Speaker's Office <speaker@guamlegislature.org>

Fwd: GPA WORK SESSION 9/20 / MEETING MATERIALS

1 message

Senator Therese Terlaje <senatorterlajeguam@gmail.com>
To: speaker@guamlegislature.org

Fri, Sep 21, 2018 at 8:23 AM

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The Office of Vice Speaker Therese M. Terlaje
Committee on Culture and Justice
I Mina'trentai Kuåttro na Liheslaturan Guåhan
34th Guam Legislature
Guam Congress Building, 163 Chalan Santo Papa, Hagåtña, Guam 96910
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Vice Speaker Therese M. Terlaje
34GL-18-2336
SEP 21 2018
Time: 0830
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Begin forwarded message:

From: Bernadette Lou Sablan <l.sablan@gpagwa.com>
Subject: GPA WORK SESSION 9/20 / MEETING MATERIALS
Date: September 20, 2018 at 2:58:12 PM GMT+10
To: "Andy Niven (ndynvn@yahoo.com)" <ndynvn@yahoo.com>, Angelica Perez <aperez@amibrokers.com>, Ann Borja - GWA <annborja@guamwaterworks.org>, "Annmarie Muna (amuna@ambrokers.com)" <amuna@ambrokers.com>, Artemio S Perez <aperez@gpagwa.com>, BENJAMIN CRUZ <speaker@senatorbjcruz.com>, "Cameron Mulka (cimiculka@guampdn.com)" <cimiculka@guampdn.com>, Chilang F Unpingco <cfejeran@gpagwa.com>, "Fred Horecky (horeckylaw@teleguam.net)" <horeckylaw@teleguam.net>, "Gaynor Delano (gdumat-ol@guam.gannett.com)" <gdumat-ol@guam.gannett.com>, Gilda Mafnas <gildam@guamwaterworks.org>, Governor's Office <joy.unpingco@guam.gov>, "Greg P. Cruz" <gpcruz@guamwaterworks.org>, Heidi Ballendorf <heidi@guamwaterworks.org>, "Jams Y Kim (pacguam@gmail.com)" <pacguam@gmail.com>, "Jeff Johnson (jeffcharjohnson@hotmail.com)" <jeffcharjohnson@hotmail.com>, "Jennifer G Sablan" <jsablan@gpagwa.com>, "Jessica Peterson (webmaster@theguamguide.com)" <webmaster@theguamguide.com>, "Jessy Gogue (ocp.mayor@gmail.com)" <ocp.mayor@gmail.com>, "Joe John Mantanona (joejohnmantanona@gmail.com)" <joejohnmantanona@gmail.com>, "John O'Connor (john@postguam.com)" <john@postguam.com>, "John Reigel (jriegel@brwncald.com)" <jriegel@brwncald.com>, Joyce N Sayama <jsayama@gpagwa.com>, Karla Tydingco <ktydingco@guamwaterworks.org>, "Kevin Kerrigan (kevin@postguam.com)" <kevin@postguam.com>, Kim Garrido <kim.garrido@mec-guam.com>, "Louella Losinio (louella@postguam.com)" <louella@postguam.com>, Manny Apuron <mapuron@guamwaterworks.org>, "Maripaz N. Perez" <mnperez@gpagwa.com>, "Michael White (whitema@cdmsmith.com)" <whitema@cdmsmith.com>, "Nestor Licanto (nestor@kuam.com)" <nestor@kuam.com>, "Patricia L. Diego" <pldiego@gpagwa.com>, "PDN Newsroom (news@guampdn.com)" <news@guampdn.com>, "Peter Montinola (peter@isuguam.com)" <peter@isuguam.com>, Selma HG Blas <sblas@gpagwa.com>, "Telena Nelson (senatortcnelson@gmail.com)" <senatortcnelson@gmail.com>, "Therese Terlaje (senatorterlajeguam@gmail.com)" <senatorterlajeguam@gmail.com>, "Tina Thai (tina.thai@ipehq.com.)" <tina.thai@ipehq.com.>

2336

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**

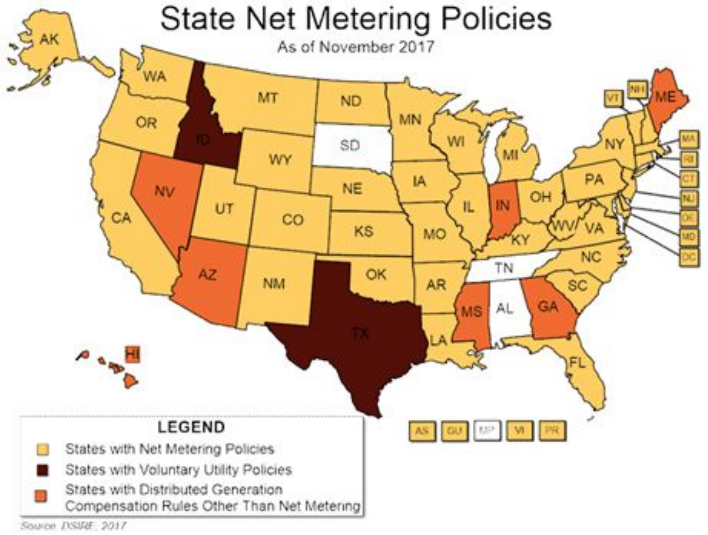
	RATE SCHEDULE R	
	Possible Rate	
KWH Utility Delivered (meter 1, register A)		469
KWH Utility Received (meter 1, register B)		531
KWH Solar Production (meter 2)		1,062
KWH Consumption		1,000
	Rate	**Amount**
Monthly Charge	$ 15.00	$ 15.00
Non-Fuel Energy Charge		
First 500 KWH	0.069550	34.78
Over 500 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.



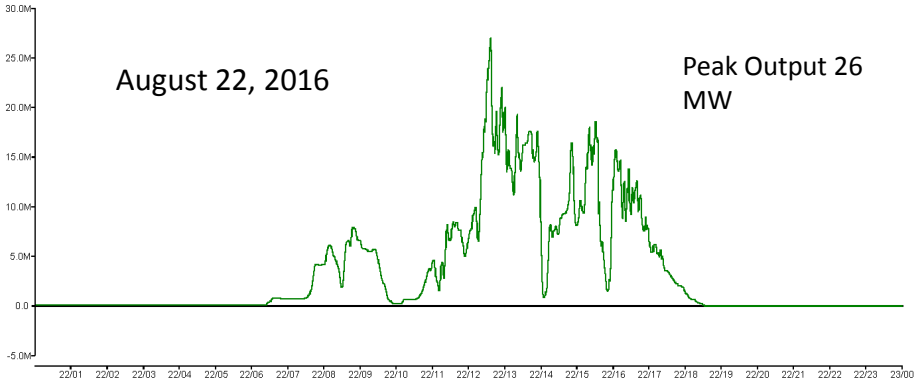
Source: National Council of State Legislatures: 11/20/17

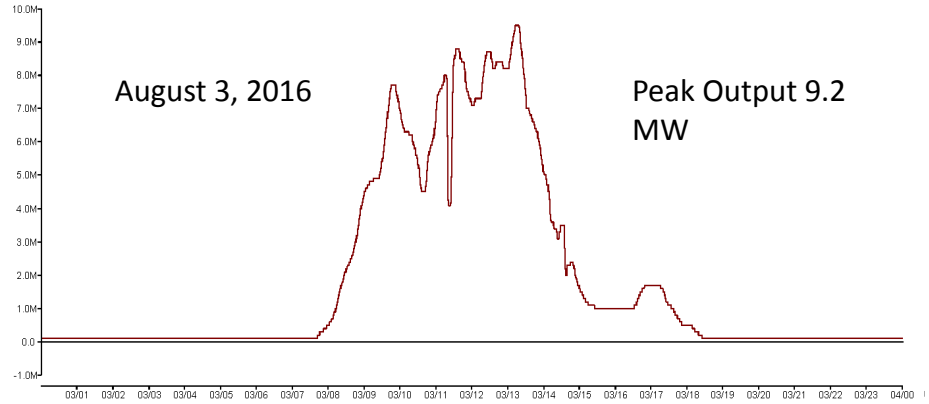
Guam NEM Program

- 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.

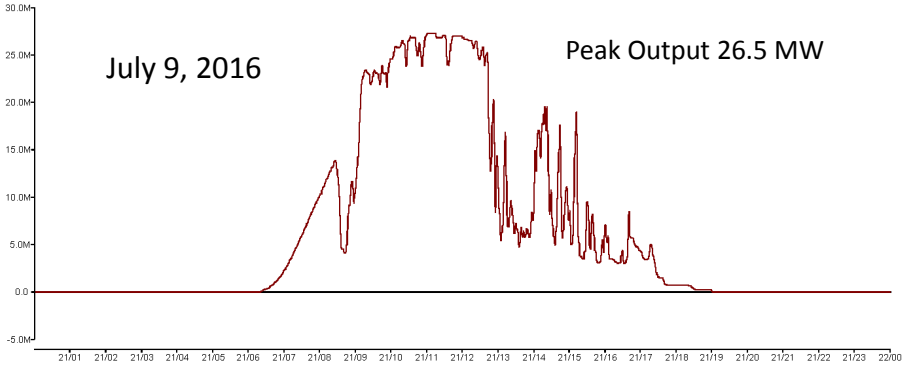
Solar PV Energy Production Characteristics

Utility Scale PV Output Look Like This …





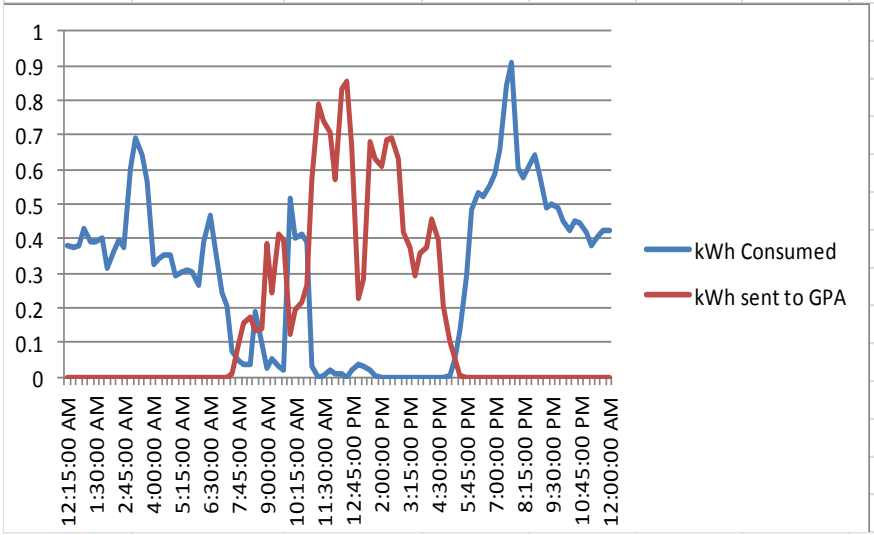
NEM does not eliminate need for capacity



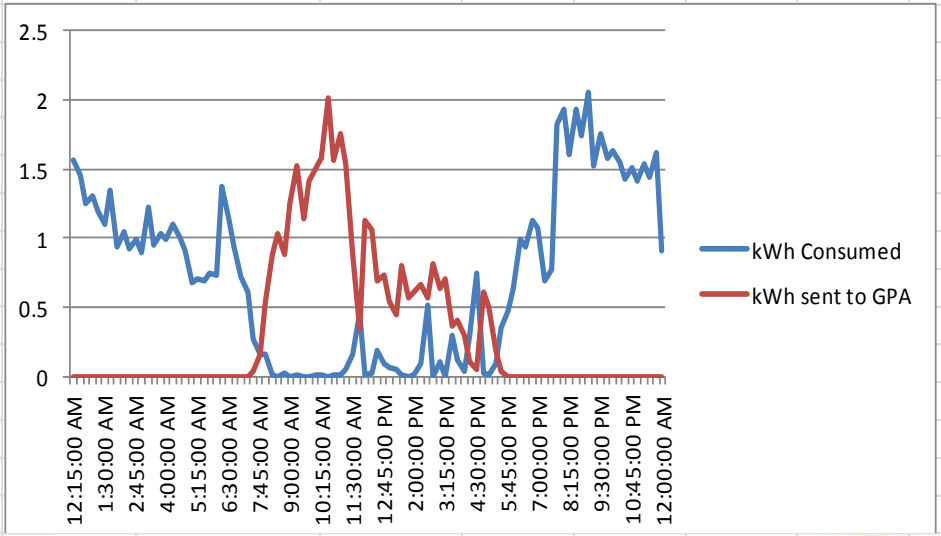
PV without adequate storage is not a capacity benefit. It is an energy benefit.

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		



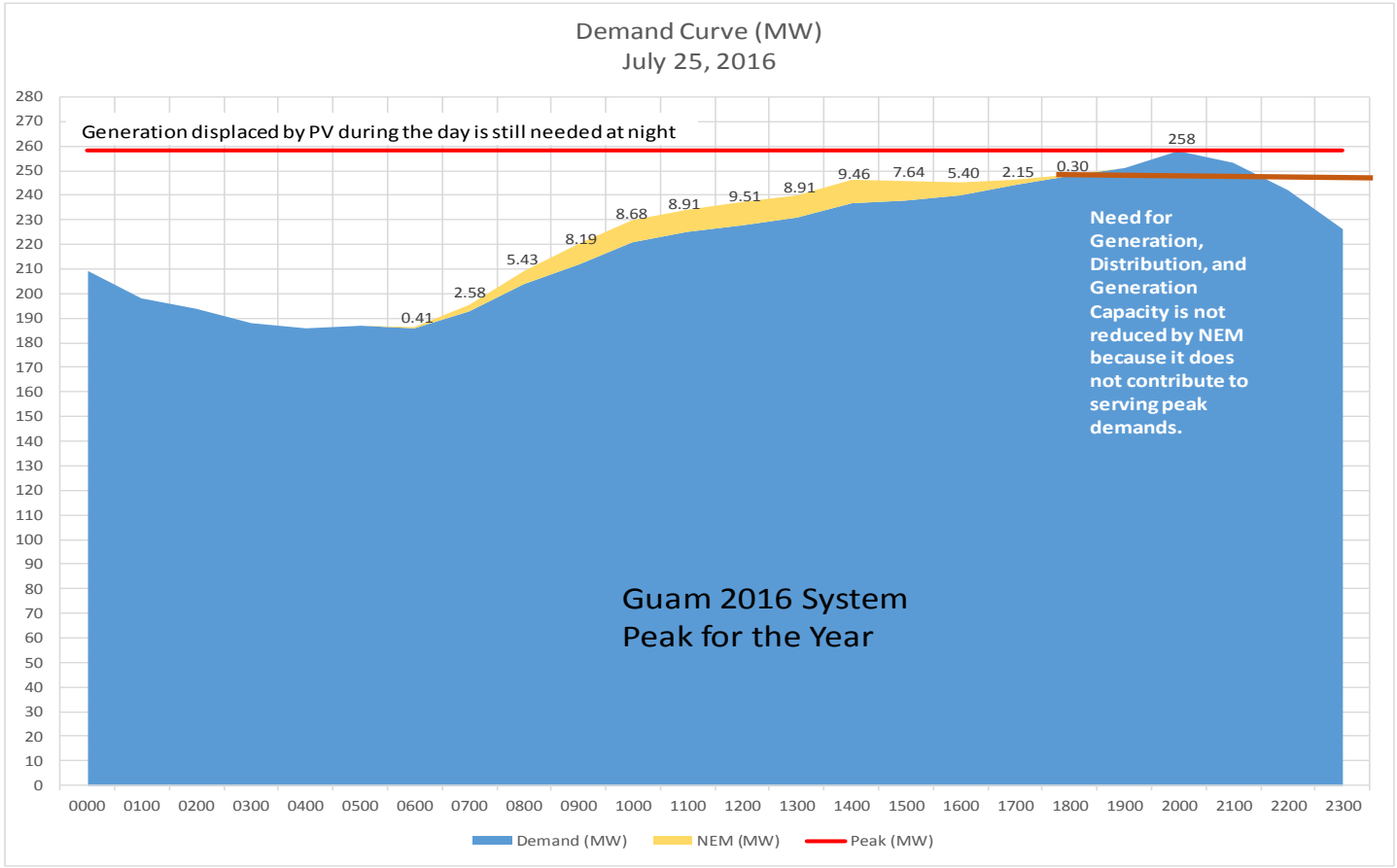
Date:	14-Jun-16		
PV System KW Size	12.4		
GPA KWH 12am to 7am	28.9		
GPA KWH 7am to 6pm	6.1		
GPA KWH 6pm to 12am	**34.6**	**Evening Peak**	
NEM KWH 7am to 6pm	32.5		
Net GPA KWH	37.1		



Does NEM Lower Guam Generation Capacity Requirements?

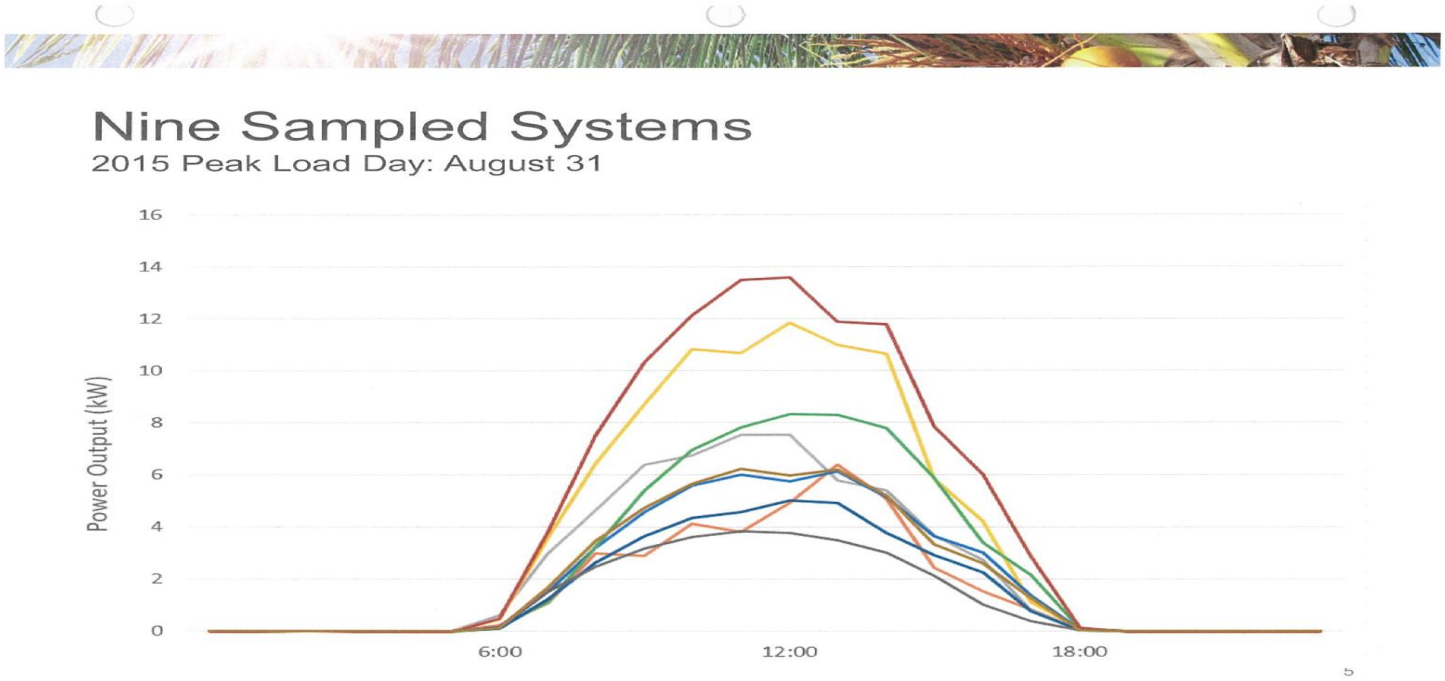
No. NEM Solar PV systems in Guam does not reduce peak demand and therefore does not eliminate conventional capacity needs

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

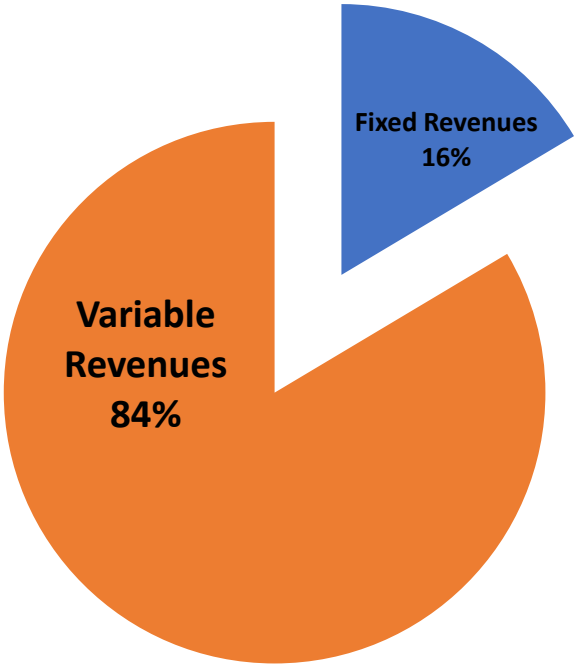
Value of the Grid to NEM Customers

- 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

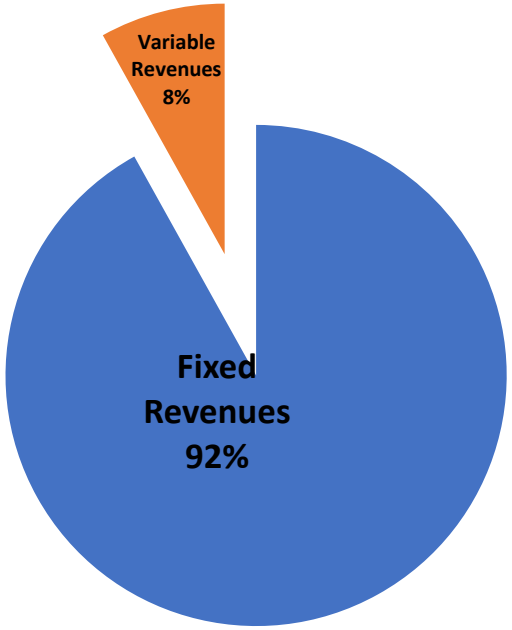
- Monthly fixed charge of $15 does not recover cost to serve from grid
  - Most of GPA fixed cost is recovered in the energy use (kWh) rate component which is typically zero for NEM customers

Rate Structure & Fixed Cost Recovery

Civilian Fixed vs Variable Revenues



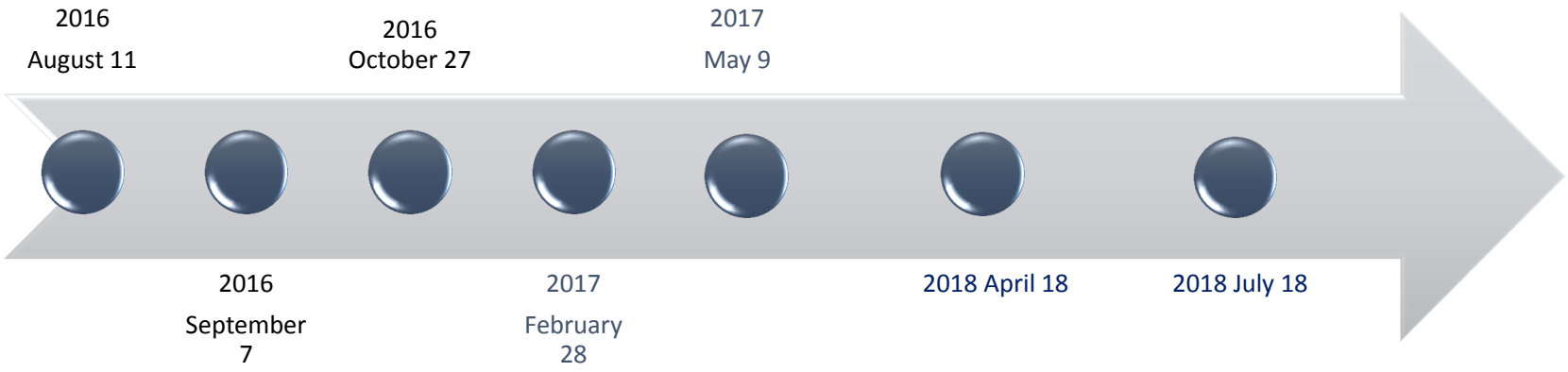
Navy Fixed vs Variable Revenues



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



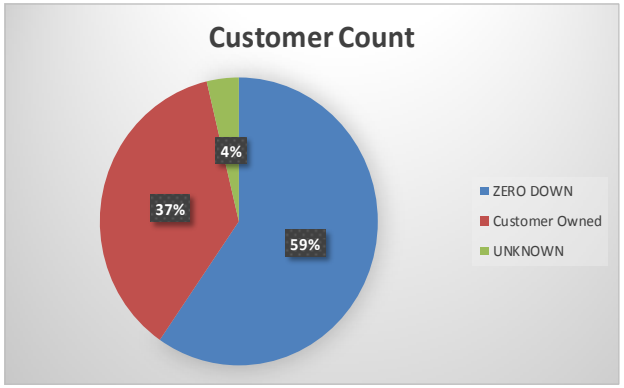
Key Points from Public Meetings

- 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)

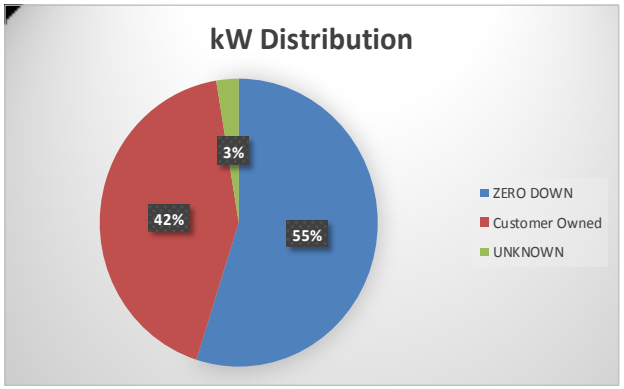
- Solar PV provider commented the NEM energy saves the utility cost on:
  - Maintenance cost for generations, poles, labor, lines, substations, transformers, etc.
  - Reduction of line losses because energy is near customers
  - Costs associated with fuel and fuel shipments
  - Helps GPA achieve energy 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**

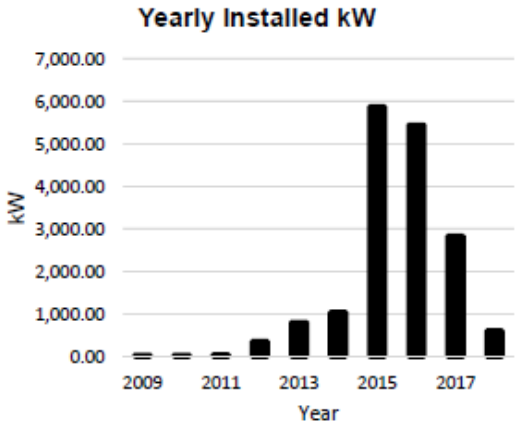
March 2018

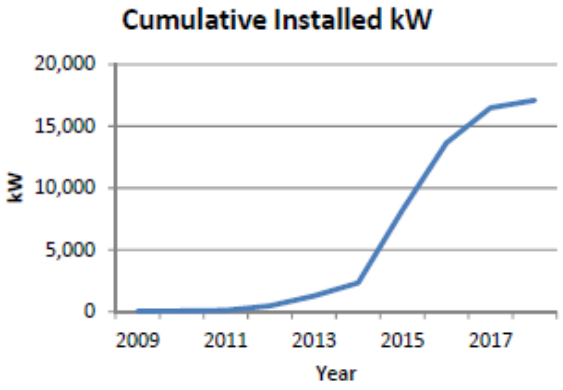
Customer Class	KW	NEM	Customers	Percent of Customer Class
R - Residential	14,119	1,562	43,756	3.6%
J - Small General Service Demand	1,647	32	987	3.2%
K - Small Government Demand	318	9	348	2.6%
L - Large Government Demand	23	1	45	2.2%
P - Large General Demand	241	3	116	2.6%
G - Small General Non Demand	666	33	4,127	0.8%
S - Small Government Non-Demand	79	7	681	1.0%
Total	**17,092**	**1,647**	**50,060**	

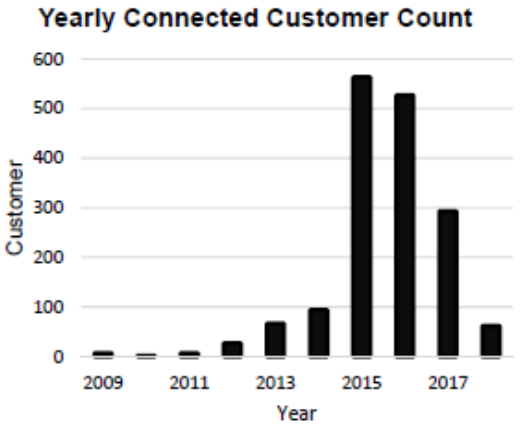
Projected FY 2018 Non-Fuel Revenue Loss

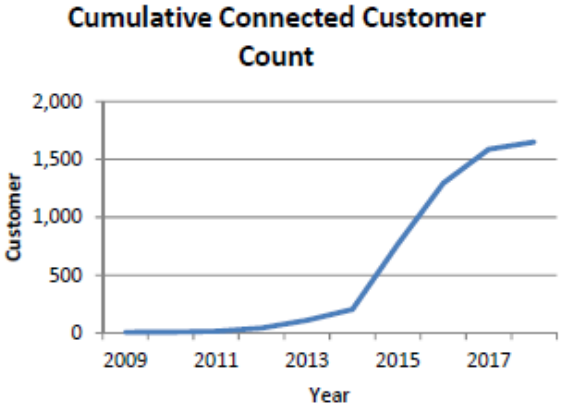
Customer Rate Class	Renewable Energy Capacity (kW)	Annual kWh Generated (@5.092 hours/day)*	Average Non-Fuel Yield $/kWh	Estimated Annual Revenue Loss
R	13,693	25,447,071	0.09293	$ 2,364,822
J	1,647	3,059,970	0.13112	401,226
K	318	590,618	0.13932	82,286
L	23	42,373	0.13525	5,731
P	241	447,331	0.11539	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).









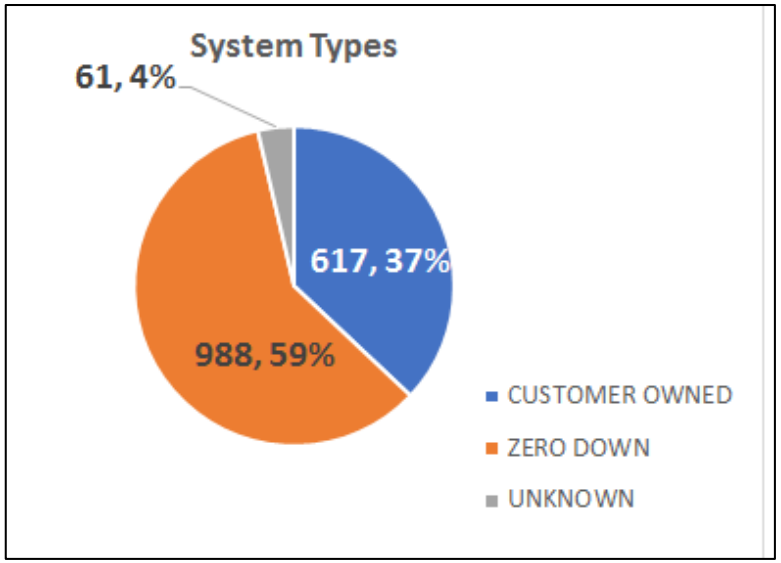
NEM Market Analysis

- 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

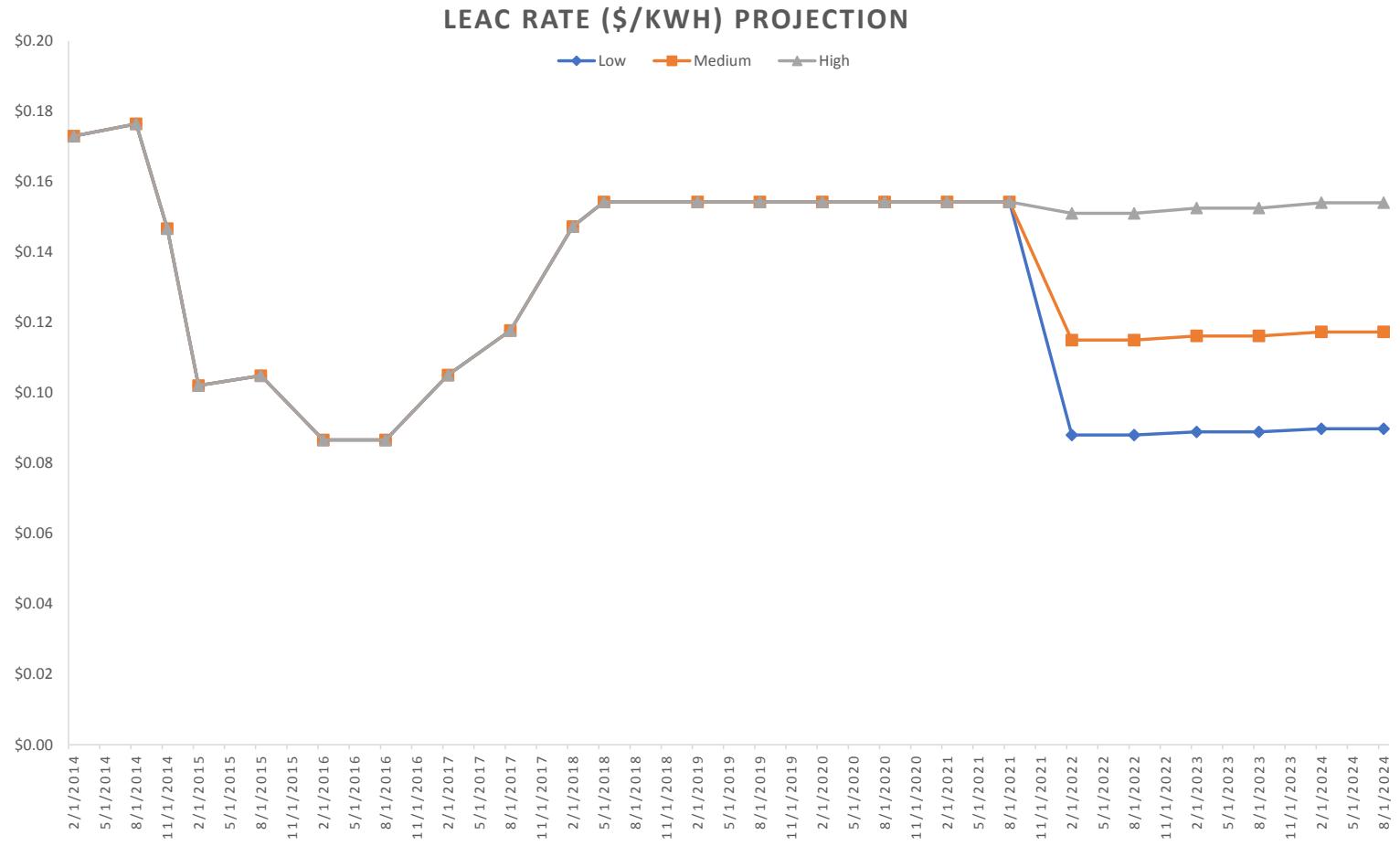
Cost Category	Minnesota	Austin Energy	Clean Power Research (MRE)	GPA Avoided Cost FY 2017	Comments
Fuel Cost	X	X	$0.1260	$0.1029	Close Agreement
Energy Losses	X	X	$0.0054	$0.0054	In Agreement
Plant O&M-Fixed	X	X			
Plant O&M-Variable	X	X		$0.0018	Minor Cost Impact
Generation Capacity Cost	X	X	$0.0490		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**

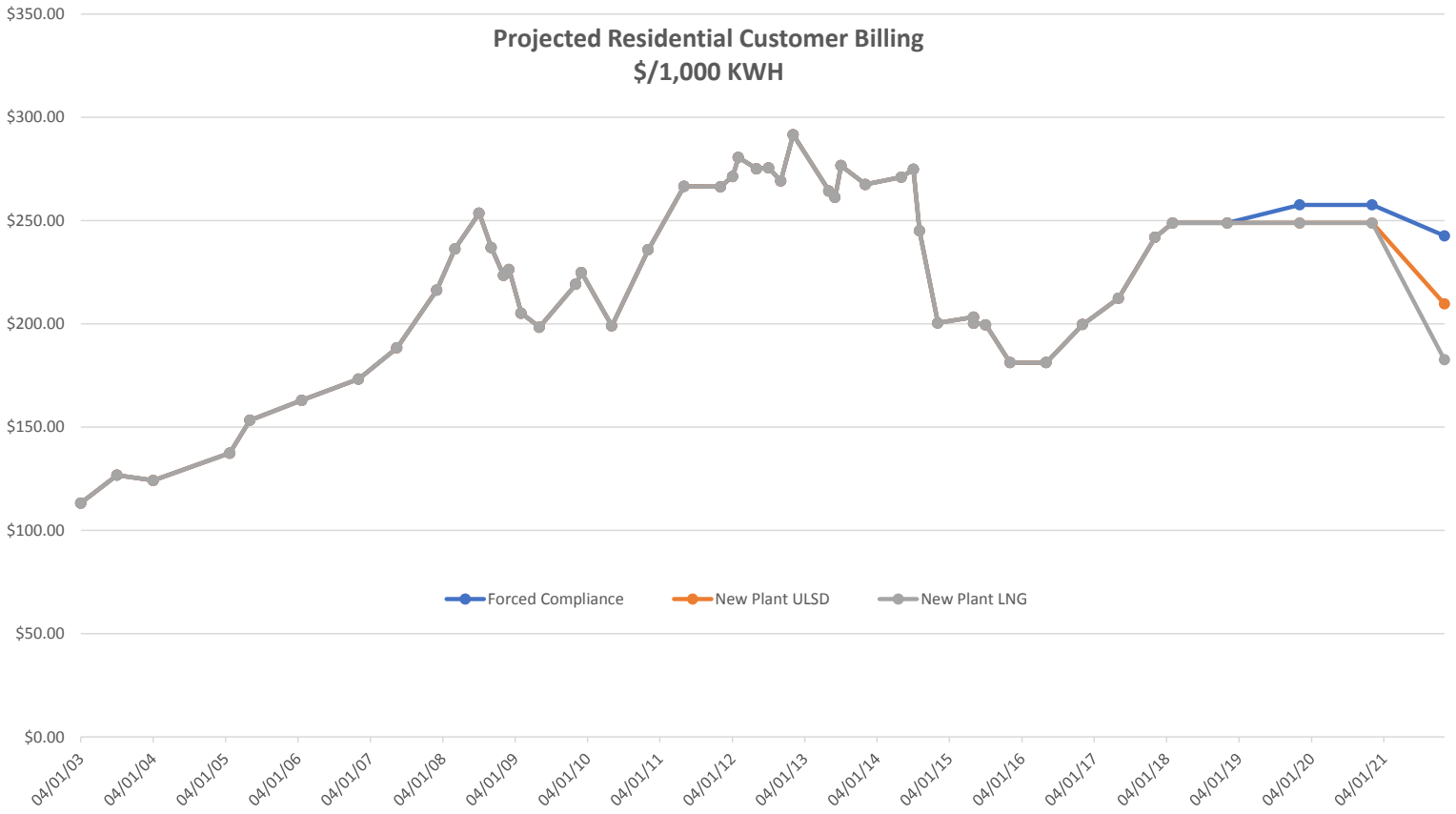
Value of Solar Comparison

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
8/1/2016
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11/1/2022
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**

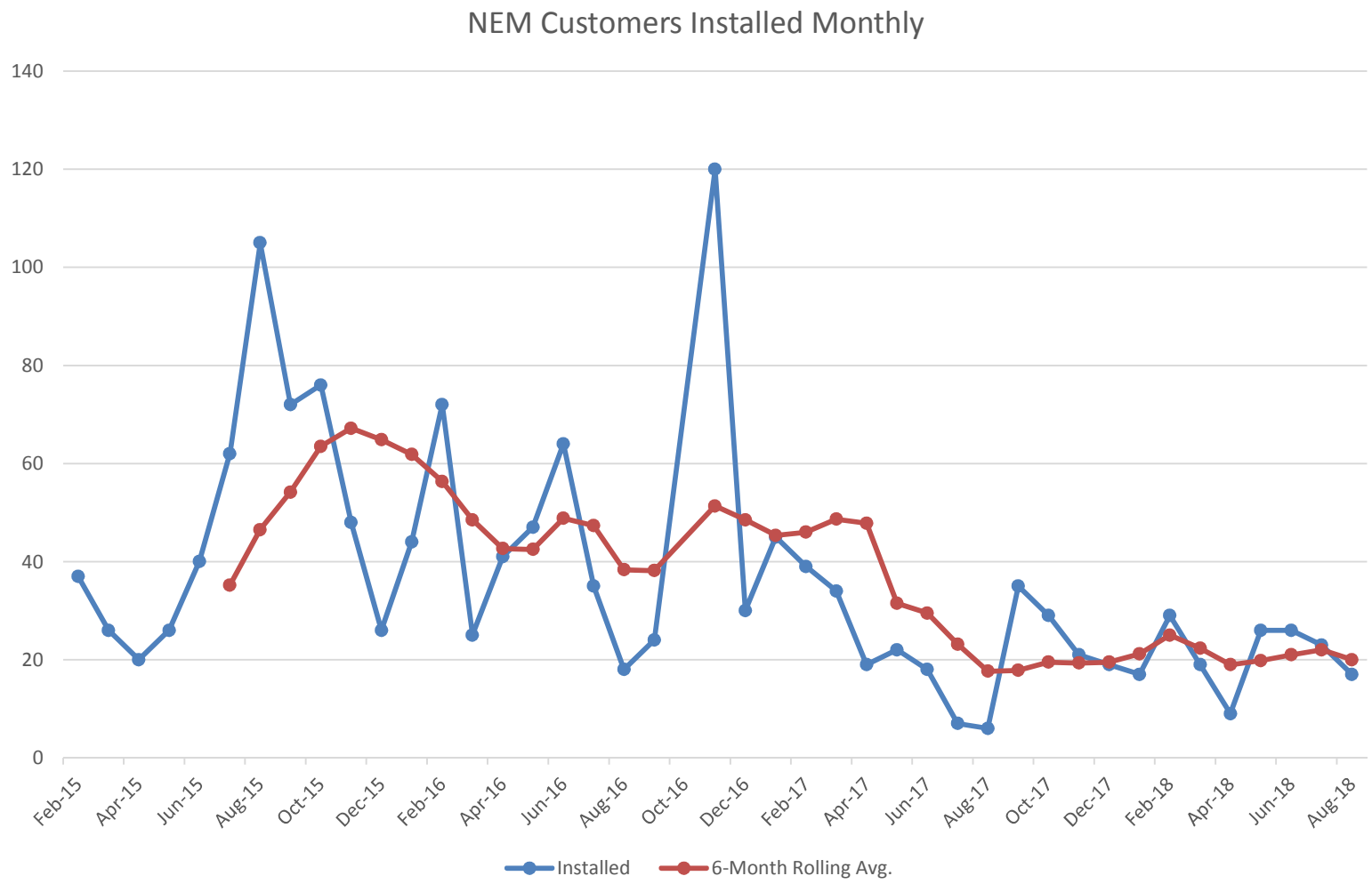
This report provides updates on key issues:

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**

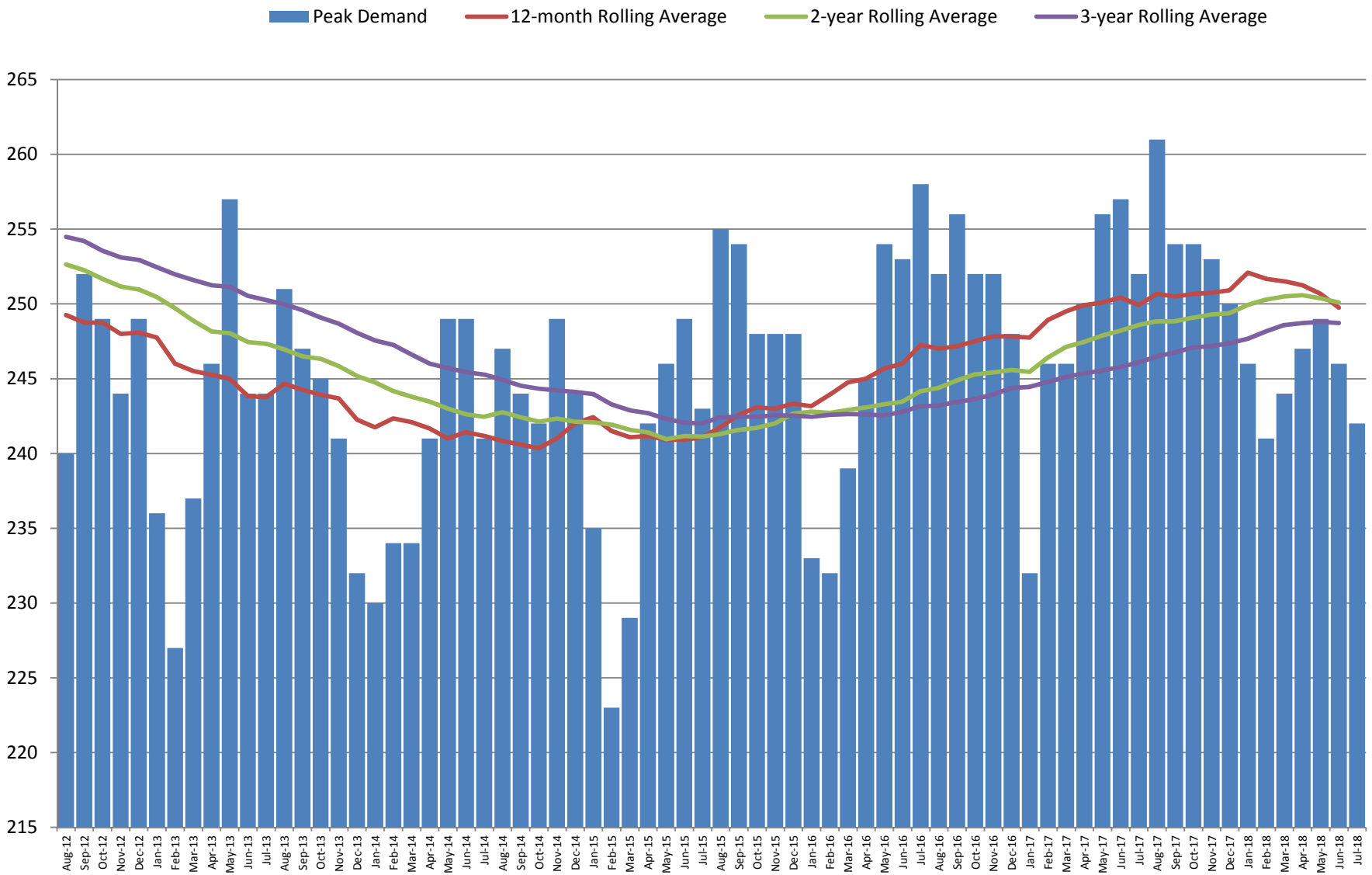
4. **PUC Dockets:**
   - The PUC has approved the technical specifications for the new plant. Thank you PUC for the quick turn around of the petition. The package is being issued to the bid's short listed proponents
   - FY 2019 CIP budget Approval is on their September meeting agenda.

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)

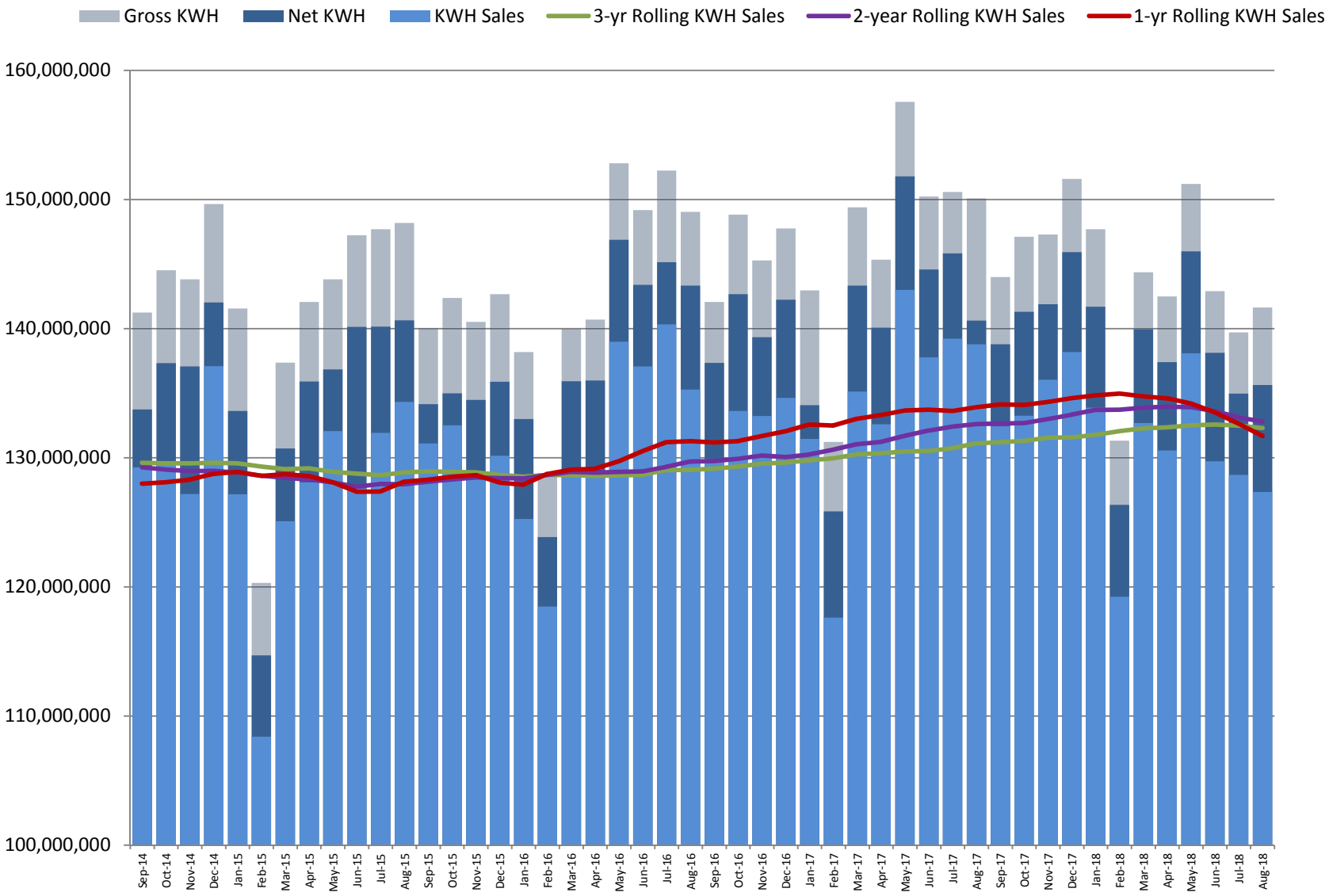
6. **Typhoon Mangkhut Restoration:** A presentation has been prepared to provide an update of the island-wide power restoration efforts from Typhoon Mangkhut.

7. **Key Performance Indicators:** The following are indicators thru August 2018.

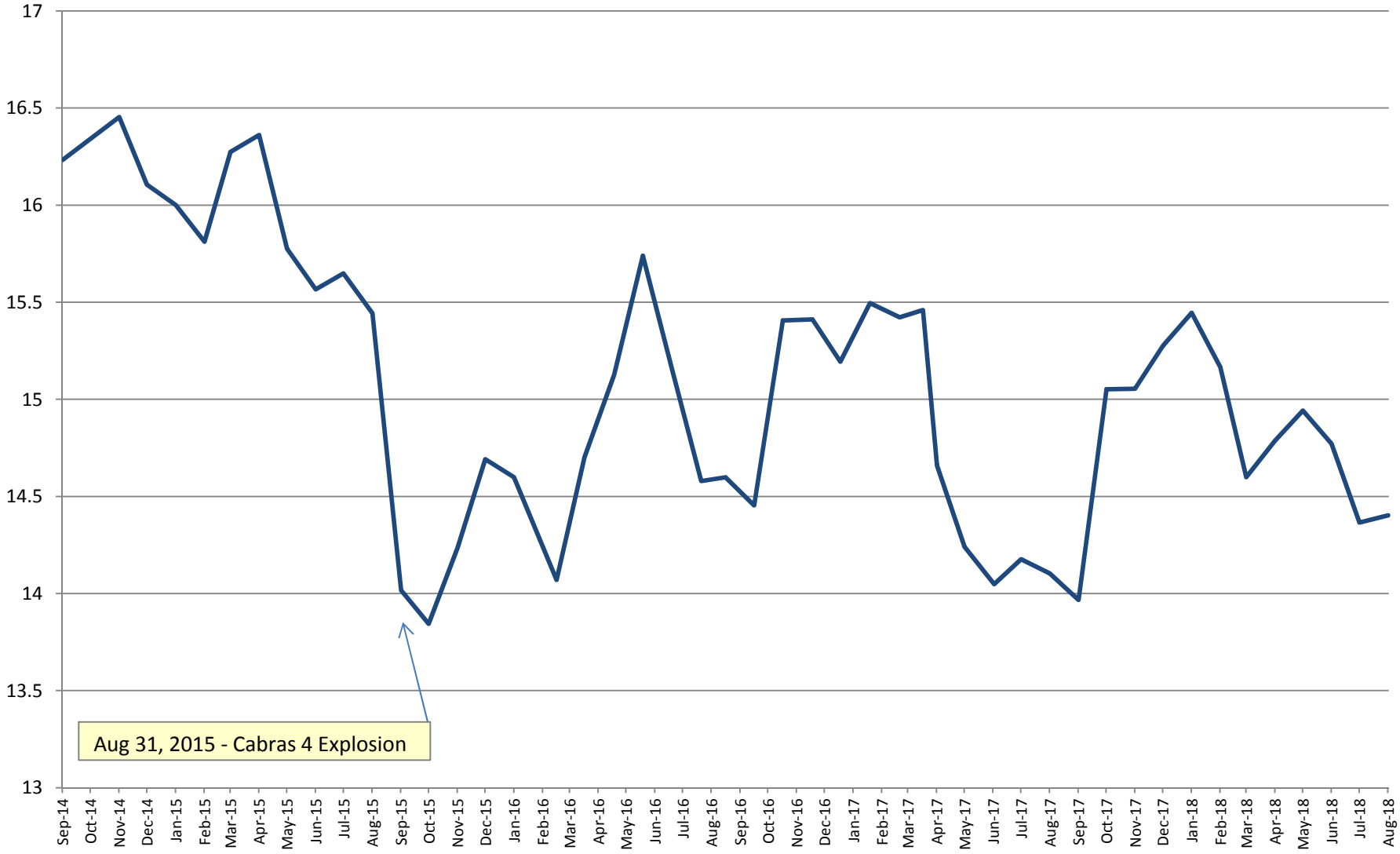
Historical Monthly Peak Demand
Aug 2012 - Aug 2018



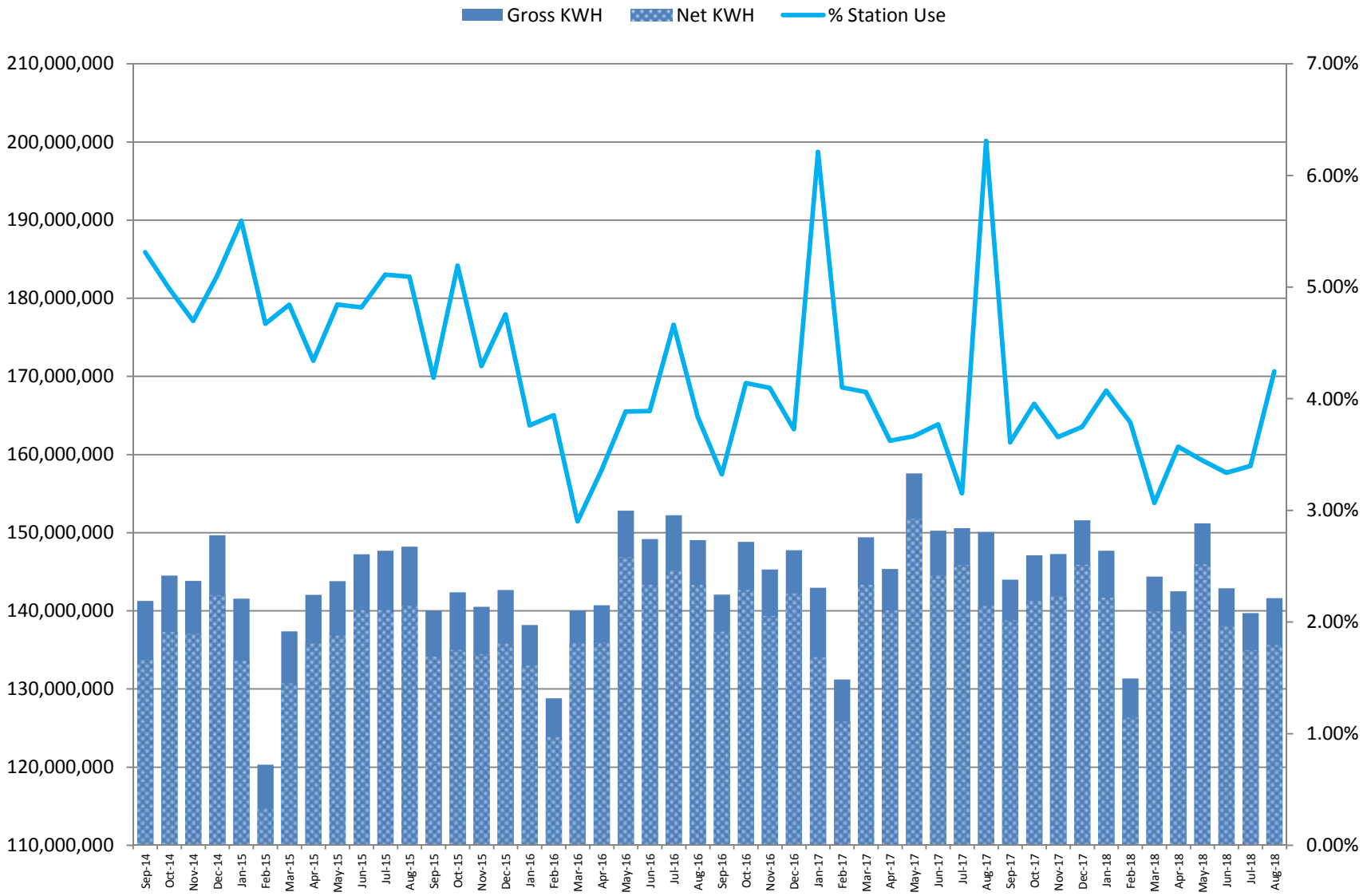
Historical KWH Sales
Sept 2014 - Aug 2018



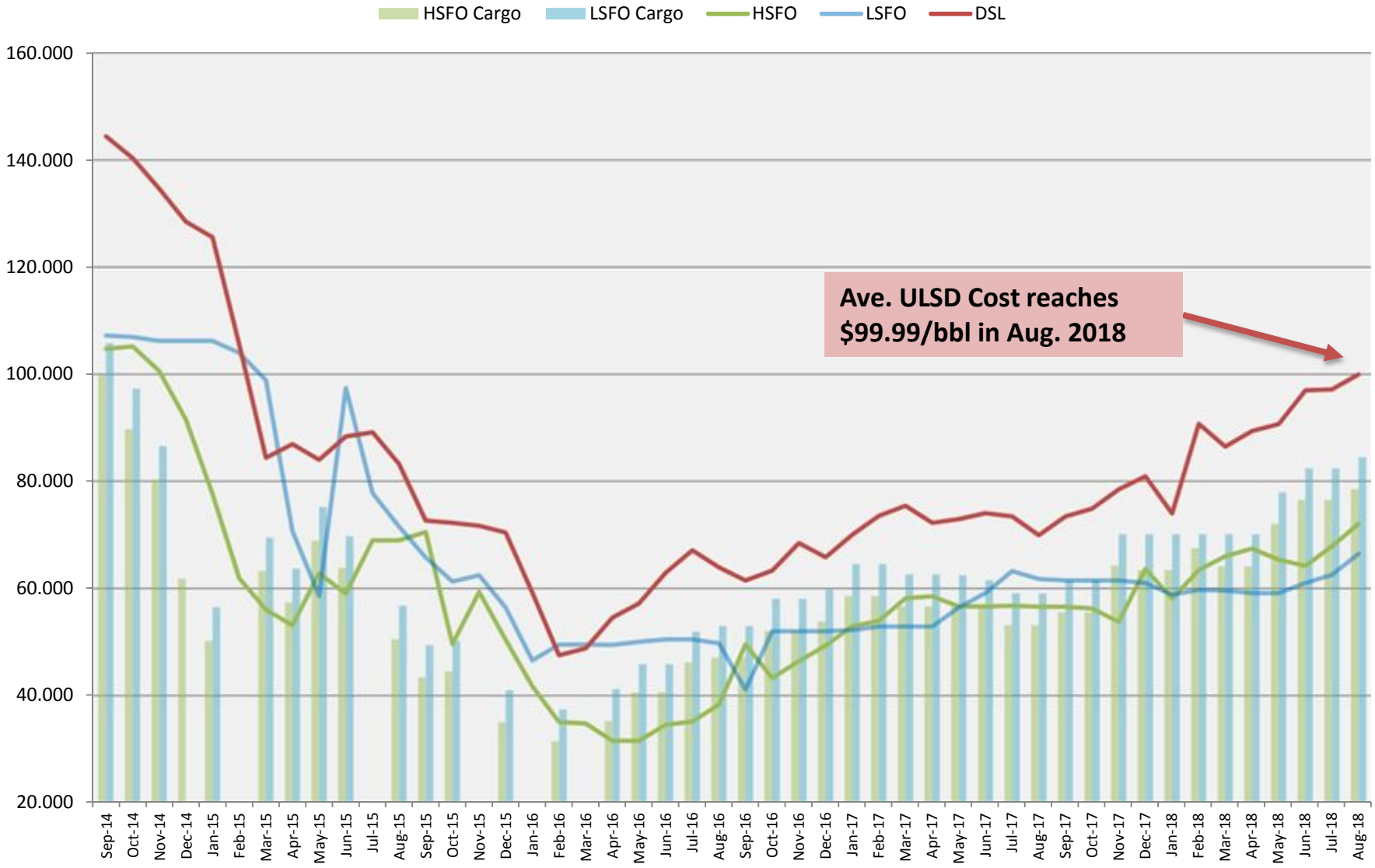
SYSTEM GROSS HEAT RATE
(KWH/Gal)
Sept 2014 - Aug 2018



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

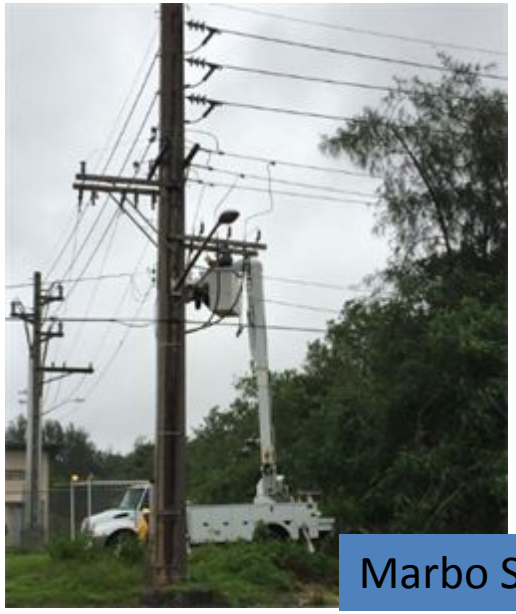
Storm Preparations

- 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

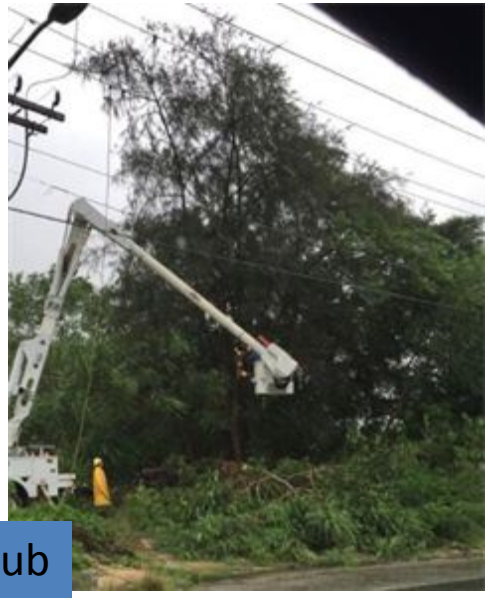


Marbo Sub





Marbo Sub



Storm Preparations

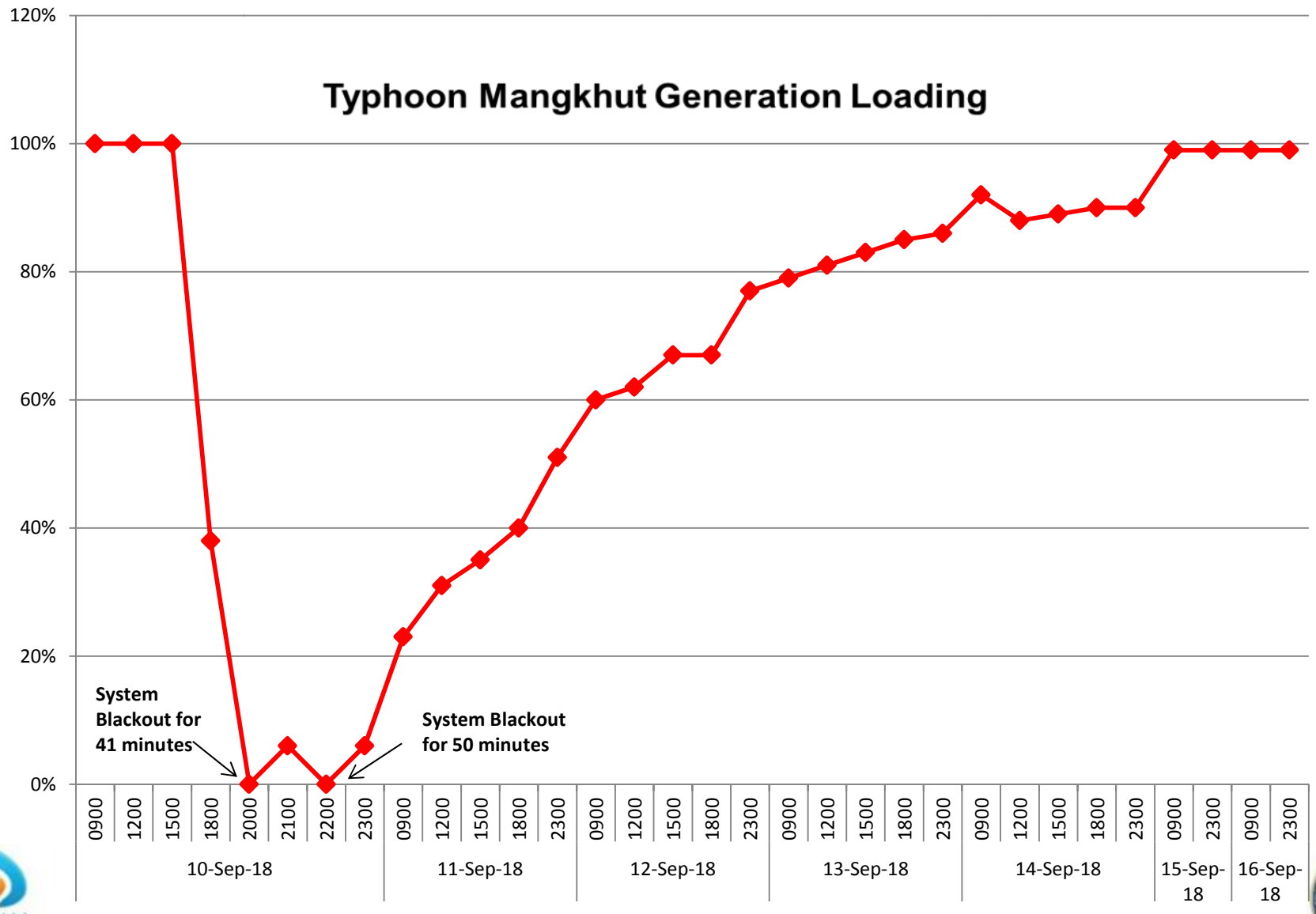

Rte. 3 Dededo


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

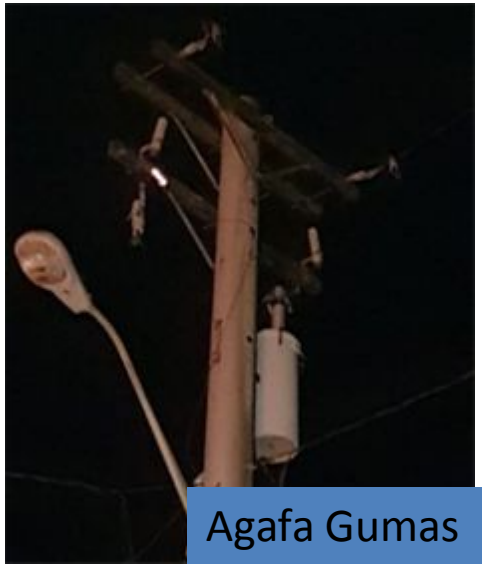
Damages


Pulantat

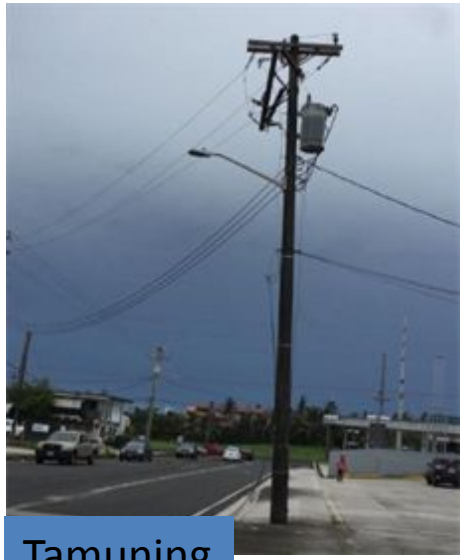

Mangilao


Tiyan


UPI Elementary


Agafa Gumas

Damages



Tamuning



Ypaopao



Mongmong



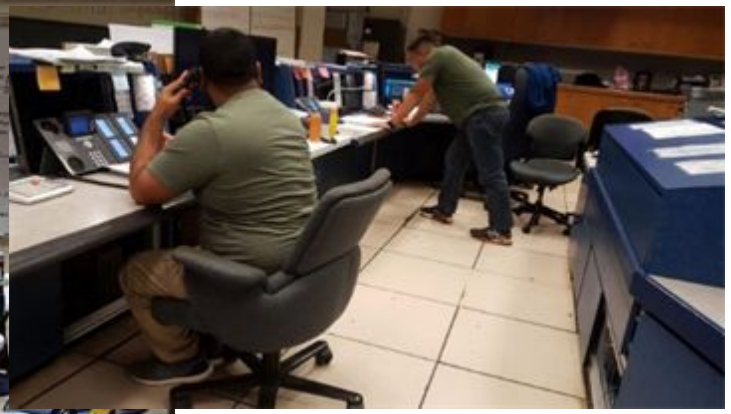
Camp Witek, Yona

Restoration

PSCC



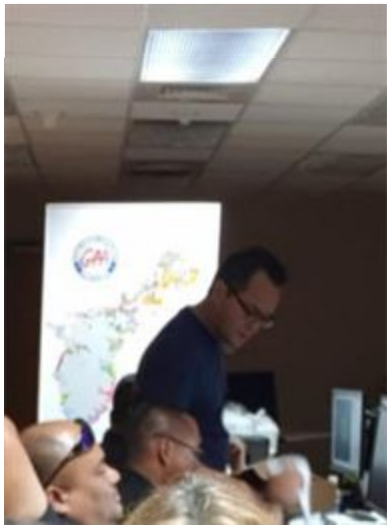




Restoration

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

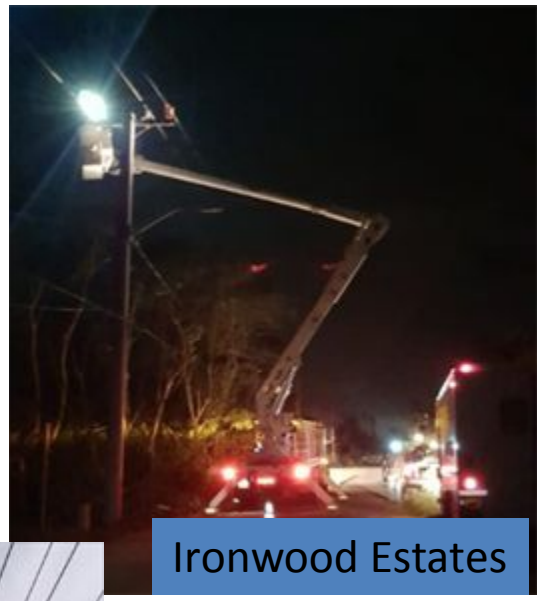


Yigo

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

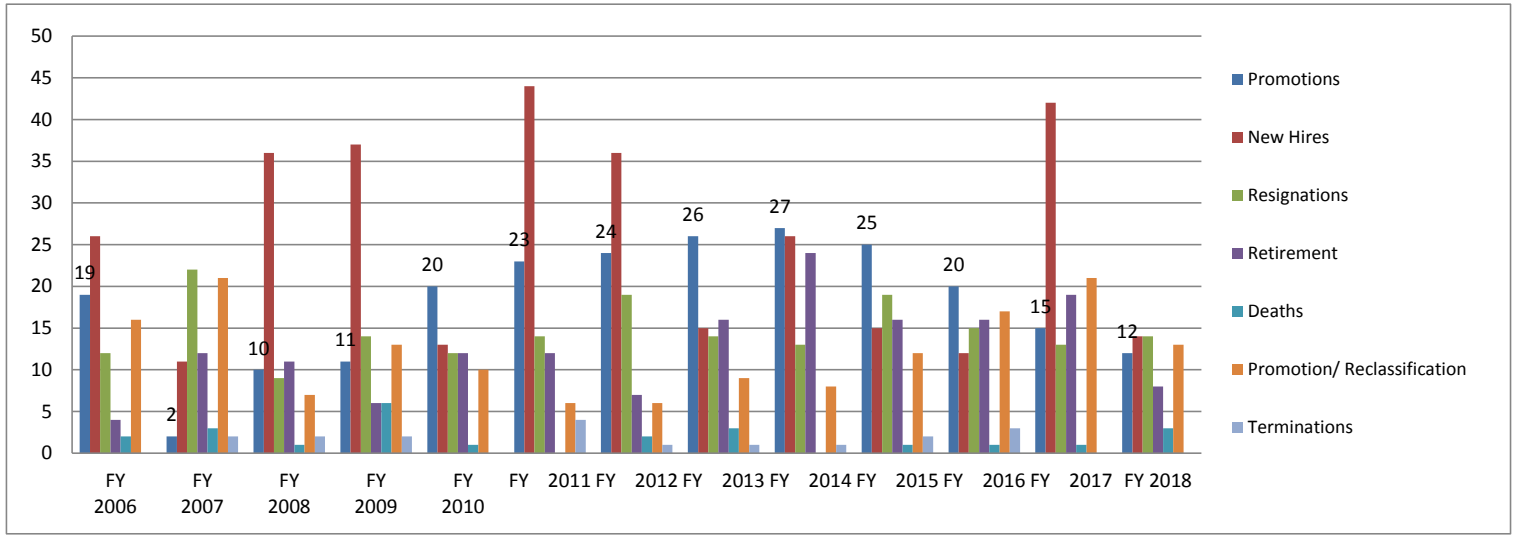
Rate Classification	Total Cust	Del Cust	Del 28-45	Del 46-60	Del 61-90	Over-90	Current Balance	28-45 Days	46-60 Days	61-90 Days	>90 Days	Total Arrears	Total Due
Residential(ERES-R)	42,575	2,690	2,667	156	18	43	6,395,448.37	622,869.24	35,218.77	3,566.77	39,464.46	701,119.24	7,096,567
		6.32%	6.26%	0.37%	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)

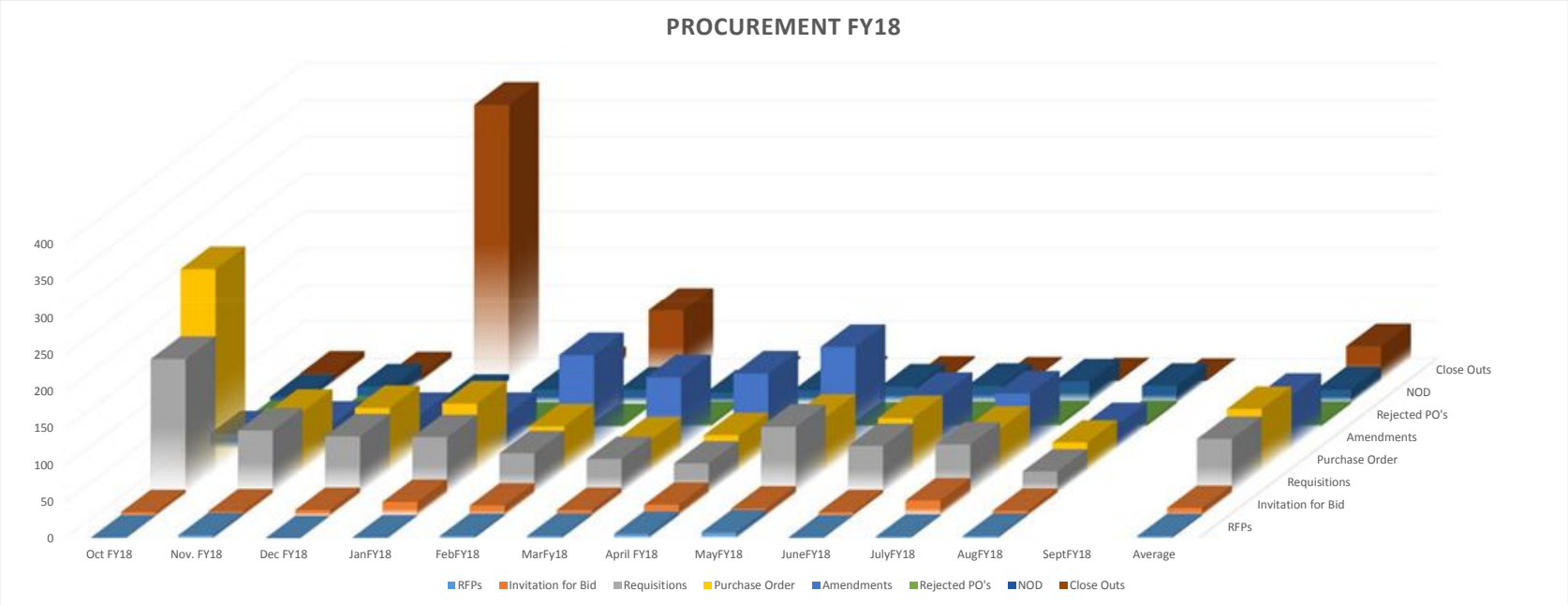
** SCSEP = Senior Community Service Employment Program

** 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.

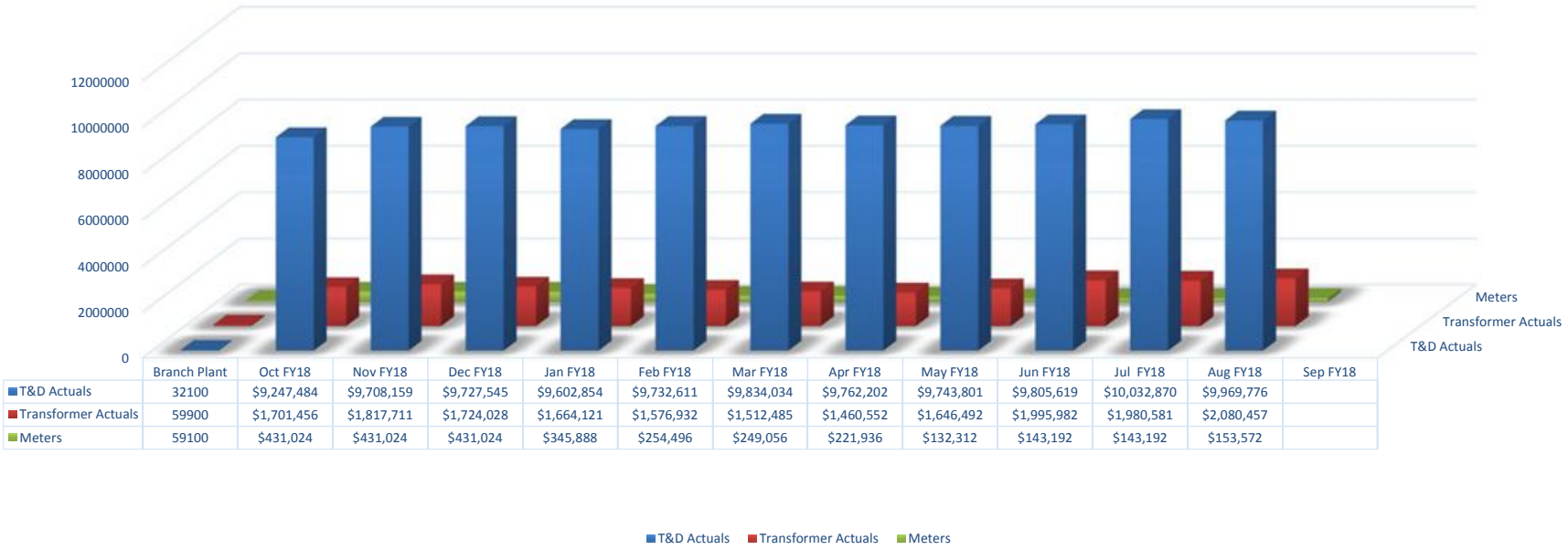
** P.L. 34-32 -Temporary employee(s)

Staffing Report as of August 31, 2018 - PREPARED BY: J.Aguigui

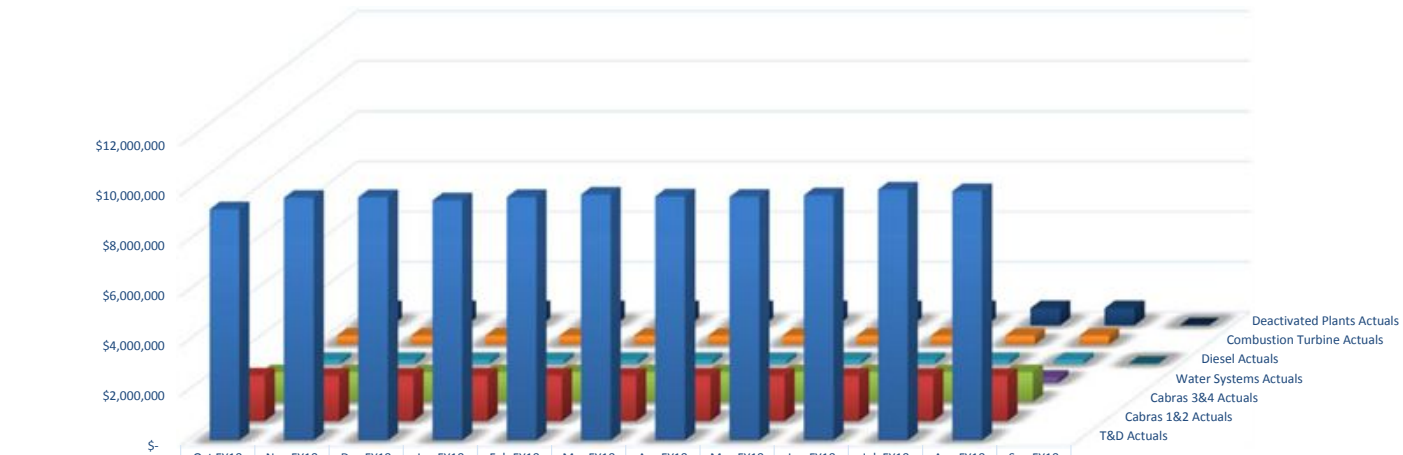


	Oct FY18	Nov. FY18	Dec FY18	JanFY18	FebFY18	MarFy18	April FY18	MayFY18	JuneFY18	JulyFY18	AugFY18	SeptFY18	Average
RFPs	1	4	0	1	3	3	6	8	1	2	3		2.90909091
Invitation for Bid	5	6	8	19	14	8	15	10	5	21	7		10.7272727
Requisitions	183	86	78	77	55	47	41	91	65	67	30		74.5454545
Purchase Order	275	81	86	92	61	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

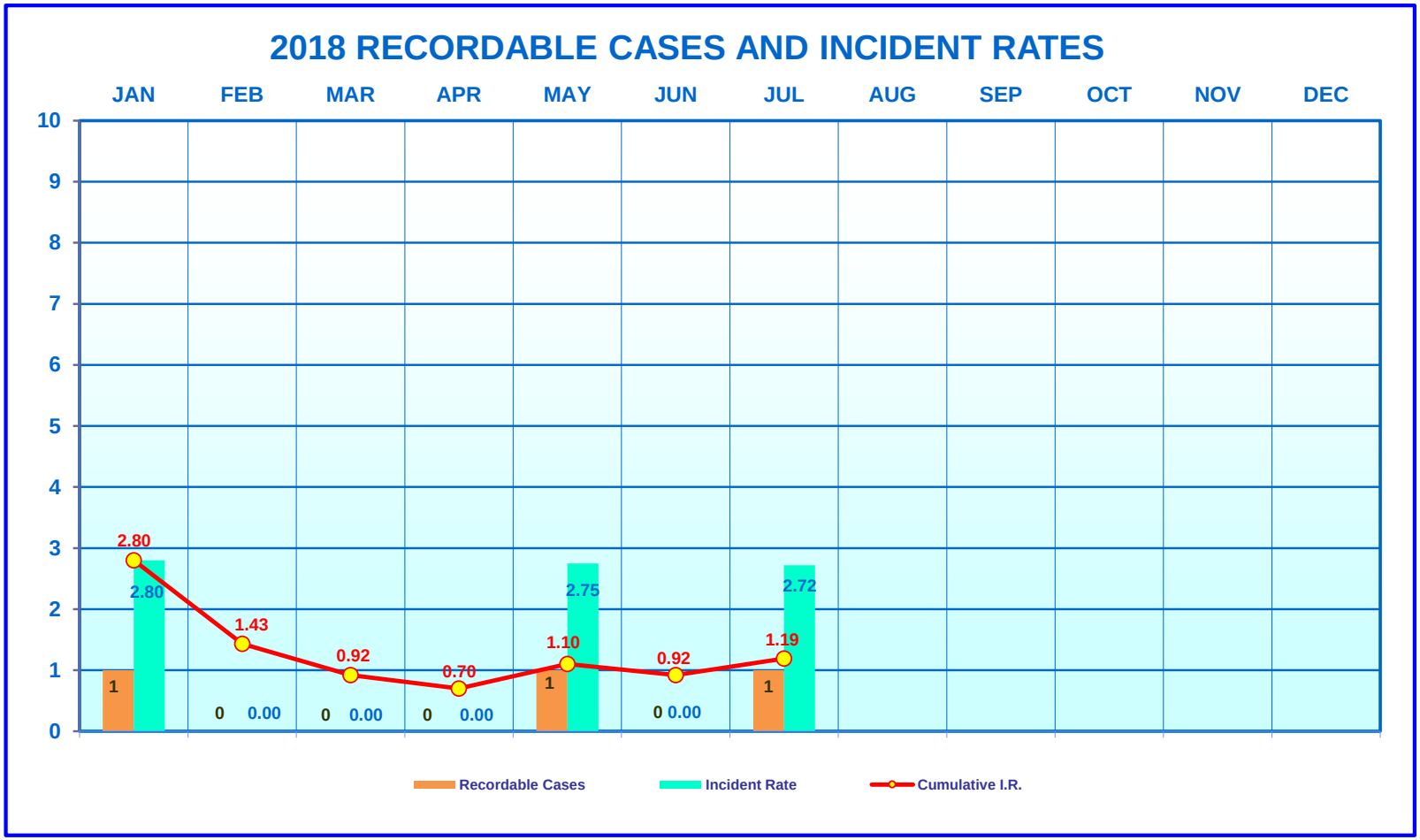


	Branch Plant	Oct FY18	Nov FY18	Dec FY18	Jan FY18	Feb FY18	Mar FY18	Apr FY18	May FY18	Jun FY18	Jul FY18	Aug FY18	Sep FY18
T&D Actuals	32100	$9,247,484	$9,708,159	$9,727,545	$9,602,854	$9,732,611	$9,834,034	$9,762,202	$9,743,801	$9,805,619	$10,032,870	$9,969,776	
Transformer Actuals	59900	$1,701,456	$1,817,711	$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	

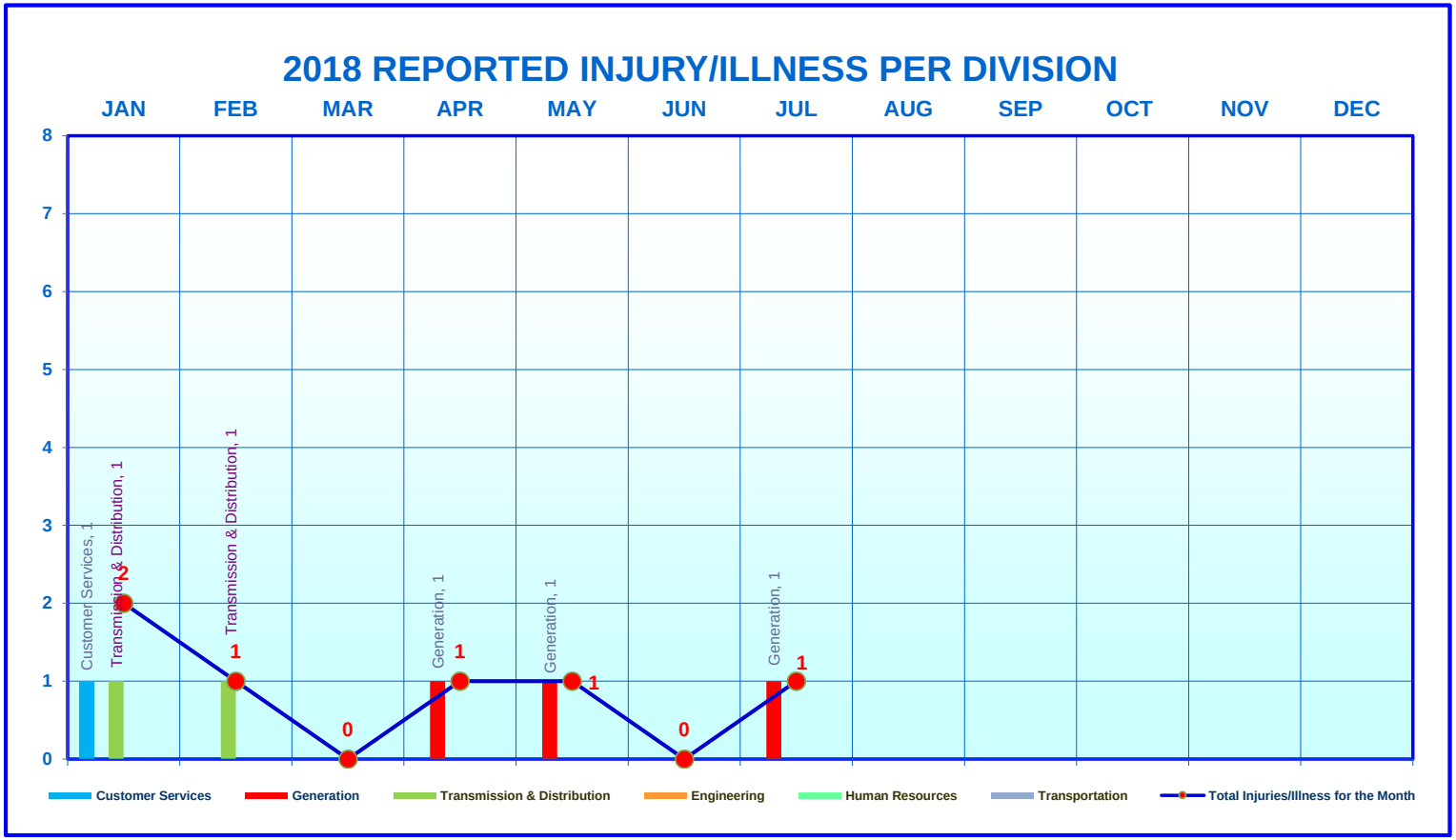


	Oct FY18	Nov FY18	Dec FY18	Jan FY18	Feb FY18	Mar FY18	Apr FY18	May FY18	Jun FY18	Jul FY18	Aug FY18	Sep FY18
T&D Actuals	$9,247,484	$9,708,159	$9,727,545	$9,602,854	$9,732,611	$9,834,034	$9,762,202	$9,743,801	$9,805,619	$10,032,87	$9,969,776	
Cabras 1&2 Actuals	$1,838,876	$1,836,965	$1,834,553	$1,842,443	$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

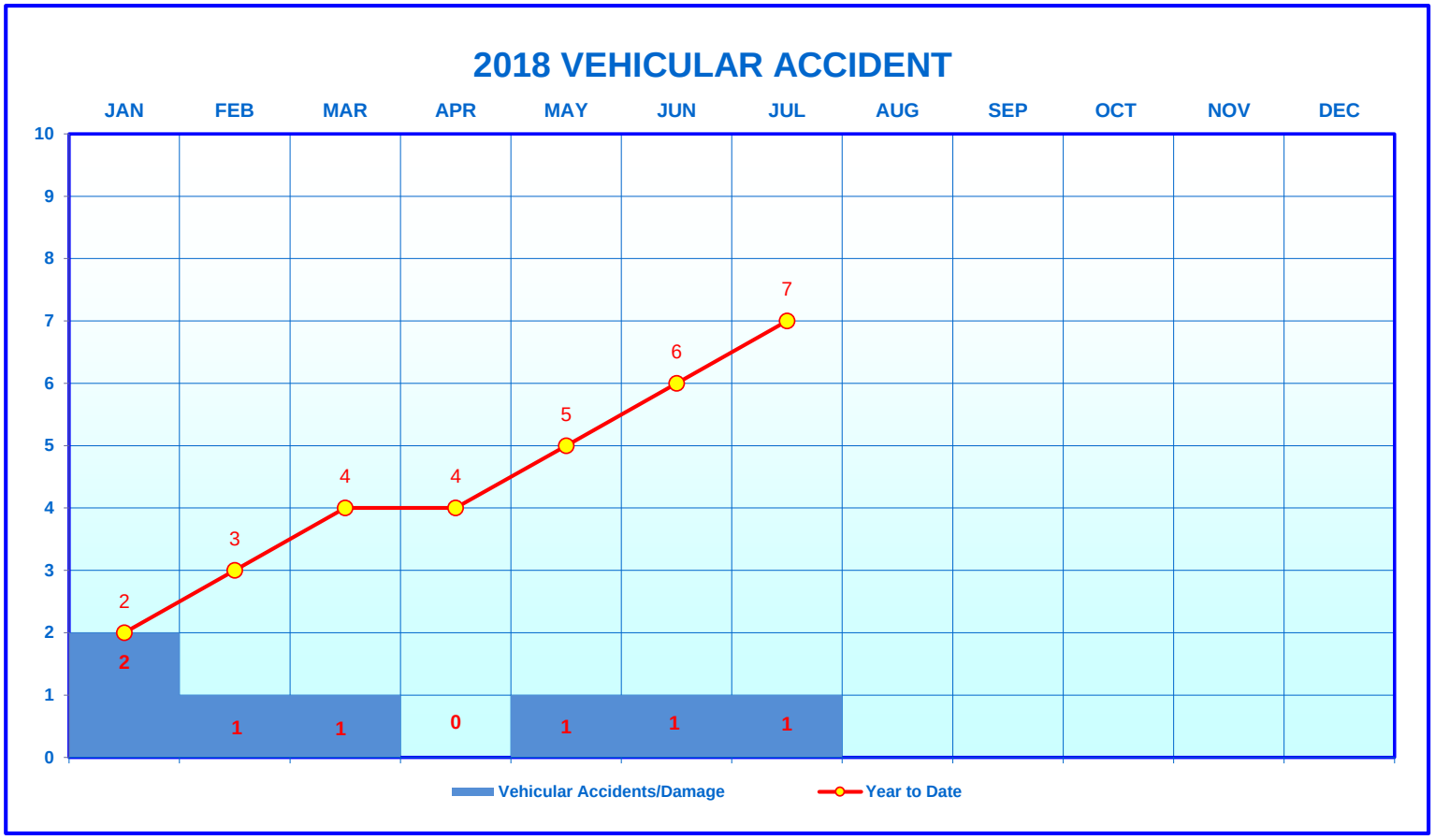


SAFETY DIVISION MONTHLY REPORT



	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



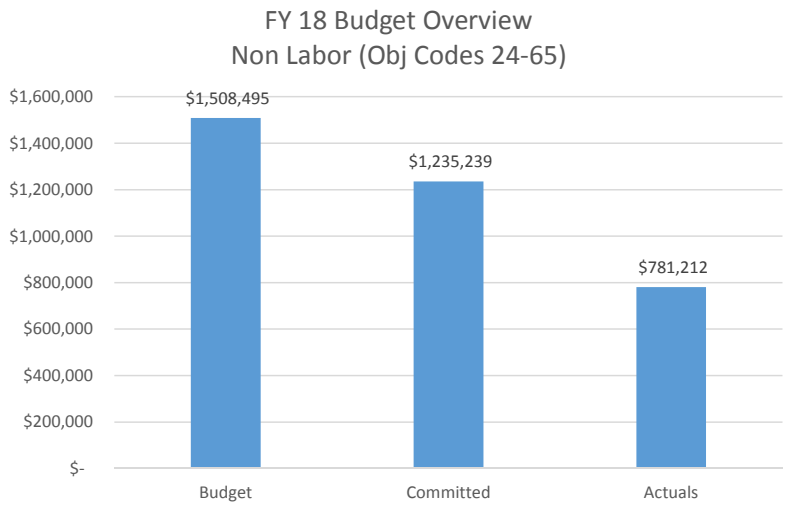
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Vehicular Accidents/Damage	2	1	1	0	1	1	1					
Year to Date	2	3	4	4	5	6	7					

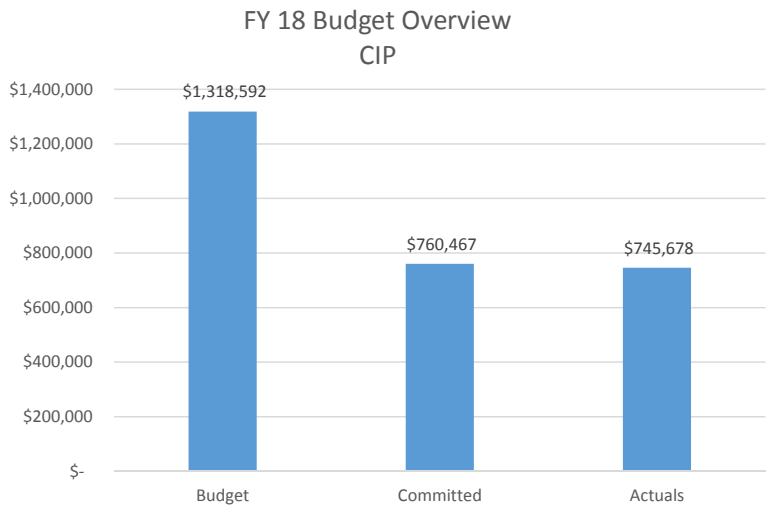
Accidents attributed to Employee fault	1	0	1	0	1	0	1					

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

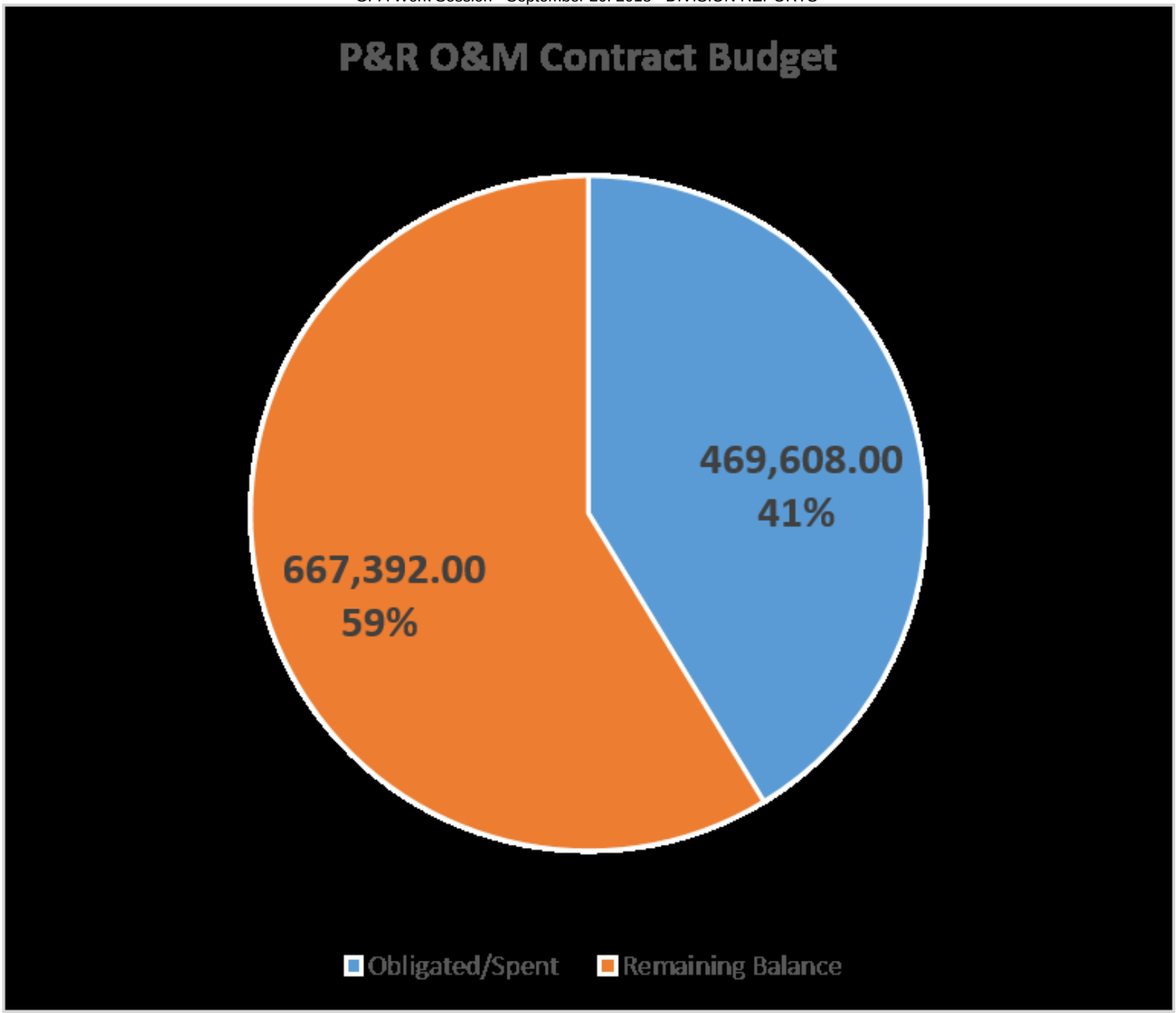
- GPA-RFP-18-007 Annual Emission Testing – Committee Accepted Best and Final Offer
- GPA RFP-18-008 CEMS and RICE MACT O&M – Committee determined most qualified bidder and requested and reviewed price proposal. Clarification Letter and Counter Proposal was submitted to Procurement for bidder action.
- 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

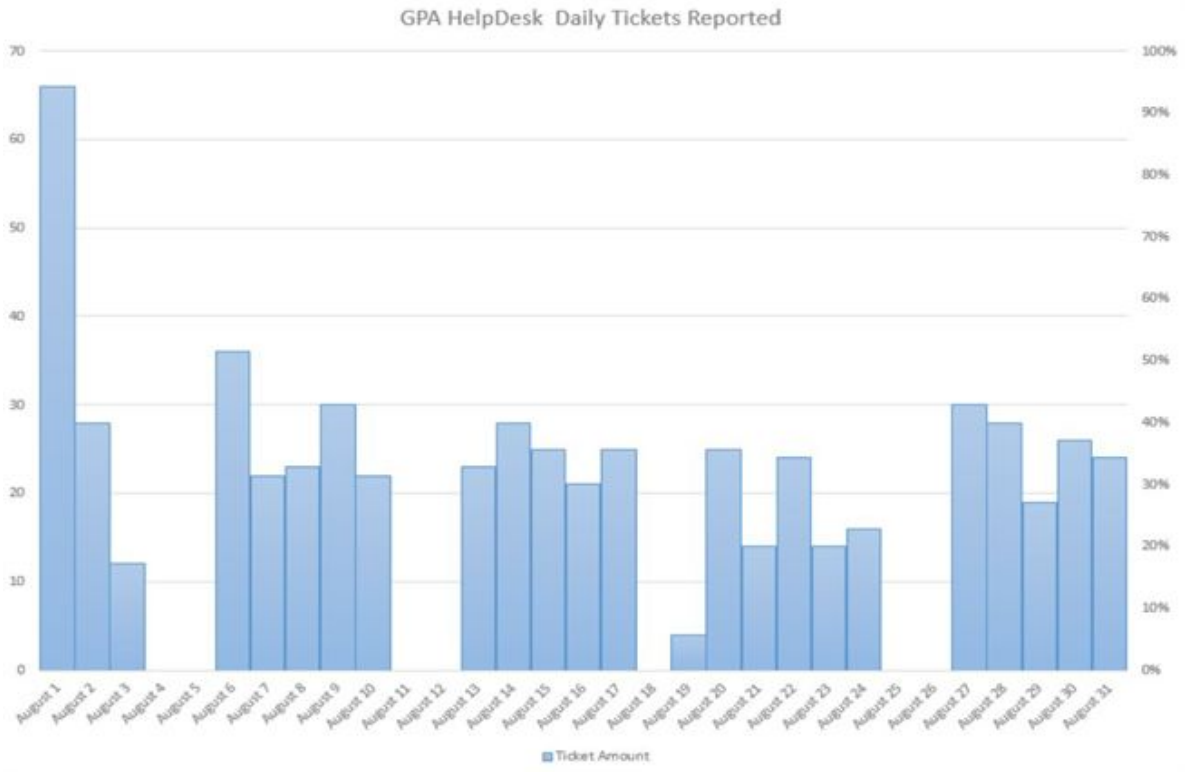
SUMMARY:

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).

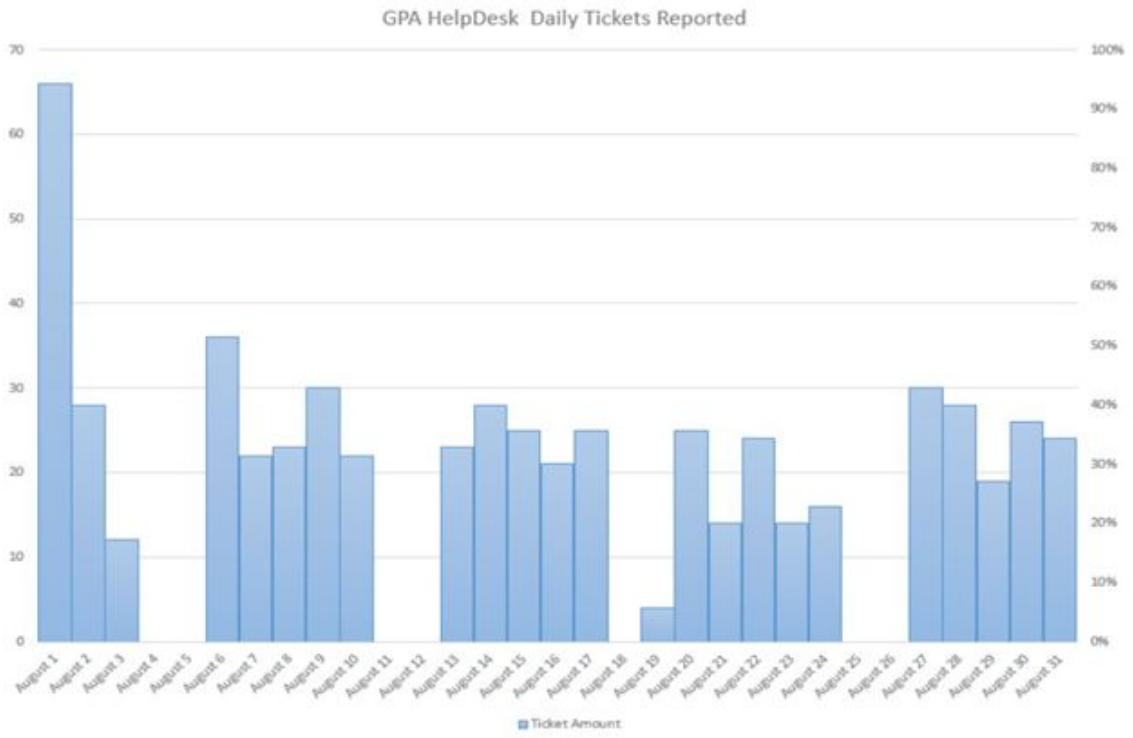
INCIDENT CALL SUMMARY:

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



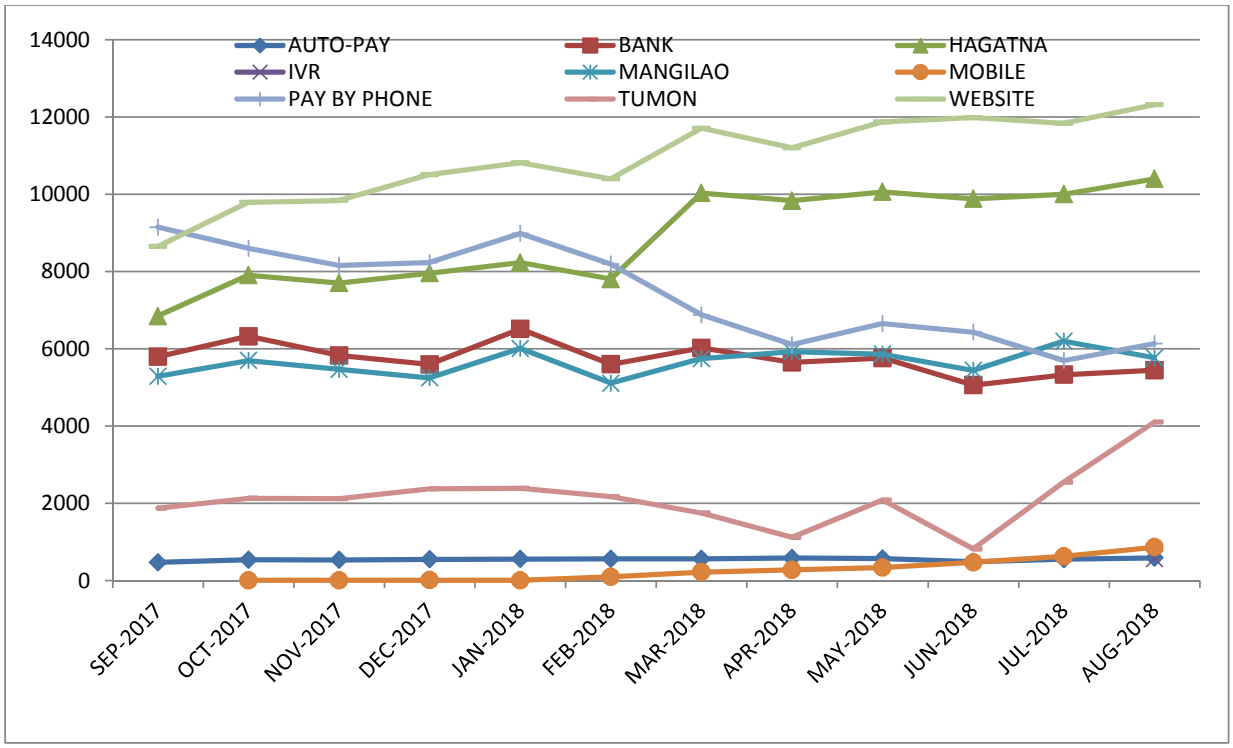
For August 2018, Computer Services responded to 585 help desk calls from GPA internal and external customers. Breakdown as follows:

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**		

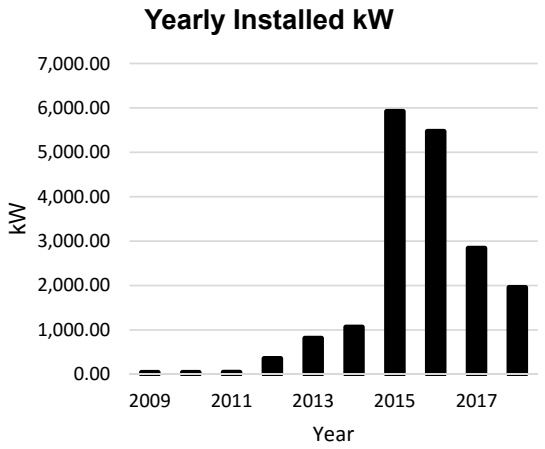
Feeders highlighted in red indicates renewable energy capacity has exceeded 25% of minimum daytime load.

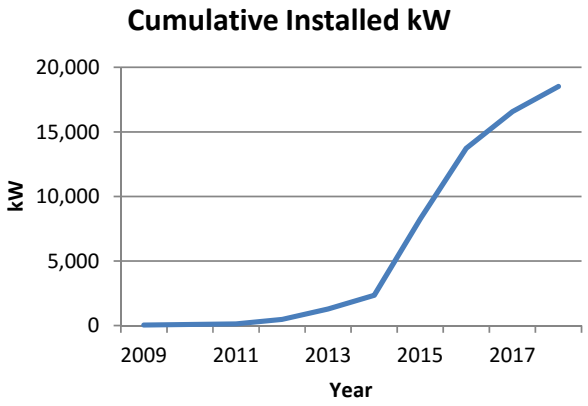
Feeders highlighted in yellow indicates renewable energy capacity has reached 15% to 24% of minimum daytime load.

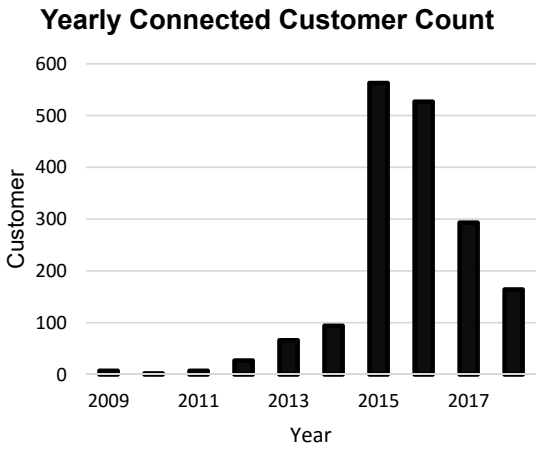
NET METERING
AUGUST 2018

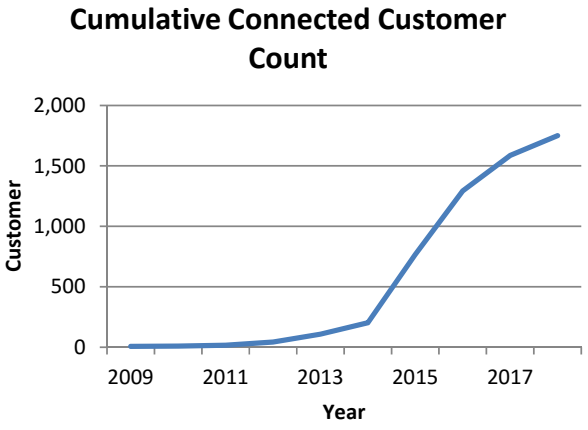
Installed kW by Year		
Year	Total	Cumulative
2009	39.46	39.46
2010	39.20	78.66
2011	43.61	122.27
2012	354.61	476.88
2013	808.15	1,285.03
2014	1,060.04	2,345.07
2015	5,920.39	8,265.46
2016	5,468.49	13,733.94
2017	2,836.10	16,570.04
2018	1,952.08	18,522.12
Grand Total	18,522.12	

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**

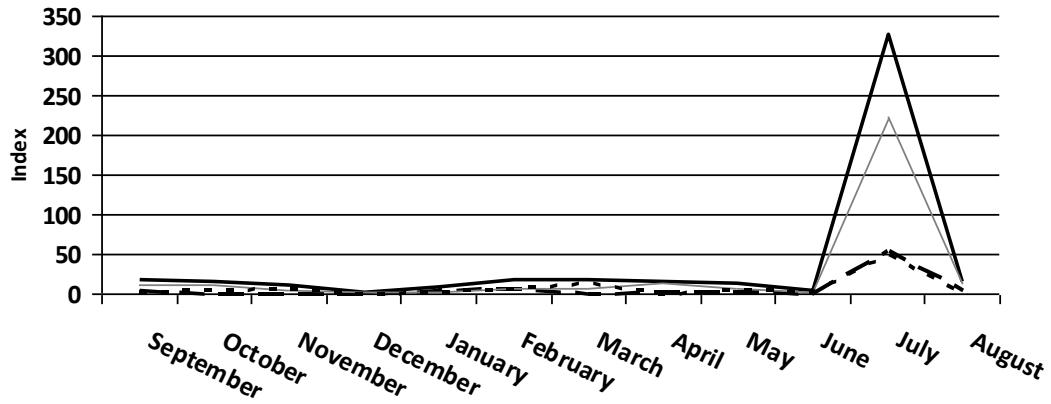
All Expenses – Fiscal Year

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)



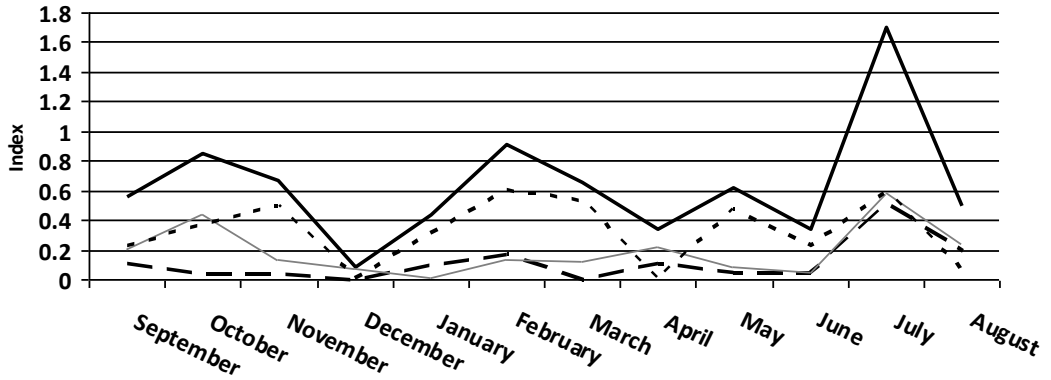
ALL

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)



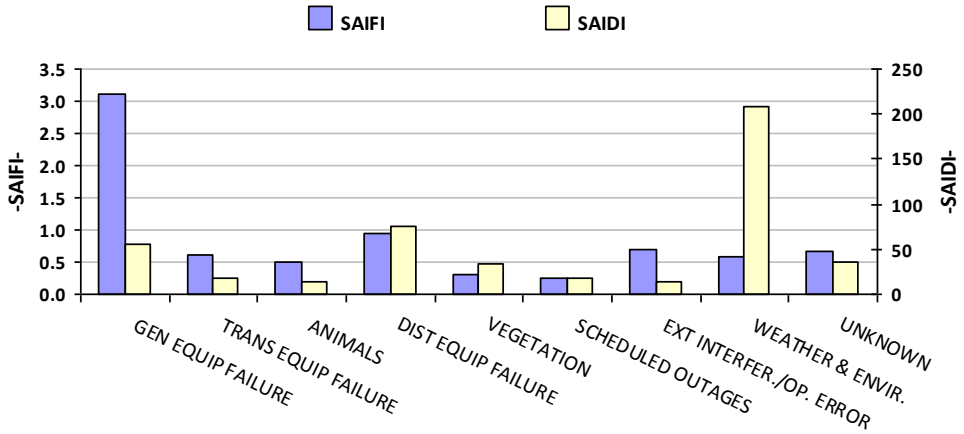
ALL

GEN=3.95 ↓
(4.53)

TRANS=1.39 ↑
(1.34)

DIST=2.30 ↓
(2.38)

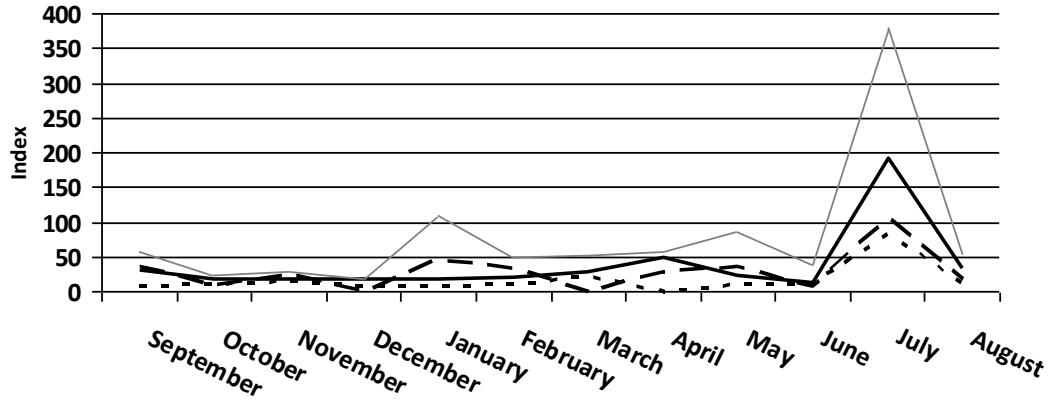
(Item 1.9) 12-Month Cause Contributions to Reliability



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)



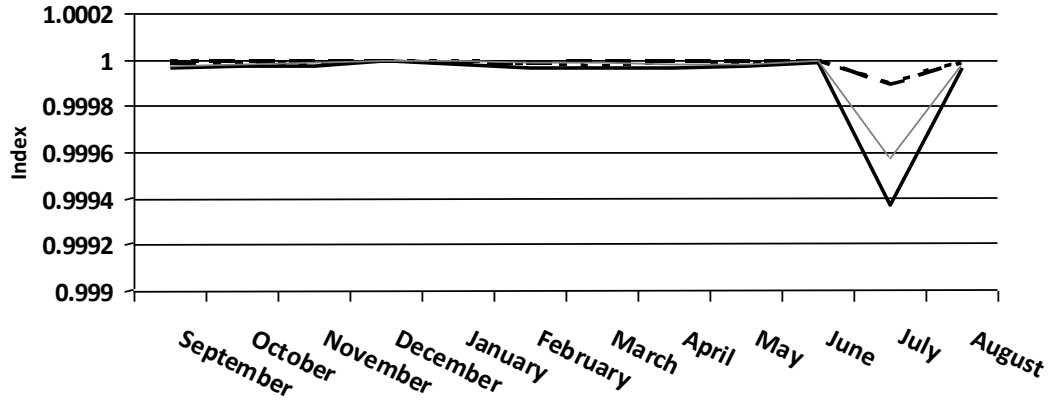
ALL

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
(0.9998) UNC*

TRANS=0.9998
(0.9998) UNC*

DIST=0.9994
(0.9994) UNC*

(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