



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., January 28, 2020

MINUTES

1. CALL TO ORDER

The CCU Chairman called the regular meeting of January 28, 2020 to order at 5:34 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
Ron Topasna	Operations / GWA
Paul Kemp	AGM Compliance & Safety / GWA
Brian Hess	GWA
Gilda Mafnas	Asst. CFO / GWA
Tom Cruz	Chief Engineer / GWA
Mauryn McDonald	Engineering / GWA
Patti Diego	Communications / GPA
Vien Wong	IT Support / GPA IT
Rick Peredo	IT Support / GPA IT
Joyce Sayama	Mgmt. Analyst / GPA Ex.Office
Antoinette Acfalle	Legal Secretary / GWA Ex.Office
Lou Sablan	Board Secretary / CCU

Guests:

Nestor Licanto	KUAM News
Ann Marie Muna	AM Insurance
Fred Horecky	PUC

2. APPROVAL OF MINUTES

The Minutes of August 27, 2019 and September 4, 2019 were presented for approval.

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

The Chairman announced a change on the Agenda and GPA will present first.

3. COMMUNICATIONS

3.1 Public Comments - None

4. GWA

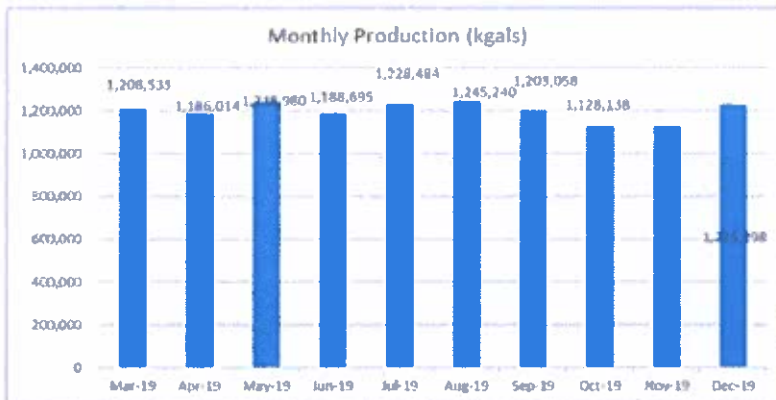
The Chairman called for a 5-minute recess before going into GWA business; it was 6:35 p.m. The meeting was resumed at 6:41 p.m.

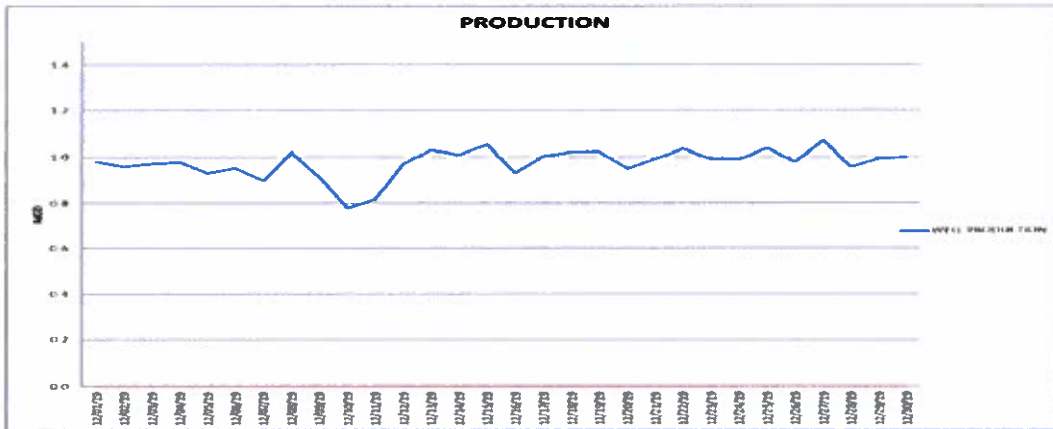
4.1 GM Report

GM Bordallo gave his usual GM Report.

**Operations Update
Production (December 2019)**

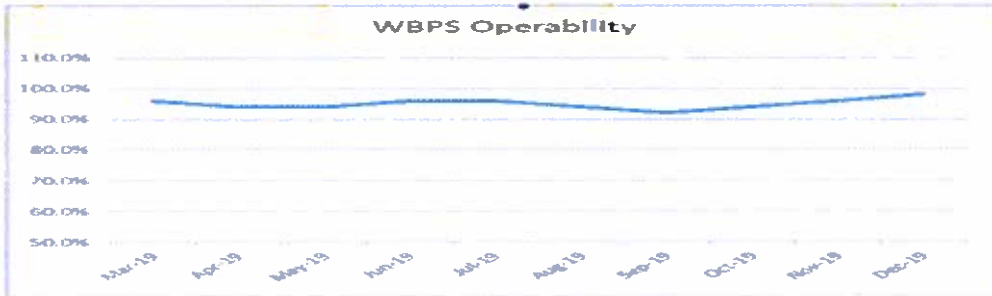
Monthly Production Summary - December 2019			DW Status as of 12/31/2019	
Deep Wells 35.7 MGD			Active	99
Active wells =	99 of 120		Grounded motor or Pump Failure	6
Avg days in operation =	31 days			A25-003-008-020-406-M17B
Total Production =	1,108,046 Kgals		Out of commission	8
Springs 0.51 MGD				A02-A07-A28-005-013-M14-MJ01-MJ05
Avg days in operation =	31 days		Temporarily Secured	3
Total Production =	15,953 Kgals			A23-A25-F10
Ugum Surface Water Plant 2.3 MGD			Standby	4
Avg days in operation =	31 days			A30-A39-F16-M12
Total Production =	72,019 Kgals		TOTAL	120
Tumon Maui Well 0.98 MGD				
Avg days in operation =	31 days			
Total Production =	30,280 Kgals			
1,226,298 Kgals 39.6 MGD				



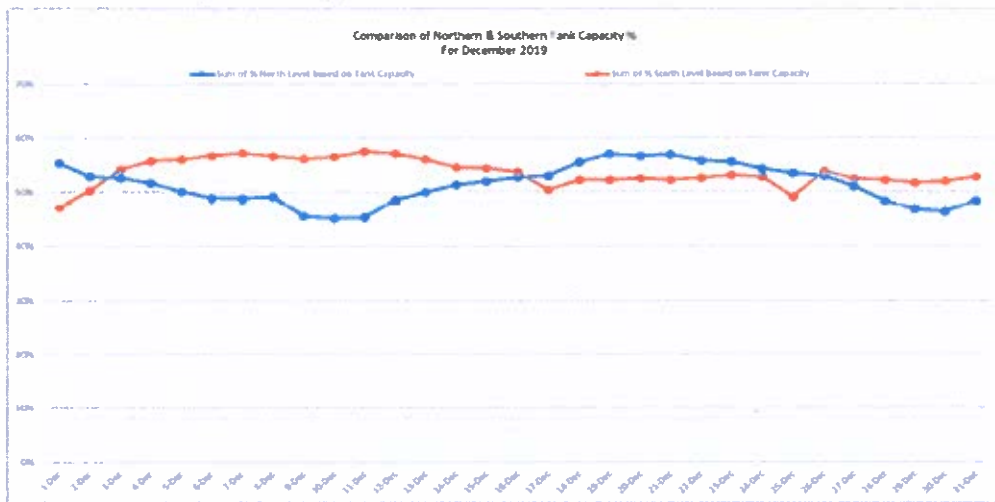


Distribution (December 2019)

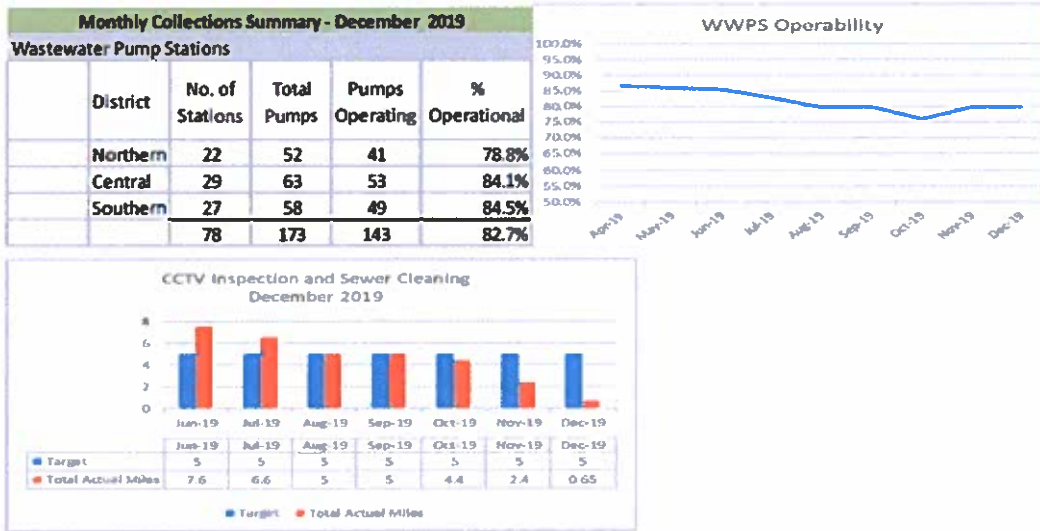
Monthly Distribution Summary - December 2019				
Water Booster Pump Stations				
District	No. of Stations	Total Pumps	Pumps Operating	% Operational
Northern	13	26	25	96.2%
Central	7	15	15	100.0%
Southern	7	15	15	100.0%
Total	27	56	55	98.2%



Distribution – Tank Levels (December 2019)



Wastewater Collections (December 2019)



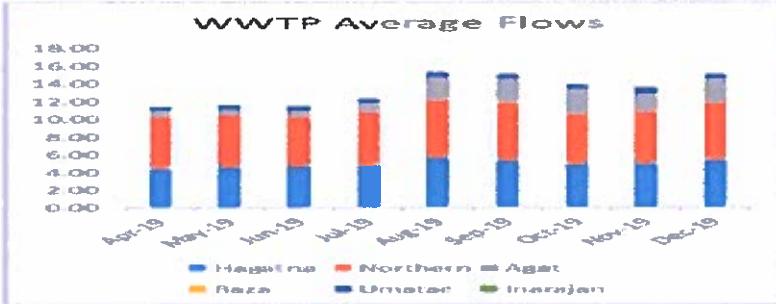
Wastewater Collections –Cleaning/Jetting (December 2019)

Anigua / Agana - Cleaned Line Areas



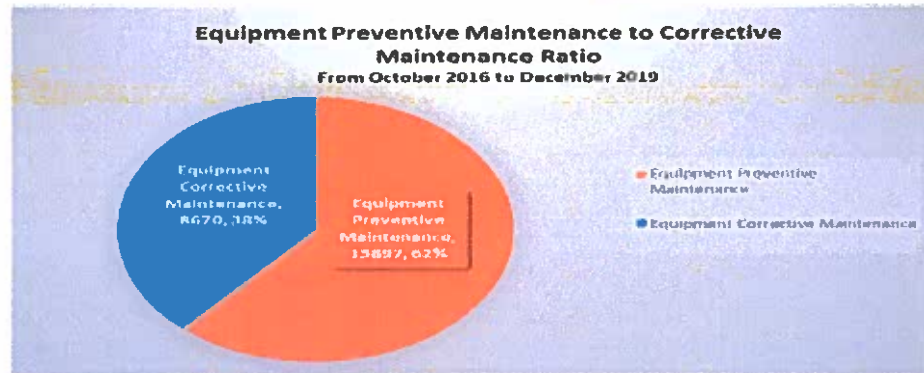
Wastewater Treatment (December 2019)

Monthly Wastewater Treatment Summary - December 2019				
WW Treatment Plants - Flows				
Facility	Avg. Daily Flows	Sludge (lbs)	Sludge Disp. (\$)	
Hagatna	5.30	501,020	\$ 45,092	
Northern	6.41	911,480	\$ 82,033	
Agat	2.8	86,360	\$ 7,772	
Baza	0			
Umatac	0.39			
Inarajan	0.15			
	15.05	1,498,860	\$ 134,897	

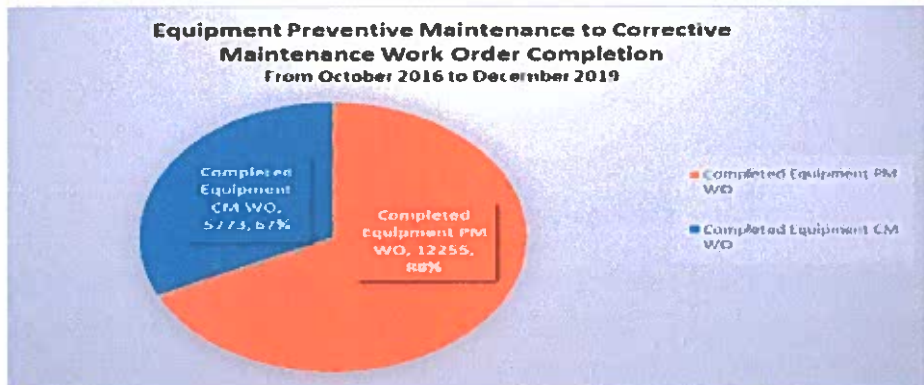


Asset Management (December 2019)

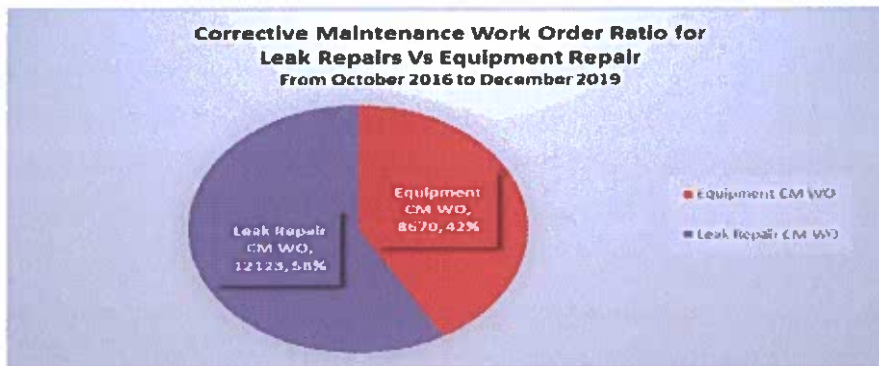
I. Equipment Preventive Maintenance to Corrective Maintenance Ratio



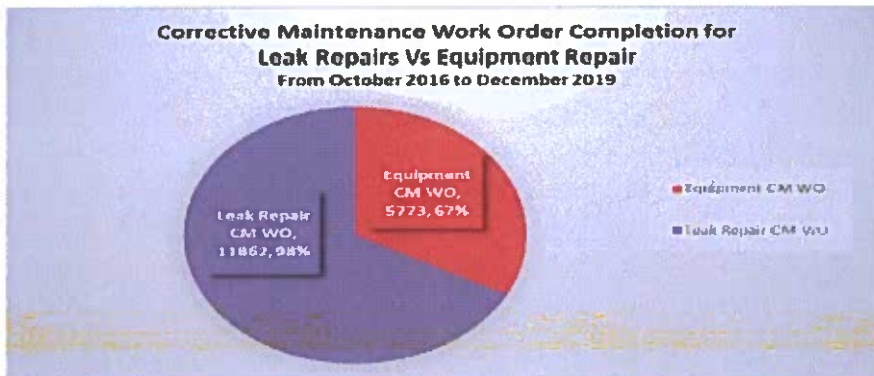
II. Equipment Preventive Maintenance to Corrective Maintenance Work Order Completion



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

- Managed major break in Yigo near Simon Sanchez H.S. on an undocumented main line across school grounds; five (5) wells secured to control flows for repairs; reservoirs were maintained despite problem isolating this unknown line.
- Tropical Storm Kammuri:
 - Ugum was secured during heavy rains;
 - Power outages affected several pump stations and deep wells; rovers responded throughout the storm to address re-sets.
 - Santa Rosa BPS had generator issues, no water in that area for a short period (5-6 hrs)
- Problems with line breaks on older ACP lines in
 - Casimiru (Nov)
 - Tai, Mangilao (Dec)
 - Pago Bay 2x (Dec)

Wastewater Collection & Treatment

- Tropical Storm Kammuri:
 - Baza Gardens pump station had power issues during storm, EQ tank filled
 - Southern ejector stations (no permanent generators) were affected by power outages; no issues reported
 - FEMA PS had electrical issues; trucks used to control flows
 - Barrigada SMH SSO (Wendy's) due to heavy rains
- Collection System:
 - Route 2 project final lateral connections being made
 - Route 1 and Route 4 projects still in progress; traffic impacts are on-going
 - Route 3 and Route 9 interceptor work is about 56% complete
- Magatna WWTP
 - Two clarifiers awaiting parts for repairs; plant operating satisfactorily on one clarifier
- Umatac-Merizo
 - Project completed, pending minor scope items delayed due to presence of Moorehen
 - Ribbon cutting being held in January
- NDWWTP
 - Major excavation work for clarifiers and ditches on-going
 - Water supply issues continue until lines in the area are upgraded

COMPLETED FIELD ACTIVITY JAN 2017 THRU DEC 2019 (POSTED IN CIS)														COMPLETED FIELD ACTIVITIES (per process) TO BE POSTED IN CIS	
2017	2018	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19		TOTAL
GVA - Meter Exchange															242

# OF METERS TESTED AS PER METER TEST FACILITY REPORTS:	6079	12259	937	730	518	1231	1135	621	643	470	731	1158	619	485	27616
# OF FIELD CREW PERFORMING CHANGE OUTS (MON THRU FRI):	234	261	1	1	10	8	7	7	7	7	9	7	7	7	8
# OF ADMIN STAFF TO CREATE AND POST FIELD ACTIVITIES IN CIS:	10	63	0	0	4	9	6	6	7	6	6	6	5	5	
TOTAL:	29	22	1	1	14	17	13	13	14	13	15	13	12	13	

REMAINING ACTIVE BADGER LP MODELS TO BE REPLACED AS OF Dec 31 2019:

2716

OF BADGER METERS IN STOCK AS OF JAN 13 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" RCCL Model M25 Disc Meter	1122	570	76	0	1768
3/4"	METER, Badger AMR 5/8" x 3/4" **WARRANTY** RCCL Model M25	0	0	0	0	0
3/4"	METER, Badger 5/8"x3/4" NSF61-G RCCL M25LL Disc Meter Integral	283	0	7	0	300
3/4"	METER, Badger AMR 5/8" x 3/4" RCCL Model M25 ***RPM***	0	0	0	0	0
3/4"	METER, Badger E-SERIES 5/8"x3/4" ULTRASONIC	975	0	0	0	975

Backbilling through December 2019

Guam Waterworks Authority

Collections Report on Accounts Backbilled thru December 31, 2019

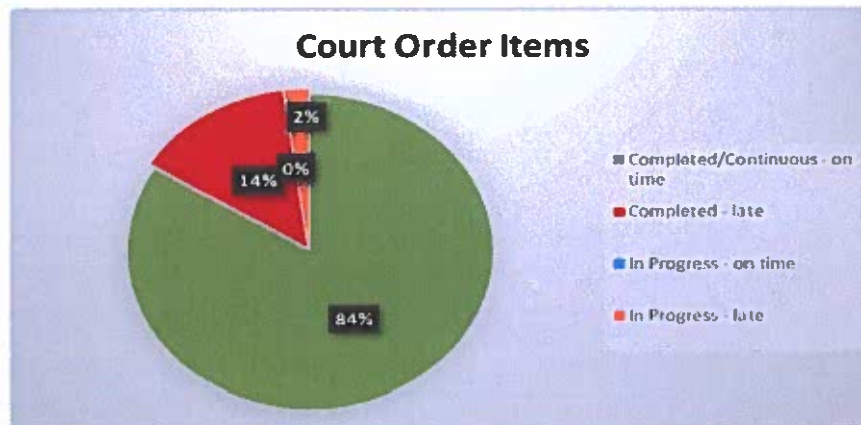
For fiscal years 2015, 2016, 2017, 2018, 2019 and 2020

Accounts Billed			Collection Status											
			Amounts Collected			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	%
FY2015	17	\$ 882	17	\$ 882	100%	0	\$ -		0	\$ -		0	\$ -	
FY2016	537	\$ 397,450	472	\$ 322,762	81%	14	\$ 20,967	5%	24	\$ 29,833	8%	27	\$ 23,887	6%
FY2017	1,374	\$ 742,109	1,220	\$ 574,467	77%	43	\$ 58,378	8%	62	\$ 68,495	9%	47	\$ 39,768	5%
FY2018	8,327	\$ 3,064,384	7,533	\$ 2,415,858	75%	107	\$ 95,121	3%	509	\$ 385,794	13%	176	\$ 166,611	5%
FY2020	575	\$ 159,039	212	\$ 25,530	36%	6	\$ 1,631	1%	350	\$ 129,921	82%	7	\$ 1,957	0%
Total	10,830	\$ 4,363,864	9,466	\$ 3,380,500	77%	172	\$ 177,098	4%	945	\$ 614,043	14%	257	\$ 232,229	5%

¹ Collections thru January 10, 2020

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%



One Guam Update

- **Santa Rosa Tank**
 - No update on AAFB response to request for data substantiating operational improvements.

- **OEA Projects**
 - Coordination on-going for remaining Rt 3 / RT 9 Interceptor work, access to South Finegayan areas
 - Close to resolving issues with two new monitoring wells sites being affected by MILCON projects;
 - Yigo well – Issues resolved with regard to access.
 - Marbo well – adjustment of well location does not affect clearances for site; Navy assisting with possible protective measure for nearby traffic

- **Property Transfers:**
 - **BPM-1 Monitoring Well:** Property was transferred twice; waiting on Navy determination on course of action
 - **Cabras waterline:** pending completion of Navy CIP replacement
 - **Murray Road Sewer Infrastructure:** with installation for approval prior to D.C. approval
 - **ACEORP water tunnel:** Inspections conducted; process for transfer is underway

- **Marine Cantonment**
 - MOU for Tumon-Maui reserved 210 GPM for Camp Blaz
 - Navy/Marine Corps considering additional supply; will advise GWA if needed

Court Order

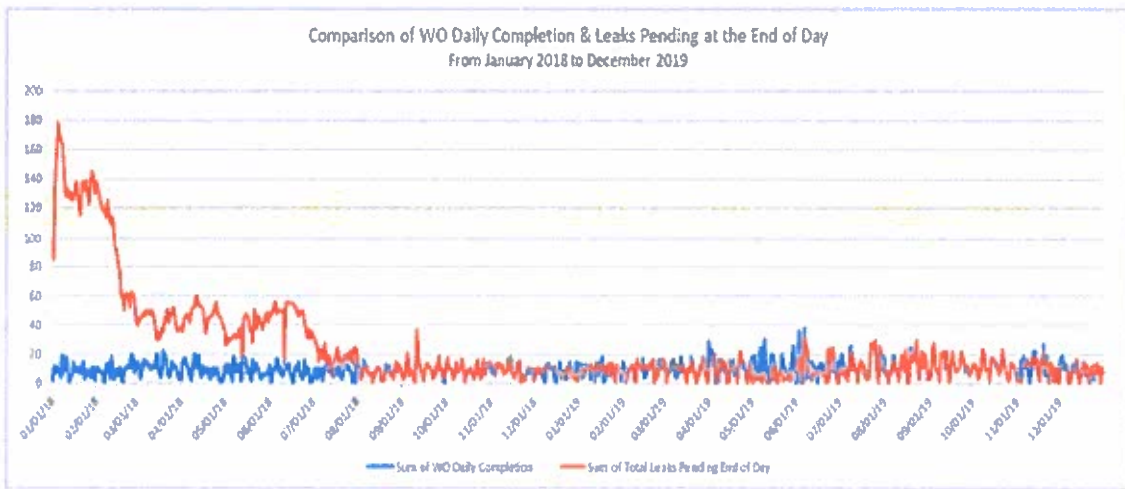
Status Information (for November and December 2019)

- **2 items delayed**
 - **Water Reservoir Repair, Replacement or Relocation program, CO # 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:**
 - 11-07-2019 Mangilao Mayor's office MH overflow; SSO (FOG)
 - 11-21-2019 Tai Mangilao PS Wet Well overflow. (airlocked pump)
 - 11-25-2019 Pas Street, Tamuning; MH overflow. (FOG)
 - 11-27-2019 Vietnam Veterans Memorial, (Rt. 10) Barrigada; SSO (Rain)
 - 11-27-2019 Serenu Ave, Tamuning; SSO (Rain)
 - 11-27-2019 New Chaot pipeline, Sinajana; SSO. (Rain)
 - 11-27-2019 station-13 Umatac-Merizo Influent Pumps; SSO. (Warranty Issue - control malfunction)
 - 11-27-2019, RR Cruz St. Santa Rita WO# 19-11-1394 Hyundai (Tropical Storm Kammuri)
 - 11-27-2019, #199 Aga St. Hyundai (Tropical Storm Kammuri.)
 - 11-27-2019, Chalan Canton Tasi Station PS #17 WO# 19-11-1398 (Tropical Storm Kammuri)
 - 11-27-2019, Chalan Canton Tasi Station by Merizo Church (Tropical Storm Kammuri)
 - 11-27-2019, Baza Garden Pump Station EQ Tank (Tropical Storm Kammuri) (Warranty Issue).
 - 11-29-2019, Jesus Lujan St# 19-11-1397 (Tropical Storm Kammuri)
 - 12-02-2019 Pas Street Tamuning MH overflow
 - 12-14-2019 124 Tun Jesus Crisostomo St, Tamuning SSO – FOG
 - 12-14-2019, Station 12 Force Main Break WO# 19-12-0556 – Aged infrastructure

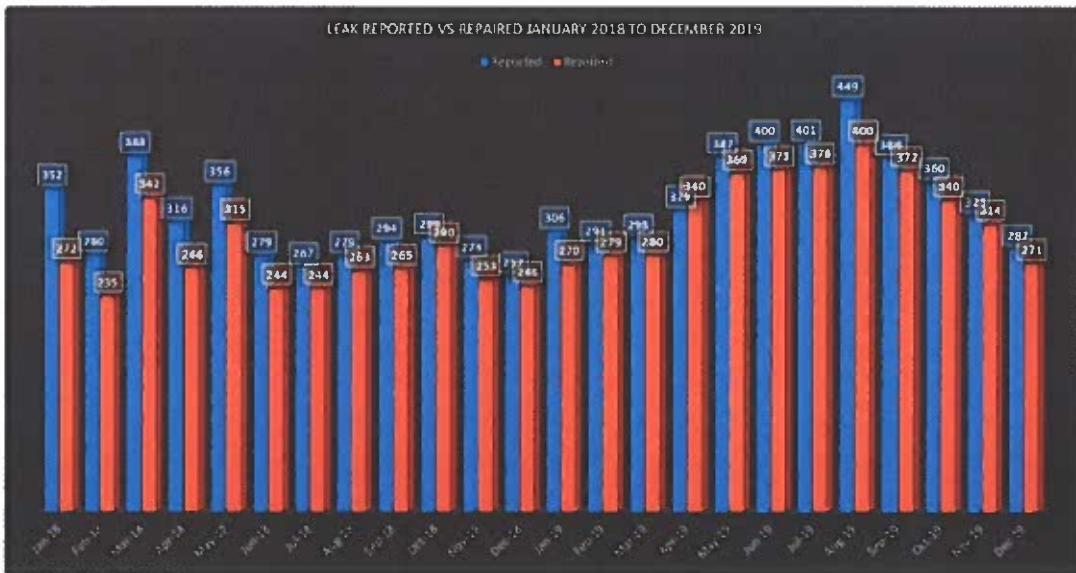
Land Acquisition Summary (as of November/December 2019)

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.

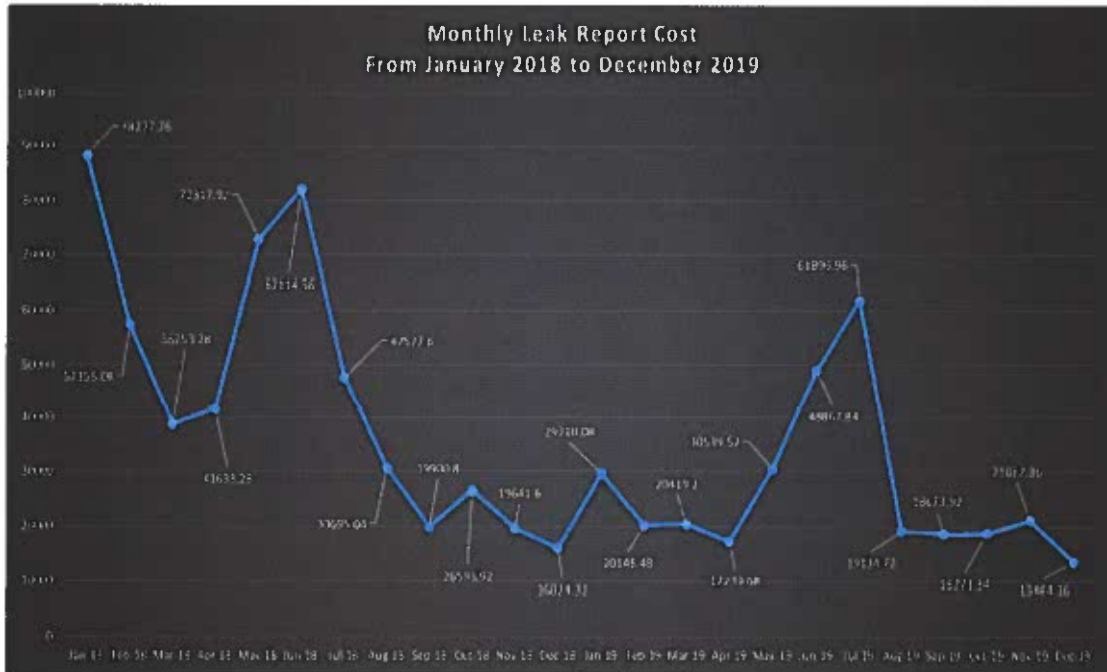
Leak Repair Summary (December 2019)



Comparison of Leaks Reported vs. Leaks Repaired (December 2019)



Monthly Leak Report Cost (December 2019)



Assumptions:

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

There was a discussion relative to the Stipulation Summary. The GM gave an overview of key factors and milestones that were discussed with PUC consultant Georgetown relative to the Stipulation.

Comm. Sanchez talked about debt service coverage which changed from 1.75 to 1.4 and it says CCU policy has to be revised. He said he does not want to put management in the position where they are dictating to us what our policy should be. The GM clarified that he does not want it to appear that he is dictating to the Board. There was a conflict with PUC vs. CCU policy. Comm. Sanchez said that he is concerned that in the future should the GM bring back to the Commission for input.

In Comm. Sanchez's opinion it is awkward situation when management is negotiating something which ends up making a significant change in policy for the Commission and we may want to think about a way to figure out how to insulate our managers

The GM said his understanding prior to signing the Stipulation was that there never was a resolution approving a Stipulation. In his opinion he was not doing anything that has not been done before. The Stipulation that was signed does not change the policy it only says that GWA is in support of a recommendation to the board to adjust its policy accordingly.

Comm. Duenas does not see this as a policy change. The PUC is the one that will decide if the debt service coverage will be changed. When we do these things the final call is PUC's. The final arbiter is the PUC.

Comm. Simon referred to another example in the Stipulation this one relative to binding GWA to pursue legislation. He said he doesn't think the General Manager intends to usurp the CCU but words mean something.

Comm. Santos said we were not there and that perhaps in the future the Commission should make themselves available.

Comm. Sanchez said he is just voicing his concern for the record.

Comm. Guthertz thanked both Comm. Sanchez and Santos, we got the point and said we should move on.

Comm. Sanchez said he would like to see a sample bill. The GM said he will provide this.

4.2 Financials

It was discussed that the financials were discussed at the GWA work session so it was not discussed again at this meeting.

4.3 Resolution 10-FY2020 Construction Contract for the Tank Repair and Bypass Project

The project's objective is the repair/rehabilitation of eight (8) reservoir locations as mandated by the Order for Preliminary Relief Re: Deadlines for Outstanding Projects Under the Amended Stipulated Order, Paragraph 29. The reservoirs are: Santa Ana, Agat-Umatac, Umatac Subdivision, Pugual Merizo, Malojloj, Windward Hills, Kaiser and Astumbo No. 2 tanks

The reservoirs are under the 2011 Court Order deadline requirements established, and therefore this project is necessary and urgent.

GWA is seeking approval to enter into contract with AIC International, Inc. for the Base Bid work for the bypass and minor repair work on the tanks listed above, and Additive Bid No. 1 (Yigo No. 3 Major Repair). A summary of work for each site under this authorization is presented below.

Santa Ana - the tank located off Highway 2 in Agat heading South just before the Agat Residential Transfer Station.

The existing booster pump station onsite will be modified with two new pumps and one new pressure reducing and sustaining valve (PRSV). The modifications are needed to bypass the tank for the inspection and repair. After inspection, the actual repairs will be determined. Minor repairs are covered under the Base Bid. Major repairs are covered under the Additive Bid. If major repairs are required as determined by the inspections, a change order will be negotiated with the Contractor.

Agat-Umatac - the tank is located off Highway 2 in Umatac heading South before Para I Lalahi Ta Park.

There is an existing bypass system in place. The tank will be taken offline and inspected. After inspection, the actual repairs will be determined. Minor repairs are covered under the Base Bid.

Major repairs are covered under the Additive Bid. If major repairs are required as determined by the inspections, a change order will be negotiated with the Contractor.

Umatac Subdivision -the tank is located off Jesus A. Quidachay Street in Umatac heading South uphill from the Umatac bridge. Toguan Booster Pump Station is located off San Dionisio Drive in Umatac heading South downhill.

The existing booster pump station (Toguan BPS) will be modified with a new pump skid and a new hydro-pneumatic tank. The modifications are needed to bypass the tank for inspection and repair. Minor repairs are covered under the Base Bid. Major repairs are covered under the Additive Bid. If major repairs are required as determined by the inspections, a change order will be negotiated with the Contractor

Pigua Merizo - the tank is located off Chalan Joseph A. Cruz Street, Highway 4 in Merizo heading South uphill after the Merizo Elementary School. Geus Booster Pump Station is located off Espinosa Avenue, Highway 4 in Merizo heading South at the 3 way-intersection in front of Merizo Shell Gas Station.

The existing booster pump station (Geus BPS) will be modified with a new pump skid and a new hydro-pneumatic tank. The modifications are needed to bypass the tank inspection and repair. The work will also include a new pressure reducing and sustaining valve (PRSV). Minor repairs are covered under the Base Bid. Major repairs are covered under the Additive Bid. If major repairs are required as determined by the inspections, a change order will be negotiated with the Contractor

Malojloj- the tank is located off Highway 4 in Malojloj heading South after the Malojloj Residential Transfer Station.

The existing reservoir inlet and outlet pipping will be modified to bypass the tank for inspection and repair. The work will also include installing a pressure reducing and sustaining valve (PRSV). Minor repairs are covered under the Base Bid. Major repairs are covered under the Additive Bid. If major repairs are required as determined by the inspection, a change order will be negotiated with the Contractor.

Windward Hills - the tank is located off Camacho Street, Highway 4A in Talofofo heading South after Onward Talofofo Golf Club.

GWA operations and engineering is currently working on a bypass for the tank site. Cleaning and preparation of the tank for inspection is included in this contract. The condition of tank appears to need major repairs. Under the Additive Bid, major repair items are listed. A change order will be negotiated with the Contactor once the repairs are determined by the inspection.

Kaiser - the tank is located off Marine Corps Drive in Dededo, heading North before Lucky Supplies. Under the Pressure Zone Realignment Phase I construction project, a bypass for the Kaiser tank will be completed. Cleaning and preparation of the tank for inspection is included in this contract. Under the Additive Bid, major repair items are listed. A change order will be negotiated with the Contactor once the repairs are determined by the inspection.

Astumbo No. 2 - the tank is located off Chalan Palauan street, Y-Sengsong Road in Dededo.

The major tank repair work involves installing a double bottom tank floor, drip rings to floor chimes, replacing tank shell manway nozzle, replacing tank exterior fill gauge and interior float

system, new tank hatch cover, tank vent and screen, roof guardrails, exterior tank ladder with cage, interior ladder with fall arrest assembly, complete exterior and interior coating, cathodic protection, and miscellaneous repairs.

Additive Bid Work - Included in this Authorization

- Additive Bid No. 1: Yigo No. 3 (formerly named Yigo No. 2 – 2.5 MG) Major Repair

GWA will seek additional approval from the CCU at a later time for additional Additive Bid Work for major repairs shown below. Major repair work includes new double bottom floor, complete exterior and interior coating, cathodic protection, vent, hatch, ladder, column and base plate repair, and miscellaneous repair items. The items below may be added to the Contract, depending on the findings during bypass and inspection work in the base bid as described above.

Additive Bid Work – Not Included in this Authorization

- Additive Bid No. 2: Santa Ana Major Repair
- Additive Bid No. 3: Umatac Subdivision Major Repair
- Additive Bid No. 4: Pigua Merizo Major Repair
- Additive Bid No. 5: Malojloj Major Repair
- Additive Bid No. 6: Agat-Umatac Major Repair
- Additive Bid No. 7: Windward Hills Major Repair
- Additive Bid No. 8: Kaiser Major Repair

The Base Bid and Additive Bid No. 1 proposal submitted by AIC International, Inc. is \$4,208,197.00 and \$1,194,129.00, respectively. The total requested funding amount is \$5,942,559.00. The total requested amount includes a 10% contingency. It will be funded by the water reservoir internal / external corrosion assessment program and the water system reservoir 2005 improvements.

The following are projected completion dates

Site(s)	Completion / Substantial Completion
<ul style="list-style-type: none"> • Santa Ana • Umatac Subdivision • Pigua Merizo • Malojloj 	NTP + 390 calendar days
Agat-Umatac	NTP + 180 calendar days
Astumbo No.2	NTP +270 calendar days
<ul style="list-style-type: none"> • Windward Hills • Kaiser 	Inspection preparation only
Yigo No. 3 Major Repair (Additive Bid No.1)	To Be Determined at C/O Issuance

The GM added that these are Court Ordered projects at 8 locations.

Comm. Santos motioned to pass Resolution 10-FY2020 second by Comm. Guthertz. There was no further discussion or objection and the motion passed unanimously.

4.4 Resolution 11-FY2020 Construction Contract for the Pressure Zone Realignment Construction Phase I Project

The project is spread across seven (7) different sites in the Base Bid – Carnation PRV(s), Okkodo PRV, Ysengsong PRV, Clara PRV, Kaiser PRV(s), Yigo Reservoir, and Astumbo Reservoir

1. Carnation - The existing Carnation pressure reducing valve (PRV) will be replaced with a new PRV, and a new Marbo PRV will also be constructed. The work will also include the construction of a new control building and line upgrades in the surrounding service area. The work is listed in the Base Bid. Carnation and Marbo work will be located near the Route 15 and Carnation Ave. intersection
2. Okkodo - The work will include the construction of a new Okkodo PRV to replace the existing PRV, a new meter in vault, and new control pedestal. The work is listed in the Base Bid.
Okkodo work will be located along Route 3, up the road from Okkodo High School.
3. Ysengsong - The work will include the construction of a new Ysengsong PRV and line upgrades in the surrounding service area. The work is listed in the Base Bid.. Ysengsong work will take place at the intersection of Ysengsong Rd., Chalan Balako, and Chalan Koda.
4. Clara - The work will consist of constructing a new Clara PRV and line upgrades. The work is listed in the Base Bid. Clara site work will be constructed along Ysengsong Rd., in front of GWA well D-11.
5. Kaiser - The work will consist of constructing a new Kaiser Bypass PRV, Kaiser PRV, new inlet and outlet meter vaults for Kaiser reservoir, a new control building, and line upgrades. The work is listed in the Base Bid. Kaiser PRV work will take place in front of GWA's Kaiser reservoir and at the intersection of Access Rd. and Route 1.
6. Yigo Reservoir - The work will consist of implementing the SCADA system for existing instrumentation. The work is listed in the Base Bid. Yigo and Astumbo reservoir work will take place at the GWA reservoirs for which the sites are named.
7. Astumbo Reservoir - The work will consist of implementing the SCADA system for existing instrumentation. The work is listed in the Base Bid.

This project is necessary in order for GWA to provide the appropriate pressures within the various service areas within its water distribution system. The work is also urgent, being critical to reducing background leaks through pressure control as a means to reduce GWA's non-revenue water, and accomplishes Level-of-Service (LOS) goals as defined in the GWA Water Resource Master Plan.

The bid proposal submitted by Sumitomo Mitsui Construction Co. LTD. is \$4,120,000.00. With a 10% contingency of \$412,000.00, the total project funding amount will be \$4,532,000.00. There will be three (3) funding sources – the water audit program, the master metering program and USEPS grants.

For all sites - Base Bid Substantial Completion: The Contractor shall begin work upon issuance of the Notice to Proceed (NTP) and base bid work shall be substantially complete as specified no later than 305 calendar days from NTP. Final Completion shall be no later than 60 calendar days following substantial completion.

Comm. Santos motioned to approve Resolution 11-FY2020 second by Comm. Guthertz. There was no further discussion or objection and the motion passed unanimously.

4.5 Resolution 12-FY2020 Change Order No. 1 for the Pressure Zone Realignment and Tank Repair/Replacement Design Project

The objective of this change order is to develop a water loss control program based on the island-wide implementation of the District Metered Area (DMA). The design services will include the development of a plan to implement Phase 3 of the DMA island-wide and the construction documents to execute four tested sites that resulted from the DMA conversion reports prepared during Phase 1 and 2. The pressure zone realignment and district metered areas work are complementary.

The following are part of this proposed change order:

1. Task 1: Review of Existing Plans and Models
2. Task 2: Identification of Potential DMAs
3. Task 3: Customer Identification per DMA
4. Task 4: Identification of DMA Infrastructure Requirements
5. Task 5: Prioritization of Proposed DMAs
6. Task 6: Develop DMA Implementation Plan
7. Task 7: Develop Draft Scopes for Implementation Project Contracting Elements

This project is necessary for GWA to improve its control of water losses by establishing proper pressure zones, zone metering, and a comprehensive water loss control program plan to guide GWA towards a properly functioning water system.

The cost for the change order is \$373,670.00 and will be funded by Pressure Zone Realignment/Development 2005 Improvements; Water Reservoir Internal/External Corrosion Rehabilitation Program; Water System Reservoir 2005 Improvements; Water Audit Program and Water Loss Control Plan

This phase of work will be completed within 6 months of Change Order No. 1 approval; however, the date may be adjusted depending on field investigations for the zoning.

Comm. Guthertz motioned to approve Resolution 12-FY2020 second by Comm. Santos. There was no further discussion or objection and the motion passed.

4.6 Resolution 13-FY2020 Re Modernization of the Guam Waterworks Authority Enterprise Resource Planning System

This resolution was tabled until next month. More time was needed to bring cost down.

4.7 Resolution 14-FY2020 Re Fund Increase to the Construction Management Contract for the Route 4 Relief Sewerline Rehabilitation and Replacement Project

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 agree that efforts to rehabilitate, repair or replace the sewer line are necessary. The construction management services are required for the duration of the project which is expected to be completed in June 2020.

This project is located along Route 4 and Route 1, from the base of the hill near well A-23 in Agana to the Agana Main Pump Station. Construction activities will be limited to the government easements of the sewer infrastructure elements. The construction is estimated to be completed by June 2020.

GWA management is seeking funding increase for the construction management services contract with EMPSCO for an additional not-to-exceed amount of Two Hundred Thirty Thousand Seven Hundred Fifty-Nine Dollars and Sixty-Two Cents (\$230,759.62), which brings the total authorized funding to a maximum not-to-exceed amount of Nine Hundred Thirty-Three Thousand Four Hundred Thirty-Seven Dollars and Seventy-Five Cents (\$933,437.75). The funding for this project will be from USEPA SRF Grant Funds and, if necessary, GWA Bond Funds with a maximum project budget of Nine Hundred Thirty-Three Thousand Four Hundred Thirty-Seven Dollars and Seventy-Five Cents (\$933,437.75).

Comm. Guthertz motioned to approve Resolution 14-FY2020 second by Comm. Santos

In discussion Comm. Limtiaco asked the cause of the delays and the GM said one reason is working hours. The contract allows the contractor only to work during the day. Another reason is a permitting issue – DPW took longer than normal. It was mentioned that there are liquidated damages but management said to expect unforeseen delays and possibly award the contractor an extension and if they go beyond the extension date, the liquidated damages will apply. **On the motion the vote was unanimous and the Resolution passed.**

4.8 Resolution 15-FY2020 Issuance and Sale of Guam Waterworks Authority Water and Wastewater System Revenue Bonds, Approving Forms of Related Documents, Agreements and Actions, and Authorizing the Execution and Delivery

In accordance with the CCU-adopted *GWA Five Year Financial Plan and Capital Improvements Program (FY20-FY24)*, GWA requires the issuance of additional bonds to fund needed capital improvement projects which include:

- Projects to complete the 2011 Court Order: \$39,550,000
- Projects to address upcoming regulatory priorities which are the subject of on-going enforcement negotiations with US EPA: \$38,625,000
- Projects to address reduction of non-revenue water in GWA's water distribution system: \$11,637,000
- Other projects needed to address environmental safety and compliance, system capacity, operational efficiency and other requirements: \$13,860,000

GWA had intended to obtain all necessary approvals for this bond issuance at the beginning of FY20 in order to meet the schedule requirements of the 2011 Court Order. There have been undue delays in the approval process, and therefore, the need for issuance of the bonds to

obtain funding necessary to complete Court Order related projects is very urgent and necessary.

GWA is also seeking authorization to evaluate/confirm the feasibility of refunding bonds to redeem or otherwise retire outstanding GWA revenue bonds (Series 2013) and, if deemed feasible, subsequently reissue for potential cost savings concurrent with the issuance of new revenue bonds.

The *GWA Five Year Financial Plan and Capital Improvements Program (FY20-FY24)* calls for the 2020 Series Bonds to be issued at a par value equal to GWA's remaining legal authorization for financing at One Hundred Thirty-Four Million dollars (\$134,000,000). The Series 2020 Bonds will be funded through the purchase of the bonds as investments through the financial markets. GWA may realize cost savings on debt service for existing Series 2013 bonds should the evaluation of refunding bonds indicate so. Cost savings will be dependent on market conditions at the time of projected issuance.

The Series 2020 revenue bonds, and any refunding bonds, are anticipated to be issued in mid-May of 2020. The CIP projects to be funded with the Series 2020 bonds are scheduled over the 5-year period covered by the *GWA Five Year Financial Plan and Capital Improvements Program (FY20-FY24)*. It will provide needed funding outlined in the 5-Year Capital Improvement Program for projects island-wide.

The GM said this resolution is urgent in order to meet the Court Order deadline.

Comm. Sanchez motioned to approve Resolution 15-FY2020 second by Comm. Guthertz.

In discussion Comm. Duenas said he thinks management is doing good relative to time. When the Court Order was being discussed back in 2000, it was mentioned that GWA will try to meet the dates assigned and feels good at our progress and where we are at now.

On the motion, there was no further discussion or objection and the motion passed.

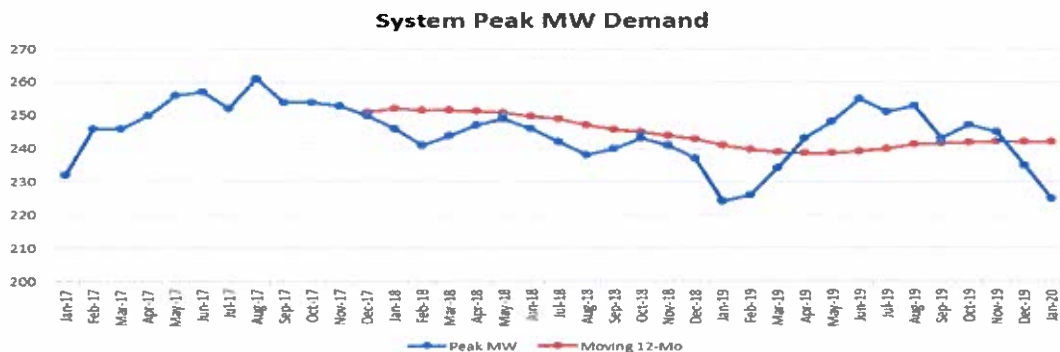
5. GPA

5.1 GM Report

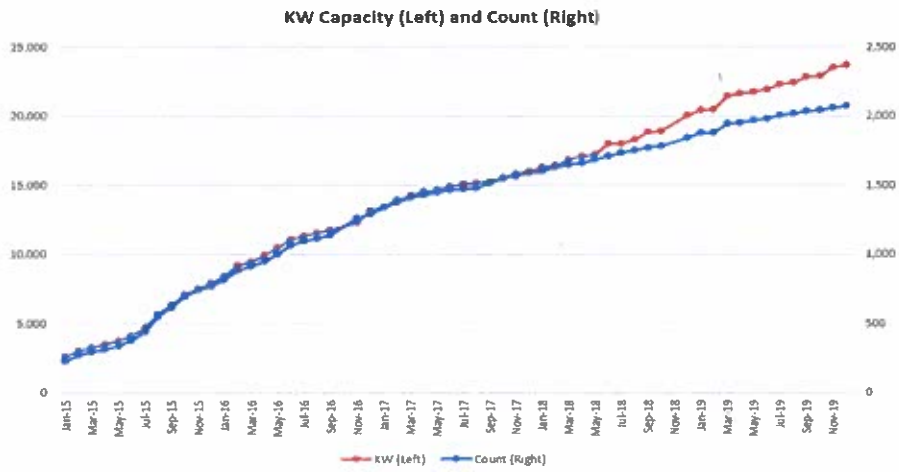
1. **Generation System:** The following is the generation forecast for February 2020:

Projected Available Capacity:	352 MW
Projected Demand:	228 MW
Anticipated Reserve Margin:	124 MW

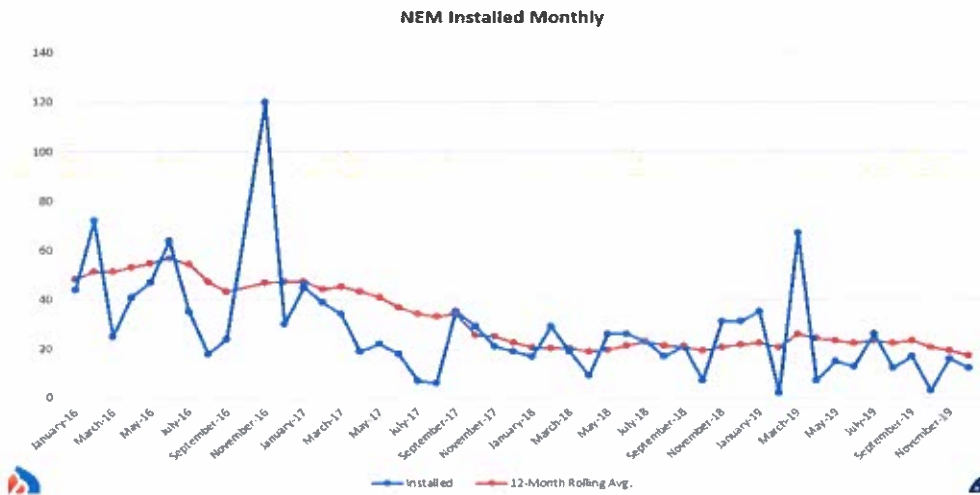
- The following updates monthly peak MW demand ending January 14, 2020:



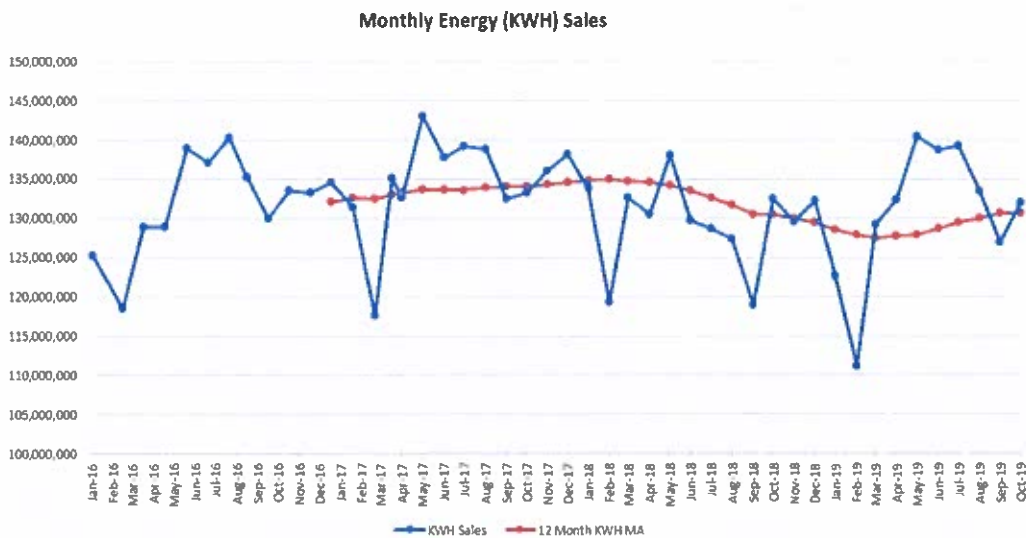
2. Net Metering (NEM) Growth Thru December 2019:



2. Net Metering (NEM) Growth Thru December 2019 (Cont'd):



3. Energy Sales Thru October 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	1Y16	1Y17	1Y18	1Y19	1Y20 thru December 31, 2019	Total to Date
Regular/OT Pay	\$11,348.80	\$22,256.00	\$26,121.83	\$50,715.19	\$6,059.80	\$116,501.62
Other Contractual	\$28,278.50	\$85,550.05	\$116,977.50	\$3,025.00	\$0.00	\$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	\$237,925.00	\$3,674,375.00
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	\$21,200.00	\$199,425.00
Total Expenses	\$200,527.30	\$680,706.05	\$1,554,524.33	\$1,553,190.19	\$267,684.80	\$4,256,632.67
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:

- GPA Docket 20-01: The PUC approved the proposed Consent Decree with USEPA at their meeting on December 5, 2019. Both MEC and myself have signed the approved Consent Decrees.

6. Award of Phase III:

- Notice of Intent to Award, subject to CCU and PUC approvals to Engle Solar was made on October 4, 2019. A protest was filed by GlidePath on October 9, 2019. GPA denied the protest and the procurement is currently before the OPA for hearings and decision.

7. Informational Briefings Conducted:

- Powering the Future to Members, Guam Association of Government Accountants (AGA) was conducted on Wednesday January 22, 2020.

8. Integrated Resource Plan:

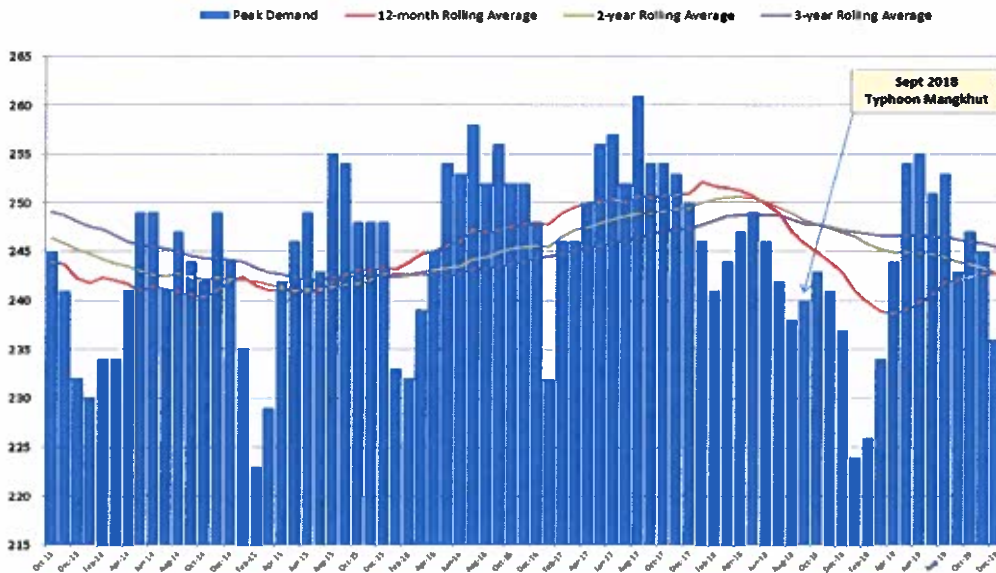
- GPA has begun the process of updating the IRP considering that almost all the significant task within the current IRP have been achieved or contracted for. The AGMET has begun the process which would include stakeholder participation. We hope to complete a draft for the CCU consideration this summer. The key features of the updated IRP include an updated load forecast, fuel forecast, conventional generation mix, renewable generation mix, diversified fuel source, reliability amongst other factors including investments required to support the updated IRP.

9. Bond Ratings:

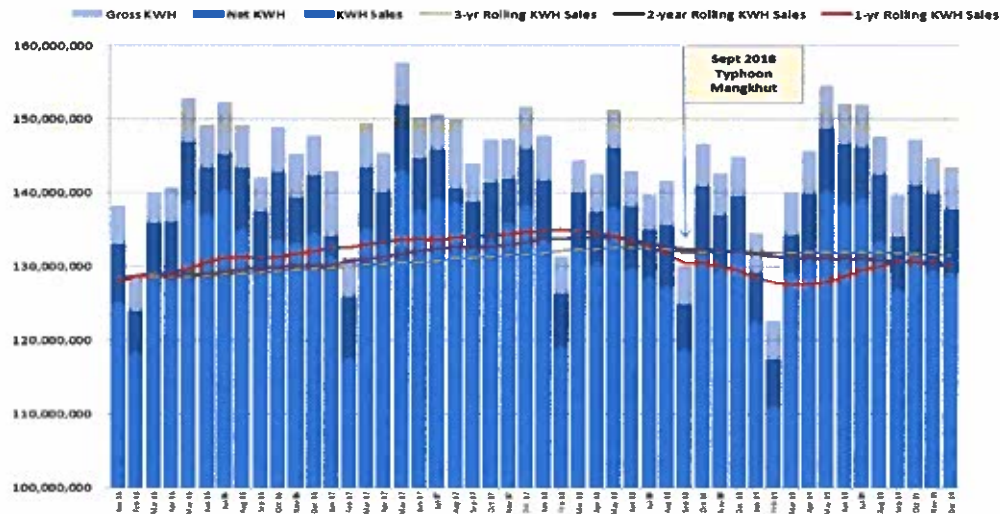
- GPA bond rating was upgraded by Fitch from BBB- to BBB Stable this week. This is a significant upgrade which will save ratepayers borrowing cost when in the near future we look at refinancing our 2012 bonds or if we had to issue bonds for upgrades in the transmission system to accommodate more renewables.
- We also recently had a conference call with Moody's updating them on the latest accomplishments similar to the presentation we did for Fitch. However, because one of Moody's criteria is that GPA bond ratings will not be rated more than two notches above the GovGuam ratings, we don't anticipate any upgrades from Moody's because this is currently the situation.

10. The following graphs show the updated system information:

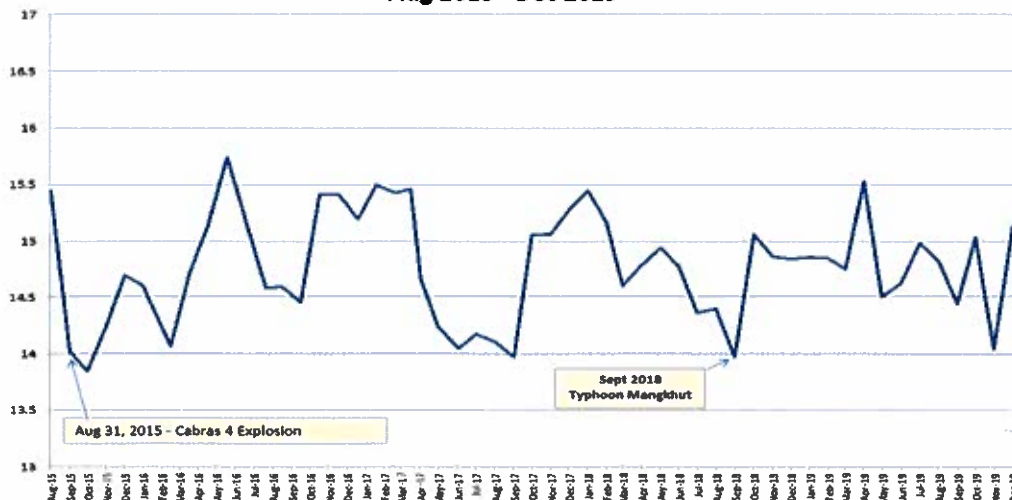
Historical Monthly Peak Demand October 2013 - Dec 2019



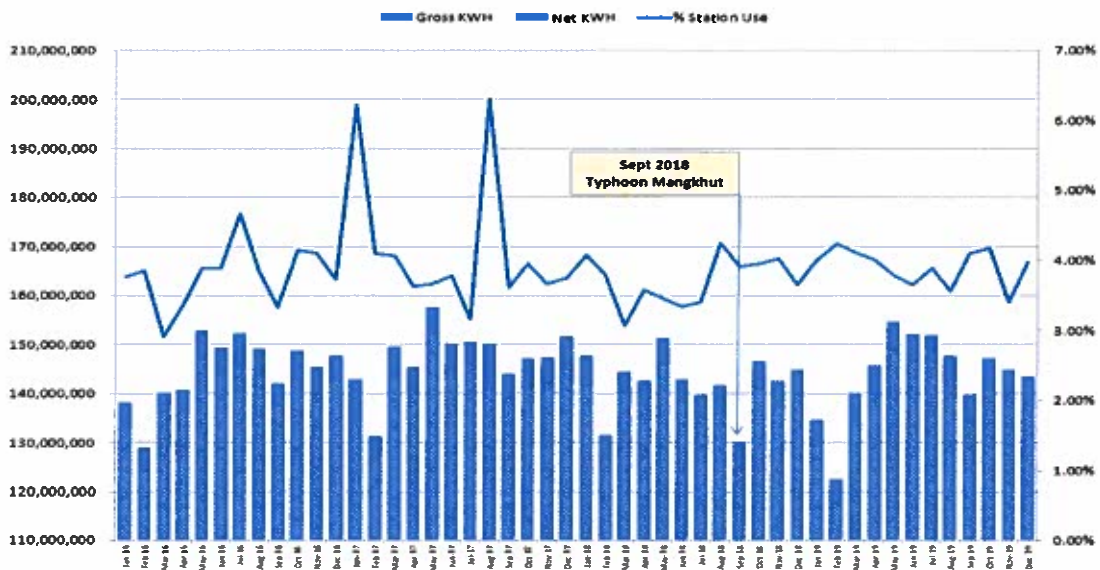
Historical KWH Sales Jan 2016 - Dec 2019



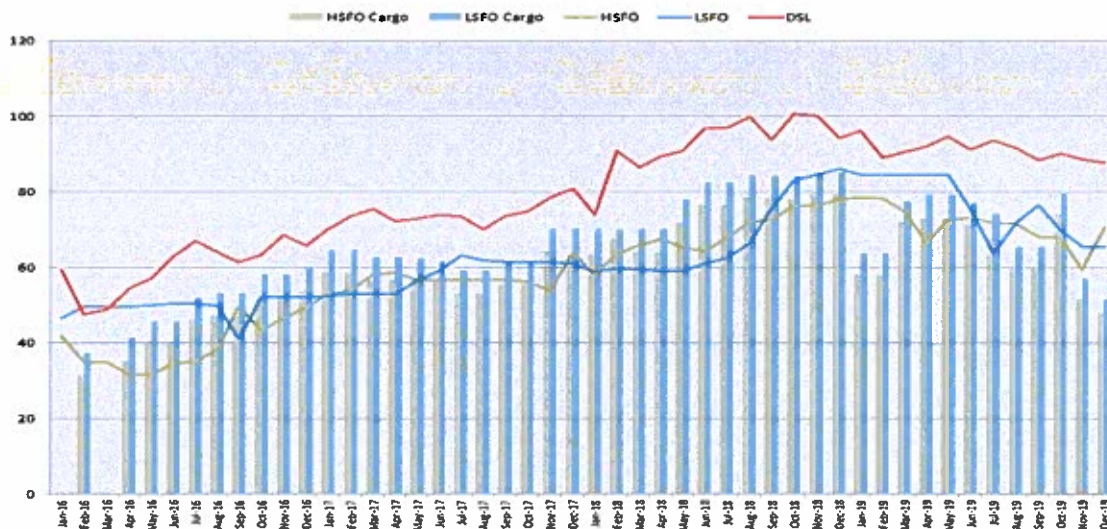
SYSTEM GROSS HEAT RATE (KWH/Gal) Aug 2015 - Dec 2019



Gross and Net Generation (KWH) Jan 2016 - Dec 2019



Fuel Cargo and Fuel Consumption Costs (\$/bbl) Jan 2016 - Dec 2019



GM Benavente said a petition was filed at PUC relative to condominium owners wanting to have their rates changed to residential. He said solicited rate consultant Mark Beauchamp to do a cost of service study for a recommendation. There is a lot of information to digest and where do we begin. He said he thought to start with what are key differences to see if anything stands out. He said CFO John Kim will update the Commission on status.

CFO Kim said that they looked at sample sizes using actual customer billing and did comparisons using schedule P and J. Based on the study there is not much variance between condo rates and residential rates.

Comm. Limtiaco said what may happen is what may be a lower rate for some may be higher rate for others.

Comm. Duenas said to give some thought to advertise builders to be aware that certain designs will cause certain problems.

CFO Kim said it is a challenge to make a recommendation and management is not ready at this time. More discussion needs to happen.

Comm. Limtiaco asked if management is advising those that come in for permitting. The GM said that everyone basically knows that individual meters is the better scenario. GPA does not impose this.

Comm. Sanchez said load matters and builders need to know this. His observation is that the size of load matters and GPA can help design their load but they still will pay their load size. Demand charges are not going away.

5.2 Financials

The CFO said he did not do financial highlights but the November financial statement is attached. Debt service is 1.62; Days in cash is about 20-30 days; energy sales is \$32M and YTD is \$66M; O&M is \$28.6M; Net and income is \$3.8 and higher than 2018.

Comm. Sanchez said the electrical sales are trending down because it is cooler which impacts sales. Also noticed in the balance sheet \$22M was expensed – where did it go? CFO Kim said a principal payment was made.

Relative to receivables, there are some accounts that are lagging but this is always work in progress.

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 requires an accompanying energy storage system such as a battery to provide a fairly smooth energy into the home or grid. GPA is purchasing energy from a 25 MW solar farm in Dandan. In addition, there are about 2,035 net metering customers with a total capacity of about 22 MW of net metering customers tied in to the grid without batteries. The result of all these intermittent productions has degraded the reliability of the system. Solar PV Production is inconsistent and requires substantial battery reserves. The number of under frequency automatic load shedding due to solar PV systems has increased substantially over the past few years.

As of October 31, 2019, there has been 27 caused feeder trips or outages due to solar PV systems without batteries. Although, the new 40 MW frequency control batteries GPA is installing would decrease these outages, we cannot continue to add intermittent energy production into the grid because uncontrolled solar PV energy will degrade system reliability again. 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 Frequency Control Capability or Energy Storage System (ESS). The lack of ESS in the system substantially degrades the reliability of non-solar customers.

Therefore, effective June 01, 2020, all new NET Metering Solar PV and Wind Turbine systems must also have Frequency Control Capability or Energy Storage System (ESS) in order to be tied in to GPA's grid. In the event that PUC sets a rate for energy storage per user, the new user may choose to pay the rate instead of providing Frequency Control Capability or Energy Storage System (ESS).

GM Benavente gave a brief update on status to date and asked the Commission to table vote on this resolution until February. He said he needs a little more time on this because there are other issues coming forth that he would like to consider. He will move the start date for June 1.

Comm. Limtiaco asked of the 2 different options do they both need PUC approval. GM confirmed the 1st option is technical and does not need PUC approval. However, the 2nd option does need PUC's approval.

5.4 Resolution 2020-02 Procurement of a Contractor for the Bulk Supply of Diesel Fuel Oil No.2 for Power Generating Plants

The fuel supply contract is necessary to provide uninterrupted supply of fuel for TENJO VISTA Power Plant. The 3-year contract is estimated to exceed \$1.5M requiring prior approval from the PUC. The contract is planned for an initial period of two years to commence on or about June 01, 2020 and to expire on May 31, 2023, with the option to extend for two (2) additional one-year terms. The source of funding for this procurement is fuel revenue funds. The IFB solicitation will commence after CCU and PUC approval.

Comm. Santos motioned to approve Resolution 2020-02 second by Comm. Guthertz. There was no further discussion or objection and the motion passed.

5.5 Resolution 2020-03 Extension of the Existing Contract for the Mgmt., Operations and Maint. of the Fuel Bulk Storage Facility with IP&E

IP&E Guam LLC has been awarded the contract through a multi-step IFB process. The objective is to continue and exercise the second (2nd) and third (3rd) year extension of the contract to ensure uninterrupted, reliable operation of the facility for the supply of fuel to the GPA plants.

The first (1st) year extension of the contract with IP&E for the Management, Operation, and Maintenance of the GPA Fuel Bulk Storage Facility under GPA-014-17 is set to expire on September 30, 2020. This contract includes up to three optional one-year extensions.

The second (2nd) year contract extension is estimated to cost about \$885,108.88 and the third (3rd) year contract extension is estimated to cost about \$911,662.13 for the required services under the contract (Exhibit A).

The contract extension shall be for a period of two (2) consecutive years, commencing in October 1, 2020 and will expire in September 30, 2022. The contract fees for the Management, Operation, and Maintenance of the facility will be funded under the fuel budget. Other services will be funded through O&M, and some through CIP if it involves procurement of equipment, construction, modification and others.

The GM said Comm. Limtiaco questioned the O&M variable charges and the GM said this becomes a reimbursable item. Comm. Limtiaco asked if receipts are provided and the GM confirmed yes.

Comm. Guthertz motioned to approve Resolution 2020-02 second by Comm. Sanchez. There was no further discussion or objection and the motion passed unanimously.

5.6 Resolution 2020-04 Recognizing & Congratulating GPA's Recent Professional Engineers

GPA requires highly skilled professionals especially in the area of Engineering. GPA Engineers provide professional and technical engineering expertise in planning, designing and managing projects required for the upgrade and maintenance of transmission and distribution lines, substation and generation facilities and for renewable energy production. Engineers communicate effectively, oversee special projects, develop economical solutions to technical problems and improve the reliability of electricity and power grids.

GPA currently has a total of 45 Engineers throughout the organization performing electrical, civil, mechanical, and environmental/regulatory work. Of the 45 Engineers in GPA, 14 Engineers are licensed Professional Engineer (PE). According to the National Society of Professional Engineers, a Professional Engineer is an individual, who has fulfilled education and experience requirements and passed a rigorous exam that, under State licensure laws, permits them to offer engineering services directly to the public.

A Professional Engineer (PE) license matters if you work in the electric power and renewable energy industry. Only a licensed Professional Engineer, may prepare, sign, seal and submit engineering plans and drawings to any public authority for approval, or to seal engineering work for public and private clients. The National Society of Professional Engineers best summarizes the power of the PE designation stating: "Licensure is the mark of a professional. It's a standard recognized by employers and their clients, by governments and by the public as an assurance of dedication, skill and quality." It tells the public that you have mastered the critical elements of your profession.

Within the last 5 years, 3 GPA Engineer employees have achieved the distinct designation of Professional Engineer (P.E.), they include Mr. Louis C. Camacho, P.E., Engineer III with the Distribution Section of Engineering, Mrs. Kristy C. Cuenca, Engineer III with the Substation/Transmission section of Engineering, and Special Projects Engineer, Mrs. Paz A. Tison with SPORD.

There is an additional team of 11 other current professional engineers on staff at GPA who continue to mentor and guide other prospective engineers to attain professional licensure. All of GPA's professional engineers' level of expertise contribute to the progress GPA has made

and will continue to make to provide outstanding energy solutions to benefit our ratepayers and island community.

The number of GPA professional engineers is the largest concentration within the Government of Guam and is comparable with the concentration of registered professional engineers employed by the federal government and engineering firms on Guam.

The GM announced the professional engineers who have recently received their P.E. Paz Tison / mechanical engineer, Kristy Cuenca / electrical engineer, and Luis Camacho / electrical engineer. This brings to 15 the number of professional engineers at GPA. Coupled with GWA the overall total is 20+

Comm. Guthertz motioned to approve Resolution 2020-04 second by Comm. Santos. There was no further discussion or objection and the motion passed unanimously

6. OTHER DISCUSSION

6.1 CCU Rules Committee Update

Comm. Limtiaco updated that he has created a working draft of the CCU Rules to include requirements of the Open Government Law especially those from lessons learned from actions from earlier in the year. It will also have segments related to ethics and travel. The Rules Committee will meet through the month of February and then will have a work session for discussion and then the draft will be brought to the Board. The Goal is to adopt the Rules in open session at a CCU meeting.

6.2 Management Pay Issues

Comm. Limtiaco said this Committee has not met yet so there's been no related discussion

Comm. Limtiaco also gave an update on the Cyber Security Committee. He said they have met twice and several SOP's have been drafted or completed already for both GPA and GWA. An RFP is being drafted and will be released in February with award at the end of March.

7. ANNOUNCEMENTS

7.1 Next CCU Meetings: GWA WS – Feb 18; GPA WS – Feb 20; CCU Mtg – Feb25

The Chairman announced a change in the meeting date for the February. The CCU meeting will move from February 25 to February 21. There is no change on the GWA and GPA work sessions.

The Chairman called for a 5-minute recess before Executive Session. It was 8 p.m.

8. EXECUTIVE SESSION

The meeting resumed at 8:08 p.m. with Executive Session. Those present included the (5) CCU members, General Managers John Benavente and Miguel Burdallo, GWA Counsel Kelly Clark and GPA Counsel Graham Botha and Court Reporter Lorraine Cruz.

8.1 GWA Litigation Matters

8.2 GPA Litigation Matter

9. **ADJOURNMENT**

There being no other business to bring before the Commission, the meeting adjourned at 9p.m.

/s/

Bls

Attested



JOSEPH T. DUENAS, Chairman



MICHAEL T. LIMTIACO Secretary