GPWA CCU MEETING

Presentation to:

Consolidated Commission on Utilities
January 23, 2024

ISSUES FOR DECISION

GPA Resolution No. FY2024-10

Request to Authorizing Expenditure for the Procurement of 45-foot Class B Concrete Power Poles

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

This procurement is to replenish GPA's stock of 45-foot concrete power poles. 45-foot concrete power poles are necessary to replace damaged poles, replace existing wooden poles, and for line extensions to service new customers. GPA currently has 64 units of the 45-foot concrete power poles in its inventory. This procurement is urgent because GPA's current stock level of 64 is *below* the minimum safety stock level of 189.

How much will it cost?

$1,098,800.00

When will it be completed?

GPA anticipates delivery of power poles by August 2024.

What is its funding source?

Revenue funds

The RFP/BID responses:

Benson Guam Enterprises Inc. submitted a bid for GPA's consideration. GPA's Evaluation Committee has determined *Benson Guam Enterprises Inc.* to be the lowest responsive bidder for the 45-foot Class B concrete power poles.

GPA Resolution No. FY2024-11

Relative to Approval for Relocation of Yigo Diesels

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

The Yigo Diesel units remain an essential part of GPA's generation capacity until the commissioning and operation of the Ukudu Power Plant by late 2025. These units however have significantly declined in capacity due to required repairs or replacement, held up by several procurement protest. The Yigo Diesel site was also determined to be the optimal site for permitting and commissioning the Temporary Power within the 100-day solicitation requirement. The immediate installation of Temporary Power would displace the Yigo Diesel units. An alternate site, adjacent to the Tenjo Vista Power Plant and owned by GPA, can temporarily accommodate up to 20 MWs of the Yigo Diesel units once repaired or replaced. GPA requires a contractor to restore 20 MWs of the Yigo Diesel units, relocate, install, commission and operate and maintain these units for 3-year base period with 2 optional one-year extensions.

Where is it located?

The Yigo Diesel units will be relocated to lot adjacent to the Tenjo Vista Power Plant.

How much will it cost?

It is estimated that the capacity restoration through repair or replacement may cost up to $7M and annual operating costs of $2-3M, totaling $13M for a base term contract.

GPA Resolution No. FY2024-11 *(continued)*

Relative to Approval for Relocation of Yigo Diesels

When will it be completed?

GPA expects units to be operational within 6-9 months with a base term for operation and maintenance for 3-year base period with 2 optional one-year extensions.

What is its funding source?

Revenue funded

The RFP/BID responses:

To be solicited

GPA Resolution No. FY2024-12

Relative to Authorizing the Management of the Guam Power Authority to Extend the Contract for the Supply of Residual Fuel Oil No. 6 to Hyundai Corporation.

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

The first (1st) year extension of the contract with Hyundai Corporation for Supply of Residual Fuel Oil (RFO) No.6 for the Baseload Plants is expiring on August 31, 2024.

Extension of the contract for two (2) consecutive years is necessary to provide uninterrupted supply of RFO, considering that the Cabras plant operation will continue until 2026 with the delayed commissioning of the Ukudu plants.

Where is the location?

RFO will be supplied to the Cabras 1&2 baseload plants.

How much will it cost?

The estimated total cost for the 2-year contract extension is approximately $213,686,333 (Exhibit A), requiring prior approval from the PUC.

The premium fee for the 2-year contract extension is reduced from $79.000/MT to $75.000/MT for a potential total savings of approximately $1,000,000.

GPA Resolution No. FY2024-12 *(continued)*

Relative to Authorizing the Management of the Guam Power Authority to Extend the Contract for the Supply of Residual Fuel Oil No. 6 to HYUNDAI CORPORATION.

When will it be completed?

The two-year contract extension shall commence on or about September 1, 2024 and to expire on August 31, 2026.

What is its funding source?

Fuel revenue funds

The RFP/BID responses:

N/A

GPA Resolution No. FY2024-12 *(continued)*

EXHIBIT A: HYUNDAI PROPOSAL ANALYSIS

Table 1

2-YR EXTENSION		**FY2025**	**FY2026**	**SUMMARY**
a. Commodity Price (Avg MOPS)	$/bbl	$101.485	$111.333	
b. Premium Fee	$/bbl	$29.185	$30.873	
c. Unit Cost (Avg)	$/bbl	$130.670	$142.207	$133.55
d. Annual Quantity	bbl	1,200,000	400,000	1,600,000
e. Total Cost	$/Yr	$156,803,727	$56,882,606	**$213,686,333**
		Current	Proposed Extension	Savings
f. Premium Fee [b]	$/bbl	$12.421	$11.792	$0.629
g. Savings				**$1,006,289**

Table 2

2-YR EXTENSION		**FY2025**	**FY2026**	**SUMMARY**
a. Commodity Price (Avg MOPS) [a]	$/MT	$756.060	$829.433	
b. Premium Fee	$/MT	$75.000	$75.000	
c. Unit Cost (Avg)	$/MT	$831.060	$904.433	$849.40
d. Annual Quantity [c]	MT	188,679	62,893	251,572
e. Total Cost	$/Yr	$156,803,727	$56,882,606	**$213,686,333**
		Current	Proposed Extension	Savings
f. Premium Fee	$/MT	$79.000	$75.000	$4
g. Savings				**$1,006,289**

[a] Conversion factor: 7.45 bbl/MT

[b,c] Conversion factor: 6.36 bbl/MT

GPA Resolution No. FY2024-13

Relative to Authorizing the Management of Guam Power Authority for the Extension of the Ultra-Low Sulfur Diesel (ULSD) Storage Agreement with Tristar Terminals Guam, Inc. (TTGI)

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

The extension of the ULSD Storage Agreement under TTGI-SA-2018-01 is set to expire on May 31, 2024 for Tank 1906 and in June 30, 2024 for Tank 1907, respectively.

With the delay in the completion of the refurbishment of GPA Tank 1934 and Tank 1935 for conversion to ULSD storage anticipated to be fully completed in year 2026, GPA needs to continue the lease of the TTGI tanks to ensure uninterrupted supply of bulk ULSD by pipeline transfer to the power plants (Tenjo Vista, Piti 7, Piti 8, and Piti 9).

Where is the location?

The TTGI ULSD storage tanks are located at the TTGI terminal in Agat, Guam.

How much will it cost?

The lease fee for each tank is approximately $98,000.00 per month (excluding handling and throughput fees).

GPA Resolution No. FY2024-13 *(continued)*

Relative to Authorizing the Management of the Guam Power Authority for the Extension of the Ultra-Low Sulfur Diesel (ULSD) Storage Agreement with Tristar Terminals Guam, Inc. (TTGI)

How much will it cost? *(continued)*

Tank 1906 lease cost for the extension period from June 1, 2024 thru June 30, 2026 is approximately $2,450,000.00.

Tank 1907 lease cost for the extension period from July 1, 2024 thru June 30, 2026 is approximately $2,352,000.00.

The aggregate total lease cost for both tanks thru June 30, 2026 is approximately $4,802,000.00.

When will it be completed?

The contract extension will expire in June 30, 2026.

What is its funding source?

The ULSD storage fees will be funded under the fuel revenue budget.

The RFP/BID responses:

TTGI is the sole source provider for the ULSD Storage Facility in Guam meeting GPA requirements.

GPA Resolution No. FY2024-14

Relative to Authorizing the Management of Guam Power Authority to Procure Supply of Diesel Fuel Oil No. 2 to the Various GPA Plant Site Locations

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

The Guam Power Authority intends to procure a contractor for the Supply of Diesel Fuel Oil No. 2 to the various GPA plant site locations. The bulk fuel supply contract is necessary to provide uninterrupted supply of fuel to the plants.

Where is the location?

Diesel Fuel Oil No.2 will be supplied to the following plant site locations:
Site Location 1 - Yigo CT and Yigo Diesel
Site Location 2 - Dededo CT and Macheche CT
Site Location 3 - Cabras 1&2 and Piti 7
Site Location 4 - Manenggon and Talofofo

How much will it cost?

The 3-year contract with two additional one-year extension option is estimated to exceed $1.5M, requiring prior approval from the PUC.

GPA Resolution No. FY2024-14 *(continued)*

Relative to Authorizing the Management of Guam Power Authority to Solicit Bids (IFB) for the Supply of Diesel Fuel Oil No. 2 to the Various GPA Plant Site Locations

When will it be completed?

The contract is planned for an initial period of two years to commence on or about January 01, 2025 and to expire on December 31, 2027, with the option to extend for two (2) additional one-year terms.

What is its funding source?

Fuel revenue funds

The RFP/BID responses:

The IFB solicitation will commence after approval by the CCU and PUC.

GPA Resolution No. FY2024-15

Relative to Authorize the Management of Guam Power Authority to Enter into a Month-to-Month Extension for its Professional Printing, Mailing, Processing and Other Services, Due to Ongoing Litigation

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

To ensure that GPA has continued printing services in order to issue monthly billings. GPA management seeks a month-to-month extension up to 12 months or up to when a new contract is awarded in the event a new vendor is selected. Below is the timeline of events:

- In April 2016, GPA entered into a contract with Graphics Center for a one-year period with option to extend for four additional one-year periods.
- In 2020, GPA issued a bid for such services but the bidder did not meet the bid requirements.
- In 2021, the CCU approved management's request to exercise the month-to-month contract extension up to 8 months or until a new contract is awarded. GPA also issued a Request for Proposal for Professional Printing, Mailing, and Processing Services. GPA received three (3) offers and selected InfoSend as the most qualified offeror, GPA selected Graphic Center as the second most qualified offeror, and GPA rejected Moonlight BPO's offer.
- In August 2021, Graphic Center filed a procurement protest disputing GPA's evaluation process for the RFP and GPA denied the protest.
- In October 2021, Graphic Center then filed a procurement protest appeal with the OPA. In March 2022, the OPA issued its decision denying Graphic Center's appeal and in April 2022, Graphic Center appealed the OPA decision in the Superior Court of Guam.

GPA Resolution No. FY2024-15 *(continued)*

Relative to Authorize the Management of Guam Power Authority to Enter into a Month-to-Month Extension for its Professional Printing, Mailing, Processing and Other Services, Due to Ongoing Litigation

What is the project's objective? Is it necessary and urgent? *(continued)*

- In February 2023 the CCU approved the extension of the GPA-Graphic Center Contract and GPA may exercise the month-to-month contract extension up to twelve (12) months or until a new contract is awarded.
- The PUC approved the month-to-month request in March 2023.

This matter continues to be with the Superior Court of Guam and it is imperative for GPA to have these bill print, mail, and processing service, which is the revenue lifeline of GPA.

Where is it located?

Guam Power Authority

How much will it cost?

Approximately $420,000 for 12-month period

What is its funding source?

Revenue funds

GPA Resolution No. FY2024-16

Relative to Approval of Temporary Power

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

Yigo CT and the Ukudu Power Plant Project sustained significant damages from Super Typhoon Mawar resulting in reduction of 20 MW to GPA's reserve capacity and a significant delay to the Ukudu Power Plant Commercial Online Date (COD).

Yigo Diesels, another critical generation site, has also significantly declined in capacity due to required repairs or replacement, held up by several procurement protests.

Due to these generation capacity shortages, GPA has solicited for up to 40MW of emergency Temporary Power.

The Yigo Diesel site was determined to be the optimal site for permitting and commissioning the Temporary Power within the 100-day solicitation requirement.

GPA has selected Aggreko to be the most qualified and responsive vendor and has completed negotiations with Aggreko for the contracting of 20MW of temporary power at Yigo Diesels. In addition to the temporary power, GPA has negotiated the assessment and repair of up to 18 Yigo Diesel units in order to restore up to an additional 20MW of capacity at the Yigo Diesel site.

GPA Resolution No. FY2024-16 *(continued)*

Relative to Approval of Temporary Power

Where is it located?

The Temporary Power location will be at the existing Yigo Diesel site.

How much will it cost?

GPA expects this to cost $25M over a 2-year period.

How much will it cost?

GPA expects units to be operational within 100 days for a 2-year base period with no option to extend.

What is its funding source?

Revenue funded

GPA Resolution No. FY2024-16 *(continued)*

Capacity (kW): 20,000 Est. Capacity Factor: 60%	Year 1	Year 2
Est. Annual Production (kWh)	105,120,000	105,120,000
Capacity Charge (kW/month)	$6,564,000	$6,892,200
Fixed O&M (month)	$2,304,972	$2,420,221
Total Fixed Charges	$8,868,972	$9,312,421
ECA ($9/MWH)	$946,080	$993,384
ANNUAL TOTAL:	**$9,815,052**	**$10,305,805**
ESTIMATED FUEL COST SAVINGS		
Annual Production (kWh)	105,120,000	105,120,000
Est. Heat Rate (kWh/gal) min.	13.3	13.3
Annual Fuel Consumption (gal)	7,908,680	7,908,680
Annual Fuel Cost (@ $120/bbl.):	$22,596,230	$22,596,230
GPA Non-Baseload Heat Rate	10.5	10.5
Annual Fuel Consumption	10,011,429	10,011,429
Annual Fuel Cost (@ $120/bbl.):	$28,604,082	$28,604,082
Annual Fuel Cost (Savings):	**($6,007,852)**	**($6,007,852)**
NET ANNUAL COST:	**$3,807,200**	**$4,297,953**

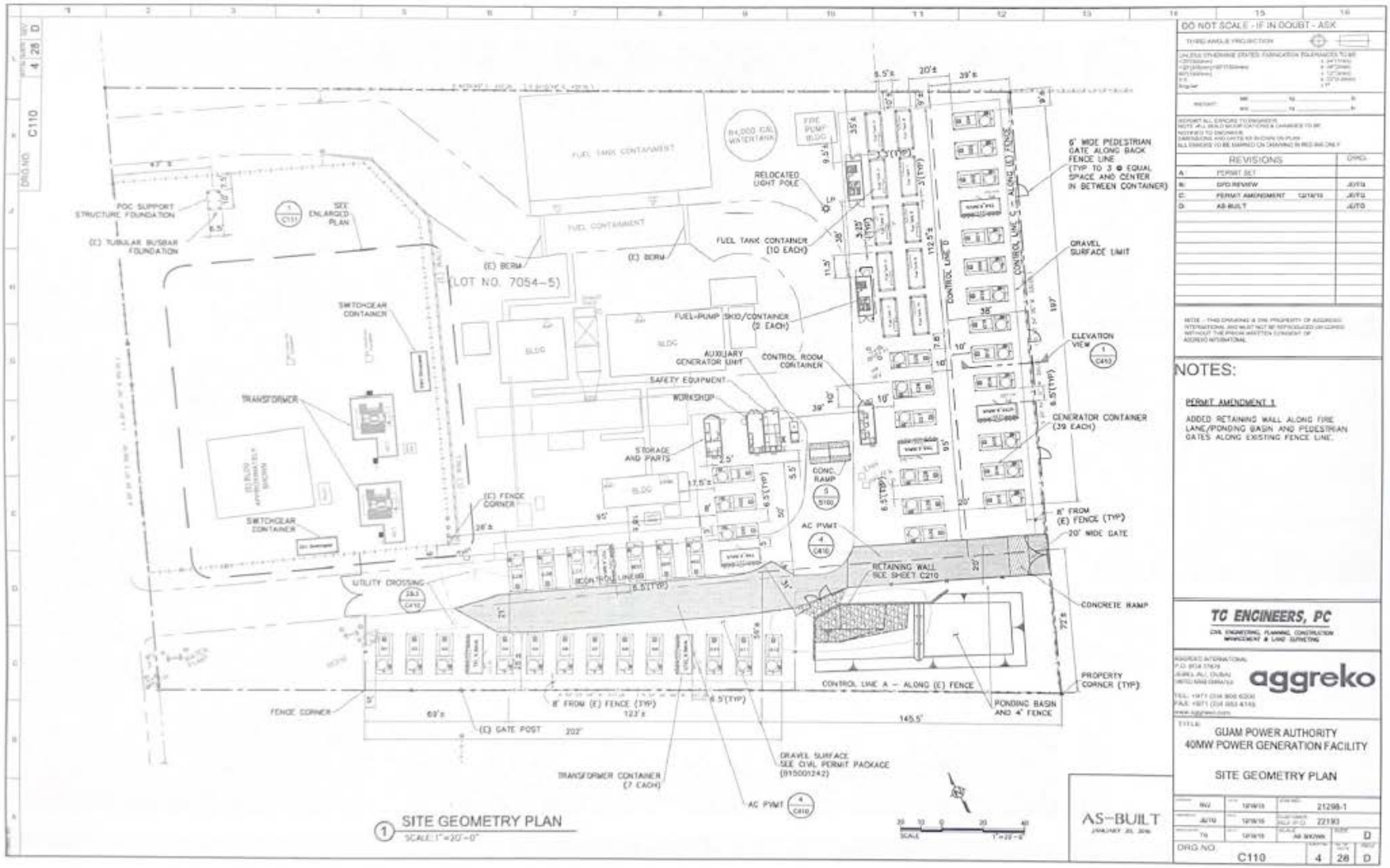
Key Responsibilities:

1. Aggreko utilizes a delineated portion of Yigo Diesel compound.
2. GPA provides DEF (Urea) and disposes of waste oil.
3. Aggreko removes all GPA containerized units on the designated site and store on GPA-designated adjacent lot.
4. Aggreko to remove non-working units from GPA-designated side and relocate/install existing working units (est. $260,000).
5. Aggreko to provide assessment, recommendations, and cost estimates for repair/overhaul of existing units (est. budget $3M).
6. Fixed cost inclusive of all mobilization, demobilization, and other costs Aggreko may incur. Variable cost based on energy production (kWh).
7. GPA to provide $1M mobilization upon award of contract.

GPA Resolution No. FY2024-16 *(continued)*

	Rate	FY2024 CY1 (1-5 months)	FY2025 CY1 (6-12 months)	FY2025 CY2 (1-5 months)	FY2026 CY2 (6-12 months)	2 Year Total
Capacity Charge	$27.35	$2,735,000	$3,829,000	$2,871,750	$4,020,450	$13,456,200
Fixed O&M Charge ($/Month)	$192,081	$ 960,405	$1,344,567	$1,008,425	$1,411,795	$4,725,193
Energy Conversion Rate ($/MWH)	$9	$394,200	$551,880	$413,910	$579,474	$1,939,464
Assess & Repair Budget (One Time)	$3,000,000	$3,000,000	-	-		$3,000,000
Mobilization Fee (One time)	$1,000,000	$1,000,000				
	Annual Totals:	$8,089,605	$5,725,447	$ 4,294,085	$6,011,719	$23,120,857
	FY Totals:	$8,089,605	$10,019,532		$6,011,719	$23,120,857
	Contract Year Totals:		**$13,815,052**		**$10,305,805**	**$24,120,857**

GPA Resolution No. FY2024-16 *(continued)*



GM UPDATES

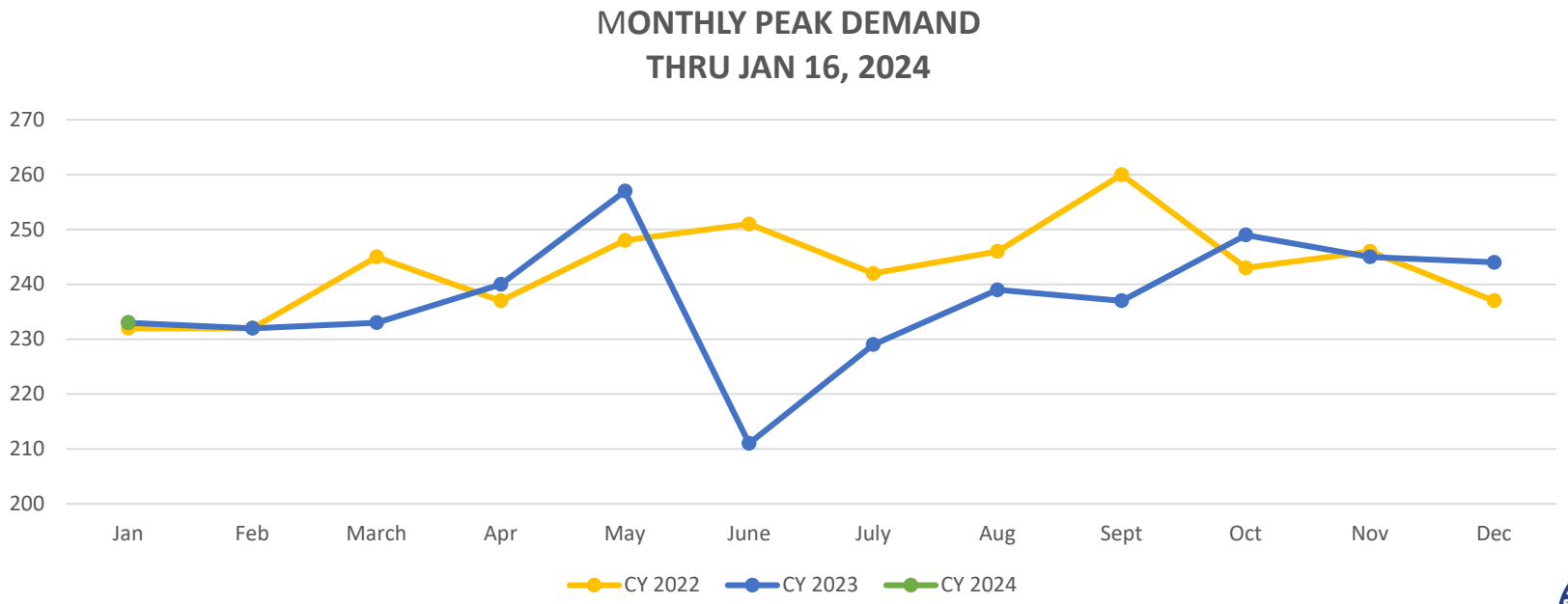
General Manager's Report

Projected February Generation Status

1. Reserve Margin Forecast for February 2024:

Targeted Available Capacity:	272 MW (All Baseloads Available)
Projected Demand:	232 MW
Anticipated Reserve Margin:	40 MW
Interruptible Load Availability:	16 MW
Total Reserves:	56 MW

2. System Peak Demand:

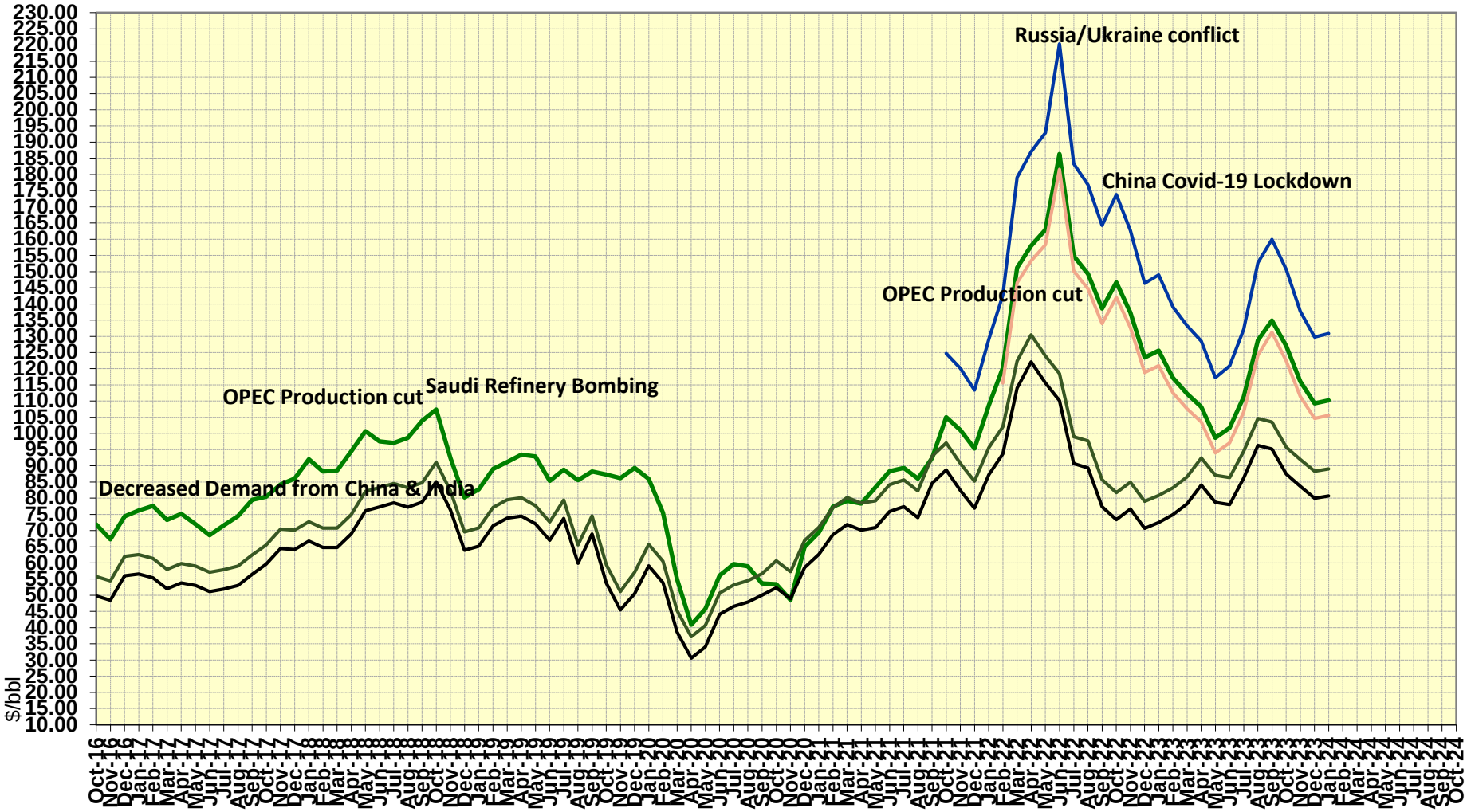


General Manager's Report

3. GPA Fuel Landed Cost

(Per Barrel thru 1/16/2024)

ULSRFO 0.2% **$130.90** **ULSD Bulk** **$105.58**



General Manager's Report

4. **PUC Update:**

GPA Docket – **Thursday, January 25, 2024** Regular Meeting

- GPA Docket 24-06, Petition to Approve Amendment II to Hanwha Energy Corporation's Phase II, Renewable Energy Acquisition Power Purchase Agreement
- GPA Docket 24-08, Petition to Set the Levelized Energy Adjustment Clause (LEAC) Factor effective February 1, 2024
- GPA Docket 24-10, Petition to Approve Purchase of Water Systems Diesel Generators

Approved Dockets on December 19, 2023:

GPA Docket 24-09, Petition for Approval and Increase in Contract Expenditures for Water System Diesel Generator Fuel

Dockets Pending PUC Review:

GPA Docket 24-03, Petition to Review 12 G.C.A. §8502 (c)(2)(B) relative to Net Metering

General Manager's Report

5. Customer Assistance:

Prugråman Ayuda Para I Taotao-ta Energy Credit 3rd Extension (PL 37-49 Oct-Dec 2023)

- GPA internal teams coordinate efforts to ensure $100 Energy Credits are applied to qualified accounts within 1-2 business days of receipt of DOA funding allotment. Unused credits are returned to DOA.
- October 2023: Funds received Nov 28th. Credits applied to qualified accounts on Nov 29th.
- November 2023: Funds received Dec 26th. Credits applied to qualified accounts on Dec 27th.
- December 2023: Funds received Jan 19th. Credits applied to qualified accounts on Jan 22nd.

P.L. 37-49 from October thru December 2023				
Period	**Credits Received**	**Credits Issued**	**Unused Credits**	**Accounts**
Oct-23	$ 5,276,000	$ 5,239,100	$ 36,900	50,756
Nov-23	$ 5,276,000	$ 5,242,500	$ 33,500	50,790
Dec-23	$ 5,276,000	$ 5,249,900	$ 26,100	50,864
Total:	**$ 15,828,000**	**$ 15,731,500**	**$ 96,500**	**152,410**
Overall Total:	**$ 94,971,000**	**$ 94,628,500**		

NOTE: Data as of January 22, 2024 energy credits upload report.

Bill 208-37 (COR), introduced by Sen. Parkinson on December 1, 2023, will appropriate funding for the $100 Energy Credits from January 2024 – March 2024, if passed into law.

Guam Homeowner Assistance Fund Program (HAF)

- $75,501.52 was applied to qualified ratepayer accounts from November 10, 2023, through December 29, 2023, totaling $2,818,714 since program inception. [Batches 74-80]

Emergency Rental Assistance Program (ERA)

- $140,816.80 $352,316.06 was applied to qualified ratepayer accounts from November 8, 2023, through December 29, 2023, totaling $6,392,560 since program inception. [Batches 278-283]

General Manager's Report

New Power Plant Update: GPA Activities

Completed:

- ECA Amendment: Signed on March 17, 2021.
- Resolution on Section 106 process between Navy/SHPO/GPA (cultural process)
- Archaeological Inventory Survey of Ukudu Site
- Cultural Survey for boring scope fuel/water/power project areas (outside of plant)
- Baseline noise study for Piti 41 MW diesel generator plant site.
- Water Supply and Discharge Agreement signed.
- Approval of research design for boring of proposed site in Piti for diesel generator relocation
- Approval of Archaeological Monitoring & Discovery Plan for pipeline construction
- Public Law 36-91 was signed on 4/11/22 for exemption of construction of Reserve Facility in Piti.
- GHPO Concurrence of Section 106 of the bull cart trails
- Land Lease Agreement was signed by Governor, Lt. Governor and Attorney General on July 6, 2022
- Geotechnical boring test report at the Piti site completed.
- GPA approves remaining Phase 5 & 6 construction permits.
- GPA obtains MEC specialist for construction support at Nimitz allowing excavation to resume on Nov. 1, 2022
- GPA obtains easement to avoid Chaot river area near Route 4 in Sinajana for pipeline construction.
- GPA provides notice to Navy of work starting on the bullcart trails along the pipeline route after Navy NEPA process.
- GPA obtains signage requirements for bullcart trails from Navy.
- CCU officially approves cancellation of Reserve Facility.
- Governor visits plant site on Feb. 2, 2023
- GPA obtains GEPA approval for Land Use Control Work Plan.
- GPA met with Mayor Paco and Mayor Sarvares to coordinate bullcart excavation in Harmon and Mongmong-Toto-Maite.
- PUC officially approves cancellation of Reserve Facility.
- GPA reviewed GUP's proposed pipeline construction plan for the Nimitz Hill Steep Section and provided comments to contractor.
- GPA received overview of commissioning plan from GUP commissioning team on Apr. 12, 2023.
- GPA obtains CCU approval for LNG Phase I pending PUC approval
- GPA met with GUP/DUP on Jun 7th, 2023 to discuss the impact of Typhoon Mawar and the actions required to mitigate the damage.
- GPA restored power to Ukudu Power Plant on Jun. 8, 2023.
- Resolved fuel supply configuration issue with GUP on Oct. 24, 2023.
- GPA and GUP reached an agreement to establish the new Commercial Operation Date (COD) on Dec. 6th, 2023

General Manager's Report

New Power Plant Update: GPA Activities (continued)

Ongoing / Pending:

- Archaeological & Cultural Requirements:
  - ✓ Archaeological monitoring for pipeline construction work (Chaot & Nimitz areas).
  - ✓ Archaeological monitoring is nearly completed for all required areas.
  - ✓ Archaeological monitoring is ongoing for augering work inside Harmon Substation.
- Water & Wastewater Requirements:
  - ✓ Change of Law issues due to update GWA NPDES permit affecting discharge of wastewater from cooling system. Follow-up with GWA on the NPDES permit modification.
- Construction Permit & Drawing Reviews:
  - ✓ Interconnection and pipeline design documents are being reviewed for approval.
- Reserve Facility:
  - ✓ Reviewing draft ECA amendment provided by GUP
- Other:
  - ✓ Monthly project reviews including Project Schedule.
  - ✓ Weekly meetings on contract items and ongoing construction activities and pending issues
  - ✓ Coordination with Navy on excavation activities for pipeline construction
  - ✓ Coordination with GUP/DUP on construction activities within Harmon Substation
  - ✓ GPA preparing response to GUP force majeure claim.
  - ✓ GPA is reviewing GUP's proposal to change fuel pump configuration.
  - ✓ GPA is assisting DUP with work within Harmon Substation
    - ✓ GPA work includes installation of line guards, outage coordination, etc.
  - ✓ GPA is attending weekly DPW meetings to help GUP/DUP attain work permit for Route 16.
  - ✓ GPA is assisting with the installation of line guards for work inside Harmon Substation.
  - ✓ GPA held meeting with DUP to discuss NETA requirements for commissioning on Jan. 12th, 2024

General Manager's Report

New Power Plant Update: GUP [Contractor] Activities

Typhoon Mawar Restoration:

- DUP structural engineer arrived on island Jun. 7th, 2023 to perform damage assessment.
- Switchgear and HRSG technical advisors arrived on island on Jun. 8th, 2023 to assess extent of the damage.
- GUP is requesting for a 14.5 month extension to the required Commercial Operation Date.
- GUP reviewing treated water tank demolition plan.
- Completed demolition of fire-water tank.
- GUP finalizing decision for MV switchgear repair/replacement.
- Demolition of all damaged ULSD and treated water tanks are completed. One course of tank walls (of 8) is in place for both ULSD tanks.
- DUP has resumed vertical welding of tank walls.
- One course of tank walls (of 8) is in place for Treated Water Tank A. DUP is awaiting the arrival of materials for Treated Water Tank B.

Typhoon Bolaven:

- Site was not affected by the typhoon and equipment was well preserved.

Completed:

- EPC Contract – Doosan
- Height Variance for Ukudu Site
- Financing Contracts Signed – Equity Bridge Loan in place. Senior loan requires air permit and land lease legislation for funds drawdown.
- Down payment to Siemens to secure Turbine Order (long lead item)
- Survey Maps for land lease recorded at Dept. of Land Management
- Phase I for Ukudu Plant construction permit approved. Foundation work is ongoing.
- GUP issues Notice to Proceed to EPC on May 31, 2022.
- Land Lease Agreement was signed by Governor, Lt. Governor and Attorney General on July 6, 2022
- GEPA approves and issues Ukudu Air Permit on 7/20/22 during construction ground breaking ceremony.
- KEPCO/GUP achieves financial close on September 30, 2022.
- Obtained DPW heavy haul permit on Feb. 3, 2023
- Delivered letter to GPA for review requesting additional compensation for increased costs and delays.
- Completed all heavy haul transports on Apr. 24th, 2023.
- Obtained permit approval for reuse water pipeline installation from DPW and GEPA.
- Concrete work completed for median restoration.
- Conducted monthly cybersecurity meeting to discuss NERC compliance with GPA Oct. 6, 2023
- DUP presented Route 16 work plan to DPW on Nov. 2nd, 2023.
- DUP submitted complete package requested by DPW for the Route 16 permit on Dec. 13, 2023.

General Manager's Report

New Power Plant Update: GUP [Contractor] Activities (continued)

Ongoing / Pending: *(continued)*

Construction

- Power Plant – All 6 phases of plant building construction permits were issued by Oct. 2022.
- Pipeline –
  - Construction of above-ground pipeline pedestals is ongoing
  - Excavation has started on Route 34.
  - Tiyan Road crossing is ongoing.
  - Restoration of Larson and Turner Road is ongoing.
  - DUP is awaiting approval from DPW to begin work along Route 16,

Transmission Line

- Design and material specifications under review.
- Anticipating construction early 2023 pending permit approval.
- Cleared area between Harmon Substation and Ukudu Plant for new transmission lines.
- Pole foundation work is ongoing within Harmon Substation.

Existing Pipeline Cleaning & Demolition

- GPA continues to work with GEPA on a Land Use Control document regarding Route 16 (Airport) to Route 34 abandonment plan.

Reserve Facility

- Provided draft ECA amendment to GPA

Schedule Update

- GUP submitted updated schedule on Sep. 13, 2023 with a Jan, 2026 Commercial Operation Date
- GUP submitted "accelerated" schedule on Sep. 13, 2023 with a Sep, 2025 Commercial Operation Date
  - GPA is reviewing GUP's $12 million dollar request to accelerate schedule
  - The new COD has been determined by GPA and GUP. Pending ECA update and approvals from CCU & PUC.

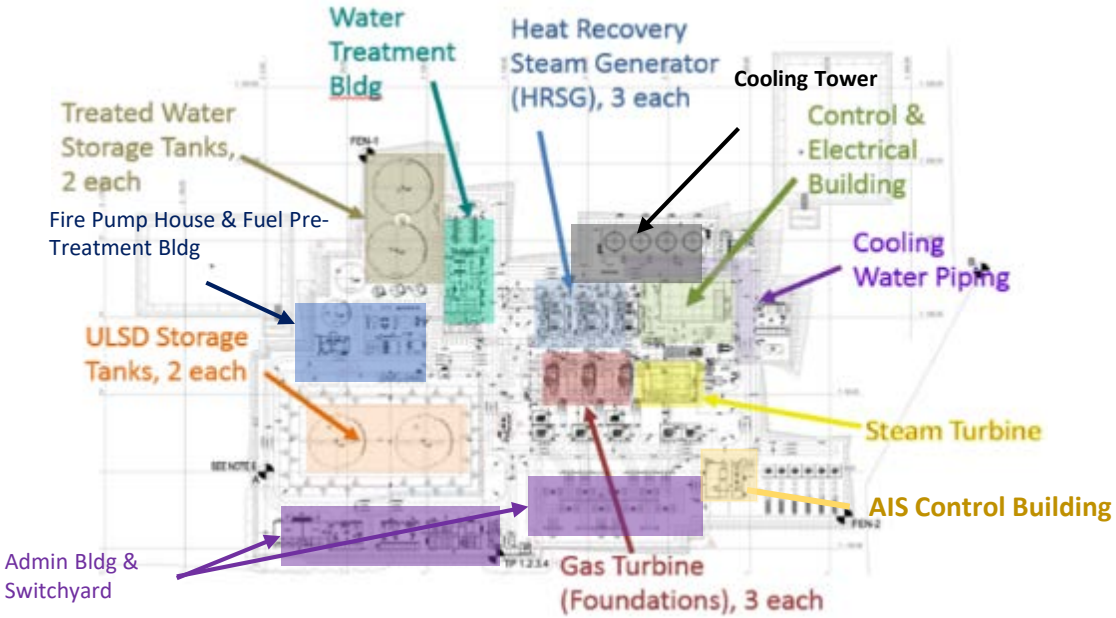
Transportation Logistics

- EPC continues to work with DPW on transport plan from Port to Ukudu site.
- Bridge analysis dictating required transport equipment.
- Temporary bridge delivered as required by DPW as backup for any bridge damage due to limited alternate routes in some areas.
- Transportation will take several hours over several days to move HRSG modules and will affect traffic during movement.
- Weekly meetings being held to discuss plans and requirements.
- 25 heavy cargo movements expected thru April 2023
- Demonstration of the Self-Propelled Modular Transporter (SPMT) was provided to DPW, GUP, DUP and GPA representatives on Oct. 27 at the Port.
- First heavy cargo shipment arrived on Guam on Nov. 2 which contains the 12 HRSG modules. It is being stored at the Port.
- Doosan team has hired media group to provide public outreach.
- Heavy haul transportation ongoing. First transport began Feb 4th.
- Painting of newly constructed medians is ongoing.

General Manager's Report

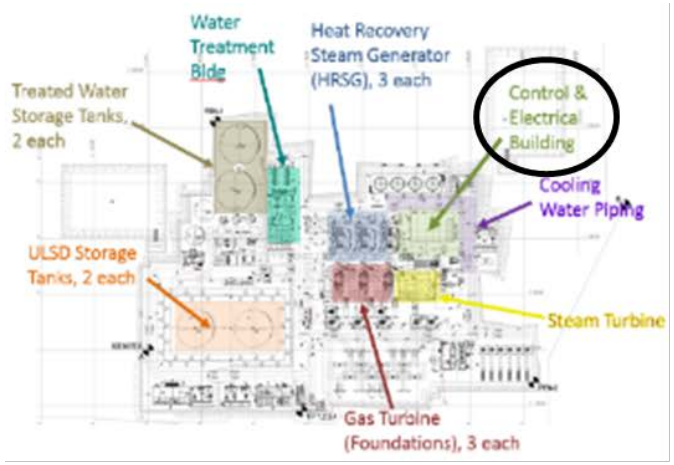
Ukudu Power Plant Construction Status

Plant construction progresses steadily. Demolition is completed for all ULSD and treated water tanks. Major ongoing work includes: Restoration of tank walls for the ULSD and Treated Water tanks, GTG air intake installation, and Power Transformer installation.



General Manager's Report

Ukudu Power Plant Construction Status



Control & Electrical Building



Control room fire panel installation is ongoing.



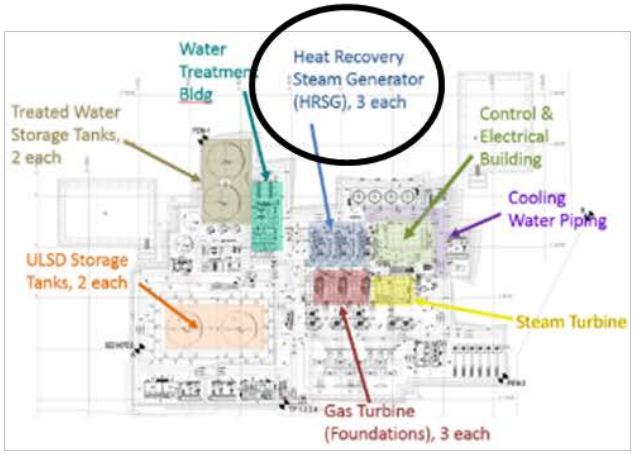
Commissioning of UPS and batteries is in progress.



General Manager's Report

Ukudu Power Plant Construction Status

Heat Recovery Steam Generator (HRSG)



HRSG 1-3: Steel Structure & Drum Installation Work is ongoing





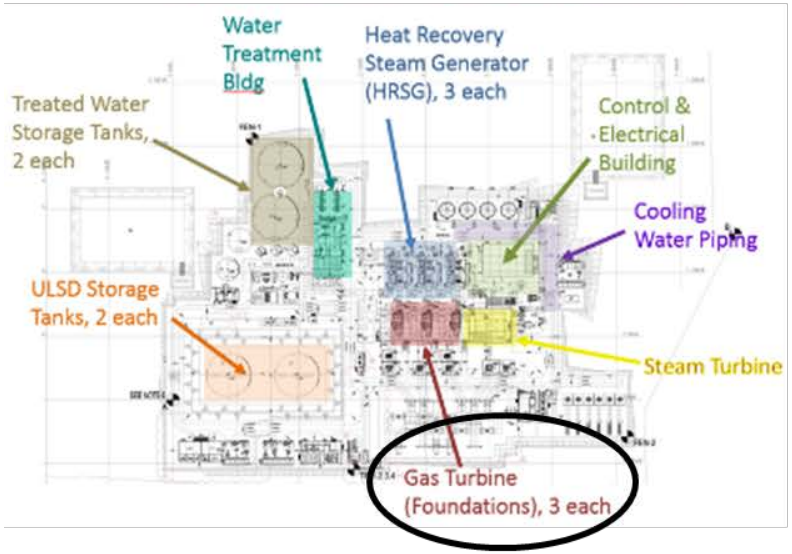




General Manager's Report

Ukudu Power Plant Construction Status

Gas Turbines & Generators



GTG Building – Air intake and piping installation is in progress

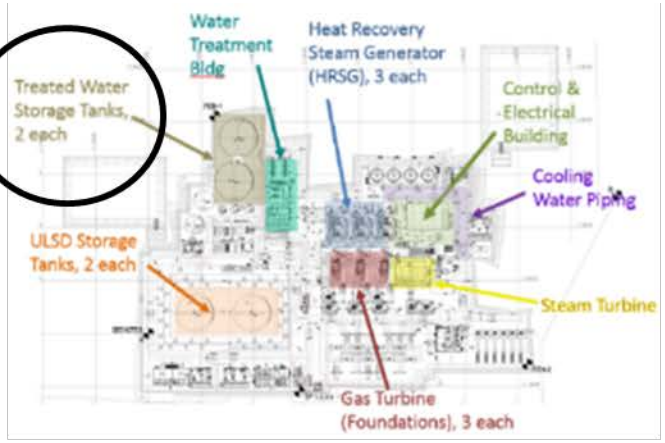


Unit Aux Transformer 1 – Tanks and radiator installation ongoing



General Manager's Report

Ukudu Power Plant Construction Status



Treated Water Storage Tank A – Awaiting arrival of materials

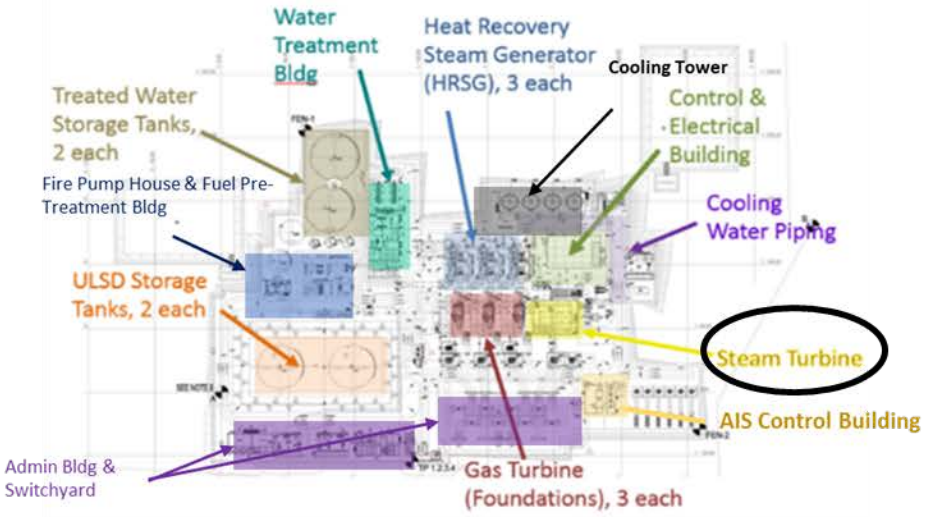


Treated Water Storage Tank B – Restoration of tank walls is in progress.



General Manager's Report

Ukudu Power Plant Construction Status



Steam Turbine & Generator – Pipe rack between STG and CEB is in place

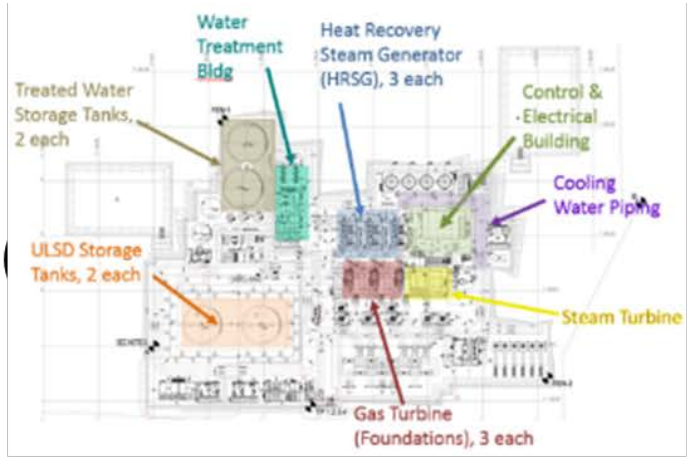


BESS – Excavation for the battery control building foundation is ongoing



General Manager's Report

Ukudu Power Plant Construction Status



ULSD Storage Tank A &B – One course is in place. Welding of tank walls are ongoing.

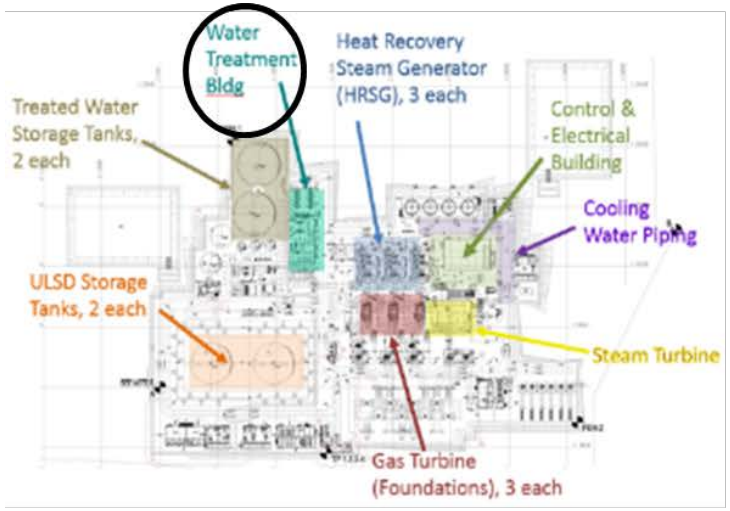


Vertical welding has resumed with automatic welding machine



General Manager's Report

Ukudu Power Plant Construction Status



Water Treatment Building – Equipment installation and setup is ongoing

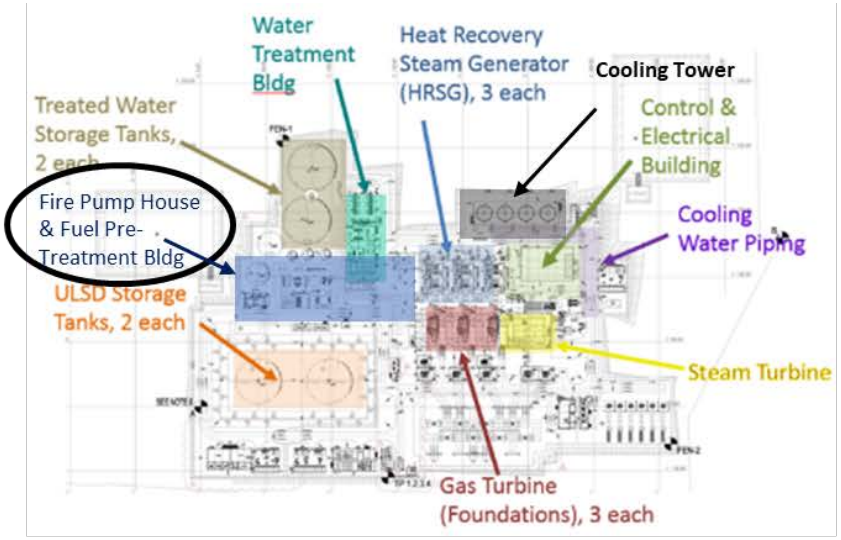


Piping installation is in progress



General Manager's Report

Ukudu Power Plant Construction Status



Fire fighting pumps are in place

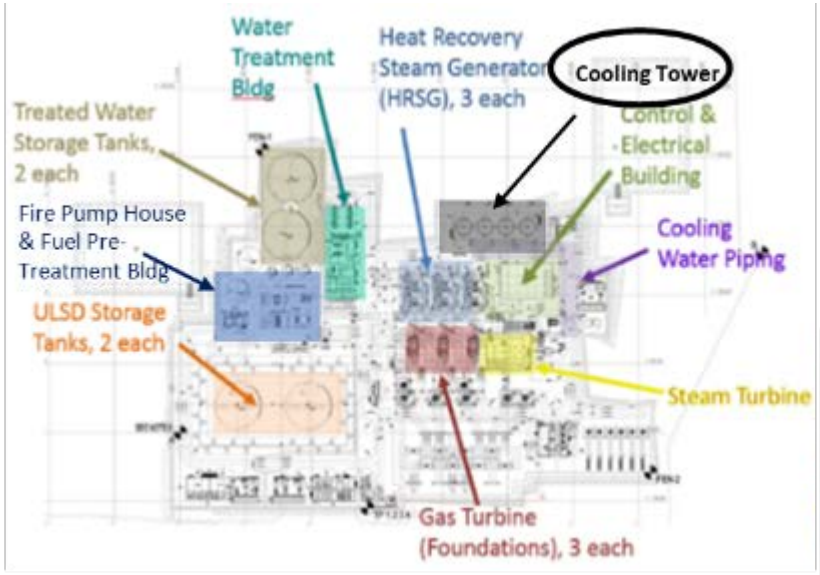


Fire Pump House & Tank – Fire fighting tank installation is ongoing.



General Manager's Report

Ukudu Power Plant Construction Status



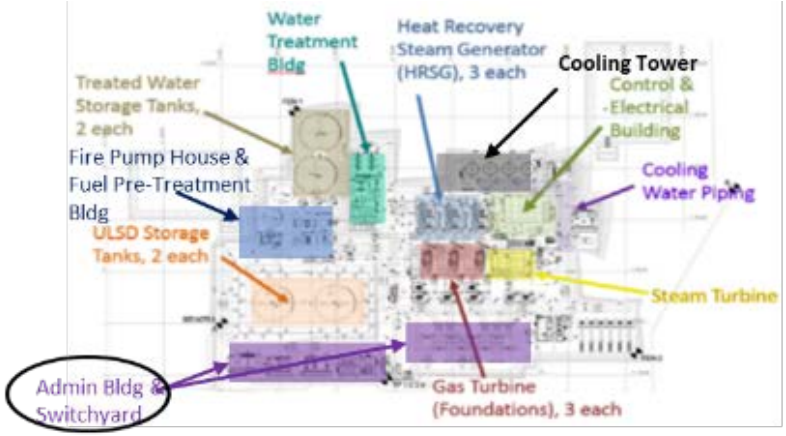
Cooling Tower & Basin – Circulating water pumps are in place. FRP structure assembly is in progress





General Manager's Report

Ukudu Power Plant Construction Status



Switchyard – Cable pulling and termination is ongoing

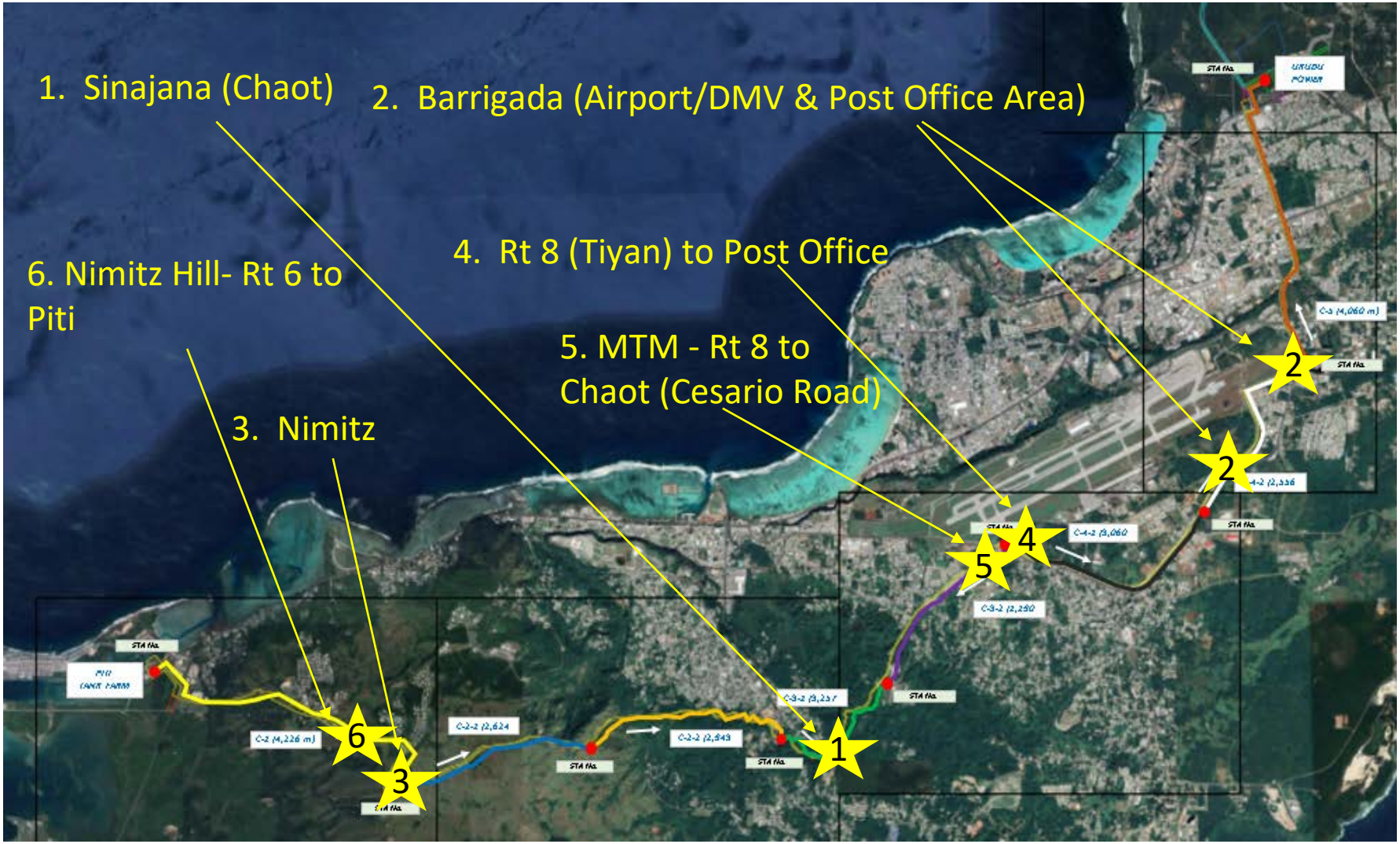


Harmon Substation – Augering for pole P4-4A is ongoing



General Manager's Report

Fuel Pipeline Construction Status



General Manager's Report

Fuel Pipeline Construction Status

1. Sinajana/Chaot area

Contractor is reworking the Chaot Bridge East section to the revised design.





2. Barrigada

Contractor is preparing to start excavation near the Barrigada Post Office





General Manager's Report

Fuel Pipeline Construction Status

3. Nimitz Hill

Pipeline installation is ongoing





4. Rt 8 (Tiyan) to Post Office

Route 8 road crossing is in progress. Pipeline installation along the shoulder of the road is ongoing





Fuel Pipeline Construction Status

5. MTM - Rt 8 to Chaot (Cesario St.)

Pipeline installation at JS Store road crossing is in progress.





6. Nimtiz Hill- Rt 6 to Piti

Excavation and pipeline installation is ongoing near the residential area.





CFO FINANCIAL HIGHLIGHTS

Residential average kWH & LEAC Rate

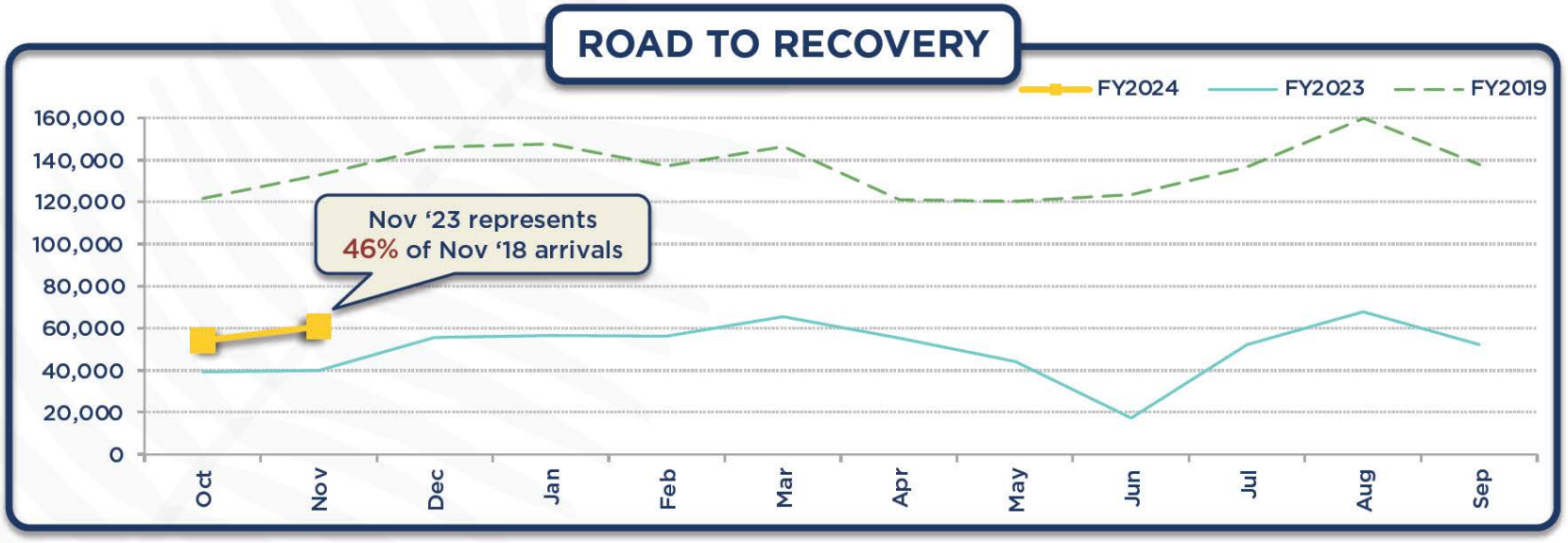
Avg kWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 2019	957	938	940	831	761	915	951	1,028	1,048	1,025	940	896
FY2020	942	938	931	867	785	979	1,046	1,140	1,114	1,103	1,081	1,062
FY2021	1,064	1,083	1,062	1,117	939	1,094	1,046	1,186	1,215	1,114	1,032	1,038
FY2022	1,021	1,063	1,030	942	883	1,053	991	1,128	1,050	977	992	972
FY2023	928	979	956	882	818	917	946	805	661	958	960	985
FY2024	997	956	955									

LEAC Rate	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 2019	$ 0.1542	$ 0.1542	$ 0.1542	$ 0.1542	$ 0.1542	$ 0.1542	$ 0.1542	$ 0.1542	$ 0.1542	$ 0.1542	$ 0.1542	$ 0.1542
FY2020	$ 0.1542	$ 0.1542	$ 0.1542	$ 0.1542	$ 0.1345	$ 0.1345	$ 0.1100	$ 0.1100	$ 0.0868	$ 0.0868	$ 0.0868	$ 0.0868
FY2021	$ 0.0868	$ 0.0868	$ 0.0868	$ 0.0868	$ 0.1100	$ 0.1100	$ 0.1100	$ 0.1100	$ 0.1100	$ 0.1100	$ 0.1304	$ 0.1304
FY2022	$ 0.1508	$ 0.1508	$ 0.1715	$ 0.1715	$ 0.1808	$ 0.1808	$ 0.2095	$ 0.2095	$ 0.2095	$ 0.2516	$ 0.2516	$ 0.2960
FY2023	$ 0.2960	$ 0.3186	$ 0.3186	$ 0.3186	$ 0.3186	$ 0.3186	$ 0.3186	$ 0.3186	$ 0.2311	$ 0.2311	$ 0.2311	$ 0.2311
FY2024	$ 0.2311	$ 0.2311	$ 0.2311									

Hotel kWh & Occupancy Rate

MWh Hotels	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY2019	11,009	10,812	10,665	10,372	9,151	9,625	10,743	10,945	10,278	11,670	10,356	10,569
FY2020	10,510	9,983	10,691	10,053	9,831	8,494	7,195	6,983	7,463	7,798	7,678	7,220
FY2021	7,194	7,535	7,754	7,129	6,427	7,014	7,474	7,293	7,669	7,989	8,064	7,712
FY2022	7,119	7,495	7,184	7,055	6,563	7,083	6,988	7,652	7,883	8,097	8,202	7,953
FY2023	7,926	8,048	8,385	8,164	7,669	8,075	7,985	7,300	6,225	8,670	8,708	8,089
FY2024	8,404	8,454	8,521									

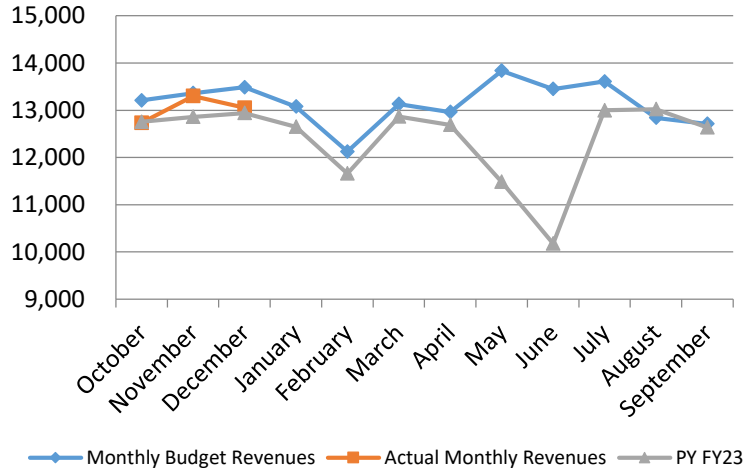
Occupancy Rate	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY2019	85.9	85.9	85.9	91.4	91.4	91.4	84.8	84.8	84.8	92.0	92.0	92.0
FY2020	89.9	89.9	89.9	73.7	73.7	73.7	34.7	34.7	34.7	27.1	27.1	27.1
FY2021	38.7	38.7	38.7	51.4	51.4	51.4	41.3	41.3	41.3	52.4	52.4	52.4
FY2022	45.9	45.9	45.9	56.0	56.0	56.0	54.0	54.0	54.0	66.8	66.8	66.8
FY2023	59.7	59.7	59.7	67.4	67.4	67.4	60.0	60.0	60.0	73.4	73.4	73.4



Note: Data from 22 hotels in schedule P. 1 hotel closed its doors on Oct. 2021. Occupancy rate and Road to Recovery is from GVB Visitor Arrival Statistic.

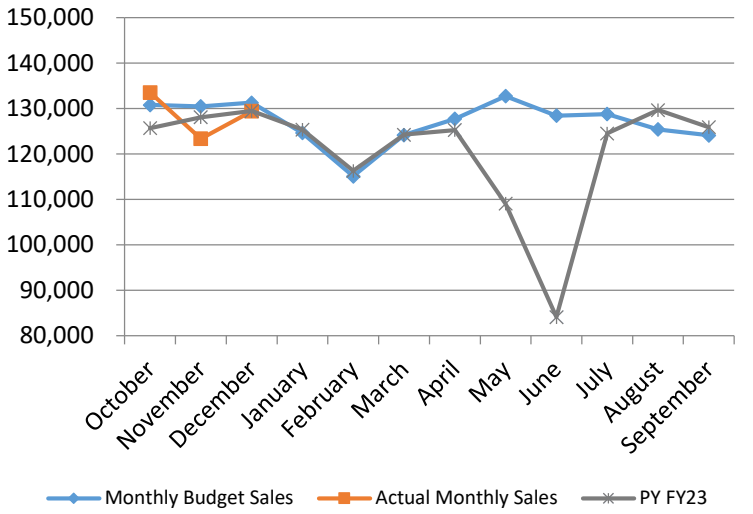
December 2023 Monthly Financial Highlights

Base Rate Revenue (in '000)



Through December 31, 2023							
$000	Monthly Budget Revenues	Actual Monthly Revenues	Variance		PY FY23	CY vs PY Variance	
October	13,209	$ 12,734	$ (475)	↓	$ 12,757	$ (22)	↓
November	13,363	13,301	$ (61)	↓	12,861	$ 440	↑
December	13,488	13,053	$ (435)	↓	12,940	$ 113	↑
January	13,078				12,651		
February	12,126				11,660		
March	13,131				12,865		
April	12,961				12,691		
May	13,837				11,484		
June	13,449				10,178		
July	13,608				12,997		
August	12,840				13,023		
September	12,710				12,635		
Total	**$ 157,800**	**$ 39,089**	**$ (971)**		**$ 148,743**	**$ 530**	

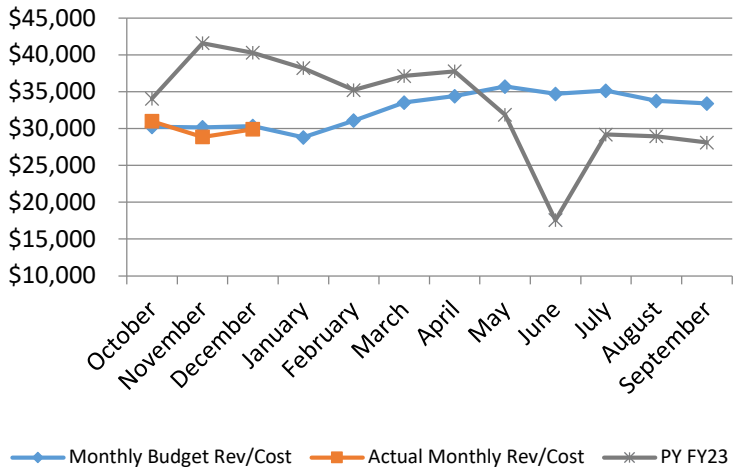
MWH Sales (in MWh)



Through December 31, 2023							
MWH	Monthly Budget Sales	Actual Monthly Sales	Variance		PY FY23	CY vs PY Variance	
October	130,775	133,530	2,754	↑	125,672	7,858	↑
November	130,478	123,349	(7,129)	↓	128,077	(4,728)	↓
December	131,278	129,415	(1,863)	↓	129,439	(24)	↓
January	124,618				125,368		
February	115,079				116,289		
March	124,155				124,254		
April	127,713				125,257		
May	132,727				109,061		
June	128,415				84,097		
July	128,775				124,518		
August	125,406				129,673		
September	124,080				125,895		
Total	**1,523,500**	**386,294**	**(6,237)**		**1,447,602**	**3,105**	

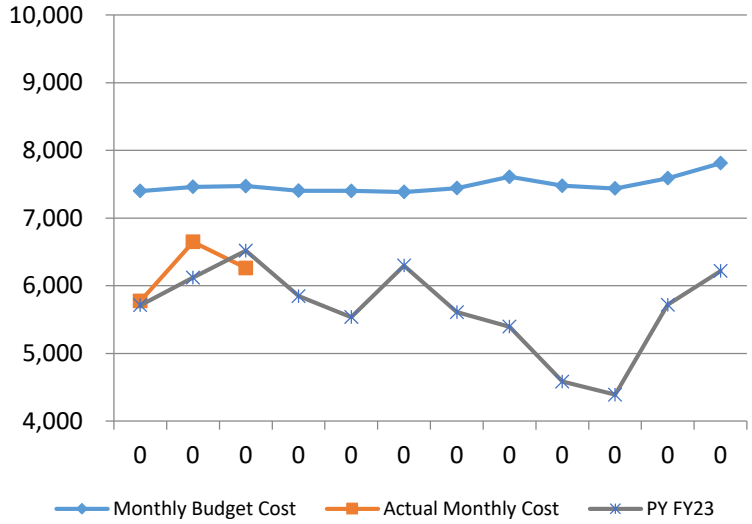
December 2023 Monthly Financial Highlights

Fuel Revenues (in '000)



Through December 31, 2023							
$000	Monthly Budget Rev/Cost	Actual Monthly Rev/Cost	Variance		PY FY23	CY vs PY Variance	
October	$ 30,228	$ 30,992	764	↑	$ 34,062	(3,070)	↓
November	30,159	28,862	(1,297)	↓	41,593	(12,731)	↓
December	30,344	29,905	(439)	↓	40,281	(10,376)	↓
January	28,805				38,205		
February	31,071				35,217		
March	33,522				37,143		
April	34,390				37,773		
May	35,710				31,867		
June	34,703				17,560		
July	35,135				29,194		
August	33,760				28,940		
September	33,402				28,103		
Total	**$ 391,228**	**$ 89,759**	**$ (972)**		**$ 399,938**	**$ (26,177)**	

O&M Costs (in '000)



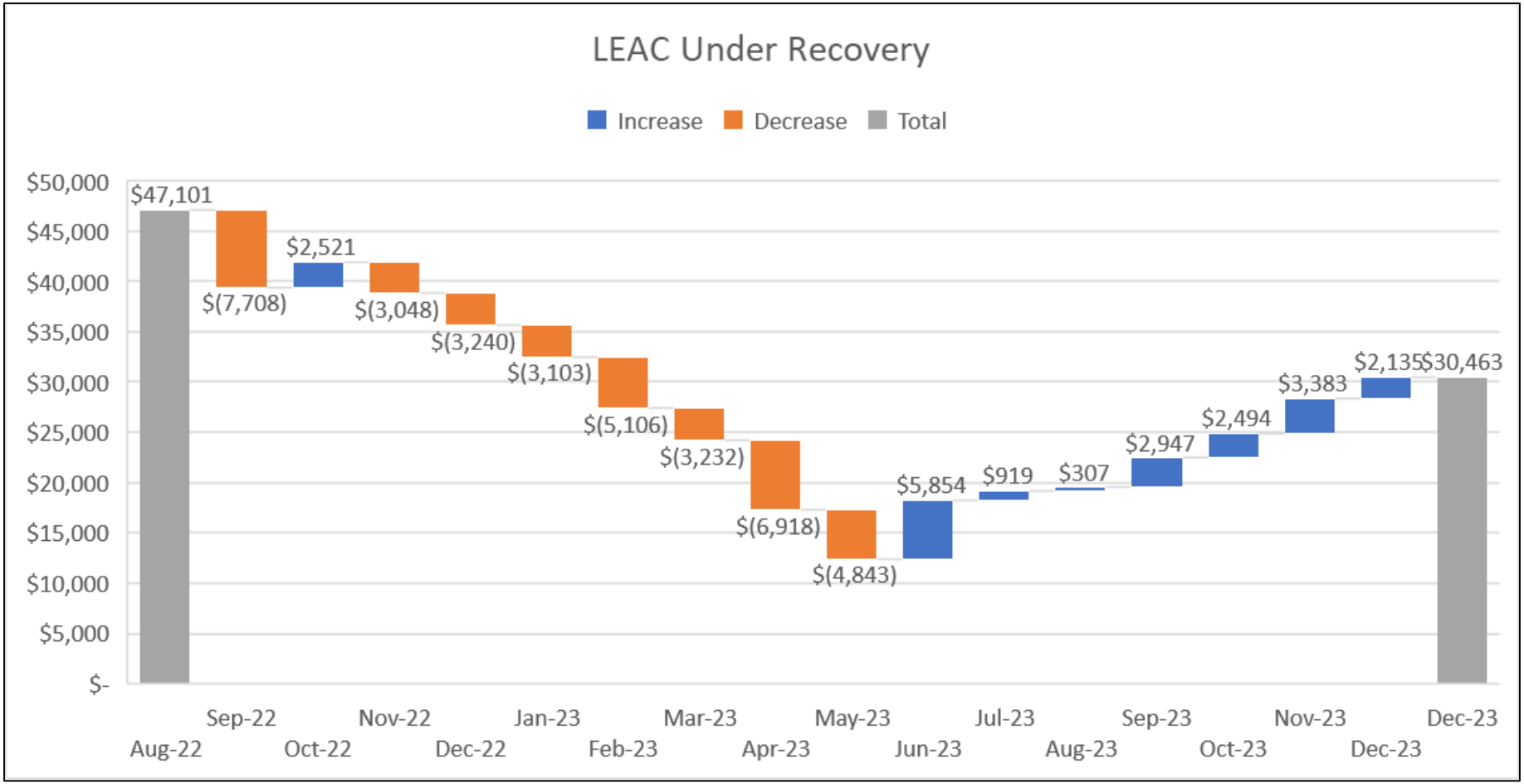
Through December 31, 2023							
$000	Monthly Budget Cost	Actual Monthly Cost	Variance		PY FY23	CY vs PY Variance	
October	7,400	5,774	1,626	↑	5,712	(62)	↓
November	7,462	6,647	814	↑	6,120	(527)	↓
December	7,473	6,262	1,211	↑	6,518	255	↑
January	7,405				5,846		
February	7,401				5,537		
March	7,384				6,298		
April	7,443				5,610		
May	7,611				5,395		
June	7,477				4,585		
July	7,438				4,390		
August	7,588				5,718		
September	7,812				6,218		
Total	**$ 89,893**	**$ 18,684**	**$ 3,651**		**$ 67,946**	**$ (334)**	

December 2023 Monthly Financial Highlights

Through September 30, 2023													
	1Q2021	2Q2021	3Q2021	4Q2021	1Q2022	2Q2022	3Q2022	4Q2022	1Q2023	2Q2023	3Q2023	4Q2023	1Q2024
Residential	44,503	44,575	45,247	45,229	45,224	45,283	45,261	45,315	45,370	45,417	45,453	44,968	45,642
Commercial	5,301	5,307	5,330	5,336	5,349	5,367	5,368	5,373	5,425	5,473	5,436	5,421	5,447
Government	1,063	1,060	1,049	1,056	1,069	1,077	1,079	1,087	1,088	1,108	1,112	1,106	1,105
Streetlights	1,133	1,132	1,132	1,131	1,160	1,158	1,156	1,163	1,167	1,167	1,165	1,159	1,149
Navy	1	1	1	1	1	1	1	1	1	1	1	1	1
Total	**52,001**	**52,075**	**52,759**	**52,753**	**52,803**	**52,886**	**52,865**	**52,939**	**53,051**	**53,166**	**53,167**	**52,655**	**53,344**

Debt service coverage (DSC) calculation-indenture	2018	2019	2020	2021	2022	2023	2024
Senior lien coverage	2.53	1.78	1.42	1.54	1.71	1.71	2.07
Debt service coverage (DSC) calculation-IPP as O&M							
Senior lien coverage	1.65	1.46	1.23	1.49	1.71	1.71	2.07

December 2023 Monthly Financial Highlights



$000	LEAC Revenue	Fuel Cost	(Over)/Under Recover	Under Recovery Balance
October	$ 30,992	$ 33,486	$ 2,494	$ 24,945
November	28,862	$ 32,245	$ 3,383	$ 28,328
December	29,905	$ 32,039	2,134	30,463

December 2023 Credit Summary

Credit Summary		
Long-Term Senior Debt	**Rating**	**Long-Term Outlook**
Standard & Poor's	BBB	Stable
Moody's Rating	Baa2	Stable
Fitch Rating	BBB	Stable

LEAC UPDATE

LEAC Update

FEB 24 - JUL 24 MS Pricing 5-Day Average from 01.10.2024 - 01.16.2024		
No Change	50% Recovery	Full Recovery
$ 139.31	$ 139.31	$ 139.31
$ 105.79	$ 105.79	$ 105.79
$ 63,540	$ 63,540	$ 63,540
96,209	96,209	96,209
$ 11,020	$ 11,020	$ 11,020
$ 170,769	$ 170,769	$ 170,769
$ 8,865	$ 8,865	$ 8,865
$ 179,635	$ 179,635	$ 179,635
79.202%	79.202%	79.202%
$ 142,275	$ 142,275	$ 142,275
$ -	$ -	$ -
$ 32,970	$ 32,970	$ 32,970
$ 175,245	$ 175,245	$ 175,245
$ 7,496	$ 8,497	$ 9,498
$ 167,749	$ 166,748	$ 165,748
$ (36,923)	**$ (18,468)**	**$ -**
$ 130,825	$ 148,281	$ 165,748
565,988	565,988	565,988
$0.231144	**$ 0.261995**	**$ 0.292845**
$ 0.231144	$ 0.231144	$ 0.231144
-	0.030851	0.061701
$ -	**$ 30.85**	**$ 61.70**
0.00%	13.35%	26.69%
0.00%	9.39%	18.77%
$ 0.224219	$ 0.254148	$ 0.284075
$ 0.223573	$ 0.253416	$ 0.283257
$ 0.220821	$ 0.250297	$ 0.279770

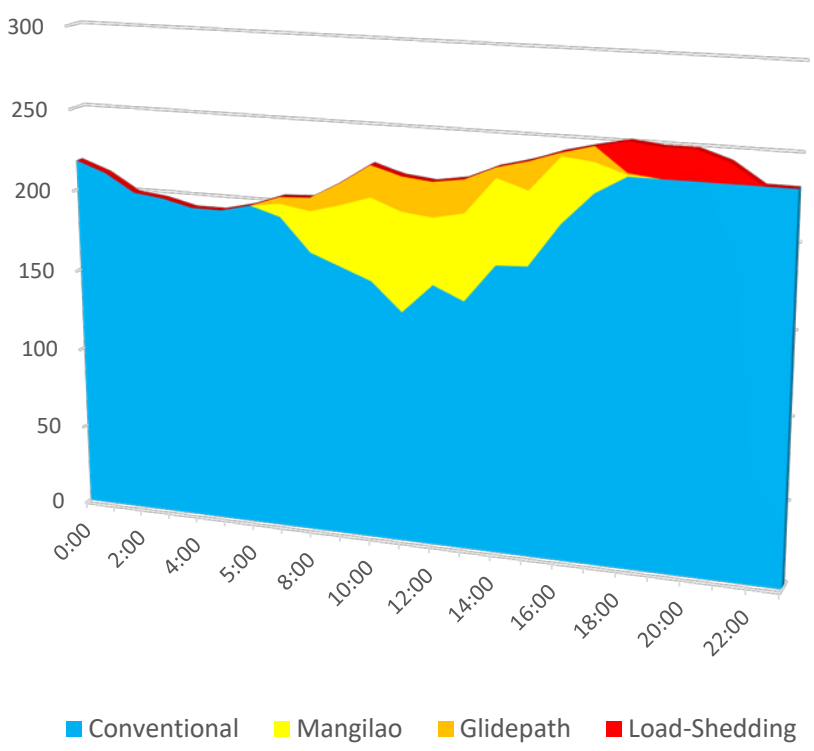
OTHER DISCUSSION

CURRENT GENERATION CAPACITY SHORTFALL AND RECOVERY PLAN

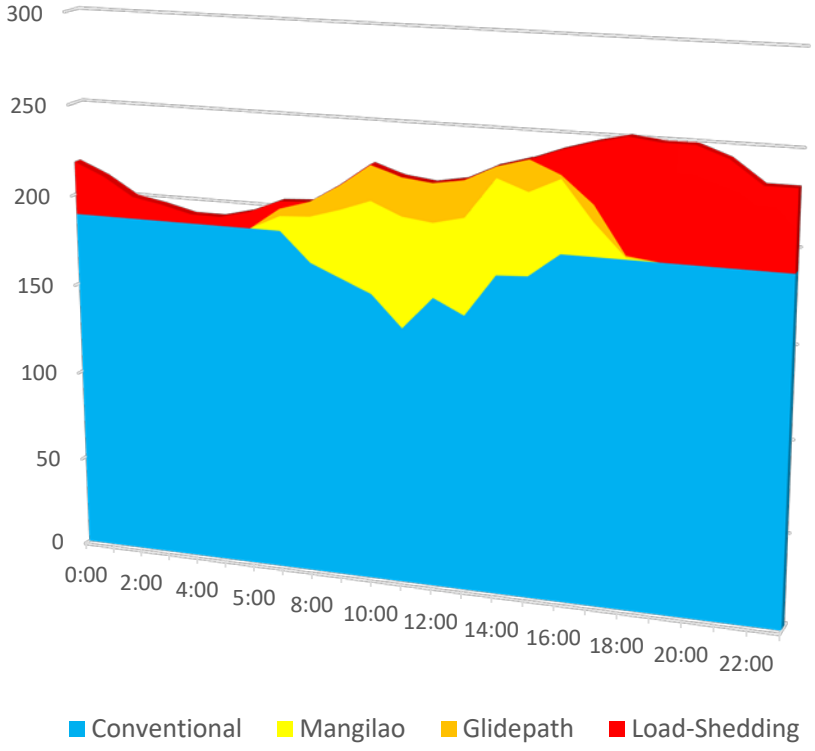
Impact of Generation Capacity Shortfall

Down Baseload Scenarios

One Baseload Down
Load Shedding 18 MW
Capacity 232MW; Demand 250MW



Two Baseloads Down
Load Shedding 61 MW
Capacity 189 MW; Demand 250MW



Load Shedding Summary *(for Sept 1 – December 21, 2023)*

Month	Feeders Impacted	Feeder Outages	Hours Outaged	Avg. MW /Feeder	Avg. Hrs/Feeder	Unserved kWh	% Energy Unserved	Days LS
Sep-23	49	370	290	2,860	5.9	792,367	**0.59%**	20
Oct-23	48	162	115	2,919	2.4	328,075	**0.25%**	11
Nov-23	49	349	301	2,860	6.1	867,119	**0.70%**	8
Dec-23	28	35	20	n/a	0.7	n/a	**n/a**	2
Sept 1, 2023 thru Dec 31, 2023:			**726**		**14.8**			**42**

	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24
Net kWh Send-out	133,231,195	132,766,903	136,680,507	137,615,616	129,439,271	121,547,053	139,902,831	133,905,681	143,520,734
Avg MW Demand	219	224	233	225	218	221	232	226	240
Highest MW Demand	237	249	245	237	232	232	245	237	248

Notes:

1. Published monthly load shedding schedules are based on a scenario with up to 2 baseload plants offline.
2. On Nov 17, 3 plants were offline: (1) Piti 7 had been offline for preventive maintenance. (2) Cabras 2, baseload plant, suffered a boiler tube leak and was taken offline the previous evening for emergency repairs. (3) Piti 8, baseload plant, experienced a cooling water leak that evening (at the onset of peak demand), and was taken offline for emergency repair.
3. Lower demand, especially in Dec 2023, allowed plant personnel to complete repairs and preventative maintenance with little or no load shedding scenarios.

Action Plan for Recovery & New Capacity

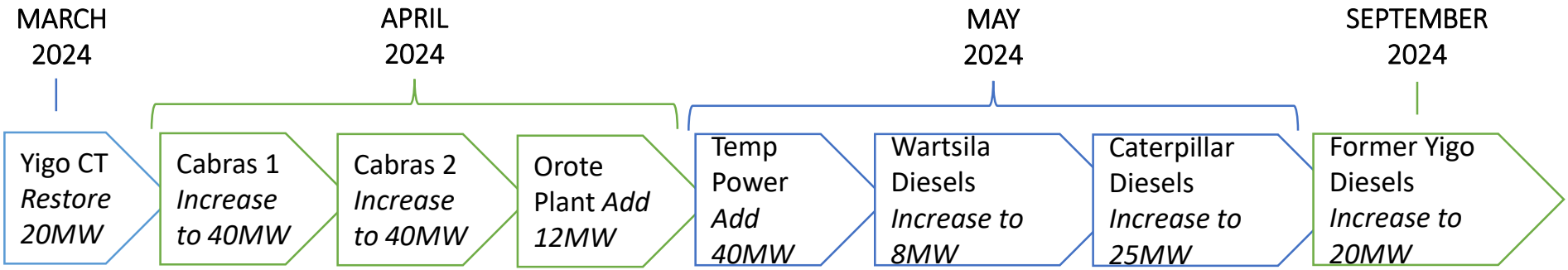
Action Plan for Recovery of Existing Capacity and Adding New Capacity

PLANT	ACTION	TARGET DATE
Cabras 2 *Baseload*	Boiler tube repairs. Unit being loaded towards 35-45 MW capacity.	Nov 20, 2023 (completed)
Piti 7 *Combustion Turbine*	Plenum repair (2-day outage) will increase capacity from 22 MW to 30 MW.	Dec 2, 2023 (early completion)
Yigo CT 20 MW *Combustion Turbine*	Typhoon damaged rotor under repair in Texas. GPA seeking assistance from federal partners to expedite return shipping.	Feb 2024
1.1 MW Diesels *Cummins Diesels*	Repair/replace up to 20 MW of capacity. Temporarily site at Tenjo (Emergency Procurement)	Sep 2024
Manenggon/Pulantat Diesels *Wartsila Diesels*	Current plant capacity at 3 MW. Unit control system replacement to increase plant capacity to 8 MW	May 2024
Tenjo, Talo'fo'fo Diesels *Caterpillar Diesels*	Perform significant repairs and/or rehabilitate units to increase plant capacity from by 12 MW to 25 MW	May 2024
Hagåtña & Talo'fo'fo BESS *Existing Utility-Scale ESS*	Utilize existing Battery Energy Storage System (ESS) to shift 40 MW energy during peak time [20MW shift?]	Mar 2024
OTHER CAPACITY		
Orote #2	5.6 MW Navy generator	Ongoing
Interruptible Load (IL) Program	Expand participation. Currently at ~16 MW.	Ongoing
NEW CAPACITY		
Temporary Power 40 MW	Procure 40 MW of temporary power generation under Emergency Procurement. A substituted version of Bill 206 may prevent delays due to protest.	May 2024, if no procurement protests or other delays



Plant personnel assessing for safe entry into boiler to make necessary repairs to 48-year-old Cabras Unit 2 baseload plant.

Near-Term Capacity Action Plan Timeline



Capacity Dates:	**11-Jan-24**	**May-2024**	**Sep-2024**	**Sep-2025**
Yigo CT: Restore to 20MW *March*	0	20	20	20
Cabras 1: Increase to 40MW *April*	21	40	40	40
Cabras 2: Increase to 40MW *April*	34	40	40	40
Orote: Add 12MW *April*	0	12	12	12
Temporary Power Services: Add 40MW *May*	0	40	40	40
Wartsila Units: Increase to 8MW *May*	3	8	8	8
Caterpillar Units: Increase to 25MW *May*	12	25	25	25
1.1MW Diesels: Increase to 20MW *Sept*	6	0	20	20
Targeted MW Increase:	**76**	**185**	**205**	**205**

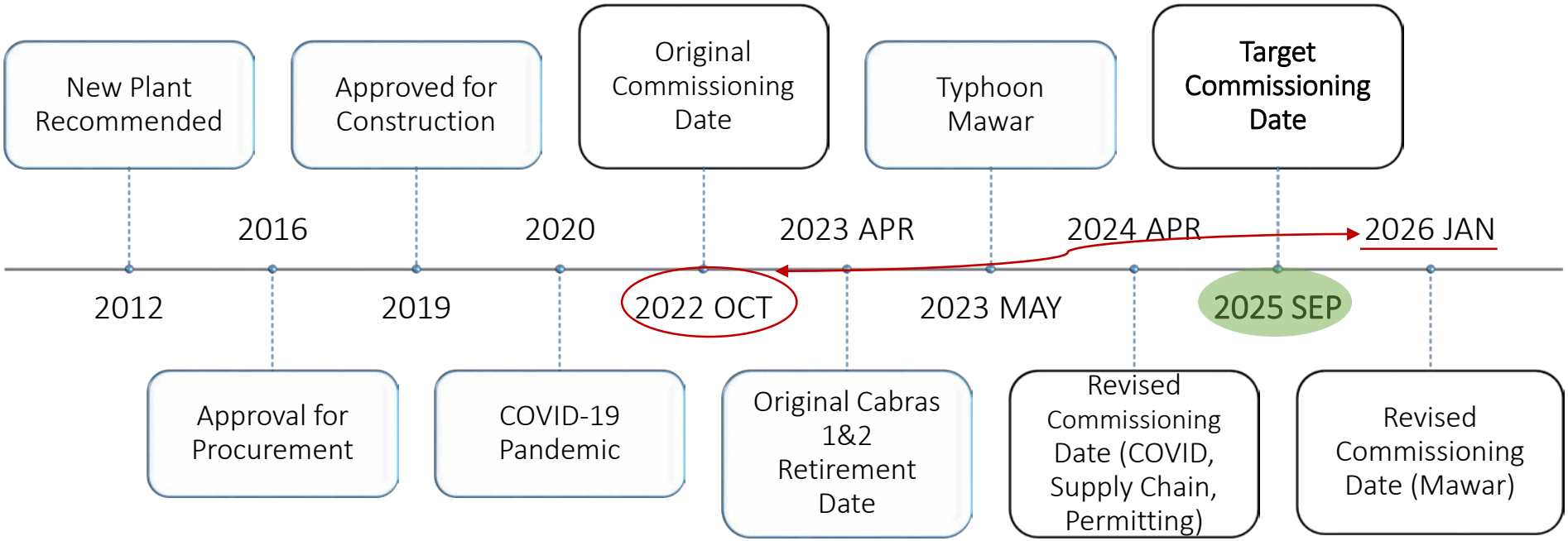
Near-Term Capacity Action Plan Timeline

	Actual	Targeted MW Capacity	Targeted MW Capacity	Ukudu COD
Capacity Dates:	**11-Jan-24**	**May-2024**	**Sep-2024**	**Sep-2025**
Piti 8 & 9	86	86	86	86
Piti 7	30	30	30	30
Dededo 1 & 2	38	38	38	38
Macheche	18	18	20	18
Subtotal:	**172**	**172**	**174**	**172**
CAPACITY INCREASE ACTION PLAN				
(See previous slide) Targeted MW Increase:	76	185	205	205
Capacity Subtotal:	**248**	**357**	**379**	**377**
Commission Ukudu *Sep 2025*				198
Retire Cabras *Mar 2026*				80
Release Temporary Power *May 2026*				0
***May 2026* Capacity Total:**				**495**
MW Capacity	248	357	379	495
Estimated MW Demand	(230)	(260)	(270)	(275)
Capacity Balance:	**18**	**97**	**109**	**220**
RESERVE REQUIREMENT				
Largest Unit	43	43	43	63
2nd Largest Unit	43	43	43	63
50% of 3rd Largest Unit	20	22	22	22
Reserve Requirement:	**106**	**108**	**108**	**148**
Capacity Balance (Shortfall):	**(88)**	**(11)**	**1**	**72**

Long-Term Generation Capacity In Progress

New 198 MW Ukudu Combined Cycle Power Plant

- This plant, which is under construction and scheduled for commissioning in 2024, has now been delayed to January 2026 due to damages sustained from Typhoon Mawar. This delay presents additional challenges for GPA to meet the demand over the next two years.
- The new plant will provide improved generation reliability and substantially reduce fuel operating costs once commissioned.
- The plant is a critical part of the USEPA-GPA Consent Decree which also requires the retirement of Cabras units 1&2 within 5 months of the Ukudu plant's commissioning.



Long-Term Generation Capacity In Progress

(continued)

PHASE IV RENEWABLES BID

- Bids from proponents have been received. All five (5) bidders have progressed to next phase.
- This bid requests 180MW+ of renewable energy with energy shifting systems which would shift at least 50% energy production from daytime supply to nighttime supply to meet peak and reduce conventional unit production.
- Commissioning may take about 3 years from CCU & PUC approvals.
- The energy storage systems will help increase GPA generation capacity substantially.

HANWHA 60 MW SOLAR PV PLANT

- GPA had noted completion of this contract which was awarded in 2018 was tenuous due to huge escalation in transmission cost and have been working with contractor to agree on an acceptable solution in order to meet USEPA consent decree requirements.
- Petition to amend this contract is before the PUC for consideration and approval.

VIRTUAL POWER PLANT BID

- Engineering technical analysis and work on bid specifications are ongoing. Team is analyzing best way to integrate smaller-sized renewable capacity into the grid.
- This bid is considering 20 MW capacity as the initial pilot bid.

Infrastructure Resiliency Plan

One Guam

- Guam Power Authority is the sole provider of energy for the island community including the military.
- The island power grid must be ready for the conflicts facing the nation and from national disasters, especially super typhoons. Almost all critical military branches use Guam as their strategic base to defend the nation from adversaries. Billions of dollars have been spent in building up the bases in Guam including providing high tech missile defense systems.
- It is very important that the federal government and the local community work together to mitigate Guam's vulnerability to natural disasters and military conflicts.

Increased Natural & Bad Actor Threats

- The community and national defense environment today has changed substantially over the past two decades and it is important to prepare the Guam electrical grid's infrastructure to survive and recover from super typhoons. The national threat from China and North Korea has substantially increased and Guam's strategic importance requires our infrastructure to be resilient for potential conflict with unfriendly nations.

One Guam Infrastructure Resiliency Plan

- GPA has detailed a mitigation plan for its infrastructure to provide resiliency from all the threats, natural or otherwise. These critical investments will bolster utility (power, water and wastewater) resiliency.
- A full underground system, excluding 115kV transmission, may cost about $7B. GPA's ability to obtain funding for the billions in investments needed is doubtful. If GPA were able to secure funding, it will certainly double power rates, if not more, making island energy costs unaffordable.
- The investment of the federal government into Guam's infrastructure will provide returns over the decades to come.

Resiliency Recommendations

To ensure a substantially reliable and resilient system provided by significant infrastructure redundancy, GPA made the following recommendations to DoD:

- Install a **45MW-225MWH Energy Storage Battery (ESS)** on the transmission side of AAFB.
  - GPA will keep this ESS charged from the transmission system using solar energy or conventional units. The ESS would also provide excellent power quality energy to AAFB most especially from huge energy draw from missile defense system and furthermore provide AAFB with stored energy adequate to keep base operating for about 24 hours in the event of a system blackout. *Investment $125M*
- Assist GPA to install a **34.5 kV underground line** from the Dededo substation to the Harmon substation to have a complete underground transmission loop in the north to serve AAFB. *Investment $15M*
- Replace the aged **Dededo 1&2 Combustion Turbine units** at Dededo with new 20 to 30 MW units equipped with remote starting capability. Units are in a housed concrete building and as shown operates through super typhoons. *Investment $100M*
- Assist GPA in a second **underground system directly from Dededo Combustion Turbine Plant to the Yigo Substation** and in to AAFB Substation. This ties in another combustion turbine unit to support AAFB. *Investment $30M*
- Consider **GPA providing distribution service to AAFB** including direct operations of its distribution system through GPA's Power System Control Center (PSCC).

Key Resiliency Initiatives

- Undergrounding Transmission Lines
- Undergrounding Distribution Lines
- Increasing Water & Wastewater Standby Generators
- Hardening General Communication Core Sites
- Hardening Critical Communications System (GPA)
- Addressing Emergency & Temporary Power

Cost Estimate: Resiliency Plan

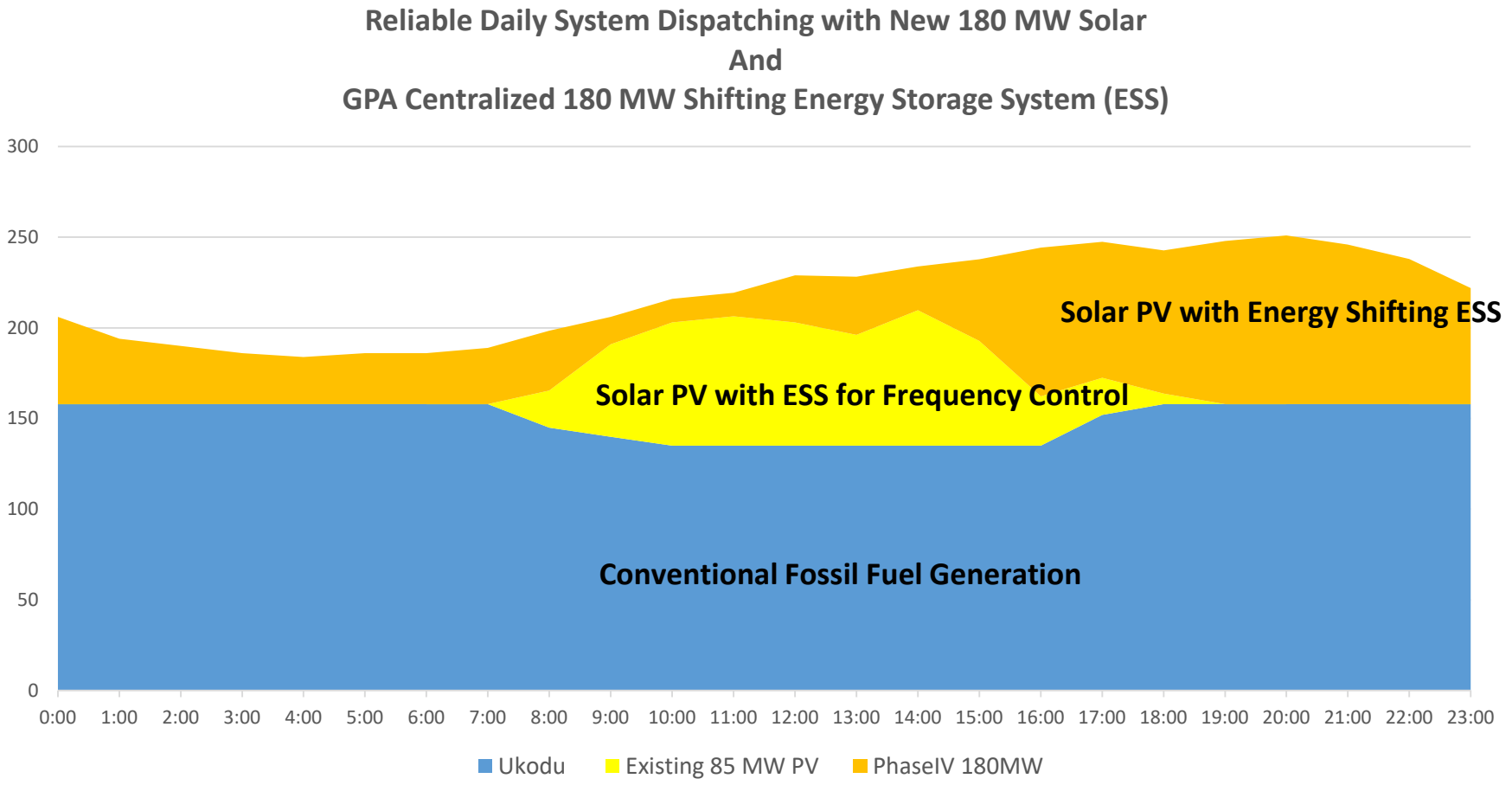
Preliminary Cost Estimate: Infrastructure Resiliency Plan

DESCRIPTION		EST. COST ($M)
ITEM 1: Underground Transmission Lines & Indoor Substations		**$ 833**
Islandwide Power System Including Assets Serving Military Facilities		
ITEM 2: Critical Distribution System Mitigation		**$ 813**
Underground distribution feeders for Y, D, F & M-Series water wells, treatment facilities/reservoirs, wastewater treatment plants, lift and pump stations	$ 502	
Underground of Naval Hospital feeder; communications core sites; industrial sector feeders; GDOE public schools, GCC, UOG	$ 78	
Standby generator systems including ATS/fuel storage for critical facilities such as public health, medical facilities, typhoon shelters, youth facilities, DOC, etc.	$ 95	
Hybrid underground of various villages secondary lines and to replace overhead transformers with pad mounted transformers	$ 138	
ITEM 3: Other Critical Infrastructure Resiliency Projects		**$ 730**
Energy Storage Batteries (180MW/900MWh)	$ 500	
New 80MW Combustion Turbine Capacity	$ 100	
Standby generator upgrades placed in concrete housings with adequate fuel storage capacity for water and wastewater systems	$ 30	
T&D operations center. Backup SCADA. Fiber optic system. Physical facilities. GWA SCADA and motorized valves.	$ 80	
Bucket trucks, line equipment, underground systems training	$ 20	
Subtotal - *Immediate Critical Infrastructure Resiliency Projects (Items 1-3)*:		**$ 2,376**
ITEM 4: Underground Remaining Distribution System		**$ 4,025**
Convert remaining distribution systems to fully underground system		
Total - *All Resiliency Projects*:		**$ 6,401**

*Preliminary Estimate as of July 20, 2023

Centralized Battery Dispatch Scenario

System Daily Energy Dispatch with Centralized Energy Storage Battery in 2026



REVIEW OF OPA REPORT NO. 23-10

Government-Wide Credit/Debit Card Use Series 1, Guam Power Authority

Review of OPA Report No. 23-10

OPA Report No. 23-10, *Government-Wide Credit/Debit Card Use, Series 1, GPA*

SUMMARY OF FINDINGS

- No evidence of fraud or abuse
- On island purchases
- No evidence of product unavailability on-island or cost savings
- Untimely, incomplete, or missing travel clearance

EXECUTIVE SUMMARY

Government-Wide Credit/Debit Card Use Series, Part I
Guam Power Authority and Guam Waterworks Authority
OPA Report No. 23-10, December 2023

From Fiscal Year (FY) 2020 to FY 2022, the Guam Power Authority (GPA) and the Guam Waterworks Authority (GWA) officials used their corporate credit cards contrary to or not in compliance with certain provisions of the Guam Procurement Law and Regulations, the Government Travel Law, and their own credit card policies. Questioned costs were $71 thousand (K) (or 16%) of the $431K total purchases for the GPA and $27K (or 21%) of the $131K total purchases for the GWA. During our review, we did not identify any instances of fraud or abuse within the context of our audit objectives.

Table 2: Samples with Incomplete or Missing Quotes

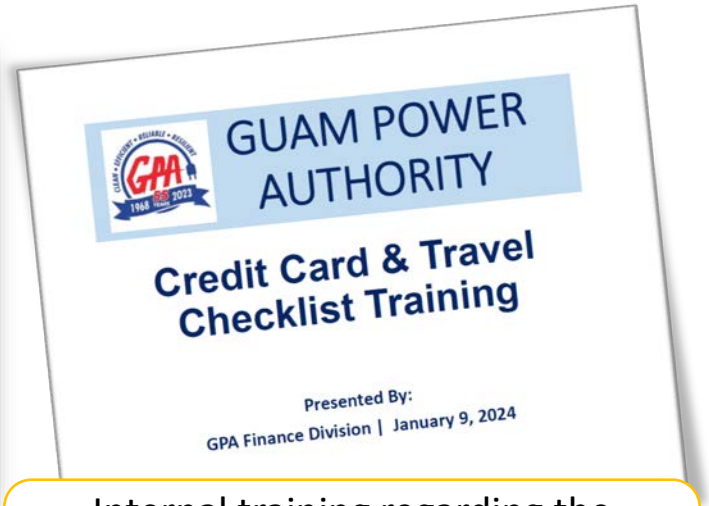
Sample No.	FY		Amount	Description	Deficiency	Details
7	2020	$	21,172	Software License	Incomplete quotes	Software license for Cisco Switch and license can only be purchased through a certified Cisco reseller.
6	2020	$	14,287	Laptops, Laptop Backpacks, and Support	Incomplete quotes	Laptop were purchased during Covid-19 lockdown and employees needed to work from home. 2 local vendors were contacted but delivery was 4-6 weeks. The personnel who asked for quotes was in military leave and email correspondence could not be retrieved.
19	2022	$	13,852	Hard drives and memory hardware	Missing quotes	Hard drives for R740 Servers.
22	2022	$	5,233	Airfare for travel	Incomplete quotes	
24	2022	$	4,020	Airfare for travel	Incomplete quotes	
23	2022	$	3,681	Lodging for travel	Missing quotes	
8	2020	$	3,110	Body temperature gates and readers	Incomplete quotes	The vendor was the only one with contactless temperature reader during the Covid-19 lockdown.
27	2022	$	2,788	Lodging for travel	Incomplete quotes	
3	2020	$	2,419	Airfare for travel	Incomplete quotes	

Review of OPA Report No. 23-10

OPA Recommendations:

To address the deficiencies, we recommend for the GPA:

1. GM to have non-travel-related credit card purchases go through their procurement department.
2. Administrative staff preparing the TA to follow small purchase requirements.
3. Accounting to ensure that the TA packet contains the required number of written quotations before routing it for management approval.
4. Accounting to remind travelers of the due date for travel clearance, and notify the CFO of untimely submission and the GM of consistent unresponsiveness to the deadline.
5. GM to enforce the travel clearance deadline mandated by law.
6. Accounting to develop a checklist and distribute it to all administrative staff processing travel. The checklist should contain the requirement for quotations showing the original quoted price for a direct flight and any changes made thereafter.
7. Policy review committee to update the Credit Card Usage Policy.



Internal training regarding the corrective actions was completed on January 10, 2023.

GPA Corrective Actions:

Implemented as of January 10, 2024

1. Recommendation #6: ***GPA Finance Credit Card Approval Checklist - Effective 6.22.2023:***

- GPA Finance Division's Credit Card Requirements Checklist implemented in June 2023.
- The checklist was reviewed and updated for process improvement on January 4, 2024.
- Finance Team distributed the checklist to key administrative personnel.

2. Recommendations #1, 2, 3, and 4 are addressed in the GPA Finance Credit Card Approval Checklist

3. Recommendation # 5: Finance updated the Travel Voucher Form and incorporated the 10-day requirement to submit statement of account supported by receipts, etc. in the form.

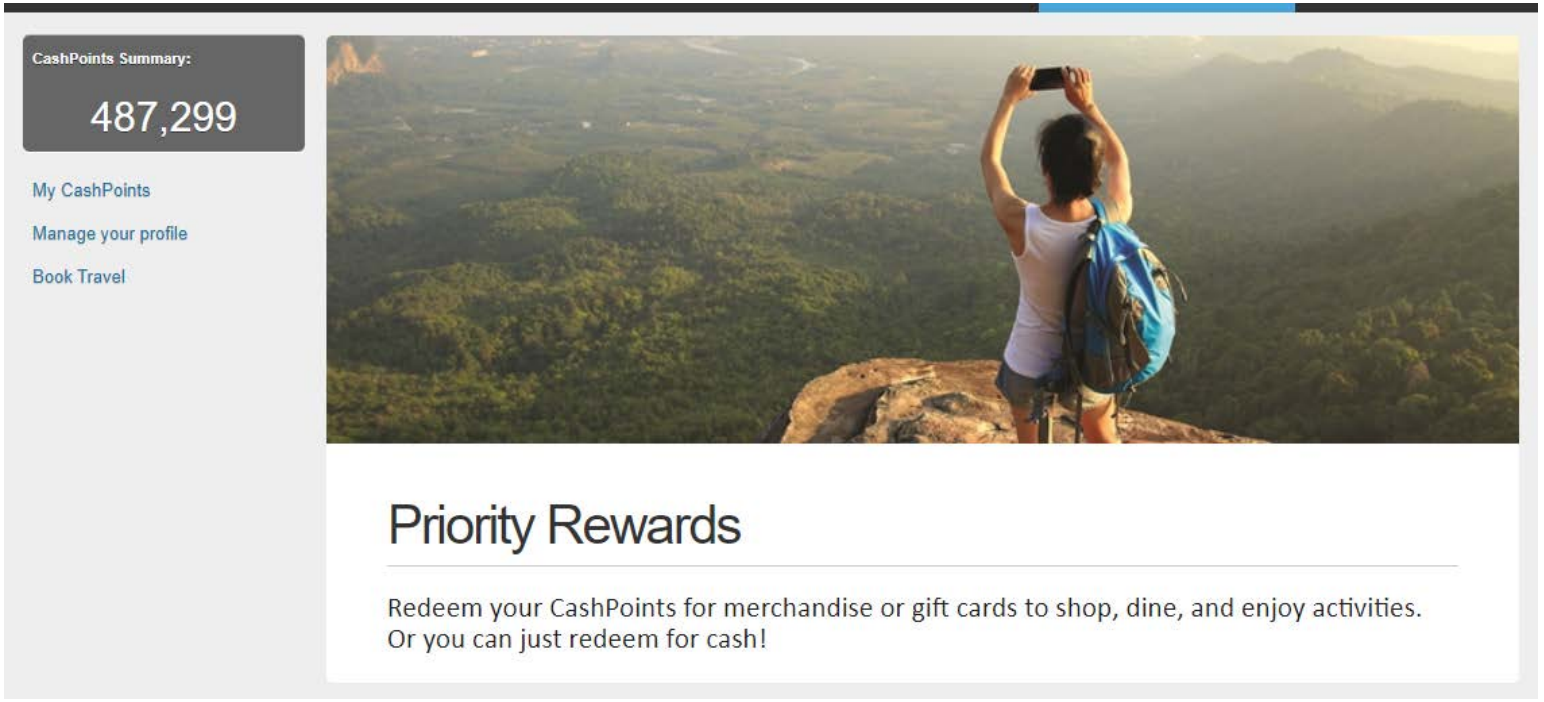
4. Recommendation #7: ***AP 067 - Credit Card Usage Policy was updated in August 2023.***
   The updated policy incorporated recommendations from the audit.

Review of OPA Report No. 23-10

Other Matters:

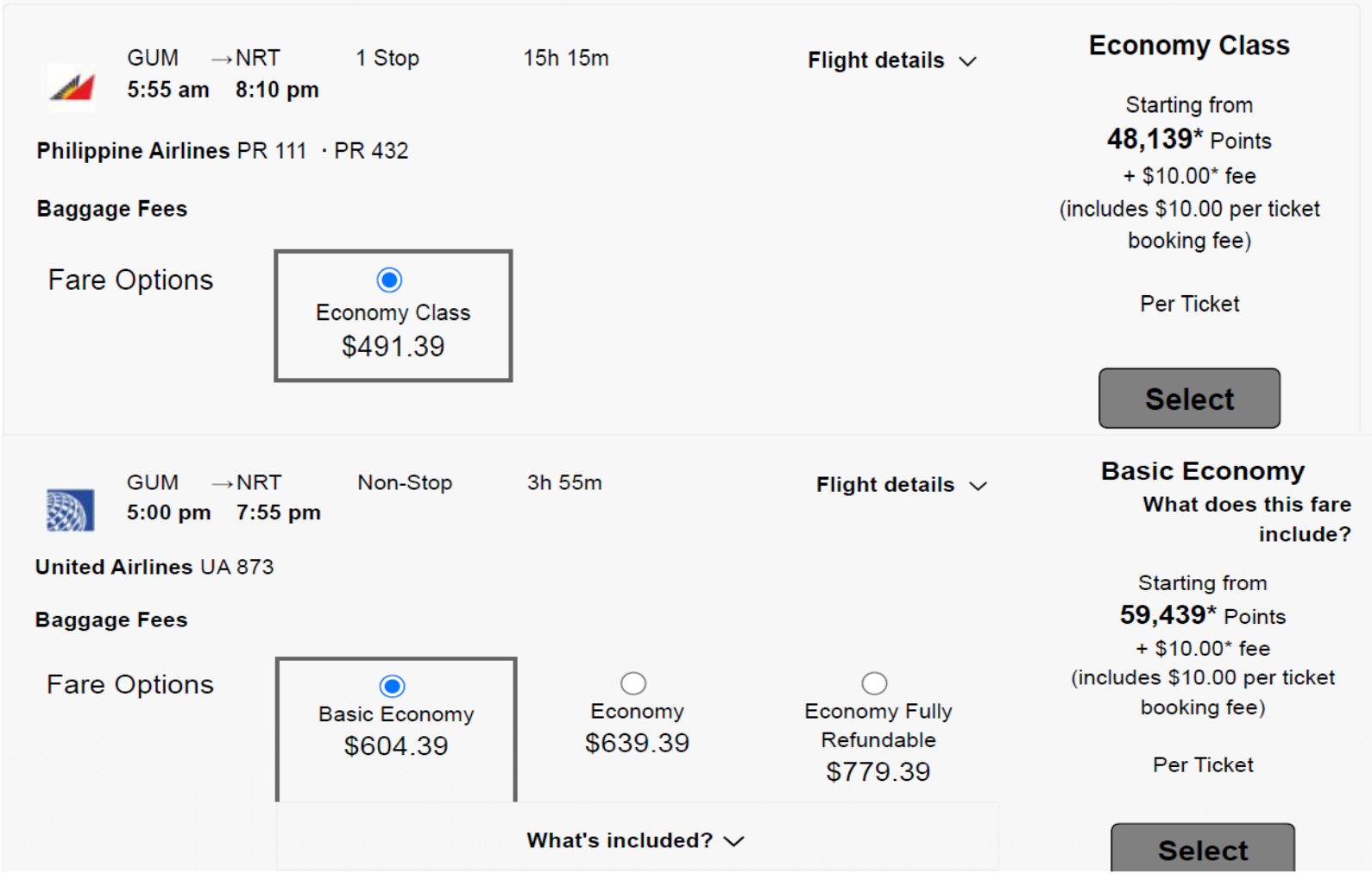
GPA has been corresponding with DOE on the Senator Edward J. Cruz Medical Referral and Education Mileage Program.

- GPA is currently using FHB Priority Reward Business card where the points can be used to purchase airline tickets from multiple carriers.
- The point balance as of August 2 is 487,299.



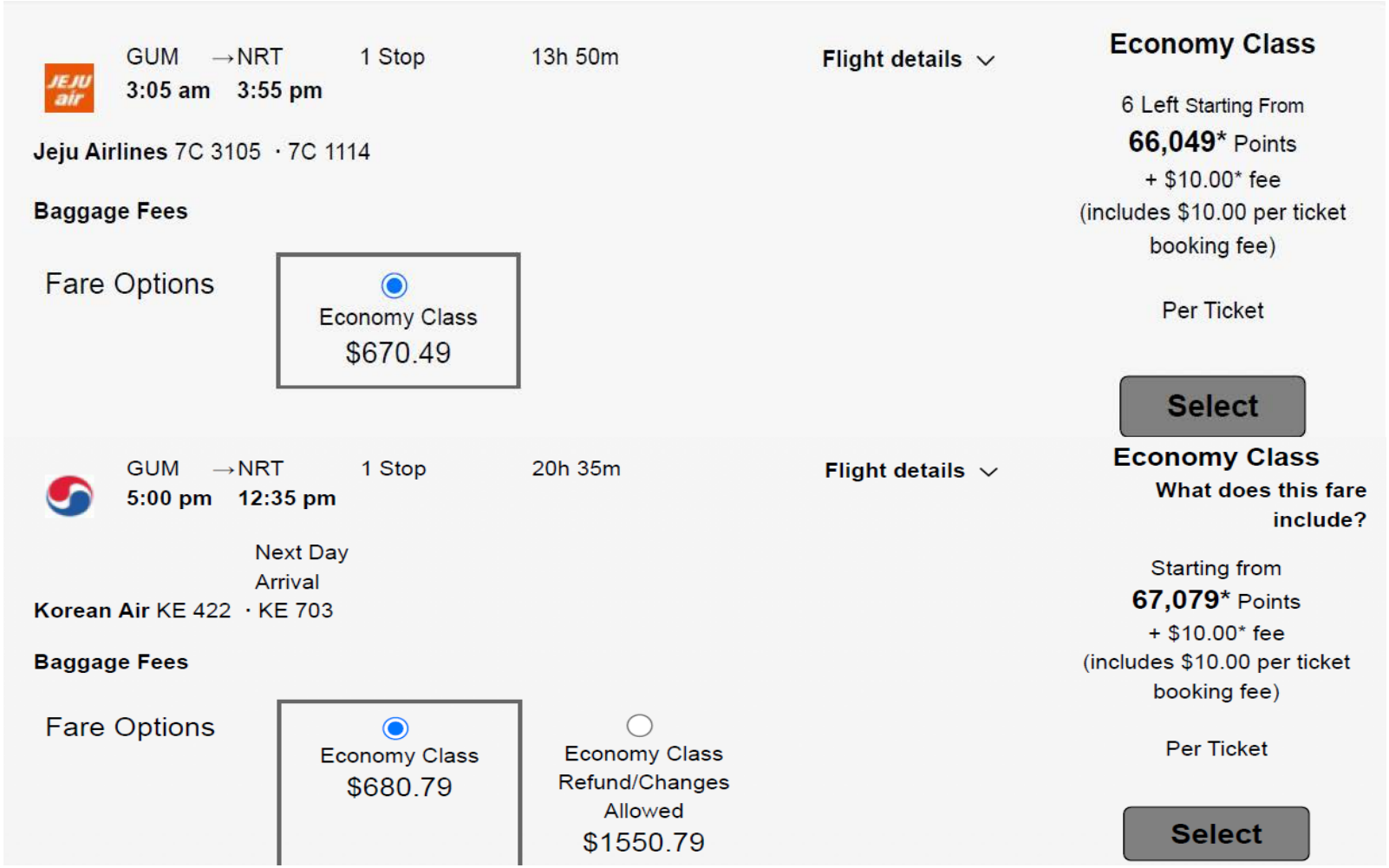
Review of OPA Report No. 23-10

Example of carriers that can be used and points required.
Guam to Narita on August 2, 2023:



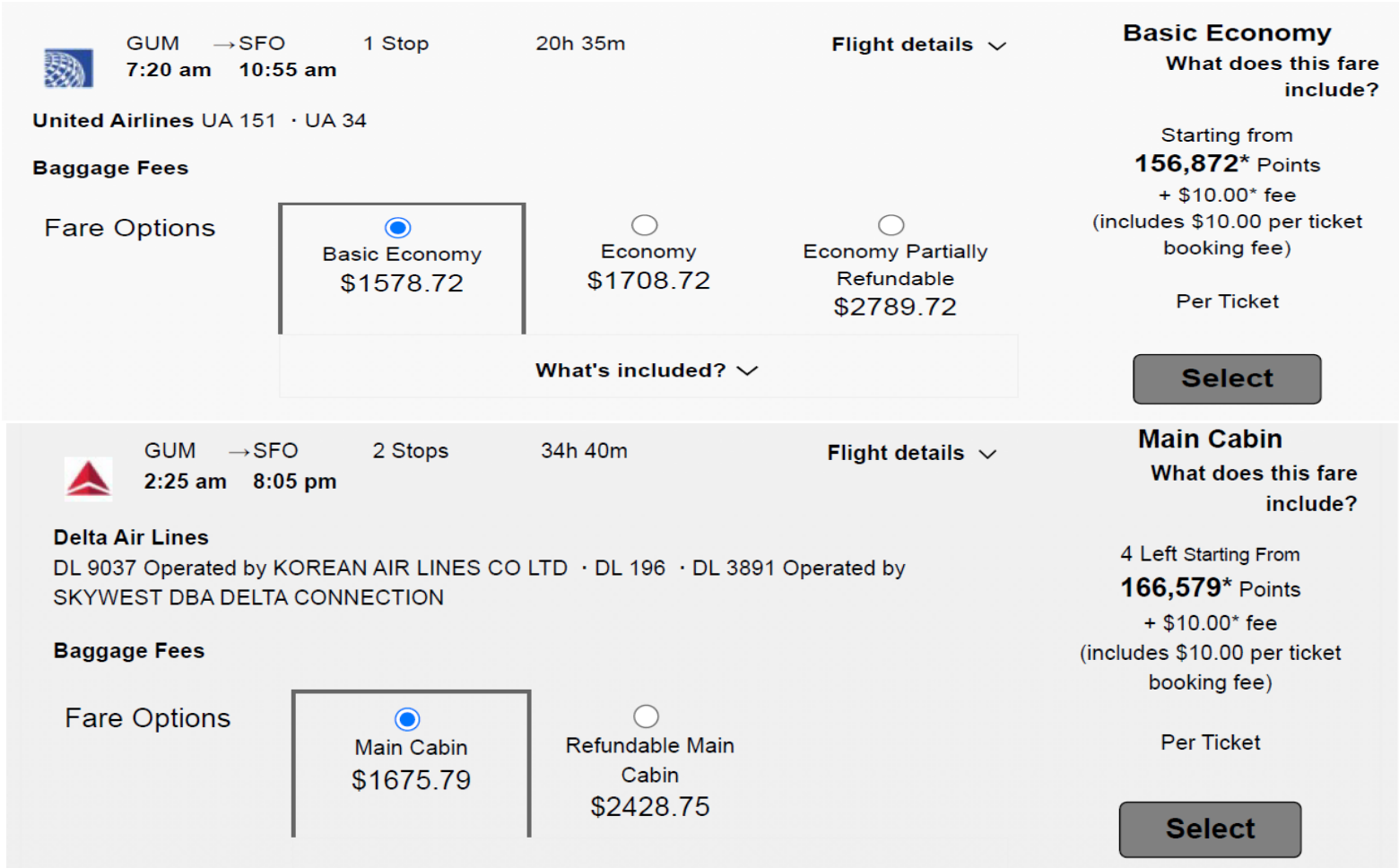
Review of OPA Report No. 23-10

Example of carriers that can be used and points required.
Guam to Narita on August 2, 2023:



Review of OPA Report No. 23-10

Example of carriers that can be used and points required.
Guam to San Francisco on August 2, 2023:



CANCELLATION OF MS IFB NO. GPA-023-23 *Yigo Diesel PMC*

Cancellation of MS IFB No. GPA-023-23

Multi-Step Invitation for Bid No. GPA-023-23

Yigo Diesels Performance Management Contract (PMC)

- The bid was issued in January 2023. A stay of procurement was placed on September 18, 2023 due to an OPA appeal.
- In May 2023, Typhoon Mawar significantly damaged the 20MW Yigo CT unit and the 198MW Ukudu power plant project. The Ukudu plant completion date is now delayed from April 2024 to January 2026 due to the irreparable damage to the fuel and water tanks by Typhoon Mawar, requiring re-construction of the tanks. The Authority is addressing the need for generation capacity by restoring down units and improving the generation output of operating units.
- The CCU and PUC approved and authorized GPA to procure 40MW of temporary power services to be commissioned within 100 days of the notice to proceed until the 2026 commissioning of the Ukudu plant to address the urgent need for power capacity demand before May 2024. GPA determined the most viable sites for the temporary power services as Yigo (for diesel engines) and Tenjo (for combustion engines), primarily due to air permitting and fuel availability considerations.
- The Yigo site currently houses the Yigo diesel generators. The award of the temporary power bid will require the removal of these generators. The immediate operation (power generation capability) of such is unlikely as the necessary permitting and infrastructure are not available at alternate sites. Furthermore, amendments to the bid scope of work would significantly differ from that originally contained in the current bid.

Cancellation of MS IFB No. GPA-023-23

Continued

- Additionally, the Public Auditor, in a hearing on *In re Dooik Eng Co., Ltd.*, Case No. OPA-PA-23-004, suggested that in the absence of a determination of substantial interest, it is better to cancel an allegedly flawed procurement than to pursue a potentially years-long appellate process. The Guam Power Authority has determined that the cancellation of this bid as provided in the procurement regulations is in the best interests of Guam. 2 GAR Div. 4 § 3115(b).
- Due to the passage of time since a PMC for these generators was first contemplated as well as the changes needed to eliminate potential flaws in this procurement, GPA has determined that the proposed amendments to the solicitation are of such magnitude that a new solicitation is desirable. 2 GAR Div. 4 § 3115(d)(1)(B)(iii).
- Therefore, MS IFB GPA-023-23 was cancelled.