	0	0	0	0
10. Payment Arrangement	31	124	24	34	31	26	29	115
c. Upper Tumon Satellite Office – Upper Tumon								
i. Total Customers Assisted :	342	1367	382	385	262	236	316	1265
ii. Total Abandoned Requests :	22	86	13	3	7	12	9	35
iii. Average Wait Time:	6 minutes		5 minutes	7 minutes	7 minutes	8 minutes	6 minutes	
iv. Average Service Time:	9 minutes		9 minutes	11 minutes	11 minutes	12 minutes	9 minutes	
v. Breakdown by request type:								
1. Apply for water	79	316	55	98	49	70	68	272
2. Restore water cut for non payment	17	69	10	22	10	3	11	45
3. Terminate Water	24	97	41	34	22	20	29	117
4. Copy of Bill	75	301	82	105	56	44	72	287
5. Billing Dispute	74	296	71	98	53	58	70	280
6. Billing Dispute follow up	2	8	2	4	2	2	3	10
7. General Questions & Other	33	132	27	63	37	23	38	150
8. Report a water leak	3	12	2	3	6	2	3	13
9. Report water theft	0	1	0	0	0	0	0	0
10. Payment Arrangement	37	146	30	59	42	21	38	152

GWA Utility Services Division
Monthly Status Report
Month ending July 28, 2018

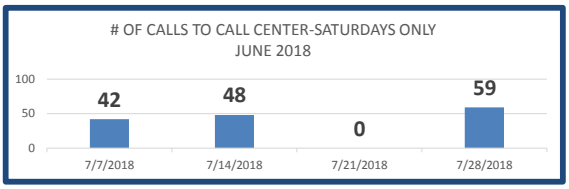
UTILITY SERVICES DIVISION ACTIVITIES:	WEEKLY AVERAGE JUNE 2018	JUNE 2018 MONTHLY TOTAL	WEEK ENDING: 7/7/2018	WEEK ENDING: 7/14/2018	WEEK ENDING: 7/21/2018	WEEK ENDING: 7/28/2018	WEEKLY AVERAGE JULY 2018	JULY 2018 MONTHLY TOTAL
d. Customer Call Center								
i. Calls Recieved :	1060	4238	690	1451	1250	1010	1100	4401
ii. Calls Immediately Answered :	756	3023	450	978	767	555	688	2750
iii. Calls Abandoned	40	159	24	53	55	35	42	167
iv. Calls Handled by Voice mail:	264	1054	215	420	427	420	371	1482
v. Average duration of calls answered	4 minutes		20 minutes	17 minutes	19 minutes	20 minutes	19 minutes	
vi. Breakdown by request type:								
1. Apply/Terminate info.	38	153	129	124	90	127	118	470
2. Automated Telphone Call	22	87	101	107	90	127	106	425
3. Balance Inquiry	123	491	60	93	48	94	74	295
4. Call Back	64	257	119	164	89	119	123	491
5. Dispatch	39	157	86	139	68	109	101	402
6. Dispute	9	36	6	6	2	1	4	15
7. Follow up	44	174	26	49	27	44	37	146
8. General Questions & Other	113	453	19	52	7	15	23	93
9. GWA Staff	123	490	19	33	18	27	24	97
10. No Water	23	91	27	45	3	14	22	89
11. Online/Phone App Help	28	110	19	127	27	15	47	188
12. Pay by Phone	123	493	6	8	5	10	7	29
13. Pay Plan	84	336	8	10	7	14	10	39
14. Restore Non-payment	27	108	15	14	16	22	17	67
15. Secure/Unsecure Valve	12	46	30	34	24	34	31	122
16. Voice Mail	24	96	69	88	34	24	54	215
17. Water leak	10	41	19	40	32	45	34	136
e. Customer Emails:								
i. Emails Recieved :								
1. customers@guamwaterworks.org	30	121	28	42	39	31	35	140
Breakdown by request type (email):								
a. Apply for water	2	7	1	2	5	2	3	10
b. Terminate Water	2	6	2	4	1	1	2	8
c. Copy of Bill	0	1	0	1	3	1	1	5
d. Billing Dispute & follow up	9	36	7	7	8	11	8	33
e. General Questions & Other	2	9	15	17	12	9	13	53
f. Report a water leak	12	49	0	4	3	1	2	8
g. Report water theft	2	7	0	0	0	0	0	0
h. Online services inquiry	2	6	3	7	7	6	6	23
2. gwaservesme@guamwaterworks.org (realtors and prop m	5	21	0	0	0	0	0	0
ii. Emails Replied (both):	34	136	21	28	32	33	29	114

	AVERAGE	7/7/2018	7/14/2018	7/21/2018	7/28/2018	AVERAGE
f. Saturday Services: 9AM TO 1PM ONLY	33	35	35	HOLIDAY	26	32
i. VISITS: Breakdown by request type:						
1. Apply for water	4	4	5	HOLIDAY	8	6
2. Restore water cut for non payment	1	0	2	HOLIDAY	0	1
3. Terminate Water	3	2	1	HOLIDAY	2	2
4. Copy of Bill	7	12	9	HOLIDAY	9	10
5. Billing Dispute	10	5	10	HOLIDAY	1	5
6. Billing Dispute follow up	0	0	0	HOLIDAY	0	0
7. General Questions & Other	2	2	2	HOLIDAY	1	2
8. Report a water leak	0	1	0	HOLIDAY	0	0
9. Report water theft	0	0	0	HOLIDAY	0	0
10. Payment Arrangement	5	9	6	HOLIDAY	5	7



GWA Utility Services Division
Monthly Status Report
Month ending July 28, 2018

UTILITY SERVICES DIVISION ACTIVITIES:	WEEKLY AVERAGE JUNE 2018	JUNE 2018 MONTHLY TOTAL	WEEK ENDING: 7/7/2018	WEEK ENDING: 7/14/2018	WEEK ENDING: 7/21/2018	WEEK ENDING: 7/28/2018	WEEKLY AVERAGE JULY 2018	JULY 2018 MONTHLY TOTAL
ii. CALLS TO CALL CENTER (Saturday services only):			7/7/2018	7/14/2018	7/21/2018	7/28/2018		
			42	48	0	59		



Dispute Resolution & Document Control

I. Dispute Resolution:			7/7/2018	7/14/2018	7/21/2018	7/28/2018		
a. Number of disputed accounts resolved:	9	35	14	10	8	8	10	40
b. Number of disputed accounts under review:	178	712	178	178	178	178	178	712
II. Document Control:								
a. Number of field activities posted :	470	1879	400	223	482	269	344	1374
b. Number of field activities pending:	639	2554	394	466	398	376	409	1634

Disconnect/Reconnect Unit

I. Number of field activities received:	269	1076	298	240	158	253	237	949
II. Number of field activities completed:	303	1210	340	252	263	180	259	1035
III.Number of field activities pending field action:	3	13	10	5	4	3	6	22

Meter Reading Unit

I. Number of meters read:			7/7/2018	7/14/2018	7/21/2018	7/28/2018		
a. Electronically Read Meters:	9810	39239	7917	1072	10397	10162	7387	29548
b. Manually Read Meters:	39	156	19	39	36	47	35	141
i. Unread meters (Meters scheduled to be read but not read):	40	160	38	46	42	50	44	176
ii. Number of data logs received:	30	118	29	29	20	29	27	107
iii. Number of data logs retrieved:	31	122	11	17	33	39	25	100
iv. Number of data logs pending field action:	9	35	23	33	29	18	26	103
v. Communication Errors/Reprogramming requests:	3	11	3	4	1	1	2	9
vi. Number of estimated readings (for the week):	27	108	37	33	23	30	31	123
vii. Reasons for Estimations:								
1. Cant locate meter:	3	11	0	9	3	4	4	16
2. Temporary Obstruction	1	5	4	2	5	5	4	16
3. Vicious Dog	0	0	0	0	0	1	0	1
4. Flooded meter	1	5	1	2	2	0	1	5
5. Corrective action requested (database corrections needed)	2	7	1	2	4	3	3	10
6. Possible changed out meter:	5	19	1	3	8	9	5	21
7. Communication/Programming error (code 92's):	4	15	2	5	1	5	3	13
8. Other:	8	30	6	8	8	14	9	36
1. Leaks detected on customer's private line:	1141	4564	987	1418	1325	1167	1224	4897
2. Reverse Flow Detected	70	278	37	91	41	159	82	328
3. No Usage Detected	390	1559	308	460	506	439	428	1713
4. Tamper Code	20	78	19	24	17	19	20	79
c. Electronic Read Percentage:	100%		98%	100%	100%	100%	99%	

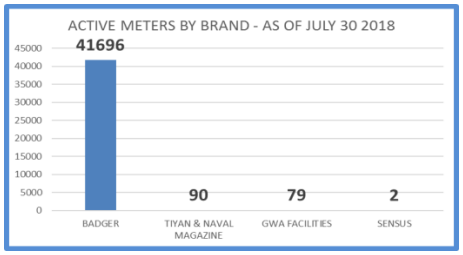
Revenue Protection Unit

I. Number of Inactive Still Consuming Reports rec'd & investigated:	0	0	0	0	2	0	1	2
II.Number of Illegal Connection reports rec'd & investigated:	1	3	1	2	0	1	1	4

III. Meter Replacement Project – Post 2010 Metron Farnier & Sensus Status Report :

METER TYPE	COUNT
SENSUS	2
METRON FARNIER	0
	2

a. Account & Meter Type Count :



GUAM WATERWORKS AUTHORITY

Engineering Monthly Report
August 2018

Prepared By:
Thomas Cruz, P.E. Chief Engineer

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A. Summary Table of 2010, 2013 and 2016 Bond

Potable Water

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
PW 05-01	Ground Water Disinfection	$ 500,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 05-03	Santa Rita Springs Booster Pump Rehab Phase II	$ -	N/A	N/A	$ 100,000.00	100.00%	0.00%	$ -	N/A	N/A
PW-05-05	"A Series Well Transmission Line	$ 518,143.96	100.00%	0.00%	$ 400,000.00	92.46%	7.54%	$ -	N/A	N/A
PW 05-06	Water Booster Pump Station	$ 500,000.00	100.00%	0.00%	$ 1,861,000.00	99.09%	0.91%	$ 4,139,000.00	0.00%	100.00%
PW 05-07	Meter Replacement Program	$ 10,300,000.00	99.84%	0.16%	$ 999,000.00	99.75%	0.25%	$ 4,501,000.00	3.33%	96.67%
PW 05-08	Barrigada Tank Repair/Replacement	$ 5,450,000.00	99.92%	0.08%	$ 4,987,000.00	99.32%	0.68%	$ 1,013,000.00	0.00%	100.00%
PW 05-09	Leak Detection	$ 200,000.00	100.06%	-0.06%	$ 20,000.00	84.58%	15.42%	$ 1,180,000.00	0.00%	100.00%
PW 05-10	Potable Water System Planning	$ 200,000.00	100.00%	0.00%	$ 624,000.00	100.00%	0.00%	$ 2,276,000.00	38.50%	61.50%
PW 05-11	Implement Ground Water Rule	$ 1,700,000.00	100.00%	0.00%	$ 1,000,000.00	100.00%	0.00%	$ -	N/A	N/A
PW 05-12	Brigade II (Ugum Lift) BPS Upgrade	$ 1,700,000.00	18.03%	81.97%	$ -	N/A	N/A	$ -	N/A	N/A
PW 05-13	Deep Well Rehabilitation	$ 548,000.00	100.00%	0.00%	$ 200,000.00	100.00%	0.00%	$ 250,000.00	44.01%	55.99%
PW 05-14	New Deep Wells at Dow n Hard	$ 638,252.85	76.11%	23.89%	$ 810,000.00	0.00%	100.00%	$ 1,190,000.00	0.00%	100.00%
PW 05-15	Rehabilitation of Asan Springs	$ 900,000.00	37.87%	62.13%	$ -	N/A	N/A	$ -	N/A	N/A
PW 05-16	Master Meters	$ 1,600,000.00	99.44%	0.56%	$ 784,000.00	99.88%	0.12%	$ 3,616,000.00	4.19%	95.81%
PW 09-01	Ugum Water Treatment Plant Intake	$ 700,000.00	99.47%	0.53%	$ 982,000.00	100.00%	0.00%	$ 18,000.00	0.00%	100.00%
PW 09-02	Water Wells	$ -	N/A	N/A	$ 4,200,000.00	54.90%	45.10%	$ 2,500,000.00	0.00%	100.00%
PW 09-03	Water Distribution System	$ 3,174,748.00	100.00%	0.00%	$ 11,151,000.00	95.15%	4.85%	$ 49,000.00	0.00%	100.00%
PW 09-04	Pressure Zone Realignment	$ -	N/A	N/A	$ 431,000.00	99.95%	0.05%	$ 1,141,000.00	64.94%	35.06%
PW 09-06	Central Water Distribution System 2005	$ 900,000.00	91.67%	8.33%	$ -	N/A	N/A	$ -	N/A	N/A
PW 09-08	Mechanical/Electrical Equipment	$ 1,200,000.00	100.00%	0.00%	$ 430,000.00	99.60%	0.40%	$ 100,000.00	0.00%	100.00%
PW 09-09	Water Reservoir Internal/External	$ 2,000,000.00	75.47%	24.53%	$ -	N/A	N/A	$ -	N/A	N/A
PW 09-10	Water Reservoir Internal/External	$ -	N/A	N/A	$ -	N/A	N/A	$ 800,000.00	100.00%	0.00%
PW 09-11	Water System Reservoirs 2005 Improvements	$ 1,050,000.00	100.00%	0.00%	$ 13,878,000.00	99.99%	0.01%	$ 28,350,000.00	55.51%	44.49%
PW 11-01	Distribution System Upgrades	$ 474,159.85	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 11-02	Ugum Water Treatment Plant Reservoir	$ -	N/A	N/A	$ 90,000.00	0.00%	100.00%	$ -	N/A	N/A
PW 12-01	Water Audit Program & Water Loss Control Plan	$ 100,000.00	78.46%	21.54%	$ -	N/A	N/A	$ 1,000,000.00	38.96%	61.04%
PW 12-02	Production Plan / Reduce Navy Purchases	$ 100,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 12-03	Hydraulic Assessment of Tanks	$ 500,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 12-04	Agana Heights & Chaot Tanks	$ 4,700,000.00	100.00%	0.00%	$ 3,280,000.00	40.52%	59.48%	$ 1,220,000.00	40.98%	59.02%
PW 12-05	Tank Major Repair Yigo #1, Mangilao #2, Astumbo#1	$ 1,900,000.00	95.16%	4.84%	$ 11,605,000.00	99.99%	0.01%	$ 1,895,000.00	96.15%	3.85%
PW 12-06	Tank Replacement Piti & Hyundai	$ -	N/A	N/A	$ -	N/A	N/A	$ 7,409,830.00	98.52%	1.48%
PW 12-07	Assessment of Maloloj Elevated & Yigo Elevated	$ 200,000.00	100.00%	0.00%	$ 485,117.00	100.00%	0.00%	$ -	N/A	N/A
PW 12-08	Public Water System Asset Inventory/ Condition Assessment	$ 100,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 12-09	Public Water System GIS & Mapping	$ 50,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 14-01	Fire Hydrant Replacement Program	$ -	N/A	N/A	$ -	N/A	N/A	$ 2,000,000.00	0.00%	100.00%
		$ 41,903,304.66			$ 58,317,117.00			$ 64,647,830.00		

Wastewater

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
WW 05-04	Wastew ater System Planning	$ 1,500,000.00	100.00%	0.00%	$ 651,000.00	100.00%	0.00%	$ 349,000.00	89.68%	10.32%
WW 05-05	Wastew ater Vehicles	$ 235,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 05-07	NDWWTP - Chlorine Tanks	$ 250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 09-01	Lift station upgrades	$ -	N/A	N/A	$ 946,000.00	70.40%	29.60%	$ 2,404,000.00	12.21%	87.79%
WW 09-06	Wastew ater Collection System Repl/ Rehabilitation	$ 1,105,000.00	99.93%	0.07%	$ 780,000.00	97.11%	2.89%	$ 2,920,000.00	19.02%	80.98%
WW 09-08	Facilities Plan/Design for Baza Gardens WWTP	$ 1,250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 09-10	Facilities Plan/Design for Agat-Santa Rita WWTP	$ 899,630.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 11-03	Baza Gardens STP Replacement	$ 1,301,947.00	88.43%	11.57%	$ 3,114,883.00	100.00%	0.00%	$ 29,400,170.00	98.99%	1.01%
WW 11-04	Facilities Plan/Design for Umatac-Merizo WWTP	$ 900,000.00	100.00%	0.00%	$ 473,000.00	100.00%	0.00%	$ 527,000.00	47.84%	52.16%
WW 11-08	Agat/Santa Rita STP Replacement	$ 2,218,000.00	99.91%	0.09%	$ 67,200,000.00	99.43%	0.57%	$ 3,000,000.00	51.50%	48.50%
WW 12-01	Northern District WWTP Primary Treatment Upgrade	$ 11,750,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-02	Biosolids Management Plan	$ 200,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-03	Agana WWTP Interim Measures	$ 11,500,000.00	100.00%	0.00%	$ 673,000.00	100.00%	0.00%	$ 827,000.00	0.00%	100.00%
WW 12-04	I&I SSES Southern	$ 800,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-05	I&I SSES Central	$ 850,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-06	I&I SSES Northern	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 12 -07	Umatac Merizo Replacement	$ 250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ 20,800,000.00	99.06%	0.94%
WW 12-08	Wastew ater System GIS & Mapping	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-09	Wastew ater Facility Back Up Pow er	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-10	Wastew ater System Asset Inventory	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 17-01	Wastew ater Sew er System Expansion									
WW 17-02	Northern District WWTP Secondary Treatment Upgrade	$ 1,000,000.00	0.00%	100.00%						
		$ 36,009,577.00			$ 73,837,883.00			$ 60,227,170.00		

Electrical Engineering Support

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
EE 05-02	SCADA Pilot Project	$ 61,950.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
EE 09-01	Wastewater Pumping Station Electrical Upgrade	$ -	N/A	N/A	$ 620,000.00	16.13%	83.87%	$ 100,000.00	0.00%	100.00%
EE 09-02	Electrical Upgrade - Water Wells	$ 354,226.63	100.00%	0.00%	$ 1,500,000.00	100.00%	0.00%	$ 650,000.00	0.00%	100.00%
EE 09-03	Electrical Upgrade - Water Booster	$ -	N/A	N/A	$ 2,000.00	0.00%	100.00%	$ 323,000.00	0.00%	100.00%
EE 09-04	Electrical Upgrade - Water Booster	$ -	N/A	N/A	$ 200,000.00	0.49%	99.51%	$ -	N/A	N/A
EE 09-05	Electrical Upgrade - Other Water	$ -	N/A	N/A	$ 150,000.00	40.47%	59.53%	$ -	N/A	N/A
EE 09-06	SCADA Improvements - Phase I	$ 250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
EE 09-07	SCADA Improvements - Phase 2	$ 1,056,986.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
EE 09-08	SCADA Improvements - Phase 3	$ 24,955.71	100.00%	0.00%	$ 923,000.00	78.26%	21.74%	$ 1,177,000.00	52.46%	47.54%
EE 09-09	SCADA Improvements - Phase 4	$ -	N/A	N/A	$ -	N/A	N/A	$ 6,500,000.00	0.00%	100.00%
		$ 1,748,118.34			$ 3,395,000.00			$ 8,750,000.00		

Miscellaneous Engineering Support

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
MC 05-01	Laboratory Modernization	$ -	N/A	N/A	$ 1,173,000.00	100.00%	0.00%	$ 1,127,000.00	100.00%	0.00%
MC 05-02	Land Survey	$ 500,000.00	99.94%	0.06%	$ 2,000.00	0.00%	100.00%	$ 1,998,000.00	63.09%	36.91%
MC 09-01	General Plant Improvements	$ 7,241,000.00	99.58%	0.42%	$ 2,600,000.00	82.00%	18.00%	$ 2,769,460.00	54.11%	45.89%
MC 15-01	Information Technology Intergration Improvements							$ 500,000.00	48.81%	51.19%
		$ 7,741,000.00			$ 3,775,000.00			$ 6,394,460.00		

	2010 Bond Allotment	2013 Bond Allotment	2016 Bond Allotment
CIP Water	$ 41,903,304.66	$ 58,317,117.00	$ 64,647,830.00
CIP Wastewater	$ 36,009,577.00	$ 73,837,883.00	$ 60,227,170.00
CIP Electrical	$ 1,748,118.34	$ 3,395,000.00	$ 8,750,000.00
CIP Miscellaneous	$ 7,741,000.00	$ 3,775,000.00	$ 6,394,460.00
	$ 87,402,000.00	$ 139,325,000.00	$ 140,019,460.00

Bond Fund	Construction Fund Amount ($M)	Estimated # of months fund available for use		Total Funds encumbered to date ($M)	% of fund used	Rate of Spending: ($M) per year
2005	$82.930	82	*	$82.930	100.00%	12.14
2010	$87.402	91	**	$83.339	95.35%	10.99
2013	$139.325	54	**	$131.780	94.58%	29.28
2015	$140.019	24		$85.991	61.41%	43.00
	* - End date November 2013 via CCU Resolution 06-FY2014					
	** - Includes month of July 2018					

B. Projects Procurement

Percentage Key:

100%	Approved by GM
99%	Signature required from either Accounting/Legal/GM
98%	Processing engineering service or construction contract (with legal)
95%	Request for CCU approval (GM/engineering)
90%	A/E fee negotiation or contractor bid evaluation (engineering)
80%	Selected A/E or Conducted bid opening (engineering)
70%	Advertised RFP/IFB (engineering)
60%	RFP/IFB Package under legal review
50%	RFP/IFB Package completed (engineering)
Less than 50%	Project Scope of work development in progress

- Red text anywhere indicates a change from the last report.

BOX KEY FOR PROCUREMENT:

(Type of Procurement) (Relevant CIP NO. or Funding Source)	**(Project Title)**	
(Percentage complete for procurement)	**Activities/Notes:** (see percentage key above)	**Consultant** (listed when selected)
Project Description	Summary of project description	

BID PACKAGE PW 09-02	**New Well Construction**	
<50% Complete	**Activities/Notes:** GWA engineering continuing discussion with Dept. of Agriculture and lessee on options of acquisition of property for well site at AG-12. Internal GWA discussions underway for survey and appraisal services as well as continuing services form Designer.	
Project Description:	The project is to construct three new production wells for GWA as well as installation of a water main to connect the new production wells to the Ysengsong Reservoirs.	

RFP PW 09-02	**New Well Construction (Construction Management)**	
<50% Complete	**Activities/Notes:** SOW being developed	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of up to three (3) new production wells for GWA. GWA plans to increase source water production to improve system redundancy that allows for operating the water production wells more effectively. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

BID PACKAGE PW 14-01	**Fire Hydrant Replacement Phase I**	
<50% Complete	**Activities/Notes:** Bid package being prepared.	
Project Description:	The work performed under this project consist of replacing all know dry barrel fire hydrants down to the lateral as well as any defective wet barrel fire hydrant. Where necessary the gate valve for the fire hydrant may also be replaced.	

RFP WW 09-01	**Yigo SPS Flood Protection and Rehabilitation Design**	
100% Complete	**Activities/Notes:** Contract executed July 31, 2018. NTP issued August 2, 2018.	
Project Description:	The work performed under this project procurement shall consist of a design services to implement storm water mitigation measures to protect the facility during extreme weather as well as rehabilitate the facility to provide better redundancy and operate efficiently.	

BID PACKAGE PW 09-03, PW 09-04 AND PW 09-11	**Northern Tank Phase I (Santa Rosa) Construction**	
<50% Complete	**Activities/Notes:** GWA will issue only a bid for Santa Rosa Tank and off-site improvements first.	
Project Description:	The work performed under this project procurement shall consist of Construction of a 1MG Santa Rosa reservoir and booster pump station. Some piping work off site from the reservoir is also required to ensure the reservoirs function optimally.	

BID PACKAGE EE 09-08, EE 09-09	**SCADA Phase A1 Construction**	
100% Complete	**Activities/Notes:** Contract executed June 19, 2018. NTP issued July 13, 2018.	
Project Description:	The work performed under this project procurement shall consist of Construction of SCADA ready instrumentation at several water and waste water facilities throughout he island.	

RFP EE 09-08, EE 09-09	**SCADA Phase A1 Construction Management**	
99% Complete	**Activities/Notes:** Contract routed for signatures within GWA.	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of all SCADA ready instrumentation at the various facilities through Guam. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be	

	delivered efficiently and professionally.

RFP PW 09-04, PW 09-11	**Design Services for the Project Pressure Zone Realignment and Tank Repair/Replacement**	
99% Complete	**Activities/Notes:** Contract routed for signatures within GWA.	
Project Description:	The work performed under this project procurement shall consist of design services for the remaining GWA reservoirs that required major repairs or replacement. The design will also address the required pressure zone realignment throughout the island so as to improve the distribution system functionality. .	

BOX KEY FOR PROJECT:

(Type of Project) (Relevant CIP NO.)	**(Project Title)** **(Contractor or consultant)**	**Start Date:** (month and year)
(Percentage complete for project)	**Activities/Notes:** (brief description of activity)	**Completion Date:** (month and year)
(Court Order Paragraph No.)	(Project type)	
Project Description	Project Description Narrative	

C. CIP Water Section

INSPECTION CIP PW 05-02	**Inspection & Maintenance Repairs to GWA Island-Wide Steel Water Tank Reservoirs Phase 2 (DCA)**	**Start Date:** April 2010
80% Complete	**Activities/Notes:** GWA needs to modify design for Toguan BPS. Still working on plan for Kaiser, Windward. Quote for Agat #1 take down with contractor. GWA working to get quotes for by-pass for Malojloj tank.	**Completion Date:** Anticipate December 2021
CO 38C	Engineering inspection services	
Project Description:	The Court Order requires GWA to inspect all active and in some cases inactive water reservoirs. The inspection results will allow GWA to determine if a reservoir requires repair or replacement.	

DESIGN CIP PW 05-12	**Brigade II BPS Upgrade** **(EM Chen)**	**Start Date:** April 2012
100% complete (Basis of Design) 80% (Design)	**Activities/Notes:** Design firm working to 90% design submittal.	**Completion Date:** Due to property acquisition issues GWA anticipate May 2018
N/A	Engineering design services	
Project Description:	The design project is intended to assess system water supply feed from the north as well as Ugum WTP and the water demands downstream from the Brigade BPS so as to reconfigure the piping into the BPS and resize the pumps to me system head requirements.	

DESIGN CIP PW 12-05	**Yigo and Astumbo 2MG Tank Design Project (Lyons)**	**Start Date:** September 2013
99% complete	**Activities/Notes:** Design firm to provide RFI support during the construction.	**Completion Date:** January 2016
CO 9 (b)(4)	Engineering design services	
Project Description:	Develop the construction documents for two (2) 2.0 million-gallon (MG) nominal capacity concrete reservoirs in the Yigo service zones and one (1) 2.0 MG reservoir in the Astumbo service area. The design services will consist of preparation of plans, specifications, and estimates (PS&E), including Basis of Design, design calculations, construction	

	schedule, topographical survey, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic resources, hazardous materials survey, construction documents, design drawings in Auto CAD (latest version), and relevant permits. Other services will include construction bid support service, meetings, and response to request for interpretation/information during construction. The consultant is required to incorporate and modify existing GWA concrete reservoir specifications to meet the project objective.

DESIGN PW 09-11	**Northern and Southern Guam Reservoir Design** **(TG Engineers)**	**Start Date:** May 2015
60% Complete	**Activities/Notes:** Santa Rosa, Sinifa and Santa Rita design to be packaged in one IFB. Inarajan – Land procurement second site related to new BPS's still on-going. Ugum – GWA still in discussion with re-evaluation and discussion with property owner of alternative property on-going.	**Completion Date:** Update: Due to property acquisitions issues for Piti and Tumon #1, design completion 6 months after property issue resolved.
CO 29 (b)(4)	Engineering design services	
Project Description:	The design services will consist of preparation of plans, specifications, and estimates (PS&E), which includes Basis of Design, design calculations, hydraulic modeling (EPANET), computational fluid dynamic modeling (CFD), construction schedule, topographical survey, property research, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic resources, hazardous materials survey, construction documents, design drawings in Auto CAD, relevant permit, construction bid support service, and response to request for interpretation/information during construction. The tank locations are Ugum, Santa Rita, Santa Rosa, Inarajan and Sinifa.	

DESIGN PW 12-04	**Central Guam Reservoirs Design** **(GHD Inc.)**	**Start Date:** May 2015
65% Complete	**Activities/Notes:** Chaot #2 – CCU resolution to be presented authorizing Change Order to AIC to construct tank. Tumon #2 – tank under construction. Hyundai – tank under construction. Piti – GWA still evaluating alternative solutions to storage needs in Piti area. Manenggon –70% design near complete. Tumon #1 – GWA working on land issues.	**Completion Date:** Update: Due to property acquisitions issues for Piti and Tumon #1, design completion 6 months after property issue resolved.
CO 29 (b)(4)	Engineering design services	
Project Description:	The design services will consist of preparation of plans, specifications, and estimates (PS&E), which includes Basis of Design, design calculations, hydraulic modeling (EPANET), computational fluid dynamic modeling (CFD), construction schedule, topographical survey, property research, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic resources, hazardous materials survey, construction documents, design drawings in Auto CAD, relevant permit, construction bid support service, and response to	

	request for interpretation/information during construction The tank locations are Hyundai, Pulantat, Chaot #2, Tumon #2, Piti and Tumon #1.

CONSTRUCTION PW 09-03	**Line Replacement Phase IV (Giant Construction)**	**Start Date:** 02/14/16
90% Complete	**Activities/Notes:** Contractor continuing work along Chalan Koda and Matguac.	**Completion Date:** 12/30/18 per Change Order.
	Construction Services	
Project Description:	The project is intended for a contractor to replace existing water lines that have been found by operations to be leaking and/or are causing service delivery to less than what GWA is required to provide. The project will replace water mains and ten known locations throughout the island and there is a component within the bid where line replacement work for unknown locations is accounted for.	

DESIGN PW 05-15	**Asan Spring Rehabilitation Design (HDR)**	**Start Date:** August 24, 2016
80% Complete	**Activities/Notes:** Design firm working to 90% design submittal.	**Completion Date:** Due to delays from the Park Services related to property access the anticipated completion of the design is May 2018.
	Engineering design services	
Project Description:	- Perform site visits and condition assessment for site conditions to determine demolition and rehabilitation requirement, process equipment condition, structural condition, and electrical system. Site condition assessment shall include all disciplines to execute the project. - Review and validate the current property boundary information to confirm the available space for the project development. - Perform an environmental impact study and prepare all required permits as needed. - Perform an archeological and historical resources study to identify potential impact to the project, prepare all required permits as needed. - Coordinate with Guam Historic Resources Division State Historic Preservation Office (SHPO) on historical resources study. Prepare all necessary reports and documents as required by SHPO. - Coordinate with Guam Department of Agriculture, Division of Aquatic and Wildlife Resources (DAWR) on vegetation clearance. Prepare all necessary reports and documents required by DAWR. - Identify the existing and projected service area, period of design. - Identify and recommend conceptual water treatment system. - Perform a Class 4 engineering cost estimate according to the American Association of Cost Engineers (AACE) International Cost Estimate Classification System for construction fee. Cost must include all disciplines, permit, construction and administration that are necessary to execute the project. All costs will be in current dollars and escalated to the estimated midpoint of construction.	

CONSTRUCTION PW 09-11, PW 12-05	**Yigo/Astumbo Tank Construction (Pernix)**	**Start Date:** 12/1/16
90% Complete	**Activities/Notes:** Yigo #1: tank on-line, final punch list on-going. Yigo #2: tank on-line, punch list on-going. Existing steel tank off-line for inspection and GWA working to Change Order repair work. Astumbo #1: disinfection work started	**Completion Date:** 07/31/18, (GWA working through delay claims from contractor)
	Construction Services	
Project Description:	This project will involve construction of two (2) 2MG concrete tanks and Booster Pump Station at the Yigo site and a one (1) 2MG concrete tank at the Astumbo site. Work will involve new pipe line, valves, electrical controls, pumps and motors, site drainage, paving, generator for the BPS, SCADA, etc.	

CONSTRUCTION MANAGEMENT PW 09-11, PW 12-05	**Yigo/Astumbo Tank Construction Management (GHD)**	**Start Date:** December 2016
90% complete	**Activities/Notes:** Processing submittals and on-site inspection	**Completion Date:** July 2018
N/A	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the demolition of existing steel elevate and ground tanks as well as the construction of the 2MG concrete tanks at the Yigo tank location and Astumbo tank location. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

CONSTRUCTION MANAGEMENT PW 12-04-11, PW 12-06 AND PW 09-11	**Central Tank Phase I (Chaot #2, Tumon #2, Hyundai) Construction Management (TG Engineers, PC)**	**Start Date:** December 2017
5% complete	**Activities/Notes:** Reviewing submittals from contractor.	**Completion Date:** February 2019
N/A	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of three water reservoirs; 0.5MG Chaot #2, 1MG Tumon #2 (Nissan) and 1MG Hyundai. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

CONSTRUCTION PW 12-04, PW 12-06 AND PW 09-11	**Central Tank Phase I (Chaot #2, Tumon #2, Hyundai) Construction (AIC)**	**Start Date:** 02/8/18
10% Complete	**Activities/Notes:** Nissan Tank demolition on-going. GWA working on GFD issued related to BPS at Hyundai tank site. No permit received yet.	**Completion Date:** 02/31/19
	Construction Services	
Project Description:	The work performed under this project procurement shall consist of Construction of three water reservoirs; 0.5MG Chaot #2, 1MG Tumon #2 (Nissan) and 1MG Hyundai. Some piping work off site from the reservoir is also required to ensure the reservoirs function optimally.	

CONSTRUCTION MANAGEMENT PW 09-11	**Northern and Southern Tank Phase I (Santa Rosa, Sinifa, Santa Rita) Construction Management (GHD)**	**Start Date:** April 2018
0% complete	**Activities/Notes:** Providing constructability review for Santa Rosa Tank.	**Completion Date:** June 2019
N/A	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of three water reservoirs; 1MG Santa Rosa, 1MG Sinifa and 1MG Santa Rita. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

D. CIP Wastewater Section

DESIGN WW 11-08	**Agat-Santa Rita WWTP Replacement (DCA)**	**Start Date:** October 2014
99% Complete	**Activities/Notes:** Change Order to extend design services during construction executed.	**Completion Date:** Nov. 2015 (design); June 2018 (construction)
CO 11	Engineering design services	
Project Description:	The engineering design consultant is required to design a new wastewater treatment facility that will meet secondary treatment limits. The new facilities will incorporate provisions for redundancy to improve reliability and facilitate operations and maintenance activities at the existing facility	

CONSTRUCTION MANAGEMENT WW 11-08	**Agat Santa Rita WWTP CM (GHD)**	**Start Date:** November 2014
100% (PH 1) 100% Complete (PH 2, Part 1) 93% Complete (PH 2, Part B)	**Activities/Notes:** Typical CM inspections on-going. Change order required to continue services through April 2018.	**Completion Date:** December 2017, projected through April 2018
CO 11	Construction Management services	

Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of the Agat Santa Rita WWTP Phase II project. GWA plans to replace the existing wastewater treatment plant for a new plant that can meets permit limits. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.

CONSTRUCTION WW 11-08	**Agat Santa Rita WWTP Phase II (Sumitomo Construction)**	**Start Date:** January 2016
Part 1 of Phase II- 100% Complete Part 2 of Phase II- 93% complete	**Activities/Notes:** Contractor still working on headworks, aerobic digester, equalization basin, admin and maintenance buildings.	**Completion Date:** Phase A: 03/15/17 Phase B: 12/31/17 will not be met, August 2018 projected
CO 11	Construction services	
Project Description:	This project includes construction of the head works, clarifier, oxidation ditches and UV disinfection and administration facilities. Rehabilitation work at the existing WWTP will also occur to ensure the wastewater can be pumped to the new plant. The new plant will also tie into the Tipalao SPS.	

DESIGN WW 09-08, WW11-03	**Baza Gardens Cross Island Sewer Design (DCA)**	**Start Date:** 02/05/16
99% Complete	**Activities/Notes:** DCA providing engineering services during construction.	**Completion Date:** 04/30/18(this completion date will have to be extended.)
CO 11	Engineering design services	
Project Description:	The intent of this project for an engineering firm to prepare design drawings and specification for a sewer conveyance from the Baza Garden WWTP to the new Agat Santa-Rite WWTP. The design will take into account growth in the Baza Gardens/Talofofo areas as wells as new connection along the Route 17 route.	

DESIGN WW 09-06	**Bayside SPS Improvements Design (EMPSCO)**	**Start Date:** July 29, 2016
99% Complete	**Activities/Notes:** Due to change in design Army Corp of Engineers permit viewed as not necessary. GWA received 100% design and under review. GWA working on Change order to address snail and archeological report that was not part of original scope.	**Completion Date:** Due to issue with ACOE anticipate December 2017 for design only.
	Engineering design services	
Project Description:	The intent of this project for an engineering firm to prepare design drawings and specification to upgrade the Bayside Sewer Pump Station given the facility is in major disrepair and the adjacent river is eroding away the access road to the facility which is causing maintenance	

	challenges.

CONSTRUCTION WW 09-08, WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance Construction Phase I (BME and Sons)**	**Start Date:** October 2016
90% Complete	**Activities/Notes:** New SPS, force main and gravity line installation along Route 17 on-going. Change Order related to installation of last segment of sewer being process.	**Completion Date:** Phase I: 03/01/18 (this completion date will have to be extended. Under negotiations)
	Construction services	
Project Description:	The work performed under this project consist of construction of 14,714' of gravity main, 2,767' of force main and sewer pump station #3 next to the Aplacho River in Santa Rita.	

CONSTRUCTION MANAGEMENT WW 09-08 WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance (Construction Management) (SSFM)**	**Start Date:** December 5, 2016
80% Complete	**Activities/Notes:** Negotiations for Change Order proposal related to time extension on-going.	**Completion Date:** April 2018 (this completion date will have to be extended. Under negotiations)
	Construction Management services	
Project Description:	The work performed under this project shall consist of Construction Management and Inspection Services for the construction of gravity main, force mains and sewer pump station as well as an equalization basin at the Baza Garden WWTP.	

CONSTRUCTION WW 09-08, WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance Construction Phase II (BME and Sons)**	**Start Date:** March 2017
95% Complete	**Activities/Notes:** New SPS, force main and gravity line installation along Route 17 on-going. Change Order related to installation of last segment of sewer being process.	**Completion Date:** April 2018 (this completion date will have to be extended. Under negotiations)
	Construction services	
Project Description:	The work performed under this project consist of construction of 1,767' of gravity main, 14,400' of force mains and sewer pump station #2 along Route 17.	

CONSTRUCTION WW 09-08, WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance Construction Phase III (Sumitomo Construction)**	**Start Date:** June 2017
45% Complete	**Activities/Notes:** Contractor continuing pipeline and SPS construction work on Route 17 along with work at wet well at Baza Gardens WWTP.	**Completion Date:** Phase III: 03/16/18 (this completion date will have to be extended. Under negotiations)
	Construction services	
Project Description:	The work performed under this project consist of construction of, but not limited to, 10,481' of force mains and sewer pump station at existing WWTP, equalization tanks, stand-by generator, improved headworks, grit removal system, and associated equipment.	

CONSTRUCTION WW 11-04	**Umatac Merizo WWTP Design Build Improvements Project (CoreTech)**	**Start Date:** June 2017
90% design 25% construction	**Activities/Notes:** • For-Construction Design: • BC acceptance of recirculation pump withheld since pump overloads at low head conditions. Engineer reviewing multiple possible solutions. • BC's Comments on I&C and Process Control requires a formal response. • Change Proposals: • WW Characterization / Design of Phosphorus Removal System: Scope & fee proposal for WW Characterization through sample collection and jar testing being prepared by CT/HD. After data is supplied to GWA, a Conceptual Design will be generated and a construction cost estimate provided. Phosphorus is the nutrient of concern	**Completion Date:** December 31, 2018
	Construction services	
Project Description:	The project is intended to improve the aeration basin, construct a new sewer pump station, regrade the overland field, construct a new effluent storage tank and disinfection facility. The overland percolation basin will undergo regarding work to ensure appropriate distribution of effluent through the whole basin.	

CONSTRUCTION MANAGEMENT WW 11-04	**Umatac Merizo WWTP Design Build Improvements Project (SSFM Inc)**	**Start Date:** September 7, 2017
25%	**Activities/Notes:** Continuing on-site inspection of field activities.	**Completion Date:** December 31, 2018
	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the improvements works at the aeration basin, new sewer pump station, overland field improvements, effluent storage tank. The overall goal of the Construction Manager (CM) is to manage the entire construction	

	process so that the project can be delivered efficiently and professionally.

E. CIP Engineering Support

DESIGN EE 09-08	**SCADA System for Water and Wastewater Facilities Phase A-1 (AECOM)**	**Start Date:** June 2015
100% complete (design) 0% Services during construction	**Activities/Notes:** Final design in hand. AECOM to provide assistance during bidding process.	**Completion Date:** November 2017 - Design January 2019 - (Bid and Construction Support)
N/A	Engineering design services	
Project Description:	The A/E firm will design an integrated, robust and secure Supervisory Control and Data Acquisition (SCADA) system for GWA's water and wastewater systems, and to provide support services during bid and construction. The 22 sites will consist of a combination of water facilities such as production wells, reservoirs, booster pump station and wastewater sites include sewer treatment plants and sewer pump stations. Executed by approved change orders, number of sites in original design scope has changed from 22 sites to 19 sites and design of High Water Alarm for 20 critical sewer pump stations has been added. Scope also includes bid and construction support of the design-build project of GPWA SCADA EMS project.	

F. GIS Section

MAPPING MC 05-02	**Island Wide Survey- (Duenas, Camacho & Ass.)**	**Start Date:** December 2007
99% complete	**Activities/Notes:** GWA engineering working to close project with surveyor and ensure all maps received.	**Completion Date:** New anticipated complete is April 2018.
	Survey services	
Project Description:	The contracted land surveyor is required to conduct title research, property valuation and mapping of property boundaries where GWA facilities are located but the lot is not registered under GWA's name.	

MAPPING MC 05-02	**Island Wide Survey PH II - (Duenas, Camacho & Ass.)**	**Start Date:** August 30, 2017
50% complete	**Activities/Notes:** First 25 property maps that GM signed are with Land Management. Second set of maps for 20 properties received from surveyor for GM signature. Surveyor conducting field work for third set of 20 properties.	**Completion Date:** December 2018

	Survey services	
Project Description:	The work performed under this project procurement shall consist of a professional land surveyor conducting field work to mark corners of existing government properties as a means of severing out portions of the larger property to be deeded to GWA. Surveyor shall also prepare all necessary maps and documents for recording at DLM	

G. Permits Section

PERMITS
MONTHLY REPORT 2018

NO DATA FOR AUGUST

	2018						
Description	Jan	Feb	Mar	April	May	Jun/July	
Building Permit	11	9	1	13	11	28	
Occupancy Permit	3	10	18	16	18	32	
New Installation	14	8	7	9	3	18	
Sewer Application	15	14	7	6	3	0	
Sewer Inspection	0	1	3	0	0	1	
Private Utility Acceptance	0	0	0	0	0	0	
Relocation of Water Meter	0	0	0	0	0	0	
Tapping-Water	1	1	0	0	3	1	
Tapping-Sewer	0	1	0	0	0	0	
Clearance-Water	3	2	7	10	20	41	
Clearance-Sewer	3	2	7	10	20	41	
Highway Encroachment	0	4	41	22	25	31	
Verification of Utilities	4	4	5	4	1	7	
Fire Flow Test	0	0	1	0	0	0	
Schedule Water Outage	0	1	0	0	0	0	

H. SRF Project Status Report

- Projects listed below that are noted to be in the procurement phase will follow the "Percentage Key" below.

Percentage Key:

100%	Approved by GM
99%	Signature required from either Accounting/Legal/GM
98%	Processing engineering service or construction contract (with legal)
95%	Request for CCU approval (GM/engineering)
90%	A/E fee negotiation or contractor bid evaluation (engineering)
80%	Selected A/E or Conducted bid opening (engineering)
70%	Advertised RFP/IFB (engineering)
60%	RFP/IFB Package under legal review
50%	RFP/IFB Package completed (engineering)
Less than 50%	Project Scope of work development in progress

- Red text anywhere indicates a change from the last report.
- Cells highlighted in green indicate contract amount certified and project active.

	Project	Project Description	Project Manager	Phase		Start Date (NTP Issued)	Anticipated Completion Date	Contract Amount (+) change orders	Contractor	Status as of 08/15/18
1	Northern District SSES & I/I Study	Sanitary sewer system evaluation study (SSES) and inflow and infiltration (I/I) study designed to evaluate high I/I areas within the Northern sewer basin with the goal of identifying projects to eliminate them.	J. Davis	Design	1	10/10/2014	2/29/2016	$ 792,979.97	Stanley	100% Complete.
				Construction				*The project does not involve construction.*		
				Const. Mgmt						
2	Southern SSES Rehabilitation (Agat-Santa Rita-Umatac-Merizo)	Rehabilitation of segments of sewer lines in Umatac, Merizo, Agat, and Santa Rita where the Sanitary Sewer Evaluation Study recommends rehabilitation.	Brown & Caldwell	Design				*The design was previously completed under bond funding.*		
				Construction	1	10/30/2015	2/28/2017	$ 1,170,583.82	Reliable Builders	Warranty work complete .
				Const. Mgmt	1	11/10/2015	3/30/2017	$ 226,980.23	TG Engineers	CM Services complete.
3	Asan-Adelup-Hagatna RT1 Sewer Line Rehabilitation and Replacement	Rehabilitation of sewer lines from the War in the Pacific Asan Park to the Governor's Complex in Adelup. This line is asbestos concrete that is dilapidated and some areas have disintegrated crowns.	Brown & Caldwell	Design	2	12/11/2015	3/30/2017 for Design requirements	$ 1,780,210.00	HDR	Route 1 rebid: HDR to provide services during bid process. .
				Construction		10/16/2018	12/30/2019	$6,275,782.88		Procurement 95%. Resolution seeking approval of contract before the CCU's August board meeting.
				Const. Mgmt	2	8/3/2017	8/3/2019	$ 870,610.41	DCA	Procurement 100%. Contract executed July 31, 2018. NTP issued August 2, 2018.
4	RT2 Agat War in the Pacific Sewer Line Rehabilitation and Replacement	Rehabilitation of a large segment of sewer line fronting the War in the Pacific Park in Agat that has collapsed.	Brown & Caldwell	Design	3	11/17/2015	3/30/2017 for Design requirements	$ 316,681.00	SSFM	SSFM providing services during bidding process as well as construction phase.
				Construction	2	8/31/2017	10/1/2018	$ 4,554,451.00	ProPacific	• PPBC working on SMH #7 and start #8; following up with TGE/PPBC about elevations. • Laying pipe between SMH #4 & 5 ongoing, and finishing up between #5 & 6; additional emphasis on poll support and trench safety. • PPBC continues discharging/dewatering water to sewer; GWA metering discharge. • PPBC continuing exploratory excavations as needed due to existing utilities. CM/BC working with PPBC to determine the final alignment. • Existing concrete-encased utilities continuing to be an issue with installing manholes per the original design; also runs parallel/above new sewerline in some locations. CM coordinating PPBC and BC on new manhole locations as needed. • Still waiting on SSFM to supply justification for hours spent on engineering services; to provide proposal on T&M basis for additional services. • CO #1: Contractor agreed to 30 days additional time; routed to Finance (7/24). • Awaiting Contractor Invoice #7.
				Const. Mgmt	3	9/19/2017	10/1/2018	$ 584,725.00	TG Engineers	• CM inspection and cooridnation on-going.

5	Brown & Caldwell Project Management	Brown & Caldwell to provide program management services and support.	T. Cruz	Design	4	3/24/2015	2/28/2019	$ 2,640,220.00	B&C	Project underway.
				Construction				*The project does not involve construction.*		
				Const. Mgmt						
6	Wastewater, Water and Source Water System Master Plan Upgrade	Update of the existing water and wastewater master plan while factoring in military integration and secondary treatment plant options.	Brown & Caldwell	Design	5	7/6/2015	01/30/2018 (revised due to financial workshop)	$ 2,623,300.00	B&C	• Public meetings are now complete. • Plan is to update Master Plan on comments received and be ready for approval at the August CCU meeting. • Plan has been updated to reflect comments received so far. Waiting for meeting notes from the public meetings for a final check. • Budget is expended - additional work for the public meetings and SFO Presentation currently at ~$65,000.
				Construction				*The project does not involve construction.*		
				Const. Mgmt						
7	Groundwater Wells Rehabilitation (F-3, A-2, A-7, A-12, D-5)	Rehabilitation of existing deep wells and/or in cases where pipe column needs replacing, wells will be re-drilled. The deep wells to be rehabilitated are A-2, A-7, A-12, D-5, & F-3.	Brown & Caldwell	Design	6	5/27/2016	2/28/2018 (for design only)	$ 1,758,247.00	AECOM	• Project in holding pattern until construction IFB is issued (funding source TBD).
				Construction		9/30/2018	9/30/2019			SRF grant funds specific to project pending FY18 grant approvals and award.
				Const. Mgmt		9/30/2018	9/30/2019			· Draft CM scope submitted to GWA.
8	Tumon Sewer Hot Spots	Investigation, evaluation, and repair of possible solutions, to long plaguing issues where sewer overflows are known to occur in Tumon San Vitores.	Brown & Caldwell	Design	7	6/24/2016	10/30/2017 for design only	$ 572,089.00	TG Engineers	· TGE to provide engineering services during bid process.
				Construction		12/1/2018	12/31/2019			Procurement 70%; GWA rejected all bid due to bids being above funding availability. GWA will work to repackage bids and re-bid within two month period.
				Const. Mgmt		12/1/2018	12/31/2019			Procurement 90%: Proposal evaluation completed with AMOrient selected as most qualified. Scope and fee negotiations on-going..
9	Critical Sewer Pump Stations (7 stations)	Rehabilitation of various components of 7 pump stations that were identified to by the CDM design team: Macheche, Ypaopao, Astumbo 1, Fujita, Santa Ana, Southern Link, and Route 1.	CDM	Design				*The design will be incorporated into the design/build package.*		
			J. Davis	Design/Build	1	8/8/2016	3/30/2018	$ 1,542,979.01	ProPacific	All work at each sewer pump station are substantially complete. Final close out on-going.
				Const. Mgmt	4	9/9/2016	3/30/2018	$ 329,353.52	Stanley	CM working. Close out of projec.

10	Sewer Pump Station High Water Alarm Systems (20 stations)	This project will design and installed telemetry equipment/SCADA type alarms that will alert when pump station failure occurs.	C. Yam	Design				*The design will be incorporated into the design/build package.*		
				Design	8	8/12/2016	02/30/2017	$ 183,171.00	AECOM	Design complete
				Construction	3	4/5/2017	9/30/2017	$ 1,444,888.00	Pacific Rim	Project complete
				Const. Mgmt	5	02/30/2017	9/30/2017	$ 195,269.00	EMSPCO	CM work complete
11	Sewer Pump Station Backup Power (2 stations)	Construction of the housing and installation of new generators for the Casimero pump station (Mongmong) and the Namo pump station (Yona central).	B. Cruz	Design				*The design will be incorporated into the design/build package.*		
				Design/Build	2	6/24/2016	9/30/2017	$ 362,692.53	ProPacific	Design Build project complete.
				Const. Mgmt				*B. Cruz is the construction manager.*		
12	RT4 Relief Sewer Line Rehabilitation and Replacement	Rehabilitation of sewer lines that are located from Agana McDonalds to Marine Drive that have been known to overflow due to structural issues.	Brown & Caldwell	Design	9	3/1/2016	4/22/2017	$ 794,000.00	AECOM	· AECOM to provided services during bidding process.
				Construction		11/15/2018	12/31/2019			Procurement 95%, CCU approved resolution. Contract for Insituform routed for signatures given all required documents received by GWA. GWA still waiting for insurance policy from Propacfic before preparing contract .
				Const. Mgmt	6	11/15/2018	12/31/2019	$ 702,678.13	EMPSCO	No CM activities until contractors on board.
13	Groundwater Wells Rehabilitation (D-3, D-17, D-18, D-22, M-9)	Rehabilitation of existing deep wells and/or in cases where pipe column needs replacing will be re-drilled. D-3, D-17, D-18, D-22, and M-9.	Brown & Caldwell	Design				*The design was previously completed under bond funding.*		
				Construction	4	8/19/2016	3/30/2018 (completion date under analysis)	$ 6,158,240.67	Pacific Rim	• Main issues remain • VFD size. Responded to RFI 96 (VFD's and D-03) on Monday. No response from PRC to date. • PRC was given direction in the meeting on 7/16 to lower the sounding tube issues. Currently scheduled to complete next Tuesday • GHD provided updated electrical drawings for the drive changes on 8/3. • Level Sensor trouble shooting indicated that the problem is not in the well which eliminates the design issue contention. PRC needs to look at the out of well installation to find the issue. • CM met with PRC on the O&M manuals this week and BC had several discussion with him as well. This should be complete next week. • Memo drafted to transfer power bill to GWA. • Well rig test failure still an issue; trying to coordinate between GWA/Morrico/Honke.
				Const. Mgmt	7	3/22/2016	3/30/2018 (completion date under analysis)	$ 1,041,722.56	EA	• CM continuing to coordinate punch list items with contractor.

14	Southern SSES Sewer Rehabilitation (Baza Gardens-Talofofo)	Rehabilitation of segments of sewer lines in Windward Hills, Talofofo area where the Sanitary Sewer Evaluation Study recommends rehabilitation.	Brown & Caldwell	Design				*The design was previously completed under bond funding.*		
				Construction	5	8/2/2016	Due to issue related to Santa Rita sewer project completion under analysis.	$ 1,189,815.00	ProPacific	• GWA to prepare and transmit letter to PPBC regarding remaining work for the new SPS and force main. • GWA letter to establish new time line and deliverables. •
				Const. Mgmt	8	7/29/2016	5/28/2017	$ 347,945.93	EMPSCO	· PM to work on Change Order to extend contract and amount.
15	Tamuning Sewer Hot Spots	Sewer rehabilitation for lines at Winner Apartments, Segund Leon Guerrero, and behind Guam Premium Outlets.	Brown & Caldwell	Design	10	9/9/2016	10/31/2017 (for design only)	$ 663,629.00	TG Engineers	· TGE to provide engineering services during bid process.
				Construction		12/1/2018	12/31/2019			Procurement 70%; GWA rejected all bid due to bids being above funding availability. GWA will work to repackage bids and re-bid within two month period.
				Const. Mgmt		12/1/2018	12/31/2019			Procurement 90%: Proposal evaluation completed with AMOrient selected as most qualified. Scope and fee negotiations on-going..
16	Talofofo Sewer Pump Stations (4 stations)	Design and construction of 4 sewer lift stations in the Talofofo village where sewer lines are installed but never completed.	J. Davis	Design (for Talofofo and Chalan Pago PS)	11	8/17/2016	11/30/2017	$ 493,818.86	EMPSCO	Talafofo Pump Station design /bid package received. Final Design of Chalan Pago Pump Station project under review by GWA. Change Order related to snails to be executed.
				Construction		12/1/2018	12/31/2019			Procurement 70%; bid package advertised 6/19/18, Bid opening rescheduled for 8/22/18.
				Const. Mgmt		12/1/2018	12/31/2019			Procurement 50%; RFP package being prepared.
17	Chalan Pago Sewer Pump Station	Design and construction of sewer lift stations and gravity lines in Scott Laguana, Santa Cruz Street Chalan Pago.	J. Davis	Design		8/17/2016	11/30/2017	*The design will be included with the Talofofo Pump Station design project.*		
				Construction		3/15/2019	3/30/2020			
				Const. Mgmt		3/15/2019	3/30/2020			
18	Water Hydraulic Model (SCADA ready instruments to update Model)	Design and construction of instrumentation at key water sites in the Barrigada service area necessary to update GWA Water hydraulic model.	Barbara Cruz	Design	12	8/3/2016	3/15/2017	$ 523,268.00	GHD	Design complete.
				Construction		3/15/2019	3/30/2020			Funding for construction project to be from FY18 grant that is still pending.
				Const. Mgmt		3/15/2019	3/30/2020			Funding for construction manager to be from FY18 grant that is still pending.

19	Macheche Hill Sewer Rehabilitation/ Replacement	Rehabilitation of sewer lines on Macheche road. Segments of this sewer line has collapsed recently and is consider a high priority.	J. Davis	Design-Build	3	8/29/2016	3/30/2018	$ 2,202,545.47	Giant Const.	Construction project complete.
				Const. Mgmt	9	9/16/2016	3/30/2018	$ 379,994.38	Am Orient	CM work complete.
20	Asan-Adelup-Hagatna Rt. 1 Sewer Line Rehabilitation and Replacement Emergency Repairs	Rehabilitation of sewer line in Asan that collapsed and which is current fitted with a temporary pumping system.	Brown & Caldwell	Design				Design cost covered under Project 3 above.		
				Construction	6	3/8/2017	12/30/2017	$ 2,470,658.00	Pacific Rim	GWA waiting on as-builts.
				Const. Mgmt	10	1/24/2017	12/30/2017	covered under Project 3	HDR	CM work complete.
21	Valve Maintenance Equipment Trailer (2 each)	Acquire two sets of valve exercise equipment mounted on trailers to be used to exercise existing valves in the distribution system as a means of maintaining the valves functionality so the valves to not "freeze up" and required replacement	Grants/Operations	Equipment	1			$ 167,814.94		Complete
22	Heavy Duty Trucks to Haul Valve Maintenance Equipment Trailer (2 each)	Acquire two heavy duty trucks with extended to pull the valve exercise equipment trailer	Grants/Operations	Equipment	2			$ 139,790.00	Triple J	Complete
23	Project Advertisement	Each IFB or RFP requires advertising	Engineering/ Procurement	MISC	1			$ 25,172.50	PDN/Post	On-going

GUAM WATERWORKS AUTHORITY
JULY 31, 2018
FINANCIAL AND RELATED REPORTS
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GUAM WATERWORKS AUTHORITY
Balance Sheet
July 31, 2018

SCHEDULE A

ASSETS AND DEFERRED OUTFLOWS OF RESOURCES	Unaudited July 31, 2018	Audited September 30, 2017	Increase (Decrease)
Current Assets:			
Cash:			
Unrestricted (Schedule G)	1,844,859	4,873,275	(3,028,416)
Restricted Funds (Schedule G)	69,200,580	65,124,400	4,076,179
Accounts Receivable Trade, Net of Allowance for Doubtful Receivables of $13,716,031 at Jul 31, 2018 and $12,619,034 at Sep 30, 2017	15,729,788	15,450,733	279,055
Other Receivable	2,176,641	8,433,446	(6,256,804)
Materials & Supplies Inventory, Net of Allowance for Obsolescence of $457,370 at Jul 31, 2018 and Sep 30, 2017	3,490,355	2,166,557	1,323,798
Total Current Assets	92,442,223	96,048,411	(3,606,188)
Property, Plant and Equipment			
Utility plant in service:			
Water system	334,789,099	327,484,191	7,304,908
Wastewater system	290,040,866	286,394,940	3,645,926
Non-utility property	19,115,656	18,938,255	177,401
Total property	643,945,621	632,817,387	11,128,235
Less Accumulated Depreciation	(301,315,079)	(286,043,580)	(15,271,499)
Land	1,163,298	1,110,998	52,300
Construction Work in Progress	173,679,989	111,695,887	61,984,103
Property, Plant and Equipment, net	517,473,829	459,580,691	57,893,138
Other noncurrent assets			
Restricted cash (Schedule G)	185,716,541	236,550,002	(50,833,461)
Investments (Schedule G)	37,779,974	41,042,038	(3,262,064)
Other Prepaid Expenses	1,000,616	551,128	449,487
Total other noncurrent assets	224,497,131	278,143,169	(53,646,038)
Total Assets	834,413,183	833,772,271	640,912
Deferred outflows of resources:			
Debt defeasance due to bond refunding	13,430,873	1,695,981	11,734,892
Deferred outflows from pension	4,940,338	4,943,777	(3,439)
Total Assets and Deferred Outflows of Resources	**852,784,394**	**840,412,029**	**12,372,365**
LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET ASSETS			
Current Liabilities:			
Current maturities of long-term debt			
-Series 2010 Bond	1,800,000	1,725,000	75,000
-Series 2014 Refunding	3,620,000	3,475,000	145,000
-Series 2017 Refunding	295,000	-	295,000
-Notes Payable	3,145,406	3,037,569	107,837
Accounts Payable -Trade	4,540,612	5,390,256	(849,644)
Interest Payable	2,137,785	6,656,499	(4,518,715)
Accrued Payroll and Employee Benefits	2,093,203	2,604,471	(511,269)
Accrued Annual Leave	1,082,311	1,729,291	(646,980)
Current portion of employee annual leave	411,887	567,057	(155,170)
Contractors' Payable	9,760,619	13,950,287	(4,189,668)
Customer and Other Deposits	1,988,983	2,014,435	(25,452)
Other Liabilities	72,817	72,772	45
Total Current Liabilities	30,948,623	41,222,638	(10,274,015)
Long Term Debt, less current maturities			
Series 2010 Revenue Bond	1,895,000	112,800,000	(110,905,000)
Series 2013 Revenue Bond	172,630,000	172,630,000	-
Series 2014 Refunding	68,900,000	72,520,000	(3,620,000)
Series 2016 Revenue Bond	143,310,000	143,310,000	-
Series 2017 Refunding Bond	107,365,000	-	107,365,000
Unamortized Discount - Bond 2010	-	(1,867,525)	1,867,525
Unamortized Discount - Bond 2013	(1,296,168)	(1,338,751)	42,583
Unamortized Premium - Bond 2014	4,582,516	4,804,694	(222,178)
Unamortized Premium - Bond 2016	16,756,730	17,262,975	(506,246)
Unamortized Premium - Bond 2017	13,102,457	-	13,102,457
Notes Payable	2,899,281	5,533,918	(2,634,637)
Unfunded Ret Liability (GASB 67/68)	49,243,798	49,243,798	-
Employee Annual Leave, Less Current Portion	1,021,974	783,992	237,982
Total Liabilities	611,359,211	616,905,739	(5,546,528)
Deferred inflows of resources:			
Deferred inflows from pension	235,155	564,514	(329,359)
Total Liabilities and Deferred Inflows of Resources	611,594,366	617,470,253	(5,875,887)
Net Assets	**241,190,028**	**222,941,776**	**18,248,252**
Total Liabilities, Deferred Inflows of Resources and Net Assets	**852,784,394**	**840,412,029**	**12,372,365**

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited) **SCHEDULE B**
Comparative Budget vs. Actual for the period ending July 31, 2018

	Month to Date		Variance
	Budget July-18	Actual (Unaudited) July-18	Favorable / (Unfavorable)
OPERATING REVENUES			
Water Revenues	5,743,160	5,160,754	(582,406)
Wastewater Revenues	3,228,257	3,205,892	(22,365)
Legislative Surcharge	291,896	296,790	4,894
Other Revenues	57,638	24,273	(33,365)
System Development Charge	46,136	131,810	85,674
Total Operating Revenues	9,367,087	8,819,520	(547,567)
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	668,113	648,721	19,392
Power Purchases	1,317,997	1,308,740	9,257
Total Utility Costs	1,986,110	1,957,462	28,649
Salaries and Wages	1,625,056	1,636,313	(11,257)
Pension and Benefits	584,558	686,271	(101,713)
Total Salaries and Benefits	2,209,614	2,322,584	(112,970)
Capitalized Labor and Benefits	(208,333)	(208,333)	(0)
Net Salaries and Benefits	2,001,281	2,114,251	(112,970)
Administrative and General Expenses			
Sludge removal	104,514	102,974	1,540
Chemicals	104,997	90,727	14,270
Materials & Supplies	277,900	275,218	2,682
Transportation	72,370	64,393	7,978
Communications	16,182	16,131	51
Claims	37,100	37,009	91
Insurance	78,757	75,172	3,585
Training & Travel	11,814	6,060	5,754
Advertising	13,910	10,935	2,975
Miscellaneous	108,515	78,761	29,754
Regulatory Expense	29,086	28,287	799
Bad Debts Provision	110,103	109,693	409
Total Administrative and General Expense	965,248	895,360	69,889
Depreciation Expense	1,528,175	1,528,175	(0)
Contractual Expense			
Audit & Computer Maint.	38,630	35,368	3,262
Building rental	37,955	36,262	1,693
Equipment rental	47,375	46,089	1,286
Legal	4,167	600	3,567
Laboratory	4,752	4,005	747
Other	140,363	138,714	1,649
Total Contractual Expense	273,241	261,038	12,203
Retiree Supp. Annuities and health care costs	240,008	234,003	6,006
Contribution to Government of Guam	49,500	49,833	(333)
Total Retiree Benefits	289,508	283,836	5,672
Total Operating Expenses	7,043,563	7,040,121	3,442
Earnings (Loss) from Operations	2,323,524	1,779,399	(544,125)
Interest Income-2010/13/14/16/17 Series Bond	15,727	293,949	278,223
Interest Income-Other Funds	2,935	54,950	52,015
Interest Income-SDC	2,414	12,382	9,968
Interest Expense- 2010/13/14/16/17 Series Bond	(2,625,587)	(2,137,785)	487,803
Interest Expense- ST BOG	(33,288)	(26,293)	6,995
Federal Expenditures	(51,332)	(81,913)	(30,581)
Loss on Asset Disposal	-	-	-
AFUDC	625,000	625,000	-
Amortization of Discount, Premium and Issuance Costs	(61,861)	(77,542)	(15,681)
Defeasance due to bond refunding	(15,218)	(12,444)	2,775
Deferred outflows from pension	(105,281)	32,592	137,873
Prior Year Adjustment	-	-	-
Total non-operating revenues (expenses)	(2,246,492)	(1,317,103)	929,389
Net Income (Loss) before capital contributions	77,032	462,296	385,264
Capital Contributions			
Grants from US Government	873,108	1,408,716	535,608
Grants from GovGuam & Others	-	-	-
Other Contributions	-	-	-
Total Capital Contributions	873,108	1,408,716	535,608
Change in Net Assets	950,140	1,871,012	920,872
Debt Service Calculation			
Earnings From Operations	2,323,524	1,779,399	
System Development Charge	(46,136)	(131,810)	
Retiree COLA	49,500	49,833	
Interest/Investment Income	2,935	54,950	
Depreciation	1,528,175	1,528,175	
Balance Available for Debt Service per Section 6.12	3,857,998	3,280,547	
Working Capital Reserve Available for Debt Service	932,265	935,321	
Transfer to Working Capital- Debt Service Reserve	(150,000)	-	
Transfer to Working Capital- O&M Reserve	(266,667)	-	
Balance Available for Debt Service inclusive of reserves	4,373,596	4,215,868	
Debt Service			
Principal	433,333	433,333	
Interest	2,063,402	1,794,910	
Total	2,496,736	2,228,243	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.55	1.47	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	1.75	1.89	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited) **SCHEDULE C**
Comparative for the period ending July 31, 2018 and 2017

	Month to Date		Variance
	Actual (Unaudited) July-18	Actual (Audited) July-17	Favorable / (Unfavorable)
OPERATING REVENUES			
Water Revenues	5,160,754	5,331,404	(170,649)
Wastewater Revenues	3,205,892	3,099,528	106,364
Legislative Surcharge	296,790	267,269	29,521
Other Revenues	24,273	36,293	(12,019)
System Development Charge	131,810	72,662	59,148
Total Operating Revenues	8,819,520	8,807,155	12,365
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	648,721	609,094	(39,627)
Power Purchases	1,308,740	1,006,355	(302,385)
Total Utility Costs	1,957,462	1,615,449	(342,013)
Salaries and Wages	1,636,313	1,413,608	(222,704)
Pension and Benefits	686,271	490,400	(195,871)
Total Salaries and Benefits	2,322,584	1,904,009	(418,575)
Capitalized Labor and Benefits	(208,333)	(262,516)	(54,183)
Net Salaries and Benefits	2,114,251	1,641,493	(472,758)
Administrative and General Expenses			
Sludge removal	102,974	140,487	37,513
Chemicals	90,727	174,001	83,274
Materials & Supplies	275,218	128,788	(146,430)
Transportation	64,393	53,744	(10,648)
Communications	16,131	10,884	(5,247)
Claims	37,009	22,151	(14,858)
Insurance	75,172	90,603	15,431
Training & Travel	6,060	23,055	16,994
Advertising	10,935	8,988	(1,947)
Miscellaneous	78,761	71,997	(6,765)
Regulatory Expense	28,287	24,134	(4,153)
Bad Debts Provision	109,693	109,700	6
Total Administrative and General Expense	895,360	858,530	(36,829)
Depreciation Expense	1,528,175	1,402,038	(126,137)
Contractual Expense			
Audit & Computer Maint.	35,368	76,901	41,533
Building rental	36,262	36,557	295
Equipment rental	46,089	59,374	13,285
Legal	600	414	(186)
Laboratory	4,005	10,627	6,622
Other	138,714	156,747	18,033
Total Contractual Expense	261,038	340,619	79,581
Retiree Supp. Annuities and health care costs	234,003	231,895	(2,107)
Contribution to Government of Guam	49,833	49,500	(333)
Total Retiree Benefits	283,836	281,395	(2,441)
Total Operating Expenses	7,040,121	6,139,525	(900,596)
Earnings (Loss) from Operations	1,779,399	2,667,630	(888,231)
Interest Income-2010/13/14/16/17 Series Bond	293,949	65,354	228,595
Interest Income-Other Funds	54,950	10,032	44,918
Interest Income-SDC	12,382	1,060	11,322
Interest Expense- 2010/13/14/16/17 Series Bond	(2,137,785)	(2,220,744)	82,959
Interest Expense- ST BOG	(26,293)	(43,736)	17,443
Federal Expenditures	(81,913)	(42,501)	(39,412)
Loss on Asset Disposal	-	(81,105)	81,105
AFUDC	625,000	1,172,241	(547,241)
Amortization of Discount, Premium and Issuance Costs	(77,542)	61,861	(139,403)
Defeasance due to bond refunding	(12,444)	(15,218)	2,775
Deferred outflows from pension	32,592	-	32,592
Prior Year Adjustment	-	(26,756)	26,756
Total non-operating revenues (expenses)	(1,317,103)	(1,119,512)	(197,590)
Net Income (Loss) before capital contributions	462,296	1,548,118	(1,085,822)
Capital Contributions			
Grants from US Government	1,408,716	1,815,921	(407,205)
Grants from GovGuam & Others	-	1,664	(1,664)
Other Contributions	-	-	-
Total Capital Contributions	1,408,716	1,817,586	(408,870)
Change in Net Assets	1,871,012	3,365,704	(1,494,691)
Debt Service Calculation			
Earnings From Operations	1,779,399	2,667,630	
System Development Charge	(131,810)	(72,662)	
Retiree COLA	49,833	49,500	
Interest/Investment Income	54,950	10,032	
Depreciation	1,528,175	1,402,038	
Balance Available for Debt Service per Section 6.12	3,280,547	4,056,538	
Working Capital Reserve Available for Debt Service	935,321	932,134	
Transfer to Working Capital- Debt Service Reserve	-	-	
Transfer to Working Capital- O&M Reserve	-	-	
Balance Available for Debt Service inclusive of reserves	4,215,868	4,988,672	
Debt Service			
Principal	433,333	420,000	
Interest	1,794,910	1,626,858	
Total	2,228,243	2,046,858	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.47	1.98	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	1.89	2.44	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited) **SCHEDULE D**
Comparative Budget vs. Actual for the period ending July 31, 2018

	Budget July-18	Year to Date Actual (Unaudited) July-18	Variance Favorable / (Unfavorable)
OPERATING REVENUES			
Water Revenues	57,431,601	54,347,086	(3,084,515)
Wastewater Revenues	32,282,573	31,978,862	(303,711)
Legislative Surcharge	2,918,960	2,816,274	(102,687)
Other Revenues	576,380	362,380	(214,000)
System Development Charge	461,358	956,455	495,097
Total Operating Revenues	93,670,872	90,461,056	(3,209,816)
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	7,351,132	7,351,566	(434)
Power Purchases	12,128,369	12,241,869	(113,500)
Total Utility Costs	19,479,500	19,593,435	(113,935)
Salaries and Wages	16,250,559	14,779,464	1,471,095
Pension and Benefits	5,845,583	5,035,636	809,947
Total Salaries and Benefits	22,096,142	19,815,100	2,281,042
Capitalized Labor and Benefits	(2,083,333)	(2,197,613)	114,279
Net Salaries and Benefits	20,012,809	17,617,487	2,395,322
Administrative and General Expenses			
Sludge removal	1,295,140	1,292,445	2,695
Chemicals	1,754,968	1,753,154	1,814
Materials & Supplies	1,931,998	1,930,244	1,754
Transportation	538,705	538,629	76
Communications	151,819	151,528	291
Claims	108,500	108,301	199
Insurance	758,566	758,031	535
Training & Travel	124,142	124,141	1
Advertising	116,601	116,165	435
Miscellaneous	860,154	859,656	498
Regulatory Expense	174,863	174,562	302
Bad Debts Provision	1,097,026	1,096,953	73
Total Administrative and General Expense	8,912,481	8,903,809	8,672
Depreciation Expense	15,281,747	15,281,750	(3)
Contractual Expense			
Audit & Computer Maint.	600,803	600,527	276
Building rental	387,650	387,590	60
Equipment rental	755,746	755,735	11
Legal	31,667	31,525	141
Laboratory	361,516	360,733	783
Other	1,716,631	1,716,221	410
Total Contractual Expense	3,854,012	3,852,331	1,681
Retiree Supp. Annuities and health care costs	2,400,083	2,374,388	25,695
Contribution to Government of Guam	495,000	498,333	(3,333)
Total Retiree Benefits	2,895,083	2,872,722	22,362
Total Operating Expenses	70,435,633	68,121,534	2,314,099
Earnings (Loss) from Operations	23,235,240	22,339,522	(895,718)
Interest Income-2010/13/14/16/17 Series Bond	157,266	2,162,528	2,005,262
Interest Income-Other Funds	29,347	368,643	339,296
Interest Income-SDC	24,143	79,857	55,714
Interest Expense- 2010/13/14/16/17 Series Bond	(26,255,872)	(21,854,044)	4,401,828
Interest Expense- ST BOG	(332,882)	(299,775)	33,106
Federal Expenditures	(513,322)	(550,432)	(37,110)
Loss on Asset Disposal	-	-	-
AFUDC	6,250,000	6,250,000	-
Amortization of Discount, Premium and Issuance Costs	(618,608)	(357,211)	261,397
Defeasance due to bond refunding	(152,184)	(124,436)	27,748
Deferred outflows from pension	(1,052,806)	325,920	1,378,726
Prior Year Adjustment	-	44,314	44,314
Total non-operating revenues (expenses)	(22,464,918)	(13,954,636)	8,510,283
Net Income (Loss) before capital contributions	770,321	8,384,886	7,614,565
Capital Contributions			
Grants from US Government	8,731,082	9,863,365	1,132,283
Grants from GovGuam & Others	-	-	-
Other Contributions	-	-	-
Total Capital Contributions	8,731,082	9,863,365	1,132,283
Change in Net Assets	9,501,403	18,248,251	8,746,848
Debt Service Calculation			
Earnings From Operations	23,235,240	22,339,522	
System Development Charge	(461,358)	(956,455)	
Retiree COLA	495,000	498,333	
Interest/Investment Income	29,347	368,643	
Depreciation	15,281,747	15,281,750	
Balance Available for Debt Service per Section 6.12	38,579,976	37,531,794	
Working Capital Reserve Available for Debt Service	9,322,650	9,321,342	
Transfer to Working Capital- Debt Service Reserve	(1,500,000)	-	
Transfer to Working Capital- O&M Reserve	(2,666,667)	-	
Balance Available for Debt Service inclusive of reserves	43,735,959	46,853,135	
Debt Service			
Principal	4,333,333	4,333,333	
Interest	20,634,022	17,949,100	
Total	24,967,355	22,282,433	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.55	1.68	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	1.75	2.10	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited)
Comparative for the period ending July 31, 2018 and 2017

SCHEDULE E

	Year to Date ACTUAL (Unaudited) July-18	Year to Date ACTUAL (Audited) July-17	Variance Favorable / (Unfavorable)
OPERATING REVENUES			
Water Revenues	54,347,086	53,314,035	1,033,050
Wastewater Revenues	31,978,862	30,995,277	983,585
Legislative Surcharge	2,816,274	2,672,689	143,585
Other Revenues	362,380	362,929	(548)
System Development Charge	956,455	726,622	229,833
Total Operating Revenues	90,461,056	88,071,551	2,389,505
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	7,351,566	6,090,937	(1,260,629)
Power Purchases	12,241,869	10,063,552	(2,178,317)
Total Utility Costs	19,593,435	16,154,489	(3,438,946)
Salaries and Wages	14,779,464	14,136,085	(643,379)
Pension and Benefits	5,035,636	4,904,003	(131,633)
Total Salaries and Benefits	19,815,100	19,040,088	(775,012)
Capitalized Labor and Benefits	(2,197,613)	(2,625,158)	(427,545)
Net Salaries and Benefits	17,617,487	16,414,931	(1,202,557)
Administrative and General Expenses			
Sludge removal	1,292,445	1,404,868	112,423
Chemicals	1,753,154	1,740,011	(13,143)
Materials & Supplies	1,930,244	1,287,877	(642,367)
Transportation	538,629	537,444	(1,185)
Communications	151,528	108,838	(42,690)
Claims	108,301	221,510	113,209
Insurance	758,031	906,027	147,997
Training & Travel	124,141	230,545	106,404
Advertising	116,165	89,878	(26,288)
Miscellaneous	859,656	719,966	(139,690)
Regulatory Expense	174,562	241,344	66,782
Bad Debts Provision	1,096,953	1,096,997	44
Total Administrative and General Expense	8,903,809	8,585,304	(318,505)
Depreciation Expense	15,281,750	14,020,379	(1,261,371)
Contractual Expense			
Audit & Computer Maint.	600,527	769,010	168,483
Building rental	387,590	365,565	(22,025)
Equipment rental	755,735	593,739	(161,996)
Legal	31,525	4,140	(27,385)
Laboratory	360,733	106,265	(254,468)
Other	1,716,221	1,567,471	(148,749)
Total Contractual Expense	3,852,331	3,406,191	(446,140)
Retiree Supp. Annuities and health care costs	2,374,388	2,318,954	(55,434)
Contribution to Government of Guam	498,333	495,000	(3,333)
Total Retiree Benefits	2,872,722	2,813,954	(58,768)
Total Operating Expenses	68,121,534	61,395,248	(6,726,286)
Earnings (Loss) from Operations	22,339,522	26,676,303	(4,336,781)
Interest Income-2010/13/14/16/17 Series Bond	2,162,528	653,544	1,508,985
Interest Income-Other Funds	368,643	100,318	268,325
Interest Income-SDC	79,857	10,598	69,259
Interest Expense- 2010/13/14/16/17 Series Bond	(21,854,044)	(22,207,438)	353,394
Interest Expense- ST BOG	(299,775)	(437,363)	137,587
Federal Expenditures	(550,432)	(425,014)	(125,418)
Loss on Asset Disposal	-	(811,046)	811,046
AFUDC	6,250,000	11,722,410	(5,472,410)
Amortization of Discount, Premium and Issuance Costs	(357,211)	618,607	(975,818)
Defeasance due to bond refunding	(124,436)	(152,184)	27,748
Deferred outflows from pension	325,920	-	325,920
Prior Year Adjustment	44,314	(267,557)	311,871
Total non-operating revenues (expenses)	(13,954,636)	(11,195,125)	(2,759,511)
Net Income (Loss) before capital contributions	8,384,886	15,481,178	(7,096,292)
Capital Contributions			
Grants from US Government	9,863,365	18,159,215	(8,295,850)
Grants from GovGuam & Others	-	16,644	(16,644)
Other Contributions	-	-	-
Total Capital Contributions	9,863,365	18,175,859	(8,312,494)
Change in Net Assets	18,248,251	33,657,037	(15,408,785)
Debt Service Calculation			
Earnings From Operations	22,339,522	26,676,303	
System Development Charge	(956,455)	(726,622)	
Retiree COLA	498,333	495,000	
Interest/Investment Income	368,643	100,318	
Depreciation	15,281,750	14,020,379	
Balance Available for Debt Service per Section 6.12	37,531,794	40,565,378	
Working Capital Reserve Available for Debt Service	9,321,342	9,321,342	
Transfer to Working Capital- Debt Service Reserve	-	-	
Transfer to Working Capital- O&M Reserve	-	-	
Balance Available for Debt Service inclusive of reserves	46,853,135	49,886,720	
Debt Service			
Principal	4,333,333	4,200,000	
Interest	17,949,100	16,268,584	
Total	22,282,433	20,468,584	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.68	1.98	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	2.10	2.44	

SCHEDULE F

Bond Compliance

		($$$) Per Indenture	As of 7/31/18 ($$$) Bond 2013/2014/2016/2017
• Operation and Maintenance Fund-BOG	*Equivalent to 55 days of the annual O&M budget less depreciation*	$10.5M	$10.5M
• Bond Reserve Fund - US Bank	*Fully funded- Principal and Interest (Bond Series 2010, 2013, 2014 Refunding and 2016)*	$34.9M	$34.9M
• Operation, Maintenance, Renewal and Replacement Reserve Fund-BOG Trust	*Equivalent to 1/4 of the annual O&M budget & CIP budget to be funded in 5 years ($2M/year)*	$17.4M	$17.4M
• Capital Improvement Fund	*Balance remaining in the Revenue Fund after the foregoing deposits*	$3.9K	$5.6K

GUAM WATERWORKS AUTHORITY
Restricted and Unrestricted Cash Summary
FY 2018

SCHEDULE G

Description	Unaudited July 31, 2018	Audited September 30, 2017	Increase (Decrease)
UNRESTRICTED			
Change Fund	2,000	2,000	-
Petty Cash	5,000	5,000	-
BOG - Deposit Accounts	1,837,859	4,866,275	(3,028,416)
Sub-total Unrestricted	1,844,859	4,873,275	(3,028,416)
RESTRICTED			
Collection Accounts	58,842	163,466	(104,624)
BOG Deposit Accounts	7,478,641	6,051,064	1,427,577
BP Deposit Accounts	791,208	944,282	(153,074)
BOG Revenue Trust Fund	6,772,080	7,782,227	(1,010,147)
BOG O & M Reserve	13,629,968	13,516,540	113,428
BOG Debt Service Reserve	11,311,972	11,217,733	94,239
BOG CAPEX Fund	18,116,285	15,462,869	2,653,416
	58,158,997	55,138,182	3,020,815
BOG - SDC Deposit	3,291,583	1,486,219	1,805,365
BOG - SDC CDs	7,750,000	8,500,000	(750,000)
Total Restricted	69,200,580	65,124,400	4,076,179
Reserve Funds			
BOG Series 05 OMRRRF Fund	17,423,213	17,423,213	-
BOG Series 13 Construction Fund	41,199,847	74,461,765	(33,261,918)
BOG Series 14 Refunding Construction Fund	739,933	771,281	(31,348)
BOG Series 16 Construction Fund	118,656,846	132,811,449	(14,154,603)
BOG Series 16 Cap Int Fund	-	1,782,982	(1,782,982)
BOG Series 17 Refunding Construction Fund	7,696,702	9,299,311	(1,602,610)
Total Restricted - Held by Trustee	185,716,541	236,550,002	(50,833,461)
USB Series 2013 Debt Service Fund	802,420	2,336,754	(1,534,334)
USB Series 2013 Debt Service Reserve Fund	12,031,688	12,031,688	-
USB Series 2014 Refunding Debt Service Fund	629,634	1,796,559	(1,166,925)
USB Series 2014 Refunding Debt Service Reserve Fund	7,891,693	7,707,602	184,091
USB Series 2016 Debt Service Fund	609,209	130	609,079
USB Series 2016 Debt Service Reserve Fund	7,594,597	7,582,725	11,872
USB Series 2010 Debt Service Fund	172,323	2,020,121	(1,847,798)
USB Series 2017 Refunding Debt Service Reserve Fund	7,566,460	7,566,460	-
USB Series 2017 Debt Service Fund	481,951	-	481,951
Total Investments	37,779,974	41,042,038	(3,262,064)
Total Restricted and Unrestricted Cash	294,541,954	347,589,716	(53,047,762)

SCHEDULE H

Guam Waterworks Authority
Statement of Cash Flows (Unaudited)
FY 2018

	YTD Jul-18
Increase (decrease) in cash	
Cash flows from operating activities:	
Cash received from trade and others	89,242,750
Cash payments to suppliers/contractors for goods and services	(33,861,450)
Cash payments to employees for services	(21,891,565)
Net cash provided by operating activities	33,489,735
Cash flows from capital and related financing activities:	
Contributed capital received (grants)	15,386,628
Acquisition of utility plant	(71,128,657)
Repayment of Long Term Debt	7,639,142
Interest expense	(29,310,747)
Net cash provided by (used in) capital and related financing activities	(77,413,634)
Cash flows from investing activities:	
Transfers from (to) restricted fund	38,284,455
Interest income received	2,611,028
Net cash provided by investing activities	40,895,483
Net increase (decrease) in cash	(3,028,416)
Unrestricted cash at beginning of the period	4,873,275
Unrestricted cash at end of period	1,844,859
Reconciliation of operating loss to net cash provided by operating activities:	
Operating Income (loss)	21,775,355
Adjustments to reconcile to net cash provided by operating activities:	
Depreciation expense	15,281,750
Other Expense/income	771,034
(Increase) decrease in assets:	
Accounts receivable	(1,192,899)
Materials and supplies inventory	(1,323,798)
Other Assets	(449,488)
Increase (decrease) in liabilities:	
Accounts payable, Contractors, Retention & Escrow Deposit	(835,543)
Accrued payroll	(511,269)
Customer deposits	(25,407)
Net cash provided by operating activities	33,489,735

Guam Waterworks Authority
Accounts Receivable - Government
As of July 31, 2018

SCHEDULE I

		AGING				
Customer Name	**No of Accounts**	**Current Balance**	**31-60 days**	**61-90 days**	**91-120 days**	**Over 120 days**	**Outstanding Bal.**
Guam Int'l Airport Authority	4	32,430	42,397	18,700	42,341	160,509	296,377
Guam Memorial Hospital Authority	3	37,564	32,512	38,480	36,415	-	144,970
Port Authority of Guam	2	39,233	40,716	20,845	-	-	100,794
Guam Power Authority	22	60,088	-	-	-	-	60,088
Guam Community College	3	4,390	5,724	4,920	4,590	39,563	59,188
University of Guam	3	16,350	-	-	-	-	16,350
Guam Housing & Urban Renewal Authority	8	5,248	-	-	-	-	5,248
Guam Housing Corporation	1	31	-	-	-	-	31
AUTONOMOUS AGENCIES	**46**	**195,334**	**121,349**	**82,945**	**83,346**	**200,072**	**683,046**
Department of Parks & Recreation	17	96,733	67,809	51,188	38,449	489,352	743,532
Department of Education	48	148,442	162,993	61,070	11,829	121,409	505,743
Department of Corrections	8	90,756	35,536	40,129	23,937	-	190,359
Department of Public Health & Social Services	6	2,757	2,086	1,032	398	102,295	108,567
Mayors' Council of Guam	47	14,799	121	61	107	-	15,088
Guam Fire Department	8	6,792	1,930	-	-	-	8,722
Office of the Governor	2	5,508	-	-	-	-	5,508
Department of Youth Affairs	3	1,012	23	23	23	3,873	4,956
Department of Agriculture	1	1,534	1,400	-	-	-	2,934
Department of Public Works	9	1,488	-	-	-	-	1,488
Sanctuary Inc.	1	1,164	-	-	-	-	1,164
Guam Police Department	2	1,114	-	-	-	-	1,114
Division of Senior Citizens, DPH&SS	2	434	161	164	26	-	785
Guam Veterans' Affairs Office	2	483	-	-	-	-	483
Department of Mental Health & Substance Abuse	1	320	-	-	-	-	320
Department of Administration	1	305	-	-	-	-	305
Guam Public Library	4	228	-	-	-	-	228
The Office of the Dededo Mayor	1	177	-	-	-	-	177
Merizo Mayor	1	34	-	-	-	-	34
Guam Solid Waste Authority	1	23	-	-	-	-	23
LINE AGENCIES	**165**	**374,104**	**272,060**	**153,669**	**74,769**	**716,929**	**1,591,531**
TOTAL July 31, 2018	**211**	**569,438**	**393,409**	**236,614**	**158,115**	**917,002**	**2,274,577**
TOTAL September 30, 2017	**253**	**715,578**	**442,522**	**169,120**	**72,476**	**396,347**	**1,796,043**
% INCREASE/ (DECREASE)	**-17%**	**-20%**	**-11%**	**40%**	**118%**	**131%**	**27%**

GUAM WATERWORKS AUTHORITY
2013 Series Bond Project Status
As of July 31, 2018

SCHEDULE J

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 07/31/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 07/31/18
Santa Rita Springs Booster Pump Rehab Phase II	$ 100,000	$ 100,000	90,163	9,837	$ 100,000	$ -	$ 9,837
"A" Series Well Transmission Line	$ 400,000	$ 400,000	369,846	(0)	$ 369,846	$ 30,154	$ 30,154
Water Booster Pump Station	$ 6,000,000	$ 1,861,000	1,656,428	23,536	$ 1,679,964	$ 181,036	$ 204,572
Meter Replacement Program		$ 999,000	996,532	-	$ 996,532	$ 2,468	$ 2,468
Barrigada Tank Repair/Replacement	$ 6,000,000	$ 4,987,000	4,924,959	62,041	$ 4,987,000	$ 0	$ 62,041
Leak Detection	$ 100,000	$ 20,000	16,916	-	$ 16,916	$ 3,084	$ 3,084
Potable Water System Planning	$ 800,000	$ 624,000	603,390	20,610	$ 624,000	$ -	$ 20,610
Implement Ground Water Rule	$ 1,000,000	$ 1,000,000	1,000,000	-	$ 1,000,000	$ -	$ -
Deep Well Rehabilitation	$ 800,000	$ 200,000	189,930	10,071	$ 200,000	$ (0)	$ 10,070
New Deep Wells at Down Hard	$ 2,000,000	$ 810,000			$ -	$ 810,000	$ 810,000
Master Meters	$ 4,000,000	$ 784,000	531,188	180,872	$ 712,060	$ 71,940	$ 252,812
Ugum Water Treatment Plant Intake	$ 1,000,000	$ 982,000	578,858	280,943	$ 859,801	$ 122,199	$ 403,142
Water Wells	$ 4,200,000	$ 4,200,000	2,284,474	745,555	$ 3,030,029	$ 1,169,971	$ 1,915,527
Water Distribution System	$ 12,000,000	$ 11,151,000	7,159,766	3,752,687	$ 10,912,453	$ 238,547	$ 3,991,234
Pressure Zone Realignment /	$ 1,000,000	$ 431,000	336,036	1,074	$ 337,110	$ 93,890	$ 94,964
Mechanical/Electrical Equipment	$ 430,000	$ 430,000	328,686	98,112	$ 426,798	$ 3,202	$ 101,314
Water Reservoir Internal/External	$ 800,000	$ -			$ -	$ -	$ -
Water System Reservoirs 2005 Improvements	$ 21,000,000	$ 13,878,000	10,897,321	2,980,680	$ 13,878,000	$ (0)	$ 2,980,679
Ugum Water Treatment Plant Reservoir	$ 7,000,000	$ 90,000			$ -	$ 90,000	$ 90,000
Agana Heights & Chaot Tanks	$ 4,500,000	$ 3,280,000	241,603	1,088,684	$ 1,330,287	$ 1,949,713	$ 3,038,397
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 13,500,000	$ 11,605,000	9,024,195	2,580,805	$ 11,605,000	$ 0	$ 2,580,805
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 8,000,000	$ -			$ -	$ -	$ -
Assessment of malojloj Elevetad & Yigo Elevated	$ 500,000	$ 485,117	461,813	23,304	$ 485,117	$ -	$ 23,304
Fire Hydrant Replacement Program	$ -	$ -			$ -	$ -	$ -
Wastewater System Planning	$ 800,000	$ 651,000	566,364	84,536	$ 650,900	$ 100	$ 84,636
Lift Station Upgrades	$ 5,000,000	$ 946,000	562,785	363	$ 563,149	$ 382,852	$ 383,215
Wastewater Collection System Repl/Rehab	$ 6,500,000	$ 780,000	578,438	81,875	$ 660,314	$ 119,687	$ 201,562
Baza Gardens STP Replacement		$ 3,114,883	2,688,166	426,703	$ 3,114,869	$ 14	$ 426,717
Facilities Plan/Design for Umatac-Merizo WWTP		$ 473,000	341,226	30,473	$ 371,699	$ 101,301	$ 131,774
Agat/Santa Rita STP Replacement	$ 19,000,000	$ 67,200,000	47,621,200	19,262,992	$ 66,884,192	$ 315,808	$ 19,578,800
Agana WWTP Interim Measures		$ 673,000	611,247	61,753	$ 673,000	$ (0)	$ 61,753
Umatac Merizo Replacement	$ 2,000,000	$ -			$ -	$ -	$ -
Wastewater Pump Station Electrical Upgrade	$ 620,000	$ 620,000	91,348	8,513	$ 99,861	$ 520,139	$ 528,652
Electrical Upgrade - Water Wells	$ 1,500,000	$ 1,500,000	1,480,769	19,230	$ 1,500,000	$ 0	$ 19,231
Electrical Upgrade - Water Booster	$ 325,000	$ 2,000			$ -	$ 2,000	$ 2,000
Electrical Upgrade -Water Booster	$ 350,000	$ 200,000	977	-	$ 977	$ 199,023	$ 199,023
Electrical Upgrade - Other Water	$ 250,000	$ 150,000	60,700	-	$ 60,700	$ 89,300	$ 89,300
SCADA Improvements – Phase 3	$ 1,850,000	$ 923,000	445,447	276,912	$ 722,359	$ 200,641	$ 477,553
SCADA Improvements – Phase 4	$ 500,000	$ -			$ -	$ -	$ -
Laboratory Modernization	$ 1,500,000	$ 1,173,000	1,163,037	8,428	$ 1,171,465	$ 1,535	$ 9,963
Land Survey	$ 2,000,000	$ 2,000	1,038	15	$ 1,053	$ 948	$ 963
General Plant Improvements / Water	$ 2,000,000	$ 2,600,000	1,265,043	1,176,695	$ 2,441,737	$ 158,263	$ 1,334,957
Allowance for COI							$ 275,005
Interest Earned							$ 769,729
Total Construction Fund (2013 Series Revenue Bond)	**$ 139,325,000**	**$ 139,325,000**	**$ 99,169,887**	**$ 33,297,300**	**$ 132,467,187**	**$ 6,857,813**	**$ 41,199,847**

PUC's Docket 14-04 dated February 25, 2014

GUAM WATERWORKS AUTHORITY
2014 Series Refunded Bond Project Status
As of July 31, 2018

SCHEDULE K

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	ADJUSTED PROJECT COST	EXPENDITURES AS OF 07/31/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	20% PUC AS OF 07/31/18	CONSTRUCTION FUND BALANCE AS OF 07/31/18
Agana Treatment Plant	$ 10,475,000	$ 11,065,512	11,065,512	$ -	$ 11,065,512	$ (0)	$ 2,095,000	$ (0)
Agana Outfall	$ 5,030,000	$ 10,127,198	10,127,198	$ -	$ 10,127,198	$ 0	$ 1,006,000	$ 0
Northern District (Outfall)	$ 4,700,000	$ 10,251,423	10,251,423	$ -	$ 10,251,423	$ 0	$ 940,000	$ 0
Northern District WWTP Upgrade		$ 173,681	173,681		$ 173,681	$ -		$ -
Northern Treatment Plant		$ -	-		$ -	$ -		$ -
Baza Gardens Wastewater Treatment Plant	$ 500,000	$ 297,177	297,177	$ -	$ 297,177	$ (0)	$ 100,000	$ (0)
Interim Disinfection Facilities	$ 581,000	$ 3,437,311	3,408,599	$ 28,712	$ 3,437,311	$ (0)	$ 116,200	$ 28,712
Electrical Protection	$ 1,000,000	$ 1,512,483	1,512,483.3	$ -	$ 1,512,483	$ (0)	$ 200,000	$ (0)
Well Vulnerability Reduction	$ 600,000	$ 185,522	185,522	$ -	$ 185,522	$ 0	$ 120,000	$ 0
Old Agat Wastewater Collection (I/I Reductic	$ 2,155,000	$ 1,931,659	1,931,659	$ -	$ 1,931,659	$ (0)	$ 431,000	$ (0)
Chaot WW Pump Station/Collection System	$ 410,000	$ 399,120	399,120	$ -	$ 399,120	$ -	$ 82,000	$ -
Lift Station Upgrades	$ 230,000	$ 149,895	149,895	$ -	$ 149,895	$ 0	$ 46,000	$ 0
Collection Line Upgrades	$ 200,000	$ 62,755	62,755	$ -	$ 62,755	$ 0	$ 40,000	$ 0
"A" Well Transmission Line	$ 2,413,000	$ 3,833,175	3,818,088	$ 15,087	$ 3,833,175	$ (0)	$ 482,600	$ 15,087
Santa Rita Springs - Booster Pump Rehab.	$ 648,000	$ 306,841	306,841	-	$ 306,841	$ (0)	$ 129,600	$ (0)
Fena Bypass Transmission line		$ 160,913	160,913	$ -	$ 160,913	$ (0)	$ -	$ (0)
Storage Additions	$ 950,000	$ -			$ -	$ -	$ 190,000	$ -
Booster Station Upgrades	$ 390,000	$ 66,734	66,734	$ -	$ 66,734	$ -	$ 78,000	$ -
Mangilao Tank Repair	$ 800,000	$ 398,367	397,933	$ 434	$ 398,367	$ (0)	$ 160,000	$ 434
Ugum Tank Replacement	$ 2,500,000	$ -			$ -	$ -	$ 500,000	$ -
Ugum WTPlant Refurbishment ($1.724,970EPA)		$ 6,588,473	6,531,525	$ 56,949	$ 6,588,473	$ (0)		$ 56,948
Barrigada Tank Repair/Replacement	$ 3,000,000	$ 65,019	65,019	$ -	$ 65,019	$ 0	$ 600,000	$ 0
Water Reservoir Condition Assessment		$ 1,250,000	1,249,227.16	$ 772	$ 1,250,000	$ 0	$ -	$ 773
EarthTech Well Buyout	$ 5,000,000	$ 5,975,000	5,975,000	$ -	$ 5,975,000	$ -	$ 1,000,000	$ -
Water Wastewater Master Plan	$ 4,900,000	$ 4,881,308	4,881,308	$ -	$ 4,881,308	$ 0	$ 980,000	$ 0
Laboratory Modernization	$ 800,000	$ 135,055	135,055	$ -	$ 135,055	$ 0	$ 160,000	$ 0
Land Survey	$ 800,000	$ 577,836	576,134	$ 1,702	$ 577,836	$ 0	$ 160,000	$ 1,702
Ground Water Disinfection		$ -				$ -		$ -
GWUDI Study		$ 262,234	260,430	1,804	$ 262,234	$ -		$ 1,804
Contingency	$ 12,276,023	$ 154	-	$ -	$ -	$ -		$ 732
Vehicles	$ 1,100,000	$ 1,280,000	2,130,305	$ (850,305)	$ 1,280,000	$ -	$ 220,000	$ -
Generation Equipment	$ 700,000	$ 880,000	2,712	$ 877,288	$ 880,000	$ 0		$ 27,033
Leak Detection/Line Replacement	$ 8,200,000	$ 5,988,494	5,988,494	$ -	$ 5,988,494	$ -	$ 1,640,000	$ -
Automated Meter Reading	$ 12,572,063	$ 17,468,359	16,870,522	$ 537,157	$ 17,468,359.32	$ 0	$ 2,514,413	$ 597,837
Total Construction Fund (2014 Series Refu	$ 82,930,086	$ 89,711,698	$ 88,981,263	$ 669,600	$ 89,711,543	$ 1	$ 13,990,813	$ 731,063
Interest Earned	$ 6,781,612	$ (0)				$ (0)		$ 8,871
Total Project Cost Funding	**$ 89,711,698**	**$ 89,711,698**	**$ 88,981,263**	**$ 669,600**	**$ 89,711,543**	**$ 1**	**$ 13,990,813**	**$ 739,934**

GUAM WATERWORKS AUTHORITY
2016 Series Bond Project Status
As of July 31, 2018

SCHEDULE L

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 07/31/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 07/31/18
Water Booster Pump Station	$ 4,139,000	$ 4,139,000			$ -	$ 4,139,000	$ 4,139,000
Meter Replacement Program	$ 4,501,000	$ 4,501,000	64,531	85,469.44	$ 150,000	$ 4,351,000	$ 4,436,469
Barrigada Tank Repair/Replacement	$ 1,013,000	$ 1,013,000		-	$ -	$ 1,013,000	$ 1,013,000
Leak Detection	$ 1,180,000	$ 1,180,000		-	$ -	$ 1,180,000	$ 1,180,000
Potable Water System Planning	$ 2,276,000	$ 2,276,000	260,131	616,163.05	$ 876,294	$ 1,399,706	$ 2,015,869
Deep Well Rehabilitation	$ 250,000	$ 250,000		110,013.00	$ 110,013	$ 139,987	$ 250,000
New Deep Wells at Down Hard	$ 1,190,000	$ 1,190,000			$ -	$ 1,190,000	$ 1,190,000
Master Meters	$ 3,616,000	$ 3,616,000	151,539	-	$ 151,539	$ 3,464,461	$ 3,464,461
Ugum Water Treatment Plant Intake	$ 18,000	$ 18,000			$ -	$ 18,000	$ 18,000
Water Wells	$ 2,500,000	$ 2,500,000			$ -	$ 2,500,000	$ 2,500,000
Water Distribution System	$ 2,049,000	$ 49,000			$ -	$ 49,000	$ 49,000
Pressure Zone Realignment /	$ 1,141,000	$ 1,141,000		741,000.20	$ 741,000	$ 400,000	$ 1,141,000
Mechanical/Electrical Equipment	$ 100,000	$ 100,000			$ -	$ 100,000	$ 100,000
Water Reservoir Internal/External	$ 800,000	$ 800,000		800,000.00	$ 800,000	$ -	$ 800,000
Water System Reservoirs 2005 Improvements	$ 42,350,000	$ 28,350,000	2,008,486	14,118,396.31	$ 16,126,882	$ 12,223,118	$ 26,341,514
Ugum Water Treatment Plant Reservoir	$ 6,410,000	$ -			$ -	$ -	$ -
Water Audit Program & Water Loss Control Plan	$ 1,000,000	$ 1,000,000		389,561.70	$ 389,562	$ 610,438	$ 1,000,000
Agana Heights & Chaot Tanks	$ 1,220,000	$ 1,220,000		500,000.00	$ 500,000	$ 720,000	$ 1,220,000
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 1,895,000	$ 1,895,000		1,822,132.80	$ 1,822,133	$ 72,867	$ 1,895,000
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 10,500,000	$ 7,409,830		7,300,000.00	$ 7,300,000	$ 109,830	$ 7,409,830
Fire Hydrant Replacement Program	$ 2,000,000	$ 2,000,000			$ -	$ 2,000,000	$ 2,000,000
Wastewater System Planning	$ 349,000	$ 349,000	193,899	119,084.26	$ 312,983	$ 36,017	$ 155,101
Lift Station Upgrades	$ 2,404,000	$ 2,404,000	222,568	42,186.67	$ 264,755	$ 2,139,245	$ 2,181,432
Wastewater Collection System Repl/Rehab	$ 2,920,000	$ 2,920,000	911.46	554,566.54	$ 555,478	$ 2,364,522	$ 2,919,089
Baza Gardens STP Replacement	$ 16,700,000	$ 29,400,170	12,108,603	17,097,178.90	$ 29,205,782	$ 194,388	$ 17,291,567
Facilities Plan/Design for Umatac-Merizo WWTP	$ 527,000	$ 527,000	239,045	13,060.42	$ 252,105	$ 274,895	$ 287,955
Agat/Santa Rita STP Replacement	$ 3,000,000	$ 3,000,000	1,273,611	271,477.03	$ 1,545,088	$ 1,454,912	$ 1,726,389
Agana WWTP Interim Measures	$ 827,000	$ 827,000			$ -	$ 827,000	$ 827,000
Umatac Merizo Replacement	$ 8,000,000	$ 20,800,000	4,028,214	16,574,040.38	$ 20,602,254	$ 197,746	$ 16,771,786
Wastewater Pump Station Electrical Upgrade	$ 100,000	$ 100,000			$ -	$ 100,000	$ 100,000
Electrical Upgrade - Water Wells	$ 650,000	$ 650,000			$ -	$ 650,000	$ 650,000
Electrical Upgrade - Water Booster	$ 323,000	$ 323,000			$ -	$ 323,000	$ 323,000
SCADA Improvements – Phase 3	$ 1,177,000	$ 1,177,000	18,000	599,496.51	$ 617,497	$ 559,503	$ 1,159,000
SCADA Improvements – Phase 4	$ 6,500,000	$ 6,500,000		2,883,117.85	$ 2,883,118	$ 3,616,882	$ 6,500,000
Laboratory Modernization	$ 1,127,000	$ 1,127,000	1,127,000	-	$ 1,127,000	$ -	$ -
Land Survey	$ 1,998,000	$ 1,998,000	130,370	1,130,153.37	$ 1,260,524	$ 737,476	$ 1,867,630
General Plant Improvements / Water	$ 2,769,463	$ 2,769,463	716,554	827,205.38	$ 1,543,760	$ 1,225,703	$ 2,052,909
Information Technology Integration Improvements	$ 500,000	$ 500,000	244,068	-	$ 244,068	$ 255,932	$ 255,932
Interest Earned		$ -					$ 1,424,912
Total Construction Fund (2016 Series Revenue Bond)	**$ 140,019,463**	**$ 140,019,463**	**$ 22,787,530**	**$ 66,594,304**	**$ 89,381,834**	**$ 50,637,629**	**$ 118,656,845**

GUAM WATERWORKS AUTHORITY
2010 Series Bond Project Status
As of July 31, 2018

SCHEDULE M

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 07/31/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 07/31/18
Ground Water Disinfection	$ -	$ 500,000	$ 438,141	$ 61,859	$ 500,000	$ 0	$ 61,859
"A" Series Well Transmission Line	$ 600,000	$ 518,144	$ 474,434	$ 1,274	$ 475,709	$ 42,435	$ 43,710
Water Booster Pump Station	$ 500,000	$ 500,000	$ 418,844	$ 81,156	$ 500,000	$ (0)	$ 81,156
Meter Replacement Program	$ 2,500,000	$ 10,300,000	$ 10,255,079	$ 18,549	$ 10,273,628	$ 26,372	$ 44,921
Barrigada Tank Repair/Replacement	$ -	$ 5,450,000	$ 5,442,302	$ 7,698	$ 5,450,000	$ 0	$ 7,698
Leak Detection		$ 200,000	$ -	$ 200,000	$ 200,000	$ -	$ 200,000
Potable Water System Planning	$ 200,000	$ 200,000	$ 180,927	$ 19,073	$ 200,000	$ -	$ 19,073
Implement Ground Water Rule		$ 1,700,000	$ 1,499,464	$ 200,535	$ 1,700,000	$ 1	$ 200,536
Brigade II (Ugum Lift) BPS Upgrade	$ 1,200,000	$ 1,700,000	$ 251,134	$ 86,760	$ 337,895	$ 1,362,105	$ 1,448,866
Deep Well Rehabilitation	$ 548,000	$ 548,000	$ 548,000	$ -	$ 548,000	$ -	$ -
New Deep Wells at Down Hard	$ 3,773,000	$ 638,252	$ 485,743	$ -	$ 485,743	$ 152,509	$ 152,509
Rehabilitation of Asan Springs	$ 900,000	$ 900,000	$ 188,771	$ 152,068	$ 340,838	$ 559,162	$ 711,229
Master Meters	$ 1,600,000	$ 1,600,000	$ 1,421,267	$ 68,690	$ 1,489,957	$ 110,043	$ 178,733
Ugum Water Treatment Plant Intake	$ 3,670,000	$ 700,000	$ 543,615	$ 156,385	$ 700,000	$ -	$ 156,385
Water Wells	$ 2,000,000	$ -	$ -		$ -	$ -	$ -
Water Distribution System	$ 384,000	$ 3,174,748	$ 3,174,748	$ -	$ 3,174,748	$ (0)	$ (0)
Pressure Zone Realignment /	$ 3,550,000	$ -	$ -		$ -	$ -	$ -
Northern System Water Distribution	$ 2,725,000	$ -	$ -	$ -	$ -	$ -	$ -
Central Water Distribution System 2005	$ 1,200,000	$ 900,000	$ 730,182	$ 44,820	$ 775,002	$ 124,998	$ 169,818
Southern Water Distribution System	$ 1,800,000	$ -	$ -		$ -	$ -	$ -
Mechanical/Electrical Equipment	$ 1,360,000	$ 1,200,000	$ 1,079,495	$ 120,505	$ 1,200,000	$ (0)	$ 120,505
Water Reservoir Internal/External	$ 500,000	$ 2,000,000	$ 1,083,817	$ 425,567	$ 1,509,384	$ 490,616	$ 916,183
Water Reservoir Internal/External	$ 2,400,000	$ -	$ -		$ -	$ -	$ -
Water System Reservoirs 2005 Improvements	$ 11,697,000	$ 1,050,000	$ 1,050,000		$ 1,050,000	$ 0	$ 0
Distribution System Upgrades	$ 3,182,000	$ 474,160	$ 456,678	$ 17,481	$ 474,160	$ 0	$ 17,482
Ugum Water Treatment Plant Reservoir	$ 3,672,000	$ -	$ -		$ -	$ -	$ -
Water Audit Program & Water Loss Control Plan		$ 100,000	$ 15,031	$ 63,428	$ 78,459	$ 21,541	$ 84,970
Production Plan / Reduce Navy Purchases		$ 100,000	$ 94,286	$ 5,714	$ 100,000	$ -	$ 5,714
Hydraulic Asessment of Tank		$ 500,000	$ 497,004	$ 2,996	$ 500,000	$ -	$ 2,996
Agana Heights & Chaot Tanks		$ 4,700,000	$ 4,350,014	$ 349,986	$ 4,700,000	$ -	$ 349,986
Tank Major Repair Yigo#1 Mangilao#2 Agat#2		$ 1,900,000	$ 1,750,355	$ 97,659	$ 1,848,013	$ 51,987	$ 149,645
Tank Major Repair Yigo#1 Mangilao#2 Agat#2		$ -			$ -	$ -	$ -
Assessment of malojloj Elevetad & Yigo Elevated		$ 200,000	$ 200,000	$ -	$ 200,000	$ -	$ -
Public Water System Asser Inventory/Condition Assesment		$ 100,000	$ 98,414	$ 1,586	$ 100,000	$ -	$ 1,586
Public Water System GIS & Mapping		$ 50,000	$ 50,000	$ -	$ 50,000	$ -	$ -
Wastewater System Planning	$ 1,500,000	$ 1,500,000	$ 1,468,176	$ 5,824	$ 1,474,000	$ 26,000	$ 31,824
Wastewater Vehicles	$ 235,000	$ 235,000	$ 209,795	$ 25,205	$ 235,000	$ 0	$ 25,205
NDWWTP - Chlorine Tanks	$ 250,000	$ 250,000	$ 250,000		$ 250,000	$ -	$ -
Tumon Bay Sewer Upgrades	$ 100,000	$ -	$ -		$ -	$ -	$ -
Wastewater Collection System Repl/Rehab		$ 1,105,000	$ 723,591	$ 283,287	$ 1,006,878	$ 98,122	$ 381,409
Facilities Plan/Design for Baza Gardens WWTP	$ 1,250,000	$ 1,250,000	$ 1,245,244	$ 4,756	$ 1,250,000	$ -	$ 4,756
Facilities Plan/Design for Agat-Santa Rita WWTP	$ 900,000	$ 899,630	$ 891,702	$ 7,928	$ 899,630	$ -	$ 7,928
Priority 1 Sewer Upgrades – Baza Gardens WWTP	$ 650,000	$ -	$ -		$ -	$ -	$ -
Baza Gardens STP Replacement	$ 3,567,000	$ 1,301,947	$ 1,151,947	$ 314	$ 1,152,261	$ 149,686	$ 150,000
Facilities Plan/Design for Umatac Merizo WWTP		$ 900,000	$ 760,845	$ 93,013	$ 853,858	$ 46,142	$ 139,155
Agat/Santa Rita STP Replacement	$ 2,968,000	$ 2,218,000	$ 2,217,314	$ 387	$ 2,217,701	$ 300	$ 686
Northern District WWTP Primary Treatment Upgrades	$ -	$ 11,750,000	$ 11,532,253	$ 211,261	$ 11,743,514	$ 6,486	$ 217,747
Biosolids Management Plan		$ 200,000	$ 196,414	$ 3,586	$ 200,000	$ -	$ 3,586
Agana WWTP Interim Measures	$ -	$ 11,500,000	$ 11,254,925	$ 45,075	$ 11,300,000	$ 200,000	$ 245,075
I&I SSES Southern		$ 800,000	$ 794,722	$ 5,278	$ 800,000	$ (0)	$ 5,278
I&I SSES Central		$ 850,000	$ 794,325	$ 55,675	$ 850,000	$ -	$ 55,675
I&I SSES Northern		$ -			$ -	$ -	$ -
Umatac Merizo Replacement		$ 250,000	$ 247,431	$ 2,569	$ 250,000	$ -	$ 2,569
Northern District WWTP Secondary Treatment Upgrades		$ 1,000,000	$ -	$ 1,000,000	$ 1,000,000	$ -	$ 1,000,000
Well Electrical Protection	$ 26,000	$ -	$ -		$ -	$ -	$ -
SCADA Pilot Project	$ 300,000	$ 61,950	$ 19,812	$ 42,138	$ 61,950	$ (0)	$ 42,138
Electrical Upgrade - Water Wells	$ 3,000,000	$ 354,227	$ 339,948	$ 14,278	$ 354,227	$ 0	$ 14,279
Electrical Upgrade - Water Booster	$ 325,000	$ -	$ -		$ -	$ -	$ -
Electrical Upgrade -Water Booster	$ 350,000	$ -	$ -		$ -	$ -	$ -
Electrical Upgrade - Other Water	$ 250,000	$ -			$ -	$ -	$ -
SCADA Improvements – Phase 1	$ 250,000	$ 250,000	$ 194,849	$ 55,151	$ 250,000	$ -	$ 55,151
SCADA Improvements – Phase 2	$ 1,100,000	$ 1,056,986	$ 1,028,284	$ 28,702	$ 1,056,986	$ -	$ 28,702
SCADA Improvements – Phase 3	$ 2,500,000	$ 24,956	$ 24,956	$ -	$ 24,956	$ 0	$ 0
SCADA Improvements – Phase 4	$ 850,000	$ -	$ -		$ -	$ -	$ -
Laboratory Modernization	$ 1,200,000	$ -	$ -		$ -	$ -	$ -
Land Survey	$ 1,500,000	$ 500,000	$ 471,450	$ 28,237	$ 499,687	$ 313	$ 28,550
General Plant Improvements / Water	$ 14,370,000	$ 7,241,000	$ 7,241,000	$ 0	$ 7,241,000	$ 0	$ 0
Interest Earned							$ 131,430
Total Construction Fund (2010 Series Revenue Bond)	**$ 87,402,000**	**$ 87,402,000**	**$ 79,836,728**	**$ 4,096,454**	**$ 83,933,182**	**$ 3,468,818**	**$ 7,696,702**

1.) PUC's Docket 11-01 $29,000,000.00 dated 09/19/11authorized GWA for reallocation
2) PUC's Docket 11-01 Reallocation of $23,246,000.00 dated 07/30/12
3) PUC's Dockect Reallocation dated February 2013

GUAM WATERWORKS AUTHORITY

Guam Waterworks Authority

VEHICLE FLEET STATUS

8/9/2018

EQUIPMENT STATUS					SUMMARY						
Description	Number of Equipment	Number of Equipment Available	Number of Equipment Not Available	Percentage	Operational	Operational w/Rprs Pending	In Shop-Accident Repairs	In Shop-Assessment Pending	In Shop-Repairs Pending	In Shop-Vendor Repairs	Recommend Survey
Backhoe	5	2	3	40%	2	0	0	0	1	0	2
Bobcat	1	1	0	100%	1	0	0	0	0	0	0
Boom Truck	2	1	1	50%	1	0	0	0	1	0	0
Crane	2	0	1	0%	0	0	0	0	1	0	1
Dump Truck	3	1	2	33%	1	0	0	0	2	0	0
Flat Bed	1	0	1	0%	0	0	0	0	0	0	1
Forklift	7	6	1	86%	6	0	0	0	0	0	1
Fuel Tanker	1	1	0	100%	1	0	0	0	0	0	0
Heavy Duty	7	4	3	57%	4	0	0	0	0	1	2
Hoist Rig	1	1	0	100%	1	0	0	0	0	0	0
Light	176	127	58	72%	126	1	2	4	9	3	40
Mini Backhoe	4	0	4	0%	0	0	0	0	2	2	0
Pumper Truck	1	1	0	100%	1	0	0	0	0	0	0
Skidster	1	1	0	100%	1	0	0	0	0	0	0
Sludge Truck	5	4	1	80%	2	2	0	0	1	0	0
Tow	1	0	1	0%	0	0	0	0	0	0	1
Tractor	2	2	0	100%	2	0	0	0	0	0	0
Tractor Mower	1	1	0	100%	1	0	0	0	0	0	0
Trailer	15	12	3	80%	12	0	0	0	1	0	2
Trencher	1	1	0	100%	1	0	0	0	0	0	0
Vaccon	1	1	0	100%	1	0	0	0	0	0	0
Vacuum Truck	3	2	1	67%	2	0	0	0	0	1	0
Water Buffalo	2	2	0	100%	2	0	0	0	0	0	0
Water Tanker	5	2	1	40%	2	0	0	0	0	2	1

Compressor	1	1	0	100%	1	0	0	0	0	0	0
Total	249	176	84		176	3	2	4	18	9	51

Guam Waterworks Authority	Date: 8/9/2018
	Time:

REVIEWS			
TOTAL PUMPS INSTALLED	51	OVERAL AVERAGE	*92%*
TOTAL PUMPS OPERATIONAL	47	% OF OPERATING PUMPS	*92%*
TOTAL BOOSTER PUMP STATIONS	25		

GUAM WATERWORKS AUTHORITY

WATER DISTRIBUTION FACILITIES REPORT

Northern District

NO:	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	PUMP AND MOTOR INVENTORY
1	Gayinero	20	2	2	100%	OP	A						
2	Mataguac	25	2	2	100%	OP	A						
3	Santa Rosa	15	2	1	50%	OP	A	Pending megger testing for pump # 2.					
4	Hyundai	40	2	1	50%	OP	A	Pump # 1 requires pump and motor.					
5	Access	60	2	2	100%	OP	A						
6	Chln. Palauan	5	2	2	100%	N/A						CIP required for new unit and electrical for generator	
7	Nimitz Hill	7.5	2	2	100%	N/A						CIP required for new unit and electrical for generator	
8	Adawag	1.5	2	2	100%	N/A						CIP required for new unit and electrical for generator	
9	Pale Kiren	1	1	1	100%	N/A						CIP required for new unit and electrical for generator	
10	Ulloa/Untalan	1	2	2	100%	OP	A						
11	Latte Heights	15	2	2	100%	OP	A						
	TOTAL = 11		**21**	**19**	**90%**								
pump availability =no of operational pumps/no of pumps*100%													

Central District

NO:	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	UPDATES
1	Pago	150 / 100	3	2	67%	0P	A	Pump # 1 grounded.				At vendor for repairs	
2	Brigade	60	3	3	100%	OP	A			Generator inadequate for 2 pump operation			
3	Windward Hills	200 / 75	3	3	100%	OP	A						
4	Santa Rita Spring	40	2	2	100%	OP	A						
5	Santa Ana (Lower)	25	2	1	50%	N/A		CHECK VALVE P1 NOT OPENING		Unable to secure discharge valve. Need to schedule an outage for area to make repairs		CIP required for new unit and electrical for generator	Need to schedule valve repairs
6	Camacho	1	1	1	100%	N/A						CIP required for new unit and electrical for generator	
7	Tenorio	1.5	1	1	100%	N/A						CIP required for new unit and electrical for generator	
	Total=7		**15**	**13**	**87%**								
pump availability =no of operational pumps/no of pumps*100%													

Southern District

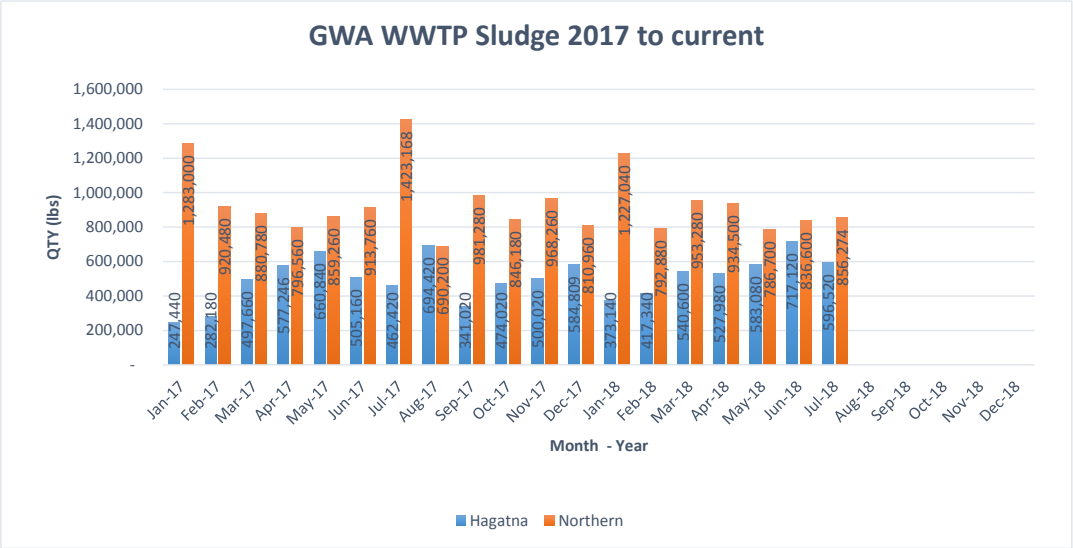
NO:	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	UPDATES
1	Malojloj Line	125 / 50	3	3	100%	OP	A	Pump 3 installed by JMI 6-28-18					
2	Geus	25	2	2	100%	OP	A						
3	Pigua	7.5	2	2	100%	N/A						CIP required for new unit and electrical for generator	
4	Toguan	25	2	2	100%	OP	A						
5	WBP-2	25	2	2	100%	OP	A						
6	WBP-1	5	2	2	100%	OP	A						
7	Malojloj Elevated	15	2	2	100%	OP	A						
	Total=7		**15**	**15**	**100%**								
pump availability =no of operational pumps/no of pumps*100%													

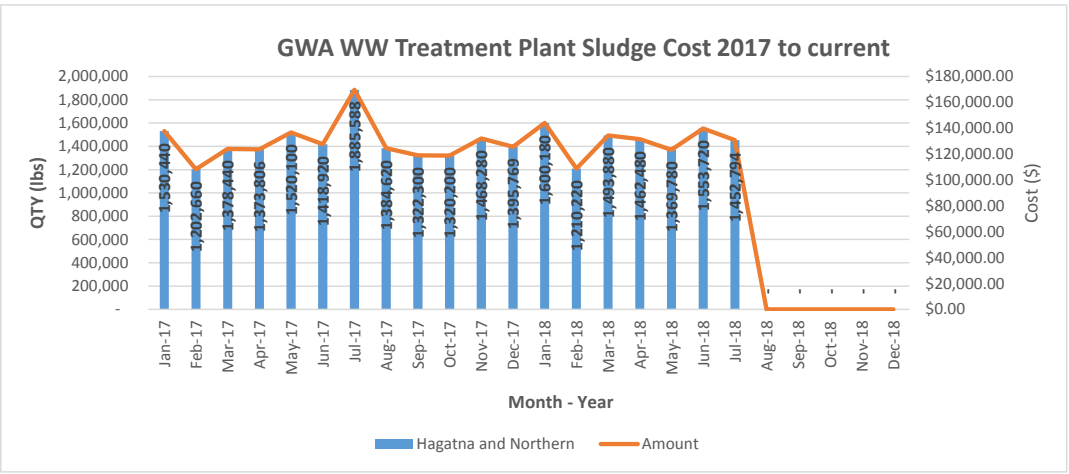
Sludge Disposal To Landfill Weight and Cost

	Hagatna		Northern		Hagatna and Northern	
2017	Qty	Amount	Qty	Amount	Qty	Amount
Month- Yr	lbs	$	lbs	$	lbs	$
Jan-17	247,440	$22,269.60	1,283,000	$115,470.00	1,530,440	$137,739.60
Feb-17	282,180	$25,396.20	920,480	$82,843.20	1,202,660	$108,239.40
Mar-17	497,660	$44,789.40	880,780	$79,270.20	1,378,440	$124,059.60
Apr-17	577,246	$51,952.14	796,560	$71,690.40	1,373,806	$123,642.54
May-17	660,840	$59,475.60	859,260	$77,333.40	1,520,100	$136,809.00
Jun-17	505,160	$45,464.40	913,760	$82,238.40	1,418,920	$127,702.80
Jul-17	462,420	$41,617.80	1,423,168	$128,085.12	1,885,588	$169,702.92
Aug-17	694,420	$62,497.80	690,200	$62,118.00	1,384,620	$124,615.80
Sep-17	341,020	$30,691.80	981,280	$88,315.20	1,322,300	$119,007.00
Oct-17	474,020	$42,661.80	846,180	$76,156.20	1,320,200	$118,818.00
Nov-17	500,020	$45,001.80	968,260	$87,143.40	1,468,280	$132,145.20
Dec-17	584,809	$52,632.81	810,960	$72,986.40	1,395,769	$125,619.21
Grand Total	5827235	$524,451.15	11373888	$1,023,649.92	17201123	$1,548,101.07

	Hagatna		Northern		Hagatna and Northern	
2018	Qty	Amount	Qty	Amount	Qty	Amount
Month- Yr	lbs	$	lbs	$	lbs	$
Jan-18	373,140	$33,582.60	1,227,040	$110,433.60	1,600,180	$144,016.20
Feb-18	417,340	$37,560.60	792,880	$71,359.20	1,210,220	$108,919.80
Mar-18	540,600	$48,654.00	953,280	$85,795.20	1,493,880	$134,449.20
Apr-18	527,980	$47,518.20	934,500	$84,105.00	1,462,480	$131,623.20
May-18	583,080	$52,477.20	786,700	$70,803.00	1,369,780	$123,280.20
Jun-18	717,120	$64,540.80	836,600	$75,294.00	1,553,720	$139,834.80
Jul-18	596,520	$53,686.80	856,274	$77,064.66	1,452,794	$130,751.46
Aug-18		$0.00		$0.00	-	$0.00
Sep-18		$0.00		$0.00	-	$0.00
Oct-18		$0.00		$0.00	-	$0.00
Nov-18		$0.00		$0.00	-	$0.00
Dec-18		$0.00		$0.00	-	$0.00
Grand Total	3755780	$338,020.20	6387274	$574,854.66	10143054	$912,874.86

Hagatna and Northern WWTP Sludge Report 2016, GWA Operations kcog / df, 8/6/2018


GWA WWTP Sludge 2017 to current
QTY (lbs)
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
-
242,440
1,283,000
282,180
920,480
497,660
880,780
577,246
796,560
660,840
859,260
505,160
913,760
462,420
1,423,168
694,420
690,200
241,020
981,280
474,020
846,180
500,020
968,260
584,809
810,960
373,140
1,227,040
417,340
792,880
540,600
953,280
527,980
934,500
583,080
786,700
717,120
836,600
596,520
856,274
Jan-17
Feb-17
Mar-17
Apr-17
May-17
Jun-17
Jul-17
Aug-17
Sep-17
Oct-17
Nov-17
Dec-17
Jan-18
Feb-18
Mar-18
Apr-18
May-18
Jun-18
Jul-18
Aug-18
Sep-18
Oct-18
Nov-18
Dec-18
Month - Year
Hagatna
Northern

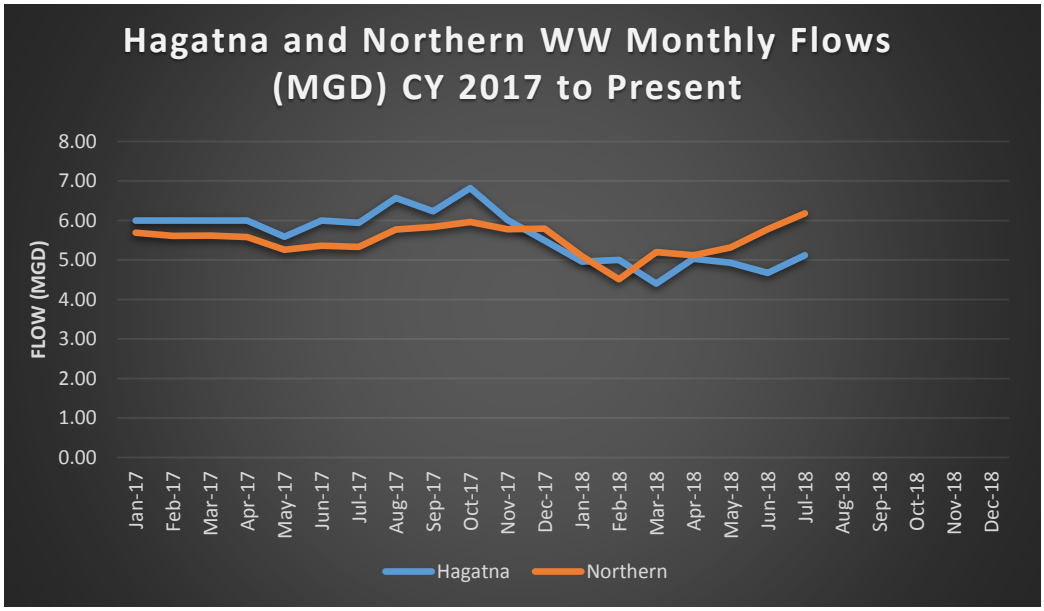

GWA WW Treatment Plant Sludge Cost 2017 to current
QTY (lbs)
2,000,000
1,800,000
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
-
Cost ($)
$180,000.00
$160,000.00
$140,000.00
$120,000.00
$100,000.00
$80,000.00
$60,000.00
$40,000.00
$20,000.00
$0.00
1,530,440
1,202,660
1,378,140
1,373,806
1,520,100
1,418,920
1,885,588
1,384,620
1,322,300
1,320,200
1,468,280
1,395,769
1,600,180
1,210,220
1,493,880
1,462,480
1,369,780
1,553,720
1,452,794
Jan-17
Feb-17
Mar-17
Apr-17
May-17
Jun-17
Jul-17
Aug-17
Sep-17
Oct-17
Nov-17
Dec-17
Jan-18
Feb-18
Mar-18
Apr-18
May-18
Jun-18
Jul-18
Aug-18
Sep-18
Oct-18
Nov-18
Dec-18
Month - Year
Hagatna and Northern
Amount

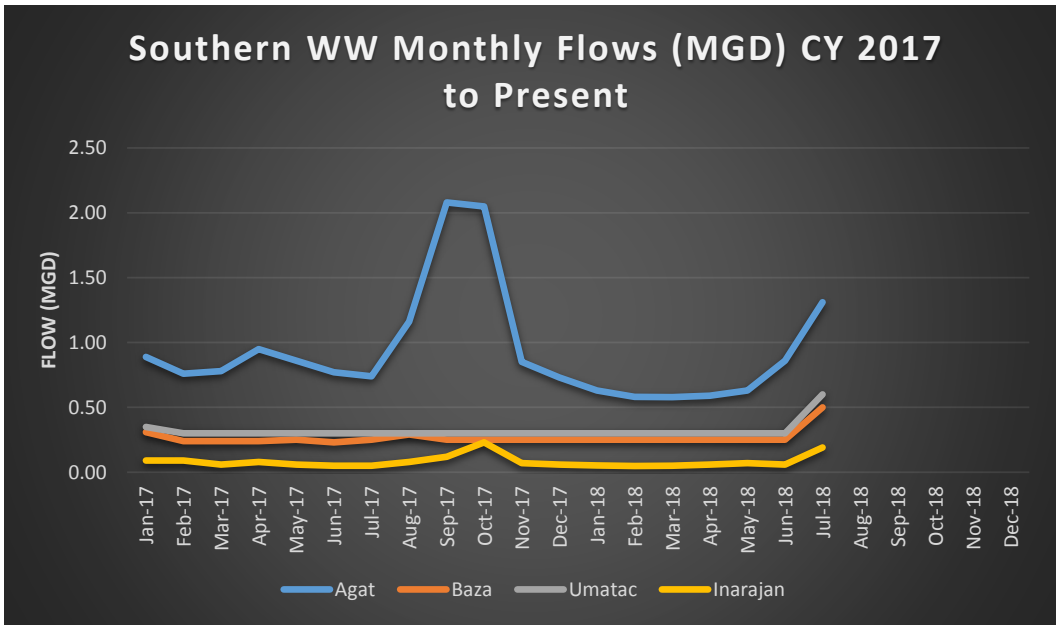
Wastewater Treatment Plant Average Monthy Flows Million Gallons Per Day

2017	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
Jan-17	6.00	5.69	0.89	0.31	0.35	0.09
Feb-17	6.00	5.61	0.76	0.24	0.30	0.09
Mar-17	6.00	5.62	0.78	0.24	0.30	0.06
Apr-17	6.00	5.58	0.95	0.24	0.30	0.08
May-17	5.59	5.26	0.86	0.25	0.30	0.06
Jun-17	6.00	5.36	0.77	0.23	0.30	0.05
Jul-17	5.94	5.33	0.74	0.25	0.30	0.05
Aug-17	6.57	5.77	1.16	0.29	0.30	0.08
Sep-17	6.23	5.84	2.08	0.25	0.30	0.12
Oct-17	6.82	5.96	2.05	0.25	0.30	0.23
Nov-17	6.01	5.78	0.85	0.25	0.30	0.07
Dec-17	5.49	5.79	0.73	0.25	0.30	0.06
2017 Average MGD	**6.05**	**5.63**	**1.05**	**0.25**	**0.30**	**0.09**
2017 Total MGY	2,210	2,056	384	93	111	32

2018	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
Jan-18	4.96	5.10	0.63	0.25	0.30	0.05
Feb-18	5.00	4.51	0.58	0.25	0.30	0.05
Mar-18	4.40	5.20	0.58	0.25	0.30	0.05
Apr-18	5.03	5.12	0.59	0.25	0.30	0.06
May-18	4.93	5.32	0.63	0.25	0.30	0.07
Jun-18	4.67	5.78	0.86	0.25	0.30	0.06
Jul-18	5.12	6.18	1.31	0.50	0.60	0.19
Aug-18						
Sep-18						
Oct-18						
Nov-18						
Dec-18						
2018 Average MGD	**4.87**	**5.32**	**0.74**	**0.29**	**0.34**	**0.08**
2018 Total MGY	1,779	1,940	270	104	125	28

GWA WWT Flow Report 2013 to Present, prepared by kcog/df, 8/6/2018





GWA WWT Flow Report 2013 to Present, prepared by kcog/df, 8/6/2018

GWA Monthly Water Production Report, July-2018

DW	OPS Status as of 7/31/2018	EPA Permit GPM	Jul-Sep 2017 Chlorides Max Allowable @ 250-PPM. NS = DW not in service	EPA Permitted GPM Calculated kgals	Days in OPS	Daily GPM Rdg (avg)	Mnthly Water Prod Daily GPM Rdg (avg)	Daily Pump PSI Rdg (avg)	Daily Xmission Line PSI Rdg (avg)	Wtr Mtr Rdg 6/30/2018	Wtr Mtr Rdg 7/31/2018	Total Water Prod Kgals Jul-2018	Remarks as of 7/31/2018
A01	Grounded motor	216	N/S	0	0	0	0	0	0	Grounded Motor	Grounded Motor	**0**	DG: Defective pressure gages 5/18: A01 secured, grounded motor.
A02	Out of commission	241	N/S	0	0	0	0	0	0	Out of commission	Out of commission	**0**	11/8/2012: A02 secured, pump-motor stuck in well casing, out of commission.
A03	Active	180	22	8035	31	238	10624	106	100	277731825.0	288316518.0	**10585**	
A04	Active	244	88	10892	31	310	13838	34	23	Defective Water Meter	Defective Water Meter	**13838**	4/21/2018: A04 WM defective, esttimated water production @ **310-GPM,** based on actuals from 4/1 thru 4/19 on Apr18PZ
A05	Active	269	47	12008	31	238	10624	75	104	142255374.0	152881210.0	**10626**	DG: Defective pressure gages.
A06	Active	241	70	10758	31	337	15044	58	43	272357820.0	287284306.0	**14926**	Inadequate Chloride Contact Time, sampling taken @ 1st customer
A07	Out of commission	113	N/S	0	0	0	0	0	0	Out of commission	Out of commission	**0**	Jan-2004: HB: A07 DW stuck in well head, redrilling/rehab required.
A08	Active	206	35	9196	31	80	3571	77	50	25028000.0	27782000.0	**2754**	
A09	Active	230	209	10267	31	283	12633	25	21	Illegible Water Meter	Illegible Water Meter	**12633**	Illegible Water Meter. Estimated water production based on actual average of **283-GPM** from the month of May2018 (worksheet "May18PZ")
A10	Active	233	397	10066	30	187	8078	60	46	Defective Water Meter	Defective Water Meter	**8078**	DM: Defective water meter. Estimated GPM based on actuals recorded during the month of July-2016 @ **187-GPM.**
A12	Active	176	N/S	7857	31	176	7857	114	115	Defective Water Meter	Defective Water Meter	**7857**	DM (estimated water production per GEPA permitted value of **176-gpm**), DG: Defective pressure gage.
A13	Active	237	426	10580	31	149	6651	40	38	193697000.0	200427000.0	**6730**	
A14	Active	147	265	6562	31	174	7767	42	45	789837541.8	797721052.8	**7884**	DG: Defective pressure gages.
A15	Active	231	161	10312	31	303	13526	45	46	697619000.0	710940000.0	**13321**	DG: Defective pressure gage.
A17	Active	180	229	8035	31	122	5446	70	DG	249518000.0	254357000.0	**4839**	DG: Defective pressure gage.
A18	Active	229	339	10223	31	234	10446	53	51	926411390.0	936121468.0	**9710**	
A19	Active	138	477	6160	31	264	11785	50	44	85846033.0	97841983.0	**11996**	
A21	Active	213	322	9508	31	270	12053	79	DG	936799000.0	948906000.0	**12107**	DG: Defective pressure gages.
A23	Temporarily secured, pending corrective active on PFOs	317	N/S	0	0	0	0	0	0	Temporarily secured, pending corrective active on PFOs	Temporarily secured, pending corrective active on PFOs	**0**	8/3 thru 8/11: A23 & A25 secured; OPS performing periodic lab sampling and line pressure testings. 8/12/2016: Temporarily secured, pending correction action on PFOs. DG: Defective pressure gages
A25	Temporarily secured, pending corrective active on PFOs	245	N/S	0	0	0	0	0	0	Temporarily secured, pending corrective active on PFOs	Temporarily secured, pending corrective active on PFOs	**0**	8/3 thru 8/11: A23 & A25 secured; OPS performing periodic lab sampling and line pressure testings. 8/12/2016: Temporarily secured; pending correction action on PFOs. DG: Defective pressure gages.
A26	Grounded motor	50	N/S	0	0	0	0	0	0	Grounded Motor	Grounded Motor	**0**	5/5/2012: A26 secured (energy conservation, power source deactivated). 10/27/2017: A26 reactivated back on line @ 1539 hrs. Water production based on 50-GPM. 11/6: A26 secured, grounded motor.

Formulated and compiled by:
J.B.Garrido, GWA Planner III

GWA Monthly Water Production Report, July-2018

DW	OPS Status as of 7/31/2018	EPA Permit GPM	Jul-Sep 2017 Chlorides Max Allowable @ 250-PPM. NS = DW not in service	EPA Permitted GPM Calculated kgals	Days in OPS	Daily GPM Rdg (avg)	Mnthly Water Prod Daily GPM Rdg (avg)	Daily Pump PSI Rdg (avg)	Daily Xmission Line PSI Rdg (avg)	Wtr Mtr Rdg 6/30/2018	Wtr Mtr Rdg 7/31/2018	Total Water Prod Kgals Jul-2018	Remarks as of 7/31/2018
A28	Out of commission	223	N/S	0	0	0	0	0	0	Out of commission	Out of commission	**0**	Jan-2008: A28 secured, exceeded maximum contaminated levels (MCL) for Perchloroethylene (PCE).
A29	Standby	403	N/S	0	0	0	0	0	0	Standby	Standby	**0**	DG: Defective pressure gage. 7/6: A29 activated on line; A30 secured for grounded motor. 7/8: A29 secured & on SB as A30 was activated BOL upon completion of pull out procedures.
A30	Active	755	107	33703	31	795	35489	89	96	670915000.0	705715000.0	**34800**	DG: Defective pressure gages.
A31	Active	293	58	13080	31	369	16472	30	24	351729534.0	368287676.0	**16558**	Inadequate Chloride Contact Time, sampling taken @ 1st customer.
A32	Active	173	34	7723	31	302	13481	40	39	288538869.0	302113913.0	**13575**	Inadequate Chloride Contact Time, sampling taken @ 1st customer.
AG01	Active	250	47	11160	31	179	7991	100	77	293286000.0	300988000.0	**7702**	
AG02	Active	400	35	17856	31	632	28212	69	62	75476529.7	102644139.3	**27168**	
D01	Active	257	88	11472	31	302	13481	10	9	291267000	304501000	**13234**	DG: Defective pressure gages.
D02	Active	187	96	8348	31	223	9955	12	4	191148000	200781000	**9633**	DG: Defective pressure gages.
D03	Out of commission	189	N/S	0	0	0	0	0	0	Out of commission	Out of commission	**0**	Jan-2004: D03, hard-broke, DW stuck in well head, redrilling/rehab required.
D04	Active	172	61	7678	31	270	12053	14	8	427000	11225000	**11874**	**D04 estimated water production: 1076-kgals** (269-kgals per day X 3-days based on average of 7/4 thru 7/31) + **10798-kgals** (WM reading from 6/26 thru 6/30 = **11874-kgals.**
D05	Out of commission	166	N/S	0	0	0	0	0	0	Out of commission	Out of commission	**0**	7/8/2013: D05 secured, grounded motor. Pump & motor unit"stuck" in pump's casing.
D06	Active	189	84	8437	31	214	9553	7	6	822926000	832391000	**9465**	DG: Defective pressure gages.
D07	Active	198	77	8839	31	200	8928	73	72	891304000.0	900214000.0	**8910**	
D08	Active	185	254	8258	31	180	8035	84	59	Defective Water Meter	Defective Water Meter	**8035**	3/8: D08 WM rdgs periodically getting stuck; estimated wtr prod as per actual averages from 3/1 thru 3/8 @ **172-GPM.**
D09	Active	196	191	3105	11	224	3548	71	42	362430000.0	365789000	**3359**	
D10	Standby	351	N/S	0	0	0	0	0	0	Standby	Standby	**0**	12/30/2014: D10 secured, grounded motor; DG: Defective pressure gage. 7/25: D10 pull outs completed; lab samples submitted & on SB.
D11	Active	226	94	5532	17	233	5704	55	54	53903000	58672000.0	**4769**	Inadequate Chloride Contact Time, sampling taken @ 1st customer. 6/12: D11 secured, defective well pump.
D12	Active	188	45	8392	31	209	9330	63	59	19837000.0	29242300.0	**9405**	DG: Defective pressure gages.
D13	Out of commission	172	N/S	0	0	0	0	0	0	Out of commission	Out of commission	**0**	May-2009: D13 secured, high chlorides.
D14	Active	200	76	8928	31	204	9107	68	66	40597300.0	49462400.0	**8865**	
D15	Active	202	230	9017	31	138	6160	58	43	Defective Water Meter	Defective Water Meter	**6160**	9/7: D15 water meter defective, registers periodically and readings stuck; water prod based on actuals from 9/1 thru 9/7 @ **138-GPMs.**
D16	Active	161	85	3478	15	220	4752	50	48	18316000.0	22620000.0	**4304**	DG: Defective pressure gages. 3/28: D16 secured and on standby status.
D17	Active - Contractor test	199	N/S	8883	31	139	6205	63	60	17991510.0	23904365.0	**5913**	Apr-2004: D17 secured, collapsed screen, complete rehab required. 3/30/2018: D17 back on line. DG: Defective pressure gages.
D18	Active - Contractor test	180	N/S	8035	31	220	9821	55	50	32307744.0	41207678.0	**8900**	Dec-1995: D18 secured, collapsed screen, complete rehab required. 3/10/2018: D18 back on line (under contract for rehab).
D19	Active	227	87	10133	31	196	8749	98	69	350021000.0	358530000.0	**8509**	
D20	Active	207	91	9240	31	212	9464	86	79	515911000.0	525277000.0	**9366**	DG: Defective pressure gages.
D21	Active	157	83	7008	31	120	5357	86	74	112095000.0	117255000.0	**5160**	

Formulated and compiled by:
J.B.Garrido, GWA Planner III

GWA Monthly Water Production Report, July-2018

DW	OPS Status as of 7/31/2018	EPA Permit GPM	Jul-Sep 2017 Chlorides Max Allowable @ 250-PPM. NS = DW not in service	EPA Permitted GPM Calculated kgals	Days in OPS	Daily GPM Rdg (avg)	Mnthly Water Prod Daily GPM Rdg (avg)	Daily Pump PSI Rdg (avg)	Daily Xmission Line PSI Rdg (avg)	Wtr Mtr Rdg 6/30/2018	Wtr Mtr Rdg 7/31/2018	Total Water Prod Kgals Jul-2018	Remarks as of 7/31/2018
D22	Active - Contractor test	200	N/S	8928	31	60	2678	49	48	411979.0	3549256.0	**3137**	Feb-2009: D22, secured pending OPS assessment (pumping air issue). 3/27/2018: D22 back on line; under contract to rehab. DG: Defective pressure gages.
D24	Active	180	66	8035	31	194	8660	64	53	169118000.0	177629000.0	**8511**	
D25	Active	400	63	17856	31	398	17767	75	68	947736000.0	965652000.0	**17916**	
D26	Active	250	184	11160	31	256	11428	87	78	260836000.0	272133000.0	**11297**	
D27	Active	400	37	17856	31	472	21070	67	63	1913631862.0	1934925242.0	**21293**	DG: Defective pressure gage.
D28	Standby	200	65	0	0	0	0	0	0	Standby	Standby	**0**	DG: Defective pressure gages. 4/1/2018: D28 found tripped @ 0913 hrs; 4/2, D28 secured grounded motor. 6/1: Pull outs completed pending lab analysis results/report.
EX05	Active	254	59	11339	31	311	13883	16	10	792063000	805666000	**13603**	
EX11	Active	210	63	9374	31	257	11472	50	40	458871000.0	469978000.0	**11107**	
F01	Grounded motor	140	N/S	0	0	0	0	0	0	Grounded Motor	Grounded Motor	**0**	6/7: F01 secured, grounded motor.
F02	Active	121	120	5401	31	121	5401	92	108	Defective Water Meter	Defective Water Meter	**5401**	DG: Defective pressure gage. F02 estimated water production: based on **121-GPM,** GEPA permitted values. DM: Defective water meter
F03	Active	142	N/S	6339	31	207	9240	DG	DG	198919000.0	207865000.0	**8946**	DG: Defective pressure gage.
F04	Active	137	10	6116	31	123	5491	102	108	35372000.0	40591000.0	**5219**	DG: Defective pressure gage.
F05	Grounded motor	145	86	4176	20	190	5472	DG	DG	214835000.0	220522000.0	**5687**	DG: Defective gage
F06	Active	151	N/S	6741	31	209	9330	81	74	43808800.0	50801900.0	**9100**	F06 estimated water production based on **209-GPM**, actuals from 4/1 thru 4/30. Apr18.PZ. **F06 estimated water production: 2107-kgals** (based on average of 209-GPM @ 7-days from 7/ thru 7/7) + **6993-kgals** (WM reading from 7/7 thru 7/31) = **9100-kgals.**
F07	Active	170	88	7589	31	185	8258	94	90	971462000.0	979328000.0	**7866**	
F08	Active	149	29	6651	31	181	8080	71	61	66953300.0	74639500.0	**7686**	
F09	Active	140	67	6250	31	152	6785	65	64	704076202.0	710900934.2	**6825**	
F10	Standby	142	202	0	0	0	0	0	0	Standby	Standby	**0**	3/12/2018: F10 secured and on standby status. 5/31: F10 reactivated BOL. 6/7: F10 secured, grounded motor. 7/25: F10 pull outs completed; lab samples submiited; placed on SB.
F11	Active	148	116	6607	31	168	7500	122	111	89587000.0	96196000.0	**6609**	
F12	Active	148	29	6607	31	198	8839	60	60	420081000.0	428586000.0	**8505**	DG: Defective pressure gage.
F13	Active	380	211	16963	31	285	12722	69	50	213747000.0	218033000.0	**11730**	**F13 estimated water production**: **7742-kgals** (based on average of 272-GPM from 7/1 thru 7/12, x 19 days) + **4286-kgals** (WM reading from 7/13 thru 7/31) = **11730-kgals.**
F15	Active	440	50	19642	31	199	8883	62	39	634305000.0	642889000.0	**8584**	
F16	Active	230	18	10267	31	213	9508	48	42	6918000.0	16129000.0	**9211**	
F17	Active	240	25	10714	31	277	12365	37	36	572202000.0	583953000.0	**11751**	
F18	Active	240	39	10714	31	256	11428	49	41	919661000.0	930464000.0	**10803**	5/29: F18 secured and placed on SB. 6/14: F18 reactivated BOL.
F19	Active	200	172	8928	31	244	10892	58	53	57071000.0	68062000.0	**10991**	
F20	Active	200	201	8928	31	245	10937	62	50	418305000.0	428735000.0	**10430**	
G501	Active	183	124	8169	31	219	9776	41	39	244363000.0	254152000.0	**9789**	
H01	Active	288	159	12856	31	278	12410	47	21	40482700.0	52824400.0	**12342**	
HGC2	Active	444	35	19820	31	592	26427	70	84	233662000.0	258479000.0	**24817**	DG: Defective pressure gages. . 6/17: HGC02 secured, grounded motor. 6/19: HCG02 back on line.
M01	Active	109	170	4866	31	89	3973	40	39	713325000.0	717210000.0	**3885**	

Formulated and compiled by:
J.B.Garrido, GWA Planner III

GWA Monthly Water Production Report, July-2018

DW	OPS Status as of 7/31/2018	EPA Permit GPM	Jul-Sep 2017 Chlorides Max Allowable @ 250-PPM. NS = DW not in service	EPA Permitted GPM Calculated kgals	Days in OPS	Daily GPM Rdg (avg)	Mnthly Water Prod Daily GPM Rdg (avg)	Daily Pump PSI Rdg (avg)	Daily Xmission Line PSI Rdg (avg)	Wtr Mtr Rdg 6/30/2018	Wtr Mtr Rdg 7/31/2018	Total Water Prod Kgals Jul-2018	Remarks as of 7/31/2018
M02	Active	184	85	8214	31	184	8214	39	48	Defective Water Meter	Defective Water Meter	**8214**	DG: Defective pressure gage; DM: Defective water meter. Estimated M02 water production utilizing GEPA permitted GPM @ **184-GPM**.
M03	Active	177	43	7901	31	190	8482	22	18	415036000.0	423548000.0	**8512**	
M04	Active	138	37	5962	30	199	8597	24	23	544678000.0	552923000.0	**8245**	7/25: M04 secured, grounded motor. 7/26: M04 BOL @ 1931 hrs.
M05	Active	176	68	7857	31	214	9553	86	83	Defective Water Meter	Defective Water Meter	**9553**	M05 WM reading stuck @ 388520000; estimated water production @ **214-GPM** based on actuals from 12/1/2017 thru 12/28/2017.
M06	Grounded motor	168	N/S	1935	8	181	2085	67	64	56014000.0	58242000.0	**2228**	DG: Defective pressure gage.
M07	Active	175	59	7812	31	175	7812	98	82	Defective Water Meter	Defective Water Meter	**7812**	Nov-2016: M07 defective water meter, slowly registering. Estimate based on GEPA permitted value of **175-GPM.**
M08	Active	158	39	7053	31	170	7589	17	17	571813000.0	579168000.0	**7355**	DG: Defective pressure gage
M09	Active	162	161	7232	31	151	6741	52	50	22151586.0	29442125.0	**7291**	
M12	Out of commission	104	N/S	0	0	0	0	0	0	Out of commission	Out of commission	**0**	Nov-2010: M12 secured, grounded motor requiring also drill rig to blow-out well.
M14	Out of commission	239	N/S	0	0	0	0	0	0	Out of commission	Out of commission	**0**	Jan-2006: M14 secured, high chlordane.
M15	Active	172	34	7678	31	164	7321	63	74	41160157.0	48438128.4	**7278**	DG: Defective pressure gages.
M17A	Out of commission	202	N/S	0	0	0	0	0	0	Out of commission	Out of commission	**0**	Jan-2004: M17A secured, recorded as hard broke
M17B	Active	354	68	15803	31	276	12321	100	98	Defective Water Meter	Defective Water Meter	**12321**	DG: Defective pressure gage. M17B estimated water production based on **276-GPM,** actuals from 5/1 thru 5/15 on May18PZ. M17B was secured and placed on SB on 6/4 thru 6/5 - 2-days.
M18	Active	300	78	13392	31	201	8973	53	57	Defective Water Meter	Defective Water Meter	**8973**	DG: Defective pressure gage; NOTATE: M18 underpumping permitted GPM value). M18 estimated water production based on actuals from 10/1 thru 10/15 Oct17PZ @ **201-GPM.**
M20A	Active	400	71	17856	31	271	12097	98	46	662897000.0	675104000.0	**12207**	
M21	Active	200	95	8928	31	225	10044	80	72	751262910.0	761407199.6	**10144**	
M23	Active	225	46	10044	31	225	10044	40	34	Defective Water Meter	Defective Water Meter	**10044**	M23 defective water meter. Estimated @ **225-GPM,** GEPA permitted value.
MJ01	Out of commission	56	N/S	0	0	0	0	0	0	Out of commission	Out of commission	**0**	MJ01 last tested to insure proper operations was Feb-2010. Secured due to high chlorine residual reported by Customers being serviced by DW.
MJ05	Out of commission	58	N/S	0	0	0	0	0	0	Out of commission	Out of commission	**0**	MJ05 last tested to insure proper operations was Feb-2010. Secured due to high chlorine residual reported by Customers being serviced by DW.
NAS01	Active	200	N/S	8640	30	239	10325	54	36	82704000.0	92828000.0	**10124**	7/30: NAS01 temporarily secured @ 1315 hrs for repairs.
Y01	Standby	141	N/S	0	0	0	0	0	0	Standby	Standby	**0**	DG: Defective pressure gage. Y01 secured on 6/20/2016, grounded motor. 7/25: Y01 pull outs completed; lab samples submiited; placed on SB.
Y02	Standby	161	47	2550	11	200	3168	79	73	Defective Water Meter	Defective Water Meter	**3168**	Y02 estimated water production based on **200-GPM,** actuals from 4/1 thru 4/22 on Apr18.PZ. 7/11: Y02 secured and on SB status.
Y03	Active	138	44	6160	31	165	7366	101	96	115837000.0	123134000.0	**7297**	

Formulated and compiled by:
J.B.Garrido, GWA Planner III

GWA Monthly Water Production Report, July-2018

DW	OPS Status as of 7/31/2018	EPA Permit GPM	Jul-Sep 2017 Chlorides Max Allowable @ 250-PPM. NS = DW not in service	EPA Permitted GPM Calculated kgals	Days in OPS	Daily GPM Rdg (avg)	Mnthly Water Prod Daily GPM Rdg (avg)	Daily Pump PSI Rdg (avg)	Daily Xmission Line PSI Rdg (avg)	Wtr Mtr Rdg 6/30/2018	Wtr Mtr Rdg 7/31/2018	Total Water Prod Kgals Jul-2018	Remarks as of 7/31/2018
Y04	Active	180	68	8035	31	224	9999	110	DG	160962000.0	170642000.0	**9680**	3/10: Y04 secured @ 800 hrs; grounded motor. 6/17: Y04 back on line.
Y05	Standby	148	91	0	0	0	0	0	0	Standby	Standby	**0**	5/27: Y05 secured, grounded motor. Jun-2018: Y05 pullouts procedures completed and placed on SB status.
Y06	Active	136	37	6071	31	222	9910	41	66	904679000.0	914272000.0	**9593**	DG: Defective pressure gage.
Y07	Active	514	44	22945	31	491	21918	99	88	Defective Water Meter	Defective Water Meter	**21918**	2/2: Y07 WM defective; estimated GPMs based on actual average of **491-GPM** on Jan18PZ
Y09	Active	472	43	21070	31	532	23748	99	99	969028439.0	992727088.7	**23699**	
Y10	Active	250	66	11160	31	228	10178	71	65	496975000.0	506343000.0	**9368**	
Y12	Active	235	77	10490	31	303	13526	61	DG	754771000.0	767904000.0	**13133**	DG: Defective pressure gage.
Y14	Active	400	83	13248	23	475	15732	86	70	Defective Water Meter	Defective Water Meter	**15732**	4/6: Y14 secured, grounded motor. 5/23: Y14 BOL. 6/118: Y14 tripped; secured on 6/19, defective well pump. 7/7: Y14 back on line @ 1823 hrs. Estimated water production from 7/8 thru 7/31 based on water meter readings actuals @ 475-GPM daily.
Y15	Active	600	38	26784	31	792	35355	90	83	537089169.0	568948292.5	**31859**	
Y16	Active	200	50	8928	31	404	18035	87	34	149992000.0	167489000.0	**17497**	
Y17	Active	300	46	13392	31	310	13838	36	33	142791000.0	156437000.0	**13646**	
Y18	Active	250	52	11160	31	307	13704	72	85	328446000.0	341733000.0	**13287**	DG: Defective pressure gage.
Y19	Active	500	43	20880	29	647	27019	117	103	Defective Water Meter	Defective Water Meter	**27019**	**3/23:** Y19 WM reported as defective by Rover; estimated GPM based on actuals from 3/1 thru 3/22, averaging @ **647-GPM.** 7/30: Y15 secured, grounded motor. 7/31: Y15 back on line @ 2258 hrs.
Y20	Active	500	55	22320	31	702	31337	109	101	645544000.0	676226000.0	**30682**	
Y21	Active	350	48	15624	31	490	21874	101	91	341203000.0	362548000.0	**21345**	
Y22	Active	300	27	13392	31	346	15445	60	55	438321000.0	453344000.0	**15023**	
Y23	Active	300	34	13392	31	286	12767	69	62	436649000.0	449028000.0	**12379**	
				1,021,565			**1,117,584**					**1,093,214**	

Other (Sprs or WTP)	OPS Status	EPA Permit GPM	Jul-Sep 2016 Chlorides Max Allowable @ 250-PPM.	EPA Permit kgals	OPS Days Standby or Active	Daily GPM Rdg (avg)	Mnthly Water Prod Daily Rdg (avg)	Daily PSI Rdg (avg)	N/A	Total Water Prod Kgals	Remarks
Santa Rita Springs	Active	N/A	43	N/A	0	**N/A**	N/A	N/A	N/A	**0**	Santa Rita Water Reservoir being by-passed; Navy water supply directly fed into Agat Santa Rita water supply system. In addition, Spring Water compartment flow meter out of service. Refer to **"Jul18.SRS"** worksheet for more information.
Ugum Wtr Trmt Plant	Active	N/A	46	N/A	31	**N/A**	N/A	N/A	N/A	**58142**	Ugum Water Treatment Plant: Water Prod based from production of raw water pump to finished water production. Totals formulated by Mr. Kyle Taimanglo, Ugum Water Treatment Plant Operations Leader (refer to **"Jul18.UgumWTP"** worksheet).
Maui Well	Active	N/A	116	N/A	31	**N/A**	N/A	N/A	N/A	**32258**	NOTE: Includes Ron Topasna's Report on the Maui Well water production data as of 8/13/2018 (refer to Tumon Maui Well July 2018 System Operation.XLS)
										1,183,615	

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GWA Monthly Water Production Report, July-2018

DW	OPS Status as of 7/31/2018	EPA Permit GPM	Jul-Sep 2017 Chlorides Max Allowable @ 250-PPM. NS = DW not in service	EPA Permitted GPM Calculated kgals	Days in OPS	Daily GPM Rdg (avg)	Mnthly Water Prod Daily GPM Rdg (avg)	Daily Pump PSI Rdg (avg)	Daily Xmission Line PSI Rdg (avg)	Wtr Mtr Rdg 6/30/2018	Wtr Mtr Rdg 7/31/2018	Total Water Prod Kgals Jul-2018	Remarks as of 7/31/2018
	ICCT=Inadequate Chloride Contact Time, sampling taken @ 1st customer; DM=Defective Water Meter (Requirements: refer to 10GCA, Chapter 46); IM=Illegible Water Meter; DG=Defective Pressure Gage; DW=Deep Well; WM=Water Meter; BOL="back on line". NOTE: ns = Deep Well unit was secured during scheduled lab sampling (column D). PFO=Perfluorooctane Sulfonate (ref: A23, A25 & NAS01 Deep Wells)												

DW Status as of 7/31/2018		
Active	95	
Grounded motor	5	A01-A26-F01-F05-M06
Out of commission	11	A02-A07-A28-D03-D05-D13-M12-M14-M17A-MJ01-MJ05
Secured, PFOs	2	A23-A25
Standby	7	A29-D10-D28-F10-Y01-Y02-Y05
TOTAL	120	

Formulated and compiled by:
J.B.Garrido, GWA Planner III

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671) 648-3002 | guamccu.org

GUAM WATERWORKS AUTHORITY WORK SESSION
CCU Conference Room
4:30 p.m., Tues., Sept. 18, 2018

***AMENDED AGENDA**

1. **ISSUES FOR DECISION**
   - **1.1** **Relative to Approval of the Talofofo Sewer Improvement Project / Resolution No. 50-FY2018**
   - **1.2** **Relative to Approval of the Contract Extension to the Well Rehabilitation and New Well Design with GHD, Inc. / Resolution No. 51-FY2018**
   - **1.3** **Relative to Approval of the Change Order for the Baza Gardens Wastewater Cross-Island Pumping and Conveyance Phase I and II Contract / Resolution No. 52-FY2018**

2. **GM REPORT**
   - **2.1** **GM Summary**

3. **ISSUES FOR DISCUSSION**
   - ***3.1** **Relative to the Write-off of Guam Waterworks Authority Receivables Determined to be Uncollectible**

4. **DIVISION REPORTS**
   - **4.1** **Communications**
   - **4.2** **Compliance & Safety**
   - **4.3** **Customer Service**
   - **4.4** **Engineering**
   - **4.5** **Finance**
   - **4.6** **Operations**

5. **ANNOUNCEMENTS**
   - **5.1** **Next CCU Meetings: GPA WS 9/20/18; CCU Meeting: 9/25/18**

6. **ADJOURNMENT**

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 50-FY2018
Relative to Contract Approval for the Talofofo Sewer Improvements Project

What is the project's objective and is it necessary and urgent?
The objective of the project is to provide new sewer pump stations and associated piping improvements to service an area of gravity sewer piping which was never properly connected to GWA's wastewater system. In doing so, GWA would eliminate the need to provide both contractor and in-house pumper trucks, other equipment and manpower, three to five times per week just to remove wastewater from a portion of the collection system for which complete the installation of necessary sewer pumping stations did not occur. For decades GWA has had to continue this pumping activity, which is highly inefficient and costly to all sewer rate payers. The construction of the sewer pump stations will allow for more adjacent lots to connect onto the existing gravity system as well as improve the operations of the collection system in Talofofo.

Where is the location?
The new SPS will be located on Chalan Kanton Ladera Street, Leonardo Tenorio Street, E. Johnny S. Taitague Street, and Chalan Ayuyu in the village of Talofofo.

How much will it cost?
The total lowest bid proposal submitted was Two Million Four Hundred Eleven Thousand Four Hundred Eighteen Dollars ($2,411,418.00). GWA management further seeks on top of the total bid proposal a ten percent (10%) contingency of Two Hundred Forty-One Thousand One Hundred Forty-One Dollars and Eighty Cents ($241,141.80), to bring the total authorized funding amount to Two Million Six Hundred Fifty-Two Thousand Five Hundred Fifty-Nine Dollars and Eighty Cents ($2,652,559.80).

When will it be completed?
The contract period is 450 calendar days from NTP thus the completion of the project is potentially February 2020.

What is the funding source?
Funding for this project will be from the USEPA State Revolving Fund and, if necessary, GWA Bond funds and SDC funds applicable to this project.

The RFP/BID responses (if applicable):
Nine (9) companies picked up bid packages. Four (4) bids were submitted August 22, 2018.

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

GWA RESOLUTION NO. 50-FY2018

RELATIVE TO CONTRACT APPROVAL FOR THE TALOFOFO SEWER IMPROVEMENT PROJECT; S16-004-EPA

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual, and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA has received a grant from USEPA, under the State Revolving Fund (SRF) program, to make improvements to the GWA wastewater collection system; and

WHEREAS, the development of infrastructure made by the Government of Guam in the Village of Talofofo in the 1990's included the installation of roads, water and sewer pipelines, and power lines; and

WHEREAS, funds during the 1990s Talofofo infrastructure improvements were depleted prior to the construction of five wastewater pump stations; and

WHEREAS, GWA has been required to provide both contracted and in-house pumper truck service, other equipment and manpower, three to five times per week over the past twenty-plus years, which has been determined to be inefficient and costly to pump-out the accumulated wastewater and transport it to the closest receiving facility; and

WHEREAS, the frequent operation of mobile wastewater pumping and hauling, and the occasional spilling of wastewater, is an unacceptable nuisance and potential health risk to the residents of Talofofo, and an excessive operational expense for GWA; and

WHEREAS, Pump stations will enable the future construction of homes on the numerous vacant lots in the village to be connected to the sewer system; and

WHEREAS, USEPA has granted SRF funding to construct five (5) wastewater pump stations, which will eliminate the potential health risks and costs associated with mobile pumping and hauling; and

WHEREAS, in April 2016 GWA issued an RFP to procure engineering design services, and in July 2016, CCU resolution 50-FY2016 authorized GWA to enter into a contract with EMPSCO Engineering Consultants to design five new pump stations; and

WHEREAS, in August 2016, GWA executed a contract with EMPSCO as the Design Engineer to provide plans and specifications in order to offer for bidding the construction of the five pump stations; and

WHEREAS, on June 19, 2018, GWA advertised the Invitation to Bid (IFB-07-ENG-2018) for the Talofofo Sewer Improvement project soliciting bids from experienced and responsive contractors to perform the work found in the plans and specifications; and

WHEREAS, on August 22, 2018, GWA received four bids (SEE EXHIBIT A – Abstract of Bids) before the bid proposal deadline; and

WHEREAS, the project Design Engineer, in conjunction with GWA, analyzed the bid proposals and determined that Giant Construction Corporation submitted the lowest responsive and responsible bid and met all the bid requirements set forth by GWA (SEE EXHIBIT B – Evaluation of Bids); and

DRAFT

WHEREAS, GWA discovered a mathematical error in Giant Construction Corporation's bid proposal in the amount of Forty-Seven Thousand Seven Hundred Dollars ($47,700.00), which results in a corrected bid amount of Two Million Four Hundred Eleven Thousand Four Hundred Eighteen Dollars ($2,411,418.00), as confirmed by Giant Construction Corporation (SEE EXHIBIT C –Bid Confirmation); and

WHEREAS, GWA seeks CCU approval of the total bid proposal in the amount of Two Million Four Hundred Eleven Thousand Four Hundred Eighteen Dollars ($2,411,418.00); and

WHEREAS, GWA further seeks CCU approval of the total bid proposal in the amount of Two Million Four Hundred Eleven Thousand Four Hundred Eighteen Dollars ($2,411,418.00) plus a ten percent (10%) contingency of Two Hundred Forty-One Thousand One Hundred Forty-One Dollars and Eighty Cents ($241,141.80), to bring the total authorized funding amount to Two Million Six Hundred Fifty-Two Thousand Five Hundred Fifty-Nine Dollars and Eighty Cents ($2,652,559.80); and

WHEREAS, funding for this project will be from the USEPA State Revolving Fund and, if necessary, GWA Bond funds and/or SDC funds applicable to this project; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms and conditions set by GWA relative to commencement of work activities are fair and reasonable, and serve as a measure of Quality Assurance/Quality Control (QA/QC).
3. The CCU hereby authorizes GWA to accept the confirmed bid proposal from Giant Construction Corporation (EXHIBIT C).
4. The CCU further authorizes GWA to enter into a contract with Giant Construction Corporation in the amount of Two Million Four Hundred Eleven Thousand Four Hundred Eighteen Dollars ($2,411,418.00).
5. The CCU further authorizes the funding total of Two Million Four Hundred Eleven Thousand Four Hundred Eighteen Dollars ($2,411,418.00), plus a ten

percent (10%) contingency of Two Hundred Forty-One Thousand One Hundred Forty-One Dollars and Eighty Cents ($241,141.80), for a total authorized funding amount of Two Million Six Hundred Fifty-Two Thousand Five Hundred Fifty-Nine Dollars and Eighty Cents ($2,652,559.80).

6. The CCU further authorizes the funding for this project will be from the USEPA State Revolving Fund and, if necessary, GWA Bond funds and/or SDC funds applicable to this project.

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 25th day of September, 2018.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS **J. GEORGE BAMBA**
Chairperson Secretary

SECRETARY'S CERTIFICATE

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

///

ORIGINAL

GUAM WATERWORKS AUTHORITY
ABSTRACT OF BIDS

Project Name: **TALOFOFO SEWER IMPROVEMENT**

Bid Opening Date: August 22, 2018
Time: 3:00 p.m.

Project Number: S16-004-EPA IFB NO.: IFB-07-ENG-2018

	Qualified Bidders Name	Section A-5 Bid Bond	CERTIFICATIONS								Addendum					Base Bid Amount
			Qualifications Statement	Non-Collusion Affidavit	EEO Certification	Non-Segregated Facilities	Sex Offender Certification	Wage & Benefit Determination	Major Shareholders Affidavit	Special Instructions to Bidders	1	2	3	4	5	
1.	MEGA UNITED CORPORATION	First Nat Insurance Company 15% of total bid amount	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	$ 2,689,358.00
2.	KORANDO CORPORATION	Lexson Insurance Company 15% of total Bid Amount	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	$ 3,293,891.00
3.	PROPACIFIC BUILDER CORPORATION	No Bid Submitted														
4.	INFRATECH INTERNATIONAL, LLC	No Bid Submitted														
5.	CORE TECH INTERNATIONAL CORP.	No Bid Submitted														
6.	GIANT CONSTRUCTION CORPORATION	Pacific Indemnity Ins. Comp. 15% of Ref. Bid	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	$ 2,363,718.00
7.	BME & SONS INC.	Fidelity and Deposit Corp of Maryland 15% Acc of Bid	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	$ 3,852,546.93
8.	ORION CONSTRUCTION CORPORATION	No Bid Submitted														
9.	IAN CORPORATION	No Bid Submitted														
	GWA Estimate															$ 9,569,053.24

Bids Opened and Read by:
GLORIA P. BENSAN
(Name and Signature)

Tabulated By:
RYCHA CARINO
(Name and Signature)

GWA Procurement Representative:
CHUNG, FHCNLL
(Name and Signature)
V. Heacock

Witnesses:
Mega United Corp.
BME & Sons, Inc.
EMPSCO

JACK Kim (KORANDO)
JACOB MILLER

GWA Work Session - September 18, 2018 - ISSUES FOR DECISION

Exhibit A (1 of 1)

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ENGINEERING MANAGEMENT & PLANNING SERVICES CORPORATION
1998 ARMY DRIVE, ROUTE 16, 2/F EMPSCO BLDG., DEDEDO, GUAM 96929 □ PO BOX 21794 GMF, BARRIGADA, GU 96921 □ TEL (671) 6384716 /6385716 □ FAX (671) 6382136

EXHIBIT B (1 of 20)

EVALUATION OF BID

Project name: Talofofo Sewer Improvement Date: September 6, 2018
Project Number: S16-004-EPA
IFB NO. : ifb-07-ENG-2018

Purpose of Bid evaluation

The main purpose of this bid evaluation is to determine the lowest substantially responsive bid among the bids submitted. A tabulation of bid amount of all qualified bidders is created to determine the lowest substantially responsive bidder. See Next page for tabulation.

Bid opening

1. Bid opening was held on August 22, 2018, 3:00 PM at GWA Gayu Conference room, Room 201.
2. All requirements of the bid have been submitted by all Bidders.
3. All bid submissions by all Bidders include all the required bidding forms submitted as part of the bid package.

Bid evaluation:

1. Best Evaluated Bid: Key finding pertained to the lowest substantially responsive evaluated bidder.
   Lowest Bidders = GIANT CONSTRUCTION CORPORATION
   Base Bid amount = $ 2,363,718.00

2. Engineering Estimate (GWA Estimate) = $ 2,569,053.24

3. Calculated discrepancy by GIANT CONSTRUCTION CORPORATION
   a. Base Bid amount = $ 2,363,718.00
   b. Correct base Bid amount = $ 2,411,418.00 (based on Total amount of Base bid, Refer to Tabulation)
   c. Difference = $ 47,700.00
   d. 0.65% below the Engineering Estimate

4. Despite discrepancy, the correct base bid amount by GIANT CONSTRUCTION CORPORATION is **LOWER THAN** the bid amount submitted by MEGA UNITED CORPORATION.

Exhibit B (2 of 20)

TALOFOFO SEWER IMPROVEMENT
GWA Project No. S16-004-EPA
BID PRICE COMPARISION

				ENG'S ESTIMATE	CONTRACTORS				
No.	Description	Qty	Unit	GWA Estimate	BME & Sons	Giant Construction Corporation	Korando Corporation	Mega United Corporation	Remarks/ Comments
I. BASE BID - CHALAN KANTON LADERA STREET STATION 1									
	General Requirements								
1.	Mobilization and Demobilization to include @ 8-in Pneumatic Pipe Plugs w 3/16-in eyebolt for removal and ¼-in threaded inflation valve; Cherne Inc. Part 041386 or equal	1	LS	$ 20,157.43	$ 21,854.46	$ 22,800.00	$ 20,000.00	$ 15,185.00	
2.	Insurance and Bonds	1	LS	$ 9,731.86	$ 36,909.17	$ 28,800.00	$ 23,000.00	$ 26,060.00	
3.	Permits	1	LS	$ 3,041.15	$ 13,659.04	$ 4,300.00	$ 10,000.00	$ 10,000.00	
	Civil and Structural Works								
4.	Restoration of Asphalt Concrete Pavement including removal and disposal of existing asphalt.	178	SY	$ 4,392.83	$ 3,647.22	$ 2,670.00	$ 3,916.00	$ 3,560.00	
5.	3" Thick Asphaltic concrete trench patch paving with CSS-1h prime coat, complete.	178	SY	$ 11,439.73	$ 26,744.50	$ 14,240.00	$ 15,842.00	$ 25,810.00	
6.	Installation of new 8" diameter polyvinyl chloride (PVC) gravity main pipe including excavation, sand bedding material, backfill, basecourse material and compaction, fittings, warning/ identification tape, cleaning, connection to existing manhole, hydrostatic testing, disposal and all incidentals complete in place.	21	LF	$ 7,488.86	$ 15,182.37	$ 4,410.00	$ 11,550.00	$ 3,150.00	
7.	New 4" diameter polyvinyl chloride (PVC) forcemain pipe including excavation, sand bedding material, flowable fill, basecourse material and compaction, fittings, warning/ identification tape, cleaning, connection to existing manholes, hydrostatic testing and all incidentals complete in place.	780	LF	$ 42,191.11	$ 112,226.40	$ 50,700.00	$ 51,480.00	$ 117,000.00	

Exhibit B (3 of 20)

TALOFOFO SEWER IMPROVEMENT
GWA Project No. S16-004-EPA
BID PRICE COMPARISION

				ENG'S ESTIMATE	CONTRACTORS				
No.	Description	Qty	Unit	GWA Estimate	BME & Sons	Giant Construction Corporation	Korando Corporation	Mega United Corporation	Remarks/ Comments
8.	Standard Sanitary Sewer Manhole with 30" manhole frame and cover, precast concrete, including reinforced concrete base, precast concrete riser and cone, flexible pipe seals and connectors, grade adjustment rings, frame and cover, epoxy coating, channeling, testing, temporary erosion control measures, traffic control work, incidental and all necessary labor, material and equipment, complete in place.	1	EA	$ 26,093.59	$ 11,704.05	$ 8,600.00	$ 16,000.00	$ 13,500.00	
9.	2" Combination Air Release Valve including 24" diameter reinforced concrete or polyvinyl chloride (PVC) C-900 stand pipe, 4' depth, concrete footing base, 3/4" gravel, manhole ring and cover, concrete collar and all incidental complete in place.	1	EA	$ 3,677.12	$ 7,168.46	$ 5,300.00	$ 4,500.00	$ 5,500.00	

Exhibit B (4 of 20)

TALOFOFO SEWER IMPROVEMENT
GWA Project No. S16-004-EPA
BID PRICE COMPARISION

				ENG'S ESTIMATE	CONTRACTORS				
No.	Description	Qty	Unit	GWA Estimate	BME & Sons	Giant Construction Corporation	Korando Corporation	Mega United Corporation	Remarks/ Comments
10.	Concrete valve box, 7ft x 7ft x 4ft interior dimension including basecourse, backfill and compaction, valve box metal frame and cover and all necessary materials, labor and equipment, complete in place.	1	EA	$ 12,889.60	$ 22,577.69	$ 28,000.00	$ 35,000.00	$ 8,250.00	
11.	8' x 8' Concrete masonry wall for Electrical panels including basecourse, wall footing with reinforcement, 4" thick slab on grade with welded wire fabric reinforcing, concrete bond beam and all necessary materials, labor and equipment, complete in place.	86	SF	$ 11,452.23	$ 7,283.34	$ 7,740.00	$ 34,400.00	$ 2,580.00	
12.	New 8' high chainlink fence and double gate including barbed wire, barbed wire extension arm, concrete foundation and all necessary materials, labor and equipment, complete in place.	12	LF	$ 10,713.95	$ 2,950.32	$ 3,000.00	$ 10,800.00	$ 3,000.00	
13.	Wet well concrete collar including basecourse and compaction, reinforcement, concrete, forms and incidental complete in place.	11	SY	$ 5,154.02	$ 4,222.02	$ 5,720.00	$ 29,700.00	$ 2,200.00	
14.	24 Hours Bypass pumping	1	LS	$ 8,768.66	$ 8,536.90	$ 9,800.00	$ 12,000.00	$ 2,500.00	
15.	USEPA and GWA Project signs, complete	2	EA	$ 3,000.00	$ 11,610.18	$ 2,600.00	$ 6,000.00	$ 1,000.00	
	Mechanical and Plumbing Works								
16.	Pre-engineered package type lift station including but not specifically limited to fiberglass wet well, stainless steel guide bars, stainless steel upper guide bar bracket, stainless steel cable holder hook, ladder, integral safe hatch aluminum access cover, easy lift pump retrieval system, vent pipe and all incidental required to complete the work.	1	SET	$ 149,527.45	$ 170,799.21	$ 98,000.00	$ 110,000.00	$ 147,479.17	

Exhibit B (5 of 20)

TALOFOFO SEWER IMPROVEMENT
GWA Project No. S16-004-EPA
BID PRICE COMPARISION

				ENG'S ESTIMATE	CONTRACTORS				
No.	Description	Qty	Unit	GWA Estimate	BME & Sons	Giant Construction Corporation	Korando Corporation	Mega United Corporation	Remarks/ Comments
17.	New submersible pumps including but not specifically limited to discharge pipe and fittings, check valves, gate valves, start-up testing, training and all incidental required to complete the work.	2	SET	$ 84,636.15	$ 99,775.05	$ 56,000.00	$ 170,000.00	$ 55,100.46	
	Electrical Works								
18.	Electrical works including new conduits, boxes, wire gutters, wires, cables and devices, electrical panel, pump controller and software, cellular autodialer, level float switches, level transducer, motion-sensor exterior light, quick connect outlets, manual transfer switch and all incidental required to complete the work.	1	LS	$ 85,010.37	$ 158,163.09	$ 52,500.00	$ 55,000.00	$ 84,505.67	
	TOTAL BASE BID ITEM NO. I (Items 1 through 18)			**$ 499,366.11**	**$ 735,013.47**	**$ 405,180.00**	**$ 619,188.00**	**$ 526,380.30**	

TALOFOFO SEWER IMPROVEMENT
GWA Project No. S16-004-EPA
BID PRICE COMPARISION

Exhibit B (6 of 20)

				ENG'S ESTIMATE	CONTRACTORS				
No.	Description	Qty	Unit	GWA Estimate	BME & Sons	Giant Construction Corporation	Korando Corporation	Mega United Corporation	Remarks/ Comments
II. BASE BID - LEONARDO TENORIO STREET									
	General Requirements								
1.	Mobilization and Demobilization	1	LS	$ 18,921.24	$ 13,659.04	$ 26,500.00	$ 24,000.00	$ 15,185.00	
2.	Insurance and Bonds	1	LS	$ 9,839.04	$ 39,324.69	$ 31,600.00	$ 28,000.00	$ 26,060.00	
3.	Permits	1	LS	$ 3,074.64	$ 13,659.04	$ 53,000.00	$ 12,000.00	$ 10,000.00	
	Civil and Structural Works								
4.	Restoration of Asphalt Concrete Pavement including removal and disposal of existing asphalt.	194	SY	$ 3,908.67	$ 3,975.06	$ 2,910.00	$ 4,268.00	$ 3,880.00	
5.	3" Thick Asphaltic concrete trench patch paving with CSS-1h prime coat, complete	194	SY	$ 12,468.02	$ 29,148.50	$ 15,520.00	$ 17,266.00	$ 28,130.00	
6.	New 8" diameter polyvinyl chloride (PVC) gravity main pipe including excavation, sand bedding material, backfill, basecourse material and compaction, fittings, warning/ identification tape, cleaning, connection to existing manhole, hydrostatic testing, disposal and all incidentals complete in place.	32	LF	$ 8,653.82	$ 23,244.48	$ 10,560.00	$ 16,800.00	$ 4,800.00	
7.	New 4" diameter polyvinyl chloride (PVC) forcemain pipe including excavation, sand bedding material, flowable fill, basecourse material and compaction, fittings, warning/ identification tape, cleaning, connection to existing manholes, hydrostatic testing and all incidentals complete in place.	579	LF	$ 34,650.56	$ 86,629.98	$ 38,214.00	$ 38,214.00	$ 86,850.00	
8.	Standard Sanitary Sewer Manhole with 30" manhole frame and cover, precast concrete, including reinforced concrete base, precast concrete riser and cone, flexible pipe seals and connectors, grade adjustment rings, frame and cover, epoxy coating, channeling, testing, temporary erosion control measures, traffic control work, incidental and all necessary labor, material and equipment, complete in place.	1	EA	$ 26,093.59	$ 12,530.88	$ 9,800.00	$ 16,000.00	$ 13,500.00	

Exhibit B (7 of 20)

TALOFOFO SEWER IMPROVEMENT
GWA Project No. S16-004-EPA
BID PRICE COMPARISION

				ENG'S ESTIMATE	CONTRACTORS				
No.	Description	Qty	Unit	GWA Estimate	BME & Sons	Giant Construction Corporation	Korando Corporation	Mega United Corporation	Remarks/ Comments
9.	2" Combination Air Release Valve including 24" diameter reinforced concrete or polyvinyl chloride (PVC) C-900 stand pipe, 4' depth, concrete footing base, 3/4" gravel, manhole ring and cover, concrete collar and all incidental complete in place.	1	EA	$ 3,677.12	$ 7,168.46	$ 5,300.00	$ 4,500.00	$ 5,500.00	
10.	Concrete valve box, 7ft x 7ft x 4ft interior dimension including basecourse, backfill and compaction, valve box metal frame and cover and all necessary materials, labor and equipment, complete in place.	1	EA	$ 12,889.60	$ 22,577.69	$ 28,000.00	$ 35,000.00	$ 8,250.00	

Exhibit B (8 of 20)

TALOFOFO SEWER IMPROVEMENT
GWA Project No. S16-004-EPA
BID PRICE COMPARISION

				ENG'S ESTIMATE	CONTRACTORS				
No.	Description	Qty	Unit	GWA Estimate	BME & Sons	Giant Construction Corporation	Korando Corporation	Mega United Corporation	Remarks/ Comments
11.	8' x 8' Concrete masonry wall for Electrical panels including basecourse, wall footing with reinforcement, 4" thick slab on grade with welded wire fabric reinforcing, concrete bond beam and all necessary materials, labor and equipment, complete in place.	86	SF	$ 11,452.23	$ 6,812.92	$ 7,740.00	$ 34,400.00	$ 3,010.00	
12	New 8' high chainlink fence and double gate including barbed wire, barbed wire extension arm, concrete foundation and all necessary materials, labor and equipment, complete in place.	12	LF	$ 10,713.95	$ 2,950.32	$ 3,000.00	$ 10,800.00	$ 3,000.00	
13.	Wet well concrete collar including basecourse and compaction, reinforcement, concrete, forms and incidental complete in place.	11	SY	$ 5,154.02	$ 4,222.02	$ 5,720.00	$ 29,700.00	$ 2,200.00	
14.	24 Hours Bypass pumping	1	LS	$ 8,768.66	$ 6,146.57	$ 10,500.00	$ 12,000.00	$ 2,500.00	
	Mechanical and Plumbing Works								
15.	Pre-engineered package type lift station including but not specifically limited to fiberglass wet well, stainless steel guide bars, stainless steel upper guide bar bracket, stainless steel cable holder hook, ladder, integral safe hatch aluminum access cover, easy lift pump retrieval system, vent pipe and all incidental required to complete the work.	1	SET	$ 164,754.80	$ 239,816.86	$ 185,800.00	$ 125,000.00	$ 147,479.17	
16.	New submersible pumps including but not specifically limited to discharge pipe and fittings, check valves, gate valves, start-up testing, training and all incidental required to complete the work.	2	SET	$ 84,636.15	$ 104,159.60	$ 59,000.00	$ 170,000.00	$ 85,243.00	

Exhibit B (9 of 20)

TALOFOFO SEWER IMPROVEMENT
GWA Project No. S16-004-EPA
BID PRICE COMPARISION

				ENG'S ESTIMATE	CONTRACTORS				
No.	Description	Qty	Unit	GWA Estimate	BME & Sons	Giant Construction Corporation	Korando Corporation	Mega United Corporation	Remarks/ Comments
17.	Electrical works including new conduits, boxes, wire gutters, wires, cables and devices, electrical panel, pump controller and software, cellular autodialer, level float switches, level transducer, motion-sensor exterior light, quick connect outlets, manual transfer switch and all incidental required to complete the work.	1	LS	$ 85,209.79	$ 167,087.70	$ 56,200.00	$ 55,000.00	$ 94,506.00	
	TOTAL BASE BID ITEM NO. II (Items 1 through 17)			**$ 504,865.90**	**$ 783,113.81**	**$ 549,364.00**	**$ 632,948.00**	**$ 540,093.17**	Giant indicated the sum of $501,664 in his bid

Exhibit B (10 of 20)

TALOFOFO SEWER IMPROVEMENT
GWA Project No. S16-004-EPA
BID PRICE COMPARISION

				ENG'S ESTIMATE	CONTRACTORS				
No.	Description	Qty	Unit	GWA Estimate	BME & Sons	Giant Construction Corporation	Korando Corporation	Mega United Corporation	Remarks/ Comments
III. BASE BID - E. JOHNNY S. TAITAGUE STREET									
	General Requirements								
1.	Mobilization and Demobilization	1	LS	$ 19,550.09	$ 13,659.04	$ 27,400.00	$ 20,000.00	$ 15,185.00	
2.	Insurance and Bonds	1	LS	$ 10,166.04	$ 38,880.87	$ 35,000.00	$ 25,000.00	$ 26,060.00	
3.	Permits	1	LS	$ 3,176.83	$ 13,659.04	$ 5,800.00	$ 13,000.00	$ 10,000.00	
	Civil and Structural Works								
4.	Restoration of Asphalt Concrete Pavement including removal and disposal of existing asphalt.	162	SY	$ 3,414.41	$ 3,319.38	$ 2,430.00	$ 3,564.00	$ 3,240.00	
5.	3" Thick Asphaltic concrete trench patch paving with CSS-1h prime coat, complete	162	SY	$ 10,411.44	$ 24,340.50	$ 12,960.00	$ 14,418.00	$ 23,490.00	
6.	New 8" diameter polyvinyl chloride (PVC) gravity main pipe including excavation, sand bedding material, backfill, basecourse material and compaction, fittings, warning/ identification tape, cleaning, connection to existing manhole, hydrostatic testing, disposal and all incidentals in place, complete in place.	60	LF	$ 10,091.15	$ 25,984.80	$ 14,400.00	$ 31,500.00	$ 9,000.00	
7.	New 4" diameter polyvinyl chloride (PVC) forcemain pipe including excavation, sand bedding material, flowable fill, basecourse material and compaction, fittings, warning/ identification tape, cleaning, connection to existing manholes, hydrostatic testing and all incidentals complete in place.	495	LF	$ 30,588.12	$ 72,299.70	$ 32,175.00	$ 32,670.00	$ 74,250.00	
8.	Standard Sanitary Sewer Manhole with 30" manhole frame and cover, precast concrete, including reinforced concrete base, precast concrete riser and cone, flexible pipe seals and connectors, grade adjustment rings, frame and cover, epoxy coating, channeling, testing, temporary erosion control measures, traffic control work, incidental and all necessary labor, material and equipment, complete in place.	1	EA	$ 26,093.59	$ 12,394.29	$ 9,900.00	$ 16,000.00	$ 13,500.00	

Exhibit B (11 of 20)

TALOFOFO SEWER IMPROVEMENT
GWA Project No. S16-004-EPA
BID PRICE COMPARISION

				ENG'S ESTIMATE	CONTRACTORS				
No.	Description	Qty	Unit	GWA Estimate	BME & Sons	Giant Construction Corporation	Korando Corporation	Mega United Corporation	Remarks/ Comments
9.	2" Combination Air Release Valve including 24" diameter reinforced concrete or polyvinyl chloride (PVC) C-900 stand pipe, 4' depth, concrete footing base, 3/4" gravel, manhole ring and cover, concrete collar and all incidental complete in place.	1	EA	$ 3,677.12	$ 7,168.46	$ 5,300.00	$ 4,500.00	$ 5,500.00	
10.	Concrete valve box, 7ft x 7ft x 4ft interior dimension including basecourse, backfill and compaction, valve box metal frame and cover and all necessary materials, labor and equipment, complete in place.	1	EA	$ 12,889.60	$ 22,577.69	$ 28,000.00	$ 35,000.00	$ 8,250.00	
11.	8' x 8' Concrete masonry wall for Electrical panels including basecourse, wall footing with reinforcement, 4" thick slab on grade with welded wire fabric reinforcing, concrete bond beam and all necessary materials, labor and equipment, complete in place.	86	SF	$ 11,452.23	$ 6,812.92	$ 7,740.00	$ 34,400.00	$ 3,010.00	
12.	New 8' high chainlink fence and double gate including barbed wire, barbed wire extension arm, concrete foundation and all necessary materials, labor and equipment, complete in place.	12	LF	$ 10,713.95	$ 2,950.32	$ 3,000.00	$ 10,800.00	$ 3,000.00	
13.	Wet well concrete collar including basecourse and compaction, reinforcement, concrete, forms and incidental complete in place.	11	SY	$ 5,154.02	$ 4,222.02	$ 5,720.00	$ 29,700.00	$ 2,200.00	
14.	24 Hours Bypass pumping	1	LS	$ 8,768.66	$ 6,146.57	$ 10,600.00	$ 12,000.00	$ 2,500.00	
	Mechanical and Plumbing Works								

Exhibit B (12 of 20)

TALOFOFO SEWER IMPROVEMENT
GWA Project No. S16-004-EPA
BID PRICE COMPARISION

				ENG'S ESTIMATE	CONTRACTORS				
No.	Description	Qty	Unit	GWA Estimate	BME & Sons	Giant Construction Corporation	Korando Corporation	Mega United Corporation	Remarks/ Comments
15.	Pre-engineered package type lift station including but not specifically limited to fiberglass wet well, stainless steel guide bars, stainless steel upper guide bar bracket, stainless steel cable holder hook, ladder, integral safe hatch aluminum access cover, easy lift pump retrieval system, vent pipe and all incidental required to complete the work.	1	SET	$ 187,719.42	$ 251,699.68	$ 208,700.00	$ 110,000.00	$ 147,479.17	
16.	New submersible pumps including but not specifically limited to discharge pipe and fittings, check valves, gate valves, start-up testing, training and all incidental required to complete the work.	2	SET	$ 84,636.15	$ 104,364.50	$ 72,000.00	$ 170,000.00	$ 85,243.00	
	Electrical Works								
17.	Electrical works including new conduits, boxes, wire gutters, wires, cables and devices, electrical panel, pump controller and software, cellular autodialer, level float switches, level transducer, motion-sensor exterior light, quick connect outlets, manual transfer switch and all incidental required to complete the work.	1	LS	$ 83,142.30	$ 163,797.72	$ 58,700.00	$ 55,000.00	$ 94,506.00	
	TOTAL BASE BID ITEM NO. III, Items 1 through 17			**$ 521,645.12**	**$ 774,277.50**	**$ 539,825.00**	**$ 617,552.00**	**$ 526,413.17**	BME indicated a total of $774,477,50 in his bid.

Exhibit B (13 of 20)

TALOFOFO SEWER IMPROVEMENT
GWA Project No. S16-004-EPA
BID PRICE COMPARISION

				ENG'S ESTIMATE	CONTRACTORS				
No.	Description	Qty	Unit	GWA Estimate	BME & Sons	Giant Construction Corporation	Korando Corporation	Mega United Corporation	Remarks/ Comments
IV. BASE BID - CHALAN KANTON LADERA STREET STATION 2									
	General Requirements								
1.	Mobilization and Demobilization	1	LS	$ 16,571.86	$ 13,659.04	$ 21,800.00	$ 24,000.00	$ 15,185.00	
2.	Insurance and Bonds	1	LS	$ 8,617.37	$ 30,377.19	$ 25,000.00	$ 28,000.00	$ 26,060.00	
3.	Permits	1	LS	$ 2,692.88	$ 13,659.04	$ 3,900.00	$ 10,000.00	$ 10,000.00	
	Civil and Structural Works								
4.	Restoration of Asphalt Concrete Pavement including removal and disposal of existing asphalt.	42	SY	$ 828.81	$ 859.74	$ 714.00	$ 924.00	$ 840.00	BME indicated a sum of $860.58 in his bid
5.	3" Thick Asphaltic concrete trench patch paving with CSS-1h prime coat, complete	42	SY	$ 2,699.26	$ 6,310.50	$ 3,570.00	$ 3,738.00	$ 6,090.00	
6.	New 8" diameter polyvinyl chloride (PVC) gravity main pipe including excavation, sand bedding material, backfill, basecourse material and compaction, fittings, warning/ identification tape, cleaning, connection to existing manhole, hydrostatic testing, disposal and all incidentals complete in place.	63	LF	$ 7,213.57	$ 22,780.80	$ 11,970.00	$ 33,075.00	$ 9,450.00	
7.	New 4" diameter polyvinyl chloride (PVC) forcemain pipe including excavation, sand bedding material, flowable fill, basecourse material and compaction, fittings, warning/identification tape, cleaning, connection to existing manholes, hydrostatic testing and all incidentals complete in place.	63	LF	$ 5,098.99	$ 18,018.00	$ 4,410.00	$ 4,158.00	$ 9,450.00	
8.	Standard Sanitary Sewer Manhole with 30" manhole frame and cover, precast concrete, including reinforced concrete base, precast concrete riser and cone, flexible pipe seals and connectors, grade adjustment rings, frame and cover, epoxy coating, channeling, testing, temporary erosion control measures, traffic control work, incidental and all necessary labor, material and equipment, complete in place.	1	EA	$ 26,093.59	$ 12,394.29	$ 9,900.00	$ 16,000.00	$ 13,500.00	

Exhibit B (14 of 20)

TALOFOFO SEWER IMPROVEMENT
GWA Project No. S16-004-EPA
BID PRICE COMPARISION

				ENG'S ESTIMATE	CONTRACTORS				
No.	Description	Qty	Unit	GWA Estimate	BME & Sons	Giant Construction Corporation	Korando Corporation	Mega United Corporation	Remarks/ Comments
9.	2" Combination Air Release Valve including 24" diameter reinforced concrete or polyvinyl chloride (PVC) C-900 stand pipe, 4' depth, concrete footing base, 3/4" gravel, manhole ring and cover, concrete collar and all incidental complete in place.	1	EA	$ 3,677.12	$ 7,102.90	$ 5,300.00	$ 4,500.00	$ 5,500.00	
10.	Concrete valve box, 7ft x 7ft x 4ft interior dimension including basecourse, backfill and compaction, valve box metal frame and cover and all necessary materials, labor and equipment, complete in place.	1	EA	$ 12,889.60	$ 22,577.69	$ 28,000.00	$ 35,000.00	$ 8,250.00	

Exhibit B (15 of 20)

TALOFOFO SEWER IMPROVEMENT
GWA Project No. S16-004-EPA
BID PRICE COMPARISION

				ENG'S ESTIMATE	CONTRACTORS				
No.	Description	Qty	Unit	GWA Estimate	BME & Sons	Giant Construction Corporation	Korando Corporation	Mega United Corporation	Remarks/ Comments
11.	8' x 8' Concrete masonry wall for Electrical panels including basecourse, wall footing with reinforcement, 4" thick slab on grade with welded wire fabric reinforcing, concrete bond beam and all necessary materials, labor and equipment, complete in place.	86	SF	$ 11,452.23	$ 6,812.92	$ 7,740.00	$ 34,400.00	$ 3,010.00	
12.	New 8' high chainlink fence and double gate including barbed wire, barbed wire extension arm, concrete foundation and all necessary materials, labor and equipment, complete in place.	12	LF	$ 10,713.95	$ 2,950.32	$ 3,000.00	$ 10,800.00	$ 3,000.00	
13.	Wet well concrete collar including basecourse and compaction, reinforcement, concrete, forms and incidental complete in place.	11	SY	$ 5,154.02	$ 4,222.02	$ 5,720.00	$ 29,700.00	$ 2,200.00	
14	24 Hours Bypass pumping	1	LS	$ 8,768.66	$ 6,146.57	$ 9,800.00	$ 12,000.00	$ 2,500.00	
	Mechanical and Plumbing Works								
15.	Pre-engineered package type lift station including but not specifically limited to fiberglass wet well, stainless steel guide bars, stainless steel upper guide bar bracket, stainless steel cable holder hook, ladder, integral safe hatch aluminum access cover, easy lift pump retrieval system, vent pipe and all incidental required to complete the work.	1	SET	$ 151,350.14	$ 169,177.38	$ 99,700.00	$ 120,000.00	$ 147,479.17	
16.	New submersible pumps including but not specifically limited to discharge pipe and fittings, check valves, gate valves, start-up testing, training and all incidental required to complete the work.	2	SET	$ 84,636.15	$ 100,048.24	$ 54,900.00	$ 170,000.00	$ 55,100.46	
	Electrical Works								

Exhibit B (16 of 20)

TALOFOFO SEWER IMPROVEMENT
GWA Project No. S16-004-EPA
BID PRICE COMPARISION

				ENG'S ESTIMATE	CONTRACTORS				
No.	Description	Qty	Unit	GWA Estimate	BME & Sons	Giant Construction Corporation	Korando Corporation	Mega United Corporation	Remarks/ Comments
17.	Electrical works including new conduits, boxes, wire gutters, wires, cables and devices, electrical panel, pump controller and software, cellular autodialer, level float switches, level transducer, motion-sensor exterior light, quick connect outlets, manual transfer switch and all incidental required to complete the work.	1	LS	$ 83,720.43	$ 167,835.48	$ 53,200.00	$ 65,000.00	$ 84,505.00	
	TOTAL BASE BID ITEM NO. IV (Items 1 through 17)			**$ 442,178.63**	**$ 604,932.12**	**$ 348,624.00**	**$ 601,295.00**	**$ 402,119.63**	

Exhibit B (17 of 20)

TALOFOFO SEWER IMPROVEMENT
GWA Project No. S16-004-EPA
BID PRICE COMPARISION

				ENG'S ESTIMATE	CONTRACTORS				
No.	Description	Qty	Unit	GWA Estimate	BME & Sons	Giant Construction Corporation	Korando Corporation	Mega United Corporation	Remarks/ Comments
V. BASE BID - CHALAN AYUYU									
	General Requirements								
1.	Mobilization and Demobilization	1	LS	$ 20,102.97	$ 13,659.04	$ 29,800.00	$ 24,000.00	$ 15,185.00	
2.	Insurance and Bonds	1	LS	$ 10,453.55	$ 43,323.71	$ 34,900.00	$ 28,000.00	$ 26,060.00	
3.	Permits	1	LS	$ 3,266.67	$ 13,659.04	$ 6,300.00	$ 10,000.00	$ 10,000.00	
	Civil and Structural Works								
4.	Restoration of Asphalt Concrete Pavement including removal and disposal of existing asphalt.	330	SY	$ 6,973.40	$ 6,761.70	$ 4,950.00	$ 7,260.00	$ 6,600.00	
5.	3" Thick Asphaltic concrete trench patch paving with CSS-1h prime coat, complete	330	SY	$ 21,208.49	$ 49,582.50	$ 26,400.00	$ 29,370.00	$ 47,850.00	
6.	New 8" diameter polyvinyl chloride (PVC) gravity main pipe including excavation, sand bedding material, backfill, basecourse material and compaction, fittings, warning identification tape, cleaning, connection to existing manhole, hydrostatic testing, disposal and all incidentals complete in place.	56	LF	$ 11,484.07	$ 39,763.92	$ 10,920.00	$ 29,400.00	$ 8,400.00	
7.	New 4" diameter polyvinyl chloride (PVC) forcemain pipe including excavation, sand bedding material, flowable fill, basecourse material and compaction, fittings, warning identification tape, cleaning, connection to existing manholes, hydrostatic testing and all incidentals complete in place.	1083	LF	$ 58,696.10	$ 166,987.77	$ 70,395.00	$ 71,478.00	$ 162,450.00	
8.	Standard Sanitary Sewer Manhole with 30" manhole frame and cover, precast concrete, including reinforced concrete base, precast concrete riser and cone, flexible pipe seals and connectors, grade adjustment rings, frame and cover, epoxy coating, channeling, testing, temporary erosion control measures, traffic control work, incidental and all necessary labor, material and equipment, complete in place.	1	EA	$ 26,093.59	$ 12,394.29	$ 9,900.00	$ 16,000.00	$ 13,500.00	

Exhibit B (18 of 20)

TALOFOFO SEWER IMPROVEMENT
GWA Project No. S16-004-EPA
BID PRICE COMPARISION

				ENG'S ESTIMATE	CONTRACTORS				
No.	Description	Qty	Unit	GWA Estimate	BME & Sons	Giant Construction Corporation	Korando Corporation	Mega United Corporation	Remarks/ Comments
9.	2" Combination Air Release Valve including 24" diameter reinforced concrete or polyvinyl chloride (PVC) C-900 stand pipe, 4' depth, concrete footing base, 3/4" gravel, manhole ring and cover, concrete collar and all incidental complete in place.	1	EA	$ 3,677.12	$ 7,102.90	$ 5,300.00	$ 4,500.00	$ 5,500.00	
10.	Concrete valve box, 7ft x 7ft x 4ft interior dimension including basecourse, backfill and compaction, valve box metal frame and cover and all necessary materials, labor and equipment, complete in place.	1	EA	$ 12,889.60	$ 22,577.69	$ 28,000.00	$ 35,000.00	$ 8,250.00	
11.	8' x 8' Concrete masonry wall for electrical panels including basecourse, wall footing with reinforcement, 4" thick slab on grade with welded wire fabric reinforcing, concrete bond beam and all necessary materials, labor and equipment, complete in place.	86	SF	$ 11,452.23	$ 6,812.92	$ 7,740.00	$ 34,400.00	$ 3,010.00	
12.	New 8' high chainlink fence and double gate including barbed wire, barbed wire extension arm, concrete foundation and all necessary materials, labor and equipment, complete in place.	12	LF	$ 10,713.95	$ 2,950.32	$ 3,000.00	$ 10,800.00	$ 3,000.00	
13.	Wet well concrete collar including basecourse and compaction, reinforcement, concrete, forms and incidental complete in place.	11	SY	$ 5,154.02	$ 4,222.02	$ 5,720.00	$ 29,700.00	$ 2,200.00	
14.	24 Hours Bypass pumping	1	LS	$ 8,768.66	$ 6,146.57	$ 9,800.00	$ 12,000.00	$ 2,500.00	
	Mechanical and Plumbing Works								
15.	Pre-engineered package type lift station including but not specifically limited to fiberglass wet well, stainless steel guide bars, stainless steel upper guide bar bracket, stainless steel cable holder hook, ladder, integral safe hatch aluminum access cover, easy lift pump retrieval system, vent pipe and all incidental required to complete the work.	1	SET	$ 153,163.96	$ 174,898.97	$ 108,500.00	$ 110,000.00	$ 147,479.17	

Exhibit B (19 of 20)

TALOFOFO SEWER IMPROVEMENT
GWA Project No. S16-004-EPA
BID PRICE COMPARISION

				ENG'S ESTIMATE	CONTRACTORS				
No.	Description	Qty	Unit	GWA Estimate	BME & Sons	Giant Construction Corporation	Korando Corporation	Mega United Corporation	Remarks/ Comments
16.	New submersible pumps including but not specifically limited to discharge pipe and fittings, check valves, gate valves, start-up testing, training and all incidental required to complete the work.	2	SET	$ 84,636.14	$ 100,048.24	$ 56,000.00	$ 170,000.00	$ 55,100.46	
	Electrical Works								
17.	Electrical works including new conduits, boxes, wire gutters, wires, cables and devices, electrical panel, pump controller and software, cellular autodialer, level float switches, level transducer, motion-sensor exterior light, quick connect outlets, manual transfer switch and all incidental required to complete the work.	1	LS	$ 87,662.96	$ 172,948.55	$ 52,200.00	$ 55,000.00	$ 84,505.00	
	TOTAL BASE BID ITEM NO. V (Items 1 through 17)			**$ 536,397.48**	**$ 843,840.15**	**$ 469,825.00**	**$ 676,908.00**	**$ 601,589.63**	BME indicated total of $ 845,640.15 in his bid

Exhibit B (20 of 20)

TALOFOFO SEWER IMPROVEMENT
GWA Project No. S16-004-EPA
BID PRICE COMPARISION

				ENG'S ESTIMATE	CONTRACTORS				
No.	Description	Qty	Unit	GWA Estimate	BME & Sons	Giant Construction Corporation	Korando Corporation	Mega United Corporation	Remarks/ Comments
VI. BASE BID - GENERATOR SETS									
1.	Towable 60kW diesel Generator Set; with single point lifting eye and four-point tie down system for detaching the generator set and fuel tank from the trailer.	2	EA	$ 64,600.00	$ 109,369.04	$ 98,600.00	$ 96,000.00	$ 92,332.10	
	TOTAL BASE BID ITEM NO. VI.			**$ 64,600.00**	**$ 109,369.04**	**$ 98,600.00**	**$ 96,000.00**	**$ 92,332.10**	
	GRAND TOTAL			**$ 2,569,053.24**	**$ 3,850,546.09**	**$ 2,411,418.00**	**$ 3,243,891.00**	**$ 2,688,928.00**	GIANT indicate a total of $2,363,718 in his bid

Exhibit C (1 of 18)

GIANT CONSTRUCTION CORP.
P.O. Box 9578 Tamuning, Guam 96931
Tel.: (671) 649-6472 • Fax.: (671) 646-3693
E-mail: giantconst@gmail.com

Sep. 04, 2018

Guam Waterworks Authority
Mr. Miguel Bordallio
General manager
P.O. Box 3010
Hagatna, Guam 96913

Attention : Mr. Thomas Cruz
Chief Engineer

Project : Talofofo Sewer Improvement
Project No. S16-004-EPA

Subject : Bid Confirmation

Dear Sir or Madam

Hafa Adai! This is to confirm our bid submitted on 3;00 PM Aug. 22, 2018. The bid amount is $2,411,418.00 for the construction of various area of lift Station with valve pit and Sewer manhole, 4" forcemain, and 8" gravity sewer line with connection.
We were the lowest bidder of above project bidding.
We are waiting for your notice of award.

Your notice of award and proceed is highly appreciated.

Sincerely yours,

Chung, In Chul
Vice-Preisdent

Received by:
Gbensan
9-5-18

Exhibit C (2 of 18)

Addendum No. 4

BID FORM

ORIGINAL

ARTICLE 1 - BID RECIPIENT

1.01 This Bid is submitted to:

Guam Waterworks Authority
Gloria B. Nelson Public Service Building
688 Route 15, Mangilao, Guam 96913

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into a Contract with Buyer in the form included in the Bidding Documents to furnish the Goods and Special Services as specified or indicated in the Bidding Documents, for the prices and within the times indicated in this Bid, and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 - BIDDER'S ACKNOWLEDGMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Buyer.

ARTICLE 3 - BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, the related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged:

Addendum No.	Addendum Date
Addendum No. 1	July 05, 2018
2	July 18, 2018
3	July 24, 2018
4	Aug. 07, 2018
5	Aug. 21, 2018

B. Bidder has visited the Point of Destination and site where the Goods are to be installed or Special Services will be provided and become familiar with and is satisfied as to the observable local conditions that may affect cost, progress, or the furnishing of Goods and Special Services, if required to do so by the Bidding Documents, or if, in Bidder's judgment, any local condition may affect cost, progress, or the furnishing of Goods and Special Services.

C. Bidder is familiar with and is satisfied as to all Laws and Regulations in effect as of the date of the Bid that may affect cost, progress, and the furnishing of Goods and Special Services.

D. Bidder has carefully studied, considered, and correlated the information known to Bidder; information commonly known to sellers of similar goods doing business in the locality of the Point of Destination and the site where the Goods will be installed or where Special Services will be provided; information and observations obtained from Bidder's visits, if any, to the Point of Destination and the site where the Goods will be installed or Special Services will be provided; and any reports and drawings identified in the Bidding Documents regarding the Point of Destination and the site where the Goods will be installed or where Special Services will be provided, with respect to the effect of such information, observations, and documents on the cost, progress, and performance of Seller's obligations under the Bidding Documents.

E. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution (if any) thereof by Engineer is acceptable to Bidder.

F. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for furnishing the Goods and Special Services for which this Bid is submitted.

ARTICLE 4 - BIDDER'S CERTIFICATIONS

4.01 Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Buyer, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Buyer of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Buyer, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process.

Exhibit C (4 of 18)

ARTICLE 5 - BASIS OF BID

5.01 Bidder will furnish the Goods and Special Services in accordance with the Contract Documents for the following price(s):

Exhibit C (5 of 18)

Addendum No. 4

GUAM WATERWORKS AUTHORITY
TALOFOFO SEWER IMPROVEMENT
GWA Project No. S16-004-EPA

BASE BID

Base Bid Description: The base bid item consists but not specifically limited to, installation of new lift station located at Chalan Kanton Ladera Station 1, Leonardo Tenorio Street, and Johnny Taitague Street; complete with wet well, vault, covers, pumps, valves, gravity sewerlines and manholes and new force mains to a new terminal manhole, rehabilitation of existing sewer system complete with appurtenances, installation of new secured fence enclosure with gates at each lift stations, power supply connection to the nearest GPA utility pole and provision to allow quick connect of portable standby power generator with manual switching control during power outages, two towable Generator set and providing temporary bypass and traffic control as required for the improvement of sewer system at Talofofo village.

I. BASE BID - CHALAN KANTON LADERA STREET STATION 1

Pay Item	Description	BASE BID ITEM NO. I			
General Requirements		**Qty.**	**Unit**	**Unit Cost**	**Sub-Total**
1.	Mobilization and Demobilization	1	LS	22,800.00	22,800.00
2.	Insurance and Bonds	1	LS	28,800.00	28,800.00
3.	Permits	1	LS	4,300.00	4,300.00
Civil and Structural Works					
4.	Restoration of Asphalt Concrete Pavement including removal and disposal of existing asphalt.	178	SY	15.00	2,670.00
5.	3" Thick Asphaltic concrete trench patch paving with CSS-1h prime coat, complete.	178	SY	80.00	14,240.00
6.	Installation of new 8" diameter polyvinyl chloride (PVC) gravity main pipe including excavation, sand bedding material, backfill, basecourse material and compaction, fittings, warning/ identification tape, cleaning, connection to existing manhole, hydrostatic testing, disposal and all incidentals complete in place.	21	LF	210.00	4,410.00
7.	New 4" diameter polyvinyl chloride (PVC) forcemain pipe including excavation, sand bedding material, flowable fill, basecourse material and compaction, fittings, warning/ identification tape, cleaning, connection to existing manholes, hydrostatic testing and all incidentals complete in place.	780	LF	65.00	50,700.00
8.	Standard Sanitary Sewer Manhole with 30" manhole frame and cover, precast concrete, including reinforced concrete base, precast concrete riser and cone, flexible pipe seals and connectors, grade adjustment rings, frame and cover, epoxy coating, channeling, testing, temporary	1	EA	8,600.00	8,600.00

Exhibit C (6 of 18)

Addendum No. 4

	erosion control measures, traffic control work, incidental and all necessary labor, material and equipment, complete in place.				
9.	2" Combination Air Release Valve including 24" diameter reinforced concrete or polyvinyl chloride (PVC) C-900 stand pipe, 4' depth, concrete footing base, 3/4" gravel, manhole ring and cover, concrete collar and all incidental complete in place.	1	EA	$5,300.00	$5,300.00
10.	Concrete valve box, 7ft x 7ft x 4ft interior dimension including basecourse, backfill and compaction, valve box metal frame and cover and all necessary materials, labor and equipment, complete in place.	1	EA	28,000.00	28,000.00
11.	8' x 8' Concrete masonry wall for Electrical panels including basecourse, wall footing with reinforcement, 4" thick slab on grade with welded wire fabric reinforcing, concrete bond beam and all necessary materials, labor and equipment, complete in place.	86	SF	90.00	7,740.00
12.	New 8' high chainlink fence and double gate including barbed wire, barbed wire extension arm, concrete foundation and all necessary materials, labor and equipment, complete in place.	12	LF	250.00	3,000.00
13.	Wet well concrete collar including basecourse and compaction, reinforcement, concrete, forms and incidental complete in place.	11	SY	$20.00	$720.00
14.	24 Hours Bypass pumping	1	LS	9,800.00	9,800.00
15.	USEPA and GWA Project signs, complete	2	EA	1,300.00	2,600.00
	Mechanical & Plumbing Works				
16.	Pre-engineered package type lift station including but not specifically limited to fiberglass wet well, stainless steel guide bars, stainless steel upper guide bar bracket, stainless steel cable holder hook, ladder, integral safe hatch aluminum access cover, easy lift pump retrieval system, vent pipe and all incidental required to complete the work.	1	SET	98,000.00	98,000.00
17.	New submersible pumps including but not specifically limited to discharge pipe and fittings, check valves, gate valves, start-up testing, training and all incidental required to complete the work.	2	SET	28,000.00	$6,000.00

Exhibit C (7 of 18) Addendum No. 4

	Electrical works				
18.	Electrical works including new conduits, boxes, wire gutters, wires, cables and devices, electrical panel, pump controller and software, cellular autodialer, level float switches, level transducer, motion-sensor exterior light, quick connect outlets, manual transfer switch and all incidental required to complete the work.	1	LS	$2,500.00	$2,500.00
	TOTAL BASE BID ITEM NO. I (Items 1 through 18)			**$**	401,180.00

Exhibit C (8 of 18)

Addendum No. 4

II. BASE BID - LEONARDO TENORIO STREET

Pay Item	Description	BASE BID ITEM NO. II			
General Requirements		**Qty.**	**Unit**	**Unit Cost**	**Sub-Total**
1.	Mobilization and Demobilization	1	LS	26,500.00	26,500.00
2.	Insurance and Bonds	1	LS	31,600.00	31,600.00
3.	Permits	1	LS	3,000.00	3,000.00
Civil and Structural Works					
4.	Restoration of Asphalt Concrete Pavement including removal and disposal of existing asphalt.	194	SY	15.00	2,910.00
5.	3" Thick Asphaltic concrete trench patch paving with CSS-1h prime coat, complete	194	SY	80.00	15,520.00
6.	New 8" diameter polyvinyl chloride (PVC) gravity main pipe including excavation, sand bedding material, backfill, basecourse material and compaction, fittings, warning/ identification tape, cleaning, connection to existing manhole, hydrostatic testing, disposal and all incidentals complete in place.	32	LF	330.00	10,560.00
7.	New 4" diameter polyvinyl chloride (PVC) forcemain pipe including excavation, sand bedding material, flowable fill, basecourse material and compaction, fittings, warning/ identification tape, cleaning, connection to existing manholes, hydrostatic testing and all incidentals complete in place.	579	LF	66.00	38,214.00
8.	Standard Sanitary Sewer Manhole with 30" manhole frame and cover, precast concrete, including reinforced concrete base, precast concrete riser and cone, flexible pipe seals and connectors, grade adjustment rings, frame and cover, epoxy coating, channeling, testing, temporary erosion control measures, traffic control work, incidental and all necessary labor, material and equipment, complete in place.	1	EA	9,800.00	9,800.00
9.	2" Combination Air Release Valve including 24" diameter reinforced concrete or polyvinyl chloride (PVC) C-900 stand pipe, 4' depth, concrete footing base, 3/4" gravel, manhole ring and cover, concrete collar and all incidental complete in place.	1	EA	5,300.00	5,300.00
10.	Concrete valve box, 7ft x 7ft x 4ft interior dimension including basecourse, backfill and compaction, valve box metal frame and cover and all necessary materials, labor and equipment, complete in place.	1	EA	28,000.00	28,000.00
11.	8' x 8' Concrete masonry wall for Electrical panels including basecourse, wall footing with reinforcement, 4" thick slab on grade with welded wire fabric	86	SF	90.00	7,740.00

Exhibit C (9 of 18)

	reinforcing, concrete bond beam and all necessary materials, labor and equipment, complete in place.				
12.	New 8' high chainlink fence and double gate including barbed wire, barbed wire extension arm, concrete foundation and all necessary materials, labor and equipment, complete in place.	12	LF	250.00	3,000.00
13.	Wet well concrete collar including basecourse and compaction, reinforcement, concrete, forms and incidental complete in place.	11	SY	520.00	5,720.00
14.	24 Hours Bypass pumping	1	LS	10,500.00	10,500.00
	Mechanical & Plumbing Works				
15.	Pre-engineered package type lift station including but not specifically limited to fiberglass wet well, stainless steel guide bars, stainless steel upper guide bar bracket, stainless steel cable holder hook, ladder, integral safe hatch aluminum access cover, easy lift pump retrieval system, vent pipe and all incidental required to complete the work.	1	SET	185,800.00	185,800.00
16.	New submersible pumps including but not specifically limited to discharge pipe and fittings, check valves, gate valves, start-up testing, training and all incidental required to complete the work.	2	SET	29,500.00	59,000.00
17.	Electrical works including new conduits, boxes, wire gutters, wires, cables and devices, electrical panel, pump controller and software, cellular autodialer, level float switches, level transducer, motion-sensor exterior light, quick connect outlets, manual transfer switch and all incidental required to complete the work.	1	LS	56,200.00	56,200.00
	TOTAL BASE BID ITEM NO. II (Items 1 through 17)			$	549,364.00

Exhibit C (10 of 18)

III. BASE BID - E. JOHNNY S. TAITAGUE STREET

Pay Item	Description	BASE BID ITEM NO. III			
General Requirements		**Qty.**	**Unit**	**Unit Cost**	**Sub-Total**
1.	Mobilization and Demobilization	1	LS	27,400.00	27,400.00
2.	Insurance and Bonds	1	LS	35,000.00	35,000.00
3.	Permits	1	LS	5,800.00	5,800.00
Civil and Structural Works					
4.	Restoration of Asphalt Concrete Pavement including removal and disposal of existing asphalt.	162	SY	15.00	2,430.00
5.	3" Thick Asphaltic concrete trench patch paving with CSS-1h prime coat, complete	162	SY	80.00	12,960.00
6.	New 8" diameter polyvinyl chloride (PVC) gravity main pipe including excavation, sand bedding material, backfill, basecourse material and compaction, fittings, warning/ identification tape, cleaning, connection to existing manhole, hydrostatic testing, disposal and all incidentals in place, complete in place.	60	LF	240.00	14,400.00
7.	New 4" diameter polyvinyl chloride (PVC) forcemain pipe including excavation, sand bedding material, flowable fill, basecourse material and compaction, fittings, warning/ identification tape, cleaning, connection to existing manholes, hydrostatic testing and all incidentals complete in place.	495	LF	65.00	32,175.00
8.	Standard Sanitary Sewer Manhole with 30" manhole frame and cover, precast concrete, including reinforced concrete base, precast concrete riser and cone, flexible pipe seals and connectors, grade adjustment rings, frame and cover, epoxy coating, channeling, testing, temporary erosion control measures, traffic control work, incidental and all necessary labor, material and equipment, complete in place.	1	EA	9,900.00	9,900.00
9.	2" Combination Air Release Valve including 24" diameter reinforced concrete or polyvinyl chloride (PVC) C-900 stand pipe, 4' depth, concrete footing base, 3/4" gravel, manhole ring and cover, concrete collar and all incidental complete in place.	1	EA	5,300.00	5,300.00
10.	Concrete valve box, 7ft x 7ft x 4ft interior dimension including basecourse, backfill and compaction, valve box metal frame and cover and all necessary materials, labor and equipment, complete in place.	1	EA	28,000.00	28,000.00
11.	8' x 8' Concrete masonry wall for Electrical panels including basecourse, wall footing with reinforcement,	86	SF	80.00	7,740.00

Exhibit C (11 of 18)

	4" thick slab on grade with welded wire fabric reinforcing, concrete bond beam and all necessary materials, labor and equipment, complete in place.				
12.	New 8' high chainlink fence and double gate including barbed wire, barbed wire extension arm, concrete foundation and all necessary materials, labor and equipment, complete in place.	12	LF	250.00	3,000.00
13.	Wet well concrete collar including basecourse and compaction, reinforcement, concrete, forms and incidental complete in place.	11	SY	520.00	5,720.00
14.	24 Hours Bypass pumping	1	LS	10,600.00	10,600.00
	Mechanical & Plumbing Works				
15.	Pre-engineered package type lift station including but not specifically limited to fiberglass wet well, stainless steel guide bars, stainless steel upper guide bar bracket, stainless steel cable holder hook, ladder, integral safe hatch aluminum access cover, easy lift pump retrieval system, vent pipe and all incidental required to complete the work.	1	SET	208,700.00	208,700.00
16.	New submersible pumps including but not specifically limited to discharge pipe and fittings, check valves, gate valves, start-up testing, training and all incidental required to complete the work.	2	SET	36,000.00	72,000.00
	Electrical works				
17.	Electrical works including new conduits, boxes, wire gutters, wires, cables and devices, electrical panel, pump controller and software, cellular autodialer, level float switches, level transducer, motion-sensor exterior light, quick connect outlets, manual transfer switch and all incidental required to complete the work.	1	LS	58,700.00	58,700.00
	TOTAL BASE BID ITEM NO. III, Items 1 through 17			$	539,825.00

Exhibit C (12 of 18) Addendum No. 4

IV. BASE BID - CHALAN KANTON LADERA STREET STATION 2

Pay Item	Description	ADDITIVE BID ITEM NO. I			
General Requirements		**Qty.**	**Unit**	**Unit Cost**	**Sub-Total**
1.	Mobilization and Demobilization	1	LS	21,800.00	21,800.00
2.	Insurance and Bonds	1	LS	25,000.00	25,000.00
3.	Permits	1	LS	3,900.00	3,900.00
Civil and Structural Works					
4.	Restoration of Asphalt Concrete Pavement including removal and disposal of existing asphalt.	42	SY	17.00	714.00
5.	3" Thick Asphaltic concrete trench patch paving with CSS-1h prime coat, complete	42	SY	85.00	3,570.00
6.	New 8" diameter polyvinyl chloride (PVC) gravity main pipe including excavation, sand bedding material, backfill, basecourse material and compaction, fittings, warning/ identification tape, cleaning, connection to existing manhole, hydrostatic testing, disposal and all incidentals complete in place.	63	LF	190.00	11,970.00
7.	New 4" diameter polyvinyl chloride (PVC) forcemain pipe including excavation, sand bedding material, flowable fill, basecourse material and compaction, fittings, warning/identification tape, cleaning, connection to existing manholes, hydrostatic testing and all incidentals complete in place.	63	LF	70.00	4,410.00
8.	Standard Sanitary Sewer Manhole with 30" manhole frame and cover, precast concrete, including reinforced concrete base, precast concrete riser and cone, flexible pipe seals and connectors, grade adjustment rings, frame and cover, epoxy coating, channeling, testing, temporary erosion control measures, traffic control work, incidental and all necessary labor, material and equipment, complete in place.	1	EA	9,900.00	9,900.00
9.	2" Combination Air Release Valve including 24" diameter reinforced concrete or polyvinyl chloride (PVC) C-900 stand pipe, 4' depth, concrete footing base, 3/4" gravel, manhole ring and cover, concrete collar and all incidental complete in place.	1	EA	5,300.00	5,300.00
10.	Concrete valve box, 7ft x 7ft x 4ft interior dimension including basecourse, backfill and compaction, valve box metal frame and cover and all necessary materials, labor and equipment, complete in place.	1	EA	28,000.00	28,000.00

Exhibit C (13 of 18)

11.	8' x 8' Concrete masonry wall for Electrical panels including basecourse, wall footing with reinforcement, 4" thick slab on grade with welded wire fabric reinforcing, concrete bond beam and all necessary materials, labor and equipment, complete in place.	86	SF	90.00	7,740.00
12.	New 8' high chainlink fence and double gate including barbed wire, barbed wire extension arm, concrete foundation and all necessary materials, labor and equipment, complete in place.	12	LF	250.00	3,000.00
13.	Wet well concrete collar including basecourse and compaction, reinforcement, concrete, forms and incidental complete in place.	11	SY	$20.00	$1,720.00
14.	24 Hours Bypass pumping	1	LS	9,800.00	9,800.00
	Mechanical & Plumbing Works				
15.	Pre-engineered package type lift station including but not specifically limited to fiberglass wet well, stainless steel guide bars, stainless steel upper guide bar bracket, stainless steel cable holder hook, ladder, integral safe hatch aluminum access cover, easy lift pump retrieval system, vent pipe and all incidental required to complete the work.	1	SET	99,700.00	99,700.00
16.	New submersible pumps including but not specifically limited to discharge pipe and fittings, check valves, gate valves, start-up testing, training and all incidental required to complete the work.	2	SET	27,450.00	$4,900.00
	Electrical Works				
17.	Electrical works including new conduits, boxes, wire gutters, wires, cables and devices, electrical panel, pump controller and software, cellular autodialer, level float switches, level transducer, motion-sensor exterior light, quick connect outlets, manual transfer switch and all incidental required to complete the work.	1	LS	$3,200.00	$3,200.00
	TOTAL BASE BID ITEM NO. IV (Items 1 through 17)			**$**	348,624.00

Exhibit C (14 of 18)

V. BASE BID - CHALAN AYUYU

Pay Item	Description	ADDITIVE BID ITEM NO. II			
General Requirements		**Qty.**	**Unit**	**Unit Cost**	**Sub-Total**
1.	Mobilization and Demobilization	1	LS	29,800.00	29,800.00
2.	Insurance and Bonds	1	LS	34,900.00	34,900.00
3.	Permits	1	LS	6,300.00	6,300.00
Civil and Structural Works					
4.	Restoration of Asphalt Concrete Pavement including removal and disposal of existing asphalt.	330	SY	15.00	4,950.00
5.	3" Thick Asphaltic concrete trench patch paving with CSS-1h prime coat, complete	330	SY	80.00	26,400.00
6.	New 8" diameter polyvinyl chloride (PVC) gravity main pipe including excavation, sand bedding material, backfill, basecourse material and compaction, fittings, warning identification tape, cleaning, connection to existing manhole, hydrostatic testing, disposal and all incidentals complete in place.	56	LF	195.00	10,920.00
7.	New 4" diameter polyvinyl chloride (PVC) forcemain pipe including excavation, sand bedding material, flowable fill, basecourse material and compaction, fittings, warning identification tape, cleaning, connection to existing manholes, hydrostatic testing and all incidentals complete in place.	1083	LF	65.00	70,395.00
8.	Standard Sanitary Sewer Manhole with 30" manhole frame and cover, precast concrete, including reinforced concrete base, precast concrete riser and cone, flexible pipe seals and connectors, grade adjustment rings, frame and cover, epoxy coating, channeling, testing, temporary erosion control measures, traffic control work, incidental and all necessary labor, material and equipment, complete in place.	1	EA	9,900.00	9,900.00
9.	2" Combination Air Release Valve including 24" diameter reinforced concrete or polyvinyl chloride (PVC) C-900 stand pipe, 4' depth, concrete footing base, 3/4" gravel, manhole ring and cover, concrete collar and all incidental complete in place.	1	EA	5,300.00	5,300.00
10.	Concrete valve box, 7ft x 7ft x 4ft interior dimension including basecourse, backfill and compaction, valve box metal frame and cover and all necessary materials, labor and equipment, complete in place.	1	EA	28,000.00	28,000.00
11.	8' x 8' Concrete masonry wall for electrical panels including basecourse, wall footing with reinforcement,	86	SF	90.00	7,740.00

Exhibit C (15 of 18)

Addendum No. 4

	4" thick slab on grade with welded wire fabric reinforcing, concrete bond beam and all necessary materials, labor and equipment, complete in place.				
12.	New 8' high chainlink fence and double gate including barbed wire, barbed wire extension arm, concrete foundation and all necessary materials, labor and equipment, complete in place.	12	LF	250.00	3,000.00
13.	Wet well concrete collar including basecourse and compaction, reinforcement, concrete, forms and incidental complete in place.	11	SY	320.00	3,720.00
14.	24 Hours Bypass pumping	1	LS	9,800.00	9,800.00
	Mechanical & Plumbing Works				
15.	Pre-engineered package type lift station including but not specifically limited to fiberglass wet well, stainless steel guide bars, stainless steel upper guide bar bracket, stainless steel cable holder hook, ladder, integral safe hatch aluminum access cover, easy lift pump retrieval system, vent pipe and all incidental required to complete the work.	1	SET	108,500.00	108,500.00
16.	New submersible pumps including but not specifically limited to discharge pipe and fittings, check valves, gate valves, start-up testing, training and all incidental required to complete the work.	2	SET	28,000.00	56,000.00
	Electrical Works				
17.	Electrical works including new conduits, boxes, wire gutters, wires, cables and devices, electrical panel, pump controller and software, cellular autodialer, level float switches, level transducer, motion-sensor exterior light, quick connect outlets, manual transfer switch and all incidental required to complete the work.	1	LS	52,200.00	52,200.00
	TOTAL BASE BID ITEM NO. V (Items 1 through 17)			$	463,825.00

Exhibit C (16 of 18)

VI. BASE BID - GENERATOR SETS

Pay Item	Description	BASE BID ITEM NO. V			
		Qty.	Unit	Unit Cost	Sub-Total
1.	Towable 60kW diesel Generator Set; with single point lifting eye and four-point tie down system for detaching the generator set and fuel tank from the trailer.	2	EA	49,300.00	98,600.00
	TOTAL BASE BID ITEM NO. VI				$ 98,600.00

TOTAL BASE BID AMOUNT (Bid items I- VI) $ 2,411,418.00

(If the Total Base Bid is within the amount of funds available, then the award will be made to the responsive and responsible bidder submitting the lowest Base Bid. In the event the lowest responsive and responsible Base Bid exceeds the available budget, GWA may reject individual Bid items I-VI until the revised Total Base Bid Amount fits within the available budget. If additional funding is obtained after the contract is executed, any or all deleted Bid items may be restored via Change Order.)

Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents. Bidder also acknowledges that each unit price includes an amount considered by Bidder to be adequate to cover Bidder's overhead and profit for each separately identified item.

ARTICLE 6 - TIME OF COMPLETION

6.01 Bidder agrees that the furnishing of Goods and Special Services will conform to the schedule set forth in Article 5 of the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 - ATTACHMENTS TO THIS BID

7.01 The following documents are attached to and made a condition of this Bid:

A. Required Bid security in the form of Bid Bond 15%

B. List of Proposed Major Suppliers;

C. Required Bidder Qualification Statement with Supporting Data; and

ARTICLE 8 - DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 - BID SUBMITTAL

9.01 This Bid submitted by:

If Bidder is:

An Individual

Name (typed or printed): _____

By: _____
(Individual's signature)

Doing business as: _____

Business address: _____

_____

Phone: _____ Facsimile: _____

E-mail address: _____ _____

Exhibit C (18 of 18)

A Partnership

Partnership Name: _____ (SEAL)

By: _____
(Signature of general partner - attach evidence of authority to sign)

Name (typed or printed): _____

Business address: _____

_____

Phone: _____ Facsimile: _____

E-mail address: _____

A Corporation

Corporation Name: Giant Construction Corp.

State of Incorporation: Guam, USA

Type (General Business, Professional, Service, other): General Contractor

By: _____
(Signature - attach evidence of authority to sign)

Name (typed or printed): Chung, In Chul

Title: Vice-President

(CORPORATE SEAL)

Attest Chung, In Chul
(Signature of Corporate Secretary)

Business address: P.O. Box 9578 Tamuning Guam 96931

308 E. Harmon Industrial Park Harmon Guam 96913

Phone: 649-6472 Facsimile: 646-3693

E-mail address: giantconst@gmail.com

A Limited Liability Company (LLC)

LLC Name: _____

State in which organized: _____

By: _____
(Signature - attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Business address: _____

_____

Phone: _____ Facsimile: _____

E-mail address: _____

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 51- FY2018
Relative to Contract Extension to the Well Rehabilitation and New Wells Design with GHD, Inc.

What is the project's objective and is it necessary and urgent?
GWA management is working to execute the construction procurement for the GWA New Wells at AG-10, AG-12 and Y-8 project, for which the engineering firm GHD, Inc. was the Engineer of Record (EOR). The objective of the project is to "reopen" the design contract with GHD and extend the period of this contract for a period until such time the new wells at AG-10, AG-12 and Y-8 are complete. Having GHD on-board during the bidding process as well as the construction activities will allow for all technical questions specific to the design to be answered.

The development of AG-10, AG-12 and Y-8 Deep Wells will allow GWA to increase its production capacity reserve that may be necessary for anticipated growth from the military build-up as well as directly improve water pressure to properties close to the new well locations

Where is the location?
AG-10 is located in Dededo along Chalan Koda, AG-12 is located in Dededo along Chalan Bada and Y-8 is located in Yigo along Chalan Islas Marianas.

How much will it cost?
GWA negotiated with GHD for fees related to the additional scope or work, and GHD submitted a final fee proposal in the amount of One Hundred Seventy Thousand ($170,000.00), which will be handled on a Time and Materials basis.

When will it be completed?
GWA Management anticipates the EOR will be involved with the bidding process and will have limited involvement during the construction activities, both of which may take 18 months to complete.

What is the funding source?
The source of funding for the Change Order will be from the Bond proceeds under CIP PW PW 05-14 "New Deep Wells and Down Hard", PW 09-02 Water Wells or System Development Charge funds.

The RFP/BID responses (if applicable):
N/A.

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

GWA RESOLUTION NO. 51-FY2018

RELATIVE TO CONTRACT EXTENSION TO THE WELL REHABILITATION AND NEW WELLS DESIGN WITH GHD, INC.

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual, and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, the CCU approved Resolution No. 08–FY2011 on April 28, 2011 which authorized GWA Management to enter into a contract with the engineering firm Winzler and Kelly, which subsequently became the engineering firm GHD, Inc., in the amount of Nine Hundred Eighty Four Thousand Eight Hundred Fifty Seven Dollars ($984,857.00) with a not to exceed maximum of One Million Dollars ($1,000,000.00) total authorized funding amount for the engineering design services for three new wells locations and seven well rehabilitation designs (D-3, D-17, D-18, D-22, A-28, M-14 and M-9); and

WHEREAS, the original scope of work for the design contract did involve engineering services during bidding but this was removed from the contract to essentially work to close the design contract given any construction activities for the wells were deferred until after much of the Court Order projects were completed and GWA management at the time did not want to have an open-ended contract; and

WHEREAS, the original scope of work for the design contract unfortunately did not have EOR services during construction period as a line item thus GWA managements seeks

CCU approval to add such services to ensure design issues that may come up are addressed by the EOR; and

WHEREAS, in the course of the active contract with GHD, six (6) Change Orders were executed where the last Change Order required CCU and PUC approval given this Change Order resulted in the contract value being One Million Thirty-Three Thousand Three Hundred Eight Dollars ($1,033,308.00); and

WHEREAS, in 2016 GWA moved forward with the well rehabilitation construction project for production wells D-3, D-17, D-18, D-22 and M-9 for which US EPA SRF Grant were used to fund the project; and

WHEREAS, GWA management is working to execute the construction procurement for the GWA New Wells at AG-10, AG-12 and Y-8 project for which the engineering firm GHD, Inc. was the Engineer of Record (EOR); and

WHEREAS, the development of the three new wells noted will allow GWA to increase its production capacity reserve that may be necessary for anticipated growth from the military build-up as well as directly improve water pressure to properties close to the new well locations; and

WHEREAS, the EOR's involvement in the project is critical to the procurement for construction services, as well as the success of the construction activities, and is necessary to respond to all technical questions specific to the design that may be raised by perspective bidders during the bidding process or from the winning contractor during the construction contract period, and as such, GWA Management seeks CCU approval to "reopen" the design contract with GHD and extend the period of this contract until the new wells at AG-10, AG-12 and Y-8 are complete; and

WHEREAS, GWA has negotiated with GHD for additional scope of work related to bidding and construction activities as well as updating the design drawings that were originally completed in 2014; and

WHEREAS, GWA has also negotiated with GHD for fees related to the additional scope and GHD have submitted for GWA's review and approval, a proposal for One Hundred Seventy Thousand ($170,000.00) which will be handle on a Time and Materials basis (SEE EXHIBIT A); and

WHEREAS, the source of funding for the Change Order will be from the Bond proceeds under CIP PW PW 05-14 "New Deep Wells and Down Hard", PW 09-02 Water Wells or SDC; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the development of the new production wells AG-10, AG-12 and Y-8 will allow GWA to increase its production capacity reserve that may be necessary for anticipated growth from the military build-up as well as directly improve water pressure to properties close to the new well locations
3. The CCU hereby authorizes GWA to "re-open" and extend the contract with GHD, Inc. as the Engineer of Record, for the New Well Design to ensure that all technical inquiries are addressed during the bidding period as well as during the construction period to ensure the success of the construction project.
4. The CCU hereby further authorizes the management of GWA to Change Order the contract with GHD for services related to bidding and construction activity support (Exhibit A).
5. The CCU hereby further approves the fee proposal amount of One Hundred Seventy Thousand ($170,000.00) which will be handled on a Time and Materials basis, bringing the total authorized contract amount to One Million Two Hundred Three Thousand Three Hundred Eight Dollars ($1,203,308.00).
6. GWA management is authorized to seek from the PUC its approval of Change Order No. 7 which increases the total authorized amount as noted above.

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 25th day of September, 2018.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS **J. GEORGE BAMBA**
Chairperson Secretary

SECRETARY'S CERTIFICATE

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

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///

///

DRAFT

Exhibit A (1 of 5)

May 21, 2018

Mr. Miguel Bordallo, PE
General Manager
Guam Waterworks Authority
Sent Via Email

Att.: Mr. Thomas Cruz, PE, Chief Engineer

SUBJECT: Construction Phase Engineering Professional Services Proposal for GWA ISLAND-WIDE NEW WELL SITE DEVELOPMENT PROJECT; GWA Project No. PW 09-02 For Wells AG-10, AG-12 and Y-08

Dear Mr. Bordallo

GHD is pleased to submit our formal proposal for construction phase professional engineering services for the above-referenced project in accordance with Guam PEALS regulations for Construction Contract Administration (CCA) services. In general, the CCA role includes a supporting role for responding to Request for Information (RFIs), and Submittals. It also includes making periodic visits to the site by a registered engineer, architect or land surveyor or authorized representatives as the case may require, to observe the progress and quality of the executed work and to determine, in general, if the work is proceeding in accordance with the contract documents. Under CCA services, GHD will not review Pay Request, prepare Change Order documents or make exhaustive or continuous on-site inspections to check the quality or quantity of the work. However, GHD will support GWA to prepare supporting documents such as drawing revisions for a change orders as requested by GWA but handling and processing of the Change Order will be by others. In addition, under the CCA role it is not intended that the engineer, architect and land surveyor be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the work. The following detailed scope of work is based on the plans and specifications for this project as well as our experience on the GWA Island-Wide Well Site Rehabilitation Project with EA Science & Technology.

I. REFERENCES

1. The Drawings and Technical Specifications for Project No. PW 09-02 titled “Island-Wide Well Site Rehabilitation and New Well Site Development”, dated March 25, 2014, stamped by Jarrett Brown P.E., and attached for reference.

II. PROJECT DESCRIPTION AND UNDERSTANDING

This project involves the construction of three (3) new wells (AG-10, AG-12 and Y-08). The project generally consists of preparing the site, drilling and constructing new wells, installing wellheads and wellhead piping, miscellaneous site improvements, well buildings including generator, fuel storage, electrical and chlorinator rooms, and installing new equipment in well buildings. GHD’s role in the project is to assist in updating the plans and specifications, support GWA for RFI and submittal review, and periodic observations of installation and testing of critical items as requested by GWA or its authorized representative.

III. SCOPE OF WORK

GHD, as the Engineer of Record (EOR), will coordinate with GWA to provide limited construction phase

Exhibit A (2 of 5)

services relating to the construction of the three new (3) wells.

IV. SCOPE OF SERVICES

A. PRECONSTRUCTION PHASE TASKS

Task A1.0: Review and Update Existing Plans and Specifications. GHD will review and coordinate with GWA Engineering and Operations to update the plan set to match GWA's latest standards and re-stamp the plans and specifications with a currently licensed GHD PE on Guam. Information discovered during construction activities from the well rehab project that are considered design corrections will be undertaken at no added cost.

Task A2.0: Bid Period Support Services. GHD will assist GWA to prepare for the bid opening including but not limited to responding to RFI's, issuing addendums, attending the pre-bid conference, and preparing a bid recommendation memo as requested by GWA.

B. CONSTRUCTION PHASE TASKS

Task B1.0: Submittals & Shop Drawings. GHD will review and provide comment and approval for all process, equipment and controls submittals and other submittals and shop drawings when requested by GWA or the CM. This scope of services estimates a review of thirty (30) submittals and/or shop drawings in aggregate. A submittal or shop drawing is defined as one item on the submittal register. Submittals and shop drawings that request for modification to the design shall be reviewed and approved by GHD.

Task B2.0: Project Meetings. GHD will participate in meetings with the CM, Contractor**,** GWA, and other parties such as GEPA and DPW as necessary to address design matters that require decisions that cannot be made by GWA or the CM. This scope of services estimates attendance of five (5) project meetings by one (1) engineer. GHD's civil engineer will participate at the physical meeting location. GHD's electrical or mechanical engineer will participate in electronic (i.e., teleconference and/or WebEx) meetings. Should the need arise for the electrical and/or mechanical engineer to travel for these meetings, travel costs will be 100% reimbursable on a time and materials basis after written approval by GWA. Others shall prepare agenda and meeting minutes.

Task B3.0: Request for Information. Respond to Requests for Information (RFI) as requested by GWA or the CM for design related questions, issues, and clarifications. RFI responses will be coordinated with the CM and GWA. The scope of services estimates review of thirty (30) RFIs. RFIs that request for modification to the design shall be reviewed and approved by GHD.

Task B4.0: Site Visits. GHD will visit the well sites during construction to observe the work when requested by the CM. A site visit report will be submitted to the CM following each site visit. This scope of services estimates three (3) site visits during construction at each site.

Task B5.0: Pump Sizing and Settings. GHD will provide technical assistance to the CM and GWA with determining the final pump sizing, settings, and pump intake elevation after completion of the 72-hour pump testing; and will assist with setting final elevations of casing, screened interval and bottom of well which will occur after completion of the 72-hour pump testing but before final well completion. This task also includes making required revisions to the civil and electrical design based on the final pump selection including selection of VFD and chlorination system and pump.

Task B6.0: Prepare Final As-built Drawings. GHD will prepare the Final As-built drawings from the jobsite redline drawings maintained by the contractor. GHD will review and provide comments on the contractor's set, GWA personnel shall also provide all comments on the Contractor's redline set prior to GHD initiating the work to transfer the redlines into AutoCAD format.

Exhibit A (3 of 5)

V. PERFORMANCE SCHEDULES

Work will commence on the date specified in the Notice to Proceed for the Contractor and continue throughout the performance period specified in the Construction Contract. This scope of services assumes the project has a 365-calendar day construction schedule.

VI. SCOPE OF SERVICES ASSUMPTIONS AND EXCLUSIONS

1. Services will be performed under a Time & Materials Contract.
2. A formal partnering meeting is not required.
3. Preparation of As-Built Drawings will be based upon the drawings provided by the Construction Contractor and will be issued in AutoCAD format to GWA.
4. Preparation and maintenance of the submittal register is excluded.
5. Preparation of Operations and Maintenance (O&M) Manuals is excluded.
6. Owner will provide access to the site.
7. No project specific permitting services are included in this scope of work.
8. Special inspection services are excluded.
9. Project specific training services are excluded.
10. No Archeological survey, Section 106 Historic Preservation, biological resource monitoring, Section 7 Endangered Species Act or related work is included.
11. Warranty follow-up is not included in the scope. If required, the fee will be negotiated with GWA.
12. These EOR Services are being provided for the construction of improvements shown on the final construction plans. If additional improvements are added to the construction contract, the fees for additional EOR Services will be negotiated with GWA.
13. Our scope of work does not include resolving hazardous material investigation or testing/sampling.
14. GHD attendance is not required at the Facility Turnover Meeting.
15. Construction Phase EOR services performed will be billed based on a Time and Material basis using the agreed to hourly rates plus 10 percent markup on expenses and GRT.

Exhibit A (4 of 5)

VII. SCOPE OF SERVICES FEE

GHD estimates the cost to perform the scope of services elements outlined above is $100,000 as set forth in Exhibit A (the Estimated Project Cost). Services will be performed on a time and materials basis per our Fee Schedule in effect at the time services are performed. Exhibit A is an estimate only, and actual costs may be higher or lower. Work that exceeds the Estimated Project Cost will be brought to your attention for review, approval, and fee adjustment. Our estimated fees are valid for a period of 60 days from the date of this proposal, after which they are subject to change.

If you have any questions, we would be glad to meet with you to discuss this proposal at your convenience. Otherwise, if the scope and fee above are acceptable, this letter can serve as our agreement by concurring below and initialing the attached GHD Standard Terms and Conditions.

Sincerely,

Paul K. Baron Principal/Pacific Service Group Manager	Concurred Authorized Representative	Date

EXHIBIT A . ESTIMATED PROJECT COST 5-21-2018 Exhibit A (5 of 5) GWA Island-Wide Well Project

Phase Letter and Task Number	Task Description	Principal/Mechanical Engineer (Paul Baron/Dan Reiter)	Senior Electrical Engineer (Rick Guggiana)	Electrical Engineer (Joseph Liberato)	Structural Engineer (Andre Tenorio)	Civil Engineer (Jecelia Llegado)	Amount
	HOURLY LABOR RATES						
A	**CONSTRUCTION PHASE TASKS**						
A1.0	**Update Plans and Specifications**						$ 40,000
A2.0	**Bid Period Support**						$ 10,000
B1.0	**Submittals & Shop Drawings (30 estimated)**						$ 30,000
B2.0	**Project Meetings (5 estimated)**						$ 4,000
B3.0	**Request for Information (30 estimated)**						$ 40,000
B4.0	**Site Visits (9 estimated)**						$ 4,000
B5.0	**Pump Sizing and Settings**						$ 7,000
B6.0	**Final As-built Drawings**						$ 15,000
	CONSTRUCTION PHASE SERVICES HOUR SUBTOTAL						
	CONSTRUCTION PHASE SERVICES SUBTOTAL						**$ 170,000**
ALL	**TOTAL**						**$ 170,000**

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 52- FY2018
Relative to Approval of Change Orders to the Baza Gardens Wastewater Cross-Island Pumping and Conveyance System Phase I and Phase II Contracts

What is the project's objective and is it necessary and urgent?
This resolution will address pending Change Order proposals with the Phase I and Phase II contractor for the Baza Gardens Wastewater Cross-Island Pumping and Conveyance System project. Critical scheduling of the installation work for the last leg of the 21-inch diameter gravity main that would complete the wastewater conveyance system to the new Agat-Santa Rita WWTP has been affected by the delay in completing work at the WWTP, and therefore was Change Ordered to the Phase I and II contracts. In executing this particular work all contingency funds authorized for the Phase I and II contacts were depleted and as such prior Change Order Proposals that GWA has deemed acceptable and would have been funded by such contingencies, now require additional CCU action to allow GWA management to address them.

Where is the location?
All work related to the pending Change Order Proposals were along Route 17 and Route 2A.

How much will it cost?
GWA management is seeking CCU approval for additional funding for Change Order Proposals related to the Phase I and Phase II contracts in the amount of Three Hundred Twenty-Four Thousand Three Hundred Fifty-Two Dollars and Fifty-Eight Cents ($324,352.58) and One Hundred Twenty-Eight Thousand Nine Hundred Seventy-Five Dollars and Twenty-Six Cents ($128,975.26), respectively.

GWA management seeks CCU approval for additional funding for the Change Order Proposals for Phase I and Phase II noted above, plus a ten percent (10%) contingency to these amounts or Thirty Two Thousand Four Hundred Thirty-Five Dollars and Twenty Six Cents ($32,435.26) and Twelve Thousand Eight Hundred Ninety-Seven Dollars and Fifty-Two Cents ($12,897.52) respectively, to bring the total authorized funding to the Phase I contract to Eight Million Six Hundred Thirty-Nine Thousand Three Hundred Forty-Six Dollars and Fifty-Nine Cents ($8,639,346.59) and a total authorized finding for Phase II to Six Million Three Hundred Fifty-Six Thousand Eight Hundred Seventy Dollars and Forty Eight Cents ($6,356,870.48)

When will it be completed?
December 2018

What is the funding source?
Additional funding needs will be from wastewater bond funds applicable to the project as well as System Development Charge funds

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

GWA RESOLUTION NO. 52-FY2018

RELATIVE TO APPROVAL OF CHANGE ORDERS TO THE BAZA GARDENS WASTEWATER CROSS-ISLAND PUMPING AND CONVEYANCE SYSTEM PHASE I AND PHASE II CONTRACTS

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual, and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, to meet a mandate of the 2011 federal Court Order regarding the Baza Gardens Wastewater Treatment Plant (WWTP), GWA elected to remove the treatment plant from operation and to instead pump the wastewater to the new (under construction) Agat-Santa Rita WWTP; and

WHEREAS, due to schedule and funds constraints, the project was divided into three phases (I, II and III) and three separate construction contracts, extending from the Baza Gardens WWTP, across Route 17 (cross-island road), and terminating at the entrance to the new Agat-Santa Rita WWTP on Route 2A; and

WHEREAS, the CCU approved via Resolution 01-FY2017 a total funding authorization for Phase I with BME & Sons in the amount of Eight Million Two Hundred Eighty-Two Thousand Five Hundred Fifty-Eight Dollars and Seventy-Five Cents ($8,282,558.75); via Resolution 13-FY2017 a total funding authorization for Phase II with BME & Sons in the amount of Six Million Two Hundred Fourteen Thousand Nine Hundred Ninety-Seven Dollars and Seventy Cents ($6,214,997.70) and via Resolution 29-FY2017 a total funding authorization

for Phase III with Sumitomo-Mitsui Construction Company in the amount of Sixteen Million Three Hundred Seven Thousand Four Hundred Thirty Six Dollars and Sixty Cents ($16,307,436.60); and

WHEREAS, the portion of the gravity conveyance system along the entrance road (from Route 2A to the Agat-Santa Rita WWTP site) that is 0.5 miles long was not included in Phase I, II or III of the Cross-Island project as it was deemed in 2016 that the contractor for the new Agat-Santa Rita WWTP project might be better positioned to more cost-effectively execute the gravity line installation work; and

WHEREAS, as of September 2018, the contractor for Phase I of the subject project completed gravity line installation along Route 2A and reached the entrance road to the new Agat Santa Rita WWTP and the contractor for the new WWTP unfortunately was not ready to execute additional scope related to installing of the gravity line along the entrance roadway; and

WHEREAS, due to efforts to comply with Court Order deadlines related to the Baza Gardens WWTP as best as possible, GWA management executed two Change Orders with the Phase I and Phase II contractor, which happen to be the same contractor, BME & Sons, Inc., to install the 21-inch diameter gravity sewer along the entrance roadway to the new WWTP to complete the wastewater conveyance system; and

WHEREAS, the execution of these Change Orders related to the 21-inch gravity line installation depleted the contingency funds approved via CCU Resolution No. 01-FY2017 for the Phase I contract and CCU Resolution No. 13-FY2017 for Phase II contract; and

WHEREAS, both Phase I and Phase II contracts had, prior to the execution of the Change Orders for the 21-inch gravity sewer line installation, pending Change Order Proposals related to unexpected costs for endangered species mitigation measures, unexpected buried utilities in the Navy right-of-way, as well as various sites changes that impacted project cost; and

WHEREAS, GWA management determined the installation of the 21-inch gravity line was of higher priority to be completed and that the pending Changed Order Proposals noted above would be addressed via a CCU resolution as a later date; and

WHEREAS, the Change Order Proposals related to the Phase I and Phase II contracts noted above total Three Hundred Twenty-Four Thousand Three Hundred Fifty-Two Dollars and Fifty-Eight Cents ($324,352.58) (See Exhibit A) and One Hundred Twenty-Eight Thousand Nine Hundred Seventy-Five Dollars and Twenty-Six Cents ($128,975.26) (See Exhibit B) respectively; and

WHEREAS, GWA management seeks CCU approval for additional funding for the Change Order Proposals for Phase I and Phase II noted above, plus a ten percent (10%) contingency to these amounts or Thirty Two Thousand Four Hundred Thirty-Five Dollars and Twenty Six Cents ($32,435.26) and Twelve Thousand Eight Hundred Ninety-Seven Dollars and Fifty-Two Cents ($12,897.52) respectively, to bring the total authorized funding to the Phase I contract to Eight Million Six Hundred Thirty-Nine Thousand Three Hundred Forty-Six Dollars and Fifty-Nine Cents ($8,639,346.59) and a total authorized finding for Phase II to Six Million Three Hundred Fifty-Six Thousand Eight Hundred Seventy Dollars and Forty Eight Cents ($6,356,870.48); and

WHEREAS, funding for this project will be from wastewater bond funds applicable to the project as well as System Development Charge funds; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU hereby authorizes additional funding to the Phase I and Phase II contracts for the Baza Gardens Wastewater Cross-Island Pumping and Conveyance project in the amount of Three Hundred Fifty-Six Thousand Seven Hundred Eight-Seven Dollars and Eight-Fours Cents ($356,787.84) (Exhibit A) and One Hundred Forty-One Thousand Eight Hundred Seventy-Two Dollars and Seventy-Eight Cents ($141,872.78) (Exhibit B), respectively.

3. The CCU further authorizes the total authorized funding to the Phase I contract to Eight Million Six Hundred Thirty-Nine Thousand Three Hundred Forty-Six Dollars and Fifty-Nine Cents ($8,639,346.59) and a total authorized finding for Phase II to Six Million Three Hundred Fifty-Six Thousand Eight Hundred Seventy Dollars and Forty-Eight Cents ($6,356,870.48).
4. The CCU further authorizes the funding for this project will be from wastewater bond funds applicable to the project as well as System Development Charge funds

RESOLVED, that the Chairman certifies and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 25th day of September, 2018.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS **J. GEORGE BAMBA**
Chairperson Secretary

SECRETARY'S CERTIFICATE

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

DRAFT

Exhibit A

ACTIVITY AND LOCATION:
GWA BAZA GARDEN WASTEWATER CROSS-ISLAND PUMPING AND CONVEYANCE SYSTEM PH-1

CCR#13 Re-routing of Gravity Sewer along Rt-17 & Rt-5 Intersection - Encroaching Federal Property

CONSTRUCTION CONTRACT NO.:

DATE: 6/21/2018

ESTIMATED BY: **BME & SONS, INC**

STATUS OF DESIGN:

Item No.	ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		EQUIPMENT COST		ENGG ESTIMATE	
		QTY	UNIT	UNIT $	TOTAL	UNIT $	TOTAL			UNIT $	TOTAL
	Deduct excavation works for comm trenches	*-45.04*	*CY*		$ -	*6.00*	$ *(270.25)*	$ *11.00*	$ *(495.46)*	*17.00*	$ *(765.71)*
	Deduct selected fill and compactions	*-12.33*	*CY*		$ -	*8.00*	$ *(98.67)*	$ *5.10*	$ *(62.90)*	*13.10*	$ *(161.57)*
	Deduct disposal of excess soil materials	*-33.00*	*CY*		$ -		$ -	$ *7.00*	$ *(231.00)*	*7.00*	$ *(231.00)*
	Deduct installation of Detectable warning tape	*-282.00*	*LF*	*0.50*	$ *(141.00)*	*0.50*	$ *(141.00)*		$ -	*1.00*	$ *(282.00)*
	Deduct concrete encasement, 3000Psi	*-13.71*	*CY*	*137.00*	$ *(1,878.04)*	*18.70*	$ *(256.35)*		$ -	*155.70*	$ *(2,134.39)*
	Deduct concrete flowable fill	*-15.56*	*CY*	*110.75*	$ *(1,722.78)*	*22.85*	$ *(355.44)*		$ -	*133.60*	$ *(2,078.22)*
	Deduct installation of Communication handhole	*-1*	*EA*		$ -	*500.00*	$ *(500.00)*	$ *200.00*	$ *(200.00)*	*700.00*	$ *(700.00)*
	Note: Precast Comm Handhole will be Turn-over to GWA				$ -		$ -		$ -	-	$ -
	Deduct installation of 2-4"dia Communication conduit	*-282*	*LF*		$ -	*3.65*	$ *(1,029.30)*		$ -	*3.65*	$ *(1,029.30)*
	ADDITIVE WORKS										
	Force Maine - 3 (additional from sta.27+64.06 to sta.31+28.56)										
	moving excavation due to underground utilities)	*65.19*	*CY*		$ -	*12.00*	$ *782.22*	$ *28.00*	$ *1,825.19*	*40.00*	$ *2,607.41*
	Provide Pipe Bedding Sand	*34.52*	*TONS*	*35.85*	$ *1,237.49*	*10.00*	$ *345.19*	$ *6.50*	$ *224.37*	*52.35*	$ *1,807.04*
	Provide Flowable Fill for paved areas and shoulder	*41.34*	*CY*	*110.75*	$ *4,578.18*	*22.85*	$ *944.57*		$ -	*133.60*	$ *5,522.76*
	Disposal of excess soil materials	*65.19*	*CY*		$ -	*5.00*	$ *325.95*	$ *10.00*	$ *651.90*	*15.00*	$ *977.85*
	Provide Detectable warning tape, 6"	*160*	*LF*	*0.50*	$ *80.00*	*0.50*	$ *80.00*		$ -	*1.00*	$ *160.00*
	Provide 10" dia. PVC pipes, C900 (force main)	*380*	*LF*	*21.50*	$ *8,170.00*		$ -		$ -	*21.50*	$ *8,170.00*
	Provide 10"dia. 1/32 bend DI Elbows	*3*	*EA*	*352.00*	$ *1,056.00*		$ -		$ -	*352.00*	$ *1,056.00*
	Note: All 10" dia. C900 PVC Pipes and fittings specifed above are already been procured when the rev.04 drawing was released										
	Install 10" dia. PVC pipes, C900 (force main)	*160*	*LF*		$ -	*12.70*	$ *2,032.00*	$ *3.50*	$ *560.00*	*16.20*	$ *2,592.00*
	Note: 160LF of 10" C900 PVC Pipes was already been installed from sta.0+00 to MH43										
	Survey Works	*1*	*Lot*		$ -	*1,500.00*	$ *1,500.00*		$ -	*1,500.00*	$ *1,500.00*
	Force Main - 3 Road Repair										
	Provide Saw-cutting of existing AC pavements	*320*	*LF*		$ -	*1.50*	$ *480.00*	$ *0.75*	$ *240.00*	*2.25*	$ *720.00*
	Remove and dispose affected AC pavements	*58.67*	*SY*		$ -		$ -	$ *7.00*	$ *410.67*	*7.00*	$ *410.67*
	Provide Cold Mix AC Pavement Restoration	*58.67*	*SY*	*40.43*	$ *2,371.89*	*15.00*	$ *880.00*	$ *5.00*	$ *293.33*	*60.43*	$ *3,545.23*
	Sewer Line C - Re-works on MH46										
	Removal of installed percast manhole (MH#46)										
	- Excavation works	*31.26*	*CY*		$ -	*10.00*	$ *312.59*	$ *15.00*	$ *468.88*	*25.00*	$ *781.47*
	- Backfilling and compactions, 10' x 10' x 10 ft deep backfilling	*37.04*	*CY*	*28.00*	$ *1,037.04*		$ -		$ -	*28.00*	$ *1,037.04*
	backfilling in 12" lift compacted to 10"	*12.00*	*lift*			*16.50*	$ *198.00*	$ *55.00*	$ *660.00*	*71.50*	$ *858.00*
	Compaction per lift	*12.00*	*lift*			*10.50*	$ *126.00*	$ *15.00*	$ *180.00*	*25.50*	$ *306.00*
	Compaction testing per lift	*12.00*	*lift*				$ -	$ *45.00*	$ *540.00*	*45.00*	$ *540.00*
	Compaction testing tech stand-by	*12.00*	*hr*			*55.00*	$ *660.00*		$ -	*55.00*	$ *660.00*

ACTIVITY AND LOCATION:
GWA BAZA GARDEN WASTEWATER CROSS-ISLAND PUMPING AND CONVEYANCE SYSTEM PH-1

CCR#13 Re-routing of Gravity Sewer along Rt-17 & Rt-5 Intersection - Encroaching Federal Property

CONSTRUCTION CONTRACT NO.:

DATE: 6/21/2018

ESTIMATED BY: **BME & SONS, INC**

STATUS OF DESIGN:

Item No.	ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		EQUIPMENT COST		ENGG ESTIMATE	
		QTY	UNIT	UNIT $	TOTAL	UNIT $	TOTAL			UNIT $	TOTAL
	DEDUCTIVE WORKS										
	Sewer Line C (Rt5 & Rt17 Intersection) sta.0+00 to sta.2+82.53										
	Deduct excavation works from gravity pipes at sta. 0+00 to sta. 2+82.53	-215.78	CY		$ -	6.00	$ (1,294.67)	$ 11.00	$ (2,373.56)	17.00	$ (3,668.22)
	Deduct excavation works for regualar manhole MH42 & 43	-47.41	CY		$ -	6.00	$ (284.44)	$ 11.00	$ (521.48)	17.00	$ (805.93)
	Deduct selected fill materials and compactions (pipeline on off-road areas)	-130.00	CY		$ -	8.00	$ (1,040.00)	$ 5.10	$ (663.00)	13.10	$ (1,703.00)
	Deduct pipe bedding sand	-65.28	TONS	35.85	$ (2,340.21)	10.00	$ (652.78)	$ 6.50	$ (424.31)	52.35	$ (3,417.29)
	Deduct flowable fill (pipeline on pave areas)	-31.11	CY	110.75	$ (3,445.56)	22.85	$ (710.89)		$ -	133.60	$ (4,156.44)
	Deduct Concrete Encasement on pipes w/ above utilty crossings (20ft long)	-2.96	CY	137.00	$ (405.93)	18.70	$ (55.41)		$ -	155.70	$ (461.33)
	Deduct disposal of excess soil materials	-190	CY		$ -		$ -	$ 7.00	$ (1,330.00)	7.00	$ (1,330.00)
	Deduct installation of warning tape "Sewerline"	-282	LF	0.50	$ (141.00)	0.50	$ (141.00)		$ -	1.00	$ (282.00)
	Deduct installtion of 12" PVC Pipe SDR35	-282	LF		$ -	12.70	$ (3,581.40)	$ 3.50	$ (987.00)	16.20	$ (4,568.40)
	Deduct installation of fitings for drop manhole	-1	EA		$ -	700.00	$ (700.00)		$ -	700.00	$ (700.00)
	Delete Precast Concrete Manhole 8' - 10' depth, 4'dia, regular, includes concrte collar, MH frame, cover and odor control insert (MH42&43)										
	- Delete Compacted Basecoarse	-3.18	TONS	35.00	$ (111.16)	24.00	$ (76.22)		$ -	59.00	$ (187.38)
	- Delete installation of MH Frame and MH Odor Insert	-2	EA		$ -	350.00	$ (700.00)	$ 100.00	$ (200.00)	450.00	$ (900.00)
	- Delete reinforced concrete colar	-2.03	CY	180.00	$ (366.02)	325.00	$ (660.86)	$ 50.00	$ (101.67)	555.00	$ (1,128.55)
	- Delete installation of MH#41	-2	EA		$ -	570.00	$ (1,140.00)	$ 475.00	$ (950.00)	1,045.00	$ (2,090.00)
	Note1 : Regular Concrete Precast Manhole MH42 & MH43, MH Frame & Cover and 200LF of 12" PVC pipes will be Turn-over to GWA										
	Note 2: MH43 for this revised drawing will be Effluent Manhole w/c is previously MH41 on the original contract drawing										
	Deduct concrete encasement of piping for manhole drop connections to manhole	-1.13	CY	137.00	$ (154.13)	30.00	$ (33.75)	$ 10.00	$ (11.25)	177.00	$ (199.13)
	Delete Epoxy Coating Liner for Precast Manhole MH42 & MH43	-216.00	SF	2.35	$ (507.60)	4.00	$ (864.00)		$ -	6.35	$ (1,371.60)
	Sewer Line C - Road Repair along Rt5 & Rt17 Intersection										
	Delete saw-cutting portion of AC Pavements	-280	LF		$ -	1.50	$ (420.00)	$ 0.75	$ (210.00)	2.25	$ (630.00)
	Delete removal and disposal of AC Pavements	-46.67	SY		$ -		$ -	$ 7.00	$ (326.67)	7.00	$ (326.67)
	Delete 3" thk AC Pavement	-46.67	SY	40.43	$ (1,886.73)		$ -		$ -	40.43	$ (1,886.73)
	Communication Conduit and Handhole Installation										

ACTIVITY AND LOCATION:
GWA BAZA GARDEN WASTEWATER CROSS-ISLAND PUMPING AND CONVEYANCE SYSTEM PH-1

CCR#13 Re-routing of Gravity Sewer along Rt-17 & Rt-5 Intersection - Encroaching Federal Property

CONSTRUCTION CONTRACT NO.:

DATE: 6/21/2018

ESTIMATED BY: **BME & SONS, INC**

STATUS OF DESIGN:

Item No.	ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		EQUIPMENT COST		ENGG ESTIMATE	
		QTY	UNIT	UNIT $	TOTAL	UNIT $	TOTAL			UNIT $	TOTAL
	- Removal of precast manhole from trench	*1*	*EA*		$ -	*500.00*	$ *500.00*	$ *300.00*	$ *300.00*	*800.00*	$ *800.00*
	Hauling precast manhole turn over to GWA yard	*1*	*EA*		$ -	*150.00*	$ *150.00*	$ *500.00*	$ *500.00*	*650.00*	$ *650.00*
	Sewer Line C (Rt5 & Rt17 Intersection) sta.0+00 to sta.0+81.99										
	Excavation works from gravity pipes at sta. 0+00 to sta. 0+81.99 (slow moving excavation due to underground utilities)	*82*	*CY*		$ -	*12.00*	$ *984.00*	$ *28.00*	$ *2,296.00*	*40.00*	$ *3,280.00*
	Eexcavation works for MH44 & MH45	*42.67*	*CY*		$ -	*7.00*	$ *298.67*	$ *15.00*	$ *640.00*	*22.00*	$ *938.67*
	Provide pipe bedding sand	*18.52*	*TONS*	*35.85*	$ *663.89*	*10.00*	$ *185.19*	$ *6.50*	$ *120.37*	*52.35*	$ *969.44*
	Provide flowable fill (pipeline on pave areas)	*67.19*	*CY*	*110.75*	$ *7,441.29*	*22.85*	$ *1,535.29*		$ -	*133.60*	$ *8,976.58*
	Diisposal of excess soil materials	*82*	*CY*		$ -		$ -	$ *7.00*	$ *574.00*	*7.00*	$ *574.00*
	Provide warning tape "Sewerline"	*82*	*LF*	*0.50*	$ *41.00*	*0.50*	$ *41.00*		$ -	*1.00*	$ *82.00*
	Installtion of 12" PVC Pipe SDR35	*82*	*LF*		$ -	*12.70*	$ *1,041.40*	$ *3.50*	$ *287.00*	*16.20*	$ *1,328.40*
	Installation Precast Concrete Manhole MH44										
	- Additional 1ft High Riser due to changes in elevation	*1.00*	*EA*	*284.25*	$ *284.25*	*150.00*	$ *150.00*	$ *100.00*	$ *100.00*	*534.25*	$ *534.25*
	Installation Precast Concrete Manhole MH45										
	- Modification works for Manhole Inlet	*1.00*	*EA*	*100.00*	$ *100.00*	*300.00*	$ *300.00*	$ *50.00*	$ *50.00*	*450.00*	$ *450.00*
	Sewer Line C - Road Repair along Rt5 & Rt17 Intersection sta.0+00 to sta. 0+81.99										
	Saw-cutting portion of AC Pavements	*164*	*LF*		$ -	*1.50*	$ *246.00*	$ *0.75*	$ *123.00*	*2.25*	$ *369.00*
	Removal and disposal of AC Pavements	*53.53*	*SY*		$ -		$ -	$ *7.00*	$ *374.73*	*7.00*	$ *374.73*
	Provide Cold Mix AC Pavement Restoration	*53.53*	*SY*	*40.43*	$ *2,164.35*		$ -		$ -	*40.43*	$ *2,164.35*
	Communication Conduit and Handhole Installation										
	Provide excavation works for comm trenches	*38.33*	*CY*		$ -	*6.00*	$ *230.00*	$ *11.00*	$ *421.67*	*17.00*	$ *651.67*
	Provide selected fill and compactions		*CY*		$ -	*8.00*	$ -	$ *5.10*	$ -	*13.10*	$ -
	Provide disposal of excess soil materials	*38.33*	*CY*		$ -		$ -	$ *7.00*	$ *268.31*	*7.00*	$ *268.31*
	Provide installation of Detectable warning tape	*240*	*LF*	*0.50*	$ *120.00*	*0.50*	$ *120.00*		$ -	*1.00*	$ *240.00*
	Provide concrete encasement, 3000Psi	*11.67*	*CY*	*137.00*	$ *1,598.33*	*18.70*	$ *218.17*		$ -	*155.70*	$ *1,816.50*
	Provide concrete flowable fill	*26.67*	*CY*	*110.75*	$ *2,953.33*	*22.85*	$ *609.33*		$ -	*133.60*	$ *3,562.67*
	Installation of 2-4"dia Communication conduit	*240*	*LF*		$ -	*3.65*	$ *876.00*		$ -	*3.65*	$ *876.00*
	Survey-Take survey of existing conditions of existing utilities to reflect on as-built drawings.	*1*	*LOT*	*1,200.00*	$ *1,200.00*		$ -		$ -	*1,200.00*	$ *1,200.00*
	Exploration of existing utilities. Using 2 workers + backhoe in 2 days	*1*	*LOT*		$ -	*320.00*	$ *320.00*	$ *1,040.00*	$ *1,040.00*	*1,360.00*	$ *1,360.00*
	Total Direct (Additive & Deductive)				$ ***21,996.91***		$ ***1,465.14***		$ ***4,061.13***		$ ***27,523.18***
	Overhead	*10%*									$ *2,752.32*
	Direct Admin & Supervisory Cost	*3%*									$ *825.70*

ACTIVITY AND LOCATION: **GWA BAZA GARDEN WASTEWATER CROSS-ISLAND PUMPING AND CONVEYANCE SYSTEM PH-1**				CONSTRUCTION CONTRACT NO.:						DATE: 6/21/2018	
				ESTIMATED BY: **BME & SONS, INC**							
CCR#13 Re-routing of Gravity Sewer along Rt-17 & Rt-5 Intersection - Encroaching Federal Property				STATUS OF DESIGN:							
Item No.	ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		EQUIPMENT COST		ENGG ESTIMATE	
		QTY	UNIT	UNIT $	TOTAL	UNIT $	TOTAL			UNIT $	TOTAL
	SUB-TOTAL										***$ 31,101.19***
	Profit	***8%***									***$ 2,488.10***
	SUB-TOTAL										***$ 33,589.29***
	GRT	***4.167%***									***$ 1,399.67***
	TOTAL PROPOSED ADDITIVE AMOUNT FOR CCR#13										***$ 34,988.95***

ACTIVITY AND LOCATION:

GWA BAZA GARDEN WASTEWATER CROSS-ISLAND PUMPING AND CONVEYANCE SYSTEM PH-1

CCR#14 Rework Gravity Pipes between SHM#3 & SMH#4 due to conflict elevation with existing Storm Drain (RFI#24)

CONSTRUCTION CONTRACT NO.:

DATE: 6/21/2018

ESTIMATED BY: **BME & SONS, INC**

STATUS OF DESIGN:

Item No.	ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		EQUIPMENT COST		ENGG ESTIMATE	
		QTY	UNIT	UNIT $	TOTAL	UNIT $	TOTAL			UNIT $	TOTAL
	Existing Storm Drain line was found in conflict of new Gravity line during the pipe laying near SMH#4. All new laid pipes was pulled out and trench was covered right away due to deep and wide excavations										
a	*Excavation works from gravity pipes SMH#3 to SMH#4*	*100.00*	*CY*		*$ -*	*8.00*	*$ 800.00*	*$ 12.00*	*$ 1,200.00*	*20.00*	*$ 2,000.00*
b	*Installation of 12" pipe*	*60.00*	*FT*		*$ -*	*12.50*	*$ 750.00*	*$ 2.50*	*$ 150.00*	*15.00*	*$ 900.00*
b.1	*Pull-out and salvage newly installed pipes*	*60.00*	*FT*		*$ -*	*10.00*	*$ 600.00*	*$ 2.50*	*$ 150.00*	*12.50*	*$ 750.00*
c	*Backfilling of excavated trench*	*100.00*	*CY*		*$ -*	*8.00*	*$ 800.00*	*$ 5.00*	*$ 500.00*	*13.00*	*$ 1,300.00*
d	*Remove portion of existing 30" drainage line*	*8.00*	*LF*		*$ -*	*7.50*	*$ 60.00*	*$ 15.00*	*$ 120.00*	*22.50*	*$ 180.00*
e	*Concrete in-fill original manhole pipe opening*	*1*	*EA*	*50.00*	*$ 50.00*	*80.00*	*$ 80.00*		*$ -*	*130.00*	*$ 130.00*
f	*Make new opening for 12" dia pipe using jack hammer power tools with 2 workers at 4 hrs*	*1*	*EA*		*$ -*	*100.00*	*$ 100.00*	*$ 50.00*	*$ 50.00*	*150.00*	*$ 150.00*
g	*Repair rough openings/concrete in-fill after pipe installation*	*1*	*EA*	*25.00*	*$ 25.00*	*50.00*	*$ 50.00*		*$ -*	*75.00*	*$ 75.00*
h	*Provide additional concrete topping inside manhole, revised manhole drop elevations with additional of 2 feet topping*	*1*	*CY*	*175.00*	*$ 175.00*	*150.00*	*$ 150.00*		*$ -*	*325.00*	*$ 325.00*
	Note:Crew worked overtime to backfilled and temporary restore the trench for safety purposes and trench gets wider on the re-excavation.										
	Total Direct (Additive & Deductive)				***$ 250.00***		***$ 3,390.00***		***$ 2,170.00***		***$ 5,810.00***
	Overhead	*10%*						`			*$ 581.00*
	Direct Admin & Supervisory Cost	*3%*									*$ 174.30*
	SUB-TOTAL										***$ 6,565.30***
	Profit	*8%*									*$ 525.22*
	SUB-TOTAL										***$ 7,090.52***
	GRT	*4.167%*									*$ 295.46*
	TOTAL PROPOSED AMOUNT FOR CCR#14										***$ 7,385.99***

ACTIVITY AND LOCATION: **GWA BAZA GARDEN WASTEWATER CROSS-ISLAND PUMPING AND CONVEYANCE SYSTEM PH-1**				CONSTRUCTION CONTRACT NO.:						DATE: **Wednesday, July 25, 2018**	
CCR#15_rev01 Road Trench Restortion (RFI#27 SMH61 - Revised pipe lay-out at Paved Area)				ESTIMATED BY: **BME & SONS, INC**							
				STATUS OF DESIGN:							
Item No.	ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		EQUIPMENT COST		ENGG ESTIMATE	
		QTY	UNIT	UNIT $	TOTAL	UNIT $	TOTAL			UNIT $	TOTAL
21	**Sewer Line C - New Road Restoration by Patching, 3ft x 340LF for Sewrline & 20" x 340ft for CommLine**										
	Saw-cut existing AC pavement	*696*	*LF*		*$ -*	*1.50*	*$ 1,044.00*	*$ 0.75*	*$ 522.00*	*2.25*	*$ 1,566.00*
	Remove and dispose affected AC pavements, Sewerline	*132.50*	*SY*		*$ -*		*$ -*	*$ 7.00*	*$ 927.50*	*7.00*	*$ 927.50*
	Remove and dispose affected AC pavements, CommLine	*76*	*SY*		*$ -*		*$ -*	*$ 7.00*	*$ 532.00*	*7.00*	*$ 532.00*
	Provide 3" thick Cold mix asphalt restoration (temporary patching) - ***For Sewerline & CommLine***	*208.50*	*SY*	*34.80*	*$ 7,255.80*	*5.00*	*$ 1,042.50*	*$ 9.20*	*$ 1,918.20*	*49.00*	*$ 10,216.50*
	Temporary Traffic Control										
	Provide Traffic control (Signages, Barriers, etc..)										
	- Flagmans, 2 men	*5*	*Days*		*$ -*	*160.00*	*$ 800.00*		*$ -*	*160.00*	*$ 800.00*
	Provide temporary steel plate	*340*	*LF*		*$ -*	*6.00*	*$ 2,040.00*	*$ 3.00*	*$ 1,020.00*	*9.00*	*$ 3,060.00*
	Total Direct (Additive & Deductive)				***$ 7,255.80***		***$ 4,926.50***		***$ 4,919.70***		***$ 17,102.00***
	Overhead	*10%*						`			*$ 1,710.20*
	Direct Admin & Supervisory Cost	*3%*									*$ 513.06*
	SUB-TOTAL										***$ 19,325.26***
	Profit	*8%*									*$ 1,546.02*
	SUB-TOTAL										***$ 20,871.28***
	GRT	*4.167%*									*$ 869.71*
	TOTAL PROPOSED ADDITIVE AMOUNT FOR CCR#15										***$ 21,740.99***

ACTIVITY AND LOCATION:

GWA BAZA GARDEN WASTEWATER CROSS-ISLAND PUMPING AND CONVEYANCE SYSTEM PH-1

CCR#19 Route 2A Road Restoration due to Sewerline Re-alignment from SMH#74 Sta. 73+48.33 to SMH#81 Sta 95+83.69

CONSTRUCTION CONTRACT NO.:

DATE: **7/25/2018**

ESTIMATED BY: **BME & SONS, INC**

STATUS OF DESIGN:

Item No.	ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		EQUIPMENT COST		ENGG ESTIMATE	
		QTY	UNIT	UNIT $	TOTAL	UNIT $	TOTAL			UNIT $	TOTAL
	ADDITIVE WORKS										
	Traffic Control										
	Provide additional traffic control along sta. 72+00 to sta. 79+00 and from Sta 88+50 to 91+50										
	- Flagmans, 2man-crew	*20*	*Days*		*$ -*	*160.00*	*$ 3,200.00*		*$ -*	*160.00*	*$ 3,200.00*
	Provide temporary steel plate	*1000*	*LF*		*$ -*	*2.00*	*$ 2,000.00*	*$ 3.00*	*$ 3,000.00*	*5.00*	*$ 5,000.00*
	Manhole Adjustment										
	For MH74, adjustment of grade ring from 3" to 8" height	*1*	*EA*	*150.00*	*$ 150.00*	*200.00*	*$ 200.00*		*$ -*	*350.00*	*$ 350.00*
	For MH75, additional 1ft high precast riser	*1*	*EA*	*284.25*	*$ 284.25*	*100.00*	*$ 100.00*	*$ 50.00*	*$ 50.00*	*434.25*	*$ 434.25*
	For MH76, adjustment of grade ring from 3" to 5" height	*1*	*EA*	*100.00*	*$ 100.00*	*150.00*	*$ 150.00*		*$ -*	*250.00*	*$ 250.00*
	For MH77, No adjustment										
	Provide additional precast manholes SMH79A between SMH79 & SMH80:										
	- Precast Manhole Base, 2.83' high	*1*	*EA*	*1,764.00*	*$ 1,764.00*	*250.00*	*$ 250.00*	*$ 180.00*	*$ 180.00*	*2,194.00*	*$ 2,194.00*
	- Precast Manhole Cone, 3' high	*1*	*EA*	*743.65*	*$ 743.65*	*150.00*	*$ 150.00*	*$ 150.00*	*$ 150.00*	*1,043.65*	*$ 1,043.65*
	- Precast 1ft high Riser	*1*	*EA*	*284.25*	*$ 284.25*	*150.00*	*$ 150.00*	*$ 150.00*	*$ 150.00*	*584.25*	*$ 584.25*
	- Concrete grade ring, 6" high, cast in-place	*1*	*EA*	*150.00*	*$ 150.00*	*250.00*	*$ 250.00*		*$ -*	*400.00*	*$ 400.00*
	- 15" dia Kor-N-Seal	*2*	*EA*	*126.65*	*$ 253.30*	*50.00*	*$ 100.00*		*$ -*	*176.65*	*$ 353.30*
	- airfreight cost of KorNSeal	*2*	*EA*	*125.00*	*$ 250.00*		*$ -*		*$ -*	*125.00*	*$ 250.00*
	- Butyl Joint Sealant	*21*	*LF*	*2.50*	*$ 52.50*	*5.00*	*$ 105.00*		*$ -*	*7.50*	*$ 157.50*
	- 30" Manhole Frame and cover (used MH frame and cover from MH26)	*1*	*EA*	*829.28*	*$ 829.28*	*180.00*	*$ 180.00*	*$ 25.00*	*$ 25.00*	*1,034.28*	*$ 1,034.28*
	- Reinforced concrete collar	*1*	*EA*	*150.00*	*$ 150.00*	*300.00*	*$ 300.00*	*$ 50.00*	*$ 50.00*	*500.00*	*$ 500.00*
	- Epoxy concrete liner	*103.96*	*SF*	*2.35*	*$ 244.31*	*4.00*	*$ 415.84*		*$ -*	*6.35*	*$ 660.15*
	Sewer Line C (Rout 2A) - Additional Road Restoration										
	Additional saw-cutting of existing pavement Sta. 72+00 to Sta 79+10 and Sta 88+50 to Sta 91+50 (1010 LF x 3)	*3030*	*LF*		*$ -*	*1.50*	*$ 4,545.00*	*$ 0.75*	*$ 2,272.50*	*2.25*	*$ 6,817.50*
	Removal & disposal of existing pavement from Sta. 72+00 to Sta 79+10 and Sta 88+50 to Sta 91+50 (1010 LF x 12)	*1347*	*SY*		*$ -*		*$ -*	*$ 7.00*	*$ 9,429.00*	*7.00*	*$ 9,429.00*
	Provide additonal 3" thk AC Pavements	*1347*	*SY*	*40.43*	*$ 54,459.21*	*1.00*	*$ 1,347.00*		*$ -*	*41.43*	*$ 55,806.21*
	Provide additonal 3/4" thk Friction course	*1347*	*SY*	*22.61*	*$ 30,455.67*		*$ -*		*$ -*	*22.61*	*$ 30,455.67*
	Provide painted line markings	*1010*	*LF*	*1.25*	*$ 1,262.50*	*1.50*	*$ 1,515.00*		*$ -*	*2.75*	*$ 2,777.50*
	Revisions on SMH80 - invert at downstream is deeper of 2 ft:										
	No Change on volume of excavation										
	Modification of SMH80 due to revised elevation										

ACTIVITY AND LOCATION:

GWA BAZA GARDEN WASTEWATER CROSS-ISLAND PUMPING AND CONVEYANCE SYSTEM PH-1

CCR#19 Route 2A Road Restoration due to Sewerline Re-alignment from SMH#74 Sta. 73+48.33 to SMH#81 Sta 95+83.69

CONSTRUCTION CONTRACT NO.:

DATE: **7/25/2018**

ESTIMATED BY: **BME & SONS, INC**

STATUS OF DESIGN:

Item No.	ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		EQUIPMENT COST		ENGG ESTIMATE	
		QTY	UNIT	UNIT $	TOTAL	UNIT $	TOTAL			UNIT $	TOTAL
	- fill to block-out existing manhole opening	*1*	*EA*	*50.00*	*$ 50.00*	*180.00*	*$ 180.00*	*$ 25.00*	*$ 25.00*	*255.00*	*$ 255.00*
	- provide new opening	*1*	*EA*	*25.00*	*$ 25.00*	*300.00*	*$ 300.00*	*$ 120.00*	*$ 120.00*	*445.00*	*$ 445.00*
	Modification of SMH81 due to revised elevation										
	- make the opeing bigger to fir new 12" pipe size	*1*	*EA*	*50.00*	*$ 50.00*	*180.00*	*$ 180.00*	*$ 25.00*	*$ 25.00*	*255.00*	*$ 255.00*
	Deduct concrete encasement	*-6*	*cy*	*135.40*	*$ (812.40)*	*35.00*	*$ (210.00)*	*$ 5.00*	*$ (30.00)*	*175.40*	*$ (1,052.40)*
	- Deduct Rebars	*-240*	*lbs*	*0.90*	*$ (216.00)*	*0.90*	*$ (216.00)*	*$ 0.25*	*$ (60.00)*	*2.05*	*$ (492.00)*
	Re-survey works from Sta73+48.33 (SMH74) up to Sta 95.83.69 (SMH81)	*1*	*LOT*		*$ -*	*1,500.00*	*$ 1,500.00*		*$ -*	*1,500.00*	*$ 1,500.00*
	Total Direct (Additive & Deductive)				***$ 90,529.52***		***$ 16,691.84***		***$ 15,386.50***		***$ 122,607.86***
	Overhead	*10%*						`			*$ 12,260.79*
	Direct Admin & Supervisory Cost	*3%*									*$ 3,678.24*
	SUB-TOTAL										***$ 138,546.88***
	Profit	*8%*									*$ 11,083.75*
	SUB-TOTAL										***$ 149,630.63***
	GRT	*5.27%*									*$ 7,885.53*
	TOTAL PROPOSED ADDITIVE COST FOR CCR#19										***$ 157,516.16***

ACTIVITY AND LOCATION:

GWA BAZA GARDEN WASTEWATER CROSS-ISLAND PUMPING AND CONVEYANCE SYSTEM PH-1

CCR#20 Additional Manhole MH71A & MH71B at Rt5 & Rt2A due to unforeseen U/G waterline and Additional Road Restoration Due to TATA U/G cables

CONSTRUCTION CONTRACT NO.:

DATE: 7/25/2018

ESTIMATED BY: **BME & SONS, INC**

STATUS OF DESIGN:

Item No.	ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		EQUIPMENT COST		ENGG ESTIMATE	
		QTY	UNIT	UNIT $	TOTAL	UNIT $	TOTAL			UNIT $	TOTAL
	ADDITIVE WORKS										
	For Manholes MH71A and MH71B										
	Excavation for new manholes	*47.62*	*CY*		$ -	*7.50*	$ *357.16*	$ *15.00*	$ *714.31*	*22.50*	$ *1,071.47*
	Provide 300Psi flowable fill for manhole sub-base	*2.25*	*CY*	*110.75*	$ *249.03*	*22.85*	$ *51.38*	$ *5.00*	$ *11.24*	*138.60*	$ *311.65*
	Bckfilling and compactions around sewer manholes	*45.61*	*LCY*	*28.00*	$ *1,277.15*		$ -		$ -	*28.00*	$ *1,277.15*
	- Backfill in 12" lift compacted to 10"	*36.49*	*CY*		$ -	*5.00*	$ *182.45*	$ *12.00*	$ *437.88*	*17.00*	$ *620.33*
	- Compaction per lift	*8*	*lift*		$ -	*25.00*	$ *200.00*	$ *15.00*	$ *120.00*	*40.00*	$ *320.00*
	- Compaction testing per lift	*8*	*EA*		$ -		$ -	$ *45.00*	$ *360.00*	*45.00*	$ *360.00*
	- Compaction testing tech stand-by	*3*	*hr*		$ -	*55.00*	$ *165.00*		$ -	*55.00*	$ *165.00*
	Provide precast manholes ***MH71A***										
	- Precast Manhole Base, 4.83' high	*1*	*EA*	*2,318.00*	$ *2,318.00*	*250.00*	$ *250.00*	$ *180.00*	$ *180.00*	*2,748.00*	$ *2,748.00*
	- Precast Manhole Cone, 3' high	*1*	*EA*	*743.65*	$ *743.65*	*150.00*	$ *150.00*	$ *150.00*	$ *150.00*	*1,043.65*	$ *1,043.65*
	- Concrete grade ring, 6" high, cast in-place	*1*	*EA*	*150.00*	$ *150.00*	*250.00*	$ *250.00*		$ -	*400.00*	$ *400.00*
	- 15" dia Kor-N-Seal	*2*	*EA*	*126.65*	$ *253.30*	*50.00*	$ *100.00*		$ -	*176.65*	$ *353.30*
	- Butyl Joint Sealant	*14*	*LF*	*2.50*	$ *35.00*	*5.00*	$ *70.00*		$ -	*7.50*	$ *105.00*
	- 30" Manhole Frame and cover (used MH frame and cover from MH26)	*1*	*EA*		$ -	*180.00*	$ *180.00*	$ *25.00*	$ *25.00*	*205.00*	$ *205.00*
	- Reinforced concrete collar	*1*	*EA*	*150.00*	$ *150.00*	*300.00*	$ *300.00*	$ *50.00*	$ *50.00*	*500.00*	$ *500.00*
	- Epoxy concrete liner	*94.83*	*SF*	*2.35*	$ *222.85*	*4.00*	$ *379.31*		$ -	*6.35*	$ *602.16*
	Provide precast manholes ***MH71B***										
	- Precast Manhole Base, 4.83' high (use monolithic base from MH42)	*1*	*EA*		$ -	*250.00*	$ *250.00*	$ *180.00*	$ *180.00*	*430.00*	$ *430.00*
	- Precast Manhole Riser, 1' high (use 1ft riser from MH42)	*1*	*EA*		$ -	*150.00*	$ *150.00*	$ *150.00*	$ *150.00*	*300.00*	$ *300.00*
	- Precast Manhole Cone, 3' high	*1*	*EA*	*743.65*	$ *743.65*	*150.00*	$ *150.00*	$ *150.00*	$ *150.00*	*1,043.65*	$ *1,043.65*
	- Concrete grade ring, 10" high, cast in-place	*1*	*EA*	*175.00*	$ *175.00*	*250.00*	$ *250.00*		$ -	*425.00*	$ *425.00*
	- 15" dia Kor-N-Seal	*2*	*EA*	*126.65*	$ *253.30*	*50.00*	$ *100.00*		$ -	*176.65*	$ *353.30*
	- Butyl Joint Sealant	*14*	*LF*	*2.50*	$ *35.00*	*5.00*	$ *70.00*		$ -	*7.50*	$ *105.00*
	- 30" Manhole Frame and cover (used MH frame and cover from MH42)	*1*	*EA*		$ -	*180.00*	$ *180.00*	$ *25.00*	$ *25.00*	*205.00*	$ *205.00*
	- Reinforced concrete collar	*1*	*EA*	*150.00*	$ *150.00*	*300.00*	$ *300.00*	$ *50.00*	$ *50.00*	*500.00*	$ *500.00*
	- Epoxy concrete liner	*111.53*	*SF*	*2.35*	$ *262.10*	*4.00*	$ *446.13*		$ -	*6.35*	$ *708.23*
	Provide Manhole Testing for MH71A & MH71B	*2*	*EA*		$ -	*250.00*	$ *500.00*	$ *250.00*	$ *500.00*	*500.00*	$ *1,000.00*
	Survey for new location of SMH#71A & SMH#71B and pipe re-alignment from Sta 67+00 to SMH#72	*1*	*LOT*		$ -	*1,000.00*	$ *1,000.00*		$ -	*1,000.00*	$ *1,000.00*
	Additional Paving Demo Works for new MH location										
	Saw-cut portion of AC Pavement	*64*	*LF*		$ -	*1.50*	$ *96.00*	$ *0.75*	$ *48.00*	*2.25*	$ *144.00*
	Remove and dispose AC Pavement	*14.22*	*SY*		$ -		$ -	$ *8.58*	$ *122.03*	*8.58*	$ *122.03*
	Re-works for installed MH72										

ACTIVITY AND LOCATION:

GWA BAZA GARDEN WASTEWATER CROSS-ISLAND PUMPING AND CONVEYANCE SYSTEM PH-1

CCR#20 Additional Manhole MH71A & MH71B at Rt5 & Rt2A due to unforeseen U/G waterline and Additional Road Restoration Due to TATA U/G cables

CONSTRUCTION CONTRACT NO.:

DATE: 7/25/2018

ESTIMATED BY: **BME & SONS, INC**

STATUS OF DESIGN:

Item No.	ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		EQUIPMENT COST		ENGG ESTIMATE	
		QTY	UNIT	UNIT $	TOTAL	UNIT $	TOTAL			UNIT $	TOTAL
	Re-excavation works	*19.81*	*CY*		$ -	*7.50*	$ *148.61*	$ *15.00*	$ *297.22*	*22.50*	$ *445.83*
	Pull-out of Manhole MH72	*1*	*EA*		$ -	*500.00*	$ *500.00*	$ *300.00*	$ *300.00*	*800.00*	$ *800.00*
	Bckfilling and compactions around sewer manholes	*24.76*	*LCY*	*28.00*	$ *693.35*		$ -		$ -	*28.00*	$ *693.35*
	- Backfill in 12" lift compacted to 10"	*19.81*	*CY*		$ -	*5.00*	$ *99.05*	$ *12.00*	$ *237.72*	*17.00*	$ *336.77*
	- Compaction per lift	*12*	*lift*		$ -	*25.00*	$ *300.00*	$ *15.00*	$ *180.00*	*40.00*	$ *480.00*
	- Compaction testing per lift	*12*	*EA*		$ -		$ -	$ *45.00*	$ *540.00*	*45.00*	$ *540.00*
	- Compaction testing tech stand-by	*3*	*hr*		$ -	*55.00*	$ *165.00*		$ -	*55.00*	$ *165.00*
	Additional Precast manhole riser, 2ft high	*1*	*EA*	*522.20*	$ *522.20*		$ -		$ -	*522.20*	$ *522.20*
	Re-installation works for MH72	*1*	*EA*		$ -	*750.00*	$ *750.00*	$ *500.00*	$ *500.00*	*1,250.00*	$ *1,250.00*
	Additional Butyl Joint Sealant	*56*	*LF*	*2.50*	$ *140.00*	*5.00*	$ *280.00*		$ -	*7.50*	$ *420.00*
	Additional Epoxy concrete liner	*25.12*	*SF*	*2.35*	$ *59.03*	*4.00*	$ *100.48*		$ -	*6.35*	$ *159.51*
	Sewer Line C (Rout 2A) - Additional Road Restoration dur to TATA underground cables										
	Additional saw-cutting of existing pavement Sta. 69+40 to Sta 72+00 (260 LF x 3)	*780*	*LF*		$ -	*1.50*	$ *1,170.00*	$ *0.75*	$ *585.00*	*2.25*	$ *1,755.00*
	Removal & disposal of existing pavement	*347*	*SY*		$ -		$ -	$ *7.00*	$ *2,429.00*	*7.00*	$ *2,429.00*
	Provide additonal 3" thk AC Pavements	*347*	*SY*	*40.43*	$ *14,029.21*	*1.00*	$ *347.00*		$ -	*41.43*	$ *14,376.21*
	Provide additonal 3/4" thk Friction course	*347*	*SY*	*22.61*	$ *7,845.67*		$ -		$ -	*22.61*	$ *7,845.67*
	Provide painted line markings	*260*	*LF*	*1.25*	$ *325.00*	*1.50*	$ *390.00*		$ -	*2.75*	$ *715.00*
	Restoration of existing concrete pavement underneath asphalt pavement										
	3ft x 111ft x 14" thick, 4,000PSI	*16*	*CY*	*165.00*	$ *2,640.00*	*35.00*	$ *560.00*	$ *5.00*	$ *80.00*	*205.00*	$ *3,280.00*
	Total Direct (Additive)				***$ 33,272.49***		***$ 10,937.57***		***$ 8,422.40***		***$ 52,632.46***
	Overhead	*10%*						`			$ *5,263.25*
	Direct Admin & Supervisory Cost	*3%*									$ *1,578.97*
	SUB-TOTAL										***$ 59,474.68***
	Profit	*8%*									$ *4,757.97*
	SUB-TOTAL										***$ 64,232.65***
	GRT	*5.27%*									$ *3,385.06*
	TOTAL PROPOSED ADDITIVE COST FOR CCR#20										***$ 67,617.72***

ACTIVITY AND LOCATION:
GWA BAZA GARDEN WASTEWATER CROSS-ISLAND PUMPING AND CONVEYANCE SYSTEM PH-1

CCR#21REv1 Aplacho Bridge Crossing Forcemain Re-alignment due to Snail Issue

CONSTRUCTION CONTRACT NO.:

DATE: **Wednesday, July 25, 2018**

ESTIMATED BY: **BME & SONS, INC**

STATUS OF DESIGN:

Item No.	ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		EQUIPMENT COST		ENGG ESTIMATE	
		QTY	UNIT	UNIT $	TOTAL	UNIT $	TOTAL			UNIT $	TOTAL
	Aplacho Bridge Crossing Forcemain Re-alignment										
	Traffic Control										
	Provide additional traffic control along sta 1+80 to sta 3+75										
	- Flagmans, 2-crew	*3*	*Days*		*$ -*	*160.00*	*$ 480.00*		*$ -*	*160.00*	*$ 480.00*
	Provide temporary steel plate	*165*	*LF*		*$ -*	*6.00*	*$ 990.00*	*$ 3.00*	*$ 495.00*	*9.00*	*$ 1,485.00*
	Demo and new Works at Aplacho Bridge										
	Setting of hanging flatform below bridge, 3-crew x 1day	*24*	*MnHrs*		*$ -*	*10.00*	*$ 240.00*		*$ -*	*10.00*	*$ 240.00*
	Demo portion of concrete diaphragm										
	- 3 Laborers x 5Days, chipping works	*120*	*MnHrs*		*$ -*	*10.00*	*$ 1,200.00*		*$ -*	*10.00*	*$ 1,200.00*
	- Equipment, Genset, chipping hammer, concrete cutter	*30*	*Hrs*		*$ -*		*$ -*	*$ 20.00*	*$ 600.00*	*20.00*	*$ 600.00*
	Demo works for concrete wall abutment										
	- 4 Laborers x 2Days, chipping works	*64*	*MnHrs*		*$ -*	*10.00*	*$ 640.00*		*$ -*	*10.00*	*$ 640.00*
	- 1 Excavator w/ operator	*4*	*Hrs*		*$ -*	*16.50*	*$ 66.00*	*$ 70.00*	*$ 280.00*	*86.50*	*$ 346.00*
	- 1 Dumptruck w/ operator	*4*	*Hrs*		*$ -*	*15.00*	*$ 60.00*	*$ 45.00*	*$ 180.00*	*60.00*	*$ 240.00*
	- Equipment, Genset, chipping hammer, concrete cutter	*16*	*Hrs*		*$ -*		*$ -*	*$ 20.00*	*$ 320.00*	*20.00*	*$ 320.00*
	Provide PVC pipe sleeve for 10" Forcemain Pipe (Approximately 10" Lg)	*2*	*EA*	*150.00*	*$ 300.00*	*75.00*	*$ 150.00*		*$ -*	*225.00*	*$ 450.00*
	Provide PVC pipe sleeve for 4" Comm line	*4*	*EA*	*25.00*	*$ 100.00*	*40.00*	*$ 160.00*		*$ -*	*65.00*	*$ 260.00*
	Seal gap between forcemain pipe, comm line and the pipe sleeve at wall abutment only	*18.71*	*LF*	*3.00*	*$ 56.13*	*5.00*	*$ 93.55*		*$ -*	*8.00*	*$ 149.68*
	Forcemain Line - 3										
	Deduct Trench excavation works	*-18.26*	*CY*		*$ -*	*7.50*	*$ (136.94)*	*$ 15.00*	*$ (273.89)*	*22.50*	*$ (410.83)*
	Deduct Selected Fill	*-18.26*	*CY*		*$ -*	*8.00*	*$ (146.07)*	*$ 5.10*	*$ (93.12)*	*13.10*	*$ (239.20)*
	Deduct disposal of excavated excess soil	*-18.26*	*CY*		*$ -*		*$ -*		*$ -*	*-*	*$ -*
	Deduct 20ft concrete encasement	*-2.71*	*CY*	*135.40*	*$ (367.08)*	*65.00*	*$ (176.22)*	*$ 5.00*	*$ (13.56)*	*205.40*	*$ (556.86)*
	Additional 10" dia x 45bend DI Elbow (Materials only)	*2*	*EA*	*220.55*	*$ 441.10*		*$ -*		*$ -*	*220.55*	*$ 441.10*
	Additional installation for 1ea-10" dia x 45 bend elbow	*1*	*EA*		*$ -*	*75.00*	*$ 75.00*		*$ -*	*75.00*	*$ 75.00*
	Additional Concrete Thrust Block	*1*	*EA*	*125.00*	*$ 125.00*	*100.00*	*$ 100.00*		*$ -*	*225.00*	*$ 225.00*
	Survey Works	*1.00*	*LOT*		*$ -*	*1,200.00*	*$ 1,200.00*		*$ -*	*1,200.00*	*$ 1,200.00*
	Forcemain Line - 3 Road Repair										
	Additional saw-cutting of AC pavement	*330*	*LF*		*$ -*	*1.50*	*$ 495.00*	*$ 0.75*	*$ 247.50*	*2.25*	*$ 742.50*
	Additional removal and disposal of AC pavement	*242*	*SY*		*$ -*		*$ -*	*$ 7.00*	*$ 1,694.00*	*7.00*	*$ 1,694.00*
	Additional 3" thk Concrete Pavement	*242*	*SY*	*40.43*	*$ 9,784.06*	*3.00*	*$ 726.00*		*$ -*	*43.43*	*$ 10,510.06*
	Additional 3/4" Friction course	*242*	*SY*	*22.61*	*$ 5,471.62*		*$ -*		*$ -*	*22.61*	*$ 5,471.62*
	Additional AC pavement line markings	*242*	*LF*	*1.25*	*$ 302.50*	*1.50*	*$ 363.00*		*$ -*	*2.75*	*$ 665.50*
					$ -		*$ -*		*$ -*	*-*	*$ -*
	Total Direct (Additive)				***$ 16,213.33***		***$ 6,579.31***		***$ 3,435.93***		***$ 26,228.57***

ACTIVITY AND LOCATION: **GWA BAZA GARDEN WASTEWATER CROSS-ISLAND PUMPING AND CONVEYANCE SYSTEM PH-1**				CONSTRUCTION CONTRACT NO.:						DATE: **Wednesday, July 25, 2018**	
				ESTIMATED BY: **BME & SONS, INC**							
CCR#21REv1 Aplacho Bridge Crossing Forcemain Re-alignment due to Snail Issue				STATUS OF DESIGN:							
Item No.	ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		EQUIPMENT COST		ENGG ESTIMATE	
		QTY	UNIT	UNIT $	TOTAL	UNIT $	TOTAL			UNIT $	TOTAL
	Overhead	*10%*						`			*$ 2,622.86*
	Direct Admin & Supervisory Cost	*3%*									*$ 786.86*
	SUB-TOTAL										***$ 29,638.28***
	Profit	*8%*									*$ 2,371.06*
	SUB-TOTAL										***$ 32,009.34***
	GRT	*4.167%*									*$ 1,333.83*
	TOTAL PROPOSED ADDITIVE COST FOR CCR#21										***$ 33,343.17***

ACTIVITY AND LOCATION:

GWA BAZA GARDEN WASTEWATER CROSS-ISLAND PUMPING AND CONVEYANCE SYSTEM PH-1

CCR#22 Provide Drainage Pipe on Electrical HandHole to Infiltration System Due to Water Seepage

CONSTRUCTION CONTRACT NO.:

DATE: **Wednesday, August 08, 2018**

ESTIMATED BY: **BME & SONS, INC**

STATUS OF DESIGN:

Item No.	ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		EQUIPMENT COST		ENGG ESTIMATE	
		QTY	UNIT	UNIT $	TOTAL	UNIT $	TOTAL			UNIT $	TOTAL
	Provide drainage Pipe from Electrical HandHole to Infiltration due to water seepage										
	Excavation, 18" wide x 3ft deep x 40 ft long	*40*	*LF*		$ -	*4.00*	$ *160.00*	*6.00*	$ *240.00*	*10.00*	$ *400.00*
	Provide 4" PVC drainage pipe	*40*	*LF*	*3.50*	$ *140.00*	*4.00*	$ *160.00*		$ -	*7.50*	$ *300.00*
	Backfilling	*40*	*LF*		$ -	*2.00*	$ *80.00*	*4.00*	$ *160.00*	*6.00*	$ *240.00*
	Compaction	*40*	*LF*		$ -	*2.00*	$ *80.00*	*2.00*	$ *80.00*	*4.00*	$ *160.00*
	Provide pipe penetration on existing handhole	*1*	*EA*		$ -	*60.00*	$ *60.00*		$ -	*60.00*	$ *60.00*
	Seal and restore opening	*1*	*EA*	*25.00*	$ *25.00*	*40.00*	$ *40.00*		$ -	*65.00*	$ *65.00*
	Make Flow Meter Box Water Tight due to water seepage										
	Provide concrete base, 3ft x 3ft x 6" to include concrete, formworks and rebars	*1*	*LOT*	*100.00*	$ *100.00*	*150.00*	$ *150.00*		$ -	*250.00*	$ *250.00*
					$ -		$ -		$ -	-	$ -
					$ -		$ -		$ -	-	$ -
	Total Direct (Additive)				***$ 265.00***		***$ 730.00***		***$ 480.00***		***$ 1,475.00***
	Overhead	*10%*						`			$ *147.50*
	Direct Admin & Supervisory Cost	*3%*									$ *44.25*
	SUB-TOTAL										***$ 1,666.75***
	Profit	*8%*									$ *133.34*
	SUB-TOTAL										***$ 1,800.09***
	GRT	*4.167%*									$ *75.01*
	TOTAL PROPOSED ADDITIVE COST FOR CCR#22										***$ 1,875.10***

EXHIBIT B

COST ESTIMATE

ACTIVITY AND LOCATION:
GWA BAZA GARDEN WASTEWATER CROSS-ISLAND PUMPING AND CONVEYANCE SYSTEM PH-2

CCR#4 - Provide Electronic (LED) Road Sign as required by DPW HEP Department

CONSTRUCTION CONTRACT NO.:
S15-008 BDN/WW 11-03

DATE:
August 8, 2018

ESTIMATED BY:
BME & SONS, INC

STATUS OF DESIGN:

Item No.	ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		EQUIPMENT COST		ENGG ESTIMATE	
		QTY	UNIT	UNIT $	TOTAL	UNIT $	TOTAL			UNIT $	TOTAL
1	*Provide electronic (LED) road sign as additional requirement of DPW HEP department, solar powered*										
2	*- Rental from October 31, 2017 to November 30, 2017*	*2*	*EA*		*$ -*		*$ -*	*$ 984.00*	*$ 1,968.00*	*984.00*	*$ 1,968.00*
3	*- Delivery charges*	*2*	*EA*		*$ -*	*120.00*	*$ 240.00*		*$ -*	*120.00*	*$ 240.00*
4	*- Rental for the month of December 2017*	*2*	*EA*		*$ -*		*$ -*	*$ 984.00*	*$ 1,968.00*	*984.00*	*$ 1,968.00*
5	*- Rental for the month of January 2018*	*2*	*EA*		*$ -*		*$ -*	*$ 984.00*	*$ 1,968.00*	*984.00*	*$ 1,968.00*
6	*- Rental for the month of February 2018*	*2*	*EA*		*$ -*		*$ -*	*$ 984.00*	*$ 1,968.00*	*984.00*	*$ 1,968.00*
7	*- Rental for the month of March 2018*	*2*	*EA*		*$ -*		*$ -*	*$ 984.00*	*$ 1,968.00*	*984.00*	*$ 1,968.00*
8	*- Rental for the month of April 2018*	*2*	*EA*		*$ -*		*$ -*	*$ 984.00*	*$ 1,968.00*	*984.00*	*$ 1,968.00*
9	*- Rental for the month of May 2018*	*2*	*EA*		*$ -*		*$ -*	*$ 984.00*	*$ 1,968.00*	*984.00*	*$ 1,968.00*
10	*- Rental for the month of June 2018*	*2*	*EA*		*$ -*		*$ -*	*$ 984.00*	*$ 1,968.00*	*984.00*	*$ 1,968.00*
11	*- Rental for the month of July 2018*	*2*	*EA*		*$ -*		*$ -*	*$ 984.00*	*$ 1,968.00*	*984.00*	*$ 1,968.00*
12	*- Rental for the month of August 2018*	*2*	*EA*		*$ -*		*$ -*	*$ 984.00*	*$ 1,968.00*	*984.00*	*$ 1,968.00*
13	*- Delivery charges (return)*	*2*	*EA*		*$ -*	*120.00*	*$ 240.00*		*$ -*	*120.00*	*$ 240.00*
	Total Direct (Additive)				***$ -***		***$ 480.00***		***$ 19,680.00***		***$ 20,160.00***
	Overhead	*10%*						`			*$ 2,016.00*
	Direct Admin & Supervisory Cost	*3%*									*$ 604.80*
	SUB-TOTAL										***$ 22,780.80***
	Profit	*8%*									*$ 1,822.46*
	SUB-TOTAL										***$ 24,603.26***
	GRT	*4.167%*									*$ 1,025.22*
	TOTAL PROPOSED ADDITIVE AMOUNT FOR CCR#12										***$ 25,628.48***

ACTIVITY AND LOCATION:

GWA BAZA GARDEN WASTEWATER CROSS-ISLAND PUMPING AND CONVEYANCE SYSTEM PH-2

CCR#05 Additive Works - Adjustment on Elevation of Forcemain Pipes from sta134+00 to sta137+50 (Response to RFI15) due to existing Storm Drainage Pipe and Install Clean-out in the locations where Pipes are already completely laid out

CONSTRUCTION CONTRACT NO.:

DATE: **Tuesday, July 31, 2018**

ESTIMATED BY: **BME & SONS, INC**

STATUS OF DESIGN:

Item No.	ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		EQUIPMENT COST		ENGG ESTIMATE	
		QTY	UNIT	UNIT $	TOTAL	UNIT $	TOTAL			UNIT $	TOTAL
	ADDITIVE WORKS										
	REMOVAL WORKS										
1	*Re-excavation works of flowble fill (sta134+00 to sta134+80)*	41	CY		$ -	6.00	$ 248.53	$ 14.00	$ 579.91	20.00	$ 828.44
2	*Cut and Removal of laid pipes from sta.134+00 to sta134+80 (for adjustment)*	80	LF		$ -	10.00	$ 800.00	$ 3.00	$ 240.00	13.00	$ 1,040.00
	NEW WORKS										
3	*Provide additional 12" dia C900 PVC pipe replacement*	20	LF	28.58	$ 571.60	12.00	$ 240.00	$ 3.00	$ 60.00	43.58	$ 871.60
	Note: Existing in-place pipe from sta134+00 to sta 134+80 was re-use, only additional 1-pc length was added to replace the cut pipe.										
4	*Provide concrete encase for forcemain pipe from sta.134+40 to sta.136+20*										
	- 3000Psi Concrete (Based on actual usage)	45	CY	134.50	$ 6,052.50	25.00	$ 1,125.00		$ -	159.50	$ 7,177.50
	- Reinforcement	0.6	TON	800.00	$ 480.00	800.00	$ 480.00		$ -	1,600.00	$ 960.00
5	*Provide pipe bedding sand t sta.134+00 to sta.134+60*	19.4	TONS		$ -	18.00	$ 349.50		$ -	18.00	$ 349.50
	- Note: Re-use bedding sand on site										
6	*Provide flowble fill*	16.2	CY	110.75	$ 1,792.00	22.50	$ 364.06	$ 5.00	$ 80.90	138.25	$ 2,236.96
7	***Clean-out adjustment***										
	- Re-excavation of Flowable Fill	3.3	CY		$ -	6.00	$ 20.00	$ 14.00	$ 46.67	20.00	$ 66.67
	- Cut and remove protion of existing pipe	1	LOT		$ -	75.00	$ 75.00		$ -	75.00	$ 75.00
	- Provide additional fittings (Dresser Coupling)	1	EA	580.00	$ 580.00	80.00	$ 80.00		$ -	660.00	$ 660.00
	- Provide flowable fill	3.3	CY	110.75	$ 365.48	22.50	$ 74.25	$ 5.00	$ 16.50	138.25	$ 456.23
	DEDUCTIVE WORKS										
8	*Reduce trench excavation works*	-54	CY		$ -	6.00	$ (324.00)	$ 14.00	$ (756.00)	20.00	$ (1,080.00)
9	*Reduce Bedding sand at sta.134+60 to sta. 136+20*	-52	TONS	35.85	$ (1,856.23)	18.00	$ (932.00)		$ -	53.85	$ (2,788.23)
	Total Direct (Additive & Deductive)				**$ 7,985.34**		**$ 2,600.35**		**$ 267.98**		**$ 10,853.66**
	Overhead	10%						`			$ 1,085.37
	Direct Admin & Supervisory Cost	3%									$ 325.61
	SUB-TOTAL										**$ 12,264.64**
	Profit	8%									$ 981.17
	SUB-TOTAL										**$ 13,245.81**
	GRT	4.167%									$ 551.95
	TOTAL PROPOSED ADDITIVE AMOUNT FOR CCR#05										**$ 13,797.77**

COST ESTIMATE

ACTIVITY AND LOCATION:
GWA BAZA GARDEN WASTEWATER CROSS-ISLAND PUMPING AND CONVEYANCE SYSTEM PH-2

CCR#6 - Additive Cost for Hardrock Excavation enountered at Forcemain Sta 126+00 to Sta 127+00

CONSTRUCTION CONTRACT NO.:
S15-008 BDN/WW 11-03

DATE:
Tuesday, July 31, 2018

ESTIMATED BY:
BME & SONS, INC

STATUS OF DESIGN:

Item No.	ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		EQUIPMENT COST		ENGG ESTIMATE	
		QTY	UNIT	UNIT $	TOTAL	UNIT $	TOTAL			UNIT $	TOTAL
	Hardrock Excavations using special mechanized equipment Excavator with Breaker:										
1	*Forcemain from Sta 126+00 to Sta 127+00*	*24*	*HRS*		$ -		$ -	$ 115.00	$ 2,760.00	*115.00*	$ 2,760.00
					$ -		$ -		$ -	-	$ -
					$ -		$ -		$ -	-	$ -
					$ -		$ -		$ -	-	$ -
					$ -		$ -		$ -	-	$ -
	Total Direct (Additive)				***$ -***		***$ -***		***$ 2,760.00***		***$ 2,760.00***
	Overhead	*10%*						`			*$ 276.00*
	Direct Admin & Supervisory Cost	*3%*									*$ 82.80*
	SUB-TOTAL										***$ 3,118.80***
	Profit	*8%*									*$ 249.50*
	SUB-TOTAL										***$ 3,368.30***
	GRT	*4.167%*									*$ 140.36*
	TOTAL PROPOSED ADDITIVE AMOUNT FOR CCR#6										***$ 3,508.66***

ACTIVITY AND LOCATION:

GWA BAZA GARDEN WASTEWATER CROSS-ISLAND PUMPING AND CONVEYANCE SYSTEM PH-2

CCR#07 Wetwell Additional Excavation and Flowable Fill Due to Unsuitable soil Condition per GEO Field Instructions

CONSTRUCTION CONTRACT NO.:

DATE: **Tuesday, July 31, 2018**

ESTIMATED BY: **BME & SONS, INC**

STATUS OF DESIGN:

Item No.	ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		EQUIPMENT COST		ENGG ESTIMATE	
		QTY	UNIT	UNIT $	TOTAL	UNIT $	TOTAL			UNIT $	TOTAL
	Additional Excavtion and Flowable Fill										
	Additional excavation works to meet hard stable ground surface as per GEO Field instructions	*92.9*	*CY*		*$ -*	*6.00*	*$ 557.49*	*$ 14.00*	*$ 1,300.81*	*20.00*	*$ 1,858.31*
	Disposal of excess soil	*92.9*	*CY*		*$ -*	*5.00*	*$ 464.50*	*$ 7.00*	*$ 650.30*	*12.00*	*$ 1,114.80*
	Total actual poured flowable fill (see HRP delivery receipts)	*135.0*	*CY*	*110.75*	*$ 14,951.25*	*22.50*	*$ 3,037.50*	*$ 5.00*	*$ 675.00*	*138.25*	*$ 18,663.75*
	Less: Estimated volume per SOP	*-41.3*	*CY*	*110.75*	*$ (4,573.98)*	*22.50*	*$ (929.25)*	*$ 5.00*	*$ (206.50)*	*138.25*	*$ (5,709.73)*
					$ -		*$ -*		*$ -*	*-*	*$ -*
	Total Direct (Additive)				***$ 10,377.28***		***$ 3,130.24***		***$ 2,419.61***		***$ 15,927.13***
	Overhead	*10%*						`			*$ 1,592.71*
	Direct Admin & Supervisory Cost	*3%*									*$ 477.81*
	SUB-TOTAL										***$ 17,997.66***
	Profit	*8%*									*$ 1,439.81*
	SUB-TOTAL										***$ 19,437.47***
	GRT	*5.30%*									*$ 809.96*
	TOTAL PROPOSED ADDITIVE AMOUNT FOR CCR#07										***$ 20,247.43***

ACTIVITY AND LOCATION:

GWA BAZA GARDEN WASTEWATER CROSS-ISLAND PUMPING AND CONVEYANCE SYSTEM PH-2

CCR#8rev1 ADDITIVE WORKS - Additional AC Pavement due to Relocation of Forcemain Line along sta. 104+80 to sta. 114+91 (As per RFI#05) - Rev.01

CONSTRUCTION CONTRACT NO.:

DATE: **Friday, August 24, 2018**

ESTIMATED BY: **BME & SONS, INC**

STATUS OF DESIGN:

Item No.	ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		EQUIPMENT COST		ENGG ESTIMATE	
		QTY	UNIT	UNIT $	TOTAL	UNIT $	TOTAL			UNIT $	TOTAL
19	***Force Main - 2 Road Repair***										
	Provide additional Saw-cutting of existing AC pavements	*404*	*LF*		*$ -*	*1.41*	*$ 569.64*	*$ 0.71*	*$ 286.84*	*2.12*	*$ 856.48*
	Remove and dispose affected AC pavements	*270*	*SY*		*$ -*	*-*	*$ -*	*$ 31.00*	*$ 8,370.00*	*31.00*	*$ 8,370.00*
	Provide additional 3" thk pavements at Route 17	*270*	*SY*	*60.88*	*$ 16,437.60*		*$ -*		*$ -*	*60.88*	*$ 16,437.60*
	Provide 1" hot asphalt friction coarse	*270*	*SY*	*41.00*	*$ 11,070.00*		*$ -*		*$ -*	*41.00*	*$ 11,070.00*
	Provide additional painted line markings	*202*	*LF*	*1.00*	*$ 202.00*	*1.20*	*$ 242.40*		*$ -*	*2.20*	*$ 444.40*
	Temporary Traffic Control										
	Provide Traffic control										
	- Flagman (1day 4 workers during restoration of pavement)	*32*	*Hrs*		*$ -*	*10.00*	*$ 320.00*		*$ -*	*10.00*	*$ 320.00*
	Total Direct (Additive)				***$ 27,709.60***		***$ 1,132.04***		***$ 8,656.84***		***$ 37,498.48***
	Overhead	*10%*						`			*$ 3,749.85*
	Direct Admin & Supervisory Cost	*3%*									*$ 1,124.95*
	SUB-TOTAL										***$ 42,373.28***
	Profit	*8%*									*$ 3,389.86*
	SUB-TOTAL										***$ 45,763.14***
	GRT	*5.30%*									*$ 2,425.45*
	TOTAL PROPOSED ADDITIVE AMOUNT FOR CCR										***$ 48,188.59***

ACTIVITY AND LOCATION: **GWA BAZA GARDEN WASTEWATER CROSS-ISLAND PUMPING AND CONVEYANCE SYSTEM PH-2**				CONSTRUCTION CONTRACT NO.:						DATE: **Friday, August 24, 2018**	
				ESTIMATED BY: **BME & SONS, INC**							
CCR#09A_Exterior Wall Painting of PS2 Building				STATUS OF DESIGN:							
Item No.	ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		EQUIPMENT COST		ENGG ESTIMATE	
		QTY	UNIT	UNIT $	TOTAL	UNIT $	TOTAL			UNIT $	TOTAL
	Painting of PS2 Building Exterior Walls:										
	Surface preparation by acid washing. Apply one coat primer and 2 coats of exterior waterbase paint finish on building exterior walls and underside of canopy. Owner to select final color (ONE COLOR Only)	*1300*	*SF*			*0.60*	*$ 780.00*		*$ -*	*0.60*	*$ 780.00*
	5 gal pail x 300 sf/gal=1500sf/pail; $110/pail primer	*1*	*pail*	*110.00*	*$ 110.00*		*$ -*		*$ -*	*110.00*	*$ 110.00*
	5 gal pail x 300 sf/gal=1500sf/pail; $112/pail top coat	*2*	*pails*	*112.00*	*$ 224.00*		*$ -*		*$ -*	*112.00*	*$ 224.00*
	Pick-up and delivery	*1*	*lot*	*60.00*	*$ 60.00*		*$ -*		*$ -*	*60.00*	*$ 60.00*
	Misc (acid, brush, roller stick & cover)	*1300*	*sf*	*0.05*	*$ 65.00*		*$ -*		*$ -*	*0.05*	*$ 65.00*
	Total Direct				***$ 459.00***		***$ 780.00***		***$ -***		***$ 1,239.00***
	Overhead	*10%*						`			*$ 123.90*
	Direct Admin & Supervisory Cost	*3%*									*$ 37.17*
	SUB-TOTAL										***$ 1,400.07***
	Profit	*8%*									*$ 112.01*
	SUB-TOTAL										***$ 1,512.08***
	GRT	*5.30%*									*$ 80.14*
	TOTAL PROPOSED AMOUNT FOR CCR#09A										***$ 1,592.22***

ACTIVITY AND LOCATION: **GWA BAZA GARDEN WASTEWATER CROSS-ISLAND PUMPING AND CONVEYANCE SYSTEM PH-2**				CONSTRUCTION CONTRACT NO.:						DATE: **Tuesday, August 07, 2018**	
				ESTIMATED BY: **BME & SONS, INC**							
CCR#09B_Exterior Wall Painting of PS2 Building Concrete Wall Fence EXTERIOR Side Only				STATUS OF DESIGN:							
Item No.	ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		EQUIPMENT COST		ENGG ESTIMATE	
		QTY	UNIT	UNIT $	TOTAL	UNIT $	TOTAL			UNIT $	TOTAL
	Exterior Wall Painting of Concrete Wall Fence (Exterior Side Only):										
	Surface preparation by acid washing. Apply one coat primer and 2 coats of exterior waterbase paint finish on building Concrete Wall Fence EXTERIOR Side only. Owner to select final color. ONE COLOR Only	*2652*	*SF*			*0.60*	*$ 1,591.20*		*$ -*	*0.60*	*$ 1,591.20*
	5 gal pail x 300 sf/gal=1500sf/pail; $110/pail primer	*2*	*pail*	*110.00*	*$ 220.00*		*$ -*		*$ -*	*110.00*	*$ 220.00*
	5 gal pail x 300 sf/gal=1500sf/pail; $112/pail top coat	*4*	*pails*	*112.00*	*$ 448.00*		*$ -*		*$ -*	*112.00*	*$ 448.00*
	Pick-up and delivery	*1*	*lot*	*60.00*	*$ 60.00*		*$ -*		*$ -*	*60.00*	*$ 60.00*
	Misc (acid, brush, roller stick & cover)	*2652*	*sf*	*0.05*	*$ 132.60*		*$ -*		*$ -*	*0.05*	*$ 132.60*
	Total Direct				***$ 860.60***		***$ 1,591.20***		***$ -***		***$ 2,451.80***
	Overhead	*10%*						`			*$ 245.18*
	Direct Admin & Supervisory Cost	*3%*									*$ 73.55*
	SUB-TOTAL										***$ 2,770.53***
	Profit	*8%*									*$ 221.64*
	SUB-TOTAL										***$ 2,992.18***
	GRT	*5.30%*									*$ 158.59*
	TOTAL PROPOSED AMOUNT FOR CCR#09B										***$ 3,150.76***

ACTIVITY AND LOCATION:

GWA BAZA GARDEN WASTEWATER CROSS-ISLAND PUMPING AND CONVEYANCE SYSTEM PH-2

CCR#09C_Exterior Wall Painting of PS2 Building Concrete Wall Fence INTERIOR Side Only

CONSTRUCTION CONTRACT NO.:

DATE: **Tuesday, August 07, 2018**

ESTIMATED BY: **BME & SONS, INC**

STATUS OF DESIGN:

Item No.	ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		EQUIPMENT COST		ENGG ESTIMATE	
		QTY	UNIT	UNIT $	TOTAL	UNIT $	TOTAL			UNIT $	TOTAL
	Exterior Wall Painting of Concrete Wall Fence (Interior Side Only):										
	Surface preparation by acid washing. Apply one coat primer and 2 coats of exterior waterbase paint finish on building Concrete Wall Fence INTERIOR Side only. Owner to select final color. ONE COLOR Only	*2652*	*SF*			*0.60*	*$ 1,591.20*		*$ -*	*0.60*	*$ 1,591.20*
	5 gal pail x 300 sf/gal=1500sf/pail; $110/pail primer	*2*	*pail*	*110.00*	*$ 220.00*		*$ -*		*$ -*	*110.00*	*$ 220.00*
	5 gal pail x 300 sf/gal=1500sf/pail; $112/pail top coat	*4*	*pails*	*112.00*	*$ 448.00*		*$ -*		*$ -*	*112.00*	*$ 448.00*
	Pick-up and delivery	*1*	*lot*	*60.00*	*$ 60.00*		*$ -*		*$ -*	*60.00*	*$ 60.00*
	Misc (acid, brush, roller stick & cover)	*2652*	*sf*	*0.05*	*$ 132.60*		*$ -*		*$ -*	*0.05*	*$ 132.60*
	Total Direct				***$ 860.60***		***$ 1,591.20***		***$ -***		***$ 2,451.80***
	Overhead	*10%*						`			*$ 245.18*
	Direct Admin & Supervisory Cost	*3%*									*$ 73.55*
	SUB-TOTAL										***$ 2,770.53***
	Profit	*8%*									*$ 221.64*
	SUB-TOTAL										***$ 2,992.18***
	GRT	*5.30%*									*$ 158.59*
	TOTAL PROPOSED AMOUNT FOR CCR#09C										***$ 3,150.76***

BME & SONS INC.

GENERAL CONTRACTOR & EQUIPMENT RENTAL

P.O. Box 24402, GMF, Barrigada, Guam 96921 * Tel: (671) 632-3338 * 637-5498 *

EMAIL: bvm@bmesons.com, dhbme@bmesons.com bernam@bmesons.com

August 7, 2018

To: **Miguel C. Bordallo, PE**
General Manager
Guam Waterworks Authority
688 Route 15, Mangilao GU 96913

Thru: **Rizaldy P. Cortez, PE, PMP, LEED**
SSFM International, Guam General Manager

Reference: Baza Garden Wastewater Cross-Island Pumping and Conveyance (Phase II)
GWA Project No. S15-008-BND

Subject: CCR#10 Provide Valve Box Cover and Riser in ForceMain Hydrotest Valves

Dear Sir,

As requested by GWA, we are pleased to submit our change order cost proposal (CCR#10) to provide valve box cover and riser in 4 gate valves installed and used for hydro testing purposes to include all labor, materials, equipment and supervision in the amount of **Six Thousand Six Hundred Ninety Nine and 66/100 Dollars ($6,699.66).**

Performance Period Required: 6 weeks procurement + 2 weeks Installation (56 calendar Days) for the date of NTP.

Thank you and your kind consideration will be greatly appreciated. Should you have any question, please feel free to contact us or email us at above email addresses.

Very Truly Yours,

Digitally signed by Daniel Hernandez
DN: cn=Daniel Hernandez, o=Project Manager, ou=BME, email=dhbme@guam.net, c=US
Date: 2018.08.07 16:53:03 +10'00'

Daniel A. Hernandez
BME & Sons, Inc.
Project Manager

ACTIVITY AND LOCATION:

GWA BAZA GARDEN WASTEWATER CROSS-ISLAND PUMPING AND CONVEYANCE SYSTEM PH-2

CCR#10_Provide Gate Valve Cover and Riser at 4 each Gate Valves used in HydroTesting

CONSTRUCTION CONTRACT NO.:

ESTIMATED BY: **BME & SONS, INC**

STATUS OF DESIGN:

DATE: **Tuesday, August 07, 2018**

Item No.	ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		EQUIPMENT COST		ENGG ESTIMATE	
		QTY	UNIT	UNIT $	TOTAL	UNIT $	TOTAL			UNIT $	TOTAL
	Provide Gate Valve Cover and Riser:										
	Provide 12" PVC Riser approximately 6 feet long x 4 + 24LF total (needs 2 lengths x 20 ft)	*2.0*	*Lengths*	*668.40*	*$ 1,336.80*		*$ -*		*$ -*	*668.40*	*$ 1,336.80*
	- Install PVC Riser approximately 6ft long	*4.0*	*EA*		*$ -*	*100.00*	*$ 400.00*		*$ -*	*100.00*	*$ 400.00*
	Compaction prior to placing concrete collar and gate valve cover	*4.0*	*EA*		*$ -*	*50.00*	*$ 200.00*	*$ 50.00*	*$ 200.00*	*100.00*	*$ 400.00*
	Provide Gate Valve Cover	*4.0*	*EA*	*283.33*	*$ 1,133.32*	*100.00*	*$ 400.00*		*$ -*	*383.33*	*$ 1,533.32*
	Provide concrete collar including rebars and formworks, 5ft x 5ft x 6" thick	*4.0*	*EA*	*150.00*	*$ 600.00*	*250.00*	*$ 1,000.00*		*$ -*	*400.00*	*$ 1,600.00*
					$ -		*$ -*		*$ -*	*-*	*$ -*
	Total Direct (Additive)				***$ 3,070.12***		***$ 2,000.00***		***$ 200.00***		***$ 5,270.12***
	Overhead	*10%*						`			*$ 527.01*
	Direct Admin & Supervisory Cost	*3%*									*$ 158.10*
	SUB-TOTAL										***$ 5,955.24***
	Profit	*8%*									*$ 476.42*
	SUB-TOTAL										***$ 6,431.65***
	GRT	*5.30%*									*$ 268.01*
	TOTAL PROPOSED ADDITIVE AMOUNT FOR CCR#07										***$ 6,699.66***

BME & SONS INC.

GENERAL CONTRACTOR & EQUIPMENT RENTAL

P.O. Box 24402, GMF, Barrigada, Guam 96921 * Tel: (671) 632-3338 * 637-5498 *

EMAIL: bvm@bmesons.com, dhbme@bmesons.com bernam@bmesons.com

August 8, 2018

To: **Miguel C. Bordallo, PE**
General Manager
Guam Waterworks Authority
688 Route 15, Mangilao GU 96913

Thru: **Rizaldy P. Cortez, PE, PMP, LEED**
SSFM International, Guam General Manager

Reference: Baza Garden Wastewater Cross-Island Pumping and Conveyance (Phase II)
GWA Project No. S15-008-BND

Subject: CCR#11 Delete 12" PVC Stand Pipe and Valve Box Cover and Install 30" RCP Stand Pipe and Manhole Cover at Plug Valves Locations (2 Each)

Dear Sir,

We are pleased to submit our change order cost proposal (CCR#11) to delete the 12" stand pipe and valve box cover and install 30" RCP stand pipe with 30" sewer manhole cover in order to access the plug valve control lever/handle in the amount of **Three Thousand Eleven and 93/100 Dollars ($3,011.93) t**o include all labor, materials, equipment and supervision.

Performance Period Required: 6 weeks procurement + 2 weeks Installation (56 calendar Days) for the date of NTP.

Thank you and your kind consideration will be greatly appreciated. Should you have any question, please feel free to contact us or email us at above email addresses.

Very Truly Yours,

Digitally signed by Daniel Hernandez
DN: cn=Daniel Hernandez, o=Project Manager, ou=BME, email=dhbme@guam.net, c=US
Date: 2018.08.08 09:14:36 +10'00'

Daniel A. Hernandez
BME & Sons, Inc.
Project Manager

ACTIVITY AND LOCATION:

GWA BAZA GARDEN WASTEWATER CROSS-ISLAND PUMPING AND CONVEYANCE SYSTEM PH-2

CCR#11_Provide 30" RCP Pipe Riser and Sewer Manhole Cover in Plug Valve Locations (2 Each)

CONSTRUCTION CONTRACT NO.:

DATE: **Tuesday, August 07, 2018**

ESTIMATED BY: **BME & SONS, INC**

STATUS OF DESIGN:

Item No.	ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		EQUIPMENT COST		ENGG ESTIMATE	
		QTY	UNIT	UNIT $	TOTAL	UNIT $	TOTAL			UNIT $	TOTAL
	Provide 30" RCP Pipe Riser and Sewer Manhole Cover in Plug Valves Locations (2 each):										
	Provide 30" RCP Pipe	*2*	*Lengths*	*1,101.00*	*$ 2,202.00*		*$ -*		*$ -*	*1,101.00*	*$ 2,202.00*
	- Delivery (from HRP to jobsite)	*1*	*LOT*		*$ -*		*$ -*	*$ 300.00*	*$ 300.00*	*300.00*	*$ 300.00*
	- Cut and provide notch to fit installation required (2 man in one day)	*2*	*EA*		*$ -*	*180.00*	*$ 360.00*	*$ 65.00*	*$ 130.00*	*245.00*	*$ 490.00*
	- Install RCP Riser approximately 6ft long	*2*	*EA*		*$ -*	*180.00*	*$ 360.00*	*$ 65.00*	*$ 130.00*	*245.00*	*$ 490.00*
	Provide concrete collar including rebars and formworks, 5ft x 5ft x 6" thick	*2*	*EA*	*150.00*	*$ 300.00*	*250.00*	*$ 500.00*		*$ -*	*400.00*	*$ 800.00*
	Deduct:										
	- 12" PVC SDR35 Riser x 6ft long	*-12*	*LF*	*6.27*	*$ (75.24)*	*75.00*	*$ (900.00)*		*$ -*	*81.27*	*$ (975.24)*
	- 12" Valve Box cover & Frame	*-2*	*EA*	*168.75*	*$ (337.50)*	*100.00*	*$ (200.00)*		*$ -*	*268.75*	*$ (537.50)*
	- Concrete Collar, 3ft x 3ft x 6"	*-2*	*EA*	*75.00*	*$ (150.00)*	*125.00*	*$ (250.00)*		*$ -*	*200.00*	*$ (400.00)*
	Total Direct (Additive)				***$ 1,939.26***		***$ (130.00)***		***$ 560.00***		***$ 2,369.26***
	Overhead	*10%*						`			*$ 236.93*
	Direct Admin & Supervisory Cost	*3%*									*$ 71.08*
	SUB-TOTAL										***$ 2,677.26***
	Profit	*8%*									*$ 214.18*
	SUB-TOTAL										***$ 2,891.44***
	GRT	*5.30%*									*$ 120.49*
	TOTAL PROPOSED ADDITIVE AMOUNT FOR CCR#07										***$ 3,011.93***

GUAM WATERWORKS AUTHORITY

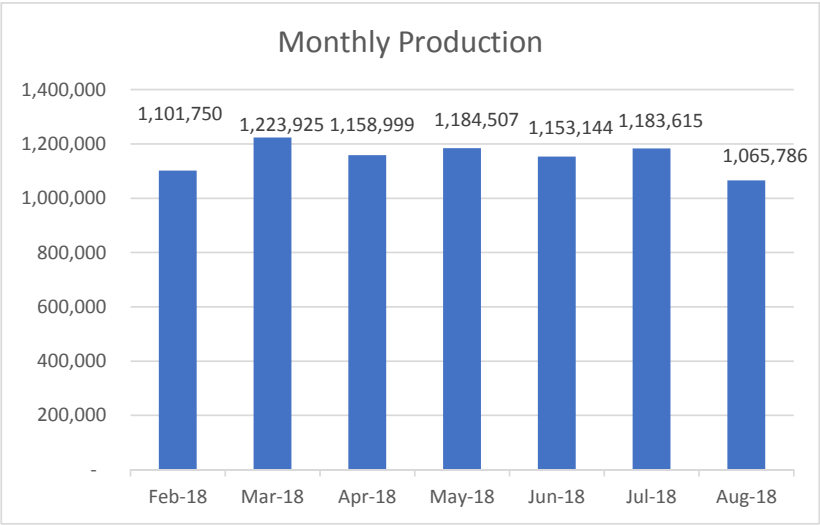
General Manager's Report
GWA Work Session, September 18, 2018

Operations Update

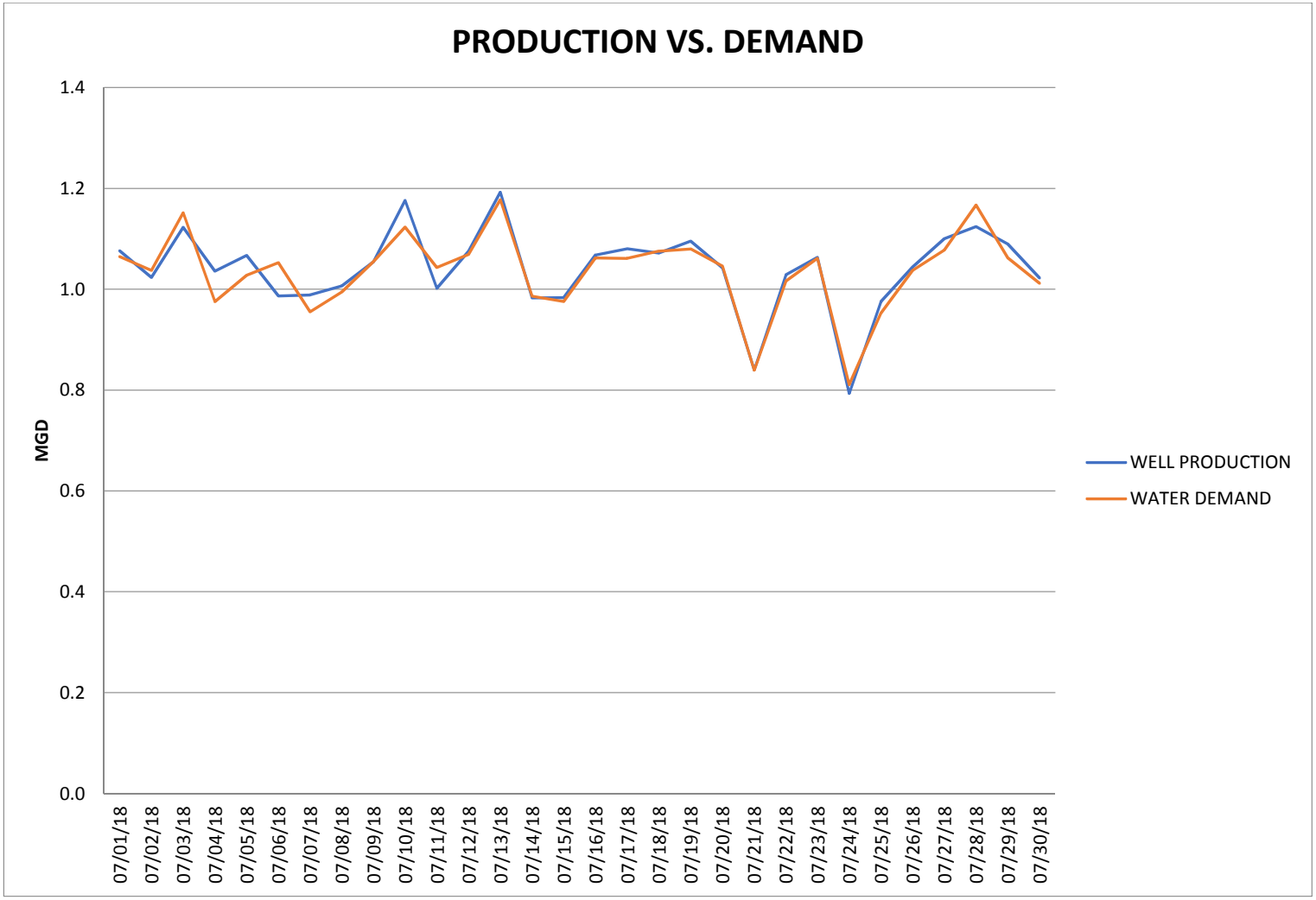
Production

Monthly Production Summary - August 2018					
Deep Wells				35.5	MGD
	Active wells =	94	of 120		
	Avg days in operation =	31.00	days		
	Total Production =	1,065,786	Kgals		
Springs				0.00	MGD
	Avg days in operation =	0	days	*placed on standby	
	Total Production =	0	Kgals		
Ugum Surface Water Plant				-	MGD
	Avg days in operation =	31	days		
	Total Production =	0	Kgals		
Tumon Maui Well				-	MGD
	Avg days in operation =	31	days		
	Total Production =	0	Kgals		
		1,065,786	Kgals	35.5	MGD

DW Status as of 8/31/2018	
Active	94
Grounded motor	3
Out of commission	11
Secured, PFOs	2
Standby	10
TOTAL	120

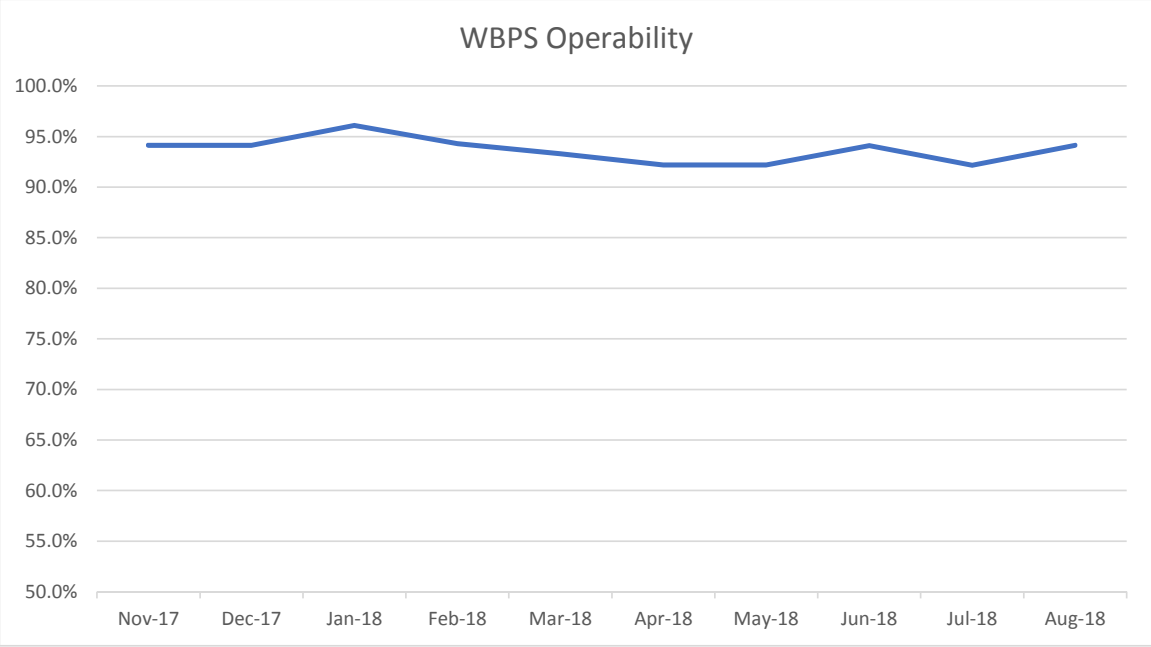


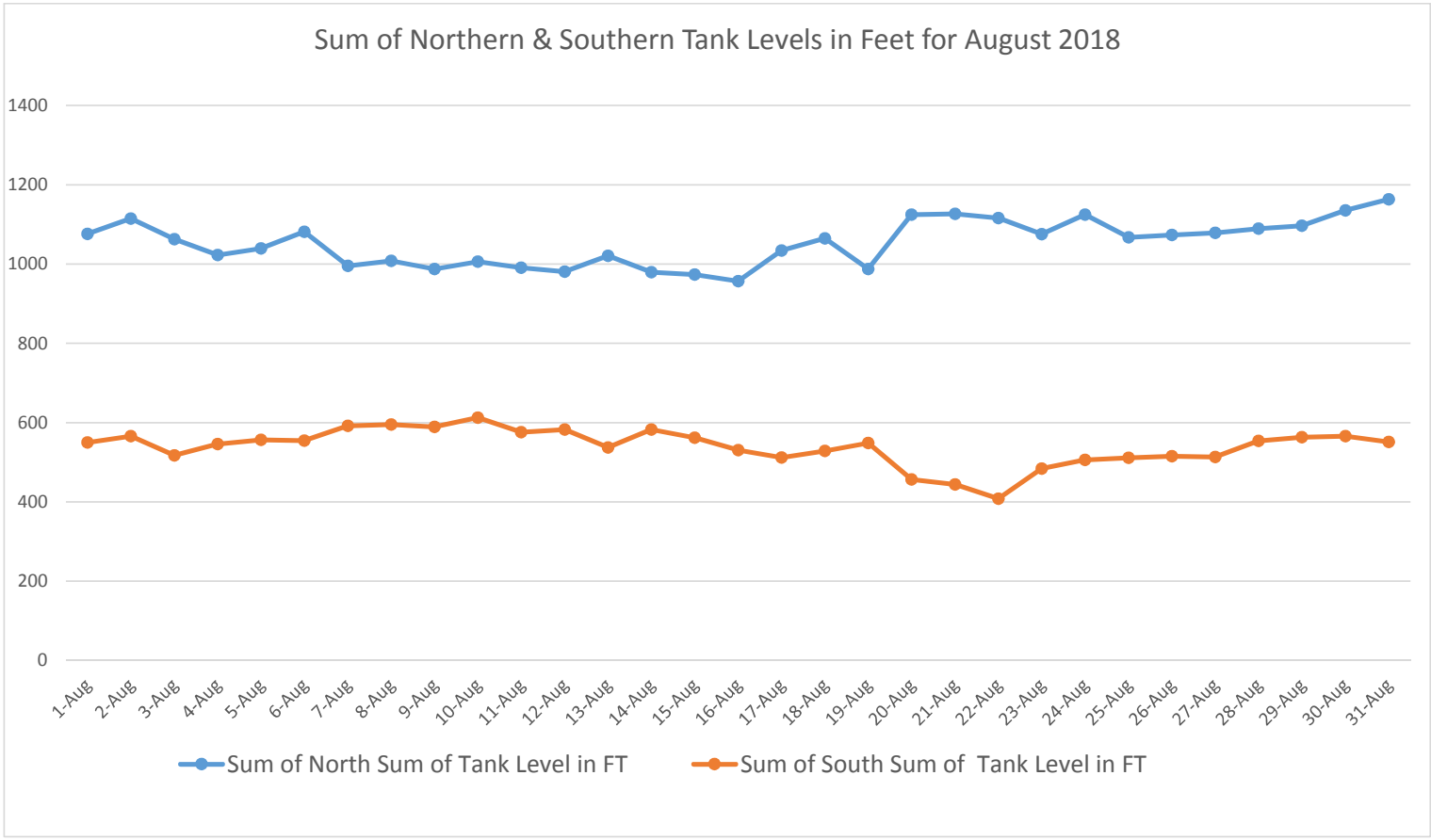
Tumon Maui Well Production vs. Demand for July 2018



Distribution

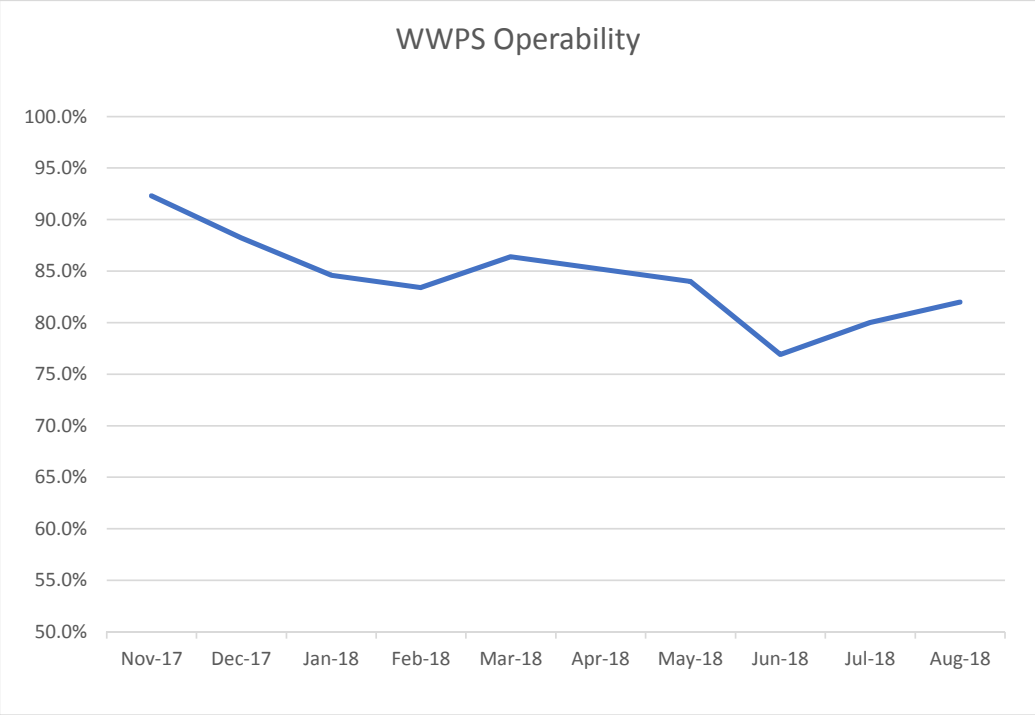
Monthly Distribution Summary - August 2018					
Water Booster Pump Stations					
	District	No. of Stations	Total Pumps	Pumps Operating	% Operational
	Northern	11	21	19	90.5%
	Central	7	15	14	93.3%
	Southern	7	15	15	100.0%
		25	51	48	94.1%




Sum of Northern & Southern Tank Levels in Feet for August 2018
1400
1200
1000
800
600
400
200
0
1-Aug
2-Aug
3-Aug
4-Aug
5-Aug
6-Aug
7-Aug
8-Aug
9-Aug
10-Aug
11-Aug
12-Aug
13-Aug
14-Aug
15-Aug
16-Aug
17-Aug
18-Aug
19-Aug
20-Aug
21-Aug
22-Aug
23-Aug
24-Aug
25-Aug
26-Aug
27-Aug
28-Aug
29-Aug
30-Aug
31-Aug
Sum of North Sum of Tank Level in FT
Sum of South Sum of Tank Level in FT

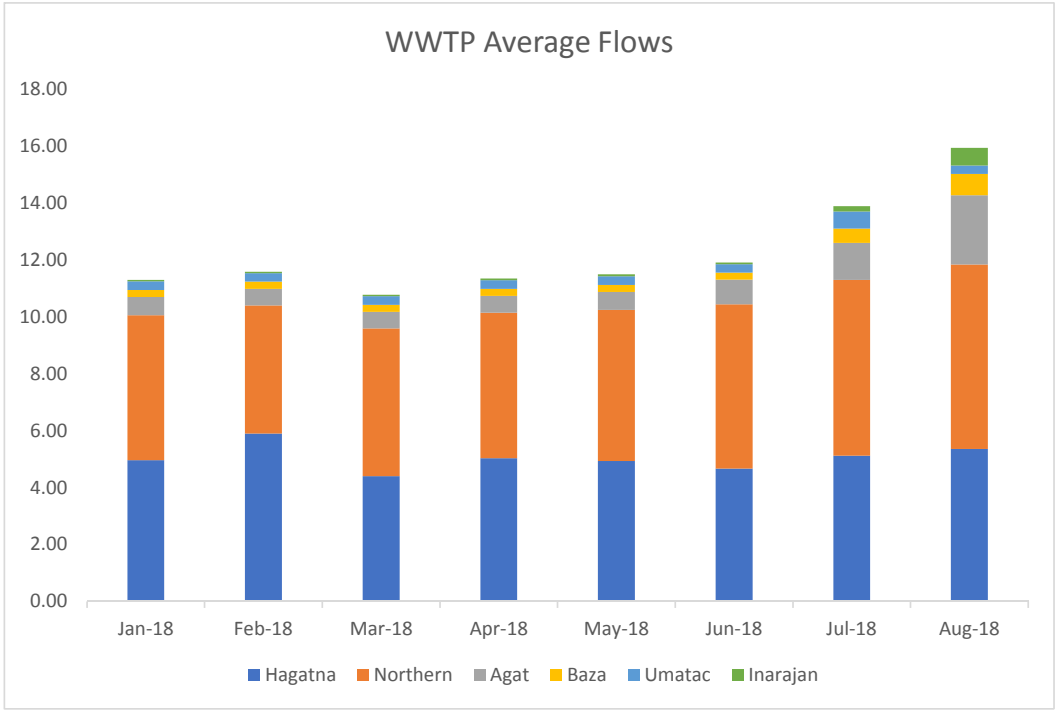
Wastewater Collections

Monthly Collections Summary - August 2018					
Wastewater Pump Stations					
	District	No. of Stations	Total Pumps	Pumps Operating	% Operational
	Northern	22	52	42	80.8%
	Central	29	63	50	79.4%
	Southern	27	57	49	86.0%
		78	172	141	82.0%

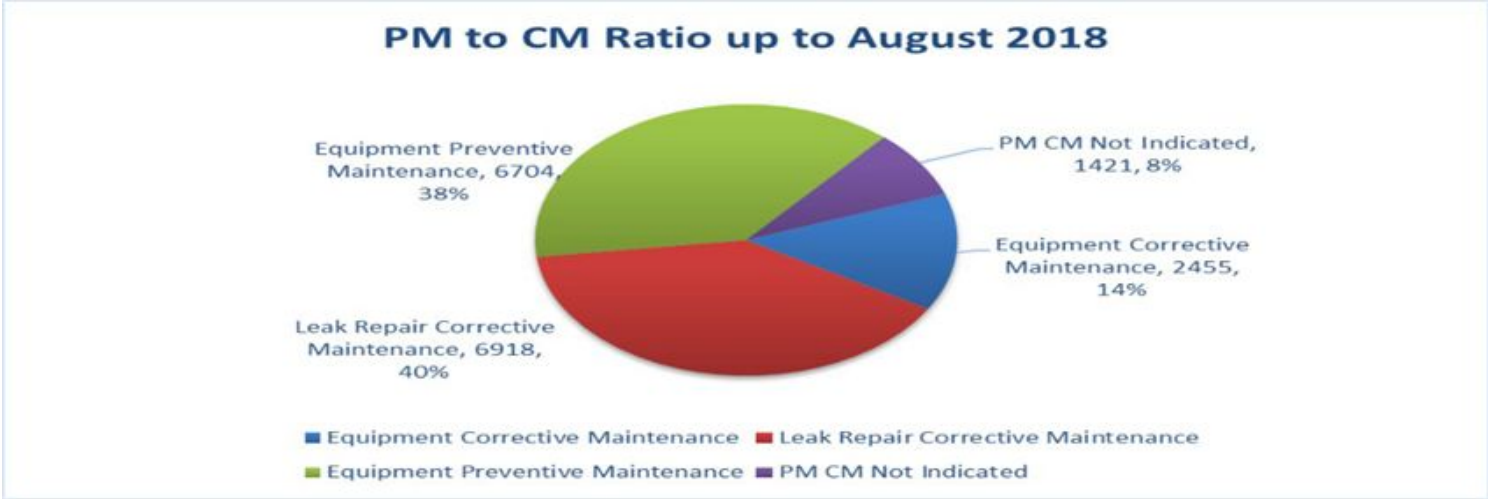


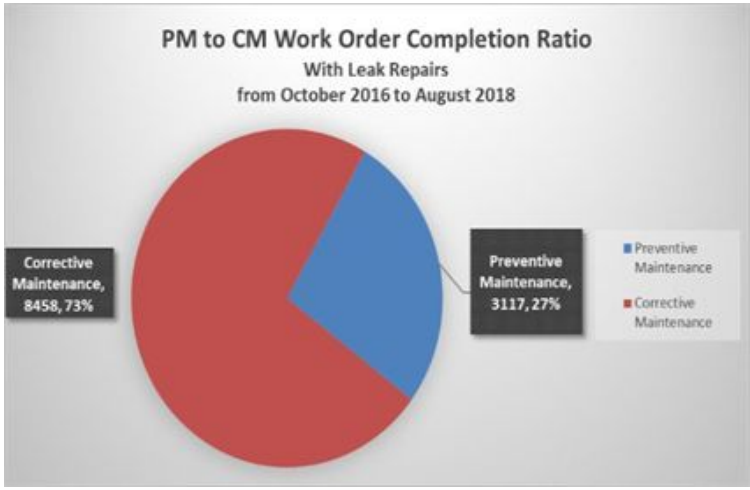
Wastewater Treatment

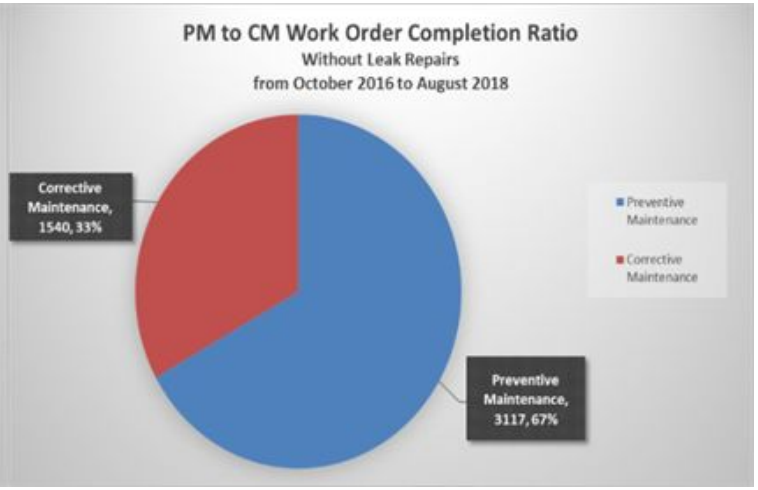
Monthly Wastewater Treatment Summary - August 2018				
WW Treatment Plants - Flows				
	Facility	**Avg. Daily Flows (MGD)**	**Sludge (lbs)**	**Sludge Disp. ($)**
	Hagatna	5.36	633,780	$ 57,040
	Northern	6.49	724,660	$ 65,219
	Agat	2.43		
	Baza	0.75		
	Umatac	0.30		
	Inarajan	0.62		
		15.95	1,358,440	$ 122,260



Asset Management for August 2018







Operational Issues

Production & Distribution

- Leak repair
  - Crews maintaining performance - As of July 31st, there were less than 24 pending repairs
    - 92% reduction from 2017-2018 Maximum of 283 pending
    - 87% reduction from 2018 Maximum of 179 pending
  - IFB for advanced remote leak detection services has been advertised
- WSCC –
  - SCADA equipment and installation requirements on-going
  - Have been coordinating the activation of new Yigo / Astumbo tanks
  - Reservoir levels have been steadily increasing
  - Deep wells placed on standby has increased to 10 (and 11 units out-of-commission).
- Pump and motor inventories okay; additional procurement up for CCU approval
- GWA Crane Repair –new cable installation complete – load test 8/22/18

Wastewater Collection & Treatment

- CCTV & Collections System:
  - Planning department assisting CCTV Crews to revise completed reports to meet appropriate industry standards
  - SSES and CCTV-based repairs to collection lines (95%) and SMHs (10%) are being conducted by Ops personnel
- Pump stations
  - Working to address pump operability issues
  - Minimum pump and motor inventory levels finalized (similar to effort with deep-wells)
  - Engineering providing support for specifications and performance points on all pumps prior to finalizing procurement
  - Critical spares and replacements procurement on-going
- Treatment Plants
  - Hagatna WWTP
    - Centrifuges: New PLC installed; programming on-going.
  - Northern WWTP
    - Both centrifuges back in operation
  - Agat-Santa Rita WWTP
    - Solids process commissioning completion pending – centrifuge #2
    - Critical process facilities all operating

- U-M WWTP
  - Work on-going at the site
  - Significant delays have occurred because of USF&W / EPA permitting issues
- Baza Gardens
  - Work on-going for all 3 phases
  - Anticipated completion is now Sep 30th
  - Delay letter has been sent to USEPA

Meters for month of August 2018

COMPLETED FIELD ACTIVITY JAN 2017 THRU AUG 2018 (POSTED IN CIS)	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	TOTAL:	COMPLETED FIELD ACTIVITIES (IN PROCESS) TO BE POSTED IN CIS
GWA - Test Meter	30	9	9	371	745	87	393	743	1000	1007	434	378	750	969	1213	1429	84	1299	797	1489	13236	478
GWA - Meter Exchange	393	179	220	276	482	353	501	807	1526	1039	452	259	239	1086	2120	121	121	1056	1248	1125	13603	211
GWA - Verify Zero Report	30	124	114	94	96	402	261	199	550	89	82	169	356	106	117	69	13	2	2	1	2876	0
GWA - Verify Low Usage	0	0	0	2	37	36	196	488	657	202	127	612	858	1122	1055	463	19	5	3	6	5888	0
TOTAL:	453	312	343	743	1360	878	1351	2237	3733	2337	1095	1418	2203	3283	4505	2082	237	2362	2050	2621	35603	689

# OF METERS TESTED AS PER METER TEST FACILITY REPORTS:	345	350	144	252	305	210	302	397	1013	1130	927	704	721	1041	1347	815	671	544	1159	1216	13593	
# OF BACKBILLINGS APPLIED AS PER FINANCE REPORTS:	0	0	0	20	122	84	29	111	219	80	77	4	136	23	323	48	75	20	30	N/A	1401	$ 928,379.83
# OF FIELD CREW PERFORMING CHANGE OUTS:	19	10	13	9	21	21	14	24	35	28	28*	28*	5	13	2	2	2	28	17	25		
# OF ADMIN STAFF TO CREATE AND POST FIELD ACTIVITIES IN CIS:	7	4	5	6	9	9	10	13	15	15	13	13	8	11	5	4	1	13	9	5		
# OF SUPPLY STAFF TO ISSUE MATERIALS AND PROGRAM NEW METERS:	2	2	2	2	2	2	2	2	2	2	2	2	2	4	0	0	0	2	2	2		
# OF TEST FACILITY PERSONNEL TESTING METERS:	2	2	2	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2	1	2		
# OF ACCOUNTANTS CALCULATING BACK BILLS:	0	0	0	2	3	2	2	3	3	2	2	2	2	2	2	2	2	2	2	N/A		
TOTAL:	30	18	22	22	38	37	31	45	58	50	48	48	20	32	11	10	7	47	31	34		

*Project overtime on hold Nov 18, 2017 thru Dec 16, 2017. During this period, 4 personnel performed work on this project during the regular work day with a majority of the work completed during Nov and Dec month occuring before and after the OT moratorium.

NOTE: MARCH 18, 2018 - PROJECT ON HOLD PENDING ARRIVAL OF METERS

Project resumed June 04 2018; added 2 hrs per weekday field work on June 18, 2018

REMAINING ACTIVE BADGER LP MODELS AS OF AUG 31, 2018: 18067

PURCHASE DATE	COUNT	
2012	8798	14413 EXPIRED WARANTY
2013	5615	
Feb-14	120	3654 ACTIVE WARANTY
Mar-14	1	
Apr-14	2084	
Jun-14	70	
Aug-14	1379	
TOTAL:	18067	

Marbo (Andy-South) Wells – Status

- Involuntary reversion appears imminent; GWA Counsel transmitted draft easement documents to GSA for consideration with DoD;
- No updates - Waiting on response from GSA
- Meeting requested by GWA for October 2018

One Guam Update

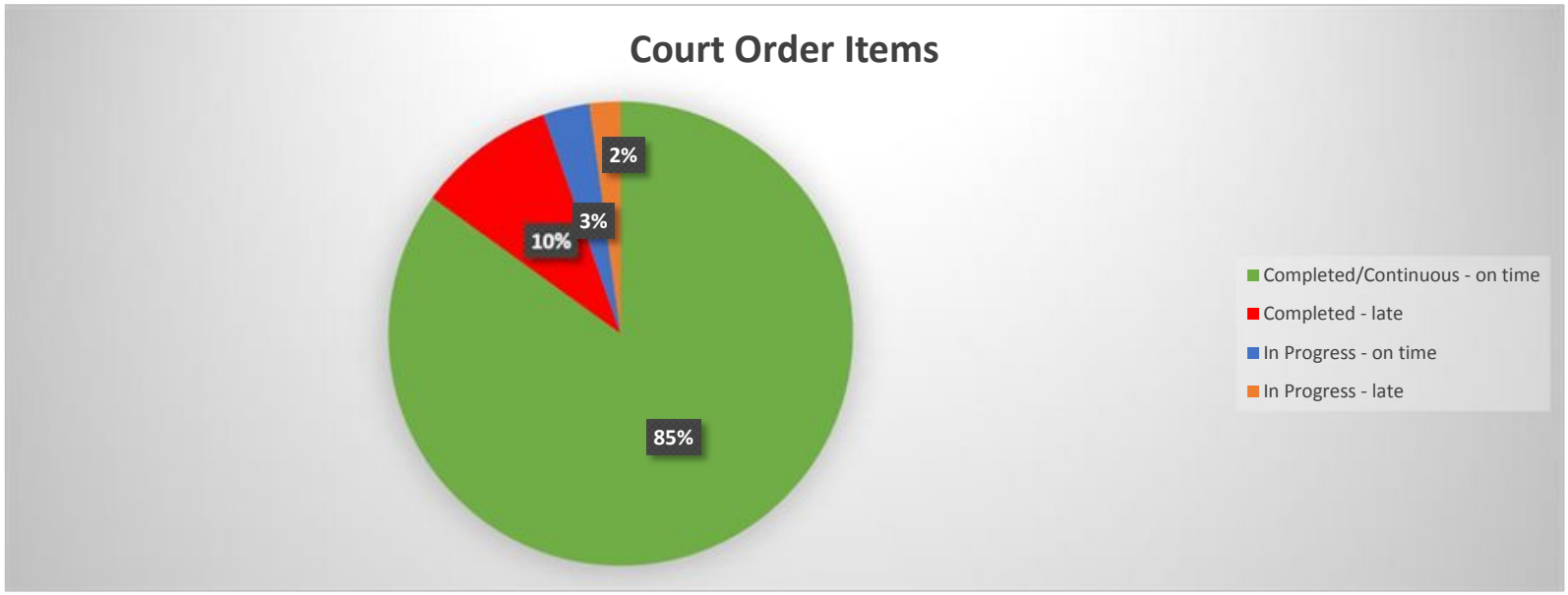
- Tumon Maui Well:
  - Quarterly Inspection conducted – no issues of concern.
- Santa Rosa Tank:
  - NAVFACMAR CO will brief Andersen MSG (Missions Support Group) commander, and Civil Engineering Squad (CES) commander, and the General regarding the MOU for the Santa Rosa Tank project. Due to busy schedules, it will probably be around the middle of September. MOU will be updated.
- Agat-Santa Rita WWTP
  - Cynthia Blas stated that Karianne Camacho is proposing if GWA will agree to an in-kind consideration, which would be a one-time cleaning if the cost estimate doesn't exceed $16,700, getting full value of the cleaning project, then the IBTF can maintain it afterwards. The area is still under GWA's license so GWA can lease it to IBTF for them to maintain it.
  - The signed letter, removing "per annum", hasn't come out of the base office still; like to include the counter-offer.
- OEA Projects
  - Observation Wells:
    - Maria Lewis will find out if DoD's Legal can go to San Francisco to attend the Guam Water & Wastewater Intergovernmental Support Team face to face or be able to send a Legal representative already in California.
- Training and Collaboration
  - AWWA HIWPS will be providing additional training for operators in the next few months.
- 30-Other
  - Utilis (satellite-based leak detection)
    - DOD is interested in the Utilis project.
  - Data Sharing SOP/MOU
    - In final draft stage. Waiting on review from Air Force.

- Connection by Developer to Navy/Murray Road
  - Pending SHPO; Maria Lewis will keep on top of it.
- TMW Inspection
  - Ron Topasna provided the operations reports to Maria Lewis.
  - Fence repair reported to Navy
- Marbo Land where GWA Wells reside
  - DoD made a request to GSA & awaiting to hear back from them. GWA gave the metes & bounds to parcel it out; want an easement long term & not an annual renewal.
- Cabras Island Water Lines
  - Maria Lewis stated that the water lines of GWA & DoD are parallel. DoD doesn't have any facilities there that require water, so Maria Lewis can highly recommend to transfer the lines to GWA. Miguel Bordallo stated that he will evaluate the situation first.
- Navy Raw Water Lines
  - GWA asked about tapping into the Navy raw water lines, as this was brought up before. DOD is reviewing this request. There is time to pursue this.

- 30-Other
  - Data Sharing SOP/MOU
    - Vangie Lujan received Miguel Bordallo's and DOD's comments for inclusion. Expected completion will be September.

Court Order

	Items	On-time Items Completed/Continuous	Items Delayed	Completed Late	Items on Schedule	Performance %
Court order total	93	79	2	9	3	97.8%



Status Information

- 2 items delayed
  - Meters
  - Baza Gardens Sewer Line
- Final Date to complete all Court Order items is December 31, 2020.
- Overflow or Bypass events reported to USEPA:
  - 09/11-12/2018 Umatac PS 13 (headworks) - Generator tagged out - spill outside MH
  - 09/11/2018 Ypaopao PS - spilling wetpit – No Generator
  - 09/11/2018 Machanao PS - spill outside MH - No Generator
  - 09/11/2018 Agat Generator-Fuel Ran out - spill outside MH
  - 09/11/2018 Umatac PS 17 - High I & I - spill outside MH
  - 09/12/2018 Agat - MH behind the Fire Station - High I & I
  - 09/12/2018 Hamburger Road Force Main Break
  - 09/13/2018 Machanao PS - GPA Gen removed-spill outside MH
  - 09/17/2018 Harmon, Behind Cost-U-Less, MH spill, FOG

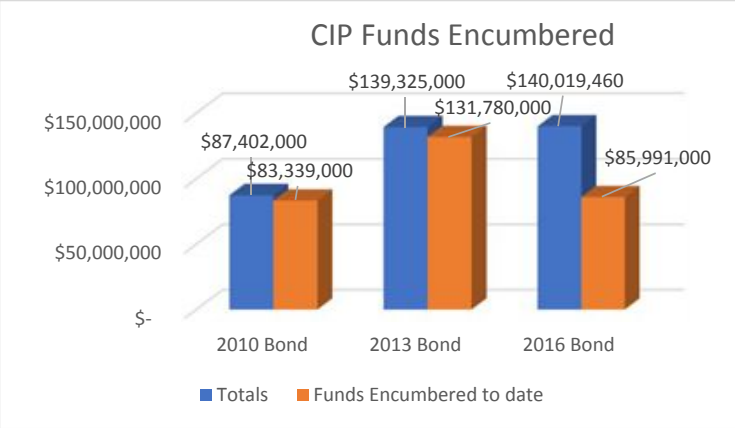
CIP Summary

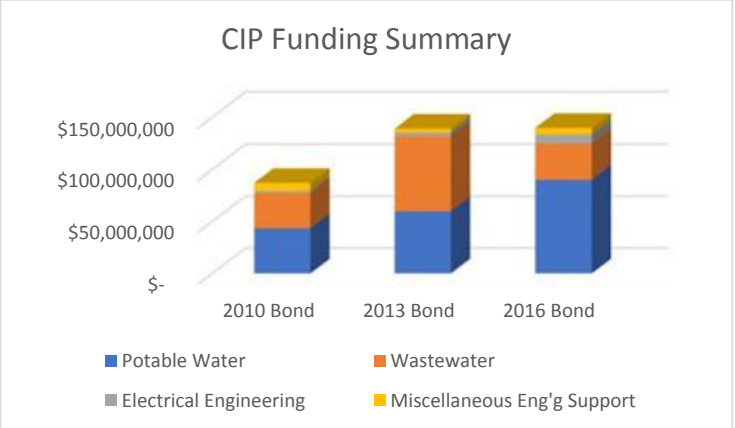
CIP Summary - Project Encumbrance

	2010 Bond		2013 Bond		2016 Bond			
	Funded	Complete	Funded	Complete	Funded	Complete	Total CIP Projects	%
Potable Water	28	17	21	8	20	1	35	49%
Wastewater	16	13	7	4	8	1	22	31%
Electrical Engineering	5	5	6	1	5	0	10	14%
Miscellaneous Eng'g Support	2	0	3	1	4	1	4	6%
Totals	51	35	37	14	37	3	71	100%
% of Total CIP by Fund Source	72%		52%		52%			

CIP Summary - Project Amounts

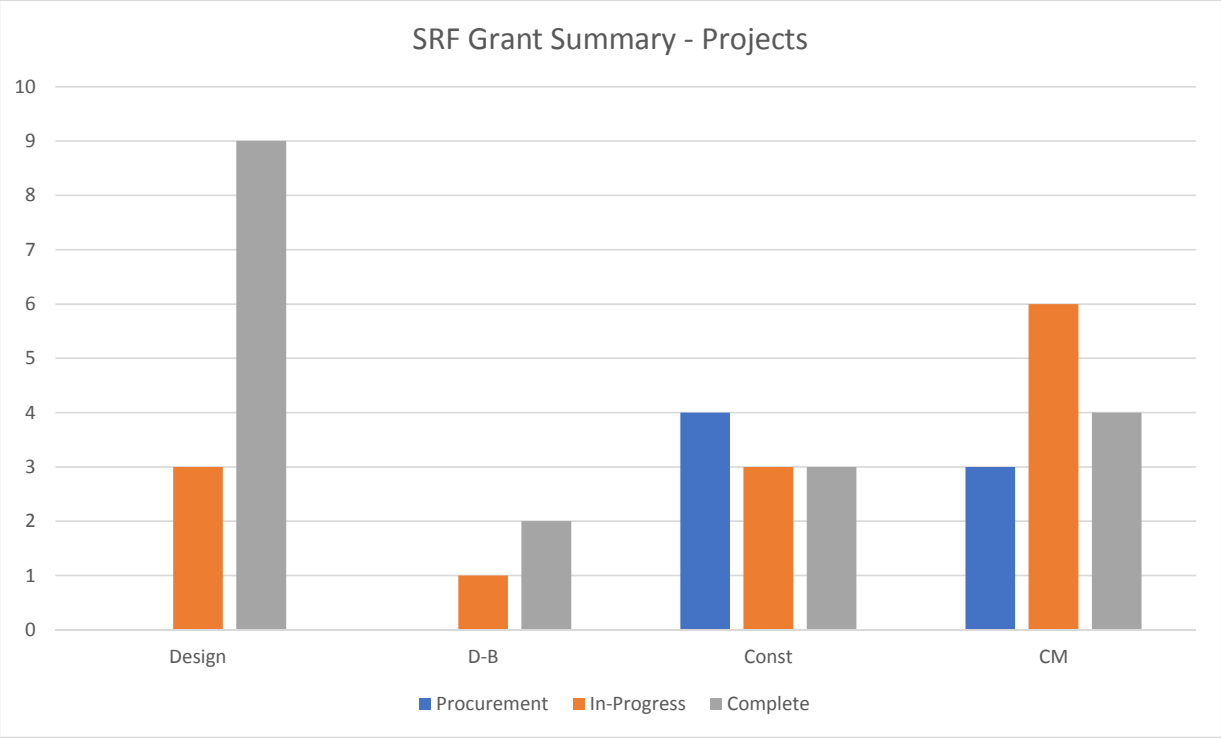
	2010 Bond		2013 Bond		2016 Bond			
	Funded	%	Funded	%	Funded	%	Total CIP Projects	%
Potable Water	$ 41,903,305	48%	$ 58,317,117	42%	$ 64,647,830	46%	$ 164,868,252	45%
Wastewater	$ 36,009,577	41%	$ 73,837,883	53%	$ 60,227,170	43%	$ 170,074,630	46%
Electrical Engineering	$ 1,748,118	2%	$ 3,395,000	2%	$ 8,750,000	6%	$ 13,893,118	4%
Miscellaneous Eng'g Support	$ 7,741,000	9%	$ 3,775,000	3%	$ 6,394,460	5%	$ 17,910,460	5%
Totals	$ 87,402,000	100%	$ 139,325,000	100%	$ 140,019,460	100%	$ 366,746,460	100%
Funds Encumbered to date	$ 83,339,000	95%	$ 131,780,000	95%	$ 85,991,000	61%		
% of Total CIP Funding	23.8%		38.0%		38.2%			





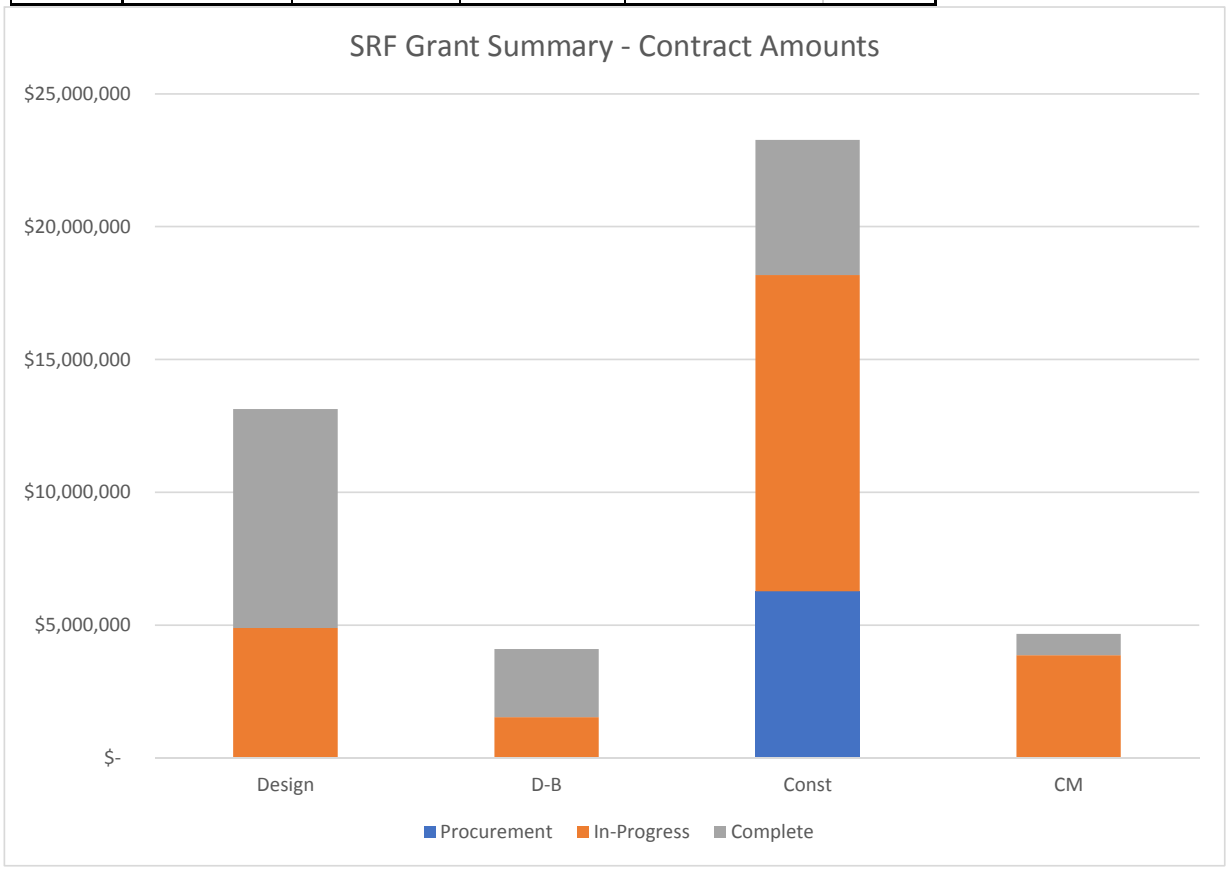
SRF Grant Summary

SRF Grant Summary - Projects					
	Procurement	**In-Progress**	**Complete**	**Totals**	**%**
Design	0	3	9	12	32%
D-B	0	1	2	3	8%
Const	4	3	3	10	26%
CM	3	6	4	13	34%
Totals	7	13	18	38	
%	18%	34%	47%		



SRF Grant Summary - Contract Amounts

	Procurement	In-Progress	Complete	Totals	%
Design	$ -	$ 4,892,286	8,249,328	$ 13,141,614	29%
D-B	$ -	$ 1,542,979	$ 2,565,238	$ 4,108,217	9%
Const	$ 6,275,783	$ 11,902,507	$ 5,086,130	$ 23,264,420	51%
CM	$ -	$ 3,877,036	$ 802,243	$ 4,679,279	10%
Totals	$ 6,275,783	$ 22,214,808	$ 16,702,939	$ 45,193,530	
%	14%	49%	37%		



OEA Grant Summary

- NDWWTP Upgrades
  - 60% design submittal scheduled for Sep 24th.
  - Sitework bid package to be issued Sep 12th
  - Workshop on 60% Design – October 18th – 19th
  - Vertical bid package planned for issuance Mar 2019

- Outfall Diffuser:
  - Re-bid package issued
  - Pre-bid Conference August 22nd
  - Bids expected September 11th

- Sewer Line Interceptor Design-Build
  - Contract Award / NTP issued
  - Design and prep work have started
  - Design submittal expected in October
  - Construction start expected in January

- NGLA Observation wells – Design work completed
  - Bid package drawings and specs under review by GWA
  - Permitting issues being resolved and permits being obtained by PM/CM
  - Bid package to be issued once permits approved – expected in Mar 2019

Action Item	Date (Target)	Date (Actual)	Status	Remarks
Project Funds Available	July-16	AUG-30-16	Completed	
Land Acquisition	Jan-17	Jan-17 (Compensation Pending)	Pending	Survey complete, appraisals complete – Deed circulated for signatures
Procure PM/CM Firm	Jan-17	Jan-17 (NTP Issued Feb 10th)	Completed	
Procure Design Firm	Jul-17		Completed	Contract issued; kickoff pending
Design -- 30/60/90/Final -- Review	Jun-18	30% - completed May 60% - expected Sep	On-target	Project design schedule has been revised / delayed
NEPA Analysis and Determination	Feb-17	Pending	Delayed	USEPA received SHPO concurrence; OEA to review EPA EA
Procure Construction Firm	Dec-18		On-target	
Construction Complete/Commence Operations	Nov-21		On-target	
Sewer line connection from MCB to GWA infrastructure	Jul-19		On-target	
MCB Initial Operating Capability	Jul-22		On-target	

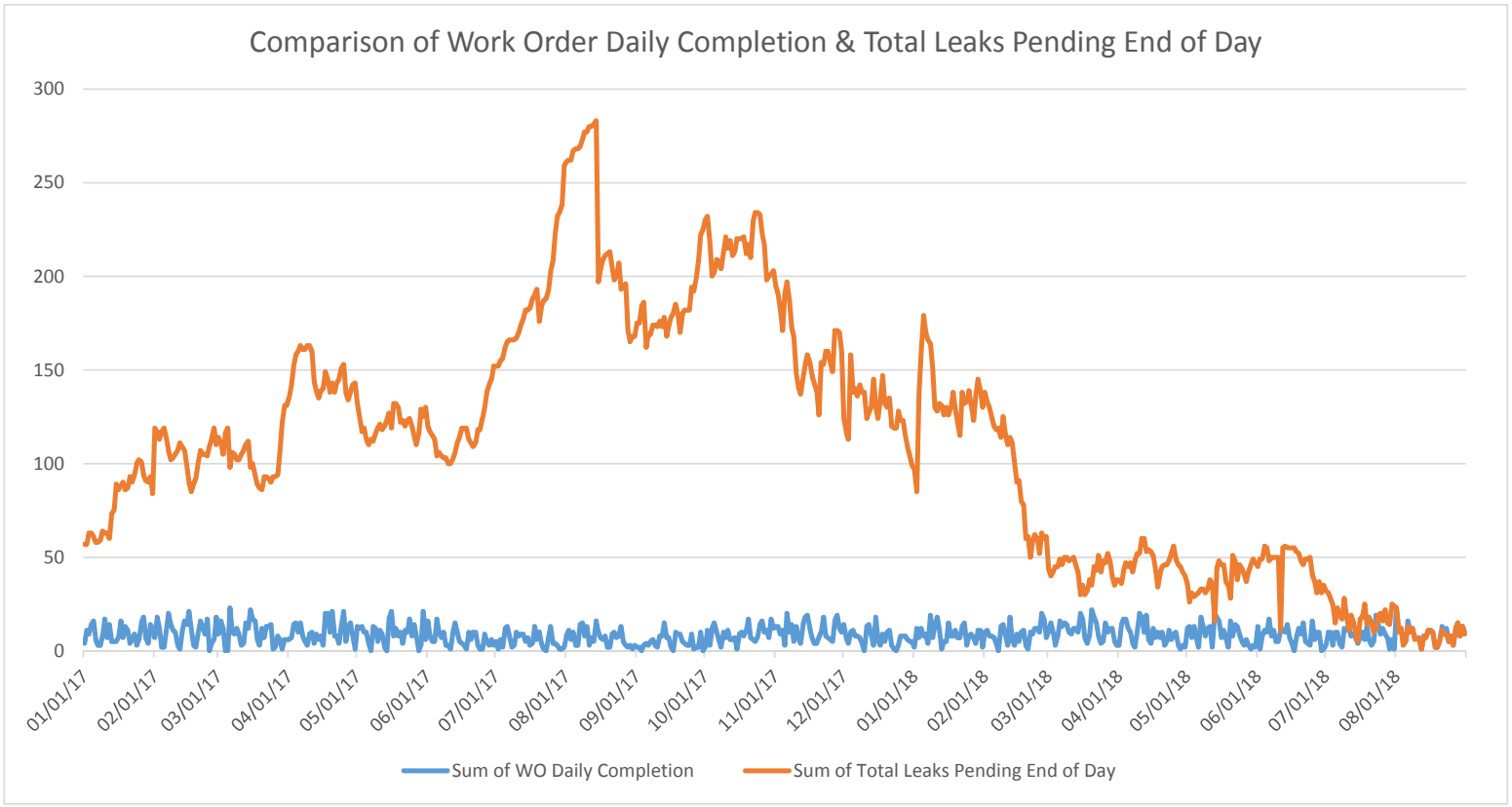
Land Acquisition Summary

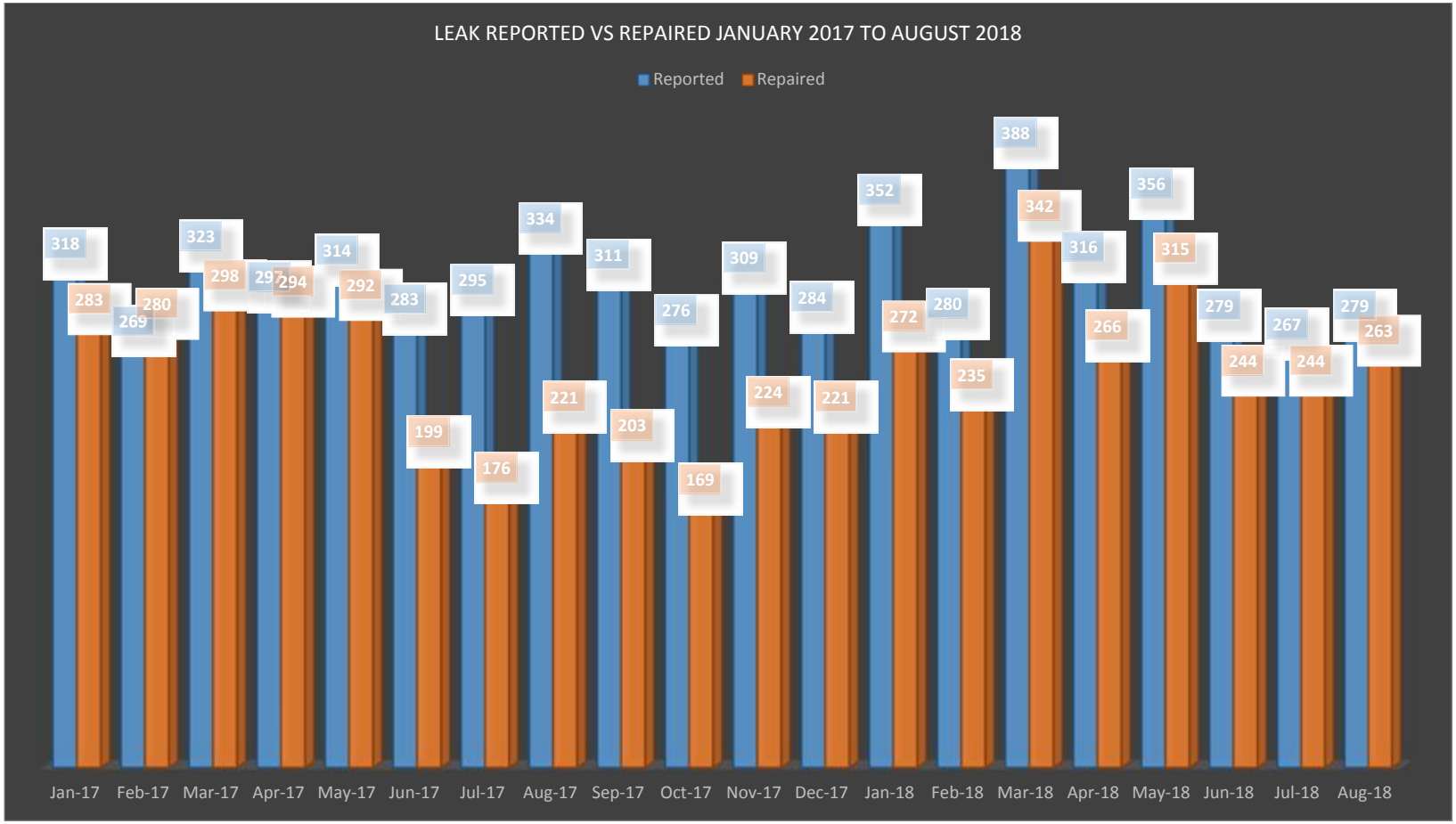
GWA Facility	Location	Gov. or Private Property	Land Acquisition Status
Tanks	Ugum	Private	Letter of Decisions mailed to private property owners 09/07/2018
	Astumbo	Gov't. - CLTC	GWA and DLM working together on Land Registration process. Pending Notification of surrounding lot owner information from DLM
	Piti	Private	Preliminary geotechnical investigation and archaeological investigation in the process 05/01/18
Expansion of the Northern District Wastewater Treatment Plant (NDWWTP)	Dededo	Gov't - GALC	Grant Deed submitted to Security Title for Escrow closing 08/31/18
Deep Wells	AG-12	Dept. of Agriculture/Manhita Farms	Land Registration has been approved by Superior Court of Guam. Pending release and recordation of the Decree Establishing Title at DLM. DCA will be submitting Retracement Survey Check Print Map to DLM for review and comments 07/13/18
	Y-8	Gov't. - CLTC	Grant Deed submitted for GM Signature 09/05/18
Booster Pump Station	Agfayan	Private	Denial Letter received from private property owner on Lot 61-R2, Inarajan 06/07/18. Sent 2nd follow up request to DLM Director on request for authorization on archeological testing for L28, B19, T3734, Inarajan 08/13/18.
Sewer Pump Stations	2nd Adjacent Property to Southern Link	Private	Land Purchase and Sale Agreement sent to GM for review and approval 09/07/18
Asan Springs	Asan	Federal	License Agreement for Asan Springs facility that fall on Dept. of Park Services property currently under DOI review

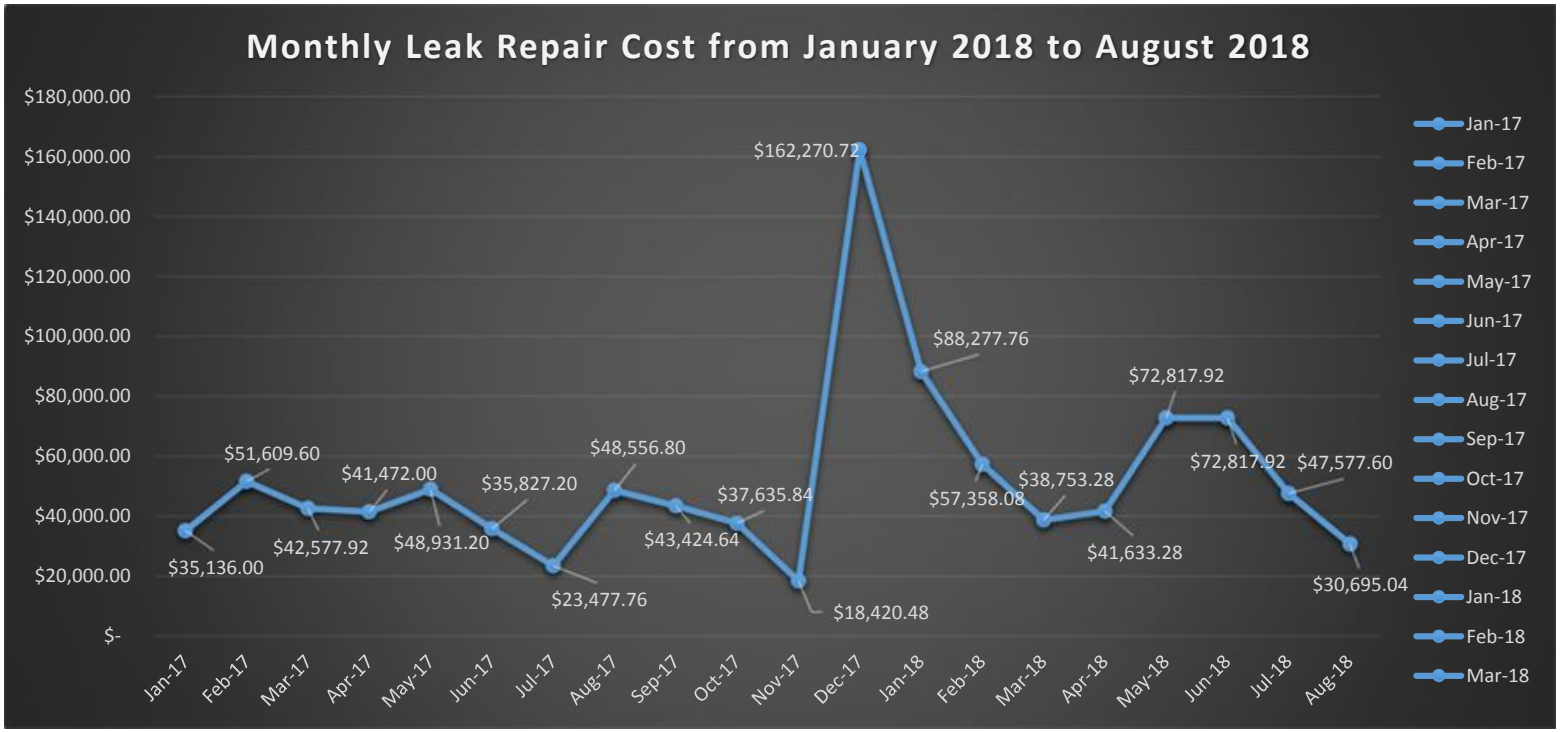
NRW – Update

- Water Loss Control Program activities are on-going
    - Review of latest numbers is underway.
    - Production meter replacement program is under design for 65 well sites. Portable flow meter is being procured to calibrate existing meters.
    - District Metering Areas are currently being developed for pilot project. Locations have been identified. Grant application was submitted for this pilot project
    - DOI Grant application has been approved for training and equipment.

Leak Repair Summary for August 2018




LEAK REPORTED VS REPAIRED JANUARY 2017 TO AUGUST 2018
Reported
Repaired
318
283
269
280
323
298
294
314
292
283
199
295
176
334
221
311
203
276
169
309
224
284
221
352
272
280
235
388
342
316
266
356
315
279
244
267
244
279
263
Jan-17
Feb-17
Mar-17
Apr-17
May-17
Jun-17
Jul-17
Aug-17
Sep-17
Oct-17
Nov-17
Dec-17
Jan-18
Feb-18
Mar-18
Apr-18
May-18
Jun-18
Jul-18
Aug-18



Assumptions:

1. Leak rate = 4 gpm
2. Cost per kgal = $4.00

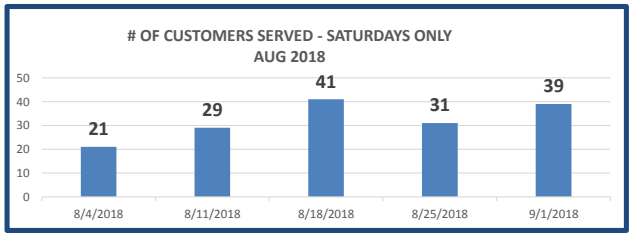
GWA Utility Services Division
Monthly Status Report
Month ending Aug 31, 2018

UTILITY SERVICES DIVISION ACTIVITIES:	WEEKLY AVERAGE JULY 2018	JULY 2018 MONTHLY TOTAL	WEEK ENDING: 8/4/2018	WEEK ENDING: 8/11/2018	WEEK ENDING: 8/18/2018	WEEK ENDING: 8/25/2018	WEEK ENDING: 9/1/2018	WEEKLY AVERAGE AUG 2018	AUG 2018 MONTHLY TOTAL
Collections Unit									
I. Number of accounts cut for nonpayment:	55	220	0	86	67	75	110	68	338
II. Number of accounts restored for nonpayment:	49	196	9	47	41	58	69	45	224
III. Number of No water reports responded to:	2	9	3	1	3	6	3	3	16
IV. Number of Secure/Unsecure valve reports responded to:	1	4	0	2	1	1	1	1	5
V. Number of Verify reads responded to:	0	0	0	0	0	0	0	0	0
VI. Number of new pay plans negotiated for **active** accounts :	180	718	148	192	217	188	201	189	946
VII. Number of active pay plans negotiated and ongoing :	1997		1816	1946	2140	2325	2451	2136	
VIII. Number of **inactive** accounts with a payment arrangement:	0		3	3	3	4	4	3	
IX. Number of broken payment plans:	72	289	74	62	23	3	75	47	237
Customer Service Unit									
I. Service Delivery Points:									
a. GBN Public Service Building – Fadian									
i. Total Customers Assisted :	214	857	259	239	224	245	262	246	1229
ii. Total Abandoned Requests :	12	48	19	10	16	13	28	17	86
iii. Average Wait Time:	6 minutes		5 minutes	5 minutes	11 minutes	7 minutes	5 minutes	7 minutes	
iv. Average Service Time:	12 minutes		11 minutes	11 minutes	11 minutes	10 minutes	10 minutes	11 minutes	
v. Breakdown by request type:									
1. Apply for water	44	174	79	55	57	54	50	59	295
2. Restore water cut for non payment	14	56	2	28	8	11	17	13	66
3. Terminate Water	14	56	26	12	9	16	22	17	85
4. Copy of Bill	35	139	38	38	38	47	27	38	188
5. Billing Dispute	44	174	51	43	43	55	56	50	248
6. Billing Dispute follow up	3	10	4	3	4	4	4	4	19
7. General Questions & Other	31	122	26	24	45	33	48	35	176
8. Report a water leak	1	3	2	1	1	1	2	1	7
9. Report water theft	0	1	0	0	0	0	1	0	1
10. Payment Arrangement	27	107	35	37	24	26	35	31	157
b. Julale Satellite Office – Hagatna									
i. Total Customers Assisted :	231	923	257	242	263	220	232	243	1214
ii. Total Abandoned Requests :	9	35	10	5	8	9	4	7	36
iii. Average Wait Time:	7 minutes		7 minutes	4 minutes	8 minutes	6 minutes	5 minutes	6 minutes	
iv. Average Service Time:	10 minutes		9 minutes	8 minutes	10 minutes	9 minutes	10 minutes	9 minutes	
v. Breakdown by request type:									
1. Apply for water	45	180	64	62	54	50	52	56	282
2. Restore water cut for non payment	8	32	2	10	14	6	9	8	41
3. Terminate Water	20	79	25	16	19	17	21	20	98
4. Copy of Bill	62	247	76	48	61	47	49	56	281
5. Billing Dispute	40	160	39	35	44	57	45	44	220
6. Billing Dispute follow up	1	2	5	0	2	2	1	2	10
7. General Questions & Other	25	101	28	31	37	22	40	32	158
8. Report a water leak	1	5	0	2	0	0	1	1	3
9. Report water theft	0	0	0	0	2	0	0	0	2
10. Payment Arrangement	29	115	23	43	38	24	26	31	154
c. Upper Tumon Satellite Office – Upper Tumon									
i. Total Customers Assisted :	316	1265	334	332	309	353	386	343	1714
ii. Total Abandoned Requests :	9	35	18	15	16	16	32	19	97
iii. Average Wait Time:	6 minutes		17 minutes	10 minutes	13 minutes	9 minutes	14 minutes	13 minutes	
iv. Average Service Time:	9 minutes		13 minutes	11 minutes	13 minutes	13 minutes	12 minutes	12 minutes	
v. Breakdown by request type:									
1. Apply for water	68	272	119	93	87	79	122	100	500
2. Restore water cut for non payment	11	45	3	12	10	24	24	15	73
3. Terminate Water	29	117	35	24	24	38	36	31	157
4. Copy of Bill	72	287	61	59	56	62	64	60	302
5. Billing Dispute	70	280	66	63	58	92	76	71	355
6. Billing Dispute follow up	3	10	4	3	1	1	2	2	11
7. General Questions & Other	38	150	34	44	47	43	41	42	209
8. Report a water leak	3	13	4	4	7	1	5	4	21
9. Report water theft	0	0	0	2	0	0	0	0	2
10. Payment Arrangement	38	152	31	44	27	40	36	36	178

GWA Utility Services Division
Monthly Status Report
Month ending Aug 31, 2018

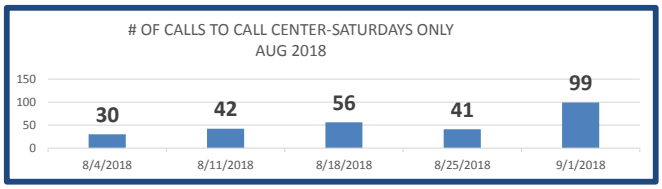
UTILITY SERVICES DIVISION ACTIVITIES:	WEEKLY AVERAGE JULY 2018	JULY 2018 MONTHLY TOTAL	WEEK ENDING: 8/4/2018	WEEK ENDING: 8/11/2018	WEEK ENDING: 8/18/2018	WEEK ENDING: 8/25/2018	WEEK ENDING: 9/1/2018	WEEKLY AVERAGE AUG 2018	AUG 2018 MONTHLY TOTAL
d. Customer Call Center									
i. Calls Recieved :	1100	4401	1080	1268	1236	1038	1513	1227	6135
ii. Calls Immediately Answered :	688	2750	753	777	817	804	979	826	4130
iii. Calls Abandoned	42	167	43	84	55	46	59	57	287
iv. Calls Handled by Voice mail:	371	1482	284	407	363	188	474	343	1716
v. Average duration of calls answered	19 minutes		5 minutes	4.5 minutes	5 minutes	4 minutes	4 minutes	5 minutes	
vi. Breakdown by request type:									
1. Apply/Terminate info.	118	470	30	25	25	21	25	25	126
2. Automated Telphone Call	106	425	17	30	35	16	58	31	156
3. Balance Inquiry	74	295	130	99	92	112	120	111	553
4. Call Back	123	491	32	89	76	53	83	67	333
5. Dispatch	101	402	25	30	28	27	65	35	175
6. Dispute	4	15	10	7	9	4	10	8	40
7. Follow up	37	146	43	65	55	48	58	54	269
8. General Questions & Other	23	93	121	125	133	124	190	139	693
9. GWA Staff	24	97	130	126	105	120	98	116	579
10. No Water	22	89	18	20	24	12	44	24	118
11. Online/Phone App Help	47	188	28	29	23	56	25	32	161
12. Pay by Phone	7	29	136	121	177	189	165	158	788
13. Pay Plan	10	39	63	118	121	77	99	96	478
14. Restore Non-payment	17	67	0	40	23	34	36	27	133
15. Secure/Unsecure Valve	31	122	9	2	7	5	4	5	27
16. Voice Mail	54	215	45	32	40	18	53	38	188
17. Water leak	34	136	15	4	8	8	13	10	48
e. Customer Emails:									
i. Emails Recieved :									
1. customers@guamwaterworks.org	35	140	35	33	35	39	32	35	174
Breakdown by request type (email):									
a. Apply for water	3	10	0	0	0	1	1	0	2
b. Terminate Water	2	8	3	3	2	1	1	2	10
c. Copy of Bill	1	5	2	0	3	4	1	2	10
d. Billing Dispute & follow up	8	33	5	7	5	5	6	6	28
e. General Questions & Other	13	53	20	15	17	19	15	17	86
f. Report a water leak	2	8	1	1	1	1	5	2	9
g. Report water theft	0	0	0	0	0	0	0	0	0
h. Online services inquiry	6	23	4	7	7	8	3	6	29
2. gwaservesme@guamwaterworks.org (realtors and prop m	0	0	0	0	0	0	0	0	0
ii. Emails Replied (both):	29	114	36	30	35	26	25	30	152

f. Saturday Services: 9AM TO 1PM ONLY	AVERAGE	8/4/2018	8/11/2018	8/18/2018	8/25/2018	9/1/2018	AVERAGE
	32	21	29	41	31	39	32
i. VISITS: Breakdown by request type:							
1. Apply for water	6	11	7	10	6	7	8
2. Restore water cut for non payment	1	0	2	0	0	1	1
3. Terminate Water	2	1	2	2	1	3	2
4. Copy of Bill	10	4	8	10	8	12	8
5. Billing Dispute	5	2	3	6	8	2	4
6. Billing Dispute follow up	0	0	0	0	0	0	0
7. General Questions & Other	2	1	1	4	2	3	2
8. Report a water leak	0	0	1	1	0	0	0
9. Report water theft	0	0	0	0	0	0	0
10. Payment Arrangement	7	2	5	8	6	11	6



GWA Utility Services Division
Monthly Status Report
Month ending Aug 31, 2018

UTILITY SERVICES DIVISION ACTIVITIES:	WEEKLY AVERAGE JULY 2018	JULY 2018 MONTHLY TOTAL	WEEK ENDING: 8/4/2018	WEEK ENDING: 8/11/2018	WEEK ENDING: 8/18/2018	WEEK ENDING: 8/25/2018	WEEK ENDING: 9/1/2018	WEEKLY AVERAGE AUG 2018	AUG 2018 MONTHLY TOTAL
ii. CALLS TO CALL CENTER (Saturday services only):			8/4/2018	8/11/2018	8/18/2018	8/25/2018	9/1/2018		
			30	42	56	41	99		



Dispute Resolution & Document Control

			8/4/2018	8/11/2018	8/18/2018	8/25/2018	9/1/2018		
I. Dispute Resolution:									
a. Number of disputed accounts resolved:	10	40	6	18	9	5	5	9	43
b. Number of disputed accounts under review:	178	712	178	178	178	178	178	178	890
II. Document Control:									
a. Number of field activities posted :	344	1374	214	314	381	455	340	341	1704
b. Number of field activities pending:	409	1634	609	834	826	657	644	714	3570

Disconnect/Reconnect Unit

I. Number of field activities received:	237	949	371	289	264	236	321	296	1481
II. Number of field activities completed:	259	1035	375	371	291	291	294	324	1622
III.Number of field activities pending field action:	6	22	4	2	1	2	1	2	10

Meter Reading Unit

			8/4/2018	8/11/2018	8/18/2018	8/25/2018	9/1/2018		
I. Number of meters read:									
a. Electronically Read Meters:	7387	29548	7554	8759	13637	10194	2734	8576	42878
b. Manually Read Meters:	35	141	38	39	47	39	29	38	192
i. Unread meters (Meters scheduled to be read but not read):	44	176	29	53	68	69	5	45	224
ii. Number of data logs received:	27	107	31	30	36	19	20	27	136
iii. Number of data logs retrieved:	25	100	24	35	47	10	33	30	149
iv. Number of data logs pending field action:	26	103	21	19	8	16	6	14	70
v. Communication Errors/Reprogramming requests:	2	9	6	4	2	0	6	4	18
vi. Number of estimated readings (for the week):	31	123	24	35	11	26	2	20	98
vii. Reasons for Estimations:									
1. Cant locate meter:	4	16	1	3	3	3	3	3	13
2. Temporary Obstruction	4	16	4	3	2	4	1	3	14
3. Vicious Dog	0	1	2	1	0	0	0	1	3
4. Flooded meter	1	5	8	4	3	12	2	6	29
5. Corrective action requested (database corrections needed)	3	10	2	7	4	3	0	3	16
6. Possible changed out meter:	5	21	6	4	42	5	3	12	60
7. Communication/Programming error (code 92's):	3	13	3	11	5	7	4	6	30
8. Other:	9	36	11	8	9	13	6	9	47
1. Leaks detected on customer's private line:	1224	4897	1115	1141	1771	1165	285	1095	5477
2. Reverse Flow Detected	82	328	85	41	75	128	17	69	346
3. No Usage Detected	428	1713	408	388	660	473	125	411	2054
4. Tamper Code	20	79	23	19	23	18	11	19	94
c. Electronic Read Percentage:	99%		98%	100%	99%	99%	100%	99%	

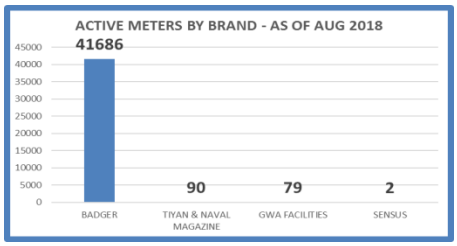
Revenue Protection Unit

I. Number of Inactive Still Consuming Reports rec'd & investigated:	1	2	0	0	0	0	2	0	2
II.Number of Illegal Connection reports rec'd & investigated:	1	4	1	0	0	0	0	0	1

III. Meter Replacement Project – Post 2010 Metron Farnier & Sensus Status Report :

METER TYPE	COUNT
SENSUS	2
METRON FARNIER	0
	2

a. Account & Meter Type Count :



GUAM WATERWORKS AUTHORITY

Engineering Monthly Report
September 2018

Prepared By:
Thomas Cruz, P.E. Chief Engineer

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A. Summary Table of 2010, 2013 and 2016 Bond

Potable Water

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
PW 05-01	Ground Water Disinfection	$ 500,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 05-03	Santa Rita Springs Booster Pump Rehab Phase II	$ -	N/A	N/A	$ 100,000.00	100.00%	0.00%	$ -	N/A	N/A
PW-05-05	"A Series Well Transmission Line	$ 518,143.96	100.00%	0.00%	$ 400,000.00	92.46%	7.54%	$ -	N/A	N/A
PW 05-06	Water Booster Pump Station	$ 500,000.00	100.00%	0.00%	$ 1,861,000.00	99.09%	0.91%	$ 4,139,000.00	0.00%	100.00%
PW 05-07	Meter Replacement Program	$ 10,300,000.00	99.84%	0.16%	$ 999,000.00	99.75%	0.25%	$ 4,501,000.00	3.33%	96.67%
PW 05-08	Barrigada Tank Repair/Replacement	$ 5,450,000.00	99.92%	0.08%	$ 4,987,000.00	99.32%	0.68%	$ 1,013,000.00	0.00%	100.00%
PW 05-09	Leak Detection	$ 200,000.00	100.06%	-0.06%	$ 20,000.00	84.58%	15.42%	$ 1,180,000.00	0.00%	100.00%
PW 05-10	Potable Water System Planning	$ 200,000.00	100.00%	0.00%	$ 624,000.00	100.00%	0.00%	$ 2,276,000.00	38.50%	61.50%
PW 05-11	Implement Ground Water Rule	$ 1,700,000.00	100.00%	0.00%	$ 1,000,000.00	100.00%	0.00%	$ -	N/A	N/A
PW 05-12	Brigade II (Ugum Lift) BPS Upgrade	$ 1,700,000.00	18.03%	81.97%	$ -	N/A	N/A	$ -	N/A	N/A
PW 05-13	Deep Well Rehabilitation	$ 548,000.00	100.00%	0.00%	$ 200,000.00	100.00%	0.00%	$ 250,000.00	44.01%	55.99%
PW 05-14	New Deep Wells at Dow n Hard	$ 638,252.85	76.11%	23.89%	$ 810,000.00	0.00%	100.00%	$ 1,190,000.00	0.00%	100.00%
PW 05-15	Rehabilitation of Asan Springs	$ 900,000.00	37.87%	62.13%	$ -	N/A	N/A	$ -	N/A	N/A
PW 05-16	Master Meters	$ 1,600,000.00	99.44%	0.56%	$ 784,000.00	99.88%	0.12%	$ 3,616,000.00	4.19%	95.81%
PW 09-01	Ugum Water Treatment Plant Intake	$ 700,000.00	99.47%	0.53%	$ 982,000.00	100.00%	0.00%	$ 18,000.00	0.00%	100.00%
PW 09-02	Water Wells	$ -	N/A	N/A	$ 4,200,000.00	54.90%	45.10%	$ 2,500,000.00	0.00%	100.00%
PW 09-03	Water Distribution System	$ 3,174,748.00	100.00%	0.00%	$ 11,151,000.00	95.15%	4.85%	$ 49,000.00	0.00%	100.00%
PW 09-04	Pressure Zone Realignment	$ -	N/A	N/A	$ 431,000.00	99.95%	0.05%	$ 1,141,000.00	64.94%	35.06%
PW 09-06	Central Water Distribution System 2005	$ 900,000.00	91.67%	8.33%	$ -	N/A	N/A	$ -	N/A	N/A
PW 09-08	Mechanical/Electrical Equipment	$ 1,200,000.00	100.00%	0.00%	$ 430,000.00	99.60%	0.40%	$ 100,000.00	0.00%	100.00%
PW 09-09	Water Reservoir Internal/External	$ 2,000,000.00	75.47%	24.53%	$ -	N/A	N/A	$ -	N/A	N/A
PW 09-10	Water Reservoir Internal/External	$ -	N/A	N/A	$ -	N/A	N/A	$ 800,000.00	100.00%	0.00%
PW 09-11	Water System Reservoirs 2005 Improvements	$ 1,050,000.00	100.00%	0.00%	$ 13,878,000.00	99.99%	0.01%	$ 28,350,000.00	55.51%	44.49%
PW 11-01	Distribution System Upgrades	$ 474,159.85	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 11-02	Ugum Water Treatment Plant Reservoir	$ -	N/A	N/A	$ 90,000.00	0.00%	100.00%	$ -	N/A	N/A
PW 12-01	Water Audit Program & Water Loss Control Plan	$ 100,000.00	78.46%	21.54%	$ -	N/A	N/A	$ 1,000,000.00	38.96%	61.04%
PW 12-02	Production Plan / Reduce Navy Purchases	$ 100,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 12-03	Hydraulic Assessment of Tanks	$ 500,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 12-04	Agana Heights & Chaot Tanks	$ 4,700,000.00	100.00%	0.00%	$ 3,280,000.00	40.52%	59.48%	$ 1,220,000.00	40.98%	59.02%
PW 12-05	Tank Major Repair Yigo #1, Mangilao #2, Astumbo#1	$ 1,900,000.00	95.16%	4.84%	$ 11,605,000.00	99.99%	0.01%	$ 1,895,000.00	96.15%	3.85%
PW 12-06	Tank Replacement Piti & Hyundai	$ -	N/A	N/A	$ -	N/A	N/A	$ 7,409,830.00	98.52%	1.48%
PW 12-07	Assessment of Malojloj Elevated & Yigo Elevated	$ 200,000.00	100.00%	0.00%	$ 485,117.00	100.00%	0.00%	$ -	N/A	N/A
PW 12-08	Public Water System Asset Inventory/ Condition Assessment	$ 100,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 12-09	Public Water System GIS & Mapping	$ 50,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 14-01	Fire Hydrant Replacement Program	$ -	N/A	N/A	$ -	N/A	N/A	$ 2,000,000.00	0.00%	100.00%
		$ 41,903,304.66			$ 58,317,117.00			$ 64,647,830.00		

Wastewater

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
WW 05-04	Wastew ater System Planning	$ 1,500,000.00	100.00%	0.00%	$ 651,000.00	100.00%	0.00%	$ 349,000.00	89.68%	10.32%
WW 05-05	Wastew ater Vehicles	$ 235,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 05-07	NDWWTP - Chlorine Tanks	$ 250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 09-01	Lift station upgrades	$ -	N/A	N/A	$ 946,000.00	70.40%	29.60%	$ 2,404,000.00	12.21%	87.79%
WW 09-06	Wastew ater Collection System Repl/ Rehabilitation	$ 1,105,000.00	99.93%	0.07%	$ 780,000.00	97.11%	2.89%	$ 2,920,000.00	19.02%	80.98%
WW 09-08	Facilities Plan/Design for Baza Gardens WWTP	$ 1,250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 09-10	Facilities Plan/Design for Agat-Santa Rita WWTP	$ 899,630.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 11-03	Baza Gardens STP Replacement	$ 1,301,947.00	88.43%	11.57%	$ 3,114,883.00	100.00%	0.00%	$ 29,400,170.00	98.99%	1.01%
WW 11-04	Facilities Plan/Design for Umatac-Merizo WWTP	$ 900,000.00	100.00%	0.00%	$ 473,000.00	100.00%	0.00%	$ 527,000.00	47.84%	52.16%
WW 11-08	Agat/Santa Rita STP Replacement	$ 2,218,000.00	99.91%	0.09%	$ 67,200,000.00	98.37%	1.63%	$ 3,000,000.00	51.50%	48.50%
WW 12-01	Northern District WWTP Primary Treatment Upgrade	$ 11,750,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-02	Biosolids Management Plan	$ 200,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-03	Agana WWTP Interim Measures	$ 11,500,000.00	100.00%	0.00%	$ 673,000.00	100.00%	0.00%	$ 827,000.00	0.00%	100.00%
WW 12-04	I&I SSES Southern	$ 800,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-05	I&I SSES Central	$ 850,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-06	I&I SSES Northern	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 12 -07	Umatac Merizo Replacement	$ 250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ 20,800,000.00	99.06%	0.94%
WW 12-08	Wastew ater System GIS & Mapping	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-09	Wastew ater Facility Back Up Pow er	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-10	Wastew ater System Asset Inventory	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 17-01	Wastew ater Sew er System Expansion									
WW 17-02	Northern District WWTP Secondary Treatment Upgrade	$ 1,000,000.00	0.00%	99.04%						
		$ 36,009,577.00			$ 73,837,883.00			$ 60,227,170.00		

Electrical Engineering Support

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
EE 05-02	SCADA Pilot Project	$ 61,950.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
EE 09-01	Wastewater Pumping Station Electrical Upgrade	$ -	N/A	N/A	$ 620,000.00	16.13%	83.87%	$ 100,000.00	0.00%	100.00%
EE 09-02	Electrical Upgrade - Water Wells	$ 354,226.63	100.00%	0.00%	$ 1,500,000.00	100.00%	0.00%	$ 650,000.00	0.00%	100.00%
EE 09-03	Electrical Upgrade - Water Booster	$ -	N/A	N/A	$ 2,000.00	0.00%	100.00%	$ 323,000.00	0.00%	100.00%
EE 09-04	Electrical Upgrade - Water Booster	$ -	N/A	N/A	$ 200,000.00	0.49%	99.51%	$ -	N/A	N/A
EE 09-05	Electrical Upgrade - Other Water	$ -	N/A	N/A	$ 150,000.00	40.47%	59.53%	$ -	N/A	N/A
EE 09-06	SCADA Improvements - Phase I	$ 250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
EE 09-07	SCADA Improvements - Phase 2	$ 1,056,986.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
EE 09-08	SCADA Improvements - Phase 3	$ 24,955.71	100.00%	0.00%	$ 923,000.00	78.26%	21.74%	$ 1,177,000.00	52.46%	47.54%
EE 09-09	SCADA Improvements - Phase 4	$ -	N/A	N/A	$ -	N/A	N/A	$ 6,500,000.00	52.29%	47.71%
		$ 1,748,118.34			$ 3,395,000.00			$ 8,750,000.00		

Miscellaneous Engineering Support

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
MC 05-01	Laboratory Modernization	$ -	N/A	N/A	$ 1,173,000.00	100.00%	0.00%	$ 1,127,000.00	100.00%	0.00%
MC 05-02	Land Survey	$ 500,000.00	99.94%	0.06%	$ 2,000.00	0.00%	100.00%	$ 1,998,000.00	63.09%	36.91%
MC 09-01	General Plant Improvements	$ 7,241,000.00	99.58%	0.42%	$ 2,600,000.00	82.00%	18.00%	$ 2,769,460.00	54.11%	45.89%
MC 15-01	Information Technology Intergration Improvements							$ 500,000.00	48.81%	51.19%
		$ 7,741,000.00			$ 3,775,000.00			$ 6,394,460.00		

	2010 Bond Allotment	2013 Bond Allotment	2016 Bond Allotment
CIP Water	$ 41,903,304.66	$ 58,317,117.00	$ 64,647,830.00
CIP Wastewater	$ 36,009,577.00	$ 73,837,883.00	$ 60,227,170.00
CIP Electrical	$ 1,748,118.34	$ 3,395,000.00	$ 8,750,000.00
CIP Miscellaneous	$ 7,741,000.00	$ 3,775,000.00	$ 6,394,460.00
	$ 87,402,000.00	$ 139,325,000.00	$ 140,019,460.00

Bond Fund	Construction Fund Amount ($M)	Estimated # of months fund available for use		Total Funds encumbered to date ($M)	% of fund used	Rate of Spending: ($M) per year
2005	$82.930	82	*	$82.930	100.00%	12.14
2010	$87.402	92	**	$83.339	95.35%	10.87
2013	$139.325	55	**	$131.067	94.07%	28.60
2015	$140.019	25		$89.390	63.84%	42.91
	* - End date November 2013 via CCU Resolution 06-FY2014					
	** - Includes month of September 2018					

B. Projects Procurement

Percentage Key:

100%	Approved by GM
99%	Signature required from either Accounting/Legal/GM
98%	Processing engineering service or construction contract (with legal)
95%	Request for CCU approval (GM/engineering)
90%	A/E fee negotiation or contractor bid evaluation (engineering)
80%	Selected A/E or Conducted bid opening (engineering)
70%	Advertised RFP/IFB (engineering)
60%	RFP/IFB Package under legal review
50%	RFP/IFB Package completed (engineering)
Less than 50%	Project Scope of work development in progress

- Red text anywhere indicates a change from the last report.

BOX KEY FOR PROCUREMENT:

(Type of Procurement) (Relevant CIP NO. or Funding Source)	**(Project Title)**	
(Percentage complete for procurement)	**Activities/Notes:** (see percentage key above)	**Consultant** (listed when selected)
Project Description	Summary of project description	

BID PACKAGE PW 09-02	**New Well Construction**	
<50% Complete	**Activities/Notes:** GWA engineering continuing discussion with Dept. of Agriculture and lessee on options of acquisition of property for well site at AG-12. Internal GWA discussions underway for survey and appraisal services as well as continuing services form Designer.	
Project Description:	The project is to construct three new production wells for GWA as well as installation of a water main to connect the new production wells to the Ysengsong Reservoirs.	

RFP PW 09-02	**New Well Construction (Construction Management)**	
<50% Complete	**Activities/Notes:** SOW being developed	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of up to three (3) new production wells for GWA. GWA plans to increase source water production to improve system redundancy that allows for operating the water production wells more effectively. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

BID PACKAGE PW 14-01	**Fire Hydrant Replacement Phase I**	
<50% Complete	**Activities/Notes:** Bid package being prepared.	
Project Description:	The work performed under this project consist of replacing all know dry barrel fire hydrants down to the lateral as well as any defective wet barrel fire hydrant. Where necessary the gate valve for the fire hydrant may also be replaced.	

BID PACKAGE PW 09-03, PW 09-04 AND PW 09-11	**Northern/Southern Tanks (Santa Rita, Santa Rosa and Sinifa) Construction**	
<50% Complete	**Activities/Notes:** Due to design schedule and funding availability, the bid package will be issued for three tanks to be constructed. Anticipate final design to be submitted end of September.	
Project Description:	The work performed under this project procurement shall consist of Construction of a 1MG Santa Rosa reservoir and booster pump station, 1MG Santa Rita reservoir and 1MG Sinifa reservoir. Some piping work off site from the reservoir is also required to ensure the reservoirs functions optimally.	

RFP EE 09-08, EE 09-09	**SCADA Phase A1 Construction Management**	
100% Complete	**Activities/Notes:** Contract fully executed August 24th. NTP issued August 28th, 2018.	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of all SCADA ready instrumentation at the various facilities through Guam. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

RFP PW 09-04, PW 09-11	**Design Services for the Project Pressure Zone Realignment and Tank Repair/Replacement**	
100% Complete	**Activities/Notes:** Contract fully executed August 16th. NTP issued August 22nd, 2018.	
Project Description:	The work performed under this project procurement shall consist of design services for the remaining GWA reservoirs that required major repairs or replacement. The design will also address the required pressure zone realignment throughout the island so as to improve the distribution system functionality. .	

BOX KEY FOR PROJECT:

(Type of Project) (Relevant CIP NO.)	**(Project Title) (Contractor or consultant)**	**Start Date:** (month and year)
(Percentage complete for project)	**Activities/Notes:** (brief description of activity)	**Completion Date:** (month and year)
(Court Order Paragraph No.)	(Project type)	
Project Description	Project Description Narrative	

C. CIP Water Section

INSPECTION CIP PW 05-02	**Inspection & Maintenance Repairs to GWA Island-Wide Steel Water Tank Reservoirs Phase 2 (DCA)**	**Start Date:** April 2010
80% Complete	**Activities/Notes:** A/E working on new bid package for by-pass and repairs. GWA ended repair contract portion of project with CoreTech.	**Completion Date:** Anticipate December 2021
CO 38C	Engineering inspection services	
Project Description:	The Court Order requires GWA to inspect all active and in some cases inactive water reservoirs. The inspection results will allow GWA to determine if a reservoir requires repair or replacement.	

DESIGN CIP PW 05-12	**Brigade II BPS Upgrade (EM Chen)**	**Start Date:** April 2012
100% complete (Basis of Design) 80% (Design)	**Activities/Notes:** Design firm working to 90% design submittal.	**Completion Date:** Due to property acquisition issues GWA anticipate May 2018
N/A	Engineering design services	
Project Description:	The design project is intended to assess system water supply feed from the north as well as Ugum WTP and the water demands downstream from the Brigade BPS so as to reconfigure the piping into the BPS and resize the pumps to me system head requirements.	

DESIGN CIP PW 12-05	**Yigo and Astumbo 2MG Tank Design Project (Lyons)**	**Start Date:** September 2013
99% complete	**Activities/Notes:** Design firm to provide RFI support during the construction.	**Completion Date:** January 2016
CO 9 (b)(4)	Engineering design services	
Project Description:	Develop the construction documents for two (2) 2.0 million-gallon (MG) nominal capacity concrete reservoirs in the Yigo service zones and one (1) 2.0 MG reservoir in the Astumbo service area. The design services will consist of preparation of plans, specifications, and estimates (PS&E), including Basis of Design, design calculations, construction schedule, topographical survey, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic	

	resources, hazardous materials survey, construction documents, design drawings in Auto CAD (latest version), and relevant permits. Other services will include construction bid support service, meetings, and response to request for interpretation/information during construction. The consultant is required to incorporate and modify existing GWA concrete reservoir specifications to meet the project objective.

DESIGN PW 09-11	**Northern and Southern Guam Reservoir Design** **(TG Engineers)**	**Start Date:** May 2015
60% Complete	**Activities/Notes:** Santa Rosa, Sinifa and Santa Rita design to be packaged in one IFB. Inarajan – Land procurement second site related to new BPS's still on-going. Ugum – GWA still in discussion with re-evaluation and discussion with property owner of alternative property on-going.	**Completion Date:** Update: Due to property acquisitions issues for Piti and Tumon #1, design completion 6 months after property issue resolved.
CO 29 (b)(4)	Engineering design services	
Project Description:	The design services will consist of preparation of plans, specifications, and estimates (PS&E), which includes Basis of Design, design calculations, hydraulic modeling (EPANET), computational fluid dynamic modeling (CFD), construction schedule, topographical survey, property research, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic resources, hazardous materials survey, construction documents, design drawings in Auto CAD, relevant permit, construction bid support service, and response to request for interpretation/information during construction. The tank locations are Ugum, Santa Rita, Santa Rosa, Inarajan and Sinifa.	

DESIGN PW 12-04	**Central Guam Reservoirs Design** **(GHD Inc.)**	**Start Date:** May 2015
65% Complete	**Activities/Notes:** Chaot #2 – CCU resolution approved to Change Order AIC to construct tank. GWA still waiting for time extension request. Tumon #2 – tank under construction. Hyundai – tank under construction. Piti – GWA still evaluating alternative solutions to storage needs in Piti area. Manenggon –70% design near complete. Tumon #1 – GWA working on land issues.	**Completion Date:** Update: Due to property acquisitions issues for Piti and Tumon #1, design completion 6 months after property issue resolved.
CO 29 (b)(4)	Engineering design services	
Project Description:	The design services will consist of preparation of plans, specifications, and estimates (PS&E), which includes Basis of Design, design calculations, hydraulic modeling (EPANET), computational fluid dynamic modeling (CFD), construction schedule, topographical survey, property research, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic resources, hazardous materials survey, construction documents, design drawings in Auto CAD, relevant permit, construction bid support service, and response to request for interpretation/information during construction The tank locations are Hyundai, Pulantat, Chaot #2, Tumon #2, Piti & Tumon #1.	

CONSTRUCTION PW 09-03	**Line Replacement Phase IV (Giant Construction)**	**Start Date:** 02/14/16
90% Complete	**Activities/Notes:** Contractor continuing work along Chalan Koda and Matguac.	**Completion Date:** 12/30/18 per Change Order.
	Construction Services	
Project Description:	The project is intended for a contractor to replace existing water lines that have been found by operations to be leaking and/or are causing service delivery to less than what GWA is required to provide. The project will replace water mains and ten known locations throughout the island and there is a component within the bid where line replacement work for unknown locations is accounted for.	

DESIGN PW 05-15	**Asan Spring Rehabilitation Design (HDR)**	**Start Date:** August 24, 2016
95% Complete	**Activities/Notes:** GWA received 100% design drawings. Design under review.	**Completion Date:** Due to delays from the Park Services related to property access the anticipated completion of the design is May 2018.
	Engineering design services	
Project Description:	- Perform site visits and condition assessment for site conditions to determine demolition and rehabilitation requirement, process equipment condition, structural condition, and electrical system. Site condition assessment shall include all disciplines to execute the project. - Review and validate the current property boundary information to confirm the available space for the project development. - Perform an environmental impact study and prepare all required permits as needed. - Perform an archeological and historical resources study to identify potential impact to the project, prepare all required permits as needed. - Coordinate with Guam Historic Resources Division State Historic Preservation Office (SHPO) on historical resources study. Prepare all necessary reports and documents as required by SHPO. - Coordinate with Guam Department of Agriculture, Division of Aquatic and Wildlife Resources (DAWR) on vegetation clearance. Prepare all necessary reports and documents required by DAWR. - Identify the existing and projected service area, period of design. - Identify and recommend conceptual water treatment system. - Perform a Class 4 engineering cost estimate according to the American Association of Cost Engineers (AACE) International Cost Estimate Classification System for construction fee. Cost must include all disciplines, permit, construction and administration that are necessary to execute the project. All costs will be in current dollars and escalated to the estimated midpoint of construction.	

CONSTRUCTION	**Yigo/Astumbo Tank Construction**	**Start Date:**

PW 09-11, PW 12-05	**(Pernix)**	12/1/16
93% Complete	**Activities/Notes:** Yigo #1: tank on-line, final punch list on-going. Yigo #2: tank on-line, punch list on-going. GWA waiting for inspection report for existing 2.5MG steel tank. GWA working to Change Order repair work for Astumbo #2 steel tank. New Concrete Astumbo #1 undergoing leak test.	**Completion Date:** 07/31/18, (GWA working through delay claims from contractor)
	Construction Services	
Project Description:	This project will involve construction of two (2) 2MG concrete tanks and Booster Pump Station at the Yigo site and a one (1) 2MG concrete tank at the Astumbo site. Work will involve new pipe line, valves, electrical controls, pumps and motors, site drainage, paving, generator for the BPS, SCADA, etc.	

CONSTRUCTION MANAGEMENT PW 09-11, PW 12-05	**Yigo/Astumbo Tank Construction Management (GHD)**	**Start Date:** December 2016
93% complete	**Activities/Notes:** Processing submittals and on-site inspection	**Completion Date:** July 2018
N/A	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the demolition of existing steel elevate and ground tanks as well as the construction of the 2MG concrete tanks at the Yigo tank location and Astumbo tank location. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

CONSTRUCTION MANAGEMENT PW 12-04-11, PW 12-06 AND PW 09-11	**Central Tank Phase I (Chaot #2, Tumon #2, Hyundai) Construction Management (TG Engineers, PC)**	**Start Date:** December 2017
10% complete	**Activities/Notes:** Reviewing submittals from contractor.	**Completion Date:** February 2019
N/A	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of three water reservoirs; 0.5MG Chaot #2, 1MG Tumon #2 (Nissan) and 1MG Hyundai. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

CONSTRUCTION	**Central Tank Phase I (Chaot #2, Tumon**	**Start Date:**

PW 12-04, PW 12-06 AND PW 09-11	**#2, Hyundai) Construction (AIC)**	02/8/18
12% Complete	**Activities/Notes:** Nissan steel tank completely demolished, site prep work for foundation work on-going. GWA received building permit for Hyundai tank site. Contractor preparing temporarily tank foundations. GWA working on Change Order to AIC for construction of Chaot #2 tank.	**Completion Date:** 02/31/19
	Construction Services	
Project Description:	The work performed under this project procurement shall consist of Construction of three water reservoirs; 0.5MG Chaot #2, 1MG Tumon #2 (Nissan) and 1MG Hyundai. Some piping work off site from the reservoir is also required to ensure the reservoirs function optimally.	

CONSTRUCTION MANAGEMENT PW 09-11	**Northern and Southern Tank Phase I (Santa Rosa, Sinifa, Santa Rita) Construction Management (GHD)**	**Start Date:** April 2018
0% complete	**Activities/Notes:** Providing constructability review for Santa Rosa Tank.	**Completion Date:** June 2019
N/A	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of three water reservoirs; 1MG Santa Rosa, 1MG Sinifa and 1MG Santa Rita. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

D. CIP Wastewater Section

DESIGN WW 11-08	**Agat-Santa Rita WWTP Replacement (DCA)**	**Start Date:** October 2014
99% Complete	**Activities/Notes:** Change Order to extend design services during construction executed.	**Completion Date:** Nov. 2015 (design); June 2018 (construction)
CO 11	Engineering design services	
Project Description:	The engineering design consultant is required to design a new wastewater treatment facility that will meet secondary treatment limits. The new facilities will incorporate provisions for redundancy to improve reliability and facilitate operations and maintenance activities at the existing facility	

CONSTRUCTION MANAGEMENT WW 11-08	**Agat Santa Rita WWTP CM (GHD)**	**Start Date:** November 2014
100% (PH 1) 100% Complete (PH 2, Part 1) 93% Complete (PH 2,	**Activities/Notes:** Typical CM inspections on-going. Change order required to continue services through remaining construction period.	**Completion Date:** Completion date to coincide with construction

Part B)		completion.
CO 11	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of the Agat Santa Rita WWTP Phase II project. GWA plans to replace the existing wastewater treatment plant for a new plant that can meets permit limits. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

CONSTRUCTION WW 11-08	**Agat Santa Rita WWTP Phase II (Sumitomo Construction)**	**Start Date:** January 2016
Part 1 of Phase II- 100% Complete Part 2 of Phase II- 93% complete	**Activities/Notes:** Contractor still working on headworks, aerobic digester, equalization basin, admin and maintenance buildings.	**Completion Date:** Phase A: 03/15/17 Phase B: 12/31/17 will not be met, December 2018 projected
CO 11	Construction services	
Project Description:	This project includes construction of the head works, clarifier, oxidation ditches and UV disinfection and administration facilities. Rehabilitation work at the existing WWTP will also occur to ensure the wastewater can be pumped to the new plant. The new plant will also tie into the Tipalao SPS.	

DESIGN WW 09-08, WW11-03	**Baza Gardens Cross Island Sewer Design (DCA)**	**Start Date:** 02/05/16
99% Complete	**Activities/Notes:** DCA providing engineering services during construction.	**Completion Date:** 04/30/18(this completion date will have to be extended.)
CO 11	Engineering design services	
Project Description:	The intent of this project for an engineering firm to prepare design drawings and specification for a sewer conveyance from the Baza Garden WWTP to the new Agat Santa-Rite WWTP. The design will take into account growth in the Baza Gardens/Talofofo areas as wells as new connection along the Route 17 route.	

DESIGN WW 09-06	**Bayside SPS Improvements Design (EMPSCO)**	**Start Date:** July 29, 2016
99% Complete	**Activities/Notes:** Due to change in design Army Corp of Engineers permit viewed as not necessary. GWA received 100% design and under review. GWA working on Change order to address snail and archeological report that was not part of original scope.	**Completion Date:** Due to issue with ACOE anticipate December 2017 for design only.
	Engineering design services	
Project Description:	The intent of this project for an engineering firm to prepare design drawings and specification to upgrade the Bayside Sewer Pump Station	

	given the facility is in major disrepair and the adjacent river is eroding away the access road to the facility which is causing maintenance challenges.

CONSTRUCTION WW 09-08, WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance Construction Phase I (BME and Sons)**	**Start Date:** October 2016
92% Complete	**Activities/Notes:** New SPS near complete, force main and gravity line installation along Route 17 on-going. Change Order related to installation of last segment of sewer executed. Request for CCU approval for additional funding sought in September meeting.	**Completion Date:** Phase I: 03/01/18 (this completion date will have to be extended. Under negotiations)
	Construction services	
Project Description:	The work performed under this project consist of construction of 14,714' of gravity main, 2,767' of force main and sewer pump station #3 next to the Aplacho River in Santa Rita.	

CONSTRUCTION MANAGEMENT WW 09-08 WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance (Construction Management) (SSFM)**	**Start Date:** December 5, 2016
80% Complete	**Activities/Notes:** Change Order for additional scope and fee with finance.	**Completion Date:** April 2018 (this completion date will have to be extended. Under negotiations)
	Construction Management services	
Project Description:	The work performed under this project shall consist of Construction Management and Inspection Services for the construction of gravity main, force mains and sewer pump station as well as an equalization basin at the Baza Garden WWTP.	

CONSTRUCTION WW 09-08, WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance Construction Phase II (BME and Sons)**	**Start Date:** March 2017
97% Complete	**Activities/Notes:** New SPS completed, force main completed and gravity line installation along Route 17 completed. Change Order related to installation of last segment of sewer executed. Request for CCU approval for additional funding sought in September meeting.	**Completion Date:** April 2018 (this completion date will have to be extended. Under negotiations)
	Construction services	
Project Description:	The work performed under this project consist of construction of 1,767' of gravity main, 14,400' of force mains and sewer pump station #2 along Route 17.	

CONSTRUCTION WW 09-08, WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance Construction Phase III (Sumitomo Construction)**	**Start Date:** June 2017
45% Complete	**Activities/Notes:** Contractor continuing pipeline and SPS construction work on Route 17 along with work at wet well at Baza Gardens WWTP.	**Completion Date:** Phase III: 03/16/18 (this completion date will have to be extended. Under negotiations)
	Construction services	
Project Description:	The work performed under this project consist of construction of, but not limited to, 10,481' of force mains and sewer pump station at existing WWTP, equalization tanks, stand-by generator, improved headworks, grit removal system, and associated equipment.	

CONSTRUCTION WW 11-04	**Umatac Merizo WWTP Design Build Improvements Project (CoreTech)**	**Start Date:** June 2017
90% design 30% construction	**Activities/Notes:** · CHL continuing excavation and grading of the North Overland Flow System (OFS) and building pipe wall supports. · Culvert repair work started. · Construction Design: · CT/HD preparing a response to BC's I&C and Process Control comments. · Updated schedule still needed and has been requested. · Water stop designed into generator building not installed. No RFI to approve deletion. · Change Proposals: · WW Characterization / Design of Phosphorus Removal System: Scope delivered to & waiting for a fee proposal for WW Characterization from CT/HD. · Forthcoming - Rock excavation and groundwater flow in area of tank. · Forthcoming - Sheet piles may be needed adjacent to large lagoon for the construction of the UV basin due to seepage from lagoon.	**Completion Date:** December 31, 2018
	Construction services	
Project Description:	The project is intended to improve the aeration basin, construct a new sewer pump station, regrade the overland field, construct a new effluent storage tank and disinfection facility. The overland percolation basin will undergo regarding work to ensure appropriate distribution of effluent through the whole basin.	

CONSTRUCTION MANAGEMENT WW 11-04	**Umatac Merizo WWTP Design Build Improvements Project (SSFM Inc)**	**Start Date:** September 7, 2017
30%	**Activities/Notes:** Continuing on-site inspection of field activities.	**Completion Date:** December 31, 2018
	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the improvements works at the aeration basin, new sewer pump station, overland field improvements, effluent storage tank. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

DESIGN WW 09-01	**Yigo SPS Flood Protection and Rehabilitation Design (AECOM)**	**Start Date:** August 2, 2018
5% Complete	**Activities/Notes:** Site investigation and pre-design task on-going.	**Completion Date:** June 2019
	Engineering design services	
Project Description:	The work performed under this project procurement shall consist of a design services to implement storm water mitigation measures to protect the facility during extreme weather as well as rehabilitate the facility to provide better redundancy and operate efficiently.	

E. CIP Engineering Support

DESIGN EE 09-08	**SCADA System for Water and Wastewater Facilities Phase A-1 (AECOM)**	**Start Date:** June 2015
100% complete (design) 0% Services during construction	**Activities/Notes:** Final design in hand. AECOM to provide assistance during bidding process.	**Completion Date:** November 2017 - Design January 2019 - (Bid and Construction Support)
N/A	Engineering design services	
Project Description:	The A/E firm will design an integrated, robust and secure Supervisory Control and Data Acquisition (SCADA) system for GWA's water and wastewater systems, and to provide support services during bid and construction. The 22 sites will consist of a combination of water facilities such as production wells, reservoirs, booster pump station and wastewater sites include sewer treatment plants and sewer pump stations. Executed by approved change orders, number of sites in original design scope has changed from 22 sites to 19 sites and design of High Water Alarm for 20 critical sewer pump stations has been added. Scope also includes bid and construction support of the design-build project of GPWA SCADA EMS project.	

CONSTRUCTION EE 09-08, EE 09-09	**SCADA Phase A1 Construction (G4S Security)**	**Start Date:** July 13, 2018
5% construction	**Activities/Notes:**	**Completion Date:** December 31, 2018
	Construction services	
Project Description:	The work performed under this project procurement shall consist of Construction of SCADA ready instrumentation at several water and waste water facilities throughout the island.	

F. GIS Section

MAPPING MC 05-02	**Island Wide Survey-** **(Duenas, Camacho & Ass.)**	**Start Date:** December 2007
99% complete	**Activities/Notes:** GWA engineering working to close project with surveyor and ensure all maps received.	**Completion Date:** New anticipated complete is April 2018.
	Survey services	
Project Description:	The contracted land surveyor is required to conduct title research, property valuation and mapping of property boundaries where GWA facilities are located but the lot is not registered under GWA's name.	

MAPPING MC 05-02	**Island Wide Survey PH II -** **(Duenas, Camacho & Ass.)**	**Start Date:** August 30, 2017
50% complete	**Activities/Notes:** First 25 property maps that GM signed are with Land Management. Second set of maps for 20 properties received from surveyor for GM signature. Surveyor conducting field work for third set of 20 properties.	**Completion Date:** December 2018
	Survey services	
Project Description:	The work performed under this project procurement shall consist of a professional land surveyor conducting field work to mark corners of existing government properties as a means of severing out portions of the larger property to be deeded to GWA. Surveyor shall also prepare all necessary maps and documents for recording at DLM	

G. Permits Section

PERMITS
MONTHLY REPORT 2018

		2018					
Description	Jan	Feb	Mar	April	May	Jun/July	Aug/Sept
Building Permit	11	9	1	13	11	28	35
Occupancy Permit	3	10	18	16	18	32	4
New Installation	14	8	7	9	3	18	3
Sewer Application	15	14	7	6	3	0	0
Sewer Inspection	0	1	3	0	0	1	0
Private Utility Acceptance	0	0	0	0	0	0	0
Relocation of Water Meter	0	0	0	0	0	0	0
Tapping-Water	1	1	0	0	3	1	1
Tapping-Sewer	0	1	0	0	0	0	0
Clearance-Water	3	2	7	10	20	41	44
Clearance-Sewer	3	2	7	10	20	41	44
Highway Encroachment	0	4	41	22	25	31	1
Verification of Utilities	4	4	5	4	1	7	8
Fire Flow Test	0	0	1	0	0	0	0
Schedule Water Outage	0	1	0	0	0	0	0

H. SRF Project Status Report

- Projects listed below that are noted to be in the procurement phase will follow the "Percentage Key" below.

Percentage Key:

100%	Approved by GM
99%	Signature required from either Accounting/Legal/GM
98%	Processing engineering service or construction contract (with legal)
95%	Request for CCU approval (GM/engineering)
90%	A/E fee negotiation or contractor bid evaluation (engineering)
80%	Selected A/E or Conducted bid opening (engineering)
70%	Advertised RFP/IFB (engineering)
60%	RFP/IFB Package under legal review
50%	RFP/IFB Package completed (engineering)
Less than 50%	Project Scope of work development in progress

- Red text anywhere indicates a change from the last report.
- Cells highlighted in green indicate contract amount certified and project active.

	Project	Project Description	Project Manager	Phase		Start Date (NTP Issued)	Anticipated Completion Date	Contract Amount (+) change orders	Contractor	Status as of 09/17/18
1	Northern District SSES & I/I Study	Sanitary sewer system evaluation study (SSES) and inflow and infiltration (I/I) study designed to evaluate high I/I areas within the Northern sewer basin with the goal of identifying projects to eliminate them.	J. Davis	Design	1	10/10/2014	2/29/2016	$ 792,979.97	Stanley	100% Complete.
				Construction				*The project does not involve construction.*		
				Const. Mgmt						
2	Southern SSES Rehabilitation (Agat-Santa Rita-Umatac-Merizo)	Rehabilitation of segments of sewer lines in Umatac, Merizo, Agat, and Santa Rita where the Sanitary Sewer Evaluation Study recommends rehabilitation.	Brown & Caldwell	Design				*The design was previously completed under bond funding.*		
				Construction	1	10/30/2015	2/28/2017	$ 1,170,583.82	Reliable Builders	Warranty work complete .
				Const. Mgmt	1	11/10/2015	3/30/2017	$ 226,980.23	TG Engineers	CM Services complete.
3	Asan-Adelup-Hagatna RT1 Sewer Line Rehabilitation and Replacement	Rehabilitation of sewer lines from the War in the Pacific Asan Park to the Governor's Complex in Adelup. This line is asbestos concrete that is dilapidated and some areas have disintegrated crowns.	Brown & Caldwell	Design	2	12/11/2015	3/30/2017 for Design requirements	$ 1,780,210.00	HDR	Route 1 rebid: HDR to provide services during bid process. .
				Construction		10/16/2018	12/30/2019	$6,275,782.88		Procurement 98%. CCU approve resolution for contract with InfraTech. GWA waiting for insurance and bonding documents. .
				Const. Mgmt	2	8/3/2017	8/3/2019	$ 870,610.41	DCA	Procurement 100%. Contract executed July 31, 2018. NTP issued August 2, 2018.
4	RT2 Agat War in the Pacific Sewer Line Rehabilitation and Replacement	Rehabilitation of a large segment of sewer line fronting the War in the Pacific Park in Agat that has collapsed.	Brown & Caldwell	Design	3	11/17/2015	3/30/2017 for Design requirements	$ 316,681.00	SSFM	SSFM providing services during bidding process as well as construction phase.
				Construction	2	8/31/2017	10/1/2018	$ 4,554,451.00	ProPacific	· Stop work order still in effect for PPBC due to improper trench shoring, and lack of support for utilities. · Met with TGE, PPBC on 9/12 to further discuss next steps. · PPBC going to revise and resubmit trench box/shoring submittal. · PPBC working on SMH #8A and start #8; SMH#8 will need to move due to utilities on both sides. · SMH #8A to be installed this week, depending on weather. · Laying pipe between SMH #4 & 5 on hold until trench shoring is resolved. · PPBC continues discharging/dewatering water to sewer; GWA metering discharge. · Still waiting on SSFM on justification for hours spent on engineering services; provided proposal on T&M basis for additional services. · CO #2: $99.3K for bypass connection of active sewer to new sewer or purchase of new(ish) trash pump. GWA decided to proceed with bypass pump purchase. Working with HES to get quotes. · CO#3: In negotiation for additional time/work completed. · Contractor Invoice #7 processing.
				Const. Mgmt	3	9/19/2017	10/1/2018	$ 584,725.00	TG Engineers	• CM inspection and coordination on-going.

5	Brown & Caldwell Project Management	Brown & Caldwell to provide program management services and support.	T. Cruz	Design	4	3/24/2015	2/28/2019	$ 2,640,220.00	B&C	Project underway.
				Construction				*The project does not involve construction.*		
				Const. Mgmt						
6	Wastewater, Water and Source Water System Master Plan Upgrade	Update of the existing water and wastewater master plan while factoring in military integration and secondary treatment plant options.	Brown & Caldwell	Design	5	7/6/2015	01/30/2018 (revised due to financial workshop)	$ 2,623,300.00	B&C	· Master Plan approved at the CCU session on the 28th. · Waiting on final public meeting review comment responses from Miguel before printing the final documents. · Budget is expended - additional work for the public meetings and SFO Presentation currently at ~$66,000. (Final printing ~ $7,000).
				Construction				*The project does not involve construction.*		
				Const. Mgmt						
7	Groundwater Wells Rehabilitation (F-3, A-2, A-7, A-12, D-5)	Rehabilitation of existing deep wells and/or in cases where pipe column needs replacing, wells will be re-drilled. The deep wells to be rehabilitated are A-2, A-7, A-12, D-5, & F-3.	Brown & Caldwell	Design	6	5/27/2016	2/28/2018 (for design only)	$ 1,758,247.00	AECOM	• Project in holding pattern until construction IFB is issued (funding source TBD).
				Construction		9/30/2018	9/30/2019			SRF grant funds specific to project pending FY18 grant approvals and award.
				Const. Mgmt		9/30/2018	9/30/2019			· Draft CM scope submitted to GWA.
8	Tumon Sewer Hot Spots	Investigation, evaluation, and repair of possible solutions, to long plaguing issues where sewer overflows are known to occur in Tumon San Vitores.	Brown & Caldwell	Design	7	6/24/2016	10/30/2017 for design only	$ 572,089.00	TG Engineers	· TGE to provide engineering services during bid process.
				Construction		12/1/2018	12/31/2019			Procurement 70%; GWA rejected all bid due to bids being above funding availability. GWA will work to repackage bids and re-bid within One (1) month period.
				Const. Mgmt		12/1/2018	12/31/2019			Procurement 90%: Proposal evaluation completed with AMOrient selected as most qualified. Scope and fee negotiations on-going..
9	Critical Sewer Pump Stations (7 stations)	Rehabilitation of various components of 7 pump stations that were identified to by the CDM design team: Macheche, Ypaopao, Astumbo 1, Fujita, Santa Ana, Southern Link, and Route 1.	CDM	Design				*The design will be incorporated into the design/build package.*		
			J. Davis	Design/Build	1	8/8/2016	3/30/2018	$ 1,542,979.01	ProPacific	All punch list items cmpete. Final close out on-going.
				Const. Mgmt	4	9/9/2016	3/30/2018	$ 329,353.52	Stanley	CM working. Close out of project on-going..

10	Sewer Pump Station High Water Alarm Systems (20 stations)	This project will design and installed telemetry equipment/SCADA type alarms that will alert when pump station failure occurs.	C. Yam	Design				*The design will be incorporated into the design/build package.*		
				Design	8	8/12/2016	02/30/2017	$ 183,171.00	AECOM	Design complete
				Construction	3	4/5/2017	9/30/2017	$ 1,444,888.00	Pacific Rim	Project complete
				Const. Mgmt	5	02/30/2017	9/30/2017	$ 195,269.00	EMSPCO	CM work complete
11	Sewer Pump Station Backup Power (2 stations)	Construction of the housing and installation of new generators for the Casimero pump station (Mongmong) and the Namo pump station (Yona central).	B. Cruz	Design				*The design will be incorporated into the design/build package.*		
				Design/Build	2	6/24/2016	9/30/2017	$ 362,692.53	ProPacific	Design Build project complete.
				Const. Mgmt				*B. Cruz is the construction manager.*		
12	RT4 Relief Sewer Line Rehabilitation and Replacement	Rehabilitation of sewer lines that are located from Agana McDonalds to Marine Drive that have been known to overflow due to structural issues.	Brown & Caldwell	Design	9	3/1/2016	4/22/2017	$ 794,000.00	AECOM	· AECOM to provided services during bidding process.
				Construction	4	11/15/2018	12/31/2019	$ 3,998,688.00	Insituform	Procurement 100%, Contract for Insituform executed and NTP issued. GWA awaiting acknowledgment form contractor.
				Construction		11/15/2018	12/31/2019	$ 3,407,848.00		Procurement 98%, Contract for ProPacifcic transmitted to management for executed.
				Const. Mgmt	6	11/15/2018	12/31/2019	$ 702,678.13	EMPSCO	No CM activities until contractors on board.
13	Groundwater Wells Rehabilitation (D-3, D-17, D-18, D-22, M-9)	Rehabilitation of existing deep wells and/or in cases where pipe column needs replacing will be re-drilled. D-3, D-17, D-18, D-22, and M-9.	Brown & Caldwell	Design				*The design was previously completed under bond funding.*		
				Construction	5	8/19/2016	3/30/2018 (completion date under analysis)	$ 6,158,240.67	Pacific Rim	· Main issues remain · VFD size. Responded to RFI 96 (VFD's and D-03) on Friday 8/10. VFD Shop drawing approved. · Sounding tubes were lowered to the correct elevation on 8/14 and 8/15. This issue is resolved. · Level Sensor trouble shooting indicated that the problem is not in the well which eliminates the design issue contention. And further trouble shooting on 8/14 confirmed the problem is in the panel or a grounding issue that PPRC needs to address. · PRC has done some additional work/testing at D-17 and believe they have fixed the level sensor interference problem. BC and EA still to confirm. · Trouble shooting at D-22 confirmed that there is a pumping issue down the well - PRC will pull the pump to investigate. Pump rotation was checked and is correct. · Well rig test failure still an issue; trying to coordinate between GWA/Morrico/Hunke. · There are a number of warranty issues cropping up that we are not being informed of so we can follow up with PRC. At the moment, two chlorine regulators and one emergency shutoff valve have been removed from service and vacuum leaks are expected at two of the wells. PRC has been working on the repairs and coordinating with Ray Q. · Met with PRC on the O& M Manuals on 6/6. Getting closer, but still work to complete. May submit Volume 1 first which covers most of the major equipment.
				Const. Mgmt	7	3/22/2016	3/30/2018 (completion date under analysis)	$ 1,041,722.56	EA	• CM continuing to coordinate punch list items with contractor.

14	Southern SSES Sewer Rehabilitation (Baza Gardens-Talofofo)	Rehabilitation of segments of sewer lines in Windward Hills, Talofofo area where the Sanitary Sewer Evaluation Study recommends rehabilitation.	Brown & Caldwell	Design				*The design was previously completed under bond funding.*		
				Construction	6	8/2/2016	Due to issue related to Santa Rita sewer project completion under analysis.	$ 1,189,815.00	ProPacific	· Lift/Pump Station Proposal was submitted to BC on 8/31/2018. · BC response given on 9/13/2018 - with no agreement to proceed. · Follow up meeting with PPBC to discuss concerns on 9/17 · PPBC on notice since 12/01/2017 (via formal GWA letter) that continuing delays are unacceptable and grounds for potential default. · Baza Gardens: · Segment in Liguana Estate not completed due to coordination issues with Todu Mauleg § Will be done next week. · 2 laterals remain to be reinstated § Exact location needs to be determined. Crew to work on this task next week. · Contractor to conduct final CCTV of all Baza Gardens after laterals are reinstated. · Talofofo: Final Inspection held on 5/25 -- all defects were corrected and work is complete.
				Const. Mgmt	8	7/29/2016	5/28/2017	$ 347,945.93	EMPSCO	· PM to work on Change Order to extend contract and amount.
15	Tamuning Sewer Hot Spots	Sewer rehabilitation for lines at Winner Apartments, Segund Leon Guerrero, and behind Guam Premium Outlets.	Brown & Caldwell	Design	10	9/9/2016	10/31/2017 (for design only)	$ 663,629.00	TG Engineers	· TGE to provide engineering services during bid process.
				Construction		12/1/2018	12/31/2019			Procurement 70%; GWA rejected all bid due to bids being above funding availability. GWA will work to repackage bids and re-bid within One (1) month period.
				Const. Mgmt		12/1/2018	12/31/2019			Procurement 90%: Proposal evaluation completed with AMOrient selected as most qualified. Scope and fee negotiations on-going..
16	Talofofo Sewer Pump Stations (4 stations)	Design and construction of 4 sewer lift stations in the Talofofo village where sewer lines are installed but never completed.	J. Davis	Design (for Talofofo and Chalan Pago PS)	11	8/17/2016	11/30/2017	$ 493,818.86	EMPSCO	Talafofo Pump Station design /bid package received. Final Design of Chalan Pago Pump Station project under review by GWA. Change Order related to snails to be executed.
				Construction		12/1/2018	12/31/2019			Procurement 95%; Bid opening occurred 8/22/18. Apparent lowest bidder is Giant. Resolution to be presented in September CCU meeting.
				Const. Mgmt		12/1/2018	12/31/2019			GWA Engineering will management construction management tasks.
17	Chalan Pago Sewer Pump Station	Design and construction of sewer lift stations and gravity lines in Scott Laguana, Santa Cruz Street Chalan Pago.	J. Davis	Design		8/17/2016	11/30/2017	*The design will be included with the Talofofo Pump Station design project.*		
				Construction		3/15/2019	3/30/2020			
				Const. Mgmt		3/15/2019	3/30/2020			
18	Water Hydraulic Model (SCADA ready instruments to update Model)	Design and construction of instrumentation at key water sites in the Barrigada service area necessary to update GWA Water hydraulic model.	Barbara Cruz	Design	12	8/3/2016	3/15/2017	$ 523,268.00	GHD	Design complete.
				Construction		3/15/2019	3/30/2020			Funding for construction project to be from FY18 grant that is still pending.
				Const. Mgmt		3/15/2019	3/30/2020			Funding for construction manager to be from FY18 grant that is still pending.

19	Macheche Hill Sewer Rehabilitation/ Replacement	Rehabilitation of sewer lines on Macheche road. Segments of this sewer line has collapsed recently and is consider a high priority.	J. Davis	Design-Build	3	8/29/2016	3/30/2018	$ 2,202,545.47	Giant Const.	Construction project complete.
				Const. Mgmt	9	9/16/2016	3/30/2018	$ 379,994.38	Am Orient	CM work complete.
20	Asan-Adelup-Hagatna Rt. 1 Sewer Line Rehabilitation and Replacement Emergency Repairs	Rehabilitation of sewer line in Asan that collapsed and which is current fitted with a temporary pumping system.	Brown & Caldwell	Design				Design cost covered under Project 3 above.		
				Construction	7	3/8/2017	12/30/2017	$ 2,470,658.00	Pacific Rim	· Record drawings: Waiting on revision 3 from PRC; Rev2 returned with comments, approximately 98%. · Received final invoice for review (9/13).
				Const. Mgmt	10	1/24/2017	12/30/2017	covered under Project 3	HDR	CM work complete.
21	Valve Maintenance Equipment Trailer (2 each)	Acquire two sets of valve exercise equipment mounted on trailers to be used to exercise existing valves in the distribution system as a means of maintaining the valves functionality so the valves to not "freeze up" and required replacement	Grants/Operations	Equipment	1			$ 167,814.94		Complete
22	Heavy Duty Trucks to Haul Valve Maintenance Equipment Trailer (2 each)	Acquire two heavy duty trucks with extended to pull the valve exercise equipment trailer	Grants/Operations	Equipment	2			$ 139,790.00	Triple J	Complete
23	Project Advertisement	Each IFB or RFP requires advertising	Engineering/ Procurement	MISC	1			$ 25,172.50	PDN/Post	On-going

GUAM WATERWORKS AUTHORITY
AUGUST 31, 2018
FINANCIAL AND RELATED REPORTS
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GUAM WATERWORKS AUTHORITY
Balance Sheet
August 31, 2018

SCHEDULE A

ASSETS AND DEFERRED OUTFLOWS OF RESOURCES	Unaudited August 31, 2018	Audited September 30, 2017	Increase (Decrease)
Current Assets:			
Cash:			
Unrestricted (Schedule G)	$ 1,072,011	$ 4,873,275	$ (3,801,264)
Restricted Funds (Schedule G)	70,753,189	65,124,400	5,628,789
Accounts Receivable Trade, Net of Allowance for Doubtful Receivables of $13,825,731 at Aug 31, 2018 and $12,619,034 at Sep 30, 2017	14,677,513	15,450,733	(773,220)
Other Receivable	2,143,223	8,433,446	(6,290,223)
Materials & Supplies Inventory, Net of Allowance for Obsolescence of $457,370 at Aug 31, 2018 and Sep 30, 2017	3,166,880	2,166,557	1,000,323
Total Current Assets	91,812,817	96,048,411	(4,235,594)
Property, Plant and Equipment			
Utility plant in service:			
Water system	335,636,865	327,484,191	8,152,674
Wastewater system	290,040,866	286,394,940	3,645,926
Non-utility property	19,252,688	18,938,255	314,432
Total property	644,930,419	632,817,387	12,113,032
Less Accumulated Depreciation	(302,843,254)	(286,043,580)	(16,799,674)
Land	1,163,298	1,110,998	52,300
Construction Work in Progress	186,416,748	111,695,887	74,720,861
Property, Plant and Equipment, net	529,667,210	459,580,691	70,086,519
Other noncurrent assets			
Restricted cash (Schedule G)	182,555,364	236,550,002	(53,994,638)
Investments (Schedule G)	42,162,007	41,042,038	1,119,969
Other Prepaid Expenses	894,477	551,128	343,348
Total other noncurrent assets	225,611,848	278,143,169	(52,531,321)
Total Assets	847,091,875	833,772,271	13,319,604
Deferred outflows of resources:			
Debt defeasance due to bond refunding	13,418,430	1,695,981	11,722,449
Deferred outflows from pension	4,939,994	4,943,777	(3,783)
Total Assets and Deferred Outflows of Resources	**$ 865,450,299**	**$ 840,412,029**	**$ 25,038,270**
LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET ASSETS			
Current Liabilities:			
Current maturities of long-term debt			
-Series 2010 Bond	$ 1,800,000	$ 1,725,000	$ 75,000
-Series 2014 Refunding	3,620,000	3,475,000	145,000
-Series 2017 Refunding	295,000	-	295,000
-Notes Payable	3,145,406	3,037,569	107,837
Accounts Payable -Trade	6,758,655	5,390,256	1,368,399
Interest Payable	4,275,569	6,656,499	(2,380,930)
Accrued Payroll and Employee Benefits	2,454,698	2,604,471	(149,773)
Accrued Annual Leave	1,082,311	1,729,291	(646,980)
Current portion of employee annual leave	411,887	567,057	(155,170)
Contractors' Payable	13,752,133	13,950,287	(198,154)
Customer and Other Deposits	1,995,277	2,014,435	(19,159)
Other Liabilities	72,817	72,772	45
Total Current Liabilities	39,663,754	41,222,638	(1,558,884)
Long Term Debt, less current maturities			
Series 2010 Revenue Bond	3,620,000	112,800,000	(109,180,000)
Series 2013 Revenue Bond	172,630,000	172,630,000	-
Series 2014 Refunding Bond	68,900,000	72,520,000	(3,620,000)
Series 2016 Revenue Bond	143,310,000	143,310,000	-
Series 2017 Refunding Bond	107,365,000	-	107,365,000
Unamortized Discount - Bond 2010	-	(1,867,525)	1,867,525
Unamortized Discount - Bond 2013	(1,291,910)	(1,338,751)	46,841
Unamortized Premium - Bond 2014	4,560,298	4,804,694	(244,396)
Unamortized Premium - Bond 2016	16,706,105	17,262,975	(556,870)
Unamortized Premium - Bond 2017	13,248,583	-	13,248,583
Notes Payable	2,639,495	5,533,918	(2,894,423)
Unfunded Ret Liability (GASB 67/68)	49,243,798	49,243,798	-
Employee Annual Leave, Less Current Portion	1,021,974	783,992	237,982
Total Liabilities	621,617,098	616,905,739	4,711,359
Deferred inflows of resources:			
Deferred inflows from pension	202,219	564,514	(362,295)
Total Liabilities and Deferred Inflows of Resources	621,819,317	617,470,253	4,349,064
Net Assets	**243,630,982**	**222,941,776**	**20,689,206**
Total Liabilities, Deferred Inflows of Resources and Net Assets	**$ 865,450,299**	**$ 840,412,029**	**$ 25,038,270**

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited) **SCHEDULE B**
Comparative Budget vs. Actual for the period ending August 31, 2018

	Month to Date Budget August-18	Month to Date Actual (Unaudited) August-18	Variance Favorable / (Unfavorable)
OPERATING REVENUES			
Water Revenues	$ 5,743,160	$ 5,088,228	$ (654,932)
Wastewater Revenues	3,228,257	3,292,102	63,844
Legislative Surcharge	291,896	255,703	(36,193)
Other Revenues	57,638	45,591	(12,047)
System Development Charge	46,136	75,362	29,227
Total Operating Revenues	9,367,087	8,756,986	(610,101)
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	771,113	770,887	227
Power Purchases	1,107,997	1,155,203	(47,206)
Total Utility Costs	1,879,110	1,926,090	(46,980)
Salaries and Wages	1,625,056	1,696,211	(71,155)
Pension and Benefits	584,558	558,452	26,107
Total Salaries and Benefits	2,209,614	2,254,662	(45,048)
Capitalized Labor and Benefits	(208,333)	(208,333)	(0)
Net Salaries and Benefits	2,001,281	2,046,329	(45,048)
Administrative and General Expenses			
Sludge removal	134,514	132,776	1,738
Chemicals	114,997	107,951	7,046
Materials & Supplies	352,900	349,090	3,809
Transportation	52,370	46,219	6,151
Communications	16,182	13,717	2,465
Claims	11,100	7,660	3,440
Insurance	79,757	75,172	4,585
Training & Travel	11,814	2,700	9,114
Advertising	13,910	12,548	1,363
Miscellaneous	105,515	100,523	4,993
Regulatory Expense	12,086	7,630	4,456
Bad Debts Provision	57,103	109,688	(52,585)
Total Administrative and General Expense	962,248	965,673	(3,425)
Depreciation Expense	1,528,175	1,528,175	(0)
Contractual Expense			
Audit & Computer Maint.	28,630	28,150	480
Building rental	37,955	36,262	1,693
Equipment rental	57,375	49,543	7,831
Legal	4,167	600	3,567
Laboratory	24,752	17,868	6,884
Other	230,363	222,018	8,345
Total Contractual Expense	383,241	354,440	28,801
Retiree Supp. Annuities and health care costs	240,008	234,003	6,006
Contribution to Government of Guam	49,500	49,833	(333)
Total Retiree Benefits	289,508	283,836	5,672
Total Operating Expenses	7,043,563	7,104,544	(60,980)
Earnings (Loss) from Operations	2,323,524	1,652,442	(671,082)
Interest Income-2010/13/14/16/17 Series Bond	15,727	300,532	284,806
Interest Income-Other Funds	2,935	61,198	58,264
Interest Income-SDC	2,414	(10,339)	(12,753)
Interest Expense- 2010/13/14/16/17 Series Bond	(2,625,587)	(2,137,785)	487,803
Interest Expense- ST BOG	(33,288)	(25,214)	8,074
Federal Expenditures	(51,332)	(138,035)	(86,703)
Loss on Asset Disposal	-	-	-
AFUDC	625,000	625,000	-
Amortization of Discount, Premium and Issuance Costs	(61,861)	(77,542)	(15,681)
Defeasance due to bond refunding	(15,218)	(12,444)	2,775
Deferred outflows from pension	(105,281)	32,592	137,873
Prior Year Adjustment	-	-	-
Total non-operating revenues (expenses)	(2,246,492)	(1,382,035)	864,457
Net Income (Loss) before capital contributions	77,032	270,408	193,375
Capital Contributions			
Grants from US Government	873,108	1,586,699	713,591
Grants from GovGuam & Others	-	-	-
Other Contributions	-	-	-
Total Capital Contributions	873,108	1,586,699	713,591
Change in Net Assets	$ 950,140	$ 1,857,106	$ 906,966
Debt Service Calculation			
Earnings From Operations	$ 2,323,524	$ 1,652,442	
System Development Charge	(46,136)	(75,362)	
Retiree COLA	49,500	49,833	
Interest/Investment Income	2,935	61,198	
Depreciation	1,528,175	1,528,175	
Balance Available for Debt Service per Section 6.12	3,857,998	3,216,287	
Working Capital Reserve Available for Debt Service	932,265	935,321	
Transfer to Working Capital- Debt Service Reserve	(150,000)	-	
Transfer to Working Capital- O&M Reserve	(266,667)	-	
Balance Available for Debt Service inclusive of reserves	4,373,596	4,151,608	
Debt Service			
Principal	433,333	433,333	
Interest	2,063,402	1,794,910	
Total	$ 2,496,736	$ 2,228,243	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.55	1.44	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	1.75	1.86	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited) **SCHEDULE C**
Comparative for the period ending August 31, 2018 and 2017

	Month to Date Actual (Unaudited) August-18	Actual (Audited) August-17	Variance Favorable / (Unfavorable)
OPERATING REVENUES			
Water Revenues	$ 5,088,228	$ 5,331,404	$ (243,175)
Wastewater Revenues	3,292,102	3,099,528	192,574
Legislative Surcharge	255,703	267,269	(11,566)
Other Revenues	45,591	36,293	9,298
System Development Charge	75,362	72,662	2,700
Total Operating Revenues	8,756,986	8,807,155	(50,169)
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	770,887	609,094	(161,793)
Power Purchases	1,155,203	1,006,355	(148,848)
Total Utility Costs	1,926,090	1,615,449	(310,641)
Salaries and Wages	1,696,211	1,413,608	(282,602)
Pension and Benefits	558,452	490,400	(68,051)
Total Salaries and Benefits	2,254,662	1,904,009	(350,653)
Capitalized Labor and Benefits	(208,333)	(262,516)	(54,183)
Net Salaries and Benefits	2,046,329	1,641,493	(404,836)
Administrative and General Expenses			
Sludge removal	132,776	140,487	7,711
Chemicals	107,951	174,001	66,050
Materials & Supplies	349,090	128,788	(220,303)
Transportation	46,219	53,744	7,525
Communications	13,717	10,884	(2,833)
Claims	7,660	22,151	14,491
Insurance	75,172	90,603	15,431
Training & Travel	2,700	23,055	20,355
Advertising	12,548	8,988	(3,560)
Miscellaneous	100,523	71,997	(28,526)
Regulatory Expense	7,630	24,134	16,504
Bad Debts Provision	109,688	109,700	12
Total Administrative and General Expense	965,673	858,530	(107,143)
Depreciation Expense	1,528,175	1,402,038	(126,137)
Contractual Expense			
Audit & Computer Maint.	28,150	76,901	48,751
Building rental	36,262	36,557	295
Equipment rental	49,543	59,374	9,831
Legal	600	414	(186)
Laboratory	17,868	10,627	(7,242)
Other	222,018	156,747	(65,270)
Total Contractual Expense	354,440	340,619	(13,821)
Retiree Supp. Annuities and health care costs	234,003	231,895	(2,107)
Contribution to Government of Guam	49,833	49,500	(333)
Total Retiree Benefits	283,836	281,395	(2,441)
Total Operating Expenses	7,104,544	6,139,525	(965,019)
Earnings (Loss) from Operations	1,652,442	2,667,630	(1,015,188)
Interest Income-2010/13/14/16/17 Series Bond	300,532	65,354	235,178
Interest Income-Other Funds	61,198	10,032	51,167
Interest Income-SDC	(10,339)	1,060	(11,398)
Interest Expense- 2010/13/14/16/17 Series Bond	(2,137,785)	(2,220,744)	82,959
Interest Expense- ST BOG	(25,214)	(43,736)	18,522
Federal Expenditures	(138,035)	(42,501)	(95,534)
Loss on Asset Disposal	-	(81,105)	81,105
AFUDC	625,000	1,172,241	(547,241)
Amortization of Discount, Premium and Issuance Costs	(77,542)	61,861	(139,403)
Defeasance due to bond refunding	(12,444)	(15,218)	2,775
Deferred outflows from pension	32,592	-	32,592
Prior Year Adjustment	-	(26,756)	26,756
Total non-operating revenues (expenses)	(1,382,035)	(1,119,512)	(262,522)
Net Income (Loss) before capital contributions	270,408	1,548,118	(1,277,710)
Capital Contributions			
Grants from US Government	1,586,699	1,815,921	(229,223)
Grants from GovGuam & Others	-	1,664	(1,664)
Other Contributions	-	-	-
Total Capital Contributions	1,586,699	1,817,586	(230,887)
Change in Net Assets	$ 1,857,106	$ 3,365,704	$ (1,508,597)

Debt Service Calculation		
Earnings From Operations	$ 1,652,442	$ 2,667,630
System Development Charge	(75,362)	(72,662)
Retiree COLA	49,833	49,500
Interest/Investment Income	61,198	10,032
Depreciation	1,528,175	1,402,038
Balance Available for Debt Service per Section 6.12	3,216,287	4,056,538
Working Capital Reserve Available for Debt Service	935,321	932,134
Transfer to Working Capital- Debt Service Reserve	-	-
Transfer to Working Capital- O&M Reserve	-	-
Balance Available for Debt Service inclusive of reserves	4,151,608	4,988,672
Debt Service		
Principal	433,333	420,000
Interest	1,794,910	1,626,858
Total	$ 2,228,243	$ 2,046,858
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.44	1.98
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	1.86	2.44

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited) **SCHEDULE D**
Comparative Budget vs. Actual for the period ending August 31, 2018

	Year to Date Budget August-18	Year to Date Actual (Unaudited) August-18	Variance Favorable / (Unfavorable)
OPERATING REVENUES			
Water Revenues	$ 63,174,761	$ 59,435,314	$ (3,739,447)
Wastewater Revenues	35,510,831	35,270,964	(239,867)
Legislative Surcharge	3,210,856	3,071,977	(138,879)
Other Revenues	634,018	407,971	(226,047)
System Development Charge	507,494	1,031,817	524,323
Total Operating Revenues	103,037,960	99,218,042	(3,819,917)
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	8,132,245	8,122,452	9,792
Power Purchases	13,437,966	13,397,876	40,089
Total Utility Costs	21,570,210	21,520,329	49,881
Salaries and Wages	17,875,615	16,476,701	1,398,914
Pension and Benefits	6,430,141	5,594,088	836,054
Total Salaries and Benefits	24,305,756	22,070,789	2,234,967
Capitalized Labor and Benefits	(2,291,667)	(2,405,946)	114,279
Net Salaries and Benefits	22,014,090	19,664,843	2,349,247
Administrative and General Expenses			
Sludge removal	1,269,654	1,260,154	9,500
Chemicals	1,989,965	1,957,718	32,247
Materials & Supplies	1,956,898	1,940,385	16,512
Transportation	591,075	586,686	4,389
Communications	178,001	164,086	13,915
Claims	122,100	81,131	40,969
Insurance	902,322	833,202	69,120
Training & Travel	139,956	126,841	13,115
Advertising	133,011	126,564	6,447
Miscellaneous	960,670	959,161	1,509
Regulatory Expense	242,950	233,715	9,235
Bad Debts Provision	1,208,129	1,206,642	1,487
Total Administrative and General Expense	9,694,729	9,476,285	218,444
Depreciation Expense	16,809,921	16,809,925	(4)
Contractual Expense			
Audit & Computer Maint.	584,934	576,908	8,026
Building rental	397,505	393,835	3,670
Equipment rental	851,120	845,641	5,479
Legal	15,833	6,600	9,233
Laboratory	382,267	374,806	7,461
Other	1,973,994	1,973,118	876
Total Contractual Expense	4,205,654	4,170,908	34,746
Retiree Supp. Annuities and health care costs	2,640,092	2,608,391	31,701
Contribution to Government of Guam	544,500	548,167	(3,667)
Total Retiree Benefits	3,184,592	3,156,558	28,034
Total Operating Expenses	77,479,196	74,798,848	2,680,348
Earnings (Loss) from Operations	25,558,764	24,419,194	(1,139,569)
Interest Income-2010/13/14/16/17 Series Bond	172,993	2,463,061	2,290,068
Interest Income-Other Funds	32,282	429,841	397,560
Interest Income-SDC	26,557	80,915	54,358
Interest Expense- 2010/13/14/16/17 Series Bond	(28,881,460)	(23,991,829)	4,889,631
Interest Expense- ST BOG	(366,170)	(324,989)	41,181
Federal Expenditures	(564,654)	(688,467)	(123,813)
Loss on Asset Disposal	-	-	-
AFUDC	6,875,000	6,875,000	-
Amortization of Discount, Premium and Issuance Costs	(680,469)	(434,753)	245,716
Defeasance due to bond refunding	(167,402)	(136,879)	30,523
Deferred outflows from pension	(1,158,087)	358,512	1,516,598
Prior Year Adjustment	-	37,975	37,975
Total non-operating revenues (expenses)	(24,711,410)	(15,331,613)	9,379,797
Net Income (Loss) before capital contributions	847,353	9,087,581	8,240,228
Capital Contributions			
Grants from US Government	9,604,190	11,601,625	1,997,435
Grants from GovGuam & Others	-	-	-
Other Contributions	-	-	-
Total Capital Contributions	9,604,190	11,601,625	1,997,435
Change in Net Assets	$ 10,451,544	$ 20,689,206	$ 10,237,662
Debt Service Calculation			
Earnings From Operations	$ 25,558,764	$ 24,419,194	
System Development Charge	(507,494)	(1,031,817)	
Retiree COLA	544,500	548,167	
Interest/Investment Income	32,282	429,841	
Depreciation	16,809,921	16,809,925	
Balance Available for Debt Service per Section 6.12	42,437,973	41,175,310	
Working Capital Reserve Available for Debt Service	10,254,916	10,253,476	
Transfer to Working Capital- Debt Service Reserve	(1,650,000)	-	
Transfer to Working Capital- O&M Reserve	(2,933,333)	-	
Balance Available for Debt Service inclusive of reserves	48,109,555	51,428,786	
Debt Service			
Principal	4,766,667	4,766,667	
Interest	22,697,424	19,744,010	
Total	$ 27,464,091	$ 24,510,677	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.55	1.68	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	1.75	2.10	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited)
Comparative for the period ending August 31, 2018 and 2017

SCHEDULE E

	Year to Date ACTUAL (Unaudited) August-18	ACTUAL (Audited) August-17	Variance Favorable / (Unfavorable)
OPERATING REVENUES			
Water Revenues	$ 59,435,314	$ 58,645,439	$ 789,875
Wastewater Revenues	35,270,964	34,094,805	1,176,159
Legislative Surcharge	3,071,977	2,939,958	132,019
Other Revenues	407,971	399,221	8,750
System Development Charge	1,031,817	799,284	232,534
Total Operating Revenues	99,218,042	96,878,706	2,339,336
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	8,122,452	6,700,031	(1,422,421)
Power Purchases	13,397,876	11,069,907	(2,327,969)
Total Utility Costs	21,520,329	17,769,938	(3,750,391)
Salaries and Wages	16,476,701	15,549,693	(927,008)
Pension and Benefits	5,594,088	5,394,403	(199,684)
Total Salaries and Benefits	22,070,789	20,944,097	(1,126,692)
Capitalized Labor and Benefits	(2,405,946)	(2,887,673)	(481,727)
Net Salaries and Benefits	19,664,843	18,056,424	(1,608,420)
Administrative and General Expenses			
Sludge removal	1,260,154	1,545,355	285,201
Chemicals	1,957,718	1,914,012	(43,706)
Materials & Supplies	1,940,385	1,416,664	(523,721)
Transportation	586,686	591,188	4,502
Communications	164,086	119,722	(44,364)
Claims	81,131	243,661	162,530
Insurance	833,202	996,630	163,428
Training & Travel	126,841	253,600	126,759
Advertising	126,564	98,865	(27,699)
Miscellaneous	959,161	791,962	(167,199)
Regulatory Expense	233,715	265,479	31,764
Bad Debts Provision	1,206,642	1,206,697	55
Total Administrative and General Expense	9,476,285	9,443,835	(32,450)
Depreciation Expense	16,809,925	15,422,417	(1,387,508)
Contractual Expense			
Audit & Computer Maint.	576,908	845,911	269,003
Building rental	393,835	402,122	8,287
Equipment rental	845,641	653,113	(192,528)
Legal	6,600	4,555	(2,045)
Laboratory	374,806	116,892	(257,915)
Other	1,973,118	1,724,218	(248,899)
Total Contractual Expense	4,170,908	3,746,810	(424,098)
Retiree Supp. Annuities and health care costs	2,608,391	2,550,850	(57,542)
Contribution to Government of Guam	548,167	544,500	(3,667)
Total Retiree Benefits	3,156,558	3,095,350	(61,208)
Total Operating Expenses	74,798,848	67,534,773	(7,264,075)
Earnings (Loss) from Operations	24,419,194	29,343,933	(4,924,739)
Interest Income-2010/13/14/16/17 Series Bond	2,463,061	718,898	1,744,163
Interest Income-Other Funds	429,841	110,350	319,492
Interest Income-SDC	80,915	11,658	69,258
Interest Expense- 2010/13/14/16/17 Series Bond	(23,991,829)	(24,428,181)	436,353
Interest Expense- ST BOG	(324,989)	(481,099)	156,109
Federal Expenditures	(688,467)	(467,516)	(220,951)
Loss on Asset Disposal	-	(892,150)	892,150
AFUDC	6,875,000	12,894,650	(6,019,650)
Amortization of Discount, Premium and Issuance Costs	(434,753)	680,468	(1,115,221)
Defeasance due to bond refunding	(136,879)	(167,403)	30,523
Deferred outflows from pension	358,512	-	358,512
Prior Year Adjustment	37,975	(294,312)	332,287
Total non-operating revenues (expenses)	(15,331,613)	(12,314,637)	(3,016,976)
Net Income (Loss) before capital contributions	9,087,581	17,029,296	(7,941,715)
Capital Contributions			
Grants from US Government	11,601,625	19,975,136	(8,373,511)
Grants from GovGuam & Others	-	18,308	(18,308)
Other Contributions	-	-	-
Total Capital Contributions	11,601,625	19,993,444	(8,391,820)
Change in Net Assets	$ 20,689,206	$ 37,022,740	$ (16,333,534)

Debt Service Calculation		
Earnings From Operations	$ 24,419,194	$ 29,343,933
System Development Charge	(1,031,817)	(799,284)
Retiree COLA	548,167	544,500
Interest/Investment Income	429,841	110,350
Depreciation	16,809,925	15,422,417
Balance Available for Debt Service per Section 6.12	41,175,310	44,621,916
Working Capital Reserve Available for Debt Service	10,253,476	10,253,476
Transfer to Working Capital- Debt Service Reserve	-	-
Transfer to Working Capital- O&M Reserve	-	-
Balance Available for Debt Service inclusive of reserves	51,428,786	54,875,392
Debt Service		
Principal	4,766,667	4,620,000
Interest	19,744,010	17,895,443
Total	$ 24,510,677	$ 22,515,443
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.68	1.98
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	2.10	2.44

GUAM WATERWORKS AUTHORITY
Bond Compliance Summary
FY 2018

SCHEDULE F

		($$$) Per Indenture	As of 8/31/18 ($$$) Bond Series 2010/2013/2014/2016/2017
• Operation and Maintenance Fund-BOG	*Equivalent to 55 days of the annual O&M budget less depreciation*	$10.5M	$10.5M
• Bond Reserve Fund - US Bank	*Fully funded- Principal and Interest (Bond Series 2010, 2013, 2014 Refunding, 2016 and 2017 Refunding)*	$34.9M	$34.9M
• Operation, Maintenance, Renewal and Replacement Reserve Fund-BOG Trust	*Equivalent to 1/4 of the annual O&M budget & CIP budget to be funded in 5 years ($2M/year)*	$17.4M	$17.4M
• Capital Improvement Fund	*Balance remaining in the Revenue Fund after the foregoing deposits*	$3.9K	$5.6K

GUAM WATERWORKS AUTHORITY
Restricted and Unrestricted Cash Summary
FY 2018

SCHEDULE G

Description	Unaudited August 31, 2018	Audited September 30, 2017	Increase (Decrease)
Unrestricted			
Change Fund	$ 2,000	$ 2,000	$ -
Petty Cash	5,000	5,000	-
BOG - Deposit Accounts	1,065,011	4,866,275	(3,801,264)
Sub-total Unrestricted	1,072,011	4,873,275	(3,801,264)
Restricted			
Collection Accounts	119,804	163,466	(43,662)
BOG Deposit Accounts	7,528,201	6,051,064	1,477,137
BP Deposit Accounts	875,205	944,282	(69,077)
BOG Revenue Trust Fund	8,042,298	7,782,227	260,071
BOG O & M Reserve	13,647,939	13,516,540	131,398
BOG Debt Service Reserve	11,326,886	11,217,733	109,153
BOG CAPEX Fund	18,142,063	15,462,869	2,679,194
	59,682,395	55,138,182	4,544,213
BOG - SDC Deposit	3,570,794	1,486,219	2,084,576
BOG - SDC CDs	7,500,000	8,500,000	(1,000,000)
Total Restricted	70,753,189	65,124,400	5,628,789
Reserve Funds			
BOG Series 05 OMRRRF Fund	17,423,213	17,423,213	-
BOG Series 13 Construction Fund	39,104,692	74,461,765	(35,357,073)
BOG Series 14 Refunding Construction Fund	740,909	771,281	(30,372)
BOG Series 16 Construction Fund	117,594,849	132,811,449	(15,216,599)
BOG Series 16 Cap Int Fund	-	1,782,982	(1,782,982)
BOG Series 17 Refunding Construction Fund	7,691,700	9,299,311	(1,607,611)
BOG Series 17 Refunding COI Fund	-	-	-
Total Restricted - Held by Trustee	182,555,364	236,550,002	(53,994,638)
USB Series 2013 Debt Service Fund	1,581,028	2,336,754	(755,726)
USB Series 2013 Debt Service Reserve Fund	12,031,688	12,031,688	-
USB Series 2014 Refunding Debt Service Fund	1,231,140	1,796,559	(565,418)
USB Series 2014 Refunding Debt Service Reserve Fund	7,931,365	7,707,602	223,763
USB Series 2016 Debt Service Fund	1,207,070	130	1,206,940
USB Series 2016 Debt Service Reserve Fund	7,594,600	7,582,725	11,875
USB Series 2010 Debt Service Fund	2,062,974	2,020,121	42,853
USB Series 2017 Refunding Debt Service Reserve Fund	7,566,460	7,566,460	-
USB Series 2017 Debt Service Fund	955,682	-	955,682
Total Investments	42,162,007	41,042,038	1,119,969
Total Restricted and Unrestricted Cash	$ 296,542,571	$ 347,589,716	$ (51,047,144)

SCHEDULE H

Guam Waterworks Authority
Statement of Cash Flows (Unaudited)
FY 2018

	YTD Aug-18
Increase (decrease) in cash	
Cash flows from operating activities:	
Cash received from trade and others	$ 99,195,080
Cash payments to suppliers/contractors for goods and services	(33,936,153)
Cash payments to employees for services	(23,893,855)
Net cash provided by operating activities	41,365,072
Cash flows from capital and related financing activities:	
Contributed capital received (grants)	16,773,809
Acquisition of utility plant	(80,219,598)
Repayment of Long Term Debt	9,441,683
Interest expense	(29,659,479)
Net cash provided by (used in) capital and related financing activities	(83,663,586)
Cash flows from investing activities:	
Transfers from (to) restricted fund	35,523,433
Interest income received	2,973,817
Net cash provided by investing activities	38,497,250
Net increase (decrease) in cash	(3,801,264)
Unrestricted cash at beginning of the period	4,873,275
Unrestricted cash at end of period	$ 1,072,011
Reconciliation of operating loss to net cash provided by operating activities:	
Operating Income (loss)	$ 24,419,194
Adjustments to reconcile to net cash provided by operating activities:	
Depreciation expense	16,809,925
Other Expense/income	848,129
(Increase) decrease in assets:	
Accounts receivable	(3,849)
Materials and supplies inventory	(1,000,323)
Other Assets	(343,349)
Increase (decrease) in liabilities:	
Accounts payable, Contractors, Retention & Escrow Deposit	1,368,399
Accrued payroll	(713,942)
Customer deposits	(19,113)
Net cash provided by operating activities	$ 41,365,072

Guam Waterworks Authority
Accounts Receivable - Government
As of August 31, 2018

SCHEDULE I

		AGING					
Customer Name	**No of Accounts**	**Current**	**31-60 days**	**61-90 days**	**91-120 days**	**Over 120 days**	**Outstanding Bal.**
Guam Int'l Airport Authority	4	$ 30,151	$ 32,214	$ 42,020	$ 18,700	$ 177,277	$ 300,362
Guam Memorial Hospital Authority	3	32,516	34,972	32,512	-	-	99,999
Port Authority of Guam	2	37,589	33,172	-	-	-	70,761
Guam Power Authority	22	27,409	-	-	-	-	27,409
University of Guam	2	8,061	-	-	-	-	8,061
Guam Housing & Urban Renewal Authority	4	1,076	-	-	-	-	1,076
Guam Housing Corporation	1	30	-	-	-	-	30
AUTONOMOUS AGENCIES	**38**	**$ 136,831**	**$ 100,358**	**$ 74,532**	**$ 18,700**	**$ 177,277**	**$ 507,698**
Department of Parks & Recreation	17	$ 92,552	$ 90,783	$ 60,590	$ 46,033	$ 487,058	$ 777,017
Department of Education	49	193,462	131,885	55,228	14,630	116,937	512,141
Department of Corrections	8	80,749	75,493	35,483	40,129	23,937	255,791
Department of Public Health & Social Services	6	5,132	1,053	1,665	834	102,274	110,958
Mayors Council of Guam	37	11,060	43	70	11	-	11,184
Guam Fire Department	8	6,354	1,865	66	-	-	8,284
Office of the Governor	2	4,723	-	-	-	-	4,723
Sanctuary Inc	1	3,471	-	-	-	-	3,471
Department of Agriculture	2	1,837	1,400	-	-	-	3,238
Department of Military Affairs/GUARNG	1	3,155	-	-	-	-	3,155
Department of Public Works	9	1,715	-	-	-	-	1,715
Guam Police Department	2	1,263	-	-	-	-	1,263
Department of Youth Affairs	1	1,068	-	-	-	-	1,068
Division of Senior Citizens, DPH&SS	2	669	172	161	17	-	1,020
Guam Public Library	4	532	-	-	-	-	532
Department of Administration	1	270	-	-	-	-	270
Guam Energy Office	1	240	-	-	-	-	240
Guam Veterans Affairs Office	2	148	-	-	-	-	148
The Office of The Dededo Mayor	1	116	-	-	-	-	116
Department of Public Health	1	107	-	-	-	-	107
Merizo Mayor	1	27	34	-	-	-	61
Vietnam Veteran of America	1	25	-	-	-	-	25
Guam Solid Waste Authority	1	23	-	-	-	-	23
LINE AGENCIES	**158**	**$ 408,699**	**$ 302,728**	**$ 153,262**	**$ 101,655**	**$ 730,207**	**$ 1,696,551**
TOTAL August 31, 2018	**196**	**$ 545,530**	**$ 403,086**	**$ 227,794**	**$ 120,355**	**$ 907,483**	**$ 2,204,248**
TOTAL September 30, 2017	**253**	**$ 715,578**	**$ 442,522**	**$ 169,120**	**$ 72,476**	**$ 396,347**	**$ 1,796,043**
% INCREASE/ (DECREASE)	**-23%**	**-24%**	**-9%**	**35%**	**66%**	**129%**	**23%**

GUAM WATERWORKS AUTHORITY
2013 Series Bond Project Status
As of August 31, 2018

SCHEDULE J

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 08/31/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 08/31/18
Santa Rita Springs Booster Pump Rehab Phase II	$ 100,000	$ 100,000	100,000	-	$ 100,000	$ -	$ -
"A" Series Well Transmission Line	$ 400,000	$ 369,846	369,846	(0)	$ 369,846	$ 0	$ 0
Water Booster Pump Station	$ 6,000,000	$ 1,679,964	1,656,428	23,536	$ 1,679,964	$ (0)	$ 23,536
Meter Replacement Program		$ 996,532	996,532	-	$ 996,532	$ (0)	$ (0)
Barrigada Tank Repair/Replacement	$ 6,000,000	$ 4,987,000	4,924,959	62,041	$ 4,987,000	$ 0	$ 62,041
Leak Detection	$ 100,000	$ 16,916	16,916	-	$ 16,916	$ (0)	$ (0)
Potable Water System Planning	$ 800,000	$ 624,000	603,390	20,610	$ 624,000	$ -	$ 20,610
Implement Ground Water Rule	$ 1,000,000	$ 1,000,000	1,000,000	-	$ 1,000,000	$ -	$ -
Deep Well Rehabilitation	$ 800,000	$ 200,000	189,930	10,071	$ 200,000	$ (0)	$ 10,070
New Deep Wells at Down Hard	$ 2,000,000	$ -			$ -	$ -	$ -
Master Meters	$ 4,000,000	$ 712,060	531,188	180,872	$ 712,060	$ (0)	$ 180,872
Ugum Water Treatment Plant Intake	$ 1,000,000	$ 859,801	578,858	280,943	$ 859,801	$ 0	$ 280,943
Water Wells	$ 4,200,000	$ 3,030,029	2,284,474	745,555	$ 3,030,029	$ 0	$ 745,556
Water Distribution System	$ 12,000,000	$ 10,912,453	7,576,647	3,335,806	$ 10,912,453	$ 0	$ 3,335,806
Pressure Zone Realignment /	$ 1,000,000	$ 337,110	336,036	1,074	$ 337,110	$ 0	$ 1,074
Mechanical/Electrical Equipment	$ 430,000	$ 426,799	328,686	98,112	$ 426,798	$ 1	$ 98,113
Water Reservoir Internal/External	$ 800,000	$ -			$ -	$ -	$ -
Water System Reservoirs 2005 Improvements	$ 21,000,000	$ 13,878,000	10,897,321	2,980,680	$ 13,878,000	$ (0)	$ 2,980,679
Ugum Water Treatment Plant Reservoir	$ 7,000,000	$ -			$ -	$ -	$ -
Agana Heights & Chaot Tanks	$ 4,500,000	$ 1,330,287	241,603	1,088,684	$ 1,330,287	$ (0)	$ 1,088,684
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 13,500,000	$ 11,605,000	9,024,195	2,580,805	$ 11,605,000	$ 0	$ 2,580,805
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 8,000,000	$ -			$ -	$ -	$ -
Assessment of malojloj Elevetad & Yigo Elevated	$ 500,000	$ 485,117	461,813	23,304	$ 485,117	$ -	$ 23,304
Fire Hydrant Replacement Program	$ -	$ -			$ -	$ -	$ -
Wastewater System Planning	$ 800,000	$ 650,901	566,364	84,536	$ 650,900	$ 1	$ 84,537
Lift Station Upgrades	$ 5,000,000	$ 563,148	562,785	363	$ 563,149	$ (1)	$ 363
Wastewater Collection System Repl/Rehab	$ 6,500,000	$ 660,313	578,438	81,875	$ 660,314	$ (0)	$ 81,875
Baza Gardens STP Replacement		$ 9,656,874	2,688,166	6,938,499	$ 9,626,664	$ 30,210	$ 6,968,708
Facilities Plan/Design for Umatac-Merizo WWTP		$ 371,699	364,527	7,172	$ 371,699	$ (0)	$ 7,172
Agat/Santa Rita STP Replacement	$ 19,000,000	$ 67,200,000	49,293,824	17,590,368	$ 66,884,192	$ 315,808	$ 17,906,176
Agana WWTP Interim Measures		$ 673,000	624,129	48,871	$ 673,000	$ (0)	$ 48,871
Umatac Merizo Replacement	$ 2,000,000	$ -			$ -	$ -	$ -
Wastewater Pump Station Electrical Upgrade	$ 620,000	$ 99,861	91,348	8,513	$ 99,861	$ 0	$ 8,513
Electrical Upgrade - Water Wells	$ 1,500,000	$ 1,500,000	1,480,769	19,230	$ 1,500,000	$ 0	$ 19,231
Electrical Upgrade - Water Booster	$ 325,000	$ -			$ -	$ -	$ -
Electrical Upgrade -Water Booster	$ 350,000	$ 977	977	-	$ 977	$ -	$ -
Electrical Upgrade - Other Water	$ 250,000	$ 60,700	60,700	-	$ 60,700	$ -	$ -
SCADA Improvements – Phase 3	$ 1,850,000	$ 722,359	460,592	261,767	$ 722,359	$ -	$ 261,767
SCADA Improvements – Phase 4	$ 500,000	$ -			$ -	$ -	$ -
Laboratory Modernization	$ 1,500,000	$ 1,171,465	1,163,037	8,428	$ 1,171,465	$ 0	$ 8,428
Land Survey	$ 2,000,000	$ 1,052	1,038	15	$ 1,053	$ (1)	$ 15
General Plant Improvements / Water	$ 2,000,000	$ 2,441,737	1,265,043	1,176,695	$ 2,441,737	$ (0)	$ 1,176,694
Allowance for COI							$ 275,005
Interest Earned							$ 825,243
Total Construction Fund	**$ 139,325,000**	**$ 139,325,000**	**$ 101,320,556**	**$ 37,658,426**	**$ 138,978,983**	**$ 346,017**	**$ 39,104,692**

GUAM WATERWORKS AUTHORITY
2014 Series Refunded Bond Project Status
As of August 31, 2018

SCHEDULE K

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	ADJUSTED PROJECT COST	EXPENDITURES AS OF 08/31/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	20% PUC AS OF 08/31/18	CONSTRUCTION FUND BALANCE AS OF 08/31/18
Agana Treatment Plant	$ 10,475,000	$ 11,065,512	11,065,512	$ -	$ 11,065,512	$ (0)	$ 2,095,000	$ (0)
Agana Outfall	$ 5,030,000	$ 10,127,198	10,127,198	$ -	$ 10,127,198	$ 0	$ 1,006,000	$ 0
Northern District (Outfall)	$ 4,700,000	$ 10,251,423	10,251,423	$ -	$ 10,251,423	$ 0	$ 940,000	$ 0
Northern District WWTP Upgrade		$ 173,681	173,681		$ 173,681	$ -		$ -
Northern Treatment Plant		$ -	-		$ -	$ -		$ -
Baza Gardens Wastewater Treatment Plant Upgrade	$ 500,000	$ 297,177	297,177	$ -	$ 297,177	$ (0)	$ 100,000	$ (0)
Interim Disinfection Facilities	$ 581,000	$ 3,437,311	3,408,599	$ 28,712	$ 3,437,311	$ (0)	$ 116,200	$ 28,712
Electrical Protection	$ 1,000,000	$ 1,512,483	1,512,483.3	$ -	$ 1,512,483	$ (0)	$ 200,000	$ (0)
Well Vulnerability Reduction	$ 600,000	$ 185,522	185,522	$ -	$ 185,522	$ 0	$ 120,000	$ 0
Old Agat Wastewater Collection (I/I Reduction)	$ 2,155,000	$ 1,931,659	1,931,659	$ -	$ 1,931,659	$ (0)	$ 431,000	$ (0)
Chaot WW Pump Station/Collection System	$ 410,000	$ 399,120	399,120	$ -	$ 399,120	$ -	$ 82,000	$ -
Lift Station Upgrades	$ 230,000	$ 149,895	149,895	$ -	$ 149,895	$ 0	$ 46,000	$ 0
Collection Line Upgrades	$ 200,000	$ 62,755	62,755	$ -	$ 62,755	$ 0	$ 40,000	$ 0
"A" Well Transmission Line	$ 2,413,000	$ 3,833,175	3,818,088	$ 15,087	$ 3,833,175	$ (0)	$ 482,600	$ 15,087
Santa Rita Springs - Booster Pump Rehab.	$ 648,000	$ 306,841	306,841	-	$ 306,841	$ (0)	$ 129,600	$ (0)
Fena Bypass Transmission line		$ 160,913	160,913	$ -	$ 160,913	$ (0)	$ -	$ (0)
Storage Additions	$ 950,000	$ -			$ -	$ -	$ 190,000	$ -
Booster Station Upgrades	$ 390,000	$ 66,734	66,734	$ -	$ 66,734	$ -	$ 78,000	$ -
Mangilao Tank Repair	$ 800,000	$ 398,367	397,933	$ 434	$ 398,367	$ (0)	$ 160,000	$ 434
Ugum Tank Replacement	$ 2,500,000	$ -			$ -	$ -	$ 500,000	$ -
Ugum WTPlant Refurbishment ($1.724,970EPA)		$ 6,588,473	6,531,525	$ 56,949	$ 6,588,473	$ (0)		$ 56,948
Barrigada Tank Repair/Replacement	$ 3,000,000	$ 65,019	65,019	$ -	$ 65,019	$ 0	$ 600,000	$ 0
Water Reservoir Condition Assessment		$ 1,250,000	1,249,227.16	$ 772	$ 1,250,000	$ 0	$ -	$ 773
EarthTech Well Buyout	$ 5,000,000	$ 5,975,000	5,975,000	$ -	$ 5,975,000	$ -	$ 1,000,000	$ -
Water Wastewater Master Plan	$ 4,900,000	$ 4,881,308	4,881,308	$ -	$ 4,881,308	$ 0	$ 980,000	$ 0
Laboratory Modernization	$ 800,000	$ 135,055	135,055	$ -	$ 135,055	$ 0	$ 160,000	$ 0
Land Survey	$ 800,000	$ 577,836	576,134	$ 1,702	$ 577,836	$ 0	$ 160,000	$ 1,702
Ground Water Disinfection		$ -				$ -		$ -
GWUDI Study		$ 262,234	260,430	1,804	$ 262,234	$ -		$ 1,804
Contingency	$ 12,276,023	$ 154	-	$ -	$ -	$ -		$ 732
Vehicles	$ 1,100,000	$ 1,280,000	2,130,305	$ (850,305)	$ 1,280,000	$ -	$ 220,000	$ -
Generation Equipment	$ 700,000	$ 880,000	2,712	$ 877,288	$ 880,000	$ 0		$ 27,033
Leak Detection/Line Replacement	$ 8,200,000	$ 5,988,494	5,988,494	$ -	$ 5,988,494	$ -	$ 1,640,000	$ -
Automated Meter Reading	$ 12,572,063	$ 17,468,359	16,870,522	$ 537,157	$ 17,468,359.32	$ 0	$ 2,514,413	$ 597,837
Interest Earned	$ 6,781,612	$ (0)				$ (0)		$ 9,847
Total Construction Fund	**$ 89,711,698**	**$ 89,711,698**	**$ 88,981,263**	**$ 669,600**	**$ 89,711,543**	**$ 1**	**$ 13,990,813**	**$ 740,909**

GUAM WATERWORKS AUTHORITY
2016 Series Bond Project Status
As of August 31, 2018

SCHEDULE L

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	ADJUSTED PROJECT COST	EXPENDITURES AS OF 08/31/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	CONSTRUCTION FUND BALANCE AS OF 08/31/18
Water Booster Pump Station	$ 4,139,000	$ -			$ -	$ -	$ -
Meter Replacement Program	$ 4,501,000	$ 1,400,000	103,622	46,377.65	$ 150,000	$ 1,250,000	$ 1,296,378
Barrigada Tank Repair/Replacement	$ 1,013,000	$ -		-	$ -	$ -	$ -
Leak Detection	$ 1,180,000	$ 100,000		-	$ -	$ 100,000	$ 100,000
Potable Water System Planning	$ 2,276,000	$ 876,294	328,374	547,919.75	$ 876,294	$ -	$ 547,920
Deep Well Rehabilitation	$ 250,000	$ 250,000		110,013.00	$ 110,013	$ 139,987	$ 250,000
New Deep Wells at Down Hard	$ 1,190,000	$ 1,190,000			$ -	$ 1,190,000	$ 1,190,000
Master Meters	$ 3,616,000	$ 2,151,539	151,539	-	$ 151,539	$ 2,000,000	$ 2,000,000
Ugum Water Treatment Plant Intake	$ 18,000	$ -			$ -	$ -	$ -
Water Wells	$ 2,500,000	$ 2,500,000			$ -	$ 2,500,000	$ 2,500,000
Water Distribution System	$ 2,049,000	$ -			$ -	$ -	$ -
Pressure Zone Realignment /	$ 1,141,000	$ 1,141,000		741,000.20	$ 741,000	$ 400,000	$ 1,141,000
Mechanical/Electrical Equipment	$ 100,000	$ -			$ -	$ -	$ -
Water Reservoir Internal/External	$ 800,000	$ 800,000		800,000.00	$ 800,000	$ -	$ 800,000
Water System Reservoirs 2005 Improvements	$ 42,350,000	$ 58,830,170	2,263,037	13,863,844.72	$ 16,126,882	$ 42,703,288	$ 56,567,133
Ugum Water Treatment Plant Reservoir	$ 6,410,000	$ -			$ -	$ -	$ -
Water Audit Program & Water Loss Control Plan	$ 1,000,000	$ 550,000		389,561.70	$ 389,562	$ 160,438	$ 550,000
Agana Heights & Chaot Tanks	$ 1,220,000	$ 1,220,000		500,000.00	$ 500,000	$ 720,000	$ 1,220,000
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 1,895,000	$ 1,822,133		1,822,132.80	$ 1,822,133	$ 0	$ 1,822,133
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 10,500,000	$ 7,300,000		7,300,000.00	$ 7,300,000	$ -	$ 7,300,000
Fire Hydrant Replacement Program	$ 2,000,000	$ 1,200,000			$ -	$ 1,200,000	$ 1,200,000
Wastewater System Planning	$ 349,000	$ 312,983	203,642	109,341.00	$ 312,983	$ -	$ 109,341
Lift Station Upgrades	$ 2,404,000	$ 1,714,755	228,622	36,133.00	$ 264,755	$ 1,450,000	$ 1,486,133
Wastewater Collection System Repl/Rehab	$ 2,920,000	$ 1,055,478	1317.71	554,160.29	$ 555,478	$ 500,000	$ 1,054,160
Baza Gardens STP Replacement	$ 16,700,000	$ 22,663,776	12,842,806	9,820,968.68	$ 22,663,775	$ 1	$ 9,820,970
Facilities Plan/Design for Umatac-Merizo WWTP	$ 527,000	$ 252,105	239,065	13,040.11	$ 252,105	$ -	$ 13,040
Agat/Santa Rita STP Replacement	$ 3,000,000	$ 2,002,331	1,273,611	271,477.03	$ 1,545,088	$ 457,243	$ 728,720
Agana WWTP Interim Measures	$ 827,000	$ -			$ -	$ -	$ -
Umatac Merizo Replacement	$ 8,000,000	$ 20,800,000	4,135,530	16,490,345.33	$ 20,625,875	$ 174,125	$ 16,664,470
Wastewater Pump Station Electrical Upgrade	$ 100,000	$ -			$ -	$ -	$ -
Electrical Upgrade - Water Wells	$ 650,000	$ -			$ -	$ -	$ -
Electrical Upgrade - Water Booster	$ 323,000	$ -			$ -	$ -	$ -
SCADA Improvements – Phase 3	$ 1,177,000	$ 1,077,497	18,000	599,496.51	$ 617,497	$ 460,000	$ 1,059,497
SCADA Improvements – Phase 4	$ 6,500,000	$ 4,378,118		3,398,748.85	$ 3,398,749	$ 979,369	$ 4,378,118
Laboratory Modernization	$ 1,127,000	$ 1,127,000	1,127,000	-	$ 1,127,000	$ -	$ -
Land Survey	$ 1,998,000	$ 1,260,524	130,370	1,130,153.37	$ 1,260,524	$ 0	$ 1,130,154
General Plant Improvements / Water	$ 2,769,463	$ 1,543,760	716,554	827,205.38	$ 1,543,760	$ 0	$ 827,206
Information Technology Integration Improvements	$ 500,000	$ 500,000	244,068	-	$ 244,068	$ 255,932	$ 255,932
Interest Earned		$ -					$ 1,582,545
Total Construction Fund	**$ 140,019,463**	**$ 140,019,463**	**$ 24,007,159**	**$ 59,371,919**	**$ 83,379,078**	**$ 56,640,385**	**$ 117,594,849**

GUAM WATERWORKS AUTHORITY
2017 Series Refunded Bond Project Status
As of August 31, 2018

SCHEDULE M

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	ADJUSTED PROJECT COST	EXPENDITURES AS OF 08/31/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	CONSTRUCTION FUND BALANCE AS OF 08/31/18
Ground Water Disinfection	$ -	$ 500,000	$ 438,141	$ 61,859	$ 500,000	$ 0	$ 61,859
"A" Series Well Transmission Line	$ 600,000	$ 475,709	$ 474,434	$ 1,274	$ 475,709	$ 0	$ 1,275
Water Booster Pump Station	$ 500,000	$ 500,000	$ 418,844	$ 81,156	$ 500,000	$ (0)	$ 81,156
Meter Replacement Program	$ 2,500,000	$ 10,450,000	$ 10,255,079	$ 18,549	$ 10,273,628	$ 176,372	$ 194,921
Barrigada Tank Repair/Replacement	$ -	$ 5,450,000	$ 5,442,302	$ 7,698	$ 5,450,000	$ 0	$ 7,698
Leak Detection		$ 200,000	$ -	$ 200,000	$ 200,000	$ -	$ 200,000
Potable Water System Planning	$ 200,000	$ 200,000	$ 180,927	$ 19,073	$ 200,000	$ -	$ 19,073
Implement Ground Water Rule		$ 1,699,999	$ 1,499,464	$ 200,535	$ 1,700,000	$ (1)	$ 200,535
Brigade II (Ugum Lift) BPS Upgrade	$ 1,200,000	$ 1,900,000	$ 251,134	$ 117,330	$ 368,464	$ 1,531,536	$ 1,648,866
Deep Well Rehabilitation	$ 548,000	$ 548,000	$ 548,000	$ -	$ 548,000	$ -	$ -
New Deep Wells at Down Hard	$ 3,773,000	$ 485,743	$ 485,743	$ -	$ 485,743	$ 0	$ 0
Rehabilitation of Asan Springs	$ 900,000	$ 1,100,000	$ 188,771	$ 152,068	$ 340,838	$ 759,162	$ 911,229
Master Meters	$ 1,600,000	$ 1,489,957	$ 1,421,267	$ 68,690	$ 1,489,957	$ (0)	$ 68,690
Ugum Water Treatment Plant Intake	$ 3,670,000	$ 700,000	$ 543,615	$ 156,385	$ 700,000	$ -	$ 156,385
Water Wells	$ 2,000,000	$ -	$ -		$ -	$ -	$ -
Water Distribution System	$ 384,000	$ 3,174,748	$ 3,174,748	$ -	$ 3,174,748	$ (0)	$ (0)
Pressure Zone Realignment /	$ 3,550,000	$ -	$ -		$ -	$ -	$ -
Northern System Water Distribution	$ 2,725,000	$ -	$ -	$ -	$ -	$ -	$ -
Central Water Distribution System 2005	$ 1,200,000	$ 775,002	$ 730,182	$ 44,820	$ 775,002	$ (0)	$ 44,820
Southern Water Distribution System	$ 1,800,000	$ -	$ -		$ -	$ -	$ -
Mechanical/Electrical Equipment	$ 1,360,000	$ 1,200,000	$ 1,079,495	$ 120,505	$ 1,200,000	$ (0)	$ 120,505
Water Reservoir Internal/External	$ 500,000	$ 2,150,000	$ 1,083,817	$ 425,567	$ 1,509,384	$ 640,616	$ 1,066,183
Water Reservoir Internal/External	$ 2,400,000	$ -	$ -		$ -	$ -	$ -
Water System Reservoirs 2005 Improvements	$ 11,697,000	$ 1,050,000	$ 1,050,000		$ 1,050,000	$ 0	$ 0
Distribution System Upgrades	$ 3,182,000	$ 474,160	$ 456,678	$ 17,481	$ 474,160	$ 0	$ 17,482
Ugum Water Treatment Plant Reservoir	$ 3,672,000	$ -	$ -		$ -	$ -	$ -
Water Audit Program & Water Loss Control Plan		$ 78,459	$ 15,031	$ 63,428	$ 78,459	$ 0	$ 63,429
Production Plan / Reduce Navy Purchases		$ 100,000	$ 94,286	$ 5,714	$ 100,000	$ -	$ 5,714
Hydraulic Asessment of Tank		$ 500,000	$ 497,004	$ 2,996	$ 500,000	$ -	$ 2,996
Agana Heights & Chaot Tanks		$ 4,700,000	$ 4,350,014	$ 349,986	$ 4,700,000	$ -	$ 349,986
Tank Major Repair Yigo#1 Mangilao#2 Agat#2		$ 1,848,013	$ 1,765,504	$ 82,510	$ 1,848,013	$ (0)	$ 82,509
Tank Major Repair Yigo#1 Mangilao#2 Agat#2		$ -			$ -	$ -	$ -
Assessment of malojloj Elevetad & Yigo Elevated		$ 200,000	$ 200,000	$ -	$ 200,000	$ -	$ -
Public Water System Asser Inventory/Condition Assesment		$ 100,000	$ 98,414	$ 1,586	$ 100,000	$ -	$ 1,586
Public Water System GIS & Mapping		$ 50,000	$ 50,000	$ -	$ 50,000	$ -	$ -
		$ -			$ -	$ -	$ -
Wastewater System Planning	$ 1,500,000	$ 1,474,000	$ 1,468,176	$ 5,824	$ 1,474,000	$ -	$ 5,824
Wastewater Vehicles	$ 235,000	$ 235,000	$ 209,795	$ 25,205	$ 235,000	$ 0	$ 25,205
NDWWTP - Chlorine Tanks	$ 250,000	$ 250,000	$ 250,000		$ 250,000	$ -	$ -
Tumon Bay Sewer Upgrades	$ 100,000	$ -	$ -		$ -	$ -	$ -
Wastewater Collection System Repl/Rehab		$ 1,001,323	$ 723,591	$ 277,732	$ 1,001,323	$ (0)	$ 277,732
Facilities Plan/Design for Baza Gardens WWTP	$ 1,250,000	$ 1,250,000	$ 1,245,244	$ 4,756	$ 1,250,000	$ -	$ 4,756
Facilities Plan/Design for Agat-Santa Rita WWTP	$ 900,000	$ 899,630	$ 891,702	$ 7,928	$ 899,630	$ -	$ 7,928
Priority 1 Sewer Upgrades – Baza Gardens WWTP	$ 650,000	$ -	$ -		$ -	$ -	$ -
Baza Gardens STP Replacement	$ 3,567,000	$ 1,488,378	$ 1,151,947	$ 314	$ 1,152,261	$ 336,117	$ 336,431
Facilities Plan/Design for Umatac Merizo WWTP		$ 853,858	$ 760,845	$ 93,013	$ 853,858	$ 0	$ 93,013
Agat/Santa Rita STP Replacement	$ 2,968,000	$ 2,217,700	$ 2,217,314	$ 387	$ 2,217,701	$ (0)	$ 386
Northern District WWTP Primary Treatment Upgrades	$ -	$ 11,743,514	$ 11,532,253	$ 211,261	$ 11,743,514	$ 0	$ 211,261
Biosolids Management Plan		$ 200,000	$ 196,414	$ 3,586	$ 200,000	$ -	$ 3,586
Agana WWTP Interim Measures	$ -	$ 11,300,000	$ 11,254,925	$ 45,075	$ 11,300,000	$ -	$ 45,075
I&I SSES Southern		$ 800,000	$ 794,722	$ 5,278	$ 800,000	$ (0)	$ 5,278
I&I SSES Central		$ 850,000	$ 794,325	$ 55,675	$ 850,000	$ -	$ 55,675
I&I SSES Northern		$ -			$ -	$ -	$ -
Umatac Merizo Replacement		$ 250,000	$ 247,431	$ 2,569	$ 250,000	$ -	$ 2,569
Northern District WWTP Secondary Treatment Upgrades		$ 1,000,000	$ -	$ 1,000,000	$ 1,000,000	$ -	$ 1,000,000
		$ -					
Well Electrical Protection	$ 26,000	$ -	$ -		$ -	$ -	$ -
SCADA Pilot Project	$ 300,000	$ 61,950	$ 19,812	$ 42,138	$ 61,950	$ (0)	$ 42,138
Electrical Upgrade - Water Wells	$ 3,000,000	$ 354,227	$ 339,948	$ 14,278	$ 354,227	$ 0	$ 14,279
Electrical Upgrade - Water Booster	$ 325,000	$ -	$ -		$ -	$ -	$ -
Electrical Upgrade -Water Booster	$ 350,000	$ -	$ -		$ -	$ -	$ -
Electrical Upgrade - Other Water	$ 250,000	$ -			$ -	$ -	$ -
SCADA Improvements – Phase 1	$ 250,000	$ 250,000	$ 194,849	$ 55,151	$ 250,000	$ -	$ 55,151
SCADA Improvements – Phase 2	$ 1,100,000	$ 1,056,986	$ 1,028,284	$ 28,702	$ 1,056,986	$ -	$ 28,702
SCADA Improvements – Phase 3	$ 2,500,000	$ 24,956	$ 24,956	$ -	$ 24,956	$ 0	$ 0
SCADA Improvements – Phase 4	$ 850,000	$ -	$ -		$ -	$ -	$ -
		$ -					
Laboratory Modernization	$ 1,200,000	$ -	$ -		$ -	$ -	$ -
Land Survey	$ 1,500,000	$ 499,688	$ 471,450	$ 28,237	$ 499,687	$ 1	$ 28,238
General Plant Improvements / Water	$ 14,370,000	$ 7,241,000	$ 7,241,000	$ 0	$ 7,241,000	$ 0	$ 0
Interest Earned							$ 141,578
Total Construction Fund	**$ 87,402,000**	**$ 87,402,000**	**$ 79,851,877**	**$ 4,106,319**	**$ 83,958,196**	**$ 3,443,804**	**$ 7,691,701**