



Regular Board Meeting
CCU Conference Room, Gloria B. Nelson Public Service Building
5:30 p.m., June 6, 2018

MINUTES

1. CALL TO ORDER

The Chairman called the CCU regular meeting of May 22, 2018 to order at 5:33 p.m. He said all five (5) Commissioners were present. Others in attendance include:

Commissioners:

Joseph T. Duenas	CCU Chairman
Francis Santos	CCU Vice Chairman
George Bamba	CCU Secretary
Judith P. Guthertz	CCU Treasurer
Simon A. Sanchez	CCU Member

Executive Mgmt.:

John Benavente	GM / GPA
Miguel Bordallo	GM / GWA
Melinda Mafnas	AGMO / GPA
John Cruz	AGMET / GPA
Tricee Limtiaco	AGMA / GPA
John Kim	CFO / GPA
Gilda Mafnas	CFO (A) / GPA
Graham Botha	Staff Attorney / GPA
Kelly Clark	Staff Attorney / GWA

Management & Staff:

Paul Kemp	AGM Compliance & Safety / GWA
Tom Cruz	Chief Engineer / GWA
Cora Montellano	Asst. CFO / GPA
Dave Fletcher	GWA
Art Perez	Communications / GPA
Patti Diego	Communications / GPA
Vincent Pangelinan	GWA
Frankie Meno	GWA
Heidi Ballendorf	Communications / GWA
Rick Peredo	IT / GPA
Ann Borja	Mgmt. Analyst / GWA Ex. Office
Lou Sablan	Board Secretary / CCU

Guest:

John S. Aguon	Adztech-GCA
Angela Perez	AM Insurance
Annmarie Muna	AM Insurance
Charlene Calvo	IPE
Dan Del Priore	GFT
Fred Horecky	PUC

2. APPROVAL OF MINUTES

The Minutes of May 22, 2018 was presented for approval.

Comm. Bamba motioned to approve the Minutes subject to verification and written correction; second by Comm. Guthertz. There was no further discussion or objection and the motion passed.

3. COMMUNICATIONS

3.1 Public Comments - none

4. NEW BUSINESS

4.1 GWA

4.1.1 GM Report

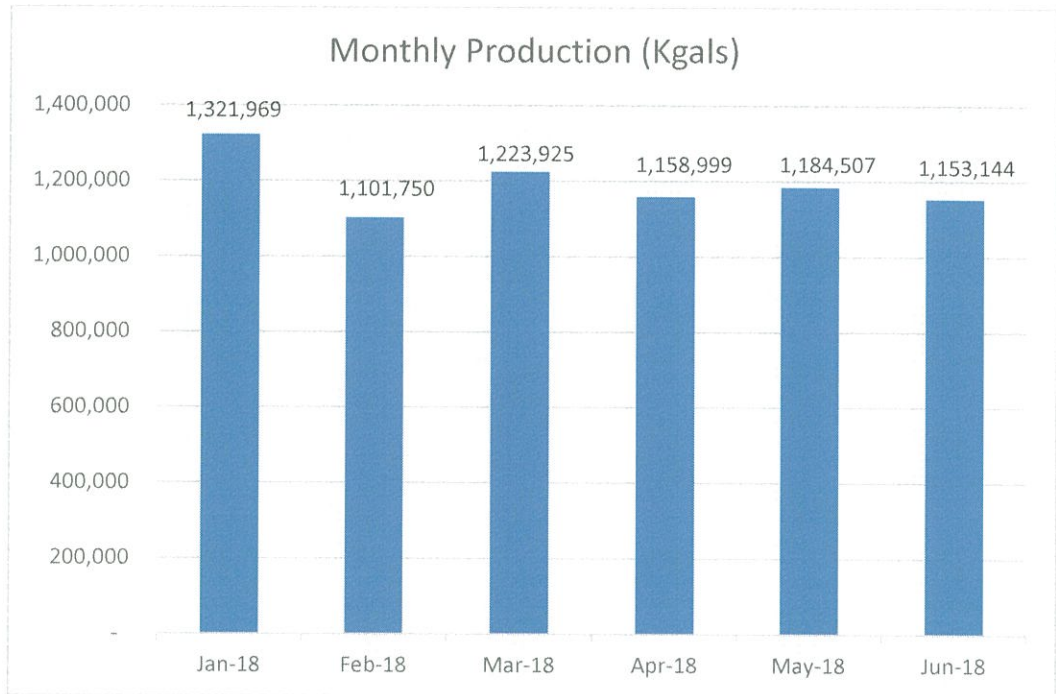
There was nothing new to report from the report given at the GWA work session. Some highlights are noted below. A full set of the GM Report is available upon request:

Operations Update

Production

Monthly Production Summary - May 2018			
Deep Wells			35.2 MGD
Active wells =	95	of 120	
Avg days in operation =	31.00	days	
Total Production =	1,089,902	Kgals	
Springs			0.00 MGD
Avg days in operation =	0	days	*placed on standby
Total Production =	0	Kgals	
Ugum Surface Water Plant			2.0 MGD
Avg days in operation =	31	days	
Total Production =	61,545	Kgals	
Tumon Maui Well			1.07 MGD
Avg days in operation =	31	days	
Total Production =	33,060	Kgals	
			38.2 MGD
		1,184,507	Kgals

Monthly Production Summary - June 2018			
Deep Wells			35.4 MGD
Active wells =	94	of 120	
Avg days in operation =	30.00	days	
Total Production =	1,062,758	Kgals	
Springs			0.00 MGD
Avg days in operation =	0	days	*placed on standby
Total Production =	0	Kgals	
Ugum Surface Water Plant			1.9 MGD
Avg days in operation =	30	days	
Total Production =	58,373	Kgals	
Tumon Maui Well			1.03 MGD
Avg days in operation =	30	days	
Total Production =	32,013	Kgals	
			1,153,144 Kgals
			38.4 MGD



Distribution

Monthly Distribution Summary - May 2018					
Water Booster Pump Stations					
	District	No. of Stations	Total Pumps	Pumps Operating	% Operational
	Northern	11	21	20	95.2%
	Central	7	15	13	86.7%
	Southern	7	15	14	93.3%
		25	51	47	92.2%

Monthly Distribution Summary - June 2018					
Water Booster Pump Stations					
	District	No. of Stations	Total Pumps	Pumps Operating	% Operational
	Northern	11	21	20	95.2%
	Central	7	15	13	86.7%
	Southern	7	15	15	100.0%
		25	51	48	94.1%

Wastewater Collections

Monthly Collections Summary - May 2018					
Wastewater Pump Stations					
	District	No. of Stations	Total Pumps	Pumps Operating	% Operational
	Northern	22	52	45	86.5%
	Central	29	63	54	85.7%
	Southern	27	54	43	79.6%
		78	169	142	84.0%

Monthly Collections Summary - June 2018

Wastewater Pump Stations

	District	No. of Stations	Total Pumps	Pumps Operating	% Operational
	Northern	22	52	44	84.6%
	Central	29	63	45	71.4%
	Southern	27	54	41	75.9%
		78	169	130	76.9%

Wastewater Treatment

Monthly Wastewater Treatment Summary - May 2018

WW Treatment Plants - Flows

	Facility	Avg. Daily Flows	Sludge (lbs)	Sludge Disp. (\$)
	Hagatna	4.93	583,080	\$ 52,477
	Northern	5.32	786,700	\$ 70,803
	Agat	0.63		
	Baza	0.25		
	Umatac	0.30		
	Inarajan	0.07		
		11.50	1,369,780	\$ 123,280

Monthly Wastewater Treatment Summary - June 2018

WW Treatment Plants - Flows

	Facility	Avg. Daily Flows	Sludge (lbs)	Sludge Disp. (\$)
	Hagatna	4.67	717,120	\$ 64,541
	Northern	5.78	836,600	\$ 75,294
	Agat	0.86		
	Baza	0.25		
	Umatac	0.30		
	Inarajan	0.06		
		11.92	1,553,720	\$ 139,835

OPERATIONAL ISSUES

Production & Distribution

- Leak repair
 - Crews maintaining performance - As of June 30th, there were less than 40 pending repairs
 - 88% reduction from 2017-2018 Maximum of 283 pending
 - 80% reduction from 2018 Maximum of 179 pending
 - IFB for advanced remote leak detection services should be advertised next month
- WSCC –
 - SCADA FAT completed
 - Coordination of WSCC – PSCC layout on-going
 - SCADA equipment and installation requirements on-going
- Pump and motor inventories okay; additional orders for recent replacements are being made
- GWA Crane Repair –new cable installation pending; load testing completed.

Wastewater Collection & Treatment

- CCTV & Collections System:
 - Planning department assisting CCTV Crews to revise completed reports to meet appropriate industry standards
 - SSES and CCTV-based repairs to collection lines and SMHs are being conducted by Ops personnel
- Pump stations
- Facility maintenance efforts have been completed
- Minimum pump and motor inventory levels being established (similar to effort with deep-wells)
- Critical spares and replacements procurement is on-going

Treatment Plants

- Hagatna WWTP
 - Effluent pumps back up
 - Centrifuges: one operational, repairs to 2nd are almost complete.
- Northern WWTP
 - Both centrifuges back in operation
- Agat-Santa Rita WWTP
 - Solids process commissioning (GBTs, Centrifuges) to be completed in the next 2 weeks
 - With that, critical process facilities all operating and substantially complete
- U-M WWTP
 - Work on-going at the site
 - Significant delays have occurred because of USF&W / EPA permitting issues
- Baza Gardens
 - Work on-going for all 3 phases
 - Anticipated completion is now Sep 30th
 - Delay letter has been sent to USEP

Marbo (Andy-South) Wells – Status

- Involuntary reversion appears imminent; GWA Counsel transmitted draft easement documents to GSA for consideration with DoD
- No updates - Waiting on response from GSA

One Guam Update

- Santa Rosa Tank:
 - GWA and DOD are finalizing the design of the Intertie. All the property maps were completed and submitted to DOD.
 - Once the maps are completed, the letter to General Cox will be finalized for the temporary easement.
 - The After-Action Report format is being reviewed.
 - The Standard Operation Procedure (SOP) and MOU are being reviewed by DOD.
- Agat-Santa Rita WWTP
 - Compensation for the Agat-Santa Rita easement is still under discussion. Waiting on Navy Real Estate
- Date Sharing MOU has been drafted – under review and comment
 - This MOU will outline the standards for GIS, hydraulic and other data to be shared between DOD and GWA.

OEA Grant Summary

- NDWWTP Upgrades
 - 60% design submittal scheduled for Sep 24th.
 - Sitework bid package to be issued Sep 12th
 - Vertical bid package planned for issuance Mar 2019
- Outfall Diffuser:
 - Re-bid package under review by GWA
 - To be advertised by end of July
 - Bids expected in September
- Sewer Line Interceptor Design-Build
 - Contract Award / NTP pending insurance requirements
 - Design and prep work is set to start
 - Construction start expected in January
- NGLA Observation wells – Design work completed
 - Bid package drawings and specs under review by GWA
 - Permitting issues being resolved and permits being obtained by PM/CM
 - Bid package to be issued once permits approved – expected in Mar 2019

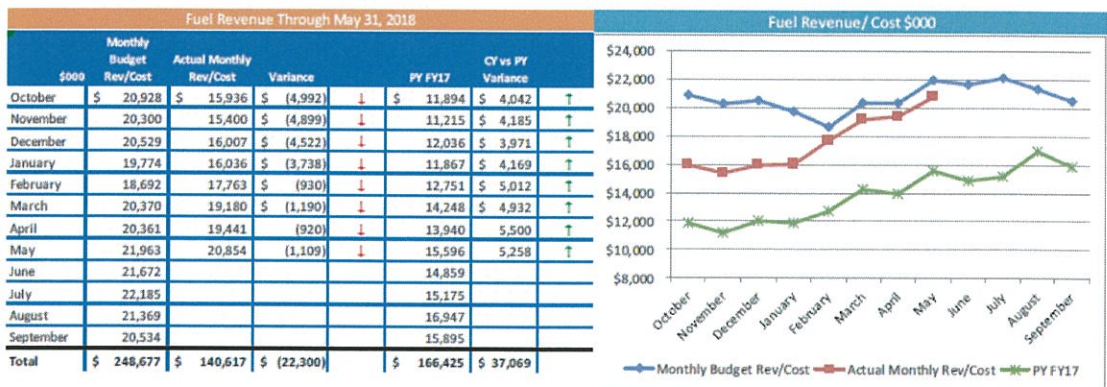
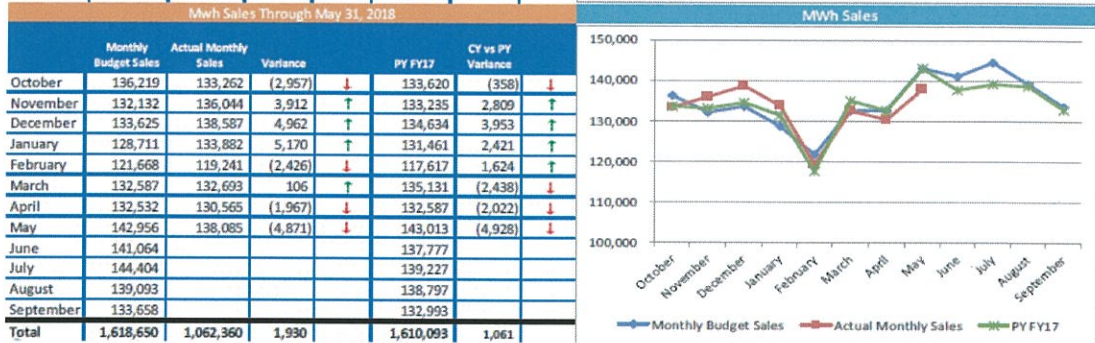
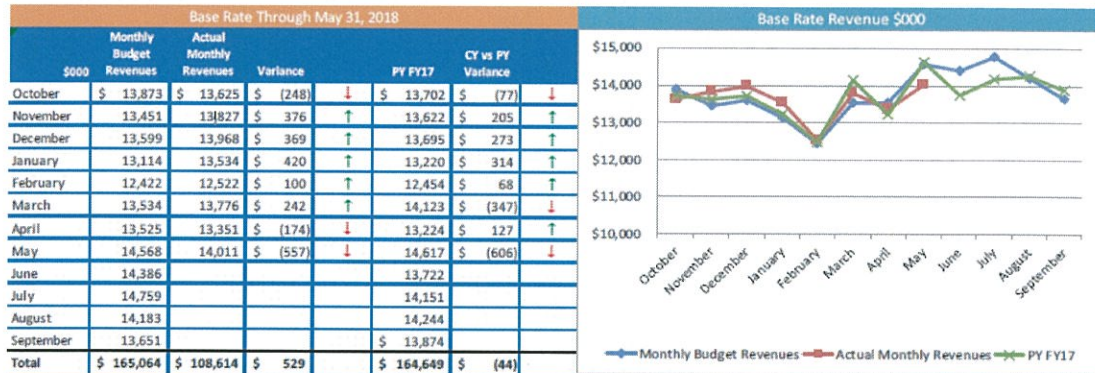
NRW – Update

- Water Loss Control Program activities are on-going
 - Latest water audit results reviewed by Technical Consultant under EPA grant. Scope

- modifications being proposed for Consultant due to GWA's progress on refining audit results
- Production meter replacement program is under design for 65 well sites. Portable flow meter is being procured to calibrate existing meters.
- District Metering Areas are currently being developed for pilot project. Locations have been identified. Grant application was submitted for this pilot project
- DOI Grant application has been approved for training and equipment.

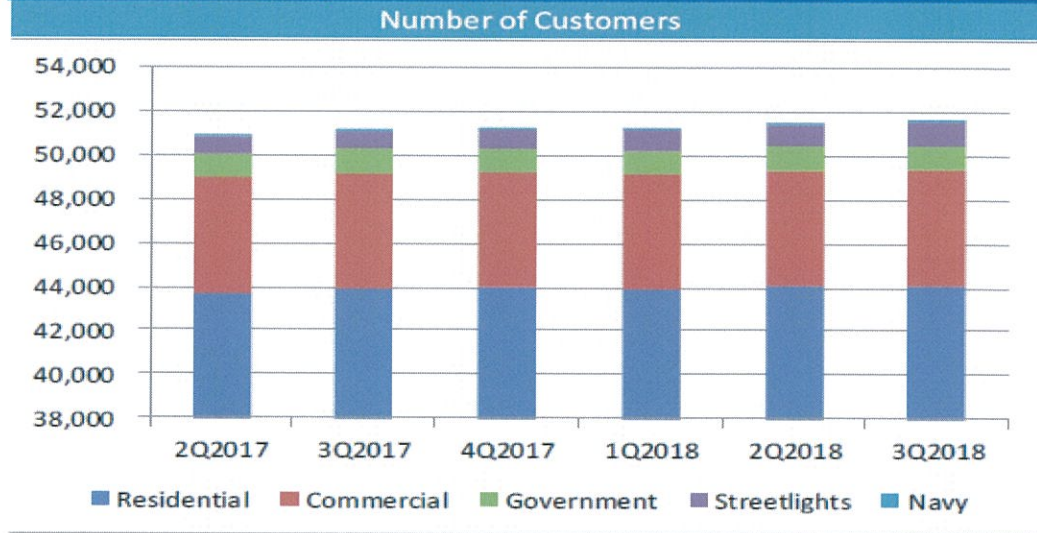
4.1.2 Financials

There was nothing new to add to financials as previously reported at the GPA Work Session. Some highlights are noted here. A full copy of the report is available upon request.

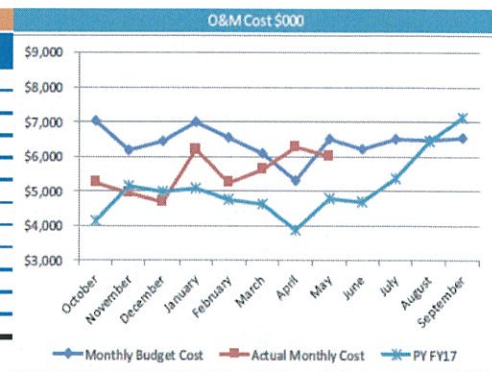


- Under recovery of LEAC - \$10.6 million

Number of Customers Through May 31, 2018						
	2Q2017	3Q2017	4Q2017	1Q2018	2Q2018	3Q2018
Residential	43,718	43,902	43,991	43,898	44,065	44,086
Commercial	5,236	5,252	5,226	5,231	5,262	5,281
Government	1,077	1,071	1,073	1,076	1,086	1,088
Streetlights	800	824	823	908	1,005	1,059
Navy	1	1	1	1	1	1
	50,832	51,050	51,114	51,114	51,419	51,515



O&M Cost Through May 31, 2018					
	Monthly Budget Cost \$000	Actual Monthly Cost	Variance	PY FY17	CY vs PY Variance
October	\$ 7,040	5,239	1,801	↑	4,135 (1,103) ↓
November	6,182	4,941	1,240	↑	5,158 217 ↑
December	6,428	4,694	1,735	↑	4,966 273 ↑
January	7,001	6,204	797	↑	5,092 (1,112) ↓
February	6,522	5,252	1,270	↑	4,748 (504) ↓
March	6,091	5,638	453	↑	4,612 (1,026) ↓
April	5,320	6,269	(949)	↓	3,892 (2,378) ↓
May	6,495	6,005	491	↑	4,772 (1,233) ↓
June	6,221				4,702
July	6,508				5,385
August	6,462				6,445
September	6,526				7,138
Total	\$ 76,796	\$ 44,242	\$ 6,838		\$ 61,045 (\$ 6,866)



- DSC greater than target of 1.75

	2013	2014	2015	2016	2017	YTD May 2018
Debt service coverage (DSC) calculation-indent						
Senior lien coverage	3.36	3.16	3.62	3.28	2.65	2.68
Aggregate debt service coverage	1.88	1.98	2.62	3.28	2.65	2.68
Debt service coverage (DSC) calculation-IPP as O&M						
Senior lien coverage	2.16	2.25	2.56	2.45	1.79	1.80
Aggregate debt service coverage	1.21	1.41	1.85	2.45	1.79	1.80

4.1.3 Resolution No. 34-FY2018/GPA Resolution No. 2018-13 Change Order for the GPWA SCADA System Contract to Include the Ugum Surface Water Treatment Plant SCADA integration Upgrade

If approved, this resolution will allow the upgrade / integration of the Ugum SWTP to the new GPWA SCADA System. The upgrades need to be performed first to integrate the Ugum SWTP SCADA system to the new GPWA SCADA System. The upgrades include major replacements and improvements on the Main Programmable Logic Controller, SCADA Server, SCADA client workstations, Profibus cabling and integration of the remote raw water pump station to the plant, software upgrades and motor control drives.

The upgrades shall correct the following issues, which does not include all issues described in the Siemens assessment report:

- The Ugum SCADA System consists of a SCADA Server with 2 client workstations but only the SCADA Server is operational. The SCADA Server is also running on Windows Server 2003 which is obsolete and no longer supported by Microsoft. Data trending is not archived properly resulting in loss of data. The Raw Water Pump Station, where the treatment process begins, is not visible in the control system. The Main PLC consists of a Read Access Memory (RAM) that will lose the program and all stored information in event of a momentary power loss and failure of the backup batteries which can cause the plant to shut down. The backwash for Cell #1 is not working properly; the cause has not been found.
- The Ugum SWTP is the major water source to the villages of Talofof, Malojloj, Inarajan, Merizo and Umatac. The change order is necessary and urgent to ensure continual operation of the plant to deliver reliable water service to these areas. SCADA integration is necessary to allow the operations of Ugum SWTP to be visible to GWA Systems Control Center and key Water personnel to better coordinate and manage the water operations. Additionally, the change order is necessary to address the Ugum SWTP's cyber security vulnerabilities that have been identified in the Ernest and Young's vulnerability and cyber security assessment.

The total amount of the change order proposal is Six Hundred Eighty-Seven Thousand Five Hundred Six Dollars and Twenty-Five Cents (\$687,506.25). The funding will come from 2016 CIP funds. It will take about 126 calendar days to complete the project.

Comm. Bamba motioned to approve GWA Resolution 34-FY2018 / GPA Resolution 2018-13 second by Comm. Santos. There was no further discussion or objection and the motion passed.

4.1.4 Resolution No. 35-FY2018 MOU for the Renewal of the GWA / GFT Collective Bargaining Agreement

The objective is to renew the effectivity of the expiring Collective Bargaining Agreement between Guam Waterworks Authority (GWA) and its employees (represented by Guam Federation of Teachers Union or GFTU), in compliance to Guam's laws. Effective date is upon the approval of the Consolidated Commission on Utilities and signature by the General Manager.

In discussion it was mentioned this process is an annual review - GFT reviews and renews every year. Sixty-three (63) GWA employees are members of this union

Comm. Guthertz motioned to approve Resolution 35-FY2018 second by Comm. Bamba. There was no further discussion or objection and the motion passed.

4.1.5 Resolution No. 36-FY2018 Design Services for the Pressure Zone Realignment and Tank Repair/Replacement Contract

The design for the Pressure Zone Realignment and Tank Repair/Replacement project is based on work required to accomplish zone realignment and system improvements in the draft 2017 Water Resource Master Plan. Twenty (20) firms RFP picked up and five (5) firms submitted. GHD was recommended for the award.

The key elements of this project are divided into several tasks:

1. Pressure zone realignment
2. Zone metering
3. Hydraulic modeling
4. Tank repair/replacement/modification and site upgrades
5. Water audit and trial district metering areas
6. Limited construction management services for pressure zone construction work

This project is necessary in order for GWA to have a properly functioning water system, which includes proper pressure zoning, metering, working facilities (tanks, bps, and all other critical facilities).

The project encompasses the entire island. The pressure zone areas (22) include the following:

1	Yigo North	12	Harmon Industrial
2	Yigo South	13	Tumon/Tamuning/Hagatna North
3	Astumbo	14	Tumon/Tamuning/Hagatna Central
4	Route 15	15	Tiyan
5	Barrigada	16	Mangilao
6	Barrigada Subzone	17	Ordot/Sinajana
7	Hyundai	18	Pago Bay
8	Hyundai Subzone	19	Santa Ana Lower
9	Mangilao North	20	Santa Ana Upper
10	Mangilao Central	21	Chalan Palaun
11	Kaiser	22	Santa Rita

The tanks (10) include the following:

1	Umatac Subdivision	6	Agat No. 1
2	Windward Hills	7	Malojloj
3	Umatac No. 1	8	Upper Nimitz
4	Kaiser	9	Lower Nimitz
5	Pigua	10	Agat No. 2

The fee proposal from the A/E is for Two Million Five Hundred Thirty-Nine Thousand Nine Hundred Ninety-One Dollars (\$2,539,991.00). With a ten percent (10%) contingency in the amount of Two Hundred Fifty-Three Thousand Nine Hundred Ninety-Nine Dollars and Ten Cents (\$253,999.10) included, the total authorized funding requested is Two Million Seven Hundred Ninety-Three Thousand Nine Hundred Ninety Dollars and Ten Cents (\$2,793,990.10). The funding source is multi-faceted: PW 09-04: Pressure Zone Realignment/Development 2005 Improvements, PW 09-10: Water Reservoir Internal/External Corrosion Rehabilitation Program, PW 09-11: Water System Reservoirs 2005 Improvements and PW 12-01: Water Audit Program and Water Loss Control Plan

GWA expects to complete all design within 18 months; however, project duration may extend depending on property issues or acquisition. The A/E is aware that the project may extend.

Comm. Bamba motioned to approve Resolution 36-FY2018 second by Comm. Guthertz, There was no further discussion or objection and the motion passed.

4.1.6 Resolution No. 37-FY2018 Approval of Expenditures for Security Services Contract in Excess of the General Manager’s Authority

There is an ongoing need to maintain the existing security services at several GWA facilities including the GWA Upper Tumon Facility and the main building and inside the customer service area, the laboratory, customer parking lot, and warehouse and FMES areas.

The service will cost approximately Two Hundred Thirty Thousand Dollars (\$230,000.00) per year based on previous expenditures and will be funded by revenue funds. The contract extends to the end of FY 2018 and a new procurement will be initiated and a contract will be in place prior to the expiration.

Comm. Bamba motioned to approve Resolution 37-FY2018 second by Comm. Guthertz. There was no further discussion or objection and the motion passed.

ACTION: GWA Master Plan - the Chairman asked GM Bordallo to give status update on public outreach to the CCU by email and to schedule Agat village on June 26

4.2 GPA

4.2.1 GM Report

4.2.1.1 Update

GM Benavente gave his usual GM update. Below are some highlights; a copy the entire report is available upon request.

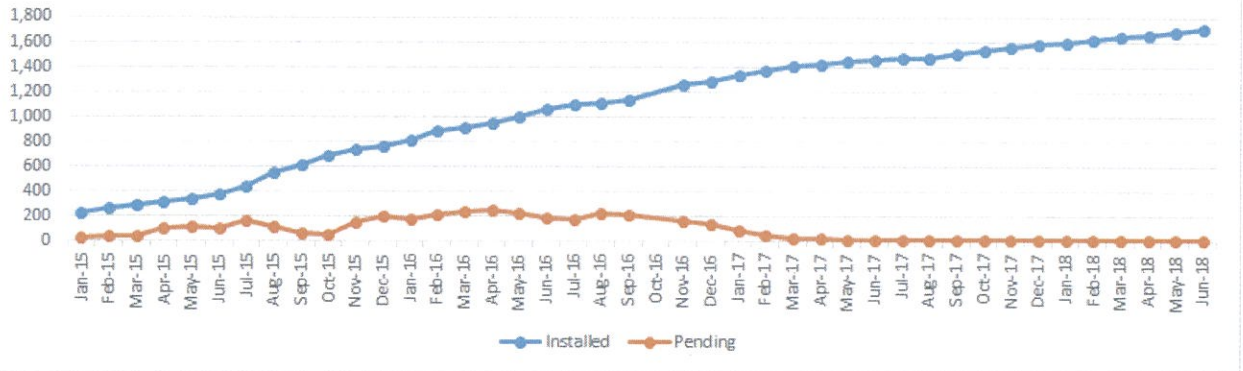
The following summarizes the expected generation capacity projection for July 2018. All base load units are expected to be in operation for the month. The Cabras steam units are currently limited to 50 MW each to minimize the potential for boiler tube leaks which is a common occurrence for them.

July 2018 Projected Capacity: 360 MW
July 2018 Projected Demand 250 MW
Projected Reserve Margin 110 MW

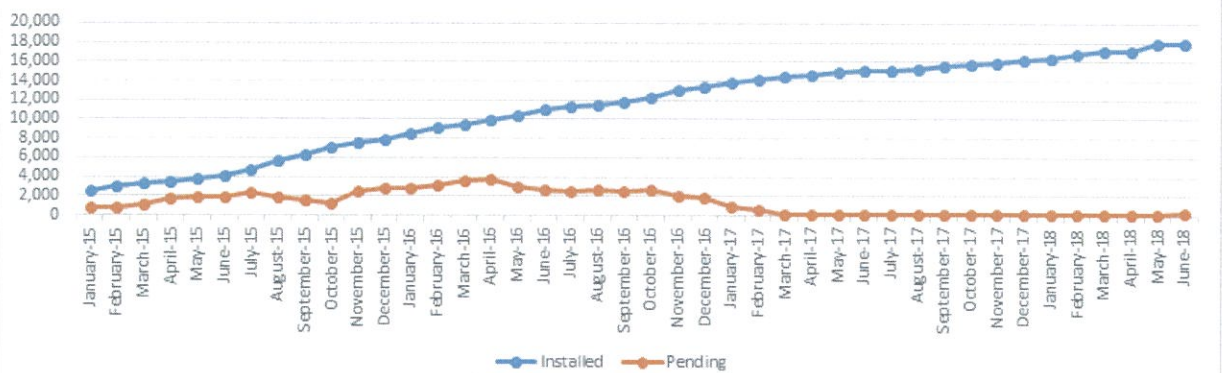
2. Net Metering Summary Ending June 2018:

Description:	Count	Kw	
Active	1,710	16,849	
Pending	20	129	
Totals:	1,730	16,978	
Service:	Count	KW	Kw/Customer
Residential	1,620	14,806	9.1
Others	90	2,043	22.7
Total:	1,710	16,849	9.9
% Residential	94.7%	87.9%	
Estimated 12 Months Revenue Impact:	\$3,360,697		

Net Metering Customers



NEM Total KW



3. Demand Side Management (DSM) Program Expenses Thru June 2018.

All Expenses – Fiscal Year

Description	FY16	FY17	FY18 as of June 30	Total to Date
Regular/OT Pay	\$11,348.80	\$22,256.00	\$17,423.89	\$51,028.69
Other Contractual	\$28,278.50	\$73,010.05	\$38,992.25	\$152,820.80
Bank Fees	\$155.00	\$1,032.06	\$315.00	1,502.06
Paid Rebates-Split AC	\$154,700.00	\$557,275.00	\$854,875.00	\$1,566,850.00
Paid Rebates-Central AC	\$3,400.00	\$8,200.00	\$1,300.00	\$12,900.00
Paid Rebates-Washer/Dryer	\$2,800.00	\$7,425.00	\$20,000.00	\$30,225.00
Total Expenses	\$200,682.30	\$669,198.11	\$932,906.14	\$1,815,326.55

SUMMARY

DESCRIPTION	AMOUNT
Initial DSM Budget FY'16	\$1,806,014.00
Interest Income as of June 18	\$4,231.57
Total Expense	\$1,815,326.55
Ending Balance as of June 18	\$(5,080.98)
Addtl. Budget: Approved (FY'18)	\$1,139,189.00
Total Ending Balance as of June 18:	\$1,134,108.02

1. **Net Metering Customer Credit Recommendation:** GPA has schedule a public hearing for Wednesday July 18th at 5:30pm here at Fadian. The public hearing is for GPA to present its recommendation which it made to the CCU on the phased reduction of net metering credits. GPA will report to the CCU on July 24th the results of the public hearing and any changes it desires to make based on the public's input. Once the CCU approves GPA's recommendation, GPA could petition the PUC for their approval.
2. **PUC Dockets:** The PUC approved the recommendation to hold LEAC at its current rate thru January 31, 2019.
3. **New Power Plant Procurement:**
 - GPA completed the transaction for the Ukudu land on Friday July 13, 2018. GPA now owns the 60 acres.
 - Multi-Step Bid Invitation No. 034-18 qualified bidder list has been established and consist of seven (7) proponents. These proponents will be provided the bid specifications once CCU approves the package subject to PUC approval.
4. **Supervisory Control and Data Acquisition (SCADA) Commissioning:** The installation of the new SCADA system is now underway. The targeted commissioning date is October 2018. The SCAWA system is designed for Power, Water and Wastewater operations.
5. **Liberation Day Parade:** The parade is this weekend, Saturday July 21, 2018. GPWA is participating in the parade and will also have a food tent in Hagatna across the entrance to the Hagatna Waste Water treatment Plant. Please join us for this celebration.
6. **Apprentice Graduation:** The graduation ceremony for fifteen (15) apprentices occurred on Friday July 13, 2018 and received excellent media coverage. The next cycle of twenty (20) apprentices mostly in the T&D area is targeted to begin in October 2018. There are 314 qualified applicants vying for the program.
7. **Tropical Storm Maria:** The storm passed over Guam on July 5th, 2018. Storm blacked out the island for about half an hour. All customers were restored within two days. The estimated damage is about \$234K.

8. **Senator Nelson Informational Hearing:** GPA provided an informational hearing to Senator Nelson on July 12, 2018. The informational briefing focused on LEAC, New Power Plant, and System Status. The presentation is attached for your perusal.
9. **GMH Main Electrical Panel Maintenance:** GPA has completed its task of conducting preventive maintenance on the GMH electrical panels. The maintenance was done between 6am to 2pm this past Sunday, July 15, 2018. GMH operated on standby generator power during the outage and there was no interruption of power to GMH. GPA has now completed its work with GMH. GPA is preparing a standard operating procedure for GMH for use in the event of an emergency. Please see the attached presentation of the work done.
10. **Key Performance Indicators** – the GM provided graphs not included here but available upon request.

4.2.1.2 Net Metering Credits

The GM presented managements proposal relative to the Net Metering issue. The presentation highlighted different factors that directly and indirectly influenced management's recommendation and included an overview of net metering policies in various states in the country that I've included here.

There are Thirty Eight (38) States, Washington D.C., and Four (4) Territories Offer Net Metering and utilities in two additional states (Idaho and Texas that adopted Net Metering (Full Retail Credit). Arizona, Georgia, Hawaii, Indiana, Maine and Mississippi have compensation other than net metering. The Value of Solar (VOS) is an alternative to net metering. Customers buy from the grid at retail rate and sell to the grid at an established VOS rate. Only Minnesota and Austin Energy (Texas) has adopted a VOS rate.

Guam's NEM Program was mandated in 2004. Guam has been crediting NEM customers full retail rate over the past 13 years. Excess credit carried over or paid out annually at full retail rate.

PUC to evaluate program and credits provided when GPA has 1,000 NEM Customers which occurred in June 2016.

As of April 2018, GPA has 1,658 NEM Customers (94.8% Residential), with 17,218 KW of capacity. The revenue impact on non-NEM ratepayers is estimated at \$3.1M annually. CCU/GPA conducted its first public hearing on NEM in August 2016 to gather input from stakeholders in order to prepare its filing to the PUC for changes in rate credits in order to achieve parity amongst all ratepayers. A total of five (5) other public meetings were held since to continue to discuss and gather input from stakeholders.

Some key points from the Public Meetings:

- The B&V report provides all the gain to GPA and did not represent true value of solar
- NEM Owner wants to recover his investment. Asked for grandfathering until he does so. He said it will take 7 years to recover his \$60K investment
- NEM not meant to be money making business but a fair exchange of trade energy...some customers making money from units sized beyond their needs
- The applicability of NEM program to 3rd party providers need to be clarified
- PV provider wants NEM program to continue up to 20% penetration similar to Hawaii
- PV provider wanted more time to provide a report on Value of Solar and bring to GPA for information. Report was conducted and presented by Clean Power Research on April 18, 2018
- Provider commented the NEM energy saves the utility cost on:
 - Maintenance cost for generations, poles, labor, lines, substations, transformers, etc.
 - Reduction of line losses because energy is near customers
 - Costs associated with fuel and fuel shipments
 - Helps GPA achieve energy portfolio reducing need for more renewable projects
 - Savings to environment; lessens carbon foot print

- Provider-GPA should consider subsidies for home energy storage systems
- Provider-GPA should consider grandfathering NEM customers through a phased approach

The GM further presented various solar PV energy production characteristics to include what Utility scale PV output looks like, NEM customer profiles & variations, the correlation of PV NEM for different locations. After several studies and reviews, its managements opinion that solar PV on Guam without adequate energy storage capacity does not reduce peak demand and does not eliminate conventional capacity needs.

At the end of this segment of his presentation GM Benavente pointed out some policy issues and the value of the grid to NEM customers shared here:

Value of Solar (VOS) Policy Issues:

- Replacement for Net Metering Program
- Grandfathering existing registered NEM customers
 - Allow customers who own system to recover investment
 - Phase in VOS rates over an extended time period
- GPA files for PUC approval:
 - Reassessed VOS rates each LEAC for Avoided Energy Value
 - Reassessed VOS rates for other VOS components
 - Annually
 - Periodically over a set number of years
 - When GPA's generation mix changes

Value of the Grid to NEM Customers:

- NEM customers receive services from the grid including:
 - Use the grid to sell power (get credit at full retail rate for excess production)
 - Use the grid to energize their homes at night
 - Frequency regulation absorbed by grid for intermittencies
 - Reactive power supply
 - Voltage regulation
 - Stand-by power on overcast days when the sun does not shine
- Monthly fixed charge of \$15 does not recover cost to serve from grid
 - Most of GPA fixed cost is recovered in the energy use (kWh) rate component which is typically zero for NEM customers

GPA Value of Solar from an Avoided Cost Perspective				24
Cost Category	FY 2017	Cost per kWh Sold	GPA Avoided Cost (\$/kWh)	
Generation + IPP Costs				
Other Production - Fixed O&M	\$ 17,783,917	\$ 0.0110		
IPP Costs - Fixed O&M	\$ 16,958,770	\$ 0.0105		
IPP Costs - Variable O&M	\$ 2,976,564	\$ 0.0018	\$	0.0018
Transmission & Distribution	\$ 11,703,869	\$ 0.0073		
Admin and General				
Payroll, benefits, retirement	\$ 12,862,432	\$ 0.0080		
Insurance	\$ 7,252,504	\$ 0.0045		
Contracts	\$ 4,024,845	\$ 0.0025		
Utilities	\$ 1,817,000	\$ 0.0011		
Office supplies & Others	\$ 844,349	\$ 0.0005		
Customer Accounting	\$ 4,756,215	\$ 0.0030		
Debt Service	\$ 56,937,000	\$ 0.0354		
OP&O/Other	\$ 26,731,639	\$ 0.0166		
Total (Base Rate Revenues)	\$ 164,649,289	\$ 0.1023		
Fuel Costs				
Fuel Consumption, plus the under recovery of \$15.3/M	\$ 165,692,714	\$ 0.1028	\$	0.1028
Fuel Handling	\$ 7,128,512	\$ 0.0044		
Renewables	\$ 8,862,280	\$ 0.0055		
Total	\$ 181,683,506	\$ 0.1128		
Energy losses at 3.5%		\$ 0.0054	\$	0.0054
Environmental cost		\$ 0.000089	\$	0.000089
Total Avoided Cost			\$	0.1102
Average cost in 2017 per kWh		\$ 0.2151	\$	0.2151
Credit Beyond Avoided Cost			\$	0.1049

Based on the illustration above the overpayment that GPA pays to NEM customers translates to \$3M per year over and above the avoided cost based on what GPA currently pays NEM customers (\$.21 vs. \$.1049)

The GM also talked about energy storage. GPA will soon have new 40MW energy storage system that will be commissioned in Oct. 2019. GPA can provide energy storage at the cost illustrated below:

FY2019	
Total KWH Sales Projected:	1,610,093,011
ESS Annual Debt Service & O&M:	\$ 2,829,348
\$/kWh:	\$0.0018

In summary Net Metering was established 13 years ago in 2004. Substantial Changes has occurred on GPA delivery cost and more changes expected by 2022. Customer Owned NEM System recovers its investment within 5 to 8 years from installation at GPA full Retail Rate Credit. Customer Owned NEM System recovers its investment within 8 to 16 years from installation at GPA LEAC Avoided Cost Rate Credit. It appears Zero Down Customers with 2.9% escalators will incur higher cost over the life of their 25 year contract

Managements recommendation includes:

1. CCU approve a GPA filing as shown herein at its July/August 2018 Meeting
2. Recommend an implementation plan for billing NEM customers on net billing: Buy All/Sell All or similar billing models
3. GPA files with GPUC for adjustment of net metering credits from retail to avoided cost
4. For existing NEM Customers, implement a Grandfather phase-in approach over 5 to 8 years to the GPA avoided cost credit. Adjustments for LEAC, line loss and variable cost changes done annually.
5. For future NEM customers, credit set at GPA avoided cost

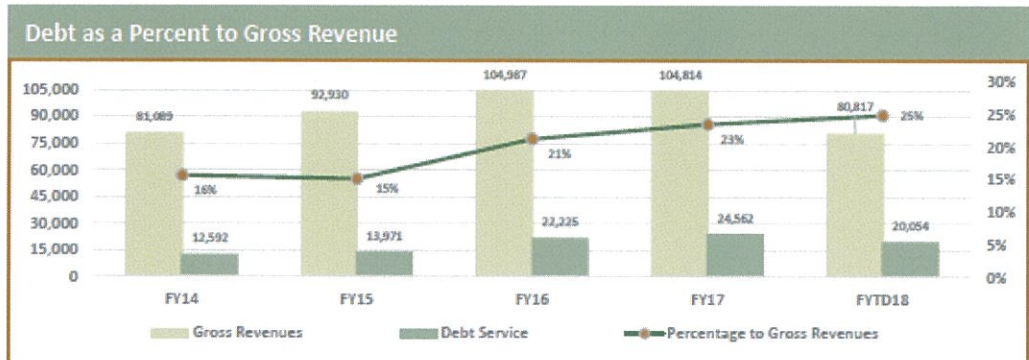
In discussion it was determined to have another NEM work session to present management's recommendation to the public allowing them an opportunity to ask clarifying questions.

ACTION: The Chairman asked GM Benavente to have a public meeting at beginning of July before the work sessions. He suggested to put a link to GPA's recommendation in all 44,000 customers billing statement in July and to have the recommendation in the website.

4.2.2 Financials

FYTD June 2018 Budget vs Actual (\$000)				
Category	Description	Budget FYTD18	Actual FYTD18	Variance
Rate Based Revenues	Water	\$53,474	\$50,921	(\$2,552)
	Wastewater	29,896	29,557	(339)
	Total	83,370	80,479	(2,891)
Operations & Maintenance	Salaries & Benefits	18,012	14,849	(3,163)
	Power	9,522	10,931	1,409
	Water Purchases	6,490	6,811	321
	A&G	9,070	8,010	(1,061)
	Contractual	3,939	3,402	(537)
	Total	\$63,392	\$60,345	(\$3,047)

Key Financial Ratios (\$000)		
Category	FY18	FY17
Accounts Payable \$\$/Days	\$4,342 / 46 days	\$5,390 / 59 days
Accounts Receivable \$\$/Days	\$15,848 / 59 days	\$15,451 / 51 days
Days Cash On Hand	156 days	184 days
Annual Debt Service (Revenue Bonds)	\$26,739	\$24,563
Debt Service Coverage (Bond/PUC)	1.74 / 2.16	1.98 / 2.44

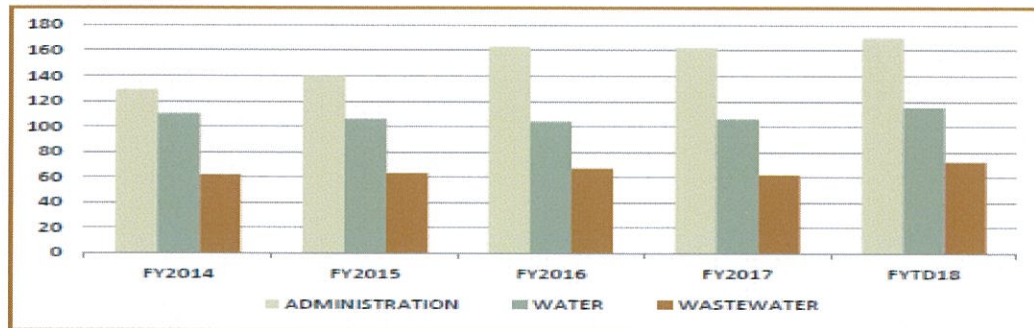


Top Ten Largest Water and Wastewater Customers – June 2018

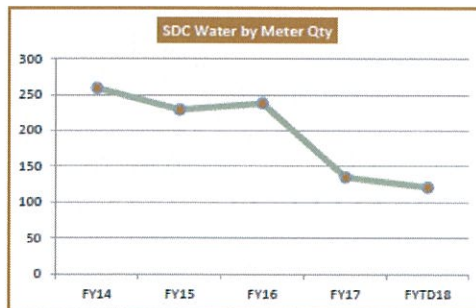
Water			Wastewater		
Customer Name	FYTD18 Revenues	% of Total	Customer Name	FYTD18 Revenues	% of Total
1) MDI GUAM CORPORATION/LEOPALACE	5985,874	1.94%	1) AIR FORCE DOD	52,700,025	9.12%
2) PACIFIC ISLANDS CLUB	909,167	1.79%	2) NAVY DOD	1,755,393	5.93%
3) HOTELS OF THE MARIANAS INC	739,619	1.45%	3) HOTELS OF THE MARIANAS INC	790,900	2.67%
4) HYATT	669,134	1.31%	4) HYATT	716,318	2.42%
5) HOTEL NIKKO GUAM	631,022	1.24%	5) HOTEL NIKKO GUAM	674,248	2.26%
6) GUAM REEF HOTEL INC	615,987	1.21%	6) GUAM REEF HOTEL INC	659,228	2.23%
7) SHERATON LAGUNA GUAM RESORT	569,039	1.12%	7) SHERATON LAGUNA GUAM RESORT	608,798	2.06%
8) MDI GUAM CORPORATION/WESTIN	494,833	0.97%	8) MDI GUAM CORPORATION/WESTIN	529,088	1.79%
9) OUTRIGGER GUAM RESORT	478,263	0.94%	9) OUTRIGGER GUAM RESORT	512,420	1.73%
10) GOODWIND DEVELOPMENT CORP	466,501	0.92%	10) GOODWIND DEVELOPMENT CORP	497,524	1.68%
Total	\$6,559,440	12.89%	Total	\$9,443,943	31.91%

FTE by Major Division

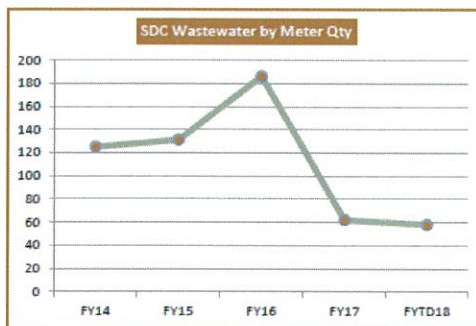
DIVISION	FY2014	FY2015	FY2016	FY2017	FYTD18
ADMINISTRATION	129	140	163	162	170
WATER	110	106	104	106	115
WASTEWATER	62	63	67	62	72
TOTAL NUMBER OF STAFF	301	309	334	330	357
Gross Salaries & Wages (\$000)	15,585	17,590	16,008	16,963	12,488
Water Customers	41,702	41,274	41,858	42,181	42,863
Staff to Customers Ratio	0.72%	0.75%	0.80%	0.78%	0.83%



SDC Water & Wastewater (Meter Quantity)



Actual Meter Sizes (Inches)	FY 2014	FY 2015	FY 2016	FY 2017	FYTD18
5/8 x 3/4	248	220	239	129	113
1	5	5	7	2	1
1 1/2	1	1	1	1	3
2	3	2	4	2	3
3	1	-	1	-	-
4	-	1	-	-	1
6	-	-	-	1	-
8	1	-	-	-	-
10	-	-	-	-	-
Total SDC by Water	259	229	252	135	121



Actual Meter Sizes (Inches)	FY 2014	FY 2015	FY 2016	FY 2017	FYTD18
5/8 x 3/4	115	124	179	58	50
1	4	3	2	-	1
1 1/2	1	1	1	1	3
2	3	2	3	2	3
3	1	-	1	-	-
4	-	1	-	-	1
6	-	-	-	1	-
8	1	-	-	-	-
10	-	-	-	-	-
Total SDC by Wastewater	125	131	186	62	58

4.2.3 Relative to Generation Financing

Relative to the financing of the new 180MW power plant, the Chairman said the current policy as adopted is to build, operate and transfer (BOT) with an IPP and the GM is moving forward with this concept in the bid specs so the Commission cannot let this matter go unresolved much longer. At the July meeting the CCU will meet (with exception of Comm. Bamba, who has recused himself), and debate / resolve this matter at that time.

4.2.4 Resolution 2018-11 Levelized Energy Adjustment Clause (LEAC)

The objective of the Levelized Energy Adjustment Clause (LEAC) rate is to recover the cost of fuel and authorized fuel related expenses to the extent that it does not cause extraordinary hardships on GPA customers. In the upcoming LEAC period, we are proposing not to change the current LEAC rate of \$0.154242/kWh, however if the price of fuel increased above the estimated \$77.13 per barrel, GPA will petition PUC for a new LEAC rate effective November 1, 2018.

The projected under-recovery for the LEAC period with no change to the rate is \$10.1M by the end of the LEAC period between August 1, 2018 to January 31, 2019. The funding source is the LEAC surcharge imposed on all ratepayers with the exception of the Navy. The Navy is billed on actual fuel cost basis each month.

Leaving the rate as is means GPA will delay some planned project. The reason for not increasing rate is to try to mitigate some of the impact. It is not a free ride and cannot go on forever and the public needs to understand this. Chairman Sanchez said historically under recovery has been greater than 10M. GPA can tolerate this for now and is willing to hold the rate status quo between now and January 31st.

Comm. Bamba motioned to approve Resolution 2018-22 second by Comm. Guthertz. There was no further discussion or objection and the motion passed unanimously.

4.2.5 Resolution 2018-12 Relative to Hyundai RFO Fuel Contract Extension

The Guam Power Authority's current contract for the Supply of Residual Fuel Oil No.6 is expiring in August 31, 2018. Solicitation for a new supplier is in progress and award of the contract is anticipated to be in September 2018.

An extension of the current contract for 3 months is necessary to allow the supplier for the new contract sufficient time for mobilization. Residual Fuel Oil No.6 will be supplied to the baseload plants - Cabras 1&2 and MEC 8&9. The 3-month contract extension shall commence on or September 01, 2018 and will expire on November 30, 2018. It is estimated to exceed \$1.5M requiring prior approval from the PUC and will be funded by fuel revenue funds. The IFB solicitation is in progress. Award of contract is anticipated to be in August 2018.

Comm. Sanchez motioned to approve Resolution 2018-12 second by Comm. Guthertz. There was no further discussion or objection and the motion passed.

4.2.6 Resolution 2018-13/GWA Resolution No. 34-FY2018 Change Order for the GPWA SCADA System Contract to Include the Ugum Surface Water Treatment Plant SCADA integration Upgrade

Resolution 2018-13 / GWA Resolution 34-FY2018 was discussed and voted upon under GWA Section 4.1.3 of these Minutes. For the record, the vote was repeated accordingly:

Comm. Bamba motioned to approve GWA Resolution 34-FY2018 / GPA Resolution 2018-13 second by Comm. Santos. There was no further discussion or objection and the motion passed.

5. OLD BUSINESS - None

6. **ANNOUNCEMENTS**

6.1 **Next CCU Meetings**

The Chairman announced that the next meeting would be the GWA work session on July 17, GPA work session on July 19 and the regular monthly CCU meeting on July 24.

He also mentioned that Legal Counsel Botha has recommended an item for discussion in Executive Session and asked for a motion.

Comm. Bamba motioned to move the meeting to Executive Session second by Comm. Guthertz. There was no objection and the meeting moved to executive session.

The Chairman called for a 5-minute break. It was 6:58 p.m.

7. **EXECUTIVE SESSION**

Executive Session began at 7:06 p.m.

7.1 **Personnel Matter**

This matter was discussed.

8. **ADJOURNMENT**

With no further business to discuss, the meeting adjourned at 8:00 p.m.

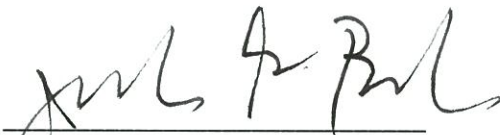
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Attested:



JOSEPH T. DUENAS, Chairman



J. GEORGE BAMBA, Secretary