



## 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., October 29, 2019**

## **MINUTES**

### **1. CALL TO ORDER**

The CCU Chairman called the CCU Regular Meeting of October 29, 2019 to order at 5:37 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:**

Art Perez	Communications / GPA
Vangie Lujan	Compliance / GWA
Ron Topasna	Operations / GWA
Heidi Ballendorf	Public Information Officer / GWA
Paul Kemp	AGM Compliance & Safety / GWA
Gilda Mafnas	Asst. CFO / GWA
Patti Diego	Communications / GPA
Zina Charfauros	Personnel Services Admi / HR, GWA
Joyce Sayama	Mgmt. Analyst / GPA Ex.Officen
Ann Borja-Gallarde	Mgmt. Analyst / GWA Ex.Office
Lou Sablan	Board Secretary / CCU

#### **Guests:**

Angelica Perez	AM Insurance
----------------	--------------

Ann Marie Muna            AM Insurance  
Orlean Arriola            AXS Insurance

The Chairman announced a change in the meeting agenda and that there would be no executive session at this meeting.

## **2. APPROVAL OF MINUTES**

The Minutes of the CCU Special Meeting of July 18, 2019 was presented for approval.

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

## **3. COMMUNICATIONS**

### **3.1 Public Comments**

June Blas / Mayor of Barrigada – re Toto Canada water outage. She introduced Jesse Bautista who accompanied her. She said her constituents are frustrated about the outages in this area. She confirmed she was able to get some information but just want to state for the record by her presence and testimony of the seriousness of this matter to her people.

Rudy Pablo / Mayor of MTM - water break issue in his village, His constituents are constantly calling his office about the problems on Casimir Street; Tenbat Street has been under repair for a couple of weeks already. He is aware that there are many water issues around the island but wants to know if there is anyway that this matter can be addressed more sooner than later.

Comm. Guthertz asked the GM to please comment.

GM Bordallo gave update on the areas in question – in Tenbat St. repair to this street was initiated but delay was caused to multiple breaks. The condition of the pipe was very worn and GWA ended up replacing 200ft of pipes. Re Casimir it was more complex because there were 2 lines on top of each other, each with multiple breaks. The same thing is happening in Sta. Rita and GWA is handling these problematic installations as quickly as possible.

Comm. Sanchez asked if Tenbat St. is back in service as of today and the GM said yes and it will be a recurring headache for another 6 months or so until a permanent fix is addressed. The Commissioner addressed the number of water tanks available for the community during these long outages and it was determined that sometime the water tanks were not delivered quickly and gave some examples of the various circumstances.

Comm. Guthertz asked managements assurance that the water tanks are deployed faster to give relief to those affected.

Comm. Duenas asked the GM if there is a list of these problematic areas and the GM confirmed yes; management keeps records of all these happenings and are trying to prioritize repairs as best as possible.

## **4. GWA**

### **4.1 GM Report**

There was no GM report presented at this meeting.

### **4.2 Financials**

Comm. Duenas introduced GWA's new CFO – Taling Taitano.

The CFO referenced Schedule D, page 16 in board books and referenced YTD actuals of \$40M change in net assets - \$36M less than budget and attributed this to under performance of capital contributions and grants. Schedule E compares this year to prior year – the CFO referenced a hold in operating expenses; revenues are currently \$9M this year vs. last year.

**4.3 Resolution No. 01-FY2020 Approval of New Signatories for Guam Waterworks Authority**

If approved, Resolution 01-FY2020 will update signatories based on recent changes in management at various financial institutions including but not limited to the Bank of Guam, Bank of Hawaii, First Hawaiian Bank, Community First, Coast360, ANZ Guam, Bank Pacific, etc.

Comm. Sanchez motioned to approve Resolution 01-FY2020, second by Comm. Santos. There was no further discussion or objection and the motion passed.

**4.4 Resolution No. 02-FY2020 Approval of the Creation of Utility Compliance Laboratory Administrator**

**Position**

Creation of the Utility Compliance Laboratory Administrator position is to update the duties and responsibilities of the position and align it with modern water and wastewater standards to enable the efficient and effective performance of duties and functions of the Guam Waterworks Authority's Laboratory section. The creation of this position is necessary to help direct and manage GWA's wide sampling activities in connection with water and wastewater operations.

The job specifications that GWA is currently utilizing are inconsistent with the rigorous operating procedures and practices of our laboratory operations. GWA Utility Compliance Laboratory operations are unique in duties and responsibilities compared to other government of Guam agencies.

GWA laboratory operations collect and analyze water samples from a wide variety of sources for a number of different reasons. Samples include shorelines, wastewater treatment plants and various rivers to evaluate impacts on the local environment. Drinking water samples are also taken to ensure safe water quality is maintained from source to each customer. Analyzes, assessed in laboratory samples include Calcium and Total Hardness, Chlorides, Alkalinity, Conductivity, pH, Temperature, Turbidity and Bacteria. Further, special samples are collected for contract laboratory evaluations for special contaminants of concerns such as pesticide, herbicide, synthetic organic chemical, volatile organic chemical content, and the results of which must be evaluated by the compliance laboratory staff. This makes the Utility Compliance Laboratory unique from other Government of Guam agencies.

The position is needed to explicitly identify Utility based job specifications for the Laboratory. Keeping in mind growth and increased productivity with an emphasis on more stringent required protocols by regulatory agencies such as USEPA.

The Utility Compliance Laboratory Administrator position will be organizationally located within the Compliance and Safety Department, under the general direction of the General Manager and the Assistant General Manager - Compliance and Safety.

Public Law 28-159, Section 7.0.3 (c) requires GPA and GWA to post a petition on their websites for ten (10) days (not including Saturdays, Sundays and government of Guam holidays). After the 10 days posting, the petition can then be forwarded to the CCU for their disposition at any regularly scheduled meeting. GWA has met the posting requirements.

Additionally, Guam law requires notice of such posting to each newspaper of general circulation and broadcasting station which airs regular news programs within Guam.

GWA will certify funding for the position available for the filling and retention of its certified, technical and professional newly created position. The funding of this position does not have an impact on the General Fund.

**Comm. Sanchez motioned to approve Resolution 02-FY2020, second by Comm. Santos. There was no objection or other discussion and the motion carried. Unanimously.**

**4.5 Resolution No. 03-FY2020 Approval of the 20<sup>th</sup> Market Percentile and GM Authority for FY2020**

This resolution was tabled.

**4.6 Resolution No. 04-FY2020 Approval of Production Well Meter Replacement Project**

The objective of the project is for GWA to replace faulty groundwater production meters and well head “above-ground” discharge piping. The reason for this project is 60 existing well head flowmeters were field tested and the results showed inaccuracies of existing meter gpm readings. The sum of the flowmeter readings for all the tested wells was approximately 1,800 gpm less than the sum of the existing meter readings. The deficiencies in meter readings are attributed to propeller-style meters that were not installed with proper upstream and downstream unobstructed clearances.

The production well meter reading deficiencies are resulting in either under-or-over report total production which affects non-revenue water calculations, making it difficult to track distribution losses. Replacement of production meters will require unobstructed straight run, and full pipe for the length of three or more pipe diameters upstream of the meter and two or more diameters downstream to be accurate. In addition to replacement of flow meters, this project includes replacement of above-ground discharge piping which are in poor condition.

The 60 well sites are scattered in northern and central Guam. Majority of the wells are located in Yigo, Dededo, Mangilao, Hagatna, and Sinajana.

The bid proposal amount for Basic Bid is One Million Three Hundred Seventy-Nine Thousand Four Hundred Five Dollars (\$1,379,405.00). GWA management is also seeking a ten percent (10%) contingency of the bid amount or One Hundred Thirty-Seven Thousand Nine Hundred Forty Dollars and Fifty Cents (\$137,940.50) to bring the total authorized funding request to One Million Five Hundred Seventeen Thousand Three Hundred Forty-Five Dollars and Fifty Cents (\$1,517,345.50). The funding for this project will be from the CIP Line Item PW 05-07 Meter Replacement Program, IFCIP or any other CIP line item applicable to the project intent.

The construction contract length of this project is 365 calendar days after an NTP is issued to the contractor.

Comm. Limtiaco asked why the estimate was off? The GM said it was not a significant difference.

**Comm. Guthertz motioned to approve Resolution 04-FY2020, second by Comm. Sanchez. There was no further discussion or objection and the motion passed unanimously.**

**4.7 Resolution No. 05-FY2020 Approval of Tamuning Sewer Hot Spots Construction Project**

Sewer system “Hot Spot” locations are areas where GWA wastewater operations have to constantly return to the sewer manhole or gravity main segment to conduct cleaning or pumping activities because at these locations there exist infrastructure defects such as a sag or low spot in the gravity main that causes wastewater to surge in the sewer main and manholes upstream of the Hot Spot location. Rehabilitation or replacement of defects at the Hot Spot location is necessary to remove the defects and allow wastewater to flow unrestricted and prevent Sanitary Sewer Overflows (SSO).

There are several Hot Spot locations in Tamuning however this project will address only the following:

- 440 linear feet of gravity sewer and manholes along Winner Apartments
- 50 linear feet of gravity sewer along Pancoso Palting Street
- 450 linear feet of gravity sewer and manholes adjacent to New Plaza Market
- 20 linear feet of gravity sewer along Jalaguac Way

Five (5) parties pick up Bid packages, only one (1) bid was submitted prior to bid deadline. The Base bid proposal submitted by Ian Corporation is One Million Ninety-Three Thousand Nine Hundred Fifty-Five Dollars and Eighty-Seven Cents (\$1,093,955.87). GWA management seeks approval of the base bid plus a ten percent (10%) contingency of One Hundred Nine Thousand Three Hundred Ninety-Five Dollars and Fifty-Eight Cents (\$109,395.58) to bring the authorized funding amount to a maximum of One Million Two Hundred Three Thousand Three Hundred Fifty-One Dollars and Forty-Five Cents (\$1,203,351.45). Funding for this project will be from the USEPA State Revolving Fund and, if necessary, GWA Bond funds applicable to the project intent. The project is to be completed 300 calendar days from Notice to Proceed.

Comm. Guthertz said for the benefit of the public, what is a hot spot? The GM said hot spots are areas of gravity sewer line which requiring frequent repair due inherent defect to the pipes or various conditions like settlement.

Comm. Guthertz motioned to approve Resolution 0a5-FY2020, second by Comm. Sanchez. There was no further discussion or objection and the motion passed.

Comm. Limtiaco asked if this bid came in lower and the GM said yes. The estimate was \$3M and the bid came in at 1.9M

#### **4.8 Resolution No. 06-FY2020 Approval of Fund Increase for Construction Mgmt. Contract for the Baza Gardens Wastewater Cross Island Pumping/Conveyance System**

The overall construction project for the Baza Gardens wastewater conveyance project to date still has minor close out items for the Phase II contractor as well as minor work at the existing clarify, civil works and SCADA for the Phase III contractor which requires continued Construction Management services that GWA anticipates will extend to November 2019. Majority of the remaining work is at the new Baza Gardens Pump Station which is the Phase III contractor.

GWA management still seeks CCU approval of additional funding not to exceed the amount of One Hundred Thirty Thousand Dollars (\$130,000.00) for the extended contract performance period from September 2019 through November 2019 including documentation of the project close out. Notwithstanding the fund increase request GWA will be negotiating down the fee proposal given the level of staffing and construction activities will ramp down towards the end of the construction period.

The approval of the One Hundred Thirty Thousand Dollars (\$130,000.00), which GWA will view on a Time and Materials basis, will bring the total authorized funding for the Construction Management contract to Three Million Four Hundred Sixty-Two Thousand Five Hundred Sixty-Four Dollars and Fifty-Nine Cents (\$3,462,564.59). Funding for any Change Order to SSFM's contract moving forward will be from any available bond funds under the line item - WW 11-03 "Baza Gardens STP Replacement", System Development Charge funds and Internally Funded CIP funds as well as Liquidated Damages of \$3,000 per day from the contractor. The actual construction completion is projected to be by October 2019 however GWA anticipates the CM services will extend to November 15, 2019.

Comm. Guthertz ask the GM to share with the public the benefits of doing these projects. The GM said that this work will benefits the Baza Garden area to the new Agat-Santa Rita WWTP. It will give property owners along this corridor better gravity to sewer lines and makes connection better for the people living in these areas



Comm. Guthertz motioned to approve Resolution 06-FY2020, second by Comm. Sanchez. There was no further discussion or objection and the motion carried; the vote was unanimous.

**5. GPA**  
**5.1 GM Report**

- 1. Generation System:** The following is the generation forecast for November 2019:  
 Projected Available Capacity: 381 MW  
 Projected Demand: 245 MW  
 Anticipated Reserve Margin: 136 MW

- The following updates monthly peak demands ending October 2019 to date:

**System Peak Demand**

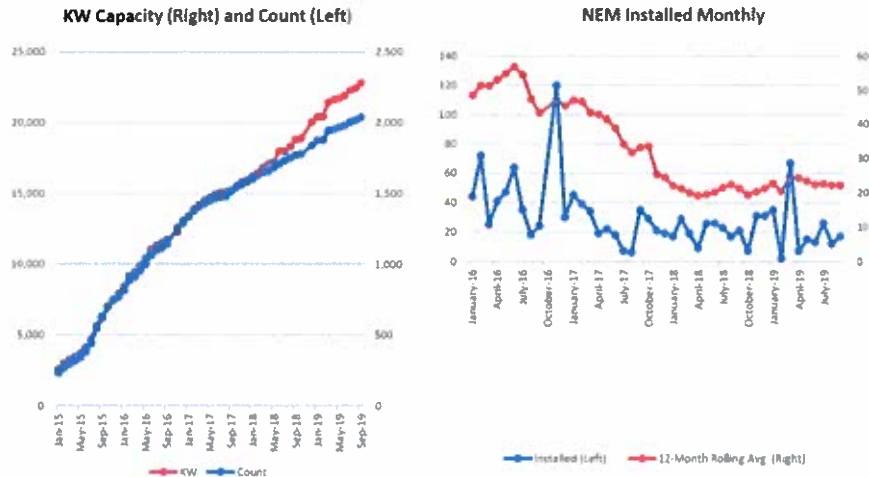


- 2. Energy Sales thru September 2019:** Sales trending upwards. Significant drop upon increase in LEAC in 2018.

**Energy (kWh) Sales**



3. Net Metering (NEM) Growth thru September 2019:



4. Program directly reduces energy cost to customer at a one time fixed rebate. Funded \$3.9M from base rate

DSM PROGRAM SUMMARY

Description	FY16	FY17	FY18	FY19 thru 9/30/19*	Total to Date
Regular/OT Pay	\$11,348.80	\$22,256.00	\$26,121.83	\$50,715.19	\$110,441.82
Other Contractual	\$28,278.50	\$85,550.05	\$116,977.50	\$3,025.00	\$233,831.05
Ads & Radio Announcements				\$7,500.00	\$7,500.00
Paid Rebates-Split AC	\$154,700.00	\$557,275.00	\$1,349,825.00	\$1,156,875.00	\$3,218,675.00
Paid Rebates-Central AC	\$3,400.00	\$8,200.00	\$4,400.00	\$6,000.00	\$22,000.00
Paid Rebates-Washer/Dryer	\$2,800.00	\$7,425.00	\$57,200.00	\$93,200.00	\$160,625.00
<b>Total Expenses</b>	<b>\$200,527.30</b>	<b>\$680,706.05</b>	<b>\$1,554,524.33</b>	<b>\$1,317,315.19</b>	<b>\$3,753,072.87</b>

5. PUC DOCKETS:

- GPA Docket 19-13: Petition to approve the ECA with KEPCO for the 198MW Power Plant is on the PUC agenda for this Thursday, October 31, 2019. The PUC has conducted three public hearings on the request.

6. Legislative Bills:

- Bill 80-35 (COR)**, An Act to Amend § 8311 of Article 3, Chapter 8, Title 12, Guam Code Annotated, Relative to Raising the Renewable Portfolio Standards (RPS) of the Guam Power Authority. GPA supported the bill as introduced which increased the Renewable Portfolio Standard (RPS) to 50%. However, bill was amended to increase the RPS to 100% along with amendments prescribing how to get there. Please see my letter (attached) to the Legislature asking them to reconsider the amendments which I believe will negatively impact ratepayers.
- Bill 196-35 (COR)**, An Act to Amend § 7116(a) and (d), both of Chapter 7, Division 2, Title 17, GCA Relative to Authorizing Guam DOE to enter into Power Purchase Agreements to Purchase Solar Energy from Qualified Provider(s). This bill is being amended to transfer procurement authority from GSA to GDOE.

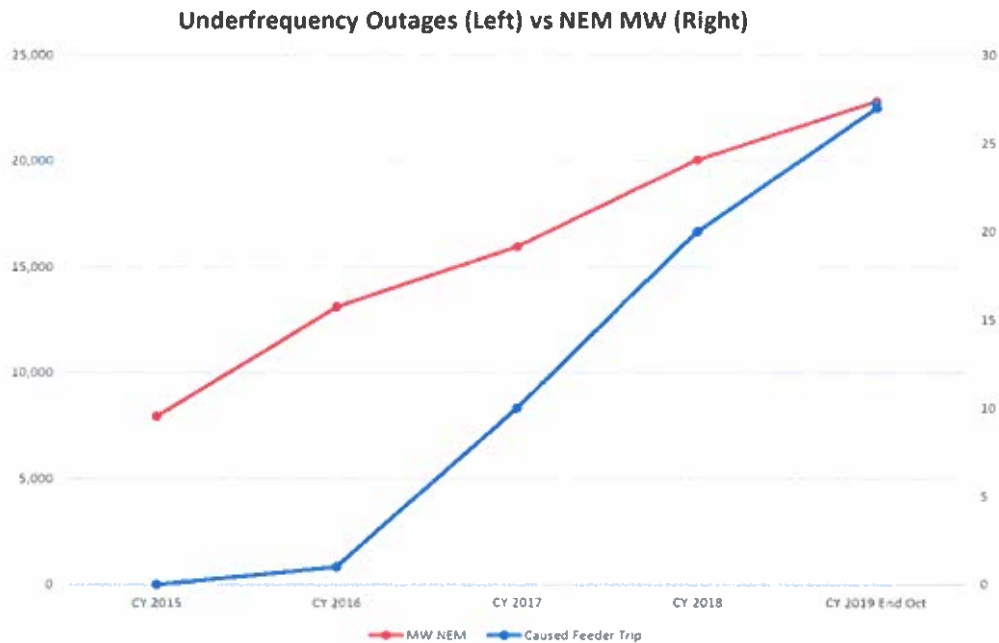
7. Informational Briefings Conducted:

- Powering the Future 2019-2024 to Members, Guam Chamber of Commerce & Society of American Military Engineers (SAME)

8. Award of Phase III: Notice of Intent to Award, subject to CCU and PUC approvals to Engie Solar was made on October 4, 2019. A protest was filed by GlidePath on October 9, 2019. GPA is in the process of making a decision on the protest.

## 9. Solar PV Reliability Cost:

- Please see the following cost estimate on Solar PV production and reliability. There is a perception in the community that renewables, in particular solar PV is the cheapest energy for Guam and that we should eliminate conventional fossil fuel production. Please note the following:
  - 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 addition, there are about 22 MW of net metering customers tied into the grid without batteries. The result of all these intermittent production has degraded the reliability of the system. The number of under frequency automatic load shedding due to solar PV systems has increased substantially over the past few years. Additionally GPA is purchasing Net metering energy for \$0.25 /kWh which it could produce at \$0.154 /kWh.
  - The new GPA 40 MW frequency control batteries is coming on line by end of the year and would decrease these outages. However, we can't continue to add intermittent energy production into the grid which will degrade reliability again. GPA is evaluating this issue and will make a recommendation soon to require all future customer owned solar PV systems to have frequency control capability or Energy Storage System (ESS).
  - System Provided Frequency Control ESS cost about \$0.002 /kWh
  - An ESS to provide one standby day of reliability cost \$0.076 /kWh. Each additional standby day is the same, therefore for two days of reliability it cost \$0.152 /kWh. The new power plant provides 365 days of reliability at \$0.050 /kWh.
  - A hybrid of renewables and the new power plant will provide the lowest and most stable cost for the ratepayers. GPA will update the system Integrated Resource Plan by June 2020. The plan will have stakeholders input.





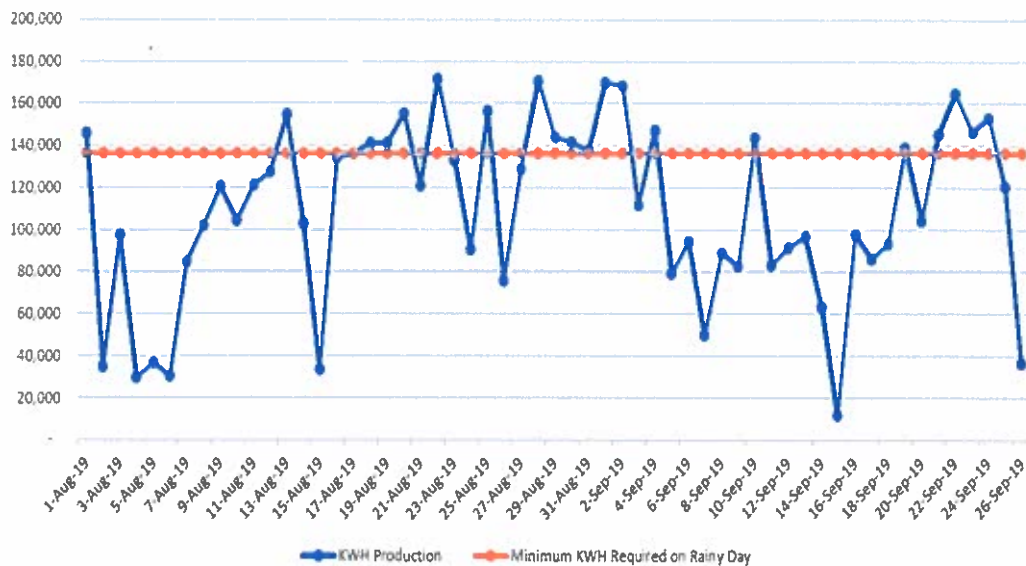
## Solar PV Cost for 1-Day Supply

Description	Existing GPS	Phase II	Phase III	TOTAL	100% Renewables
<b>Capacity kW</b>	<b>25,000</b>	<b>120,000</b>	<b>40,000</b>	<b>185,000</b>	<b>792,428</b>
<b>Approximate Acres (233kW/Acre)</b>	<b>107</b>	<b>515</b>	<b>172</b>	<b>794</b>	<b>3,401</b>
Estimated Annual Energy kWh	52,560,000	283,824,000	84,096,000	420,480,000	
Estimated System Annual Energy kWh	1,666,000,000	1,666,000,000	1,666,000,000	1,666,000,000	1,666,000,000
Capacity Factor	24.0%	27.0%	24.0%	24.0%	24.0%
Percentage of System Delivery	3.2%	17.0%	5.0%	25.2%	
Estimated Sales	1,549,380,000	1,549,380,000	1,549,380,000	1,549,380,000	1,549,380,000
RPS	3.4%	18.3%	5.4%	27.1%	
System Heat Rate kWh/Gal	15.3	15.3	15.3	15.3	
<b>Total Barrels Fuel Avoided</b>	<b>81,793</b>	<b>441,681</b>	<b>130,868</b>	<b>654,342</b>	
<b>Fuel Cost Amount Avoided @\$55/BBL</b>	<b>\$4,498,599</b>	<b>\$24,292,437</b>	<b>\$7,197,759</b>	<b>\$35,988,796</b>	
Contract \$/kWh	\$0.198	\$0.085	\$0.120 *estimated		\$0.120
Annual Cost	\$10,406,880	\$24,125,040	\$10,091,520	\$44,623,440	\$199,920,000
Average \$/kWh				\$0.106	
\$/kW	\$4,000	\$4,000	\$5,000		
<b>Investment Required</b>	<b>\$100,000,000</b>	<b>\$480,000,000</b>	<b>\$200,000,000</b>	<b>\$780,000,000</b>	<b>\$3,777,138,508</b>
\$/kW				\$4.216	\$4.766

All projects beyond Phase II requires energy storage systems (ESS) for load shifting.

## Solar PV Production is Inconsistent and Requires Substantial Battery Reserves

25 MW Solar PV Production  
Aug 1st thru Sept 26th, 2019



## Energy Storage System Cost for 1-Day Supply

ENERGY STORAGE SYSTEM			
FREQUENCY CONTROL		LOAD SHIFTING	
Battery Size kW	40,000	Peak Demand kW	256,000
Investment	\$35,000,000	Battery Size kW	40,000
Annual Debt Service 5%, 20 yrs	\$2,006,065	Daily Net kWh	5,000,000
Annual O&M	\$300,000	Max 10 hour Storage of 40MW Battery	14
Total Annual Cost	\$2,306,065	<u>Estimated Battery Cost for 1-Day Reserve:</u>	
GPA Total Sales kWh	1,650,000,000	\$/kWh USA	\$209
\$/kWh Sold		\$/kWh Guam	\$314
Monthly Cost/1,000 kWh Customer	\$1.40	Investment for System Daily 5,000,000 kWh	\$1,567,500,000
Annual Cost/1,000 kWh Customer	\$16.77	Annual Cost 5%, 20 yrs	\$125,780,255
		\$/kWh for 1,650,000 kWh	\$0.076
		Monthly Cost/1,000 kWh Customer	\$76.23



## \$ 8.8B for 100% Renewables plus 1-Day Reserve Capacity

<b>KW Capacity Required for 1-Day to Full Charge</b>	<b>868,056</b>
<b>\$/KW Investment</b>	<b>\$4,000</b>
<b>Total Investment:</b>	<b>\$3,472,222,222</b>
<b>Daily use</b>	<b>\$3,777,138,508</b>
<b>Recharge Capacity for 1-Day Recharging</b>	<b>\$3,472,222,222</b>
<b>One Day Battery Reserve Capacity</b>	<b>\$1,567,500,000</b>
<b>Total:</b>	<b>\$8,816,860,731</b>
<b>Annual Cost; 20 year life</b>	<b>\$440,843,036.53</b>
<b>Annual kWh</b>	<b>1,666,000,000</b>
<b>Annual \$/kWh</b>	<b>\$0.265</b>
<b>Base Rate less \$0.03/kWh Avoided with Retirement of Conventional Units</b>	<b>\$0.07C</b>
<b>\$/kWh 100% Renewables Plus 1-Day Storage and 1-Day Recharge:</b>	<b>\$0.335</b>

## \$0.6B for 24/7 Reliable and Lower Cost Power

DESCRIPTION	PITI 8 & 9 (M/C)	UKUDU (KEPCO)
Annual Fixed Capacity Fee	\$18,000,000	\$40,000,000
Total KW Capacity	88,000	198,000
<b>\$/KW</b>	<b>\$205</b>	<b>\$202</b>
Annual All-in Cost Excluding Fuel:	\$15,000,000	\$70,000,000
Annual Capacity Factor	80.0%	80.0%
Annual Net kWh	598,202,880.0	1,387,584,000.0
Annual Net \$/kWh ULSD	\$0.025	\$0.050
Annual Net \$/kWh LNG	\$0.025	\$0.043
Thermal Efficiency	39.4%	55.3%
Net Heat Rate kWh/gal ULSD	15.7	20.5
\$/BBL ULSD	\$90.00	\$90.00
\$/kWh ULSD Fuel Cost	\$0.136	\$0.105
\$/kWh LNG Fuel Cost	\$0.105	\$0.080
Total Production Cost ULSD	\$0.1616	\$0.1550
Total Production Cost LNG	\$0.1297	\$0.1234
Age (years)	20	0
Annual Availability	90%	96%
Self Back Up	None	64MW Diesels; 25MW ESS
Forced Outage Rate	5%	2%

## 5.2 Financials

There was an increase in net assets for the end of August was \$1.3M as compared to the anticipated net increase of \$1.0M projected at the beginning of the year. kWh sales were 4.03% less than projected and non-fuel revenues were \$0.7M less than projected. O&M was \$6.3M, \$0.3M less than projected. The Quick Ratio has been a challenge historically.

## 5.3 Resolution 2019-14 USEPA Consent Decree

The U.S. Environmental Protection Agency (EPA) alleges that GPA has been in violation of the EPA National Emission Standards for Hazardous Air Pollutants (NESHAP) standards for oil-fired electric steam generating units at Cabras Units 1 and 2 since April 2015, and the standards for stationary reciprocating internal combustion engines at Cabras Units 3 and 4 from May 2013 to September 2015, and Piti Units 8 and 9 since May 2013. The Guam Power Authority (GPA) and the U.S. Environmental Protection Agency (EPA) have reached an agreement in principle to resolve alleged violations of the Clean Air Act at GPA's Cabras and Piti generating plants, the details of which are contained in the draft consent decree, which is submitted to the Consolidated Commission on Utilities (CCU) and the Guam Public Utilities Commission (GPUC) for review and approval.

To resolve the EPA's alleged violations, the settlement requires that GPA pay a civil penalty of \$400,000; construct and operate a new 180MW power plant burning ultra-low sulfur diesel (ULSD) by October 31, 2022; convert GPA's fuel delivery system from residual fuel oil (RFO) to ULSD, which will include refurbishing the main fuel bulk storage tanks; construct a new ULSD pipeline; run Piti Units 8 and 9 on ULSD by December 31, 2021; use low-sulfur RFO in Cabras 1 and 2 and permanently shut down Cabras 1 and 2 by October 31, 2022; build 100MW of additional utility scale solar power; and install and operate a new energy storage system by December 31, 2019. EPA has alleged that the GPA units have not been compliant with the applicable NESHAP regulations since May 2013 (Cabras 3 and 4, Piti 8 and 9) and since April 2015 (Cabras 1 and 2), which, without a settlement, would subject GPA to potential fines in the hundreds of millions of dollars in civil penalties, in addition to the cost of substantial investments to reduce emissions, with a much more aggressive compliance schedule required by EPA. The proposed consent decree requires GPA to pay a nominal civil penalty which takes into account GPA's limited economic resources, and allows GPA to focus its expenditures on a new efficient power plant, and cost-effective emission reduction measures.

Based on all the additional information provided by GPA over the course of the extensive negotiation process with the U.S. Environmental Protection Agency (EPA) and the US Department of Justice (DOJ), the CCU determines that is in the best interest of the ratepayers of Guam to proceed with the proposed Consent Decree with EPA and DOJ.

The settlement requires that GPA pay a civil penalty of \$400,000. Without a settlement, it would subject GPA to potential fines in the hundreds of millions of dollars in civil penalties, in addition to the cost of substantial investments to reduce emissions, with a much more aggressive compliance schedule required by EPA.

The GM said that this resolution is a very important one and one that has been discussed numerous times in past years. He asked Legal Counsel Botha to give overview of consent decree status and to intro GPA's Legal Counsel Mr. Matt Morrison who has been helping us negotiate the consent decree for the last 3-4 years with the Dept. of Justice and USEPA. His background includes 23 years of environmental compliance litigation. He said they have put forth the resolution detailing the basic terms of the consent decree and detailing what the settlement includes – to resolve all of the violations of relative to the Cabras plants and Piti 8&9 Units. The details include a Civil Penalty is \$400,000 and allows us to construct & operate the new power plant and shut down the plants by completion of the new power plants.

Mr. Morrison gave brief overview of compliance standards when they went into effect in 2013 and 2015 and applies to the type of plant facilities that GPA operates. One is the Reciprocal Internal Combustion Engine or RICE and the other is the Mercury and Air Toxic Standards or MATS.

Mr. Morrison said he would do a brief on GPA's alleged violations, the key settlement terms, the current status and recommendations. He reiterated that this will be an ORDER OF THE COURT not just a regular agreement. After all action is complete the ORDER will be lifted. Below is summary of his brief.

#### Alleged Violations

Cabras units 1&2 have operated in violation of MATS since April 2015; Cabras Units 3&4 operated in violation of RICE since May 2013 until the explosion in 2015. Piti units 8&9 have operated in violation of the RICE since May 2013.

#### Key Settlement Terms

GPA will pay a civil penalty of \$400k and build / operate a new 198MW power plant that burns ultra-low sulfur diesel and capable of burning liquified natural gas. GPA's fuel delivery system will be converted from residual fuel oil to ultra-low sulfur diesel. Piti units 8&9 will be modified to burn ULSD by December 2021. Cabras Units 1&2 will be modified to burn ULSD and shut down by October 2022. Cabras 3&4 and Tanguisson will be permanently shut down within a month after settlement. GPA will build a 100MW solar power in addition to the 25MW of solar already installed; GPA will install and operate a new energy storage system totaling 40MW.

#### Effects of Settlement

The Consent Decree will resolve the RICE and MATS claim made by EPA against GPA and Marianas Energy Co.; GPA will not be admitting liability in the Consent Decree but rather is making a strategic settlement to avoid the cost and uncertainty of litigating the United States claims; when Consent Decree is approved the District Court of Guam, it will become enforceable order of the Court.

#### Termination

The Consent Decree can be terminated once all of the obligations have been fulfilled; DOJ and EPA will likely file a motion to terminate this Consent Decree in 2023.

Mr. Morrison said approvals are in place to proceed with the settlement. PUC approved a contract between GPA and AYM International for construction of a ULSD pipeline and the bulk storage fuel tanks inspection and refurbishment between GPA and Tristar Agility. They also approved contract between GPA and Mobil Oil Guam and Isla Petroleum and Energy Holdings for supply of ULSD to GPA. The CCU approved the Energy Conversion Agreement [ECA] between GPA and Korea Electric Power Company [KEPCO] for the new 198MW power plant. GPA filed the ECA with PUC and GPA expects to sign the ECA agreement after PUC review.

#### DOJ and Judicial Approval Process

After GPA and MEC sign, the settlement must be authorized by the Asst. AG for Environment and Natural Resources of the Dept of Justice. Once DOJ files the Consent Decree with the US District Court for Guam a public notice will be published in the Federal Register after which the public will have 30 days in which to submit comments. After close of the public comment period, DOJ in coordination with EPA will respond to any comments submitted and request that the Court approve the settlement as an order of the court.

Mr. Morrison said that the settlement terms are favorable for Guam stating that EPA has a viable claim against GPA. The regulatory requirements are clear and data shows that GPA exceeded the allowable emissions limits. Also, EPA has reduced the penalty because of a determination that GPA has limited ability to pay a civil penalty given its financial status. GPA was also allowed to negotiate a favorable timeline for the work to become compliant. Lastly the cost of litigation would be high and could very well result in a much higher penalty and more heavy compliance schedule.



He added that the penalty is reasonable for these types of violations. The Clean Air Act authorizes EPA to seek civil penalties up to a max amount established by statute and regulation – for GPA this is more than \$600 million, far beyond GPA's means. GPA was able to demonstrate that it has a limited ability to pay even the standard settlement amount and that funds would be better spent on new equipment and fuels to lower emissions. The \$400k GPA penalty for violations at six units is significantly lower than that recovered by the U.S. in similar cases and gave some examples.

#### The Path Forward

GPA can meet the schedule laid out in the Consent Decree – the schedule was negotiated with EPA and is better than EPA could have demanded or would require if GPA was forced to litigate its claims. GPA will need to provide EPA with an update report every six (6) months, which must include the status of construction and compliance with the Consent Decree. If GPA misses a deadline there are three (3) options – request a delay from EPA based on circumstances that were unforeseeable, sudden, and outside of GPA's control; request that the Court modify a deadline in the Consent Decree and pay the stipulated penalties in the consent decree for missing the deadline.

It was mentioned that the settlement will help Guam's power grid because it allows GPA to modernize its power plants, which is needed regardless of whether this settlement is concluded. GPA's plans for an additional 100MW of rooftop solar, combined with its existing solar energy portfolio would also mean that a substantial portion of GPA's projected daytime production after 2021 will come from renewable energy.

#### Recommendation

Mr. Morrison recommended to the CCU to approve the settlement because the violations and potential penalties otherwise faced are substantial. The settlement conditions will improve Guam's air quality by requiring that GPA retire some of its older units and switch to cleaner fuels, primarily through building a new ULSD power plant. The settlement provides Guam with cost-efficient and reliable power and the settlement conditions will also increase Guam's energy security by dramatically expanding GPA's renewable portfolio.

Comm. Guthertz said the presentation was very well put together and easy to understand and appreciate. It reflects what the agency and CCU has been trying to do. She looks forward to the public knowing what this is all about and that it gets the support that it needs and final approval by the court & PUC.

Mr. Morrison recognized GM John Benavente and staff and in particular Legal Counsel Graham Botha who led the negotiations.

Comm. Guthertz motion to approve the proposed settlement, second by Comm. Sanchez.

In discussion Comm. Limtiaco said his only concern is related to Piti 8&9's conversion to ULSD because the timeline is very tight. He asked GM Benavente whether or not it is truly achievable and can GPA meet this schedule and maintain reliability standards that he alluded to. The GM said it is a challenge to convert MEC 8&9 by 2021. He said conversion by this date is not so much the issue - its taking the units down for the period needed during this growth period is the real issue. He said reaching resolution of this USEPA compliance issue makes it well worth the effort to try our best to meet the challenge and management will try to mitigate what comes up to move the plan along.

Comm. Limtiaco asked the GM to speak about the cost to move from RFO to ULSD is more expensive. The GM confirmed that it will cost about \$30M more per year to move from RFO to ULSD. Part of the reasoning to move to ULSD around this time is intentional to tie in with the shutdown of Cabras 1&2. The objective is to use up all the inventories of RFO on hand.



Comm. Limtiaco asked about possibility of LEAC impact and the GM said there could be it depends but the cost associated with the penalties are substantially higher.

Comm. Sanchez wanted clarification on the related fuel impact and the GMA confirmed there is potential impact of \$30M expense for Piti 8&9 for period Dec2021 - Oct 2022 until the new power plant is operational. It was mentioned that on top of this there is the \$400k in penalty that will be paid with cash flow and will not impact ratepayers.

Comm. Limtiaco said considering PUC will hear the docket on the new power plant and because the consent decree timelines are largely dependent on the new power plant timeline he asked if it would be more prudent to wait until PUC approves the power plant before voting on this matter.

Comm. Sanchez said he sees it as being the entire opposite. He said this is public record and would rather approve it tonight so PUC knows we acted on it. There's no more speculation....this may help influence their decision and doesn't see any benefit to wait. He asked Mr. Morrison if CCU needs PUC approval for the consent decree.

Comm. Limtiaco asked what are the options if PUC does not approve the new plant - will ratepayers face an increase? GM Benavente commented said without the new power plant EPA and take GPA to court and mandate that GPA burn ULSD by a certain date and the same with Cabras 1&2. The corresponding impact for the latter is about \$100k per year in fuel. The new power plant is integral to ensure what is best for the ratepayers. The other thing is the PUC is not unfamiliar with this plan to build a plant and retire the old plants. PUC is aware of this.

Comm. Duenas said the PUC approved to concept of building the power plant. What PUC has before them is to approve the contract not the concept but rather contract terms and conditions.

Comm. Sanchez said if PUC does not approve the consent decree then they have to answer to the Court as to their reason. He said he would rather do everything it can now.

Matt Morrison added that if the CCU decides to not approve this settlement no one has signed document yet. CCU could approve settlement tonight and if PUC disapproves it the Commission could reserve their right to revisit this discussion. USEPA is blind to these deliberations and only concerned about when the official signature is complete.

Comm. Guthertz said she does not want any hesitation on behalf of the CCU on this matter. Everyone worked very hard to get to this day. Everything in the proposed settlement is positive adding the timeline is tight but we can work with the Department of Justice and USEPA to address any related issue at that time. We should be the first to support this and we should vote tonight.

Comm. Limitaco said he believes the consent decree was well written and that he supports it, his concerned is the tight timeline and the ramifications that follow should PUC not approve on Thursday.

Comm. Duenas told Comm. Limtiaco to take comfort in the fact that PUC approved that GPA move forward with the new power plant and is confident that the PUC will act favorably.

Comm. Santos said for the record that we have 800 days either we pay \$600M or \$400k There is no other option here.

Comm. Guthertz motioned to approve Resolution 2019-014 relative to the USEPA Consent Decree second by Comm. Sanchez

Comm. Simon reconfirmed with legal if PUC needs to approve this in discussion it was mentioned that PUC need only be informed and that this matter is between GPA and USEPA. Legal Counsel concurred stating that initially he was advised to petition the PUC but if this is no longer CCU's sentiment, the resolution can be amended.

Comm. Guthertz motion to amend the resolution to strike any reference to petition the PUC, second by Comm. Sanchez. The vote was unanimous.

On main motion the vote was unanimous and Resolution 2019-14 carried as amended.

## 6. ANNOUNCEMENTS

### 6.1 Next CCU Meetings:

The Chairman announced that the next CCU meeting would be a GWA work session on November 19<sup>th</sup>, a GPA work session on November 21 and the regular monthly CCU meeting on Nov 26.

## 7. EXECUTIVE SESSION

### 7.1 Potential Litigation Matter

Executive Session was canceled prior to the start of the meeting.

## 8. ADJOURNMENT

There being no other business to bring before the Commission,

Comm. Santos motioned to adjourn the meeting; second by Comm. Sanchez. It was unanimous and the meeting adjourned at 6:57 p.m.

||s||

Bls

Attested:



JOSEPH T. DUENAS, Chairman



MICHAEL T. LIMTIACO Secretary