



CONSOLIDATED COMMISSION ON UTILITIES

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

Regular Board Meeting
CCU Conference Room, Gloria B. Nelson Public Service Building
5:30 p.m., February 21, 2020

MINUTES

1. CALL TO ORDER

The CCU Chairman called the regular meeting of February 21, 2020 to order at 5:38 p.m. He said all five (5) Commissioners were present. Others in attendance include:

Commissioners:

Joseph T. Duenas	CCU Chairman
Francis E. Santos	CCU Vice Chairman
Michael T. Limtiaco	CCU Secretary
Judith P. Guthertz	CCU Treasurer
Simon A. Sanchez	Commissioner

Executive Mgmt.:

Miguel Bordallo	GM / GWA
John Benavente	GM / GPA
Melinda Mafnas	AGMO / GPA
John Cruz	AGMET / GPA
Tricee Limtiaco	AGMA / GPA
Chris Budasi	AGMA / GWA
John Kim	CFO / GPA
Taling Taitano	CFO / GWA
Kelly Clark	Legal Counsel / GWA
Graham Botha	Legal Counsel / GPA

Management & Staff:

Vangie Lujan	Compliance / GWA
Vince Leon Guerrero	Procurement / GWA
Paul Kemp	AGM Compliance & Safety / GWA
Gilda Mafnas	Asst. CFO / GWA
Patti Diego	Communications / GPA
Vien Wong	IT Support / GPA IT
Joyce Sayama	Mgmt. Analyst / GPA Ex.Office
Ann Borja	Mgmt. Analyst / GWA Ex Office
Lou Sablan	Board Secretary / CCU

2. APPROVAL OF MINUTES

The Minutes of February 11, 2020 was presented for approval.

Comm. Santos motioned approval the Minutes subject to verification and written correction, second by Comm. Guthertz. There was no further discussion or objection and the motion passed unanimously.

3. COMMUNICATIONS

3.1 Public Comments - None

4. GWA

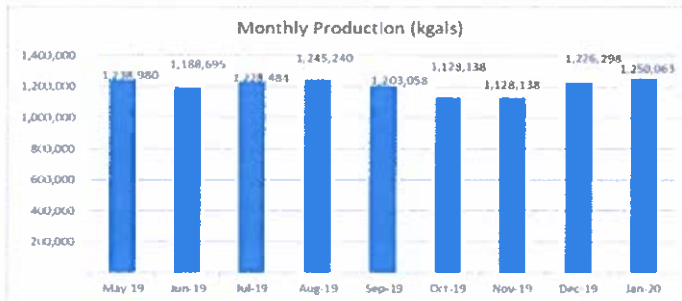
4.1 GM Report

Operations Update

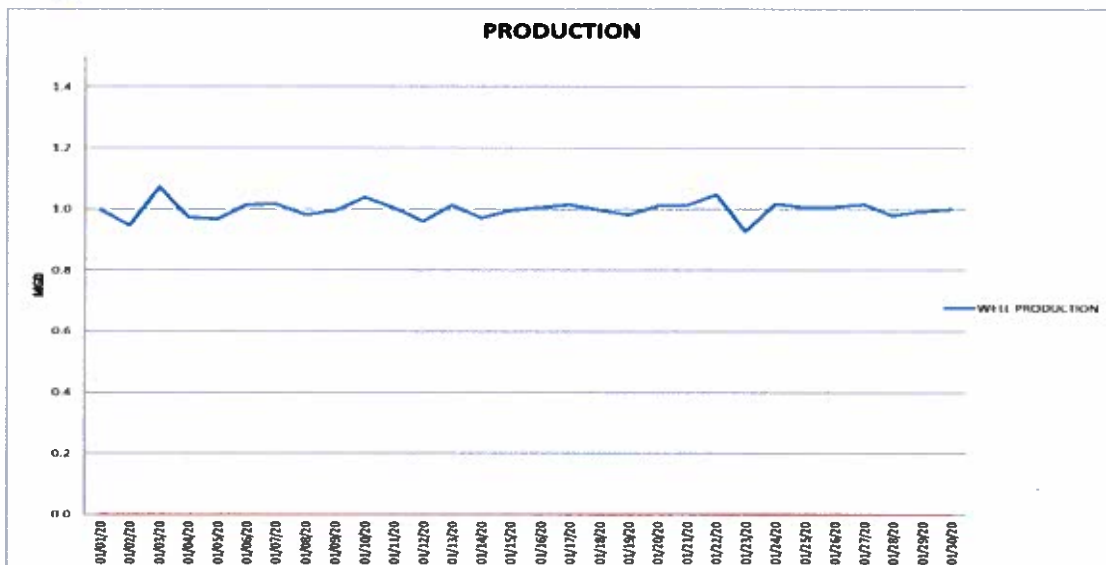
Production (January 2020)

Monthly Production Summary - January 2020		
Deep Wells		36.7 MGD
Active wells =	96 of 120	
Avg days in operation =	31 days	
Total Production =	1,137,530 Kgals	
Springs		0.34 MGD
Avg days in operation =	31 days	
Total Production =	10456 Kgals	
Ugum Surface Water Plant		2.3 MGD
Avg days in operation =	31 days	
Total Production =	71,110 Kgals	
Tumon Maui Well		1.00 MGD
Avg days in operation =	31 days	
Total Production =	30,967 Kgals	
		1,250,063 Kgals 40.3 MGD

DW Status as of 1/31/2020	
Active	96
Grounded motor or Pump Failure	7
Out of commission	8
Temporarily Sealed	4
Standby	5
TOTAL	120

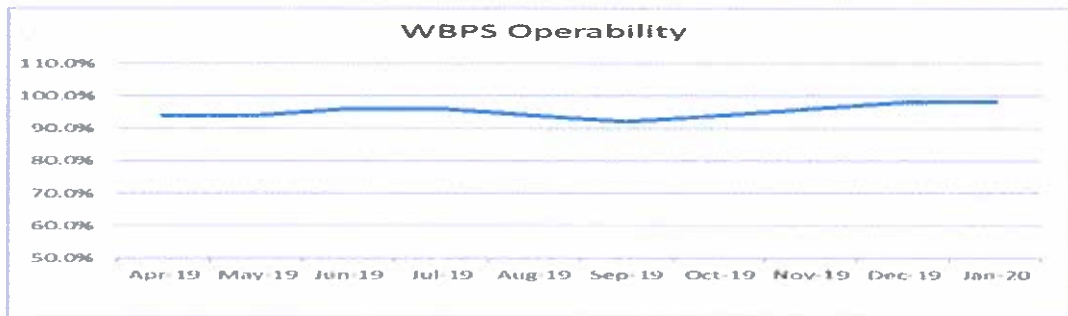


Tumon Maui Well Production (January 2020)

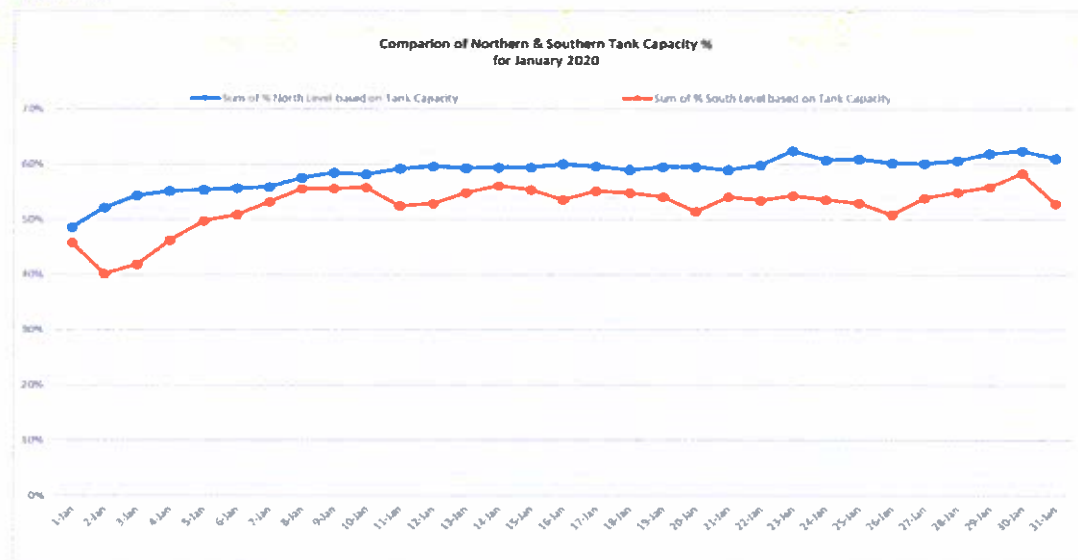


Distribution (January 2020)

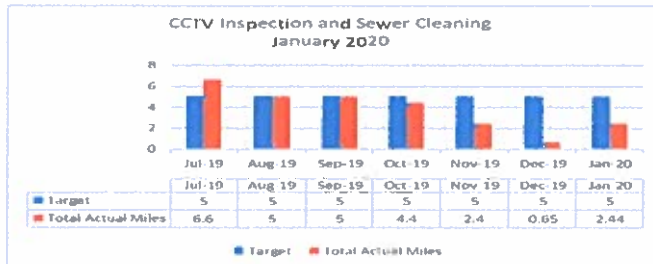
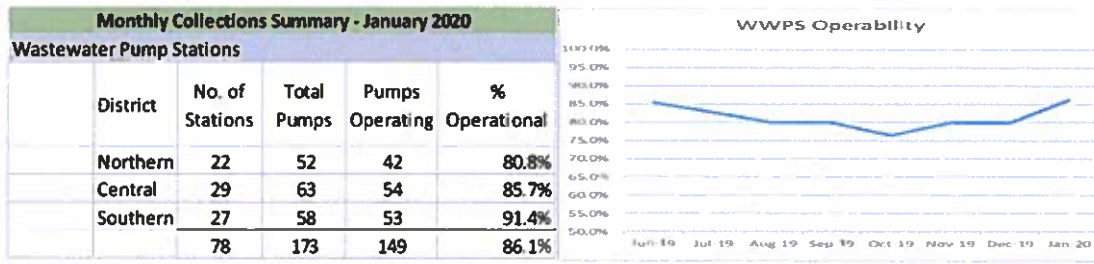
Monthly Distribution Summary - January 2020				
Water Booster Pump Stations				
District	No. of Stations	Total Pumps	Pumps Operating	% Operational
Northern	13	26	25	96.2%
Central	7	15	15	100.0%
Southern	7	15	15	100.0%
	27	56	55	98.2%



Distribution – Tank Levels (January 2020)



Wastewater Collections (January 2020)



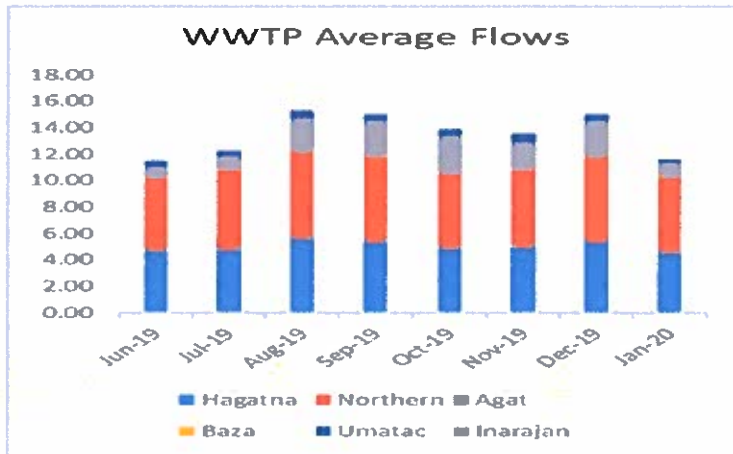
Wastewater Collections –Cleaning/Jetting (January 2020)

Asan



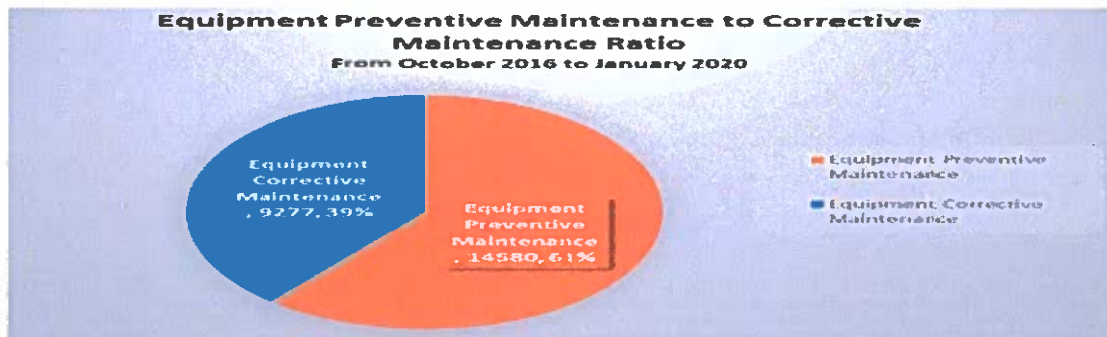
Wastewater Treatment (January 2020)

Monthly Wastewater Treatment Summary - January 2020				
WW Treatment Plants - Flows				
Facility	Avg. Daily Flows	Sludge (lbs)	Sludge Disp. (\$)	
Hagatna	4.44	283,080	\$ 25,477	
Northern	5.77	1,055,960	\$ 95,036	
Agat	1.1	72,740	\$ 6,547	
Baza	0			
Umatac	0.24			
Inarajan	0.05			
	11.60	1,411,780	\$ 127,060	

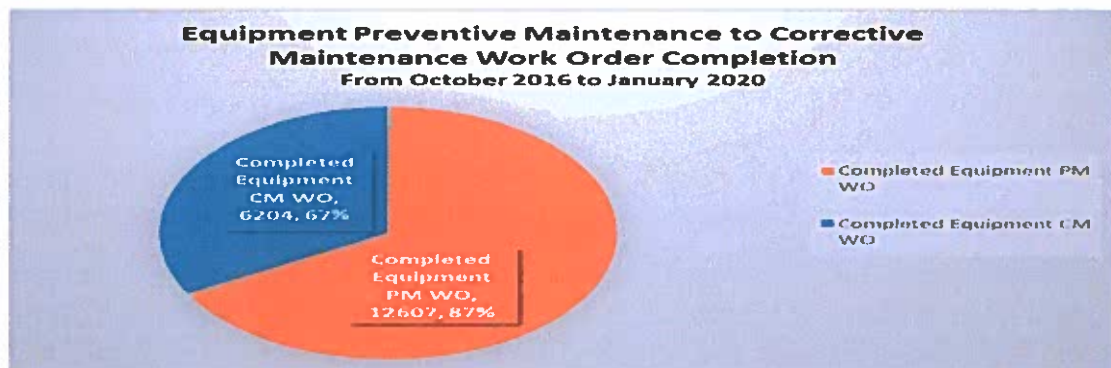


Asset Management (January 2020)

I. Equipment Preventive Maintenance to Corrective Maintenance **Ratio**

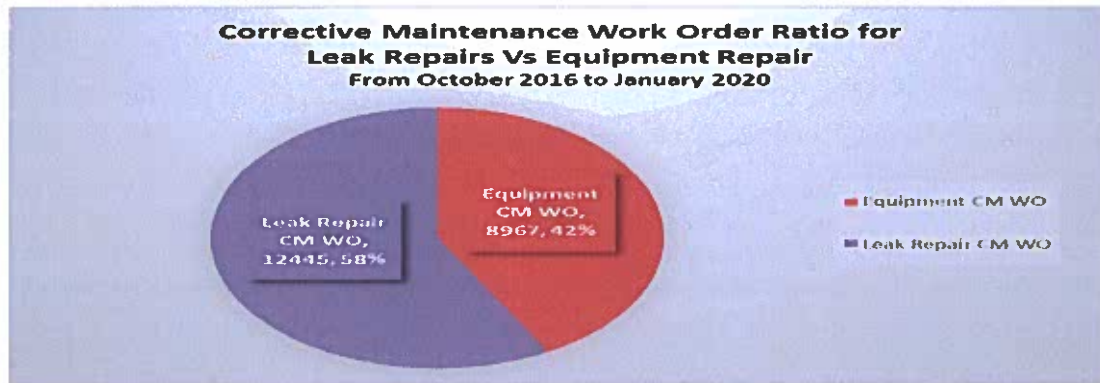


II. Equipment Preventive Maintenance to Corrective Maintenance **Work Order Completion**

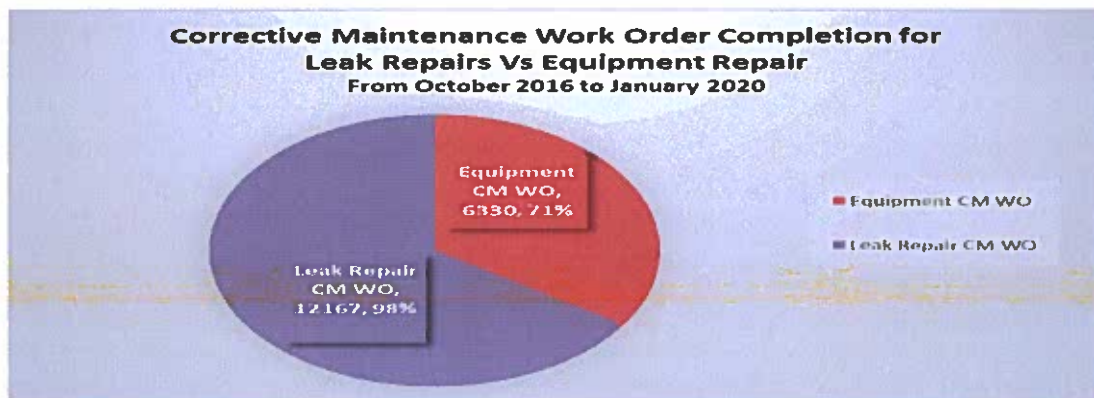


Asset Management (January 2020)

III. Corrective Maintenance Work Order *Ratio* for Leak Repairs vs. Equipment Repair



IV. Corrective Maintenance Work Order *Completion* for Leak Repairs vs. Equipment Repair



Operational Issues

Production & Distribution

- Valve Issues:
 - Addressed long-standing pressure issues in isolated area in Tamuning due to a failed partially-closed valve. Pressures have improved around GPO
 - Togcha valve separating Ugum supply from northern well water supply broke and required replacement
- Problems with line breaks on older ACP lines in
 - Toto-Canada (Jan 6th, Jan 12th)
 - 6" ACP Main Break in Tumon (Jan 23rd)
 - Santa Rita (Jan 31st)

Wastewater Collection & Treatment

- Collection System:
 - Route 2 project final lateral connections have been completed.
 - Route 1 and Route 4 projects still in progress; traffic impacts are on-going
 - Route 3 and Route 9 interceptor work is about 61% complete
- Hagatna WWTP
 - Parts for two clarifiers ordered; basins being inspected for needed repairs; plant operating satisfactorily on one clarifier
- NDWWTP
 - Major excavation work for clarifiers on-going; steelwork for foundations / concrete pour anticipated this week
 - Water supply issues continue until lines in the area are upgraded

Meters from January 2017 through January 2020

COMPLETED FIELD ACTIVITY JAN 2017 THRU JAN 2020 (POSTED IN CIS)						COMPLETED FIELD ACTIVITIES (IN PROCESS) TO BE POSTED IN CIS
2017	2018	2019	Jan-20	TOTAL:		
GWA - Meter Exchange	6487	13353	10850	1079	31769	178

# OF METERS TESTED AS PER METER TEST FACILITY REPORTS:	6079	12259	9278	749	28365
AVG # OF FIELD STAFF PERFORMING CHANGE OUTS (MON THRU FRI):	19	16	7	7	
# OF ADMIN STAFF TO CREATE AND POST FIELD ACTIVITIES IN CIS:	10	6.3	5	5	
TOTAL:	29	22	12	12	

REMAINING ACTIVE BADGER LP MODELS TO BE REPLACED AS OF Jan 31 2020:

1871

3/4" BADGER METERS IN STOCK AS OF Feb 07 2020:

Size	Meter Description	New Meters Passed	New Meters Untested	Passed Field Meters	MMP	Meters Available
3/4"	METER, Badger AMR 5/8" X 3/4" RCDL Model M25 Disc Meter	1420	0	246	0	1666
3/4"	METER, Badger AMR 5/8" x 3/4" **WARRANTY** RCDL Model M25	0	0	0	0	0
3/4"	METER, Badger 5/8"x3/4" NSF61-G RCDL M25LL Disc Meter Integral	38	0	0	0	38
3/4"	METER, Badger AMR 5/8" x 3/4" RCDL Model M25 ***RMI***	0	0	0	0	0
3/4"	METER, Badger E-SERIES 5/8"x3/4" ULTRASONIC	975	0	0	0	975

Backbilling through January 2020

Guam Waterworks Authority

Collections Report¹ on Accounts Backbilled thru January 31, 2020

For fiscal years 2015 through 2020 (Jan)

Accounts Billed			Collection Status											
			Amounts Collected ¹			Amounts Adjusted			Total Uncollected (Active)			Total Uncollected (Inactive)		
FY Billed	No. of Accounts	Amount	No. of Accounts	Amount	%	No. of Accounts	Amount	%	No. of Accounts	Amount	%	No. of Accounts	Amount	%
FY 2015														
FY 2016	17	\$ 882	17	\$ 882	100%	0	\$ -		0	\$ -		0	\$ -	
FY 2017	537	\$ 397,450	472	\$ 322,762	81%	14	\$ 20,967	5%	24	\$ 29,833	8%	27	\$ 23,887	6%
FY 2018	1,374	\$ 742,109	1,220	\$ 574,467	77%	45	\$ 59,378	8%	62	\$ 68,495	9%	47	\$ 39,768	5%
FY 2019	8,324	\$ 3,064,384	7,581	\$ 2,430,067	79%	119	\$ 103,453	3%	436	\$ 428,165	14%	188	\$ 102,699	3%
FY 2020	1,391	\$ 385,270	585	\$ 68,645	18%	6	\$ 1,631	0%	778	\$ 311,552	81%	22	\$ 3,442	0%
Total	11,643	\$ 4,590,095	9,875	\$ 3,396,823	74%	184	\$ 185,429	4%	1,300	\$ 838,045	18%	284	\$ 169,796	4%

¹ Collections thru February 12, 2020

One Guam Update

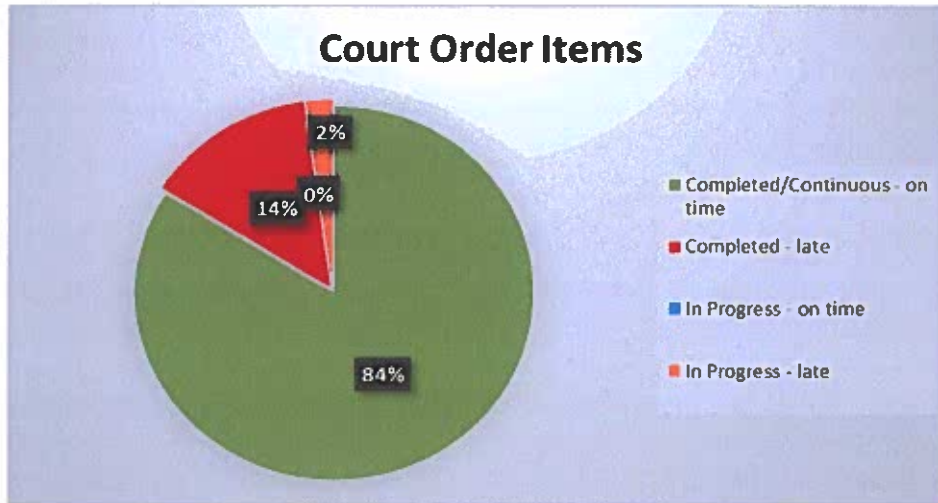
- Tumon Maui Well
 - Well inspection was completed; Some corrective actions for mostly minor issues.
 - GWA will be replacing the GAC based on sampling data at the vessels; pending the availability of a crane.
 - DOD and GWA discussed formalizing the inspections. Future inspections will need to be signed by someone from GWA & NBG inspector for documentation.
 - Needed repairs to be done within one cycle if possible.
- OEA Projects
 - Observation Wells/NGLA
 - Maria Lewis is still waiting on response on acceptance of well locations. There are no issues on Y well. M1 well is the one adjacent to the training site for the large vehicles. B&C pushed the actual site 30' SW within the 100'x100' Area of Potential Effect that was surveyed (cultural/biological).
 - Need to coordinate the construction schedules. Easements will be granted for all wells.
 - GWA is reviewing the draft MOA on recurring costs for data collection and evaluation.
 - Sewer Interceptor
 - MEC exemption was expiring this month. B&C notified DoD & MEC exemption was extended one more year.
 - Extension on the License has been approved until September 2020.
- Property Transfers
 - Transfer of BPM-1: There is a cloud on the title, however it can still be transfer in its current state. DOD will wait for GWA to make a decision if they are interested in obtaining the property with the issues related to the title.
 - Marbo Areas: verifying property surveys for potential easements from Navy.
 - Transfer of Navy Laterals at Murray Road to GWA: The approval letter is still at Naval Base Guam. Installation Commanding Officer needs to sign, then approval package has to be prepared.

One Guam Update

- Other
 - Cabras Island Water Lines
 - DOD descoped the line upgrade project.
 - GWA will not be accepting the line, if the repairs are not completed.
 - DOD will abandon the line properly if GWA doesn't want it.
 - ACEORP Tunnel
 - The letter and package are being reviewed by Federal GSA before it goes to Congress. The schedule for it to be turned into a quit claim deed is November.
 - Utility Data Sharing: Maria Lewis sent the non-disclosure agreement (NDA) to Miguel Bordallo; needs his approval or his comments. Once received, will put in with MOU for submittal to the CO & then get the signatures.
 - Marine Corps Base
 - Connection at Potts Junction will be in about 5-6 months. Once they connect & test it, they will shut the valve until ready to use it. Don't expect force flow (full base operation) and the increased water requirement until 2024.
 - GWA will provide water to the Operation of Potts Junction intertie based on the Tumon Maui Well MOU.
 - In the future, a contractual agreement to operate it needs to be in place. Need to talk about maximums, requirements, etc. Water exchange is preferred.
 - Andersen AFB
 - Andersen will pursue the installation of a wastewater meter to obtain actual wastewater discharge amounts. Andersen will work with GWA in determining the specification for the meter and the appropriate location for the installation of the meter. The monthly water readings are provided by Andersen to GWA. GWA bills 80% of the water consumption as the charge for wastewater. Andersen will be responsible for purchasing the meter and the cost of installation.
 - AG-1 Access for GWA/GPA
 - DOD is working with GWA to establish easier access to AG-1. This will elevate the issues related to security of the well for GWA personnel.

Court Order

	Items	On-time Items Completed/Continuous	Items Delayed	Completed Late	Items on Schedule	Performance %
Court order total	93	78	2	13	0	97.8%



Court Order

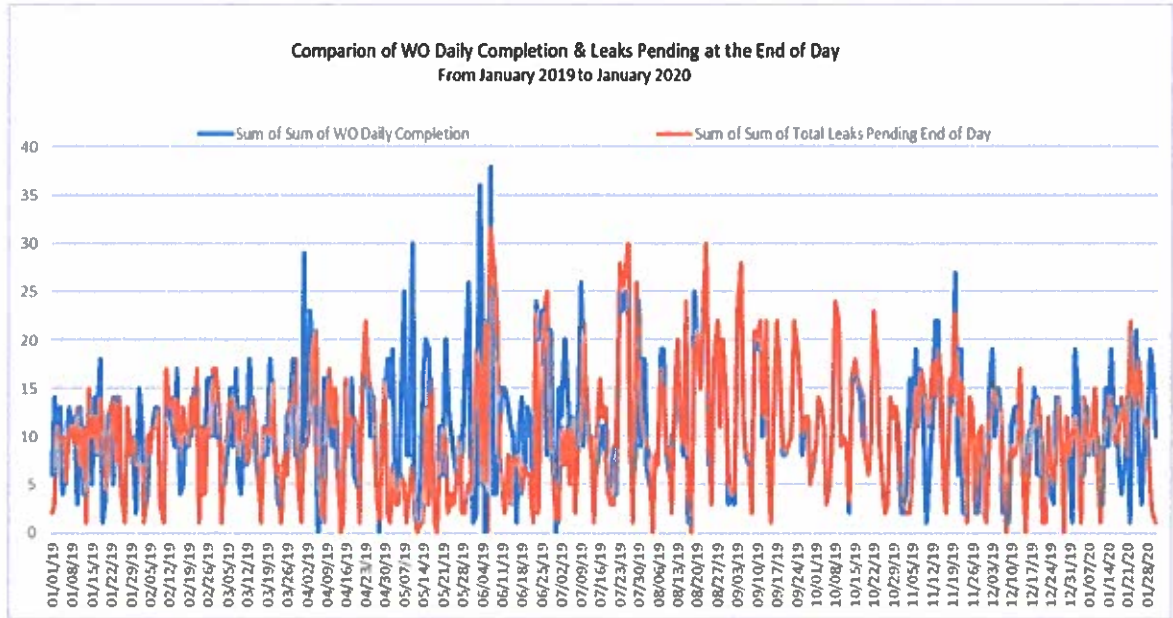
Status Information (for January 2020)

- **2 Items delayed**
 - Water Reservoir Repair. Replacement or Relocation program, CO II C 29(b)(6)(ii)–(all remaining tanks). (Affects final date of the Court Order.)
 - Umatac-Merizo Wastewater Treatment Plant – completed in December; ribbon cutting held in January.
- Final Date to complete all Court Order Items may be delayed past December 31, 2020. [CO 29(b) has been expanded by 31% beyond the original Court Order Requirements (General Counsel is reviewing filing requirements and content).]
- Overflow or Bypass events reported to USEPA:
 - 01/25/2020 Ignacio P. Quitugua St. – FOG
 - 01/31/2020 Chalan Nette St. Yigo – FOG
 - 02/01/2020 Roy T. Damlen St. – Mongmong – Sensor clogged

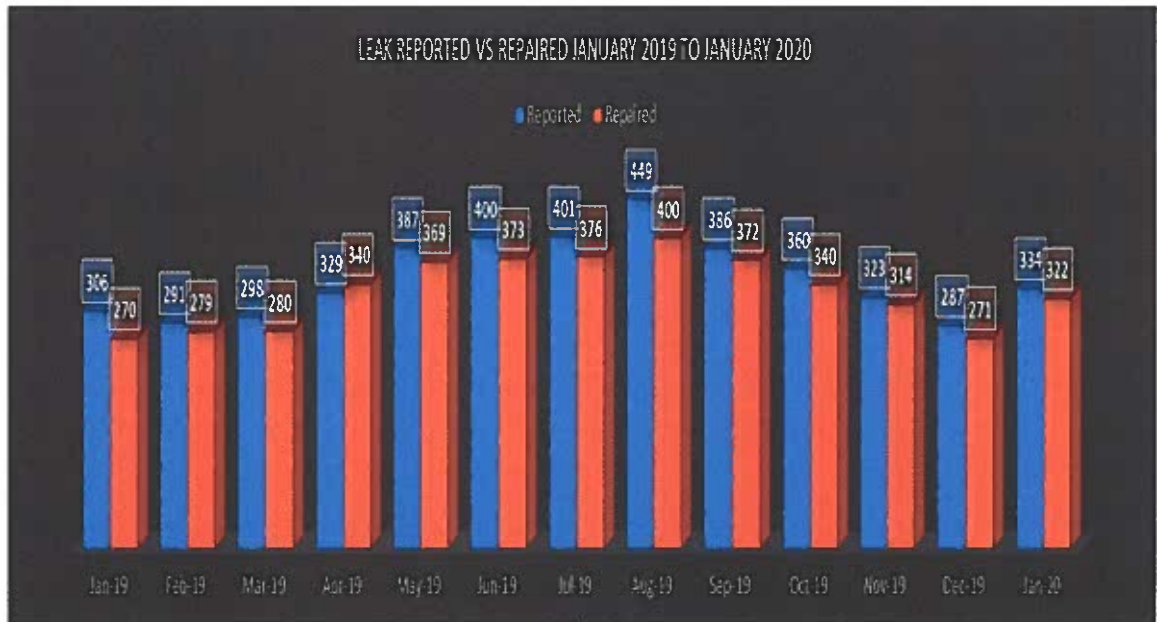
Land Acquisition Summary (as of January 2020 – no changes from Nov/Dec 2019 reports)

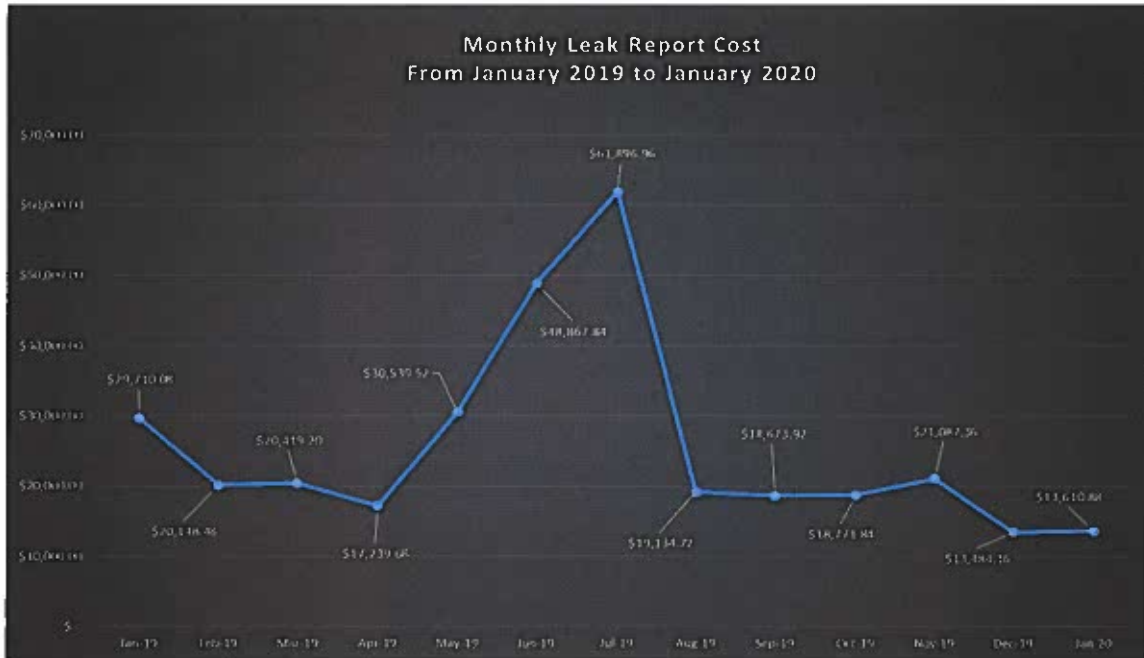
GWA Facility	Location	Gov. or Private Property	Land Acquisition Status
Tanks	Astumbo	Gov't. - CLTC	Petition of Land Registration package forwarded to Attorney General by DLM 11/04/19.
	Piti	Private	Pending comments from Federal and GovGuam agencies on Section 106 documents 11/07/19.
Deep Wells	AG-12	Dept. of Agriculture/Manhita Farms	Right of Entry Agreement sent to Dept of AG for signature 05/24/18. 2 nd follow up sent on 09/12/18. 3 rd follow up sent on 04/10/19. Retracement Survey Property Map filed and recorded at DLM 7/10/19.
Booster Pump Station	Agfayan	Private	TGE working on structural design for pump station area for L28, B19, T3734, Inarajan 11/07/19.
Asan Springs	Asan	Federal	Pending comments from Federal and GovGuam agencies on Section 106 documents 11/07/19.

Leak Repair Summary (January 2020)



Comparison of Leaks Reported vs. Leaks Repaired (January 2020)





Assumptions:

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

4.2 Financials – Not discussed.

4.3 Resolution No. 13-FY2020 Relative to Authorizing the Modernization of the Guam Waterworks Authority Enterprise Resource Planning System

GWA first implemented JD Edwards (JDE) Enterprise Resource Planning system (ERP) in 1998 to manage day-to-day accounting, procurement and human resources business activities. The JDE World ERP v9.3 will no longer be supported or enhanced by the vendor in March 2020. Over the years, GWA employees have developed manual workarounds using stand-alone software applications to perform tasks and create reports because of JDE World’s limitations and its complicated and inefficient legacy green screen “command line interface.

GWA has evaluated the DXC Red Projects JDE EnterpriseOne (E1) solution for engineering and construction firms and determined it is a state-of-the-art ERP solution that provides all the tools necessary to transform GWA to paperless digital business processes and integrate with other GWA business systems.

GWA requires a transformational ERP upgrade to automate and integrate business systems and processes that will improve employee productivity, more efficiently streamline operations and provide timely decision support information in order to achieve the objectives in the 2018 Water Resource Master Plan Update (WRMPU).

A major component of the WRMPU is more than 160 Capital Improvement Projects (CIP) for implementation between 2018 and 2037 estimated to cost \$1.2 billion. The Red Projects modernization of the ERP will allow GWA to automate CIP project workflow for multi-fund/year

budgeting, procurement, contracting, project management, job forecasting, financial tracking/payments and capitalization of assets. Red Projects will allow the engineering and finance departments to focus on high value work by cutting down on the amount of time spent on gathering and reconciling information from several siloed information systems. It will also enable internal staff, external agencies, contractors and partners to collaborate on both CIP planning and implementation.

The GWA Asset Management program is using a Computerized Maintenance Management System (CMMS) that requires double entry for work orders, inventory and time and labor. The CMMS system is also not integrated with the JDE ERP and thus is unable to track the cost of asset maintenance and reconcile with Fixed Asset valuations. The software program has been problematic to upgrade. Significant IT resources are dedicated to developing and maintaining it and, despite multiple efforts, been unable to implement a mobile solution with simplified forms for use on smart phones by field operations.

Red Projects will completely integrate Asset Management with Fixed Assets, Inventory and Time and Labor functions to allow condition-based maintenance and accurate and historical cost reporting and analysis. Integration of financial information will allow real-time cost of service predictive modeling and reporting. A pre-integrated Mobile Workforce Solution will provide employees in the field with real time access to information to conduct preventive and corrective maintenance on GWA assets. Work orders can be completed in the field using a smartphone by allowing employees to enter job-based time and materials information as well as complete inspections and assessments.

Modernizing the ERP system is necessary and urgent to provide many of the tools necessary to move GWA's organizational performance to the next level. In order to elevate to a well-rounded world class water and wastewater utility, GWA must be more agile in recording, processing and reporting information. Too much time and effort are currently wasted on low-value activity such as manually collecting, modifying, editing and formatting data for reports. The use of paper-based forms and physical routing of documents for approvals also slows processes such as procurement, recruitment, employee evaluations, employee on-boarding and incident reporting to list a few. The Red Projects JDE E1 solutions will completely digitize GWA's work processes, freeing up employees to perform more of the high value work needed to achieve high levels of internal and external customer service.

The project will have two JD Edwards E1 database environments. One environment will reside in the Oracle Cloud in an Arizona data center and the second environment will reside in the Fadian data center. Toward the end of the project implementation, GWA will determine whether the production environment will reside in the Cloud or on-premise at Fadian. The disaster recovery environment will be located at the other location. The disaster recovery design will guarantee a Recovery Point Objective of 1 hour or less. The data replication between the production and backup environment is estimated to be a 15-minute delay.

The proposal to modernize the GWA Enterprise Resource Planning system is Five Million Two Hundred Eighty-Six Thousand Three Hundred Eighty-Five Dollars (\$5,286,385). GWA received a \$500,000 grant and will apply for an additional grant in April 2020 from the Office of Insular Affairs Technical Assistance Program. The terms of the grant require GWA contribute not less

than a 50% cost share toward the project. The non-grant funding source for the project is from bonds, internally CIP and revenue funds.

The estimated project length is approximately seven months after PUC approval. If the contract is approved as part of the February 27, 2020 docket then the completion date would be January 2021.

GWA was directed by Oracle to work with DXC Redrock, the only Oracle Platinum Partner contractor in the Western Pacific with a proprietary pre-built JDE E1 configuration and implementation plan for engineering and construction firms, to upgrade to E1. In December 2018, a sole source procurement was awarded for first phase of the E1 upgrade implementation labeled the "Discovery Phase." The Discovery Phase included defining scope for both a technical and transformational upgrade and provided several key project planning deliverables including pricing. In October 2019, DXC Red Rock provided pricing for their proprietary product Red Projects to implement a transformational upgrade that could be completed within (7) seven months.

Comm. Sanchez motioned to approve Resolution 13-FY2020 second by Comm. Guthertz. There was no further discussion or objection and the motion carried. The vote was unanimous.

4.4 Resolution No. 16-FY2020 Relative to Approval of Change Order No. 2 for the Route 4 Relief Sewer line Rehabilitation and Replacement Projects S15-006-EPA

The objective of this project is to improve the sewer collection system, which included repairing and/or replacing sewer manholes and over 4,200 linear feet of gravity sewer line along Route 4 and Route 1 in the village of Agana. These sewer infrastructure elements have been identified by GWA, through an SSES investigation, to be subjected to either inactivity due to incomplete construction work or excessive infiltration and inflow (I&I). Successful completion of this project will result in proper maintenance and operation of the sewer collection system and USEPA agrees that efforts to rehabilitate, repair or replace the sewer line are necessary.

Change Order No. 2 is necessary to avoid costly delays in the Cured-In-Place-Pipe (CIPP) lining work by the 2nd contractor on this project (Insituform) by accelerating work to resolve infiltration at manholes ahead of the scheduled manhole rehabilitation. Until the infiltration at the manholes is resolved, the lining work cannot happen. There is the potential for liner failure if the CIPP does not cure properly due to the heavy infiltration that this change order will address. Additionally, there is an existing concrete plug at SMH-6897 that needs to be removed to allow that segment of pipe to be lined ahead of when SMH-6897 is scheduled to be rehabilitated. Manhole rehabilitation cannot happen until after lining is completed due to the potential damage of the interior epoxy coating in the manholes from the high heat during the liner curing process.

This project is located along Route 4 and Route 1, from the in front of Vons Chicken in Agana to the Agana Main Pump Station. Construction activities will be limited to the government easements of the sewer infrastructure elements.

The total cost of Change Order No. 2 comes out to the amount of One Hundred Eleven Thousand Eight Hundred Eighty-One Dollars and Thirty-Five Cents (\$111,881.35), of which Sixty-Four Thousand Twenty-Four Dollars and Sixty-One Cents (\$64,024.61) will come from the remaining

contingency funds. The funding for this project will be from USEPA SRF Grant Funds and, if necessary, GWA Bond Funds with a maximum project budget of Three Million Seven Hundred Ninety-Six Thousand Four Hundred Eighty-Nine Dollars and Fifty-Four Cents (\$3,796,489).

GWA Management seeks CCU approval of PPBC’s proposal for accelerated construction services in the additional funding amount of Forty-Seven Thousand Eight Hundred Fifty-Six Dollars and Seventy-Four Cents (\$47,856.74), to bring the total authorized funding amount to Three Million Seven Hundred Ninety-Six Thousand Four Hundred Eighty-Nine Dollars and Fifty-Four Cents (\$3,796,489.54).

The accelerated construction work associated with Change Order No. 2 is estimated to be completed by March 2020.

Comm. Sanchez motioned to approve Resolution 16-2020 second by Comm. Guthertz. There was no further discussion or objection and the motion passed. The vote was unanimous.

5. GPA

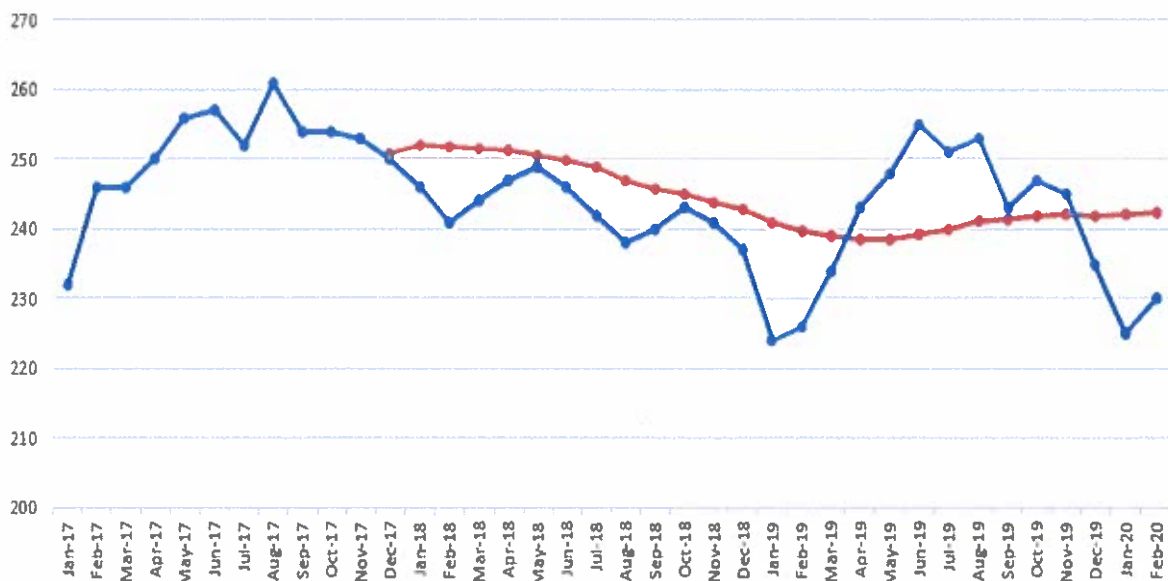
5.1 GM Report

1. Generation System: The following is the generation forecast for March 2020:

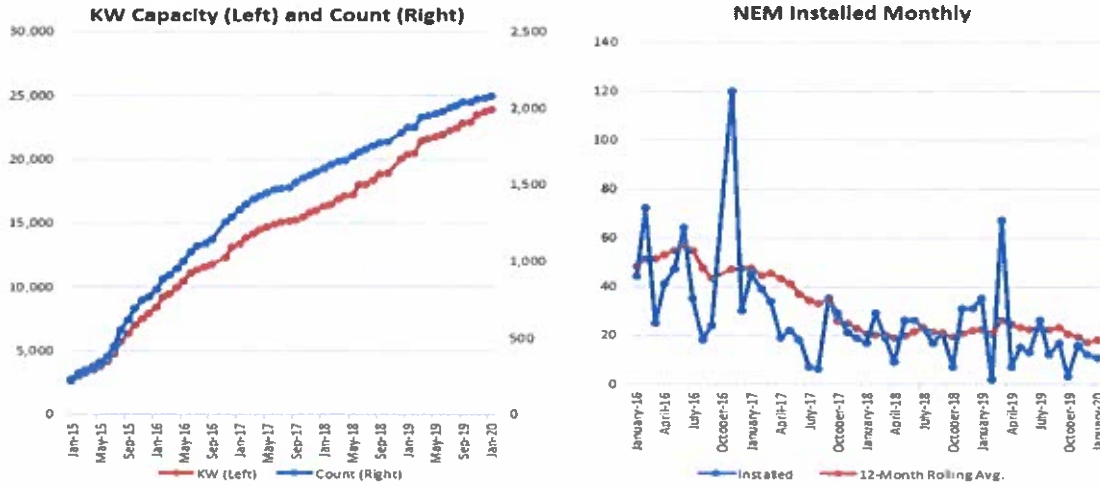
Projected Available Capacity: 321 MW
 Projected Demand: 238 MW
 Anticipated Reserve Margin: 83 MW

Cabras Unit 2 to undergo 35 days overhaul from March 15th thru April 18th

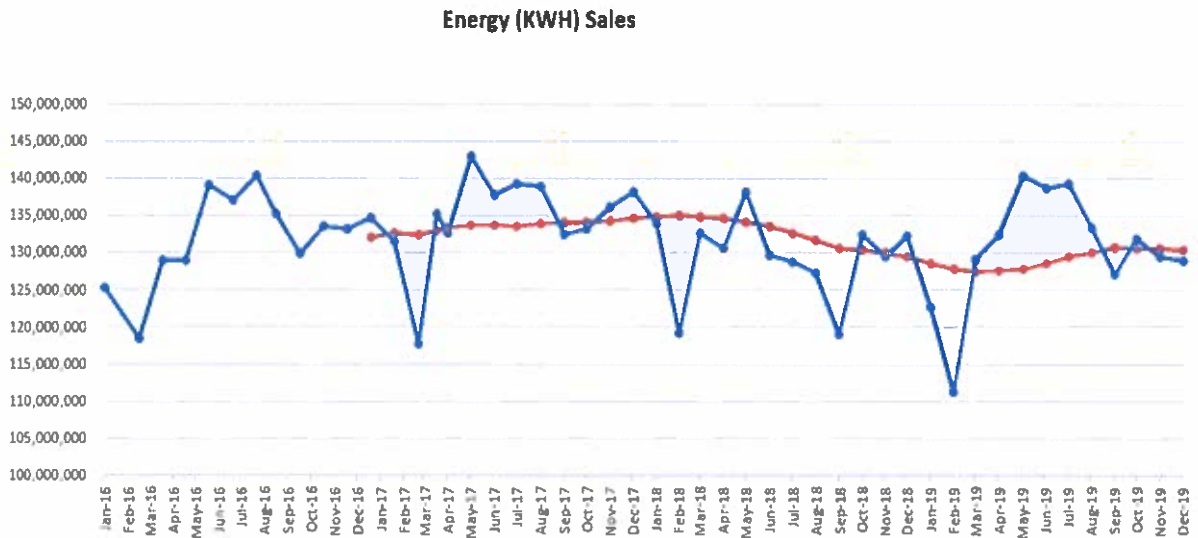
System Peak MW Demand



2. Net Metering (NEM) Growth Thru January 2020:



3. Energy Sales Thru December 2019:



- 4. Program directly reduces energy cost to customer at a one-time fixed rebate. These expenses funded from base rate. I have added \$500K from FY 2020 budget to cover expenses thru March 2020 in order to provide time for PUC to approve placing DSM under LEAC.**

DSM PROGRAM SUMMARY

Description	FY16	FY17	FY18	FY19	FY20	Total to Date
					As of 1/31/20	
Regular/OT Pay	\$11,348.80	\$22,256.00	\$26,121.83	\$50,715.19	\$11,519.27	\$121,961.09
Other Contractual	\$28,278.50	\$85,550.05	\$116,977.50	\$3,025.00	-	\$233,831.05
Ads & Radio Announcements	-	-	-	\$7,500.00	\$1,500.00	\$9,000.00
Paid Rebates-Split AC	\$154,700.00	\$557,275.00	\$1,349,825.00	\$1,374,650.00	\$274,575.00	\$3,711,025.00
Paid Rebates-Central AC	\$3,400.00	\$8,200.00	\$4,400.00	\$6,500.00	\$1,000.00	\$23,500.00
Paid Rebates-Washer/Dryer	\$2,800.00	\$7,425.00	\$57,200.00	\$110,800.00	\$23,200.00	\$201,425.00
Total Expenses	\$200,527.30	\$680,706.05	\$1,554,524.33	\$1,553,190.19	\$311,794.27	\$4,300,742.14
Bank Interest (+)	\$1,676.42	\$1,722.74	\$1,222.29	\$730.05	\$127.57	\$5,479.07
Bank Fees	\$155.00	\$1,032.06	\$1,085.08	\$1,247.54	\$145.00	\$3,664.68

5. PUC DOCKETS

- **Docket 20-04:** Cabras PMC Bid Invitation was approved. GPA issued a Multi-Step Invitation For Bid (MS-RFP); award recommendation to CCU & PUC targeted for June 2020
- **Docket 20-03:** LEAC Filing; Approved at \$0.134/kWh

6. AWARD OF RENEWABLES PHASE III

- GlidePath's appeals of GPA's intent to award to ENGIE is before the OPA. The formal hearing begins on March 25th.

7. USEPA CONSENT DECREE

- The USEPA filed the complaint and proposed consent decree in federal court on Thursday, Feb 7, 2020. The proposed consent decree now undergoes a 30-day public comment period (from February 12, 2020 to March 13, 2020) after which the federal judge will rule on the decree. CCU/GPA held a press conference on the announcement on Monday, Feb 10, 2020.

8. UKUDU POWER PLANT UPDATE

- KEPCO and GPA/Stanley Consultants continue to prepare and pursue the required environmental impact assessments and permits required before KEPCO can complete project financing. The financial close is targeted for this summer.

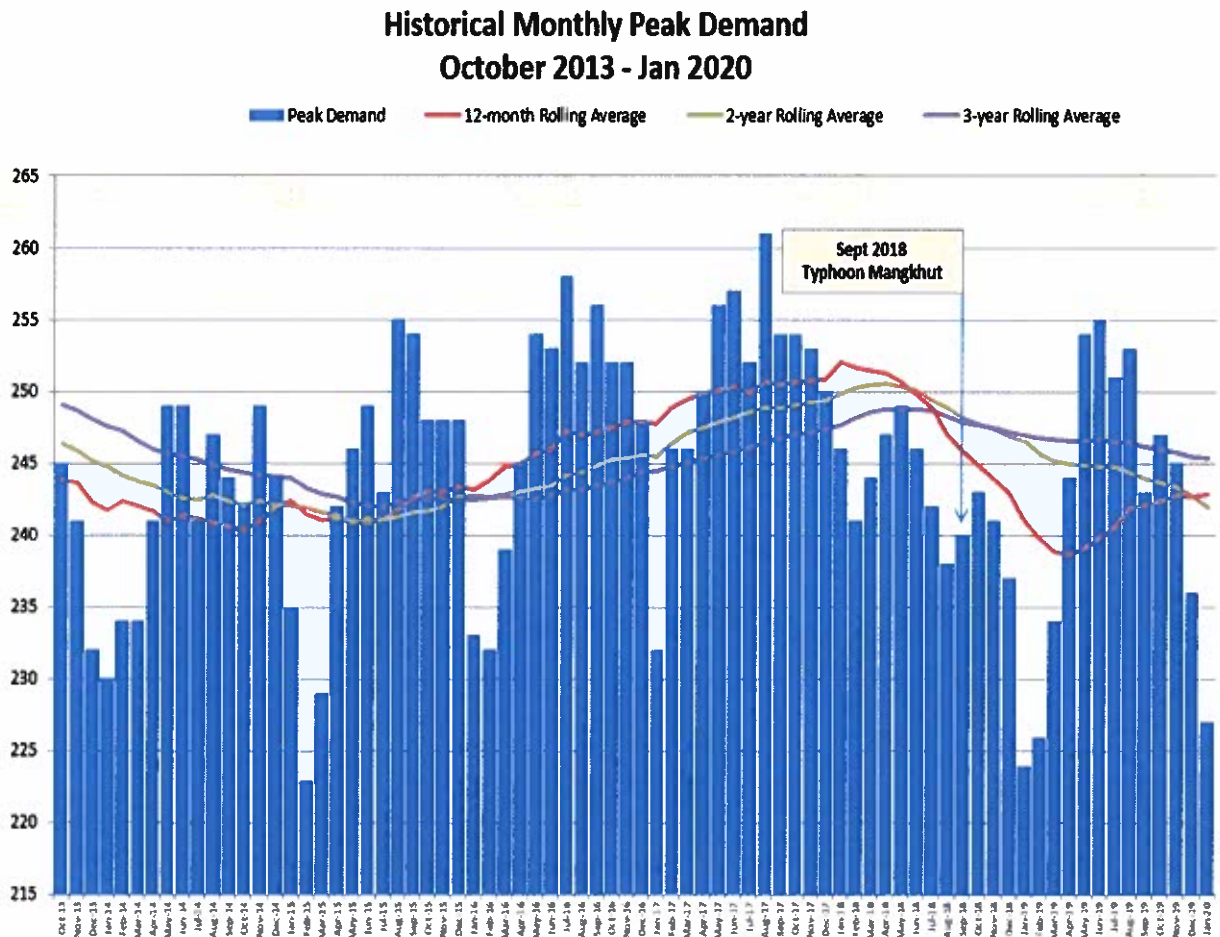
9. ENERGY STORAGE SYSTEM (ESS) UPDATE

- The testing of the 40 MW ESS at the Talofofu and Hagatna substations are scheduled to begin at the end of this month. A third party commissioning team is arriving to oversee the testing. Once commissioned the ESS will help mitigate most of the under frequency outages caused by the tripping of conventional generation and the quick ramp down by Solar PV systems. The ESS system will improve system power quality and decrease spinning reserve cost.
- Details as follows:
 - \$35M funding thru GPA 2014 Bond Issuance
 - Frequency Control Unit 40MW / 10 MWH System
 - Battery Life under 20 Year Warranty
 - LG contracted to provide O&M services over the next 20 Years
 - The 40MW is located at two sites: Hagatna 24 MW ESS and Talofofu 16 MW ESS
- The following are pictures of the Hagatna 24 MW and the 16 MW Talofofu Energy Storage System:
No pictures available.

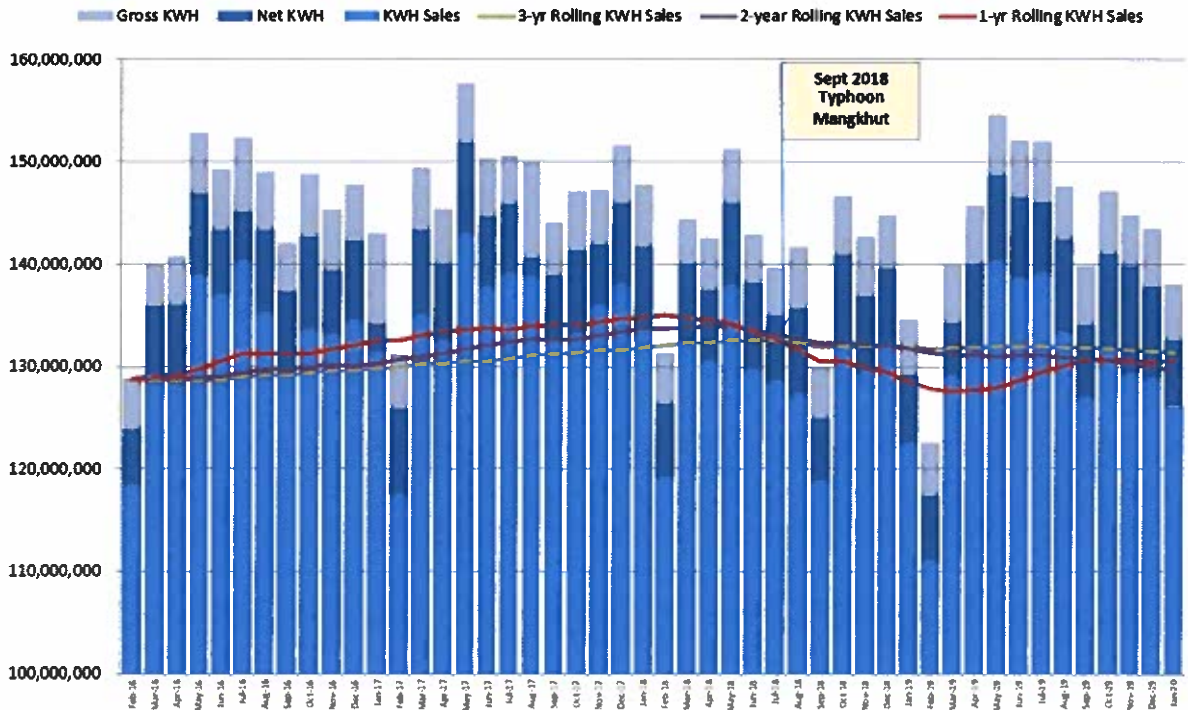
10. LEGISLATIVE ACTIVITY

- **Bill 196-35:** A roundtable was held by Senator Nelson related to providing procurement authority to GDOE to directly procure for Solar PV systems for public schools. I participated in the roundtable discussions and provided testimony with specific recommendations concerning GPA's involvement (attached).
- **Bill 219-35:** Senator San Agustin held a public hearing on the proposed legislation that would to provide GDOE and other educational institutions (GCC, UOG, charter schools, etc.) similar procurement authority and establish solar PV program rules. I attended the roundtable and provided testimony on the proposed bill. Senator San Agustin has requested for proposed revisions to the bill, as introduced.

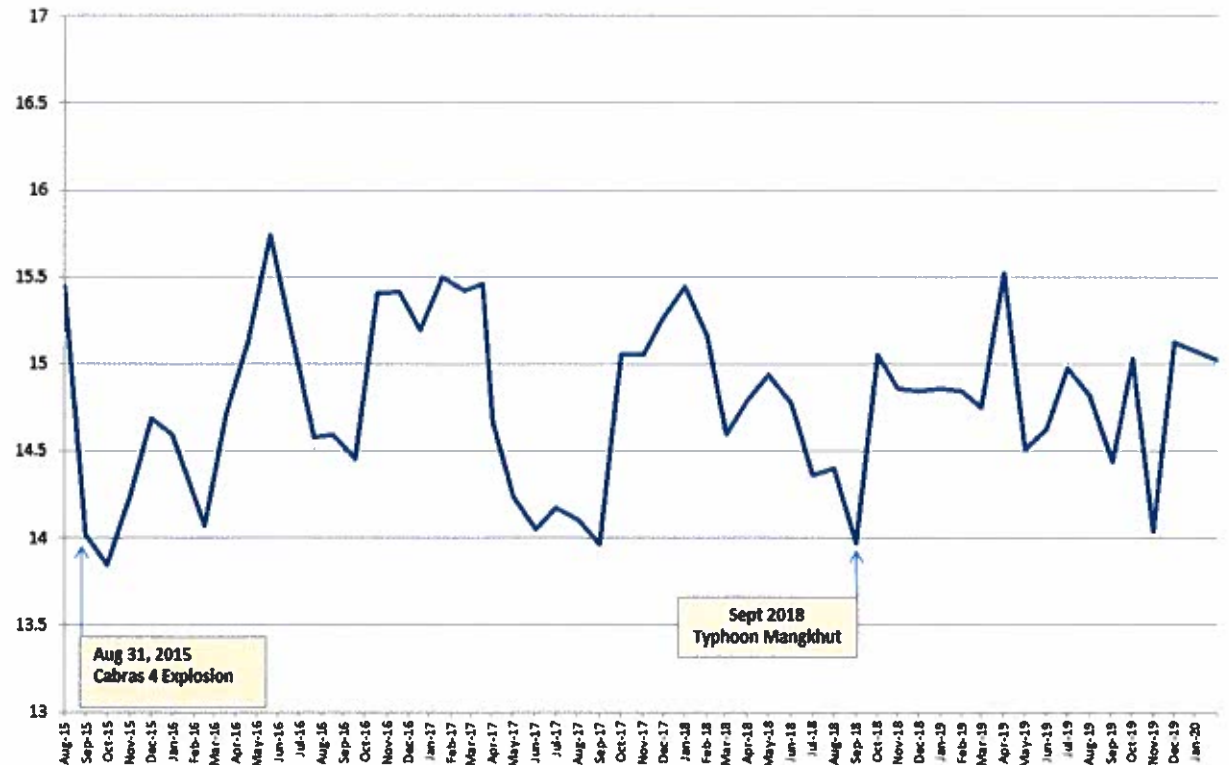
11. The following graphs show the updated system information:



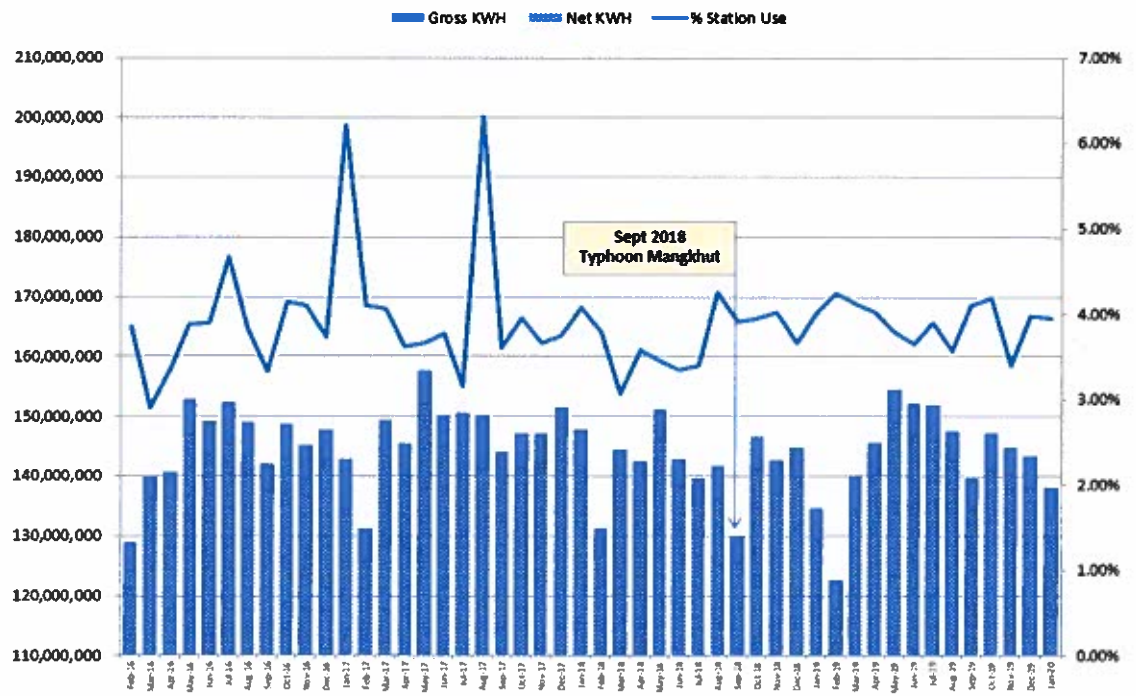
Historical KWH Sales Feb 2016 - Jan 2020



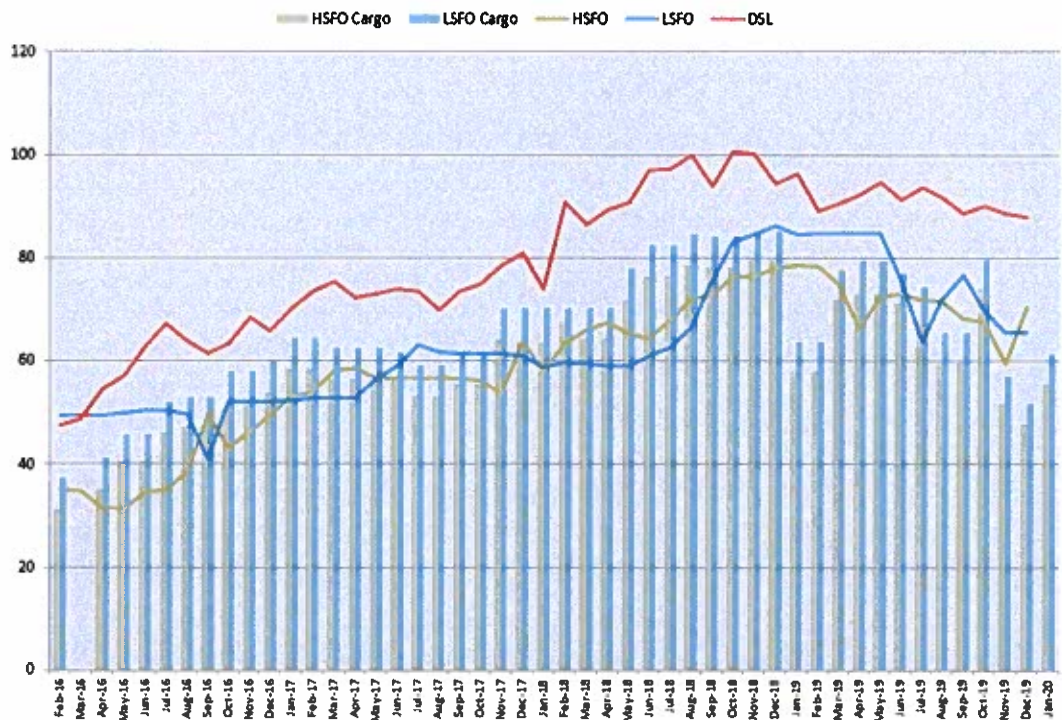
SYSTEM GROSS HEAT RATE (KWH/Gal) Aug 2015 - Jan 2020



Gross and Net Generation (KWH) Feb 2016 - Jan 2020



Fuel Cargo and Fuel Consumption Costs (\$/bbl) Feb 2016 - Jan 2020



5.2 Financials – Not discussed.

5.3 Resolution 2020-01 NEM Policy Requiring Installation of ESS for New NEM Solar PV & Wind Turbine Customers

Guam Public Law 27-132 (December 2004) created Net Metering for Guam and assigned the Guam Public Utilities Commission (PUC) the responsibility for setting the Net Metering Rate for excess renewable energy fed into GPA's Distribution System. NEM customers receive services from the grid subsidized by non-NEM customers including but not limited to:

- 1) Use of the grid to sell power (get credit at full retail rate for excess production);
- 2) Use of the grid to energize their homes at night, but credited back from their production (uses GPA Grid as storage);
- 3) Frequency regulation absorbed by grid for intermittencies;
- 4) Reactive power supply;
- 5) Voltage regulation;
- 6) Stand-by power on overcast days when the sun does not shine.

Solar PV production is intermittent and would require an accompanying energy storage system such as a battery or Frequency Control Capability to provide smooth energy into the customer premise or power grid. A 25 MW utility scale solar PV farm and an estimated 24 MW of net metering capacity tied in to the grid without ESS or Frequency Control Capability, resulting in significant intermittency which degrades the reliability of the island wide power system (IWPS). Production graphs of the utility-scale Dandan solar PV farm during several consecutive weeks of rainy weather, aptly illustrates the solar PV production is inconsistent and requires substantial battery storage reserves.

The number of automatic under-frequency load shedding events have increased substantially over the past few years due to intermittency of solar PV tied into the island's power grid. As of October 31, 2019, GPA customers experienced 27 feeder trips or outages due to solar PV systems without ESS or Frequency Control Capabilities. Although, the pending utility-scale 40 MW ESS will control system frequencies and decrease these outages, the addition of more intermittent energy into the grid will continue to degrade system reliability. GPA cannot continue to add intermittent energy production into the grid without requiring all future customer owned solar PV and wind turbine systems to also have ESS or Frequency Control Capability. GPA could provide Energy Storage System (ESS) into the grid at low cost due to its opportunities through economies of scale.

GPA recommends that new utility-scale, and NEM solar PV and wind turbine systems must have ESS or Frequency Control Capability after **June 01, 2020**, in order to be tied into island power grid. However, GPA will petition the PUC to create an Energy Storage Rate Schedule, a new NEM customer may select the new Rate Schedule in lieu of providing ESS or Frequency Control Capability.

GPA recommends the initial Energy Storage Rate Schedule be set at \$2.43 per kW per month, as installed. These moves will actually continue to promote the development of renewable energy on Guam and give choices and flexibility to the individual in a way that is in their best economical interest.

GM Benavente said that this process began in November and we have done many outreach program / presentation over the past few months to educate the consumer why it is needed. He said this is needed to ensure that the reliability of the system is maintained. GPA currently has about 49 MW or 25% energy intermittency at this time. The new energy storage system will be tested in March and will improve the system. He does not want to see a degradation due to non controlled intermittency, He recommends that all NEM customers have frequency controlled capability or batteries after June 1, 2020. GPA can provide this and GPA can provide this at low cost – less than 2-cents per kWh.

Comm. Sanchez motioned approve Resolution 2020-01 second by Comm. Guthertz.

In discussion it was discussed that addition to resolution include petitioning PUC and choices and flexibility for customers according to their financial capability and the extension for implementation in June 1st.

Comm. Duenas recommended to amend line 76 to add “GPA to “authorize” petition of the PUC”

Comm. Sanchez motioned to approve the amendment of line 76 second by Comm. Guthertz.

On the amendment there was no further discussion or objection and the amendment passed with 5 ayes

On the main motion as amended there was no further discussion or objection and the resolution passed. The vote was unanimous.

5.4 Resolution 2020-05 Cost of Service Change of Rate

As a Public Corporation and an enterprise fund it is expected that GPA will set its rates in a manner that will cover the costs of operation of the Authority. The rates of the Authority are subject to regulation by the Public Utilities Commission (PUC). Condominium customers are currently charged under Rate Schedules G (General Service Non-Demand), J (General Service Demand), or P (Large Power Service). Several condominium owners, occupants and representatives thereof seek to apply Rate Schedule R (Residential Service, for single phase service metered dwellings) to condominium customers.

The PUC has requested a recommendation from GPA and CCU on the petition before them to provide residential rates for condominium homes. GPA seeks an equitable rate plan which reflects actual cost of service. The Authority is to file a petition to create a rate for condominium with master meter servicing multiple dwelling units not individually metered, and amend Rate Schedule R to include three phase service metered single family dwellings.

The proposed tariff will be available for condominium buildings in service or within the active building permit process as of the approved date of the tariff by Public Utilities Commission. Some condominium customers might not wish to change their Rate Schedule (G, J or P). A customer shall be given a one-time option to elect to transfer to Rate Schedule D.

GPA requests the Consolidated Commission on Utilities to authorize the Authority to file such petition with the Guam Public Utilities Commission.

GM Benavente said in the past, condos were built with one master meters and does not allow for individual meters; GPA moving towards policy of individual meters. Rationale - it promotes energy conservation and energy savings allowing individual to control it's on usage

Management has been working on discussions relative to language because there are phrases that conflict such as to Multi-dwelling vs. condominium or apartment vs. condominium. GM recommends to give this more thought.

Comm. Sanchez motioned to approve Resolution 2020-05 second by Comm. Guthertz.

In discussion Comm. Sanchez asked of one has a 6 unit apartment with a single meter do they qualify for this rate and the CFO said yes. It was mentioned that management is not aware of any apartments that exist with a master meter. In the future any multi-family dwellings must apply for individual metes.

Comm. Guthertz asked how many buildings have single master meters for everything. The CFO said about 20.

On the motion there was no further discussion and the motion passed unanimously.

5.5 Resolution 2020-06 Contract for Bulk Supply of Residual Fuel Oil NO. 6

The Guam Power Authority's current contract for Supply of Residual Fuel Oil No.6 for the Baseload Plants is expiring in August 31, 2020. The fuel supply contract is necessary to provide uninterrupted supply of fuel for the Baseload plants namely Cabras 1&2 and MEC 8&9

The 2-year contract is estimated to exceed \$1.5M requiring prior approval from the PUC and will be funded with fuel revenue funds.

The contract is planned for an initial period of three (3) years to commence on or about September 01, 2020 and to expire on August 31, 2023, with the option to extend for two (2) additional one-year terms. The IFB solicitation will commence after CCU and PUC approval.

Comm. Sanchez motioned to approve Resolution 2020-06 second by Comm Limtiaco. There was no further discussion or objection and the motion passed. The vote was unanimous.

6. OTHER DISCUSSION_- None

7. ANNOUNCEMENTS

7.1 Next CCU Meetings

The Chairman announced that the next meeting would be a GWA Work Session on March 17, a GPA Work Session on March 19. The regular monthly CCU meeting is on March 24.

The Chairman called for a 5-minute recess before executive session. It was 6:01 p.m.

After recess GWA Counsel Kelly Clark made recommendation to move the meeting to Executive Session. It was 6:10 p.m.

8. EXECUTIVE SESSION

8.1 Litigation Matter

8.2 Personnel Matter

After executive session there was discussion about outcomes of executive evaluations and how to move forward re discussion of such in open session and pros and cons of such action. The Commission is trying to determine best practice that can be adopted and that is also within the guidelines of open government law. Their goal is to develop and adopt a policy. Also discussed is the proposed rating system – satisfactory, unsatisfactory etc. It was mentioned that KPI's should be tied into performance evaluations. The discussion also included the definition of "personnel matter". Comm. Duenas mentioned that we have an attorney and we should listen to our attorney. Legal Counsel Guerrero said you cannot discuss personnel matter in open session because you can be subject to a law suit Comm. Limtiaco asked counsel about personnel matters. If there was a metrics that is already being discussed in open session i.e. in the GM reports which is a clear measurement of how a person is performing how are we not able to discuss this in public as part of their evaluation? At the end of the discussion Counsel was asked to do more research re "personnel matter", "liability" and "employment" and return with an opinion for the CCU and the Commission will go from there. Counsel was asked to also look into the Collective Bargaining Law to see if there is any information there that can be helpful.

9. ADJOURNMENT

There being no other business to bring before the Commission, the meeting adjourned at 6:50 p.m.

||s||

Bls

Attested



JOSEPH T. DUENAS, Chairman



MICHAEL T. LIMTIACO Secretary