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To: 34th Guam Legislature Clerks <clerks@guamlegislature.org>
Cc: Rennae Meno <rennae@guamlegislature.org>

Hafa adai Clerks: Attachments of meetings for the Consolidated Utilities Commission will be provided on flash drive for M&C GL34-17-806 to GL34-17-816

8/2/2017	8/2/2017	Consolidated Commission on Uitlities	CCU Meeting 7/16/17*	34-17-806
8/2/2017	8/2/2017	Consolidated Commission on Uitlities	CCU Meeting 5/23/17*	34-17-807
8/2/2017	8/2/2017	Consolidated Commission on Uitlities	CCU Meeting 4/18/17*	34-17-808
8/2/2017	8/2/2017	Consolidated Commission on Uitlities	CCU Meeting 6/6/17*	34-17-809
8/2/2017	8/2/2017	Consolidated Commission on Uitlities	CCU Meeting 3/21/17*	34-17-810
8/2/2017	8/2/2017	Consolidated Commission on Uitlities	CCU Meeting 2/21/17*	34-17-811
8/2/2017	8/2/2017	Consolidated Commission on Uitlities	CCU Meeting 1/24/17*	34-17-812
8/2/2017	8/2/2017	Consolidated Commission on Uitlities	CCU Meeting 1/12/17*	34-17-813
8/2/2017	8/2/2017	Consolidated Commission on Uitlities	CCU Meeting 12/6/16*	34-17-814
8/2/2017	8/2/2017	Consolidated Commission on Uitlities	CCU Meeitng11/22/16*	34-17-815
8/2/2017	8/2/2017	Consolidated Commission on Uitlities	CCU Meeting 10/25/16*	34-17-816

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OFFICE OF SPEAKER BENJAMIN J.F. CRUZ

Committee on Appropriations and Adjudication

I Mina'trentai Kuattro na Liheslaturan Guåhan

Guam Congress Building | 163 Chalan Santo Papa | Hagatna, GU 96910

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Speaker Benjamin J.F. Cruz

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CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority • Guam Waterworks Authority
P.O.BOX 2977 • Agana,Guam 96932

Regular Board Meeting
CCU Conference Room, Gloria B. Nelson Public Service Building
5:30 p.m., November 22, 2016

AGENDA

1. CALL TO ORDER

2. APPROVAL OF MINUTES

3. COMMUNICATIONS
   - 3.1 Public Comments (2 min. per person)

4. NEW BUSINESS
   - 4.1 GPA
   - 4.1.1 GM Report Update
   - 4.1.2 Financials
   - 4.1.3 Resolution 2016-65 Request for Approval to Increase the 3-Year Contract Amount for Supply of Diesel Fuel Oil No. 2 for GPA Power Plants
   - 4.1.4 Resolution 2016-66 Relative to Authorizing Management to Acquire Harmon Property for New Generation Plant
   - 4.1.5 Resolution 2016-67 Relative to Amending the Classification Standards of the Assistant General Manager, Administration Position
   - 4.1.6 Resolution 2016-68 Request Authorization for Cabras 3&4 Plant Cleaning and Unit 3 Engine Cleaning
   - 4.1.7 Resolution 2016-69 Request Authorization for Cabras 4 Engine and Auxiliary Removal Inclusive of Generator Dismantling
   - 4.1.8 Resolution 2016-70 Authorizing Expenditure for Architectural Engineering & Construction Mgmt. Svc.
   - 4.1.9 Resolution 2016-71 Authorizing Extension of Performance Mgmt. Contract for Cabras 3 Plant

   - 4.2 GWA
   - 4.2.1 GM Report Update
   - 4.2.2 Financials
   - 4.2.3 Resolution No. 03-FY2017 Relative to Ratification of Services Provided by Hawaiian Rock
   - 4.2.4 Resolution No. 06-FY2017 Relative to Ratification of Services Provided by Allied Pacific Drilling, Inc.
   - 4.2.5 Resolution No. 07-FY2017 Relative to Approval of the Guam Waterworks Authority's 2016-2020 Updated Capital Improvements Plan for the Purposes of Planning and Executing Projects in the Near Term

5. OLD BUSINESS

6. ANNOUNCEMENTS
   - 6.1 Next CCU Meetings: CCU Meeting - December 6th

7. ADJOURNMENT

CONSOLIDATED
COMMISSION ON UTILITIES
Guam Power Authority • Guam Waterworks Authority
P.O.BOX 2977 • Agana,Guam 96932

Regular Board Meeting
CCU Conference Room, Gloria B. Nelson Public Service Building
5:30 p.m., October 25, 2016

MINUTES

1. CALL TO ORDER

Chairman Duenas called the Regular CCU Meeting of October 25, 2016 to order at 5:16 p.m. He announced that three (4) Commissioners were present and there was a quorum. Those present include:

Commissioners:

Joseph T. Duenas	CCU Chairman
Francis Santos	CCU Vice Chairman
George Bamba	CCU Secretary
Simon Sanchez	Member

Executive Mgmt.:

John Benavente	GM / GPA
Miguel Bordallo	GM / GWA
Melinda Camacho	AGM Operations / GPA
John Kim	CFO / GPA
Greg Cruz	CFO / GWA
Graham Botha	Staff Attorney / GPA
Kelly Clark	Staff Attorney / GWA

Management & Staff:

Paul Kemp	AGM Compliance & Safety / GWA
Tom Cruz	Chief Engineer / GWA
John Cruz	SPORD Manager / GPA
Tony Chargualaf	Production & Treatment / GWA
Art Perez	PIO / GPA
Kathy Beleno	Mgmt. Analyst / GWA Ex. Office
Joyce Sayama	Mgmt. Analyst / GPA Ex. Office
Lou Sablan	Board Secretary / CCU

Guest:

Angelica Perez	AM Insurance
Annmarie Muna	AM Insurance
Andy Nivens	PUC
Nestor Licanto	KUAM
Nick Manley	HDR
Aaron Meilleur	HDR
James Margrave	AMCC Foster Wheeler

Kurt Biltz	Brown & Caldwell
John O'Conner	Guam Post

2. APPROVAL OF MINUTES

The Minutes of September 27, 2016 was presented for approval.

It was moved by Comm. Santos and seconded by Comm. Bamba to approve the Minutes subject to verification and written correction. There was no further discussion or objection and the motion and passed

3. COMMUNICATIONS

3.1 Public Comments - None

4. NEW BUSINESS

4.1 GWA

4.1.1 GM Report Update

GM Bordallo said there was not further update from the GM Report given at the GWA Work Session last week. Comm. Sanchez asked about the SDC Charge and requested if at the next Work Session management can update the Commission on a proposed spending plan. The CCU thinks this is valid request because they want to know where the funds are going to be spent. Comm. Bamba is especially interested to know if management plans to spend some on court ordered projects. Comm. Duenas said upgrading water wells is another good use of funds because our current wells are over capacity. GWA's GM said he will give an update at the next GWA work session

4.1.2 Financials

CFO Cruz reported that there were some minor reclassifications in the financial statement that did not affect bottom line. $28M recorded as net income - caution board that not all are cash 15% is non cash item; federal grants are for capital projects cannot be spent anywhere else.

Comm. Sanchez said at next work session he would like management to prepare a comparison between 2016 performance and 2017 projection. 2013 rate plan was designed to reflect needs of the agency at that time and it seems that GWA is experiencing a very positive cash flow. His objective with the study is to revisit the rate increase for next year to determine if the increase is still needed - wants to see what did the 5year rate plan project for 2017 vs. actuals. This plan was presented to the PUC to generate the cash flow to allow for … if 2017 is way above plan then wants to see if possible to stay the next rate increase.

Comm. Bamba added that since its adoption what were the projected debt ratios and how do actuals compare

Comm. Duenas commented that the Commission / management were just beginning to think about thereorg at the time 5year base rate was implemented at the end of the day we want to take GWA to a better place relative to asset management where we maintain everything we put in the ground; GM needs to have input on this too relative to his plans and his vision for GWA

Relative to Budget vs. actuals Comm. Santos commented that the budget for materials was $5M but according to the financials only $1.2M was spent, he asked the CFO if this means we did not buy something. Other areas of the report that was questioned was Miscellaneous - $4M v. 820k; Page 38 Computer category - GC said this is the new CC&B; Contractual Expense - $5.5 vs 1.3M

Comm. Sanchez commented that the Budget is an educated guess and if we didn't spend it 2 things happened either we have a lousy budget or the world changed and we didn't need to purchase that item anymore. Wants to know if we can give ratepayers a relief without hurting the company

4.1.3 Resolution No. 01-FY2017 Approval of the Baza Gardens Wastewater Cross-Island Pumping and Conveyance Phase I Construction Project

Resolution 01-FY2017 was a matter that was poll voted and it was presented today for ratification. The objective of the overall intent of the "Baza Gardens Wastewater Cross Island Pumping and Conveyance" project is to convey/pump the wastewater treated at the Baza Gardens WWTP to the new Agat-Santa Rita WWTP along Route 17 and Route 5.

This construction procurement is Phase I is located along Route 17 closest to Santa Rita, Route 5 and Route 2 which are also in the village of Santa Rita. It is a multiple three phases and which involves constructing one sewer pump station with a design pumping capacity around 550gpm (peak). This request is urgent because it is a Court Ordered project and GWA is required to issue an NTP for construction by October 31, 2016.

The bid proposal amount for Phase I is Seven Million Eight Hundred Eighty Eight Thousand One Hundred Fifty One Dollars and Nineteen Cents ($7,888,151.19). GWA management is also seeking a five percent (5%) contingency of the bid amount or Three Hundred Ninety Four Thousand Four Hundred Seven Dollars and Fifty Six Cents ($394,407.56) which would bring the total authorized funding amount to Eight Million Two Hundred Eight Two Thousand Five Hundred Fifty Eight Dollars and Seventy Five Cents ($8,282,558.75). The funding for this project will be from the 2016 Bond Funds under the line item CIP WW 11-03 "Baza Gardens STP Replacement" and will be completed in 360 days.

Comm. Sanchez motioned to approve Resolution 01-FY2017 and seconded by Comm. Bamba. There was no further discussion or objection and the motion passed.

4.1.4 Resolution No. 02-FY2017 Approval of the Construction Management Services of the Baza Gardens Wastewater Cross-Island Pumping and Conveyance Project

Resolution 02-FY2017 is an accompanying resolution to Resolution 01-FY2017. It was also poll voted and was presented for ratification. This project will provide Construction Management Services for the Baza Gardens Wastewater Cross-Island Pumping and Conveyance System "multiple phased" construction on behalf of GWA. The overall intent of the project is to convey/pump the un-treated wastewater collected from the Baza Gardens WWTP to the new Agat-Santa Rita WWTP along Route 17 and Route 5.

The CM service has multiple phases. Phase I covers the construction management for construction of one sewer pump station (near Aplacho Bridge), installation of 14,643 feet of gravity and 2,767 feet of force main along Route 17 (Cross Island). This phase is approximately one third of the overall project requirements. Construction of Phase II, III & IV is the conversion of the existing Baza Gardens WWTP site to a pretreatment facility that includes headworks (screening and grit removal), Equalization Tank 1 & 2, Baza Pump Station, Operational Structures, as well as a Pump Station 2 (located near Windward Hills Country Club) and laying of force main and gravity line along Route 17.

Phase I construction is expected to be completed by October 26, 2017, with construction cost amounting to $7,888,151.19. Phase II construction is expected to be bid before end of November 2016 with the remaining phases being bid out within three months after the previous phase.

Construction Management Services need to be secured as early as possible to provide better communication and coordination of efforts at the start of the construction activities. The urgency for this project is that GWA is required to issue an NTP for construction by October 31, 2016 thus having a CM at the start of construction is necessary. The engineering consultant team that was ranked highest during the procurement process, and which GWA is currently in negotiations with, is SSFM International.

The project is intended to comply with the 2011 USEPA Court Order requirements under Paragraph 13 but which GWA has established deadlines under Paragraph 14. The CM services for Phase I is anticipated to be fully completed by October 26, 2017. Phase II, III & IV by April 30, 2018.

The CM services contract is currently being negotiated with a not to exceed amount of $2,6100,000. GWA management is also seeking a 10% contingency to the "not to exceed" amount of $261,000 (not to exceed $2.871M authorized funding total) and the funding for this project will be from the 2016 Bond Funds under the line items CIP WW 11-03 "Baza Gardens STP Replacement".

Comm. Sanchez motioned to approve Resolution 02-FY2016; Comm. Bamba seconded. There was no further discussion or objection and the motion passed 4 / 1.

4.1.5 Resolution No. 04-FY2017 Relative to Supporting the 2016 MOU Between GWA/ DoD & DoN

The Guam Waterworks Authority (GWA) has been working with the Department of the Defense, Department of the Navy to update the 2010 MOU between the GWA and the Department of the Navy Relative to the 2010 Military Build-up. The purpose of this updated MOU is to define the relationship between Joint Region Marianas (JRM), Naval Facilities Engineering Command Marianas (NAVFAC Marianas), Guam Waterworks Authority (GWA), and the Consolidated Commission on Utilities (CCU), while developing the "One-Guam" vision for water and wastewater needs expected to increase as a result of military and civilian population growth. The updated MOU establishes objectives relating to the implementation of water and wastewater utility service solutions devised to address the projected additional requirements and/or re-capitalization efforts needed and covers issues not identified in the original 2010 MOU. This MOU will be reviewed every 5 years.

Comm. Sanchez said he would like to amend section 2 of the resolution to say the CCU authorizes the Chairman and GM to execute the updated MOU and leave the date open until all parties have signed. Comm. Bamba seconded. The amendment passed.

In discussion. Comm. Sanchez commented that we should wait to sign this MOU until the Navy / DoD approves it stating it is awkward to approve a document without seeing the final draft. It was decided to make the amendments and keep the matter open pending final draft and then if needed bring to a future meeting for ratification or poll vote, if necessary with official CCU signatures.

On the main resolution, it was tabled subject to poll vote. The Commission asked management to put the changes in and table the resolution.

4.1.6 Resolution No. 05-FY2017 Relative to Change Order No. 7 for the Chlorine Residual Analyzer/Electrical Upgrade Construction Project

This resolution requests the CCU to approve a change order to an existing contract with Asanuma Corporation work necessary to meet Groundwater Rule ("GWR") and Paragraph 22 of the Court Order for several of GWA's production wells. GWA initially intended to address holistically the chlorine residual analyzer requirement and electrical upgrades at all production wells but was not able to do so at the time of the original award due to funding limitation. But due to the additional funding coming available through the 2016 bond GWA now has an opportunity to complete the project scope by change ordering in the remaining work not initially awarded as well as work revealed necessary but related to the original scope.

The project involves production wells throughout the northern half of Guam. In general, 18 well sites will see electrical improvements, 15 well sites require roof ventilation needed for cool VFD equipment, 16 wells site require defective chlorine residual analyzers to be replaced and well F-13 requires installation of a VFD.

Asanuma Corporation submitted a change order proposal for the scope noted in the amount of Eight Hundred Forty Thousand Dollars ($840,000.00). The additional work will take six (6) months to complete from NTP for Change Order and the funding source for the Change Order will be from 2016 bond funds slated for CIP funds.

Comm. Bamba motioned to approve Resolution 05-FY2016; Comm. Santos seconded. There was no further discussion or objection and the motion passed.

4.2 GPA

4.2.1 GM Report Update

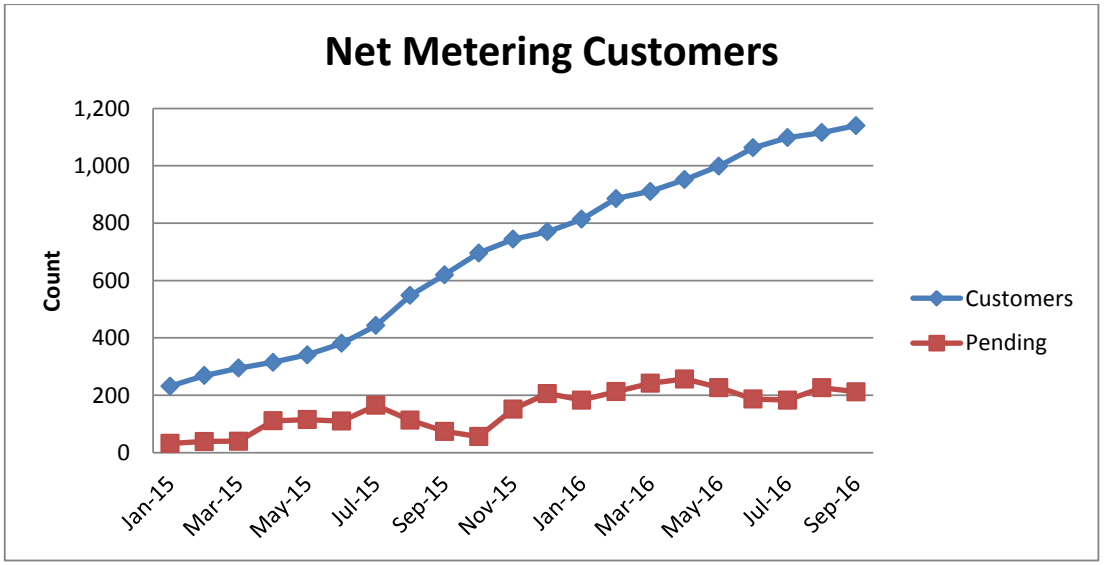
GM Benavente gave his GM report:

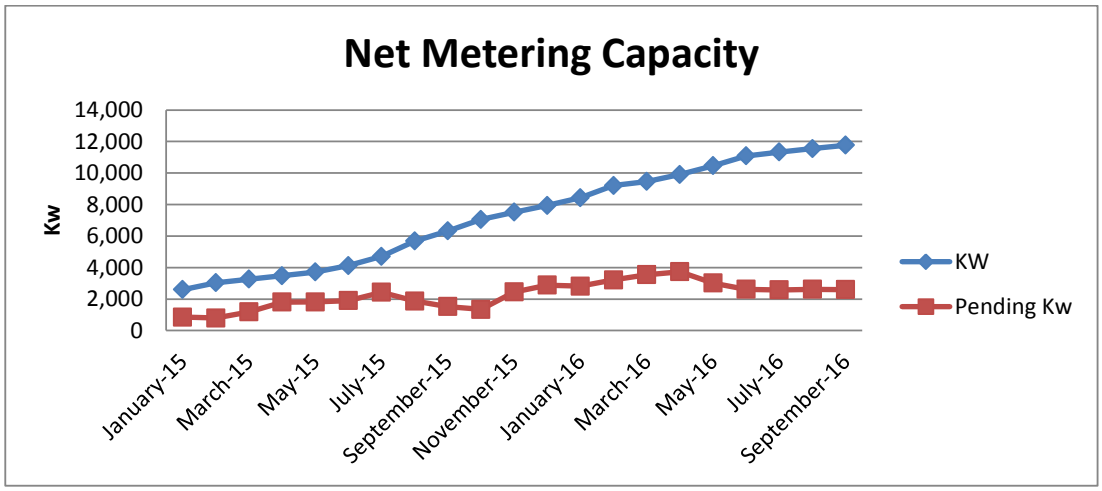
1. **Net Metering: Updated information on NEM including growth profile.**

Net Metering Summary Ending September 2016:

Description:	**Count**	**Kw**	
Active	**1,140**	**11,766**	
Pending	212	2,602	
Totals:	1,352	14,368	
Service:	**Count**	**KW**	**Kw/Customer**
Residential	**1,073**	**9,586**	**8.9**
Others	67	2,180	32.5
Total:	1,140	11,766	10.3
% Residential	**94.1%**	**81.5%**	
Estimated Revenue Impact:	**$2,200,794**		

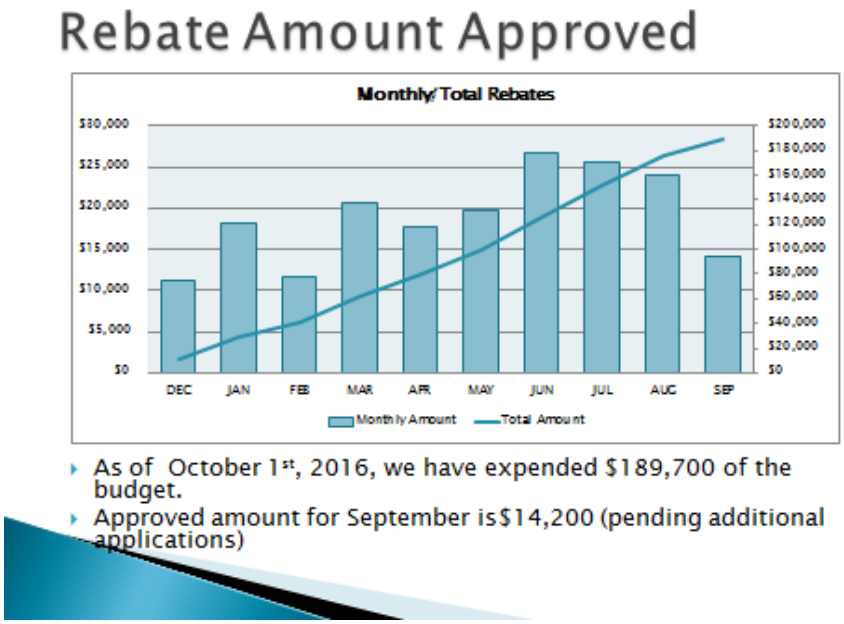
NEMS Renewables Work Session is scheduled for Thursday 10/27/2016 from 10:00 am – 11:30 am here at the CCU Conference Room.





The above does not include the GDOE project for the schools. We have not heard back from either the GDOE or it power purchase agreement partner since we sent them the CCU resolution approving the project. The GDOE project consists of four (4) schools totaling about 3,500 Kw of solar PV capacity.

2. DSM Program Update:



Comm. Sanchez wanted update on revision of this rebate program which hopefully will include residential batteries. He said would management be willing to include batteries and what is the value of such a rebate. He said HICO and Kauai are both doing pilot projects and GPA should consider doing something similar. The Chairman said the CCU wants to broaden this program and asked management to consider working on this. He said to put all the variables in play. Comm. Sanchez said DMS is a perfect tool to do this. GPA GM Benavente said he will report back to the CCU in November.

3. **Key Procurements Underway:**
   Phase II Renewables Bid: Below is a list of those Un-Priced Technical Proposals received for MS GPA-070-16, Renewable Energy Resource Phase II:
   1. Hecate Energy
   2. Hanwha Energy Corp.
   3. Terra Energy
   4. Global Sourcing USA
   5. Sean/NexGeo Consortium
   6. LSIS Co. Ltd.
   7. Terra Solar, LLC
   8. Green Globe Solutions
   9. Pacific Progress LLC
   10. Quantum/Guam Clean Energy
   11. Solar City
   12. LGCNS
       a. Notification date of short list November 16th, 2016
       b. Priced proposal due on December 20th, 2016.
       c. Notification of successful bidder(s) expected January 26th, 2017.

   Chairman wanted confirmation on the MW being considered and the GM said about 30 MG blocks. Comm. Sanchez was curious what technology was included by the 12 proponents. GM Benavente said he would summarize this information and report back to the Commission. Some of the criteria mentioned for short listed proponents include price, experience, storage and technology, acquiring of property and ability for interconnection.

4. **Public Hearing on Bill 361-33 for property for the Energy Storage System for NRG Solar PV plant:**
   a. Bill 361-33, An act to transfer a portion of Lot 421-R26, tentatively identified as "portion 421-77" Municipality of Talofofo with an area of 2,100± square meters from the Chamorro Land Trust inventory to the Guam Power Authority for the purpose of expanding the Talofofo substation is being heard tomorrow Wednesday October 26th at 9:30am at the Legislature.
   b. Additionally, the Legislature would be conducting an information hearing on GPA at same time.

5. **Waste Oil Burning at the Cabras Steam Plant:** GPA has put a stop on burning waste oil at the Cabras 1&2 steam plant about 3 months ago. However, GPA will again begin accepting waste oil for a period of six months in order to allow the private sector some time to find alternate ways of disposing of the waste oil.
   a. The program started back in the late eighties and was deemed at the time to be a short term solution.
   b. Sludge built up on boiler tubes from waste oil burning resulting in some boiler tube leaks
   c. Cabras 1&2 are deemed critical base load units now that the Cabras 3&4 units are not available.
   d. The reliability of the steam units are crucial to providing reliable power over the next few years until the new combined cycle units are commissioned.
   e. When the Cabras steam plant is retired, GPA can't burn the fuel in other units and therefore alternate solutions would need to be implemented anyways.

   Chairman said this is a community service as we collect waste oil and burn it off to turn to steam. Comm. Sanchez said to work with Art Perez to get the word out and standardize GPA's exit strategy. The Community is asking for enough time to find other alternatives. Chairman said GPA needs to

involve all the oil stakeholders for proper notification. GM Benavente said possibly this program will end in about 6 mopnths.

6. **System Capacity Recovery Plan Update:**
   - The Macheche combustion turbine replacement unit should be on island by October 31st. The unit is targeted to be commissioned by November 7th thereby adding about 22MW of reserve capacity.
   - The Dededo Combustion Turbine Plant is now programmed to be commissioned by March 31st, 2017. All the long lead time equipment has been ordered. The plant would add 40 MW of reserve capacity into the system.
   - The following updates our generation capacity recovery schedule:

IWPS Capacity Recovery Plan (Updated):

24-Oct-16

Date	Description (IWPS Capacity)	MW Added	System MW	Peak MW	Reserve MW
24-Oct-16	**Current**		**319**	**255**	**64**
26-Oct-16	MEC 9 Liner Repair Completed	10	329	255	74
7-Nov-16	Macheche CT Commissioned	22	351	255	96
28-Feb-17	Dededo CT 2 Commissioned	20	371	255	116
31-Mar-17	Dededo CT 1 Commissioned	20	391	255	136

It was clarified that these engines are like aircraft engines and they are easier to replace and put back to service. The Chairman pointed out that the Macheche and Yigo plants are aero dirivities and cost a little more but more efficient. Dededo 1 & 2 are industrial types. Comm. Bamba commented relative to expenditures and wanted a total for all. GM Benvente said about $14Million and GPA will gain 80MW at the end of the day. Chairman Joey reminded GM Benavente about the Warsilla plant in Manengon to confirm if GPA will own it at the end of the contract period.

7. **Public Commission on Utilities public hearings:** The PUC conducted public hearings on the new generation plant and the streetlight tariff change this month. GPA attended the hearings as well as our Chairman.

   Comm. Sanchez asked if there was any community comment of note; GM responded that there was really very little and mostly clarifying questions. There was no public objection.

8. **Public Commission on Utilities Dockets:** The following dockets are on the agenda for this Thursday's PUC meeting.
   - GPA Docket 16-01, GPA's Streetlight Rate Schedule F and H Filing, ALJ Report, and Proposed Order
   - GPA Docket 15-05, Petition for Approval of Procurement of New Generation Combined Cycle Units, ALJ Report, and Proposed Order
   - GPA Docket 17-01, Petition for Approval of SCADA Contract, PUC Counsel Report, and Proposed Order
   - GPA Docket 17-02, Petition for Approval of the Cabras 1 Overhaul, PUC Counsel Report, and Proposed Order
   - GPA Docket 17-03, Petition for Approval of Diesel Peaking Units Overhaul, PUC Counsel Report, and Proposed Order
   - GPA Docket 17-04, Petition for Approval of Procurement of PMC for Fuel Farm, PUC Counsel Report, and Proposed Order

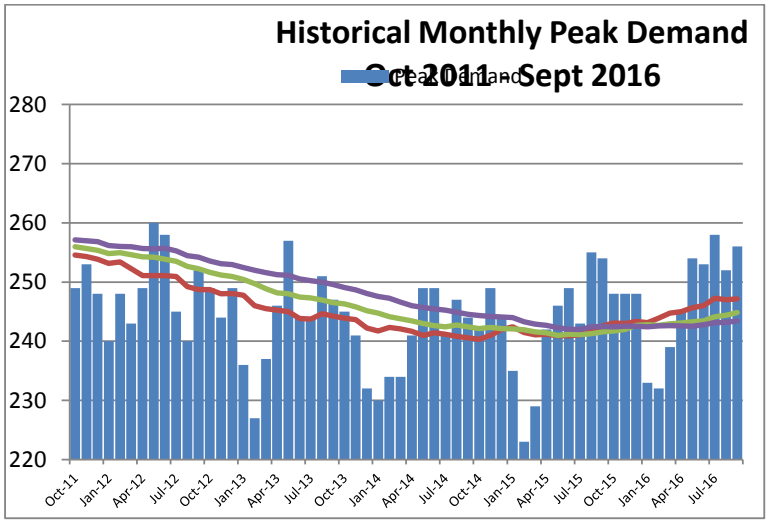
- GPA Docket 17-05, Petition for Approval of Contract relative to Engineering & Technical Services Supporting GPA's Resource Plan, PUC Counsel Report, and Proposed Order
- GPA Docket 17-06, Petition for Approval of GPA-Navy Renewables Study, PUC Counsel Report, and Proposed Order
- GPA Docket 17-07, GPA Petition for Extension of Property Insurance Contract, PUC Counsel Report, and Proposed Order

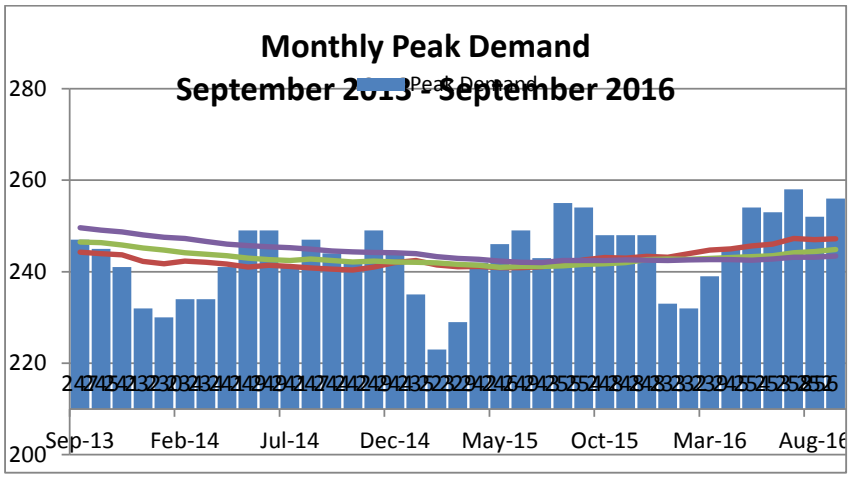
9. **Customer Payment Demographics:** The following provides the information on customer payments as requested by Commissioner Santos.

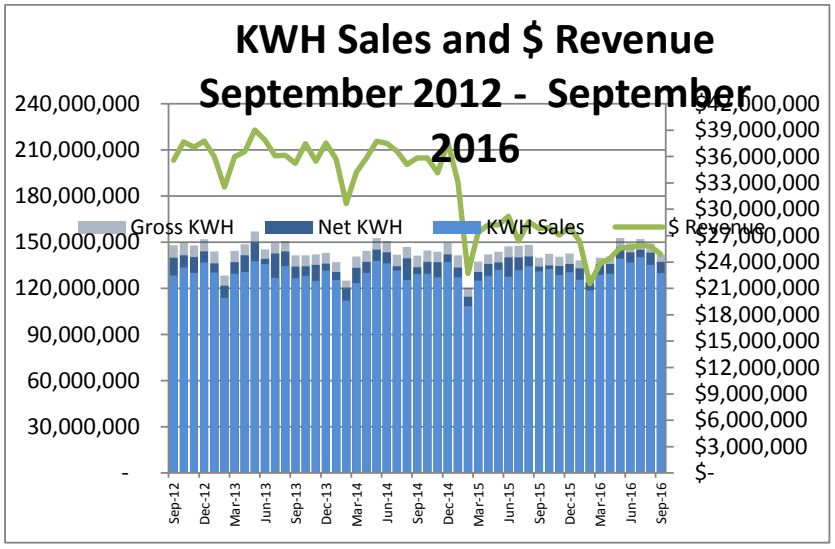
Demographics of Customer Payment:				
		Monthly Customer Total		
BOOK NBR	**PAYMENT LOCATI**	**16-Jul**	**16-Aug**	**16-Sep**
400-459	HAGATNA	2,383	2,574	2,458
400-459	FADIAN	1,334	1,456	1,365
151-169/300-370/460-468	UPPER TUMON	6,753	7,724	7,371
400-459 (Umatac, Malessao, Inarajan, Malojloj, Talofofo, Ipan, Yona, Windward Hills, Santa Rita, Agat, Nimitz Hill				
151 – 169 (Tamuning, Upper Tamuning)				
300 – 370 (Dededo, Yigo, Latte Heights)				
460 -468 (Tumon, Upper Tumon, Harmon)				

Comm. Santos asked when GPA plan to upgrade the Upper Tumon facility. He added that we need another location in the north in Yigo or Dededo to better serve our customers. Comm. Santos asked John Kim, CFO status on the kiosk concept and he responded that it is still a work in progress and cost is a factor and is trying to source. Chairman Duenas said there is an urgency here and to please give expedient attention to this project.

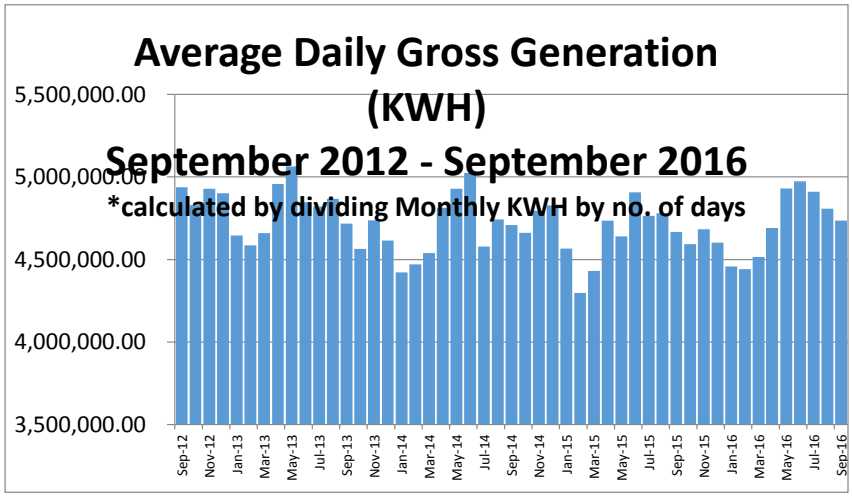
10. Key Performance Indicators graphs:

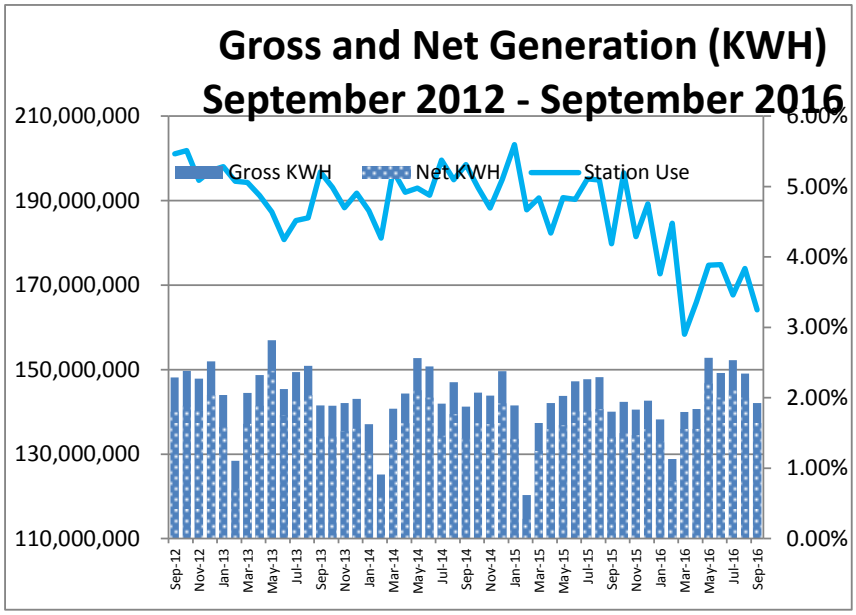


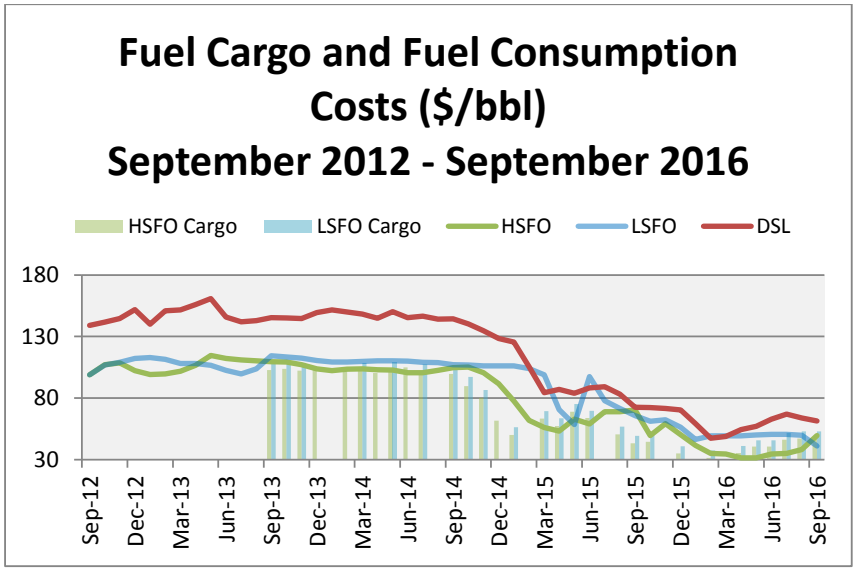


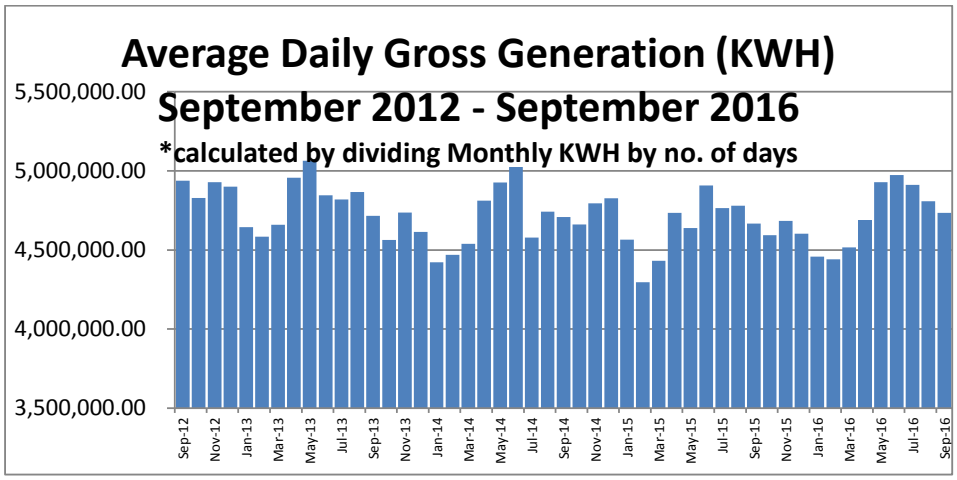


Comm. Sanchez is curious to run some elasticity study on this - lower cost v. consumption. CO Kim said he would work on this.




Gross and Net Generation (KWH)
September 2012 - September 2016
Gross KWH
Net KWH
Station Use
210,000,000
190,000,000
170,000,000
150,000,000
130,000,000
110,000,000
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
Sep-12
Nov-12
Jan-13
Mar-13
May-13
Jul-13
Sep-13
Nov-13
Jan-14
Mar-14
May-14
Jul-14
Sep-14
Nov-14
Jan-15
Mar-15
May-15
Jul-15
Sep-15
Nov-15
Jan-16
Mar-16
May-16
Jul-16
Sep-16


Fuel Cargo and Fuel Consumption
Costs ($/bbl)
September 2012 - September 2016
HSFO Cargo
LSFO Cargo
HSFO
LSFO
DSL
180
130
80
30
Sep-12
Dec-12
Mar-13
Jun-13
Sep-13
Dec-13
Mar-14
Jun-14
Sep-14
Dec-14
Mar-15
Jun-15
Sep-15
Dec-15
Mar-16
Jun-16
Sep-16



4.2.2 Financials

This matter was not dicussed.

4.2.3 Resolution 2016-60 Relative to Approving the Insurance Bid Renewal

The Guam Power Authority's Bond Indenture agreement requires GPA to "secure and maintain property insurance on all facilities constituting the system against risks of loss or damage to the extent that such insurance is obtainable at reasonable cost."

The indenture further requires GPA to carry insurance "of a scope and nature as that usually carried in the industry," and GPA's current Property Insurance policy is set to expire on November 1, 2016. GPA management has been in close communication with its insurance adjuster, broker and underwriters regarding the claim on its property insurance policy for the incident and the effect it has on future premiums.

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 two years; assuming that GPA is now in a position to confirm agreement to these two years, and accordingly will commit to keeping the current policy in place until November 1, 2018.

The property insurance premiums will be $6,450,000 annually for the next two years. An annual savings of $212,309 compared to the present premium. Also, insurers agreed to add Cyber security coverage with $5 million sub-limit. The policy renewal term is for two years from November 1, 2016 until October 31, 2018 and the funding source is GPA revenues

There was discussion on the period being covered by this policy. Legal Counsel said this will cover (2) calendar years Nov. 2016 to Oct. 31, 2018. Comm. Santos said he would like to personally review the actual policy and Ms. Ann Marie Muna / AM Insurance said she would accommodate the request

Comm. Bamba motioned to approve Resolution 2016-60; Comm. Santos seconded. On the motion there was no further discussion or objection and the motion passed.

4.2.4 Resolution 2016-61 Relative to Aggrekko Contract Extension

Cabras 3&4 power plant is still not available and the power system remains short of 78.6 MW of base load capacity placing GPA in the position of having difficulty meeting system demand upon an additional base load maintenance outage or large emergency unit outage. The Authority is interested in pursuing the extension of the (Aggreko) 40 MW Temporary Power Plant Lease Contract for an additional 4 years

with the option to purchase the units to ensure GPA has sufficient and reliable reserves until the commissioning of new baseload units. A summary of lease and rent-to-own options from Aggreko for 30 MW and 40 MW capacities are in Master File and will cost approximately $49.7M.

The Authority plans to use the revenue funds which could be as much as $9M to $12.5M per year for the extension of lease contract based on a 27% capacity factor of the 40 MW plant. In addition GPA is currently working with Aggreko on the required air permit for operations beyond the initial 1 year period.

A lengthy discussion followed regarding the revised proposal on page 141 of Board Books (copy attached here).

REVISED PROPOSAL (10/24):	CURRRENT	2017	2018	2019	2020	4 Year TOTAL
Extension for 40 MW Rent to Own (Per Annum Fixed Fees)	**$ 11,789,832**	**$ 12,991,952**	**$ 9,991,952**	**$ 11,291,952**	**$ 11,491,952**	**$ 45,767,808**
Capacity Charge	*$ 8,308,800*	*$ 6,979,392*	*$ 6,979,392*	*$ 6,979,392*	*$ 6,979,392*	*$ 27,917,568*
Shipping Charge	*$ 1,253,472*					*$ -*
Fixed O&M Charge	*$ 2,227,560*	*$ 2,227,560*	*$ 2,227,560*	*$ 2,227,560*	*$ 2,227,560*	*$ 8,910,240*
Emission Control Charge		*$ 285,000*	*$ 285,000*	*$ 285,000*	*$ 285,000*	*$ 1,140,000*
Emission Control Moblization		*$ 3,000,000*	*$ -*	*$ -*	*$ -*	*$ 3,000,000*
Rent-To-Own		*$ 500,000*	*$ 500,000*	*$ 1,800,000*	*$ 2,000,000*	*$ 4,800,000*
Estimated Energy Charge - Per Annum (Based on current average of 97171 MWH per annum @ $4.4/MWH)		**$ 427,550**	**$ 427,550**	**$ 427,550**	**$ 427,550**	**$ 1,710,201**
Estimated Urea Cost - Per Annum (Based on current average of 97171 MWH per annum @ **$5.8/MWH**)		**$ 563,589**	**$ 563,589**	**$ 563,589**	**$ 563,589**	**$ 2,254,356**
Total Estimate (Per Annum)		**$ 13,983,091**	**$ 10,983,091**	**$ 12,283,091**	**$ 12,483,091**	**$ 49,732,365**
Annual Savings *		$ 9,377,000	$ 9,377,000	$ 9,377,000	$ 9,377,000	$ 37,508,000
Net Annual Costs		$ 4,606,091	$ 1,606,091	$ 2,906,091	$ 3,106,091	$ 12,224,365

**Annual Savings are projected from Cabras 3&4 PMC, CIP, O&M and labor savings. It also includes fuel savings from fuel efficiencies gained over CT operations.*

A very lengthy discussion followed and some of the comments are highlighted below.

Comm. Bamba asked if there are any additional cost such as fuel line and others; GM Benavente confirmed the costs are all inclusive. Comm. Sanchez on the annual savings how much is fuel – GM said $4M per year which will eventually go back to the ratepayer. The net annual cost from revenue base is $28M. Does management anticipate any base rate adjustment as a result of this deal. GM Benavente said that is a different story. Comm. Sanchez said he loves the concept from a capacity point of view but he is concerned that the CCU will put GPA in an awkward situation where the coverage ratio has declined. If we accept this can GPA handle a $28M increase in cost without adversely impacting our coverage. What does management intend? Chairman Duenas said management needs to tell the CCU how management intends to make up for it.

Comm. Sanchez – can management give analysis on how they plan to address the short fall. Comm.Bamba – how much of the lease is actually going towards ownership; GM Benavente said about $4.8M total. Comm. Duenas– if we change our mind and we don't want to own it then we don't have to pay the $1.8M and $2M at the back end

It was mentioned that management did ask EPA to waive the emission charges and they denied the request.

The GM reiterated the advantages of Aggreko - 99% reliability;; more efficient by Yigo or TEMES; Agreed to carry 7MW spinning reserve to help with intermittency. Comm. Sanchez said the concern is not with the technical it's how do we plan to pay for it

Comm. Bamba asked about the condition of the units – the GM gave a scenario of the life of the units which ends up being positive for GPA. The problem that he has is there was no bid that went out on this originally. Chairman asked Legal Counsel if the original proposal included the option to buy. The Chairman asked if they can buy it now and the CFO said they will sell it to us in 4 years but not now.

Chairman Duenas commented that Aggreko is part of our current mix and when Dededo CT 1&2 comes on line we may not need Aggreko. It makes sense to take this deal for the next year and we can exit cancel the rent to own later in 2018 or 2019.

Comm. Sanchez said we want to preserve the option to buy but want to think about it for a year; if we do this then what is the buyout. In addition, Comm. Sanchez said the key point is we can't revisit this a year from now if we put $3M investment for year 1.

At the end, the Commission put the matter to a vote.

Comm. Sanchez motioned to approve Resolution 2016-61; Comm. Santos seconded. The vote was 3 ayes and 1 nay and the motion passed. For the record, Comm. Bamba voted nay.

4.2.5 Resolution 2016-62 Relative to the Cabras 1 & 2 PMC Extension

Resolution 2016-62 requests the Commission to approve filing a petition with the PUC for approval to extend the PMC for Cabras 1&2. GPA has a five-year Performance Management Contracts (PMC) for the management, operations, and maintenance of the Cabras 1&2 Plant awarded to TEMES, that commenced in October 2010 with expiration date of September 30, 2015. With Resolution 2015-35, the PMC was extended up to December 31, 2015 for an amount not to exceed $723,279.44.

GPA issued a Multi-Step Bid for a Single Performance Management Contract for the Cabras 1&2 and the Cabras 3&4 Power Plants, which was subsequently cancelled due to the explosion of Cabras 3&4 Power Plant; and with Resolution 2015-62A, the PMC between GPA and TEMES for Cabras 1&2 was approved for extension up to December 31, 2016.

GPA's current resource plans and regulatory compliance measures filed with the PUC for approval, indicate the retirement of the Cabras 1&2 units by 2021. The PMC provides GPA assistance in the continued operation and maintenance of the plants, including completion of life-extension projects, and meeting availability, reliability, and efficiency standards. Cabras 1&2 provides up to 132 MW capacity, about 50% of current estimated peak demand, and it is important for GPA to ensure its availability and reliability, to ensure adequate MW capacity to support the island's energy requirements with minimal power supply interruption. GPA believes extending the contract period for the current PMC Contract, currently awarded to TEMES, Inc., is a more practical approach, given TEMES's experience in the management, operation and maintenance of Cabras 1&2, as well as experience working with GPA.

GPA and TEMES have begun evaluating and improving key contract requirements and objectives – reference the table below.

GPA's PROPOSED COSTS FOR TEMES CABRAS 1&2 PMC EXTENSION PERIOD

ACTUAL EXPENSES	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	TOTAL	AVERAGE
Fixed Management Fee	$ 1,520,000	$ 1,562,560	$ 1,606,312	$ 1,651,288	$ 1,697,524	$ 8,037,685	$ 1,607,537
Routine O&M Budget	$ 833,564	$ 1,027,999	$ 1,056,717	$ 1,086,374	$ 1,320,365	$ 5,325,019	$ 1,065,004
Inventory Replenishment	$ 151,356	$ 120,225	$ 158,993	$ 188,484	$ 120,075	$ 739,133	$ 147,827
TOTAL O&M EXPENSES	**$ 2,504,920**	**$ 2,710,784**	**$ 2,822,022**	**$ 2,926,146**	**$ 3,137,964**	**$ 14,101,837**	**$ 2,820,367**
Revenue CIP - True Up	**$ 435,302**	**$ 502,787**	**$ 403,683**	**$ 420,685**		**$ 1,762,457**	**$ 440,614**
TOTAL O&M + TRUE-UP	***$ 2,940,222***	***$ 3,213,571***	***$ 3,225,705***	***$ 3,346,831***	***$ 3,137,964***	***$ 15,864,294***	***$ 3,260,982***

GPA FINAL PROPOSAL							
YEAR	2017	2018	2019	2020	OPTIONAL EXTENSION YEAR: 2021	TOTAL	AVERAGE
Fixed Management Fee	$ 1,674,400	$ 1,721,283	$ 1,769,479	$ 1,819,025		$ 6,984,187	$ 1,746,047
Routine O&M Budget	$ 1,203,370	$ 1,237,064	$ 1,271,702	$ 1,307,309	$ 1,343,914	$ 6,363,358	$ 1,272,672
Inventory Replenishment	$ 120,000	$ 120,000	$ 120,000	$ 120,000	$ 120,000	$ 600,000	$ 120,000
Non-Routine O&M Budget SUBJECT TO GPA REVIEW AND APPROVAL ON A CASE-BY-CASE BASIS	$ 258,530	$ 265,813	$ 273,289	$ 280,936	$ 2,158,786	$ 3,237,355	$ 647,471
ESTIMATED MAXIMUM COUNTRACT AMOUNTS	***$ 3,256,300***	***$ 3,344,160***	***$ 3,434,470***	***$ 3,527,270***	***$ 3,622,700***	***$ 17,184,900***	***$ 3,436,980***

The Authority requests for an extension of the contract from January 1, 2017 to December 1, 2021 and the approval is requested to allow the General Manager to petition the PUC to pursue a five-year extension for the Cabras 1&2 PMC Contract.

Comm. Bamba motioned to approve Resolution 2016-62; Comm. Santos seconded. On the motion there was no further discussion or objection and the motion passed.

4.2.6 Resolution 2016-63 Relative to Authorizing the Approval of a Bond Issuance Refinancing

The objective of refunding the outstanding revenue bonds is to take advantage of low interest rates, hence reduce debt service payments. This will be beneficial to our ratepayers in the form of potential savings. The refunding will result in cost savings to the Authority. It is estimated that the process will require assistance and bond review from Barclays, GPA Bond Counsel, GEDA, inclusive of the approval of the Public Utilities Commission / Guam Legislature and the Governor. The Cost of issuance will be covered by the proceeds from the refunding. The new debt service is already covered by the existing revenues in the Authority's revenue requirement.

Comm. Bamba motioned to approve Resolution 2016-63; Comm. Sanchez seconded. There was no further discussion or objection and the motion passed.

4.2.7 Resolution 2016-64 Relative to Authorizing Additional Expenditures for the Dededo CT Return to Service Project

If approved Resolution 2016-64 will return the Dededo Combustion Turbine Units 1 and 2 to service. The project is necessary and urgent to ease the current generation shortfall by adding 45 MW of capacity to the system. The services will be provided through TEMES (CT PMC)

The anticipated completion of this project is December, 2016 for Dededo CT Unit 2 and February, 2017 for Dededo CT Unit 1 and is estimated at $9.7 million. The breakdown of costs is as follows and the funding source is 1999, 2010, 2014 bond funds and 2017 revenue funds.

Description	Budget
1. Combustion Turbine (CT) Overhaul	$2,070,000
2. CT Generator Rotor Repair #2, Megger & Testing of Generator #1	$2,270,000
3. CT Air Intake System Repair	$371,370

4. Water System Upgrade	$1,041,128
5. Air Cooling Tower System Replacement	$717,068
6. Outdoor BOP pipe, fitting and valve replacement and pump/motor maintenance for fuel oil and raw water system	$255,683
7. Control System Upgrade	$1,080,000
8. Unit #1 Replace 13.8 kV Switchgear. Unit #2 PM for existing switchboard	$1,210,000
9. Black Start Diesel Generator Repair	$70,000
10. Replace DC Batteries	$50,000
11. I &C Equipment of Balance of Plant Repair and Maintenance	$70,000
12. Fire Protection System Repair	$300,000
13. CT#1 & #2 Lube Oil Material (Purchase)	$80,000
14. Switchyard MTR (Bushing & DS)	$85,000
15. Crane Repair	$28,000
TOTAL	$9,698,249
Reallocated BF	$6,355,128
2014 BF	$736,000
Revenue Funds	$2,607,121

Comm. Bamba motioned to approve Resolution 2016-64; Comm. Sanchez seconded. There was no further discussion or objection and the motion passed.

5. OLD BUSINESS - None

6. ANNOUNCEMENTS

6.1 Next CCU Meetings

The Chairman said the next meeting would be a work session for GWA on November 16 and GPA on November 17. The November CCU meeting is on November 22nd.

7. ADJOURNMENT

The meeting was adjourned a 7:40 p.m.

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bls

Attested:

_____ _____

JOSEPH T. DUENAS, Chairman J. GEORGE BAMBA, Secretary

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

TO: **Consolidated Commission on Utilities**

FROM: **General Manager**

DATE: **November 17, 2016**

SUBJECT: **General Manager's Report**

This report provides an update on key issues:

1. **System Capacity Recovery Plan Update**
   - The Macheche combustion turbine unit was returned to service on November 15th thereby adding another 20MW of capacity.
   - The Dededo Combustion Turbine Plant is on schedule to be commissioned by March 31st, 2017. The plant would add 40 MW of capacity into the system. The completion of this plant will complete capacity recovery effort.
   - The following updates our generation capacity recovery schedule:

IWPS Capacity Recovery Plan (Updated):

17-Nov-16

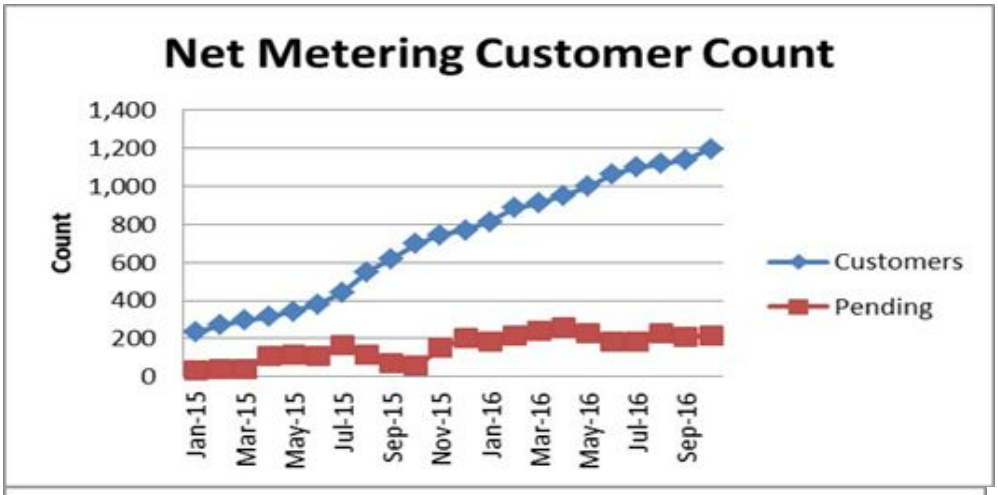
Date	Description (IWPS Capacity)	MW Added	System MW	Peak MW	Reserve MW
14-Nov-16	GPA Total Capacity***		358	255	103
15-Nov-16	**Macheche CT Commissioned**	**20**	**378**	**255**	**123**
28-Feb-17	Dededo CT 2 Commissioned	20	398	255	143
31-Mar-17	**Dededo CT 1 Commissioned**	**20**	**418**	**255**	**163**

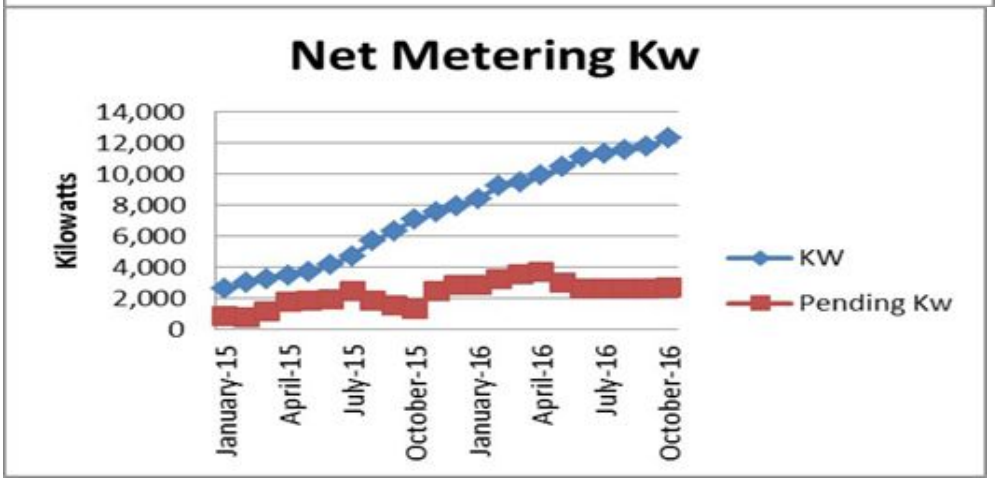
***** Capacity does not include interruptible load, standby generators and Navy capacity.**

2. **Net Metering: Updated information on NEM including growth profile.**

Net Metering Summary Ending October 16:

Description:	Count	Kw	
Active	**1,196**	**12,303**	
Pending	216	2,697	
Totals:	1,412	15,000	
Service:	**Count**	**KW**	**Kw/Customer**
Residential	**1,129**	**10,123**	**9.0**
Others	67	2,180	32.5
Total:	1,196	12,303	10.3
% Residential	**94.4%**	**82.3%**	
Estimated Revenue Impact:	**$2,293,535**		

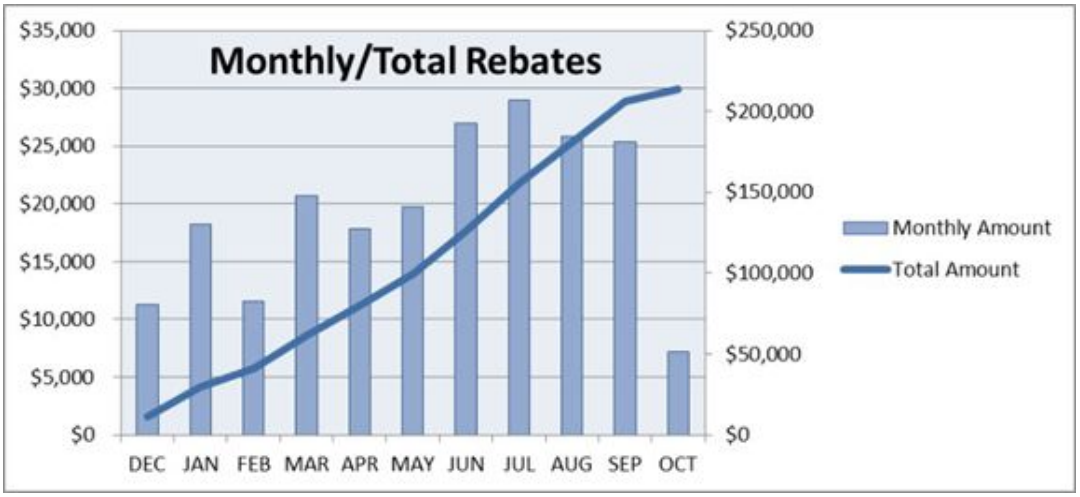




Most NEM Populated Feeders (October 2016)

Feeder	NEM Count	NEM Kw	% of Min Load
P-262 (Talofofo, Ipan)	80	766	48.2%
P-212 (Barrigada)	65	718	44.9%
P-220 (Apra)	9	82	42.1%
P-340 (Merizo, Umatac, Inarajan)	32	325	39.5%
P-294 (Pulantat to Mangilao)	67	727	33.3%
P-087 (Dededo-Ysengsong)	84	752	30.0%
P-005 (Piti)	16	251	29.2%
P-223 (Apra, Santa Rita, Agat)	45	415	24.9%

3. **DSM Program Update:** The following summarizes rebates thru November 1st 2016. The paid out rebate to date totals $213,550.



4. **Phase II Renewables Bid:**
   - Below is the list of Un-priced Technical Proposals deemed qualified to submit a price proposal for MS GPA-070-16, Renewable Energy Resource Phase II? Seven (7) out of Twelve (12) Proponents were deemed qualified:
     1. Hanwha Energy Corp. /Pacific Petroleum Trading Co. (2 ea. Proposals)
     2. Shanghai Electric Power Co. Ltd / Terra Energy (2.ea. Proposals)
     3. Sean ENC. / NexGeo Consortium
     4. LSIS Co. Ltd. (2. Ea. Proposals)
     5. Quantum/Guam Clean Energy (2 ea. Proposals)
     6. Pacific Solar Storage 1 (Guam) LLC - Solar City
     7. KEPCO-LG CNS (2. Ea. Proposals)
   - Priced proposals are due on December 20th, 2016.
   - Notification of successful bidder(s) targeted for January 26th, 2017.

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5. **Other Key Bid Invitations Updates:**
   - Energy Storage System Bid opening November 29th, 2016. No additional extensions to be granted.
   - Engineering, Procurement, and Construction Management (EPCM) consultant for new power plant advertised on November 10th, 2016.
   - Major Engine Overhaul for Diesel Units advertised on November 15, 2016.
   - LED Luminaires bid closed on November 10th, 2016. Being evaluated for award at December 2016 CCU Meeting.
   - Fuel Oil Tank Farm Performance Management Contractor bid advertised on November 15, 2016.

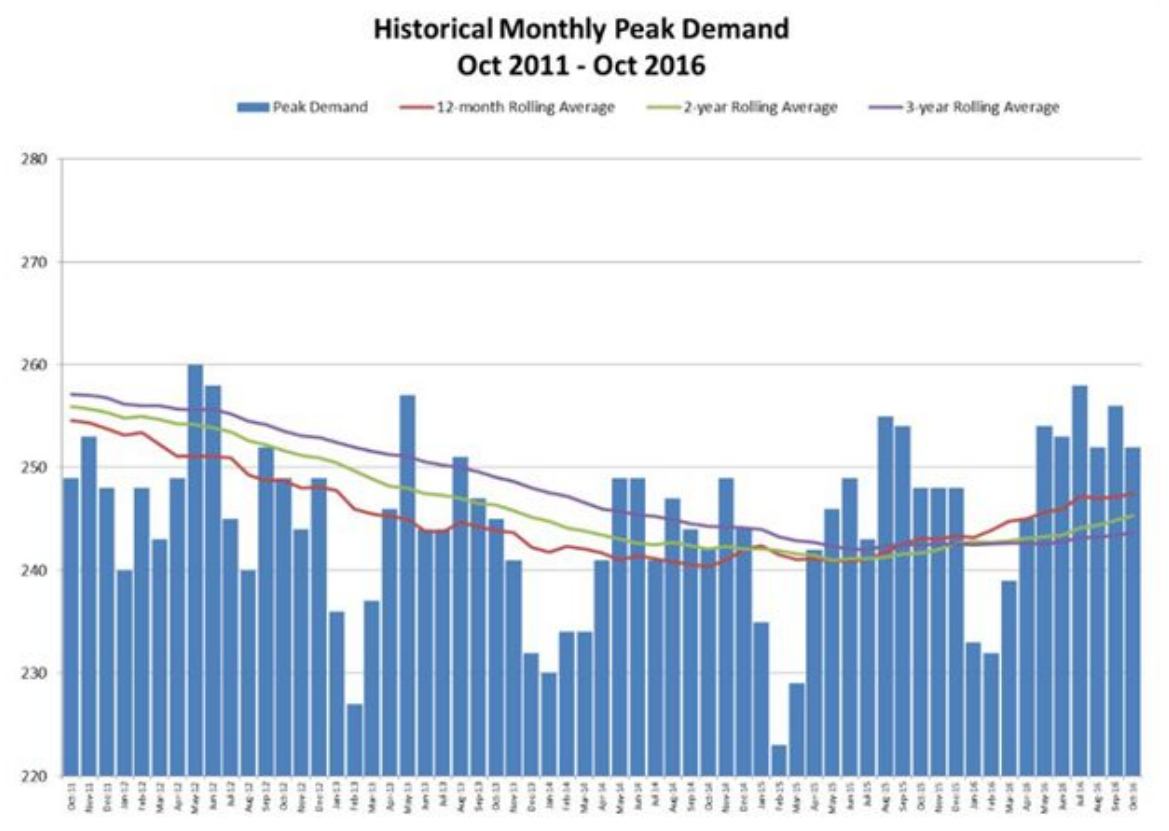
6. **Waste Oil Burning at the Cabras Steam Plant:** GPA met with waste oil providers and discussed the following. All agreeable to work towards improving short term issues and finding a long term solution.
   1. GPA needs to revise waste oil burning process:
      a. The explosion of Cabras 3&4 make the Cabras 1&2 units critical for system base load operations.
      b. Sludge buildup on boiler tubes exposes units to potential boiler tube leaks causing downtime of 4 days to 1 week.
      c. Downtime is costly and could lead to load shedding because of limited reserve capacity.

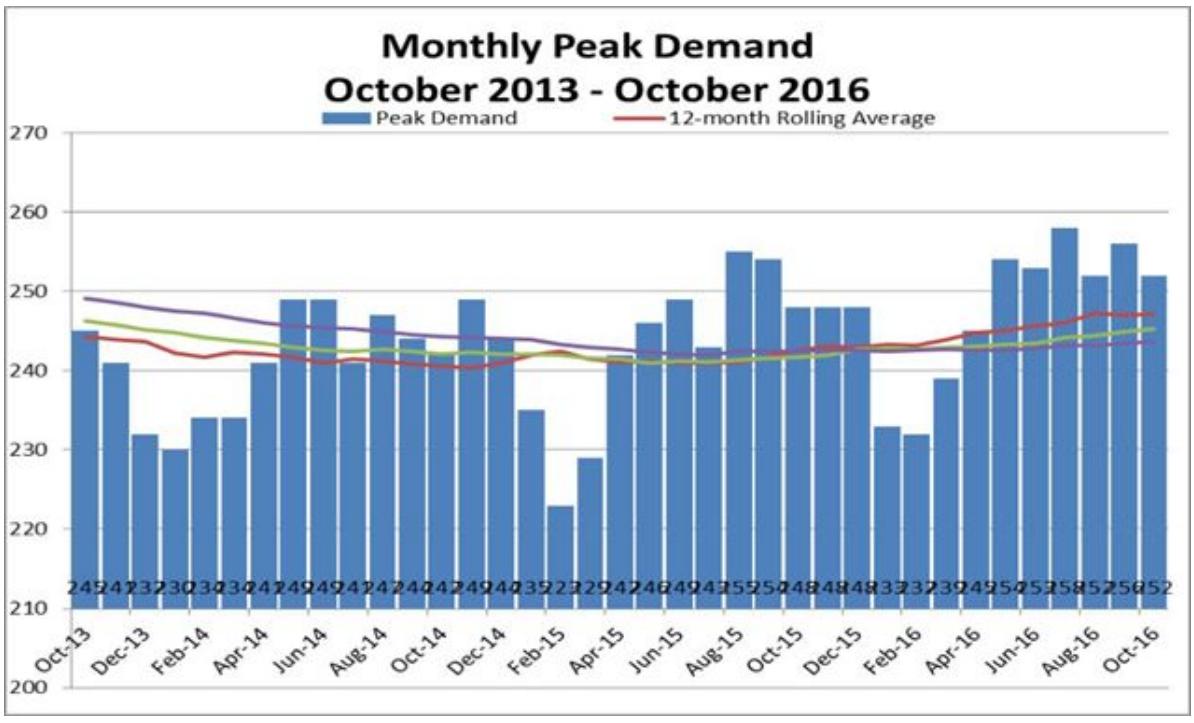
   d. Cabras 1&2 scheduled for retirement in 2021. No other GPA generating unit can burn waste oil.
2. GPA needs to find a way to continue burning waste oil until 2021. However, changes in the system and mode of operations needs to occur:
   a. Efficient schedule of waste oil deliveries has to be put in place.
   b. Waste must exclude as much water as possible
   c. Oil/Water Separator must be operated and maintained efficiently.
   d. GPA/TEMES to design an oil purifier system to remove as much metals as possible before burning waste.
   e. GPA/TEMES to determine best location to inject waste oil into RFO fuel system so as to maintain a consistent feed rate which minimizes operational challenges. This would include installing an injection pump adjustable to RFO flow rate.
   f. TEMES to insure strainers are cleaned more often to avoid operational problems.
3. Waste Oil disposers may have to help pay for the improvements planned. Cost most likely cheaper than sending waste off island.
4. GPA needs to explore incineration technology or other purification process which could possibly combine waste with diesel fuel as a fuel source for existing units. Study must be undertaken because there will always be a need for some on-island disposal because off island disposal will be costly for all parties.

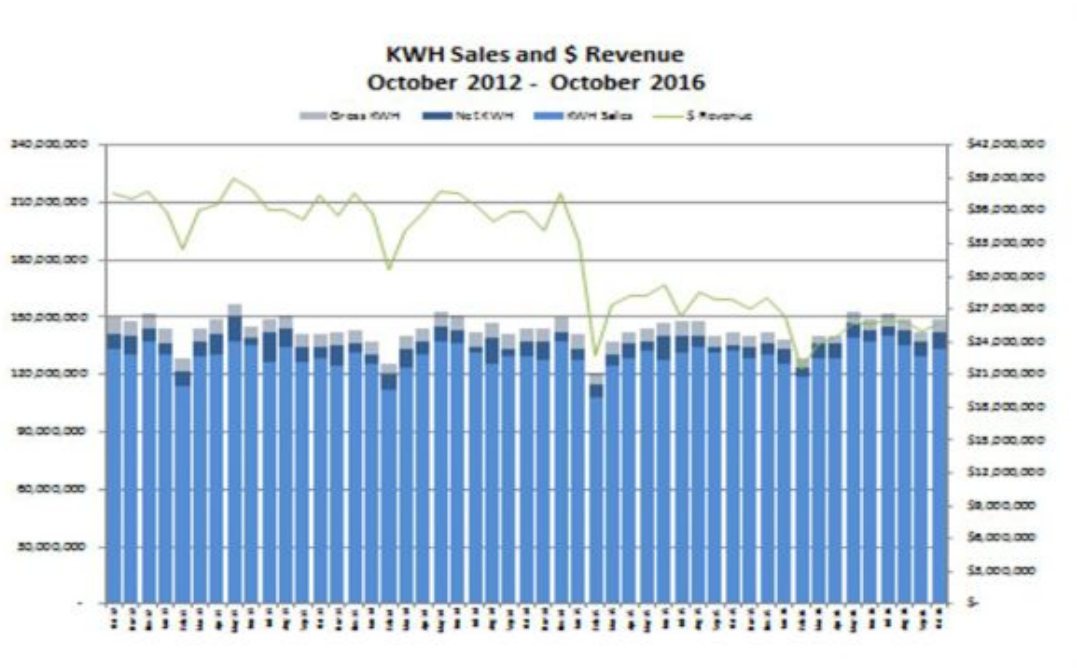
7. **Public Commission on Utilities Dockets:** The following dockets were approved at last month's PUC meeting:
   • GPA Docket 16-01, GPA's LED Streetlight Rate Schedule F and H
   • GPA Docket 15-05, Procurement of up to 180 MW Combined Cycle Plant, Retirement of Cabras 1&2 and procurement of EPCM
   • GPA Docket 17-01, Approval of SCADA Contract,
   • GPA Docket 17-02, Approval of the Cabras 1 Overhaul,
   • GPA Docket 17-03, Approval of Diesel Peaking Units Overhaul,
   • GPA Docket 17-04, Approval of Procurement of PMC for Fuel Farm
   • GPA Docket 17-05, Approval of Contract relative to Engineering and Technical Services Supporting GPA's Resource Plan
   • GPA Docket 17-06, Approval of GPA-Navy Renewables Study
   • GPA Docket 17-07, Approval of Extension of Property Insurance

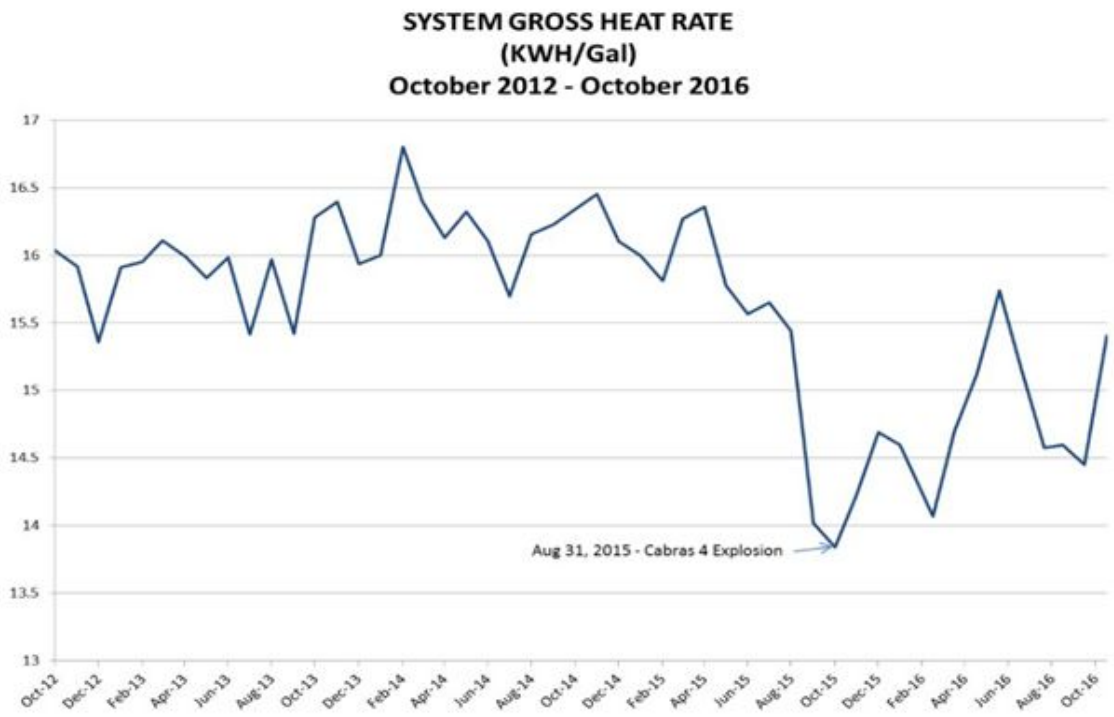
8. **Key Performance Indicators graph:** The following pages update the information up thru October 2016.

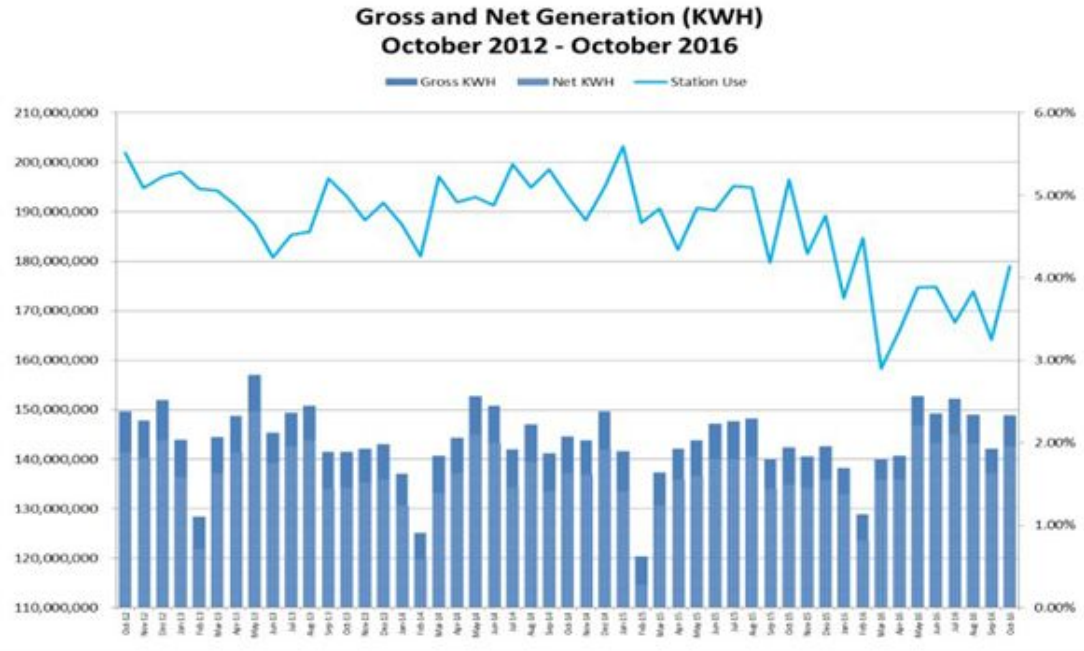
John M. Benavente, P.E.

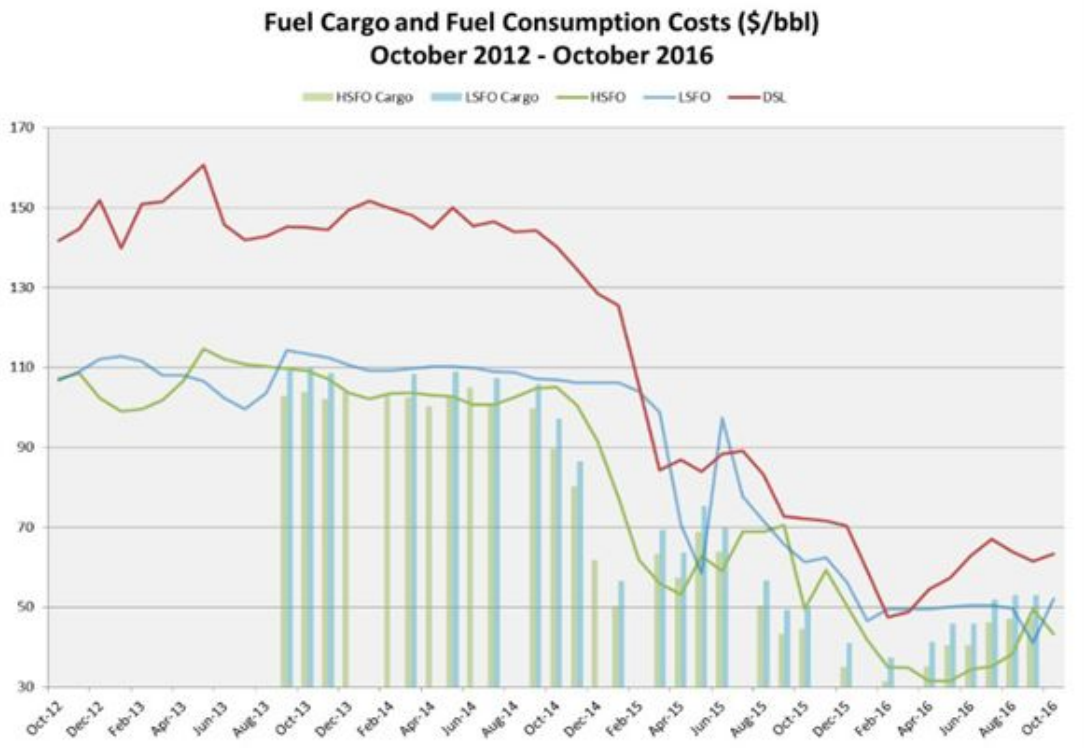

Historical Monthly Peak Demand
Oct 2011 - Oct 2016
Peak Demand
12-month Rolling Average
2-year Rolling Average
3-year Rolling Average
280
270
260
250
240
230
220

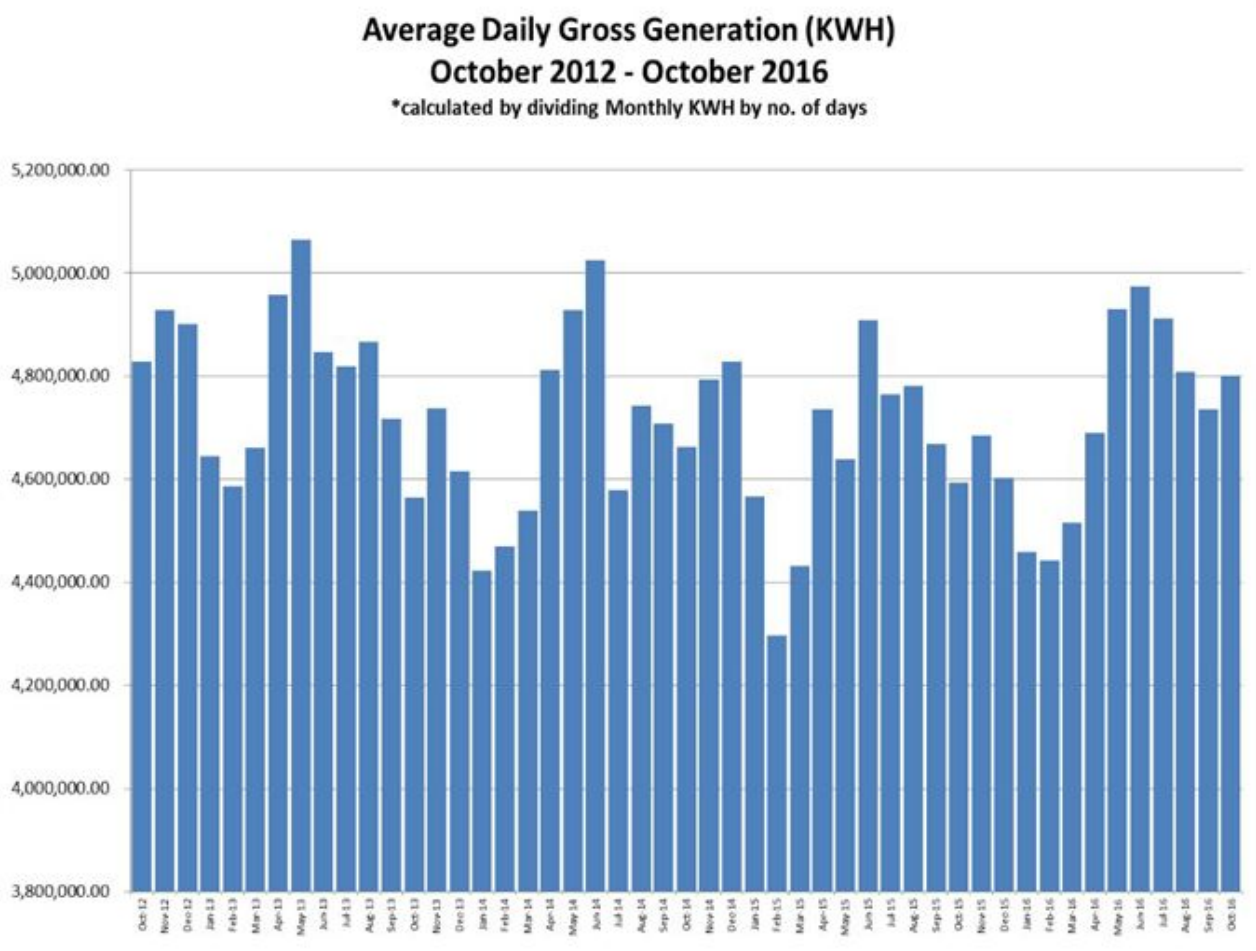

Monthly Peak Demand
October 2013 - October 2016
Peak Demand
12-month Rolling Average
270
260
250
240
230
220
210
200
Oct-13
Dec-13
Feb-14
Apr-14
Jun-14
Aug-14
Oct-14
Dec-14
Feb-15
Apr-15
Jun-15
Aug-15
Oct-15
Dec-15
Feb-16
Apr-16
Jun-16
Aug-16
Oct-16


KWH Sales and $ Revenue
October 2012 - October 2016

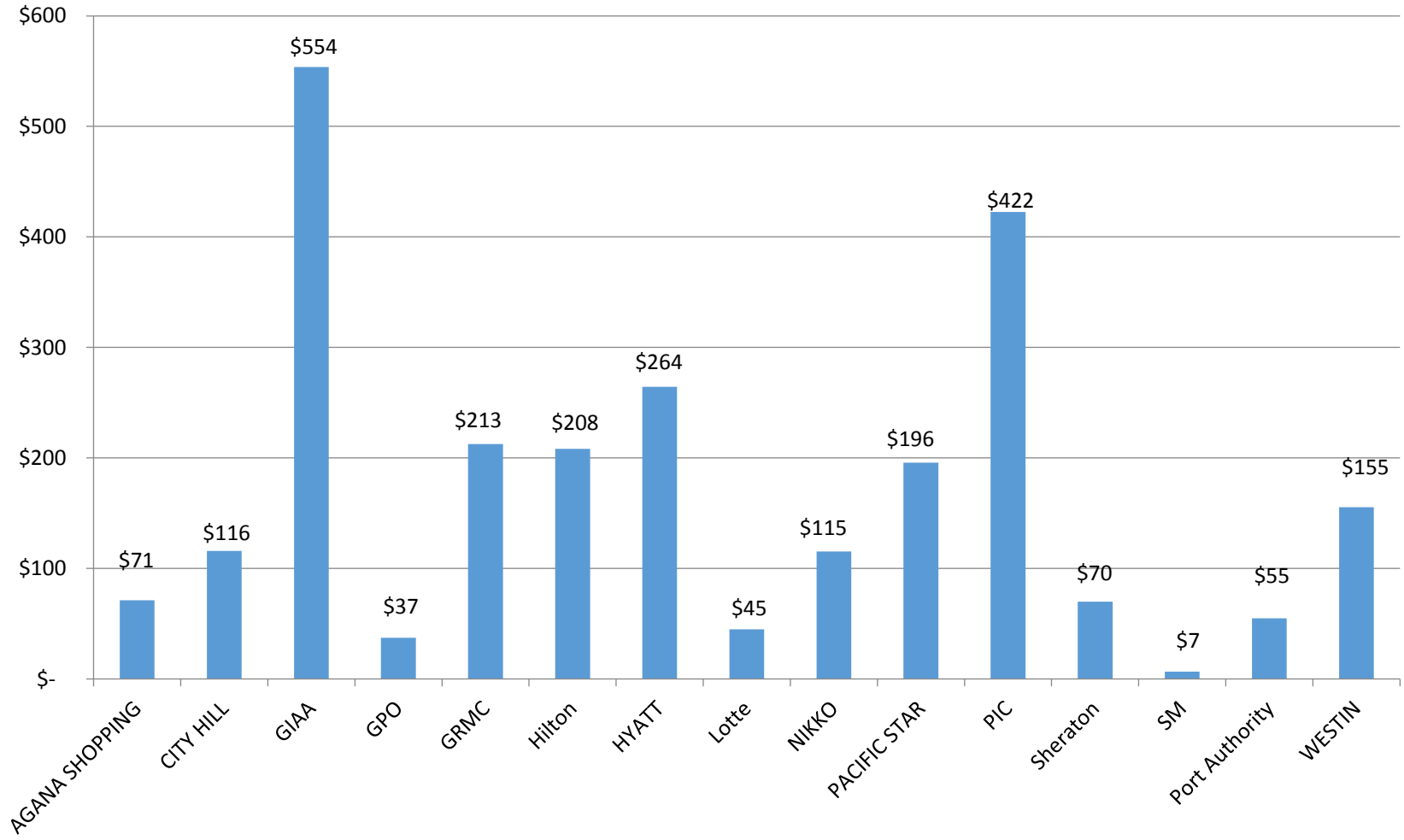

SYSTEM GROSS HEAT RATE
(KWH/Gal)
October 2012 - October 2016
17
16.5
16
15.5
15
14.5
14
13.5
13
Aug 31, 2015 - Cabras 4 Explosion
Oct-12
Dec-12
Feb-13
Apr-13
Jun-13
Aug-13
Oct-13
Dec-13
Feb-14
Apr-14
Jun-14
Aug-14
Oct-14
Dec-14
Feb-15
Apr-15
Jun-15
Aug-15
Oct-15
Dec-15
Feb-16
Apr-16
Jun-16
Aug-16
Oct-16


Gross and Net Generation (KWH)
October 2012 - October 2016
Gross KWH
Net KWH
Station Use
210,000,000
200,000,000
190,000,000
180,000,000
170,000,000
160,000,000
150,000,000
140,000,000
130,000,000
120,000,000
110,000,000
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%


Fuel Cargo and Fuel Consumption Costs ($/bbl)
October 2012 - October 2016
HSFO Cargo
LSFO Cargo
HSFO
LSFO
DSL
170
150
130
110
90
70
50
30
Oct-12
Dec-12
Feb-13
Apr-13
Jun-13
Aug-13
Oct-13
Dec-13
Feb-14
Apr-14
Jun-14
Aug-14
Oct-14
Dec-14
Feb-15
Apr-15
Jun-15
Aug-15
Oct-15
Dec-15
Feb-16
Apr-16
Jun-16
Aug-16
Oct-16


Average Daily Gross Generation (KWH)
October 2012 - October 2016
*calculated by dividing Monthly KWH by no. of days
5,200,000.00
5,000,000.00
4,800,000.00
4,600,000.00
4,400,000.00
4,200,000.00
4,000,000.00
3,800,000.00

Interruptible Load Program (in '000)



ILP $2,527,794 as of October 31, 2016

GPA Retirees

- 372 Retirees on Medical, Dental, Life Insurance
  - $2,859,300 FY 2017
- 421 Retirees on Cola Benefits
  - $842,000 FY 2017
- 102 Retirees on Supplemental Benefits
  - $417,078 FY 2017

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

GUAM POWER AUTHORITY
FINANCIAL STATEMENT OVERVIEW
September 2016

Attached are the financial statements and supporting schedules for the month and fiscal year ended September 30, 2016.

Summary
The increase in net assets for the year ended was $13.2 million as compared to the anticipated net decrease of $0.6 million at the beginning of the year. This was primarily due to the effect of the implementation of GASB 68 – Accounting and Financial Reporting of Pensions and the reduction of costs related to the cessation of operation of the Cabras 3 & 4 power plants. The total kWh sales for the year were 3.57% more than projected and non-fuel revenues were $2.6M more than the estimated amounts. O & M expenses for the year were $59.9 million which was $14.2 million less than our projections for this year. Other expenses for the year such as interest expense, IPP costs, (net of interest income and other income) totaled to $44.4 million which was about $11.6 million less than the projected amount. There were no other significant departures from the budget during the period.

Analysis

Description	Previous Month	Current Month	Target
Quick Ratio	2.50	2.18	2
Days in Receivables	40	35	52
Days in Payables	32	30	30
LEAC (Over)/Under Recovery Balance -YTD	$3,762,773	$5,669,985	$1,890,467
T&D Losses	4.59%	4.73%	7.00%
Debt Service Coverage	2.48	2.52	1.75
Long-term equity ratio	14%	14%	30 – 40%
Days in Cash	219	207	60

The Quick Ratio reflects the basic challenge facing GPA. However, this fiscal year has shown improvement over the previous fiscal year. This is due to the receipt of $50M in cash advances of insurance proceeds. GPA has current obligations of approximately $71.1 million and approximately $155.1 million in cash and current receivables. The LEAC under recovery for the month is $1.8 million. The Debt Service Coverage ratio is calculated using the methodology in use before the Fiscal Year 2002 change in accounting practice.

Financial Statement
September 2016
Significant Assumptions

The significant assumptions in the financial statements are as follows:

- Accrual cutoff procedures were performed at month end
- An inventory valuation is performed at year-end only
- Accounts Receivable includes accruals based on prior months' usage.

Prepared by:	Reviewed by:	Approved by:
Lenora M. Sanz	John J.E. Kim	John M. Benavente, P.E.
Controller	Chief Financial Officer	General Manager

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)
Statements of Net Position
September 30, 2016 and September 30, 2015

	Unaudited September 2016	Audited September 2015	Change from Sept 30 2015
ASSETS AND DEFERRED OUTFLOWS OF RESOURCES			
Current assets:			
Cash and cash equivalents:			
Held by trustee for restricted purposes:			
Interest and principal funds	$ 16,005,063	$ 22,849,106	$ (6,844,043)
Bond indenture funds	69,821,815	84,986,806	(15,164,991)
Held by Guam Power Authority:			
Bond indenture funds	126,056,805	61,456,015	64,600,790
Self insurance fund-restricted	20,442,578	20,435,825	6,753
Energy sense fund	1,646,041	1,806,014	(159,973)
Total cash and cash equivalents	233,972,302	191,533,766	42,438,536
Accounts receivable, net	31,003,172	35,519,425	(4,516,253)
Total current receivables	31,003,172	35,519,425	(4,516,253)
Materials and supplies inventory	14,624,878	16,312,559	(1,687,681)
Fuel inventory	31,326,367	34,774,612	(3,448,245)
Prepaid expenses	753,398	733,254	20,144
Total current assets	311,680,117	278,873,616	32,806,501
Utility plant, at cost:			
Electric plant in service	1,038,493,831	1,004,422,940	34,070,891
Construction work in progress	18,407,877	31,056,101	(12,648,224)
Total	1,056,901,708	1,035,479,041	21,422,667
Less: Accumulated depreciation	(534,001,129)	(494,104,532)	(39,896,597)
Total utility plant	522,900,579	541,374,509	(18,473,930)
Other non-current assets:			
Investment - bond reserve funds held by trustee	48,550,887	54,356,593	(5,805,706)
Unamortized debt issuance costs	4,646,601	5,026,209	(379,608)
Total other non-current assets	53,197,488	59,382,802	(6,185,314)
Total assets	887,778,184	879,630,927	8,147,257
Deferred outflow of resources:			
Deferred fuel revenue	5,670,120	1,869,479	3,800,641
Unamortized loss on debt refunding	12,324,400	13,574,416	(1,250,016)
Pension	7,490,630	7,490,630	0
Unamortized forward delivery contract costs	796,718	956,078	(159,360)
Total deferred outflows of resources	26,281,868	23,890,603	2,391,265
	$ 914,060,052	$ 903,521,530	$ 10,538,522

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)
Statement of Net Position, Continued
September 30, 2016 and September 30, 2015

	Unaudited September 2016	Audited September 2015	Change from Sept 30 2015
LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION			
Current liabilities:			
Current maturities of long-term debt	$ 115,000	$ 14,265,000	$ (14,150,000)
Current obligations under capital leases	16,737,242	14,820,776	1,916,466
Accounts payable			
Operations	25,782,804	22,068,203	3,714,601
Others	47,482	0	47,482
Accrued payroll and employees' benefits	1,533,906	1,296,886	237,020
Current portion of employees' annual leave	2,405,799	2,388,129	17,670
Interest payable	15,146,696	15,673,208	(526,512)
Customer deposits	9,332,016	9,043,908	288,108
Total current liabilities	71,100,945	79,556,110	(8,455,165)
Regulatory liabilities:			
Provision for self insurance	19,550,977	19,758,320	(207,343)
Total regulatory liabilities	19,550,977	19,758,320	(207,343)
Long term debt, net of current maturities	595,057,778	597,785,166	(2,727,388)
Obligations under capital leases, net of current portion	22,872,720	39,609,006	(16,736,286)
Net Pension liability	63,293,549	67,025,973	(3,732,424)
DCRS sick leave liability	3,436,738	3,113,912	322,826
Employees' annual leave net of current portion	806,762	806,762	0
Customer advances for construction	319,321	205,461	113,860
Total liabilities	776,438,790	807,860,710	(31,421,920)
Deferred inflows of resources:			
Unearned forward delivery contract revenue	2,920,088	3,504,106	(584,018)
Pension	7,694,438	7,694,438	0
Other unearned revenues	29,745,503	357,000	29,388,503
Total deferred inflows of resources	40,360,029	11,555,544	28,804,485
Commitments and contigencies			
Net Position:			
Net investment in capital assets	6,286,220	16,924,495	(10,638,275)
Restricted	1,627,138	13,551,340	(11,924,201)
Unrestricted	89,347,874	53,629,441	35,718,433
Total net position	97,261,232	84,105,276	13,155,956
	$ 914,060,052	$ 903,521,530	$ 10,538,522

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM
Statement of Revenues, Expenses and Changes in Net Assets

	September 30			Twelve Months Ended September 30		
	Unaudited 2016	Audited 2015	% of change Inc (dec)	Unaudited 2016	Audited 2015	% of change Inc (dec)
Revenues						
Sales of electricity	$ 24,899,890	$ 27,827,382	(11)	$ 306,896,751	$ 359,165,172	(15)
Working Capital surcharge	-	595,328	(100)	-	7,019,913	(100)
Miscellaneous	72,856	2,894,331	(97)	2,293,862	4,774,888	(52)
Total	24,972,746	31,317,041	(20)	309,190,613	370,959,973	(17)
Bad debt expense	324,776	366,492	(11)	(989,764)	(959,008)	3
Total revenues	25,297,522	31,683,533	(20)	308,200,849	370,000,965	(17)
Operating and maintenance expenses						
Production fuel	11,374,557	14,490,543	(22)	146,339,925	204,135,935	(28)
Other production	1,665,254	2,044,505	(19)	15,789,182	20,079,025	(21)
	13,039,811	16,535,048	(21)	162,129,107	224,214,960	(28)
Depreciation	4,088,032	5,111,759	(20)	42,331,578	41,765,404	1
Energy conversion cost	1,440,066	380,603	278	16,800,170	18,403,965	(9)
Transmission & distribution	496,574	150,383	230	10,720,669	11,169,990	(4)
Customer accounting	(215,802)	356,727	(160)	4,501,910	3,780,277	19
Administrative & general	2,880,004	(5,218,478)	(155)	28,845,755	21,908,001	32
Total operating and maintenance expenses	21,728,685	17,316,042	25	265,329,190	321,242,597	(17)
Operating income	3,568,836	14,367,491	(75)	42,871,659	48,758,368	(12)
Other income (expenses)						
Interest income	258,874	327,903	(21)	1,100,891	1,179,348	(7)
Interest expense and amortization	(2,903,243)	(2,820,633)	3	(34,812,382)	(38,147,772)	(9)
Bond issuance costs	68,617	120,866	(43)	823,404	1,002,810	(18)
Assets written off	0	0		0	0	
Allowance for funds used during construction	323,634	373,159	(13)	4,137,420	5,645,742	(27)
Other expense	(4,287)	423,592	(101)	(1,696,980)	(4,672,026)	(64)
Total other income (expenses)	(2,256,405)	(1,575,113)	43	(30,447,647)	(34,991,898)	(13)
Income (loss) before capital contributions	1,312,431	12,792,378	(90)	12,424,012	13,766,470	(10)
Capital contributions	28,228	1,031,100	0	731,944	3,091,297	(76)
Increase (decrease) in net assets	1,340,659	13,823,478	(90)	13,155,956	16,857,767	(22)
Total net assets at beginning of period (restated)	95,920,573	67,804,297	41	84,105,276	64,770,008	30
Total net assets at end of period	$ 97,261,232	$ 81,627,775	19	$ 97,261,232	$ 81,627,775	19

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)
Statements of Cash Flows
Period Ended September 30, 2016

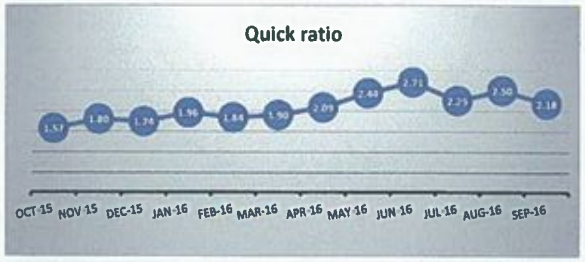
	Month Ended 9/30/2016	YTD Ended 9/30/2016
Increase(decrease) in cash and cash equivalents		
Cash flows from operating activities:		
Cash received from customers	$26,374,769	$ 312,757,121
Cash payments to suppliers and employees for goods and services	27,054,790	191,040,823
Net cash provided by operating activities	($680,022)	$121,716,298
Cash flows from investing activities:		
Interest and dividends on investments and bank accounts	258,874	1,100,891
Net cash provided by investing activities	258,874	1,100,891
Cash flows from non-capital financing activities		
Interest paid on short term debt	(6,307)	(80,914)
Provision for self insurance funds	1,063,414	(6,753)
Net cash provided by noncapital financing activities	1,057,107	(87,667)
Cash flows from capital and related financing activities		
Acquisition of utility plant	(4,769,217)	(23,857,648)
Principal paid on bonds and other long-term debt	-	(14,265,000)
Interest paid on bonds(net of capitalized interest)	323,631	(25,150,896)
Interest paid on capital lease obligations	(427,501)	(5,969,664)
Interest & principal funds held by trustee	(4,157,232)	6,844,043
Reserve funds held by trustee	(4,227)	5,805,706
Bond funds held by trustee	2,105,604	15,164,991
Principal payment on capital lease obligations	(1,304,956)	(14,819,820)
Grant from DOI/FEMA	28,228	731,944
Debt issuance costs/loss on defeasance	(217,699)	(2,612,388)
Net cash provided by (used in) capital and related financing activities	(8,423,369)	(58,128,732)
Net (decrease) increase in cash and cash equivalents	(7,787,410)	64,600,791
Cash and cash equivalents, beginning	133,844,215	61,456,015
Cash and cash equivalents-Funds held by GPA, September 30, 2016	**$ 126,056,805**	**$ 126,056,805**

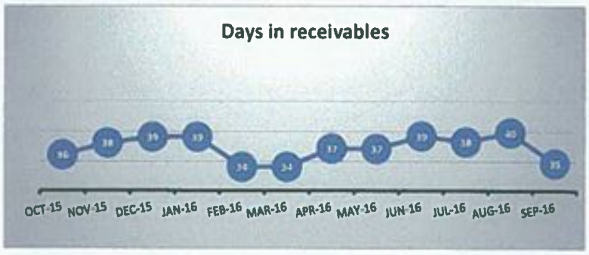
GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)
Statements of Cash Flows, continued
Period Ended September 30, 2016

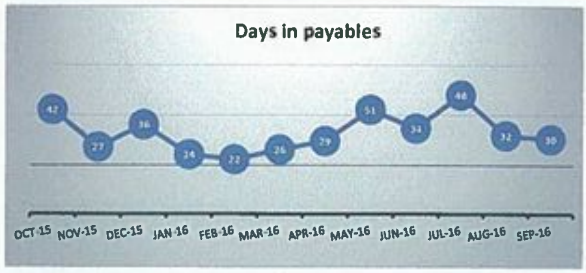
	Month Ended 9/30/2016	YTD Ended 9/30/2016
Reconciliation of operating earnings to net cash provided by operating activities:		
Operating earnings net of depreciation expense and excluding interest income	$3,568,836	$42,871,659
Adjustments to reconcile operating earnings to net cash provided by operating activities:		
Depreciation and amortization	4,088,032	42,331,578
Other expense	64,324	(873,576)
(Increase) decrease in assets:		
Accounts receivable	1,170,428	4,516,253
Materials and inventory	544,223	1,687,681
Fuel inventory	(7,387,592)	3,448,245
Prepaid expenses	866,280	(20,144)
Unamortized debt issuance cost	31,634	379,608
Deferred fuel revenue	(1,907,212)	(3,800,641)
Unamortized loss on debt refunding	104,168	1,250,016
Unamortized forward delivery contract costs	13,280	159,360
Increase (decrease) in liabilities:		
Accounts payable-operations	(1,079,165)	3,874,574
Accounts payable-others	-	47,482
Accrued payroll and employees' benefits	221,328	237,020
Net pension liability	(520,250)	(3,732,424)
DCRS Sick leave liability	322,826	322,826
Employees' annual leave	(128,610)	17,670
Customers deposits	839,859	288,108
Provision for self insurance	(207,343)	(207,343)
Customer advances for construction	22,373	113,860
Other unearned revenue	(1,258,773)	29,388,503
Unearned forward delivery contract revenue	(48,668)	(584,018)
Net cash provided by operating activities	**($680,022)**	**$121,716,298**

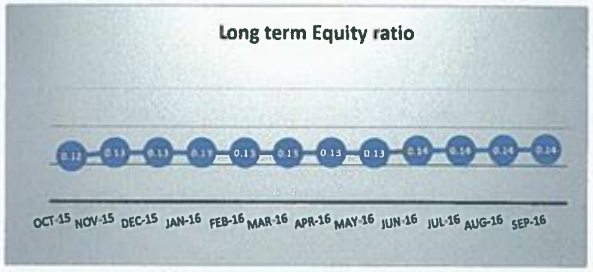
Guam Power Authority
Financial Analysis
September 30, 2016

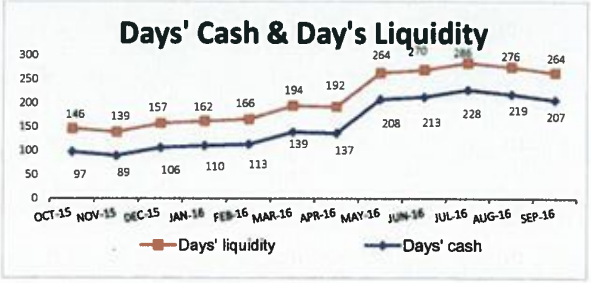
	Quick Ratio		
A	Reserve Funds Held by GPA		126,056,805
B	Current Accounts Receivable		29,011,210
C	Total Cash and A/R (A+B)		155,068,015
D	Total Current Liabilities		71,100,945
E	**Quick Ratio (F/G)**		**2.18**
	Days in Receivables		
A	FY 16 Moving 12 Mos.-Actual		306,896,754
B	No. of Days		366
C	Average Revenues per day (A/B)		838,516
D	Current Accounts Receivable		29,011,210
E	**Days in Receivables (D/C)**		**35**
	Days in Payables		
A	FY 16 Moving 12 Months-Actual		312,710,964
B	No. of Days		366
C	Average Payables per day (A/B)		854,402
D	Current Accounts Payables		25,830,286
E	**Days in Payables (D/C)**		**30**
	Long term equity ratio		
A	Equity	$	97,261,232.18
B	Total Long term Liability	$	585,373,486.00
C	Total Equity and liability	$	682,634,718.18
D	**Long term equity ratio (A/C)**		**14%**
	Days cash on hand		
A	Unresctricted cash & cash equivalents		126,057
B	No. of Days -YTD		366
C	A x B		46,136,791
D	Total Operating expenses excluding depreciation		222,998
E	**Days cash on hand**		**207**
	Days' Liquidity		
A	Unresctricted cash , cash equivalents & revolving Credi		161,057
B	No. of Days -YTD		366
C	A x B		58,946,791
D	Total Operating expenses excluding depreciation		222,998
E	**Days liquidity**		**264**











GPA 302
26-Oct-16

GUAM POWER AUTHORITY
ACCRUED REVENUE
SEPTEMBER 2016

	FOR THE MONTH ENDED SEPTEMBER		TWELVE MONTHS ENDED SEPTEMBER	
	2016	2015	2016	2015
KWH SALES:				
Residential	41,186,530	39,872,545	487,022,560	461,568,899
Small Gen. Non Demand	6,885,525	6,288,677	80,284,067	72,596,851
Small Gen. Demand	14,741,107	16,163,980	190,587,125	189,288,039
Large General	25,176,509	26,047,464	308,834,877	309,074,448
Independent Power Producer	62,052	38,355	767,880	609,957
Private St. Lights	56,235	52,449	629,744	622,232
Sub-total	88,107,957	88,463,469	1,068,126,254	1,033,760,426
Government Service:				
Small Non Demand	1,164,666	1,124,630	13,428,264	13,943,174
Small Demand	7,858,530	7,515,034	93,302,996	92,149,165
Large	5,804,148	5,971,410	70,055,104	70,798,160
Street Lighting	995,613	992,895	11,344,681	11,543,174
Sub-total	15,822,957	15,603,969	188,131,044	188,433,673
Total	103,930,914	104,067,438	1,256,257,298	1,222,194,100
U. S. Navy	26,000,826	27,037,635	318,082,773	314,821,165
GRAND TOTAL	129,931,741	131,105,073	1,574,340,071	1,537,015,265
REVENUE:				
Residential	$ 7,492,970	$ 7,993,843	$ 92,057,360	$ 103,382,140
Small Gen. Non Demand	$ 1,523,079	$ 1,569,131	$ 18,390,954	$ 19,860,035
Small Gen. Demand	$ 3,075,598	$ 3,723,724	$ 40,501,958	$ 48,187,471
Large General	$ 4,802,289	$ 5,550,227	$ 60,787,284	$ 74,098,918
Independent Power Producer	$ 13,572	$ 8,781	$ 160,467	$ 174,860
Private St. Lights	$ 28,980	$ 29,415	$ 345,133	$ 368,417
Sub-total	$ 16,936,487	$ 18,875,121	$ 212,243,155	$ 246,071,841
Government Service:				
Small Non Demand	$ 277,519	$ 289,058	$ 3,299,460	$ 3,999,866
Small Demand	$ 1,746,819	$ 1,821,960	$ 21,324,151	$ 24,674,533
Large	$ 1,250,824	$ 1,373,500	$ 15,453,317	$ 17,906,961
Street Lighting	$ 431,835	$ 490,400	$ 5,383,255	$ 6,250,452
Sub-total	$ 3,706,997	$ 3,974,919	$ 45,460,182	$ 52,831,812
Total	$ 20,643,484	$ 22,850,040	$ 257,703,338	$ 298,903,653
U. S. Navy	$ 4,256,406	$ 4,977,342	$ 49,193,414	$ 58,094,495
GRAND TOTAL	$ 24,899,890	$ 27,827,382	$ 306,896,751	$ 356,998,148
NUMBER OF CUSTOMERS:				
Residential	43,408	42,888	43,252	42,644
Small Gen. Non Demand	4,092	4,027	4,071	3,992
Small Gen. Demand	987	1,013	1,000	1,017
Large General	116	116	115	133
Independent Power Producer	3	1	3	3
Private St. Lights	525	536	531	536
Sub-total	49,131	48,581	48,972	48,326
Government Service:				
Small Non Demand	696	638	689	704
Small Demand	348	259	341	330
Large	45	42	45	44
Street Lighting	163	158	161	166
Sub-total	1,252	1,097	1,235	1,243
Total	50,383	49,678	50,206	49,569
US Navy	1	1	1	1
	50,384	49,679	50,207	49,570

GPA403

GUAM POWER AUTHORITY
ACCRUED REVENUE

	TWELVE MONTHS ENDING	SEPTEMBER 2016	AUGUST 2016	JULY 2016	JUNE 2016	MAY 2016	APRIL 2016	MARCH 2016	FEBRUARY 2016	JANUARY 2016	DECEMBER 2015	NOVEMBER 2015	OCTOBER 2015
KWH SALES:													
Residential	487,022,560	41,186,530	41,736,102	45,406,686	44,922,307	44,836,952	40,225,381	38,724,045	34,167,871	36,377,830	39,545,945	39,586,380	40,306,531
Small General Non Demand	80,284,067	6,885,525	6,830,745	7,304,373	7,402,321	7,254,820	6,571,445	6,643,435	6,027,261	6,251,920	6,454,702	6,164,074	6,493,446
Small General Demand	190,587,125	14,741,107	16,161,003	17,589,484	16,214,181	16,413,008	15,697,754	15,685,021	14,874,631	15,330,440	15,725,755	15,829,108	16,356,633
Large General	308,834,877	25,176,509	27,005,358	26,974,574	26,144,475	26,310,196	24,539,981	25,281,406	23,808,449	25,642,537	25,829,727	26,020,043	26,101,621
Private Outdoor Lighting	629,744	56,235	48,857	55,391	52,648	50,329	53,670	52,898	49,247	52,626	50,663	56,110	51,169
Independent Power Producer	767,880	62,052	87,741	30,869	58,806	74,939	64,373	-7,624	123,125	61,452	173,026	3,966	35,156
Sub-Total	1,068,126,254	88,107,957	91,869,806	97,361,377	94,794,639	94,940,244	87,152,604	86,349,181	79,050,584	83,716,806	87,779,819	87,659,681	89,343,556
Government Service:													
Small Non Demand	13,428,264	1,164,666	1,172,055	1,218,659	1,204,202	1,174,961	1,105,215	1,085,055	959,493	1,060,412	1,109,415	1,011,894	1,162,236
Small Demand	93,302,996	7,858,530	8,136,012	8,100,561	7,757,551	8,192,526	7,739,650	7,916,800	7,348,858	7,644,625	7,378,797	7,442,179	7,787,906
Large	70,055,104	5,804,148	6,189,305	5,961,435	5,890,099	5,980,723	5,844,996	5,861,708	5,543,670	5,708,837	5,600,975	5,705,026	5,964,181
Street Lighting (Agencies)	11,344,681	995,613	902,990	932,581	901,159	994,816	957,681	998,928	869,623	900,721	1,059,604	865,766	965,200
Sub-Total	188,131,044	15,822,957	16,400,363	16,213,237	15,753,012	16,343,026	15,647,542	15,861,491	14,721,643	15,314,595	15,148,790	15,024,865	15,879,523
Total	1,256,257,298	103,930,914	108,270,169	113,574,614	110,547,650	111,283,270	102,800,146	102,210,671	93,772,227	99,031,401	102,928,609	102,684,546	105,223,080
U.S. Navy	318,082,773	26,000,826	27,005,111	26,759,668	26,525,986	27,705,645	26,110,172	26,723,828	24,710,507	26,232,862	27,228,752	25,785,101	27,294,313
Grand Total	1,574,340,071	129,931,741	135,275,280	140,334,282	137,073,637	138,988,915	128,910,318	128,934,499	118,482,734	125,264,263	130,157,361	128,469,648	132,517,393
REVENUE:													
Residential	$ 92,057,360	$ 7,492,970	$ 7,638,875	$ 8,252,365	$ 8,172,237	$ 8,166,754	$ 7,344,934	$ 7,103,669	$ 6,031,139	$ 7,459,365	$ 8,117,317	$ 8,051,485	$ 8,226,249
Small General Non Demand	$ 15,390,954	$ 1,523,079	$ 1,535,319	$ 1,616,070	$ 1,624,200	$ 1,609,832	$ 1,463,634	$ 1,484,401	$ 1,322,917	$ 1,534,356	$ 1,599,731	$ 1,500,558	$ 1,576,858
Small General Demand	$ 40,501,958	$ 3,075,598	$ 3,324,470	$ 3,499,625	$ 3,307,319	$ 3,378,832	$ 3,242,757	$ 3,243,586	$ 3,053,498	$ 3,492,514	$ 3,653,549	$ 3,529,493	$ 3,700,718
Large General	$ 60,787,284	$ 4,802,289	$ 5,042,115	$ 5,074,460	$ 4,980,357	$ 4,948,442	$ 4,730,172	$ 4,829,239	$ 4,484,480	$ 5,405,849	$ 5,689,645	$ 5,248,792	$ 5,551,443
Private Outdoor Lighting	$ 345,133	$ 28,980	$ 27,331	$ 28,750	$ 28,526	$ 27,838	$ 28,916	$ 28,395	$ 28,494	$ 29,610	$ 28,687	$ 30,266	$ 29,340
Independent Power Producer	$ 160,467	$ 13,572	$ 17,553	$ 6,353	$ 12,907	$ 14,112	$ 12,767	$ (589)	$ 23,390	$ 12,991	$ 37,533	$ 2,227	$ 7,649
Sub-Total	$ 212,243,155	$ 16,936,487	$ 17,585,664	$ 18,477,624	$ 18,125,547	$ 18,145,810	$ 16,823,180	$ 16,688,702	$ 14,943,918	$ 17,934,685	$ 19,126,462	$ 18,362,820	$ 19,092,257
Government Service:													
Small Non Demand	$ 3,299,460	$ 277,519	$ 277,379	$ 289,886	$ 287,100	$ 280,970	$ 264,751	$ 255,836	$ 229,896	$ 277,478	$ 291,748	$ 263,904	$ 302,993
Small Demand	$ 21,324,151	$ 1,746,819	$ 1,760,715	$ 1,786,074	$ 1,733,527	$ 1,783,792	$ 1,733,876	$ 1,739,694	$ 1,622,883	$ 1,865,919	$ 1,839,730	$ 1,803,679	$ 1,907,443
Large	$ 15,453,317	$ 1,250,824	$ 1,304,812	$ 1,247,433	$ 1,251,920	$ 1,267,063	$ 1,258,758	$ 1,256,310	$ 1,187,244	$ 1,350,727	$ 1,340,879	$ 1,333,370	$ 1,401,976
Street Lighting (Agencies)	$ 5,383,255	$ 431,835	$ 437,775	$ 441,692	$ 436,404	$ 450,507	$ 444,854	$ 451,027	$ 432,582	$ 456,140	$ 483,587	$ 449,048	$ 467,703
Sub-Total	$ 45,460,182	$ 3,706,997	$ 3,780,681	$ 3,765,085	$ 3,708,951	$ 3,782,332	$ 3,702,240	$ 3,704,866	$ 3,472,705	$ 3,950,264	$ 3,955,944	$ 3,850,002	$ 4,080,116
Total	$ 257,703,338	$ 20,643,484	$ 21,366,345	$ 22,242,709	$ 21,834,498	$ 21,928,142	$ 20,525,420	$ 20,393,568	$ 18,416,623	$ 21,884,949	$ 23,082,406	$ 22,212,822	$ 23,172,373
U.S. Navy	$ 49,193,414	$ 4,256,406	$ 4,418,264	$ 3,676,367	$ 3,800,186	$ 3,672,842	$ 3,895,565	$ 3,399,739	$ 3,105,842	$ 4,472,293	$ 4,883,127	$ 4,861,306	$ 4,751,478
Grand Total	$ 306,896,751	$ 24,899,890	$ 25,784,609	$ 25,919,076	$ 25,634,683	$ 25,600,983	$ 24,420,985	$ 23,793,307	$ 21,522,465	$ 26,357,241	$ 27,965,533	$ 27,074,128	$ 27,923,851
NUMBER OF CUSTOMERS:													
Residential	43,252	43,408	43,483	43,322	43,333	43,405	43,221	43,250	43,236	43,185	43,211	43,013	42,955
Small General Non Demand	4,071	4,092	4,121	4,090	4,087	4,087	4,055	4,065	4,058	4,052	4,059	4,034	4,048
Small General Demand	1,000	987	991	988	991	999	996	1,003	1,004	1,007	1,010	1,012	1,013
Large General	115	116	115	114	114	116	116	115	116	116	116	116	116
Private Outdoor Lighting	531	525	525	528	528	526	536	534	536	533	531	536	534
Independent Power Producer	3	3	3	3	3	3	3	3	3	3	3	3	3
Sub-Total	48,972	49,131	49,238	49,045	49,056	49,135	48,927	48,970	48,953	48,896	48,930	48,714	48,669
Government Service:													
Small Non Demand	689	696	693	695	699	685	689	696	683	680	684	659	703
Small Demand	341	348	347	346	344	340	340	339	338	337	336	330	342
Large	45	45	45	45	45	45	45	45	45	45	44	43	44
Street Lighting (Agencies)	161	163	162	161	161	160	160	161	160	160	160	160	161
Sub-Total	1,235	1,252	1,247	1,247	1,249	1,230	1,234	1,241	1,226	1,222	1,224	1,192	1,250
Total	50,206	50,383	50,485	50,292	50,305	50,365	50,161	50,211	50,179	50,118	50,154	49,906	49,919
U.S. Navy	1	1	1	1	1	1	1	1	1	1	1	1	1
Grand Total	50,207	50,384	50,486	50,293	50,306	50,366	50,162	50,212	50,180	50,119	50,155	49,907	49,920

GPA303

GUAM POWER AUTHORITY
ACCRUED REVENUE
SEPTEMBER 2016

RATE	NUMBER OF CUSTOMERS	KWH SALES	TOTAL REVENUE AMOUNT	TOTAL REVENUE C/KWH	BASE RATE REVENUE C/KWH	BASE RATE REVENUE AMOUNT	AVERAGE PER CUSTOMER KWH	AVERAGE PER CUSTOMER REVENUE	$ 0.086613 NON-FUEL C/KWH	$ 0.086613 NON-FUEL AMOUNT	FUEL C/KWH	FUEL AMOUNT
Month												
R Residential	43,408	41,186,530	$ 7,492,970	$ 18.19	$ 18.19	7,492,970	949	$ 172.62	$ 9.5315	$ 3,925,681	$ 8.6613	$ 3,567,289
G Small Gen. Non Demand	4,092	6,885,525	$ 1,523,079	$ 22.12	$ 22.12	1,523,079	1,683	$ 372.21	$ 13.4587	$ 926,703	$ 8.6613	$ 596,376
J Small Gen. Demand	987	14,741,107	$ 3,075,598	$ 20.86	$ 20.86	3,075,598	14,935	$ 3,116.11	$ 12.2062	$ 1,799,327	$ 8.6579	$ 1,276,271
P Large General	116	25,176,509	$ 4,802,289	$ 19.07	$ 19.07	4,802,289	217,039	$ 41,399.04	$ 10.4526	$ 2,631,610	$ 8.6218	$ 2,170,679
I Independent Power Producer	3	62,052	$ 13,572	$ 21.87	$ 21.87	13,572	20,684	$ 4,523.96	$ 13.5051	$ 8,380	$ 8.3668	$ 5,192
H Private St. Lights	525	56,235	$ 28,980	$ 51.53	$ 51.53	28,980	107	$ 55.20	$ 42.8715	$ 24,109	$ 8.6613	$ 4,871
Sub-Total	49,131	88,107,957	$ 16,936,487	$ 19.22	$ 19.22	16,936,487	1,793	$ 344.72	$ 10.5732	$ 9,315,809	$ 8.6492	$ 7,620,677
Government Service:												
S Small Non Demand	696	1,164,666	$ 277,519	$ 23.83	$ 23.83	277,519	1,673	$ 398.73	$ 15.1669	$ 176,644	$ 8.6613	$ 100,875
K Small Demand	348	7,858,530	$ 1,746,819	$ 22.23	$ 22.23	1,746,819	22,582	$ 5,019.59	$ 13.5670	$ 1,066,168	$ 8.6613	$ 680,651
L Large	45	5,804,148	$ 1,250,824	$ 21.55	$ 21.55	1,250,824	128,981	$ 27,796.09	$ 12.9803	$ 753,393	$ 8.5703	$ 497,431
F Street Lighting (Agencies)	163	995,613	$ 431,835	$ 43.37	$ 43.37	431,835	6,108	$ 2,649.30	$ 34.7125	$ 345,602	$ 8.6613	$ 86,233
Sub-Total	1,252	15,822,957	$ 3,706,997	$ 23.43	$ 23.43	3,706,997	12,638	$ 2,960.86	$ 14.8001	$ 2,341,807	$ 8.6279	$ 1,365,190
	50,383	103,930,914	$ 20,643,484	$ 42.65	$ 42.65	20,643,484	2,063	$ 409.73	$ 11.2167	$ 11,657,617	$ 8.6460	$ 8,985,867
U.S. Navy	1	26,000,826	$ 4,256,406	$ 16.37	$ 16.37	4,256,406			$ 6.5818	$ 1,711,315	$ 9.7885	$ 2,545,091
TOTAL	50,384	129,931,741	$ 24,899,890	$ 19.16	$ 19.16	24,899,890	2,579	$ 494.20	$ 10.2892	$ 13,368,932	$ 8.8746	$ 11,530,958
Twelve Months Ended September 2016												
R Residential	43,252	487,022,560	$ 92,057,360	$ 18.90	$ 18.90	92,057,360	11,260	$ 2,128.40	$ 9.6203	$ 46,853,221	$ 9.2817	$ 45,204,139
G Small Gen. Non Demand	4,071	80,284,067	$ 18,390,954	$ 22.91	$ 22.91	18,390,954	19,723	$ 4,517.92	$ 13.6364	$ 10,947,876	$ 9.2709	$ 7,443,078
J Small Gen. Demand	1,000	190,587,125	$ 40,501,958	$ 21.25	$ 21.25	40,501,958	190,571	$ 40,498.58	$ 11.9423	$ 22,760,513	$ 9.3088	$ 17,741,444
P Large General	116	308,834,877	$ 60,787,284	$ 19.68	$ 19.68	60,787,284	2,675,826	$ 526,676.83	$ 10.3705	$ 32,027,609	$ 9.3123	$ 28,759,676
I Independent Power Producer	3	767,880	$ 160,467	$ 20.90	$ 20.90	160,467	259,565	$ 54,242.20	$ 11.7983	$ 90,597	$ 9.0990	$ 69,870
H Private St. Lights	531	629,744	$ 345,133	$ 54.81	$ 54.81	345,133	1,186	$ 649.97	$ 45.4278	$ 286,079	$ 9.3776	$ 59,055
Sub-Total	48,972	1,068,126,254	$ 212,243,155	$ 19.87	$ 19.87	212,243,155	21,811	$ 4,333.97	$ 10.5761	$ 112,965,895	$ 9.2945	$ 99,277,261
Government Service:												
S Small Non Demand	689	13,428,264	$ 3,299,460	$ 24.57	$ 24.57	3,299,460	19,504	$ 4,792.24	$ 15.2255	$ 2,044,514	$ 9.3456	$ 1,254,946
K Small Demand	341	93,302,996	$ 21,324,151	$ 22.85	$ 22.85	21,324,151	273,951	$ 62,610.67	$ 13.5082	$ 12,603,536	$ 9.3466	$ 8,720,615
L Large	45	70,055,104	$ 15,453,317	$ 22.06	$ 22.06	15,453,317	1,568,398	$ 345,969.79	$ 12.8102	$ 8,974,202	$ 9.2486	$ 6,479,115
F Street Lighting (Agencies)	161	11,344,681	$ 5,383,255	$ 47.45	$ 47.45	5,383,255	70,573	$ 33,488.36	$ 38.0746	$ 4,319,445	$ 9.3772	$ 1,063,810
Sub-Total	1,235	188,131,044	$ 45,460,182	$ 24.16	$ 24.16	45,460,182	152,395	$ 36,824.77	$ 14.8523	$ 27,941,696	$ 9.3119	$ 17,518,486
U.S. Navy	1	318,082,773	$ 49,193,414	$ 15.47	$ 15.47	49,193,414			$ 6.1774	$ 19,649,233	$ 9.2882	$ 29,544,181
TOTAL	50,207	1,574,340,071	$ 306,896,751	$ 19.49	$ 19.49	306,896,751	31,357	$ 6,112.57	$ 10.1984	$ 160,556,823	$ 9.2953	$ 146,339,928
Moving Twelve Months Ended September 2016												
R Residential	43,252	487,022,560	$ 92,057,360	$ 18.90	$ 18.90	92,057,360	11,260	$ 2,128.40	$ 9.6203	$ 46,853,221	$ 9.2817	$ 45,204,139
G Small Gen. Non Demand	4,071	80,284,067	$ 18,390,954	$ 22.91	$ 22.91	18,390,954	19,723	$ 4,517.92	$ 13.6364	$ 10,947,876	$ 9.2709	$ 7,443,078
J Small Gen. Demand	1,000	190,587,125	$ 40,501,958	$ 21.25	$ 21.25	40,501,958	190,571	$ 40,498.58	$ 11.9423	$ 22,760,513	$ 9.3088	$ 17,741,444
P Large General	116	308,834,877	$ 60,787,284	$ 19.68	$ 19.68	60,787,284	2,675,826	$ 526,676.83	$ 10.3705	$ 32,027,609	$ 9.3123	$ 28,759,676
I Independent Power Producer	3	767,880	$ 160,467	$ 20.90	$ 20.90	160,467	259,565	$ 54,242.20	$ 11.7983	$ 90,597	$ 9.0990	$ 69,870
H Private St. Lights	531	629,744	$ 345,133	$ 54.81	$ 54.81	345,133	1,186	$ 649.97	$ 45.4278	$ 286,079	$ 9.3776	$ 59,055
Sub-Total	48,972	1,068,126,254	$ 212,243,155	$ 19.87	$ 19.87	212,243,155	21,811	$ 4,333.97	$ 10.5761	$ 112,965,895	$ 9.2945	$ 99,277,261
Government Service:												
S Small Non Demand	689	13,428,264	$ 3,299,460	$ 24.57	$ 24.57	3,299,460	19,504	$ 4,792.24	$ 15.2255	$ 2,044,514	$ 9.3456	$ 1,254,946
K Small Demand	341	93,302,996	$ 21,324,151	$ 22.85	$ 22.85	21,324,151	273,951	$ 62,610.67	$ 13.5082	$ 12,603,536	$ 9.3466	$ 8,720,615
L Large	45	70,055,104	$ 15,453,317	$ 22.06	$ 22.06	15,453,317	1,568,398	$ 345,969.79	$ 12.8102	$ 8,974,202	$ 9.2486	$ 6,479,115
F Street Lighting (Agencies)	161	11,344,681	$ 5,383,255	$ 47.45	$ 47.45	5,383,255	70,573	$ 33,488.36	$ 38.0746	$ 4,319,445	$ 9.3772	$ 1,063,810
Sub-Total	1,235	188,131,044	$ 45,460,182	$ 24.16	$ 24.16	45,460,182	152,395	$ 36,824.77	$ 14.8523	$ 27,941,696	$ 9.3119	$ 17,518,486
	50,206	1,256,257,298	$ 257,703,338	$ 20.51	$ 20.51	257,703,338	25,022	$ 41,158.76	$ 11.2165	$ 140,907,591	$ 9.2971	$ 116,795,747
U.S. Navy	1	318,082,773	$ 49,193,414	$ 15.47	$ 15.47	49,193,414			$ 6.1774	$ 19,649,233	$ 9.2882	$ 29,544,181
TOTAL	50,207	1,574,340,071	$ 306,896,751	$ 19.49	$ 19.49	306,896,751	31,357	$ 6,112.57	$ 10.1984	$ 160,556,823	$ 9.2953	$ 146,339,928

GPA-318

318Sep16

ENERGY ACCOUNT

FY 2016 Versus FY 2015

FOR INTERNAL USE ONLY

Gross Generation	September 2016		September 2015		Y T D 2016		Y T D 2015		MOVING TWELVE MONTHS	
Number of days in Period	30		30		366		366		366	
Peak demand	256		254		258		255		258	
Date	09/05/16		09/17/15		07/25/16		08/31/15		07/25/16	
	KWH	% change	KWH	% change	KWH	% change	KWH	% change	KWH	% change
Energy Account:										
Kilowatt hours GPA:										
Cabras 1 & 2	34,919,000		53,526,000		640,287,000		519,840,000		640,287,000	
Cabras No. 3	0		0		0		204,164,813		0	
Cabras No. 4	0		0		0		184,708,024		0	
MEC (ENRON) Piti 8 (IPP)	29,192,500		21,588,200		281,612,350		328,092,200		281,612,350	
MEC (ENRON) Piti 9 (IPP)	23,932,900		27,635,800		314,537,200		347,665,700		314,537,200	
TEMES Piti 7 (IPP)	11,037,200		9,824,773		97,482,153		18,138,072		97,482,153	
Tanguisson 2	0		0		0		0		0	
Tanguisson 1	0		0		0		11,012,210		0	
Diesels/CT's & Others:							0			
MDI 10MW	1,227,212		3,333,966		10,784,474		14,704,999		10,784,474	
NRG Solar Dandan	3,420,080		3,671,967		49,550,327		5,883,224		49,550,327	
Dededo CT #1	0		0		0		0		0	
Dededo CT #2	0		0		0		0		0	
Macheche CT	0		6,832,843		50,634,675		15,856,909		50,634,675	
Yigo CT (Leased)	7,794,820		6,587,938		48,405,494		15,653,543		48,405,494	
Tenjo	4,594,580		9,531,520		47,918,189		40,378,400		47,918,189	
Talofofo 10 MW	1,935,110		1,158,620		11,208,933		5,787,333		11,208,933	
Aggreko	23,037,937		0		168,092,182		0		168,092,182	
Wind Turbine*	15,904		0		381,279		0		381,279	
Orote	0		0		0		0		0	
Marbo	0		0		0		0		0	
	141,107,243		**143,691,628**		**1,720,894,256**		**1,711,885,427**		**1,720,894,256**	
Ratio to last year		98.20		101.72		100.53		**100.24**		**100.53**
Station use	4,562,720		5,863,909		64,951,789		83,059,829		64,951,789	
Ratio to gross generation		3.23		4.08		3.77		4.85		**3.77**
Net send out	136,544,523		137,827,719		1,655,942,467		1,628,825,598		1,655,942,467	
Ratio to last year		99.07		103.05		101.66		**100.38**		**101.85**
KWH deliveries:										
Sales to Navy (@34.5kv)	**26,000,826**		**27,037,635**		**318,082,771**		314,821,165		**318,082,771**	
Ratio to last year		96.17		101.87		101.04		**96.33**		**100.22**
GPA-metered	**110,543,697**		**110,790,084**		**1,337,859,696**		**1,314,004,433**		**1,337,859,696**	
Ratio to last year		99.78		103.34		101.82		**101.40**		**102.02**
Power factor adj	0		0		0	0			0	
Adjusted	110,543,697		110,790,084		1,337,859,696		1,314,004,433		1,337,859,696	
GPA KWH Accountability:										
Sales to civilian customers-accrual basis	**103,930,914**		**104,067,438**		**1,256,257,297**		**1,222,194,099**		**1,256,257,297**	
Ratio to last year		99.87		101.31		102.79		**101.08**		**102.79**
GPA use-KWH	250,698		277,464		3,321,842		4,088,340		3,321,842	
Unaccounted For	6,362,085		6,445,181		78,280,557		87,721,994		78,280,557	
Ratio to deliveries		5.76		5.82		5.85		6.68		5.85
Ratio to Gross Generation		4.51		4.49		4.55		5.12		4.55
Ratio to Net Send Out		4.66		4.68		4.73		5.39		4.73

Doc. No. 34GL-17-0815.*

CCU November 22, 2016 Regular Meeting - NEW BUSINESS

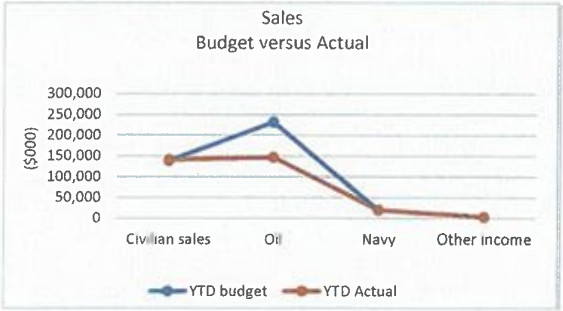
GPA-317Sep16

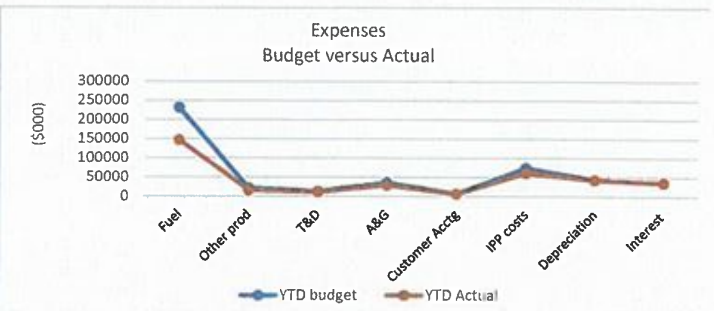
Guam Power Authority
Fuel Consumption
FY 2016

Description	September 2016 BARRELS	September 2016 AMOUNT	YEAR-TO-DATE BARRELS	YEAR-TO-DATE AMOUNT	MOVING 12 MONTHS BARREL S	MOVING 12 MONTHS AMOUNT
FUEL FURNISHED:						
NAVY:						
Diesel	0	0	0	0	0	0
Low Sulfur	0	0	0	0	0	0
	0	**0**	**0**	**0**	**0**	**0**
GPA:						
RFO	78,746	$3,191,685	1,426,725	$ 58,640,262	1,426,725	$ 58,640,262
Diesel	101,866	$6,522,358	901,356	$ 55,531,243	901,356	$ 55,531,243
Low Sulfur	51,889	$2,455,498	424,948	$ 21,057,472	424,948	$ 21,057,472
Deferred Fuel Costs	0	-$1,907,212	0	$ (2,505,219)	0	$ (2,505,219)
Fuel Adjustments	0	$40,912		$ 83,149	0	$ 83,149
Fuel Handling Costs	0	$1,071,315	0	$ 13,533,020	0	$ 13,533,020
	232,500	**$11,374,557**	**2,753,029**	**$ 146,339,927**	**2,753,029**	**$ 146,339,927**
IWPS:						
GPA RFO	78,746	$3,191,685	1,426,725	$ 58,640,262	1,426,725	$ 58,640,262
Diesel	101,866	$6,522,358	901,356	$ 55,531,243	901,356	$ 55,531,243
Low Sulfur	51,889	$2,455,498	424,948	$ 21,057,472	424,948	$ 21,057,472
Deferred Fuel Costs	0	-$1,907,212	0	$ (2,505,219)	0	$ (2,505,219)
Fuel Variance	0	$40,912	0	$ 83,149		$ 83,149
Fuel Handling Costs	0	$1,071,315	0	$ 13,533,020	0	$ 13,533,020
	232,500	**$11,374,557**	**2,753,029**	**$ 146,339,927**	**2,753,029**	**$ 146,339,927**
AVERAGE COST/Bbl						
GPA RFO		**$40.53**		**$41.10**		**$41.10**
Diesel		**$64.03**		**$61.61**		**$61.61**
Low Sulfur		**$47.32**		**$49.55**		**$49.55**
AS BURNED						
Cabras 1 & 2						
RFO	33,438	$ 1,355,283	771,012	$ 32,057,030	771,012	$ 32,057,030
Low Sulfur	26,137	$ 1,245,431	282,131	$ 13,988,437	282,131	$ 13,988,437
Diesel	301	$ 16,857	1,458	$ 107,728	1,458	$ 107,728
	59,876	$ 2,617,571	1,054,600	$ 46,153,195	1,054,600	$ 46,153,195
Cabras 3 & 4						
RFO	0	$ -	0	$ -	0	$ -
Low Sulfur	0	$ -	0	$ -	0	$ -
Diesel	0	$ -	0	$ -	0	$ -
	0	$ -	0	$ -	0	$ -
MEC (Piti Units 8&9)						
RFO	45,308	$ 1,836,402	655,714	$ 26,583,232	655,714	$ 26,583,232
Low Sulfur	25,752	$ 1,210,068	142,817	$ 7,069,035	142,817	$ 7,069,035
Diesel	0	$ -	106	$ 15,983	106	$ 15,983
	71,060	$ 3,046,470	798,638	$ 33,668,250	798,638	$ 33,668,250
Diesel & CT's - GPA:						
MDI Dsl	1,954	$ 126,684	19,006	$ 1,198,703	19,006	$ 1,198,703
Macheche CT	0	$ -	113,547	$ 6,843,071	113,547	$ 6,843,071
Yigo CT	15,732	$ 978,556	102,547	$ 6,638,035	102,547	$ 6,638,035
Talofofo 10 MW	3,090	$ 193,320	17,817	$ 1,118,415	17,817	$ 1,118,415
Aggreko	42,262	$ 2,627,114	305,486	$ 17,762,490	305,486	$ 17,762,490
Tenjo	7,931	$ 520,129	82,722	$ 5,301,570	82,722	$ 5,301,570
TEMES (IPP)	28,104	$ 1,771,970	253,258	$ 15,942,352	253,258	$ 15,942,352
GWA Generators	2,492	$ 287,729	5,409	$ 602,896	5,409	$ 602,896
	101,565	$ 6,505,501	899,791	$ 55,407,532	899,791	$ 55,407,532
Deferred Fuel Costs	0	$ (1,907,212)		$ (2,505,219)		$ (2,505,219)
Adjustment		$ 40,912		$ 83,149		$ 83,149
Fuel Handling Costs	0	$ 1,071,315		$ 13,533,020		$ 13,533,020
TOTAL	**232,501**	**$ 11,374,557**	**2,753,029**	**$ 146,339,927**	**2,753,029**	**$ 146,339,927**

Statement of operations
Comparison-Budget versus Actual
For the month and year to date ended September 30, 2016

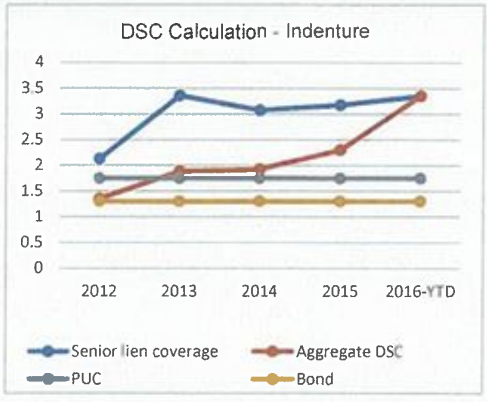
	Budget	Actual September-16	Variance	YTD Budget	YTD Actual	Variance
KwH Sales-Civilian	99,856	103,931	-4,075	1,200,961	1,256,257	-55,296
Non-fuel yield	$ 0.115173	$ 0.112171	$ 0.003002	$ 0.115203	$ 0.112040	$ 0.003163
KwH Sales-Navy	26,462	26,001	461	319,162	318,083	1,079
Non-fuel yield	$ 0.061338	$ 0.065805	$ (0.004467)	$ 0.061338	$ 0.061773	$ (0.000435)
Operating revenue						
Civilian sales	$ 11,501	$ 11,658	$ (157)	$ 138,354	$ 140,751	$ (2,397)
Oil	19,816	11,531	8,285	232,125	146,496	85,629
Navy	1,623	1,711	(88)	19,577	19,649	(72)
Other income	232	73	159	2,780	2,294	486
	33,172	24,973	8,199	392,836	309,190	83,646
Bad debts expense	93	(325)	418	1,100	990	110
Total operating revenues	33,079	25,298	7,781	391,736	308,200	83,536
Operating expenses:						
Production fuel	19,816	11,375	8,442	232,125	146,340	85,786
O & M expenses:						
Other production	2,264	1,665	598	21,740	15,789	5,951
Transmission distribution	195	497	(302)	12,611	10,721	1,890
Administrative expense	2,937	2,880	57	35,336	28,846	6,490
Customer accounting	339	(216)	555	4,345	4,502	(157)
	5,735	4,826	909	74,032	59,858	14,174
IPP costs	1,615	1,440	175	19,383	16,800	2,582
Depreciation	3,571	4,088	(517)	42,849	42,332	518
	30,737	21,729	9,008	368,389	265,329	103,060
Operating income	2,342	3,569	(1,227)	23,347	42,871	(19,524)
Other revenue (expenses):						
Investment income	128	259	(131)	1,540	1,100	440
Interest expense	(2,896)	(2,903)	7	(34,752)	(34,812)	60
AFUDC	501	324	177	6,010	4,137	1,873
Bond issuance costs/Other expenses	118	64	54	1,418	(874)	2,292
Net income before capital contribution	193	1,313	(1,120)	(2,437)	12,423	(14,860)
Grants from the U.S. Government	150	28	122	1,802	732	1,070
Increase (decrease) in net assets	$ 344	$ 1,341	$ (998)	$ (635)	$ 13,155	$ (13,790)

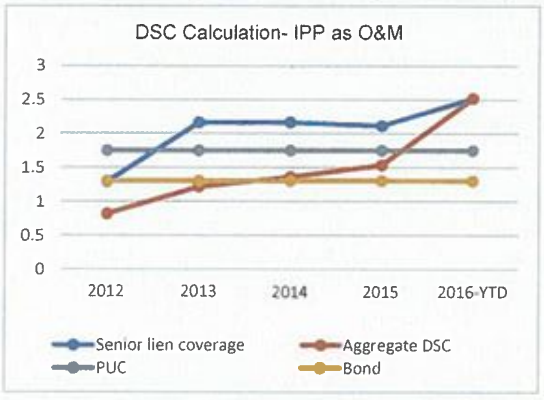




Guam Power Authority
Debt service coverage
September 30, 2016

	2012	2013	2014	2015	YTD 9/30/2016
Operating revenues					
Sales	$ 438,112	$ 449,029	$ 434,462	$ 366,185	$ 306,896
Miscellaneous	1,916	2,927	2,156	4,775	2,294
Total revenues	440,028	451,956	436,618	370,960	309,190
Bad debts expense	1,355	1,223	178	959	990
Total operating revenues	438,673	450,733	436,440	370,001	308,200
Operating expenses					
Production fuel	288,602	295,473	271,175	204,136	146,340
Other production	24,991	22,009	19,305	20,079	15,789
Energy conversion costs	19,937	20,264	20,632	18,404	16,800
Transmission and distribution	12,717	13,368	12,950	11,170	10,721
Customer accounting	3,676	3,878	3,821	3,780	4,502
Admin and General	31,378	31,589	28,393	21,908	28,846
Total Expenses	381,301	386,581	356,276	279,477	222,998
Operating income	$ 57,372	$ 64,152	$ 80,164	$ 90,524	$ 85,202
Interest/Other income (expenses)	$ 1,113	$ 720	$ 157	$ 256	$ (1,188)
Debt service and lease payments					
IPP lease payments	$ 23,084	$ 23,084	$ 23,084	$ 26,622	$ 20,790
2014 bonds	-	-	-	-	10
2012 bonds	-	16,309	17,455	17,096	17,098
2010 senior bonds	27,483	2,997	7,999	7,999	7,999
2010 subordinate	15,934	15,163	15,193	9,605	-
Total Debt service-bonds	43,417	34,469	40,647	34,700	25,106
Total Debt service and capital lease	$ 66,501	$ 57,553	$ 63,731	$ 61,322	$ 45,896
Debt service coverage (DSC) calculation-indenture					
Senior lien coverage	2.13	3.36	3.16	3.62	3.35
Aggregate debt service coverage	1.35	1.88	1.98	2.62	3.35
Debt service coverage (DSC) calculation-IPP as O&M					
Senior lien coverage	1.29	2.16	2.25	2.56	2.52
Aggregate debt service coverage	0.82	1.21	1.41	1.85	2.52

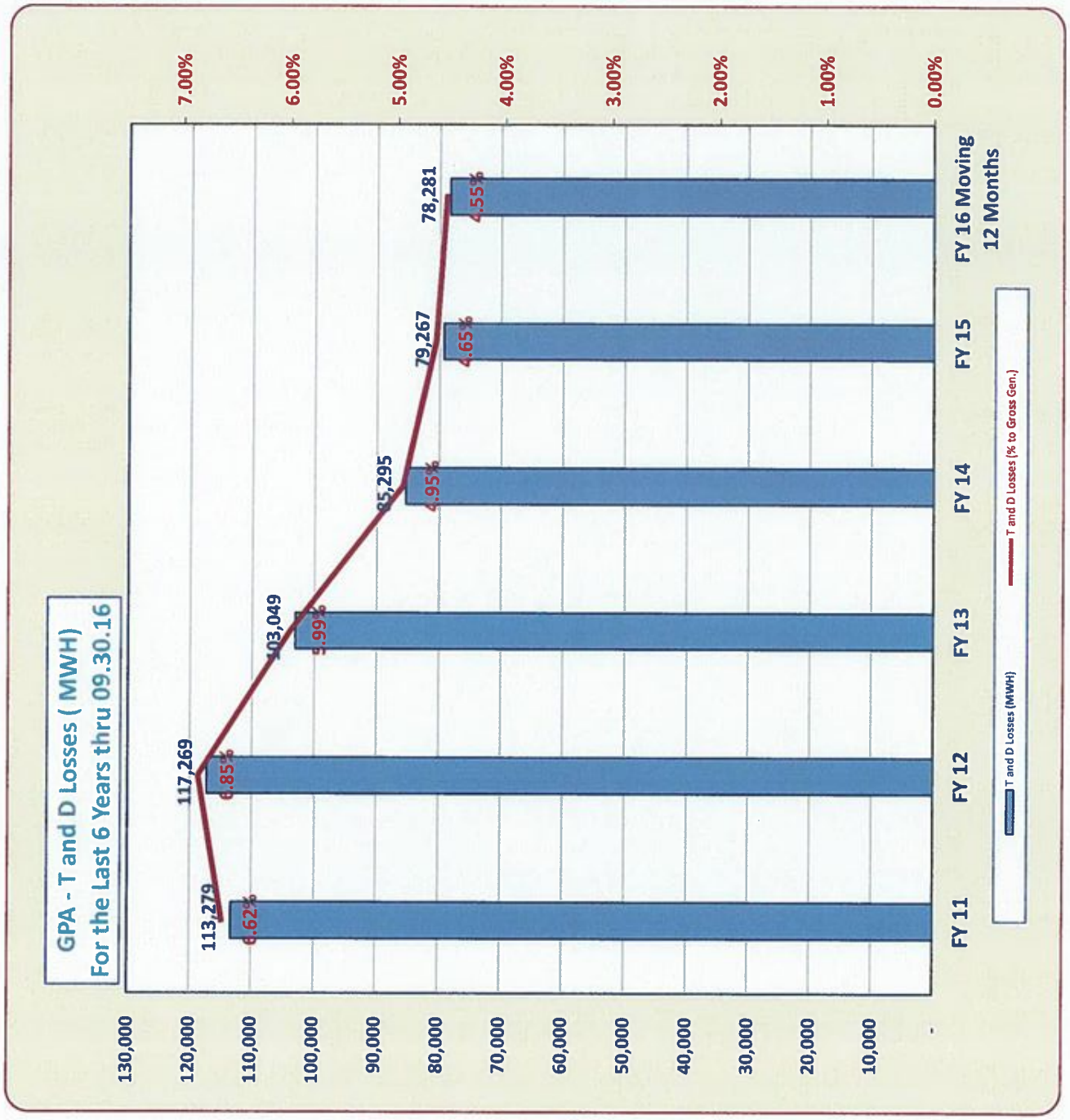


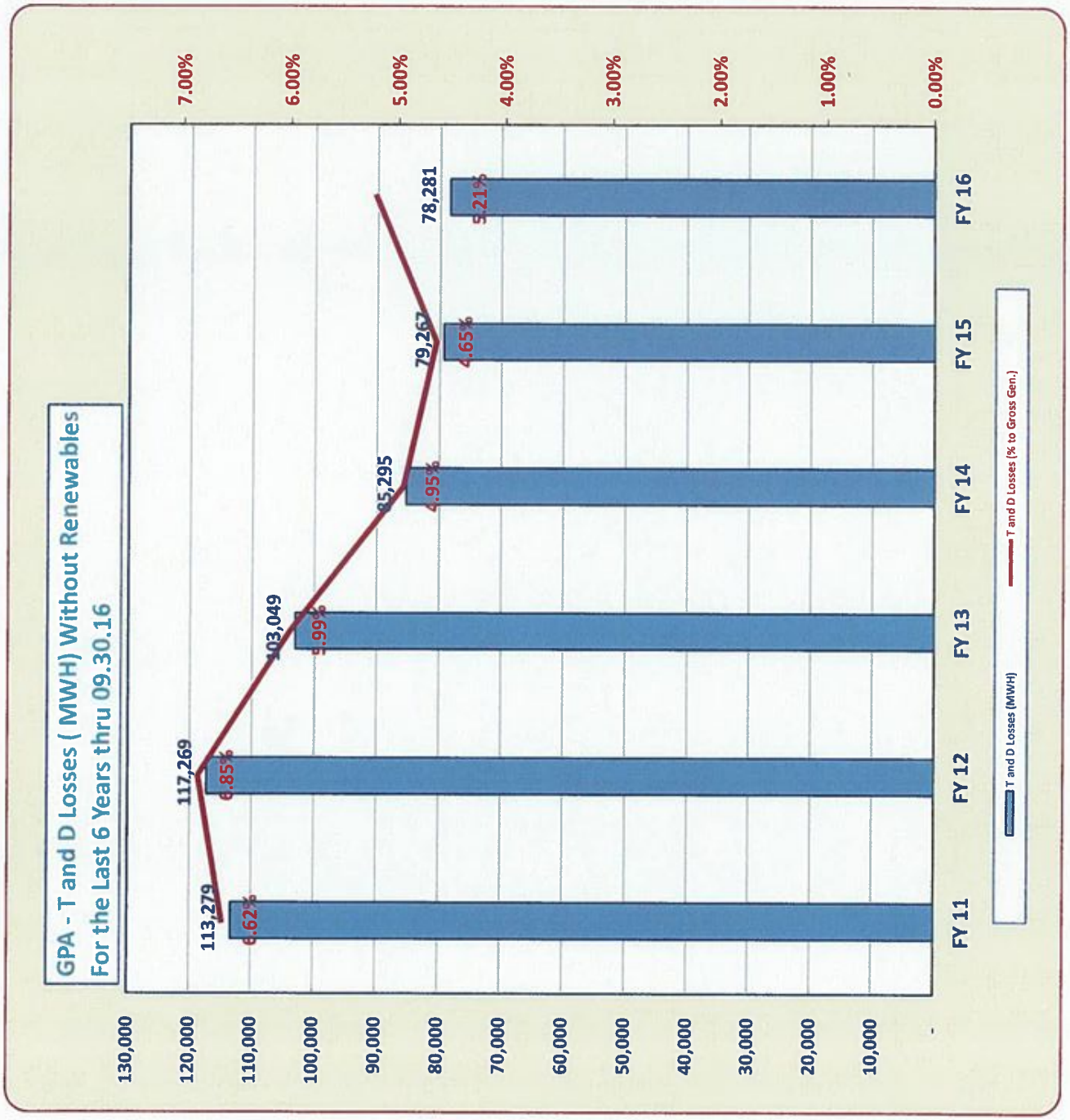


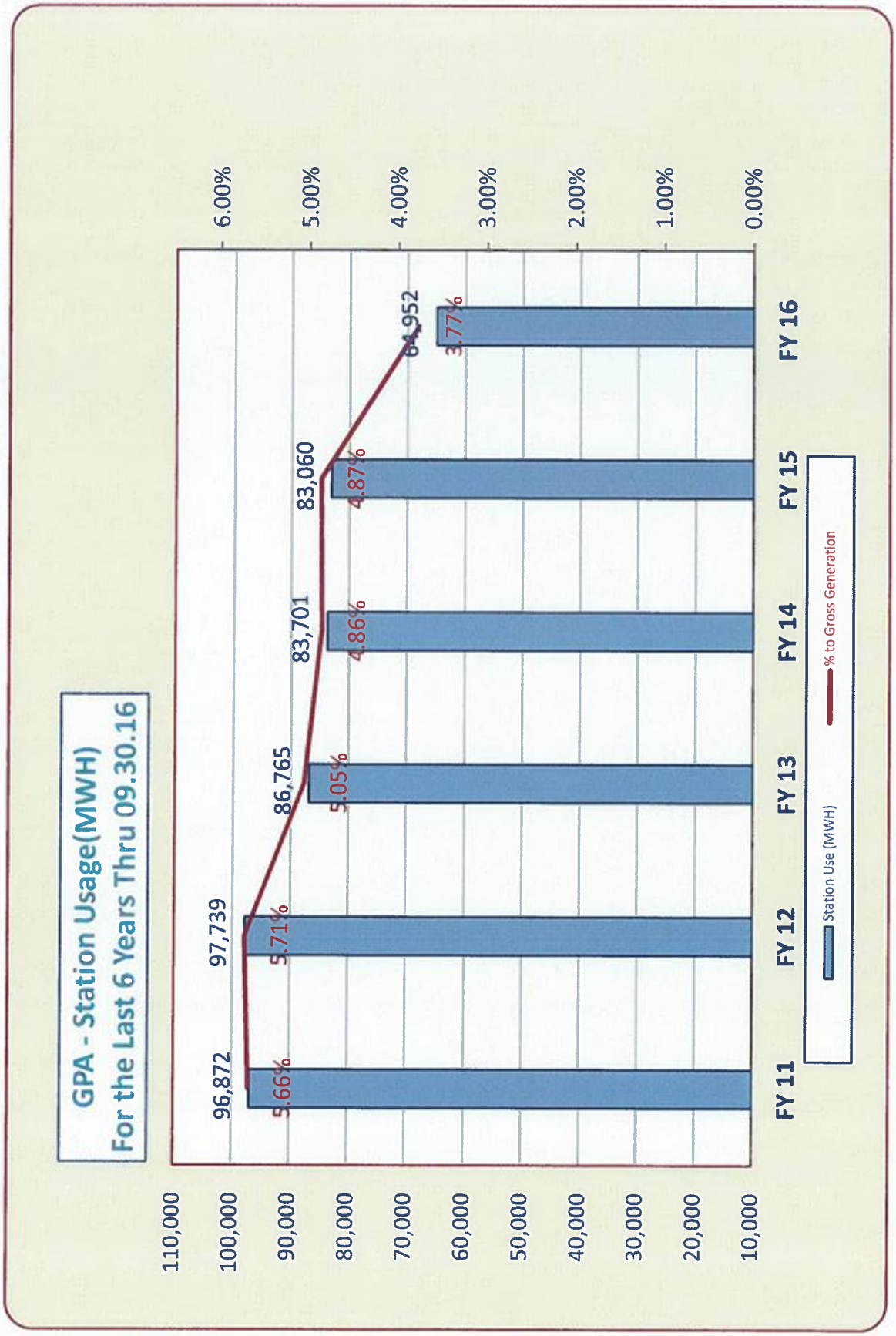
REVENUES-ACTUAL VS PROJECTIONS

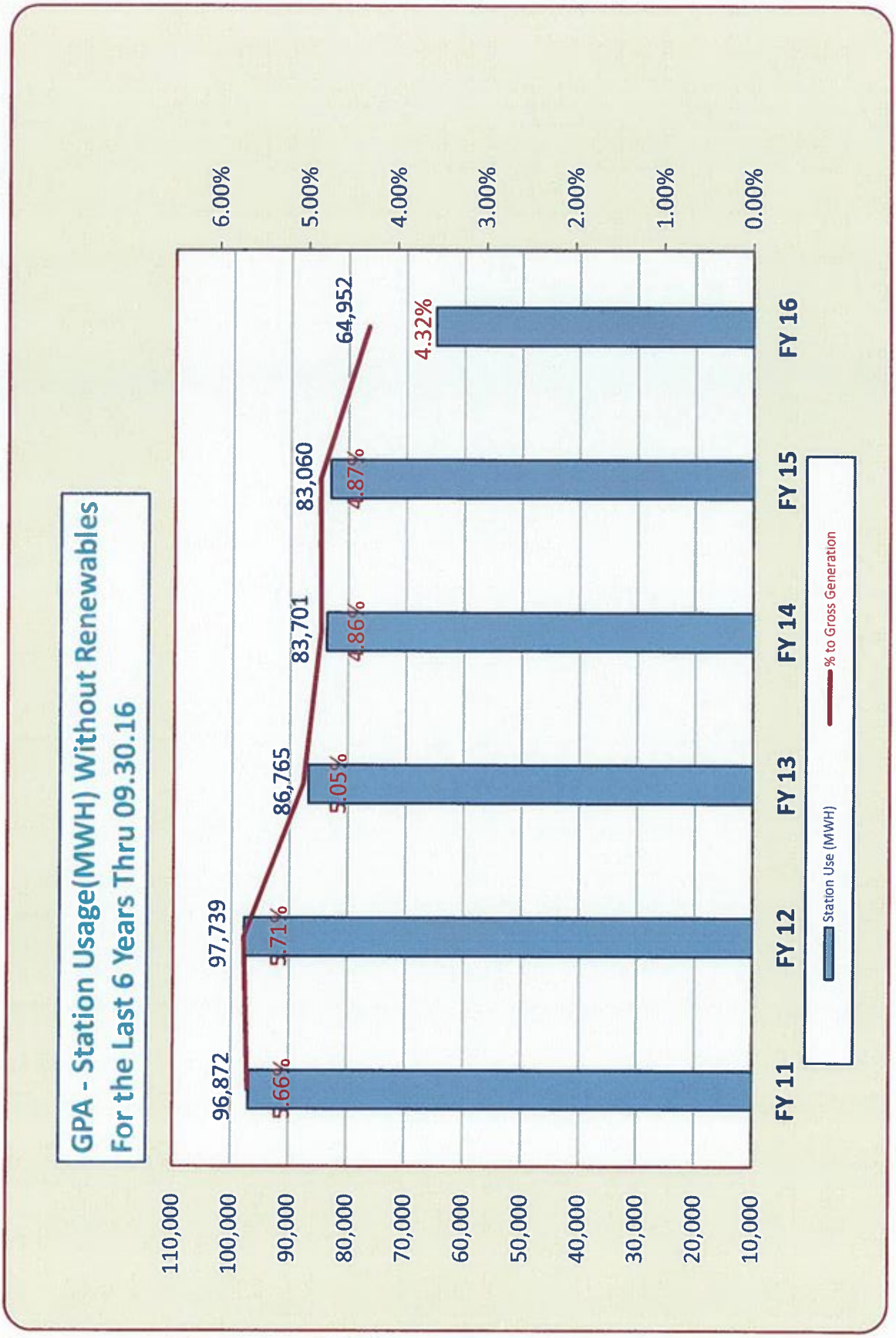
	MONTHLY - SEPTEMBER 2016				YTD THRU 09/30/2016			
	PROJECTIONS	ACTUAL	VARIANCE	% VARIANCE	PROJECTIONS	ACTUAL	VARIANCE	% VARIANCE
KWH								
Residential	36,557,942	41,186,530	4,628,588	12.66%	437,593,660	487,022,560	49,428,900	11.30%
Small General-Non-Demand	5,586,691	6,885,525	1,298,834	23.25%	67,496,024	80,284,067	12,788,043	18.95%
Small General-Demand	16,152,414	14,741,107	(1,411,307)	-8.74%	193,412,395	190,587,125	(2,825,270)	-1.46%
Large	26,193,754	25,176,509	(1,017,245)	-3.88%	316,110,683	308,834,877	(7,275,805)	-2.30%
Independent Power Producers	52,337	62,052	9,715	18.56%	631,607	767,880	136,274	21.58%
Private St. Lites	85,114	56,235	(8,879)	-13.64%	631,633	629,744	(1,889)	-0.30%
Sub-total	**84,608,251**	**88,107,957**	**3,499,706**	**4.14%**	**1,015,876,001**	**1,068,126,254**	**52,250,253**	**5.14%**
Government								
Small_Non Demand	1,145,839	1,164,666	18,827	1.64%	14,210,236	13,428,264	(781,972)	-5.50%
Small-Demand	7,937,187	7,858,530	(78,637)	-0.99%	95,348,825	93,302,996	(2,045,830)	-2.15%
Large	5,224,691	5,804,148	579,456	11.09%	64,195,529	70,055,104	5,859,574	9.13%
Public St. Lites	940,234	995,613	55,379	5.89%	11,330,756	11,344,681	13,924	0.12%
Sub-total	**15,247,931**	**15,822,957**	**575,026**	**3.77%**	**185,085,347**	**188,131,044**	**3,045,697**	**1.65%**
Total-Civilian	**99,856,183**	**103,930,914**	**4,074,732**	**4.08%**	**1,200,961,348**	**1,256,257,298**	**55,295,950**	**4.60%**
USN	26,462,067	26,000,826	(461,240)	-1.74%	319,161,725	318,082,773	(1,078,953)	-0.34%
Grand Total	**126,318,249**	**129,931,741**	**3,613,491**	**2.86%**	**1,520,123,073**	**1,574,340,071**	**54,216,997**	**3.57%**
					-	-		
Non-Oil Yield								
Residential	0.089751	0.095315	0.005563	6.20%	0.089751	0.096203	0.006452	7.19%
Small General-Non-Demand	0.148700	0.134587	(0.014112)	-9.49%	0.148700	0.136364	(0.012335)	-8.30%
Small General-Demand	0.128020	0.122062	(0.005958)	-4.65%	0.128020	0.119423	(0.008597)	-6.72%
Large	0.111931	0.104526	(0.007405)	-6.62%	0.111931	0.103705	(0.008226)	-7.35%
Independent Power Producers	0.171527	0.135051	(0.036476)	0.00%	-	0.117983	0.117983	0.00%
Private St. Lites	0.490401	0.428715	(0.061685)	-12.58%	0.490401	0.454278	(0.036123)	-7.37%
Sub-total	**0.108175**	**0.105732**	**(0.002443)**	**-2.26%**	**0.108156**	**0.105761**	**(0.002395)**	**-2.21%**
Government					-			
Small_Non Demand	0.157027	0.151669	(0.005358)	-3.41%	0.157027	0.152255	(0.004772)	-3.04%
Small-Demand	0.135057	0.135670	0.000613	0.45%	0.135057	0.135082	0.000025	0.02%
Large	0.130628	0.129803	(0.000826)	-0.63%	0.130628	0.128102	(0.002526)	-1.93%
Public St. Lites	0.440111	0.347125	(0.092986)	-21.13%	0.440111	0.380746	(0.059365)	-13.49%
Sub-total	**0.154001**	**0.148001**	**(0.006000)**	**-3.90%**	**0.153883**	**0.148523**	**(0.005360)**	**-3.48%**
Total-Civilian	**0.115173**	**0.112167**	**(0.003006)**	**-2.61%**	**0.115203**	**0.112165**	**(0.003038)**	**-2.64%**
USN	0.061338	0.065818	0.004480	7.30%	0.061338	0.061774	0.000436	0.71%
Grand Total	**0.103895**	**0.102892**	**(0.001003)**	**-0.97%**	**0.103893**	**0.101984**	**(0.001910)**	**-1.84%**
Non-Oil Revenues								
Residential	3,281,123	3,925,681	644,558	19.64%	39,274,598	46,853,221	7,578,623	19.30%
Small General-Non-Demand	830,738	926,703	95,964	11.55%	10,036,627	10,947,876	911,249	9.08%
Small General-Demand	2,067,834	1,799,327	(268,507)	-12.98%	24,760,679	22,760,513	(2,000,166)	-8.08%
Large	2,931,894	2,631,610	(300,284)	-10.24%	35,382,593	32,027,609	(3,354,984)	-9.48%
Independent Power Producers	8,977	8,380	(597)	-6.65%	108,338	90,597	(17,741)	-16.38%
Private St. Lites	31,932	24,109	(7,823)	-24.50%	309,753	286,079	(23,674)	-7.64%
Sub-total	**9,152,498**	**9,315,809**	**163,311**	**1.78%**	**109,872,588**	**112,965,895**	**3,093,307**	**2.82%**
Government								
Small_Non Demand	179,928	176,644	(3,284)	-1.82%	2,231,389	2,044,514	(186,875)	-8.37%
Small-Demand	1,071,969	1,066,168	(5,801)	-0.54%	12,877,517	12,603,536	(273,981)	-2.13%
Large	682,492	753,393	70,901	10.39%	8,385,747	8,974,202	588,455	7.02%
Public St. Lites	413,807	345,602	(68,205)	-16.48%	4,986,793	4,319,445	(667,349)	-13.38%
Sub-total	**2,348,196**	**2,341,807**	**(6,389)**	**-0.27%**	**28,481,446**	**27,941,696**	**(539,749)**	**-1.90%**
Total-Civilian	**11,500,694**	**11,657,617**	**156,922**	**1.36%**	**138,354,033**	**140,907,591**	**2,553,557**	**1.85%**
USN	1,623,134	1,711,315	88,181	5.43%	19,576,789	19,649,233	72,443	0.37%
Grand Total	**13,123,828**	**13,368,932**	**245,104**	**1.87%**	**157,930,823**	**160,556,823**	**2,626,001**	**1.66%**
% of Total Revenues	39.84%	53.69%			40.49%	52.32%		
Oil Revenues								
Residential	5,856,255	3,567,289	(2,288,966)	-39.09%	67,599,455	45,204,139	(22,395,317)	-33.13%
Small General-Non-Demand	894,938	596,376	(298,562)	-33.36%	10,423,101	7,443,078	(2,980,023)	-28.59%
Small General-Demand	2,587,472	1,276,271	(1,311,201)	-50.67%	29,877,126	17,741,444	(12,135,682)	-40.62%
Large	4,196,005	2,170,679	(2,025,327)	-48.27%	48,836,967	28,759,676	(20,077,291)	-41.11%
Independent Power Producers	8,384	5,192	(3,192)	-38.07%	97,579	69,870	(27,709)	-28.40%
Private St. Lites	10,431	4,871	(5,560)	-53.30%	98,021	59,055	(38,967)	-39.75%
Sub-total	**13,553,485**	**7,620,677**	**(5,932,808)**	**-43.77%**	**156,932,249**	**99,277,261**	**(57,654,989)**	**-36.74%**
Government								
Small_Non Demand	183,553	100,875	(82,678)	-45.04%	2,192,109	1,254,946	(937,164)	-42.75%
Small-Demand	1,271,463	680,651	(590,812)	-46.47%	14,731,372	8,720,615	(6,010,756)	-40.80%
Large	836,949	497,431	(339,518)	-40.57%	9,908,601	6,479,115	(3,429,486)	-34.61%
Public St. Lites	150,617	86,233	(64,384)	-42.75%	1,750,542	1,083,810	(666,732)	-39.23%
Sub-total	**2,442,582**	**1,365,190**	**(1,077,392)**	**-44.11%**	**28,582,624**	**17,518,486**	**(11,064,138)**	**-38.71%**
Total-Civilian	**15,996,068**	**8,985,867**	**(7,010,201)**	**-43.82%**	**185,514,873**	**116,795,747**	**(68,719,127)**	**-37.04%**
USN	3,820,428	2,545,091	(1,275,337)	-33.38%	46,610,600	29,544,181	(17,066,418)	-36.61%
Grand Total	**19,816,496**	**11,530,958**	**(8,285,538)**	**-41.81%**	**232,125,473**	**146,339,928**	**(85,785,545)**	**-36.96%**
% of Total Revenues	60.16%	46.31%			59.51%	47.68%		
Grand Total								
Residential	9,137,378	7,492,970	(1,644,408)	-18.00%	106,874,053	92,057,360	(14,816,693)	-13.86%
Small General-Non-Demand	1,725,676	1,523,079	(202,598)	-11.74%	20,459,728	18,390,954	(2,068,774)	-10.11%
Small General-Demand	4,655,306	3,075,598	(1,579,708)	-33.93%	54,637,805	40,501,958	(14,135,848)	-25.87%
Large	7,127,899	4,802,289	(2,325,610)	-32.63%	84,219,559	60,787,284	(23,432,275)	-27.82%
Independent Power Producers	17,361	13,572	(3,789)	-21.83%	205,917	160,467	(45,450)	-22.07%
Private St. Lites	42,363	28,980	(13,383)	-31.59%	407,774	345,133	(62,641)	-15.36%
Sub-total	**22,705,983**	**16,936,487**	**(5,769,497)**	**-25.41%**	**266,804,837**	**212,243,155**	**(54,561,682)**	**-20.45%**
Government					-			
Small_Non Demand	363,481	277,519	(85,962)	-23.65%	4,423,498	3,299,460	(1,124,039)	-25.41%
Small-Demand	2,343,432	1,746,819	(596,614)	-25.46%	27,608,888	21,324,151	(6,284,737)	-22.76%
Large	1,519,441	1,250,824	(268,617)	-17.68%	18,294,348	15,453,317	(2,841,031)	-15.53%
Public St. Lites	564,424	431,835	(132,589)	-23.49%	6,737,335	5,383,255	(1,354,081)	-20.10%
Sub-total	**4,790,778**	**3,706,997**	**(1,083,781)**	**-22.62%**	**57,064,070**	**45,460,182**	**(11,603,887)**	**-20.33%**
Total-Civilian	**27,496,762**	**20,643,484**	**(6,853,278)**	**-24.92%**	**323,868,907**	**257,703,338**	**(66,165,569)**	**-20.43%**
USN	5,443,562	4,256,406	(1,187,156)	-21.81%	66,187,389	49,193,414	(16,993,975)	-25.68%
Grand Total	**32,940,324**	**24,899,890**	**(8,040,434)**	**-24.41%**	**390,056,295**	**306,896,751**	**(83,159,544)**	**-21.32%**
	-	-	-					

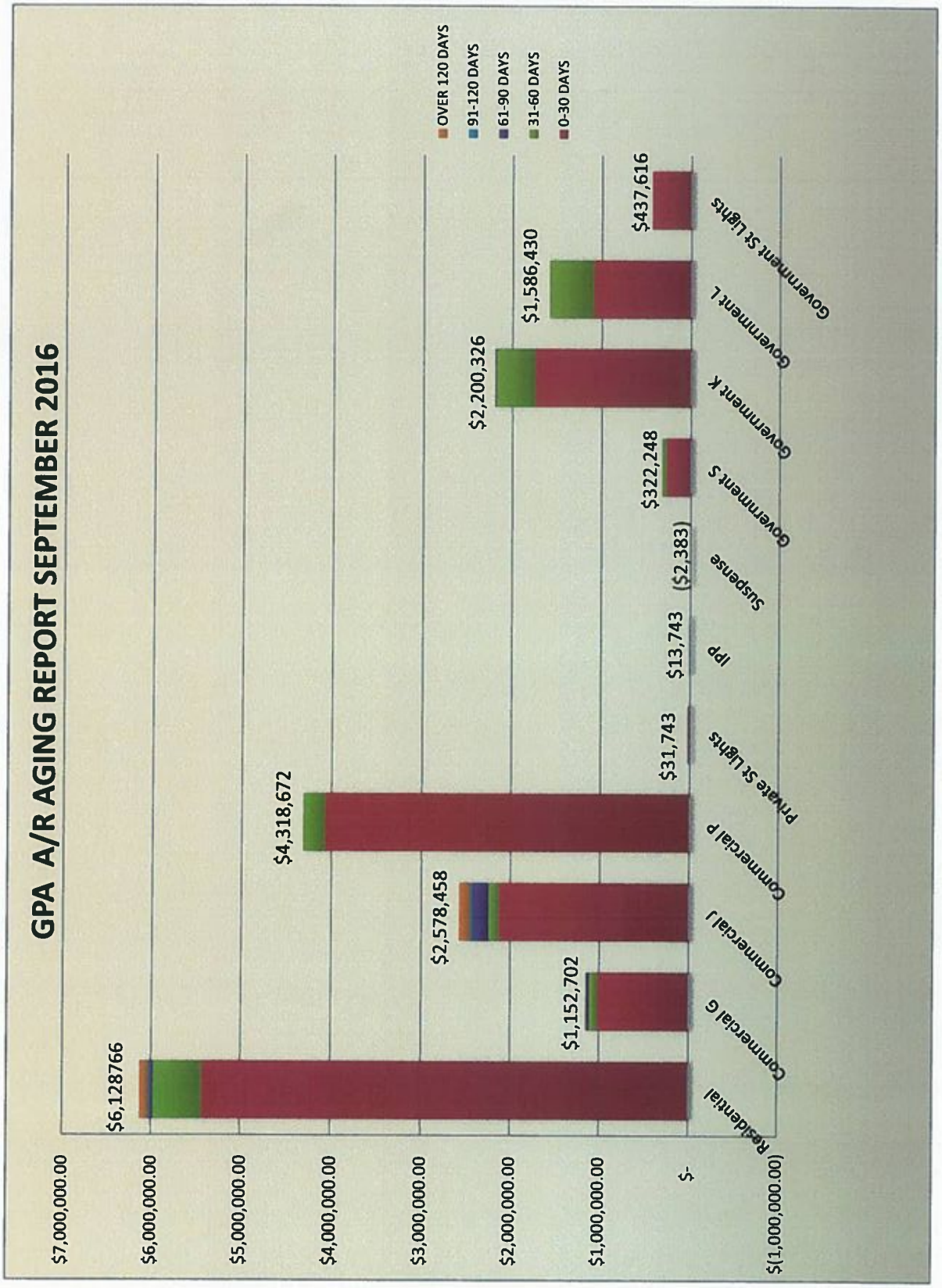
	YTD REVENUES - CURRENT YEAR VS PRIOR YEAR				MTD REVENUES - CURRENT YEAR VS PRIOR YEAR			
	ACTUALS - 12 MONTHS ENDED SEPTEMBER 30				ACTUALS - MONTH ENDED SEPTEMBER 30			
	2016	2015	VARIANCE	% VARIANCE	2016	2015	VARIANCE	% VARIANCE
KWH								
Residential	487,022,560	461,568,899	25,453,660	5.51%	41,186,530	39,872,545	1,313,985	3.30%
Small General-Non-Demand	80,284,067	72,596,851	7,687,216	10.59%	6,885,525	6,288,677	596,848	9.49%
Small General-Demand	190,587,125	189,288,039	1,299,086	0.69%	14,741,107	16,163,980	(1,422,873)	-8.80%
Large	308,834,877	309,074,448	(239,570)	-0.08%	25,176,509	26,047,464	(870,955)	-3.34%
Independent Power Producers	767,880	609,957	157,923	25.89%	62,052	38,355	23,697	61.78%
Private St. Lites	629,744	622,232	7,512	1.21%	56,235	52,449	3,786	7.22%
Sub-total	**1,068,126,254**	**1,033,760,426**	**34,365,827**	**3.32%**	**88,107,957**	**88,463,469**	**(355,512)**	**-0.40%**
Government								
Small_Non Demand	13,428,264	13,943,174	(514,910)	-3.69%	1,164,666	1,124,630	40,036	3.56%
Small-Demand	93,302,998	92,149,165	1,153,830	1.25%	7,858,530	7,515,034	343,496	4.57%
Large	70,055,104	70,798,160	(743,057)	-1.05%	5,804,148	5,971,410	(167,263)	-2.80%
Public St. Lites	11,344,681	11,543,174	(198,493)	-1.72%	995,813	992,895	2,718	0.27%
Sub-total	**188,131,044**	**188,433,673**	**(302,629)**	**-0.16%**	**15,822,957**	**15,603,969**	**218,988**	**1.40%**
Total-Civilian	**1,256,257,298**	**1,222,194,100**	**34,063,198**	**2.79%**	**103,930,914**	**104,067,438**	**(136,524)**	**-0.13%**
USN	318,082,773	317,393,055	689,718	0.22%	26,000,826	27,037,635	(1,036,808)	-3.83%
Grand Total	**1,574,340,071**	**1,539,587,154**	**34,752,916**	**2.26%**	**129,931,741**	**131,105,073**	**(1,173,332)**	**-0.89%**
Non-Oil Yield								
Residential	0.096203	0.090233	0.005971	6.62%	0.095315	0.092451	0.002864	3.10%
Small General-Non-Demand	0.136364	0.139956	-0.003592	-2.57%	0.134587	0.141483	-0.006896	-4.87%
Small General-Demand	0.119423	0.120744	-0.001321	-1.09%	0.122062	0.122430	-0.000368	-0.30%
Large	0.103705	0.106376	-0.002671	-2.51%	0.104526	0.106109	-0.001582	-1.49%
Independent Power Producers	0.000000	0.160485	-0.160485	-100.00%	0.135051	0.127763	0.007289	5.70%
Private St. Lites	0.454278	0.458304	-0.004026	-0.88%	0.428715	0.452805	-0.024090	-5.32%
Sub-total	**0.105761**	**0.104401**	**0.001360**	**1.30%**	**0.105732**	**0.105665**	**0.000067**	**0.06%**
Government								
Small_Non Demand	0.152255	0.151022	0.001233	0.82%	0.151669	0.148991	0.002678	1.80%
Small-Demand	0.135082	0.133619	0.001463	1.09%	0.135670	0.134408	0.001262	0.94%
Large	0.128102	0.121298	0.006804	5.61%	0.129803	0.124154	0.005649	4.55%
Public St. Lites	0.380746	0.407819	-0.027073	-6.64%	0.347125	0.385875	-0.038751	-10.04%
Sub-total	**0.148523**	**0.147074**	**0.001448**	**0.98%**	**0.148001**	**0.147536**	**0.000465**	**0.31%**
Total-Civilian	**0.112165**	**0.110980**	**0.001185**	**1.07%**	**0.112167**	**0.111943**	**0.000224**	**0.20%**
USN	0.061774	0.061092	0.000682	1.12%	0.065818	0.062403	0.003414	5.47%
Grand Total	**0.101984**	**0.100695**	**0.001288**	**1.28%**	**0.102892**	**0.101726**	**0.001166**	**1.15%**
Non-Oil Revenues								
Residential	46,853,221	41,648,551	5,204,670	12.50%	3,925,681	3,686,253	239,428	6.50%
Small General-Non-Demand	10,947,876	10,160,386	787,490	7.75%	926,703	889,740	36,963	4.15%
Small General-Demand	22,760,513	22,855,434	(94,921)	-0.42%	1,799,327	1,978,951	(179,624)	-9.08%
Large	32,027,609	32,877,980	(850,371)	-2.59%	2,631,610	2,763,857	(132,247)	-4.78%
Independent Power Producers	90,597	97,889	(7,292)	-7.45%	8,380	4,900	3,480	71.01%
Private St. Lites	286,079	285,171	908	0.32%	24,109	23,749	360	1.51%
Sub-total	**112,965,895**	**107,925,412**	**5,040,483**	**4.67%**	**9,315,809**	**9,347,450**	**(31,641)**	**-0.34%**
Government								
Small_Non Demand	2,044,514	2,105,724	(61,210)	-2.91%	176,644	167,560	9,084	5.42%
Small-Demand	12,603,536	12,312,864	290,672	2.36%	1,066,168	1,010,081	56,087	5.55%
Large	8,974,202	8,587,657	386,545	4.50%	753,393	741,374	12,019	1.62%
Public St. Lites	4,319,445	4,707,524	(388,079)	-8.24%	345,602	383,134	(37,532)	-9.80%
Sub-total	**27,941,698**	**27,713,768**	**227,928**	**0.82%**	**2,341,807**	**2,302,148**	**39,659**	**1.72%**
Total-Civilian	**140,907,591**	**135,639,180**	**5,268,411**	**3.88%**	**11,657,617**	**11,649,598**	**8,018**	**0.07%**
USN	19,649,233	19,390,057	259,175	1.34%	1,711,315	1,687,240	24,075	1.43%
Grand Total	**160,556,823**	**155,029,237**	**5,527,586**	**3.57%**	**13,368,932**	**13,336,838**	**32,093**	**0.24%**
% of Total Revenues								
Oil Revenues								
Residential	45,204,139	61,733,589	(16,529,450)	-26.78%	3,567,289	4,307,590	(740,302)	-17.19%
Small General-Non-Demand	7,443,078	9,699,649	(2,256,572)	-23.26%	596,376	679,391	(83,015)	-12.22%
Small General-Demand	17,741,444	25,332,037	(7,590,592)	-29.96%	1,276,271	1,744,773	(468,502)	-26.85%
Large	28,759,676	41,220,938	(12,461,262)	-30.23%	2,170,679	2,786,370	(615,691)	-22.10%
Independent Power Producers	69,870	76,971	(7,101)	-9.23%	5,192	3,880	1,311	33.79%
Private St. Lites	59,055	83,246	(24,192)	-29.06%	4,871	5,666	(796)	-14.04%
Sub-total	**99,277,261**	**138,146,430**	**(38,869,169)**	**-28.14%**	**7,620,677**	**9,527,871**	**(1,906,994)**	**-20.02%**
Government								
Small_Non Demand	1,254,946	1,894,142	(639,197)	-33.75%	100,875	121,498	(20,623)	-16.97%
Small-Demand	8,720,615	12,361,670	(3,641,055)	-29.45%	680,651	811,879	(131,228)	-16.16%
Large	6,479,115	9,319,304	(2,840,188)	-30.48%	497,431	632,127	(134,696)	-21.31%
Public St. Lites	1,063,810	1,542,928	(479,118)	-31.05%	88,233	107,266	(21,033)	-19.61%
Sub-total	**17,518,486**	**25,118,044**	**(7,599,557)**	**-30.26%**	**1,365,190**	**1,672,770**	**(307,581)**	**-18.39%**
Total-Civilian	**116,795,747**	**163,264,473**	**(46,468,726)**	**-28.46%**	**8,985,867**	**11,200,441**	**(2,214,574)**	**-19.77%**
USN	29,544,181	40,871,461	(11,327,280)	-27.71%	2,545,091	3,290,102	(745,011)	-22.64%
Grand Total	**146,339,928**	**204,135,934**	**(57,796,006)**	**-28.31%**	**11,530,958**	**14,490,543**	**(2,959,585)**	**-20.42%**
% of Total Revenues								
Grand Total								
Residential	92,057,360	103,382,140	(11,324,780)	-10.95%	7,492,970	7,993,843	(500,874)	-6.27%
Small General-Non-Demand	18,390,954	19,860,035	(1,469,082)	-7.40%	1,523,079	1,569,131	(46,052)	-2.93%
Small General-Demand	40,501,958	48,187,471	(7,685,513)	-15.95%	3,075,598	3,723,724	(648,125)	-17.41%
Large	60,787,284	74,098,918	(13,311,634)	-17.96%	4,802,289	5,550,227	(747,939)	-13.48%
Independent Power Producers	160,467	174,860	(14,393)	-8.23%	13,572	8,781	4,791	54.56%
Private St. Lites	345,133	368,417	(23,284)	-6.32%	28,980	29,415	(436)	-1.48%
Sub-total	**212,243,155**	**246,071,841**	**(33,828,686)**	**-13.75%**	**16,936,487**	**18,875,121**	**(1,938,634)**	**-10.27%**
Government								
Small_Non Demand	3,299,460	3,999,866	(700,406)	-17.51%	277,519	289,058	(11,539)	-3.99%
Small-Demand	21,324,151	24,674,533	(3,350,382)	-13.58%	1,746,819	1,821,960	(75,142)	-4.12%
Large	15,453,317	17,906,961	(2,453,644)	-13.70%	1,250,824	1,373,500	(122,676)	-8.93%
Public St. Lites	5,383,255	6,250,452	(867,197)	-13.87%	431,835	490,400	(58,565)	-11.94%
Sub-total	**45,460,182**	**52,831,812**	**(7,371,629)**	**-13.95%**	**3,706,997**	**3,974,919**	**(267,922)**	**-6.74%**
Total-Civilian	**257,703,338**	**298,903,653**	**(41,200,315)**	**-13.78%**	**20,643,484**	**22,850,040**	**(2,206,556)**	**-9.66%**
USN	49,193,414	60,261,518	(11,068,104)	-18.37%	4,256,406	4,977,342	(720,935)	-14.48%
Grand Total	**306,896,751**	**359,165,171**	**(52,268,419)**	**-14.55%**	**24,899,890**	**27,827,382**	**(2,927,492)**	**-10.52%**


GPA - T and D Losses (MWH)
For the Last 6 Years thru 09.30.16
130,000
120,000
110,000
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
7.00%
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
113,279
117,269
103,049
95,295
79,267
78,281
6.62%
6.85%
5.99%
4.95%
4.65%
4.55%
FY 11
FY 12
FY 13
FY 14
FY 15
FY 16 Moving 12 Months
T and D Losses (MWH)
T and D Losses (% to Gross Gen.)


GPA - T and D Losses (MWH) Without Renewables
For the Last 6 Years thru 09.30.16
T and D Losses (MWH)
T and D Losses (% to Gross Gen.)
FY 11
FY 12
FY 13
FY 14
FY 15
FY 16
113,279
117,269
103,049
95,295
79,267
78,281
6.62%
6.85%
5.99%
4.95%
4.65%
5.21%
130,000
120,000
110,000
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
7.00%
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%


GPA - Station Usage(MWH)
For the Last 6 Years Thru 09.30.16
110,000
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
96,872
97,739
86,765
83,701
83,060
84,952
5.66%
5.71%
5.05%
4.86%
4.87%
3.77%
FY 11
FY 12
FY 13
FY 14
FY 15
FY 16
Station Use (MWH)
% to Gross Generation


GPA - Station Usage(MWH) Without Renewables
For the Last 6 Years Thru 09.30.16
110,000
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
96,872
97,739
86,765
83,701
83,060
64,952
5.66%
5.71%
5.05%
4.86%
4.87%
4.32%
FY 11
FY 12
FY 13
FY 14
FY 15
FY 16
Station Use (MWH)
% to Gross Generation


GPA A/R AGING REPORT SEPTEMBER 2016
OVER 120 DAYS
91-120 DAYS
61-90 DAYS
31-60 DAYS
0-30 DAYS
$7,000,000.00
$6,000,000.00
$5,000,000.00
$4,000,000.00
$3,000,000.00
$2,000,000.00
$1,000,000.00
$-
$(1,000,000.00)
$6,128766
$1,152,702
$2,578,458
$4,318,672
$31,743
$13,743
($2,383)
$322,248
$2,200,326
$1,586,430
$437,616
Residential
Commercial G
Commercial J
Commercial P
Private St Lights
IPP
Suspense
Government S
Government K
Government L
Government St Lights

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

Issues for Decision

Resolution No. 2016-65:

Relative to: **AUTHORIZING THE MANAGEMENT OF THE GUAM POWER AUTHORITY TO PETITION THE PUBLIC UTILITIES COMMISSION TO INCREASE THE 3-YEAR CONTRACT (GPA-029-14) EXPENDITURES FOR THE SUPPLY OF DIESEL FUEL OIL NO.2 FOR THE BASELOADS, COMBUSTION TURBINES, TENJO VISTA, MANENGGON AND TALOFOFO POWER PLANTS.**

What is the objective and is it necessary and urgent?

- The original projected expenditures for the 3-year contract period under GPA-029-14 is about 16M gallons at an estimated cost of about $50M (Exhibit A- Schedule 1).
- At the aftermath of the explosion at the Cabras 3&4 Units in August 31, 2015, and overhauls of the remaining plants, the diesel consumption has significantly increased beyond the estimated expenditures (Exhibit B).
- The objective is to provide sufficient funding for the increased diesel fuel expenditures to ensure uninterrupted supply of diesel fuel to support the IWPS demand.

How much will it cost?

- The revised expenditures for the 3-year contract period is estimated to increase to 70M gallons at a cost of about $120M (Exhibit A- Schedule 2).

SCHEDULE 3: SUMMARY

3-Year Contract Period	Gallons	Total Cost
Schedule 1 (Original Estimate)	15,900,000	$ 50,619,000.00
Schedule 2 (Revised Estimate)	69,055,494	$ 120,010,046.93
Variance	53,155,494 334% Increase	$ 69,391,046.93 137% Increase

What is its funding source?

- Revenue Funds

CONSOLIDATED
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RESOLUTION NO. 2016-65

AUTHORIZING THE MANAGEMENT OF THE GUAM POWER AUTHORITY TO PETITION THE PUBLIC UTILITIES COMMISSION TO INCREASE THE 3-YEAR CONTRACT EXPENDITURES UNDER GPA-029-14 FOR THE SUPPLY OF DIESEL FUEL OIL NO.2 FOR THE BASELOADS, COMBUSTION TURBINES, TENJO VISTA, MANENGGON AND TALOFOFO POWER PLANTS

WHEREAS, the three (3) year Contract under GPA-029-14 for the supply of Diesel Fuel Oil No.2 for the Baseloads, Combustion Turbines, Tenjo Vista, Manenggon and Talofofo power plants commenced in January 1, 2015 and will expire on December 31, 2017; and

WHEREAS, the award of the contract under Resolution 2014-37 is based on the estimated total supply quantities of 6M gallons per year at a total cost of approximately $15,900,000 per year or a 3-year total of 16M gallons at a total cost of $50,619,000.00 (Exhibit A- Schedule 1); and

WHEREAS, the explosion at the Cabras 3&4 Units in August 2015 and overhauls of the remaining power plants significantly increased the diesel consumption; and

WHEREAS, the revised diesel expenditures for the 3-year contract period is estimated to increase to approximately 70M gallons at a cost of close to $120M (Exhibit A- Schedule 2); and

WHEREAS, GPA is seeking the approval of the CCU to increase the total diesel expenditures to $120M to ensure uninterrupted supply for the 3-year contract period.

NOW THEREFORE, BE IT RESOLVED, by the Consolidated Commission on Utilities, subject to the review and approval of the Guam Public Utilities Commission, as follows:

1. The Guam Power Authority is hereby authorized to increase the diesel expenditures for the three-year contract to $120M.

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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 22nd day November 2016.

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 the meeting place thereof on November 22, 2016 at which meeting of all said members had due notice and at which at least s majority thereof were present, and

At said meeting said resolution was adopted by the following vote:

Ayes: _____

Nays: _____

Absent: _____

Abstain: _____

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As of the date of this certification, said original resolution has not been amended, modified, or rescinded since the date of its adoption, and the same is now in full force and effect.

SO CERTIFIED this 22nd day of November, 2016.

J. GEORGE BAMBA
Secretary
Consolidated Commission on Utilities

EXHIBIT A: GPA-029-14 ESTIMATED EXPENDITURES

SCHEDULE 1: Original Estimates

RESOLUTION 2014-37	1st year (01/01/15 to 12/31/15)	2nd Year (01/01/16 to 12/31/16)	3rd year (01/01/17 to 12/31/17)	**3-Year Contract Period** (01/01/15-12/31/17)
Total Qty (Gallons)	5,300,000	5,300,000	5,300,000	**15,900,000**
Total Cost ($)	$16,873,000.00	$16,873,000.00	$16,873,000.00	**$50,619,000.00**
Remarks	Estimated	Estimated	Estimated	Estimated

SCHEDULE 2: Revised Estimates

RESOLUTION 2016-	1st year (01/01/15 to 12/31/15)	2nd Year (01/01/16 to 12/31/16)	3rd year (01/01/17 to 12/31/17)	**3-Year Contract Period (01/01/15 to 12/31/17)**
Jan-Sep	6,253,698	28,041,799	15,376,040	
Oct-Dec	9,133,263	5,125,347	5,125,347	
Total Qty (Gallons)	15,386,962	33,167,145	20,501,386	**69,055,494**
Jan-Sep	$12,068,804	$38,755,957	$32,232,328	
Oct-Dec	$15,464,740	$10,744,109	$10,744,109	
Total Cost ($)	$27,533,544	$49,500,066	$42,976,437	**$120,010,047**
REMARKS	Actual (Cabras 3&4 Explosion on 08/31/15)	Actual (Cabras 3&4 Offline & forced outages in remaining plants)	Estimated (Cabras 3&4 Offline & anticipated overhauls/outages in remaining plants)	Revised Estimated Diesel Expenses

SCHEDULE 3: SUMMARY

3-Year Contract Period	**Gallons**	**Total Cost**
Schedule 1 (Original Estimate)	**15,900,000**	**$ 50,619,000.00**
Schedule 2 (Revised Estimate)	**69,055,494**	**$ 120,010,046.93**
Variance	**53,155,494** **334%** **Increase**	**$ 69,391,046.93** **137%** **Increase**

EXHIBIT A: GPA-029-14 ESTIMATED EXPENDITURES

SCHEDULE 1: Original Estimates

RESOLUTION 2014-37	1st year (01/01/15 to 12/31/15)	2nd Year (01/01/16 to 12/31/16)	3rd year (01/01/17 to 12/31/17)	**3-Year Contract Period** (01/01/15-12/31/17)
Total Qty (Gallons)	5,300,000	5,300,000	5,300,000	**15,900,000**
Total Cost ($)	$16,873,000.00	$16,873,000.00	$16,873,000.00	**$50,619,000.00**
Remarks	Estimated	Estimated	Estimated	Estimated

SCHEDULE 2: Revised Estimates

RESOLUTION 2016-	FY2015 (01/01/15 to 09/30/15)	FY2016 (10/01/15 to 09/30/16)	FY2017 (10/01/16 to 09/30/17)	FY2018 (10/01/17 to 12/31/17)	**3-Year Contract Period (01/01/15 to 12/31/17)**
Total Qty (Gallons)	6,253,698	37,175,062	20,501,386	5,125,347	**69,055,494**
Total Cost ($)	$ 12,068,803.79	$54,220,696.77	$42,976,437.10	$10,744,109.27	**$120,010,046.93**
REMARKS	Actual (Cabras 3&4 Explosion on 08/31/15)	Actual (Cabras 3&4 Offline & forced outages in remaining plants)	Estimated (Cabras 3&4 Offline & anticipated overhauls/outages in remaining plants)	Estimated (Cabras 3&4 Offline & anticipated overhauls/outages in remaining plants)	Revised Estimated Diesel Expenses

SCHEDULE 3: SUMMARY

3-Year Contract Period	**Gallons**	**Total Cost**
Schedule 1 (Original Estimate)	**15,900,000**	**$ 50,619,000.00**
Schedule 2 (Revised Estimate)	**69,055,494**	**$ 120,010,046.93**
Variance	**53,155,494 334% Increase**	**$ 69,391,046.93 137% Increase**

EXHIBIT B

STATISTICAL SUMMARY - RFO vs. DFO

FISCAL YEAR	PLANT CONSUMPTION				
	RFO		DFO		TOTAL FUELS (barrels)
	(barrels)	%	(barrels)	%	
FY - 2006	2,809,262	98%	61,154	2%	2,870,416
FY - 2007	2,715,625	95%	139,426	5%	2,855,051
FY - 2008	2,746,146	96%	122,852	4%	2,868,998
FY - 2009	2,731,209	98%	58,901	2%	2,790,110
FY - 2010	2,809,516	98%	57,527	2%	2,867,043
FY - 2011	2,712,403	98%	62,669	2%	2,775,072
FY - 2012	2,662,058	98%	52,334	2%	2,714,392
FY - 2013	2,560,489	97%	87,836	3%	2,648,325
FY - 2014	2,434,656	97%	76,836	3%	2,511,492
FY - 2015 *	2,308,364	91%	223,822	9%	2,532,186
FY - 2016 *	1,852,468	67%	896,175	33%	2,748,643

Remarks: * Cabras 3&4 Explosion on 8/31/15 and forced outages on remaining power plants.

EXHIBIT C

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RESOLUTION NO. 2014-37

AUTHORIZING THE MANAGEMENT OF THE GUAM POWER AUTHORITY TO PETITION THE PUBLIC UTILITIES COMMISSION TO AWARD THE CONTRACT FOR THE SUPPLY OF DIESEL FUEL OIL NO.2 FOR THE POWER PLANTS

WHEREAS, Diesel Fuel oil is used by GPA's baseload plants and peaking units for plant operations; and

WHEREAS, GPA's current contract with IP&E Guam for supply of Diesel Fuel Oil No.2 to expires on November 30, 2014; and

WHEREAS, in anticipation of this expiration date, GPA was authorized by the CCU under CCU Resolution No. 2014-05 and approved by the PUC on February 25, 2014 to issue bids for the procurement of a new Diesel Fuel Oil No.2 supply contract; and

WHEREAS, the Procurement Officer has provided adequate public announcement for the need for such services through Invitation for Bid No. GPA-029-14 describing the type of services required and specifying the type of information and data required of each offeror; and

WHEREAS, IP&E and Mobil Oil Guam submitted bids for GPA consideration; and

WHEREAS, an evaluation committee was convened to evaluate proposals and the results and evaluation of the bids are provided in Exhibit A; and

WHEREAS, Mobil Oil Guam was determined to be the lowest, most responsive bidder to provide diesel fuel oil to the base load plants, combustion turbine plants, Manenggon Diesel Plant, and Talofofo Diesel Plant meeting the requirements of the bid solicitation; and

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WHEREAS, IP&E Guam was determined to be the lowest, most responsive bidder to provide diesel fuel oil to the Tenjo Diesel Plant meeting the requirements of the bid solicitation; and

WHEREAS, the Diesel Fuel Oil No.2 Supply Contract with Mobil Oil Guam and IP&E shall be for a period of three years and is anticipated to commence December 1, 2014 and expire on November 30, 2017 with two one- year extension options renewable annually upon mutual agreement of both parties; and

WHEREAS, the award of the contract to Mobil Oil Guam based on the estimated supply quantities has an estimated total contract value of approximately $10,477,000.00 per year or a total of $31,430,000.00 for the three-year contract period; and

WHEREAS, the award of the contract to IP&E Guam based on the estimated supply quantities has an estimated total contract value of approximately $6,396,000.00 per year or a total of $19,118,000.00 for the three-year contract period; and

WHEREAS, the award of the contract to Mobil Oil Guam based on the estimated supply quantities has an estimated total Premium Fee savings of approximately $755,200.00 per year or a total of $2,265,600.00 for the three-year contract period; and

WHEREAS, the award of the contract to IP&E Guam based on the estimated supply quantities has an estimated total Premium Fee savings of approximately $880,000.00 per year or a total of $2,640,000.00 for the three-year contract period.

NOW THEREFORE, BE IT RESOLVED, by the Consolidated Commission on Utilities, subject to the review and approval of the Guam Public Utilities Commission, as follows:

1. The General Manager of the Guam Power Authority is hereby authorized to enter into a three-year contract with **Mobil Oil Guam** for supply of Diesel Fuel Oil No.2 to the Baseload

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Plants (Cabras 1&2, MEC 8&9, and Tanguisson 1&2), Combustion Turbine Plants (TEMES CT, Dededo CT, Macheche CT, and Yigo CT), and Medium Speed Diesel Plants (Manenggon and Talofofo)

2. The General Manager of the Guam Power Authority is hereby authorized to enter into a three-year contract with **IP&E Guam** for supply of Diesel Fuel Oil to the Tenjo Diesel Plant.
3. The General Manager of the Guam Power Authority is hereby authorized an increase in obligating authority to the annual value of the services and execute such agreements and documents necessary for a contract with **Mobil Oil Guam** and **IP&E** Guam.

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 12th day of August 2014.

Certified by:

SIMON A. SANCHEZ II
CHAIRMAN

Attested by:

JOSEPH T. DUENAS
SECRETARY

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority • Guam Waterworks Authority
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SECRETARY'S CERTIFICATE

I, Joseph T. Duenas, Secretary for the Consolidated Commission on Utilities do hereby certify that the foregoing is a full, true, and correct copy of the resolution duly adopted at a regular meeting of the members of Guam's Consolidated Commission on Utilities, duly and legally held at the meeting place thereof on August 12, 2014, at which meeting of all said members had due notice and at which at least s majority thereof were present, and

At said meeting said resolution was adopted by the following vote:

Ayes: 4

Nays: 0

Absent: 1

Abstain: 0

As of the date of this certification, said original resolution has not been amended, modified, or rescinded since the date of its adoption, and the same is now in full force and effect.

SO CERTIFIED this 12th day of August, 2014.

JOSEPH T. DUENAS
Secretary
Consolidated Commission on Utilities

Exhibit A:

IFB GPA-029-14: PRICE PROPOSAL ANALYSIS

1. Baseloads

3 year Base Contract	Current Contract IP&E	1st CONTRACT YEAR		2nd CONTRACT YEAR		3rd CONTRACT YEAR		3-YEAR CONTRACT	
		Bidder #1 IP&E Guam	Bidder #2 Mobil Oil Guam	Bidder #1 IP&E Guam	Bidder #2 Mobil Oil Guam	Bidder #1 IP&E Guam	Bidder #2 Mobil Oil Guam	Bidder #1 IP&E Guam	Bidder #2 Mobil Oil Guam
Quantity (gal/yr)	200,000	200,000	200,000	200,000	200,000	200,000	200,000	600,000	600,000
Bid Price ($/gal)	$2.204	$3.198	$3.190	$3.198	$3.190	$3.198	$3.190	$3.198	$3.190
Reference Price ($/gal)	$1.543	$2.928	$2.928	$2.928	$2.928	$2.928	$2.928	$2.928	$2.928
Premium Fee Cost ($/gal)	$0.661	$0.270	$0.262	$0.270	$0.262	$0.270	$0.262	$0.270	$0.262
% of Reference Price	43%	9%	9%	9%	9%	9%	9%	9%	9%
Bid Cost ($/yr)	$440,800.000	$639,600.000	$638,000.000	$639,600.000	$638,000.000	$639,600.000	$638,000.000	$1,918,800.000	$1,914,000.000
Premium Fee Cost ($/yr)	$132,200.000	$54,000.000	$52,400.000	$54,000.000	$52,400.000	$54,000.000	$52,400.000	$162,000.000	$157,200.000
Variance w/ Current Contract		($78,200.00) Savings	($79,800.00) Savings	($78,200.00) Savings	($79,800.00) Savings	($78,200.00) Savings	($79,800.00) Savings	($238,600.00) Savings	($239,400.00) Savings
Ranking (1 as the Lowest Bidder)		2	1	2	1	2	1	2	1

2. CT Plants

3 year Base Contract	Current Contract IP&E	1st CONTRACT YEAR		2nd CONTRACT YEAR		3rd CONTRACT YEAR		3-YEAR CONTRACT	
		Bidder #1 IP&E Guam	Bidder #2 Mobil Oil Guam	Bidder #1 IP&E Guam	Bidder #2 Mobil Oil Guam	Bidder #1 IP&E Guam	Bidder #2 Mobil Oil Guam	Bidder #1 IP&E Guam	Bidder #2 Mobil Oil Guam
Quantity (gal/yr)	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	4,500,000	4,500,000
Bid Price ($/gal)	$1.821	$3.198	$3.170	$3.198	$3.170	$3.198	$3.170	$3.198	$3.170
Reference Price ($/gal)	$1.543	$2.928	$2.928	$2.928	$2.928	$2.928	$2.928	$2.928	$2.928
Premium Fee Cost ($/gal)	$0.278	$0.270	$0.242	$0.270	$0.242	$0.270	$0.242	$0.270	$0.242
% of Reference Price	18%	9%	8%	9%	8%	9%	8%	9%	8%
Bid Cost ($/yr)	$2,731,500.000	$4,797,000.000	$4,755,000.000	$4,797,000.000	$4,755,000.000	$4,797,000.000	$4,755,000.000	$14,391,000.00	$14,265,000.00
Premium Fee Cost ($/yr)	$417,000	$405,000	$363,000	$405,000	$363,000	$405,000	$363,000	$1,215,000.00	$1,089,000.00
Variance w/ Current Contract		($12,000.00) Savings	($54,000.00) Savings	($12,000.00) Savings	($54,000.00) Savings	($12,000.00) Savings	($54,000.00) Savings	($36,000.00) Savings	($162,000.00) Savings
Ranking (1 as the Lowest Bidder)		2	1	2	1	2	1	2	1

3. Fast Tracks (Manengon & Talofofo)

3 year Base Contract	Current Contract IP&E	1st CONTRACT YEAR		2nd CONTRACT YEAR		3rd CONTRACT YEAR		3-YEAR CONTRACT	
		Bidder #1 IP&E Guam	Bidder #2 Mobil Oil Guam	Bidder #1 IP&E Guam	Bidder #2 Mobil Oil Guam	Bidder #1 IP&E Guam	Bidder #2 Mobil Oil Guam	Bidder #1 IP&E Guam	Bidder #2 Mobil Oil Guam
Quantity (gal/yr)	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	3,000,000	3,000,000
Bid Price ($/gal)	$2.203	$3.198	$3.170	$3.198	$3.170	$3.198	$3.170	$3.198	$3.170
Reference Price ($/gal)	$1.543	$2.928	$2.928	$2.928	$2.928	$2.928	$2.928	$2.928	$2.928
Premium Fee Cost ($/gal)	$0.660	$0.270	$0.242	$0.270	$0.242	$0.270	$0.242	$0.270	$0.242
% of Reference Price	43%	9%	8%	9%	8%	9%	8%	9%	8%
Bid Cost ($/yr)	$2,203,000.000	$3,198,000.000	$3,170,000.000	$3,198,000.000	$3,170,000.000	$3,198,000.000	$3,170,000.000	$9,594,000.00	$9,510,000.00
Premium Fee Cost ($/yr)	$660,000	$270,000	$242,000	$270,000	$242,000	$270,000	$242,000	$810,000.00	$726,000.00
Variance w/ Current Contract		($390,000.00) Savings	($418,000.00) Savings	($390,000.00) Savings	($418,000.00) Savings	($390,000.00) Savings	($418,000.00) Savings	($1,170,000.00) Savings	($1,254,000.00) Savings
Ranking (1 as the Lowest Bidder)		2	1	2	1	2	1	2	1

4. TEMES CT Plant

3 year Base Contract	Current Contract IP&E	1st CONTRACT YEAR		2nd CONTRACT YEAR		3rd CONTRACT YEAR		3-YEAR CONTRACT	
		Bidder #1 IP&E Guam	Bidder #2 Mobil Oil Guam	Bidder #1 IP&E Guam	Bidder #2 Mobil Oil Guam	Bidder #1 IP&E Guam	Bidder #2 Mobil Oil Guam	Bidder #1 IP&E Guam	Bidder #2 Mobil Oil Guam
Quantity (gal/yr)	600,000	600,000	600,000	600,000	600,000	600,000	600,000	1,800,000	1,800,000
Bid Price ($/gal)	$2.144	$3.198	$3.190	$3.198	$3.190	$3.198	$3.190	$3.198	$3.190
Reference Price ($/gal)	$1.543	$2.928	$2.928	$2.928	$2.928	$2.928	$2.928	$2.928	$2.928
Premium Fee Cost ($/gal)	$0.601	$0.270	$0.262	$0.270	$0.262	$0.270	$0.262	$0.270	$0.262
% of Reference Price	39%	9%	9%	9%	9%	9%	9%	9%	9%
Bid Cost ($/yr)	$1,286,400.000	$1,918,800.000	$1,914,000.000	$1,918,800.000	$1,914,000.000	$1,918,800.000	$1,914,000.000	$5,756,400.00	$5,742,000.00
Premium Fee Cost ($/yr)	$360,600	$162,000	$157,200	$162,000	$157,200	$162,000	$157,200	$486,000.00	$471,600.00
Variance w/ Current Contract		($198,600.00) Savings	($203,400.00) Savings	($198,600.00) Savings	($203,400.00) Savings	($198,600.00) Savings	($203,400.00) Savings	($595,800.00) Savings	($610,200.00) Savings
Ranking (1 as the Lowest Bidder)		2	1	2	1	2	1	2	1

SUMMARY 1:

Estimated Over-all Contract Cost (Bid Cost)								
	$10,553,400.000	$10,477,000.000	$10,553,400.000	$10,477,000.000	$10,553,400.000	$10,477,000.000	$31,660,200.000	$31,431,000.000

SUMMARY 2:
Estimated Over-all Contract Premium Fee Cost

3 year Base Contract	Current Contract IP&E	1st CONTRACT YEAR		2nd CONTRACT YEAR		3rd CONTRACT YEAR		3-YEAR CONTRACT	
		Bidder #1 IP&E Guam	Bidder #2 Mobil Oil Guam	Bidder #1 IP&E Guam	Bidder #2 Mobil Oil Guam	Bidder #1 IP&E Guam	Bidder #2 Mobil Oil Guam	Bidder #1 IP&E Guam	Bidder #2 Mobil Oil Guam
Quantity (gal/yr)	3,300,000	3,300,000	3,300,000	3,300,000	3,300,000	3,300,000	3,300,000	9,900,000	9,900,000
Premium Fee Cost ($/yr)	$1,569,800.000	$891,000.000	$814,600.000	$891,000.000	$814,600.000	$891,000.000	$814,600.000	$2,673,000.00	$2,443,800.00
Variance w/ Current Contract		($678,800.00) Savings	($755,200.00) Savings	($678,800.00) Savings	($755,200.00) Savings	($678,800.00) Savings	($755,200.00) Savings	($2,036,400.00) Savings	($2,265,600.00) Savings
Ranking (1 as the Lowest Bidder)		2	1	2	1	2	1	2	1

EXHIBIT A

IFB GPA-029-14: PRICE PROPOSAL ANALYSIS

Tenjo Vista Plant

3 year Base Contract	Current Contract IP&E	1st CONTRACT YEAR		2nd CONTRACT YEAR		3rd CONTRACT YEAR		3-YEAR CONTRACT	
		Bidder #1 IP&E Guam	Bidder #2 Mobil Oil Guam	Bidder #1 IP&E Guam	Bidder #2 Mobil Oil Guam	Bidder #1 IP&E Guam	Bidder #2 Mobil Oil Guam	Bidder #1 IP&E Guam	Bidder #2 Mobil Oil Guam
Estimated Quantity (gal/yr)	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	6,000,000	6,000,000
Bid Price ($/gal)	$2.253	$3.198	$3.310	$3.198	$3.310	$3.198	$3.310	$3.198	$3.310
Reference Price ($/gal)	$1.543	$2.928	$2.928	$2.928	$2.928	$2.928	$2.928	$2.928	$2.928
Premium Fee Cost ($/gal)	$0.710	$0.270	$0.382	$0.270	$0.382	$0.270	$0.382	$0.270	$0.382
% of Reference Price	46%	9%	13%	9%	13%	9%	13%	9%	13%
Bid Cost ($/yr)	$4,506,000.000	$6,396,000.000	$6,620,000.000	$6,396,000.000	$6,620,000.000	$6,396,000.000	$6,620,000.000	$19,188,000.00	$19,860,000.00
Premium Fee Cost ($/yr)	$1,420,000	$540,000	$764,000	$540,000	$764,000	$540,000	$764,000	$1,620,000.00	$2,292,000.00
Variance w/ Current Contract		($880,000.00) Savings	($656,000.00) Savings	($880,000.00) Savings	($656,000.00) Savings	($880,000.00) Savings	($656,000.00) Savings	($2,640,000.00) Savings	($1,968,000.00) Savings
Ranking (1 as the Lowest Bidder)		1	2	1	2	1	2	1	2

Summary 1:

Estimated Over-all Contract Cost (Bid Cost)	$6,396,000.000	$6,620,000.000	$6,396,000.000	$6,620,000.000	$6,396,000.000	$6,620,000.000	$19,188,000.000	$19,860,000.000

Summary 2:
Estimated Over-all Premium Fee Cost

3 year Base Contract	Current Contract IP&E	1st CONTRACT YEAR		2nd CONTRACT YEAR		3rd CONTRACT YEAR		3-YEAR CONTRACT	
		Bidder #1 IP&E Guam	Bidder #2 Mobil Oil Guam	Bidder #1 IP&E Guam	Bidder #2 Mobil Oil Guam	Bidder #1 IP&E Guam	Bidder #2 Mobil Oil Guam	Bidder #1 IP&E Guam	Bidder #2 Mobil Oil Guam
Estimated Quantity (gal/yr)	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	6,000,000	6,000,000
Premium Fee Cost ($/yr)	$1,420,000	$540,000	$764,000	$540,000	$764,000	$540,000	$764,000	$1,620,000.00	$2,292,000.00
Variance w/ Current Contract		($880,000.00) Savings	($656,000.00) Savings	($880,000.00) Savings	($656,000.00) Savings	($880,000.00) Savings	($656,000.00) Savings	($2,640,000.00) Savings	($1,968,000.00) Savings
Ranking (1 as the Lowest Bidder)		1	2	1	2	1	2	1	2

Doc. No. 34GL-17-0815.*

CCU November 22, 2016 Regular Meeting - NEW BUSINESS

Phase II

Number of Invitations Issued: 2
Number of Bids Required: 2

PURCHASES & STORES DIVISION
GUAM POWER AUTHORITY
ABSTRACT OF BIDS

Page 1 of 2 Pages

Invitation Number: MS GPA-029-14
Opening Date: 07/00/14
Opening Time: 8:NAM

Description of Supplies or Services: Supply of Diesel Fuel Oil No. 2 for Cabrera & Piti Units

BIDDER	Requirements Time (Days)	DISCOUNT	ITEM NO.	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory		
			QTY.	3-Yr. Base	3-Yr. Base	3-Yr Base	2-Yr. Ext.	2-Yr. Ext		
			UNIT	1st Yr.	2nd Yr.	3rd Yr.	1st Yr.	2nd Yr.		
			DELIVERY							
			MFR							
Mobil Oil Guam Inc.		Baseload		3.190	3.190	3.190	3.190	3.190		
		Diesel CT		3.170	3.170	3.170	3.170	3.170		
		Fast Track		3.170	3.170	3.170	3.170	3.170		
		Tenoso CT		3.190	3.190	3.190	3.190	3.190		
		Tenjo		3.310	3.310	3.310	3.310	3.310		
IPRF				Optional Bid	Optional Bid	Optional Bid	Optional Bid	Optional Bid		
				3-yr. Base	3-yr. Base	3-YR Base	2-yr Ext.	3-yr Ext		
				1st yr.	2nd yr.	3rd yr.	1st yr	1st year		
		Baseload		3.198	3.198	3.198	3.198	3.198		
		Diesel CT		3.198	3.198	3.198	3.198	3.198		
		Fast Track		3.198	3.198	3.198	3.198	3.198		
		Tenoso		3.198	3.198	3.198	3.198	2.198		
		Tenjo		3.198	3.198	3.198	3.198	3.198		

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

Tabulated by: [signature]

Jon J. Reyes (Opening Officer) 07/08/2014

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

Number of Awards (Contractors)

APPROVAL OF AWARD(S) (Attached and Signed sheet sheet)

CCU November 22, 2016 Regular Meeting - NEW BUSINESS

Doc. No. 34GL-17-0815.*

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

Issues for Decision

Resolution No. 2016-66:

Relative to the Authorizing Management of GPA to Acquire Harmon Property for New Generation Plant

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

The Guam Power Authority (GPA) has determined that new 180 MW power plant is necessary to meet future power system needs, and to be able to meet USEPA emission regulations systems. The Guam Power Authority has determined that between 30-40 acres will be needed for the new power plant with space for future expansion and to meet physical security requirements for power systems which require substantial setbacks from adjacent roads.

Where is it at?

The Guam Power Authority has determined the new power plant should be located in the Harmon area close to the Harmon sub-station and GWA waste water treatment plant.

How much will it cost?

The amount has not been determined. It will go through a procurement bid.

What is its funding source?

The Authority plans to use revenue funds for the acquisition of property in the Harmon area.

CONSOLIDATED
COMMISSION ON UTILITIES
Guam Power Authority • Guam Waterworks Authority
P.O.BOX 2977 • Agana,Guam 96932

RESOLUTION NO. 2016-66

AUTHORIZING MANAGEMENT OF THE GUAM POWER AUTHORITY TO ACQUIRE HARMON PROPERTY FOR NEW GENERATION PLANTS

WHEREAS, the Guam Power Authority (GPA) has determined that the new 180 MW power plant is necessary to meet future power system needs, and to be able to meet USEPA emission Regulations; and

WHEREAS, the Guam Power Authority has determined that between 30-40 acres will be needed for the new power plant with space for future expansion and to meet physical security requirements for power systems which require substantial setbacks from adjacent roads; and

WHEREAS, various studies over the past years have determined that any expansion in the Cabras area would be very costly due to cleanup and demolition of existing plants, and would expose those plants to issues with potential tsunamis in the Cabras area, and USEPA §316(b) rules regarding water cooling for power plants; and

WHEREAS, the Guam Power Authority has determined the new power plant should be located in the Harmon area close to the Harmon sub-station and GWA waste water treatment plant; and

WHEREAS, the Authority plans to use revenue funds, insurance proceeds or installment plan for the acquisition of property in the Harmon area; and

WHEREAS, the Public Utilities Commission has approved GPA's request to pursue up to 180 MW of power generation.

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 acquisition of property in Harmon close to the Harmon sub-station for the location of new generation is reasonable, prudent, and necessary for the reliable operation of the generation system.
2. The General Manager is authorized to procure 30-40 acres of property in Harmon for the location of the new power plant.

3. The General Manager is to obtain approval from the Consolidated Commission on Utilities for funding amounts before signing the final contract for purchase.

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 22nd day of November, 2016.

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 the meeting place thereof on November 22, 2016, at which meeting of all said members had due notice and at which at least s majority thereof were present, and

At said meeting said resolution was adopted by the following vote:

Ayes: _____

Nays: _____

Absent: _____

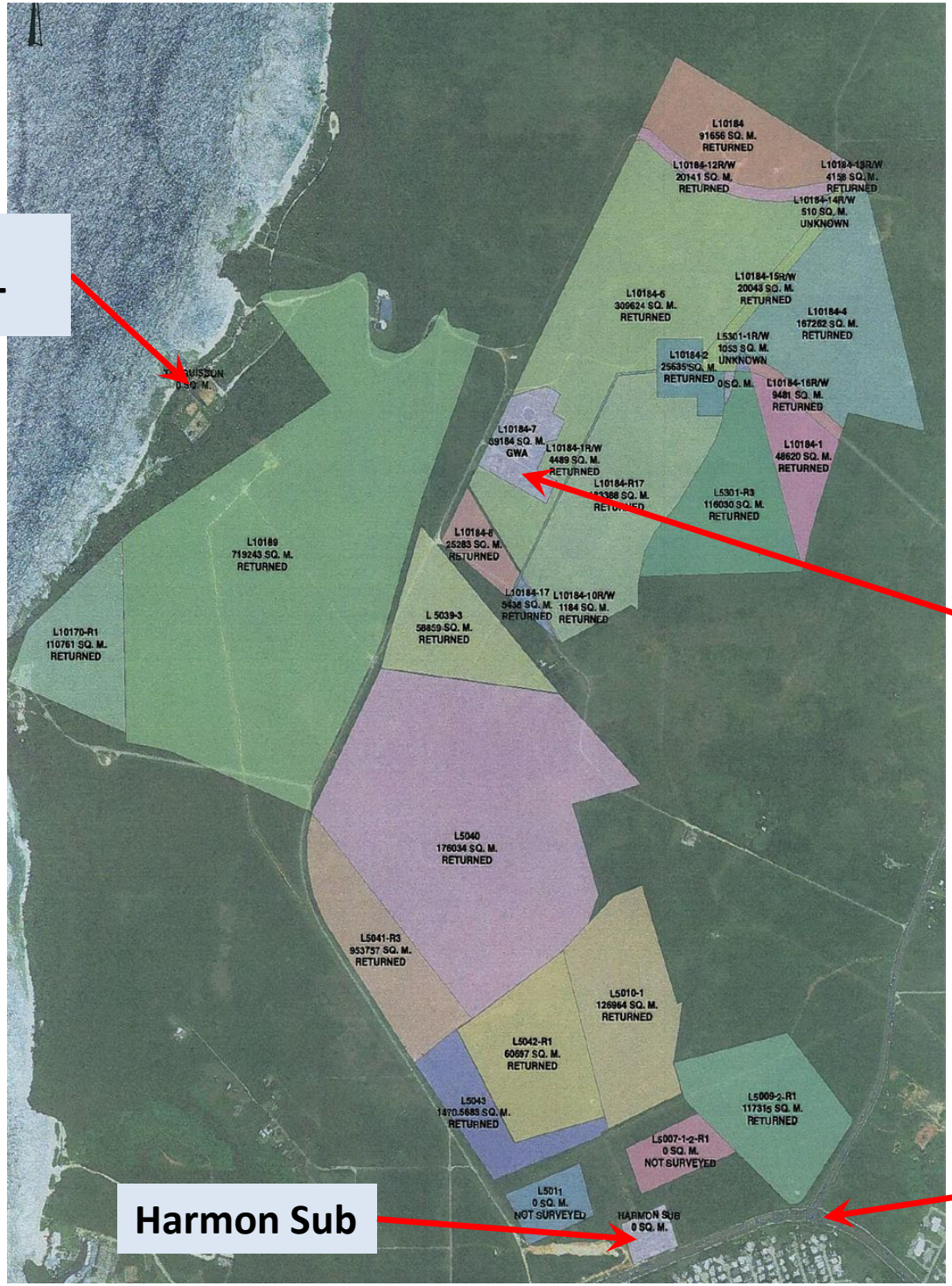
Abstain: _____

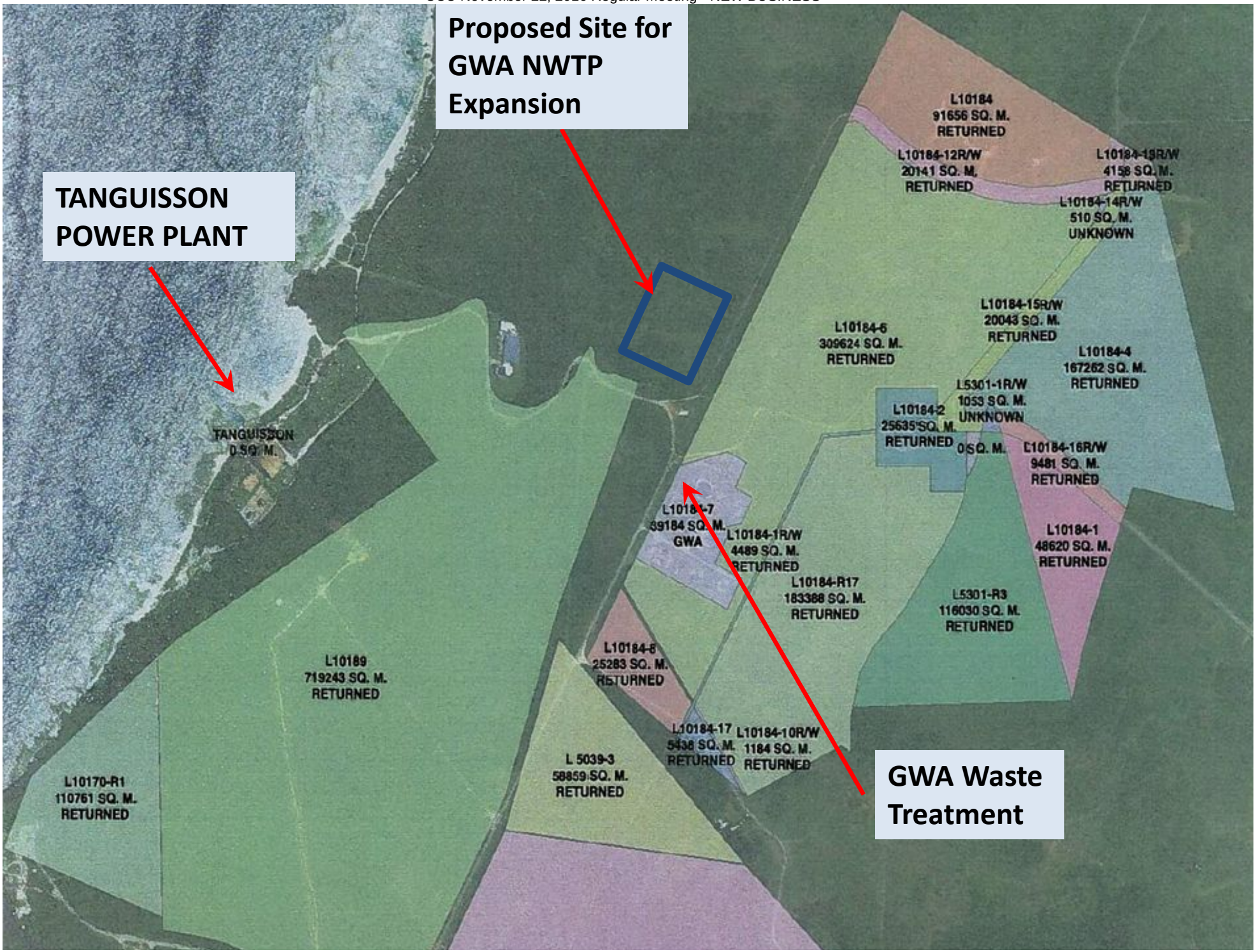
As of the date of this certification, said original resolution has not been amended, modified, or rescinded since the date of its adoption, and the same is now in full force and effect.

SO CERTIFIED this 22nd day of November, 2016.

J. GEORGE BAMBA
Secretary
Consolidated Commission on Utilities

Potential Siting for New Resource


TANGUISSON POWER PLANT
GWA Waste Treatment
Harmon Sub
ROUTE 1
L10184
91656 SQ. M.
RETURNED
L10184-12R/W
20141 SQ. M.
RETURNED
L10184-13R/W
4158 SQ. M.
RETURNED
L10184-14R/W
510 SQ. M.
UNKNOWN
L10184-15R/W
20043 SQ. M.
RETURNED
L10184-6
309624 SQ. M.
RETURNED
L10184-4
167282 SQ. M.
RETURNED
L5301-1R/W
1053 SQ. M.
UNKNOWN
L10184-2
25635 SQ. M.
RETURNED
0 SQ. M.
L10184-16R/W
9481 SQ. M.
RETURNED
L10184-7
39184 SQ. M.
GWA
L10184-1R/W
4489 SQ. M.
RETURNED
L10184-1
48620 SQ. M.
RETURNED
L10184-R17
L5301-R3
116030 SQ. M.
RETURNED
L10184-5
25283 SQ. M.
RETURNED
L10189
719243 SQ. M.
RETURNED
L10184-17
5436 SQ. M.
RETURNED
L10184-10R/W
1184 SQ. M.
RETURNED
L 5039-3
58859 SQ. M.
RETURNED
L10170-R1
110761 SQ. M.
RETURNED
L5040
176034 SQ. M.
RETURNED
L5041-R3
953757 SQ. M.
RETURNED
L5010-1
126964 SQ. M.
RETURNED
L5042-R1
60697 SQ. M.
RETURNED
L5043
1470.5683 SQ. M.
RETURNED
L5009-2-R1
117315 SQ. M.
RETURNED
L5007-1-2-R1
0 SQ. M.
NOT SURVEYED
L5011
0 SQ. M.
NOT SURVEYED
HARMON SUB
0 SQ. M.


Proposed Site for GWA NWTP Expansion
TANGUISSON POWER PLANT
GWA Waste Treatment
L10184
91656 SQ. M.
RETURNED
L10184-12R/W
20141 SQ. M.
RETURNED
L10184-13R/W
4158 SQ. M.
RETURNED
L10184-14R/W
510 SQ. M.
UNKNOWN
L10184-15R/W
20043 SQ. M.
RETURNED
L10184-6
309624 SQ. M.
RETURNED
L10184-4
167262 SQ. M.
RETURNED
L5301-1R/W
1053 SQ. M.
UNKNOWN
L10184-2
25635 SQ. M.
RETURNED
0 SQ. M.
L10184-16R/W
9481 SQ. M.
RETURNED
TANGUISSON
0 SQ. M.
L10184-7
39184 SQ. M.
GWA
L10184-1R/W
4489 SQ. M.
RETURNED
L10184-1
48620 SQ. M.
RETURNED
L10184-R17
183388 SQ. M.
RETURNED
L5301-R3
116030 SQ. M.
RETURNED
L10184-5
25283 SQ. M.
RETURNED
L10189
719243 SQ. M.
RETURNED
L10184-17
5436 SQ. M.
RETURNED
L10184-10R/W
1184 SQ. M.
RETURNED
L 5039-3
58859 SQ. M.
RETURNED
L10170-R1
110761 SQ. M.
RETURNED

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

Issues for Decision

Resolution No. 2016-67:

Relative to the Amendment of the Classification Standard of the Assistant General Manager Administration Position

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

The initial creation of the Assistant General Manager, Administration position was adopted and approved through CCU Resolution No. 2016-54 for the Guam Power Authority. The General Manager of the Guam Power Authority (GPA) requests the Consolidated Commission on Utilities (CCU) to amend the classification standard of the Assistant General Manager, Administration position. The amendment is to add the *Procurement division* as a business unit under the purview of the Assistant General Manager, Administration position. The amendment will also align the job standard with GPAs FY2017 organizational realignment as approved by the CCU through Resolution No. 2016-53.

Where is the location?

Positions will be located at the GBN Public Service Building.

How much will it cost?

The annual salary for each position will commensurate with experience and qualifications per hire as recommended by the General Manager and approved by the CCU.

When will it be completed?
Job Announcement for the position is currently open till 11/21/2016.

What is its funding source?
Revenue funded

CONSOLIDATED
COMMISSION ON UTILITIES
Guam Power Authority • Guam Waterworks Authority
P.O.BOX 2977 • Agana,Guam 96932

CONSOLIDATED COMMISSION ON UTILITIES
RESOLUTION NO. 2016-67

RESOLUTION RELATIVE TO THE AMENDMENT OF THE CLASSIFICATION STANDARD OF THE ASSISTANT GENERAL MANAGER, ADMINISTRATION POSITION

WHEREAS, the initial creation of the Assistant General Manager, Administration position was adopted and approved through CCU Resolution No. 2016-54 for the Guam Power Authority; and

WHEREAS, the General Manager of the Guam Power Authority (GPA) requests the Consolidated Commission on Utilities (CCU) to amend the classification standard of the Assistant General Manager, Administration position; and

WHEREAS, Public Law 28-112 and 4 GCA §6303 (d) authorizes the creation of positions in Autonomous Agencies and Public Corporations; and

WHEREAS, the amendment to add the Procurement division as a business unit under the purview of the Assistant General Manager, Administration position; and

WHEREAS, GPA Personnel Rules and Regulations Section 7.03 (c) as amended by Public Law 28-159 Section 3 (C) authorizes the CCU to amend, modify or add a position to the list of certified, technical and professional position; and

WHEREAS, the amendment will also align the job standard with GPA's FY2017 organizational realignment as approved by the CCU through Resolution No. 2016-053; and

NOW THEREFORE BE IT RESOLVED, the Commission approves the amendment of the Assistant General Manager, Administration position as follows:

1. The amendment of the Assistant General Manager, Administration position to include the Procurement division as a business unit under its purview is hereby approved.

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

DULY AND REGULARLY ADOPTED AND APPROVED this 22nd day of November, 2016.

Certified by:

_____
JOSEPH T. DUENAS
Chairperson
Consolidated Commission on Utilities

Attested by:

_____
J. GEORGE BAMBA
Secretary
Consolidated Commission on Utilities

SECRETARY'S CERTIFICATE

I, J. GEORGE BAMBA, Secretary for the Consolidated Commission on Utilities do hereby certify that the foregoing is a full, true, and correct copy of the resolution duly adopted at a regular meeting of the members of Guam's Consolidated Commission on Utilities, duly and legally held at the meeting place thereof on November 22, 2016 at which meeting of all said members had due notice and at which at least a majority thereof were present, and

At said meeting said resolution was adopted by the following vote:

Ayes: _____

Nays: _____

Absent: _____

Abstain: _____

As of the date of this certification, said original resolution has not been amended, modified, or rescinded since the date of its adoption, and the same is now in full force and effect.

SO CERTIFIED this 22nd day of November, 2016.

_____
J. GEORGE BAMBA
Secretary
Consolidated Commission on Utilities

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

Issues for Decision

Resolution No. 2016-68:

Relative to <u>Authorizing Expenditure for Cabras 3&4 Plant Cleaning and Unit 3 Engine Cleaning</u>

What is the project's objective and is it necessary and urgent?
The explosion of Cabras Unit 4 and the subsequent fire have caused significant smoke and suit contamination on the plant building, engine and auxiliary equipment. This project will decontaminate the building and significant engine components to facilitate the preservation of Unit 3. Until such time that the Insurance claim is settled and a final decision is made on Unit 3, GPA has a fiduciary responsibility in preserving Unit 3.

Where is it at?
Cabras 3&4 Plant

How much will it cost?
The project will cost **$4,840,538.00**

1	Mobilization	$ 484,053.75
2	Demolition of offices	$ 1,210,134.38
3	Fireproofing removal	$ 1,210,134.38
4	Scaffolding	$ 968,107.51
5	Structural Cleaning	$ 484,053.75
6	Demobilization	$ 484,053.81
		$ 4,840,537.58

See **Attachment A (BELFOR USA proposal)** for the breakdown of costs.

When will it be completed?
The project is expected to be completed 3 months from the Notice to Proceed.

What is its funding source?
Insurance proceeds.

The RFP/BID responses:
KEWP solicited proposals from 4 vendors and received quotes from BELFOR USA and Tony's Workshop (Royce Power Engineering, Ltd.)

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority • Guam Waterworks Authority
P.O.BOX 2977 • Agana,Guam 96932

Resolution No. 2016-68

Relative to Authorizing Expenditure for
Cabras 3&4 Plant Cleaning and Unit 3 Engine Cleaning

WHEREAS, the Cabras 3&4 Plant suffered an explosion on August 31, 2015, which caused the collapse of the building's roof and rendered both units inoperable; and

WHEREAS, the Cabras 3&4 Plant is currently being managed by Korea East WEST (KEWP) through a Performance Management Contract with GPA; and

WHEREAS, GPA has commissioned The Greenspan Co./Adjusters International to facilitate and represent GPA in its ongoing insurance claim; and

WHEREAS, GPA has received notice from its Insurers to proceed with preservation efforts; and

WHEREAS, KEWP as the PMC is authorized to procure required services for the preservation of Cabras Unit 3; and

WHEREAS, the Cabras 3&4 Plant suffered extensive smoke and soot contamination resulting from the fire; and

WHEREAS, KEWP has obtained the necessary price quotes for services and equipment required to decontaminate and clean the Cabras 3&4 Plant inclusive of Unit 3 Engine exterior cleaning to facilitate the preservation of Cabras Unit 3; and

WHEREAS, GPA has a fiduciary responsibility to preserve Cabras Unit 3 until the insurance claim is finally settled; and

WHEREAS, the Consolidated Commission on Utilities fully supports GPA's efforts to preserve Cabras Unit 3 equipment.

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. After careful review of the attached documents, the Consolidated Commission on Utilities finds the expenditure for the Cabras 3&4 Plant Cleaning and Engine 3 Exterior Cleaning to be reasonable, prudent and necessary for the use of Insurance Proceeds.
2. The General Manager of GPA is hereby authorized obligating authority of **$4,840,538.00** for the purpose of securing the required services for Cabras 3&4 Plant Cleaning and Engine 3 Exterior Cleaning.

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

DULY and REGULARLY ADOPTED AND APPROVED THIS 22nd DAY OF NOVEMBER, 2016.

Certified by: Attested By:

JOSEPH T. DUENAS **CHAIRMAN**	**J. GEORGE BAMBA** **SECRETARY**
Date: _____	Date: _____

SECRETARY'S CERTIFICATE

I, J. George Bamba Secretary, Consolidated Commission on Utilities hereby certifies as follows:

The foregoing is a full, true and correct copy of a resolution duly adopted at a regular meeting of the members of Guam's Consolidated Commission on Utilities, duly and legally held at the meeting place thereof on November 22, 2016, at which meeting all of said members had due notice and at which at least a majority thereof were present;

At said meeting said resolution was adopted by the following vote:

Ayes: _____

Nays: _____

Absent: _____

Abstain: _____

Said original resolution has not been amended, modified, or rescinded since the date of its adoption, and the same is now in full force and effect.

SO CERTIFIED this 22nd day of November, 2016.

_____

J. George Bamba
Secretary, Consolidated Commission on Utilities

ATTACHMENT A - CABRAS 3&4 PLANT CLEANING

KEWP CABRAS 3&4 PMC/CABRAS 3&4 BUILDING AND OIL CLEANING												
	Vendor Name: Royce Power Engineering, Ltd.			Vendor Name: Belfor			Vendor Name: Continental Machinery Company, Inc.			Vendor Name: BWSC		
I CERTIFY THAT THE FORGOING STATEMENT OF INFORMAL STATEMENT OF	Tel: (671) 637-3060			Tel: (480) 239-1206			Tel: 214-342-8919			Tel: +45 48 14 00 22		
INFORMAL QUOTATION IS TRUE AND CORRECT AND PRICES CHARGED ARE	Fax No: (671) 637-3139			Fax No: (407) 677-6222			Fax No: N/a			Fax No: +48 48 14 01 50		
JUST, FAIR, REASONABLE, AND THE BEST OBTAINED.	Email: tonyworkshop@teleguam.net			Email: warren.lindell@us.belfor.com			Email: jschwenk@continentalmachinery.com			Email: bwsc@bwsc.dk		
	POC: Barry Eadie			POC: Warren Lindell			POC: Jeff Schwenk			POC: Jes Moller		
	Date: 12 October 2016			Date: 5 June 2016			Date: 24 October 2016			Date: 28 October 2016		
	Delivery Date: Until Work Scope is Completed			Delivery Date: 160 Days			Delivery Date: N/a			Delivery Date: N/a		
REMARKS: See quotations for itemized breakdown cost	Quote Expiration Date: 30 days from quotation date			Quote Expiration Date: N/a			Quote Expiration Date: N/a			Quote Expiration Date: N/a		
Item Description	Qty	Unit	Unit Price	Qty	Unit	Unit Price	Qty	Unit	Unit Price	Qty	Unit	Unit Price
Building, Structural, and Cabras 3 Engine Exterior Cleaning	1	1	$ 2,753,614.00	Lump Sum Cost		$ 4,840,537.57						
Removal of Fire proofing	1	1	$ 681,370.00									
Scaffolding	1	1	$ 1,105,819.00									
Overhead and Miscellaneous	1	1	$ 547,539.00									
TOTAL AMOUNT			$ 5,088,342.00			$ 4,840,537.57	No Quote			No Quote		

ATTACHMENT A - CABRAS 3&4 PLANT CLEANING

BELFOR USA

7100 TPC Drive
Suite 450
Orlando, Florida 32828
Ph- 407-856-6970
Fax-407-856-6977

Client:	Guam Power Authority (Environmental- Demolition-Fireproof removal)
Property:	Cabreas #3, 4 Power Plant 322 Cabras Hwy Route 11. Piti Guam 96915
Operator:	WARREN.L
Estimator:	Warren Lindell
Cellular:	(480) 239-1206
E-mail:	warren.lindell@us.belfor.com
Type of Estimate:	Fire
Date Entered:	6/5/2016
Date Assigned:	
Price List:	HIHO8X_MAR16
Labor Efficiency:	Restoration/Service/Remodel
Estimate:	2016-05-24-1909-1--1

I. Pricing:

*** This Belfor proposal is for $ 4,840,537.57 excluding the specific items identified in Section V. listed below.**

II. Payment Schedule:

1. **Initial Payment: 10% ($484,053.75) payable upon contract signing.**
2. **First Partial Payment: 10% ($484,053.75) payable upon commencement of the demolition of the offices.**
3. **Second Partial Payment: 15% ($726,080.63) payable upon commencement of the fireproofing removal.**
4. **Third Partial Payment: 20% ($968,107.51) payable upon arrival of the Scaffolding to job site.**
5. **Fourth Payment: 15% ($726,080.63) Payable upon completion of the demolition of the offices, the removal of HVAC systems and the removal of ELECTRICAL systems.**
6. **Fifth payment : 10% ($484,053.75) Payable upon commencement of the structural cleaning.**
7. **Sixth payment: 10% ($484,053.75) Payable upon completion of the fireproofing removal**
8. **Final payment: 10% ($484,053.81) Payable of the completion of the job including demobilization**

III. Failure To Make Payment

Payments are due 15 days after invoice date. If payment is not received with in 30 days, BELFOR reserves the right to suspend work and remain on stand-by at a rate of $970/hour for a maximum of 8 hours per day until the amount due is paid in full. The over all work Schedule will be extended by the number of stand by days.

IV. This Proposal is limited to Four scopes of work:

1. **Scope #1: The cleaning of concrete surfaces due to the impact of smoke, soot and residue oil.***
2. **Scope #2: The cleaning of structural members- the interior of the exterior concrete panels due to contamination caused by smoke, soot and oil residue.***
3. **Scope #3: The removal of the structural steel fireproofing.***
4. **Scope #4: The preliminary cleaning of the exterior of engine and generator #3***

*** The necessary scaffolding required to complete the project is for a duration up to 6 months, including shipping.**

ATTACHMENT A - CABRAS 3&4 PLANT CLEANING

BELFOR USA

7100 TPC Drive
Suite 450
Orlando, Florida 32828
Ph- 407-856-6970
Fax-407-856-6977

V. Any additional work requested by Guam Power Authority not included in the proposed amount of $4,840,537.57 U.S. Dollars or listed below will incur an additional charge. The following items are not included in the current proposal A. The relocation of contents, parts or equipment prior to commencement of work.

B. Asbestos or Lead Abatement

C. Additional cleaning or preparation of all surfaces prior to painting.

D. Scaffolding rental beyond 6 months.

E. BELFOR"S proposed schedule for worked performed per this proposal will be based on 6 days per week/ 10 hours per day. If there are delays caused by weather conditions or other events beyond BELFOR"S control that prevents BELFOR and its subcontractors from working then BELFOR and its subcontractors shall remain on stand-by at a rate of $970/hour for a maximum of 8 hours per day. Any overtime requested by GPA above our proposed work schedule (of 6 days/10 hours per day) will incur an additional charge.

VI. All Change Order request shall be agreed upon by both the contractor (Belfor) and GPA. prior to commencement of any requested change orders

VII. Local skilled labor will be utilized when possible. BELFOR will provide notice to the Client of any subcontractor that may be hired outside the territory of Guam.

ATTACHMENT A - CABRAS 3&4 PLANT CLEANING

BELFOR USA

7100 TPC Drive
Suite 450
Orlando, Florida 32828
Ph- 407-856-6970
Fax-407-856-6977

2016-05-24-1909-1--1

Project General Conditions

Project General Conditions

DESCRIPTION	QTY
883. Commercial Supervision	800.00 HR
905. Commercial Forman	1,600.00 HR
891. Commercial Supervision / Enviromental supervisior	800.00 HR
887. Commercial Supervision / Enviromental Forman	800.00 HR

Lodging

DESCRIPTION	QTY
909. Hotel and Lodging for Off Island Supervisors (4) and Heath and Saftey Officer	385.00 EA
896. Per Diem 4 person 84 days	420.00 EA
897. Air Transportation	10.00 EA

Safety

DESCRIPTION	QTY
901. Site Saftey Officer 40 hours per week	640.00 HR

Oil Impacted Concrete Floors and Foundations

DESCRIPTION	QTY
134. Cleaning - Remediation Technician -to apply degreaser	160.00 HR
135. Clean with pressure/chemical spray - Very heavy concrete floors and Walls	800.00 HR
136. Cleaning Remediation Technician light Hand Cleaning	40.00 HR
137. Cleaning Remediation Technician for water control	160.00 HR
138. Contaminated Water Disposal 7 days	3,500.00 GL

Engine #3 Exterior Cleaning

DESCRIPTION	QTY
85. Cleaning - Remediation Technician -to apply degreaser	96.00 HR

ATTACHMENT A - CABRAS 3&4 PLANT CLEANING

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CONTINUED - Engine #3 Exterior Cleaning

DESCRIPTION	QTY
66. Clean with pressure/chemical spray - Very heavy	320.00 HR
87. Clean with pressure/rise only - Very heavy including equipment hot steam rise	32.00 HR
64. Cleaning - Remediation Technician - dry the exterior of engine 3 including attached walk ways	240.00 HR
79. Equipment Operator	320.00 HR
84. Contaminated Water Disposal	3,500.00 GL
89. Cleaning Remediation Technician for water control	160.00 HR
90. Detach and reset Traped Water Protection Including Cabling	480.00 HR
91. Replace Heavy Canvas Trap	6.00 EA
92. Trap plastic ties	1.00 EA
93. Chain Link Fencing Detach and Reset	128.00 EA

Main Level Structural Cleaning

Column line A to C 1 to2 **Height: 16'**

DESCRIPTION	QTY
173. Cleaning - Remediation Technician -to apply degreaser Walls- Metal Decking-stairs	24.00 HR
174. Clean With pressure/chemical spray Floors, Walls - Metal Decking, Stairs and the interior of the exterior wall panels	80.00 HR
175. Cleaning Remediation Technician light Hand Cleaning including stairs	32.00 HR
176. Cleaning Remediation Technician for water control	40.00 HR
177. Contaminated Water Disposal	700.00 GL
185. Two ladders with jacks and plank (per day) Single Story L up to 12 foot Lift Equipment 4 sets	18.00 DA

Column lines C to D 1 to 2 **Height: 33' 9"**

DESCRIPTION	QTY
246. Cleaning - Remediation Technician -to apply degreaser Walls and Metal Decking	8.00 HR
247. Clean with pressure/chemical spray - Very heavy steam Floors, Walls , Metal Decking	16.00 HR
248. Cleaning Remediation Technician light Hand Cleaning	8.00 HR
249. Cleaning Remediation Technician for water control	8.00 HR
250. Contaminated Water Disposal	350.00 GL

Column lines D to E 1 to 2 **Height: 16'**

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DESCRIPTION	QTY
569. Cleaning - Remediation Technician -to apply degreaser Walls- Metal Decking-four stairs	24.00 HR
570. Clean With pressure/chemical spray Floors, Walls - Metal Decking, Stairs and the interior of the exterior wall panels	80.00 HR
572. Cleaning Remediation Technician light Hand Cleaning	32.00 HR
573. Cleaning Remediation Technician for water control	40.00 HR
574. Contaminated Water Disposal	700.00 GL
583. Two ladders with jacks and plank (per day) Single Story L up to 12 foot Lift Equipment 4 sets	18.00 DA

Main Engine Room Column A to F 2 to 6 **Height: 80'**

DESCRIPTION	QTY
369. Cleaning - Remediation Technician -to apply degreaser Walls	360.00 HR
370. Clean With pressure/chemical spray Floors, Walls - Metal Decking, Stairs and the interior of the exterior wall panels	690.00 HR
371. Cleaning Remediation Technician light Hand Cleaning	320.00 HR
372. Cleaning Remediation Technician for water control	320.00 HR
592. Cleaning Technician - per hour cleaning of catwals and Balconies	48.00 HR
373. Contaminated Water Disposal	2,100.00 GL

South Lobby **Height: 15' 9"**

DESCRIPTION	QTY
507. Clean With pressure/chemical spray Floors, Walls - Metal Decking, Stairs and the interior of the exterior wall panels	32.00 HR
509. Demolition Laborer - per hour hand cleaning including pan deck	16.00 HR
510. General Demolition - per hour remove drywall and T bar ceiling	8.00 HR
733. Contaminated Water Disposal	500.00 GL
751. Cleaning - Remediation Technician -to apply degreaser	8.00 HR

S Elevator **Height: 80'**

DESCRIPTION	QTY
515. Clean With pressure/chemical spray Floors, Walls - Metal Decking, Stairs and the interior of the exterior wall panels	32.00 HR
517. Demolition Laborer - per hour hand cleaning including pan deck	8.00 HR
742. Contaminated Water Disposal	250.00 GL
761. Cleaning - Remediation Technician -to apply degreaser	8.00 HR

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S Stairwell **Height: 78'**

DESCRIPTION	QTY
856. Cleaning - remediation technician - apply degreaser	8.00 HR
532. Clean With pressure/chemical spray Floors, Walls - Metal Decking, Stairs and the interior of the exterior wall panels	80.00 HR
533. General Demolition - per hour hand clean rails and steps	16.00 HR
750. Contaminated Water Disposal	500.00 GL
760. General Demolition - per hour remove drywall and T bar ceiling	8.00 HR

North Lobby **Height: 15' 9"**

DESCRIPTION	QTY
752. Clean With pressure/chemical spray Floors, Walls - Metal Decking, Stairs and the interior of the exterior wall panels	32.00 HR
754. Demolition Laborer - per hour hand cleaning including pan deck	16.00 HR
755. General Demolition - per hour remove drywall and T bar ceiling	8.00 HR
758. Contaminated Water Disposal	500.00 GL
759. Cleaning - Remediation Technician -to apply degreaser	8.00 HR

N Elevator **Height: 80'**

DESCRIPTION	QTY
743. Clean with pressure/rise only - Very heavy including equipment hot steam rise	32.00 HR
745. Demolition Laborer - per hour hand cleaning including pan deck	8.00 HR
747. Contaminated Water Disposal	250.00 GL

N Stairwell **Height: 78'**

DESCRIPTION	QTY
857. Cleaning - remediation technician - apply degreaser	8.00 HR
763. Clean With pressure/chemical spray Floors, Walls - Metal Decking, Stairs and the interior of the exterior wall panels	80.00 HR
764. General Demolition - per hour hand clean rails and steps	16.00 HR
767. Contaminated Water Disposal	500.00 GL
768. General Demolition - per hour remove drywall and T bar ceiling	8.00 HR

Lower Compressor Column B to E 6 to 7 **Height: 8'**

DESCRIPTION	QTY

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CONTINUED - Lower Compressor Column B to E 6 to 7

DESCRIPTION	QTY
462. Cleaning - Remediation Technician -to apply degreaser Walls	16.00 HR
465. Clean With pressure/chemical spray Floors, Walls - Metal Decking, Stairs and the interior of the exterior wall panels	176.00 HR
466. Cleaning Remediation Technician for water control	16.00 HR
467. Contaminated Water Disposal	700.00 GL

Level 2

MCC 1 Column line B to E 6 to 7 — **Height: 14'**

DESCRIPTION	QTY
818. General Demolition - per hour clean metal pan deck by hand	120.00 HR
865. Mask the surface area per square foot - plastic and tape - 4 mil	1,680.00 SF

Level 2 Column lines A to C 1 To 2 — **Height: 17'**

DESCRIPTION	QTY
615. Cleaning - Remediation Technician -to apply degreaser Walls- Metal Decking-four stairs	16.00 HR
616. Clean With pressure/chemical spray Floors, Walls - Metal Decking, Stairs and the interior of the exterior wall panels	48.00 HR
618. Cleaning Remediation Technician light Hand Cleaning	16.00 HR
619. Cleaning Remediation Technician for water control	40.00 HR
620. Contaminated Water Disposal	500.00 GL

Level 2 Column lines D to F 1 to 2 — **Height: 17'**

DESCRIPTION	QTY
770. Cleaning - Remediation Technician -to apply degreaser Walls- Metal Decking-four stairs	24.00 HR
771. Clean With pressure/chemical spray Floors, Walls - Metal Decking, Stairs and the interior of the exterior wall panels	128.00 HR
773. Cleaning Remediation Technician light Hand Cleaning	32.00 HR
774. Cleaning Remediation Technician for water control	40.00 HR
775. Contaminated Water Disposal	700.00 GL

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Mezzine

Level 3 Column lines A to F 1 to 2 — **Height: 12'**

DESCRIPTION	QTY
661. Cleaning - Remediation Technician -to apply degreaser Walls- Metal Decking-four stairs	80.00 HR
662. Clean With pressure/chemical spray Floors, Walls - Metal Decking, Stairs and the interior of the exterior wall panels	288.00 HR
664. Cleaning Remediation Technician light Hand Cleaning and hand Rails	136.00 HR
665. Cleaning Remediation Technician for water control	100.00 HR
666. Contaminated Water Disposal	1,750.00 GL

Level 3 Cable Room — **Height: 7' 7"**

DESCRIPTION	QTY
824. Cleaning - Remediation Technician -to apply degreaser	16.00 HR
825. Clean With pressure/chemical spray Floors, Walls - Metal Decking, Stairs and the interior of the exterior wall panels	32.00 HR
826. Cleaning Remediation Technician for water control	16.00 HR
827. Contaminated Water Disposal	700.00 GL

Level 3

Level 4 MCC 2 — **Height: 14' 3"**

DESCRIPTION	QTY
832. Cleaning - Remediation Technician -to apply degreaser	32.00 HR
833. Clean With pressure/chemical spray Floors, Walls - Metal Decking, Stairs and the interior of the exterior wall panels	64.00 HR
834. Cleaning Remediation Technician for water control	32.00 HR
866. Mask the surface area per square foot - plastic and tape - 4 mil	1,680.00 SF
835. Contaminated Water Disposal	700.00 GL

Level 4 Column A to F 1 to 2 — **Height: 24'**

DESCRIPTION	QTY
787. Cleaning - Remediation Technician -to apply degreaser Walls- Metal Decking-four stairs	128.00 HR
788. Clean With pressure/chemical spray Floors, Walls - Metal Decking, Stairs and the interior of the exterior wall panels	440.00 HR
790. Cleaning Remediation Technician light Hand Cleaning and hand Rails	152.00 HR

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CONTINUED - Level 4 Column A to F 1 to 2

DESCRIPTION	QTY
791. Cleaning Remediation Technician for water control	100.00 HR
792. Contaminated Water Disposal	1,750.00 GL

Level 4

Level 4 Controll Room-Office **Height: 14' 3"**

DESCRIPTION	QTY
842. Cleaning - Remediation Technician -to apply degreaser	32.00 HR
843. Clean With pressure/chemical spray Floors, Walls - Metal Decking, Stairs and the interior of the exterior wall panels	64.00 HR
844. Cleaning Remediation Technician for water control	32.00 HR
845. Contaminated Water Disposal	1,400.00 GL

Elect Demo

DESCRIPTION	QTY
406. Electrician - per hour to remove building wiring-light-sub panels for the building structure	1,600.00 HR
408. Electrician forman for as builts and Cap off	160.00 HR
409. Demolition Laborer - per hour to carry to dumpsters	160.00 HR

HVC Demo

DESCRIPTION	QTY
398. Heating / A.C. Mechanic - per hour to remove ducts and air handlier	1,280.00 HR
400. Heating / A.C. Project manger for mapping and capping off	160.00 HR
401. Demolition Laborer - per hour to carry to dumpsters	160.00 HR

Scaffolding and Equipment

DESCRIPTION	QTY
877. Scaffolding (Bid Item) shipping to inland	1.00 EA
881. Scaffolding (Bid Item) shipping from inland	1.00 EA

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CONTINUED - Scaffolding and Equipment

DESCRIPTION	QTY
880. Scaffold - per section (per day) for the duration of project	34,200.00 DA
878. Scaffold - per section (per day) for duration of project	38,000.00 DA
879. Labor to take down scaffold - per section	760.00 HR
882. Labor to set up scaffold - per section	760.00 HR
1,011. Boom lift - 100" to 120' reach no operator 2 lifts	24.00 WK
1,013. Crane and operator - 14 ton capacity - 65' extension boom	16.00 HR
1,015. (Material Only) Air compressor - 10HP - 2 stage, packaged - w/120 gal.tank Toe Behind Rental	10.00 WK
1,016. Generator - 10-30KW (per week - 8 hour) - no monitoring	12.00 WK
1,017. Scissor lift - 26' platform height - electric powered 2 each	100.00 DA
1,018. Pneumatic Chipper 6 per day 30 days	180.00 DA
1,019. Axial fan air mover - 1 HP (per 24 hr period)-No monit.For Ventalation 4 fans 10 weeks	40.00 WK
1,020. Steam power washing equipment	540.00 DA
1,012. Rental equipment delivery (Bid item)	6.00 EA
1,021. Water Run of equipment portable extraction	672.00 EA
1,022. Ladders and Demo Carts	800.00 DA
1,023. Air Hoses and fittings	2,000.00 LF
1,026. Degreaser sprayers	10.00 EA
1,036. Temporary toilet (per month) 2 toilets for 4 months	8.00 MO
1,037. Small tools	360.00 EA
1,038. Job Site Truck	252.00 EA
1,039. Dumpster load - Approx. 40 yards, 7-8 tons of debris	20.00 EA
1,040. Temporary construction office - portable (trailer)	4.00 MO
1,041. Delivery and set up	1.00 EA

FireProofing Removal

Grid Line A to C 1 to 2

DESCRIPTION	QTY
920. General Demolition - per hour Hand scrape from Stuctural Steel Prior to power Washing	320.00 HR
923. General Demolition - per hour To Bag and Transport to Dumpster 2 men 2 days	16.00 HR
925. Plastic bag - used for disposal of contaminated items	180.00 EA

Grid Line C to D 1 to 2

DESCRIPTION	QTY
926. General Demolition - per hour Hand scrape from Stuctural Steel Prior to power Washing	180.00 HR

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CONTINUED - Grid Line C to D 1 to 2

DESCRIPTION	QTY
929. General Demolition - per hour To Bag and Transport to Dumpster 2 men 2 days	16.00 HR
933. Plastic bag - used for disposal of contaminated items	90.00 EA

Grid Lines D To E 1 to 2

DESCRIPTION	QTY
934. General Demolition - per hour Hand scrape from Stuctural Steel Prior to power Washing	320.00 HR
937. General Demolition - per hour To Bag and Transport to Dumpster 2 men 2 days	16.00 HR
939. Plastic bag - used for disposal of contaminated items	180.00 EA

Main Engine Room Grid Line A to F 2 to 6

DESCRIPTION	QTY
940. General Demolition - per hourHand scrape from Stuctural Steel Prior to power Washing	1,600.00 HR
943. General Demolition - per hour To Bag and Transport to Dumpster	96.00 HR
946. Plastic bag - used for disposal of contaminated items	360.00 EA
947. General Demolition - per hour remove drywall	640.00 HR
948. General Demolition - per hour to haul material to dumpesters	64.00 HR

Lower Compressor Grid B to E 6 to 7

DESCRIPTION	QTY
952. General Demolition - per hour Hand scrape from Stuctural Steel Prior to power Washing	520.00 HR
955. General Demolition - per hour To Bag and Transport to Dumpster 2 men 2 days	16.00 HR
958. Plastic bag - used for disposal of contaminated items	100.00 EA

Level 2 grid line A to C 1 and 2

DESCRIPTION	QTY
959. General Demolition - per hour Hand scrape from Stuctural Steel Prior to power Washing	320.00 HR
962. General Demolition - per hour To Bag and Transport to Dumpster 2 men 2 days	16.00 HR
964. Plastic bag - used for disposal of contaminated items	180.00 EA

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Level 2 MCC1 and Battery room

DESCRIPTION	QTY
965. General Demolition - per hour to scrape and remove fire proofing	320.00 HR
966. General Demolition - per hour haul material to dumpsters	40.00 HR
967. General Demolition - Equipment cover up	16.00 HR
968. Mask the surface area per square foot - plastic and tape - 4 mil	1,680.00 SF

Second Level Grid Lines D to F 1 to 2

DESCRIPTION	QTY
969. General Demolition - per hour Hand scrape from Stuctural Steel Prior to power Washing	320.00 HR
972. General Demolition - per hour To Bag and Transport to Dumpster 2 men 2 days	16.00 HR
974. Plastic bag - used for disposal of contaminated items	180.00 EA

Level 3 Grid lines A to F 1 to 2

DESCRIPTION	QTY
975. General Demolition - per hour Hand scrape from Stuctural Steel Prior to power Washing	480.00 HR
978. General Demolition - per hour To Bag and Transport to Dumpster 2 men 2 days	16.00 HR
980. Plastic bag - used for disposal of contaminated items	360.00 EA

Level 3 Cable Room

DESCRIPTION	QTY
981. General Demolition - per hour to scrape and remove fire proofing	320.00 HR
982. General Demolition - per hour haul material to dumpsters	3.00 HR

Level 4 Gril Lines A to F 1 to 2

DESCRIPTION	QTY
983. General Demolition - per hour Hand scrape from Stuctural Steel Prior to power Washing	480.00 HR
986. General Demolition - per hour To Bag and Transport to Dumpster 2 men 2 days	16.00 HR
988. Plastic bag - used for disposal of contaminated items	360.00 EA

Level 4 MCC 2

DESCRIPTION	QTY

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CONTINUED - Level 4 MCC 2

DESCRIPTION	QTY
989. General Demolition - per hour to scrape and remove fire proofing	320.00 HR
990. General Demolition - per hour haul material to dumpsters	40.00 HR
991. Mask the surface area per square foot - plastic and tape - 4 mil	1,680.00 SF

Level 5 Control Room

DESCRIPTION	QTY
992. General Demolition - per hour to scrape and remove fire proofing	320.00 HR
993. General Demolition - per hour haul material to dumpsters	40.00 HR

Consumables

DESCRIPTION	QTY
1,024. (Install) Chemical Degreasor	1,660.00 EA
1,025. Cleaning Rages and Disposable consumables	2.00 EA
1,027. Disposal Water containers	20.00 EA
1,029. Boots - waterproof latex - Disposable (per pair)	800.00 EA
1,030. Add for personal protective equipment (hazardous cleanup)	840.00 EA
1,032. Fuel consumtion for trucks and generators	112.00 EA
1,033. Temporary Water Barriers to controll contaminated water flow	20.00 EA

Labor Minimums Applied

DESCRIPTION	QTY
74. Plumbing labor minimum	1.00 EA

Grand Total 4,840,537.57

Warren Lindell

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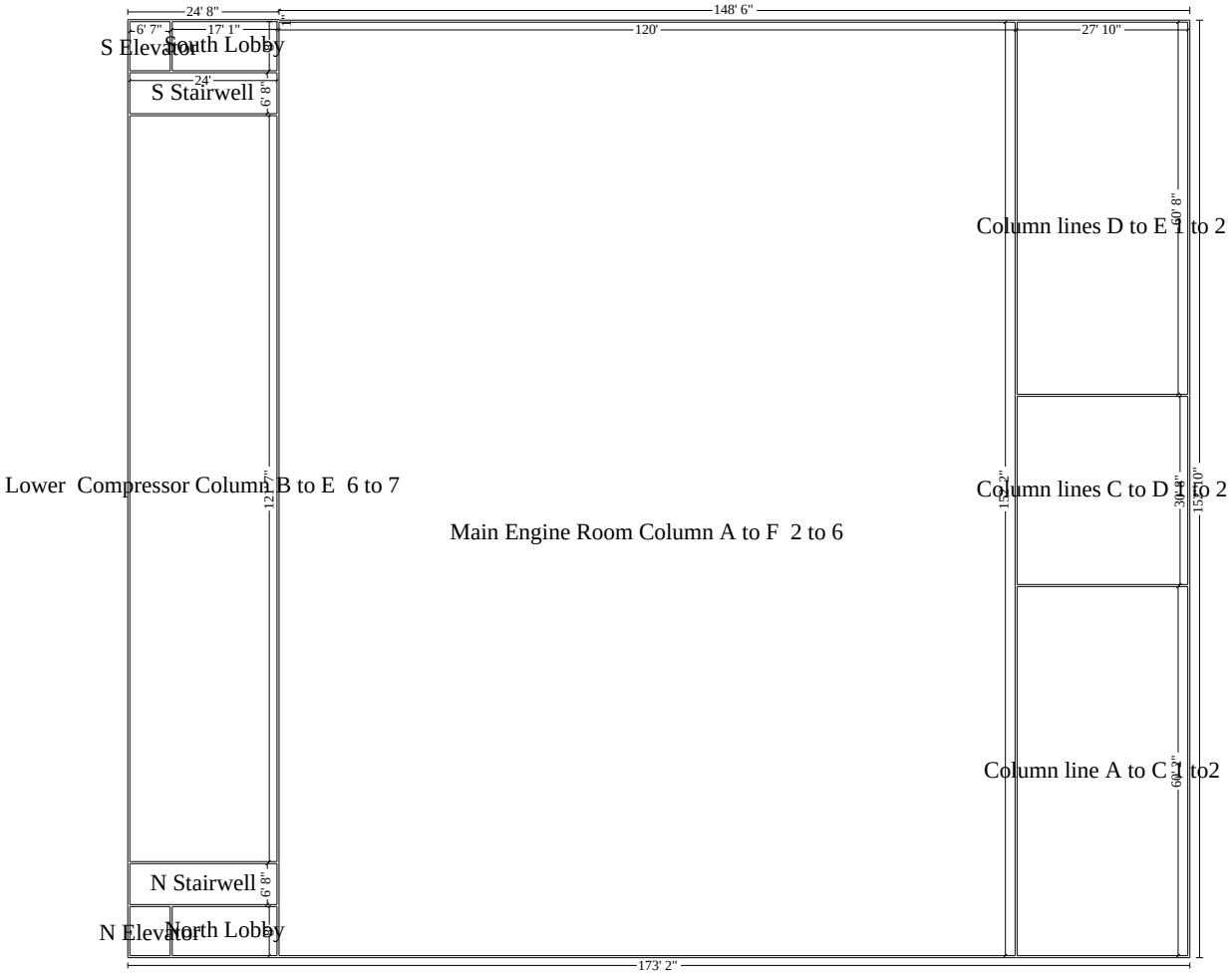
Grand Total Areas:

104,756.92	SF Walls	49,589.17	SF Ceiling	154,346.08	SF Walls and Ceiling
49,589.17	SF Floor	5,509.91	SY Flooring	3,820.13	LF Floor Perimeter
0.00	SF Long Wall	0.00	SF Short Wall	3,820.13	LF Ceil. Perimeter
49,589.17	Floor Area	50,711.43	Total Area	104,756.92	Interior Wall Area
64,951.75	Exterior Wall Area	2,906.80	Exterior Perimeter of Walls		
0.00	Surface Area	0.00	Number of Squares	0.00	Total Perimeter Length
0.00	Total Ridge Length	0.00	Total Hip Length		

No interest or carrying charges are factored into this estimate please review and approve payment term presented in Belfor's lump sum proposal

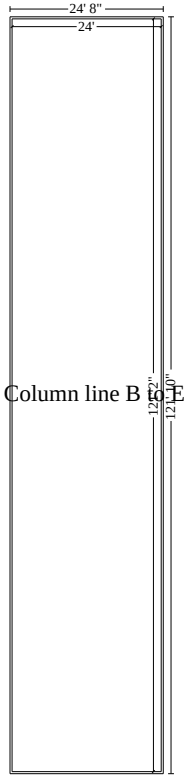
Main Level Structural Cleaning

ATTACHMENT A - CABRAS 3&4 PLANT CLEANING

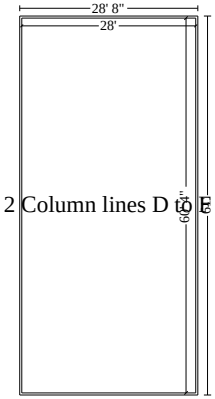


Level 2

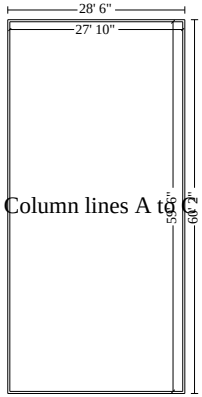
ATTACHMENT A - CABRAS 3&4 PLANT CLEANING



MCC 1 Column line B to E 6 to 7



Level 2 Column lines D to E 1 to 2



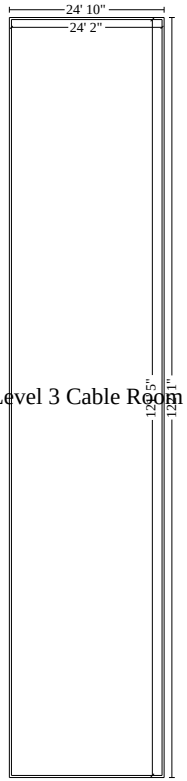
Level 2 Column lines A to C 1 To 2



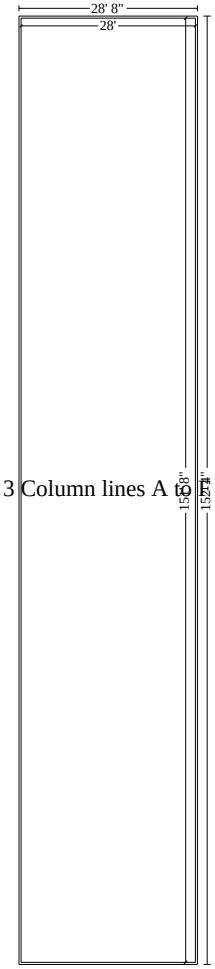
Level 2

Mezzine

ATTACHMENT A - CABRAS 3&4 PLANT CLEANING



Level 3 Cable Room



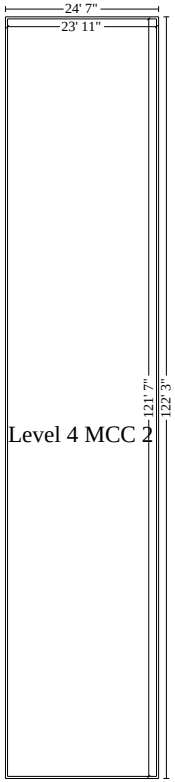
Level 3 Column lines A to F 1 to 2

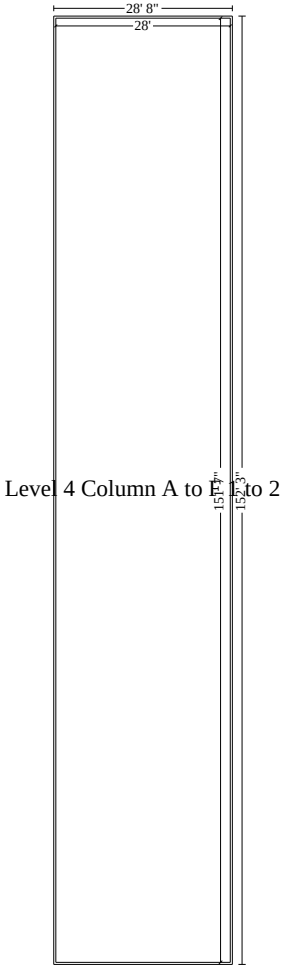
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Mezzine

Level 3

ATTACHMENT A - CABRAS 3&4 PLANT CLEANING



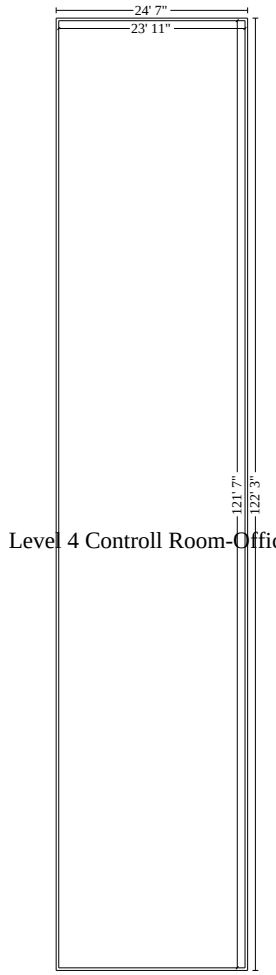




Level 3

Level 4

ATTACHMENT A - CABRAS 3&4 PLANT CLEANING



Level 4 Controll Room-Office

N

Level 4

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

Issues for Decision

Resolution No. 2016-69:

Relative to <u>Authorizing Expenditure for Cabras 4 Engine Removal Inclusive of Generator Dismantling</u>

What is the project's objective and is it necessary and urgent?
The explosion of Cabras Unit 4 and the subsequent fire on August 31, 2015 have caused extensive damage on Unit 4. GPA commissioned BWSC to evaluate the loss, and BWSC has produced a report stating that Unit 4 is a total loss. GPA's Insurers agree that Engine 4 is beyond economical repair. Hence, the Insurers have requested GPA to dismantle Generator 4 to allow their consultant to examine and evaluate the extent of damage on the generator. This project will provide the necessary services to remove Engine 4 along with auxiliary equipment as well as to dismantle Generator 4.

Where is it at?
Cabras 3&4 Plant

How much will it cost?
The project will cost **$5,996,434.78**

1	Engine 4 Dismantling (inclusive of cable trays and oil purifier)	$	3,689,343.00
2	Generator 4 dismantling and reinstallation	$	348,234.00
3	Auxiliary dismantling (inclusive of sump oil tanks)	$	1,327,544.00
		$	5,365,121.00
4	Contingency at 3%	$	160,953.63
5	Bid Bond Insurance 4%	$	214,604.84
6	Risk Insurance 0.6%	$	32,190.72
7	GRT	$	223,564.59
	TOTAL	**$**	**5,996,434.78**

See **Attachment A (Tony's Workshop/Royce Power Engineering, Ltd. proposal)** for the breakdown of costs and the Bid Evaluation Sheet.

When will it be completed?
The project is expected to be completed 5 months from the Notice to Proceed.

What is its funding source?
Insurance proceeds.

The RFP/BID responses:
KEWP solicited proposals from 3 vendors and received quotes from BELFOR USA and Tony's Workshop (Royce Power Engineering, Ltd.)

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority • Guam Waterworks Authority
P.O.BOX 2977 • Agana,Guam 96932

Resolution No. 2016-69

Relative to Authorizing Expenditure for
Cabras 4 Engine and Auxiliary Equipment Removal
Inclusive of Generator Dismantling

WHEREAS, the Cabras 3&4 Plant suffered an explosion on August 31, 2015, which caused the collapse of the building's roof and rendered both units inoperable; and

WHEREAS, the Cabras 3&4 Plant is currently being managed by Korea East WEST (KEWP) through a Performance Management Contract with GPA; and

WHEREAS, GPA has commissioned The Greenspan Co./Adjusters International to facilitate and represent GPA in its ongoing insurance claim; and

WHEREAS, GPA has submitted a report to its Insurers that Cabras Unit 4 is a total loss and that the Insurers agree that Engine 4 is beyond economical repair; and

WHEREAS, dismantling and removal of Engine 4 is required to enable GPA to perform further analysis on the Engine foundation; and

WHEREAS, the Insurance Adjuster from McLarens has requested GPA to remove and dismantle Unit 4's generator for further examination of the extent of loss; and

WHEREAS, KEWP as the PMC is authorized to procure required services relative to the operations of the Cabras 3&4 Plant; and

WHEREAS, KEWP has obtained the necessary price quotes for the required services to dismantle and remove Engine 4 along with auxiliary equipment and to dismantle Generator 4; and

WHEREAS, the work required is to facilitate the evaluation and quantification of the property loss; and

WHEREAS, the Consolidated Commission on Utilities fully supports GPA's efforts in working with its Insurers to work through the processes to progress the Insurance claim.

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. After careful review of the attached documents, the Consolidated Commission on Utilities finds the expenditure for the Cabras 4 Engine Removal and Unit 4 Generator dismantling to be reasonable, prudent and necessary for the use of Insurance Proceeds.
2. The General Manager of GPA is hereby authorized obligating authority of **$5,996,435.00** to secure the required services for Cabras 4 Engine Removal and Unit 4 Generator dismantling.

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

DULY and REGULARLY ADOPTED AND APPROVED THIS 22nd DAY OF NOVEMBER, 2016.

Certified by: Attested By:

JOSEPH T. DUENAS
CHAIRMAN

J. GEORGE BAMBA
SECRETARY

Date: _____ Date: _____

SECRETARY'S CERTIFICATE

I, J. George Bamba Secretary, Consolidated Commission on Utilities hereby certifies as follows:

The foregoing is a full, true and correct copy of a resolution duly adopted at a regular meeting of the members of Guam's Consolidated Commission on Utilities, duly and legally held at the meeting place thereof on November 22, 2016, at which meeting all of said members had due notice and at which at least a majority thereof were present;

At said meeting said resolution was adopted by the following vote:

Ayes:

Nays:

Absent:

Abstain:

Said original resolution has not been amended, modified, or rescinded since the date of its adoption, and the same is now in full force and effect.

SO CERTIFIED this 22nd day of November, 2016.

_____

J. George Bamba
Secretary, Consolidated Commission on Utilities

ATTACHMENT A

Bid Abstract

KEWP CABRAS 3&4 PMC/CABRAS UNIT 4 GENERATOR AND ENGINE DISMANTLING QUOTATION EVALUATION FORM									
	Vendor Name: Royce Power Engineering, Ltd.			Vendor Name: Belfor			Vendor Name: Continental Machinery Company, Inc.		
I CERTIFY THAT THE FORGOING STATEMENT OF INFORMAL STATEMENT OF INFORMAL QUOTATION IS TRUE AND CORRECT AND PRICES CHARGED ARE JUST, FAIR, REASONABLE, AND THE BEST OBTAINED.	Tel: (671) 637-3060			Tel: (480) 239-1206			Tel: 214-342-8919		
	Fax No: (671) 637-3139			Fax No: (407) 677-6222			Fax No: N/a		
	Email: tonyworkshop@teleguam.net			Email: warren.lindell@us.belfor.com			Email: jschwenk@continentalmachinery.com		
	POC: Barry Eadie			POC: Warren Lindell			POC: Jeff Schwenk		
	Date: 28 October 2016			Date: 4 May 2016			Date: 24 October 2016		
	Delivery Date: 120 Days			Delivery Date: 120 Days			Delivery Date: N/a		
REMARKS: See quotations for itemized breakdown cost	Quote Expiration Date: 30 days from quotation date			Quote Expiration Date: N/a			Quote Expiration Date: N/a		
Item Description	Qty	Unit	Unit Price	Qty	Unit	Unit Price	Qty	Unit	Unit Price
Engine Disassembly	1	1	$ 3,689,343.00	1	1	$ 4,049,511.00			
Generator Cover Removal and Reinstallation	1	1	$ 348,234.00	1	1	$ 399,674.00			
Auxilliary Equipment Dismantling and Disposal (Optional)	1	1	$ 1,327,544.00	1	1	$ 1,284,560.00			
Overhead and Miscellaneous*	1	1	$ 631,313.78	1	1	$ 574,963.82			
Note: Overhead and Miscellaneous cost suject to change dependant on optional work									
TOTAL AMOUNT			$ 5,996,434.78			$ 6,308,708.82	No Quote		

ATTACHMENT A

Quotation for
Dismantling / Removal of 1 unit of damaged generating set MAN 12K80MC-S namely #4 located at
Cabras Power Plant in Guam

Quotation No.: **PSQ1608008.PL**

Date: **28th Oct 2016**

ROYCE POWER ENGINEERING LIMITED
HONG KONG

CONSULTANTS FOR:

TONY'S WORKSHOP
CONTRACTOR
P.O. BOX 23066GMF
BARRIGADA, GUAM 96921-3066

ATTACHMENT A

1. Project Overview

Project Name : Dismantling of 1 unit of total damaged engine MAN 12K80MC-S namely #4 and all Auxiliaries pertaining to this unit

Project Location : At Cabras 3&4 Power Plant in Guam

Project Description : Dismantling of unit #4, and removal from GPA site damaged engine MAN 12K80MC-S and ABB generator being Exposed by removing covers and top half of stator_

2. Scope of Supply

The scope of supply is to be included:

2.1 Schedule and plan the dismantling.

2.2 Schedule and plan the pre-site works, safety precaution, environmental issues during the dismantling period.

2.3 Drain off lube oil, fuel and cooling water in the piping and System (i.e., to internal side wall or floor level of the engine room).

2.3 -a) Remove all excess oil from drained piping & dispose of from site.

-b) Remove all excess fuel from drained pipes & dispose of from site.

2.4 Disconnect the piping system (including inlet and outlet piping system) (i.e., to internal side wall or floor level of the engine room).

2.4-a) Blank off all piping remaining on the floor and wall level.

ATTACHMENT A

2.5 Disconnect the lube oil system (i.e., to internal side wall or floor level of the engine room).

2.6 Disconnect the fuel oil system. (i.e., to internal side wall or floor level of the engine room).

2.7 Disconnect the cooling system. (i.e., to internal side wall or floor Level of the engine room).

2.8 Cleaning externals of #4 engine and internals to HOT Permit Safety level.

2.9 Dismantle turbo chargers, governor, inlet and outlet conduits.

2.10 Remove all others components installed on #4 engine.

2.11 Dismantle the connecting flywheel to engine and generator.

2.12 Dismantle the connecting cable to engine and generator.

2.13 Dismantle the anchor bolts of the engine.

2.14 Separate the engine and generator shaft.

2.15 Dismantle the crankshaft, cylinder head, pistons etc.

2.16 Disconnect & remove the electrical system (including power cable & Trays) (i.e., to internal side wall or floor Level of the engine room).

2.17 Dismantle the generator covers and Stator top half shell and cover and store within building GPA site.
Supervised by SULZER (i.e. the above supervision works done by SULZER to be paid for by others)

ATTACHMENT A

2.17 Remove all others components installed on # 4 generator

2.18 Crane unloading the heavy portions and components from top of the engine.

2.19 Crane unloading the crank shaft from the engine

2.20 Crane unloading the engine body

2.21 Move out all the dismantled portions and components (down to foundation level) from the Engine from GPA Site. (Excluding concrete pad and foundation).

2.22 Crane unloading the heavy portions and components from top of the generator.

2.23 Reinstall top of half of Stator & covers after inspection by others to the Generator.

2.24 Remove Sump Tank from building.

2.25 Remove all Auxiliaries of engine #4 from building and GPA site.

2.27 Remove all cables pertaining to Engine 4 and remove from GPA site. Excluding any embedded in concrete flooring or walls

2.28 Remove all Scrap steel off GPA site.

2.29 Remove all scrap cables off GPA site.

2.30 Remove all waste oil from GPA site.

3. <u>Delivery Time</u>

120 normal working days and normal working hours, but excluding delays caused by weather conditions, industrial disputes, stoppages due to any permitting authority that are not our responsibility, and any

ATTACHMENT A

disputes that are out of our control, that may hold up progress.

Note: a) The normal working days does not include Saturday, Sunday, Public Holidays, overtimes works and inclement weather.

b) The normal working days means 8 hours/day including 1 x hour lunch time.

c) Standby rates apply for overtimes works, all equipment and labor onsite for any of the above stoppages that are out of our control:
Rates: Local charge out rates

4. <u>Pricing</u>

Price: A.
Dismantle Engine and load to transport at Cabras 3 & 4 site including Oil purifier and all cables and trays to end wall behind engine area up to front of foundation: down to internal side wall of building and foundations.

USD 3,689,343.00

Price B.

Removal of Alternator # 4 covers and top half of stator housing and store in Power plant building

Reinstall Alternator # 4 covers and top half of stator housing and covers within 2-3 weeks after completion of inspection by others.

USD 348,234.00

Price: C..
Dismantle all Auxiliaries from front of engine including Sump Oil Tanks and Auxiliaries on all floors, down to internal side wall of building and foundations.
Subject to all work being carried out jointly

USD 1,327,544.00

ATTACHMENT A

SUB TOTAL: USD 5,365,121

Sub Total:	USD 5,365,121.00
Contingency 3 %:	USD 160,953.63
Bid Bond Insurance 4%:	USD 214,604.84
Risk Insurance @ 0.6%:	USD 32,190.72
Guam Tax @ 4.167%:	USD 223,564.59

TOTAL Lump Sum Price : USD 5,996,434.78

Subject to all work being carried out jointly:

4.1 Price Included:

4.1.1 Mobile cranes with capacity from 35 to 200 ton general dismantling machines, mechanical tools and hand tools (i.e. welding machine, cutting machine, including industrial gas, chain block, drill, all spanners that maybe required).

4.1.2 Consumable materials for dismantling (i.e. welding sticks, cut plates, grind plates, oxygen / acetylene and industrial gas etc.)

4.1.3 Airline tickets, accommodation, meals and local transport for Consultant service team members.

4.1.4 Special tools for dismantling MAN 12K80MC-S.

4.1.5 All taxes including income tax/salary tax, profit tax, sales tax, withholding tax, state tax & federal tax etc., to be imposed by the laws of country, or to be induced in Guam related to this project service.

4.1.6 Bid bond insurance required by Guam for contract.

ATTACHMENT A

4.1.7 Insurance as required by GPA including GPA mentioned on the policy for contracts.

4.1.8 All government charges or charges related to this project service.

4.1.9 All charges levied by Guam, state or country during the service period.

4.1.10 Electricity at site by Mobile generator

4.1.11 Environment Permit (if necessary).

4.1.12 On-Site Office

4.1.13 2 Units Toilets (Mobile)

4.1.14 EPA permits

4.1.15 I.H.P. Hot Permits

4.1.16 Scaffolding for removal of top of engine, where walkway for safety of workers is damaged.

4.1.17 Scaffolding between engine and wall end for removal of cables and cable trays.

4.1.18 Electrical engineer to supervise the cable removal to ensure safe removal and to determine the common power supply between engines #3 & #4 as not to disrupt any supply detrimental the ongoing preservation or refurbishment of unit #3. THIS IS A SAFTEY REQUIREMENT.

4.1.19 Fire extinguishers for fire prevention during cutting activities.

ATTACHMENT A

4.1.20 Fire watchers during any gas cutting activities.

4.1.21 Safety officer onsite at all times.

4.1.22 First aid room in close proximity to the work site with qualified first aid person on site at all times.

5. Contractor's Responsibility

5.1 All imported mechanical equipment and materials will be listed out to owner/owner's representative for custom use

5.2 Formulate safety / environmental procedure

5.3 To complete the service within the target timing.

5.4 To Comply with all EPA standards

6. Owner/Owner's Representative Responsibility

6.1 Provide water at site or to site

6.2 Provide invitation letters to contractor for consultant's visits for visas

6.3 Provide unrestricted access to the site where work is to take place subject to contractor meeting the relevant requirements for such work.

7. Exclusions:

7.1 Any work to generator # 4 except the removal and replacement of covers and top half of stator.

7.2 Items NOT clearly specified or NOT listed in the bills of materials are NOT included.

8. Terms of Payment

8.1 30% deposit to be paid by T/T in full within 4 weeks against invoice date.

8.2 25% payment to be paid by T/T in full upon completion of 30 normal working days and within 4 weeks against invoice date.

ATTACHMENT A

8.3 25% payment to be paid by T/T in full upon completion of 30 normal working days and within 4 weeks against invoice date.

8.4 20% final payment to be paid by T/T in full upon completion of works and inspection by GPA representative and compliance with the scope of work and within 4 weeks against invoice date.

9. VALIDITY

30 days from date of quotation.

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

Issues for Decision

Resolution No. 2016-70:

Relative to <u>Authorizing Expenditure for the Procurement of Architectural, Engineering, and Construction Management Services for the Cabras 3&4 Temporary Roof Supplemental Work</u>

What is the project's objective and is it necessary and urgent?
The Cabras 3&4 Plant was severely damaged by the explosion of Unit 4 and the fire which ensued on August 31, 2015. Architectural and engineering plans as well as subsequent construction management services are required to effectuate the temporary roof supplemental design along with construction management services.

Where is it at?
Cabras 3&4 Plant.

How much will it cost?
The required A&E ($345,866.32) and CM ($292,046.84) services will cost a total of $637,913.16.

When will it be completed?
AE Services – 2 months from NTP
CM Services – 6 months construction

What is its funding source?
Insurance Proceeds

The RFP/BID responses:
NC Macario & Associates is in the best position to provide the required services as the original designer of the plant's building. GPA also retained NC Macario & Associates for the design and CM for the roof demolition of the plant. Hence, NC Macario is in the unique position as the best qualified firm to perform the required work.

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority • Guam Waterworks Authority
P.O.BOX 2977 • Agana,Guam 96932

Resolution No. 2016-70

Relative to Authorizing Expenditure for Architectural, Engineering and Construction Management Services For the Cabras 3&4 Temporary Roof Supplemental Work

WHEREAS, the Cabras 3&4 Plant suffered an explosion on August 31, 2015, which caused the collapse of the building's roof and rendered both units inoperable; and

WHEREAS, GPA has undertaken best efforts to make the building safe by demolishing the collapsed roof; and

WHEREAS, GPA is moving forward with the preservation of Cabras Unit 3; and

WHEREAS, supplemental architectural and engineering (A&E) services are required for the temporary roof, which will involve upgrading the building's structure and safety features to comply with the latest building codes and fire protection guidelines as well as construction administration services during construction of the project; and

WHEREAS, the Cabras 3&4 Plant is currently being managed by Korea East WEST (KEWP) through a Performance Management Contract (PMC) with GPA; and

WHEREAS, KEWP as the PMC, upon GPA's approval, is allowed to procure required services for the expeditious and efficient operation and maintenance of the plant; and

WHEREAS, KEWP has solicited and received a proposal from NC Macario & Associates, who was the original A&E designer for the Cabras 3&4 Plant; and

WHEREAS, GPA and KEWP have successfully negotiated with NC Macario & Associates for the required scope inclusive of Construction Support Services in the amount of $637,913.00.

WHEREAS, NC Macario & Associates is in a position to expedite the production of design plans for the Cabras 3&4 building's temporary roof as the original designer of the building as well as the designer for the building's roof demolition; and

WHEREAS, GPA proposes to use the Self-Insurance fund for the required work; and

WHEREAS, GPA is pursuing reimbursement of any eligible costs with Dongbu Insurance Ltd. and associated insurance underwriters, and GPA proposes to reimburse the Self-insurance fund with the insurance proceeds; and

WHEREAS, the Consolidated Commission on Utilities fully supports GPA's efforts in the preservation of Cabras Unit 3.

NOW, THEREFORE, BE IT RESOLVED, by the Consolidated Commission on Utilities subject to the review and approval, if required, of the Public Utilities Commission as follows:

1. After careful review of the attached documents, the Consolidated Commission on Utilities finds the expenditure for Cabras 3&4 Temporary Roof Supplemental Design and Construction Administration Support Services to be reasonable, prudent and necessary for the use of Self-Insurance fund.
2. The General Manager of GPA is hereby authorized obligating authority of **$637,913.00** for the purpose of securing the required services for the Cabras 3&4 Temporary Roof Supplemental Design and Construction Administration Support Services.

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

DULY and REGULARLY ADOPTED AND APPROVED THIS 22nd DAY OF NOVEMBER, 2016.

Certified by: Attested By:

JOSEPH T. DUENAS **CHAIRMAN**	**J. GEORGE BAMBA** **SECRETARY**
Date: _____	Date: _____

SECRETARY'S CERTIFICATE

I, J. George Bamba Secretary, Consolidated Commission on Utilities hereby certifies as follows:

The foregoing is a full, true and correct copy of a resolution duly adopted at a regular meeting of the members of Guam's Consolidated Commission on Utilities, duly and legally held at the meeting place thereof on November 22, 2016, at which meeting all of said members had due notice and at which at least a majority thereof were present;

At said meeting said resolution was adopted by the following vote:

Ayes:

Nays:

Absent:

Abstain:

Said original resolution has not been amended, modified, or rescinded since the date of its adoption, and the same is now in full force and effect.

SO CERTIFIED this 22nd day of November, 2016.

_____

J. George Bamba
Secretary, Consolidated Commission on Utilities

ATTACHMENT A

PROJECT NAME: TEMPORARY ROOFING TO FIRE-EXPLOSION DAMAGED CABRAS UNITS 3 & 4 BUILDING

SCOPE OF WORK FOR <u>SUPPLEMENTAL DESIGN FOR TEMPORARY ROOFING</u> TO ENABLE CABRAS UNIT #3 ENGINE OPERATIONS.

1. ARCHITECTURAL
   a. Provide the repair of Toilet located at ground floor only for use of plant personnel during the Engine unit #3 plant operations.
   b. Provide design for the replacement of means of egress by replacing all interior doors in all floors leading to corridors and all exterior doors including the main entrance roll up door, side entrance double doors that were damaged by fire-explosion of Cabras 3&4.
   c. Provide new observation glass windows damaged by explosion to properly maintain fire rating separation between Power Generation area and Admin/Control Room.
   d. Firestopping or sealing of all openings and joints in fire resistance rated wall or floor assemblies such as electrical conduits and sprinkler piping wall penetrations.
   e. Provide replacement design for the existing make up air vent for mechanical HVAC air flow.
   f. Provide Fire-Proofing design for new and existing Steel Members for Cabras building with Group F-1 occupancy under IBC 2009, Section 306.2.
   g. Prepare Architectural As-built drawings for the entire floor of Cabras 3 & 4 building.

2. STRUCTURAL
   a. Prepare Structural As-built drawings for Cabras 3 & 4 Building.

3. MECHANICAL
   a. Provide repair of HVAC for Engine Unit #3, Station Air Blower and the FM200 Room.
   b. Provide plumbing design at ground floor toilets if replacement is required.
   c. Prepare Mechanical As-built drawings of Cabras 3 & 4.

4. FIRE PROTECTION
   a. Provide automatic Fire Suppression design of the Power Generation area and repair existing FS system at Mechanical area.
   b. Assessed existing Fire Pumps and Provide new fire pump room as required, design as far as the existing FS system to supply Fuel Oil Heater Room and Emulsion Water Treatment Room including Deluge System at Main Transformer.

c. Provide Building Fire Protection and Life Safety Analysis, NFPA 101 code as required to obtain occupancy permit for the Cabras Engine #3 operation. Life safety Analysis to include evaluation of the existing egress means of the facility based on the provisions of NFPA 101. Physical repair design of means of ingress and egress is via Architectural.
d. Restore Fire Foam Protection System piping between Fuel Storage Tanks and Foam Tank building.
e. Prepare Fire Protection As-built drawings for Cabras 3 & 4.

5. ELECTRICAL

a. Provide design for building lightning protection.
b. Prepare Electrical As-built drawings for Cabras 3 & 4.
c. Restoration of other building areas other than above is not included.

6. FIRE ALARM SYSTEM:
   a. Provide design repair or reconnection of existing F/A system to temporary FA control panel for the following to make Engine # 3 operational;
      → Provide design for the replacement of Fire Alarm system at the Emulsion Water Treatment Facility and at both elevator shafts that is compatible with the new FA system designed for the Temporary Roof project.
      → Provide design for the new Heat Detector of Third Floor Fuel Oil Heater Facility.
      → Provide design of new synchronize Fire Alarm system for various Motor Control Centers and Synchronizing Controls including at Elevator shaft,
   b. Prepare Fire Alarm System As-built drawings for Cabras 3 & 4.

7. PEER REVIEW to be Conducted by WJE
   a. PEER Review for Fire Sprinkler Design to Supplemental to Temporary Roof Phase.
   b. PEER Review for Structural design to Temporary Roof Phase.

- End -

ATTACHMENT B - FEE PROPOSAL BREAKDOWN

A/E Fee Schedule	N.C.MACARIO & ASSOCIATES, Inc.							
PROJECT TITLE Cabras 3&4 Temp Roof - Supplemental Design Services			DATE OF SCOPE	DATE OF EST. 10/6/2016		RFP NO.		
LOCATION Cabras Island, Piti, Guam			Client Guam Power Authority					
ITEM	ENGINEERING SERVICES	NO. OF	PROFESSIONAL			SUB-PROFESSIONAL		
A	DISCIPLINE / WORK TYPE	DWGS	MHR	RATE	COST	MHR	RATE	COST
1	PROJECT MANAGER		80	76.83	6146.40		0.00	0.00
2	PROJECT ENGINEER		80	62.80	5024.00		37.00	0.00
3	ARCHITECTURAL			74.80	0.00		37.00	0.00
4	ENVIRONMENTAL			62.80	0.00		37.00	0.00
5	STRUCTURAL		40	62.80	2512.00	180	37.00	6660.00
6	CIVIL			62.80	0.00		37.00	0.00
7	MECHANICAL/FIRE PROTECTION			62.80	0.00		37.00	0.00
8	ELECTRICAL			62.80	0.00		37.00	0.00
9	SPEC/REPORT WRITER		40	62.80	2512.00		37.00	0.00
10	COST ESTIMATOR			62.80	0.00		37.00	0.00
11	TYPIST				0.00	40	26.50	1060.00
12	**TOTALS**				16194.40			7720.00
13								
14	TOTAL DIRECT LABOR (Professional and Sub-Professional))							$23,914.40
15	OVERHEAD 138.2% X LINE 14							33049.70
16	TOTAL DIRECT LABOR AND OVERHEAD (LINES 14 AND 15)							$56,964.10
17	PROFIT and GRT 14.17% X LINE 16							8071.81
18	**TOTAL FEE FOR ENGINEERING SERVICES (LINES 16 AND 17)**							**$65,035.91**
B	**ENGINEERING SERVICES, REPRODUCTION AND TRAVEL**							
1	MATERIAL INVESTIGATION - CORING SAMPLING (Itemized on supplement sheet)							0.00
2	DIFFERENTIAL SURVEY (Itemized on supplement sheet)							0.00
3	FIELD INVESTIGATION (Itemized on supplement sheet)							5,087.26
4	REPRODUCTION (Reports, Calcs, Estimate & Sketch)							14,293.85
5	OTHER SPECIAL COSTS (Identified on supplement sheet)							0.00
6	TRAVEL - REIMBURSABLE (Itemized on supplement sheet)							$0.00
7	**TOTAL FEE FOR ENGINEERING SERVICES, REPRODUCTION AND TRAVEL**							**$19,381.11**
C	**CONST MANAGEMENT SERVICES**		PROFESSIONAL			SUB-PROFESSIONAL		
	DISCIPLINE / WORK TYPE		MHR	RATE	COST	MHR	RATE	COST
1	ENGINEERING TECH SUPPORT							
2	PROJECT MANAGER		108	76.83	8297.64		0.00	0.00
3	PROJ ENGR - CONTR ADMIN, INV., REPORTS, MTNG		260	62.80	16328.00		37.00	0.00
4	SUBM. RVW & INSPECTION-ARCH/STRUCTURAL		142	62.80	8917.60		37.00	0.00
5	SUBM. RVW & INSPECTION-MECHL & FS		166	62.80	10424.80		37.00	0.00
6	SUBM. RVW & INSPECTION-ELECT & FA		169	62.80	10613.20	0	37.00	0.00
7	RESIDENT ENGINEER-INSPECTOR		0	52.49	0.00	1387	37.00	51319.00
8	REVIEW AS-BUILT SUBMITTED BY CTR			52.49	0.00	8	37.00	296.00
9	TYPIST					45	26.50	1192.50
10	TOTAL DIRECT LABOR (Lines 1 to 8, Professional & Sub professional) $54,581.24							$107,388.74
11	OVERHEAD 138.20% X Line 10							148411.24
12	TOTAL DIRECT LABOR AND OVERHEA (Lines 10 and 11)							$255,799.98
13	PROFIT 14.17% X Line 12							36246.86
14	**TOTAL FEE FOR CONSTRUCTION SUPPORT SVCS** (Lines 12 and 13)							**$292,046.84**
SUB-TOTAL FEE:							AG	**$376,463.86**

A/E FEE ITEMIZATION	N.C. MACARIO & ASSOCIATES, INC.			
PROJECT TITLE **Cabras 3&4 Temp Roof - Supplemental**		DATE OF SCOPE	DATE OF EST. 10/6/2016	RFP NO.
LOCATION **Cabras Island, Piti, Guam**		Client Guam Power Authority		
	CONSULTANT	Architectural		36,000.00
		Mechanical & FP		63,000.00
		Electrical & FA System		30,000.00
		WJE-Peer Review		100,000.00
	TOTALS			229,000.00
	GENERAL & ADMINISTRATION (G&A) + GRT	14.17%		32,449.30
	TOTAL FEE FOR Consultant Services			**$261,449.30**
GRAND TOTAL FEE: A/E SERVICES				**$637,913.00**

A/E FEE ITEMIZATION	N.C. MACARIO & ASSOCIATES, INC.							
PROJECT TITLE			DATE OF SCOPE	DATE OF EST.	RFP NO.			
Cabras 3&4 Temp Roof - Supplemental				10/6/2016				
LOCATION			Client					
Cabras Island, Piti, Guam			Guam Power Authority					

B.1	MATERIAL INVESTIGATION-CORI	NO. OF	PROFESSIONAL			SUB-PROFESSIONAL		
ITEM	DISCIPLINE / WORK TYPE	SAMPLES	MHR	RATE	COST	MHR	RATE	COST
1	MOBILIZATION / CORING EQUIPMENT					0	500.00	0.00
2	BORINGS: DEPTH-SAMPLING	0	0	52.49	0.00	0	37.00	0.00
3	STEEL SAMPLING COLLECTIONS	0	0	52.49	0.00	0	37.00	0.00
4	ENVIRONMENTAL					0		0.00
5	ATTERBERG LIMITS							0.00
6	UNCONFINED COMPRESSION							0.00
7	CONSOLIDATION TESTS							0.00
8	TRIAXIAL COMPRESSION							0.00
9	OTHER COST-SHIPPING					0	1500.00	0.00
10	**TOTALS**				0.00			0.00
11								0.00
12	TOTAL DIRECT LABOR (Professional and Sub-Professional))							$0.00
13	OVERHEAD 138.2% X LINE 14							0.00
14	TOTAL DIRECT LABOR AND OVERHEAD (LINES 14 AND 15)							$0.00
15	PROFIT AND GRT 14.17% X LINE 16							0.00
16	**TOTAL FEE FOR GEOTECHNICAL INVESTIGATION**							**$0.00**

B.2	DIFFERENTIAL SURVEY					SUB-PROFESSIONAL		
ITEM	DISCIPLINE / WORK TYPE					MHR	RATE	COST
1	SURVEY PARTY, 3 MAN CREW	0	Man	Days	Per Day			0.00
2	SURVEY PARTY 4 MAN CREW	0	Man	Days	Per Day		2250.00	0.00
3	ENGINEERING			8.00		0	62.80	0.00
4	ENCODER/COMPUTER TIME			8.00		0	47.18	0.00
5	DRAFTSMAN/CADD			8.00		0	37.00	0.00
6	OTHER, SPECIFY (REPORT)					0	26.50	0.00
7	**TOTALS**							0.00
8								
9	TOTAL DIRECT LABOR (Professional and Sub-Professional))							$0.00
10	OVERHEAD 138.2% X LINE 14							0.00
11	TOTAL DIRECT LABOR AND OVERHEAD (LINES 14 AND 15)							$0.00
12	PROFIT AND GRT 14.17% X LINE 16							0.00
13	**TOTAL FEE FOR TOPOGRAPHIC SURVEY**							**$0.00**

B.3	FLD INVGT'N RVW AS BUILT-RPR	NO. OF	PROFESSIONAL			SUB-PROFESSIONAL		
ITEM	DISCIPLINE / WORK TYPE	DWGS	MHRS	RATE	COST	MHRS	RATE	COST
1	PROJECT MANAGER		8	76.83	614.64			
2	PROJECT ENGINEER		16	62.80	1004.80		37.00	0.00
3	ARCHITECTURAL		0	74.80	0.00		37.00	0.00
4	ENVIRONMENTAL		0	62.80	0.00		37.00	0.00
5	STRUCTURAL		4	62.80	251.20	0	37.00	0.00
6	CIVIL		0	62.80	0.00	0	37.00	0.00
7	MECHANICAL/FIRE PROTECTION		0	62.80	0.00	0	37.00	0.00
8	ELECTRICAL		0	62.80	0.00	0	37.00	0.00
9	SPEC/REPORT WRITER		0	62.80	0.00		37.00	0.00
10	COST ESTIMATOR		0	62.80	0.00		37.00	0.00
11	TYPIST				0.00		26.50	0.00
12	**TOTALS**				1870.64			0.00
13								
14	TOTAL DIRECT LABOR (Professional and Sub-Professional))							$1,870.64
15	OVERHEAD 138.2% X LINE 14							2,585.22
16	TOTAL DIRECT LABOR AND OVERHEAD (LINES 14 AND 15)							$4,455.86
17	PROFIT AND GRT 14.17% X LINE 16							631.40
18	**TOTAL FEE FOR FIELD INVESTIGATION**							**$5,087.26**

B.4	REPRODUCTION					PROFESSIONAL		
ITEM	DISCIPLINE / WORK TYPE		Sheets	Submittals	Set/Sub.	QTY	EA	COST
1	DRAWING		24	3	4	288	$ 2.25	648.00
2	MYLAR (for as-built)		48	1	1	48	$ 12.00	576.00
3	SPECS/CALCS/REPORTS		120	8	4	3840	$ 1.05	4032.00
4	PHOTOS			3	4	0	$ 0.60	0.00
5	**TOTALS**							5256.00
6								
7	TOTAL DIRECT LABOR	(Professional and Sub-Professional))						$5,256.00
8	OVERHEAD	138.2% X LINE 14						7,263.79
9	TOTAL DIRECT LABOR AND OVERHEAD	(LINES 14 AND 15)						$12,519.79
10	PROFIT AND GRT	14.17% X LINE 16						1774.05
11	**TOTAL FEE FOR REPRODUCTION**							**$14,293.85**

B.5	OTHER SPECIALIST SERVICES					PROFESSIONAL		
ITEM	DISCIPLINE / WORK TYPE					MHR	RATE	COST
1	CATHODIC PROTECTION TESTING					0	115.00	0.00
2	GROUND PENETRATING RADAR (GPR)					0	122.00	0.00
3	COLOR RENDERINGS							0.00
4	SOLAR ENERGY STUDY							0.00
5	ASBESTOS SPECIALIST/TECHN							0.00
6	INDUSTRIAL HYGIENIST							0.00
7	**TOTALS**							0.00
8								
9	TOTAL DIRECT LABOR	(Professional and Sub-Professional))						$0.00
10	OVERHEAD	138.2% X LINE 14						0.00
11	TOTAL DIRECT LABOR AND OVERHEAD	(LINES 14 AND 15)						$0.00
12	PROFIT AND GRT	14.17% X LINE 16						0.00
13	**TOTAL FEE FOR OTHER SPECIALIST SERVICES**							**$0.00**

B.6	TRAVEL, ACCOMMODATION, TRANSPORTATION						
ITEM	DISCIPLINE / WORK TYPE	NO. OF PERSON	RATE	UNIT	NO. OF DAYS	COST	TOTAL COST
1	AIR FARE	0	2,500.00	EA	1	$ -	
2	ACCOMMODATION/TRANSPORTATION	0	150.00	NIGHT	5.0	$ -	
3	CAR RENTAL-PARKING	0	60.00	DY	5	$ -	
4	TOTAL DIRECT COST						$0.00
5	G&A AND GRT	10.00% X LINE 4					0.00
6	**TOTAL FEE FOR TRAVEL, ACCOMMODATION & TRANSPORTATION**						**$0.00**

Armando R. Audije, RA
arara277@yahoo.com
P.O. Box 26727 Barrigada, Guam 96921
Office: (671) 646-1377 Mobile: (671) 988-6577

27 September 2016

TO: N.C. Macario & Associates, Inc.
270 Guerrero Drive
Tamuning, Guam 96913

Attn: Mr. Al Torillo

SUBJECT: Architectural Fee Proposal for Cabras #3 & #4 Temporary Roofing with Supplemental Scope of Work and As-Built Drawings Projects

Al,

My architectural fee proposal, for the subject projects are listed below.

1. Preparation of architectural construction documents for the project Temporary Roofing with Supplemental Scope of work for Cabras #3 & #4: $29,000.00 (TWENTY NINE THOUSAND DOLLARS)

2. Preparation of Architectural As-Built drawings for the Cabras #3 & #4 building: $7,000.00 (SEVEN THOUSAND DOLLARS)

3. Construction Management services will be negotiated separately.

I hope that this fee proposal meets your approval and I look forward to working with you in this project.

Sincerely,

Armando R. Audije, RA

cc: Project file

ERI

Engineering Resources International
1128 North Marine Corps Drive, #104
Tamuning, Guam 96913

27 September 2016

N.C. Macario and Associates
P.O. Box 784
Hagatna, GUAM 96932

Atttention: Nemencio Macario, P.E., S.E.

Project: INSTALL TEMPORARY ROOF FOR CABRAS 3-4 POWER PLANT REPAIR
CABRAS ISLAND, GUAM

Subject: Fee Proposal for
- Supplemental Phase
- As-Built Drawings

Dear Mr. Macario,

Thank you very much for giving us the opportunity to provide you with electrical engineering design services for the subject project.

Electrical design services for this Design-Bid-Build Project can be summarized as follows:

1. For Electrical design work associated with the Supplemental Phase as summarized in your Scope of Work:
   a. Providing general purpose power and general illumination for working occupants and Life Safety provisions in the following areas:
      1). Areas related to repair and operation of Cabras Unit 3
      2). Emulsion Water Treatment Building
   b. Fire Alarm extension to Temporary Control Room
   c. Lightning Protection

   For the work above, we propose a fee of $ 20,000

2. For preparation of As-Built Drawings reflecting electrical conditions prior to the fire, we propose a fee of $ 10,000

   Total Fee Proposal - $ 30,000

If this is acceptable, please indicate your approval by signing one copy below and returning that copy to our office for our files.

Sincerely,

Patrick S. Mizuta, P.E.
Principal Electrical Engineer

Approval:

By: _____ Date: _____
(Signature)

_____ Title: _____
(Print Name)

WM ENGINEERING SERVICES, LLC

P.O. Box 392
Hagåtña, Guam 96932

Tel: (671) 646-8127
Fax: (671) 646-0704
E-mail: engoff@guam.net

September 23, 2016

N.C. Macario & Associates, Inc.
P.O. Box 784
Agaña, Guam 96931

Attn.: Mr. Nemencio C. Macario, P.E., S.E.

Re.: Cabras 3 & 4 Temporary Repairs, Piti, Guam

We are pleased to present this proposal for mechanical/fire protection engineering services for the proposed project above.

A. Project Description:

Proposed project is to provide temporary repairs to Cabras 3 & 4 power plant damaged by a fire/explosion. Temporary repairs are expected to allow operation of Cabras 4 while repairs to Cabras 3 continue.

B. Scope of Services:

1. Provide supplemental design for the HVAC and fire sprinkler design of the power generation area, and temporary control room for the construction related to the permanent repairs. Provide life safety code analysis involved in the temporary repairs. Provide piping modification to foam-water fire protection system to day tank area. Develop as-built plans for mechanical systems in place.
2. Provide construction administrative and construction management support for mechanical work (maximum of 5 site inspections). Provide as-built drawings based on contractors red-line mark-ups.

C. Not Included:

Fire Alarm Design, commissioning and testing, cost estimates, reimbursable cost and Gross Receipt Tax (GRT), and all other services are excluded.

D. Compensation:

Fee:	1. Design:	$ 63,000.00
	2. Construction Admin. Services:	$ 24,000.00

I hope this proposal has met all your requirements. If you have any questions, please contact me at (671) 646-8127. Your approval and signature in the space provided below will form an agreement of services, when executed please return the signed copy via fax at (671) 646-0704 or via email at engoff@guam.net. It will serve as our Notice to Proceed (NTP).

I would like to thank you for this opportunity and look forward to working with you.

Sincerely,

WMES

Signed: _____ Approved by: _____
William G. Miller, Jr., P.E.

Date: September 23, 2016 Date: _____

NFPA MEMBER 2016-2017

888 N. Marine Corps Drive, Suite 210,
Tamuning, Guam 96913

WJE ENGINEERS ARCHITECTS MATERIALS SCIENTISTS

Wiss, Janney, Elstner Associates, Inc.
1441 Kapiolani Boulevard, Suite 1700
Honolulu, Hawaii 96814
808.591.2728 tel | 808.591.2620 fax
www.wje.com

Via E-mail: jacosta@gpagwa.com

October 5, 2016

Joven Acosta, PE, Engineering Manager
Guam Power Authority
PO Box 2977
Hagatna, Guam 96932

Re: Cabras Unit No. 3 and No. 4
Supplemental Peer Review Services Related to Temporary Roof Design
Cabras Island, Guam, M.I.
WJE No. 2015.5021.1

Dear Mr. Acosta:

At the request of the Guam Power Authority (GPA), Wiss, Janney, Elstner Associates, Inc. (WJE) is providing this supplemental proposal for peer review services related to the design of a temporary roof system at the Cabras Power Plant located at 322 Cabras Highway in Piti, Guam. N.C. Macario & Associates, Inc. (NCMA) is the prime Engineer-of-Record for the temporary roof. WJE is requested to provide peer reviews of designs related to the fire sprinkler system and the structural system of the temporary roof.

Background

The Cabras Power Plant is the largest power plant on Guam. The Cabras Nos. 3 and 4 generators are Slow Speed Diesel 40 megawatt Generators commissioned in 1995 and 1997, respectively. The facility has a structural steel frame system with precast concrete infill wall panels. The elevated floors are cast-in-place concrete over metal decking with supporting steel beams and girders. The roof is cast-in-place concrete over metal decking supported by trussed beams and steel beams. The structural steel roof trusses are supported on steel columns. Steel connections vary and consist of welded and bolted type connections. There is a 90-ton crane steel beam that spans approximately 100 feet, which is the same as the main roof truss span.

After our initial assessment of the enclosure structure, it has been determined that removal of the roof assembly, including the steel truss, metal decking and cast-in-place concrete slab is required. Partial removal of the roof has been performed and the design of a temporary roof structure is in progress by NCMA.

Scope of Work

Task I - Temporary Roof Fire Sprinkler System Design Peer Review

WJE has been requested to provide peer review services for a design of the fire sprinkler system of the temporary roof. WJE will review fire sprinkler system calculations, drawings and specifications, as provided by NCMA, of the proposed sprinkler system. Our review will be limited to fire sprinkler system design only. The review of architectural, electrical, mechanical, plumbing, fire separation, egress, smoke

control/isolation, etc. are beyond scope of work for this proposal and will be provided by others. We assume that one document review will be performed at a level of development to be determined by GPA; should additional reviews of revisions be required, our fees will be billed as an additional service.

The fire sprinkler system peer review recommendations are intended for the sole use and benefit of our client, GPA, and will be offered for further review and consideration by NCMA and their Fire Protection Engineer-of-Record. The information contained within our peer review recommendations must be reviewed and approved prior to incorporation into the contract documents. Any accepted recommendations should be thoroughly reviewed by involved parties for project-wide applicability, adaptability and cost in the broader context of the project. Any modifications to the construction documents that is based, whole or in part, on the peer review recommendations shall be the sole responsibility of NCMA and their Fire Protection Engineer-of-Record.

At this time, we understand that no construction period services, related to the temporary roof fire sprinkler system, are being requested of WJE. We can provide construction period peer review services as an additional service at your request.

Task II - Temporary Roof Structural Design Peer Review

WJE has been requested to provide further structural peer review services for a design of the temporary roof repair. WJE will review calculations, drawings, and specifications, provided by NCMA, of the proposed temporary structure and repairs to the power plant roof. Our review will be limited to structural design considerations only. The review of architectural, electrical, mechanical, plumbing, etc. are beyond scope of work for this proposal and will be provided by others. We assume that two document reviews will be performed at a level of development to be determined by GPA; should additional reviews of revisions be required, our fees will be billed as an additional service.

The structural peer review recommendations are intended for the sole use and benefit of our client, GPA, and will be offered for further review and consideration by NCMA and their Structural Engineer-of-Record. The information contained within our peer review recommendations must be reviewed and approved prior to incorporation into the contract documents. Any accepted recommendations should be thoroughly reviewed by involved parties for project-wide applicability, adaptability and cost in the broader context of the project. Any modifications to the construction documents that is based, whole or in part, on the peer review recommendations shall be the sole responsibility of NCMA and their Structural Engineer-of-Record.

At this time, we understand that no construction period services, related to the temporary roof structure, are being requested of WJE. We can provide construction period peer review services as an additional service at your request.

Recommended Fee

We recommend a ***fixed fee (per the table below)***, ***inclusive of tax and expenses***, be established to provide the scope of services described above.

Task	Description	Fee
I	Temporary Roof Fire Sprinkler System Design Peer Review	$ 30,000
II	Temporary Roof Structural Design Peer Review	$ 70,000
	Total (including tax and expenses) =	**$100,000**

WJE plans to attend four (4) meetings in Guam for peer reviews, coordination, discussion of findings, etc. We assume that one (1) WJE professional will travel to Guam for two (2) days for each meeting. If additional visits are required, they will be billed as an additional service.

Charges for professional services performed on this project will be based upon the fees established above. As a reference, our prevailing hourly rate schedule is provided below. The recommended fees are based on our limited understanding of conditions known at this time and may change based on actual existing conditions. All services will be performed in accordance with the enclosed *Terms and Conditions for Professional Services*, dated October 1, 2009.

Schedule of Hourly Time Charges

Professional Staff		Professional Support Staff	
Senior Principal	$360.00	Senior Specialist	$160.00
Principal	305.00	Specialist	140.00
Associate Principal	245.00		
Senior Associate	220.00	Senior Technician	$120.00
Associate III	195.00	Technician II	105.00
Associate II	165.00	Technician I	85.00
Associate I	140.00		

Closing

If this design peer review proposal is acceptable to you, please countersign and return a signed copy of the proposal as our authorization to proceed. Should you have any questions, or require additional information, please contact us at your earliest convenience. We look forward to assisting you with the successful completion of this project.

Sincerely,

WISS, JANNEY, ELSTNER ASSOCIATES, INC.



Mike A. Greer, PE, SE
Senior Associate / Project Manager

Enclosure: *Terms and Conditions for Professional Services*

Cabras Unit No. 3 and No. 4
Supplemental Peer Review Services Related to Temporary Roof Design
Cabras Island, Guam, M.I.
WJE No. 2015.5021.1

Entity responsible for payment

Name: _____ (please print)

Signature: _____

Title: _____

As Agent or Principal for: _____

Date: _____

WJE

Terms and Conditions for Professional Services

October 1, 2009

Wiss, Janney, Elstner Associates, Inc. or **WJE Engineers & Architects, P.C. (WJE)** has been requested to perform certain professional and other services. The parties agree that these services shall be performed under the following Terms and Conditions, and acceptance of WJE's proposal or its direction for WJE to commence any services constitutes acceptance of these Terms.

1. Independent Contractor. WJE is an independent contractor, and all persons employed to furnish services hereunder are employees of WJE or its subcontractors/subconsultants and of the Client. WJE and Client agree to be solely responsible for compliance with all federal, state, and local laws, rules and regulations, and ordinances that apply to their own respective employees.

2. Performance. The standard of care for all professional services performed or furnished by WJE will be the skill and care ordinarily used by members of WJE's profession practicing under similar circumstances at the same time and in the same locality. WJE makes no guarantees or warranties, express or implied, with regard to the performance of its services. WJE shall not have control or charge of and shall not be responsible for construction means, methods, techniques, sequences or procedures or for construction safety precautions and programs since these are the responsibilities of others. WJE agrees to perform its services in as timely a manner as is consistent with the professional standard of care and shall comply with applicable laws, regulations, codes and standards that relate to WJE's services and that are in effect as of the date when the services are provided.

3. Client Duties. In order for WJE to perform the services requested, the Client shall, at no expense to WJE, (1) provide WJE necessary information regarding Client's requirements necessary for the orderly progress of the work; (2) designate a person to act as Client's representative for the services who shall have the authority to transmit instructions, receive instructions and information, and interpret and define Client's policies and requests for WJE's services; and (3) provide access to all provisions for WJE, whether, without limitation, or burden en to WJE, the subject property as required to perform the work, including the use of scaffolds or similar mechanical equipment WJE is entitled to rely upon the information and services provided by the Client.

4. Safety. Field work will be performed only under conditions deemed safe by WJE personnel. Charges may be made for safety or security measures required by hazardous job conditions that WJE may encounter. Client understands that WJE is only responsible for the safety of its own employees and those subconsultants and is not responsible for the safety of other persons or property.

5. Compensation and Expenses. Client agrees to pay for WJE's requested services in accordance with WJE's standard hourly rate schedule or negotiated fee. Charges generally will be billed on monthly intervals with applicable taxes included. Travel, subsistence, and out-of-pocket expenses incurred; communications; reproduction; and shipping charges will be billed at cost plus 5 percent and invoiced as an expense service fee. Use of vehicles will be billed at $0.60 per mile. Expended materials for field and laboratory work, rental equipment, and advanced on Client's behalf will be billed at cost plus 10 percent and invoiced as an expense service fee. WJE equipment used in field or laboratory work is billed at WJE's equipment usage rate in effect at the time the work is performed, subject to adjustment for minimum or extended usage. Portal-to-portal equipment usage rates are comparable to prevailing commercial rental rates (if available). Billing rates may be increased annually. Any subcontracted service will be billed at cost plus 10 percent provided the subcontract firm has in place adequate insurance coverage determined by WJE; otherwise, the cost will be marked up 20 percent and invoiced as an expense service fee. Client agrees to pay WJE's then-current time charges, attorneys' fees, and other expenses resulting from required attendance at depositions, administrative proceedings, or responding to subpoenas or court orders relating to the Project, but not for suits or expenses attributed to WJE's negligent performance of its services.

Payment for WJE's services is expected in full in U.S. dollars upon receipt of the invoice. Invoices considered past due are subject to any related attorneys' fees and collection expenses. WJE reserves the right to suspend its services if the Client fails to make payment when due providing that WJE gives seven calendar days' notice to Client as practicable. In such an event, WJE shall have no liability to the Client for delay or damage caused the Client because of such suspension.

6. Termination. Both the Client and WJE have the right to terminate WJE's services for convenience upon seven calendar days' written notice to the other party. In the event the Client terminates services without cause, WJE shall be entitled to compensation for its services and expenses up to the time of such notification, including fees for any transition services, and shall have no liability to or delay or damage to Client because of such termination.

7. Reports, Drawings, and Work Product. WJE retains ownership of reports, drawings, specifications, test data, memoranda, photographs, letters, notes, and other work product and documents, including those in electronic form, it has created. These documents or parts thereof may not be reproduced or used by the Client for any purpose other than the purpose for which they were prepared, including, but not limited to, use on other projects, additions to this Project, without the prior written consent of WJE. Upon request, WJE will provide Client with a copy of documentation for information and reference purposes in connection with Paragraph 5 of such reproduction in accordance with Paragraph 5. Any unauthorized use of WJE's work product shall be at the Client's sole risk and Client shall indemnify WJE for any liability or legal exposure to WJE. To the extent WJE terminates its services due to non-payment of fees by Client, Client shall not be entitled to use the documents described herein for any purpose whatsoever.

8. Environmental Hazards. Client acknowledges that WJE's services do not include the detection, investigation, evaluation, or abatement of environmental conditions that WJE may encounter, such as mold, lead, asbestos, PCBs, hazardous substances, or toxic materials that may be present in buildings and structures involved in this Project. The Client agrees to defend, indemnify and hold WJE harmless from any claims relating to the actual or alleged existence or discharge of such materials through no fault

of WJE's employees. WJE reserves the right to suspend services, without liability for consequential or any other damages if it has reason to believe that its employees may be exposed to hazardous materials and will notify the Client in such event.

9. Dispute Resolution. Prior to the initiation of any legal proceedings, WJE and the Client agree to submit all claims, disputes, or controversies arising out of or in relation to the services provided by WJE to mediation. Such mediation shall be conducted under the auspices of the American Arbitration Association or such other mediation service or mediator upon which the parties agree.

10. Governing Law. The laws of the state where WJE performs its services shall govern.

11. Successors and Assigns. These Terms shall be binding upon Client and WJE and their respective successors, assigns and legal representatives. Neither party may assign, sublet, or otherwise delegate its responsibilities without the prior consent of the other party, which consent shall not be unreasonably withheld.

12. Insurance. WJE maintains commercial general liability, automobile, workers' compensation, and employers' professional liability coverages under policies written by national insurance carriers rated by the A. M. Best Company, evidence of which will be provided upon request. Endorsements naming allowed. No waiver of subrogation is allowed on WJE's professional liability policy. Upon written request, WJE agrees to name the Client as an additional insured to the commercial general liability and automobile coverages. Any request to add the Client, and no other entity shall have any claim against WJE parties as additional insureds must be made in writing and because of these Terms or WJE's performance or non-performance of services hereunder. subject to certain limitations. All policies are subject to annual renewal, and WJE will not undertake to guarantee continued coverage beyond the individual policy term. Excess coverage is available for exposures over primary policy limits except for professional liability.

13. Indemnity. To the fullest extent permitted by law, Client and WJE each agree to indemnify and hold the other harmless, and their respective agents, officers and employees, from and against liability for all direct claims, losses, damages, and expenses, including reasonable attorneys' fees, to the extent such claims, losses, damages, or expenses are for bodily injury, sickness, disease, death, or property damage and to the extent they are caused by the negligent acts, errors, or omissions of the indemnifying party, and/or the indemnifying party's agents, officers, employees, independent contractors, or subcontractors of any tier. In the event such claims, losses, damages, or expenses are caused by the joint or concurrent negligence of Client and WJE, or their respective agents, officers, employees, independent contractors, or subcontractors of any tier, they shall indemnify each party in proportion to that negligence.

14. Agreed Remedy. To the fullest extent permitted by law, the total liability, in the aggregate, of WJE and WJE's officers, directors, employees, agents, and consultants to Client and anyone claiming by, through, or under Client, for any and all injuries, claims, losses, expenses, or damages, including, without limitation, attorneys' fees, arising out of or in any way related to WJE's services, the Project, or these Terms, from any cause or causes whatsoever, including but not limited to, negligence, strict liability, indemnity or breach of contract shall not exceed an amount equal to the proceeds obligated to be paid under WJE's applicable insurance policy for such claims. If, for any reason, applicable insurance policy does not provide coverage for any particular claim described herein, then the liability amount shall not exceed WJE's fees for the services performed hereunder.

In no event shall WJE be liable in contract, tort, strict liability, warranty or otherwise, for any special, incidental or consequential damages, such as, but not limited to, delay, disruption, loss of product, loss of anticipated profits or revenue, loss of use of equipment or system, non-operation or increased expense of operation and maintenance or replacement equipment systems or power.

15. Third-Party Beneficiaries. Nothing contained in these Terms shall create a contractual relationship with, or a cause of action in favor of, a third party against either the Client or WJE. WJE's services hereunder are being performed solely for the benefit of the Client, and no other entity shall have any claim against WJE

16. Entire Agreement. These Terms together with any written proposal shall constitute the entire understanding of the parties concerning the Project and superseded all prior negotiations and written agreements between them, and any amendment or modification to either WJE's proposal or these Terms may be made only by a written instrument expressly stated to be an amendment and signed by WJE.

17. Severability. If any provisions of these Terms, or portion thereof, are determined to be unenforceable, the remainder shall not be affected thereby and each remaining provision or portion thereof shall continue to be valid and effective and shall be enforceable to the fullest extent permitted by law.

Copyright 2009 Wiss, Janney, Elstner Associates, Inc.

N.C. MACARIO & ASSOCIATES, INC.
Planning * Engineering * Construction Management * Value Engineering
270 Guerrero Dr. Tamuning, GU 96913 Tel: 671 646-0947/48 Fax: 671 646-0901
P.O. Box 784 Hagatna, GU 96932 * e-mail: ncma@guam.net and ncm@ncmacario.com

Mr. Joven Acosta, PE
Engineering Manager
Guam Power Authority
Po Box 2977
Hagatna, Guam 96932

October 06, 2016

Subj: **Cabras Unit #3 & #4 Supplemental Design to Temporary Roof Repairs, Cabras Island, Guam, M.I.**

In response to the request of proposal for the proposed supplemental design to the Temporary Roof Repairs as an additional scope of services for the Cabras Unit #3 & #4 Power Plant building, we are pleased to submit this proposal for engineering services as for the above project.

1. **Project Description:** The existing main roof of the Diesel Power Plant #3 & #4 has undergone demolition and will need a temporary roof pending the final repairs of the facility. The temporary roof and the supplemental to temporary roof is required to protect the facility from the elements while the permanent repairs are not yet provided. The temporary roof will meet the current IBC 2009 wind load requirement of 210 MPH using aluminum roofing, cold formed purlins, steel trusses to cover the main roof which is about 116 feet by 148 feet. The roof is about 105 feet above ground level. Roof repairs includes roof connection to the existing frames, roof bracing (both directions), providing metal siding atop the remaining walls above the lower roof at Grids 2 and 6, wall metal siding closure at Grids A and F, bracing of the walls above the lower roof and repair of the stair wall enclosure. Project includes roof ventilation, electrical power and lighting, insulation and painting. However, in order to allow the facility to operate engine #3 and secure a building occupancy permit, the supplemental design is required to bring the facility into compliance of International and Local building codes by providing the approved fire protection and suppression and life safety requirements and be able to obtain occupancy permit.

2. **Scope of Services:**

    a. **Design:** Perform an additional design to supplement previous design of Temporary Roof. The Supplemental design consist of the additional work necessary for the Cabras 3&4 building to support the Engine No. 3 operation. The additional scope of services is enumerated in Attachment A as attached.

    b. **Construction Management:** Provide construction management services for the construction of the Temporary roof and additional items of work as mentioned in the Supplemental AE design. Contract administration includes administrative submittals, Review of Materials and Shop drawing submittals, construction schedule, schedule of values, review/recommend payment request, conduct weekly progress meeting, construction observations by resident construction representative and requested discipline as required.

3. **Services Not Included:** Environmental and other Hazard Mitigation requirements, restoration of other systems related to making Cabras Unit 3 operational that are not mentioned in Attachment A, Scope of Work.

4. **Time of Completion: W**e are ready to meet a design completion date agreed by both parties as soon as Notice to Proceed is issued to N.C.Macario & Associates, Inc.

N.C. MACARIO & ASSOCIATES, INC.
Planning * Engineering * Construction Management * Value Engineering
270 Guerrero Dr. Tamuning, GU 96913 Tel: 671 646-0947/48 Fax: 671 646-0901
P.O. Box 784 Hagatna, GU 96932 * e-mail: ncma@guam.net and ncm@ncmacario.com

5. **Compensation:** We propose the following fee for;

a. Design	$ 345,913.00
b. Construction Management	$ 292,000.00 (temporary Roof + Supplemental)
Total Engineering Services Fee Proposal	$637,913.00 (Six hundred thirty seven thousand nine hundred thirteen dollars)

We hope that this proposal meets all your requirements. Your approval and signature on this proposal; shall form an agreement for services, when executed please return one signed copy and a down payment of 30% of the design fee, which will serve as our Notice to Proceed (NTP). We appreciate this opportunity of presenting this proposal and we look forward to working with you in this project. If you have any questions or require further information please do not hesitate to call me at 646-0947, fax 646-0901 or email ncma@guam.net and ncm@ncmacario.com.

Sincerely,
N.C. Macario & Associates, Inc.

Nemencio C. Macario, P.E., S.E. Approved:_____Date:_____
Its:

Att:
Attachment A – Scope of Work
Attachment B - Fee Proposal Breakdown

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

Issues for Decision

Resolution No. 2016-71 :

Relative to <u>Authorizing Management of the Guam Power Authority to Extend the Performance Management Contract for the Cabras 3 Power Plant.</u>

What is the objective and is it necessary and urgent?
The objective is to continue preservation efforts at Cabras Unit 3 in order to reduce further degradation of vital engine/generator components. Without contract extension Cabras Unit 3 will continue to degrade at an increased rate.

Where is it at?
Cabras 3&4 Plant

How much will it cost?
The contract extension will costs a total of $382,173.44 and is further detailed below.

a. Fixed Management Fee (3-months)	$242,242.44
b. Reimbursable Preservation Costs	<u>$139,931.00</u>
	$382,173.44

When will it be completed?
This is a continuing effort. Contract extension will be from January 1, 2017 to March 31, 2017.

What is its funding source?
Insurance proceeds will fund this extension.

CONSOLIDATED
COMMISSION ON UTILITIES
Guam Power Authority • Guam Waterworks Authority
P.O.BOX 2977 • Agana,Guam 96932

RESOLUTION NO. 2016–71

AUTHORIZING MANAGEMENT OF THE GUAM POWER AUTHORITY TO EXTEND THE PERFORMANCE MANAGEMENT CONTRACT FOR THE CABRAS 3 POWER PLANT

WHEREAS, through resolution 2015-62B, the Authority and Korea East West Power, Ltd. (KEWP) entered into a 15-month Performance Management Contract for the preservation of Cabras Unit #3; and

WHEREAS, this Performance Management Contract (PMC) is scheduled to expire on December 31, 2016; and

WHEREAS, preservation efforts are ongoing and there is an urgent need to continue these works to prevent further degradation of Cabras Unit #3; and

WHEREAS, KEWP, the PMC for Cabras 3, can support GPA through this critical period by continuing to provide valuable expertise and support in areas such as Engineering Assessment, Technical Services, Program Management, and related tasks; and

WHEREAS, extending the contract time of the existing PMC contract with KEWP is reasonable to support the Authority with plant preservation and associated technical services; and

WHEREAS, the Authority requests for an extension of the contract from January 1, 2017 to March 31, 2017; and

WHEREAS, the Authority has agreed with KEWP on a reduced fixed management fee of **$**80,747.48 per month during the extension period for a 3-month cost of $242,242.44, and is estimating $139,931.00 in reimbursable Preservation Management Services for a total contract extension cost of $382,173.44; and

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

1. After careful review the Consolidated Commission on Utilities finds extending the current PMC Contract for Cabras 3&4 to be reasonable, prudent, and necessary for preservation of Cabras Unit 3.

2. The General Manager is authorized to extend the contract with KEWP from January 1, 2017 to March 31, 2017 for a fixed management fee of $242,242.44 and an estimated preservation management services cost of $139,931.00. The total cost of the contract extension is approved for $382,173.44.

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

DULY and REGULARLY ADOPTED AND APPROVED THIS 22nd DAY OF NOVEMBER, 2016.

Certified by:	**Attested By:**
_____	_____
JOSEPH T. DUENAS	**J. GEORGE BAMBA**
CHAIRMAN	**SECRETARY**
Date:_____	**Date:_____**

SECRETARY'S CERTIFICATE

I, J. George Bamba Secretary, Consolidated Commission on Utilities hereby certifies as follows:

The foregoing is a full, true and correct copy of a resolution duly adopted at a regular meeting of the members of Guam's Consolidated Commission on Utilities, duly and legally held at the meeting place thereof on November 22, 2016, at which meeting all of said members had due notice and at which at least a majority thereof were present;

At said meeting said resolution was adopted by the following vote:

Ayes:

Nays:

Absent:

Abstain:

Said original resolution has not been amended, modified, or rescinded since the date of its adoption, and the same is now in full force and effect.

SO CERTIFIED this 22nd day of November, 2016.

_____

J. George Bamba
Secretary, Consolidated Commission on Utilities

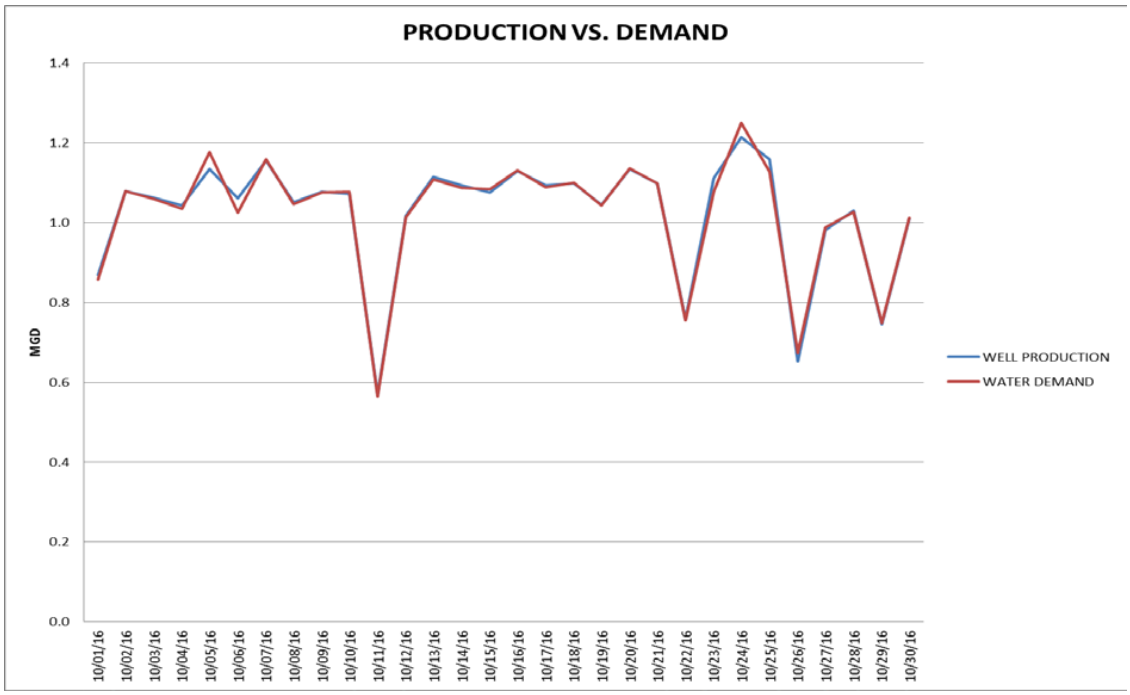
GUAM WATERWORKS AUTHORITY

General Manager's Report

GPWA CCU Board Meeting, November 22, 2016

"One Guam" Initiative – GWA and DoD NAVFAC

1. **TMW License Agreement:**
    a. GWA continues operations and maintenance at TMW.
    b. Inspection was completed on October 26 at 2:00 pm. Navy Public Works Department and GWA conducted the inspection. Minor corrections are being addressed by GWA.
    c. Now that *Lucity,* GWA's Asset Management Program, is up and running, status reports will be submitted to DoD NAVFAC more often.
    d. GWA is still waiting on DoD to respond to the final drawings for the Potts Junction intertie.
    e. Production:
        i. Fairly consistent between 1.0 and 1.2 million gallons per day (MGD), with the exception of several events tripped equipment events - see chart below.
        ii. Total production in October is **31,846,800 gallons.**



2. **2010 MOU Update**
    a. GWA and NAVFAC completed their work on an updated MOU.
    b. Joint Region has not yet reviewed the MOU.

3. **Easement Request for Agat WWTP Project**
    a. NBG Installation Commanding Officer approved the easement grant at no cost.
    b. Still waiting on Commander Navy Installation Command on the term and type of request approval.
    c. GWA is willing to do 50% of the maintenance of the easement as part of the contribution.
    d. GWA will pay for appraisal and survey for legal meets and bounds if needed for the agreement.

4. **Interoperability Options – future projects**
    a. Santa Rosa.
    b. Route 15 line connection.
    c. Agana Heights tanks (GWA and Naval Hospital).
    d. Urunao and the Wildlife Refuge.

OEA Grants – Guam Water-Wastewater Infrastructure Projects

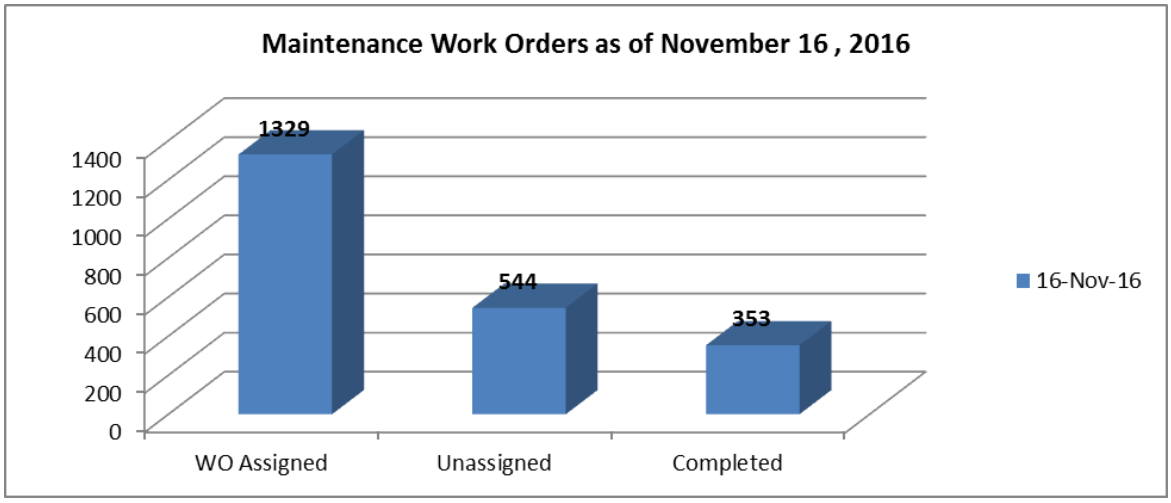
- PM/CM scope was finalized with GWWIST review/input; RFP issued on October 21; submissions due November 21.
- GWA is providing assistance to USEPA for NEPA process associated with initial project; formal NEPA activities pending contract (USEPA).
- NGLA Monitoring Wells – slight delay in finalizing sites located on DoD property due to MEC training issues.
- GWWIST meeting was held on November 8 in Hawaii. Schedule for implementation was updated (see below), and a briefing on current procurement and land acquisition efforts was provided.

Action Item	Date (Target)	Date (Actual)	Status
Project Funds Available	~~Oct -15~~ / July-16	AUG-30-16	Completed
Land Acquisition	~~Sep-16 (?)~~ Jan-17		On-target
Procure PM/CM Firm	~~Apr-16~~ / Jan-17		On-target
Procure Design Firm	~~Oct-16 (?)~~ Jul-17		On-target
Design -- 30/60/90/Final -- Review	~~Nov-17~~ Jun-18		On-target
NEPA Analysis and Determination	~~Aug-17~~ Feb-17		??
Procure Construction Firm	~~Jun~~Dec-18		On-target
Construction Complete/Commence Operations	Nov-21		On-target
Sewer line connection from MCB to GWA infrastructure	~~TBD (?)~~ Jul-19		On-target
MCB Initial Operating Capability	Jul-22		On-target

Asset Management

- CMMS system went live on October 3, 2016.
- Functionality testing completed September 2016; 13 mobile routers expected to arrive in November to improve real-time mobile management.
- AM & Operations meet weekly on:
  - Compliance with process and work flow
  - Inventory management and monitoring
  - Critical asset redundancy
  - Training needs
  - Development of policy for records management
  - QA/QC Performance on PM and CM
- AM Steering Committee meets monthly on:
  - Discussion of weekly maintenance meetings
  - Resources needed to sustain AM program
- Over 1,000 Work Orders issued so far.

- Over 300 Work Orders completed.
- PM/CM ratio is less than 0.5 (roughly 16% / 84%).
- WO Report Summary

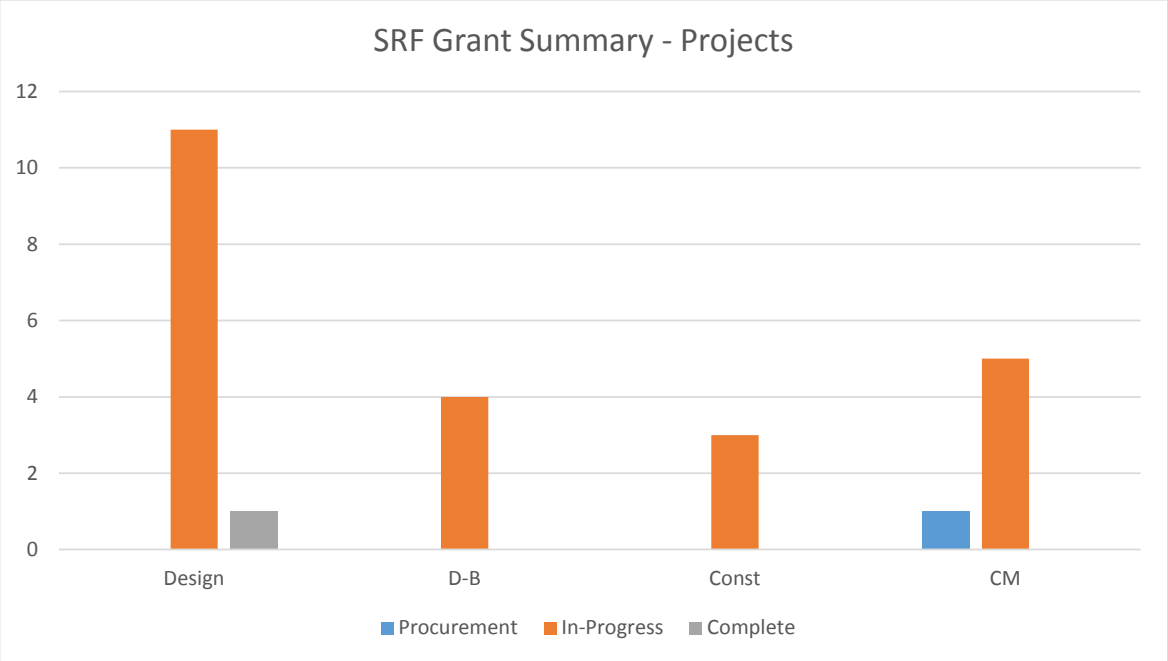


USEPA SRF Projects

- Summary of all SRF grant funded projects are shown below.

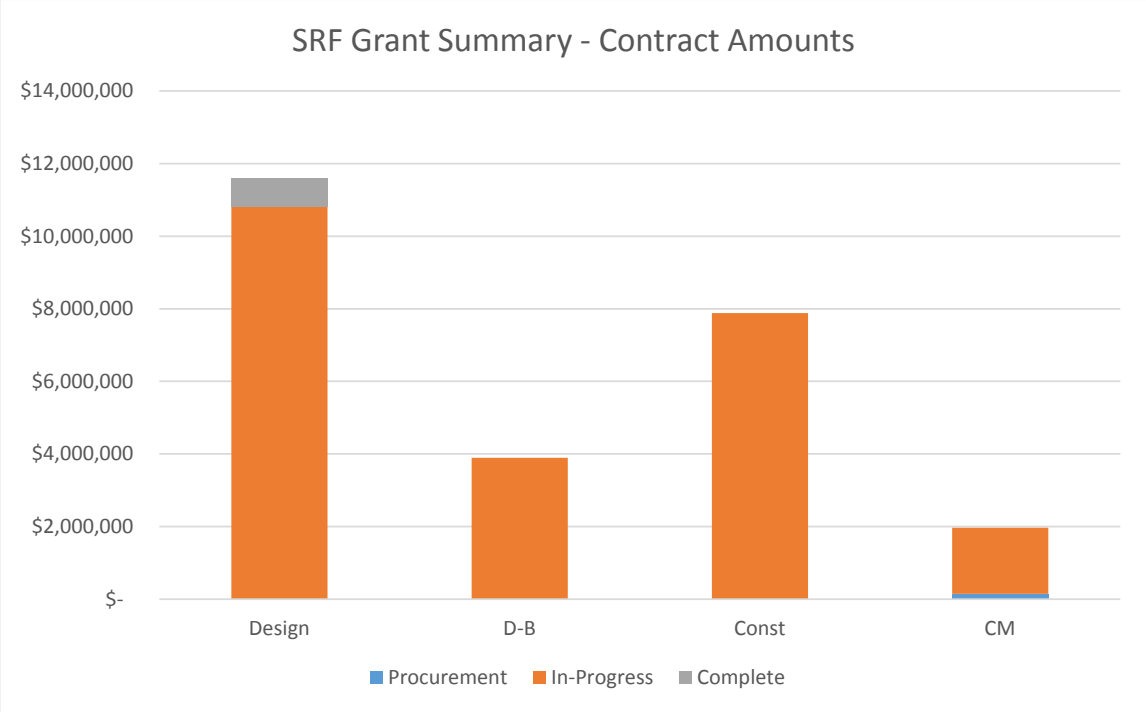
SRF Grant Summary - Projects

	Procurement	In-Progress	Complete	Totals	%
Design	0	11	1	12	48%
D-B	0	4		4	16%
Const	0	3		3	12%
CM	1	5		6	24%
Totals	1	23	1	25	
%	4%	92%	4%		

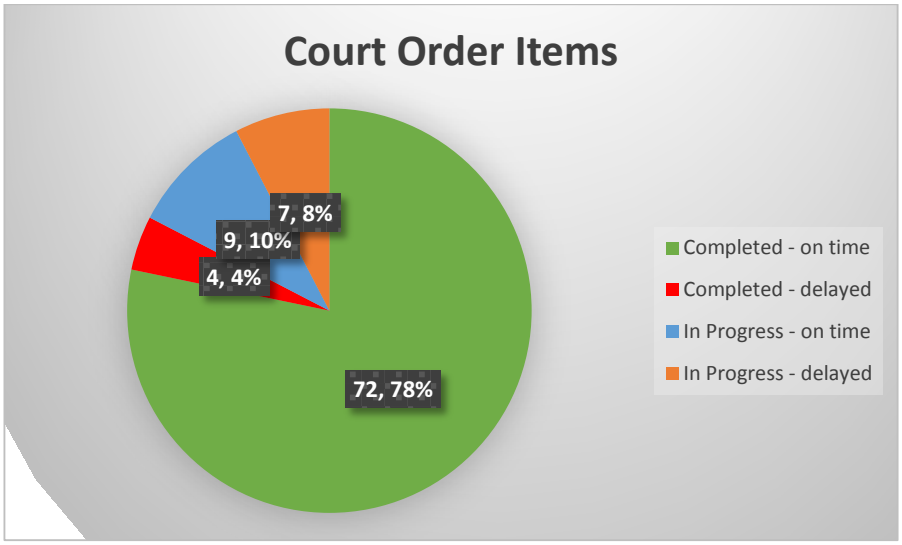


SRF Grant Summary - Contract Amounts

	Procurement	In-Progress	Complete	Totals	%
Design	$ -	$ 10,812,544	$ 792,980	$ 11,605,524	46%
D-B	$ -	$ 3,898,896		$ 3,898,896	15%
Const	$ -	$ 7,883,710		$ 7,883,710	31%
CM	$ 145,186	$ 1,824,690		$ 1,969,876	8%
Totals	$ 145,186	$ 24,419,840	$ 792,980	$ 25,358,006	
%	1%	96%	3%		



Court Order



Court Order Summary

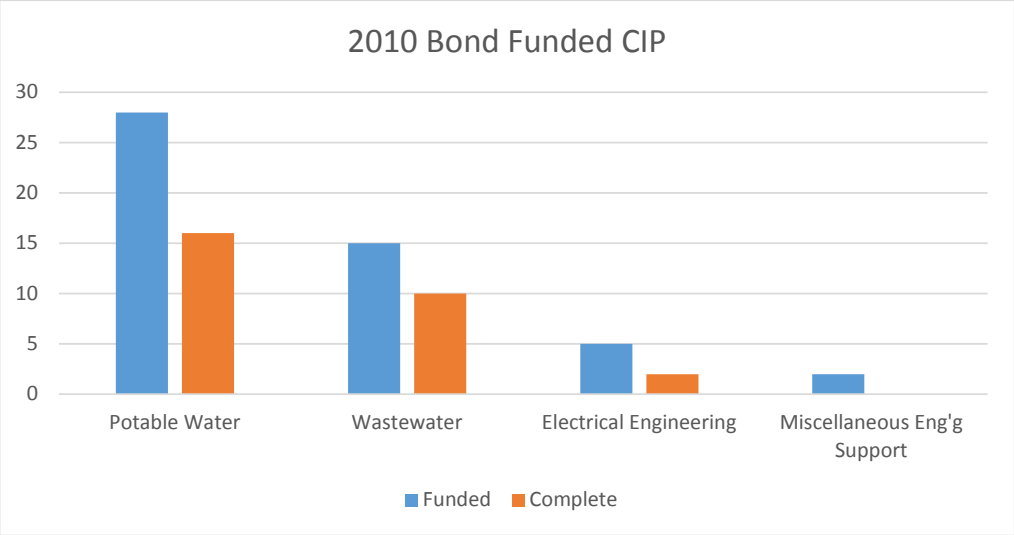
	Court Order Items	%	Performance (on-time or completed)
Completed - on time	72	78%	
Completed - delayed	4	4%	
In Progress - on time	9	10%	
In Progress - delayed	7	8%	92.4%
Totals	92	100%	

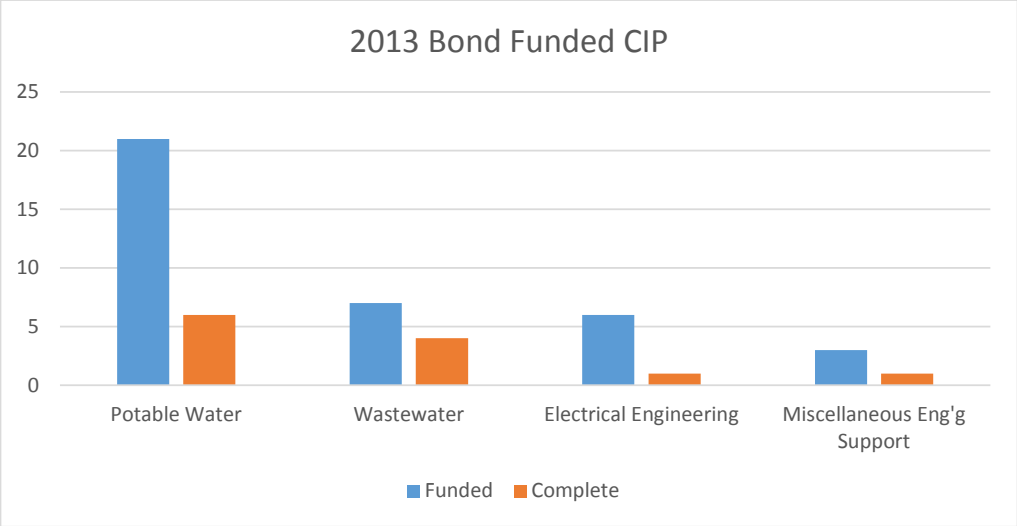
- 7 items delayed
  - SSES (2 items)
  - Agat/SR System Upgrades (to send delay letter)
  - Sewer Cleaning
  - CCTV
  - Cl Residual Monitors
  - Meters
- Final Date to complete all Court Order items is December 21, 2020.
- Overflow or Bypass events reported to USEPA – 6 events reported in October and November
  - 1 – Partial bypass at Umatac (Lagoon overflow)
  - 1 – Compressor failure
  - 1 – Main break
  - 1 – FOG
  - 2 – Power glitches

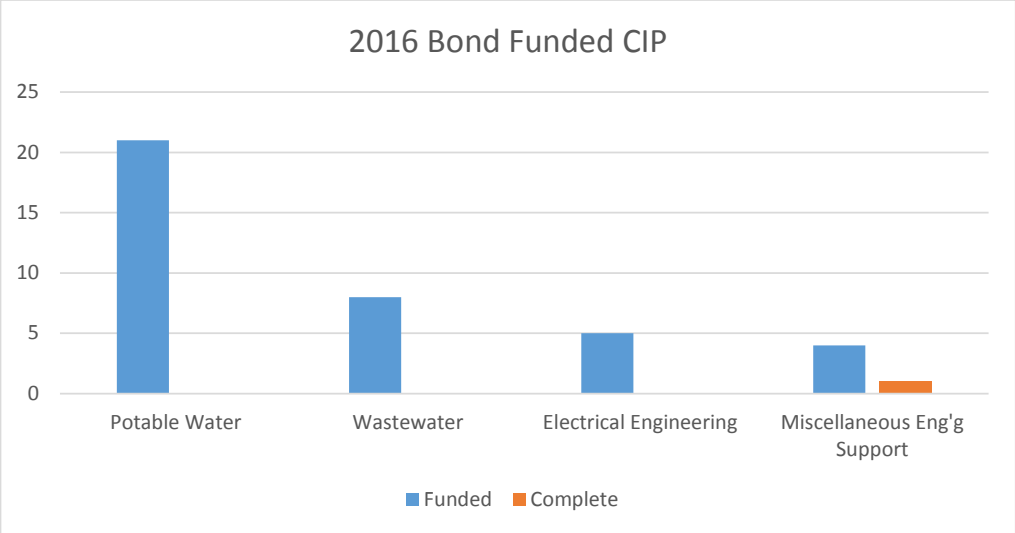
CIP Summary

CIP Summary - Project Encumbrance

	2010 Bond		2013 Bond		2016 Bond			
	Funded	Complete	Funded	Complete	Funded	Complete	Total CIP Projects	%
Potable Water	28	16	21	6	21	0	31	53%
Wastewater	15	10	7	4	8	0	16	27%
Electrical Engineering	5	2	6	1	5	0	9	15%
Miscellaneous Eng'g Support	2	0	3	1	4	1	3	5%
Totals	50	28	37	12	38	1	59	100%
% of Total CIP by Fund Source	85%		63%		64%			
% of CIP Funding Completed		56%		32%		3%		

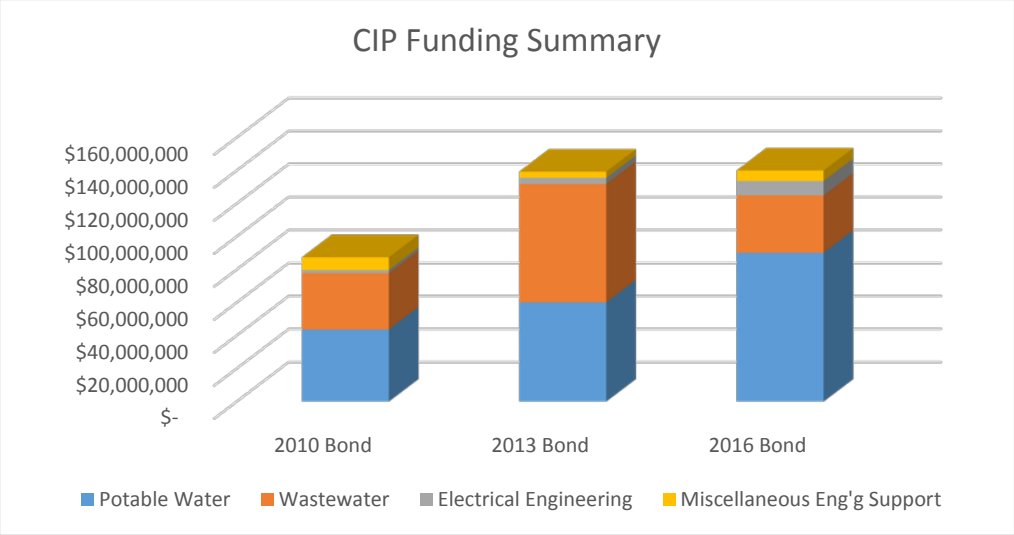



2013 Bond Funded CIP
25
20
15
10
5
0
Potable Water
Wastewater
Electrical Engineering
Miscellaneous Eng'g Support
Funded
Complete


2016 Bond Funded CIP
25
20
15
10
5
0
Potable Water
Wastewater
Electrical Engineering
Miscellaneous Eng'g Support
Funded
Complete

CIP Summary - Project Amounts

	2010 Bond		2013 Bond		2016 Bond			
	Funded	%	Funded	%	Funded	%	Total CIP Projects	%
Potable Water	$ 43,671,000	50%	$ 60,082,000	43%	$ 90,148,000	65%	$ 193,901,000	53%
Wastewater	$ 34,070,000	39%	$ 71,823,000	52%	$ 34,727,000	25%	$ 140,620,000	38%
Electrical Engineering	$ 1,920,000	2%	$ 3,645,000	3%	$ 8,750,000	6%	$ 14,315,000	4%
Miscellaneous Eng'g Support	$ 7,741,000	9%	$ 3,775,000	3%	$ 6,394,460	5%	$ 17,910,460	5%
Totals	$ 87,402,000	100%	$ 139,325,000	100%	$ 140,019,460	100%	$ 366,746,460	100%
%	23.8%		38.0%		38.2%			

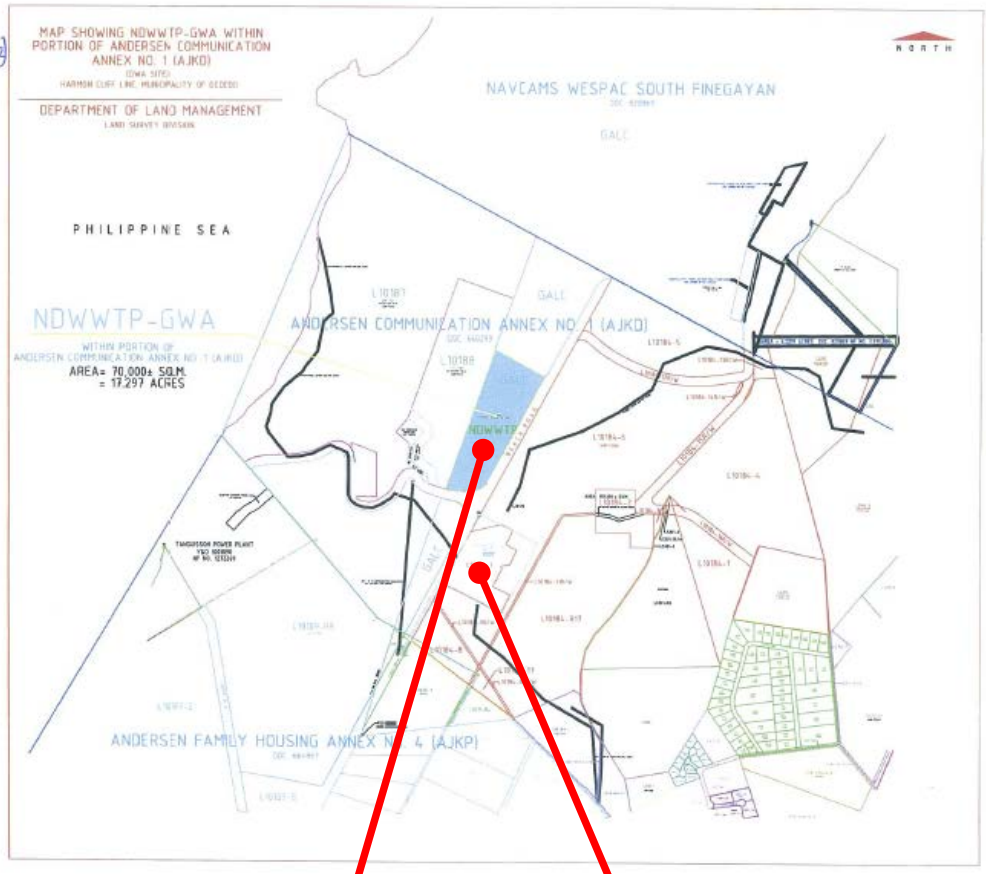


Land Acquisition Status

- ALC property for NDWWTP:
  - Legislation authorizing acquisition submitted;
  - public hearing was held with supporting resolutions and testimony from ALC, CCU and GWA;
  - bill to be heard at next legislative session.
- CLTC properties: Appraisals completed; surveys ongoing.
- Private properties needed for Court-order improvement projects: completed or pending survey. See Land Acquisition chart below.

GWA Facility	Location	Gov. or Private Property	Land Acquisition Status
Tanks	Inarajan	Private	Property acquisition complete, deed of property with GWA.
	Ugum	Private	Still under legal review.
	Manenggon	Private	Survey map ongoing. Contract of sale transmitted to property owner.
	Santa Rita	Gov't. – CLTC	Survey map and appraisal documents sent to DLM. GWA and DLM agree in concept to purchase property based on fair market value.
	Astumbo	Gov't. - CLTC	Survey map of property still ongoing. GWA and DLM agree in concept to purchase property based on fair market value.
	Upper Tumon	Gov't. - CLTC	Survey map of property still ongoing. GWA and DLM agree in concept to outright purchase property based on fair market value.
	Piti	Private	Engineering currently reviewing options for relocating the Piti tank from current location to area east of the Nimitz Estate Subdivision.
Deep Well	Y-8	Gov't. - CLTC	GWA engineering working to obtain appraisal and survey serves.
	AG-12	Dept. of Agriculture/ Manhita Farms	GWA engineering working to obtain appraisal and survey serves.
Booster Pump Station	Brigade	Private	GWA received Right of Entry agreement from landlord. Survey work for property severance has begun.

Bill No. 393-22(COR)
Exhibit A



ALC Lot Proposed for Use

Existing NDWWTP Site

PFOS Issue

Status Update:

- A-Series wells (A-23 and A-25) remain off-line.
- NAS-1 well remains off-line.
- NAS-1 GAC removal completed by GIAA contractor.
- GIAA GAC replacement completed; the system has been reconfigured and now the lead has become the lag and vice versa.
- Coordinating with GEPA on potential sources and responsibility; discussions with DoD ongoing.

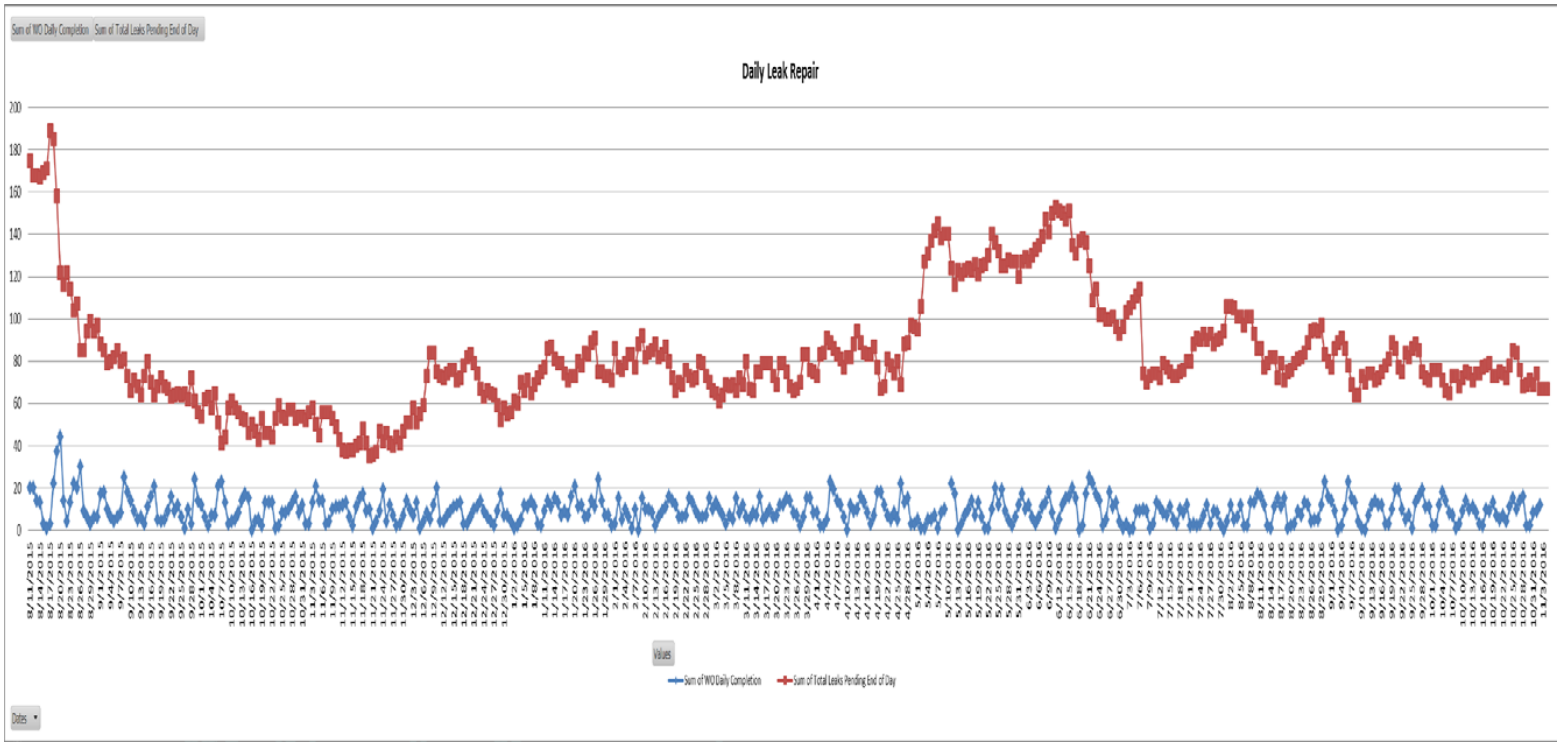
Actions pending:

Mobile treatment unit – technical specifications under revision; IFB pending.

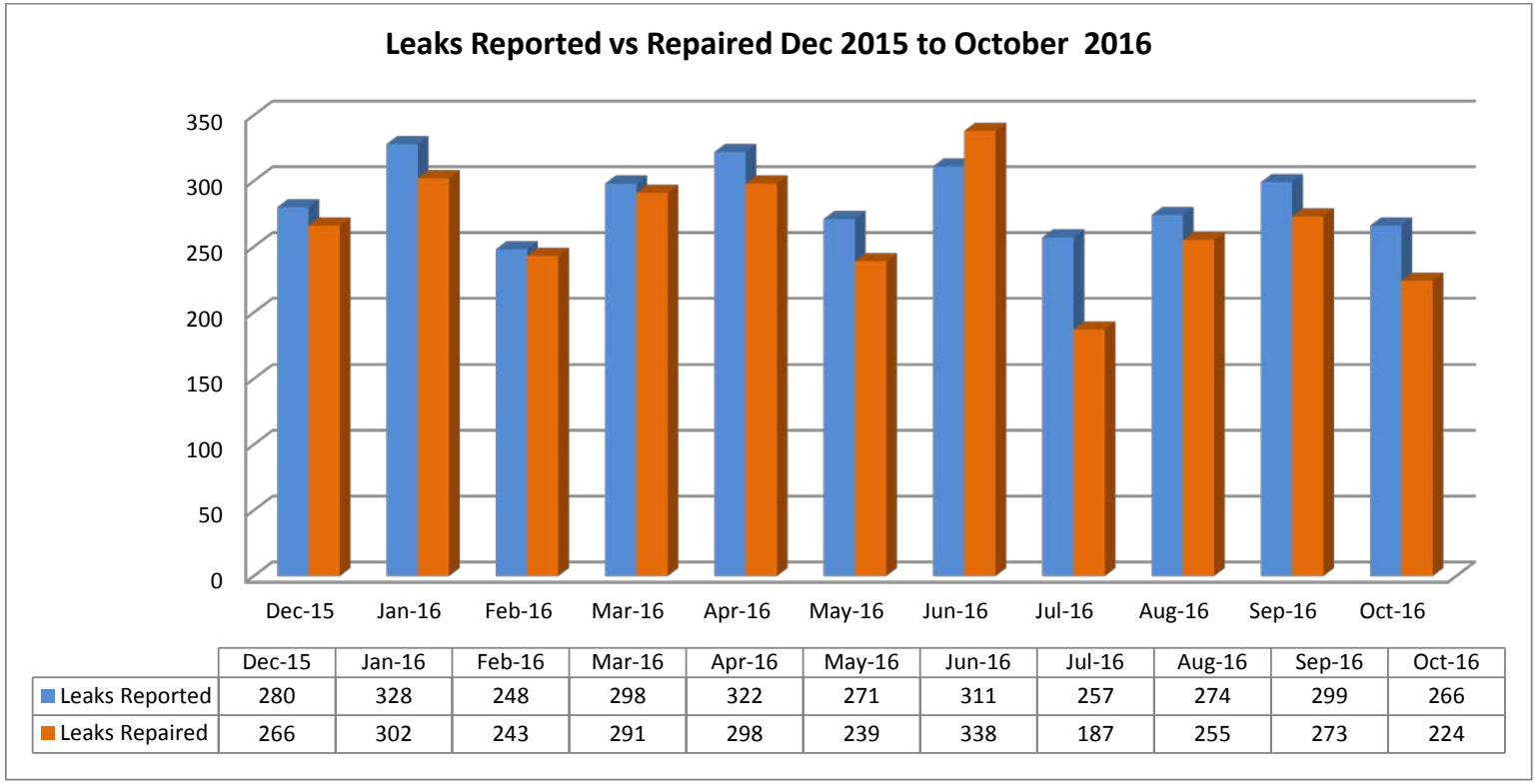
Key Operational Issues

Leak Repair: WOs Completed & Pending (Daily)

(up to November 3, 2016)

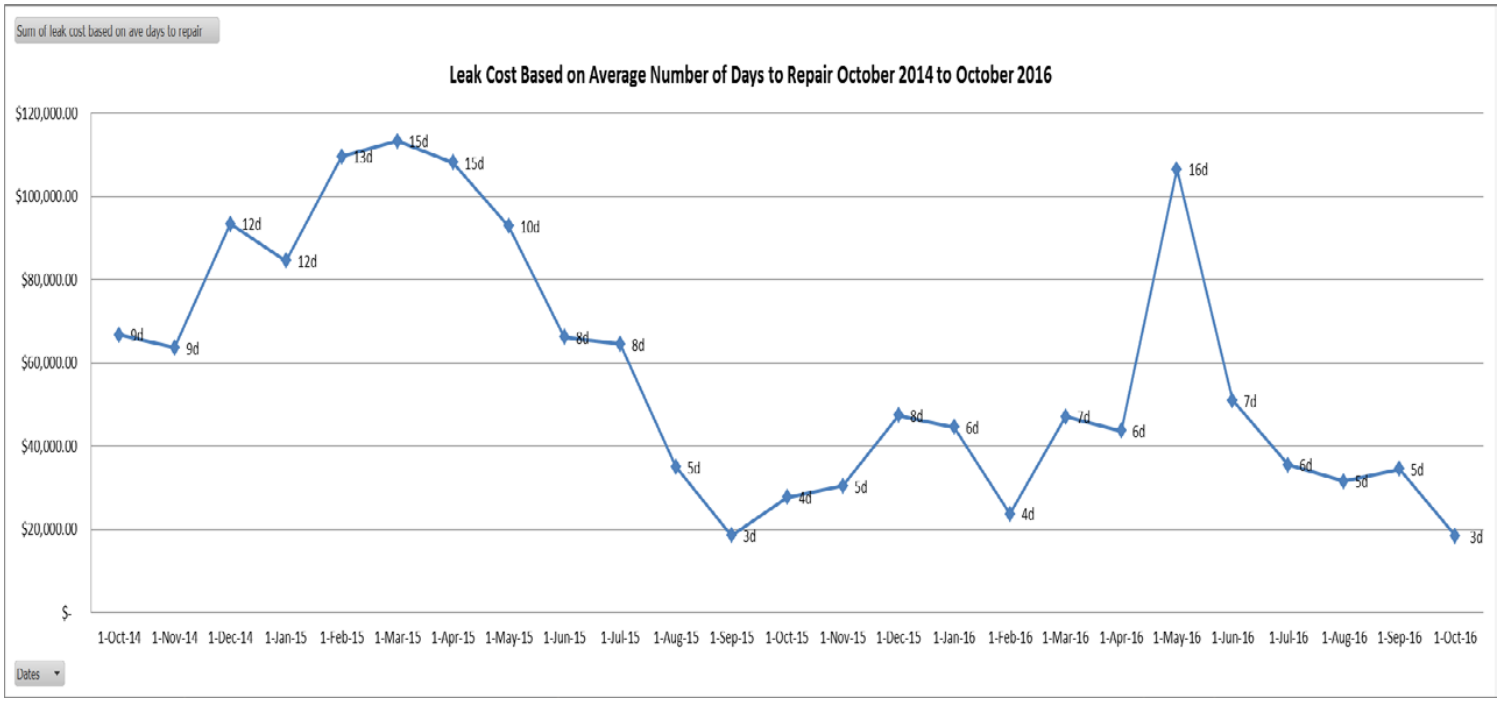


Leak Repair: Leaks Reported and Repaired (Monthly)



	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16
Leaks Reported	280	328	248	298	322	271	311	257	274	299	266
Leaks Repaired	266	302	243	291	298	239	338	187	255	273	224

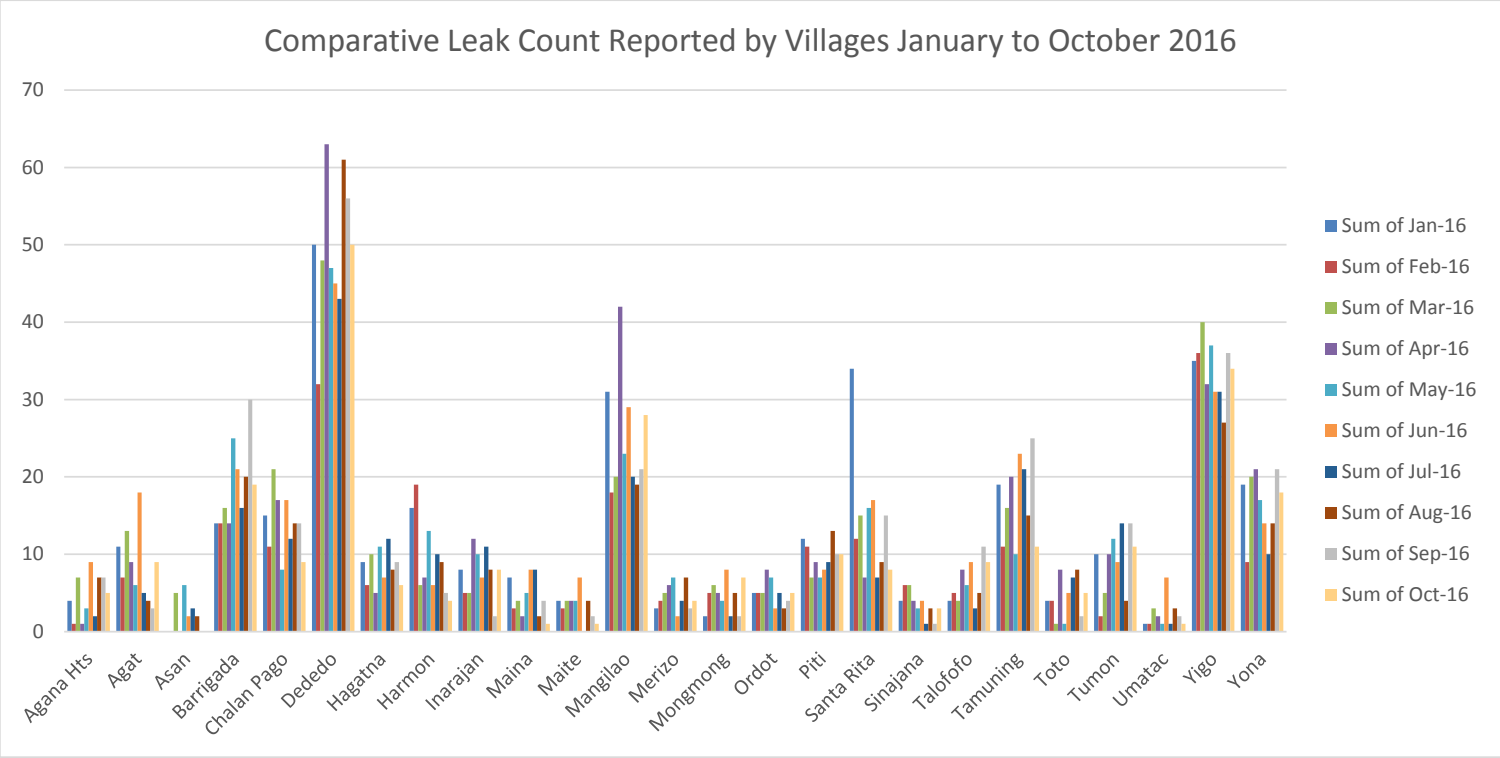
Leak Repair: Cost Savings – Days to Repair (Monthly)



Assumptions:

1. Leak rate = 4 gpm
2. Cost per kgal = $4.00

Leak Repair: Reported by Village



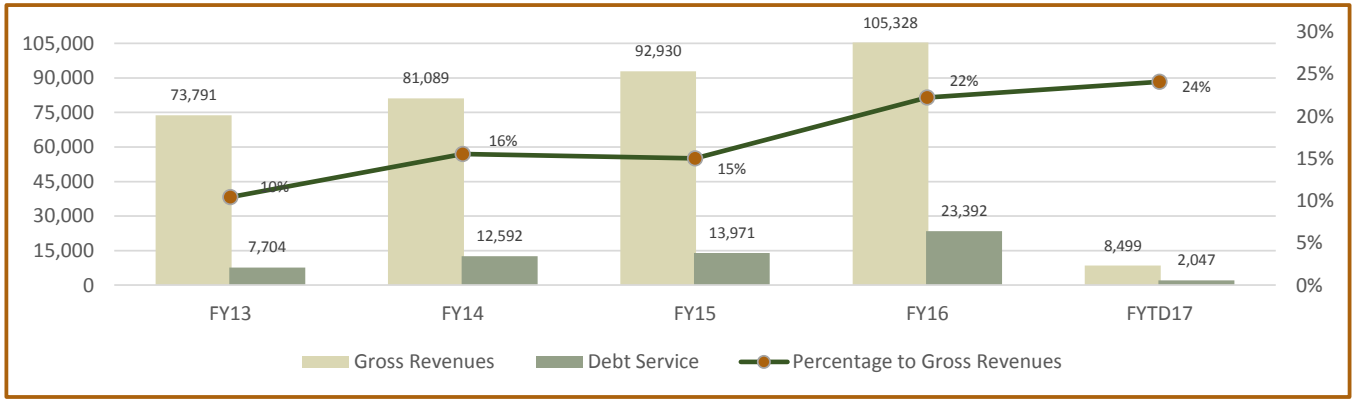
DASHBOARD

October 2016 YTD Budget vs Actual ($000)

Category	Description	Budget FY17	Actual FY17	Variance
Rate Based Revenues	Water	$5,872	$5,368	($504)
	Wastewater	$3,379	$3,131	($248)
	Total	$9,251	$8,499	($752)
Operations & Maintenance	Salaries & Benefits	$1,892	$1,488	($403)
	Power	$1,062	$946	($116)
	Water Purchases	$676	$581	($96)
	A&G	$935	$585	($351)
	Contractual	$296	$165	($132)
	Total	$6,763	$5,652	($1,111)

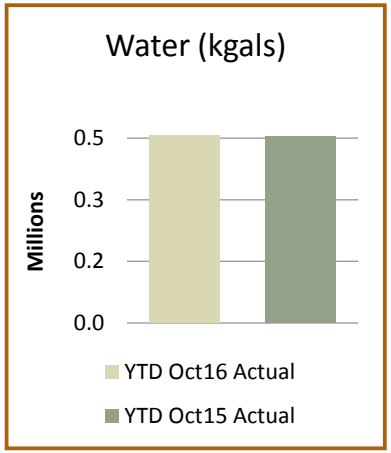
Category	FY17	FY16
Accounts Payable $$/Days	$5,078 / 66 days	$4,909 / 53 days
Accounts Receivable $$/Days	$16,047 / 51 days	$16,997 / 51 days
Days Cash On Hand	159 days	178 days
Annual Debt Service (Revenue Bonds)	$24,562	$23,392
Debt Service Coverage (Bond/PUC)	2.16 / 2.61	2.33 / 2.52

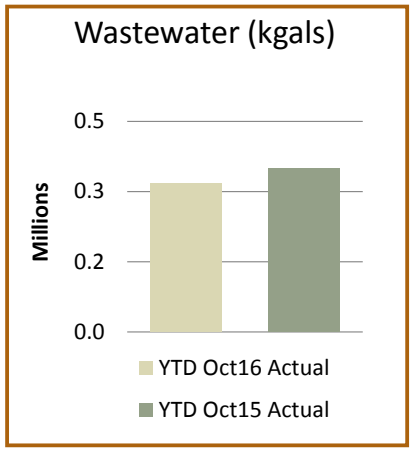
Debt as a Percent to Gross Revenue

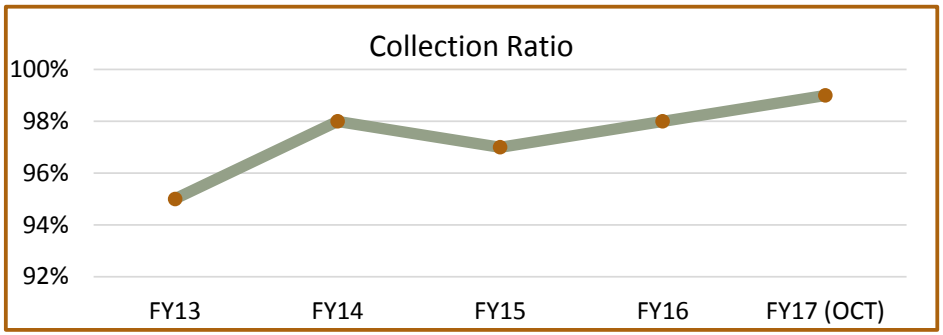


(1) Gross Revenues excludes SDC
(2) Debt Service Excludes Cap I

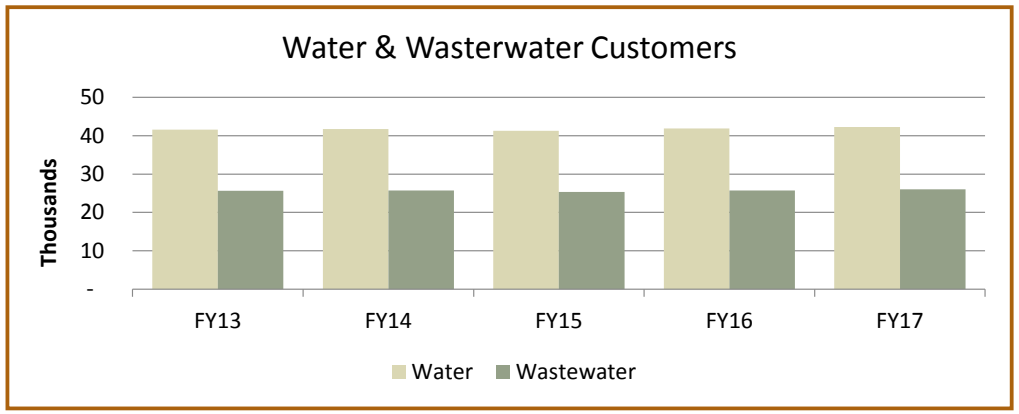
Water & Wastewater Analytics

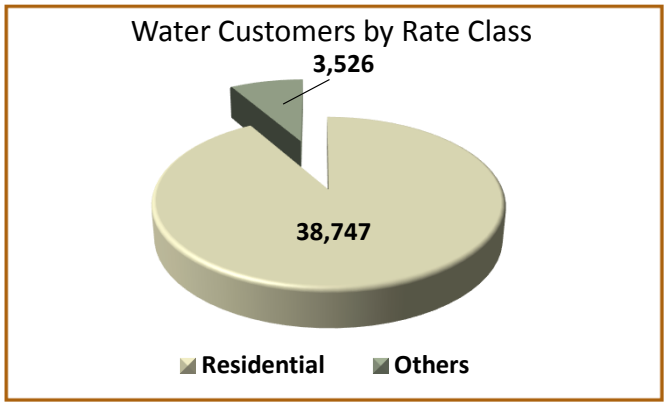


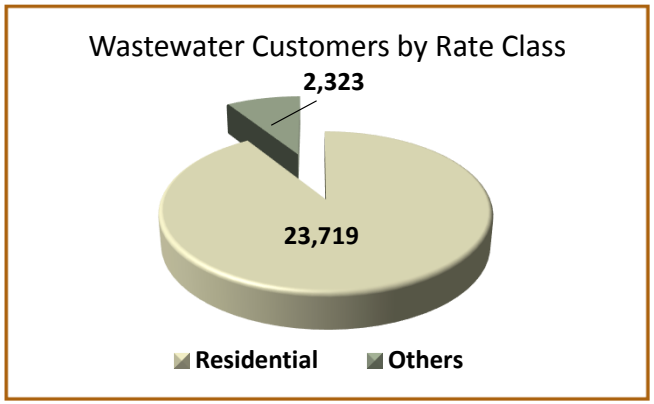


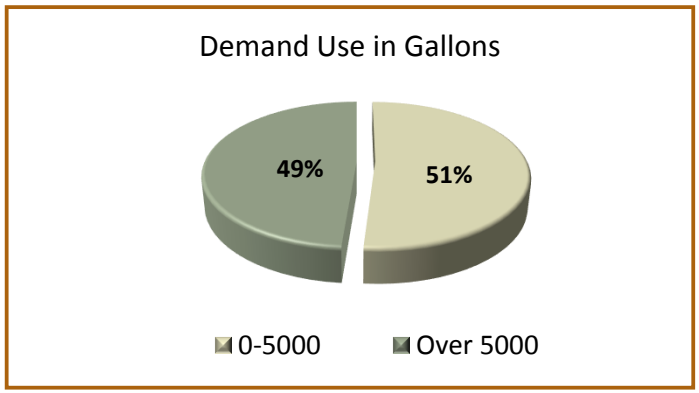


Water & Wastewater Customers





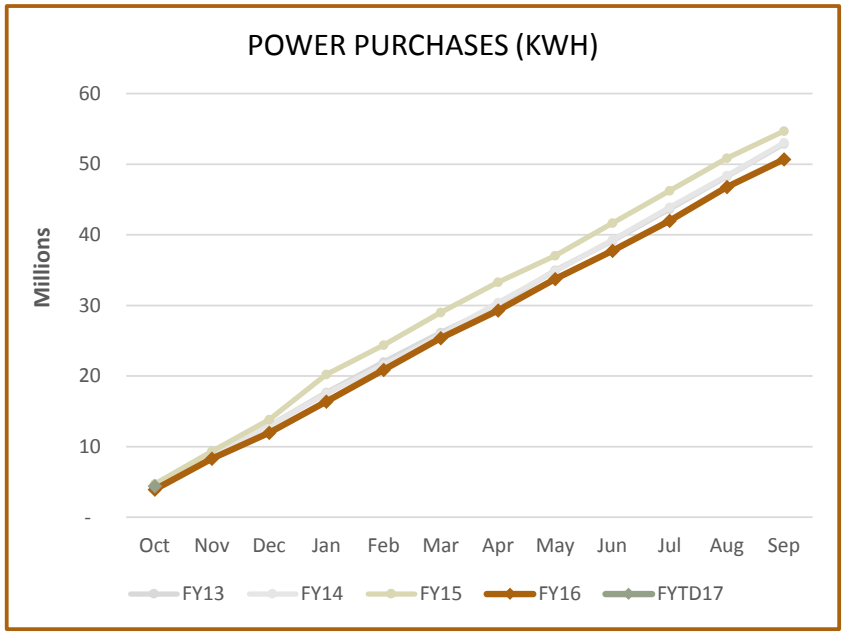


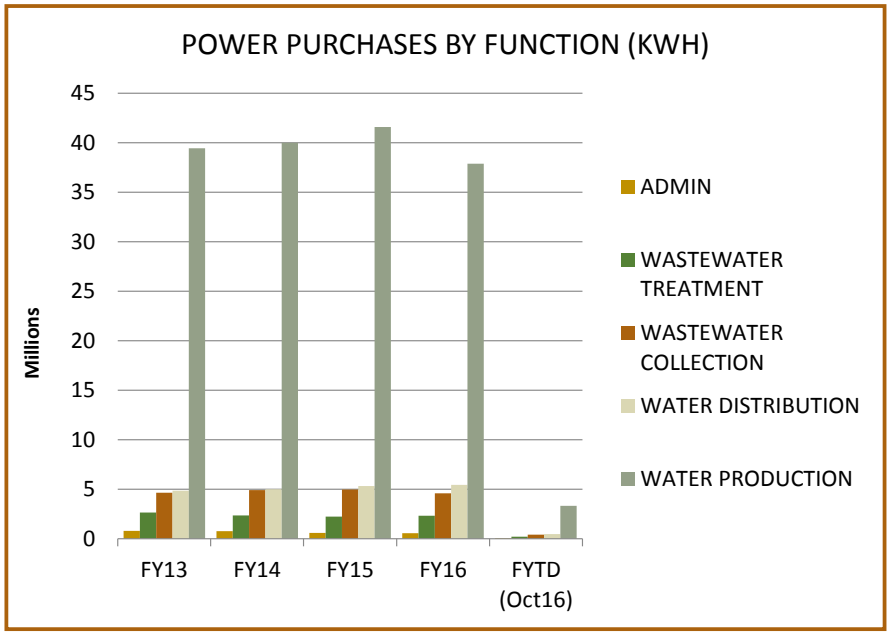


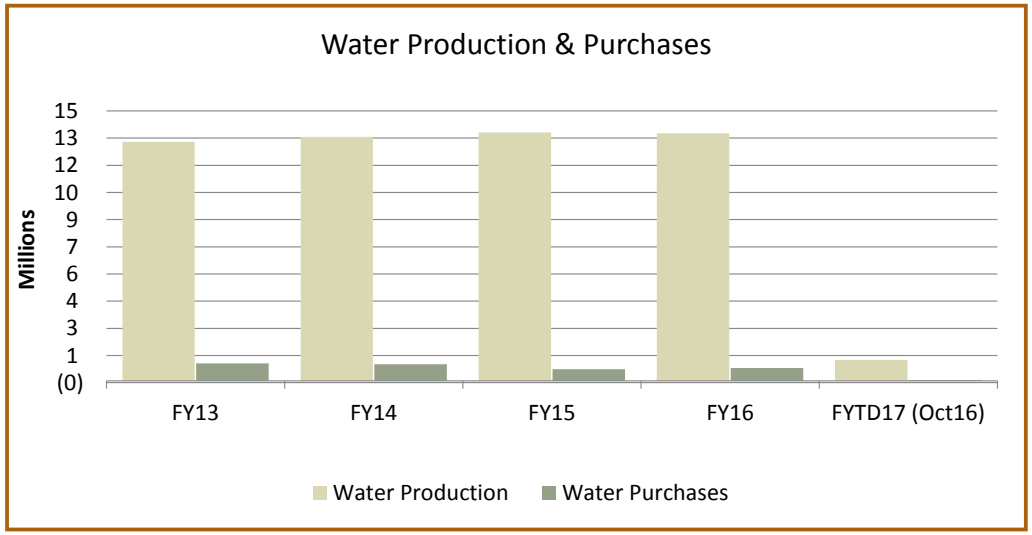
Top Ten Largest Water and Wastewater Customers – October 2016

Water			Wastewater		
Customer Name	FY17 YTD Revenues	% of Total	Customer Name	FY17 YTD Revenues	% of Total
1)PACIFIC ISLANDS CLUB	$96,991	1.87%	1)AIR FORCE DOD	$300,000	10.17%
2)MDI GUAM CORPORATION/LEOPALACE	96,251	1.85%	2)NAVY DOD	150,000	5.08%
3)HOTELS OF THE MARIANAS INC	82,741	1.59%	3)HOTELS OF THE MARIANAS INC	88,483	3.00%
4)HOTEL NIKKO GUAM	68,328	1.32%	4)HOTEL NIKKO GUAM	73,003	2.47%
5)SHERATON LAGUNA GUAM RESORT	67,015	1.29%	5)SHERATON LAGUNA GUAM RESORT	71,713	2.43%
6)PACIFIC STAR RESORT & SPA	60,178	1.16%	6)PACIFIC STAR RESORT & SPA	64,250	2.18%
7)HYATT	60,124	1.16%	7)HYATT	64,313	2.18%
8)GUAM REEF HOTEL INC	55,059	1.06%	8)GUAM REEF HOTEL INC	58,873	2.00%
9)MDI GUAM CORPORATION/WESTIN	50,434	0.97%	9)MDI GUAM CORPORATION/WESTIN	53,905	1.83%
10)OUTRIGGER GUAM RESORT	48,636	0.94%	10)OUTRIGGER GUAM RESORT	52,095	1.77%
Total	**$685,757**	**13.20%**	**Total**	**$976,635**	**33.10%**

Power, Water Purchases and Water Production

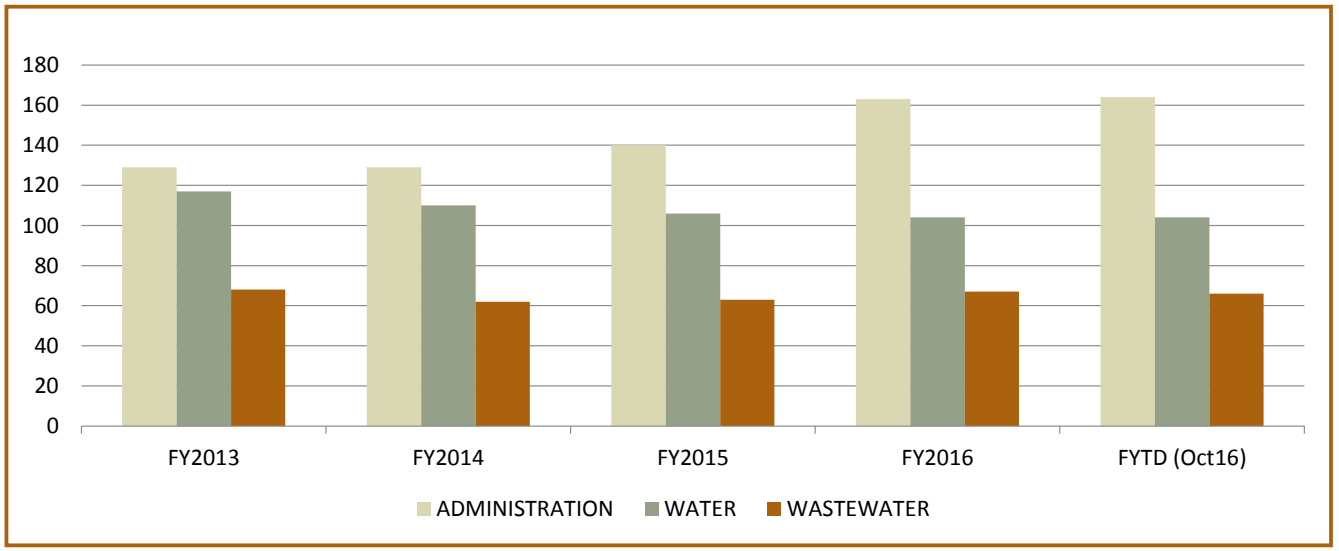






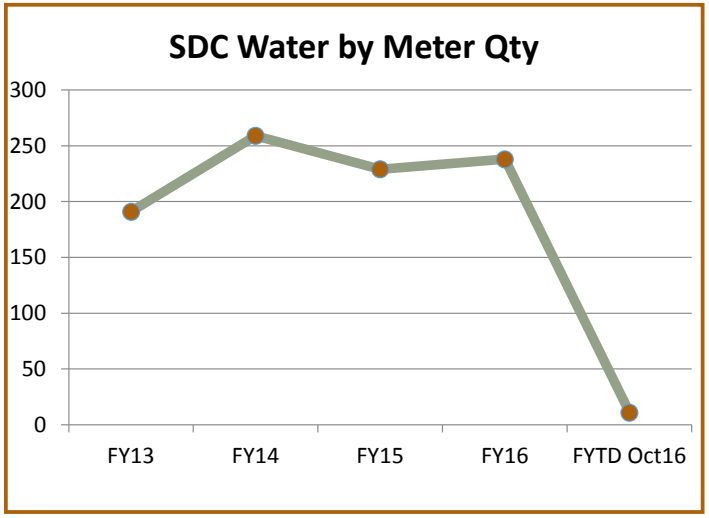
FTE by Major Division

DIVISION	FY2013	FY2014	FY2015	FY2016	FYTD (Oct16)
ADMINISTRATION	129	129	140	163	164
WATER	117	110	106	104	104
WASTEWATER	68	62	63	67	66
TOTAL NUMBER OF STAFF	314	301	309	334	334
Gross Salaries & Wages ($000)	14,929	15,532	15,805	16,442	1,305
Water Customers	41,582	41,702	41,274	42,259	42,273
Staff to Customers Ratio	0.76%	0.72%	0.75%	0.79%	0.79%

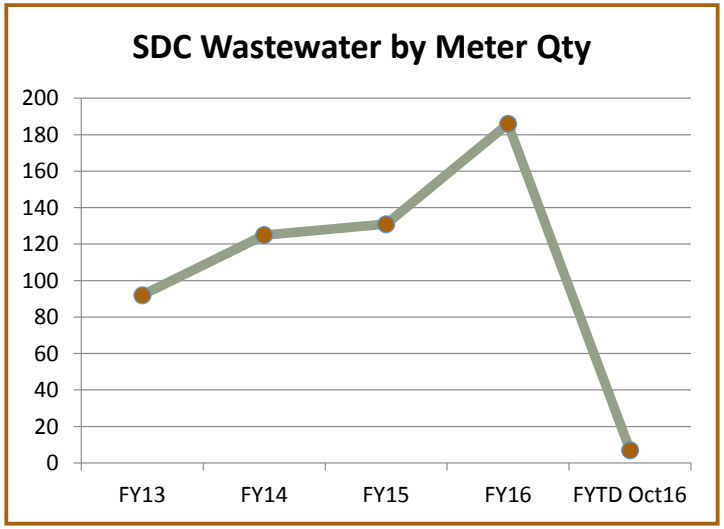


Note: FYTD16 number of employees 334 is as at October 2016

SDC Water & Wastewater (Meter Quantity)



Actual Meter Sizes (Inches)	FY 2013	FY 2014	FY 2015	FY 2016	FYTD (Oct16)
5/8 x 3/4	179	248	220	239	11
1	-	5	5	7	-
1 1/2	5	1	1	1	-
2	4	3	2	4	-
3	-	1	-	1	-
4	3	-	1	-	-
6	-	-	-	-	-
8	-	1	-	-	-
10	-	-	-	-	-
Total SDC by Water	191	259	229	252	11



Actual Meter Sizes (Inches)	FY 2013	FY 2014	FY 2015	FY 2016	FYTD (Oct16)
5/8 x 3/4	80	115	124	179	7
1	-	4	3	2	-
1 1/2	5	1	1	1	-
2	4	3	2	3	-
3	-	1	-	1	-
4	3	-	1	-	-
6	-	-	-	-	-
8	-	1	-	-	-
10	-	-	-	-	-
Total SDC by Wastewater	92	125	131	186	7

GUAM WATERWORKS AUTHORITY
OCTOBER 31, 2016
FINANCIAL AND RELATED REPORTS
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GUAM WATERWORKS AUTHORITY
Balance Sheet
October 31, 2016

SCHEDULE A

ASSETS	Unaudited October 31, 2016	Unaudited September 30, 2016	Increase (Decrease)
Current Assets:			
Cash:			
Unrestricted (Schedule G)	8,195,176	7,495,476	699,700
Restricted Funds (Schedule G)	50,527,315	49,098,347	1,428,967
Accounts Receivable Trade, Net of Allowance for Doubtful Receivables of $11,080,731 at Oct 31, 2016 and $11,018,231 at Sep 30, 2016	14,931,952	15,928,397	(996,445)
Other Receivable	1,115,239	1,069,466	45,773
Materials & Supplies Inventory, Net of Allowance for Obsolescence of $457,370 at Sep 30, 2016	2,332,108	2,269,775	62,332
Total Current Assets	77,101,789	75,861,461	1,240,328
Property, Plant and Equipment			
Utility plant in service:			
Water system	300,446,338	300,446,338	-
Wastewater system	259,251,891	259,251,891	-
Non-utility property	22,474,787	22,474,787	-
Total property	582,173,016	582,173,016	-
Less Accumulated Depreciation	(286,853,412)	(285,323,862)	(1,529,550)
Land	254,288	254,288	-
Construction Work in Progress	90,146,457	88,018,453	2,128,004
Property, Plant and Equipment, net	385,720,348	385,121,894	598,454
Other noncurrent assets			
Restricted cash (Schedule G)	283,902,244	285,277,784	(1,375,539)
Investments (Schedule G)	43,076,095	41,029,262	2,046,833
Other Prepaid Expenses	653,376	652,000	1,376
Total other noncurrent assets	327,631,716	326,959,047	672,670
TOTAL ASSETS	790,453,853	787,942,402	2,511,452
Deferred outflows of resources:			
Debt defeasance loss on refunding	1,863,383	1,878,602	(15,219)
Deferred outflows from pension	3,145,625	3,212,553	(66,928)
Total Assets and Deferred Outflows from Pension	**795,462,862**	**793,033,556**	**2,429,305**
LIABILITIES AND NET ASSETS			
Current Liabilities:			
Current maturities of long-term debt			
-Series 2010 Bond	1,590,000	1,590,000	-
-Series 2014 Refunding	3,320,000	3,320,000	-
-Notes Payable	2,887,091	2,737,804	149,286
Accounts Payable -Trade	5,078,240	4,909,146	169,094
Accrued Expense	70,661	42,126	28,535
Interest Payable	8,934,735	6,748,638	2,186,097
Accrued Payroll and Employee Benefits	1,243,612	1,696,907	(453,295)
Accrued Annual Leave	1,641,497	1,641,497	-
Current portion of employee annual leave	511,267	511,267	-
Contractor's Payable	3,205,241	3,436,908	(231,668)
Customer Deposits	2,219,606	2,228,235	(8,630)
Total Current Liabilities	30,701,948	28,862,527	1,839,421
Long Term Debt, less current maturities			
Series 2010 Revenue Bond	114,590,000	114,590,000	-
Series 2013 Revenue Bond	172,630,000	172,630,000	-
Series 2014 Refunding	76,060,000	76,060,000	-
Series 2016 Revenue Bond	143,310,000	143,310,000	-
Unamortized Discount - Bond 2010	(1,941,482)	(1,948,205)	6,723
Unamortized Discount - Bond 2013	(1,385,592)	(1,389,850)	4,258
Unamortized Premium - Bond 2014	5,049,089	5,071,307	(22,218)
Unamortized Premium - Bond 2016	17,819,845	17,870,470	(50,625)
Notes Payable	8,342,695	8,714,386	(371,692)
Unfunded Ret Liability (GASB 67/68)	31,225,173	31,330,546	(105,372)
Employee Annual Leave, Less Current Portion	924,662	924,662	-
TOTAL LIABILITIES	597,326,339	596,025,843	1,300,496
Deferred inflows from pension	2,795,396	2,854,872	(59,477)
Net Assets	**195,341,127**	**194,152,841**	**1,188,286**
Total Liabilities and Net Assets and Deferred Inflows from Pension	**795,462,862**	**793,033,556**	**2,429,306**

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited)
Comparative Budget vs. Actual for the period ending October 31, 2016

SCHEDULE B

	Month to Date			Variance
	Budget October-16	Encumbered October-16	Actual (Unaudited) October-16	Increase / (Decrease)
OPERATING REVENUES				
Water Revenues	5,678,548		5,191,057	(487,490)
Wastewater Revenues	3,284,461		3,062,417	(222,043)
Legislative Surcharge	288,387		245,832	(42,555)
Other Revenues	43,750		34,438	(9,312)
System Development Charge	133,333		47,704	(85,629)
Total Operating Revenues	9,428,479		8,581,449	(847,030)
OPERATING AND MAINTENANCE EXPENSES				
Water Purchases	676,391		580,607	(95,784)
Power Purchases	1,061,804		946,060	(115,744)
Total Utility Costs	1,738,195		1,526,668	(211,527)
Salaries and Wages	1,586,470		1,304,611	(281,859)
Pension and Benefits	597,585		347,130	(250,455)
Total Salaries and Benefits	2,184,055		1,651,741	(532,314)
Capitalized Labor and Benefits	(292,554)		(163,448)	129,107
Net Salaries and Benefits	1,891,501		1,488,293	(403,208)
Administrative and General Expenses				
Sludge removal	174,395	-	147,577	(26,817)
Chemicals	205,222	-	127,871	(77,351)
Materials & Supplies	216,071	129,154	79,773	(7,144)
Transportation	71,419	8,261	46,616	(16,543)
Communications	14,152	-	13,385	(767)
Claims	3,284	-	3,000	(284)
Insurance	135,312	-	101,034	(34,278)
Training & Travel	5,570	-	2,782	(2,787)
Advertising	7,045	-	6,197	(848)
Miscellaneous	102,963	2,500	56,641	(43,822)
Total Administrative and General Expense	935,431	139,915	584,876	(210,641)
Regulatory Expense	21,791	-	21,871	80
Bad Debts Provision (net of recoveries)	62,500	-	62,489	(11)
Depreciation Expense	1,529,550	-	1,529,550	-
Contractual Expense				
Audit & Computer Maint.	78,630	7,416	31,204	(40,010)
Building rental	38,368	-	23,931	(14,437)
Equipment rental	42,270		38,878	(3,392)
Legal	439	-	397	(42)
Laboratory	10,086	-	10,000	(86)
Other	126,292	26,012	60,093	(40,187)
Total Contractual Expense	296,085	33,428	164,503	(98,153)
Retiree Supp. Annuities and health care costs	239,312		224,117	(15,194)
Contribution to Government of Guam	48,285		49,667	1,382
Total Retiree Benefits	287,597		273,784	(13,813)
Total Operating Expenses	6,762,648	173,343	5,652,033	(937,272)
Earnings (Loss) from Operations	2,665,830	(173,343)	2,929,415	90,242
Interest Income-2010/13/14/16 Series Bond	1,029		4,947	3,918
Interest Income-Other Funds	642		5,385	4,743
Interest Expense- 2010/13/14/16 Series Bond	(2,223,983)		(2,223,983)	(0)
Interest Expense- ST BOG	(46,124)		(24,708)	21,416
Federal Expenditures	-		(70,491)	(70,491)
Loss on Asset Disposal	-		-	-
AFUDC	625,000		462,937	(162,063)
Amortization of Discount, Premium and Issuance Costs	37,738		61,861	24,123
Loss on Defeasance Bond05 Refunding	(19,483)		(15,218)	4,265
Deferred outflows from pension	(66,928)		(7,452)	59,476
Prior Year Adjustment	-		(164,572)	(164,572)
Total non-operating revenues (expenses)	(1,692,111)	-	(1,971,295)	(279,184)
Net Income (Loss) before capital contributions	973,720	(173,343)	958,120	(188,942)
Capital Contributions				
Grants from US Government	250,000		230,165	(19,835)
Grants from GovGuam & Others	-		-	-
Other Contributions	-		-	-
Total Capital Contributions	250,000	-	230,165	(19,835)
Change in Net Assets	1,223,720	(173,343)	1,188,286	(208,777)
Debt Service Calculation				
Earnings From Operations	2,665,830		2,929,415	
System Development Charge	(133,333)		(47,704)	
Interest/Investment Income	642		5,385	
Depreciation	1,529,550		1,529,550	
Balance Available for Debt Service per Section 6.12	4,062,689		4,416,646	
Working Capital Reserve Available for Debt Service	632,083		932,149	
Transfer to Working Capital Debt Service Reserve	(304,167)		-	
Balance Available for Debt Service inclusive of reserves	4,390,606		5,348,796	
Debt Service				
Principal	420,000		420,000	
Interest	1,626,858		1,626,858	
Total	2,046,858		2,046,858	
Debt Service Coverage inclusive of reserves (PUC)	2.15		2.61	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.98		2.16	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited)
Comparative for the period ending October 31, 2016 and 2015

SCHEDULE C

	Month to Date Actual (Unaudited) October-16	Month to Date Actual (Unaudited) October-15	Variance Increase / (Decrease)
OPERATING REVENUES			
Water Revenues	5,191,057	5,234,197	(43,139)
Wastewater Revenues	3,062,417	2,827,863	234,555
Legislative Surcharge	245,832	215,896	29,935
Other Revenues	34,438	13,127	21,311
System Development Charge	47,704	50,376	(2,672)
Total Operating Revenues	8,581,449	8,341,458	239,990
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	580,607	484,284	96,323
Power Purchases	946,060	935,403	10,657
Total Utility Costs	1,526,668	1,419,688	106,980
Salaries and Wages	1,304,611	1,351,314	(46,703)
Pension and Benefits	347,130	475,253	(128,124)
Total Salaries and Benefits	1,651,741	1,826,567	(174,827)
Capitalized Labor and Benefits	(163,448)	(163,448)	-
Net Salaries and Benefits	1,488,293	1,663,120	(174,827)
Administrative and General Expenses			
Sludge removal	147,577	134,925	12,653
Chemicals	127,871	173,908	(46,038)
Materials & Supplies	79,773	110,806	(31,033)
Transportation	46,616	20,814	25,801
Communications	13,385	4,998	8,387
Claims	3,000	-	3,000
Insurance	101,034	101,054	(20)
Training & Travel	2,782	-	2,782
Advertising	6,197	-	6,197
Miscellaneous	56,641	82,388	(25,747)
Total Administrative and General Expense	584,876	628,893	(44,018)
Regulatory Expense	21,871	8,208	13,662
Bad Debts Provision (net of recoveries)	62,489	62,500	(11)
Depreciation Expense	1,529,550	1,485,000	44,550
Contractual Expense			
Audit & Computer Maint.	31,204	40,905	(9,701)
Building rental	23,931	32,259	(8,328)
Equipment rental	38,878	-	38,878
Legal	397	-	397
Laboratory	10,000	9,595	405
Other	60,093	94,594	(34,501)
Total Contractual Expense	164,503	177,353	(12,850)
Retiree Supp. Annuities and health care costs	224,117	218,645	5,473
Contribution to Government of Guam	49,667	584,000	(534,333)
Total Retiree Benefits	273,784	802,645	(528,861)
Total Operating Expenses	5,652,033	6,247,407	(595,374)
Earnings (Loss) from Operations	2,929,415	2,094,051	835,364
Interest Income-2010/13/14/16 Series Bond	4,947	1,397	3,550
Interest Income-Other Funds	5,385	1,000	4,385
Interest Expense - 2010/13/14/16 Series Bond	(2,223,983)	(1,640,515)	(583,469)
Interest Expense- ST BOG	(24,708)	(66,279)	41,570
Federal Expenditures	(70,491)	-	(70,491)
Loss on Asset Disposal	-	-	-
AFUDC	462,937	462,937	-
Amortization of Discount, Premium and Issuance Costs	61,861	11,236	50,625
Loss on Defeasance Bond05 Refunding	(15,218)	-	(15,218)
Deferred outflows from pension	(7,452)	-	(7,452)
Prior Year Adjustment	(164,572)	-	(164,572)
Total non-operating revenues (expenses)	(1,971,295)	(1,230,223)	(741,072)
Net Income (Loss) before capital contributions	958,120	863,828	94,292
Capital Contributions			
Grants from US Government	230,165	43,966	186,199
Grants from GovGuam & Others	-	-	-
Other Contributions	-	-	-
Total Capital Contributions	230,165	43,966	186,199
Change in Net Assets	1,188,286	907,795	280,491
Debt Service Calculation			
Earnings From Operations	2,929,415	2,094,051	
System Development Charge	(47,704)	(50,376)	
Interest/Investment Income	5,385	1,000	
Depreciation	1,529,550	1,485,000	
Balance Available for Debt Service per Section 6.12	4,416,646	3,529,676	
Working Capital Reserve Available for Debt Service	932,149	382,083	
Transfer to Working Capital Debt Service Reserve	-		
Balance Available for Debt Service inclusive of Reserves	5,348,796	3,911,759	
Debt Service			
Principal	420,000	409,167	
Interest	1,626,858	1,248,244	
Total	2,046,858	1,657,410	
Debt Service Coverage inclusive of reserves (PUC)	2.61	2.36	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	2.16	2.13	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited)
Comparative Budget vs. Actual for the period ending October 31, 2016

SCHEDULE D

	Year to Date			Variance
	Budget October-16	Encumbered October-16	Actual (Unaudited) October-16	Increase / (Decrease)
OPERATING REVENUES				
Water Revenues	5,678,548		5,191,057	(487,490)
Wastewater Revenues	3,284,461		3,062,417	(222,043)
Legislative Surcharge	288,387		245,832	(42,555)
Other Revenues	43,750		34,438	(9,312)
System Development Charge	133,333		47,704	(85,629)
Total Operating Revenues	9,428,479		8,581,449	(847,030)
OPERATING AND MAINTENANCE EXPENSES			-	
Water Purchases	676,391		580,607	(95,784)
Power Purchases	1,061,804		946,060	(115,744)
Total Utility Costs	1,738,195		1,526,668	(211,527)
			-	
Salaries and Wages	1,586,470		1,304,611	(281,859)
Pension and Benefits	597,585		347,130	(250,455)
Total Salaries and Benefits	2,184,055		1,651,741	(532,314)
Capitalized Labor	(292,554)		(163,448)	129,107
Net Salaries and Benefits	1,891,501		1,488,293	(403,208)
Administrative and General Expenses			-	
Sludge removal	174,395	-	147,577	(26,817)
Chemicals	205,222	-	127,871	(77,351)
Materials & Supplies	216,071	129,154	79,773	(7,144)
Transportation	71,419	8,261	46,616	(16,543)
Communications	14,152	-	13,385	(767)
Claims	3,284	-	3,000	(284)
Insurance	135,312	-	101,034	(34,278)
Training & Travel	5,570	-	2,782	(2,787)
Advertising	7,045	-	6,197	(848)
Miscellaneous	102,963	2,500	56,641	(43,822)
Total Administrative and General Expense	935,431	139,915	584,876	(210,641)
Regulatory Expense	21,791	-	21,871	80
Bad Debts Provision	62,500	-	62,489	(11)
Depreciation Expense	1,529,550	-	1,529,550	-
Contractual Expense				
Audit & Computer Maint.	78,630	7,416	31,204	(40,010)
Building rental	38,368	-	23,931	(14,437)
Equipment rental	42,270	-	38,878	(3,392)
Legal	439	-	397	(42)
Laboratory	10,086	-	10,000	(86)
Other	126,292	26,012	60,093	(40,187)
Total Contractual Expense	296,085	33,428	164,503	(98,153)
Retiree Supp. Annuities and health care costs	239,312		224,117	(15,194)
Contribution to Government of Guam	48,285		49,667	1,382
Total Retiree Benefits	287,597	-	273,784	(13,813)
Total Operating Expenses	6,762,648	173,343	5,652,033	(937,272)
Earnings (Loss) from Operations	2,665,830	(173,343)	2,929,415	90,242
Interest Income-2010/13/14/16 Series Bond	1,029		4,947	3,918
Interest Income-Other Funds	642		5,385	4,743
Interest Expense - 2010/13/14/16 Series Bond	(2,223,983)		(2,223,983)	(0)
Interest Expense- ST BOG	(46,124)		(24,708)	21,416
Federal Expenditures	-		(70,491)	(70,491)
Loss on Assets Disposal	-		-	-
AFUDC	625,000		462,937	(162,063)
Amortization of Discount, Premium and Issuance Costs	37,738		61,861	24,123
Loss on Defeasance Bond05 Refunding	(19,483)		(15,218)	4,265
Deferred outflows from pension	(66,928)		(7,452)	59,476
Prior Year Adjustment	-		(164,572)	(164,572)
Total non-operating revenues (expenses)	(1,692,111)	-	(1,971,295)	(279,184)
Net Income (Loss) before capital contributions	973,720	(173,343)	958,120	(188,942)
Capital Contributions				
Grants from US Government	250,000		230,165	(19,835)
Grants from GovGuam & Others	-		-	-
Other Contributions	-		-	-
Total Capital Contributions	250,000	-	230,165	(19,835)
Change in Net Assets	1,223,720	(173,343)	1,188,286	(208,777)
Debt Service Calculation				
Earnings From Operations	2,665,830		2,929,415	
System Development Charge	(133,333)		(47,704)	
Interest/Investment Income	642		5,385	
Depreciation	1,529,550		1,529,550	
Balance Available for Debt Service per Section 6.12	4,062,689		4,416,646	
Working Capital Reserve for Debt Service	632,083		932,149	
Transfer to Working Capital Debt Service Reserve	(304,167)		-	
Balance Available for Debt Service inclusive of Reserves	4,390,606		5,348,796	
Debt Service				
Principal	420,000		420,000	
Interest	1,626,858		1,626,858	
Total	2,046,858		2,046,858	
Debt Service Coverage inclusive of reserves (PUC)	2.15		2.61	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.98		2.16	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited)
Comparative for the period ending October 31, 2016 and 2015

SCHEDULE E

	Year to Date ACTUAL (Unaudited) October-16	Year to Date ACTUAL (Unaudited) October-15	Variance Increase / (Decrease)
OPERATING REVENUES			
Water Revenues	5,191,057	5,234,197	(43,139)
Wastewater Revenues	3,062,417	2,827,863	234,555
Legislative Surcharge	245,832	215,896	29,935
Other Revenues	34,438	13,127	21,311
System Development Charge	47,704	50,376	(2,672)
Total Operating Revenues	8,581,449	8,341,458	239,990
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	580,607	484,284	96,323
Power Purchases	946,060	935,403	10,657
Total Utility Costs	1,526,668	1,419,688	106,980
Salaries and Wages	1,304,611	1,351,314	(46,703)
Pension and Benefits	347,130	475,253	(128,124)
Total Salaries and Benefits	1,651,741	1,826,567	(174,827)
Capitalized Labor and Benefits	(163,448)	(163,448)	-
Net Salaries and Benefits	1,488,293	1,663,120	(174,827)
Administrative and General Expenses			
Sludge removal	147,577	134,925	12,653
Chemicals	127,871	173,908	(46,038)
Materials & Supplies	79,773	110,806	(31,033)
Transportation	46,616	20,814	25,801
Communications	13,385	4,998	8,387
Claims	3,000	-	3,000
Insurance	101,034	101,054	(20)
Training & Travel	2,782	-	2,782
Advertising	6,197	-	6,197
Miscellaneous	56,641	82,388	(25,747)
Total Administrative and General Expense	584,876	628,893	(44,018)
Regulatory Expense	21,871	8,208	13,662
Bad Debts Provision	62,489	62,500	(11)
Depreciation Expense	1,529,550	1,485,000	44,550
Contractual Expense			
Audit & Computer Maint.	31,204	40,905	(9,701)
Building rental	23,931	32,259	(8,328)
Equipment rental	38,878	-	38,878
Legal	397	-	397
Laboratory	10,000	9,595	405
Other	60,093	94,594	(34,501)
Total Contractual Expense	164,503	177,353	(12,850)
Retiree Supp. Annuities and health care costs	224,117	218,645	5,473
Contribution to Government of Guam	49,667	584,000	(534,333)
Total Retriree Benefits	273,784	802,645	(528,861)
Total Operating Expenses	5,652,033	6,247,407	(595,374)
Earnings (Loss) from Operations	2,929,415	2,094,051	835,364
Interest Income-2010/13/14/16 Series Bond	4,947	1,397	3,550
Interest Income-Other Funds	5,385	1,000	4,385
Interest Expense - 2010/13/14/16 Series Bond	(2,223,983)	(1,640,515)	(583,469)
Interest Expense- ST BOG	(24,708)	(66,279)	41,570
Federal Expenditures	(70,491)	-	(70,491)
Loss on Assets Disposal	-	-	-
AFUDC	462,937	462,937	-
Amortization of Discount, Premium and Issuance Costs	61,861	11,236	50,625
Loss on Defeasance Bond05 Refunding	(15,218)	-	(15,218)
Deferred outflows from pension	(7,452)	-	(7,452)
Prior Year Adjustment	(164,572)	-	(164,572)
Total non-operating revenues (expenses)	(1,971,295)	(1,230,223)	(741,072)
Net Income (Loss) before capital contributions	958,120	863,828	94,292
Capital Contributions			
Grants from US Government	230,165	43,966	186,199
Grants from GovGuam & Others	-	-	-
Other Contributions	-	-	-
Total Capital Contributions	230,165	43,966	186,199
Change in Net Assets	1,188,286	907,795	280,491
Debt Service Calculation			
Earnings From Operations	2,929,415	2,094,051	
System Development Charge	(47,704)	(50,376)	
Interest/Investment Income	5,385	1,000	
Depreciation	1,529,550	1,485,000	
Balance Available for Debt Service per Section 6.12	4,416,646	3,529,676	
Working Capital Reserve Available for Debt Service	932,149	382,083	
Transfer to Working Capital Debt Service Reserve	-	-	
Balance Available for Debt Service inclusive of Reserves	5,348,796	3,911,759	
Debt Service			
Principal	420,000	409,167	
Interest	1,626,858	1,248,244	
Total	2,046,858	1,657,410	
Debt Service Coverage inclusive of reserves (PUC)	2.61	2.36	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	2.16	2.13	

SCHEDULE F

Bond Compliance		($$$) Per Indenture	As of 10/31/16 ($$$) Bond 2010/2013/2014/2016
• Revenues Collected sweep from BOG (Daily) and all banks (Thursdays)	Collections		
• Operation and Maintenance Fund-BOG	*Equivalent to 55 days of the annual O&M budget less depreciation*	$10.5M	$10.5M
• Debt Service Fund - US Bank	*Principal and Interest payment based on the amortization schedule (1/2 of the annual debt service)*	$14.7M	$8.2M
• Bond Reserve Fund - US Bank	*Fully funded- Principal and Interest (Bond Series 2010, 2013, 2014 Refunding and 2016)*	$34.9M	$34.9M
• Operation, Maintenance, Renewal and Replacement Reserve Fund-BOG Trust	*Equivalent to 1/4 of the annual O&M budget & CIP budget to be funded in 5 years ($2M/year)*	$17.4M	$17.4M
• Capital Improvement Fund & BOG Reserves	*Balance remaining in the Revenue Fund after the foregoing deposits*		$0.9M
• Capitalized Interest Fund			$8.9M

GUAM WATERWORKS AUTHORITY
Restricted and Unrestricted Cash Summary
FY 2017

SCHEDULE G

Description	Unaudited October 31, 2016	Unaudited September 30, 2016	Increase (Decrease)
UNRESTRICTED			
Change Fund	2,000	2,000	0
Petty Cash	5,000	5,000	0
BOG - General Fund	5,829,911	5,026,177	803,734
BOG - Credit Card-Sweep	-	-	0
BOG - On Line Payment	-	-	0
BOG - PRN Payroll	2,224,253	2,274,253	(50,000)
BOG - Sweep Account	(3)	76	(78)
Bank of Hawaii	109,303	121,371	(12,068)
ANZ Bank	1,177	245	932
First Hawaiian Bank	7,498	47,741	(40,243)
Bank Pacific	9,383	13,764	(4,381)
Community First FCU	6,654	4,849	1,805
Sub-total Unrestricted	8,195,176	7,495,476	699,700
RESTRICTED			
BOG - PRN Moratorium	-	-	0
BOG - Customer Refunds	2,224,171	2,274,599	(50,428)
Bank Pacific - Surcharge	261,903	166,670	95,233
Bank Pacific - Escrow Deposit	845,734	845,640	94
BOG Emergency Reserve Fund	6,115	6,114	1
BOG - Revenue Trust	1,033,433	595,751	437,682
BOG Revenue Trust Fund	8,175,102	8,182,472	(7,370)
BOG Capital Improvement Fund	962,952	3,933	959,020
BOG-O & M Reserve	4,050,416	4,050,319	96
BOG-Debt Service Reserve	11,185,793	11,185,610	183
BOG-CAPEX Reserve	8,710,654	8,710,383	271
BOG Sewer Hookup Revolving Fund	62,138	62,132	6
BOG Short Term Loan DSF	-	-	0
BOG Subord. Sec. Fund	859,233	859,233	0
BOG Operation and Maintenance Fund	3,083,482	3,083,482	0
	41,461,126	40,026,338	1,434,788
BOG - SDC Deposit	1,066,188	1,064,792	1,397
BOG - SDC CDs	8,000,000	8,000,000	0
Total Restricted	50,527,315	49,091,129	1,436,185
Reserve Funds			
BOG Series 05 OMRRRF Fund	17,423,213	17,423,213	0
BOG Series 10 Construction Fund	11,343,290	11,725,749	(382,458)
BOG Series 13 Construction Fund	106,768,562	107,622,618	(854,056)
BOG Series 13 CAP I Fund	-	-	0
BOG Series 14 Refunding Construction Fund	820,549	820,529	20
BOG Series 16 Construction Fund	138,608,947	138,748,131	(139,184)
BOG Series 16 Cap Int Fund	8,937,684	8,937,545	139
BOG Series 16 COI Fund	-	-	0
Total Restricted - Held by Trustee	283,902,244	285,277,784	(1,375,539)
USB Series 2010 Debt Service Fund	2,688,547	2,016,414	672,133
USB Series 2010 Debt Service Reserve Fund	7,566,460	7,566,460	0
USB Series 2013 Debt Service Fund	3,110,723	2,333,083	777,641
USB Series 2013 Debt Service Reserve Fund	12,031,688	12,031,688	0
USB Series 2014 Refunding Debt Service Fund	2,388,350	1,791,266	597,084
USB Series 2014 Refunding Debt Service Reserve Fund	7,707,602	7,707,628	(25)
USB Series 2016 Debt Service Fund	-	-	0
USB Series 2016 Debt Service Reserve Fund	7,582,725	7,582,725	0
Total Investments	43,076,095	41,029,262	2,046,833
Total Restricted and Unrestricted Cash	385,700,831	382,893,652	2,807,179

SCHEDULE H

Guam Waterworks Authority
Statement of Cash Flows (Unaudited)
FY 2016

	YTD October 2016
Increase (decrease) in cash	
Cash flows from operating activities:	
Cash received from trade and others	9,334,597
Cash payments to suppliers/contractors for goods and services	(171,714)
Cash payments to employees for services	(2,215,372)
Net cash provided by operating activities	6,947,511
Cash flows from capital and related financing activities:	
Contributed capital received (grants)	159,674
Acquisition of utility plant	(1,635,313)
Repayment of Long Term Debt	(433,553)
Interest expense	(2,248,692)
Net cash provided by (used in) capital and related financing activities	(4,157,883)
Cash flows from investing activities:	
Transfers from (to) restricted fund	(2,100,261)
Interest income received	10,332
Net cash provided by investing activities	(2,089,929)
Net increase (decrease) in cash	699,700
Unrestricted cash at beginning of the period	7,495,476
Unrestricted cash at end of period	8,195,176
Reconciliation of operating loss to net cash provided by operating activities:	
Operating Income (loss)	2,526,118
Adjustments to reconcile to net cash provided by operating activities:	
Depreciation expense	1,529,550
Other Expense/income	39,191
(Increase) decrease in assets:	
Accounts receivable	1,147,817
Materials and supplies inventory	(62,332)
Other Assets	(1,376)
Increase (decrease) in liabilities:	
Accounts payable, Contractors, Retention & Escrow Deposit	2,230,469
Accrued payroll	(453,295)
Customer deposits	(8,630)
Net cash provided by operating activities	6,947,511

Guam Waterworks Authority
Accounts Receivable - Government
October 31, 2016

SCHEDULE I

		AGING				
Customer Name	**No of Accounts**	**Current Balance**	**31-60 days**	**61-90 days**	**91-120 days**	**Over 120 days**	**Outstanding Bal.**
GUAM INT'L AIRPORT AUTHORITY	10	48,904	42,721	28,715	31,602	108,391	260,333
GUAM POWER AUTHORITY	21	35,340	85,513	285	62	-	121,201
PORT AUTHORITY OF GUAM	3	46,232	37,141	34,370	310	-	118,053
GUAM HOUSING & URBAN RENEWAL AUTHORITY	10	6,712	2,202	22	22	292	9,249
UNIVERSITY OF GUAM	3	6,416	-	-	-	-	6,416
GUAM MEMORIAL HOSPITAL AUTHORITY	2	2,898	3,107	-	-	-	6,005
GUAM HOUSING CORPORATION	1	92	-	-	-	-	92
							-
AUTONOMOUS AGENCIES	**50**	**146,594**	**170,685**	**63,392**	**31,995**	**108,682**	**521,348**
DEPT OF EDUCATION	47	296,229	14,569	683	2,120	206,577	520,178
DEPT OF PARKS & RECREATION	15	24,219	18,342	25,126	31,687	41,493	140,866
DEPT OF CORRECTIONS	8	82,119	3,253	18,850	-	10,305	114,527
DEPT OF PUBLIC HEALTH & SOCIAL SERVICES	4	1,242	1,392	663	514	103,749	107,560
DEPT OF CHAMORRO AFFAIRS	8	11,433	12,395	11,908	8,713	6,391	50,841
OFFICE OF CIVIL DEFENSE	1	30,296	-	-	-	-	30,296
MAYORS' COUNCIL OF GUAM	40	10,122	4,272	1,720	1,908	1,243	19,265
DEPT OF PUBLIC WORKS	10	4,098	510	275	40	4,600	9,522
OFFICE OF THE GOVERNOR	2	3,476	2,804	2,094	261	-	8,635
GUAM FIRE DEPARTMENT	9	5,659	2,143	413	-	-	8,215
DIVISON OF SENIOR CITIZENS, DPH&SS	2	1,937	290	61	-	-	2,288
DEPT OF AGRICULTURE	1	1,307	-	-	-	-	1,307
GUAM VETERANS AFFAIRS OFFICE	2	332	-	-	-	-	332
GHURA-AGAFU GUMAS PARK	1	28	28	34	31	-	121
GUAM PUBLIC LIBRARY	2	96	-	-	-	-	96
MERIZO MAYOR	1	66	23	-	-	-	89
GUAM SOLID WASTE AUTHORITY	2	75	-	-	-	-	75
DEPT OF YOUTH AFFAIRS	1	25	24	-	-	-	48
							-
LINE AGENCIES	**156**	**472,757**	**60,044**	**61,825**	**45,274**	**374,359**	**1,014,259**
TOTAL OCTOBER 31, 2016	**206**	**619,352**	**230,728**	**125,217**	**77,269**	**483,041**	**1,535,607**

GUAM WATERWORKS AUTHORITY
2010 Series Bond Project Status
As of Oct. 31, 2016

SCHEDULE J

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 10/31/16	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 10/31/16
Ground Water Disinfection	$ -	$ 500,000	$ 438,141	$ 61,859	$ 500,000	$ 0	$ 61,859
"A" Series Well Transmission Line	$ 600,000	$ 600,000	$ 469,130	$ 49,014	$ 518,144	$ 81,856	$ 130,870
Water Booster Pump Station	$ 500,000	$ 500,000	$ 418,844	$ 81,156	$ 500,000	$ (0)	$ 81,156
Meter Replacement Program	$ 2,500,000	$ 10,300,000	$ 10,253,886	$ 19,742	$ 10,273,628	$ 26,372	$ 46,114
Barrigada Tank Repair/Replacement	$ -	$ 5,450,000	$ 5,442,302	$ 7,698	$ 5,450,000	$ 0	$ 7,698
Leak Detection		$ 200,000	$ -	$ 200,000	$ 200,000	$ -	$ 200,000
Potable Water System Planning	$ 200,000	$ 200,000	$ 179,138	$ 20,862	$ 200,000	$ -	$ 20,862
Implement Ground Water Rule		$ 1,700,000	$ 1,444,088	$ 255,911	$ 1,700,000	$ 1	$ 255,912
Brigade II (Ugum Lift) BPS Upgrade	$ 1,200,000	$ 1,700,000	$ 83,395	$ 202,199	$ 285,595	$ 1,414,405	$ 1,616,605
Deep Well Rehabilitation	$ 548,000	$ 548,000	$ 548,000	$ -	$ 548,000	$ -	$ -
New Deep Wells at Down Hard	$ 3,773,000	$ 1,773,000	$ 451,649	$ -	$ 451,649	$ 1,321,351	$ 1,321,351
Rehabilitation of Asan Springs	$ 900,000	$ 900,000	$ 188,771	$ 152,068	$ 340,838	$ 559,162	$ 711,229
Master Meters	$ 1,600,000	$ 1,600,000	$ 1,421,267	$ 68,690	$ 1,489,957	$ 110,043	$ 178,733
Ugum Water Treatment Plant Intake	$ 3,670,000	$ 700,000	$ 543,382	$ 156,618	$ 700,000	$ -	$ 156,618
Water Wells	$ 2,000,000	$ -	$ -		$ -	$ -	$ -
Water Distribution System	$ 384,000	$ 3,200,000	$ 3,174,748	$ (68,298)	$ 3,106,451	$ 93,549	$ 25,252
Pressure Zone Realignment /	$ 3,550,000	$ -	$ -		$ -	$ -	$ -
Northern System Water Distribution	$ 2,725,000	$ -	$ -	$ -	$ -	$ -	$ -
Central Water Distribution System 2005	$ 1,200,000	$ 900,000	$ 578,684	$ 45,469	$ 624,152	$ 275,848	$ 321,316
Southern Water Distribution System	$ 1,800,000	$ -	$ -		$ -	$ -	$ -
Mechanical/Electrical Equipment	$ 1,360,000	$ 1,200,000	$ 1,079,495	$ 120,505	$ 1,200,000	$ (0)	$ 120,505
Water Reservoir Internal/External	$ 500,000	$ 2,000,000	$ 855,242	$ 584,234	$ 1,439,476	$ 560,524	$ 1,144,758
Water Reservoir Internal/External	$ 2,400,000	$ -	$ -		$ -	$ -	$ -
Water System Reservoirs 2005 Improvements	$ 11,697,000	$ 1,050,000	$ 1,050,749	$ (749)	$ 1,050,000	$ -	$ (749)
Distribution System Upgrades	$ 3,182,000	$ 500,000	$ 449,046	$ 25,114	$ 474,160	$ 25,840	$ 50,954
Ugum Water Treatment Plant Reservoir	$ 3,672,000	$ -	$ -		$ -	$ -	$ -
Water Audit Program & Water Loss Control Plan		$ 100,000	$ 15,031	$ 63,428	$ 78,459	$ 21,541	$ 84,970
Production Plan / Reduce Navy Purchases		$ 100,000	$ 94,286	$ 5,714	$ 100,000	$ -	$ 5,714
Hydraulic Asessment of Tank		$ 500,000	$ 461,260	$ 38,740	$ 500,000	$ -	$ 38,740
Agana Heights & Chaot Tanks		$ 4,700,000	$ 3,871,240	$ 828,760	$ 4,700,000	$ -	$ 828,760
Tank Major Repair Yigo#1 Mangilao#2 Agat#2		$ 2,400,000	$ 1,691,840	$ 156,174	$ 1,848,013	$ 551,987	$ 708,160
Tank Major Repair Yigo#1 Mangilao#2 Agat#2		$ -			$ -	$ -	$ -
Assessment of malojloj Elevetad & Yigo Elevated		$ 200,000	$ 180,098	$ 19,902	$ 200,000	$ -	$ 19,902
Public Water System Asser Inventory/Condition Assesment		$ 100,000	$ 95,171	$ 4,829	$ 100,000	$ -	$ 4,829
Public Water System GIS & Mapping		$ 50,000		$ 50,000	$ 50,000	$ -	$ 50,000
		$ -			$ -	$ -	$ -
Wastewater System Planning	$ 1,500,000	$ 1,500,000	$ 1,464,065	$ 9,935	$ 1,474,000	$ 26,000	$ 35,935
Wastewater Vehicles	$ 235,000	$ 235,000	$ 209,795	$ 25,205	$ 235,000	$ 0	$ 25,205
NDWWTP - Chlorine Tanks	$ 250,000	$ 250,000	$ 250,000	$ -	$ 250,000	$ -	$ -
Tumon Bay Sewer Upgrades	$ 100,000	$ -	$ -		$ -	$ -	$ -
Wastewater Collection System Repl/Rehab		$ 1,150,000	$ 704,859	$ 296,464	$ 1,001,323	$ 148,677	$ 445,141
Facilities Plan/Design for Baza Gardens WWTP	$ 1,250,000	$ 1,250,000	$ 1,133,433	$ 15,837	$ 1,149,269	$ 100,731	$ 116,567
Facilities Plan/Design for Agat-Santa Rita WWTP	$ 900,000	$ 900,000	$ 871,040	$ 28,590	$ 899,630	$ 370	$ 28,960
Priority 1 Sewer Upgrades – Baza Gardens WWTP	$ 650,000	$ -	$ -		$ -	$ -	$ -
Baza Gardens STP Replacement	$ 3,567,000	$ 317,000	$ 149,958	$ 167,042	$ 317,000	$ -	$ 167,042
Facilities Plan/Design for Umatac Merizo WWTP		$ 900,000	$ 185,037	$ 485,754	$ 670,791	$ 229,209	$ 714,963
Agat/Santa Rita STP Replacement	$ 2,968,000	$ 2,218,000	$ 2,212,537	$ 3,441	$ 2,215,978	$ 2,022	$ 5,463
Northern District WWTP Primary Treatment Upgrades	$ -	$ 11,750,000	$ 11,362,272	$ 212,328	$ 11,574,600	$ 175,400	$ 387,728
Biosolids Management Plan		$ 200,000	$ 142,119	$ 57,881	$ 200,000	$ -	$ 57,881
Agana WWTP Interim Measures	$ -	$ 11,500,000	$ 11,236,182	$ 263,818	$ 11,500,000	$ -	$ 263,818
I&I SSES Southern		$ 800,000	$ 444,004	$ 355,997	$ 800,000	$ (0)	$ 355,996
I&I SSES Central		$ 850,000	$ 794,325	$ 55,675	$ 850,000	$ -	$ 55,675
I&I SSES Northern		$ -			$ -	$ -	$ -
Umatac Merizo Replacement		$ 250,000	$ 247,431	$ 2,569	$ 250,000	$ -	$ 2,569
Well Electrical Protection	$ 26,000	$ -	$ -		$ -	$ -	$ -
SCADA Pilot Project	$ 300,000	$ 70,000	$ 19,812	$ 42,138	$ 61,950	$ 8,050	$ 50,188
Electrical Upgrade - Water Wells	$ 3,000,000	$ 450,000	$ 335,378	$ 18,849	$ 354,227	$ 95,773	$ 114,622
Electrical Upgrade - Water Booster	$ 325,000	$ -	$ -		$ -	$ -	$ -
Electrical Upgrade -Water Booster	$ 350,000	$ -	$ -		$ -	$ -	$ -
Electrical Upgrade - Other Water	$ 250,000	$ -			$ -	$ -	$ -
SCADA Improvements – Phase 1	$ 250,000	$ 250,000	$ 193,953	$ 56,047	$ 250,000	$ -	$ 56,047
SCADA Improvements – Phase 2	$ 1,100,000	$ 1,100,000	$ 1,027,388	$ 29,598	$ 1,056,986	$ 43,014	$ 72,612
SCADA Improvements – Phase 3	$ 2,500,000	$ 50,000	$ 24,956	$ -	$ 24,956	$ 25,044	$ 25,044
SCADA Improvements – Phase 4	$ 850,000	$ -	$ -		$ -	$ -	$ -
Laboratory Modernization	$ 1,200,000	$ -	$ -		$ -	$ -	$ -
Land Survey	$ 1,500,000	$ 500,000	$ 360,532	$ 46,125	$ 406,657	$ 93,343	$ 139,468
General Plant Improvements / Water	$ 14,370,000	$ 7,241,000	$ 7,241,000	$ 0	$ 7,241,000	$ 0	$ 0
Interest Earned							$ 30,244
Total Construction Fund	**$ 87,402,000**	**$ 87,402,000**	**$ 76,088,954**	**$ 5,322,933**	**$ 81,411,887**	**$ 5,990,113**	**$ 11,343,290**

1.) PUC's Docket 11-01 $29,000,000.00 dated
09/19/11authorized GWA for reallocation
2) PUC's Docket 11-01 Reallocation of $23,246,000.00 dated 07/30/12
3) PUC's Dockect Reallocation dated February 2013

GUAM WATERWORKS AUTHORITY
2013 Series Bond Project Status
As of Oct. 31, 2016

SCHEDULE K

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 10/31/16	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 10/31/16
Santa Rita Springs Booster Pump Rehab Phase II	$ 100,000	$ 100,000			$ -	$ 100,000	$ 100,000
"A" Series Well Transmission Line	$ 400,000	$ 400,000	314,479	55,367	$ 369,846	$ 30,154	$ 85,521
Water Booster Pump Station	$ 6,000,000	$ 1,861,000	1,439,426	62,340	$ 1,501,765	$ 359,235	$ 4,560,574
Meter Replacement Program		$ 999,000	996,532	-	$ 996,532	$ 2,468	$ 503,468
Barrigada Tank Repair/Replacement	$ 6,000,000	$ 4,987,000	4,924,959	62,041	$ 4,987,000	$ 0	$ 1,075,041
Leak Detection	$ 100,000	$ 20,000	16,916	-	$ 16,916	$ 3,084	$ 83,084
Potable Water System Planning	$ 800,000	$ 624,000	597,797	26,203	$ 624,000	$ -	$ 602,203
Implement Ground Water Rule	$ 1,000,000	$ 1,000,000	1,000,000	-	$ 1,000,000	$ 0	$ -
Deep Well Rehabilitation	$ 800,000	$ 550,000	189,525	10,475	$ 200,000	$ 350,000	$ 610,475
New Deep Wells at Down Hard	$ 2,000,000	$ 810,000			$ -	$ 810,000	$ 2,000,000
Master Meters	$ 4,000,000	$ 884,000	481,188	230,872	$ 712,060	$ 171,940	$ 3,518,812
Ugum Water Treatment Plant Intake	$ 1,000,000	$ 982,000	572,475	287,326	$ 859,801	$ 122,199	$ 427,525
Water Wells	$ 4,200,000	$ 4,200,000	1,201,647	974,974	$ 2,176,621	$ 2,023,379	$ 2,998,353
Water Distribution System	$ 12,000,000	$ 12,451,000	2,357,766	6,447,594	$ 8,805,360	$ 3,645,640	$ 11,642,234
Pressure Zone Realignment /	$ 1,000,000	$ 431,000	321,145	1,580	$ 322,725	$ 108,275	$ 678,855
Mechanical/Electrical Equipment	$ 430,000	$ 430,000	328,686	98,112	$ 426,798	$ 3,202	$ 101,314
Water Reservoir Internal/External	$ 800,000	$ -			$ -	$ -	$ 800,000
Water System Reservoirs 2005 Improvements	$ 21,000,000	$ 13,878,000	3,233,912	4,472,855	$ 7,706,768	$ 6,171,233	$ 14,766,088
Ugum Water Treatment Plant Reservoir	$ 7,000,000	$ 90,000			$ -	$ 90,000	$ 7,000,000
Agana Heights & Chaot Tanks	$ 4,500,000	$ 3,280,000	232,227	47,022	$ 279,250	$ 3,000,750	$ 4,267,773
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 13,500,000	$ 11,605,000	93,867	1,467,837	$ 1,561,703	$ 10,043,297	$ 13,406,134
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 8,000,000	$ -			$ -	$ -	$ 8,000,000
Assessment of maloiloi Elevetad & Yigo Elevated	$ 500,000	$ 500,000	67,369	417,748	$ 485,117	$ 14,883	$ 432,631
Fire Hydrant Replacement Program	$ -	$ -			$ -	$ -	$ 1,000,000
		$ -					
Wastewater System Planning	$ 800,000	$ 651,000	469,642	181,359	$ 651,000	$ (0)	$ 330,358
Lift Station Upgrades	$ 5,000,000	$ 946,000	469,473	57,948	$ 527,421	$ 418,579	$ 1,530,527
Wastewater Collection System Repl/Rehab	$ 6,500,000	$ 880,000	67,156	374,591	$ 441,748	$ 438,253	$ 3,732,844
Baza Gardens STP Replacement		$ 1,000,000	887,851	112,149	$ 1,000,000	$ 0	$ 112,149
Facilities Plan/Design for Umatac-Merizo WWTP		$ 473,000	318,327	3,703	$ 322,030	$ 150,970	$ 681,673
Agat/Santa Rita STP Replacement	$ 19,000,000	$ 67,200,000	8,853,227	58,037,374	$ 66,890,601	$ 309,399	$ 10,146,773
Agana WWTP Interim Measures		$ 673,000	402,679	270,321	$ 673,000	$ (0)	$ 1,097,321
Umatac Merizo Replacement	$ 2,000,000	$ -			$ -	$ -	$ 1,000,000
		$ -					
Wastewater Pump Station Electrical Upgrade	$ 620,000	$ 620,000	91,146	8,854	$ 100,000	$ 520,000	$ 528,854
Electrical Upgrade - Water Wells	$ 1,500,000	$ 1,500,000	1,222,099	277,900	$ 1,500,000	$ 0	$ 277,901
Electrical Upgrade - Water Booster	$ 325,000	$ 2,000			$ -	$ 2,000	$ 325,000
Electrical Upgrade -Water Booster	$ 350,000	$ 350,000	977	-	$ 977	$ 349,023	$ 349,023
Electrical Upgrade - Other Water	$ 250,000	$ 250,000	60,700	-	$ 60,700	$ 189,300	$ 189,300
SCADA Improvements – Phase 3	$ 1,850,000	$ 923,000	313,731	408,628	$ 722,359	$ 200,641	$ 1,536,269
SCADA Improvements – Phase 4	$ 500,000	$ -			$ -	$ -	$ 1,200,000
		$ -					
Laboratory Modernization	$ 1,500,000	$ 1,173,000	249,850	921,615	$ 1,171,465	$ 1,535	$ 1,250,150
Land Survey	$ 2,000,000	$ 2,000		2,000	$ 2,000	$ (0)	$ 2,000,000
General Plant Improvements / Water	$ 2,000,000	$ 2,600,000	1,093,026	1,482,361	$ 2,575,387	$ 24,613	$ 1,506,974
Allowance for COI							$ 275,005
Interest Earned							$ 38,358
Total Construction Fund	**$ 139,325,000**	**$ 139,325,000**	**$ 32,869,801**	**$ 76,801,149**	**$ 109,670,950**	**$ 29,654,050**	**$ 106,768,562**

PUC's Docket 14-04 dated February 25, 2014

GUAM WATERWORKS AUTHORITY
2014 Series Refunded Bond Project Status
As of Oct. 31, 2016

SCHEDULE L

PROJECT NAME	ORIGINAL APPROVED PROJECT	ADJUSTED PROJECT COST	EXPENDITURES AS OF 10/31/16	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	20% PUC AS OF 10/31/16	Construction fund balance AS OF 10/31/16
Agana Treatment Plant	$ 10,475,000	$ 11,065,512	11,065,512	$ -	$ 11,065,512	$ (0)	$ 2,095,000	$ (0)
								$ -
Agana Outfall	$ 5,030,000	$ 10,127,198	10,127,198	$ -	$ 10,127,198	$ 0	$ 1,006,000	$ 0
								$ -
								$ -
Northern District (Outfall)	$ 4,700,000	$ 10,251,423	10,251,423	$ -	$ 10,251,423	$ 0	$ 940,000	$ 0
Northern District WWTP Upgrade		$ 173,681	173,681		$ 173,681	$ -		$ -
Northern Treatment Plant		$ -	-		$ -	$ -		$ -
Baza Gardens Wastewater Treatment Plant	$ 500,000	$ 297,177	297,177	$ -	$ 297,177	$ (0)	$ 100,000	$ (0)
Interim Disinfection Facilities	$ 581,000	$ 3,437,311	3,408,599	$ 28,712	$ 3,437,311	$ (0)	$ 116,200	$ 28,712
						$ -		$ -
Electrical Protection	$ 1,000,000	$ 1,512,483	1,512,483.3	$ -	$ 1,512,483	$ (0)	$ 200,000	$ (0)
Well Vulnerability Reduction	$ 600,000	$ 185,522	185,522	$ -	$ 185,522	$ 0	$ 120,000	$ 0
Old Agat Wastewater Collection (I/I Reductic	$ 2,155,000	$ 1,931,659	1,931,659	$ -	$ 1,931,659	$ (0)	$ 431,000	$ (0)
				$ -		$ -		$ -
Chaot WW Pump Station/Collection System	$ 410,000	$ 399,120	399,120	**$ -**	$ 399,120	$ -	$ 82,000	$ -
Lift Station Upgrades	$ 230,000	$ 149,895	149,895	$ -	$ 149,895	$ 0	$ 46,000	$ 0
Collection Line Upgrades	$ 200,000	$ 62,755	62,755	$ -	$ 62,755	$ 0	$ 40,000	$ 0
"A" Well Transmission Line	$ 2,413,000	$ 3,833,175	3,790,888	$ 42,287	$ 3,833,175	$ (0)	$ 482,600	$ 42,287
					$ -	$ -		$ -
Santa Rita Springs - Booster Pump Rehab.	$ 648,000	$ 306,841	306,841	-	$ 306,841	$ (0)	$ 129,600	$ (0)
						$ -	$ -	$ -
Fena Bypass Transmission line		$ 160,913	160,913	$ -	$ 160,913	$ (0)	$ -	$ (0)
Storage Additions	$ 950,000	$ -			$ -	$ -	$ 190,000	$ -
Booster Station Upgrades	$ 390,000	$ 66,734	66,734	$ -	$ 66,734	$ -	$ 78,000	$ -
Mangilao Tank Repair	$ 800,000	$ 398,367	397,933	$ 434	$ 398,367	$ (0)	$ 160,000	$ 434
Ugum Tank Replacement	$ 2,500,000	$ -			$ -	$ -	$ 500,000	$ -
Ugum WTPlant Refurbishment ($1.724,970EPA)		$ 6,588,473	6,531,525	$ 56,949	$ 6,588,473	$ (0)		$ 56,948
Barrigada Tank Repair/Replacement	$ 3,000,000	$ 65,019	65,019	$ -	$ 65,019	$ 0	$ 600,000	$ 0
						$ -		$ -
Water Reservoir Condition Assessment		$ 1,250,000	1,207,250.62	$ 42,749	$ 1,250,000	$ 0	$ -	$ 42,749
EarthTech Well Buyout	$ 5,000,000	$ 5,975,000	5,975,000	$ -	$ 5,975,000	$ -	$ 1,000,000	$ -
Water Wastewater Master Plan	$ 4,900,000	$ 4,881,308	4,881,308	$ -	$ 4,881,308	$ 0	$ 980,000	$ 0
Laboratory Modernization	$ 800,000	$ 135,055	135,055	$ -	$ 135,055	$ 0	$ 160,000	$ 0
Land Survey	$ 800,000	$ 577,836	556,037	$ 21,799	$ 577,836	$ 0	$ 160,000	$ 21,799
Ground Water Disinfection		$ -				$ -		$ -
GWUDI Study		$ 262,234	260,430	1,804	$ 262,234	$ -		$ 1,804
						$ -		$ -
Contingency	$ 12,276,023	$ 154	-	$ -	$ -	$ -		$ 732
						$ -		$ -
						$ -		$ -
						$ -		$ -
						$ -		$ -
						$ -		$ -
Vehicles	$ 1,100,000	$ 1,280,000	2,130,305	$ (850,305)	$ 1,280,000	$ -	$ 220,000	$ -
Generation Equipment	$ 700,000	$ 880,000	2,712	$ 877,288	$ 880,000	$ 0		$ 27,033
Leak Detection/Line Replacement	$ 8,200,000	$ 5,988,494	5,988,494	$ -	$ 5,988,494	$ -	$ 1,640,000	$ -
						$ -		$ -
						$ -		$ -
Automated Meter Reading	$ 12,572,063	$ 17,468,359	16,870,522	$ 537,157	$ 17,468,359.32	$ 0	$ 2,514,413	$ 597,837
	$ 6,781,612							
		$ (0)				$ (0)		
Total Construction Fund	$ 89,711,698	$ 89,711,698	$ 88,891,990	$ 758,873	$ 89,711,543	$ 1	$ 13,990,813	$ 820,336
Interest Earned								$ 214
Total Project Cost Funding	**$ 89,711,698**	**$ 89,711,698**	**88,891,990**	**$ 758,873.38**	**$ 89,711,543**	**$ 1**	**$ 13,990,813**	**$ 820,550**

GUAM WATERWORKS AUTHORITY
2016 Series Bond Project Status
As of Oct. 31, 2016

SCHEDULE M

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	EXPENDITURES AS OF 10/31/16	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 10/31/16
Water Booster Pump Station	$ 4,139,000			$ -	$ 4,139,000	$ 4,139,000
Meter Replacement Program	$ 4,501,000			$ -	$ 4,501,000	$ 4,501,000
Barrigada Tank Repair/Replacement	$ 1,013,000			$ -	$ 1,013,000	$ 1,013,000
Leak Detection	$ 1,180,000			$ -	$ 1,180,000	$ 1,180,000
Potable Water System Planning	$ 2,276,000		126,294	$ 126,294	$ 2,149,706	$ 2,276,000
Deep Well Rehabilitation	$ 250,000			$ -	$ 250,000	$ 250,000
New Deep Wells at Down Hard	$ 1,190,000			$ -	$ 1,190,000	$ 1,190,000
Master Meters	$ 3,616,000			$ -	$ 3,616,000	$ 3,616,000
Ugum Water Treatment Plant Intake	$ 18,000			$ -	$ 18,000	$ 18,000
Water Wells	$ 2,500,000			$ -	$ 2,500,000	$ 2,500,000
Water Distribution System	$ 2,049,000			$ -	$ 2,049,000	$ 2,049,000
Pressure Zone Realignment /	$ 1,141,000			$ -	$ 1,141,000	$ 1,141,000
Mechanical/Electrical Equipment	$ 100,000			$ -	$ 100,000	$ 100,000
Water Reservoir Internal/External	$ 800,000			$ -	$ 800,000	$ 800,000
Water System Reservoirs 2005 Improvements	$ 42,350,000			$ -	$ 42,350,000	$ 42,350,000
Ugum Water Treatment Plant Reservoir	$ 6,410,000			$ -	$ 6,410,000	$ 6,410,000
Water Audit Program & Water Loss Control Plan	$ 1,000,000				$ 1,000,000	$ 1,000,000
Agana Heights & Chaot Tanks	$ 1,220,000			$ -	$ 1,220,000	$ 1,220,000
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 1,895,000			$ -	$ 1,895,000	$ 1,895,000
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 10,500,000			$ -	$ 10,500,000	$ 10,500,000
Fire Hydrant Replacement Program	$ 2,000,000			$ -	$ 2,000,000	$ 2,000,000
Wastewater System Planning	$ 349,000			$ -	$ 349,000	$ 349,000
Lift Station Upgrades	$ 2,404,000			$ -	$ 2,404,000	$ 2,404,000
Wastewater Collection System Repl/Rehab	$ 2,920,000			$ -	$ 2,920,000	$ 2,920,000
Baza Gardens STP Replacement	$ 16,700,000	1,420,223	510,030	$ 1,930,253	$ 14,769,747	$ 15,279,777
Facilities Plan/Design for Umatac-Merizo WWTP	$ 527,000			$ -	$ 527,000	$ 527,000
Agat/Santa Rita STP Replacement	$ 3,000,000			$ -	$ 3,000,000	$ 3,000,000
Agana WWTP Interim Measures	$ 827,000			$ -	$ 827,000	$ 827,000
Umatac Merizo Replacement	$ 8,000,000			$ -	$ 8,000,000	$ 8,000,000
Wastewater Pump Station Electrical Upgrade	$ 100,000			$ -	$ 100,000	$ 100,000
Electrical Upgrade - Water Wells	$ 650,000			$ -	$ 650,000	$ 650,000
Electrical Upgrade - Water Booster	$ 323,000			$ -	$ 323,000	$ 323,000
SCADA Improvements – Phase 3	$ 1,177,000			$ -	$ 1,177,000	$ 1,177,000
SCADA Improvements – Phase 4	$ 6,500,000			$ -	$ 6,500,000	$ 6,500,000
Laboratory Modernization	$ 1,127,000		1,127,000	$ 1,127,000	$ -	$ 1,127,000
Land Survey	$ 1,998,000		107,000	$ 107,000	$ 1,891,000	$ 1,998,000
General Plant Improvements / Water	$ 2,769,463		474,437	$ 474,437	$ 2,295,026	$ 2,769,463
Information Technology Integration Improvements	$ 500,000				$ 500,000	$ 500,000
Interest Earned						$ 9,707
Total Construction Fund	**$ 140,019,463**	**$ 1,420,223**	**$ 2,344,761**	**$ 3,764,984**	**$ 136,254,479**	**$ 138,608,947**

GUAM WATERWORKS AUTHORITY
Schedule of Series 2010, 2013, 2014 Refunding and 2016 Bond Bank Accounts
As of October 31, 2016

SCHEDULE N

	10/31/2016
BANK OF GUAM	
BOG - Revenue Account - Acct. no. 71-00-4000-3-02	9,134,102
BOG - Operations and Maintenance Reserve - Acct. no. 71-01-4000-3-02	3,083,482
BOG - Operations, Maintenance, Renewal and Replacement Reserve Fund - Acct. no. 71-03-4000-3-02	17,423,213
BOG - Capital Improvement Fund - Acct. no. 71-05-4000-3-02	3,952
BOG - O & M Reserve - Acct. no. 71-05-4001-3-02	4,050,416
BOG - Debt Service Reserve - Acct. no. 71-05-4002-3-02	11,185,793
BOG - CAPEX Reserve - Acct. no. 71-05-4003-3-02	8,710,654
Total BOG Bank Account Balance	**53,591,611**
Series 2010 Bond:	
BOG - Construction Account - Acct. no. 71-09-4000-3-02	11,343,290
USB - Debt Service Fund - Acct. no. 144541000	2,688,547
USB - Debt Service Reserve Fund - Acct. no. 210860001	7,566,460
Total Series 2010 Bond Bank Balance	**21,598,297**
Series 2013 Bond:	
BOG - Construction Fund - Acct. no. 71-13-4000-3-02	106,768,562
BOG - Capitalized Interest Fund - Acct. no. 71-12-4000-3-02	-
USB - Debt Service Fund - Acct no. 207339000	3,110,723
USB - Debt Service Reserve Fund - Acct no. 210860001	12,031,688
Total Series 2013 Bond Bank Balance	**121,910,973**
Series 2014 Refunding Bond:	
BOG - Construction Fund - Acct. no. 71-08-4000-3-02	820,549
USB - Debt Service Fund - Acct. no. 210860000	2,388,350
USB - Debt Service Reserve Fund - Acct. no. 210860001	7,707,602
Total Series 2014 Refunding Bond Bank Balance	**10,916,501**
Series 2016 Bond:	
BOG - Construction Account - Acct. no. 71-15-4000-3-02	138,608,947
BOG - Capitalized Interest Fund - Acct. no. 71-15-4001-3-02	8,937,684
BOG - Cost of Issuance Fund - Acct. no. 71-15-4002-3-02	-
USB - Debt Service Fund - Acct. no. 264990000	-
USB - Debt Service Reserve Fund - Acct. no. 264990001	7,582,725
Total Series 2016 Bond Bank Balance	**155,129,355**

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 03-FY2017
Relative to Ratification of the Services Provided by Hawaiian Rock Products for the Repair and Maintenance of Water Lines Island-wide for an Amended Purchase Order Amount to Issue

What is the project's objective and is it necessary and urgent?
This project is related to the repair and maintenance of water lines. This project requires base course and bedding sand which is necessary for backfilling and compaction around the pipe and above it.

Where is the location?
Water line repairs located island-wide.

How much will it cost?
Existing purchase order no. 298400 is in the amount of $10,872.00.

Purchase order amendment will cost $1,399.60.

Invoices that exceeded PO amount:

Invoice No.	Amount	Balance to Pay
249714	$486.69	$486.69
250309	$463.82	$463.82
251058	$266.74	$266.74
251063	$182.35	$182.35
Total		**$1,399.60**

When will it be completed?
Materials provided in August 2015 and September 2015.

What is the funding source?
GL 5221.62005.417 O&M FY2015

Funding Source	O&M	Approved Amount
GL 5221.62005.417	2015	$10,872.00
GL 5221.62005.417	2015	$1,399.60
Total Funding		$12,271.60

The RFP/BID responses (if applicable):
N/A

GUAM CONSOLIDATED COMMISSION ON UTILITIES
RESOLUTION NO. 03-FY2017

RELATIVE TO RATIFICATION OF THE SERVICES PROVIDED BY HAWAIIAN ROCK PRODUCTS FOR THE REPAIR AND MAINTENANCE OF WATER LINES ISLAND-WIDE FOR AN AMENDED PURCHASE ORDER AMOUNT TO ISSUE

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, the Consolidated Commission on Utilities under Section 5452 of Title 5 of the Guam Code Annotated has the authority to ratify the procurement of goods and services if there is no indication that the company who was awarded the procurement acted in bad faith and there is a finding that the procurement is for GWA's use and is in the best interest of the Territory of Guam; and

WHEREAS, GWA Management entered into purchase order no. 298400 with Hawaiian Rock Products on August 13, 2015 for base course and bedding sand to be used for the repair and maintenance of water lines island-wide; and

WHEREAS, during this period, purchase order no. 298400 exceeded the amount of Ten Thousand Eight Hundred Seventy Two Dollars ($10,872.00) (see Exhibit A) by One Thousand Three Hundred Ninety Nine Dollars and Sixty Cents ($1,399.60); and

WHEREAS, the Consolidated Commission on Utilities under Section 5452 of Title 5 of the Guam Code Annotated has the authority to ratify the procurement of goods and services if there is no indication that the person who was awarded the procurement acted in bad faith and there is a finding that the procurement is for GWA's use and is in the best interest of the people of Guam and GWA management is now seeking ratification from the CCU for the work.

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve and authorize the following:

Section 1. The foregoing recitals hereto are hereby ratified, confirmed, and incorporated herein by reference.

Section 2. The Consolidated Commission on Utilities hereby ratifies and approves the payment be made to Hawaiian Rock Products for purchase order number 298400 (Exhibit A) in the amended amount of One Thousand Three Hundred Ninety Nine Dollars and Sixty Cents ($1,399.60) on the following grounds:

a. There was no indication of bad faith or fraud in any of the procurements contained herein.

b. According to GWA management, the material is required for the ongoing repair and maintenance of water lines. Material is used for backfilling and compaction around the pipe and above it.

c. All of the procurements herein are in the best interest of the Territory of Guam and the Guam Waterworks Authority.

d. Only a reasonable profit was given in those instances where the profit was given.

Section 3. This Resolution is hereby determined to be a declaration of official intent of the Consolidated Commission on Utilities.

Section 4. All actions heretofore taken by the GWA or the officers thereof or on their behalf not inconsistent herewith related to these purchases are hereby ratified, approved, and confirmed.

Section 5. Based on the forgoing, the CCU authorizes GWA management to pay the amended amount owed between GWA and Hawaiian Rock Products in the total amount due of One Thousand Three Hundred Ninety Nine Dollars and Sixty Cents ($1,399.60).

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

DULY AND REGULARLY ADOPTED, this 22nd day of November, 2016.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS **J. GEORGE BAMBA**
Chairperson Secretary

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities, as evidenced by my signature above do hereby certify as follows:

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

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

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EXHIBIT A

GUAM WATERWORKS AUTHORITY

1 : Page
5220: B/U
08/13/15: Date
FOB GWA: F.O.B.

PURCHASE ORDER
GUAM WATERWORKS AUTHORITY

P.O. Box 3010, Hagatna, Guam 96932
PHONE: (671) 647-7818 FAX: (671) 649-3750

No. 298400-000 OP

THIS PURCHASE ORDER MUST APPEAR ON ALL INVOICES PACKING SLIPS, PACKAGES, B/L CORRESPONDENCE, ETC.

Payment Terms: Net 30 Days

VENDOR:

HAWAIIAN ROCK PRODUCTS
1402 ROUTE 15
MANGILAO GU 96913

SHIP TO:

GUAM WATERWORKS AUTHORITY
578 N. Marine Corps. Dr.
ATTENTION: P & S WAREHOUSE
Tamuning GU 96913

AUTHORITY	IFB / REFERENCE	TIME FOR DELIVERY	EXPIRATION
PL 16-124 / PL 21-148			09/30/2015

ARTICLES OR SERVICES	QTY	UNIT	UNIT PRICE	UNIT	AMOUNT
COURSE *** NOTE: TO BE PICKED UP BY GWA DUMP TRUCK OR APPROVED HEAVY EQUIPMENT. *** FOR: WATER/PRESSURE/F. SANCHEZ GPP: 3-204.03.1 DELIVERY: AS NEEDED G.L:5220.62005.417 OQ# 26220 / OR# 26268 PETER					
2" MINUS AGGREGRATED BASE SAND 3/8"	400	TN	20.79	TN	8,316.00
BEDDING SAND/MANFACTURED	100	TN	25.56	TN	2,556.00

NOTE:"SUBJECT TO THE GUAM PROCUREMENT CODE AND ACCOMPANYING REGULATIONS"

SPECIAL INSTRUCTIONS TO VENDOR:
Send certified original and three (3) copies of invoice to Guam Waterworks Authority, Government of Guam, at the address shown above.

Payment upon receipt of marchandise in Guam in good condition.

SEE BACK FOR TERMS AND CONDITIONS

DO NOT FILL THIS ORDER if your total cost exceeds this total. >>

TOTAL $ 10,872.00

ACKNOWLEDGED BY: _____ DATE: _____
SIGNATURE OF VENDOR

RETURN TO PROCUREMENT DIVISION AT THE ABOVE ADDRESS

SIGNATURE:

Mark G. Miller - General Manager, Interim
NAME TITLE

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 06-FY2017
Relative to the Ratification of Work Provided by Allied Pacific Drilling, Inc. on GWA's deep wells for an amended Purchase Order Amount to Issue.

What is the project's objective and is it necessary and urgent?
To cover the contractor's cost for labor, materials and equipment utilized in order to airlift/bail settlements found after GWA's deep well maintenance crew extracts wells piping network, pump and motor. Rust settlements must be removed in order to complete well repair and restore well back in service.

Where is the location?
Guam Waterworks Authority's various deep well facilities.

How much will it cost?
Purchase order amendment will cost **$7,888.50**

Invoice Nos	Amount	Paid Amount	Balance to Pay
D12-0113	$8,550.00	$5,000.00	$3,550.00
D12-0119	$19,337.50	$14,999.00	$4,338.50
Total	**$27,887.50**	**$19,999.00**	**$7,888.50**

When will it be completed?
Contractual services has been completed on January 16, 2016 & May 24, 2016.

What is the funding source?
Water Division's Budget G/L Account no: 6812.950.34011 (Equipment Rental)

Funding Source	Water Division	Approved Amount
G/L Account no. 6812.950.34011	FY2016	$3,550.00
G/L Account no. 6812.950.34011	FY2016	$4,338.50
Total Funding		**$7,888.50**

The RFP/BID responses (if applicable):
N/A

GUAM CONSOLIDATED COMMISSION ON UTILITIES
RESOLUTION NO. 06-FY2017

RELATIVE TO RATIFICATION OF WORK PROVIDED BY ALLIED PACIFIC DRILLING, INC. ON GWA'S DEEP WELLS FOR AN AMENDED PURCHASE ORDER AMOUNT TO ISSUE

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, the Consolidated Commission on Utilities under Section 5452 of Title 5 of the Guam Code Annotated has the authority to ratify the procurement of goods and services if there is no indication that the company who was awarded the procurement acted in bad faith and there is a finding that the procurement is for GWA's use and is in the best interest of the Territory of Guam; and

WHEREAS, GWA Management entered into two (2) purchase orders with Allied Pacific Drilling, Inc. - purchase order no. 298647 was on October 22, 2015 and purchase order no. 299090 was on February 26, 2016 for work provided on GWA's deep well facilities; and

WHEREAS, during this period, purchase order no. 298647 exceeded the amount of Eight Thousand Five Hundred Fifty Dollars ($8,550.00) (see Exhibit A) by Three Thousand Five Hundred Fifty Dollars ($3,550.00); and purchase order no. 299090 exceeded the amount of Nineteen Thousand Three Hundred Thirty Seven Dollars and Fifty Cents ($19,337.50) (See Exhibit B) by Four Thousand Three Hundred Thirty Eight Dollars and Fifty Cents ($4,338.50); and

WHEREAS, the Consolidated Commission on Utilities under Section 5452 of Title 5 of the Guam Code Annotated has the authority to ratify the procurement of goods and services if there is no indication that the person who was awarded the procurement acted in bad faith

and there is a finding that the procurement is for GWA's use and is in the best interest of the people of Guam and GWA management is now seeking ratification from the CCU for the work.

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve and authorize the following:

Section 1. The foregoing recitals hereto are hereby ratified, confirmed, and incorporated herein by reference.

Section 2. The Consolidated Commission on Utilities hereby ratifies and approves payment be made to Allied Pacific Drilling, Inc. for purchase order number 298647 (Exhibit A) in the amount of Three Thousand Five Hundred Fifty Dollars ($3,550.00) and purchase order number 299090 (Exhibit B) in the amount of Four Thousand Three Hundred Thirty Eight Dollars and Fifty Cents ($4,338.50) on the following grounds:

a. There was no indication of bad faith or fraud in any of the procurements contained herein.

b. According to GWA management, the work conducted by Allied Pacific Drilling, Inc. was necessary to complete the repairs and restore the wells back in operation.

c. All of the procurements herein are in the best interest of the Territory of Guam and the Guam Waterworks Authority.

d. Only a reasonable profit was given in those instances where the profit was given.

Section 3. This Resolution is hereby determined to be a declaration of official intent of the Consolidated Commission on Utilities.

Section 4. All actions heretofore taken by the GWA or the officers thereof or on their behalf not inconsistent herewith related to these purchases are hereby ratified, approved, and confirmed.

Section 5. Based on the forgoing, the CCU authorizes GWA management to pay the amended amount owed between GWA and Allied Pacific Drilling, Inc. in the total amount due of Seven Thousand Eight Hundred Eighty Eight Dollars and Fifty Cents ($7,888.50).

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

DULY AND REGULARLY ADOPTED, this 22nd day of November, 2016.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS **J. GEORGE BAMBA**
Chairperson Secretary

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities, as evidenced by my signature above do hereby certify as follows:

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

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

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EXHIBIT A

ALL PURCHASE ORDERS FROM THE GUAM WATERWORKS AUTHORITY ARE SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS.

1. In the shipments are connected with a bid or RFP issued by GWA, this purchase order shall be governed by the Terms and Conditions of the bid or RFP as well as the Guam Procurement Law and the Guam Procurement Regulations

2. An acknowledged and dated copy of this purchase order must be returned to GWA.

3. GWA will only be responsible for the total amount indicated in this Purchase Order and any amount in excess of that amount will not be paid by GWA.

4. All invoices (original/s and duplicate/s) must be forwarded to Accounts Payable Department of the Guam Waterworks Authority. These invoices must be properly endorsed or signed by authorized GWA personnel as indicated in the Purchase Order. And invoices should be provided to GWA within the month in which the purchases and/or services were rendered.

5. All vendors with an outstanding unpaid invoice at the end of the month after the goods or services were rendered must provide monthly vendor statements to the Accounts Payable Supervisor at GWA.

6. No variation in any of the terms, conditions, delivery dates, prices, quality, quantity or specifications under this order, regardless of the conditions or terms of the seller's acceptance, will be effective without the written consent of a person specifically authorized by GWA to make such changes.

7. Packing lists must accompany each shipment which indicate the order number and a detailed description and goods or services provided, including, but not limited to, the part number and serial number for each item delivered.

8. Shipments must be identified as either "PARTIAL" or "COMPLETE."

9. All goods delivered are subject to GWA's inspection and acceptance within a reasonable time after delivery. If the specifications are not met and are rejected by GWA, the goods shall be returned at the seller's expense.

10. In connection with any prompt payment discount offered the time will computed from date of delivery and acceptance at destination or from the date the correct invoice or voucher is received in by the Guam Waterworks Authority, if the latter is later than date of delivery and acceptance. Payment is deemed to be made, for the purpose of earning any discount on the date the check is mailed.

11. Shipments in excess of the amount stated in the order will not be accepted unless specifically approved by a GWA official authorized to make such changes.

GUAM WATERWORKS AUTHORITY

1 : Page
6812 : B/U
10/22/15 : Date
: F.O.B.

PURCHASE ORDER
GUAM WATERWORKS AUTHORITY

P.O. Box 3010, Hagatna, Guam 96932
PHONE: (671) 647-7818 FAX: (671) 649-3750

No. 298647

THIS PURCHASE ORDER MUST APPEAR ON ALL INVOICES PACKING SLIPS, PACKAGES, B/L CORRESPONDENCE, ETC.

Payment Terms: NET 30 DAYS

VENDOR:

ALLIED PACIFIC DRILLING INC.
P.O. BOX 3411
HAGATNA, GUAM 96932

SHIP TO:

GUAM WATEWORKS AUTHORITY
578. N. MARINE CORPS. DR.
ATTENTION: P&S WAREHOUSE

AUTHORITY	IFB / REFERENCE	TIME FOR DELIVERY	EXPIRATION
PL 16-124 / PL 21-148			09/30/2016

ARTICLES OR SERVICES	QTY	UNIT	UNIT PRICE	AMOUNT
IMPORTANT MESSAGE TO VENDOR: GWA WILL NOT BE LIABLE FOR ANY UNAUTHORIZED SERVICES THAT IS NOT LISTED IN THE PURCHASES ORDER, ONLY THE SERVICES LISTED IN THE PURCHASE ORDER WILL BE PAYED BY GWA. *** ONLY THE AUTHORIZED NAMES LISTED ON THE P.O ARE ALLOWED HONORED BY GWA, VENDOR MUST INDICATE ON THE SERVICE INVOICE THE EMPLOYEE'S NAME, BADGE NUMBER AND MUST SIGN AND PRINT CLEARLY. *** AGREEMENT TO COVER COST FOR LABOR, MATERIALS AND EQUIPMENTS FOR REDEVELOPMENT AND BLOWING/ AIRLIFT/BAILING FOR VARIOUS GWA DEEPWELL SITES. *** DEEPWELL SITES 500 FEET DEEP OR LESS: (MONDAY THRU FRIDAY) $2,750.00 PER DAY DEEPWELL SITES MORE 500 FEET DEEP: (MONDAY THRU FRIDAY): $3,050.00. PER DAY DEEPWELL SITES 500 FEET DEEP OR LESS: (WEEKENDS & HOLIDAYS) $3,250.00 PER DAY DEEPWELL SITES MORE 500 FEET DEEP: (WEEKENDS & HOLIDAYS): $3,550.00 PER DAY *** AUTHORIZED PERSONNEL: *** RON TOPASNA/ PAT SIQUENZA/ GARRET TAITAGUE/IGNACIO CASTRO FOR: WATER/ GROUND DEEPWELL GPR: 3-204.07 DELIVERY: AS NEEDED G.L: 6812.950.34000 OQ# / OR# TONY CAMACHO #962				$5,000.00

NOTE: "SUBJECT TO THE GUAM PROCUREMENT CODE AND ACCOMPANYING REGULATIONS"

SPECIAL INSTRUCTIONS TO VENDOR:
Send certified original and three (3) copies of invoice to Guam Waterworks Authority, Government of Guam, at the address shown above.

Payment upon receipt of merchandise in Guam in good condition.

SEE BACK FOR TERMS AND CONDITIONS

ACKNOWLEDGED BY: DATE: 1/13/16
SIGNATURE OF VENDOR
Bryan Matz

RETURN TO PROCUREMENT DIVISION AT THE ABOVE ADDRESS

DO NOT FILL THIS ORDER if your total cost exceeds this total. >>

TOTAL $5,000.00

SIGNATURE:

Mark G. Miller - Interim General Manager
NAME TITLE

ORIGINAL

202309/180827
180828

V23343

Allied Pacific Drilling, Inc.

P.O. Box 3411
Hagatna, Guam 96932

Invoice

Date	Invoice #
2/26/2016	D12-0113

Bill To	Ship To
Guam Waterworks 578 N. Marine Corps Drive Tamuning GU 96913	

P.O. Number	Terms	Rep	Ship	Via	F.O.B.	Project
298647	Net 30		2/25/2016			

Quantity	Item Code	Description	Price Each	Amount
		Project: Airlift/Blow out wells GWA well #s F-13 and F-17,		
1	Airlifting Well	Airlift/Blow out well F-13 on date 01/14/16, Thursday. Bottom well at 481'	2,750.00	2,750.00
1	Airlifting Well	Airlift/Blow out wells F-13 and F-17 on date 1/15/2016, Friday.	2,750.00	2,750.00
1	Airlifting Well	Airlift/Blow out well F-17 on date 1/16/16, Saturday. Bottom well at 525' (charged at regular day)	3,050.00	3,050.00
		Work authorization attachments: 1. GWA PO #298647 dated 10/22/2015 2. APDI Daily Production Reports consisting of 3 pages.		

GUAM WATERWWORKS AUTHORITY
CONFIRMED ITEM RECD/SVC RENDERED
NAME Ronal Tagaolem
SIGNATURE #4119
DATE 10/13/2016

REVIEWED & VERIFIED FOR COMPLETENESS & ACCURACY
10/13/16
ACCOUNTING

Thank you for your business.

Total A $8,550.00

A: Invoice total A 8,550.00
B: Excess/Unauthorized Amt B (3,550.00)
C: PO/Authorized Amt C 5,000.00

EXHIBIT B

ALL PURCHASE ORDERS FROM THE GUAM WATERWORKS AUTHORITY ARE SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS.

1. In the shipments are connected with a bid or RFP issued by GWA, this purchase order shall be governed by the Terms and Conditions of the bid or RFP as well as the Guam Procurement Law and the Guam Procurement Regulations

2. An acknowledged and dated copy of this purchase order must be returned to GWA.

3. GWA will only be responsible for the total amount indicated in this Purchase Order and any amount in excess of that amount will not be paid by GWA.

4. All invoices (original/s and duplicate/s) must be forwarded to Accounts Payable Department of the Guam Waterworks Authority. These invoices must be properly endorsed or signed by authorized GWA personnel as indicated in the Purchase Order. And invoices should be provided to GWA within the month in which the purchases and/or services were rendered.

5. All vendors with an outstanding unpaid invoice at the end of the month after the goods or services were rendered must provide monthly vendor statements to the Accounts Payable Supervisor at GWA.

6. No variation in any of the terms, conditions, delivery dates, prices, quality, quantity or specifications under this order, regardless of the conditions or terms of the seller's acceptance, will be effective without the written consent of a person specifically authorized by GWA to make such changes.

7. Packing lists must accompany each shipment which indicate the order number and a detailed description and goods or services provided, including, but not limited to, the part number and serial number for each item delivered.

8. Shipments must be identified as either "PARTIAL" or "COMPLETE."

9. All goods delivered are subject to GWA's inspection and acceptance within a reasonable time after delivery. If the specifications are not met and are rejected by GWA, the goods shall be returned at the seller's expense.

10. In connection with any prompt payment discount offered the time will computed from date of delivery and acceptance at destination or from the date the correct invoice or voucher is received in by the Guam Waterworks Authority, if the latter is later than date of delivery and acceptance. Payment is deemed to be made, for the purpose of earning any discount on the date the check is mailed.

11. Shipments in excess of the amount stated in the order will not be accepted unless specifically approved by a GWA official authorized to make such changes.

GUAM WATERWORKS AUTHORITY

1 : Page
6812: B/U
02/26/16: Date
FOB GWA: F.O.B.

PURCHASE ORDER
GUAM WATERWORKS AUTHORITY

P.O. Box 3010, Hagatna, Guam 96932
PHONE: (671) 647-7818 FAX: (671) 649-3750

No. 299090-000 OP

THIS PURCHASE ORDER MUST APPEAR ON ALL INVOICES PACKING SLIPS, PACKAGES, B/L CORRESPONDENCE, ETC.

Payment Terms: Net 30 Days

VENDOR:

ALLIED PACIFIC DRILLING, I
P.O. BOX 3411
Agana GU 96932

SHIP TO:

GUAM WATERWORKS AUTHORITY
578 N. Marine Corps. Dr.
ATTENTION: P & S WAREHOUSE
Tamuning GU 96913

AUTHORITY	IFB / REFERENCE	TIME FOR DELIVERY	EXPIRATION
PL 16-124 / PL 21-148			09/30/2016

ARTICLES OR SERVICES	QTY	UNIT	UNIT PRICE	AMOUNT

CONDITIONS:
GPR: 3-204.07
Requested by: Water/Deepwell/R. Topasna
Authorized Personnel: Patrick Siquenza or Garrick Taitague /
or Ron Topasna or Ignacio Castro /
Business unit: 6812
G/L Account no: 6812.950.34011 /
Funding source: Revenue
OQ# 26994/ OR# 26706
Buyer: Peter
*
IMPORTANT NOTICE TO VENDORS LABOR, MATERIALS AND EQUIPMENTS
" All invoices must indicate P.O. Number for payment
" All invoices must indicate on the invoice the Employee's Name, Badge Number that must be signed and printed clearly
" Submit signed & dated P.O. acknowledgement with invoice
" GWA will not be liable for any unauthorized services that are not listed in the Purchase Order - only the services listed on the Purchase Order will be paid by GWA.
" Only the authorized names listed on the Purchase Order are allowed to transact. Unauthorized ND MUST SIGN AND PRINT person(s) will not be honored by GWA
*
AGREEMENT TO COVER COST FOR LABOR, MATERIALS AND EQUIPMENTS FOR REDEVELOPMENT AND BLOWING/ AIRLIFT/BAILING FOR VARIOUS GWA DEEPWELL SITES
*
LISTED BELOW ARE THE 120 DEEPWELL FACILITIES FOR AIR LIFTING SERVICES:
A-1, A-6, A-12, A-18, A-26, A-32, F-04/ F-9, F-15, F-20,
M-2, M-7, A-2, A-7, A-13, A-19, A-28, AG-01, F-5, F-10,
F-16, G-501, M-3, M-8, A-3, A-8, A-14, A-21, A-29, AG-2,
F-6, F-11, F-17, H-1, M-4, M-9, A-4, A-9, A-15, A-23, A-30,
D-1, F-7, F-12, F-18, HGC-2, M-5, M-12, A-5, A-10, A-17,
A-25, A-31, D-2, F-8, F-13, F-19, M-1, M-6, M-14/ D-3, D-8,

NOTE:"SUBJECT TO THE GUAM PROCUREMENT CODE AND ACCOMPANYING REGULATIONS"

SPECIAL INSTRUCTIONS TO VENDOR:
Send certified original and three (3) copies of invoice to Guam Waterworks Authority, Government of Guam, at the address shown above.

Payment upon receipt of merchandise in Guam in good condition.

SEE BACK FOR TERMS AND CONDITIONS

DO NOT FILL THIS ORDER if your total cost exceeds this total. >>

TOTAL $

ACKNOWLEDGED BY: _____ DATE: 3/9/16
SIGNATURE OF VENDOR

RETURN TO PROCUREMENT DIVISION AT THE ABOVE ADDRESS

SIGNATURE:

Miguel C. Bordallo - General Manager
NAME TITLE

DOMICILE:

ACKNOWLEDGEMENT COPY

14

GUAM WATERWORKS AUTHORITY

2 : Page
6812 : B/U
02/26/16 : Date
FOB GWA : F.O.B.

PURCHASE ORDER
GUAM WATERWORKS AUTHORITY

P.O. Box 3010, Hagatna, Guam 96932
PHONE: (671) 647-7818 FAX: (671) 649-3750

No. 299090-000 OP

THIS PURCHASE ORDER MUST APPEAR ON ALL INVOICES PACKING SLIPS, PACKAGES, B/L CORRESPONDENCE, ETC.

Payment Terms: Net 30 Days

VENDOR:

ALLIED PACIFIC DRILLING, I
P.O. BOX 3411
Agana GU 96932

SHIP TO:

GUAM WATERWORKS AUTHORITY
578 N. Marine Corps. Dr.
ATTENTION: P & S WAREHOUSE
Tamuning GU 96913

AUTHORITY	IFB / REFERENCE	TIME FOR DELIVERY	EXPIRATION
PL 16-124 / PL 21-148			09/30/2016

ARTICLES OR SERVICES	QTY	UNIT	UNIT PRICE	AMOUNT
D-13, D-18, D-24, EX-5, M-15, M-21, Y-1, Y-6, Y-14, Y-19, D-4, D-9, D-14, D-19, D-25, EX-11, M-17A, M-23, Y-2, Y-7, Y-15, Y-20, D-5, D-10, D-15, D-20, D-26, F-1, M-17B, MJ-1, Y-3, Y-9, Y16, Y-21, D-6, D-11, D-16, D-21, D-27, F-2, M-18, MJ-5, Y-4, Y-10, Y-17, Y-22, D-7, D-12, D-17, D-22, D-28, F-3, M-20A, NAS-1, Y-5, Y-12, Y-18, Y-23 * CHARGES FOR EDEVELOPMENT AND BLOWING/ AIRLIFT BAILING FOR VARIOUS GWA DEEPWELL SITES DEEPWELL SITES 500 FEET DEEP OR LESS: (MONDAY THRU FRIDAY): $2,975.00 DEEPWELL SITES MORE 500 FEET DEEP: (MONDAY THRU FRIDAY): 3,275.00. DEEPWELL SITES 500 FEET DEEP OR LESS: (WEEKENDS & HOLIDAYS) $3,475.00 DEEPWELL SITES MORE 500 FEET DEEP: (WEEKENDS & HOLIDAYS): $3,775.00				
HEAVY EQUIPMENT RENTAL	EA	.00	EA	14,999.00

NOTE: "SUBJECT TO THE GUAM PROCUREMENT CODE AND ACCOMPANYING REGULATIONS"

SPECIAL INSTRUCTIONS TO VENDOR:
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Payment upon receipt of merchandise in Guam in good condition.

SEE BACK FOR TERMS AND CONDITIONS

DO NOT FILL THIS ORDER if your total cost exceeds this total. >>

TOTAL $ 14,999.00

ACKNOWLEDGED BY: _____ DATE: 3/9/16
SIGNATURE OF VENDOR

RETURN TO PROCUREMENT DIVISION AT THE ABOVE ADDRESS

SIGNATURE:

Miguel C. Bordallo - General Manager
NAME TITLE

ACKNOWLEDGEMENT COPY

V23343 / 269975|186479

Allied Pacific Drilling, Inc.

P.O. Box 3411
Hagatna, Guam 96932

Invoice

Date	Invoice #
6/1/2016 X	D12-0119 X

Bill To	Ship To
Guam Waterworks 578 N. Marine Corps Drive Tamuning GU 96913	

P.O. Number	Terms	Rep	Ship	Via	F.O.B.	Project
299090 X	Net 30		6/1/2016			

Quantity	Item Code	Description	Price Each	Amount
		Airlift/Blow out wells GWA well #s F-4, D-10 and M-14;		
2	Airlifting Well	Airlift/Blow out well F-4 on date 05/12/16, Thursday. Bottom well at 496'	2,975.00	5,950.00
1.5	Airlifting Well	Airlift/Blow out wells D-10 on date 5/20/2016, Friday. Bottom well at 448.5'	2,975.00	4,462.50
3	Airlifting Well	Airlift/Blow out well M-4 on date 5/24/16, Tuesday. Bottom well at 476'	2,975.00	8,925.00
		Work authorization attachments: 1. GWA PO #299090 dated 02/26/2016 2. APDI Daily Production Reports consisting of 3 pages.		

REVIEWED & VERIFIED FOR COMPLETENESS & ACCURACY
10/13/16
ACCOUNTING

Thank you for your business.

Total A $19,337.50

A : Invoice total — A 19,337.50
B : Excess amount / unauthorized — B (4,338.50)
C : PO amount / authorized — C 14,999.00

9

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Discussion

Resolution No. 07-FY2017

Relative to Approval of the Guam Waterworks Authority's 2016-2020 Updated Capital Improvements Plan (CIP) for the Purposes of Planning and Executing Projects in the Near Term

What is the project's objective and is it necessary and urgent?
The CIP is GWA's five-year blueprint for creating, maintaining, renewing, and replacing the crucial infrastructure that will support Guam's sustainable and continued growth. This CIP covers a five-year period to account primarily for Court Order projects, some of which may have a start time outside of a five-year period from 2015, but which required funding appropriation from the anticipated 2015 and 2018 bond issuances, which are reflected in this updated CIP.

The CIP is an important and necessary part of GWA's public communication. The CIP gives residents and businesses a view of GWA's direction for capital improvements for the Island, and a better understanding of the Authority's ongoing need for stable revenue sources to fund large or multi-year capital projects.

The CIP is also an important operational document, providing GWA Engineering, Maintenance & Operation (M&O), Finance, and support staff with an overview of our organization's overall direction and some detail of specific projects GWA plans on implementing to continue improvement of the utility for the Territory of Guam.

Where is the project located?
Island-wide.

How much will it cost?
The CIP reflects $281,453,900 in planned capital expenditures over the next 4 years.

When will it be completed?
The CIP extends out to 2020.

What is the funding source?
Funding sources identified in the CIP include 2010, 2013, 2015, 2018 State Revolving Funds, Internally Funded CIP, Grants and System Development Charges.

GUAM CONSOLIDATED COMMISSION ON UTILITIES

RESOLUTION NO. 07-FY2017

RELATIVE TO APPROVING THE GUAM WATERWORKS AUTHORITY'S 2016-2020 UPDATED CAPITAL IMPROVEMENT PLAN FOR THE PURPOSES OF PLANNING AND EXECUTING PROJECTS IN THE NEAR TERM

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, on November 23, 2010 GWA closed on the 2010 bond issuance, on December 12, 2013 GWA closed on the 2013 bond issuance, and on February 25, 2016 GWA closed on the 2015 bond issuance that provided net proceeds for Capital Improvement Projects in the final amount of Eighty Seven Million Four Hundred Two Thousand Dollars ($87,402,000.00), and One Hundred Thirty Nine Million Three Hundred Twenty Five Thousand Dollars ($139,325,000.00), and One Hundred Forty Million Nineteen Thousand Four Hundred Sixty Three Dollars ($140,019,463.00) respectively; and

WHEREAS, GWA has revised the previously approved 2015-2020 Capital Improvements Plan ("CIP") dated October 27, 2015, and updates to the plan covering FY2016 through 2020 are summarized in tables as shown in EXHIBIT A, wherein these tables identify capital projects with funding derived from the following sources in the following amounts: (a) balance of the 2010 bond funds which is approximately $4,469,000; (b) balance of the 2013 bond funds which is approximately $12,304,900; (c) balance of the 2015 bond funds which is approximately $121,513,000; (d) $67,250,000 from anticipated 2018 bond issuance; e) $28,475,000 in State Revolving Funds from the USEPA; (e) $9,794,000 in System Development Charges; (f) $948,000 in grant funding from a variety of federal sources; (g) balance of the revenues for internal CIP fund estimated at $36,700,000,

all resulting in a grand total of $281,453,900 in planned capital expenditures over the next four (4) years; and

WHEREAS, the 2016-2020 CIP also identifies for planning purposes a $169,500,000 funding need for wastewater infrastructure improvements at the Northern District WWTP, the northern collection system upgrade and the Northern Guam Lens Aquifer (NGLA) monitoring system associated with the military buildup; and

WHEREAS, the 2016-2020 CIP identifies existing and new CIP projects that require, in most cases, design, construction and construction management implementation as well as provides an update to the funding and projects needs for the 2015 bond issuance; and

WHEREAS, some of the major projects identified in the 2016-2020 CIP include, but which are not limited to, the following:

- Water Booster Pump Station (BPS) Rehabilitation to improve pumping capacity and energy efficiency at critical BPS throughout the Island;
- Island-wide sewer collection system improvements to reduce Infiltration & Inflow (I&I) and improve collection system efficiency and WWTP processing;
- Baza Gardens WWTP conversion to conveyance facilities to pump and transport wastewater to the new Agat-Santa Rita WWTP;
- Umatac-Merizo Wastewater Treatment Plant upgrades to bring the plant into compliance with the NPDES permit limits;
- Umatac-Merizo Wastewater System upgrades which will address required improvements at the treatment plant and collection systems;
- Water line replacement projects which will reduce GWA's water loss rates and improve GWA's operational efficiency;
- Sewer pump station upgrades which will provide more efficient pumping operations reducing GWA power consumption and improve system reliability to prevent sewer spills;
- Implementation of a SCADA system to allow GWA to have real time information on the water and wastewater facilities throughout the Island

which will allow for improved operations, timely response to changing system conditions, better data collection to support planning and maintenance activities, and enhanced system troubleshooting;

- Rehabilitation of down hard wells and develop new wells for additional source water capacity to address the Island's natural population growth as well as growth related to the military buildup;
- Replacement of many of GWA's steel water storage tanks with concrete tanks that have improved service life and a better life cycle cost;
- Refurbishment of some of GWA's steel water storage tanks that will give the tanks an additional ten (10) to fifteen (15) years of service life to allow GWA the ability to replace the tanks as necessary in the future.

WHEREAS, the 2016-2010 CIP as shown in EXHIBIT A reflects the funding amounts and project descriptions as noted above, and may be subject to adjustment in the coming year relative to actual conditions/variations resulting from normal project execution; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve and authorize the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The FY2016-2020 CIP attached as EXHIBIT A is incorporated into this resolution in its entirety.
3. The CCU approves the 2016-2020 CIP with the understanding that updated information and changing circumstances resulting from normal project execution throughout the year may require GWA to make adjustments/changes as necessary and for the betterment of the water and wastewater systems for the people they serve.
4. The FY2016-2020 CIP shall satisfy the requirement that GWA submit its final capital plan to the PUC annually.

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

DULY AND REGULARLY ADOPTED AND APPROVED this 22nd day of November, 2016.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS **J. GEORGE BAMBA**
Chairperson Secretary

I, J. George Bamba, Board Secretary of the Consolidated Commission

on Utilities as evidenced by my signature above do hereby certify as follows:

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

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

GUAM WATERWORKS AUTHORITY

Better Water Better Lives

CAPITAL IMPROVEMENT PLAN

2016-2020

November 22, 2016

CAPITAL IMPROVEMENT PLAN
2016-2020

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A. Narrative

Summary of CIP
The Capital Improvement Plan (CIP) has been updated with the best available data to illustrate the current funding available to complete projects which had been identified from the originally submitted CIP.

The following two tables provide an overview of the current funding status:

Table 1. Summary of Project Type (x1000):

	2016	2017	2018	2019	2020	TOTAL
Potable Water	53,854	55,580	29,178	33,250	10,000	181,862
Wastewater	9,881	36,179	33,000	1,000	-	80,059
Electrical Engineer	4,237	3,150	2,500	-	-	9,887
Miscellaneous	3,200	4,045	1,200	1,200	-	9,645
Total	71,172	98,954	65,878	35,450	10,000	281,453

Table 2. Summary of Funding Source (x1000):

	2016	2017	2018	2019	2020	TOTAL
2010 Bond Series	4,469					4,469
2013 Bond Series	11,922	383				12,305
2015 Bond Series	40,559	57,576	23,378			121,513
2018 Bond Series	-		23,000	34,250	10,000	67,250
State Revolving Fund (SRF)	3,475	17,000	8,000			28,475
System Development Charge (SDC)	4,800	4,494	500			9,794
GRANTS	948					948
Internally Funded CIP	5,000	19,500	11,000	1,200		36,700
Total	71,172	98,954	65,878	35,450	10,000	281,453

Note: The State Revolving Fund line item includes the funding allotment for the USEPA engineering consultant.

Developing the Capital Improvement Plan (CIP)
The CIP is GWA's five-year blueprint for creating, maintaining, renewing, and replacing the crucial infrastructure that will support Guam's sustainable and continued growth. This CIP covers a five-year period to account primarily for Court Order projects that have a start time outside of a five-year period from 2015 but which required funding appropriation from the anticipated 2015 and 2018 bond issuances which are reflected in this updated CIP.

This CIP was developed to include a narrative and project description sheets detailing the projects. Other documents, such as the 2007 Water Resource Master Plan (WRMP), GWA's Comprehensive Management Plan, 2006 Stipulated Order, GWA Production Plan, PUC Order, SRF Grant Project list, 2011 Amended Stipulated Order, and the 2012 USEPA NEIC Report

"Findings of Significant Deficiencies in the Public Water System" provided valuable information and guidance in the preparation of the CIP.
The CIP will continue to be reviewed and updated by the Chief Engineer, General Manager GWA, Consolidated Commission on Utilities (CCU) and the Public Utilities Commission (PUC).

The CIP is an important public communication medium. The CIP gives residents and businesses a view of GWA's direction for capital improvement and a better understanding of the Island's ongoing need for stable revenue sources to fund large or multi-year capital projects.

The CIP is also an important operational document, providing GWA Engineering, Maintenance & Operation (M&O), Finance, and support staff with a blueprint of the overall direction and specific projects GWA plans on implementing to continue improvement for the utility and the Territory of Guam.

Definition of an Engineering Capital Improvement Project
For the purposes of the Engineering CIP, a capital expenditure is an expenditure to acquire and/or replace GWA's capital assets. Major projects are projects with a cost of more than $50,000 or are listed in the 2006 Stipulated Order and/or Master Plan. Water production facilities, water distribution systems, wastewater collection systems, wastewater treatment plants, and major one-time equipment acquisitions are examples of capital improvements.

Carryover Projects/Fund Balance
Due to the nature of capital projects, the life of a project may span across fiscal years. As funds are received to fund a project, they are accumulated in the appropriate capital fund and expended as projects progress. When the funds are not spent in one year, they remain in the fund balance to be used in the future, often referred to as carryover. As GWA refines the annual CIP, these carryover projects will be redefined into areas of contractual obligation, and ongoing projects may be re-allocated in the following year as financing is re-evaluated to ensure project funding and funding viability. In addition, CIP line items may also be consolidated to another CIP line item; therefore to understand this CIP update, it is important to refer to the previous year's CIP.

Operating and Capital Budget Relationship
The CIP also impacts the operating budget. As projects are completed, operating funds are necessary for routine maintenance and operation costs such as utilities, staffing, repairs, and equipment maintenance.

CIP Organization
This fiscally constrained CIP includes project summary tables, funding source tables, funding anticipated to be committed by the Department of Defense funding, and project sheets.

Bond Spending Status
GWA acquired $316M in capital construction funding from the Series 2005, 2010, 2013 and 2015 Revenue Bonds to plan, design, and construct capital projects needed to comply with U.S. Environmental Protection Agency (USEPA) stipulations and court orders and to implement the WRMP 2007. This CIP update reports that the Series 2005 Revenue Bonds have been fully allocated at the amount of $89,711,419. Under the direction of the CCU, GWA has completed several financial plans over the last few years that have placed GWA on a successful path. With

continued financial plans in place and updates to the plans, GWA should be able to allocate current revenue bonds and obtain additional revenue bonds which can further progress projects required by the 2011 Court Order, other compliance requirements and the WRMP 2007.

This updated CIP will continue to ensure GWA provides excellence in water and wastewater services. The development of this CIP was truly a team effort with the combined effort of the interim General Manager, Engineering staff, Operations staff, Grants Section, and Finance Department.

B. CIP Summary Tables

Table 3.Summary Table Potable Water

CIP #	Project Name	2016 (x1000)	2017 (x1000)	2018 (x1000)	2019 (x1000)	2020 (x1000)	Total (x1000)
PW 05-01	Ground Water Disinfection	$ -	$ -	$ -	$ -	$ -	$ -
PW 05-03	Santa Rita Springs Booster Pump Rehab Phase II	$ -	$ -	$ -	$ -	$ -	$ -
PW 05-05	“A” Series Well Transmission Line	$ 82	$ -	$ -	$ -	$ -	$ 82
PW 05-06	Water Booster Pump Station	$ 2,536	$ 3,000	$ 1,000	$ -	$ -	$ 6,536
PW 05-07	Meter Replacement Program	$ 520	$ 2,000	$ 2,000	$ -	$ -	$ 4,520
PW 05-08	Barrigada Tank Repair/Replacement	$ 1,052	$ 400	$ -	$ 6,000	$ -	$ 7,452
PW 05-09	Leak Detection	$ 81	$ 1,100	$ 100	$ -	$ -	$ 1,281
PW 05-10	Potable Water System Planning	$ 439	$ 2,000	$ 400	$ -	$ -	$ 2,839
PW 05-11	Implement Ground Water Rule	$ -	$ -	$ -	$ -	$ -	$ -
PW 05-12	Brigade II (Ugum Lift) BPS Upgrade	$ 1,445	$ -	$ -	$ -	$ -	$ 1,445
PW 05-13	Deep Well Rehabilitation	$ 2,600	$ 3,000	$ -	$ -	$ -	$ 5,600
PW 05-14	New Deep Wells at Down Hard	$ 3,321	$ -	$ -	$ -	$ -	$ 3,321
PW 05-15	Rehabilitation of Asan Springs	$ 1,157	$ -	$ -	$ -	$ -	$ 1,157
PW 05-16	Master Meters	$ 110	$ 3,616	$ -	$ -	$ -	$ 3,726
PW 09-01	Ugum Water Treatment Plant Intake	$ 522	$ 500	$ -	$ -	$ -	$ 1,022
PW 09-02	Water Wells	$ 6,756	$ 2,660	$ 500	$ 4,000	$ -	$ 13,916
PW 09-03	Water Distribution System Pipe Replacement and Upgrades	$ 3,701	$ 12,260	$ 500	$ 5,000	$ -	$ 21,461
PW 09-04	Pressure Zone Realignment / Development 2005 Improvements	$ 569	$ 572	$ -	$ -	$ -	$ 1,141
PW 09-06	Central Water Distribution System 2005 Improvements	$ 75	$ -	$ -	$ -	$ -	$ 75
PW 09-08	Mechanical/Electrical Equipment	$ 102	$ -	$ -	$ -	$ -	$ 102
PW 09-09	Water Reservoir Internal/External	$ 646	$ -	$ -	$ -	$ -	$ 646
PW 09-10	Water Reservoir Internal/External	$ 800	$ -	$ -	$ -	$ -	$ 800
PW 09-11	Water System Reservoirs 2005 Improvements	$ 8,485	$ 18,472	$ 24,178	$ 18,250	$ 10,000	$ 79,385
PW 11-01	Distribution System Upgrade	$ 26	$ -	$ -	$ -	$ -	$ 26
PW 11-02	Ugum Water Treatment Plant Reservoir	$ 6,500	$ -	$ -	$ -	$ -	$ 6,500
PW 12-01	Water Audit Program & Water Loss Control Plan	$ 1,022	$ -	$ -	$ -	$ -	$ 1,022
PW 12-02	Production Plan / Reduce Navy Purchases	$ -	$ -	$ -	$ -	$ -	$ -

PW 12-03	Hydraulic Assessment of Tanks	$ -	$ -	$ -	$ -	$ -	$ -
PW 12-04	Agana Heights & Chaot Tanks	$ 4,221	$ -	$ -	$ -	$ -	$ 4,221
PW 12-05	Tank Major Repair Yigo #1, Mangilao #2, Astumbo #1	$ 73	$ -	$ -	$ -	$ -	$ 73
PW 12-06	Tank Replacement Piti & Hyundai	$ 5,000	$ 5,500	$ -	$ -	$ -	$ 10,500
PW 12-07	Assessment/Replacement of Malojloj Elevated & Yigo Elevated	$ 15	$ -	$ -	$ -	$ -	$ 15
PW 12-08	Public Water System Asset Inventory/ Condition Assessment	$ -	$ -	$ -	$ -	$ -	$ -
PW 12-09	Public Water System GIS & Mapping	$ -	$ -	$ -	$ -	$ -	$ -
PW 14-01	Fire Hydrant Replacement Program	$ 2,000	$ 500	$ 500	$ -	$ -	$ 3,000
	Sub-Total	$ 53,854	$ 55,580	$ 29,178	$ 33,250	$ 10,000	
	Grand Total for PW Funding	$				181,862	

Table 4.Summary Table Wastewater

		2016	2017	2018	2019	2020	Total
CIP #	Project Name	(x1000)	(x1000)	(x1000)	(x1000)	(x1000)	(x1000)
WW 05-04	Wastewater System Planning	$ 308	$ -	$ 1,000	$ 1,000	$ -	$ 2,308
WW 09-01	Lift station upgrades	$ 1,055	$ 5,050	$ 1,500	$ -	$ -	$ 7,605
WW 09-02	Moratorium	$ -	$ -	$ -	$ -	$ -	$ -
WW 09-06	Wastewater Collection System Repl/ Rehabilitation	$ 3,095	$ 13,920	$ 8,500	$ -	$ -	$ 25,515
WW 09-08	Facilities Plan/Design/interim for Baza Gardens STP Impr.	$ -	$ -	$ -	$ -	$ -	$ -
WW 09-10	Facilities Plan/Design/interim for Agat-Santa Rita STP Impr.	$ 0.37	$ -	$ -	$ -	$ -	$ 0.37
WW 09-11	WWTP Priority 1 Upgrades	$ 1,300	$ -	$ -	$ -	$ -	$ 1,300
WW 11-03	Baza Gardens STP Replacement	$ 1	$ 5,590	$ 13,000	$ -	$ -	$ 18,591
WW 11-04	Facilities Plan/Design/Interim for Umatac-Merizo STP Impr.	$ 277	$ -	$ -	$ -	$ -	$ 277
WW 11-08	Agat/ Santa Rita STP Replacement	$ -	$ 2,936	$ -	$ -	$ -	$ 2,936
WW 12-01	Northern District WWTP Primary Treatment Upgrades	$ 1,500	$ -	$ -	$ -	$ -	$ 1,500
WW 12-02	Bio Solids Management Plan	$ -	$ -	$ -	$ -	$ -	$ -
WW 12-03	Agana WWTP Interim Measures	$ 827	$ -	$ -	$ -	$ -	$ 827
WW 12-04	I&I SSES Southern	$ -	$ -	$ -	$ -	$ -	$ -
WW 12-05	I&I SSES Central	$ -	$ -	$ -	$ -	$ -	$ -
WW 12-06	I&I SSES Northern	$ 355	$ -	$ -	$ -	$ -	$ 355
WW 12-07	Umatac Merizo STP Replacement	$ 943	$ 7,000	$ 9,000	$ -	$ -	$ 16,943
WW 12-09	Wastewater Facility Back Up Power	$ 220	$ -	$ -	$ -	$ -	$ 220
WW 17-01	Wastewater Sewer System Expansion	$ -	$ 1,683	$ -	$ -	$ -	$ 1,683
	Sub-Total	$ 9,881	$ 36,179	$ 33,000	$ 1,000	$ -	
	Grand Total for WW Funding	$				80,059	

Table 5.Summary Table Electrical Engineering

		2016	2017	2018	2019	2020	Total
CIP #	Project Name	(x1000)	(x1000)	(x1000)	(x1000)	(x1000)	(x1000)
EE 05-02	SCADA Pilot Project	$ 8	$ -	$ -	$ -	$ -	$ 8
EE 09-01	Wastewater Pumping Station Electrical Upgrade	$ 620	$ -	$ -	$ -	$ -	$ 620
EE 09-02	Electrical Upgrade - Water Wells	$ -	$ 150	$ -	$ -	$ -	$ 150
EE 09-03	Electrical Upgrade - Water Booster	$ 325	$ -	$ -	$ -	$ -	$ 325
EE 09-04	Electrical Upgrade -Water Booster	$ 349	$ -	$ -	$ -	$ -	$ 349
EE 09-05	Electrical Upgrade - Other Water	$ 189	$ -	$ -	$ -	$ -	$ 189
EE 09-07	SCADA Improvements – Phase 2	$ 43	$ 500	$ -	$ -	$ -	$ 543
EE 09-08	SCADA Improvements – Phase 3	$ 1,203	$ -	$ -	$ -	$ -	$ 1,203
EE 09-09	SCADA Improvements – Phase 4	$ 1,500	$ 2,500	$ 2,500	$ -	$ -	$ 6,500
	Sub-Total	$ 4,237	$ 3,150	$ 2,500	$ -	$ -	
	Grand Total for EE Funding	$				9,887	

Table 6.Summary Table Miscellaneous

		2016	2017	2018	2019	2020	Total
CIP #	Project Name	(x1000)	(x1000)	(x1000)	(x1000)	(x1000)	(x1000)
MC 05-01	Laboratory Modernization	$ -	$ -	$ -	$ -	$ -	$ -
MC 05-02	Land Survey	$ 1,893	$ -	$ -	$ -	$ -	$ 1,893
MC 09-01	General Plant Improvements / Water	$ 1,057	$ 3,295	$ 1,000	$ 1,000	$ -	$ 6,352
MC 15-01	Information Technology Integration Improvements	$ 250	$ 750	$ 200	$ 200	$ -	$ 1,400
	Sub-Total	$ 3,200	$ 4,045	$ 1,200	$ 1,200	$ -	
	Grand Total for MC Funding	$				9,645	

C. CIP FUNDING TABLES

Funding Source Key:

- 2010 Bond B2010
- 2013 Bond B2013
- 2015 Bond B2015
- 2018 Bond B2018
- System Development Charge SDC
- Internally Funded CIP IFCIP
- Grants (DOI, EPA ARRA, etc) GRANTS
- State Revolving Fund SRF

Table 7.Potable Water Funding Table

FS - Funding Source

		2016		2017		2018		2019		2020	
		FS	(x1000)	FS	(x1000)	FS	(x1000)	FS	(x1000)	FS	(x1000)
PW 05-01	Ground Water Disinfection										
PW 05-03	Santa Rita Springs Booster Pump Rehab Phase II										
PW 05-05	"A" Series Well Transmission Line	B2010	81.6								
PW 05-06	Water Booster Pump Station	IFCIP	0	IFCIP	1,000						
		B2015	2,139	B2015	2,000	B2018	1,000				
		GRANT	387								
		B2013	9.5								
PW 05-07	Meter Replacement Program	B2015	501								
		B2010	16.8								
		B2013	2.5	B2015	2,000	B2015	2,000				
PW 05-08	Barrigada Tank Repair/Replacement	B2010	4.6	IFCIP	400						
		B2013	34								
		B2015	1013					B2018	6,000		
PW 05-09	Leak Detection	B2015	80								
		B2013	0.75	B2015	1100	IFCIP	100				
PW 05-10	Potable Water System Planning	SRF	0	SRF	500						
		B2015	439.1			B2018	0				
				B2015	1500	IFCIP	400	B2018	0		
PW 05-11	Implement Ground Water Rule										

PW 05-12	Brigade II (Ugum Lift) BPS Upgrade	B2010	1445								
PW 05-13	Deep Well Rehabilitation	B2013	350								
		B2015	250								
		SRF	2000	SRF	3000						
PW 05-14	New Deep Wells at Down Hard	B2015	1190								
		B2010	1321								
		B2013	810								
PW 05-15	Rehabilitation of Asan Springs	B2010	596.6								
		GRANT	560.5								
PW 05-16	Master Meters	B2015	0								
		B2010	8.9								
		B2013	101	B2015	3616						
PW 09-01	Ugum Water Treatment Plant Intake	IFCIP	500	IFCIP	500						
		B2010	3.7								
		B2015	18								
PW 09-02	Water Wells	B2013	2,256.0			B2015	0	B2018	4,000		
		IFCIP	2,500								
		B2015	0.0	B2015	2,160						
		SDC	2,000	SDC	500	SDC	500				
PW 09-03	Water Distribution System Pipe Replacement and Upgrades	B2015	-	IFCIP	7900	IFCIP	500				
		B2010	68.6								
		B2013	3,632.5	B2015	2,049			B2018	5,000		
				SDC	2,311						
PW 09-04	Pressure Zone Realignment / Development 2005 Improvements	B2010	0								
		B2013	0.23								
		B2015	569	B2015	572						
PW 09-06	Central Water Distribution System 2005 Improvements	B2010	75								
PW 09-08	Mechanical/Electrical Equipment	B2013	1.7								
		B2015	100								
PW 09-09	Water Reservoir Internal/External	B2010	646								
PW 09-10	Water Reservoir Internal/External	B2015	800								

PW 09-11	Water System Reservoirs 2005 Improvements	B2013	378.5	B2015	14,972	B2015	17,378	B2018	18,250	B2018	10,000
		B2015	8,106.6			B2018	5,000				
				IFCIP	3500	IFCIP	1,800				
PW 11-01	Distribution System Upgrade	B2010	25.8								
PW 11-02	Ugum Water Treatment Plant Reservoir	B2015	6410								
		B2013	90								
PW 12-01	Water Audit Program & Water Loss Control Plan	B2010	22								
		B2015	1000			B2018	0	B2018	0		
PW 12-02	Production Plan / Reduce Navy Purchases										
PW 12-03	Hydraulic Assessment of Tanks										
PW 12-04	Agana Heights & Chaot Tanks	B2013	3000.9								
		B2015	1220								
PW 12-05	Tank Major Repair Yigo #1, Mangilao #2, Astumbo #1	B2015	72.86								
		B2010	0								
		B2013	0.22								
PW 12-06	Tank Replacement Piti & Hyundai	B2015	5000	B2015	5,500						
PW 12-07	Assessment/Replacement of Malojloj Elevated & Yigo Elevated	B2013	14.88								
PW 12-08	Public Water System Asset Inventory/ Condition Assessment										
PW 12-09	Public Water System GIS & Mapping										
PW 14-01	Fire Hydrant Replacement Program	IFCIP	1000								
		B2015	1000	B2015	500	B2015	500				
TOTAL POTABLE WATER PROJECTS (2010)			4,316		-		-		-		-
TOTAL POTABLE WATER PROJECTS B2013/FY2014			10,683		-		-		-		-
TOTAL POTABLE WATER PROJECTS B2015/FY2016			29,909		35,969		19,878		-		-
TOTAL POTABLE WATER PROJECTS B2017/FY2018			-		-		6,000		33,250		10,000
State Revolving Fund (SRF) Grant Funds			2,000		3,500		-		-		-
System Development Charge (SDC)			2,000		2,811		500		-		-
GRANTS			948		-		-		-		-
IFCIP			4,000		13,300		2,800		-		-

Table 8.Wastewater Funding Table

FS - Funding Source

		2016		2017		2018		2019		2020	
		FS	(x1000)	FS	(x1000)	FS	(x1000)	FS	(x1000)	FS	(x1000)
WW 05-04	Wastewater System Planning	B2015	308.3								
		B2013	0			B2018	1000	B2018	1,000		
		SRF	0						-		
WW 09-01	Lift station upgrades	B2013	0.61	IFCIP	1,700	IFCIP	500				
		B2015	1,054	B2015	350						
		SRF	0	SRF	3,000	B2015	1,000				
WW 09-02	Moratorium										
WW 09-06	Wastewater Collection System Repl/ Rehabilitation	B2013	148.84								
		B2010	45.7								
		B2015	1,000	B2015	1,920						
		IFCIP	1,000	IFCIP	2,000	IFCIP	500				
		SRF	900	SRF	10000	SRF	8000				
WW 09-08	Facilities Plan/Design/interim for Baza Gardens STP Impr.										
WW 09-10	Facilities Plan/Design/interim for Agat-Santa Rita STP Impr.	B2010	0.37								
WW 09-11	WWTP Priority 1 Upgrades	SDC	1300								
WW 11-03	Baza Gardens STP Replacement	B2013	0			B2018	7000				
		B2010	1			IFCIP	6000				
		IFCIP	0	B2015	5,589.5	B2015	0				
WW 11-04	Facilities Plan/Design/Interim for Umatac-Merizo STP Impr.	B2015	277								
		B2013	0.0		-						
WW 11-08	Agat/ Santa Rita STP Replacement			B2013	383.3						
		B2013	0	B2015	2,552.7						
WW 12-01	Northern District WWTP Primary Treatment Upgrades	SDC	1500								
WW 12-02	Bio Solids Management Plan										
WW 12-03	Agana WWTP Interim Measures	B2015	827								
		B2013	0.0								

WW 12-04	I&I SSES Southern					
WW 12-05	I&I SSES Central					
WW 12-06	I&I SSES Northern	SRF 355				
WW 12-07	Umatac Merizo STP Replacement	B2015 942.7	B2015 7000	B2018 9000 B2015 0		
WW 12-09	Wastewater Facility Back Up Power	SRF 220				
WW 17-01	Wastewater Sewer System Expansion		SDC 1683			
TOTAL WASTEWATER PROJECTS (2010)		47	-	-	-	-
TOTAL WASTEWATER PROJECTS B2013/FY2014		149.5	383	-	-	-
TOTAL WASTEWATER PROJECTS B2015/FY2016		4,409	17,412	1,000	-	-
TOTAL WASTEWATER PROJECTS B2017/FY2018		-	-	17,000	1,000	-
State Revolving Fund (SRF) Grant Funds		1,475	13,000	8,000	-	-
System Development Charge (SDC)		2,800	1,683	-	-	-
GRANTS		-	-	-	-	-
IFCIP		1,000	3,700	7,000	-	-

Table 9. Electrical Engineering Funding Table

FS - Funding Source

		2016		2017		2018		2019		2020	
		FS	(x1000)	FS	(x1000)	FS	(x1000)	FS	(x1000)	FS	(x1000)
EE 05-02	SCADA Pilot Project	B2010	8								
EE 09-01	Wastewater Pumping Station Electrical Upgrade	B2013 B2015	520 100								
EE 09-02	Electrical Upgrade - Water Wells	B2015	0	B2015	150	B2015	0				
EE 09-03	Electrical Upgrade - Water Booster	B2015 B2013	323 2								
EE 09-04	Electrical Upgrade -Water Booster	B2013	349								
EE 09-05	Electrical Upgrade - Other Water	B2013	189.3								
EE 09-07	SCADA Improvements – Phase 2	B2010	43	SRF	500						
EE 09-08	SCADA Improvements – Phase 3	B2010 B2013 B2015	25 0.64 1177								
EE 09-09	SCADA Improvements – Phase 4	B2015	1,500	B2015	2500	B2015	2,500				
TOTAL ELECTRICAL PROJECTS (2010)			76		-		-		-		-
TOTAL ELECTRICAL PROJECTS B2013/FY2014			1,061		-		-		-		-
TOTAL ELECTRICAL PROJECTS B2015/FY2016			3,100		2,650		2,500		-		-
TOTAL ELECTRICAL PROJECTS B2017/FY2018			-		-		-		-		-
State Revolving Fund (SRF) Grant Funds			-		500		-		-		-
System Development Charge (SDC)			-		-		-		-		-
GRANTS			-		-		-		-		-
IFCIP			-		-		-		-		-

Table 10. Miscellaneous Funding Table

FS - Funding Source		2016		2017		2018		2019		2020	
		FS	(x1000)	FS	(x1000)	FS	(x1000)	FS	(x1000)	FS	(x1000)
MC 05-01	Laboratory Modernization	B2015	0								
MC 05-02	Land Survey	B2015	1891								
		B2013	2								
MC 09-01	General Plant Improvements	B2010	30.5								
		B2013	26.57								
		IFCIP	0	IFCIP	2,000	IFCIP	1000	IFCIP	1000		
		B2015	1000	B2015	1295						
MC 15-01	Information Technology Integration Improvements			IFCIP	500	IFCIP	200	IFCIP	200		
		B2015	250	B2015	250						
TOTAL MISCELLANEOUS PROJECTS (2010)			31		-		-		-		-
TOTAL MISCELLANEOUS PROJECTS B2013/FY2014			29		-		-		-		-
TOTAL MISCELLANEOUS PROJECTS B2015/FY2016			3,141		1,545		-		-		-
TOTAL MISCELLANEOUS PROJECTS B2017/FY2018			-		-		-		-		-
State Revolving Fund (SRF) Grant Funds			-		-		-		-		-
System Development Charge (SDC)			-		-		-		-		-
GRANTS			-		-		-		-		-
IFCIP			-		2,500		1,200		1,200		-

D. Department of Defense (DoD) Funding

The following tables illustrate CIP projects related to the military relocation that will have an impact on GWA infrastructure. The projects and funding noted are from the 2015 Record of Decision.

Table 11. DoD Wastewater Project Description

Project Location	**Project Details**	**Related GWA CIP**
Northern District WWTP	Secondary Treatment Upgrade Capacity 12 MGD	WW 12-01
Collection System Improvements	Route 9/Route 3 Sewer Main Upgrade	WW 05-02
Observation Well	Rehabilitation and New NGLA Monitoring wells	

Table 12. Estimated DoD Funding(x1,000)

CIP	**Project Details**	**2015** (x1000)	**2016** (x1000)	**2017** (x1000)	**2018** (x1000)	**2019** (x1000)	**2020** (x1000)
DoD-01	Secondary Treatment Upgrade Capacity 12 MGD		$134,300				
DoD-02	Route 9/Route 3 Sewer Main Upgrade		$29,000				
DoD-03	Rehabilitation and New NGLA Monitoring wells		$3,000				
Total			$166,300				

G. Project Sheets

Project Sheet Water

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 05-03**

Categorization: **Project**

Name of Project: **Santa Rita Springs Booster Pump Rehabilitation, Phase II**

Reference Documents:

a.) Stipulated Order 2006, item 44. Basis of Design Santa Rita Springs Booster Pump Rehabilitation Project, July 2005.

b.) *GWA Engineering Division, Potable Water Production Enhancement Plan*, June 10, 2010.

Project Description:

The original construction scope of work for the project intent has been completed. The project now requires completion of incidental work related to the spring impound and facility function controls. It is the intent of this CIP project to be "transitioned" into a project where work is required to address the GEPA pending action related to "Ground Water Under the Direct Influence (GWUDI)".Should GWUDI be designated the project scope will focus on necessary design and improvements to meet GWUDI conditions.

Project Justification:

The original project is identified in the Stipulated Order 2006, Item 44.Relative to the GWUDI project scope there are indications from GEPA that water coming from natural springs has a high probability of being designated as GWUDI. This project intends to meet the GWUDI requirements.

Financing Options & Grants:

The source of funding for the original scope was under 2005 bond. Additional work will be funded with 2013 bond.

Project Staffing Implications:

Contract Administration, Project Management Services, Program Management and Construction Management Services are required.

Results:

Project completed. Project continued due to GWUDI pending action by GEPA.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		
2017		
2018		
2019		
2020		
Project Total		**$0**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 05-05**

Categorization: **Project**

Name of Project: **A-Series Well Transmission Line**

Reference Documents:

a) Stipulated Order 2006, Item 38(B), Sinajana Water Transmission Line
b) Amended Stipulated Order 2011, Item 28, Sinajana Water Transmission Line

Project Description:

Construction of approximately 24,800-feet of 8, 12, and 24-inch water transmission lines between the Chaot and Agana Heights water storage tanks; the connection of 7 existing A-series wells to the transmission line, and chlorination equipment at each of the two storage tanks has been completed. The new pipeline will be a dedicated transmission line to the storage tanks. This project is broken down to 4 phases. Phase 1, Phase 2a and Phase 2b are completed. Phase 3 entails design services and is completed which resulted in the need for a BPS in Agana Heights. Phase 4 will include construction activities that will provide the water service area with the acceptable pressure once the system as intended is put in service and include SCADA controls.

Project Justification:

This project is identified in the Stipulated Order 2006, Item 38(B) and the Amended Stipulated Order 2011, Item 28.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond, and 2013 bond if available and necessary.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Program Management, Major Construction Management, Major GIS Support, and Modeling Support are required.

Results:

Phase 1, Phase 2a, Phase 2b, and Phase 3 are completed. Phase 4 entails construction of water storage tanks under PW 12-04 and is ongoing.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Construction	$82
2017		
2018		
2019		
2020		
Project Total		**$82**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 05-06**

Categorization: **Project**

Name of Project: **Water Booster Pump Station**

Reference Documents:

a) MASTER PLAN, VOLUME 2, TABLE 9-13

Project Description:

The 2005 hydraulic model for GWA's three water systems identified deficiencies in water booster pump capacity to provide adequate supply to areas in the Northern, Southern and Central water systems. The project will include all improvements necessary to address capacity limitations as well as facility functionality such as motors, controls, valves etc. Additional improvements shall include the use of VFD for better energy efficiency and facility functionality.

Project Justification:

This project will provide additional booster pump capacity to ensure adequate supply to affected areas are provided as well as to ensure existing BPS are equipped with efficient pumps, motors, controls, etc. The improvements are to also address the USEPA's "Findings of Significant Deficiencies in the Public Water System"

Financing Options & Grants:

The source of funding for this project will be the grant, 2013 bond, 2015 Bond, 2018 Bond and Internally Funded CIP.

Project Staffing Implications:

Contract Administration, Project Management Services, Program Management and Construction Management Services are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Planning/Design/Construction	$2,536
2017	Construction	$3,000
2018	Construction	$1,000
2019	Construction	
2020		
Project Total		**$6,536**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 05-07**

Categorization: **Program / Construction**

Name of Project: **Meter Replacement Program**

Reference Documents:

a) Stipulated Order 2006, Item 14
b) Amended Stipulated Order 2011, Item 23, Water Meters

Project Description:

The project will continue to replace all GWA customer water (mechanical) meters with AMR (automatic meter reading) meters. This project will replace old, underperforming and broken meters, including production meters. The AMR meters will allow data logging and electronic collection of monthly metering data.

This project will develop a water meter improvement program to ensure that each connection to the three public water systems has an accurate and accessible water meter that is GPS and reflected on the GIS, and asset inventory, read monthly and billed more accurately.

Project Justification:

Currently, GWA's unaccounted water rate is over 50%. It is believed that a portion of this loss is due to leakage and a portion is attributable to metering problems.

Financing Options & Grants:

The source of funding for this project will be the 2010, 2013 and 2015 bonds.

Project Staffing Implications:

Major Field Support, Contract Administration, Project Management, Program Management and GIS Support are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Replacement	$520
2017	Replacement	$2,000
2018	Replacement	$2,000
2019		
2020		
Project Total		**$4,520**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 05-08**

Categorization: **Project**

Name of Project: **Barrigada Tank Repair/Replacement**

Reference Documents:

a) Amended Stipulated Order 2011, Item 29 (b) (3) Storage Tank/Reservoir, Repair, Rehabilitation, Replacement and Relocation program

Project Description:

This project will replace the 1.0 MG tank that collapsed in 2003 and add new tanks based on modeling studies. The 1.0 MG tank will be located in the same footprint as the previous tank and will include a design analysis for a replacement tank. Additional tanks will be placed as determined by the modeling studies.

Project Justification:

The reduction in storage capacity of the Barrigada reservoirs due to the catastrophic failure of the previous 1.0 MG steel tank has negatively impacted the ability of GWA to effectively supply adequate water source to the villages of Barrigada and Maite. Modeling studies may show requirement for constructing additional tanks.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond, 2013 Bond, 2015 Bond, 2018 Bond and Internally Funded CIP.

Project Staffing Implications:

Contract Administration, Project Management Services, Program Management and Construction Management Services are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Design	$1,052
2017	Design	$400
2018		
2019	CM/Construction	$6,000
2020		
Project Total		**$7,452**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 05-09**

Categorization: **Program / Assessment**

Name of Project: **Leak Detection / Line Replacement**

Reference Documents:

a) PG Environmental – GWA Master Planning Technical Assessment, January 29, 2010

Project Description:

This project will perform system wide leak detection, line location and mapping, leak repair and inspection, leak analysis and control, and training and technology transfer. Line location will be performed where GIS and model data are incomplete. Leak detection will be performed on 450 miles of system pipe, including use of acoustical surveying and water audits. Leaks and repairs will be inspected, standard operating procedures reviewed/revised and material inventories developed. GWA personnel will receive training in leak detection methods and equipment. Pressure, surge and frequency analysis will be conducted, and recommendations developed for pipeline replacement, system reconfiguration, and other adjustments needed to control leakage. Data from leak detection will be used to set line replacement priorities with a goal to design and construct the replacement of approximately 10 miles of distribution mains annually depending on availability of funding.

Project Justification:

GWA system consists of hundreds of miles of water distribution mains consisting of numerous different pipe sizes and types. Many of these lines are undersized and/or failing due to improper construction, earthquake damage, and/or material failures. Operating personnel average about 5 distribution main breaks per week. GWA management considers any water loss a priority.

Financing Options & Grants:

The source of funding for this project will be the 2015 Bond and Internally Funded CIP.

Project Staffing Implications:

Major Contract Administration, Major Project Management Services, Program Management and Major Construction Management Services are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Planning	$81
2017	Planning	$1,100
2018	Planning	$100
2019		
2020		
Project Total		**$1,281**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 05-10**

Categorization: **Program / Planning**

Name of Project: **Potable Water System Planning**

Reference Documents:

a) MASTER PLAN, VOLUME 2, CHAPTER 6
b) GUAM CONSOLIDATED COMMISSION ON UTILITIES RESOLUTION NO. 11
c) Amended Stipulated Order 2011, Item 28 and Item 29

Project Description:

This project will include long term planning, system planning, and environmental planning. Specific applications will include potable water hydraulic modeling and the potable water bubble map. This will be used to update a portion of the Master Plan. Hydraulic modeling includes the software, hardware, travel and training. System planning includes but not limited to GIS mapping, asset inventory, asset management, asset management software, GIS software, GIS training, asset management training and asset condition assessment.

Project Justification:

Long term planning, system planning, and environmental planning is essential for developing capital improvement programs. Potable Water System Planning ensures that a system approach is used in project development which specifies how specific projects fit into the overall planning goals.

In addition, the 2006 Master Plan requires updating every two years by the Guam Consolidated Commission on Utilities Resolution No. 11 – FY 2007 Relative to Approving the Guam Waterworks Authority Master Plan. The resolution states “The Guam Waterworks Authority is hereby directed to continue refining the Master Plan and every two years from the date of approval of this document to recommend to the Consolidated Commission on Utilities improvements and modifications to the Master Plan and the hydraulic model and to recommend and re-prioritize capital projects resulting from said changes or modifications.”

Financing Options & Grants:

The source of funding for this project will be the 2013 Bond, 2015 Bond, 2018 Bond, SRF Grant and Internally Funded CIP.

Project Staffing Implications:

Major modeling services and GIS support are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Design Planning	$439
2017	Design Planning	$2,000
2018	Design Planning	$400
2019	Design Planning	
2020		
Project Total		**$2,839**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 05-11**

Categorization: **Program / Construction**

Name of Project: **Implement Ground Water Rule**

Reference Documents:

a) Implementation of the Groundwater Rule GEPA

Project Description:

This project will provide upgrades to the deep wells for the implementation of the Groundwater Rule. This project will install chlorine residual monitors on all GWA wells. The wells will include SCADA equipment to communicate the well chlorine levels to central location.

Project Justification:

The Groundwater Rule requires GWA to install chlorine residual monitors on all GWA wells.

Financing Options & Grants:

This project will be funded from 2010 Bond, 2013 bond and SRF Grant.

Project Staffing Implications:

Major Contract Administration, Major Project Management Services, Program Management and Major Construction Management Services are required. A control system technician will be required to maintain the monitors and related SCADA equipment.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		
2017		
2018		
2019		
2020		
Project Total		**$0**

Note: Funds encumbered by construction project.

GWA Capital Improvement Plan
Project Sheet FY 2014-2018

Project Number: **CIP PW 05-12**

Categorization: **Project**

Name of Project: **Brigade II (Ugum Lift) BPS Upgrade**

Reference Documents:

a) GWA Engineering Division, Potable Water Production Enhancement Plan, June 10, 2010.

Project Description:

A new Brigade II booster pump station is required to fully utilize the surface supply from the south or the Ugum Treatment Plant. A new pump station, located at the Brigade II BPS site, will serve both the Windward Hills Reservoir and the Pulantat Reservoir. To provide this operational flexibility, the new pump station is to be located on the downstream side of Ugum Reservoir and should be able to overcome the pipe head loss plus the elevation difference (139 feet) between the Pulantat Reservoir and the Ugum Reservoir. Property acquisition is likely. Approximately 1100 feet of pipe is required in addition to the pump station. Additionally, the Brigade booster pump station and Windward Hills booster pump station will be upgraded to increase reliability and energy savings.

Project Justification:

Based on GEPA 2009 Annual Production Well Inspection Report, 13 of GWA's wells were required to decrease production due to the chloride levels; and 16 wells were approaching the chloride limit. One approach to supplementing the water supply due to the decrease in production of these 13 wells is to maximize the use of GWA's surface water and ground water. It is estimated that an increase in production of 2 MGD is needed to offset this loss in production. The source water from Ugum WTP is intended to cover the loss in deep well production.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management Services, Program Management and Major Construction Management Services are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		$1,445
2017		
2018		
2019		
2020		
Project Total		**$1,445**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 05-13**

Categorization: **Project**

Name of Project: **Deep Well Rehabilitation**

Reference Documents:

a) GWA Engineering Division, Potable Water Production Enhancement Plan, June 10, 2010.

Project Description:

This project will design and construct up to 3 new wells to increase supply and include the design and rehabilitation of seven “down-hard” wells. This project will require a feasibility study to determine the specific approach and cost estimate for each well.

Project Justification:

Based on GEPA 2009 Annual Production Well Inspection Report, 13 of GWA’s wells were required to decrease production due to the chloride levels; and 16 wells were approaching the chloride limit or other contaminants. One approach to supplementing the water supply due to the decrease in production of these 13 wells is to maximize the use of GWA’s surface water and ground water. It is estimated that an increase in production of 2 MGD is needed to offset this loss in production

Financing Options & Grants:

The source of funding for this project will be the 2013 Bond, 2015 bond and SRF.

Project Staffing Implications:

Major Contract Administration, Major Project Management Services, Program Management and Major Construction Management Services are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Construction	$2,600
2017		$3,000
2018		
2019		
2020		
Project Total		**$5,600**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 05-14**

Categorization: **Project**

Name of Project: **New Deep Wells at Down Hard Well Sites**

Reference Documents:

a) GWA Engineering Division, Potable Water Production Enhancement Plan, June 10, 2010.

Project Description:

This project will provide wells to increase supply and include new source water by drilling new wells adjacent to existing wells. This cost of these new wells will include casing and the transmission line to tie the wells into the system. This project will require a feasibility study to determine the specific approach and cost estimate for each well.

Project Justification:

Based on GEPA 2009 Annual Production Well Inspection Report, 13 of GWA's wells were required to decrease production due to the chloride levels; and 16 wells were approaching the chloride limit. One approach to supplementing the water supply due to the decrease in production of these 13 wells is to maximize the use of GWA's surface water and ground water. It is estimated that an increase in production of 2 MGD is needed to offset this loss in production.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond, 2013 bond and 2015 Bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management Services, Program Management and Major Construction Management Services are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Construction	$3,321
2017		
2018		
2019		
2020		
Project Total		**$3,321**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 05-15**

Categorization: **Project**

Name of Project: Rehabilitation of Asan Springs Ground Reservoir

Reference Documents:

a) GWA Engineering Division, Potable Water Production Enhancement Plan, June 10, 2010.

Project Description:

This project will include design and construction work to rehabilitate/upgrade the reservoir, treatment/chlorination facility, pump/motors and electrical controls.

Project Justification:

Based on GEPA 2009 Annual Production Well Inspection Report, 13 of GWA's wells were required to decrease production due to the chloride levels; and 16 wells were approaching the chloride limit. One approach to supplementing the water supply due to the decrease in production of these 13 wells is to maximize the use of GWA's surface water and ground water. It is estimated that an increase in production of 2 MGD is needed to offset this loss in production.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond and DOI grant.

Project Staffing Implications:

Major Contract Administration, Major Project Management Services, Program Management and Major Construction Management Services are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		$1,157
2017		
2018		
2019		
2020		
Project Total		**$1,157**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 05-16**

Categorization: **Program / Construction**

Name of Project: **Master Metering**

Reference Documents:
a) The Bubble Map and Water Service Area Map.

Project Description:
This project will provide for the design, installation, and materials for water meters to be installed at major GWA facilities and pressure zones to fully account for water consumption. This project will aid in analyzing and forming a more accurate picture related to leak detection studies and reports. Additionally the hydraulic model will benefit from the data collected.

Project Justification:
The project is needed to perform water audits on water service areas (WSA) as required by US EPA. This project will greatly enhance the data from the current leak detection contract.

Financing Options & Grants:
The source of funding for this project will be the 2010 Bond, 2013 Bond and 2015 Bond.

Project Staffing Implications:
Major Contract Administration, Major Project Management Services, Program Management and Major Construction Management Services are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Construction	$110
2017	Construction	$3,616
2018		
2019		
2020		
Project Total		**$3,726**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 09-01**

Categorization: **Project**

Name of Project: **Ugum Water Treatment Plant Intake Modifications**

Reference Documents:

a) Stipulated Order 2006, item 41, Ugum Surface Water Treatment Plant. Due January 5, 2008.
b) MASTER PLAN, VOLUME 2, TABLE 9-6
c) *GWA Engineering Division, Potable Water Production Enhancement Plan*, June 10, 2010.

Project Description:

This project includes an alternative analysis and a design concept report to refine the extent and cost of this critical project. This project will improve the intake structure of the Ugum Water Treatment Plant to minimize siltation and provide more reliable raw water supply during low river flow conditions. This project also includes master planning for future treatment capacity and projects that increase plant capacity. Additionally vehicles, equipment, software, hardware, training for the planning, engineering, operation and maintenance of the treatment plant are part of the scope. This project will cover all related work that fell under PW 05-04.

Project Justification:

The existing intake is susceptible to siltation and requires frequent maintenance. The project will allow for GWA to efficiently extract the Ugum water even during high silt periods and operate at low river conditions. More importantly the Ugum WTP is a major source of water for supplying the Southern Water System thus continued water supply is necessary.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond, 2013 Bond, 2015 Bond and IFCIP.

Project Staffing Implications:

Contract Administration, Project Management, Program Management and Construction Management Services are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		$522
2017		$500
2018		
2019		
2020		
Project Total		**$1,022**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 09-02**

Categorization: **Program / Construction**

Name of Project: **Water Wells**

Reference Documents:

a) GWA Needs Assessment for Anticipated Guam Military Buildup 08/2007 and 08/2009 update.
b) *GWA Engineering Division, Potable Water Production Enhancement Plan*, June 10, 2010.

Project Description:

GWA projects a need to construct new production wells to produce an estimated 5-7 MGD for natural growth of the island and pending military development. This project will require studying the aquifer with respect to all production wells, water system demand analysis, and development/construction of new well. It is imperative that the site locations of the new wells are executed with a whole-aquifer perspective. This project also includes addressing replacement of pumps, motors, cables, motor controls, meters, and electrical systems at existing wells to meet GWA's production needs.

Project Justification:

Water demands for all population residing outside military property will be met by GWA sources. This project will ensure water supply can meet customer demands taking onto account economic, environmental, health and safety factors.

Financing Options & Grants:

The source of funding for this project will be the 2013 bond, 2015 Bond, 2018 Bond, System Development Charge, and Internally Funded CIP.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Program Management, Major Construction Management, and Modeling Support are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Planning/Design/Construction	$6,756
2017	Construction	$2,660
2018	Construction	$500
2019	Construction	$4,000
2020		
Project Total		**$3,916**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 09-03**

Categorization: **Program / Construction**

Name of Project: **Water Distribution System Pipe Replacement**

Reference Documents:

a) MASTER PLAN, VOLUME 2, TABLE 9-7
b) *GWA Engineering Division, Potable Water Production Enhancement Plan*, June 10, 2010
c) NEIC Finding of Significant Deficiencies in GWA Water System, April 2013

Project Description:

In addition to specific pipe replacement projects identified through hydraulic modeling, there is an ongoing need to fund pipe replacement to address leaks, failure and age issues. In addition the 2005 hydraulic model identified deficiencies in pumping capacity and pipe size to provide adequate fire flow and pressure, and reduce high velocities and friction losses throughout the island The basis for this project is to replace 13,500 linear feet of pipe per year through 2015 and 2,000 feet of pipe replacement per year thereafter. Pipe replacement includes but is not limited to replacement of fire hydrants, PRV, valves (isolation valves, air lease valves blow off valves, etc.), vaults, and line segment replacement. In addition these projects include leak detection, leak repair, the mapping and records related to these activities, and valve exercise program.

Project Justification:

Under the current leak detection project sites have been identified where substantial leaks are occurring. This pipe replacement project intends to use the information from the leak detection project in prioritizing pipe replacement. The GWA system also has numerous substandard/undersize pipes which would be address through this project. The improvements are to also address the USEPA's "Findings of Significant Deficiencies in the Public Water System"

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond, 2013 bond, 2015 Bond, 2018 Bond, Internally Funded CIP, and SDC.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Program Management, Major Construction Management, Major GIS Support, and Major Modeling Support are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Construction	$3,701
2017	Construction	$12,260
2018	Construction	$500
2019	Construction	$5,000
2020		
Project Total		**$21,461**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 09-04**

Categorization: **Program / Construction**

Name of Project: **Pressure Zone Realignment/Development 2005 Improvements**

Reference Documents:

a) MASTER PLAN, VOLUME 2, TABLE 9-12
b) Water System Hydraulic Analysis Report, May 3, 2013

Project Description:

The hydraulic modeling of the water system identified areas with inadequate service pressures and flows. Installation of pressure regulating valve and pressure sustaining valve stations is required at strategic locations to facilitate the development of defined pressure zones, and improve circulation of flow from a higher pressure zone to a lower pressure zone. These projects include repairs of existing PRV and PSV to ensure the water system meets services pressure and flow.

Project Justification:

Pressure zone changes needed to improve flow circulation and defined pressure zones.

Financing Options & Grants:

The source of funding for this project will be the 2013 bond, and 2015 Bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Program Management, Major Construction Management, Major GIS Support, and Major Modeling Support are required. The modeling support to achieve this project will be extensive.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Design/Construction	$569
2017	Construction	$572
2018		
2019		
2020		
Project Total		**$1,141**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 09-06**

Categorization: **Program / Construction**

Name of Project: **Central Water Distribution System 2005 Improvements**

Reference Documents:

a) MASTER PLAN, VOLUME 2, TABLE 9-10

Project Description:

There is an ongoing need to fund pipe replacement to address leaks, failure and age issues. In addition the 2005 hydraulic model identified deficiencies pipe size to provide adequate fire flow and pressure, and reduce high velocities and friction losses throughout the island. Pipe replacement includes but is not limited to fire hydrants, PRV, valves, vaults and line segment replacement. These projects include leak detection, leak repair, and the mapping and records related to these activities.

Project Justification:

Under the current leak detection project sites have been identified where substantial leaks are occurring. This pipe replacement project intends to use the information from the leak detection project in prioritizing pipe replacement. The GWA system also has numerous substandard/undersize pipes which would be address through this project.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond.

Project Staffing Implications:

Contract Administration, Project Management Services, Construction Management Services, GIS Support, and Modeling Support are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		$75
2017		
2018		
2019		
2020		
Project Total		**$75**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 09-08**

Categorization: **Program / Construction**

Name of Project: **Mechanical/Electrical Equipment Replacement**

Reference Documents:

a) MASTER PLAN, VOLUME 2, TABLE 9-8

Project Description:

This project will create an equipment reserve for routine mechanical/electrical equipment replacement due to age, capacity, or failure. This reserve includes well pumps, booster pumps, valves, emergency generators and other items associated with the Northern, Central and Southern Water Systems.

Project Justification:

Sufficient funds must be reserved to ensure water system mechanical and electrical equipment is replaced in a timely manner.

Financing Options & Grants:

The source of funding for this project will be the 2013 Bond and 2015 bond.

Project Staffing Implications:

Contract Administration, Project Management Services, and Construction Management Services are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Procurement/Construction	$102
2017		
2018		
2019		
2020		
Project Total		**$102**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 09-09**

Categorization: **Program / Assessment**

Name of Project: **Water Reservoir Internal/External Corrosion Assessment Program**

Reference Documents:

a) MASTER PLAN, VOLUME 2, TABLE 9-2

Project Description:

This project will develop and implement a corrosion assessment program for all steel water reservoirs to determine the extent of internal and external reservoir corrosion and necessary course of action to rehabilitate or replace the affected reservoirs.

Project Justification:

The failure of the Barrigada Water Reservoir #1 in June 2005 demonstrated the urgent need to internally inspect and carry out a full condition assessment of all steel reservoirs to determine the degree of corrosion damage and establish remedial action or reservoir replacement as appropriate.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond.

Project Staffing Implications:

Contract Administration, Project Management, and Construction Inspection are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		$646
2017		
2018		
2019		
2020		
Project Total		**$646**

Note: Funds encumbered by construction project.

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 09-10**

Categorization: **Program / Construction**

Name of Project: **Water Reservoir Internal/External Corrosion Rehabilitation Program**

Reference Documents:

a) MASTER PLAN, VOLUME 2, TABLE 9-3

Project Description:

This project will program the rehabilitation of designated reservoirs over a four-year period as a phased project based on the results of the corrosion assessment program for all steel water reservoirs.

Project Justification:

The failure of the Barrigada Water Reservoir #1 in June 2005 demonstrated the urgent need to internally inspect and carryout a full condition assessment of all steel reservoirs to determine the degree of corrosion damage and establish remedial action or reservoir replacement as appropriate.

Financing Options & Grants:

The source of funding for this project will be the 2015 bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management, and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Planning/Construction	$800
2017		
2018		
2019		
2020		
Project Total		**$800**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 09-11**

Categorization: **Program / Construction**

Name of Project: **Water System Reservoirs 2005 Improvements**

Reference Documents:
a) MASTER PLAN, VOLUME 2, TABLE 9-14 & 15
b) Amended Stipulated Order 2011, Item 29

Project Description:
This project will construct additional reservoirs that address deficiencies in water storage capacity.

Project Justification:
The 2005 hydraulic model for GWA's three water systems identified deficiencies in reservoir capacity. This project will provide adequate capacity and pressure for fire and customer supply.

Financing Options & Grants:
The source of funding for this project will be the 2013 Bond, 2015 Bond, 2018 Bond, and Internally Funded CIP.

Project Staffing Implications:
Major Contract Administration, Major Project Management, Program Management and Major Construction Management and Major Modeling are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Planning/Construction	$8,485
2017	Construction	$18,472
2018	Construction	$24,178
2019	Construction	$18,250
2020	Construction	$10,000
Project Total		**$79,385**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 11-01**

Categorization: **Program / Construction**

Name of Project: **Distribution System Upgrades**

Reference Documents:

Project Description:
Waterlines from the 2009 Leak Detection Program distribution system upgrades will be identified that are in conformance with the Master Plan but are not scheduled with the current time horizon but need to be repaired sooner.

Project Justification:
Water Distribution System Pipe: GWA's system consists of hundreds of miles of water distribution mains consisting of various pipe sizes and types. Many of these lines are undersized and/or failing due to improper construction, earthquake damage, and/or material failures. Additionally, pressure zone changes are needed to improve flow circulation and define pressure zones.

Financing Options & Grants:
The source of funding for this project will be the 2010 Bond.

Project Staffing Implications:
Major Contract Administration, Major Project Management, Major Construction Management, Major GIS Support, and Modeling Support are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		$26
2017		
2018		
2019		
2020		
Project Total		**$26**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 11-02**

Categorization: **Project**

Name of Project: **Ugum Water Treatment Plant Reservoir Replacement**

Reference Documents:

a) Amended Stipulated Order 2011, Item 29

Project Description:

This project will provide a new 2 MG finished water reservoir at the Ugum Water Treatment Plant. The reservoirs will be the sole source of finished water for most of the Southern Water System. Failure of the existing lone reservoir would result in a significant hardship on customers in the system. The new 2 MG reservoir would allow the existing reservoir to be taken off-line and refurbished and ultimately allow for redundancy and maintenance. This may require property acquisition.

Project Justification:

To provide redundancy in storage at the treatment plant that will allow for periodic maintenance. The existing reservoir is damaged, but cannot be taken out-of-service for repair because there is no back-up.

Financing Options & Grants:

The source of funding for this project will be the 2013 Bond and 2015 Bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Program Management and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Assessment/Planning/Construction	$6,500
2017		
2018		
2019		
2020		
Project Total		**$6,500**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 12-01**

Categorization: **Program / Planning**

Name of Project: **Water Audit Program & Water Loss Control Plan**

Reference Documents:
PUC Docket 09-03

Project Description:
This project will perform system wide leak detection, leak repair and inspection, leak analysis and control. Leak detection will be performed on 450 miles of system pipe, including use of acoustical surveying and water audits. The information resulting from the work completed in the project will be used to update the AWWA M-36 Water Audit which will allow GWA to address PUC STIP 4.c.i, apparent losses: a forensic assessment, Customer Service Meter Inaccuracies, PUC STIP 4.c.ii, apparent losses: including potential outsourcing and Unbilled Unmetered, PUC STIP 4.c.iii, apparent losses: unauthorized consumption.

This project will also address the Tiyan properties returned to the original home owner who are not currently meter. This project therefore will include installation of individual residential meters as well as installation of any water distribution system that will improve GWA's ability to serve these customers.

Project Justification:
This project will develop a water meter improvement program to ensure that each connection to the three public water systems has an accurate and accessible water meter that is read monthly and billed.

Financing Options & Grants:
The source of funding for this project will be the 2010 Bond and 2018 Bond. Line item MC 09-01 within the any bond issuance shall be an alternative source of funding for projects generated through CIP PW 12-01 if GWA engineering can show the project meets MC 09-01 capital project criteria.

Project Staffing Implications:
Major Contract Administration, Major Project Management, Program Management and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET(x1000)
2016		$1,022
2017		
2018		
2019		
2020		
Project Total		**$1,022**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 12-02**

Categorization: **Program / Planning**

Name of Project: **Production Plan / Reduce Navy Purchases**

Reference Documents:
GWA Production Plan 2010

Project Description:
This project will implement the GWA Production plan which includes but not limited to down hard wells that were rehabilitated, development of new well, rehabilitation of springs, and improvements to the Ugum WTP. This project will also include planning and design of transmission mains to move larger volumes of water to areas supplied by Navy water.

Project Justification:
Navy water purchase is expensive for GWA for resale. The anticipated growth of the island due to the military buildup will have impacts to GWA if additional Navy purchases were to occur.

Financing Options & Grants:
Line item MC 09-01 within the Bond issuance shall be an alternative source of funding for projects generated through CIP PW 12-02 if GWA engineering can show the project meets MC 09-01 capital project criteria.

Project Staffing Implications:
Major Contract Administration, Major Project Management, and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		
2017		
2018		
2019		
2020		
Project Total		**$0**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 12-03**

Categorization: **Program / Assessment**

Name of Project: **Hydraulic Assessment of Tanks**

Reference Documents:

a) Amended Stipulated Order 2011, Item 29 (a)

Project Description:

The hydraulic analysis through the use of hydraulic modeling program shall evaluate each service area to identify deficiencies that impact the short and long term water storage and pressure needs of that service area. The analysis will also include at a minimum defining the zones in the Bubble Map, updating Demand (Population).

Project Justification:

This is a stipulated order project intended to help GWA understand and manage the water storage capacity throughout the island.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management, and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		
2017		
2018		
2019		
2020		
Project Total		**$0**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 12-04**

Categorization: **Project**

Name of Project: **Agana Heights and Chaot Tank Construction**

Reference Documents:

a) Amended Stipulated Order 2011, Item 28(c)

Project Description:

This project will replace the existing Agana Heights and Chaot steel tanks to concrete tanks. Concrete tank design and construction management will be required.

Project Justification:

Results from internal and external corrosion assessment deemed tanks to be replaced. In addition, this is a Court Ordered project. Additionally, this project completes the Sinajana/Agana Heights Water Transmission line project.

Financing Options & Grants:

The source of funding for this project will be the 2013 Bond and 2015 Bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Program Management and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	CM/Construction	$4,221
2017		
2018		
2019		
2020		
Project Total		**$4,221**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 12-05**

Categorization: **Project**

Name of Project: **Tank Major Repair Yigo #1, Mangilao #2, Astumbo #1**

Reference Documents:

a) Amended Stipulated Order 2011, Item 29
b) Duenas, Camacho & Associates (DCA) "Structural Inspection and Assessment of the Mangilao 2 Tank", April 6 2011
c) DCA "Structural Inspection and Assessment of the Astumbo 1 Tank", April 6, 2011
d) DCA "Structural Inspection and Assessment of the Yigo 1 Tank", April 6, 2011
e) Water System Hydraulic Analysis Report, May 3, 2013

Project Description:

This project will replace all deteriorated steel within the existing steel tank for the Mangilao #2 tank. Scope of work includes improvements to the steel floor; steel columns, roof purlins as well as interior and exterior re-coating. This project will also include the replacement of the steel tanks at the Yigo site and Astumbo site with concrete tanks and booster pumps station.

Project Justification:

Results from internal and external corrosion assessment deemed the Mangilao tank to require major improvements. As for the Yigo and Astumbo tanks GWA find it is on the best interest of the public to fully replacement the Yigo and Astumbo Tanks as well as build a booster pump station. .

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond, 2013 Bond and 2015 Bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Program Management and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	CM/Construction	$73
2017		
2018		
2019		
2020		
Project Total		**$73**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 12-06**

Categorization: **Project**

Name of Project: **Tank Replacement Piti & Hyundai Tanks**

Reference Documents:

a) Amended Stipulated Order 2011, Item 29
b) Water System Hydraulic Analysis Report, May 3, 2013

Project Description:

This project will include the design and construction of replacement tanks for the Piti and Hyundai steel tanks. The new tanks more than likely will be located in the same footprint as the previous tanks however should the tank assessment project (PW 12-03) indicate otherwise the tanks will be located as recommended. This project will include a design analysis for a replacement tank.

Project Justification:

Results from internal and external corrosion assessment deemed tanks to be replaced. In addition, this is a Court Ordered project.

Financing Options & Grants:

The source of funding for this project will be the 2015 bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Program Management and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Planning/Design	$5,000
2017	CM/Construction	$5,500
2018		
2019		
2020		
Project Total		**$10,500**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 12-07**

Categorization: **Project**

Name of Project: **Assessment/Replacement of Malojloj Elevated & Yigo Elevated Tanks**

Reference Documents:

a) Amended Stipulated Order 2011, Item 29
b) Water System Hydraulic Analysis Report, May 3, 2013

Project Description:

This project will include the design and construction of replacement tanks for the Malojloj and Yigo elevated steel tanks. GWA may also assess the abandonment of these thanks and/or replacement with pump stations. The new tanks more than likely will be located in the same footprint as the previous tanks however should the tank assessment project (PW 12-03) indicate otherwise the tanks will be located as recommended. This project will include a design analysis for a replacement tank.

Project Justification:

Results from internal and external corrosion assessment deemed tanks to be replaced. In addition, this is a Court Ordered project.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond and 2013 bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Program Management and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		$15
2017		
2018		
2019		
2020		
Project Total		**$15**

GWA Capital Im
provement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 12-08**

Categorization: **Program / Assessment**

Name of Project: **Public Water System Asset Inventory/Condition Assessment**

Reference Documents:

a) Work Plan USEPA Region IX – R9 Tracking #11-277 "Water and Wastewater System Improvements

Project Description:

This project includes but not limited to water asset inventory development, asset management planning and implementation, asset management software procurement, asset management training and asset condition assessment. The information gathered will also be integrated with the GWA GIS system.

Project Justification:

This project is intended to provide GWA with data, information and the ability to understand and manage the water system such as the distribution line, booster pump station, section valves, and treatment facility to ensure planning effort to upgrade the system is done effectively and efficiently.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond.

Project Staffing Implications:

Contract Administration and Project Management are required. GWA staff training and management of the asset inventory also required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		
2017		
2018		
2019		
2020		
Project Total		**$0**

Note: Funds encumbered by Program Management Office.

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 12-09**

Categorization: **Program / Planning**

Name of Project: **Public Water System GIS & Mapping**

Reference Documents:

a) Work Plan USEPA Region IX – R9 Tracking #11-277 "Water and Wastewater System Improvements

Project Description:

This project intends to improve GWA's GIS data base through improvements with GWA data management system. The improvements will include integration of other data sources into GIS to close the data gaps as well as implement system hardware to ensure use and expansion of GIS is achievable.

Project Justification:

Continued update of the GIS system will allow GWA to understand and manage GWA infrastructure more effectively. Accurate GIS information is vital to new development planning as well as system maintenance.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond.

Project Staffing Implications:

Major Contract Management for GIS services and GIS support are required

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		
2017		
2018		
2019		
2020		
Project Total		**$0**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 14-01**

Categorization: **Project**

Name of Project: **Fire Hydrant Replacement Program**

Reference Documents:

a) Guam Administrative Rules and Regulations, Title 28, Chapter 2, Article 1, 2102 (a)(17)
b) Development Plan for Long-Term Comprehensive Water Distribution System Program, Section 5, Fire Hydrant Exercising, Maintenance, and Replacement Program, April 2013

Project Description:

This project intends to replace old, damaged or out-of-commissioned fire hydrants throughout Guam, in accordance with the Guam Administrative Rules and Regulations.

Project Justification:

Replacement of damaged or out-of-commission fire hydrants will help GWA remain in compliance with the Guam Administrative Rules and Regulations and increase the emergency response capacity of Guam's water system.

Financing Options & Grants:

The source of funding for this project will be the 2015 Bond and Internally Funded CIP.

Project Staffing Implications:

Contract Administration, Project Management Services, Program Management and Construction Management Services are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Planning/Construction	$2,000
2017	Construction	$500
2018	Construction	$500
2019		
2020		
Project Total		**$3,000**

Project Sheet Wastewater

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 05-04**

Categorization: **Program / Planning**

Name of Project: **Wastewater System Planning**

Reference Documents:

a) MASTER PLAN, VOLUME 3, CHAPTER 4.7.3
b) GUAM CONSOLIDATED COMMISSION ON UTILITIES RESOLUTION NO. 11-FY2007

Project Description:

Wastewater System Planning will include long term planning, system planning, and environmental planning. Specific application would include wastewater hydraulic modeling and the wastewater skeletal basin map. This will be used to update a portion of the Master Plan. Hydraulic modeling includes the software, hardware, travel and training. System planning includes but not limited to GIS mapping, asset inventory, asset management, asset management software, GIS software, GIS training, asset management training and asset condition assessment.

Project Justification:

Long term planning, system planning, and environmental planning is essential for developing capital improvement programs. Wastewater System Planning ensures that a system approach is used in project development.

In addition, the 2006 Master Plan requires updating every two years by the Guam Consolidated Commission on Utilities Resolution No. 11 – FY 2007 Relative to Approving the Guam Waterworks Authority Master Plan. The resolution states "The Guam Waterworks Authority is hereby directed to continue refining the Master Plan and every two years from the date of approval of this document to recommend to the Consolidated Commission on Utilities improvements and modifications to the Master Plan and the hydraulic model and to recommend and re-prioritize capital projects resulting from said changes or modifications."

Financing Options & Grants:

The source of funding for this project will be the 2013 Bond, 2015 Bond, 2018 Bond and SRF funding.

Project Staffing Implications:

Major modeling services and GIS support are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Assessment/Planning/Design	$308
2017		
2018	Assessment/Planning/Design	$1,000
2019	Assessment/Planning/Design	$1,000
2020		
Project Total		**$2,308**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 09-01**

Categorization: **Project**

Name of Project: **Lift Station Upgrades**

Reference Documents:

a) Performance Management Contract, CIP / PIP Review June 2007

Project Description:

Specific rehabilitation and repair capital projects are needed for the sewage pump stations. These projects include: Health and Safety (e.g. overhead crane repair and fall protection barriers, lock, wet well fencing, fans and basic security), Environmental Protection and Compliance (e.g. high level and overflow alarm systems), Energy Optimization Programs (e.g. upgrading electrical controls and motors, add amp meters, add run time meter), and economically beneficial Asset Replacement (e.g. replacement of a pump for $9,000 rather than repair it for $7,600).

Project Justification:

Sewage pump stations require ongoing capital upkeep in order to maintain safety, prevent sewer overflows, maintain environmental compliance and optimize energy usage. Installation of control equipment such as amp meters and alarms help maintenance of the pumps and motors. These improvements are to also address the pending USEPA's "Findings of Significant Deficiencies in the Wastewater System" report.

Financing Options & Grants:

The main source of funding for this project is the SRF funding, 2013 Bond, 2015 Bond, and Internally Funded CIP.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Program Management and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Planning/Design/Construction	$1,055
2017	Construction	$5,050
2018	Construction	$1,500
2019	Construction	
2020		
Project Total		**$7,605**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 09-02**

Categorization: **Project**

Name of Project: **Moratorium**

Reference Documents:

a) Central Guam Sewer Improvements Functional Design Report, January 2009
b) MASTER PLAN, VOLUME 3, TABLE 9-7, 8, 9, 10, 28, 29, 43, 44

Project Description:

The Moratorium project is a collection of specific wastewater projects within the Tamuning and Agana villages. These projects include upgrades to the Mamajanao, Chaot, and Agana Main Pump Stations.

Project Justification:

The sewer system in the Central Guam catchment along Marine Corp. Drive and Route 4 close to Agana Bay is stressed. The primary sewers in these locations experience periodic overflows with 2008 flows and by 2025 the system could be completely overwhelmed. This problem is exacerbated by the Mamajanao Sewage Pump Station, which under certain operating conditions is unable to cope with the influent flows without surcharging and locally flooding the downstream system.

Financing Options & Grants:

The source of funding for this project will be Short-Term Loan.

Project Staffing Implications:

Major Contract Administration, Major Project Management, GIS Support, and Modeling Support, and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		
2017		
2018		
2019		
2020		
Project Total		**$0**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 09-06**

Categorization: **Program / Construction**

Name of Project: **Wastewater Collection System Replacement/Rehabilitation Program**

Reference Documents:

a) MASTER PLAN, VOLUME 3, TABLE 9-23
b) Southern SSES Rehabilitation Program, December 2013
c) Agana (Central) Collection System Rehabilitation Plan, June 2014

Project Description:

Annual recurring design and construction project to replace/rehabilitate 3/4 of the total collection system (~8,600 feet) per year. This would focus on the worst condition pipes not already scheduled for hydraulic related rehab or replacement. Additional work under this CIP includes manhole repair/replacement, manhole collar replacement, and manhole lid seals.

Project Justification:

Replacement/rehabilitation program will upgrade sewer collection system as a proactive activity to mitigate catastrophic system failure. These improvements are to also address the pending USEPA's "Findings of Significant Deficiencies in the Wastewater System" report.

Financing Options & Grants:

The main source of funding for this project will be 2010 Bond, 2013 bond, 2015 Bond, SRF funding and Internally Funded CIP.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Program Management, Major Construction Management, Major GIS Support, and Modeling Support are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Construction	$3,095
2017	Construction	$13,920
2018	Construction	$8,500
2019		
2020		
Project Total		**$25,515**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 09-08**

Categorization: **Project**

Name of Project: **Facilities Plan/Design/Interim for Baza Gardens STP Improvements**

Reference Documents:

a) MASTER PLAN, VOLUME 3, TABLE 9-26
b) Wastewater Facilities Plan, Baza Gardens WWTP, August 2008
c) CIP WW 11-03 Baza Gardens STP Replacement
d) Guam Environmental Protection Agency Requirements meeting minutes, December 19, 2007 and letter, May 13, 2008.

Project Description:

This project includes planning, design and implementation for interim improvements at the wastewater treatment facility to meet permit conditions. Due to strict effluent limits imposed by the stream discharge and difficulty in operating complex treatment systems to reliably meet these limits, an alternative means of disposal should be considered in the Facility Plan. Facility Plan process recommendations will be based on the recommended alternative means of disposal. The new facilities will incorporate provisions for redundancy to improve reliability and facilitate operations and maintenance activities. Design and test the concept of utilization of Underground Injection Wells (UIC) for effluent discharge and design a replacement for the existing wastewater treatment plant with a new Membrane Bioreactor plant at the same location.

Project Justification:

Existing facilities lack redundancy and reliability, are difficult to operate, and require significant repair. Existing disposal requirements cannot be achieved, so a different effluent disposal system must be identified. The current secondary treatment plant cannot meet the stringent nutrient limits in the receiving stream, and the facility has outlived its design life and has severe operational challenges. A new plant is required that discharges to an Underground Injection Well (pursuant to Guam Environmental Protection Agency requirements).

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond.

Project Staffing Implications:

Contract Administration, Project Management Services, Program Management and Construction Management Services are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET(x1000)
2016		
2017		
2018		
2019		
2020		
Project Total		**$0**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 09-10**

Categorization: **Project**

Name of Project: **Facilities Plan/Design/Interim Measures for Agat-Santa Rita STP Replacement**

Reference Documents:

a) MASTER PLAN, VOLUME 3, TABLE 9-24

Project Description:

This project includes planning and design for interim improvements at the wastewater treatment facilities to meet existing and future flow capacity and reliably achieve regulatory compliance. The facilities will incorporate provisions for redundancy to improve reliability and facilitate operations and maintenance activities.

Project Justification:

Existing facilities do not have sufficient capacity for current and future flow projections. Existing facilities lack redundancy and reliability, are difficult to operate, and require significant repair.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond.

Project Staffing Implications:

Contract Administration, Project Management Services, Program Management and Construction Management Services are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		$0
2017		
2018		
2019		
2020		
Project Total		**$0.37**

GWA Capital Improvements Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 09-11**

Categorization: **Project**

Name of Project: **WWTP Priority 1 Upgrades**

Reference Documents:

a) Performance Management Contract, CIP / PIP Review June 2007

Project Description:

Specific rehabilitation and repair capital projects are needed for the sewage pump stations. These include projects: Health and Safety (e.g. overhead crane repair and fall protection barriers), Environmental Protection and Compliance (e.g. grit removal), Energy Optimization Programs (e.g. upgrading electrical controls and motors), and economically beneficial Asset Replacement (e.g. replacement of a pump for $9000 rather than repair it for $7600).

Project Justification:

Aging infrastructure leads to environmental impacts, non-compliance, inefficiencies, and safety problems that must be addressed on an annualized basis.

Financing Options & Grants:

The source of funding for this project will be the System Development Charge.

Project Staffing Implications:

Major Contract Administration, Major Project Management, and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		$1,300
2017		
2018		
2019		
2020		
Project Total		**$1,300**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 11-03**

Categorization: **Project**

Name of Project: **Baza Gardens STP Replacement**

Reference Documents:

a) MASTER PLAN, VOLUME 3, TABLE 9-26 & 27
b) Baza Gardens Wastewater System Evaluation, April 2014

Project Description:

Construction of new wastewater treatment facilities that will meet secondary treatment limits. Due to strict effluent limits imposed by the stream discharge and difficulty in operating complex treatment systems to reliably meet these limits, an alternative means of disposal should be considered in the Facility Plan. Facility Plan process recommendations will be based on the recommended alternative means of disposal. The new facilities will incorporate provisions for redundancy to improve reliability and facilitate operations and maintenance activities at the existing facility.

Project Justification:

Existing facilities lack redundancy and reliability, are difficult to operate, and require significant repair. Existing disposal requirements cannot be achieved, so a different effluent disposal system must be identified.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond, 2013 Bond, 2015 Bond, 2018 Bond, and Internally Funded CIP.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Program Management and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Design/CM/Construction	$1
2017	Construction	$5,590
2018	Construction	$13,000
2019		
2020		
Project Total		**$18,591**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **WW CIP 11-04**

Categorization: **Project**

Name of Project: **Facilities Plan/Design/Interim for the Umatac-Merizo STP Improvements**

Reference Documents:

a) MASTER PLAN, VOLUME 3, TABLE 9-36
b) Umatac-Merizo Wastewater System Evaluation Report, December 2013

Project Description:

Phase 1 of this project is a facility planning to meet permit conditions; phase 2 is the design of the interim improvements. Planning and design for interim improvements such as new mechanically cleaned bar screen facilities to improve reliability and facilitate operations and maintenance requirements.

Project Justification:

All interim improvements, including mechanically cleaned bar screens, is intended to improve process performance and reduce O&M requirements.

Financing Options & Grants

The source of funding for this project will be the 2010 Bond, 2013 Bond and 2015 Bond.

Project Staffing Implications:

Contract Administration, Project Management, Program Management and Construction Inspection are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Construction	$277
2017		
2018		
2019		
2020		
Project Total		**$277**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 11-08**

Categorization: **Project**

Name of Project: **Agat/Santa Rita STP Replacement**

Reference Documents:

a) Agat-Santa Rita Wastewater Systems Evaluation Report, December 2013

Project Description:

Construction of new wastewater treatment facilities that will meet secondary treatment limits. The new facilities will incorporate provisions for redundancy to improve reliability and facilitate operations and maintenance activities at the existing facility.

Project Justification:

Existing facilities lack redundancy and reliability, are difficult to operate, and require significant repair.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond and 2013 Bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Program Management and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Design/Construction	
2017	Construction	$2,936
2018		
2019		
2020		
Project Total		**$2,936**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 12-01**

Categorization: **Project**

Name of Project: **Northern District WWTP Primary Treatment Upgrades**

Reference Documents:

Project Description:

The Project is intended to deliver, as closely as possible and subject to the terms and conditions of the Contract, the requirements of the Stipulated Order as set out in 1.2 above including, but not limited to, the design, build and commission of the interim primary treatment improvements works at the NDWWTP that will bring the NDWWTP back into compliance with the current NPDES Permit for the quality parameters of TSS and BOD and also provide additional flow capacity of 7.5 MGD (monthly average daily flow) while still complying with the NPDES Permit concentration limits for TSS and BOD.

Project Justification:

The assets at the NDWWTP are not in good condition: sludge stream processes are largely inoperable and the treatment process are compromised, as many of the components are in poor condition or are inoperable.

The assets condition significantly impacts the capacity and performance of the NDWWTP and therefore, the NDWWTP cannot consistently meet the treatment standards required by the National Pollutant Discharge Elimination System (NPDES) discharge permit for the Site (the “NPDES Permit”).

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond and SDC funds.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Program Management and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		$1,500
2017		
2018		
2019		
2020		
Project Total		**$1,500**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 12-02**

Categorization: **Program / Planning**

Name of Project: **Bio Solids Management Plan**

Reference Documents:

Project Description:
This project will allow GWA to plan and management the increased generation of sludge from the wastewater treatment plant throughout the island. The initial focus of the plan would be on the management of GWA's bio-solids (and NDWWTP and Agana WWTP being the primary focus), but in keeping with the spirit of the 'One Guam' utility solution, the plan will develop an island wide bio-solids management plan and include the DoN Apra Harbor Plant bio-solids as well (although it is likely that these bio-solids are likely to contain more constituents of concern than that of GWA bio-solids).

Project Justification:
The current cost of bio-solids disposal is becoming a significant financial liability to GWA with the advent of large increase in tipping fees related to GBB management of Ordot and the development of the new landfill. In addition over the coming 5 years there will be a significant increase in bio-solids production volumes.

Financing Options & Grants:
The source of funding for this project will be the 2010 Bond.

Project Staffing Implications:
Major Contract Administration, Major Project Management, and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		
2017		
2018		
2019		
2020		
Project Total		**$0**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 12-03**

Categorization: **Project**

Name of Project: **Agana WWTP Interim Measures**

Reference Documents:

a) Amended Stipulated Order 2011, Item 5 and 6
b) Agama WTP Primary Treatment Upgrades, Preliminary Design Report, September 2012

Project Description:

This project will include process upgrades to include grit removal; fat, oil and grease (FOG) removal; septage handling facility; prevent back flow from the new outfall; bio-solids treatment; and any additional improvements, rehabilitation or improvements, such as the use of chemically enhanced treatment.

Project Justification:

The *Order for Preliminary Relief Re: Deadlines for Outstanding Projects under the Amended Stipulated Order* (ASO), filed on 11th November 2011, contains requirements to upgrade the Agana WWTP achieves consistent compliance with the WWTP's NPDES permit, and comply with the sludge and bio-solids requirements in 40 C.F.R. Part 503 **(Paragraph 5).**

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond 2015 Bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Program Management and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Construction	$827
2017		
2018		
2019		
2020		
Project Total		**$827**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 12-04**

Categorization: **Program / Planning**

Name of Project: **I&I SSES Southern**

Reference Documents:

a) Amended Stipulated Order 2011, Item 8 (b) and (d)
b) Southern Sanitary Sewer Evaluation Survey Findings Summary, Technical Memorandum, September 2014
c) Agana, Agat-Santa Rita, Baza Gardens and Umatac-Merizo WWTP Sewer Basins, I&I and SSES Analyses, February 2013

Project Description:

This project will include a comprehensive I&I/SSES assessment work to determine the high probable locations where I&I is occurring. The work will include the minor repairs necessary to decrease infiltration and inflow. This will include but is not limited to manhole inspection, manhole mapping, raising manholes, manhole seals, manhole repair to the cover frame, manhole repair to barrel/cone seal, collection line inspection, collection line repair/rehabilitation.

Project Justification:

The *Order for Preliminary Relief Re: Deadlines for Outstanding Projects under the Amended Stipulated Order* (ASO), filed on 11th November 2011, contains requirements to conduct I&I/SSES assessment of the southern wastewater system.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Program Management and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		
2017		
2018		
2019		
2020		
Project Total		**$0**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 12-05**

Categorization: **Program / Planning**

Name of Project: **I&I SSES Central**

Reference Documents:

a) Amended Stipulated Order 2011, Item 8 (c) and (e)
b) Agana (Central) Collection System Rehabilitation Plan, June 27, 2014
c) Inflow and Infiltration (I/I) Study for the Agana (Central) Sewer Basin, March 2014

Project Description:

This project will include a comprehensive I&I/SSES assessment work to determine the high probable locations where I&I is occurring. The work will include the minor repairs necessary to decrease infiltration and inflow. This will include but is not limited to manhole inspection, manhole mapping, raising manholes, manhole seals, manhole repair to the cover frame, manhole repair to barrel/cone seal, collection line inspection, collection line repair/rehabilitation.

Project Justification:

The *Order for Preliminary Relief Re: Deadlines for Outstanding Projects under the Amended Stipulated Order* (ASO), filed on 11th November 2011, contains requirements to conduct I&I/SSES assessment of the central wastewater system.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond and SRF funding.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Program Management and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		
2017		
2018		
2019		
2020		
Project Total		**$0**

Note: Funds encumbered by design project.

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 12-06**

Categorization: **Program / Planning**

Name of Project: **I&I SSES Northern**

Reference Documents:

a) Work Plan USEPA Region IX – R9 Tracking #11-277 "Water and Wastewater System Improvements

Project Description:

This project will include a comprehensive I&I/SSES assessment work to determine the high probable locations where I&I is occurring. The work will include the minor repairs necessary to decrease infiltration and inflow. This will include but is not limited to manhole inspection, manhole mapping, raising manholes, manhole seals, manhole repair to the cover frame, manhole repair to barrel/cone seal, collection line inspection, collection line repair/rehabilitation.

Project Justification:

Continued development in the northern part of the island will contribute to impacts to the existing wastewater collection system. It is the intent of this project is to determine where I&I are occurring and make necessary repairs.

Financing Options & Grants:

The source of funding for this project will be the SRF funding.

Project Staffing Implications:

Major Contract Administration, Major Project Management, and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		$355
2017		
2018		
2019		
2020		
Project Total		**$355**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 12-07**

Categorization: **Project**

Name of Project: **Umatac-Merizo STP Replacement**

Reference Documents:

a) Umatac-Merizo Wastewater System Evaluation Report, December 2013

Project Description:

Construction of new wastewater treatment facilities that will meet secondary treatment limits. The new facilities will incorporate provisions for redundancy to improve reliability and facilitate operations and maintenance activities at the existing facility.

Project Justification:

Existing facilities lack redundancy and reliability, are difficult to operate, and require significant repair.

Financing Options & Grants:

The source of funding for this project will be the 2015 Bond and 2018 Bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Program Management 23and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Planning	$943
2017		$7,000
2018	Design/Construction	$9,000
2019		
2020		
Project Total		**$16,943**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 12-09**

Categorization: **Program / Equipment**

Name of Project: **Wastewater Facility Back Up Power**

Reference Documents:

a) Work Plan USEPA Region IX – R9 Tracking #11-277 "Water and Wastewater System Improvements

Project Description:

This project will assess back up power needs at critical sewer pump stations and develop criteria for implementation of back-up power installation. This project is also intended to install necessary equipment as called out in the assessment.

Project Justification:

Sewer pump station are a critical facility that requires continued operations during power outages to ensure there are no wastewater overflows at sewer manholes or the sewer pump station itself. Compete avoidance of overflows is a high priority of GWA.

Financing Options & Grants:

The source of funding for this project will be the SRF funds.

Project Staffing Implications:

Major Contract Administration, Major Project Management, and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		$220
2017		
2018		
2019		
2020		
Project Total		**$220**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 17-01**

Categorization: **Project**

Name of Project: **Wastewater Sewer System Expansion**

Reference Documents:

Project Description:
Construction of sewer system expansions to accommodate new sewer connections and avoid/reduce use of septic tank/leaching field systems.

Project Justification:
Sanitary sewer systems are necessary to protect the quality of the island's drinking water resources from septic tank/leaching field systems, particularly over the Northern Guam Lens, which provides most of Guam's drinking water.

Financing Options & Grants:
The main source of funding for this project will be SDC funds

Project Staffing Implications:
Major Contract Administration, Major Project Management, Program Management, Major Construction Management, Major GIS Support, and Modeling Support are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		
2017		$1,683
2018		
2019		
2020		
Project Total		**$1,683**

Project Sheet Electrical

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP EE 05-02**

Name of Project: **SCADA Pilot Project**

Reference Documents:

Project Description:
This pilot project will procure communication services and install field instrumentation and a Human-Machine Interface (HMI) to support supervisory control and data acquisition (SCADA) of selected water and wastewater facilities. For this pilot GWA will only make functional real time data acquisition for status monitoring and alarming.

Project Justification:
This pilot project is to identify and evaluate proposed solutions and gather information that will be used to develop design standards for the water and wastewater SCADA system.

Financing Options & Grants:
The source of funding for this project will be the 2010 Bond.

Project Staffing Implications:
Contract Administration, Project Management, Construction Inspection and Technical Support after completion are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET(x1000)
2016		$8
2017		
2018		
2019		
2020		
Project Total		**$8**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP EE 09-01**

Name of Project: **Wastewater Pumping Station Electrical Upgrade**

Reference Documents:

a) MASTER PLAN, VOLUME 3, TABLE 9-43

Project Description:

This project will upgrade and standardize the electrical control system at the wastewater pumping stations as recommended in the GWA Master Plan Report. An initial assessment using a standard checklist will be conducted. Project scope will include the reconnection of the electrical service to a grounded WYE system involve replacement of the electrical meter and service conductors. Transient voltage surge suppression will also be installed at the station main service. The level control system will be standardized with a level transducer to provide level indication and communication with the SCADA unit. The back-up will be a float located out of the wet well. Also included are dry well level sensor alarms that are connected to SCADA, where applicable. The motor starters will be replaced with electronic soft start type to reduce mechanical wear.

Project Justification:

It is necessary to improve the electrical reliability at each wastewater pump station and minimize overflows by implementing the recommendations of the GWA Master Plan. Stations that are critical to operations are priority and will be completed first.

Financing Options & Grants:

The source of funding for this project will be the 2013 bond and 2015 Bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Construction Management, and Technical Support after completion are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		$620
2017		
2018		
2019		
2020		
Project Total		**$620**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP EE 09-02**

Name of Project: **Electrical Upgrade - Water Wells**

Reference Documents:

a) MASTER PLAN, VOLUME 2, TABLE 9-25

Project Description:

This project will upgrade the electrical system at each of the water wells as recommended in the Electrical Assessment of the GWA Master Plan. First, a standard electrical checklist and guideline will be developed followed by an assessment of the electrical system at each station. Goals are to change the transformer secondary connection and surge suppression, replace the service conductors, correct the voltage unbalance, prevent water conductor entry, replace the meter socket, install transient voltage surge suppression, install electronic motor protection, install electronic motor starter, install power factor correction equipment, integrate voltage unbalance relays in the auto transfer switch control system, interlock the chlorination controls with the well controls, and interlock with well flush controls.

Project Justification:

This project will improve the electrical reliability at each of the water pumping stations by implementing the recommendations of the GWA Master Plan. Stations that are critical to operations and require high maintenance are priority and will be completed first.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond and 2015 Bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Construction Management, and Technical Support after completion are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Construction	
2017	Construction	$150
2018	Construction	
2019		
2020		
Project Total		**$150**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP EE 09-03**

Name of Project: **Electrical Upgrade - Water Booster Pump Stations**

Reference Documents:

a) MASTER PLAN, VOLUME 2, TABLE 9-22

Project Description:

This project is primarily for the electrical upgrade at the Pago Bay, Brigade, and Windward Hills water booster stations by replacing the existing motors with premium efficiency motors, improve the system grounding, install transient voltage surge suppression equipment (TVSS), replace the motor control center, replace instrumentation controls, and add power factor correction. This project includes a detailed engineering assessment and preparation of design engineering plans. The improvement work noted above is also applicable to other booster pump stations that operations and engineering determine are in needs of improvements.

Project Justification:

The original distribution boards and motor controls have reached their useful lives, have signs of corrosion, and are missing parts. Improvements in motor efficiency and control devices reduce energy consumption costs. The voltage and transient surge suppressions reduce voltage surges within the facility while power factor correction help improve voltage stability.

Financing Options & Grants:

The source of funding for this project will be the 2013 bond and 2015 Bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Construction Management, and Technical Support after completion are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Construction	$325
2017		
2018		
2019		
2020		
Project Total		**$325**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP EE 09-04**

Name of Project: **Electrical Upgrade -Water Booster Pump Stations**

Reference Documents:

a) MASTER PLAN, VOLUME 2, TABLE 9-23

Project Description:

This project is for the electrical upgrade at the water booster stations by replacing the existing motors with premium efficiency motors, improve the system grounding, installation of transient voltage surge suppression equipment (TVSS), replace the motor control center and main distribution board, replace the instrumentation controls, and add power factor correction, where applicable. Included is a detailed engineering assessment and preparation of design engineering plans and specifications.

Project Justification:

The original distribution board and motor controls have reached their useful lives, have signs of corrosion, and are missing parts. Improvements in motor efficiency reduce energy costs. The application of transient surge suppressions and power factor capacitors reduce voltage surges and improve stability.

Financing Options & Grants:

The source of funding for this project will be the 2013 bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Construction Management, and Technical Support after completion are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Planning/Design/Construction	$349
2017		
2018		
2019		
2020		
Project Total		**$349**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP EE 09-05**

Name of Project: **Electrical Upgrade - Other Water Booster Pump Stations**

Reference Documents:

a) MASTER PLAN, VOLUME 2, TABLE 9-24

Project Description:

This project is for the electrical upgrade at the other water booster stations such as Yigo Elevated Tank, Pale Kieran, etc. Project scope includes: replacing the existing motors with premium efficiency motors, improve system grounding, install transient voltage surge suppression equipment (TVSS), replace the motor control center and main distribution board, replace instrumentation controls, and add power factor correction, where applicable.

Project Justification:

Several stations' original distribution board and motor controls have reached their useful life, have signs of corrosion, and are missing parts. Improvements in motor efficiency reduce energy costs. The voltage and transient surge suppressions and power factor correction also reduce voltage surges and improve voltage stability.

Financing Options & Grants:

The source of funding for this project will be the 2013 bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Construction Management and Technical Support after completion are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Planning/Design/Construction	$189
2017		
2018		
2019		
2020		
Project Total		**$189**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP EE 09-07**

Name of Project: **SCADA Improvements – Phase 2**

Reference Documents:

a) MASTER PLAN, VOLUME 3, TABLE 9-45

Project Description:

In Phase 2 of this project, the critical water and wastewater pumping stations are monitored by activating and updating the existing Motorola SCADA system. In this phase of the project, the balance of the pumping stations and the treatment facilities are updated and incorporated into the GWA SCADA System. The treatment facility alarms would be identified and activated to a digital telephone text messaging unit to call key operations personnel related to that specific area. Phase 2 will also continue any master planning efforts not completed in Phase 1.

Project Justification:

This phase is a continuation of this project to improve the efficiency and effective utilization of GWA personnel and performance of the water and wastewater pumping systems.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond.

Project Staffing Implications:

Contract Administration, Major Project Management Services, Construction Inspection and Major Technical Support after completion.

Results

Design work is ongoing however related work will be continued under EE 09-08.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		$43
2017		$500
2018		
2019		
2020		
Project Total		**$543**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP EE 09-08**

Name of Project: **SCADA Improvements – Phase 3**

Reference Documents:

a) MASTER PLAN, VOLUME 3, TABLE 9-46

Project Description:

In Phase 3 of this Project, improvements in real time data acquisition for status monitoring and process control is expanded at the treatment facilities through the incorporation of Programmable Logic Controllers (PLCs). The data is conveyed to the GWA Central as well as identified engineering and operations personnel for analysis and process optimization through the use of Virtual Private Networks (VPNs) or other available secured technology. Further improvements and updating of the pumping station SCADA monitoring would be expanded using digital communications (the Gov Guam system is scheduled to be updated during this period) and the radio units would require replacement.

Project Justification:

This phase is a continuation of this project to improve the efficiency and effective utilization of GWA personnel and performance of the water and wastewater pumping systems.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond, 2013 Bond and 2015 Bond.

Project Staffing Implications:

Contract Administration, Major Project Management Services, Construction Inspection and Major Technical Support after completion.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		$1,203
2017		
2018		
2019		
2020		
Project Total		**$1,203**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP EE 09-09**

Name of Project: **SCADA Improvements – Phase 4**

Reference Documents:

a) MASTER PLAN, VOLUME 3, TABLE 9-47

Project Description:

In Phase 4 of this project, accounting information such as equipment and parts costs along with the condition data such as equipment operating time and preventive/predictive maintenance programs are to be incorporated into an asset management program. The SCADA system's role will be incorporated into the overall GWA asset management program and the SCADA equipment, hardware, and software will be updated.

Project Justification:

This phase is a continuation of this project to improve the efficiency and effective utilization of GWA personnel and performance of the water and wastewater pumping systems.

Financing Options & Grants:

The source of funding for this project will be the 2015 Bond.

Project Staffing Implications:

Contract Administration, Major Project Management Services, and Major Technical Support after completion.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Construction	$1,500
2017	Construction	$2,500
2018	Construction	$2,500
2019		
2020		
Project Total		**$6,500**

Project Sheet Miscellaneous

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP MC 05-01**

Name of Project: **Laboratory Modernization**

Reference Documents:

a) Criteria and specification for Design of the Renovation and Enlargement of the Dededo Laboratory, 4/12/2007.

Project Description:

The existing lab is about 2300 square feet and work under this project will enlarge the facility to allow for expanded testing capabilities as well as increased office/storage space. The renovation work to the lab will include increasing testing counter space and modernizing all equipment to maintain Guam EPA certification. The renovation work will also include any improvements to ensure the facilities ability to remain open during typhoon weather conditions.

Project Justification:

GWA laboratory tests the quality of the water throughout the water system which is then reported to GEPA and USEPA. The GWA laboratory plays I vital role in ensuring GWA meets the Clean water Act and a modern laboratory is required to do so.

Financing Options & Grants:

The source of funding for this project will be the 2013 Bond and 2015 Bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management, and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Construction	
2017		
2018		
2019		
2020		
Project Total		**$0**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP MC 05-02**

Name of Project: **Land Survey**

Reference Documents:

a) Public Law 22-47, 22-28, 22-18

Project Description:

This project will survey GWA property and property to be deeded to GWA and add these properties to GWA assets. A portion of work to be completed with the current contact for professional services as well as subsequent contracts to complete remaining work.

Project Justification:

GWA has been granted land from the Government of Guam for the purpose of locating water and wastewater system assets such as water storage tanks and water and wastewater treatment plants. The land was granted under the condition that GWA compete a legal boundary survey of the properties.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond, 2013 bond and 2015 Bond.

Project Staffing Implications:

Contract Administration, Project Management, Major GIS Support.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Research, Survey	$1,893
2017		
2018		
2019		
2020		
Project Total		**$1,893**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP MC 09-01**

Name of Project: **General Plant Improvements**

Reference Documents:

Project Description:
These capital improvements project will provide GWA with general plant improvements that will enhance operations and maintenance capabilities throughout the utility. The criteria for a project and/or general plant improvement to be considered a capital and eligible for bond funding is the value is greater than $5,000 and has a life span greater than one year. This line item is general in nature to support Operations and Maintenance Program that meet funding criteria noted above. Work items to support O&M includes: replacing failing pipelines, pumps and refurbish PRV to improve the water system pressure zones. Work related to the replacement of failing pipes and pumps includes but is not limited to PRV, valves, vaults, line segment replacement and equipment such as pump rigs to remove, repair and replace pumps. The General Manager will be responsible to generate and update a list of eligible projects for General Plant Improvements. The “General Plant Improvements List” will be approved by the General Manager with concurrence by the Chief Engineer and Chief Financial Officer and submitted to the CCU by the General Manager in the Monthly Report. Additional projects that may be cover under this project sheet includes leak detection, leak repair, and the mapping and records related to these activities as well as contingency funding needs related to CIP projects.

This funding source can be used to complete any 2011 court order project relative to all capital improvements installed in water and wastewater system. Therefore it is also the intent of this CIP to cover two important aspects of planning, 1) hydraulic modeling and 2) system planning. Work under hydraulic modeling includes but not limited to hydraulic modeling training, planning tool software/hardware acquisition, and travel related to hydraulic modeling training. The system planning work will include, but not limited to, GIS mapping, asset inventory, asset management, asset management software, GIS software, GIS training, asset management training and asset condition assessment, updates to CIS and MWMS software and software and equipment GPS in vehicles.

Project Justification:
Capital improvements project are required to help maintain GWA level of service to its customers, thus the work described above will enhance operations and maintenance capabilities. The water and wastewater system for example consists of hundreds of miles of infrastructure, including facilities that are failing due to improper construction, earthquake damage, and/or material failures. Specifically for the water system GWA needs to change pressure zones to improve flow circulation and define pressure zones.

Financing Options & Grants:
The source of funding for this CIP line item will be the 2010, 2013 and 2015 bonds as well as Internally Funded CIP.

Project Staffing Implications:
Contract Administration, Project Management Services, and Construction Management Services are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Planning/Design/Construction	$1,057
2017	Planning/Design/Construction	$3,295
2018	Planning/Design/Construction	$1,000
2019	Planning/Design/Construction	$1,000
2020		
Project Total		**$6,352**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP MC 15-01**

Name of Project: **Information Technology Integration Improvements**

Reference Documents:

Project Description:
The capital improvement projects describe herein will improve GWA's ability to obtain real time information for customer request, maintain important customer data history more effectively and improve productive of employees through implementation of emerging technology. The projects identified under this CIP include Mobile Work Force Management Solutions, imaging and document management solutions, Desktop computer Replacement Program, Voice Over Internet Protocol (VOIP) solutions, Network Communication and Security System Improvements, Enterprise Information System Upgrades, Customer Information System Implementation, and Virtual Server and Storage Solutions.

Project Justification:
Information technology integration improvement projects are required to help maintain GWA level of service to customers as well as improve operations functionality. Current technology systems within GWA are becoming obsolete due to the ever changing/improving computer system and programing platform in the industry that for GWA to meet and maintain expectations of the mission of GWA, the CIP initiative

Financing Options & Grants:
The source of funding for this project will be the 2015 bond and Internally Funded CIP.

Project Staffing Implications:
Contract Administration and Project Management Services are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Planning and procurement	$250
2017	Planning and procurement	$750
2018	Procurement	$200
2019	Procurement	$200
2020		
Project Total		**$1,400**

Project Sheet Department of Defense

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP DoD-01**

Name of Project: **NDWWTP Secondary Treatment Capacity 12MGD**

Reference Documents:

a. Record of Decision for the Final Supplement Environmental Impact Statement for Guam and Commonwealth of the Northern Marianas Island Military Relocation August 28, 2015.
b. CIP WW 05-03 and CIP WW 11-07
c. Evaluation of Northern District Wastewater Treatment Plant Capacity, December 2009

Project Description:

This project will improve/convert the NDWWTP to a facility that treats wastewater to secondary limits with a capacity of 12 MGD for GWA to meet USEPA NPDES discharge requirements. This project will utilize much of the existing plan structures and add major upgrades and modifications.

Project Justification:

This project is a requirement of the Record of Decision for the Final Supplement Environmental Impact Statement for Guam and Commonwealth of the Northern Marianas Island Military Relocation.

Financing Options & Grants:

The Department of Navy is responsible for funding this project

Project Staffing Implications:

A Program management office will be required for the project.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Planning/Design/Construction	
2017		
2018		
2019		
2020		
Project Total		

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP DoD-02**

Name of Project: **Northern Systems Wastewater System**

Reference Documents:

a. Record of Decision for the Final Supplement Environmental Impact Statement for Guam and Commonwealth of the Northern Marianas Island Military Relocation August 28, 2015.
b. WW 05-02, WW 05-06, WW 09-0, WW 09-02, WW 09-04, WW 09-06, & W 09-09

Project Description:

This project will upgrade the sewer collection system in the Northern District Sewer Basin along Route 9 and Route 3.

Project Justification:

This project is a requirement of the Record of Decision for the Mariana Island Range Complex Final Environmental Impact Statement.

Financing Options & Grants:

The Department of Navy is responsible for funding this project

Project Staffing Implications:

A Program management office will be required for this project

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Planning/Design/Construction	
2017		
2018		
2019		
2020		
Project Total		

Appendix A:
Operations Project Nomination Listing

The projects identified in this section are a result of planning efforts between engineering and operations. It is important to understand these nominated projects have the potential to fall under any of the CIP line items noted in the body of this document. The list noted below is also expected to have new project nomination over the coming years.

Water Operations Project Nomination List:

1. Northern Water System Large Valve Replacement
2. Central Water System Large Valve Replacement
3. Southern Water System Large Valve Replacement
4. Back Flow Prevention Program
5. New Water transmission line between Agat and Umatac
6. Ugum WTP Membrane Replacement
7. Ugum WTP Centrifudge/VFD Replacement Project
8. Island Wide Ground Water Monitoring Well Integration with GWA
9. Island Wide Water Distribution System "Looping" Improvements

Wastewater Operations Project Nomination List:

1. Hagatna WWTP Digester Improvements
2. Sludge Bind Protection Shelter – Hagatna and Northern District WWTP's
3. New Sewer line connection from Sothern HS to the New Agat Santa Rita WWTP
4. Inarajan WWTP Improvements related to Layon Leachete
5. Pago Socia WWTP Conversion to Pump Station
6. Source Control and Pre-treatment Program

Appendix B:
CCU Resolution

CONSOLIDATED COMMISSION ON UTILITIES

Guam Power Authority • Guam Waterworks Authority
P.O.BOX 2977 • Agana,Guam 96932

Regular Board Meeting
CCU Conference Room, Gloria B. Nelson Public Service Building
5:30 p.m., October 25, 2016

MINUTES

1. **CALL TO ORDER**

Chairman Duenas called the Regular CCU Meeting of October 25, 2016 to order at 5:16 p.m. He announced that three (4) Commissioners were present and there was a quorum. Those present include:

Commissioners:

Joseph T. Duenas	CCU Chairman
Francis Santos	CCU Vice Chairman
George Bamba	CCU Secretary
Simon Sanchez	Member

Executive Mgmt.:

John Benavente	GM / GPA
Miguel Bordallo	GM / GWA
Melinda Camacho	AGM Operations / GPA
John Kim	CFO / GPA
Greg Cruz	CFO / GWA
Graham Botha	Staff Attorney / GPA
Kelly Clark	Staff Attorney / GWA

Management & Staff:

Paul Kemp	AGM Compliance & Safety / GWA
Tom Cruz	Chief Engineer / GWA
John Cruz	SPORD Manager / GPA
Tony Chargualaf	Production & Treatment / GWA
Art Perez	PIO / GPA
Kathy Beleno	Mgmt. Analyst / GWA Ex. Office
Joyce Sayama	Mgmt. Analyst / GPA Ex. Office
Lou Sablan	Board Secretary / CCU

Guest:

Angelica Perez	AM Insurance
Annmarie Muna	AM Insurance
Andy Nivens	PUC
Nestor Licanto	KUAM
Nick Manley	HDR
Aaron Meilleur	HDR
James Margrave	AMCC Foster Wheeler

Kurt Biltz	Brown & Caldwell
John O'Conner	Guam Post

2. APPROVAL OF MINUTES

The Minutes of September 27, 2016 was presented for approval.

It was moved by Comm. Santos and seconded by Comm. Bamba to approve the Minutes subject to verification and written correction. There was no further discussion or objection and the motion and passed

3. COMMUNICATIONS

3.1 Public Comments - None

4. NEW BUSINESS

4.1 GWA

4.1.1 GM Report Update

GM Bordallo said there was not further update from the GM Report given at the GWA Work Session last week. Comm. Sanchez asked about the SDC Charge and requested if at the next Work Session management can update the Commission on a proposed spending plan. The CCU thinks this is valid request because they want to know where the funds are going to be spent. Comm. Bamba is especially interested to know if management plans to spend some on court ordered projects. Comm. Duenas said upgrading water wells is another good use of funds because our current wells are over capacity. GWA's GM said he will give an update at the next GWA work session

4.1.2 Financials

CFO Cruz reported that there were some minor reclassifications in the financial statement that did not affect bottom line. $28M recorded as net income - caution board that not all are cash 15% is non cash item; federal grants are for capital projects cannot be spent anywhere else.

Comm. Sanchez said at next work session he would like management to prepare a comparison between 2016 performance and 2017 projection. 2013 rate plan was designed to reflect needs of the agency at that time and it seems that GWA is experiencing a very positive cash flow. His objective with the study is to revisit the rate increase for next year to determine if the increase is still needed - wants to see what did the 5year rate plan project for 2017 vs. actuals. This plan was presented to the PUC to generate the cash flow to allow for ... if 2017 is way above plan then wants to see if possible to stay the next rate increase.

Comm. Bamba added that since its adoption what were the projected debt ratios and how do actuals compare

Comm. Duenas commented that the Commission / management were just beginning to think about thereorg at the time 5year base rate was implemented at the end of the day we want to take GWA to a better place relative to asset management where we maintain everything we put in the ground; GM needs to have input on this too relative to his plans and his vision for GWA

Relative to Budget vs. actuals Comm. Santos commented that the budget for materials was $5M but according to the financials only $1.2M was spent, he asked the CFO if this means we did not buy something. Other areas of the report that was questioned was Miscellaneous - $4M v. 820k; Page 38 Computer category - GC said this is the new CC&B; Contractual Expense - $5.5 vs 1.3M

Comm. Sanchez commented that the Budget is an educated guess and if we didn't spend it 2 things happened either we have a lousy budget or the world changed and we didn't need to purchase that item anymore. Wants to know if we can give ratepayers a relief without hurting the company

4.1.3 Resolution No. 01-FY2017 Approval of the Baza Gardens Wastewater Cross-Island Pumping and Conveyance Phase I Construction Project

Resolution 01-FY2017 was a matter that was poll voted and it was presented today for ratification. The objective of the overall intent of the "Baza Gardens Wastewater Cross Island Pumping and Conveyance" project is to convey/pump the wastewater treated at the Baza Gardens WWTP to the new Agat-Santa Rita WWTP along Route 17 and Route 5.

This construction procurement is Phase I is located along Route 17 closest to Santa Rita, Route 5 and Route 2 which are also in the village of Santa Rita. It is a multiple three phases and which involves constructing one sewer pump station with a design pumping capacity around 550gpm (peak). This request is urgent because it is a Court Ordered project and GWA is required to issue an NTP for construction by October 31, 2016.

The bid proposal amount for Phase I is Seven Million Eight Hundred Eighty Eight Thousand One Hundred Fifty One Dollars and Nineteen Cents ($7,888,151.19). GWA management is also seeking a five percent (5%) contingency of the bid amount or Three Hundred Ninety Four Thousand Four Hundred Seven Dollars and Fifty Six Cents ($394,407.56) which would bring the total authorized funding amount to Eight Million Two Hundred Eight Two Thousand Five Hundred Fifty Eight Dollars and Seventy Five Cents ($8,282,558.75). The funding for this project will be from the 2016 Bond Funds under the line item CIP WW 11-03 "Baza Gardens STP Replacement" and will be completed in 360 days.

Comm. Sanchez motioned to approve Resolution 01-FY2017 and seconded by Comm. Bamba. There was no further discussion or objection and the motion passed.

4.1.4 Resolution No. 02-FY2017 Approval of the Construction Management Services of the Baza Gardens Wastewater Cross-Island Pumping and Conveyance Project

Resolution 02-FY2017 is an accompanying resolution to Resolution 01-FY2017. It was also poll voted and was presented for ratification. This project will provide Construction Management Services for the Baza Gardens Wastewater Cross-Island Pumping and Conveyance System "multiple phased" construction on behalf of GWA. The overall intent of the project is to convey/pump the un-treated wastewater collected from the Baza Gardens WWTP to the new Agat-Santa Rita WWTP along Route 17 and Route 5.

The CM service has multiple phases. Phase I covers the construction management for construction of one sewer pump station (near Aplacho Bridge), installation of 14,643 feet of gravity and 2,767 feet of force main along Route 17 (Cross Island). This phase is approximately one third of the overall project requirements. Construction of Phase II, III & IV is the conversion of the existing Baza Gardens WWTP site to a pretreatment facility that includes headworks (screening and grit removal), Equalization Tank 1 & 2, Baza Pump Station, Operational Structures, as well as a Pump Station 2 (located near Windward Hills Country Club) and laying of force main and gravity line along Route 17.

Phase I construction is expected to be completed by October 26, 2017, with construction cost amounting to $7,888,151.19. Phase II construction is expected to be bid before end of November 2016 with the remaining phases being bid out within three months after the previous phase.

Construction Management Services need to be secured as early as possible to provide better communication and coordination of efforts at the start of the construction activities. The urgency for this project is that GWA is required to issue an NTP for construction by October 31, 2016 thus having a CM at the start of construction is necessary. The engineering consultant team that was ranked highest during the procurement process, and which GWA is currently in negotiations with, is SSFM International.

The project is intended to comply with the 2011 USEPA Court Order requirements under Paragraph 13 but which GWA has established deadlines under Paragraph 14. The CM services for Phase I is anticipated to be fully completed by October 26, 2017. Phase II, III & IV by April 30, 2018.

The CM services contract is currently being negotiated with a not to exceed amount of $2,6100,000. GWA management is also seeking a 10% contingency to the "not to exceed" amount of $261,000 (not to exceed $2.871M authorized funding total) and the funding for this project will be from the 2016 Bond Funds under the line items CIP WW 11-03 "Baza Gardens STP Replacement".

Comm. Sanchez motioned to approve Resolution 02-FY2016; Comm. Bamba seconded. There was no further discussion or objection and the motion passed 4 / 1.

4.1.5 Resolution No. 04-FY2017 Relative to Supporting the 2016 MOU Between GWA/ DoD & DoN

The Guam Waterworks Authority (GWA) has been working with the Department of the Defense, Department of the Navy to update the 2010 MOU between the GWA and the Department of the Navy Relative to the 2010 Military Build-up. The purpose of this updated MOU is to define the relationship between Joint Region Marianas (JRM), Naval Facilities Engineering Command Marianas (NAVFAC Marianas), Guam Waterworks Authority (GWA), and the Consolidated Commission on Utilities (CCU), while developing the "One-Guam" vision for water and wastewater needs expected to increase as a result of military and civilian population growth. The updated MOU establishes objectives relating to the implementation of water and wastewater utility service solutions devised to address the projected additional requirements and/or re-capitalization efforts needed and covers issues not identified in the original 2010 MOU. This MOU will be reviewed every 5 years.

Comm. Sanchez said he would like to amend section 2 of the resolution to say the CCU authorizes the Chairman and GM to execute the updated MOU and leave the date open until all parties have signed. Comm. Bamba seconded. The amendment passed.

In discussion. Comm. Sanchez commented that we should wait to sign this MOU until the Navy / DoD approves it stating it is awkward to approve a document without seeing the final draft. It was decided to make the amendments and keep the matter open pending final draft and then if needed bring to a future meeting for ratification or poll vote, if necessary with official CCU signatures.

On the main resolution, it was tabled subject to poll vote. The Commission asked management to put the changes in and table the resolution.

4.1.6 Resolution No. 05-FY2017 Relative to Change Order No. 7 for the Chlorine Residual Analyzer/Electrical Upgrade Construction Project

This resolution requests the CCU to approve a change order to an existing contract with Asanuma Corporation work necessary to meet Groundwater Rule ("GWR") and Paragraph 22 of the Court Order for several of GWA's production wells. GWA initially intended to address holistically the chlorine residual analyzer requirement and electrical upgrades at all production wells but was not able to do so at the time of the original award due to funding limitation. But due to the additional funding coming available through the 2016 bond GWA now has an opportunity to complete the project scope by change ordering in the remaining work not initially awarded as well as work revealed necessary but related to the original scope.

The project involves production wells throughout the northern half of Guam. In general, 18 well sites will see electrical improvements, 15 well sites require roof ventilation needed for cool VFD equipment, 16 wells site require defective chlorine residual analyzers to be replaced and well F-13 requires installation of a VFD.

Asanuma Corporation submitted a change order proposal for the scope noted in the amount of Eight Hundred Forty Thousand Dollars ($840,000.00). The additional work will take six (6) months to complete from NTP for Change Order and the funding source for the Change Order will be from 2016 bond funds slated for CIP funds.

Comm. Bamba motioned to approve Resolution 05-FY2016; Comm. Santos seconded. There was no further discussion or objection and the motion passed.

4.2 GPA

4.2.1 GM Report Update

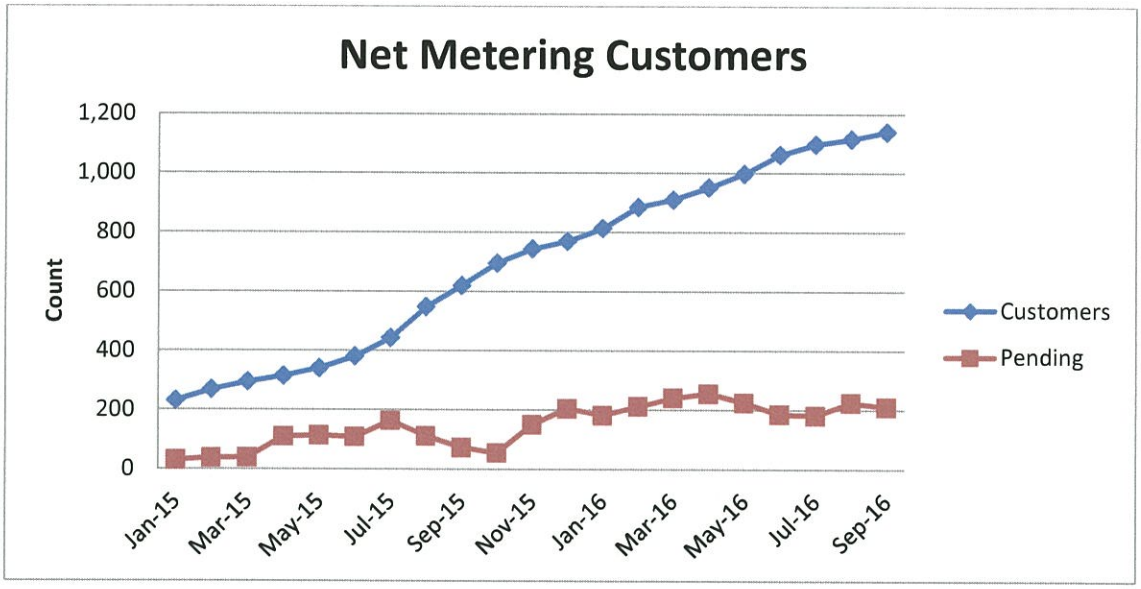
GM Benavente gave his GM report:

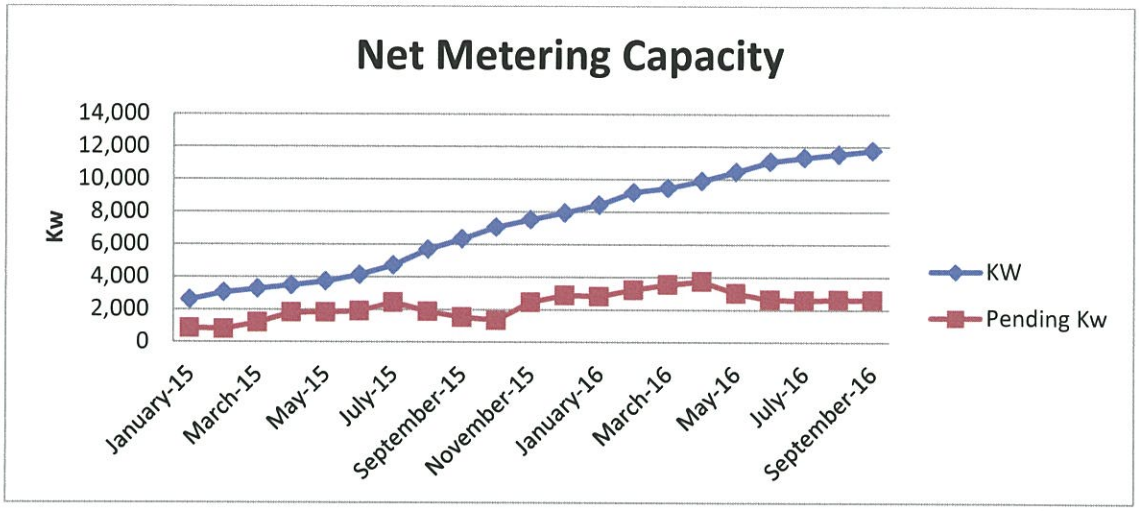
1. **Net Metering: Updated information on NEM including growth profile.**

Net Metering Summary Ending September 2016:

Description:	**Count**	**Kw**	
Active	**1,140**	**11,766**	
Pending	212	2,602	
Totals:	1,352	14,368	
Service:	**Count**	**KW**	**Kw/Customer**
Residential	**1,073**	**9,586**	**8.9**
Others	67	2,180	32.5
Total:	1,140	11,766	10.3
% Residential	**94.1%**	**81.5%**	
Estimated Revenue Impact:	**$2,200,794**		

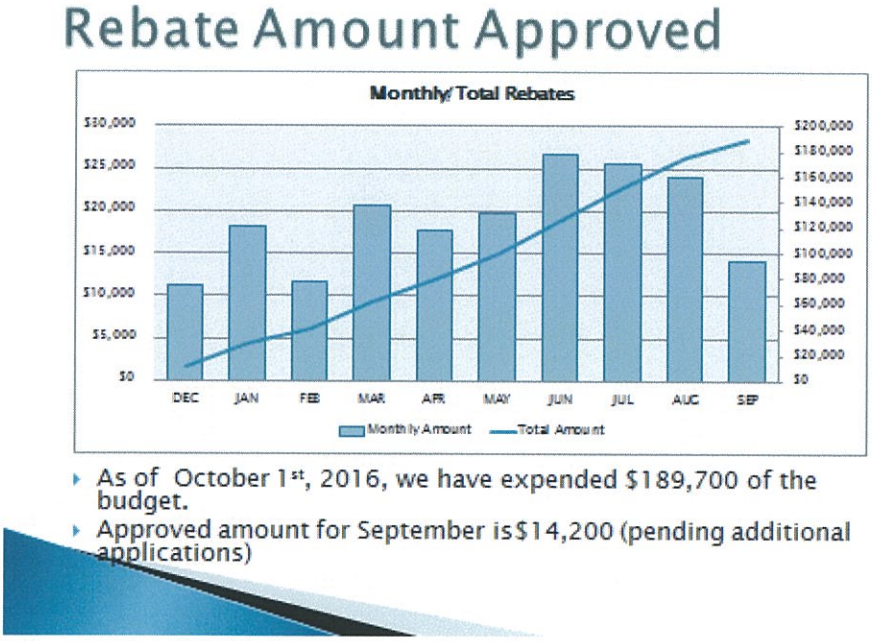
NEMS Renewables Work Session is scheduled for Thursday 10/27/2016 from 10:00 am – 11:30 am here at the CCU Conference Room.





The above does not include the GDOE project for the schools. We have not heard back from either the GDOE or it power purchase agreement partner since we sent them the CCU resolution approving the project. The GDOE project consists of four (4) schools totaling about 3,500 Kw of solar PV capacity.

2. **DSM Program Update:**



Comm. Sanchez wanted update on revision of this rebate program which hopefully will include residential batteries. He said would management be willing to include batteries and what is the value of such a rebate. He said HICO and Kauai are both doing pilot projects and GPA should consider doing something similar. The Chairman said the CCU wants to broaden this program and asked management to consider working on this. He said to put all the variables in play. Comm. Sanchez said DMS is a perfect tool to do this. GPA GM Benavente said he will report back to the CCU in November.

3. **Key Procurements Underway:**
Phase II Renewables Bid: Below is a list of those Un-Priced Technical Proposals received for MS GPA-070-16, Renewable Energy Resource Phase II:
    1. Hecate Energy
    2. Hanwha Energy Corp.
    3. Terra Energy
    4. Global Sourcing USA
    5. Sean/NexGeo Consortium
    6. LSIS Co. Ltd.
    7. Terra Solar, LLC
    8. Green Globe Solutions
    9. Pacific Progress LLC
    10. Quantum/Guam Clean Energy
    11. Solar City
    12. LGCNS
        a. Notification date of short list November 16th, 2016
        b. Priced proposal due on December 20th, 2016.
        c. Notification of successful bidder(s) expected January 26th, 2017.

Chairman wanted confirmation on the MW being considered and the GM said about 30 MG blocks. Comm. Sanchez was curious what technology was included by the 12 proponents. GM Benavente said he would summarize this information and report back to the Commission. Some of the criteria mentioned for short listed proponents include price, experience, storage and technology, acquiring of property and ability for interconnection.

4. **Public Hearing on Bill 361-33 for property for the Energy Storage System for NRG Solar PV plant:**
    a. Bill 361-33, An act to transfer a portion of Lot 421-R26, tentatively identified as "portion 421-77" Municipality of Talofofo with an area of 2,100± square meters from the Chamorro Land Trust inventory to the Guam Power Authority for the purpose of expanding the Talofofo substation is being heard tomorrow Wednesday October 26th at 9:30am at the Legislature.
    b. Additionally, the Legislature would be conducting an information hearing on GPA at same time.

5. **Waste Oil Burning at the Cabras Steam Plant:** GPA has put a stop on burning waste oil at the Cabras 1&2 steam plant about 3 months ago. However, GPA will again begin accepting waste oil for a period of six months in order to allow the private sector some time to find alternate ways of disposing of the waste oil.
    a. The program started back in the late eighties and was deemed at the time to be a short term solution.
    b. Sludge built up on boiler tubes from waste oil burning resulting in some boiler tube leaks
    c. Cabras 1&2 are deemed critical base load units now that the Cabras 3&4 units are not available.
    d. The reliability of the steam units are crucial to providing reliable power over the next few years until the new combined cycle units are commissioned.
    e. When the Cabras steam plant is retired, GPA can't burn the fuel in other units and therefore alternate solutions would need to be implemented anyways.

Chairman said this is a community service as we collect waste oil and burn it off to turn to steam. Comm. Sanchez said to work with Art Perez to get the word out and standardize GPA's exit strategy. The Community is asking for enough time to find other alternatives. Chairman said GPA needs to

involve all the oil stakeholders for proper notification. GM Benavente said possibly this program will end in about 6 mopnths.

6. **System Capacity Recovery Plan Update:**
   - The Macheche combustion turbine replacement unit should be on island by October 31st. The unit is targeted to be commissioned by November 7th thereby adding about 22MW of reserve capacity.
   - The Dededo Combustion Turbine Plant is now programmed to be commissioned by March 31st, 2017. All the long lead time equipment has been ordered. The plant would add 40 MW of reserve capacity into the system.
   - The following updates our generation capacity recovery schedule:

IWPS Capacity Recovery Plan (Updated):

24-Oct-16

Date	Description (IWPS Capacity)	MW Added	System MW	Peak MW	Reserve MW
24-Oct-16	**Current**		**319**	**255**	**64**
26-Oct-16	MEC 9 Liner Repair Completed	10	329	255	74
7-Nov-16	Macheche CT Commissioned	22	351	255	96
28-Feb-17	Dededo CT 2 Commissioned	20	371	255	116
31-Mar-17	Dededo CT 1 Commissioned	20	391	255	136

It was clarified that these engines are like aircraft engines and they are easier to replace and put back to service. The Chairman pointed out that the Macheche and Yigo plants are aero dirivities and cost a little more but more efficient. Dededo 1 & 2 are industrial types. Comm. Bamba commented relative to expenditures and wanted a total for all. GM Benvente said about $14Million and GPA will gain 80MW at the end of the day. Chairman Joey reminded GM Benavente about the Warsilla plant in Manengon to confirm if GPA will own it at the end of the contract period.

7. **Public Commission on Utilities public hearings:** The PUC conducted public hearings on the new generation plant and the streetlight tariff change this month. GPA attended the hearings as well as our Chairman.

   Comm. Sanchez asked if there was any community comment of note; GM responded that there was really very little and mostly clarifying questions. There was no public objection.

8. **Public Commission on Utilities Dockets:** The following dockets are on the agenda for this Thursday's PUC meeting.
   - GPA Docket 16-01, GPA's Streetlight Rate Schedule F and H Filing, ALJ Report, and Proposed Order
   - GPA Docket 15-05, Petition for Approval of Procurement of New Generation Combined Cycle Units, ALJ Report, and Proposed Order
   - GPA Docket 17-01, Petition for Approval of SCADA Contract, PUC Counsel Report, and Proposed Order
   - GPA Docket 17-02, Petition for Approval of the Cabras 1 Overhaul, PUC Counsel Report, and Proposed Order
   - GPA Docket 17-03, Petition for Approval of Diesel Peaking Units Overhaul, PUC Counsel Report, and Proposed Order
   - GPA Docket 17-04, Petition for Approval of Procurement of PMC for Fuel Farm, PUC Counsel Report, and Proposed Order

- GPA Docket 17-05, Petition for Approval of Contract relative to Engineering & Technical Services Supporting GPA's Resource Plan, PUC Counsel Report, and Proposed Order
- GPA Docket 17-06, Petition for Approval of GPA-Navy Renewables Study, PUC Counsel Report, and Proposed Order
- GPA Docket 17-07, GPA Petition for Extension of Property Insurance Contract, PUC Counsel Report, and Proposed Order

9. **Customer Payment Demographics:** The following provides the information on customer payments as requested by Commissioner Santos.

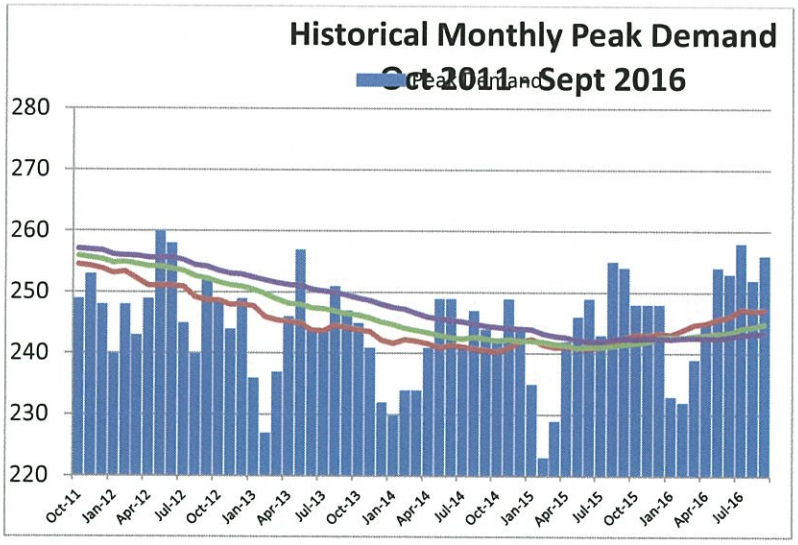
Demographics of Customer Payment:

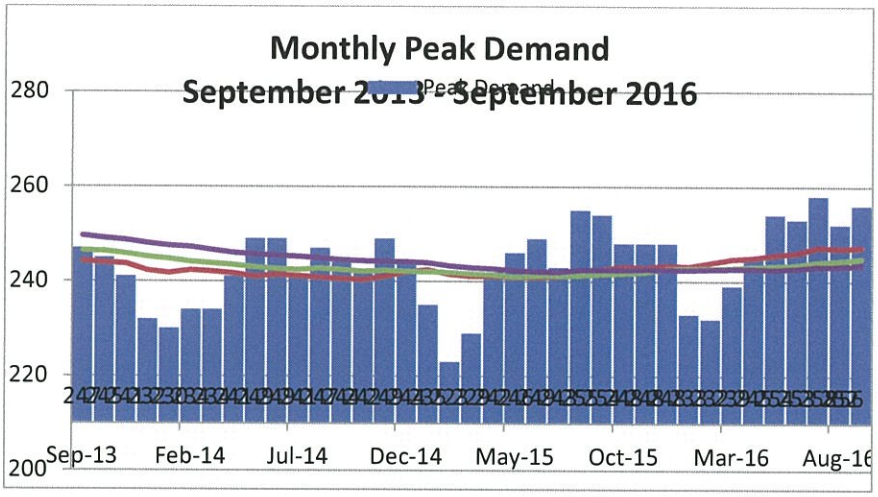
		Monthly Customer Total		
BOOK NBR	**PAYMENT LOCATI**	**16-Jul**	**16-Aug**	**16-Sep**
400-459	HAGATNA	2,383	2,574	2,458
400-459	FADIAN	1,334	1,456	1,365
151-169/300-370/460-468	UPPER TUMON	6,753	7,724	7,371

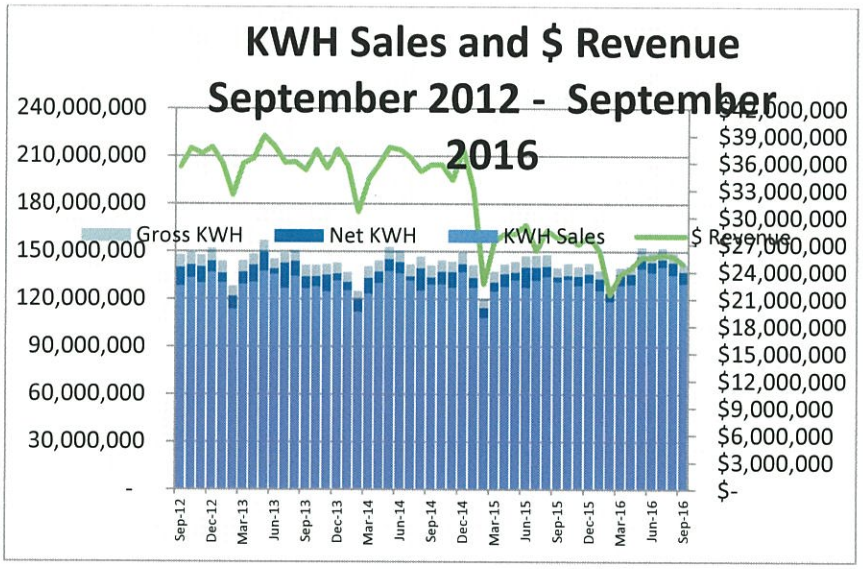
400-459 (Umatac, Malessao, Inarajan, Malojloj, Talofofo, Ipan, Yona, Windward Hills, Santa Rita, Agat, Nimitz Hill
151 – 169 (Tamuning, Upper Tamuning)
300 – 370 (Dededo, Yigo, Latte Heights)
460 -468 (Tumon, Upper Tumon, Harmon)

Comm. Santos asked when GPA plan to upgrade the Upper Tumon facility. He added that we need another location in the north in Yigo or Dededo to better serve our customers. Comm. Santos asked John Kim, CFO status on the kiosk concept and he responded that it is still a work in progress and cost is a factor and is trying to source. Chairman Duenas said there is an urgency here and to please give expedient attention to this project.

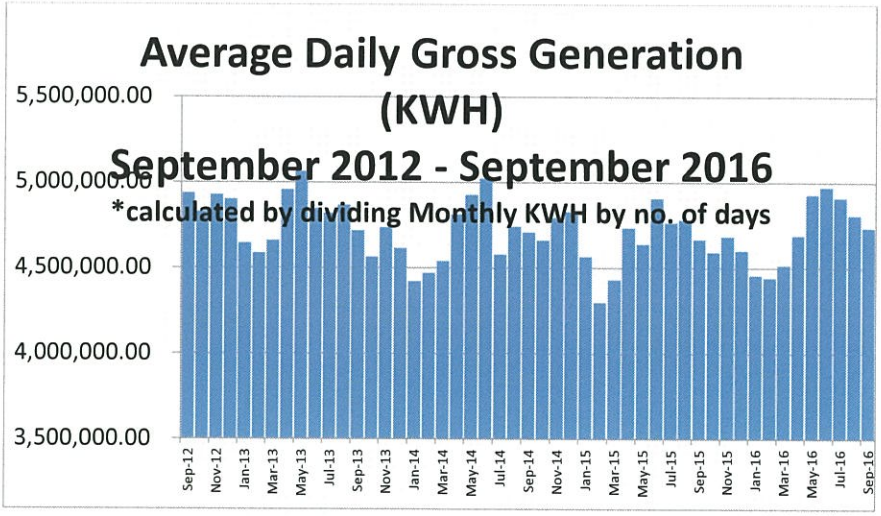
10. Key Performance Indicators graphs:

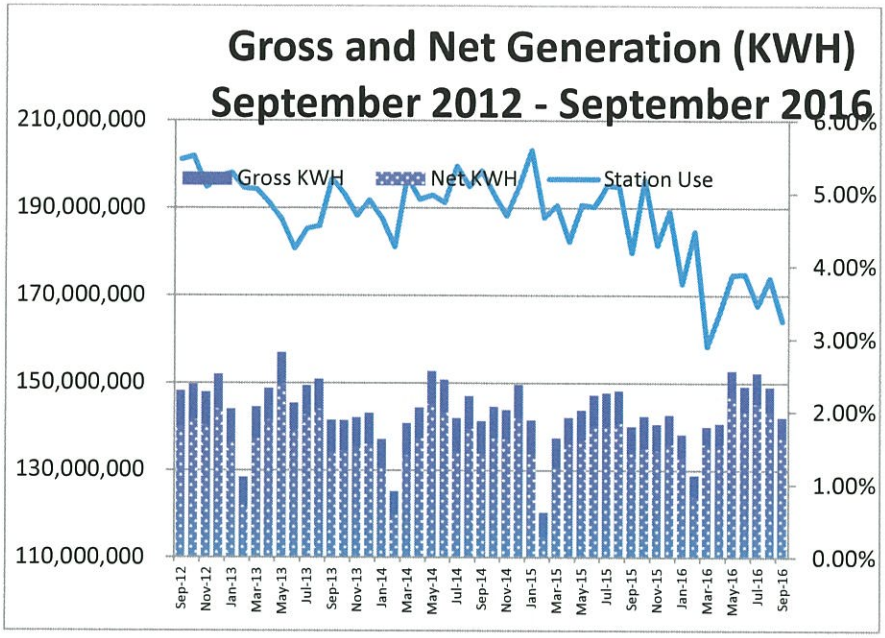


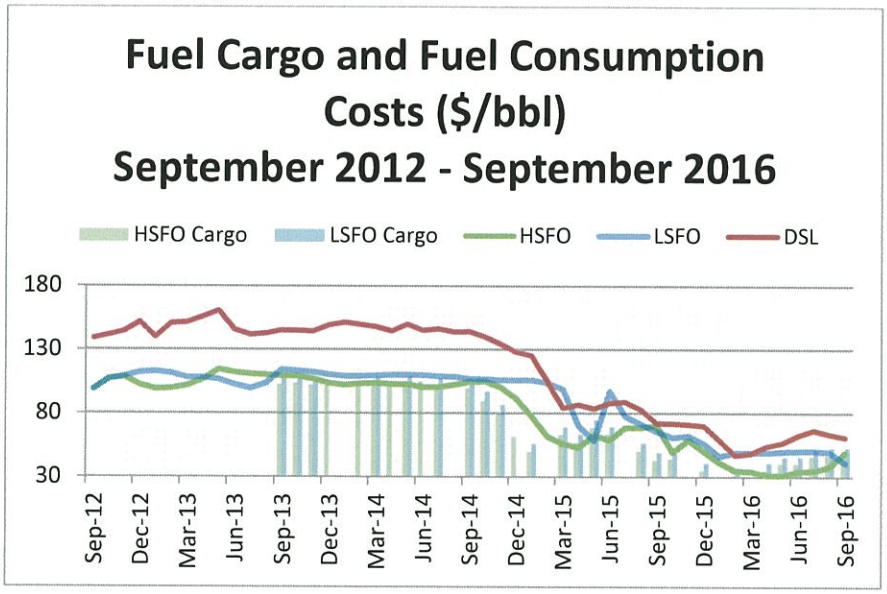


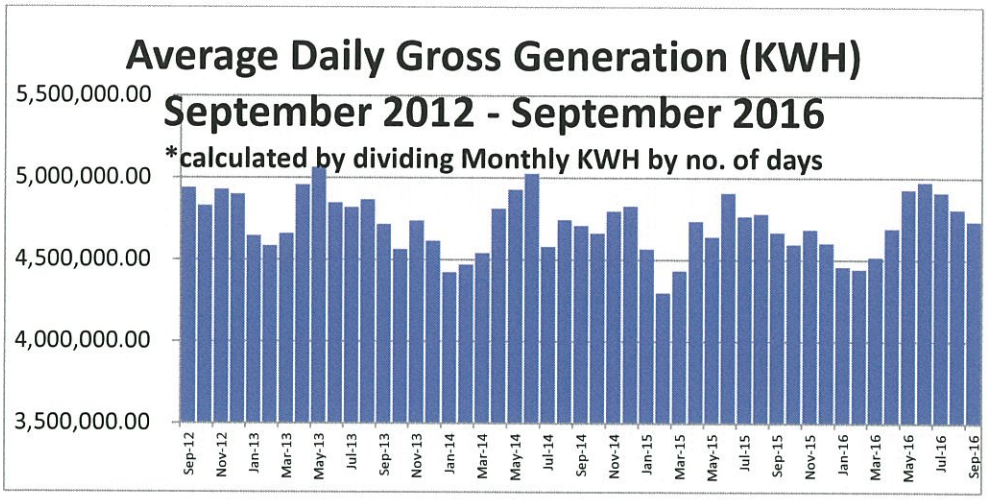


Comm. Sanchez is curious to run some elasticity study on this - lower cost v. consumption. CO Kim said he would work on this.




Gross and Net Generation (KWH)
September 2012 - September 2016
Gross KWH
Net KWH
Station Use
210,000,000
190,000,000
170,000,000
150,000,000
130,000,000
110,000,000
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
Sep-12
Nov-12
Jan-13
Mar-13
May-13
Jul-13
Sep-13
Nov-13
Jan-14
Mar-14
May-14
Jul-14
Sep-14
Nov-14
Jan-15
Mar-15
May-15
Jul-15
Sep-15
Nov-15
Jan-16
Mar-16
May-16
Jul-16
Sep-16


Fuel Cargo and Fuel Consumption
Costs ($/bbl)
September 2012 - September 2016
HSFO Cargo
LSFO Cargo
HSFO
LSFO
DSL
180
130
80
30
Sep-12
Dec-12
Mar-13
Jun-13
Sep-13
Dec-13
Mar-14
Jun-14
Sep-14
Dec-14
Mar-15
Jun-15
Sep-15
Dec-15
Mar-16
Jun-16
Sep-16



4.2.2 Financials

This matter was not dicussed.

4.2.3 Resolution 2016-60 Relative to Approving the Insurance Bid Renewal

The Guam Power Authority's Bond Indenture agreement requires GPA to "secure and maintain property insurance on all facilities constituting the system against risks of loss or damage to the extent that such insurance is obtainable at reasonable cost."

The indenture further requires GPA to carry insurance "of a scope and nature as that usually carried in the industry," and GPA's current Property Insurance policy is set to expire on November 1, 2016. GPA management has been in close communication with its insurance adjuster, broker and underwriters regarding the claim on its property insurance policy for the incident and the effect it has on future premiums.

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 two years; assuming that GPA is now in a position to confirm agreement to these two years, and accordingly will commit to keeping the current policy in place until November 1, 2018.

The property insurance premiums will be $6,450,000 annually for the next two years. An annual savings of $212,309 compared to the present premium. Also, insurers agreed to add Cyber security coverage with $5 million sub-limit. The policy renewal term is for two years from November 1, 2016 until October 31, 2018 and the funding source is GPA revenues

There was discussion on the period being covered by this policy. Legal Counsel said this will cover (2) calendar years Nov. 2016 to Oct. 31, 2018. Comm. Santos said he would like to personally review the actual policy and Ms. Ann Marie Muna / AM Insurance said she would accommodate the request

Comm. Bamba motioned to approve Resolution 2016-60; Comm. Santos seconded. On the motion there was no further discussion or objection and the motion passed.

4.2.4 Resolution 2016-61 Relative to Aggrekko Contract Extension

Cabras 3&4 power plant is still not available and the power system remains short of 78.6 MW of base load capacity placing GPA in the position of having difficulty meeting system demand upon an additional base load maintenance outage or large emergency unit outage. The Authority is interested in pursuing the extension of the (Aggreko) 40 MW Temporary Power Plant Lease Contract for an additional 4 years

with the option to purchase the units to ensure GPA has sufficient and reliable reserves until the commissioning of new baseload units. A summary of lease and rent-to-own options from Aggreko for 30 MW and 40 MW capacities are in Master File and will cost approximately $49.7M.

The Authority plans to use the revenue funds which could be as much as $9M to $12.5M per year for the extension of lease contract based on a 27% capacity factor of the 40 MW plant. In addition GPA is currently working with Aggreko on the required air permit for operations beyond the initial 1 year period.

A lengthy discussion followed regarding the revised proposal on page 141 of Board Books (copy attached here).

REVISED PROPOSAL (10/24):	CURRRENT	2017	2018	2019	2020	4 Year TOTAL
Extension for 40 MW Rent to Own (Per Annum Fixed Fees)	**$ 11,789,832**	**$ 12,991,952**	**$ 9,991,952**	**$ 11,291,952**	**$ 11,491,952**	**$ 45,767,808**
Capacity Charge	*$ 8,308,800*	*$ 6,979,392*	*$ 6,979,392*	*$ 6,979,392*	*$ 6,979,392*	*$ 27,917,568*
Shipping Charge	*$ 1,253,472*					*$ -*
Fixed O&M Charge	*$ 2,227,560*	*$ 2,227,560*	*$ 2,227,560*	*$ 2,227,560*	*$ 2,227,560*	*$ 8,910,240*
Emission Control Charge		*$ 285,000*	*$ 285,000*	*$ 285,000*	*$ 285,000*	*$ 1,140,000*
Emission Control Moblization		*$ 3,000,000*	*$ -*	*$ -*	*$ -*	*$ 3,000,000*
Rent-To-Own		*$ 500,000*	*$ 500,000*	*$ 1,800,000*	*$ 2,000,000*	*$ 4,800,000*
Estimated Energy Charge - Per Annum (Based on current average of 97171 MWH per annum @ $4.4/MWH)		**$ 427,550**	**$ 427,550**	**$ 427,550**	**$ 427,550**	**$ 1,710,201**
Estimated Urea Cost - Per Annum (Based on current average of 97171 MWH per annum @ **$5.8/MWH**)		**$ 563,589**	**$ 563,589**	**$ 563,589**	**$ 563,589**	**$ 2,254,356**
Total Estimate (Per Annum)		**$ 13,983,091**	**$ 10,983,091**	**$ 12,283,091**	**$ 12,483,091**	**$ 49,732,365**
Annual Savings *		$ 9,377,000	$ 9,377,000	$ 9,377,000	$ 9,377,000	$ 37,508,000
Net Annual Costs		$ 4,606,091	$ 1,606,091	$ 2,906,091	$ 3,106,091	$ 12,224,365

**Annual Savings are projected from Cabras 3&4 PMC, CIP, O&M and labor savings. It also includes fuel savings from fuel efficiencies gained over CT operations.*

A very lengthy discussion followed and some of the comments are highlighted below.

Comm. Bamba asked if there are any additional cost such as fuel line and others; GM Benavente confirmed the costs are all inclusive. Comm. Sanchez on the annual savings how much is fuel – GM said $4M per year which will eventually go back to the ratepayer. The net annual cost from revenue base is $28M. Does management anticipate any base rate adjustment as a result of this deal. GM Benavente said that is a different story. Comm. Sanchez said he loves the concept from a capacity point of view but he is concerned that the CCU will put GPA in an awkward situation where the coverage ratio has declined. If we accept this can GPA handle a $28M increase in cost without adversely impacting our coverage. What does management intend? Chairman Duenas said management needs to tell the CCU how management intends to make up for it.

Comm. Sanchez – can management give analysis on how they plan to address the short fall. Comm.Bamba – how much of the lease is actually going towards ownership; GM Benavente said about $4.8M total. Comm. Duenas– if we change our mind and we don't want to own it then we don't have to pay the $1.8M and $2M at the back end

It was mentioned that management did ask EPA to waive the emission charges and they denied the request.

The GM reiterated the advantages of Aggreko - 99% reliability;; more efficient by Yigo or TEMES; Agreed to carry 7MW spinning reserve to help with intermittency. Comm. Sanchez said the concern is not with the technical it's how do we plan to pay for it

Comm. Bamba asked about the condition of the units – the GM gave a scenario of the life of the units which ends up being positive for GPA. The problem that he has is there was no bid that went out on this originally. Chairman asked Legal Counsel if the original proposal included the option to buy. The Chairman asked if they can buy it now and the CFO said they will sell it to us in 4 years but not now.

Chairman Duenas commented that Aggreko is part of our current mix and when Dededo CT 1&2 comes on line we may not need Aggreko. It makes sense to take this deal for the next year and we can exit cancel the rent to own later in 2018 or 2019.

Comm. Sanchez said we want to preserve the option to buy but want to think about it for a year; if we do this then what is the buyout. In addition, Comm. Sanchez said the key point is we can't revisit this a year from now if we put $3M investment for year 1.

At the end, the Commission put the matter to a vote.

Comm. Sanchez motioned to approve Resolution 2016-61; Comm. Santos seconded. The vote was 3 ayes and 1 nay and the motion passed. For the record, Comm. Bamba voted nay.

4.2.5 Resolution 2016-62 Relative to the Cabras 1 & 2 PMC Extension

Resolution 2016-62 requests the Commission to approve filing a petition with the PUC for approval to extend the PMC for Cabras 1&2. GPA has a five-year Performance Management Contracts (PMC) for the management, operations, and maintenance of the Cabras 1&2 Plant awarded to TEMES, that commenced in October 2010 with expiration date of September 30, 2015. With Resolution 2015-35, the PMC was extended up to December 31, 2015 for an amount not to exceed $723,279.44.

GPA issued a Multi-Step Bid for a Single Performance Management Contract for the Cabras 1&2 and the Cabras 3&4 Power Plants, which was subsequently cancelled due to the explosion of Cabras 3&4 Power Plant; and with Resolution 2015-62A, the PMC between GPA and TEMES for Cabras 1&2 was approved for extension up to December 31, 2016.

GPA's current resource plans and regulatory compliance measures filed with the PUC for approval, indicate the retirement of the Cabras 1&2 units by 2021. The PMC provides GPA assistance in the continued operation and maintenance of the plants, including completion of life-extension projects, and meeting availability, reliability, and efficiency standards. Cabras 1&2 provides up to 132 MW capacity, about 50% of current estimated peak demand, and it is important for GPA to ensure its availability and reliability, to ensure adequate MW capacity to support the island's energy requirements with minimal power supply interruption. GPA believes extending the contract period for the current PMC Contract, currently awarded to TEMES, Inc., is a more practical approach, given TEMES's experience in the management, operation and maintenance of Cabras 1&2, as well as experience working with GPA.

GPA and TEMES have begun evaluating and improving key contract requirements and objectives – reference the table below.

GPA's PROPOSED COSTS FOR TEMES CABRAS 1&2 PMC EXTENSION PERIOD

ACTUAL EXPENSES	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	TOTAL	AVERAGE
Fixed Management Fee	$ 1,520,000	$ 1,562,560	$ 1,606,312	$ 1,651,288	$ 1,697,524	$ 8,037,685	$ 1,607,537
Routine O&M Budget	$ 833,564	$ 1,027,999	$ 1,056,717	$ 1,086,374	$ 1,320,365	$ 5,325,019	$ 1,065,004
Inventory Replenishment	$ 151,356	$ 120,225	$ 158,993	$ 188,484	$ 120,075	$ 739,133	$ 147,827
TOTAL O&M EXPENSES	**$ 2,504,920**	**$ 2,710,784**	**$ 2,822,022**	**$ 2,926,146**	**$ 3,137,964**	**$ 14,101,837**	**$ 2,820,367**
Revenue CIP - True Up	**$ 435,302**	**$ 502,787**	**$ 403,683**	**$ 420,685**		**$ 1,762,457**	**$ 440,614**
TOTAL O&M + TRUE-UP	***$ 2,940,222***	***$ 3,213,571***	***$ 3,225,705***	***$ 3,346,831***	***$ 3,137,964***	***$ 15,864,294***	***$ 3,260,982***

GPA FINAL PROPOSAL							
YEAR	2017	2018	2019	2020	OPTIONAL EXTENSION YEAR: 2021	TOTAL	AVERAGE
Fixed Management Fee	$ 1,674,400	$ 1,721,283	$ 1,769,479	$ 1,819,025		$ 6,984,187	$ 1,746,047
Routine O&M Budget	$ 1,203,370	$ 1,237,064	$ 1,271,702	$ 1,307,309	$ 1,343,914	$ 6,363,358	$ 1,272,672
Inventory Replenishment	$ 120,000	$ 120,000	$ 120,000	$ 120,000	$ 120,000	$ 600,000	$ 120,000
Non-Routine O&M Budget SUBJECT TO GPA REVIEW AND APPROVAL ON A CASE-BY-CASE BASIS	$ 258,530	$ 265,813	$ 273,289	$ 280,936	$ 2,158,786	$ 3,237,355	$ 647,471
ESTIMATED MAXIMUM COUNTRACT AMOUNTS	***$ 3,256,300***	***$ 3,344,160***	***$ 3,434,470***	***$ 3,527,270***	***$ 3,622,700***	***$ 17,184,900***	***$ 3,436,980***

The Authority requests for an extension of the contract from January 1, 2017 to December 1, 2021 and the approval is requested to allow the General Manager to petition the PUC to pursue a five-year extension for the Cabras 1&2 PMC Contract.

Comm. Bamba motioned to approve Resolution 2016-62; Comm. Santos seconded. On the motion there was no further discussion or objection and the motion passed.

4.2.6 Resolution 2016-63 Relative to Authorizing the Approval of a Bond Issuance Refinancing

The objective of refunding the outstanding revenue bonds is to take advantage of low interest rates, hence reduce debt service payments. This will be beneficial to our ratepayers in the form of potential savings. The refunding will result in cost savings to the Authority. It is estimated that the process will require assistance and bond review from Barclays, GPA Bond Counsel, GEDA, inclusive of the approval of the Public Utilities Commission / Guam Legislature and the Governor. The Cost of issuance will be covered by the proceeds from the refunding. The new debt service is already covered by the existing revenues in the Authority's revenue requirement.

Comm. Bamba motioned to approve Resolution 2016-63; Comm. Sanchez seconded. There was no further discussion or objection and the motion passed.

4.2.7 Resolution 2016-64 Relative to Authorizing Additional Expenditures for the Dededo CT Return to Service Project

If approved Resolution 2016-64 will return the Dededo Combustion Turbine Units 1 and 2 to service. The project is necessary and urgent to ease the current generation shortfall by adding 45 MW of capacity to the system. The services will be provided through TEMES (CT PMC)

The anticipated completion of this project is December, 2016 for Dededo CT Unit 2 and February, 2017 for Dededo CT Unit 1 and is estimated at $9.7 million. The breakdown of costs is as follows and the funding source is 1999, 2010, 2014 bond funds and 2017 revenue funds.

Description	Budget
1. Combustion Turbine (CT) Overhaul	$2,070,000
2. CT Generator Rotor Repair #2, Megger & Testing of Generator #1	$2,270,000
3. CT Air Intake System Repair	$371,370

4. Water System Upgrade	$1,041,128
5. Air Cooling Tower System Replacement	$717,068
6. Outdoor BOP pipe, fitting and valve replacement and pump/motor maintenance for fuel oil and raw water system	$255,683
7. Control System Upgrade	$1,080,000
8. Unit #1 Replace 13.8 kV Switchgear. Unit #2 PM for existing switchboard	$1,210,000
9. Black Start Diesel Generator Repair	$70,000
10. Replace DC Batteries	$50,000
11. I &C Equipment of Balance of Plant Repair and Maintenance	$70,000
12. Fire Protection System Repair	$300,000
13. CT#1 & #2 Lube Oil Material (Purchase)	$80,000
14. Switchyard MTR (Bushing & DS)	$85,000
15. Crane Repair	$28,000
TOTAL	$9,698,249
Reallocated BF	$6,355,128
2014 BF	$736,000
Revenue Funds	$2,607,121

Comm. Bamba motioned to approve Resolution 2016-64; Comm. Sanchez seconded. There was no further discussion or objection and the motion passed.

5. OLD BUSINESS - None

6. ANNOUNCEMENTS

6.1 Next CCU Meetings

The Chairman said the next meeting would be a work session for GWA on November 16 and GPA on November 17. The November CCU meeting is on November 22nd.

7. ADJOURNMENT

The meeting was adjourned a 7:40 p.m.

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bls

Attested:

JOSEPH T. DUENAS, Chairman

J. GEORGE BAMBA, Secretary

GUAM CONSOLIDATED COMMISSION ON UTILITIES
RESOLUTION NO. 03-FY2017

RELATIVE TO RATIFICATION OF THE SERVICES PROVIDED BY HAWAIIAN ROCK PRODUCTS FOR THE REPAIR AND MAINTENANCE OF WATER LINES ISLAND-WIDE FOR AN AMENDED PURCHASE ORDER AMOUNT TO ISSUE

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, the Consolidated Commission on Utilities under Section 5452 of Title 5 of the Guam Code Annotated has the authority to ratify the procurement of goods and services if there is no indication that the company who was awarded the procurement acted in bad faith and there is a finding that the procurement is for GWA's use and is in the best interest of the Territory of Guam; and

WHEREAS, GWA Management entered into purchase order no. 298400 with Hawaiian Rock Products on August 13, 2015 for base course and bedding sand to be used for the repair and maintenance of water lines island-wide; and

WHEREAS, during this period, purchase order no. 298400 exceeded the amount of Ten Thousand Eight Hundred Seventy Two Dollars ($10,872.00) (see Exhibit A) by One Thousand Three Hundred Ninety Nine Dollars and Sixty Cents ($1,399.60); and

WHEREAS, the Consolidated Commission on Utilities under Section 5452 of Title 5 of the Guam Code Annotated has the authority to ratify the procurement of goods and services if there is no indication that the person who was awarded the procurement acted in bad faith and there is a finding that the procurement is for GWA's use and is in the best interest of the people of Guam and GWA management is now seeking ratification from the CCU for the work.

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve and authorize the following:

Section 1. The foregoing recitals hereto are hereby ratified, confirmed, and incorporated herein by reference.

Section 2. The Consolidated Commission on Utilities hereby ratifies and approves the payment be made to Hawaiian Rock Products for purchase order number 298400 (Exhibit A) in the amended amount of One Thousand Three Hundred Ninety Nine Dollars and Sixty Cents ($1,399.60) on the following grounds:

a. There was no indication of bad faith or fraud in any of the procurements contained herein.

b. According to GWA management, the material is required for the ongoing repair and maintenance of water lines. Material is used for backfilling and compaction around the pipe and above it.

c. All of the procurements herein are in the best interest of the Territory of Guam and the Guam Waterworks Authority.

d. Only a reasonable profit was given in those instances where the profit was given.

Section 3. This Resolution is hereby determined to be a declaration of official intent of the Consolidated Commission on Utilities.

Section 4. All actions heretofore taken by the GWA or the officers thereof or on their behalf not inconsistent herewith related to these purchases are hereby ratified, approved, and confirmed.

Section 5. Based on the forgoing, the CCU authorizes GWA management to pay the amended amount owed between GWA and Hawaiian Rock Products in the total amount due of One Thousand Three Hundred Ninety Nine Dollars and Sixty Cents ($1,399.60).

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

DULY AND REGULARLY ADOPTED, this 22nd day of November, 2016.

Certified by:

JOSEPH T. DUENAS
Chairperson

Attested by:

J. GEORGE BAMBA
Secretary

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities, as evidenced by my signature above do hereby certify as follows:

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

AYES: 4

NAYS: 0

ABSTENTIONS: 0

ABSENT: 1

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EXHIBIT A

GUAM WATERWORKS AUTHORITY

1 : Page
5220: B/U
08/13/15: Date
FOB GWA: F.O.B.

PURCHASE ORDER
GUAM WATERWORKS AUTHORITY

P.O. Box 3010, Hagatna, Guam 96932
PHONE: (671) 647-7818 FAX: (671) 649-3750

No. 298400-000 OP

THIS PURCHASE ORDER MUST APPEAR ON ALL INVOICES PACKING SLIPS, PACKAGES, B/L CORRESPONDENCE, ETC.

Payment Terms: Net 30 Days

VENDOR:

HAWAIIAN ROCK PRODUCTS
1402 ROUTE 15
MANGILAO GU 96913

SHIP TO:

GUAM WATERWORKS AUTHORITY
578 N. Marine Corps. Dr.
ATTENTION: P & S WAREHOUSE
Tamuning GU 96913

AUTHORITY	IFB / REFERENCE	TIME FOR DELIVERY	EXPIRATION
PL 16-124 / PL 21-148			09/30/2015

ARTICLES OR SERVICES	QTY	UNIT	UNIT PRICE		AMOUNT
COURSE *** NOTE: TO BE PICKED UP BY GWA DUMP TRUCK OR APPROVED HEAVY EQUIPMENT. *** FOR: WATER/PRESSURE/F. SANCHEZ GPP: 3-204.03.1 DELIVERY: AS NEEDED G.L:5220.62005.417 OQ# 26220 / OR# 26268 PETER					
2" MINUS AGGREGRATED BASE SAND 3/8"	400	TN	20.79	TN	8,316.00
BEDDING SAND/MANFACTURED	100	TN	25.56	TN	2,556.00

NOTE: "SUBJECT TO THE GUAM PROCUREMENT CODE AND ACCOMPANYING REGULATIONS"

SPECIAL INSTRUCTIONS TO VENDOR:
Send certified original and three (3) copies of invoice to Guam Waterworks Authority, Government of Guam, at the address shown above.

Payment upon receipt of merchandise in Guam in good condition.

SEE BACK FOR TERMS AND CONDITIONS

DO NOT FILL THIS ORDER if your total cost exceeds this total. >>

TOTAL $ 10,872.00

ACKNOWLEDGED BY: _____ DATE: _____
SIGNATURE OF VENDOR

RETURN TO PROCUREMENT DIVISION AT THE ABOVE ADDRESS

SIGNATURE:

Mark G. Miller - General Manager, Interim
NAME TITLE

GUAM CONSOLIDATED COMMISSION ON UTILITIES
RESOLUTION NO. 06-FY2017

RELATIVE TO RATIFICATION OF WORK PROVIDED BY ALLIED PACIFIC DRILLING, INC. ON GWA'S DEEP WELLS FOR AN AMENDED PURCHASE ORDER AMOUNT TO ISSUE

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, the Consolidated Commission on Utilities under Section 5452 of Title 5 of the Guam Code Annotated has the authority to ratify the procurement of goods and services if there is no indication that the company who was awarded the procurement acted in bad faith and there is a finding that the procurement is for GWA's use and is in the best interest of the Territory of Guam; and

WHEREAS, GWA Management entered into two (2) purchase orders with Allied Pacific Drilling, Inc. - purchase order no. 298647 was on October 22, 2015 and purchase order no. 299090 was on February 26, 2016 for work provided on GWA's deep well facilities; and

WHEREAS, during this period, purchase order no. 298647 exceeded the amount of Eight Thousand Five Hundred Fifty Dollars ($8,550.00) (see Exhibit A) by Three Thousand Five Hundred Fifty Dollars ($3,550.00); and purchase order no. 299090 exceeded the amount of Nineteen Thousand Three Hundred Thirty Seven Dollars and Fifty Cents ($19,337.50) (See Exhibit B) by Four Thousand Three Hundred Thirty Eight Dollars and Fifty Cents ($4,338.50); and

WHEREAS, the Consolidated Commission on Utilities under Section 5452 of Title 5 of the Guam Code Annotated has the authority to ratify the procurement of goods and services if there is no indication that the person who was awarded the procurement acted in bad faith

and there is a finding that the procurement is for GWA's use and is in the best interest of the people of Guam and GWA management is now seeking ratification from the CCU for the work.

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve and authorize the following:

Section 1. The foregoing recitals hereto are hereby ratified, confirmed, and incorporated herein by reference.

Section 2. The Consolidated Commission on Utilities hereby ratifies and approves payment be made to Allied Pacific Drilling, Inc. for purchase order number 298647 (Exhibit A) in the amount of Three Thousand Five Hundred Fifty Dollars ($3,550.00) and purchase order number 299090 (Exhibit B) in the amount of Four Thousand Three Hundred Thirty Eight Dollars and Fifty Cents ($4,338.50) on the following grounds:

a. There was no indication of bad faith or fraud in any of the procurements contained herein.

b. According to GWA management, the work conducted by Allied Pacific Drilling, Inc. was necessary to complete the repairs and restore the wells back in operation.

c. All of the procurements herein are in the best interest of the Territory of Guam and the Guam Waterworks Authority.

d. Only a reasonable profit was given in those instances where the profit was given.

Section 3. This Resolution is hereby determined to be a declaration of official intent of the Consolidated Commission on Utilities.

Section 4. All actions heretofore taken by the GWA or the officers thereof or on their behalf not inconsistent herewith related to these purchases are hereby ratified, approved, and confirmed.

Section 5. Based on the forgoing, the CCU authorizes GWA management to pay the amended amount owed between GWA and Allied Pacific Drilling, Inc. in the total amount due of Seven Thousand Eight Hundred Eighty Eight Dollars and Fifty Cents ($7,888.50).

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

DULY AND REGULARLY ADOPTED, this 22nd day of November, 2016.

Certified by:

JOSEPH T. DUENAS
Chairperson

Attested by:

J. GEORGE BAMBA
Secretary

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities, as evidenced by my signature above do hereby certify as follows:

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

AYES: 4

NAYS: 0

ABSTENTIONS: 0

ABSENT: 1

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EXHIBIT A

ALL PURCHASE ORDERS FROM THE GUAM WATERWORKS AUTHORITY
ARE SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS.

1. In the shipments are connected with a bid or RFP issued by GWA, this purchase order shall be governed by the Terms and Conditions of the bid or RFP as well as the Guam Procurement Law and the Guam Procurement Regulations

2. An acknowledged and dated copy of this purchase order must be returned to GWA.

3. GWA will only be responsible for the total amount indicated in this Purchase Order and any amount in excess of that amount will not be paid by GWA.

4. All invoices (original/s and duplicate/s) must be forwarded to Accounts Payable Department of the Guam Waterworks Authority. These invoices must be properly endorsed or signed by authorized GWA personnel as indicated in the Purchase Order. And invoices should be provided to GWA within the month in which the purchases and/or services were rendered.

5. All vendors with an outstanding unpaid invoice at the end of the month after the goods or services were rendered must provide monthly vendor statements to the Accounts Payable Supervisor at GWA.

6. No variation in any of the terms, conditions, delivery dates, prices, quality, quantity or specifications under this order, regardless of the conditions or terms of the seller's acceptance, will be effective without the written consent of a person specifically authorized by GWA to make such changes.

7. Packing lists must accompany each shipment which indicate the order number and a detailed description and goods or services provided, including, but not limited to, the part number and serial number for each item delivered.

8. Shipments must be identified as either "PARTIAL" or "COMPLETE."

9. All goods delivered are subject to GWA's inspection and acceptance within a reasonable time after delivery. If the specifications are not met and are rejected by GWA, the goods shall be returned at the seller's expense.

10. In connection with any prompt payment discount offered the time will computed from date of delivery and acceptance at destination or from the date the correct invoice or voucher is received in by the Guam Waterworks Authority, if the latter is later than date of delivery and acceptance. Payment is deemed to be made, for the purpose of earning any discount on the date the check is mailed.

11. Shipments in excess of the amount stated in the order will not be accepted unless specifically approved by a GWA official authorized to make such changes.

GUAM WATERWORKS AUTHORITY

1	: Page
6812	: BAI
10/22/15	: Date
	: F.O.B.

PURCHASE ORDER
GUAM WATERWORKS AUTHORITY

P.O. Box 3010, Hagatna, Guam 96932
PHONE: (671) 647-7818 FAX: (671) 649-3750

No. 208647

THIS PURCHASE ORDER MUST APPEAR ON ALL INVOICES PACKING SLIPS, PACKAGES, B/L CORRESPONDENCE, ETC.

Payment Terms: NET 30 DAYS

VENDOR:

ALLIED PACIFIC DRILLING INC.
P.O. BOX 3411
HAGATNA, GUAM 96932

SHIP TO:

GUAM WATEWORKS AUTHORITY
578. N. MARINE CORPS. DR.
ATTENTION: P&S WAREHOUSE

AUTHORITY	IFB / REFERENCE	TIME FOR DELIVERY	EXPIRATION
PL 16-134 / PL 21-148			09/30/2016

ARTICLES OR SERVICES	QTY	UNIT	UNIT PRICE	AMOUNT
IMPORTANT MESSAGE TO VENDOR: GWA WILL NOT BE LIABLE FOR ANY UNAUTHORIZED SERVICES THAT IS NOT LISTED IN THE PURCHASES ORDER, ONLY THE SERVICES LISTED IN THE PURCHASE ORDER WILL BE PAYED BY GWA. *** ONLY THE AUTHORIZED NAMES LISTED ON THE P.O ARE ALLOWED HONORED BY GWA, VENDOR MUST INDICATE ON THE SERVICE INVOICE THE EMPLOYEE'S NAME, BADGE NUMBER AND MUST SIGN AND PRINT CLEARLY. *** AGREEMENT TO COVER COST FOR LABOR, MATERIALS AND EQUIPMENTS FOR REDEVELOPMENT AND BLOWING/ AIRLIFT/BAILING FOR VARIOUS GWA DEEPWELL SITES. *** DEEPWELL SITES 500 FEET DEEP OR LESS: (MONDAY THRU FRIDAY): $2,750.00 PER DAY DEEPWELL SITES MORE 500 FEET DEEP: (MONDAY THRU FRIDAY): $3,050.00. PER DAY DEEPWELL SITES 500 FEET DEEP OR LESS: (WEEKENDS & HOLIDAYS) $3,250.00 PER DAY DEEPWELL SITES MORE 500 FEET DEEP: (WEEKENDS & HOLIDAYS): $3,550.00 PER DAY *** AUTHORIZED PERSONNEL: *** RON TOPASNA/ PAT SIQUENZA/ GARRET TAITAGUE/IGNACIO CASTRO FOR: WATER/ GROUND DEEPWELL GPR: 3-204.07 DELIVERY: AS NEEDED G.L: 6812.950.34000 OQ# / OR# TONY CAMACHO #962				$5,000.00

NOTE:"SUBJECT TO THE GUAM PROCUREMENT CODE AND ACCOMPANYING REGULATIONS"

SPECIAL INSTRUCTIONS TO VENDOR:
Send certified original and three (3) copies of invoice to Guam Waterworks Authority, Government of Guam, at the address shown above.

Payment upon receipt of merchandise in Guam in good condition.

SEE BACK FOR TERMS AND CONDITIONS

DO NOT FILL THIS ORDER if your total cost exceeds this total. >>

TOTAL $5,000.00

ACKNOWLEDGED BY: [signature] DATE: 1/13/16
SIGNATURE OF VENDOR
Bryan Matz

RETURN TO PROCUREMENT DIVISION AT THE ABOVE ADDRESS

SIGNATURE: [signature]

Mark G. Miller - Interim General Manager
NAME TITLE

ORIGINAL

V23343

Allied Pacific Drilling, Inc.

P.O. Box 3411
Hagatna, Guam 96932

Invoice

Date	Invoice #
2/26/2016	DI2-0113

Bill To	Ship To
Guam Waterworks 578 N. Marine Corps Drive Tamuning GU 96913	

P.O. Number	Terms	Rep	Ship	Via	F.O.B.	Project
298647	Net 30		2/25/2016			

Quantity	Item Code	Description	Price Each	Amount
		Project: Airlift/Blow out wells GWA well #s F-13 and F-17,		
1	Airlifting Well	Airlift/Blow out well F-13 on date 01/14/16, Thursday. Bottom well at 481'	2,750.00	2,750.00
1	Airlifting Well	Airlift/Blow out wells F-13 and F-17 on date 1/15/2016, Friday.	2,750.00	2,750.00
1	Airlifting Well	Airlift/Blow out well F-17 on date 1/16/16, Saturday. Bottom well at 525' (charged at regular day)	3,050.00	3,050.00
		Work authorization attachments: 1. GWA PO #298647 dated 10/22/2015 2. APDI Daily Production Reports consisting of 3 pages.		

GUAM WATERWWORKS AUTHORITY
CONFIRMED ITEM RECD/SVC RENDERED
NAME Ron Torres #419
SIGNATURE
DATE 10/13/2016

REVIEWED & VERIFIED FOR COMPLETENESS & ACCURACY
10/13/16
ACCOUNTING

Thank you for your business.

Total A $8,550.00

A: Invoice total A 8,550.00
B: Excess/unauthorized Amt B (3,550.00)
C: PO/Authorized Amt C 5,000.00

EXHIBIT B

ALL PURCHASE ORDERS FROM THE GUAM WATERWORKS AUTHORITY
ARE SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS.

1. In the shipments are connected with a bid or RFP issued by GWA, this purchase order shall be governed by the Terms and Conditions of the bid or RFP as well as the Guam Procurement Law and the Guam Procurement Regulations

2. An acknowledged and dated copy of this purchase order must be returned to GWA.

3. GWA will only be responsible for the total amount indicated in this Purchase Order and any amount in excess of that amount will not be paid by GWA.

4. All invoices (original/s and duplicate/s) must be forwarded to Accounts Payable Department of the Guam Waterworks Authority. These invoices must be properly endorsed or signed by authorized GWA personnel as indicated in the Purchase Order. And invoices should be provided to GWA within the month in which the purchases and/or services were rendered.

5. All vendors with an outstanding unpaid invoice at the and of the month after the goods or services were rendered must provide monthly vendor statements to the Accounts Payable Supervisor at GWA.

6. No variation in any of the terms, conditions, delivery dates, prices, quality, quantity or specifications under this order, regardless of the conditions or terms of the seller's acceptance, will be effective without the written consent of a person specifically authorized by GWA to make such changes.

7. Packing lists must accompany each shipment which indicate the order number and a detailed description and goods or services provided, including, but not limited to, the part number and serial number for each item delivered.

8. Shipments must be identified as either "PARTIAL" or "COMPLETE."

9. All goods delivered are subject to GWA's inspection and acceptance within a reasonable time after delivery. If the specifications are not met and are rejected by GWA, the goods shall be returned at the seller's expense.

10. In connection with any prompt payment discount offered the time will computed from date of delivery and acceptance at destination or from the date the correct invoice or voucher is received in by the Guam Waterworks Authority, if the latter is later than date of delivery and acceptance. Payment is deemed to be made, for the purpose of earning any discount on the date the check is mailed.

11. Shipments in excess of the amount stated in the order will not be accepted unless specifically approved by a GWA official authorized to make such changes.

GUAM WATERWORKS AUTHORITY

1 : Page
6812: B/U
02/26/16, Date
FOB GWA: F.O.B.

PURCHASE ORDER
GUAM WATERWORKS AUTHORITY

P.O. Box 3010, Hagatna, Guam 96932
PHONE: (671) 647-7818 FAX: (671) 649-3750

No. 299090-000 OP

THIS PURCHASE ORDER MUST APPEAR ON ALL INVOICES PACKING SLIPS, PACKAGES, B/L CORRESPONDENCE, ETC.

Payment Terms: Net 30 Days

VENDOR:

ALLIED PACIFIC DRILLING, I
P.O. BOX 3411
Agana GU 96932

SHIP TO:

GUAM WATERWORKS AUTHORITY
578 N. Marine Corps. Dr.
ATTENTION: P & S WAREHOUSE
Tamuning GU 96913

AUTHORITY	IFB / REFERENCE	TIME FOR DELIVERY	EXPIRATION
PL 16-124 / PL 22-148			09/30/2016

ARTICLES OR SERVICES	QTY	UNIT	UNIT PRICE	AMOUNT

CONDITIONS:
GPR: 3-204.07
Requested by: Water/Deepwell/R. Topasna
Authorized Personnel: Patrick Siquenza or Garrick Taitague /
or Ron Topasna or Ignacio Castro /
Business unit: 6812
G/L Account no: 6812.950.34011 /
Funding source: Revenue
OQ# 26994/ OR# 26706
Buyer: Peter
*
IMPORTANT NOTICE TO VENDORS LABOR, MATERIALS AND EQUIPMENTS
" All invoices must indicate P.O. Number for payment
" All invoices must indicate on the invoice the Employee's Name, Badge Number that must be signed and printed clearly
" Submit signed & dated P.O. acknowledgement with invoice
" GWA will not be liable for any unauthorized services that are not listed in the Purchase Order - only the services listed on the Purchase Order will be paid by GWA.
" Only the authorized names listed on the Purchase Order are allowed to transact. Unauthorized ND MUST SIGN AND PRINT person(s) will not be honored by GWA
*
AGREEMENT TO COVER COST FOR LABOR, MATERIALS AND EQUIPMENTS FOR REDEVELOPMENT AND BLOWING/ AIRLIFT/BAILING FOR VARIOUS GWA DEEPWELL SITES
*
LISTED BELOW ARE THE 120 DEEPWELL FACILITIES FOR AIR LIFTING SERVICES:
A-1, A-6, A-12, A-18, A-26, A-32, F-04/ F-9, F-15, F-20, M-2, M-7, A-2, A-7, A-13, A-19, A-28, AG-01, F-5, F-10, F-16, G-501, M-3, M-8, A-3, A-8, A-14, A-21, A-29, AG-2, F-6, F-11, F-17, H-1, M-4, M-9, A-4, A-9, A-15, A-23, A-30, D-1, F-7, F-12, F-18, HGC-2, M-5, M-12, A-5, A-10, A-17, A-25, A-31, D-2, F-8, F-13, F-19, M-1, M-6, M-14/ D-3, D-8,

NOTE:"SUBJECT TO THE GUAM PROCUREMENT CODE AND ACCOMPANYING REGULATIONS"

SPECIAL INSTRUCTIONS TO VENDOR:
Send certified original and three (3) copies of invoice to Guam Waterworks Authority, Government of Guam, at the address shown above.

Payment upon receipt of merchandise in Guam in good condition.

SEE BACK FOR TERMS AND CONDITIONS

DO NOT FILL THIS ORDER if your total cost exceeds this total. >>

TOTAL $

ACKNOWLEDGED BY: _____ DATE: 3/9/16
SIGNATURE OF VENDOR

RETURN TO PROCUREMENT DIVISION AT THE ABOVE ADDRESS

SIGNATURE:

Miguel C. Bordallo - General Manager
NAME TITLE

ACKNOWLEDGEMENT COPY

GUAM WATERWORKS AUTHORITY

2 : Page
6812: P/O
02/26/16: Date
FOB GWA: F.O.B.

PURCHASE ORDER
GUAM WATERWORKS AUTHORITY

P.O. Box 3010, Hagatna, Guam 96932
PHONE: (671) 647-7818 FAX: (671) 649-3750

No. 299090-000 OP

THIS PURCHASE ORDER MUST APPEAR ON ALL INVOICES PACKING SLIPS, PACKAGES, B/L CORRESPONDENCE, ETC.

Payment Terms: Net 30 Days

VENDOR:

ALLIED PACIFIC DRILLING, I
P.O. BOX 3411
Agana GU 96932

SHIP TO:

GUAM WATERWORKS AUTHORITY
578 N. Marine Corps. Dr.
ATTENTION: P & S WAREHOUSE
Tamuning GU 96913

AUTHORITY	IFB / REFERENCE	TIME FOR DELIVERY	EXPIRATION
PL 16-124 / PL 21-148			09/30/2016

ARTICLES OR SERVICES	QTY	UNIT	UNIT PRICE		AMOUNT
D-13, D-18, D-24, EX-5, M-15, M-21, Y-1, Y-6, Y-14, Y-19, D-4, D-9, D-14, D-19, D-25, EX-11, M-17A, M-23, Y-2, Y-7, Y-15, Y-20, D-5, D-10, D-15, D-20, D-26, F-1, M-17B, MJ-1, Y-3, Y-9, Y16, Y-21, D-6, D-11, D-16, D-21, D-27, F-2, M-18, MJ-5, Y-4, Y-10, Y-17, Y-22, D-7, D-12, D-17, D-22, D-28, F-3, M-20A, NAS-1, Y-5, Y-12, Y-18, Y-23 * CHARGES FOR EDEVELOPMENT AND BLOWING/ AIRLIFT BAILING FOR VARIOUS GWA DEEPWELL SITES DEEPWELL SITES 500 FEET DEEP OR LESS: (MONDAY THRU FRIDAY): $2,975.00 DEEPWELL SITES MORE 500 FEET DEEP: (MONDAY THRU FRIDAY): 3,275.00. DEEPWELL SITES 500 FEET DEEP OR LESS: (WEEKENDS & HOLIDAYS) $3,475.00 DEEPWELL SITES MORE 500 FEET DEEP: (WEEKENDS & HOLIDAYS): $3,775.00					
HEAVY EQUIPMENT RENTAL	EA	.00	EA		14,999.00

NOTE: "SUBJECT TO THE GUAM PROCUREMENT CODE AND ACCOMPANYING REGULATIONS"

SPECIAL INSTRUCTIONS TO VENDOR:
Send certified original and three (3) copies of invoice to Guam Waterworks Authority, Government of Guam, at the address shown above.

Payment upon receipt of merchandise in Guam in good condition.

SEE BACK FOR TERMS AND CONDITIONS

DO NOT FILL THIS ORDER if your total cost exceeds this total. >>

TOTAL $ 14,999.00

ACKNOWLEDGED BY: _____ DATE: 3/9/16
SIGNATURE OF VENDOR

RETURN TO PROCUREMENT DIVISION AT THE ABOVE ADDRESS

SIGNATURE:

Miguel C. Bordallo - General Manager
NAME TITLE

AUDITOR'S COPY

V23343 ✓ ~ 269975|186479

Allied Pacific Drilling, Inc.

P.O. Box 3411
Hagatna, Guam 96932

Invoice

Date	Invoice #
6/1/2016 X	D12-0119 X

Bill To	Ship To
Guam Waterworks 578 N. Marine Corps Drive Tamuning GU 96913	

P.O. Number	Terms	Rep	Ship	Via	F.O.B.	Project
299090 X	Net 30		6/1/2016			

Quantity	Item Code	Description	Price Each	Amount
		Airlift/Blow out wells GWA well #s F-4,D-10 and M-14,		
2	Airlifting Well	Airlift/Blow out well F-4 on date 05/12/16 Thursday. Bottom well at 496'	2,975.00	5,950.00
1.5	Airlifting Well	Airlift/Blow out wells D-10 on date 5/20/2016 Friday.Bottom well at 448.5'	2,975.00	4,462.50
3	Airlifting Well	Airlift/Blow out well M-4 on date 5/24/16 Tuesday. Bottom well at 476'	2,975.00	8,925.00
		Work authorization attachments: 1. GWA PO #299090 dated 02/26/2016 2. APDI Daily Production Reports consisting of 3 pages.		

REVIEWED & VERIFIED FOR COMPLETENESS & ACCURACY
10/13/16
ACCOUNTING

Thank you for your business.

Total A $19,337.50

~ A : Invoice total — A 19,337.50
\ B : Excess amount / unauthorized — B (4,338.50)
~ C : PO amount / authorized — C 14,999.00

9

GUAM CONSOLIDATED COMMISSION ON UTILITIES

RESOLUTION NO. 07-FY2017

RELATIVE TO APPROVING THE GUAM WATERWORKS AUTHORITY'S 2016-2020 UPDATED CAPITAL IMPROVEMENT PLAN FOR THE PURPOSES OF PLANNING AND EXECUTING PROJECTS IN THE NEAR TERM

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, on November 23, 2010 GWA closed on the 2010 bond issuance, on December 12, 2013 GWA closed on the 2013 bond issuance, and on February 25, 2016 GWA closed on the 2015 bond issuance that provided net proceeds for Capital Improvement Projects in the final amount of Eighty Seven Million Four Hundred Two Thousand Dollars ($87,402,000.00), and One Hundred Thirty Nine Million Three Hundred Twenty Five Thousand Dollars ($139,325,000.00), and One Hundred Forty Million Nineteen Thousand Four Hundred Sixty Three Dollars ($140,019,463.00) respectively; and

WHEREAS, GWA has revised the previously approved 2015-2020 Capital Improvements Plan ("CIP") dated October 27, 2015, and updates to the plan covering FY2016 through 2020 are summarized in tables as shown in EXHIBIT A, wherein these tables identify capital projects with funding derived from the following sources in the following amounts: (a) balance of the 2010 bond funds which is approximately $4,469,000; (b) balance of the 2013 bond funds which is approximately $12,304,900; (c) balance of the 2015 bond funds which is approximately $121,513,000; (d) $67,250,000 from anticipated 2018 bond issuance; e) $28,475,000 in State Revolving Funds from the USEPA; (e) $9,794,000 in System Development Charges; (f) $948,000 in grant funding from a variety of federal sources; (g) balance of the revenues for internal CIP fund estimated at $36,700,000,

all resulting in a grand total of $281,453,900 in planned capital expenditures over the next four (4) years; and

WHEREAS, the 2016-2020 CIP also identifies for planning purposes a $169,500,000 funding need for wastewater infrastructure improvements at the Northern District WWTP, the northern collection system upgrade and the Northern Guam Lens Aquifer (NGLA) monitoring system associated with the military buildup; and

WHEREAS, the 2016-2020 CIP identifies existing and new CIP projects that require, in most cases, design, construction and construction management implementation as well as provides an update to the funding and projects needs for the 2015 bond issuance; and

WHEREAS, some of the major projects identified in the 2016-2020 CIP include, but which are not limited to, the following:

- Water Booster Pump Station (BPS) Rehabilitation to improve pumping capacity and energy efficiency at critical BPS throughout the Island;
- Island-wide sewer collection system improvements to reduce Infiltration & Inflow (I&I) and improve collection system efficiency and WWTP processing;
- Baza Gardens WWTP conversion to conveyance facilities to pump and transport wastewater to the new Agat-Santa Rita WWTP;
- Umatac-Merizo Wastewater Treatment Plant upgrades to bring the plant into compliance with the NPDES permit limits;
- Umatac-Merizo Wastewater System upgrades which will address required improvements at the treatment plant and collection systems;
- Water line replacement projects which will reduce GWA's water loss rates and improve GWA's operational efficiency;
- Sewer pump station upgrades which will provide more efficient pumping operations reducing GWA power consumption and improve system reliability to prevent sewer spills;
- Implementation of a SCADA system to allow GWA to have real time information on the water and wastewater facilities throughout the Island

which will allow for improved operations, timely response to changing system conditions, better data collection to support planning and maintenance activities, and enhanced system troubleshooting;

- Rehabilitation of down hard wells and develop new wells for additional source water capacity to address the Island's natural population growth as well as growth related to the military buildup;
- Replacement of many of GWA's steel water storage tanks with concrete tanks that have improved service life and a better life cycle cost;
- Refurbishment of some of GWA's steel water storage tanks that will give the tanks an additional ten (10) to fifteen (15) years of service life to allow GWA the ability to replace the tanks as necessary in the future.

WHEREAS, the 2016-2010 CIP as shown in EXHIBIT A reflects the funding amounts and project descriptions as noted above, and may be subject to adjustment in the coming year relative to actual conditions/variations resulting from normal project execution; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve and authorize the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The FY2016-2020 CIP attached as EXHIBIT A is incorporated into this resolution in its entirety.
3. The CCU approves the 2016-2020 CIP with the understanding that updated information and changing circumstances resulting from normal project execution throughout the year may require GWA to make adjustments/changes as necessary and for the betterment of the water and wastewater systems for the people they serve.
4. The FY2016-2020 CIP shall satisfy the requirement that GWA submit its final capital plan to the PUC annually.

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

DULY AND REGULARLY ADOPTED AND APPROVED this 22nd day of November, 2016.

Certified by:

JOSEPH T. DUENAS
Chairperson

Attested by:

J. GEORGE BAMBA
Secretary

I, J. George Bamba, Board Secretary of the Consolidated Commission

on Utilities as evidenced by my signature above do hereby certify as follows:

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

AYES: 4

NAYS: 0

ABSTENTIONS: 0

ABSENT: 1

GUAM WATERWORKS AUTHORITY

Better Water Better Lives

CAPITAL IMPROVEMENT PLAN

2016-2020

November 22, 2016

CAPITAL IMPROVEMENT PLAN
2016-2020

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A. Narrative

Summary of CIP

The Capital Improvement Plan (CIP) has been updated with the best available data to illustrate the current funding available to complete projects which had been identified from the originally submitted CIP.

The following two tables provide an overview of the current funding status:

Table 1. Summary of Project Type (x1000):

	2016	2017	2018	2019	2020	TOTAL
Potable Water	53,854	55,580	29,178	33,250	10,000	181,862
Wastewater	9,881	36,179	33,000	1,000	-	80,059
Electrical Engineer	4,237	3,150	2,500	-	-	9,887
Miscellaneous	3,200	4,045	1,200	1,200	-	9,645
Total	71,172	98,954	65,878	35,450	10,000	281,453

Table 2. Summary of Funding Source (x1000):

	2016	2017	2018	2019	2020	TOTAL
2010 Bond Series	4,469					4,469
2013 Bond Series	11,922	383				12,305
2015 Bond Series	40,559	57,576	23,378			121,513
2018 Bond Series	-		23,000	34,250	10,000	67,250
State Revolving Fund (SRF)	3,475	17,000	8,000			28,475
System Development Charge (SDC)	4,800	4,494	500			9,794
GRANTS	948					948
Internally Funded CIP	5,000	19,500	11,000	1,200		36,700
Total	71,172	98,954	65,878	35,450	10,000	281,453

Note: The State Revolving Fund line item includes the funding allotment for the USEPA engineering consultant.

Developing the Capital Improvement Plan (CIP)

The CIP is GWA's five-year blueprint for creating, maintaining, renewing, and replacing the crucial infrastructure that will support Guam's sustainable and continued growth. This CIP covers a five-year period to account primarily for Court Order projects that have a start time outside of a five-year period from 2015 but which required funding appropriation from the anticipated 2015 and 2018 bond issuances which are reflected in this updated CIP.

This CIP was developed to include a narrative and project description sheets detailing the projects. Other documents, such as the 2007 Water Resource Master Plan (WRMP), GWA's Comprehensive Management Plan, 2006 Stipulated Order, GWA Production Plan, PUC Order, SRF Grant Project list, 2011 Amended Stipulated Order, and the 2012 USEPA NEIC Report

"Findings of Significant Deficiencies in the Public Water System" provided valuable information and guidance in the preparation of the CIP.
The CIP will continue to be reviewed and updated by the Chief Engineer, General Manager GWA, Consolidated Commission on Utilities (CCU) and the Public Utilities Commission (PUC).

The CIP is an important public communication medium. The CIP gives residents and businesses a view of GWA's direction for capital improvement and a better understanding of the Island's ongoing need for stable revenue sources to fund large or multi-year capital projects.

The CIP is also an important operational document, providing GWA Engineering, Maintenance & Operation (M&O), Finance, and support staff with a blueprint of the overall direction and specific projects GWA plans on implementing to continue improvement for the utility and the Territory of Guam.

Definition of an Engineering Capital Improvement Project
For the purposes of the Engineering CIP, a capital expenditure is an expenditure to acquire and/or replace GWA's capital assets. Major projects are projects with a cost of more than $50,000 or are listed in the 2006 Stipulated Order and/or Master Plan. Water production facilities, water distribution systems, wastewater collection systems, wastewater treatment plants, and major one-time equipment acquisitions are examples of capital improvements.

Carryover Projects/Fund Balance
Due to the nature of capital projects, the life of a project may span across fiscal years. As funds are received to fund a project, they are accumulated in the appropriate capital fund and expended as projects progress. When the funds are not spent in one year, they remain in the fund balance to be used in the future, often referred to as carryover. As GWA refines the annual CIP, these carryover projects will be redefined into areas of contractual obligation, and ongoing projects may be re-allocated in the following year as financing is re-evaluated to ensure project funding and funding viability. In addition, CIP line items may also be consolidated to another CIP line item; therefore to understand this CIP update, it is important to refer to the previous year's CIP.

Operating and Capital Budget Relationship
The CIP also impacts the operating budget. As projects are completed, operating funds are necessary for routine maintenance and operation costs such as utilities, staffing, repairs, and equipment maintenance.

CIP Organization
This fiscally constrained CIP includes project summary tables, funding source tables, funding anticipated to be committed by the Department of Defense funding, and project sheets.

Bond Spending Status
GWA acquired $316M in capital construction funding from the Series 2005, 2010, 2013 and 2015 Revenue Bonds to plan, design, and construct capital projects needed to comply with U.S. Environmental Protection Agency (USEPA) stipulations and court orders and to implement the WRMP 2007. This CIP update reports that the Series 2005 Revenue Bonds have been fully allocated at the amount of $89,711,419. Under the direction of the CCU, GWA has completed several financial plans over the last few years that have placed GWA on a successful path. With

continued financial plans in place and updates to the plans, GWA should be able to allocate current revenue bonds and obtain additional revenue bonds which can further progress projects required by the 2011 Court Order, other compliance requirements and the WRMP 2007.

This updated CIP will continue to ensure GWA provides excellence in water and wastewater services. The development of this CIP was truly a team effort with the combined effort of the interim General Manager, Engineering staff, Operations staff, Grants Section, and Finance Department.

B. CIP Summary Tables

Table 3.Summary Table Potable Water

CIP #	Project Name	2016 (x1000)	2017 (x1000)	2018 (x1000)	2019 (x1000)	2020 (x1000)	Total (x1000)
PW 05-01	Ground Water Disinfection	$ -	$ -	$ -	$ -	$ -	$ -
PW 05-03	Santa Rita Springs Booster Pump Rehab Phase II	$ -	$ -	$ -	$ -	$ -	$ -
PW 05-05	"A" Series Well Transmission Line	$ 82	$ -	$ -	$ -	$ -	$ 82
PW 05-06	Water Booster Pump Station	$ 2,536	$ 3,000	$ 1,000	$ -	$ -	$ 6,536
PW 05-07	Meter Replacement Program	$ 520	$ 2,000	$ 2,000	$ -	$ -	$ 4,520
PW 05-08	Barrigada Tank Repair/Replacement	$ 1,052	$ 400	$ -	$ 6,000	$ -	$ 7,452
PW 05-09	Leak Detection	$ 81	$ 1,100	$ 100	$ -	$ -	$ 1,281
PW 05-10	Potable Water System Planning	$ 439	$ 2,000	$ 400	$ -	$ -	$ 2,839
PW 05-11	Implement Ground Water Rule	$ -	$ -	$ -	$ -	$ -	$ -
PW 05-12	Brigade II (Ugum Lift) BPS Upgrade	$ 1,445	$ -	$ -	$ -	$ -	$ 1,445
PW 05-13	Deep Well Rehabilitation	$ 2,600	$ 3,000	$ -	$ -	$ -	$ 5,600
PW 05-14	New Deep Wells at Down Hard	$ 3,321	$ -	$ -	$ -	$ -	$ 3,321
PW 05-15	Rehabilitation of Asan Springs	$ 1,157	$ -	$ -	$ -	$ -	$ 1,157
PW 05-16	Master Meters	$ 110	$ 3,616	$ -	$ -	$ -	$ 3,726
PW 09-01	Ugum Water Treatment Plant Intake	$ 522	$ 500	$ -	$ -	$ -	$ 1,022
PW 09-02	Water Wells	$ 6,756	$ 2,660	$ 500	$ 4,000	$ -	$ 13,916
PW 09-03	Water Distribution System Pipe Replacement and Upgrades	$ 3,701	$ 12,260	$ 500	$ 5,000	$ -	$ 21,461
PW 09-04	Pressure Zone Realignment / Development 2005 Improvements	$ 569	$ 572	$ -	$ -	$ -	$ 1,141
PW 09-06	Central Water Distribution System 2005 Improvements	$ 75	$ -	$ -	$ -	$ -	$ 75
PW 09-08	Mechanical/Electrical Equipment	$ 102	$ -	$ -	$ -	$ -	$ 102
PW 09-09	Water Reservoir Internal/External	$ 646	$ -	$ -	$ -	$ -	$ 646
PW 09-10	Water Reservoir Internal/External	$ 800	$ -	$ -	$ -	$ -	$ 800
PW 09-11	Water System Reservoirs 2005 Improvements	$ 8,485	$ 18,472	$ 24,178	$ 18,250	$ 10,000	$ 79,385
PW 11-01	Distribution System Upgrade	$ 26	$ -	$ -	$ -	$ -	$ 26
PW 11-02	Ugum Water Treatment Plant Reservoir	$ 6,500	$ -	$ -	$ -	$ -	$ 6,500
PW 12-01	Water Audit Program & Water Loss Control Plan	$ 1,022	$ -	$ -	$ -	$ -	$ 1,022
PW 12-02	Production Plan / Reduce Navy Purchases	$ -	$ -	$ -	$ -	$ -	$ -

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PW 12-03	Hydraulic Assessment of Tanks	$ -	$ -	$ -	$ -	$ -	$ -
PW 12-04	Agana Heights & Chaot Tanks	$ 4,221	$ -	$ -	$ -	$ -	$ 4,221
PW 12-05	Tank Major Repair Yigo #1, Mangilao #2, Astumbo #1	$ 73	$ -	$ -	$ -	$ -	$ 73
PW 12-06	Tank Replacement Piti & Hyundai	$ 5,000	$ 5,500	$ -	$ -	$ -	$ 10,500
PW 12-07	Assessment/Replacement of Malojloj Elevated & Yigo Elevated	$ 15	$ -	$ -	$ -	$ -	$ 15
PW 12-08	Public Water System Asset Inventory/ Condition Assessment	$ -	$ -	$ -	$ -	$ -	$ -
PW 12-09	Public Water System GIS & Mapping	$ -	$ -	$ -	$ -	$ -	$ -
PW 14-01	Fire Hydrant Replacement Program	$ 2,000	$ 500	$ 500	$ -	$ -	$ 3,000
	Sub-Total	$ 53,854	$ 55,580	$ 29,178	$ 33,250	$ 10,000	
	Grand Total for PW Funding	$				181,862	

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Table 4.Summary Table Wastewater

CIP #	Project Name	2016 (x1000)	2017 (x1000)	2018 (x1000)	2019 (x1000)	2020 (x1000)	Total (x1000)
WW 05-04	Wastewater System Planning	$ 308	$ -	$ 1,000	$ 1,000	$ -	$ 2,308
WW 09-01	Lift station upgrades	$ 1,055	$ 5,050	$ 1,500	$ -	$ -	$ 7,605
WW 09-02	Moratorium	$ -	$ -	$ -	$ -	$ -	$ -
WW 09-06	Wastewater Collection System Repl/ Rehabilitation	$ 3,095	$ 13,920	$ 8,500	$ -	$ -	$ 25,515
WW 09-08	Facilities Plan/Design/interim for Baza Gardens STP Impr.	$ -	$ -	$ -	$ -	$ -	$ -
WW 09-10	Facilities Plan/Design/interim for Agat-Santa Rita STP Impr.	$ 0.37	$ -	$ -	$ -	$ -	$ 0.37
WW 09-11	WWTP Priority 1 Upgrades	$ 1,300	$ -	$ -	$ -	$ -	$ 1,300
WW 11-03	Baza Gardens STP Replacement	$ 1	$ 5,590	$ 13,000	$ -	$ -	$ 18,591
WW 11-04	Facilities Plan/Design/Interim for Umatac-Merizo STP Impr.	$ 277	$ -	$ -	$ -	$ -	$ 277
WW 11-08	Agat/ Santa Rita STP Replacement	$ -	$ 2,936	$ -	$ -	$ -	$ 2,936
WW 12-01	Northern District WWTP Primary Treatment Upgrades	$ 1,500	$ -	$ -	$ -	$ -	$ 1,500
WW 12-02	Bio Solids Management Plan	$ -	$ -	$ -	$ -	$ -	$ -
WW 12-03	Agana WWTP Interim Measures	$ 827	$ -	$ -	$ -	$ -	$ 827
WW 12-04	I&I SSES Southern	$ -	$ -	$ -	$ -	$ -	$ -
WW 12-05	I&I SSES Central	$ -	$ -	$ -	$ -	$ -	$ -
WW 12-06	I&I SSES Northern	$ 355	$ -	$ -	$ -	$ -	$ 355
WW 12-07	Umatac Merizo STP Replacement	$ 943	$ 7,000	$ 9,000	$ -	$ -	$ 16,943
WW 12-09	Wastewater Facility Back Up Power	$ 220	$ -	$ -	$ -	$ -	$ 220
WW 17-01	Wastewater Sewer System Expansion	$ -	$ 1,683	$ -	$ -	$ -	$ 1,683
	Sub-Total	$ 9,881	$ 36,179	$ 33,000	$ 1,000	$ -	
	Grand Total for WW Funding	$ 80,059					

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Table 5.Summary Table Electrical Engineering

CIP #	Project Name	2016 (x1000)	2017 (x1000)	2018 (x1000)	2019 (x1000)	2020 (x1000)	Total (x1000)
EE 05-02	SCADA Pilot Project	$ 8	$ -	$ -	$ -	$ -	$ 8
EE 09-01	Wastewater Pumping Station Electrical Upgrade	$ 620	$ -	$ -	$ -	$ -	$ 620
EE 09-02	Electrical Upgrade - Water Wells	$ -	$ 150	$ -	$ -	$ -	$ 150
EE 09-03	Electrical Upgrade - Water Booster	$ 325	$ -	$ -	$ -	$ -	$ 325
EE 09-04	Electrical Upgrade -Water Booster	$ 349	$ -	$ -	$ -	$ -	$ 349
EE 09-05	Electrical Upgrade - Other Water	$ 189	$ -	$ -	$ -	$ -	$ 189
EE 09-07	SCADA Improvements – Phase 2	$ 43	$ 500	$ -	$ -	$ -	$ 543
EE 09-08	SCADA Improvements – Phase 3	$ 1,203	$ -	$ -	$ -	$ -	$ 1,203
EE 09-09	SCADA Improvements – Phase 4	$ 1,500	$ 2,500	$ 2,500	$ -	$ -	$ 6,500
	Sub-Total	$ 4,237	$ 3,150	$ 2,500	$ -	$ -	
	Grand Total for EE Funding	$					9,887

Table 6.Summary Table Miscellaneous

CIP #	Project Name	2016 (x1000)	2017 (x1000)	2018 (x1000)	2019 (x1000)	2020 (x1000)	Total (x1000)
MC 05-01	Laboratory Modernization	$ -	$ -	$ -	$ -	$ -	$ -
MC 05-02	Land Survey	$ 1,893	$ -	$ -	$ -	$ -	$ 1,893
MC 09-01	General Plant Improvements / Water	$ 1,057	$ 3,295	$ 1,000	$ 1,000	$ -	$ 6,352
MC 15-01	Information Technology Integration Improvements	$ 250	$ 750	$ 200	$ 200	$ -	$ 1,400
	Sub-Total	$ 3,200	$ 4,045	$ 1,200	$ 1,200	$ -	
	Grand Total for MC Funding	$					9,645

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C. CIP FUNDING TABLES

Funding Source Key:

- 2010 Bond — B2010
- 2013 Bond — B2013
- 2015 Bond — B2015
- 2018 Bond — B2018
- System Development Charge — SDC
- Internally Funded CIP — IFCIP
- Grants (DOI, EPA ARRA, etc) — GRANTS
- State Revolving Fund — SRF

Table 7.Potable Water Funding Table

FS - Funding Source

		2016		2017		2018		2019		2020	
		FS	(x1000)	FS	(x1000)	FS	(x1000)	FS	(x1000)	FS	(x1000)
PW 05-01	Ground Water Disinfection										
PW 05-03	Santa Rita Springs Booster Pump Rehab Phase II										
PW 05-05	"A" Series Well Transmission Line	B2010	81.6								
PW 05-06	Water Booster Pump Station	IFCIP	0	IFCIP	1,000						
		B2015	2,139	B2015	2,000	B2018	1,000				
		GRANT	387								
		B2013	9.5								
PW 05-07	Meter Replacement Program	B2015	501	.		.		.		.	
		B2010	16.8								
		B2013	2.5	B2015	2,000	B2015	2,000				
PW 05-08	Barrigada Tank Repair/Replacement	B2010	4.6	IFCIP	400						
		B2013	34								
		B2015	1013	.		.		B2018	6,000	.	
PW 05-09	Leak Detection	B2015	80								
		B2013	0.75	B2015	1100	IFCIP	100	.		.	
PW 05-10	Potable Water System Planning	SRF	0	SRF	500						
		B2015	439.1			B2018	0				
				B2015	1500	IFCIP	400	B2018	0		
PW 05-11	Implement Ground Water Rule										

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PW 05-12	Brigade II (Ugum Lift) BPS Upgrade	B2010	1445								
PW 05-13	Deep Well Rehabilitation	B2013 B2015 SRF	350 250 2000	SRF	3000						
PW 05-14	New Deep Wells at Down Hard	B2015 B2010 B2013	1190 1321 810								
PW 05-15	Rehabilitation of Asan Springs	B2010 GRANT	596.6 560.5								
PW 05-16	Master Meters	B2015 B2010 B2013	0 8.9 101	B2015	3616						
PW 09-01	Ugum Water Treatment Plant Intake	IFCIP B2010 B2015	500 3.7 18	IFCIP	500						
PW 09-02	Water Wells	B2013 IFCIP B2015 SDC	2,256.0 2,500 0.0 2,000	B2015 SDC	2,160 500	B2015 SDC	0 500	B2018	4,000		
PW 09-03	Water Distribution System Pipe Replacement and Upgrades	B2015 B2010 B2013	- 68.6 3,632.5	IFCIP B2015 SDC	7900 2,049 2,311	IFCIP	500	B2018	5,000		
PW 09-04	Pressure Zone Realignment / Development 2005 Improvements	B2010 B2013 B2015	0 0.23 569	B2015	572						
PW 09-06	Central Water Distribution System 2005 Improvements	B2010	75								
PW 09-08	Mechanical/Electrical Equipment	B2013 B2015	1.7 100								
PW 09-09	Water Reservoir Internal/External	B2010	646								
PW 09-10	Water Reservoir Internal/External	B2015	800								

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PW 09-11	Water System Reservoirs 2005 Improvements	B2013 B2015	378.5 8,106.6	B2015 IFCIP	14,972 3500	B2015 B2018 IFCIP	17,378 5,000 1,800	B2018	18,250	B2018	10,000
PW 11-01	Distribution System Upgrade	B2010	25.8								
PW 11-02	Ugum Water Treatment Plant Reservoir	B2015 B2013	6410 90								
PW 12-01	Water Audit Program & Water Loss Control Plan	B2010 B2015	22 1000			B2018	0	B2018	0		
PW 12-02	Production Plan / Reduce Navy Purchases										
PW 12-03	Hydraulic Assessment of Tanks										
PW 12-04	Agana Heights & Chaot Tanks	B2013 B2015	3000.9 1220								
PW 12-05	Tank Major Repair Yigo #1, Mangilao #2, Astumbo #1	B2015 B2010 B2013	72.86 0 0.22								
PW 12-06	Tank Replacement Piti & Hyundai	B2015	5000	B2015	5,500						
PW 12-07	Assessment/Replacement of Malojloj Elevated & Yigo Elevated	B2013	14.88								
PW 12-08	Public Water System Asset Inventory/ Condition Assessment										
PW 12-09	Public Water System GIS & Mapping										
PW 14-01	Fire Hydrant Replacement Program	IFCIP B2015	1000 1000	B2015	500	B2015	500				
TOTAL POTABLE WATER PROJECTS (2010)			4,316		-		-		-		-
TOTAL POTABLE WATER PROJECTS B2013/FY2014			10,683		-		-		-		-
TOTAL POTABLE WATER PROJECTS B2015/FY2016			29,909		35,969		19,878		-		-
TOTAL POTABLE WATER PROJECTS B2017/FY2018			-		-		6,000		33,250		10,000
State Revolving Fund (SRF) Grant Funds			2,000		3,500		-		-		-
System Development Charge (SDC)			2,000		2,811		500		-		-
GRANTS			948		-		-		-		-
IFCIP			4,000		13,300		2,800		-		-

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Table 8.Wastewater Funding Table

FS - Funding Source

		2016		2017		2018		2019		2020	
		FS	(x1000)	FS	(x1000)	FS	(x1000)	FS	(x1000)	FS	(x1000)
WW 05-04	Wastewater System Planning	B2015	308.3								
		B2013	0			B2018	1000	B2018	1,000		
		SRF	0						-		
WW 09-01	Lift station upgrades	B2013	0.61	IFCIP	1,700	IFCIP	500				
		B2015	1,054	B2015	350						
		SRF	0	SRF	3,000	B2015	1,000				
WW 09-02	Moratorium										
WW 09-06	Wastewater Collection System Repl/ Rehabilitation	B2013	148.84								
		B2010	45.7								
		B2015	1,000	B2015	1,920						
		IFCIP	1,000	IFCIP	2,000	IFCIP	500				
		SRF	900	SRF	10000	SRF	8000				
WW 09-08	Facilities Plan/Design/interim for Baza Gardens STP Impr.										
WW 09-10	Facilities Plan/Design/interim for Agat-Santa Rita STP Impr.	B2010	0.37								
WW 09-11	WWTP Priority 1 Upgrades	SDC	1300								
WW 11-03	Baza Gardens STP Replacement	B2013	0			B2018	7000				
		B2010	1			IFCIP	6000				
		IFCIP	0	B2015	5,589.5	B2015	0				
WW 11-04	Facilities Plan/Design/Interim for Umatac-Merizo STP Impr.	B2015	277								
		B2013	0.0		-						
WW 11-08	Agat/ Santa Rita STP Replacement			B2013	383.3						
		B2013	0	B2015	2,552.7						
WW 12-01	Northern District WWTP Primary Treatment Upgrades	SDC	1500								
WW 12-02	Bio Solids Management Plan										
WW 12-03	Agana WWTP Interim Measures	B2015	827								
		B2013	0.0								

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WW 12-04	I&I SSES Southern					
WW 12-05	I&I SSES Central					
WW 12-06	I&I SSES Northern	SRF 355				
WW 12-07	Umatac Merizo STP Replacement	B2015 942.7	B2015 7000	B2018 9000 B2015 0		
WW 12-09	Wastewater Facility Back Up Power	SRF 220				
WW 17-01	Wastewater Sewer System Expansion		SDC 1683			
TOTAL WASTEWATER PROJECTS (2010)		47	-	-	-	-
TOTAL WASTEWATER PROJECTS B2013/FY2014		149.5	383	-	-	-
TOTAL WASTEWATER PROJECTS B2015/FY2016		4,409	17,412	1,000	-	-
TOTAL WASTEWATER PROJECTS B2017/FY2018		-	-	17,000	1,000	-
State Revolving Fund (SRF) Grant Funds		1,475	13,000	8,000	-	-
System Development Charge (SDC)		2,800	1,683	-	-	-
GRANTS		-	-	-	-	-
IFCIP		1,000	3,700	7,000	-	-

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Table 9. Electrical Engineering Funding Table

FS - Funding Source

		2016		2017		2018		2019		2020	
		FS	(x1000)	FS	(x1000)	FS	(x1000)	FS	(x1000)	FS	(x1000)
EE 05-02	SCADA Pilot Project	B2010	8								
EE 09-01	Wastewater Pumping Station Electrical Upgrade	B2013 B2015	520 100								
EE 09-02	Electrical Upgrade - Water Wells	B2015	0	B2015	150	B2015	0				
EE 09-03	Electrical Upgrade - Water Booster	B2015 B2013	323 2								
EE 09-04	Electrical Upgrade -Water Booster	B2013	349								
EE 09-05	Electrical Upgrade - Other Water	B2013	189.3								
EE 09-07	SCADA Improvements – Phase 2	B2010	43	SRF	500						
EE 09-08	SCADA Improvements – Phase 3	B2010 B2013 B2015	25 0.64 1177								
EE 09-09	SCADA Improvements – Phase 4	B2015	1,500	B2015	2500	B2015	2,500				
TOTAL ELECTRICAL PROJECTS (2010)			76		-		-		-		-
TOTAL ELECTRICAL PROJECTS B2013/FY2014			1,061		-		-		-		-
TOTAL ELECTRICAL PROJECTS B2015/FY2016			3,100		2,650		2,500		-		-
TOTAL ELECTRICAL PROJECTS B2017/FY2018			-		-		-		-		-
State Revolving Fund (SRF) Grant Funds			-		500		-		-		-
System Development Charge (SDC)			-		-		-		-		-
GRANTS			-		-		-		-		-
IFCIP			-		-		-		-		-

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Table 10. Miscellaneous Funding Table

FS - Funding Source

		2016		2017		2018		2019		2020	
		FS	(x1000)	FS	(x1000)	FS	(x1000)	FS	(x1000)	FS	(x1000)
MC 05-01	Laboratory Modernization	B2015	0								
MC 05-02	Land Survey	B2015	1891								
		B2013	2								
MC 09-01	General Plant Improvements	B2010	30.5								
		B2013	26.57								
		IFCIP	0	IFCIP	2,000	IFCIP	1000	IFCIP	1000		
		B2015	1000	B2015	1295						
MC 15-01	Information Technology Integration Improvements			IFCIP	500	IFCIP	200	IFCIP	200		
		B2015	250	B2015	250						
TOTAL MISCELLANEOUS PROJECTS (2010)			31		-		-		-		-
TOTAL MISCELLANEOUS PROJECTS B2013/FY2014			29		-		-		-		-
TOTAL MISCELLANEOUS PROJECTS B2015/FY2016			3,141		1,545		-		-		-
TOTAL MISCELLANEOUS PROJECTS B2017/FY2018			-		-		-		-		-
State Revolving Fund (SRF) Grant Funds			-		-		-		-		-
System Development Charge (SDC)			-		-		-		-		-
GRANTS			-		-		-		-		-
IFCIP			-		2,500		1,200		1,200		-

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D. Department of Defense (DoD) Funding

The following tables illustrate CIP projects related to the military relocation that will have an impact on GWA infrastructure. The projects and funding noted are from the 2015 Record of Decision.

Table 11. DoD Wastewater Project Description

Project Location	Project Details	Related GWA CIP
Northern District WWTP	Secondary Treatment Upgrade Capacity 12 MGD	WW 12-01
Collection System Improvements	Route 9/Route 3 Sewer Main Upgrade	WW 05-02
Observation Well	Rehabilitation and New NGLA Monitoring wells	

Table 12. Estimated DoD Funding(x1,000)

CIP	Project Details	2015 (x1000)	2016 (x1000)	2017 (x1000)	2018 (x1000)	2019 (x1000)	2020 (x1000)
DoD-01	Secondary Treatment Upgrade Capacity 12 MGD		$134,300				
DoD-02	Route 9/Route 3 Sewer Main Upgrade		$29,000				
DoD-03	Rehabilitation and New NGLA Monitoring wells		$3,000				
Total			$166,300				

G. Project Sheets

Project Sheet Water

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 05-03**

Categorization: **Project**

Name of Project: **Santa Rita Springs Booster Pump Rehabilitation, Phase II**

Reference Documents:

a.) Stipulated Order 2006, item 44. Basis of Design Santa Rita Springs Booster Pump Rehabilitation Project, July 2005.

b.) *GWA Engineering Division, Potable Water Production Enhancement Plan*, June 10, 2010.

Project Description:

The original construction scope of work for the project intent has been completed. The project now requires completion of incidental work related to the spring impound and facility function controls. It is the intent of this CIP project to be "transitioned" into a project where work is required to address the GEPA pending action related to "Ground Water Under the Direct Influence (GWUDI)".Should GWUDI be designated the project scope will focus on necessary design and improvements to meet GWUDI conditions.

Project Justification:

The original project is identified in the Stipulated Order 2006, Item 44.Relative to the GWUDI project scope there are indications from GEPA that water coming from natural springs has a high probability of being designated as GWUDI. This project intends to meet the GWUDI requirements.

Financing Options & Grants:

The source of funding for the original scope was under 2005 bond. Additional work will be funded with 2013 bond.

Project Staffing Implications:

Contract Administration, Project Management Services, Program Management and Construction Management Services are required.

Results:

Project completed. Project continued due to GWUDI pending action by GEPA.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		
2017		
2018		
2019		
2020		
Project Total		**$0**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 05-05**

Categorization: **Project**

Name of Project: **A-Series Well Transmission Line**

Reference Documents:

a) Stipulated Order 2006, Item 38(B), Sinajana Water Transmission Line
b) Amended Stipulated Order 2011, Item 28, Sinajana Water Transmission Line

Project Description:

Construction of approximately 24,800-feet of 8, 12, and 24-inch water transmission lines between the Chaot and Agana Heights water storage tanks; the connection of 7 existing A-series wells to the transmission line, and chlorination equipment at each of the two storage tanks has been completed. The new pipeline will be a dedicated transmission line to the storage tanks. This project is broken down to 4 phases. Phase 1, Phase 2a and Phase 2b are completed. Phase 3 entails design services and is completed which resulted in the need for a BPS in Agana Heights. Phase 4 will include construction activities that will provide the water service area with the acceptable pressure once the system as intended is put in service and include SCADA controls.

Project Justification:

This project is identified in the Stipulated Order 2006, Item 38(B) and the Amended Stipulated Order 2011, Item 28.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond, and 2013 bond if available and necessary.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Program Management, Major Construction Management, Major GIS Support, and Modeling Support are required.

Results:

Phase 1, Phase 2a, Phase 2b, and Phase 3 are completed. Phase 4 entails construction of water storage tanks under PW 12-04 and is ongoing.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Construction	$82
2017		
2018		
2019		
2020		
Project Total		**$82**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 05-06**

Categorization: **Project**

Name of Project: **Water Booster Pump Station**

Reference Documents:

a) MASTER PLAN, VOLUME 2, TABLE 9-13

Project Description:

The 2005 hydraulic model for GWA's three water systems identified deficiencies in water booster pump capacity to provide adequate supply to areas in the Northern, Southern and Central water systems. The project will include all improvements necessary to address capacity limitations as well as facility functionality such as motors, controls, valves etc. Additional improvements shall include the use of VFD for better energy efficiency and facility functionality.

Project Justification:

This project will provide additional booster pump capacity to ensure adequate supply to affected areas are provided as well as to ensure existing BPS are equipped with efficient pumps, motors, controls, etc. The improvements are to also address the USEPA's "Findings of Significant Deficiencies in the Public Water System"

Financing Options & Grants:

The source of funding for this project will be the grant, 2013 bond, 2015 Bond, 2018 Bond and Internally Funded CIP.

Project Staffing Implications:

Contract Administration, Project Management Services, Program Management and Construction Management Services are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Planning/Design/Construction	$2,536
2017	Construction	$3,000
2018	Construction	$1,000
2019	Construction	
2020		
Project Total		**$6,536**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 05-07**

Categorization: **Program / Construction**

Name of Project: **Meter Replacement Program**

Reference Documents:
a) Stipulated Order 2006, Item 14
b) Amended Stipulated Order 2011, Item 23, Water Meters

Project Description:
The project will continue to replace all GWA customer water (mechanical) meters with AMR (automatic meter reading) meters. This project will replace old, underperforming and broken meters, including production meters. The AMR meters will allow data logging and electronic collection of monthly metering data.

This project will develop a water meter improvement program to ensure that each connection to the three public water systems has an accurate and accessible water meter that is GPS and reflected on the GIS, and asset inventory, read monthly and billed more accurately.

Project Justification:
Currently, GWA's unaccounted water rate is over 50%. It is believed that a portion of this loss is due to leakage and a portion is attributable to metering problems.

Financing Options & Grants:
The source of funding for this project will be the 2010, 2013 and 2015 bonds.

Project Staffing Implications:
Major Field Support, Contract Administration, Project Management, Program Management and GIS Support are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Replacement	$520
2017	Replacement	$2,000
2018	Replacement	$2,000
2019		
2020		
Project Total		**$4,520**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 05-08**

Categorization: **Project**

Name of Project: **Barrigada Tank Repair/Replacement**

Reference Documents:

a) Amended Stipulated Order 2011, Item 29 (b) (3) Storage Tank/Reservoir, Repair, Rehabilitation, Replacement and Relocation program

Project Description:

This project will replace the 1.0 MG tank that collapsed in 2003 and add new tanks based on modeling studies. The 1.0 MG tank will be located in the same footprint as the previous tank and will include a design analysis for a replacement tank. Additional tanks will be placed as determined by the modeling studies.

Project Justification:

The reduction in storage capacity of the Barrigada reservoirs due to the catastrophic failure of the previous 1.0 MG steel tank has negatively impacted the ability of GWA to effectively supply adequate water source to the villages of Barrigada and Maite. Modeling studies may show requirement for constructing additional tanks.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond, 2013 Bond, 2015 Bond, 2018 Bond and Internally Funded CIP.

Project Staffing Implications:

Contract Administration, Project Management Services, Program Management and Construction Management Services are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Design	$1,052
2017	Design	$400
2018		
2019	CM/Construction	$6,000
2020		
Project Total		**$7,452**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 05-09**

Categorization: **Program / Assessment**

Name of Project: **Leak Detection / Line Replacement**

Reference Documents:

a) PG Environmental – GWA Master Planning Technical Assessment, January 29, 2010

Project Description:

This project will perform system wide leak detection, line location and mapping, leak repair and inspection, leak analysis and control, and training and technology transfer. Line location will be performed where GIS and model data are incomplete. Leak detection will be performed on 450 miles of system pipe, including use of acoustical surveying and water audits. Leaks and repairs will be inspected, standard operating procedures reviewed/revised and material inventories developed. GWA personnel will receive training in leak detection methods and equipment. Pressure, surge and frequency analysis will be conducted, and recommendations developed for pipeline replacement, system reconfiguration, and other adjustments needed to control leakage. Data from leak detection will be used to set line replacement priorities with a goal to design and construct the replacement of approximately 10 miles of distribution mains annually depending on availability of funding.

Project Justification:

GWA system consists of hundreds of miles of water distribution mains consisting of numerous different pipe sizes and types. Many of these lines are undersized and/or failing due to improper construction, earthquake damage, and/or material failures. Operating personnel average about 5 distribution main breaks per week. GWA management considers any water loss a priority.

Financing Options & Grants:

The source of funding for this project will be the 2015 Bond and Internally Funded CIP.

Project Staffing Implications:

Major Contract Administration, Major Project Management Services, Program Management and Major Construction Management Services are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Planning	$81
2017	Planning	$1,100
2018	Planning	$100
2019		
2020		
Project Total		**$1,281**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 05-10**

Categorization: **Program / Planning**

Name of Project: **Potable Water System Planning**

Reference Documents:

a) MASTER PLAN, VOLUME 2, CHAPTER 6
b) GUAM CONSOLIDATED COMMISSION ON UTILITIES RESOLUTION NO. 11
c) Amended Stipulated Order 2011, Item 28 and Item 29

Project Description:

This project will include long term planning, system planning, and environmental planning. Specific applications will include potable water hydraulic modeling and the potable water bubble map. This will be used to update a portion of the Master Plan. Hydraulic modeling includes the software, hardware, travel and training. System planning includes but not limited to GIS mapping, asset inventory, asset management, asset management software, GIS software, GIS training, asset management training and asset condition assessment.

Project Justification:

Long term planning, system planning, and environmental planning is essential for developing capital improvement programs. Potable Water System Planning ensures that a system approach is used in project development which specifies how specific projects fit into the overall planning goals.

In addition, the 2006 Master Plan requires updating every two years by the Guam Consolidated Commission on Utilities Resolution No. 11 – FY 2007 Relative to Approving the Guam Waterworks Authority Master Plan. The resolution states "The Guam Waterworks Authority is hereby directed to continue refining the Master Plan and every two years from the date of approval of this document to recommend to the Consolidated Commission on Utilities improvements and modifications to the Master Plan and the hydraulic model and to recommend and re-prioritize capital projects resulting from said changes or modifications."

Financing Options & Grants:

The source of funding for this project will be the 2013 Bond, 2015 Bond, 2018 Bond, SRF Grant and Internally Funded CIP.

Project Staffing Implications:

Major modeling services and GIS support are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Design Planning	$439
2017	Design Planning	$2,000
2018	Design Planning	$400
2019	Design Planning	
2020		
Project Total		**$2,839**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 05-11**

Categorization: **Program / Construction**

Name of Project: **Implement Ground Water Rule**

Reference Documents:

a) Implementation of the Groundwater Rule GEPA

Project Description:

This project will provide upgrades to the deep wells for the implementation of the Groundwater Rule. This project will install chlorine residual monitors on all GWA wells. The wells will include SCADA equipment to communicate the well chlorine levels to central location.

Project Justification:

The Groundwater Rule requires GWA to install chlorine residual monitors on all GWA wells.

Financing Options & Grants:

This project will be funded from 2010 Bond, 2013 bond and SRF Grant.

Project Staffing Implications:

Major Contract Administration, Major Project Management Services, Program Management and Major Construction Management Services are required. A control system technician will be required to maintain the monitors and related SCADA equipment.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		
2017		
2018		
2019		
2020		
Project Total		**$0**

Note: Funds encumbered by construction project.

GWA Capital Improvement Plan
Project Sheet FY 2014-2018

Project Number: **CIP PW 05-12**

Categorization: **Project**

Name of Project: **Brigade II (Ugum Lift) BPS Upgrade**

Reference Documents:

a) GWA Engineering Division, Potable Water Production Enhancement Plan, June 10, 2010.

Project Description:

A new Brigade II booster pump station is required to fully utilize the surface supply from the south or the Ugum Treatment Plant. A new pump station, located at the Brigade II BPS site, will serve both the Windward Hills Reservoir and the Pulantat Reservoir. To provide this operational flexibility, the new pump station is to be located on the downstream side of Ugum Reservoir and should be able to overcome the pipe head loss plus the elevation difference (139 feet) between the Pulantat Reservoir and the Ugum Reservoir. Property acquisition is likely. Approximately 1100 feet of pipe is required in addition to the pump station. Additionally, the Brigade booster pump station and Windward Hills booster pump station will be upgraded to increase reliability and energy savings.

Project Justification:

Based on GEPA 2009 Annual Production Well Inspection Report, 13 of GWA's wells were required to decrease production due to the chloride levels; and 16 wells were approaching the chloride limit. One approach to supplementing the water supply due to the decrease in production of these 13 wells is to maximize the use of GWA's surface water and ground water. It is estimated that an increase in production of 2 MGD is needed to offset this loss in production. The source water from Ugum WTP is intended to cover the loss in deep well production.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management Services, Program Management and Major Construction Management Services are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		$1,445
2017		
2018		
2019		
2020		
Project Total		**$1,445**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 05-13**

Categorization: **Project**

Name of Project: **Deep Well Rehabilitation**

Reference Documents:

a) GWA Engineering Division, Potable Water Production Enhancement Plan, June 10, 2010.

Project Description:

This project will design and construct up to 3 new wells to increase supply and include the design and rehabilitation of seven "down-hard" wells. This project will require a feasibility study to determine the specific approach and cost estimate for each well.

Project Justification:

Based on GEPA 2009 Annual Production Well Inspection Report, 13 of GWA's wells were required to decrease production due to the chloride levels; and 16 wells were approaching the chloride limit or other contaminants. One approach to supplementing the water supply due to the decrease in production of these 13 wells is to maximize the use of GWA's surface water and ground water. It is estimated that an increase in production of 2 MGD is needed to offset this loss in production

Financing Options & Grants:

The source of funding for this project will be the 2013 Bond, 2015 bond and SRF.

Project Staffing Implications:

Major Contract Administration, Major Project Management Services, Program Management and Major Construction Management Services are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Construction	$2,600
2017		$3,000
2018		
2019		
2020		
Project Total		**$5,600**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 05-14**

Categorization: **Project**

Name of Project: **New Deep Wells at Down Hard Well Sites**

Reference Documents:

a) GWA Engineering Division, Potable Water Production Enhancement Plan, June 10, 2010.

Project Description:

This project will provide wells to increase supply and include new source water by drilling new wells adjacent to existing wells. This cost of these new wells will include casing and the transmission line to tie the wells into the system. This project will require a feasibility study to determine the specific approach and cost estimate for each well.

Project Justification:

Based on GEPA 2009 Annual Production Well Inspection Report, 13 of GWA's wells were required to decrease production due to the chloride levels; and 16 wells were approaching the chloride limit. One approach to supplementing the water supply due to the decrease in production of these 13 wells is to maximize the use of GWA's surface water and ground water. It is estimated that an increase in production of 2 MGD is needed to offset this loss in production.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond, 2013 bond and 2015 Bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management Services, Program Management and Major Construction Management Services are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Construction	$3,321
2017		
2018		
2019		
2020		
Project Total		**$3,321**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 05-15**

Categorization: **Project**

Name of Project: Rehabilitation of Asan Springs Ground Reservoir

Reference Documents:

a) GWA Engineering Division, Potable Water Production Enhancement Plan, June 10, 2010.

Project Description:

This project will include design and construction work to rehabilitate/upgrade the reservoir, treatment/chlorination facility, pump/motors and electrical controls.

Project Justification:

Based on GEPA 2009 Annual Production Well Inspection Report, 13 of GWA's wells were required to decrease production due to the chloride levels; and 16 wells were approaching the chloride limit. One approach to supplementing the water supply due to the decrease in production of these 13 wells is to maximize the use of GWA's surface water and ground water. It is estimated that an increase in production of 2 MGD is needed to offset this loss in production.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond and DOI grant.

Project Staffing Implications:

Major Contract Administration, Major Project Management Services, Program Management and Major Construction Management Services are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		$1,157
2017		
2018		
2019		
2020		
Project Total		**$1,157**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 05-16**

Categorization: **Program / Construction**

Name of Project: **Master Metering**

Reference Documents:
a) The Bubble Map and Water Service Area Map.

Project Description:
This project will provide for the design, installation, and materials for water meters to be installed at major GWA facilities and pressure zones to fully account for water consumption. This project will aid in analyzing and forming a more accurate picture related to leak detection studies and reports. Additionally the hydraulic model will benefit from the data collected.

Project Justification:
The project is needed to perform water audits on water service areas (WSA) as required by US EPA. This project will greatly enhance the data from the current leak detection contract.

Financing Options & Grants:
The source of funding for this project will be the 2010 Bond, 2013 Bond and 2015 Bond.

Project Staffing Implications:
Major Contract Administration, Major Project Management Services, Program Management and Major Construction Management Services are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Construction	$110
2017	Construction	$3,616
2018		
2019		
2020		
Project Total		**$3,726**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 09-01**

Categorization: **Project**

Name of Project: **Ugum Water Treatment Plant Intake Modifications**

Reference Documents:

a) Stipulated Order 2006, item 41, Ugum Surface Water Treatment Plant. Due January 5, 2008.
b) MASTER PLAN, VOLUME 2, TABLE 9-6
c) *GWA Engineering Division, Potable Water Production Enhancement Plan*, June 10, 2010.

Project Description:

This project includes an alternative analysis and a design concept report to refine the extent and cost of this critical project. This project will improve the intake structure of the Ugum Water Treatment Plant to minimize siltation and provide more reliable raw water supply during low river flow conditions. This project also includes master planning for future treatment capacity and projects that increase plant capacity. Additionally vehicles, equipment, software, hardware, training for the planning, engineering, operation and maintenance of the treatment plant are part of the scope. This project will cover all related work that fell under PW 05-04.

Project Justification:

The existing intake is susceptible to siltation and requires frequent maintenance. The project will allow for GWA to efficiently extract the Ugum water even during high silt periods and operate at low river conditions. More importantly the Ugum WTP is a major source of water for supplying the Southern Water System thus continued water supply is necessary.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond, 2013 Bond, 2015 Bond and IFCIP.

Project Staffing Implications:

Contract Administration, Project Management, Program Management and Construction Management Services are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		$522
2017		$500
2018		
2019		
2020		
Project Total		**$1,022**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 09-02**

Categorization: **Program / Construction**

Name of Project: **Water Wells**

Reference Documents:

a) GWA Needs Assessment for Anticipated Guam Military Buildup 08/2007 and 08/2009 update.
b) *GWA Engineering Division, Potable Water Production Enhancement Plan*, June 10, 2010.

Project Description:

GWA projects a need to construct new production wells to produce an estimated 5-7 MGD for natural growth of the island and pending military development. This project will require studying the aquifer with respect to all production wells, water system demand analysis, and development/construction of new well. It is imperative that the site locations of the new wells are executed with a whole-aquifer perspective. This project also includes addressing replacement of pumps, motors, cables, motor controls, meters, and electrical systems at existing wells to meet GWA's production needs.

Project Justification:

Water demands for all population residing outside military property will be met by GWA sources. This project will ensure water supply can meet customer demands taking onto account economic, environmental, health and safety factors.

Financing Options & Grants:

The source of funding for this project will be the 2013 bond, 2015 Bond, 2018 Bond, System Development Charge, and Internally Funded CIP.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Program Management, Major Construction Management, and Modeling Support are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Planning/Design/Construction	$6,756
2017	Construction	$2,660
2018	Construction	$500
2019	Construction	$4,000
2020		
Project Total		**$3,916**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 09-03**

Categorization: **Program / Construction**

Name of Project: **Water Distribution System Pipe Replacement**

Reference Documents:

a) MASTER PLAN, VOLUME 2, TABLE 9-7
b) *GWA Engineering Division, Potable Water Production Enhancement Plan*, June 10, 2010
c) NEIC Finding of Significant Deficiencies in GWA Water System, April 2013

Project Description:

In addition to specific pipe replacement projects identified through hydraulic modeling, there is an ongoing need to fund pipe replacement to address leaks, failure and age issues. In addition the 2005 hydraulic model identified deficiencies in pumping capacity and pipe size to provide adequate fire flow and pressure, and reduce high velocities and friction losses throughout the island The basis for this project is to replace 13,500 linear feet of pipe per year through 2015 and 2,000 feet of pipe replacement per year thereafter. Pipe replacement includes but is not limited to replacement of fire hydrants, PRV, valves (isolation valves, air lease valves blow off valves, etc.), vaults, and line segment replacement. In addition these projects include leak detection, leak repair, the mapping and records related to these activities, and valve exercise program.

Project Justification:

Under the current leak detection project sites have been identified where substantial leaks are occurring. This pipe replacement project intends to use the information from the leak detection project in prioritizing pipe replacement. The GWA system also has numerous substandard/undersize pipes which would be address through this project. The improvements are to also address the USEPA's "Findings of Significant Deficiencies in the Public Water System"

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond, 2013 bond, 2015 Bond, 2018 Bond, Internally Funded CIP, and SDC.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Program Management, Major Construction Management, Major GIS Support, and Major Modeling Support are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Construction	$3,701
2017	Construction	$12,260
2018	Construction	$500
2019	Construction	$5,000
2020		
Project Total		**$21,461**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 09-04**

Categorization: **Program / Construction**

Name of Project: **Pressure Zone Realignment/Development 2005 Improvements**

Reference Documents:
a) MASTER PLAN, VOLUME 2, TABLE 9-12
b) Water System Hydraulic Analysis Report, May 3, 2013

Project Description:
The hydraulic modeling of the water system identified areas with inadequate service pressures and flows. Installation of pressure regulating valve and pressure sustaining valve stations is required at strategic locations to facilitate the development of defined pressure zones, and improve circulation of flow from a higher pressure zone to a lower pressure zone. These projects include repairs of existing PRV and PSV to ensure the water system meets services pressure and flow.

Project Justification:
Pressure zone changes needed to improve flow circulation and defined pressure zones.

Financing Options & Grants:
The source of funding for this project will be the 2013 bond, and 2015 Bond.

Project Staffing Implications:
Major Contract Administration, Major Project Management, Program Management, Major Construction Management, Major GIS Support, and Major Modeling Support are required. The modeling support to achieve this project will be extensive.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Design/Construction	$569
2017	Construction	$572
2018		
2019		
2020		
Project Total		**$1,141**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 09-06**

Categorization: **Program / Construction**

Name of Project: **Central Water Distribution System 2005 Improvements**

Reference Documents:

a) MASTER PLAN, VOLUME 2, TABLE 9-10

Project Description:

There is an ongoing need to fund pipe replacement to address leaks, failure and age issues. In addition the 2005 hydraulic model identified deficiencies pipe size to provide adequate fire flow and pressure, and reduce high velocities and friction losses throughout the island. Pipe replacement includes but is not limited to fire hydrants, PRV, valves, vaults and line segment replacement. These projects include leak detection, leak repair, and the mapping and records related to these activities.

Project Justification:

Under the current leak detection project sites have been identified where substantial leaks are occurring. This pipe replacement project intends to use the information from the leak detection project in prioritizing pipe replacement. The GWA system also has numerous substandard/undersize pipes which would be address through this project.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond.

Project Staffing Implications:

Contract Administration, Project Management Services, Construction Management Services, GIS Support, and Modeling Support are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		$75
2017		
2018		
2019		
2020		
Project Total		**$75**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 09-08**

Categorization: **Program / Construction**

Name of Project: **Mechanical/Electrical Equipment Replacement**

Reference Documents:

a) MASTER PLAN, VOLUME 2, TABLE 9-8

Project Description:

This project will create an equipment reserve for routine mechanical/electrical equipment replacement due to age, capacity, or failure. This reserve includes well pumps, booster pumps, valves, emergency generators and other items associated with the Northern, Central and Southern Water Systems.

Project Justification:

Sufficient funds must be reserved to ensure water system mechanical and electrical equipment is replaced in a timely manner.

Financing Options & Grants:

The source of funding for this project will be the 2013 Bond and 2015 bond.

Project Staffing Implications:

Contract Administration, Project Management Services, and Construction Management Services are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Procurement/Construction	$102
2017		
2018		
2019		
2020		
Project Total		**$102**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 09-09**

Categorization: **Program / Assessment**

Name of Project: **Water Reservoir Internal/External Corrosion Assessment Program**

Reference Documents:

a) MASTER PLAN, VOLUME 2, TABLE 9-2

Project Description:

This project will develop and implement a corrosion assessment program for all steel water reservoirs to determine the extent of internal and external reservoir corrosion and necessary course of action to rehabilitate or replace the affected reservoirs.

Project Justification:

The failure of the Barrigada Water Reservoir #1 in June 2005 demonstrated the urgent need to internally inspect and carry out a full condition assessment of all steel reservoirs to determine the degree of corrosion damage and establish remedial action or reservoir replacement as appropriate.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond.

Project Staffing Implications:

Contract Administration, Project Management, and Construction Inspection are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		$646
2017		
2018		
2019		
2020		
Project Total		**$646**

Note: Funds encumbered by construction project.

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 09-10**

Categorization: **Program / Construction**

Name of Project: **Water Reservoir Internal/External Corrosion Rehabilitation Program**

Reference Documents:
a) MASTER PLAN, VOLUME 2, TABLE 9-3

Project Description:
This project will program the rehabilitation of designated reservoirs over a four-year period as a phased project based on the results of the corrosion assessment program for all steel water reservoirs.

Project Justification:
The failure of the Barrigada Water Reservoir #1 in June 2005 demonstrated the urgent need to internally inspect and carryout a full condition assessment of all steel reservoirs to determine the degree of corrosion damage and establish remedial action or reservoir replacement as appropriate.

Financing Options & Grants:
The source of funding for this project will be the 2015 bond.

Project Staffing Implications:
Major Contract Administration, Major Project Management, and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Planning/Construction	$800
2017		
2018		
2019		
2020		
Project Total		**$800**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 09-11**

Categorization: **Program / Construction**

Name of Project: **Water System Reservoirs 2005 Improvements**

Reference Documents:
a) MASTER PLAN, VOLUME 2, TABLE 9-14 & 15
b) Amended Stipulated Order 2011, Item 29

Project Description:
This project will construct additional reservoirs that address deficiencies in water storage capacity.

Project Justification:
The 2005 hydraulic model for GWA's three water systems identified deficiencies in reservoir capacity. This project will provide adequate capacity and pressure for fire and customer supply.

Financing Options & Grants:
The source of funding for this project will be the 2013 Bond, 2015 Bond, 2018 Bond, and Internally Funded CIP.

Project Staffing Implications:
Major Contract Administration, Major Project Management, Program Management and Major Construction Management and Major Modeling are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Planning/Construction	$8,485
2017	Construction	$18,472
2018	Construction	$24,178
2019	Construction	$18,250
2020	Construction	$10,000
Project Total		**$79,385**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: CIP PW 11-01

Categorization: Program / Construction

Name of Project: Distribution System Upgrades

Reference Documents:

Project Description:
Waterlines from the 2009 Leak Detection Program distribution system upgrades will be identified that are in conformance with the Master Plan but are not scheduled with the current time horizon but need to be repaired sooner.

Project Justification:
Water Distribution System Pipe: GWA's system consists of hundreds of miles of water distribution mains consisting of various pipe sizes and types. Many of these lines are undersized and/or failing due to improper construction, earthquake damage, and/or material failures. Additionally, pressure zone changes are needed to improve flow circulation and define pressure zones.

Financing Options & Grants:
The source of funding for this project will be the 2010 Bond.

Project Staffing Implications:
Major Contract Administration, Major Project Management, Major Construction Management, Major GIS Support, and Modeling Support are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		$26
2017		
2018		
2019		
2020		
Project Total		**$26**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 11-02**

Categorization: **Project**

Name of Project: **Ugum Water Treatment Plant Reservoir Replacement**

Reference Documents:

a) Amended Stipulated Order 2011, Item 29

Project Description:

This project will provide a new 2 MG finished water reservoir at the Ugum Water Treatment Plant. The reservoirs will be the sole source of finished water for most of the Southern Water System. Failure of the existing lone reservoir would result in a significant hardship on customers in the system. The new 2 MG reservoir would allow the existing reservoir to be taken off-line and refurbished and ultimately allow for redundancy and maintenance. This may require property acquisition.

Project Justification:

To provide redundancy in storage at the treatment plant that will allow for periodic maintenance. The existing reservoir is damaged, but cannot be taken out-of-service for repair because there is no back-up.

Financing Options & Grants:

The source of funding for this project will be the 2013 Bond and 2015 Bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Program Management and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Assessment/Planning/Construction	$6,500
2017		
2018		
2019		
2020		
Project Total		**$6,500**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 12-01**

Categorization: **Program / Planning**

Name of Project: **Water Audit Program & Water Loss Control Plan**

Reference Documents:
PUC Docket 09-03

Project Description:
This project will perform system wide leak detection, leak repair and inspection, leak analysis and control. Leak detection will be performed on 450 miles of system pipe, including use of acoustical surveying and water audits. The information resulting from the work completed in the project will be used to update the AWWA M-36 Water Audit which will allow GWA to address PUC STIP 4.c.i, apparent losses: a forensic assessment, Customer Service Meter Inaccuracies, PUC STIP 4.c.ii, apparent losses: including potential outsourcing and Unbilled Unmetered, PUC STIP 4.c.iii, apparent losses: unauthorized consumption.

This project will also address the Tiyan properties returned to the original home owner who are not currently meter. This project therefore will include installation of individual residential meters as well as installation of any water distribution system that will improve GWA's ability to serve these customers.

Project Justification:
This project will develop a water meter improvement program to ensure that each connection to the three public water systems has an accurate and accessible water meter that is read monthly and billed.

Financing Options & Grants:
The source of funding for this project will be the 2010 Bond and 2018 Bond. Line item MC 09-01 within the any bond issuance shall be an alternative source of funding for projects generated through CIP PW 12-01 if GWA engineering can show the project meets MC 09-01 capital project criteria.

Project Staffing Implications:
Major Contract Administration, Major Project Management, Program Management and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET(x1000)
2016		$1,022
2017		
2018		
2019		
2020		
Project Total		**$1,022**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 12-02**

Categorization: **Program / Planning**

Name of Project: **Production Plan / Reduce Navy Purchases**

Reference Documents:
GWA Production Plan 2010

Project Description:
This project will implement the GWA Production plan which includes but not limited to down hard wells that were rehabilitated, development of new well, rehabilitation of springs, and improvements to the Ugum WTP. This project will also include planning and design of transmission mains to move larger volumes of water to areas supplied by Navy water.

Project Justification:
Navy water purchase is expensive for GWA for resale. The anticipated growth of the island due to the military buildup will have impacts to GWA if additional Navy purchases were to occur.

Financing Options & Grants:
Line item MC 09-01 within the Bond issuance shall be an alternative source of funding for projects generated through CIP PW 12-02 if GWA engineering can show the project meets MC 09-01 capital project criteria.

Project Staffing Implications:
Major Contract Administration, Major Project Management, and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		
2017		
2018		
2019		
2020		
Project Total		**$0**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 12-03**

Categorization: **Program / Assessment**

Name of Project: **Hydraulic Assessment of Tanks**

Reference Documents:

a) Amended Stipulated Order 2011, Item 29 (a)

Project Description:

The hydraulic analysis through the use of hydraulic modeling program shall evaluate each service area to identify deficiencies that impact the short and long term water storage and pressure needs of that service area. The analysis will also include at a minimum defining the zones in the Bubble Map, updating Demand (Population).

Project Justification:

This is a stipulated order project intended to help GWA understand and manage the water storage capacity throughout the island.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management, and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		
2017		
2018		
2019		
2020		
Project Total		**$0**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 12-04**

Categorization: **Project**

Name of Project: **Agana Heights and Chaot Tank Construction**

Reference Documents:
a) Amended Stipulated Order 2011, Item 28(c)

Project Description:
This project will replace the existing Agana Heights and Chaot steel tanks to concrete tanks. Concrete tank design and construction management will be required.

Project Justification:
Results from internal and external corrosion assessment deemed tanks to be replaced. In addition, this is a Court Ordered project. Additionally, this project completes the Sinajana/Agana Heights Water Transmission line project.

Financing Options & Grants:
The source of funding for this project will be the 2013 Bond and 2015 Bond.

Project Staffing Implications:
Major Contract Administration, Major Project Management, Program Management and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	CM/Construction	$4,221
2017		
2018		
2019		
2020		
Project Total		**$4,221**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 12-05**

Categorization: **Project**

Name of Project: **Tank Major Repair Yigo #1, Mangilao #2, Astumbo #1**

Reference Documents:

a) Amended Stipulated Order 2011, Item 29
b) Duenas, Camacho & Associates (DCA) "Structural Inspection and Assessment of the Mangilao 2 Tank", April 6 2011
c) DCA "Structural Inspection and Assessment of the Astumbo 1 Tank", April 6, 2011
d) DCA "Structural Inspection and Assessment of the Yigo 1 Tank", April 6, 2011
e) Water System Hydraulic Analysis Report, May 3, 2013

Project Description:

This project will replace all deteriorated steel within the existing steel tank for the Mangilao #2 tank. Scope of work includes improvements to the steel floor; steel columns, roof purlins as well as interior and exterior re-coating. This project will also include the replacement of the steel tanks at the Yigo site and Astumbo site with concrete tanks and booster pumps station.

Project Justification:

Results from internal and external corrosion assessment deemed the Mangilao tank to require major improvements. As for the Yigo and Astumbo tanks GWA find it is on the best interest of the public to fully replacement the Yigo and Astumbo Tanks as well as build a booster pump station. .

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond, 2013 Bond and 2015 Bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Program Management and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	CM/Construction	$73
2017		
2018		
2019		
2020		
Project Total		**$73**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 12-06**

Categorization: **Project**

Name of Project: **Tank Replacement Piti & Hyundai Tanks**

Reference Documents:

a) Amended Stipulated Order 2011, Item 29
b) Water System Hydraulic Analysis Report, May 3, 2013

Project Description:

This project will include the design and construction of replacement tanks for the Piti and Hyundai steel tanks. The new tanks more than likely will be located in the same footprint as the previous tanks however should the tank assessment project (PW 12-03) indicate otherwise the tanks will be located as recommended. This project will include a design analysis for a replacement tank.

Project Justification:

Results from internal and external corrosion assessment deemed tanks to be replaced. In addition, this is a Court Ordered project.

Financing Options & Grants:

The source of funding for this project will be the 2015 bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Program Management and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Planning/Design	$5,000
2017	CM/Construction	$5,500
2018		
2019		
2020		
Project Total		**$10,500**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 12-07**

Categorization: **Project**

Name of Project: **Assessment/Replacement of Malojloj Elevated & Yigo Elevated Tanks**

Reference Documents:
a) Amended Stipulated Order 2011, Item 29
b) Water System Hydraulic Analysis Report, May 3, 2013

Project Description:
This project will include the design and construction of replacement tanks for the Malojloj and Yigo elevated steel tanks. GWA may also assess the abandonment of these thanks and/or replacement with pump stations. The new tanks more than likely will be located in the same footprint as the previous tanks however should the tank assessment project (PW 12-03) indicate otherwise the tanks will be located as recommended. This project will include a design analysis for a replacement tank.

Project Justification:
Results from internal and external corrosion assessment deemed tanks to be replaced. In addition, this is a Court Ordered project.

Financing Options & Grants:
The source of funding for this project will be the 2010 Bond and 2013 bond.

Project Staffing Implications:
Major Contract Administration, Major Project Management, Program Management and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		$15
2017		
2018		
2019		
2020		
Project Total		**$15**

GWA Capital Im
provement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 12-08**

Categorization: **Program / Assessment**

Name of Project: **Public Water System Asset Inventory/Condition Assessment**

Reference Documents:

a) Work Plan USEPA Region IX – R9 Tracking #11-277 "Water and Wastewater System Improvements

Project Description:

This project includes but not limited to water asset inventory development, asset management planning and implementation, asset management software procurement, asset management training and asset condition assessment. The information gathered will also be integrated with the GWA GIS system.

Project Justification:

This project is intended to provide GWA with data, information and the ability to understand and manage the water system such as the distribution line, booster pump station, section valves, and treatment facility to ensure planning effort to upgrade the system is done effectively and efficiently.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond.

Project Staffing Implications:

Contract Administration and Project Management are required. GWA staff training and management of the asset inventory also required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		
2017		
2018		
2019		
2020		
Project Total		**$0**

Note: Funds encumbered by Program Management Office.

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 12-09**

Categorization: **Program / Planning**

Name of Project: **Public Water System GIS & Mapping**

Reference Documents:

a) Work Plan USEPA Region IX – R9 Tracking #11-277 "Water and Wastewater System Improvements

Project Description:

This project intends to improve GWA's GIS data base through improvements with GWA data management system. The improvements will include integration of other data sources into GIS to close the data gaps as well as implement system hardware to ensure use and expansion of GIS is achievable.

Project Justification:

Continued update of the GIS system will allow GWA to understand and manage GWA infrastructure more effectively. Accurate GIS information is vital to new development planning as well as system maintenance.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond.

Project Staffing Implications:

Major Contract Management for GIS services and GIS support are required

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		
2017		
2018		
2019		
2020		
Project Total		**$0**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP PW 14-01**

Categorization: **Project**

Name of Project: **Fire Hydrant Replacement Program**

Reference Documents:

a) Guam Administrative Rules and Regulations, Title 28, Chapter 2, Article 1, 2102 (a)(17)
b) Development Plan for Long-Term Comprehensive Water Distribution System Program, Section 5, Fire Hydrant Exercising, Maintenance, and Replacement Program, April 2013

Project Description:

This project intends to replace old, damaged or out-of-commissioned fire hydrants throughout Guam, in accordance with the Guam Administrative Rules and Regulations.

Project Justification:

Replacement of damaged or out-of-commission fire hydrants will help GWA remain in compliance with the Guam Administrative Rules and Regulations and increase the emergency response capacity of Guam's water system.

Financing Options & Grants:

The source of funding for this project will be the 2015 Bond and Internally Funded CIP.

Project Staffing Implications:

Contract Administration, Project Management Services, Program Management and Construction Management Services are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Planning/Construction	$2,000
2017	Construction	$500
2018	Construction	$500
2019		
2020		
Project Total		**$3,000**

Project Sheet Wastewater

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 05-04**

Categorization: **Program / Planning**

Name of Project: **Wastewater System Planning**

Reference Documents:

a) MASTER PLAN, VOLUME 3, CHAPTER 4.7.3
b) GUAM CONSOLIDATED COMMISSION ON UTILITIES RESOLUTION NO. 11-FY2007

Project Description:

Wastewater System Planning will include long term planning, system planning, and environmental planning. Specific application would include wastewater hydraulic modeling and the wastewater skeletal basin map. This will be used to update a portion of the Master Plan. Hydraulic modeling includes the software, hardware, travel and training. System planning includes but not limited to GIS mapping, asset inventory, asset management, asset management software, GIS software, GIS training, asset management training and asset condition assessment.

Project Justification:

Long term planning, system planning, and environmental planning is essential for developing capital improvement programs. Wastewater System Planning ensures that a system approach is used in project development.

In addition, the 2006 Master Plan requires updating every two years by the Guam Consolidated Commission on Utilities Resolution No. 11 – FY 2007 Relative to Approving the Guam Waterworks Authority Master Plan. The resolution states "The Guam Waterworks Authority is hereby directed to continue refining the Master Plan and every two years from the date of approval of this document to recommend to the Consolidated Commission on Utilities improvements and modifications to the Master Plan and the hydraulic model and to recommend and re-prioritize capital projects resulting from said changes or modifications."

Financing Options & Grants:

The source of funding for this project will be the 2013 Bond, 2015 Bond, 2018 Bond and SRF funding.

Project Staffing Implications:

Major modeling services and GIS support are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Assessment/Planning/Design	$308
2017		
2018	Assessment/Planning/Design	$1,000
2019	Assessment/Planning/Design	$1,000
2020		
Project Total		**$2,308**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 09-01**

Categorization: **Project**

Name of Project: **Lift Station Upgrades**

Reference Documents:

a) Performance Management Contract, CIP / PIP Review June 2007

Project Description:

Specific rehabilitation and repair capital projects are needed for the sewage pump stations. These projects include: Health and Safety (e.g. overhead crane repair and fall protection barriers, lock, wet well fencing, fans and basic security), Environmental Protection and Compliance (e.g. high level and overflow alarm systems), Energy Optimization Programs (e.g. upgrading electrical controls and motors, add amp meters, add run time meter), and economically beneficial Asset Replacement (e.g. replacement of a pump for $9,000 rather than repair it for $7,600).

Project Justification:

Sewage pump stations require ongoing capital upkeep in order to maintain safety, prevent sewer overflows, maintain environmental compliance and optimize energy usage. Installation of control equipment such as amp meters and alarms help maintenance of the pumps and motors. These improvements are to also address the pending USEPA's "Findings of Significant Deficiencies in the Wastewater System" report.

Financing Options & Grants:

The main source of funding for this project is the SRF funding, 2013 Bond, 2015 Bond, and Internally Funded CIP.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Program Management and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Planning/Design/Construction	$1,055
2017	Construction	$5,050
2018	Construction	$1,500
2019	Construction	
2020		
Project Total		**$7,605**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 09-02**

Categorization: **Project**

Name of Project: **Moratorium**

Reference Documents:

a) Central Guam Sewer Improvements Functional Design Report, January 2009
b) MASTER PLAN, VOLUME 3, TABLE 9-7, 8, 9, 10, 28, 29, 43, 44

Project Description:

The Moratorium project is a collection of specific wastewater projects within the Tamuning and Agana villages. These projects include upgrades to the Mamajanao, Chaot, and Agana Main Pump Stations.

Project Justification:

The sewer system in the Central Guam catchment along Marine Corp. Drive and Route 4 close to Agana Bay is stressed. The primary sewers in these locations experience periodic overflows with 2008 flows and by 2025 the system could be completely overwhelmed. This problem is exacerbated by the Mamajanao Sewage Pump Station, which under certain operating conditions is unable to cope with the influent flows without surcharging and locally flooding the downstream system.

Financing Options & Grants:

The source of funding for this project will be Short-Term Loan.

Project Staffing Implications:

Major Contract Administration, Major Project Management, GIS Support, and Modeling Support, and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		
2017		
2018		
2019		
2020		
Project Total		**$0**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 09-06**

Categorization: **Program / Construction**

Name of Project: **Wastewater Collection System Replacement/Rehabilitation Program**

Reference Documents:

a) MASTER PLAN, VOLUME 3, TABLE 9-23
b) Southern SSES Rehabilitation Program, December 2013
c) Agana (Central) Collection System Rehabilitation Plan, June 2014

Project Description:

Annual recurring design and construction project to replace/rehabilitate 3/4 of the total collection system (~8,600 feet) per year. This would focus on the worst condition pipes not already scheduled for hydraulic related rehab or replacement. Additional work under this CIP includes manhole repair/replacement, manhole collar replacement, and manhole lid seals.

Project Justification:

Replacement/rehabilitation program will upgrade sewer collection system as a proactive activity to mitigate catastrophic system failure. These improvements are to also address the pending USEPA's "Findings of Significant Deficiencies in the Wastewater System" report.

Financing Options & Grants:

The main source of funding for this project will be 2010 Bond, 2013 bond, 2015 Bond, SRF funding and Internally Funded CIP.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Program Management, Major Construction Management, Major GIS Support, and Modeling Support are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Construction	$3,095
2017	Construction	$13,920
2018	Construction	$8,500
2019		
2020		
Project Total		**$25,515**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 09-08**

Categorization: **Project**

Name of Project: **Facilities Plan/Design/Interim for Baza Gardens STP Improvements**

Reference Documents:

a) MASTER PLAN, VOLUME 3, TABLE 9-26
b) Wastewater Facilities Plan, Baza Gardens WWTP, August 2008
c) CIP WW 11-03 Baza Gardens STP Replacement
d) Guam Environmental Protection Agency Requirements meeting minutes, December 19, 2007 and letter, May 13, 2008.

Project Description:

This project includes planning, design and implementation for interim improvements at the wastewater treatment facility to meet permit conditions. Due to strict effluent limits imposed by the stream discharge and difficulty in operating complex treatment systems to reliably meet these limits, an alternative means of disposal should be considered in the Facility Plan. Facility Plan process recommendations will be based on the recommended alternative means of disposal. The new facilities will incorporate provisions for redundancy to improve reliability and facilitate operations and maintenance activities. Design and test the concept of utilization of Underground Injection Wells (UIC) for effluent discharge and design a replacement for the existing wastewater treatment plant with a new Membrane Bioreactor plant at the same location.

Project Justification:

Existing facilities lack redundancy and reliability, are difficult to operate, and require significant repair. Existing disposal requirements cannot be achieved, so a different effluent disposal system must be identified. The current secondary treatment plant cannot meet the stringent nutrient limits in the receiving stream, and the facility has outlived its design life and has severe operational challenges. A new plant is required that discharges to an Underground Injection Well (pursuant to Guam Environmental Protection Agency requirements).

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond.

Project Staffing Implications:

Contract Administration, Project Management Services, Program Management and Construction Management Services are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET(x1000)
2016		
2017		
2018		
2019		
2020		
Project Total		**$0**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 09-10**

Categorization: **Project**

Name of Project: **Facilities Plan/Design/Interim Measures for Agat-Santa Rita STP Replacement**

Reference Documents:

a) MASTER PLAN, VOLUME 3, TABLE 9-24

Project Description:

This project includes planning and design for interim improvements at the wastewater treatment facilities to meet existing and future flow capacity and reliably achieve regulatory compliance. The facilities will incorporate provisions for redundancy to improve reliability and facilitate operations and maintenance activities.

Project Justification:

Existing facilities do not have sufficient capacity for current and future flow projections. Existing facilities lack redundancy and reliability, are difficult to operate, and require significant repair.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond.

Project Staffing Implications:

Contract Administration, Project Management Services, Program Management and Construction Management Services are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		$0
2017		
2018		
2019		
2020		
Project Total		**$0.37**

GWA Capital Improvements Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 09-11**

Categorization: **Project**

Name of Project: **WWTP Priority 1 Upgrades**

Reference Documents:

a) Performance Management Contract, CIP / PIP Review June 2007

Project Description:

Specific rehabilitation and repair capital projects are needed for the sewage pump stations. These include projects: Health and Safety (e.g. overhead crane repair and fall protection barriers), Environmental Protection and Compliance (e.g. grit removal), Energy Optimization Programs (e.g. upgrading electrical controls and motors), and economically beneficial Asset Replacement (e.g. replacement of a pump for $9000 rather than repair it for $7600).

Project Justification:

Aging infrastructure leads to environmental impacts, non-compliance, inefficiencies, and safety problems that must be addressed on an annualized basis.

Financing Options & Grants:

The source of funding for this project will be the System Development Charge.

Project Staffing Implications:

Major Contract Administration, Major Project Management, and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		$1,300
2017		
2018		
2019		
2020		
Project Total		**$1,300**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 11-03**

Categorization: **Project**

Name of Project: **Baza Gardens STP Replacement**

Reference Documents:
a) MASTER PLAN, VOLUME 3, TABLE 9-26 & 27
b) Baza Gardens Wastewater System Evaluation, April 2014

Project Description:
Construction of new wastewater treatment facilities that will meet secondary treatment limits. Due to strict effluent limits imposed by the stream discharge and difficulty in operating complex treatment systems to reliably meet these limits, an alternative means of disposal should be considered in the Facility Plan. Facility Plan process recommendations will be based on the recommended alternative means of disposal. The new facilities will incorporate provisions for redundancy to improve reliability and facilitate operations and maintenance activities at the existing facility.

Project Justification:
Existing facilities lack redundancy and reliability, are difficult to operate, and require significant repair. Existing disposal requirements cannot be achieved, so a different effluent disposal system must be identified.

Financing Options & Grants:
The source of funding for this project will be the 2010 Bond, 2013 Bond, 2015 Bond, 2018 Bond, and Internally Funded CIP.

Project Staffing Implications:
Major Contract Administration, Major Project Management, Program Management and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Design/CM/Construction	$1
2017	Construction	$5,590
2018	Construction	$13,000
2019		
2020		
Project Total		**$18,591**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **WW CIP 11-04**

Categorization: **Project**

Name of Project: **Facilities Plan/Design/Interim for the Umatac-Merizo STP Improvements**

Reference Documents:

a) MASTER PLAN, VOLUME 3, TABLE 9-36
b) Umatac-Merizo Wastewater System Evaluation Report, December 2013

Project Description:

Phase 1 of this project is a facility planning to meet permit conditions; phase 2 is the design of the interim improvements. Planning and design for interim improvements such as new mechanically cleaned bar screen facilities to improve reliability and facilitate operations and maintenance requirements.

Project Justification:

All interim improvements, including mechanically cleaned bar screens, is intended to improve process performance and reduce O&M requirements.

Financing Options & Grants

The source of funding for this project will be the 2010 Bond, 2013 Bond and 2015 Bond.

Project Staffing Implications:

Contract Administration, Project Management, Program Management and Construction Inspection are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Construction	$277
2017		
2018		
2019		
2020		
Project Total		**$277**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 11-08**

Categorization: **Project**

Name of Project: **Agat/Santa Rita STP Replacement**

Reference Documents:

a) Agat-Santa Rita Wastewater Systems Evaluation Report, December 2013

Project Description:

Construction of new wastewater treatment facilities that will meet secondary treatment limits. The new facilities will incorporate provisions for redundancy to improve reliability and facilitate operations and maintenance activities at the existing facility.

Project Justification:

Existing facilities lack redundancy and reliability, are difficult to operate, and require significant repair.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond and 2013 Bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Program Management and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Design/Construction	
2017	Construction	$2,936
2018		
2019		
2020		
Project Total		**$2,936**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 12-01**

Categorization: **Project**

Name of Project: **Northern District WWTP Primary Treatment Upgrades**

Reference Documents:

Project Description:

The Project is intended to deliver, as closely as possible and subject to the terms and conditions of the Contract, the requirements of the Stipulated Order as set out in 1.2 above including, but not limited to, the design, build and commission of the interim primary treatment improvements works at the NDWWTP that will bring the NDWWTP back into compliance with the current NPDES Permit for the quality parameters of TSS and BOD and also provide additional flow capacity of 7.5 MGD (monthly average daily flow) while still complying with the NPDES Permit concentration limits for TSS and BOD.

Project Justification:

The assets at the NDWWTP are not in good condition: sludge stream processes are largely inoperable and the treatment process are compromised, as many of the components are in poor condition or are inoperable.

The assets condition significantly impacts the capacity and performance of the NDWWTP and therefore, the NDWWTP cannot consistently meet the treatment standards required by the National Pollutant Discharge Elimination System (NPDES) discharge permit for the Site (the "NPDES Permit").

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond and SDC funds.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Program Management and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		$1,500
2017		
2018		
2019		
2020		
Project Total		**$1,500**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: CIP WW 12-02

Categorization: Program / Planning

Name of Project: Bio Solids Management Plan

Reference Documents:

Project Description:
This project will allow GWA to plan and management the increased generation of sludge from the wastewater treatment plant throughout the island. The initial focus of the plan would be on the management of GWA's bio-solids (and NDWWTP and Agana WWTP being the primary focus), but in keeping with the spirit of the 'One Guam' utility solution, the plan will develop an island wide bio-solids management plan and include the DoN Apra Harbor Plant bio-solids as well (although it is likely that these bio-solids are likely to contain more constituents of concern than that of GWA bio-solids).

Project Justification:
The current cost of bio-solids disposal is becoming a significant financial liability to GWA with the advent of large increase in tipping fees related to GBB management of Ordot and the development of the new landfill. In addition over the coming 5 years there will be a significant increase in bio-solids production volumes.

Financing Options & Grants:
The source of funding for this project will be the 2010 Bond.

Project Staffing Implications:
Major Contract Administration, Major Project Management, and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		
2017		
2018		
2019		
2020		
Project Total		**$0**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 12-03**

Categorization: **Project**

Name of Project: **Agana WWTP Interim Measures**

Reference Documents:

a) Amended Stipulated Order 2011, Item 5 and 6
b) Agama WTP Primary Treatment Upgrades, Preliminary Design Report, September 2012

Project Description:

This project will include process upgrades to include grit removal; fat, oil and grease (FOG) removal; septage handling facility; prevent back flow from the new outfall; bio-solids treatment; and any additional improvements, rehabilitation or improvements, such as the use of chemically enhanced treatment.

Project Justification:

The *Order for Preliminary Relief Re: Deadlines for Outstanding Projects under the Amended Stipulated Order* (ASO), filed on 11th November 2011, contains requirements to upgrade the Agana WWTP achieves consistent compliance with the WWTP's NPDES permit, and comply with the sludge and bio-solids requirements in 40 C.F.R. Part 503 **(Paragraph 5).**

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond 2015 Bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Program Management and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Construction	$827
2017		
2018		
2019		
2020		
Project Total		**$827**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 12-04**

Categorization: **Program / Planning**

Name of Project: **I&I SSES Southern**

Reference Documents:

a) Amended Stipulated Order 2011, Item 8 (b) and (d)
b) Southern Sanitary Sewer Evaluation Survey Findings Summary, Technical Memorandum, September 2014
c) Agana, Agat-Santa Rita, Baza Gardens and Umatac-Merizo WWTP Sewer Basins, I&I and SSES Analyses, February 2013

Project Description:

This project will include a comprehensive I&I/SSES assessment work to determine the high probable locations where I&I is occurring. The work will include the minor repairs necessary to decrease infiltration and inflow. This will include but is not limited to manhole inspection, manhole mapping, raising manholes, manhole seals, manhole repair to the cover frame, manhole repair to barrel/cone seal, collection line inspection, collection line repair/rehabilitation.

Project Justification:

The *Order for Preliminary Relief Re: Deadlines for Outstanding Projects under the Amended Stipulated Order* (ASO), filed on 11th November 2011, contains requirements to conduct I&I/SSES assessment of the southern wastewater system.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Program Management and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		
2017		
2018		
2019		
2020		
Project Total		**$0**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 12-05**

Categorization: **Program / Planning**

Name of Project: **I&I SSES Central**

Reference Documents:

a) Amended Stipulated Order 2011, Item 8 (c) and (e)
b) Agana (Central) Collection System Rehabilitation Plan, June 27, 2014
c) Inflow and Infiltration (I/I) Study for the Agana (Central) Sewer Basin, March 2014

Project Description:

This project will include a comprehensive I&I/SSES assessment work to determine the high probable locations where I&I is occurring. The work will include the minor repairs necessary to decrease infiltration and inflow. This will include but is not limited to manhole inspection, manhole mapping, raising manholes, manhole seals, manhole repair to the cover frame, manhole repair to barrel/cone seal, collection line inspection, collection line repair/rehabilitation.

Project Justification:

The *Order for Preliminary Relief Re: Deadlines for Outstanding Projects under the Amended Stipulated Order* (ASO), filed on 11th November 2011, contains requirements to conduct I&I/SSES assessment of the central wastewater system.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond and SRF funding.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Program Management and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		
2017		
2018		
2019		
2020		
Project Total		**$0**

Note: Funds encumbered by design project.

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 12-06**

Categorization: **Program / Planning**

Name of Project: **I&I SSES Northern**

Reference Documents:

a) Work Plan USEPA Region IX – R9 Tracking #11-277 "Water and Wastewater System Improvements

Project Description:

This project will include a comprehensive I&I/SSES assessment work to determine the high probable locations where I&I is occurring. The work will include the minor repairs necessary to decrease infiltration and inflow. This will include but is not limited to manhole inspection, manhole mapping, raising manholes, manhole seals, manhole repair to the cover frame, manhole repair to barrel/cone seal, collection line inspection, collection line repair/rehabilitation.

Project Justification:

Continued development in the northern part of the island will contribute to impacts to the existing wastewater collection system. It is the intent of this project is to determine where I&I are occurring and make necessary repairs.

Financing Options & Grants:

The source of funding for this project will be the SRF funding.

Project Staffing Implications:

Major Contract Administration, Major Project Management, and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		$355
2017		
2018		
2019		
2020		
Project Total		**$355**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 12-07**

Categorization: **Project**

Name of Project: **Umatac-Merizo STP Replacement**

Reference Documents:

a) Umatac-Merizo Wastewater System Evaluation Report, December 2013

Project Description:

Construction of new wastewater treatment facilities that will meet secondary treatment limits. The new facilities will incorporate provisions for redundancy to improve reliability and facilitate operations and maintenance activities at the existing facility.

Project Justification:

Existing facilities lack redundancy and reliability, are difficult to operate, and require significant repair.

Financing Options & Grants:

The source of funding for this project will be the 2015 Bond and 2018 Bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Program Management 23and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Planning	$943
2017		$7,000
2018	Design/Construction	$9,000
2019		
2020		
Project Total		**$16,943**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 12-09**

Categorization: **Program / Equipment**

Name of Project: **Wastewater Facility Back Up Power**

Reference Documents:

a) Work Plan USEPA Region IX – R9 Tracking #11-277 "Water and Wastewater System Improvements

Project Description:

This project will assess back up power needs at critical sewer pump stations and develop criteria for implementation of back-up power installation. This project is also intended to install necessary equipment as called out in the assessment.

Project Justification:

Sewer pump station are a critical facility that requires continued operations during power outages to ensure there are no wastewater overflows at sewer manholes or the sewer pump station itself. Compete avoidance of overflows is a high priority of GWA.

Financing Options & Grants:

The source of funding for this project will be the SRF funds.

Project Staffing Implications:

Major Contract Administration, Major Project Management, and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		$220
2017		
2018		
2019		
2020		
Project Total		**$220**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP WW 17-01**

Categorization: **Project**

Name of Project: **Wastewater Sewer System Expansion**

Reference Documents:

Project Description:
Construction of sewer system expansions to accommodate new sewer connections and avoid/reduce use of septic tank/leaching field systems.

Project Justification:
Sanitary sewer systems are necessary to protect the quality of the island's drinking water resources from septic tank/leaching field systems, particularly over the Northern Guam Lens, which provides most of Guam's drinking water.

Financing Options & Grants:
The main source of funding for this project will be SDC funds

Project Staffing Implications:
Major Contract Administration, Major Project Management, Program Management, Major Construction Management, Major GIS Support, and Modeling Support are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		
2017		$1,683
2018		
2019		
2020		
Project Total		**$1,683**

Project Sheet Electrical

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP EE 05-02**

Name of Project: **SCADA Pilot Project**

Reference Documents:

Project Description:
This pilot project will procure communication services and install field instrumentation and a Human-Machine Interface (HMI) to support supervisory control and data acquisition (SCADA) of selected water and wastewater facilities. For this pilot GWA will only make functional real time data acquisition for status monitoring and alarming.

Project Justification:
This pilot project is to identify and evaluate proposed solutions and gather information that will be used to develop design standards for the water and wastewater SCADA system.

Financing Options & Grants:
The source of funding for this project will be the 2010 Bond.

Project Staffing Implications:
Contract Administration, Project Management, Construction Inspection and Technical Support after completion are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET(x1000)
2016		$8
2017		
2018		
2019		
2020		
Project Total		**$8**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP EE 09-01**

Name of Project: **Wastewater Pumping Station Electrical Upgrade**

Reference Documents:

a) MASTER PLAN, VOLUME 3, TABLE 9-43

Project Description:

This project will upgrade and standardize the electrical control system at the wastewater pumping stations as recommended in the GWA Master Plan Report. An initial assessment using a standard checklist will be conducted. Project scope will include the reconnection of the electrical service to a grounded WYE system involve replacement of the electrical meter and service conductors. Transient voltage surge suppression will also be installed at the station main service. The level control system will be standardized with a level transducer to provide level indication and communication with the SCADA unit. The back-up will be a float located out of the wet well. Also included are dry well level sensor alarms that are connected to SCADA, where applicable. The motor starters will be replaced with electronic soft start type to reduce mechanical wear.

Project Justification:

It is necessary to improve the electrical reliability at each wastewater pump station and minimize overflows by implementing the recommendations of the GWA Master Plan. Stations that are critical to operations are priority and will be completed first.

Financing Options & Grants:

The source of funding for this project will be the 2013 bond and 2015 Bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Construction Management, and Technical Support after completion are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		$620
2017		
2018		
2019		
2020		
Project Total		**$620**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP EE 09-02**

Name of Project: **Electrical Upgrade - Water Wells**

Reference Documents:

a) MASTER PLAN, VOLUME 2, TABLE 9-25

Project Description:

This project will upgrade the electrical system at each of the water wells as recommended in the Electrical Assessment of the GWA Master Plan. First, a standard electrical checklist and guideline will be developed followed by an assessment of the electrical system at each station. Goals are to change the transformer secondary connection and surge suppression, replace the service conductors, correct the voltage unbalance, prevent water conductor entry, replace the meter socket, install transient voltage surge suppression, install electronic motor protection, install electronic motor starter, install power factor correction equipment, integrate voltage unbalance relays in the auto transfer switch control system, interlock the chlorination controls with the well controls, and interlock with well flush controls.

Project Justification:

This project will improve the electrical reliability at each of the water pumping stations by implementing the recommendations of the GWA Master Plan. Stations that are critical to operations and require high maintenance are priority and will be completed first.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond and 2015 Bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Construction Management, and Technical Support after completion are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Construction	
2017	Construction	$150
2018	Construction	
2019		
2020		
Project Total		**$150**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP EE 09-03**

Name of Project: **Electrical Upgrade - Water Booster Pump Stations**

Reference Documents:

a) MASTER PLAN, VOLUME 2, TABLE 9-22

Project Description:

This project is primarily for the electrical upgrade at the Pago Bay, Brigade, and Windward Hills water booster stations by replacing the existing motors with premium efficiency motors, improve the system grounding, install transient voltage surge suppression equipment (TVSS), replace the motor control center, replace instrumentation controls, and add power factor correction. This project includes a detailed engineering assessment and preparation of design engineering plans. The improvement work noted above is also applicable to other booster pump stations that operations and engineering determine are in needs of improvements.

Project Justification:

The original distribution boards and motor controls have reached their useful lives, have signs of corrosion, and are missing parts. Improvements in motor efficiency and control devices reduce energy consumption costs. The voltage and transient surge suppressions reduce voltage surges within the facility while power factor correction help improve voltage stability.

Financing Options & Grants:

The source of funding for this project will be the 2013 bond and 2015 Bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Construction Management, and Technical Support after completion are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Construction	$325
2017		
2018		
2019		
2020		
Project Total		**$325**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP EE 09-04**

Name of Project: **Electrical Upgrade -Water Booster Pump Stations**

Reference Documents:

a) MASTER PLAN, VOLUME 2, TABLE 9-23

Project Description:

This project is for the electrical upgrade at the water booster stations by replacing the existing motors with premium efficiency motors, improve the system grounding, installation of transient voltage surge suppression equipment (TVSS), replace the motor control center and main distribution board, replace the instrumentation controls, and add power factor correction, where applicable. Included is a detailed engineering assessment and preparation of design engineering plans and specifications.

Project Justification:

The original distribution board and motor controls have reached their useful lives, have signs of corrosion, and are missing parts. Improvements in motor efficiency reduce energy costs. The application of transient surge suppressions and power factor capacitors reduce voltage surges and improve stability.

Financing Options & Grants:

The source of funding for this project will be the 2013 bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Construction Management, and Technical Support after completion are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Planning/Design/Construction	$349
2017		
2018		
2019		
2020		
Project Total		**$349**

GWA Capital Improvement Plan
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Project Number: **CIP EE 09-05**

Name of Project: **Electrical Upgrade - Other Water Booster Pump Stations**

Reference Documents:

a) MASTER PLAN, VOLUME 2, TABLE 9-24

Project Description:

This project is for the electrical upgrade at the other water booster stations such as Yigo Elevated Tank, Pale Kieran, etc. Project scope includes: replacing the existing motors with premium efficiency motors, improve system grounding, install transient voltage surge suppression equipment (TVSS), replace the motor control center and main distribution board, replace instrumentation controls, and add power factor correction, where applicable.

Project Justification:

Several stations' original distribution board and motor controls have reached their useful life, have signs of corrosion, and are missing parts. Improvements in motor efficiency reduce energy costs. The voltage and transient surge suppressions and power factor correction also reduce voltage surges and improve voltage stability.

Financing Options & Grants:

The source of funding for this project will be the 2013 bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management, Construction Management and Technical Support after completion are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Planning/Design/Construction	$189
2017		
2018		
2019		
2020		
Project Total		**$189**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP EE 09-07**

Name of Project: **SCADA Improvements – Phase 2**

Reference Documents:

a) MASTER PLAN, VOLUME 3, TABLE 9-45

Project Description:

In Phase 2 of this project, the critical water and wastewater pumping stations are monitored by activating and updating the existing Motorola SCADA system. In this phase of the project, the balance of the pumping stations and the treatment facilities are updated and incorporated into the GWA SCADA System. The treatment facility alarms would be identified and activated to a digital telephone text messaging unit to call key operations personnel related to that specific area. Phase 2 will also continue any master planning efforts not completed in Phase 1.

Project Justification:

This phase is a continuation of this project to improve the efficiency and effective utilization of GWA personnel and performance of the water and wastewater pumping systems.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond.

Project Staffing Implications:

Contract Administration, Major Project Management Services, Construction Inspection and Major Technical Support after completion.

Results

Design work is ongoing however related work will be continued under EE 09-08.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		$43
2017		$500
2018		
2019		
2020		
Project Total		**$543**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP EE 09-08**

Name of Project: **SCADA Improvements – Phase 3**

Reference Documents:

a) MASTER PLAN, VOLUME 3, TABLE 9-46

Project Description:

In Phase 3 of this Project, improvements in real time data acquisition for status monitoring and process control is expanded at the treatment facilities through the incorporation of Programmable Logic Controllers (PLCs). The data is conveyed to the GWA Central as well as identified engineering and operations personnel for analysis and process optimization through the use of Virtual Private Networks (VPNs) or other available secured technology. Further improvements and updating of the pumping station SCADA monitoring would be expanded using digital communications (the Gov Guam system is scheduled to be updated during this period) and the radio units would require replacement.

Project Justification:

This phase is a continuation of this project to improve the efficiency and effective utilization of GWA personnel and performance of the water and wastewater pumping systems.

Financing Options & Grants:

The source of funding for this project will be the 2010 Bond, 2013 Bond and 2015 Bond.

Project Staffing Implications:

Contract Administration, Major Project Management Services, Construction Inspection and Major Technical Support after completion.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016		$1,203
2017		
2018		
2019		
2020		
Project Total		**$1,203**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP EE 09-09**

Name of Project: **SCADA Improvements – Phase 4**

Reference Documents:

a) MASTER PLAN, VOLUME 3, TABLE 9-47

Project Description:

In Phase 4 of this project, accounting information such as equipment and parts costs along with the condition data such as equipment operating time and preventive/predictive maintenance programs are to be incorporated into an asset management program. The SCADA system's role will be incorporated into the overall GWA asset management program and the SCADA equipment, hardware, and software will be updated.

Project Justification:

This phase is a continuation of this project to improve the efficiency and effective utilization of GWA personnel and performance of the water and wastewater pumping systems.

Financing Options & Grants:

The source of funding for this project will be the 2015 Bond.

Project Staffing Implications:

Contract Administration, Major Project Management Services, and Major Technical Support after completion.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Construction	$1,500
2017	Construction	$2,500
2018	Construction	$2,500
2019		
2020		
Project Total		**$6,500**

Project Sheet Miscellaneous

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP MC 05-01**

Name of Project: **Laboratory Modernization**

Reference Documents:

a) Criteria and specification for Design of the Renovation and Enlargement of the Dededo Laboratory, 4/12/2007.

Project Description:

The existing lab is about 2300 square feet and work under this project will enlarge the facility to allow for expanded testing capabilities as well as increased office/storage space. The renovation work to the lab will include increasing testing counter space and modernizing all equipment to maintain Guam EPA certification. The renovation work will also include any improvements to ensure the facilities ability to remain open during typhoon weather conditions.

Project Justification:

GWA laboratory tests the quality of the water throughout the water system which is then reported to GEPA and USEPA. The GWA laboratory plays I vital role in ensuring GWA meets the Clean water Act and a modern laboratory is required to do so.

Financing Options & Grants:

The source of funding for this project will be the 2013 Bond and 2015 Bond.

Project Staffing Implications:

Major Contract Administration, Major Project Management, and Major Construction Management are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Construction	
2017		
2018		
2019		
2020		
Project Total		**$0**

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP MC 05-02**

Name of Project: **Land Survey**

Reference Documents:
a) Public Law 22-47, 22-28, 22-18

Project Description:
This project will survey GWA property and property to be deeded to GWA and add these properties to GWA assets. A portion of work to be completed with the current contact for professional services as well as subsequent contracts to complete remaining work.

Project Justification:
GWA has been granted land from the Government of Guam for the purpose of locating water and wastewater system assets such as water storage tanks and water and wastewater treatment plants. The land was granted under the condition that GWA compete a legal boundary survey of the properties.

Financing Options & Grants:
The source of funding for this project will be the 2010 Bond, 2013 bond and 2015 Bond.

Project Staffing Implications:
Contract Administration, Project Management, Major GIS Support.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Research, Survey	$1,893
2017		
2018		
2019		
2020		
Project Total		**$1,893**

GWA Capital Improvement Plan
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Project Number: **CIP MC 09-01**

Name of Project: **General Plant Improvements**

Reference Documents:

Project Description:

These capital improvements project will provide GWA with general plant improvements that will enhance operations and maintenance capabilities throughout the utility. The criteria for a project and/or general plant improvement to be considered a capital and eligible for bond funding is the value is greater than $5,000 and has a life span greater than one year. This line item is general in nature to support Operations and Maintenance Program that meet funding criteria noted above. Work items to support O&M includes: replacing failing pipelines, pumps and refurbish PRV to improve the water system pressure zones. Work related to the replacement of failing pipes and pumps includes but is not limited to PRV, valves, vaults, line segment replacement and equipment such as pump rigs to remove, repair and replace pumps. The General Manager will be responsible to generate and update a list of eligible projects for General Plant Improvements. The "General Plant Improvements List" will be approved by the General Manager with concurrence by the Chief Engineer and Chief Financial Officer and submitted to the CCU by the General Manager in the Monthly Report. Additional projects that may be cover under this project sheet includes leak detection, leak repair, and the mapping and records related to these activities as well as contingency funding needs related to CIP projects.

This funding source can be used to complete any 2011 court order project relative to all capital improvements installed in water and wastewater system. Therefore it is also the intent of this CIP to cover two important aspects of planning, 1) hydraulic modeling and 2) system planning. Work under hydraulic modeling includes but not limited to hydraulic modeling training, planning tool software/hardware acquisition, and travel related to hydraulic modeling training. The system planning work will include, but not limited to, GIS mapping, asset inventory, asset management, asset management software, GIS software, GIS training, asset management training and asset condition assessment, updates to CIS and MWMS software and software and equipment GPS in vehicles.

Project Justification:

Capital improvements project are required to help maintain GWA level of service to its customers, thus the work described above will enhance operations and maintenance capabilities. The water and wastewater system for example consists of hundreds of miles of infrastructure, including facilities that are failing due to improper construction, earthquake damage, and/or material failures. Specifically for the water system GWA needs to change pressure zones to improve flow circulation and define pressure zones.

Financing Options & Grants:

The source of funding for this CIP line item will be the 2010, 2013 and 2015 bonds as well as Internally Funded CIP.

Project Staffing Implications:

Contract Administration, Project Management Services, and Construction Management Services are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Planning/Design/Construction	$1,057
2017	Planning/Design/Construction	$3,295
2018	Planning/Design/Construction	$1,000
2019	Planning/Design/Construction	$1,000
2020		
Project Total		**$6,352**

GWA Capital Improvement Plan
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Project Number: **CIP MC 15-01**

Name of Project: **Information Technology Integration Improvements**

Reference Documents:

Project Description:
The capital improvement projects describe herein will improve GWA's ability to obtain real time information for customer request, maintain important customer data history more effectively and improve productive of employees through implementation of emerging technology. The projects identified under this CIP include Mobile Work Force Management Solutions, imaging and document management solutions, Desktop computer Replacement Program, Voice Over Internet Protocol (VOIP) solutions, Network Communication and Security System Improvements, Enterprise Information System Upgrades, Customer Information System Implementation, and Virtual Server and Storage Solutions.

Project Justification:
Information technology integration improvement projects are required to help maintain GWA level of service to customers as well as improve operations functionality. Current technology systems within GWA are becoming obsolete due to the ever changing/improving computer system and programing platform in the industry that for GWA to meet and maintain expectations of the mission of GWA, the CIP initiative

Financing Options & Grants:
The source of funding for this project will be the 2015 bond and Internally Funded CIP.

Project Staffing Implications:
Contract Administration and Project Management Services are required.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Planning and procurement	$250
2017	Planning and procurement	$750
2018	Procurement	$200
2019	Procurement	$200
2020		
Project Total		**$1,400**

Project Sheet Department of Defense

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP DoD-01**

Name of Project: **NDWWTP Secondary Treatment Capacity 12MGD**

Reference Documents:

a. Record of Decision for the Final Supplement Environmental Impact Statement for Guam and Commonwealth of the Northern Marianas Island Military Relocation August 28, 2015.
b. CIP WW 05-03 and CIP WW 11-07
c. Evaluation of Northern District Wastewater Treatment Plant Capacity, December 2009

Project Description:

This project will improve/convert the NDWWTP to a facility that treats wastewater to secondary limits with a capacity of 12 MGD for GWA to meet USEPA NPDES discharge requirements. This project will utilize much of the existing plan structures and add major upgrades and modifications.

Project Justification:

This project is a requirement of the Record of Decision for the Final Supplement Environmental Impact Statement for Guam and Commonwealth of the Northern Marianas Island Military Relocation.

Financing Options & Grants:

The Department of Navy is responsible for funding this project

Project Staffing Implications:

A Program management office will be required for the project.

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Planning/Design/Construction	
2017		
2018		
2019		
2020		
Project Total		

GWA Capital Improvement Plan
Project Sheet FY 2016-2020

Project Number: **CIP DoD-02**

Name of Project: **Northern Systems Wastewater System**

Reference Documents:

a. Record of Decision for the Final Supplement Environmental Impact Statement for Guam and Commonwealth of the Northern Marianas Island Military Relocation August 28, 2015.
b. WW 05-02, WW 05-06, WW 09-0, WW 09-02, WW 09-04, WW 09-06, & W 09-09

Project Description:

This project will upgrade the sewer collection system in the Northern District Sewer Basin along Route 9 and Route 3.

Project Justification:

This project is a requirement of the Record of Decision for the Mariana Island Range Complex Final Environmental Impact Statement.

Financing Options & Grants:

The Department of Navy is responsible for funding this project

Project Staffing Implications:

A Program management office will be required for this project

Project Time Table/Budget:

FISCAL YEAR	ACTIVITY	BUDGET (x1000)
2016	Planning/Design/Construction	
2017		
2018		
2019		
2020		
Project Total		

Appendix A:
Operations Project Nomination Listing

The projects identified in this section are a result of planning efforts between engineering and operations. It is important to understand these nominated projects have the potential to fall under any of the CIP line items noted in the body of this document. The list noted below is also expected to have new project nomination over the coming years.

Water Operations Project Nomination List:

1. Northern Water System Large Valve Replacement
2. Central Water System Large Valve Replacement
3. Southern Water System Large Valve Replacement
4. Back Flow Prevention Program
5. New Water transmission line between Agat and Umatac
6. Ugum WTP Membrane Replacement
7. Ugum WTP Centrifudge/VFD Replacement Project
8. Island Wide Ground Water Monitoring Well Integration with GWA
9. Island Wide Water Distribution System "Looping" Improvements

Wastewater Operations Project Nomination List:

1. Hagatna WWTP Digester Improvements
2. Sludge Bind Protection Shelter – Hagatna and Northern District WWTP's
3. New Sewer line connection from Sothern HS to the New Agat Santa Rita WWTP
4. Inarajan WWTP Improvements related to Layon Leachete
5. Pago Socia WWTP Conversion to Pump Station
6. Source Control and Pre-treatment Program

Appendix B:
CCU Resolution

CONSOLIDATED
COMMISSION ON UTILITIES
Guam Power Authority • Guam Waterworks Authority
P.O.BOX 2977 • Agana,Guam 96932

RESOLUTION NO. 2016-65

AUTHORIZING THE MANAGEMENT OF THE GUAM POWER AUTHORITY TO PETITION THE PUBLIC UTILITIES COMMISSION TO INCREASE THE 3-YEAR CONTRACT EXPENDITURES UNDER GPA-029-14 FOR THE SUPPLY OF DIESEL FUEL OIL NO.2 FOR THE BASELOADS, COMBUSTION TURBINES, TENJO VISTA, MANENGGON AND TALOFOFO POWER PLANTS

WHEREAS, the three (3) year Contract under GPA-029-14 for the supply of Diesel Fuel Oil No.2 for the Baseloads, Combustion Turbines, Tenjo Vista, Manenggon and Talofofo power plants commenced in January 1, 2015 and will expire on December 31, 2017; and

WHEREAS, the award of the contract under Resolution 2014-37 is based on the estimated total supply quantities of 6M gallons per year at a total cost of approximately $15,900,000 per year or a 3-year total of 16M gallons at a total cost of $50,619,000.00 (Exhibit A- Schedule 1); and

WHEREAS, the explosion at the Cabras 3&4 Units in August 2015 and overhauls of the remaining power plants significantly increased the diesel consumption; and

WHEREAS, the revised diesel expenditures for the 3-year contract period is estimated to increase to approximately 70M gallons at a cost of close to $120M (Exhibit A- Schedule 2); and

WHEREAS, GPA is seeking the approval of the CCU to increase the total diesel expenditures to $120M to ensure uninterrupted supply for the 3-year contract period.

NOW THEREFORE, BE IT RESOLVED, by the Consolidated Commission on Utilities, subject to the review and approval of the Guam Public Utilities Commission, as follows:

1. The Guam Power Authority is hereby authorized to increase the diesel expenditures for the three-year contract to $120M.

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 22nd day November 2016.

Certified by:

JOSEPH T. DUENAS
CHAIRMAN

Attested by:

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 the meeting place thereof on November 22, 2016 at which meeting of all said members had due notice and at which at least s majority thereof were present, and

At said meeting said resolution was adopted by the following vote:

Ayes:	4
Nays:	0
Absent:	1
Abstain:	0

As of the date of this certification, said original resolution has not been amended, modified, or rescinded since the date of its adoption, and the same is now in full force and effect.

SO CERTIFIED this 22nd day of November, 2016.

J. GEORGE BAMBA
Secretary
Consolidated Commission on Utilities

EXHIBIT A: GPA-029-14 ESTIMATED EXPENDITURES

SCHEDULE 1: Original Estimates

RESOLUTION 2014-37	1st year (01/01/15 to 12/31/15)	2nd Year (01/01/16 to 12/31/16)	3rd year (01/01/17 to 12/31/17)	**3-Year Contract Period** (01/01/15-12/31/17)
Total Qty (Gallons)	5,300,000	5,300,000	5,300,000	**15,900,000**
Total Cost ($)	$16,873,000.00	$16,873,000.00	$16,873,000.00	**$50,619,000.00**
Remarks	Estimated	Estimated	Estimated	Estimated

SCHEDULE 2: Revised Estimates

RESOLUTION 2016-	1st year (01/01/15 to 12/31/15)	2nd Year (01/01/16 to 12/31/16)	3rd year (01/01/17 to 12/31/17)	**3-Year Contract Period (01/01/15 to 12/31/17)**
Jan-Sep	6,253,698	28,041,799	15,376,040	
Oct-Dec	9,133,263	5,125,347	5,125,347	
Total Qty (Gallons)	15,386,962	33,167,145	20,501,386	**69,055,494**
Jan-Sep	$12,068,804	$38,755,957	$32,232,328	
Oct-Dec	$15,464,740	$10,744,109	$10,744,109	
Total Cost ($)	$27,533,544	$49,500,066	$42,976,437	**$120,010,047**
REMARKS	Actual (Cabras 3&4 Explosion on 08/31/15)	Actual (Cabras 3&4 Offline & forced outages in remaining plants)	Estimated (Cabras 3&4 Offline & anticipated overhauls/outages in remaining plants)	Revised Estimated Diesel Expenses

SCHEDULE 3: SUMMARY

3-Year Contract Period	**Gallons**	**Total Cost**
Schedule 1 (Original Estimate)	**15,900,000**	**$ 50,619,000.00**
Schedule 2 (Revised Estimate)	**69,055,494**	**$ 120,010,046.93**
Variance	**53,155,494 334% Increase**	**$ 69,391,046.93 137% Increase**

Doc. No. 34GL-17-0815.*

CONSOLIDATED
COMMISSION ON UTILITIES
Guam Power Authority • Guam Waterworks Authority
P.O.BOX 2977 • Agana,Guam 96932

RESOLUTION NO. 2016-66

AUTHORIZING MANAGEMENT OF THE GUAM POWER AUTHORITY TO ACQUIRE HARMON PROPERTY FOR NEW GENERATION PLANTS

WHEREAS, the Guam Power Authority (GPA) has determined that the new 180 MW power plant is necessary to meet future power system needs, and to be able to meet USEPA emission Regulations; and

WHEREAS, the Guam Power Authority has determined that between 30-40 acres will be needed for the new power plant with space for future expansion and to meet physical security requirements for power systems which require substantial setbacks from adjacent roads; and

WHEREAS, various studies over the past years have determined that any expansion in the Cabras area would be very costly due to cleanup and demolition of existing plants, and would expose those plants to issues with potential tsunamis in the Cabras area, and USEPA §316(b) rules regarding water cooling for power plants; and

WHEREAS, the Guam Power Authority has determined the new power plant should be located in the Harmon area close to the Harmon sub-station and GWA waste water treatment plant; and

WHEREAS, siting of the new power plant next to the wastewater treatment plant provides for the use of wastewater effluent as a re-use water source for the new power plant.

WHEREAS, the Authority plans to use revenue funds, insurance proceeds or installment plan for the acquisition of property in the Harmon area; and

WHEREAS, the Public Utilities Commission has approved GPA's request to pursue up to 180 MW of power generation.

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 acquisition of property in Harmon close to the Harmon sub-station for the location of new generation is reasonable, prudent, and necessary for the reliable operation of the generation system.
2. The General Manager is authorized to procure 30-40 acres of property in Harmon for the location of the new power plant.

3. The General Manager is to obtain approval from the Consolidated Commission on Utilities for funding amounts before signing the final contract for purchase.

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 22nd day of November, 2016.

Certified by:

JOSEPH T. DUENAS
CHAIRMAN

Attested by:

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 the meeting place thereof on November 22, 2016, at which meeting of all said members had due notice and at which at least s majority thereof were present, and

At said meeting said resolution was adopted by the following vote:

Ayes: 4

Nays: 0

Absent: 1

Abstain: 0

As of the date of this certification, said original resolution has not been amended, modified, or rescinded since the date of its adoption, and the same is now in full force and effect.

SO CERTIFIED this 22nd day of November, 2016.

J. GEORGE BAMBA
Secretary
Consolidated Commission on Utilities

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority • Guam Waterworks Authority
P.O.BOX 2977 • Agana,Guam 96932

CONSOLIDATED COMMISSION ON UTILITIES
RESOLUTION NO. 2016-67

RESOLUTION RELATIVE TO THE AMENDMENT OF THE CLASSIFICATION STANDARD OF THE ASSISTANT GENERAL MANAGER, ADMINISTRATION POSITION

WHEREAS, the initial creation of the Assistant General Manager, Administration position was adopted and approved through CCU Resolution No. 2016-54 for the Guam Power Authority; and

WHEREAS, the General Manager of the Guam Power Authority (GPA) requests the Consolidated Commission on Utilities (CCU) to amend the classification standard of the Assistant General Manager, Administration position; and

WHEREAS, Public Law 28-112 and 4 GCA §6303 (d) authorizes the creation of positions in Autonomous Agencies and Public Corporations; and

WHEREAS, the amendment to add the Procurement division as a business unit under the purview of the Assistant General Manager, Administration position; and

WHEREAS, GPA Personnel Rules and Regulations Section 7.03 (c) as amended by Public Law 28-159 Section 3 (C) authorizes the CCU to amend, modify or add a position to the list of certified, technical and professional position; and

WHEREAS, the amendment will also align the job standard with GPA's FY2017 organizational realignment as approved by the CCU through Resolution No. 2016-053; and

NOW THEREFORE BE IT RESOLVED, the Commission approves the amendment of the Assistant General Manager, Administration position as follows:

1. The amendment of the Assistant General Manager, Administration position to include the Procurement division as a business unit under its purview is hereby approved.

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

DULY AND REGULARLY ADOPTED AND APPROVED this 22nd day of November, 2016.

Certified by:

JOSEPH T. DUENAS
Chairperson
Consolidated Commission on Utilities

Attested by:

J. GEORGE BAMBA
Secretary
Consolidated Commission on Utilities

SECRETARY'S CERTIFICATE

I, J. GEORGE BAMBA, Secretary for the Consolidated Commission on Utilities do hereby certify that the foregoing is a full, true, and correct copy of the resolution duly adopted at a regular meeting of the members of Guam's Consolidated Commission on Utilities, duly and legally held at the meeting place thereof on November 22, 2016 at which meeting of all said members had due notice and at which at least a majority thereof were present, and

At said meeting said resolution was adopted by the following vote:

Ayes: 4

Nays: 0

Absent: 1

Abstain: 0

As of the date of this certification, said original resolution has not been amended, modified, or rescinded since the date of its adoption, and the same is now in full force and effect.

SO CERTIFIED this 22nd day of November, 2016.

J. GEORGE BAMBA
Secretary
Consolidated Commission on Utilities

CONSOLIDATED COMMISSION ON UTILITIES

Guam Power Authority • Guam Waterworks Authority
P.O.BOX 2977 • Agana,Guam 96932

Resolution No. 2016-68

Relative to Authorizing Expenditure for Cabras 3&4 Plant Cleaning and Unit 3 Engine Cleaning

WHEREAS, the Cabras 3&4 Plant suffered an explosion on August 31, 2015, which caused the collapse of the building's roof and rendered both units inoperable; and

WHEREAS, the Cabras 3&4 Plant is currently being managed by Korea East WEST (KEWP) through a Performance Management Contract with GPA; and

WHEREAS, GPA has commissioned The Greenspan Co./Adjusters International to facilitate and represent GPA in its ongoing insurance claim; and

WHEREAS, GPA has received notice from its Insurers to proceed with preservation efforts; and

WHEREAS, KEWP as the PMC is authorized to procure required services for the preservation of Cabras Unit 3; and

WHEREAS, the Cabras 3&4 Plant suffered extensive smoke and soot contamination resulting from the fire; and

WHEREAS, KEWP has obtained the necessary price quotes for services and equipment required to decontaminate and clean the Cabras 3&4 Plant inclusive of Unit 3 Engine exterior cleaning to facilitate the preservation of Cabras Unit 3; and

WHEREAS, GPA has a fiduciary responsibility to preserve Cabras Unit 3 until the insurance claim is finally settled; and

WHEREAS, the Consolidated Commission on Utilities fully supports GPA's efforts to preserve Cabras Unit 3 equipment.

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. After careful review of the attached documents, the Consolidated Commission on Utilities finds the expenditure for the Cabras 3&4 Plant Cleaning and Engine 3 Exterior Cleaning to be reasonable, prudent and necessary for the use of Insurance Proceeds.

2. The General Manager of GPA is hereby authorized obligating authority of **$4,840,538.00** for the purpose of securing the required services for Cabras 3&4 Plant Cleaning and Engine 3 Exterior Cleaning.

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

DULY and REGULARLY ADOPTED AND APPROVED THIS 22nd DAY OF NOVEMBER, 2016.

Certified by:

JOSEPH T. DUENAS
CHAIRMAN

Date: 11/22/16

Attested By:

J. GEORGE BAMBA
SECRETARY

Date: 11/22/16

SECRETARY'S CERTIFICATE

I, J. George Bamba Secretary, Consolidated Commission on Utilities hereby certifies as follows:

The foregoing is a full, true and correct copy of a resolution duly adopted at a regular meeting of the members of Guam's Consolidated Commission on Utilities, duly and legally held at the meeting place thereof on November 22, 2016, at which meeting all of said members had due notice and at which at least a majority thereof were present;

At said meeting said resolution was adopted by the following vote:

Ayes: 4

Nays: 0

Absent: 1

Abstain: 0

Said original resolution has not been amended, modified, or rescinded since the date of its adoption, and the same is now in full force and effect.

SO CERTIFIED this 22nd day of November, 2016.

J. George Bamba
Secretary, Consolidated Commission on Utilities

CONSOLIDATED COMMISSION ON UTILITIES

Guam Power Authority • Guam Waterworks Authority
P.O.BOX 2977 • Agana,Guam 96932

Resolution No. 2016-69

Relative to Authorizing Expenditure for Cabras 4 Engine and Auxiliary Equipment Removal Inclusive of Generator Dismantling

WHEREAS, the Cabras 3&4 Plant suffered an explosion on August 31, 2015, which caused the collapse of the building's roof and rendered both units inoperable; and

WHEREAS, the Cabras 3&4 Plant is currently being managed by Korea East WEST (KEWP) through a Performance Management Contract with GPA; and

WHEREAS, GPA has commissioned The Greenspan Co./Adjusters International to facilitate and represent GPA in its ongoing insurance claim; and

WHEREAS, GPA has submitted a report to its Insurers that Cabras Unit 4 is a total loss and that the Insurers agree that Engine 4 is beyond economical repair; and

WHEREAS, dismantling and removal of Engine 4 is required to enable GPA to perform further analysis on the Engine foundation; and

WHEREAS, the Insurance Adjuster from McLarens has requested GPA to remove and dismantle Unit 4's generator for further examination of the extent of loss; and

WHEREAS, KEWP as the PMC is authorized to procure required services relative to the operations of the Cabras 3&4 Plant; and

WHEREAS, KEWP has obtained the necessary price quotes for the required services to dismantle and remove Engine 4 along with auxiliary equipment and to dismantle Generator 4; and

WHEREAS, the work required is to facilitate the evaluation and quantification of the property loss; and

WHEREAS, the Consolidated Commission on Utilities fully supports GPA's efforts in working with its Insurers to work through the processes to progress the Insurance claim.

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. After careful review of the attached documents, the Consolidated Commission on Utilities finds the expenditure for the Cabras 4 Engine Removal and Unit 4 Generator dismantling to be reasonable, prudent and necessary for the use of Insurance Proceeds.
2. The General Manager of GPA is hereby authorized obligating authority of **$5,996,435.00** to secure the required services for Cabras 4 Engine Removal and Unit 4 Generator dismantling.

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

DULY and REGULARLY ADOPTED AND APPROVED THIS 22nd DAY OF NOVEMBER, 2016.

Certified by:

JOSEPH T. DUENAS
CHAIRMAN

Date: 11/22/16

Attested By:

J. GEORGE BAMBA
SECRETARY

Date: 11/22/16

SECRETARY'S CERTIFICATE

I, J. George Bamba Secretary, Consolidated Commission on Utilities hereby certifies as follows:

The foregoing is a full, true and correct copy of a resolution duly adopted at a regular meeting of the members of Guam's Consolidated Commission on Utilities, duly and legally held at the meeting place thereof on November 22, 2016, at which meeting all of said members had due notice and at which at least a majority thereof were present;

At said meeting said resolution was adopted by the following vote:

Ayes: 4

Nays: 0

Absent: 1

Abstain: 0

Said original resolution has not been amended, modified, or rescinded since the date of its adoption, and the same is now in full force and effect.

SO CERTIFIED this 22nd day of November, 2016.

J. George Bamba
Secretary, Consolidated Commission on Utilities

CONSOLIDATED COMMISSION ON UTILITIES

Guam Power Authority • Guam Waterworks Authority
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Resolution No. 2016-70

Relative to Authorizing Expenditure for Architectural, Engineering and Construction Management Services For the Cabras 3&4 Temporary Roof Supplemental Work

WHEREAS, the Cabras 3&4 Plant suffered an explosion on August 31, 2015, which caused the collapse of the building's roof and rendered both units inoperable; and

WHEREAS, GPA has undertaken best efforts to make the building safe by demolishing the collapsed roof; and

WHEREAS, GPA is moving forward with the preservation of Cabras Unit 3; and

WHEREAS, supplemental architectural and engineering (A&E) services are required for the temporary roof, which will involve upgrading the building's structure and safety features to comply with the latest building codes and fire protection guidelines as well as construction administration services during construction of the project; and

WHEREAS, the Cabras 3&4 Plant is currently being managed by Korea East WEST (KEWP) through a Performance Management Contract (PMC) with GPA; and

WHEREAS, KEWP as the PMC, upon GPA's approval, is allowed to procure required services for the expeditious and efficient operation and maintenance of the plant; and

WHEREAS, KEWP has solicited and received a proposal from NC Macario & Associates, who was the original A&E designer for the Cabras 3&4 Plant; and

WHEREAS, GPA and KEWP have successfully negotiated with NC Macario & Associates for the required scope inclusive of Construction Support Services in the amount of $637,913.00.

WHEREAS, NC Macario & Associates is in a position to expedite the production of design plans for the Cabras 3&4 building's temporary roof as the original designer of the building as well as the designer for the building's roof demolition; and

WHEREAS, GPA proposes to use the Self-Insurance fund for the required work; and

WHEREAS, GPA is pursuing reimbursement of any eligible costs with Dongbu Insurance Ltd. and associated insurance underwriters, and GPA proposes to reimburse the Self-insurance fund with the insurance proceeds; and

WHEREAS, the Consolidated Commission on Utilities fully supports GPA's efforts in the preservation of Cabras Unit 3.

NOW, THEREFORE, BE IT RESOLVED, by the Consolidated Commission on Utilities subject to the review and approval, if required, of the Public Utilities Commission as follows:

1. After careful review of the attached documents, the Consolidated Commission on Utilities finds the expenditure for Cabras 3&4 Temporary Roof Supplemental Design and Construction Administration Support Services to be reasonable, prudent and necessary for the use of Self-Insurance fund.
2. The General Manager of GPA is hereby authorized obligating authority of **$637,913.00** for the purpose of securing the required services for the Cabras 3&4 Temporary Roof Supplemental Design and Construction Administration Support Services.

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

DULY and REGULARLY ADOPTED AND APPROVED THIS 22nd DAY OF NOVEMBER, 2016.

Certified by:

JOSEPH T. DUENAS
CHAIRMAN

Date: 11/22/16

Attested By:

J. GEORGE BAMBA
SECRETARY

Date: 11/22/16

SECRETARY'S CERTIFICATE

I, J. George Bamba Secretary, Consolidated Commission on Utilities hereby certifies as follows:

The foregoing is a full, true and correct copy of a resolution duly adopted at a regular meeting of the members of Guam's Consolidated Commission on Utilities, duly and legally held at the meeting place thereof on November 22, 2016, at which meeting all of said members had due notice and at which at least a majority thereof were present;

At said meeting said resolution was adopted by the following vote:

Ayes: 4

Nays: 0

Absent: 1

Abstain: 0

Said original resolution has not been amended, modified, or rescinded since the date of its adoption, and the same is now in full force and effect.

SO CERTIFIED this 22nd day of November, 2016.

J. George Bamba
Secretary, Consolidated Commission on Utilities

CONSOLIDATED
COMMISSION ON UTILITIES
Guam Power Authority • Guam Waterworks Authority
P.O.BOX 2977 • Agana,Guam 96932

RESOLUTION NO. 2016–71

AUTHORIZING MANAGEMENT OF THE GUAM POWER AUTHORITY TO EXTEND THE PERFORMANCE MANAGEMENT CONTRACT FOR THE CABRAS 3 POWER PLANT

WHEREAS, through resolution 2015-62B, the Authority and Korea East West Power, Ltd. (KEWP) entered into a 15-month Performance Management Contract for the preservation of Cabras Unit #3; and

WHEREAS, this Performance Management Contract (PMC) is scheduled to expire on December 31, 2016; and

WHEREAS, preservation efforts are ongoing and there is an urgent need to continue these works to prevent further degradation of Cabras Unit #3; and

WHEREAS, KEWP, the PMC for Cabras 3, can support GPA through this critical period by continuing to provide valuable expertise and support in areas such as Engineering Assessment, Technical Services, Program Management, and related tasks; and

WHEREAS, extending the contract time of the existing PMC contract with KEWP is reasonable to support the Authority with plant preservation and associated technical services; and

WHEREAS, the Authority requests for an extension of the contract from January 1, 2017 to March 31, 2017; and

WHEREAS, the Authority has agreed with KEWP on a reduced fixed management fee of $80,747.48 per month during the extension period for a 3-month cost of $242,242.44, and is estimating $139,931.00 in reimbursable Preservation Management Services for a total contract extension cost of $382,173.44; and

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

1. After careful review the Consolidated Commission on Utilities finds extending the current PMC Contract for Cabras 3&4 to be reasonable, prudent, and necessary for preservation of Cabras Unit 3.

2. The General Manager is authorized to extend the contract with KEWP from January 1, 2017 to March 31, 2017 for a fixed management fee of $242,242.44 and an estimated preservation management services cost of $139,931.00. The total cost of the contract extension is approved for $382,173.44.

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

DULY and REGULARLY ADOPTED AND APPROVED THIS 22nd DAY OF NOVEMBER, 2016.

Certified by:

JOSEPH T. DUENAS
CHAIRMAN

Date: 11/22/16

Attested By:

J. GEORGE BAMBA
SECRETARY

Date: 11/22/16

SECRETARY'S CERTIFICATE

I, J. George Bamba Secretary, Consolidated Commission on Utilities hereby certifies as follows:

The foregoing is a full, true and correct copy of a resolution duly adopted at a regular meeting of the members of Guam's Consolidated Commission on Utilities, duly and legally held at the meeting place thereof on November 22, 2016, at which meeting all of said members had due notice and at which at least a majority thereof were present;

At said meeting said resolution was adopted by the following vote:

Ayes: 4

Nays: 0

Absent: 1

Abstain: 0

Said original resolution has not been amended, modified, or rescinded since the date of its adoption, and the same is now in full force and effect.

SO CERTIFIED this 22nd day of November, 2016.

J. George Bamba
Secretary, Consolidated Commission on Utilities