

CCU Regular Board Meeting

Presentation to:

Consolidated Commission on Utilities
March 25, 2025

ISSUES FOR DECISION

GPA Resolution FY2025-14

To Authorize the Management of the 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 of services up to 12 months or up to when the internal printing services is established; or up to when a new contract is awarded in the event that 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, 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 and received 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 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.

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. In March 2023, the PUC approved the month-to-month request.

Matter continues to be with the Supreme Court of Guam and in January 2024, the CCU approved management's request to continue to exercise month-to-month extension of services up to 12 months.

In May 2024, the PUC approved the extension of the GPA-Graphic Center Contract and GPA may exercise the month-to-month contract extension up to 12 months or until a new contract is awarded. The order also required GPA to find an alternative billing solution that GPA can perform internally.

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. GPA again seeks a month-to-month extension up to 12 months.

GPA issued Invitation Bid Number GPA-026-25, for High Volume Color Printer, with bid submission due date on the third week of March. The procurement process is ongoing and GPA must have the printing services in order to issue monthly billings which is the revenue lifeline of GPA.

GPA estimates that it would cost \$554,000 per annum to perform the bill printing, mailing, and processing internally. This estimate includes a full time employee to oversee and process the billings daily; equipment lease; supplies and materials; and postage.

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. GPA again seeks a month-to-month extension up to 12 months for approximately \$400,000 with Graphic Center; or up to when the internal printing services is established; or up to when a new contract is awarded in the event that a new vendor is selected.

GPA Resolution FY2025-14 (Continued)

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

Where is the location?

Guam Power Authority

How much will it cost?

Approximately \$400,000 for 12-month period

What is its funding source?

The source is revenue funds.

GM REPORT

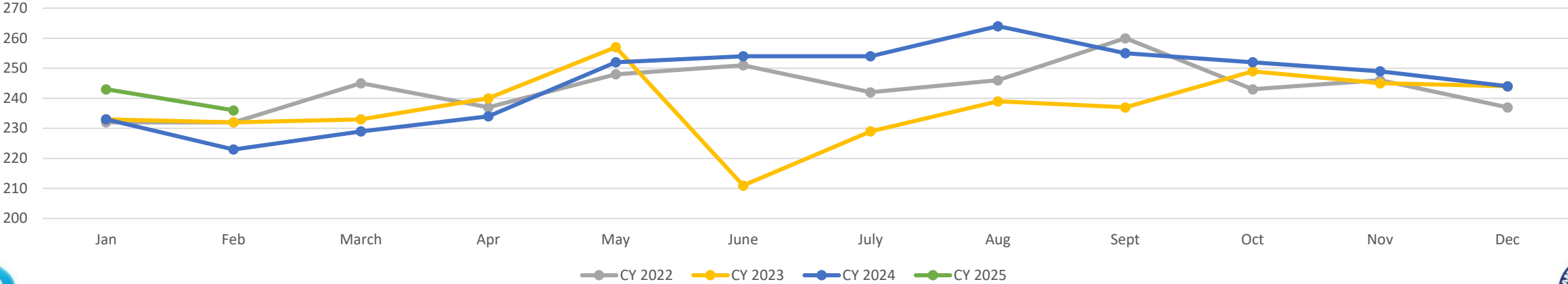
General Manager's Report

Reserve Margin Forecast for April 2025:

Targeted Available Capacity:	279 MW
Projected Demand:	248 MW
Anticipated Reserve Margin:	31 MW
Interruptible Load Availability:	8 MW
Navy Assistance (Orote):	12 MW
Total Reserves:	51 MW

*Piti 8&9 Overhaul: Piti 9 on 03/31-04/21/2025 followed by Piti 8 on 04/23-05/14/2025 (22 days each)

MONTHLY PEAK DEMAND
THRU February 2025



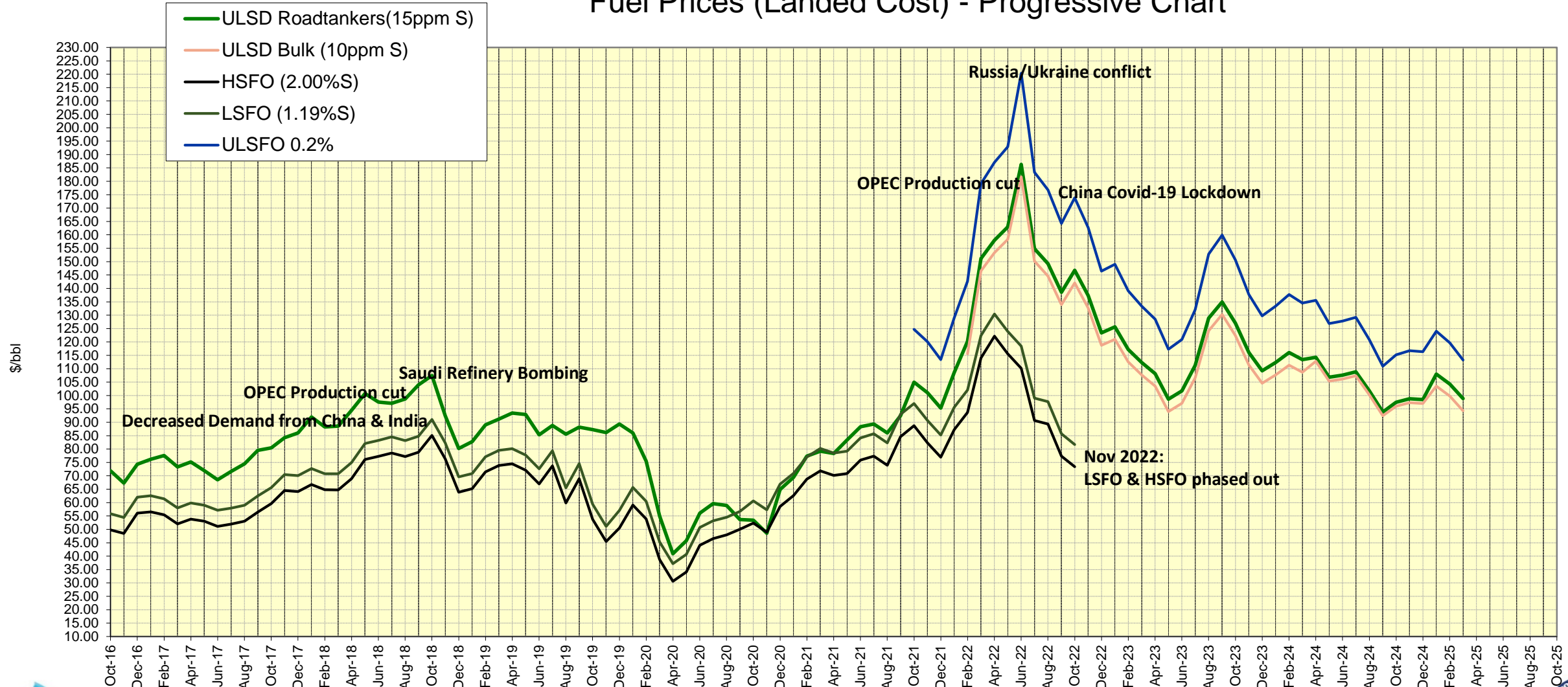
General Manager's Report

GPA Fuel Landed Cost (Per Barrel as of March 14, 2025)

ULSRFO 0.2% \$113.23

ULSD Bulk \$94.33

Fuel Prices (Landed Cost) - Progressive Chart



General Manager's Report

DSM Online Report – February 2025

OVERALL COUNTS

Month	ALL			COMMERCIAL			RESIDENTIAL		
	Applications	Equipment	Rebates	Applications	Equipment	Rebates	Applications	Equipment	Rebates
FY-2022*	696	981	\$ 196,075	7	12	\$ 1,950	689	969	\$ 194,125
FY-2023	5,721	7,992	\$ 1,621,850	67	101	\$ 19,350	5,654	7,891	\$ 1,602,500
FY-2024	5,304	7,496	\$ 1,522,650	81	114	\$ 34,400	5,223	7,382	\$ 1,488,250
Oct-24	503	755	\$ 150,725	9	14	\$ 4,150	494	741	\$ 146,575
Nov-24	340	483	\$ 100,000	1	1	\$ 100	339	482	\$ 99,900
Dec-24	468	693	\$ 139,325	5	11	\$ 2,050	463	682	\$ 137,275
Jan-25	472	693	\$ 141,050	1	2	\$ 600	471	691	\$ 140,450
Feb-25	386	524	\$ 108,725	12	15	\$ 4,000	374	509	\$ 104,725
Mar-25									
Apr-25									
May-25									
Jun-25									
Jul-25									
Aug-25									
Sep-25									
TOTAL	13,890	19,617	\$ 3,980,400	183	270	\$ 66,600	13,707	19,347	\$ 3,913,800
Monthly Averages (FY25)	446	656	\$ 132,775	4	7	1,725	442	649	\$ 131,050

* DSM Online went live on 8/17/22. FY2022 Figures are from 8/17/2022 to 9/30/2022 only.
 Large Commercial, Government, Prepaid, and Inactive accounts are still tracked and processed manually.
 Paper applications are NOT INCLUDED with these counts. Includes denied and pending applications.



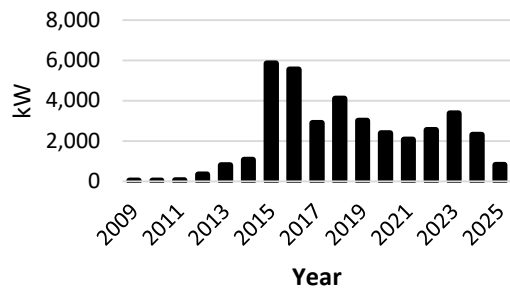
General Manager's Report

NET METERING February 2025

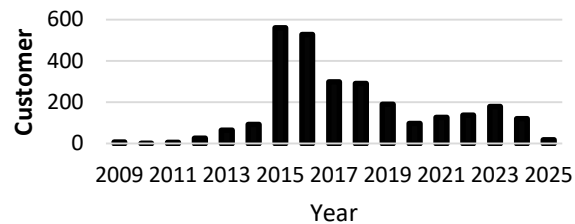
Installed kW by Year		
Year	Total	Cumulative
2009	39	39
2010	39	79
2011	42	120
2012	335	455
2013	803	1,258
2014	1,067	2,325
2015	5,843	8,168
2016	5,541	13,709
2017	2,887	16,596
2018	4,096	20,692
2019	3,005	23,697
2020	2,380	26,077
2021	2,059	28,136
2022	2,549	30,685
2023	3,362	34,047
2024	2,303	36,350
2025	807	
Grand Total	37,157	

Customer Count by Year		
Year	Total	Cumulative
2009	7	7
2010	2	9
2011	6	15
2012	26	41
2013	65	106
2014	93	199
2015	560	759
2016	528	1,287
2017	298	1,585
2018	291	1,876
2019	190	2,066
2020	97	2,163
2021	126	2,289
2022	138	2,427
2023	179	2,606
2024	121	2,727
2025	19	
Grand Total	2,746	

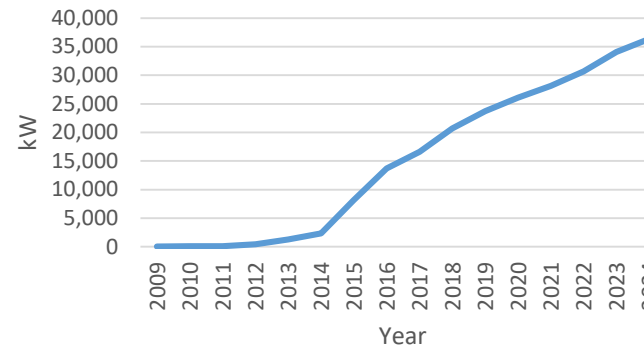
Yearly Installed kW



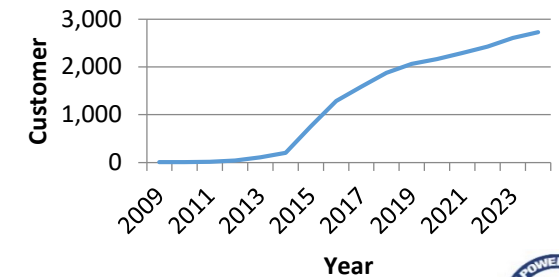
Yearly Connected Customer Count



Cumulative Installed kW



Cumulative Connected Customer Count



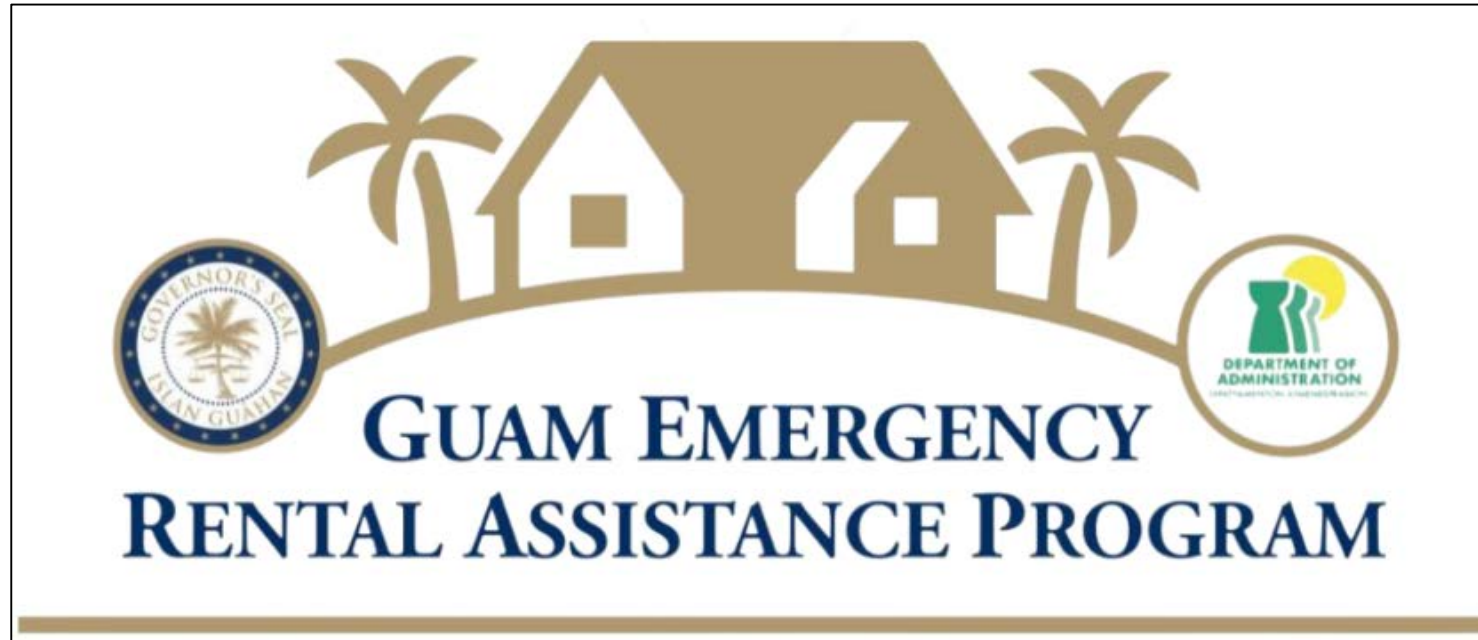
General Manager's Report

PUC Update:

- **Dockets heard and passed in the month of February 27, 2025:**
 - **GPA Docket No. 24-25:** Petition of the Guam Power Authority to Approve Phase IV Renewable Energy Acquisition Award to KEPCO-EWP-Samsung C&T Consortium and Core Tech Solar Energy LLC, for up to 192 MW of Renewable Energy Capacity; Certification of the Chief ALJ Concerning the GPA's Phase IV Renewable Energy Purchase Agreement with Kes Yona Solar LLC (from: 11/5/2024)
 - **GPA Docket No. 25-08:** Petition of the Guam Power for Approval of Additional Projected Costs of Urea Supply Contract; ALJ Report; and proposed Order.
- **Dockets to be heard for the month of March 2025:**
 - **Docket 25-07:** Petition of the Guam Power Authority for Authorization to Procure Strategic Program Management Office for GPA's Future Projects.
 - **Docket 25-09:** Petition of the Guam Power Authority to Approve Procurement of Comprehensive Unarmed Uniformed Security Guard Services.
- **Pending Dockets:**
 - Docket No. 24-03: Petition to Review 12 GCA § 8502(c)(2)(B) Relative to Net Metering - this docket will not be heard until further notice.

General Manager's Report

Customer Assistance



Emergency Rental Assistance (ERA) Program

- On March 3, 2021, the Department of Administration (DOA) launched the ERA program to assist households affected by the COVID-19 pandemic that are unable to pay rent and utilities.
- \$102,215.26 was applied to qualified ratepayer accounts [Batches 339 - 341] for February 2025, totaling \$7,688,123.64 since the program's inception.
- Cycle 6 of the program closed on January 21, 2025. No new applications are being accepted.
- Continuance requests will be accepted until March 31, 2025.

General Manager's Report

Customer Assistance

Low-Income Home Energy Assistance Program (LIHEAP)

- The Guam Energy Office is expanding its annual Low Income Home Energy Assistance Program, known as LIHEAP, with a new cooling credit component while taking a more comprehensive approach to helping families reduce their energy costs in the long term.
- Program includes two key components:
 - Crisis assistance of up to \$1,000 for households facing power disconnection
 - Six-month cooling assistance credit providing \$100 monthly credits from March to August. (new)
- **Cooling credit program application window is from February 24 to March 7, 2025.**
- Qualified applicants of the program will have payments made directly to GPA.



General Manager's Report

Customer Engagement & Community Outreach – Mount Carmel & St. Anthony Schools

- As a part of Community Outreach, GPA Communications and SPORD division visited Mount Carmel and St. Anthony Schools to deliver their Energy-Efficiency and Conservation presentation.
- These presentations were delivered on Friday, March 7, 2025 and Friday, March 14, 2025, to a combined total of 206 students and 12 teachers that were in attendance. SPORD Engineers taught students ways to save energy, how to be energy efficient, and why being sustainable is important. Students were also informed about how energy is generated, the types of energy sources (non-renewable and renewables), and the different ways GPA makes electrical energy.
- Communications staff presented the Beat-the-Peak campaign to the students, who were taught the importance of conserving energy during peak hours of 5 pm to 11 pm and different ways they could “Beat-the-Peak”.
- In addition, teachers and staff in attendance were informed on the Energy Sense rebate program and received information on how to get rebates for their schools and homes.
- Towards the end of the presentation, students were quizzed on the what they've learned about energy saving and conservation, and were rewarded with energy related promotional items.



General Manager's Report

Customer Engagement & Community Outreach – FBLG Middle School Science Expo

- Guam Power Authority participated in the FB Leon Guerrero (FBLG) Middle School Science Expo on Friday, March 28, 2025.
- Students visited the GPA booth where T&D linemen explained the importance of wearing personal protective equipment (PPEs) for safety when working with electricity. They also showcased a hot dog demonstration on electrical safety which revealed to students the harmful effects electricity has on human skin without the use of safety gear.
- After T&D's safety demonstration, SPORD engineers explained the different types of renewable energy and demonstrated how renewable energy works using solar and wind STEM kits. Students also learned about energy conservation and energy saving tips highlighted by the "Beat-the-Peak" campaign discussed by GPA Communications personnel.



General Manager's Report

Ukudu Power Plant Construction Status

Plant construction progresses steadily. Major work includes: Installation of steam blowing insulation, BESS cable pulling, and ground compaction/asphalt work.

Actual accumulated progress including Engineering, Procurement, and Construction: **93.96%**
(as of February 28, 2025)



General Manager's Report

Ukudu Power Plant Update:

GPA Activities

1. GPA is coordinating with GWA to facilitate acquisition of new NPDES permit.
2. GPA personnel is coordinating with GUP/DUP for gas turbine commissioning and testing activities.

GUP Activities

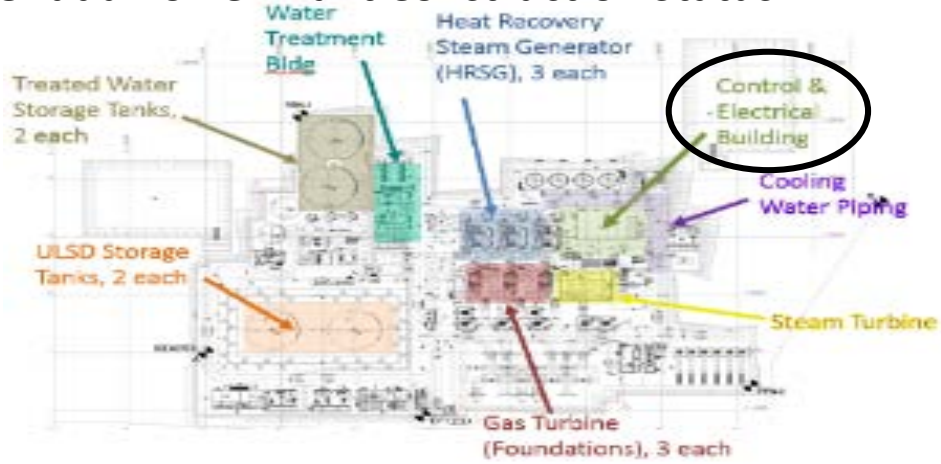
1. GTG #1 was synchronized to the grid on February 18, 2025, GTG #2 on February 26, 2025, and GTG #3 on March 7, 2025. Majority of testing has been completed with all units able to reach approximately 48 MW. Tuning is ongoing for all units.
2. Steam blowing for Steam Turbine commissioning is tentatively scheduled for late March 2025.

Work Area	Progress (%)
Engineering	89.99
Procurement	99.98
Construction	98.40
Commissioning	12.12
Overall	93.96

Unit	Initial Firing (No Load)	Synchronization
GT Unit 1	12-Feb-25	18-Feb-25
GT Unit 2	21-Feb-25	26-Feb-25
GT Unit 3	28-Feb-25	7-Mar-25

General Manager's Report

Ukudu Power Plant Construction Status



GPA personnel assisting with initial synchronization of GTG units



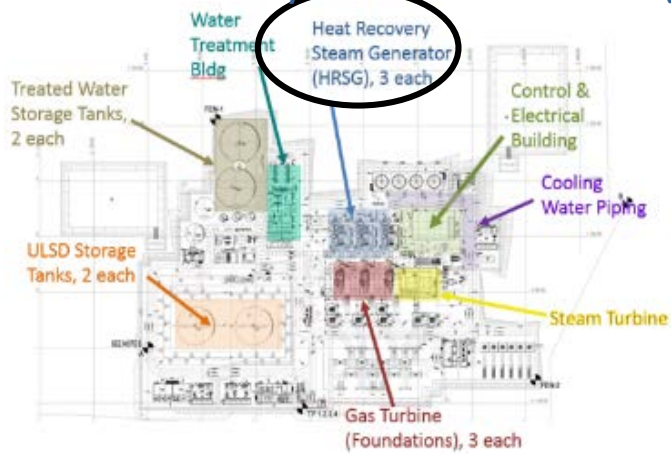
Control & Electrical Building



General Manager's Report

Ukudu Power Plant Construction Status

Heat Recovery Steam Generator (HRSG)



HRSG 1-3: Installation of insulation is ongoing



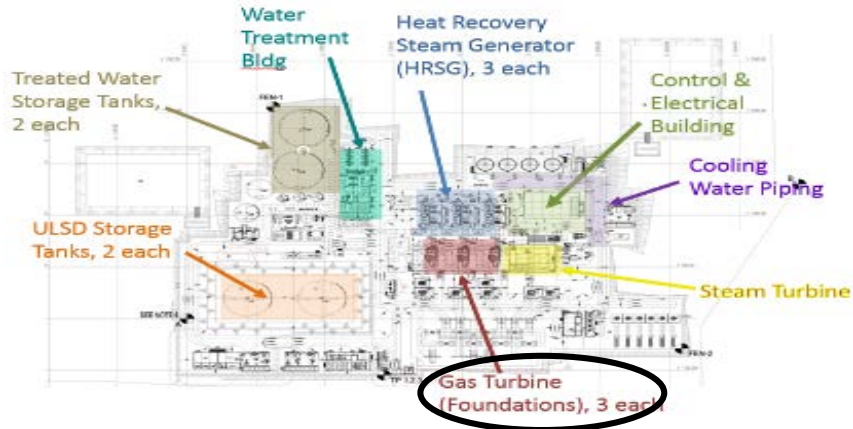
Temporary steam blowing pipe fabrication between HRSG #1 and #2



General Manager's Report

Ukudu Power Plant Construction Status

Gas Turbines & Generators



GTG tuning is ongoing

GTG Building – Commissioning work is ongoing.

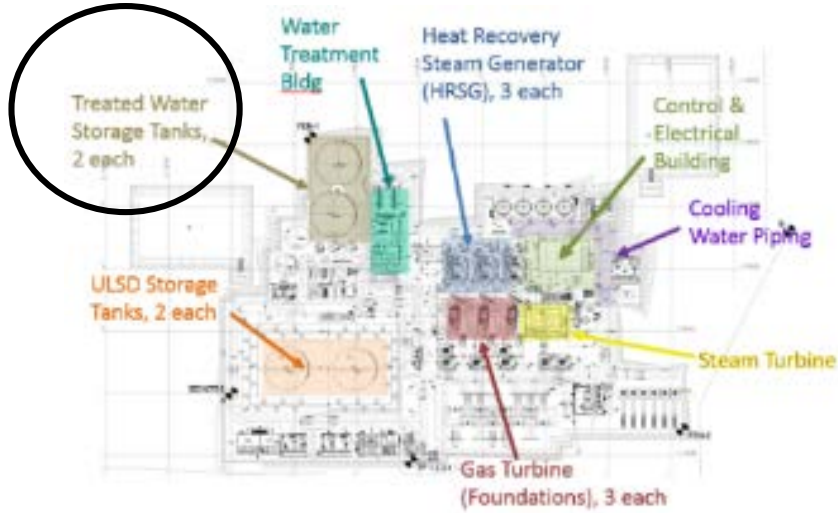


8 14

#1 GT GROSS POWER	#2 GT GROSS POWER	#3 GT GROSS POWER	#
47 MW	0.0 MW	--- MW	
TOTAL GROSS POWER	TOTAL NET POWER	AUX POWER	T
47 MW	46 MW	1.2 MW	

General Manager's Report

Ukudu Power Plant Construction Status

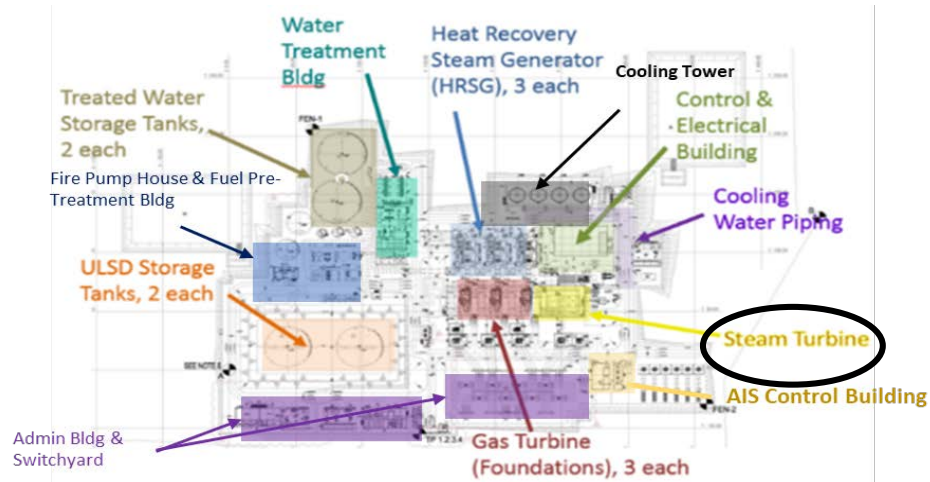


**Treated Water Storage Tanks:
Completed**



General Manager's Report

Ukudu Power Plant Construction Status



Installation of insulation on temporary steam blowing pipes is ongoing.



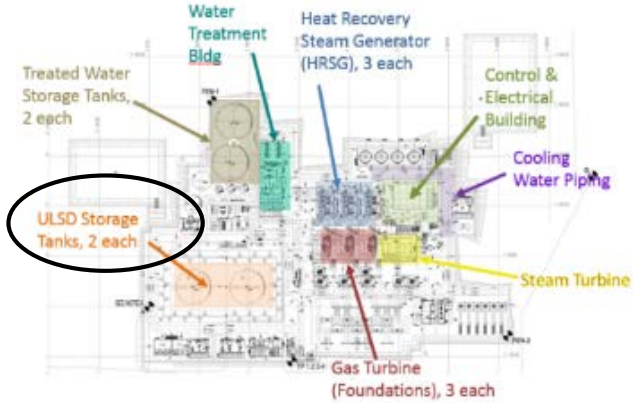
Steam Turbine & Generator Building: Painting of STG piping and cable installation is ongoing



General Manager's Report

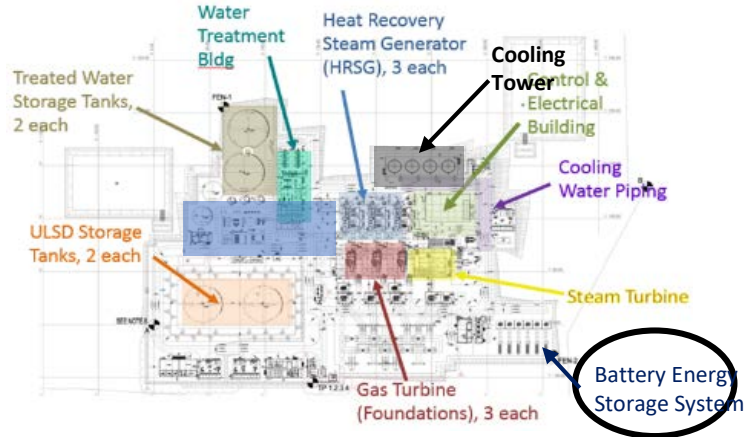
Ukudu Power Plant Construction Status

ULSD Storage Tanks – Completed. Second ULSD fuel transfer is scheduled for March 25, 2025.



General Manager's Report

Ukudu Power Plant Construction Status



Testing inside BESS Control Room

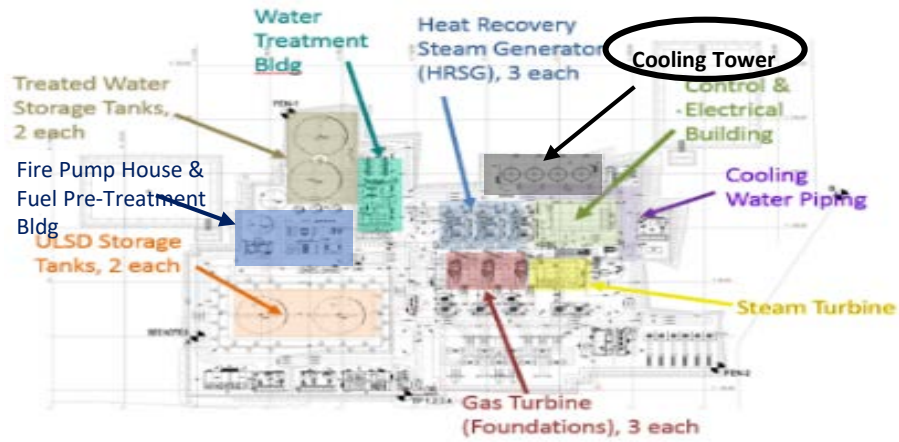


Battery Energy Storage System (BESS): Cable pulling is ongoing.

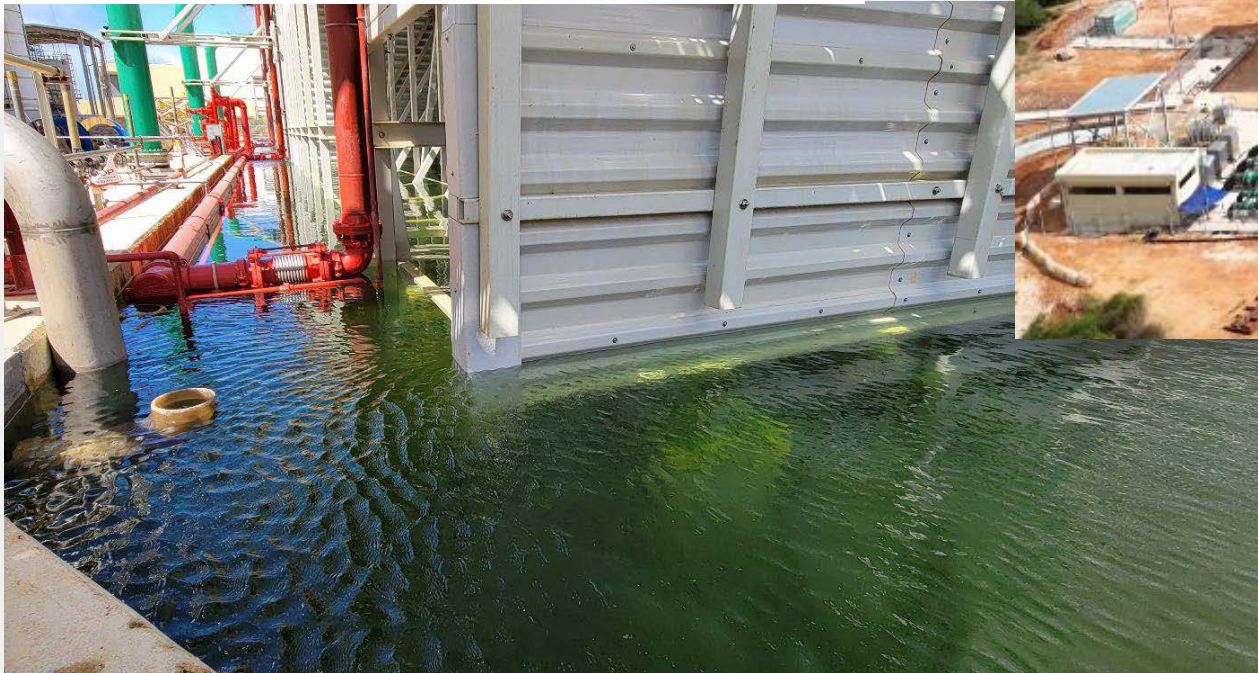


General Manager's Report

Ukudu Power Plant Construction Status



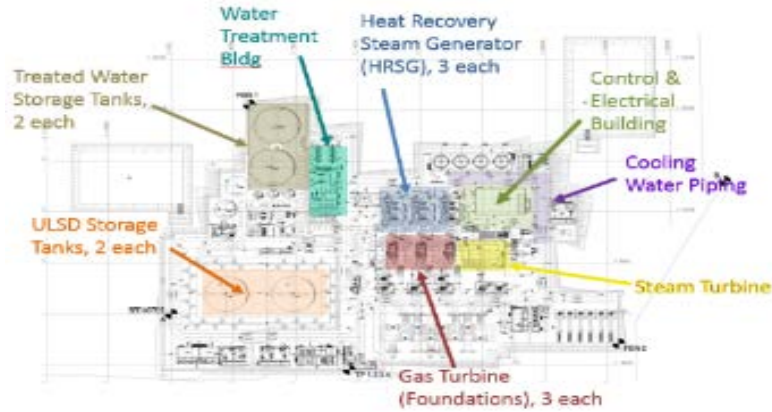
Cooling Tower & Basin – Commissioning work is ongoing.



General Manager's Report

Ukudu Power Plant Construction Status

Miscellaneous Ongoing Work



Road paving preparation inside plant is ongoing



Access road ground compaction and asphaltting in progress



Painting ongoing of fire suppression piping



General Manager's Report

Fuel Pipeline Construction Status



Generation KPIs

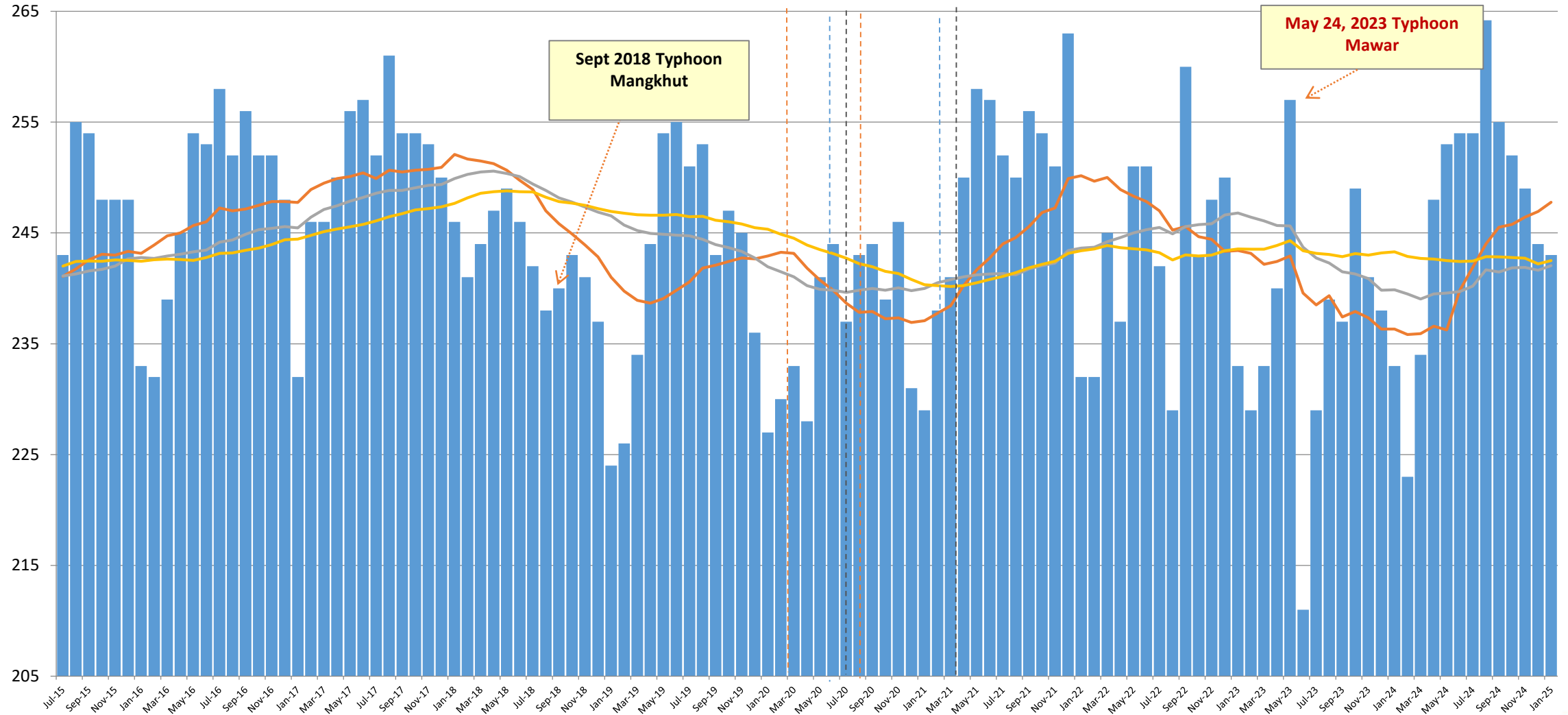
February 2025

Historical Monthly Peak Demand July 2015 - February 2025

- █ Peak Demand
- 12-month Rolling Average
- 2-year Rolling Average
- 3-year Rolling Average

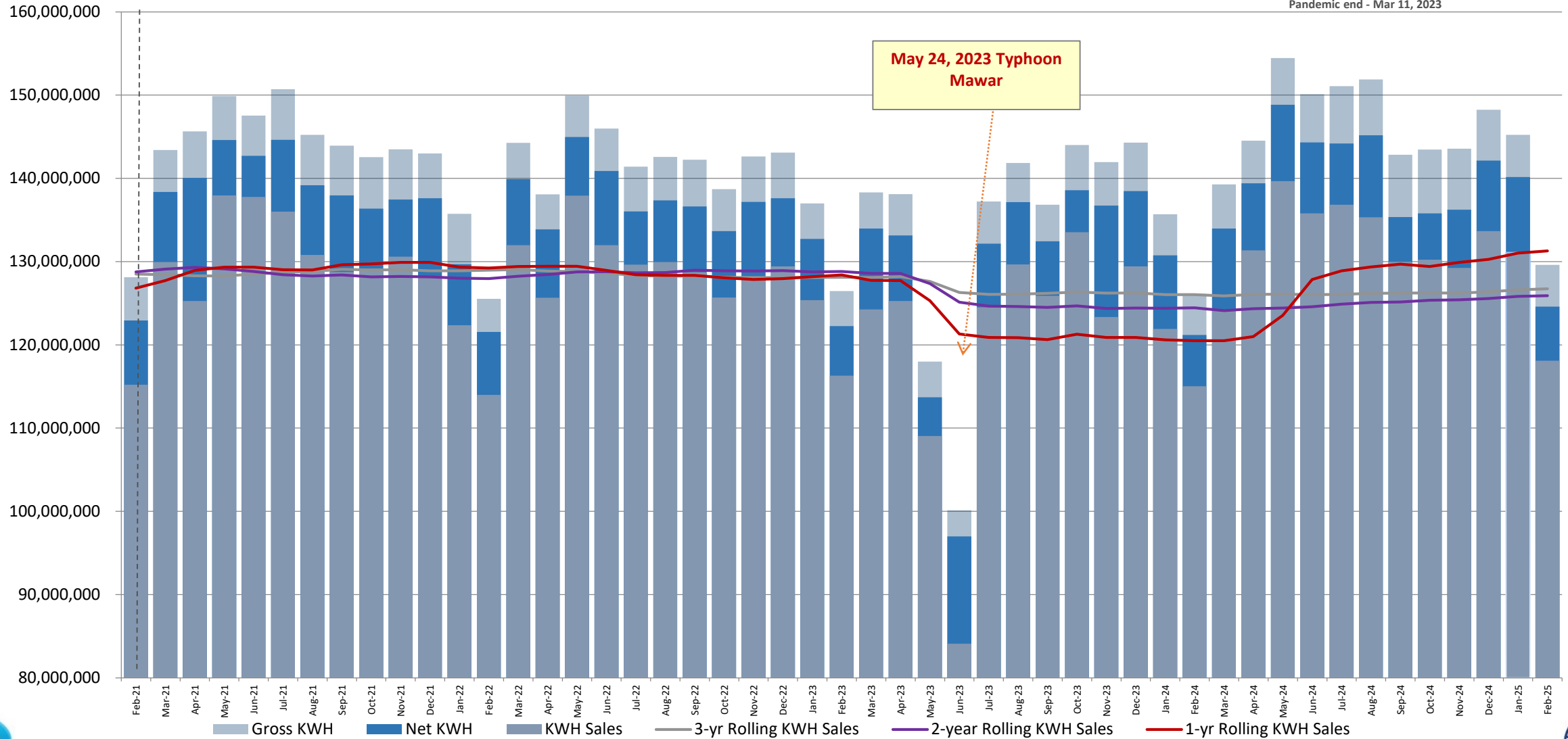
COVID 19 Pandemic

- PCOR1 - Mar 15, 2020
- PCOR2 - May 10, 2020
- PCOR3 - Jul 20, 2020
- PCOR1 - Aug 16, 2020
- PCOR 2- Jan 18, 2021
- PCOR3 - Feb 22, 2021
- Pandemic end - Mar 11, 2023



Historical KWH Sales Feb 2021 - Feb 2025

COVID 19 Pandemic
 PCOR1 - Mar 15, 2020
 PCOR2 - May 10, 2020
 PCOR3 - Jul 20, 2020
 PCOR1 - Aug 16, 2020
 PCOR 2- Jan 18, 2021
 PCOR3 - Feb 22, 2021
 Pandemic end - Mar 11, 2023



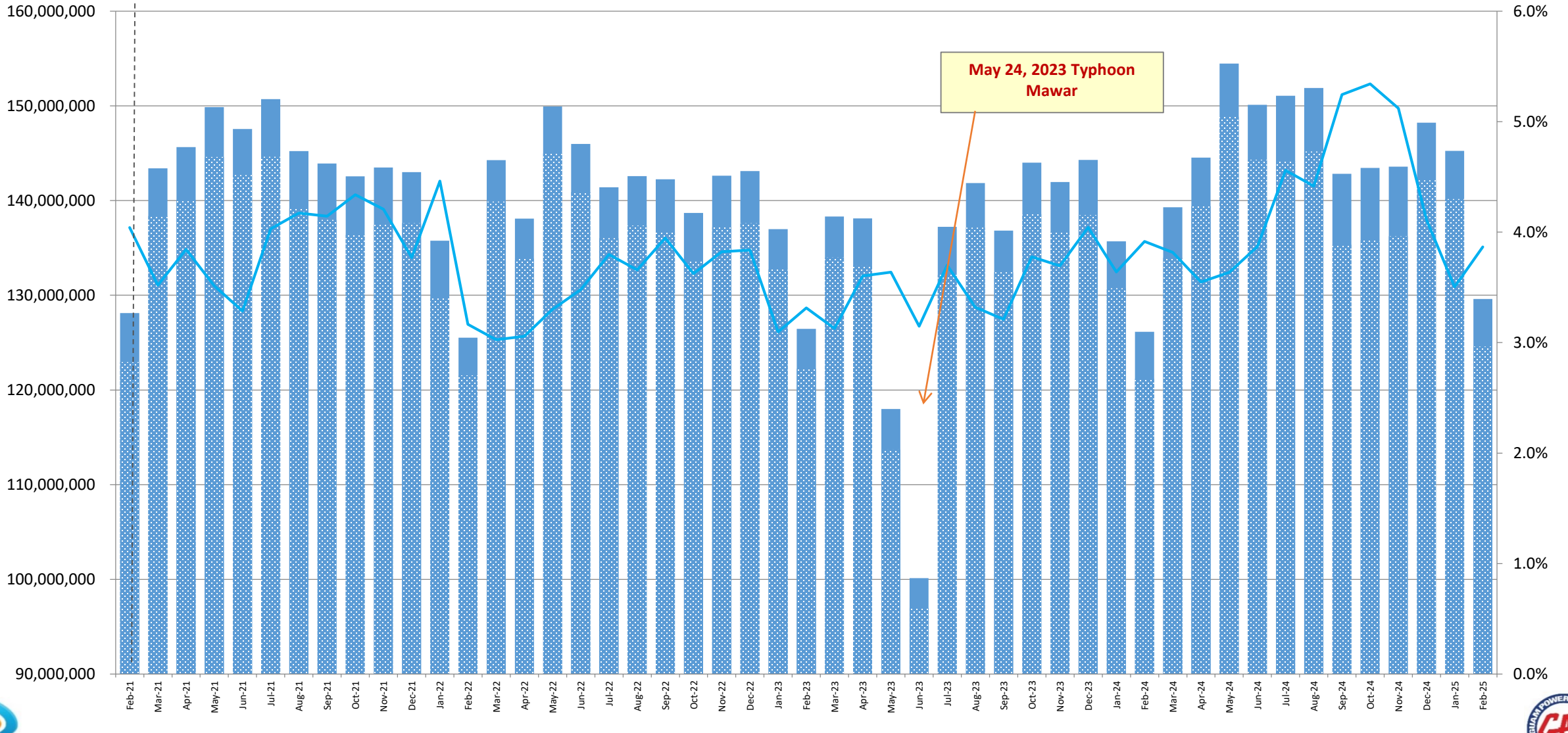
■ Gross KWH
 ■ Net KWH
 ■ KWH Sales
 — 3-yr Rolling KWH Sales
 — 2-year Rolling KWH Sales
 — 1-yr Rolling KWH Sales



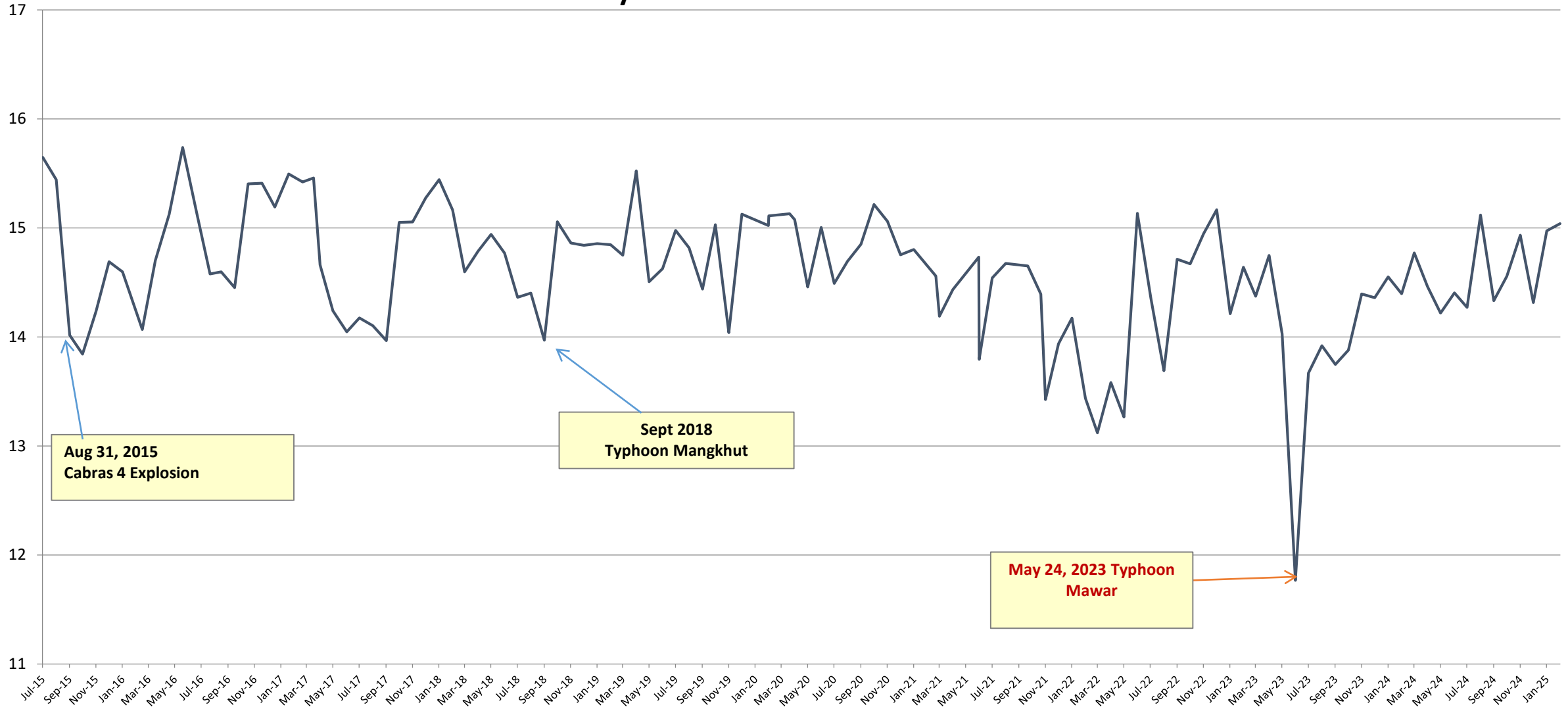
Gross and Net Generation (KWH) Feb 2021 - Feb 2025

COVID 19 Pandemic
 PCOR1 - Mar 15, 2020
 PCOR2 - May 10, 2020
 PCOR3 - Jul 20, 2020
 PCOR1 - Aug 16, 2020
 PCOR2 - Jan 18, 2021
 PCOR3 - Feb 22, 2021
 Pandemic end - Mar 11, 2023

Gross KWH Net KWH % Station Use



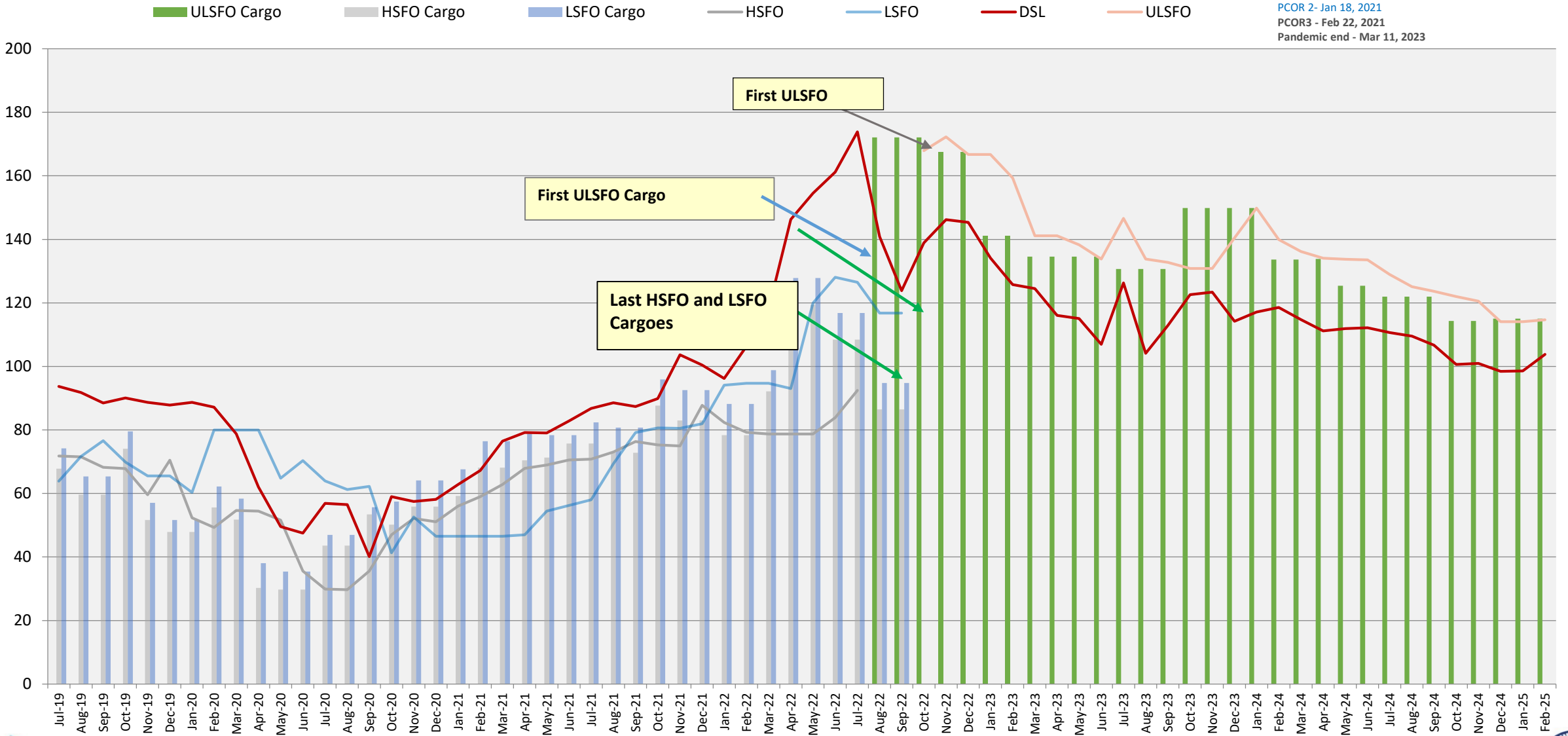
SYSTEM GROSS HEAT RATE (KWH/Gal) July 2015 - Feb 2025



Fuel Cargo and Fuel Consumption Costs (\$/bbl)

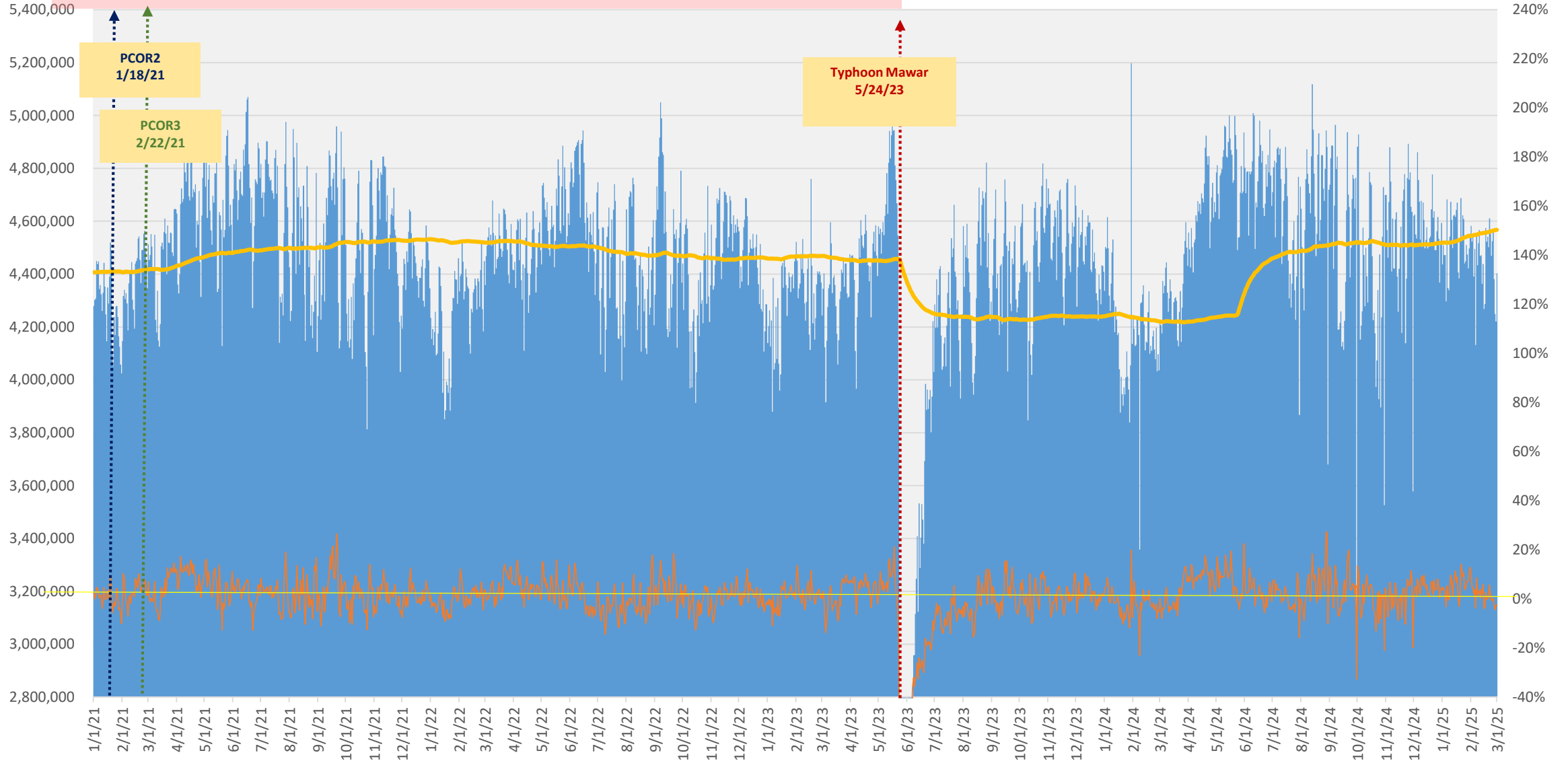
June 2019 - Feb 2025

COVID 19 Pandemic
 PCOR1 - Mar 15, 2020
 PCOR2 - May 10, 2020
 PCOR3 - Jul 20, 2020
 PCOR1 - Aug 16, 2020
 PCOR 2- Jan 18, 2021
 PCOR3 - Feb 22, 2021
 Pandemic end - Mar 11, 2023



Daily Net KWH

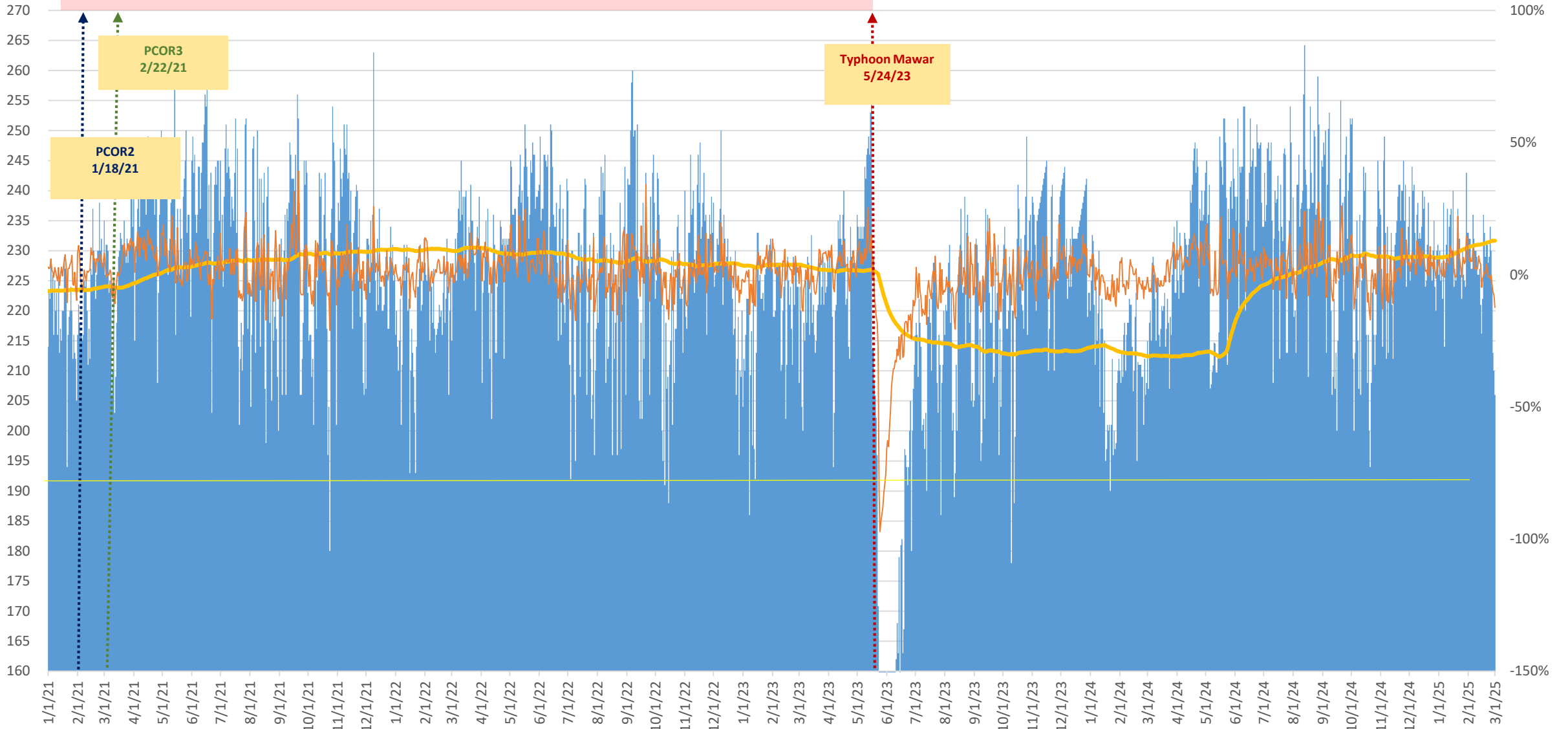
COVID 19 PANDEMIC
 COVID-19 Pandemic incident period ended May 11, 2023



Daily Peak MW

COVID 19 PANDEMIC

COVID-19 Pandemic incident period ended May 11, 2023

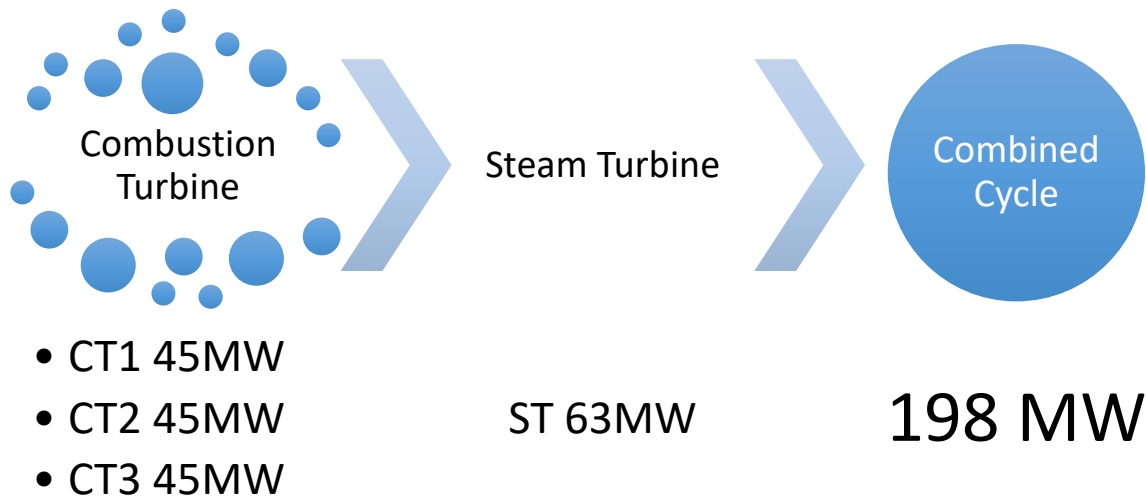
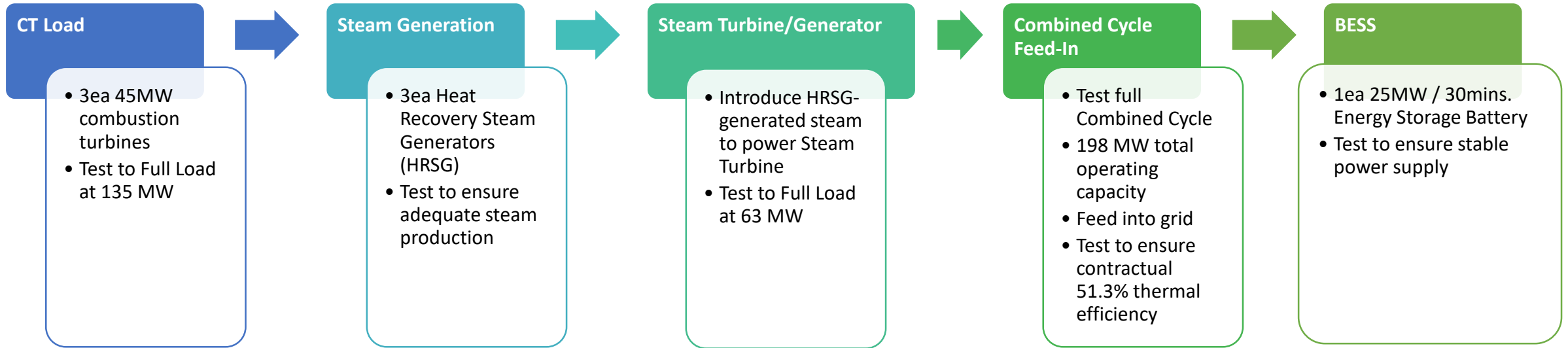


Other Discussion

Capacity Chronology (March 11 - 18, 2025)

	11-Mar Tuesday	12-Mar Wednesday	13-Mar Thursday	15-Mar Saturday	16-Mar Sunday	17-Mar Monday	18-Mar Tuesday
Cabras 1	42	42	42	42	42	42	42
Cabras 2	-	-	-	23	40	40	40
Piti 8	22	22	22	4	26	13	38
Piti 9	30	30	30	30	30	30	30
Piti 7 (CT)	-	20	20	20	20	20	20
Aggreko (Temp)	20	20	20	20	20	20	20
Others (Reserves)	91	91	91	86	95	94	93
Total GPA Conventional	205	225	225	225	273	259	283
Peak Shifting Solar ESS	4	4	4	4	4	4	4
Orote Plant	12	12	12	12	12	12	12
Total Emergency Support:	16	16	16	16	16	16	16
Total Capacity (Peak Time)	221	241	241	241	289	271	299
Peak Demand	235	235	242	229	236	242	240
Margin	(14)	6	(1)	16	57	29	59
Significant Event	Ukudu Assist LS Avoided	Piti 7 Online 6:10pm	Yigo CT Start Up Issue	Cabras 2 Online Piti 8 Repaired	Cab 2 Inc Cap Piti 8 Inc Cap	Piti 8 Limited Cap	Piti 8 Inc Cap
Load Shed	NO	YES	YES	NO	NO	NO	NO
Time		5:34pm-6:04pm	5:38pm-6:37pm				
Total Circuits Affected		11	11				
Longest Outage Duration		26 mins	37 mins				

Ukudu Power Plant: Testing thru August; Commissioning Sept. 15, 2025



COMMISSIONING TARGET DATE:
SEPTEMBER 15, 2025
Contingent on satisfactory functionality of entire plant capacity and auxiliaries



**POWERING FORWARD
CLEAN ENERGY MASTER PLAN**

**RENEWABLE ENERGY UPDATES
PH IV Bids
PH II HANWHA 40MW Solar Contract**

Phase II – Hanwha Energy USA Holdings Corp

40 MW Solar Plant Contract Termination

Contract Amendments

Original scope of work was amended, reducing the plant size to 40 MW solar and requiring 22 MW/66 MWh ESS as an attempt to comply with the USEPA Consent Decree

CCU and PUC approved the amendment with reservation and concern that contractor, Hanwha, may not complete the project

Amended contract includes significant milestones which, if not achieved, are grounds for contract termination

Performance

Hanwha did not achieve the February 28, 2025 Scheduled Module Order Date milestone to ensure timely project completion and contractual commissioning date by April 2026

Notice

Notice of Default and Opportunity to Cure was sent by GPA to Hanwha on March 1, 2025

Cure date passed without results

In process to effectuate garnishment of performance bond

Consent Decree

GPA in process to inform USEPA of actions taken against Hanwha due to continued non-performance. GPA is on track to comply with all other CD requirements NLT March 2026. Other options to comply with the remaining 40 MW new utility scale renewable energy requirement will be discussed.

Of the 100 MW new renewable energy, 60 MW was fulfilled upon commissioning of the KES (Mangilao) facility. The Ph III Engie project on military land was to fulfill the remaining 40 MW but canceled after a prolonged protest. The Hanwha project was intended to fulfill the CD requirement

Phase IV Renewable Energy Projects – Status as of March 20, 2025

KEPCO (132 MW)

- Contract executed on February 28, 2025
- 132 MW Solar Farm with 67 MW / 4 Hour Energy Storage Battery
- Commercial Operation Date: February 28, 2028
- Reduces Annual Fuel Oil Imports by 300,000 Bbl./Year
- Increases Guam Renewable Portfolio to 30% in 2028

Core Tech (60 MW)

- Contractual review ongoing
- Media reports approval of rezoning for proposed project site has been approved.

Mojave Marianas (60 MW)

- System interconnection discussions ongoing.

PEC (20 MW)

- Contract negotiations pending completion of Distribution System Impact Study (DSIS).
- DSIS completion expected end March 2025.

Power Solutions (62 MW)

- Contract negotiations pending completion of Distribution System Impact Study (DSIS).
- DSIS completion expected end March 2025.

Supporting Information of Phase IV Award

Phase IV Renewable Energy Projects – Discussion

PROPOSALS SUBMITTED IN RESPONSE TO THE PHASE IV RENEWABLE ENERGY BID TOTALS 333.6MW

ACHIEVING THE RENEWABLE PORTFOLIO STANDARD MANDATE

• **GPA IS MANDATED TO ACHIEVE 50% RENEWABLES BY 2035.** If all Phase IV proponents are contracted, GPA will achieve the RPS mandate by 2030.

The award of the proposals provide clear benefits for GPA and its ratepayers. The government procurement process is burdensome and time-consuming. The Phase IV bid is past two years since announcement. Work continues with a goal of contracting projects by the end of 2025.

REDUCING GUAM'S ENERGY COSTS & CARBON FOOTPRINT

• **ULSD fuel oil prices will continue to rise and fluctuate** because it is a global commodity significantly impacted by global events. Every historic global and/or political event resulted in the slope of fuel prices maintaining an upward price trend.

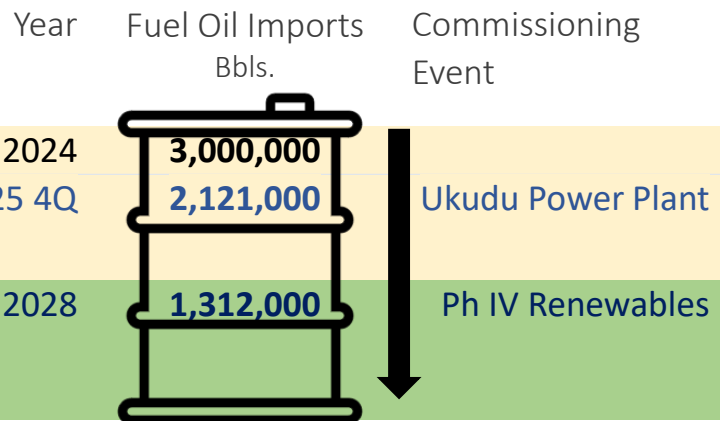
The price of ULSD prices has reached \$150+ per barrel within the past three years, soaring to \$186/Bbl. in 2022.

While GPA cannot control global fuel prices, efforts to reduce its fuel consumption significantly benefits ratepayers.

• The commissioning of the Ukudu Power Plant and Phase IV Renewables will reduce GPA fuel imports by ~56%.

The impact of global events, the perennial nemesis of GPA ratepayers, will have been reduced more than half.

This paradigm shift in Guam energy generation and fuel sources will continue further as GPA continues to pursue renewables beyond 50%. However, GPA is working at contracting additional renewables below Phase IV prices with the addition of centralized energy storage.



Phase IV Renewable Energy Projects – Discussion (continued)

ACHIEVING OVERALL VALUE & AFFORDABILITY

•The award of the Phase IV proposals will provide an excellent hedge against high ULSD fuel prices.

•GPA has used fuel oil hedging in past years to no success despite the assistance of hedging consultants.

•GPA sets the annual escalator at no more than 1%, making these renewable energy contracts an excellent hedge. This condition protects ratepayers from having to see LEAC reach the high 20¢/kWh and into the 30¢/kWh range as it did recently.

•GPA power purchase agreements add value to large tracts of land which are otherwise difficult to develop.

•As GPA enters more renewable energy contracts, the prices of large land tracts will likely increase because of their added value for energy production. However, large tracts with varying terrain and topography requiring substantial grading to install solar components will drive land and contract prices higher.

•The award of the Phase IV proposals are time sensitive as proponents have limited land option contracts. Failure to issue timely awards jeopardize the feasibility and costs of these projects if the proponent's land options expire.

•T&D infrastructure upgrades, although initially costly, improves the grid and prepares it for expansion.

•Limitations of existing transmission infrastructure are constraining low-cost utility-scale project sites.

•Upgrades to 115 kV lines are becoming the norm and could cost upwards of \$0.02/kWh to install. As more higher voltage transmission lines are added into the grid, more and more renewables at lessor price could be added without additional expenses.

•Energy Storage Systems (ESS) are required to shift daytime solar energy to non-daylight hours.

•ESS capable of 50% shifting increases renewable energy project pricing by about \$0.07/kWh, while a 100% shifting requirement raise the energy pricing over \$0.20/kWh.

•The Phase IV bid required 50% energy shifting and a price cap of \$0.179/kWh.

Phase IV Renewable Energy Projects – Discussion (continued)

IMPROVING ENERGY RELIABILITY, RESILIENCY, & READINESS

•Energy Storage Systems provide reserve capacity to meet peak loads and future load growth.

•ESS provides reserve capacity, allowing GPA to reduce conventional reserve units and reduce cost.

•DoD has noted their potential growth will raise their power requirements to 100+MW, compared to about 42MW in 2024.

•Capacity to serve other growth areas, such as data centers, electric vehicles, island housing, etc., could be met by the ESS capabilities delivered by Phase IV projects.

•Responding to the INDOPACOM threats and conflicts requires GPA ramp up its resiliency and reliability capacities.

•Having 50% of all the island’s energy served by renewables by end of 2027 goes a long way to achieving resiliency.

•The reduction of energy from conventional plants increases our Fuel Oil inventory capacity from 90 days to several months which substantially adds to energy sustainability.

Notes:

- *On December 29, 2023, GPA issued to all proponents Notices of Intent to Award subject to their agreement and compliance with the system impact study infrastructure requirements (to be conducted for their technical proposals) with no change in bid price and further subject to CCU and PUC approvals*
- *On February 28, 2025, the first of 5 possible contracts was executed with bidder, KEPCO*

Phase IV Renewable Energy Projects – Summary

GPA RECOMMENDS THE AWARD TO ALL PHASE IV RENEWABLE BIDDERS (MS IFB-012-23) WHO COMPLY WITH SYSTEM IMPACT STUDY INFRASTRUCTURE REQUIREMENT WITHOUT A CHANGE IN BID PRICE

PH IV-A

Initial Awards

- Two of the five qualified proponents have substantially completed the System Impact Studies and contract negotiations with GPA. The parties are prepared to proceed to the award phase of the procurement process. One contract has been executed as of 2/28/25. The 2 proposals total 192MW solar PV with 97MW/280MWh ESS capacity. The lengthy procurement process stresses proponents' ability to maintain price validity, increasing the time sensitivity to award. GPA requests the CCU's approval to proceed with an initial award to proponents KEPCO/EWP/Samsung and Core Tech Solar. Together, 192MW solar PV with 97MW/280MWh ESS capacity 97MW/280MWH will be awarded.

PH IV-B

Remaining Awards

- GPA will recommend the CCU and PUC approve the award to the remaining proponents upon completion of the SIS and contract negotiations.

PHASE IV renewable projects provide a ***significant hedge against perennially rising fuel prices*** resulting in recent \$0.31/kWh LEAC. Ukudu and Ph IV projects will keep LEAC below \$0.20/kWh despite rising fuel prices.

The combination of efficient conventional energy and energy shifting renewable energy capacity provides ***reliability and resiliency for Guam ratepayers.***

The added capacity from Ph IV is allows GPA to ***meet future demand growth, retire units as needed, and achieve the 50% renewable portfolio mandate*** ahead of schedule.

Phase IV Renewable Energy Projects – Bid Recommendation

GPA recommends an initial award (Phase IV-A) of MS IFB GPA-012-23 totaling 192 MW of solar PV renewable energy to the following two proponents:

1. Core Tech Solar Energy, LLC
2. KEPCO-EWP-Samsung C&T Consortium [Contract executed as of February 28, 2025]

- ✓ Proponents have agreed to implement the recommendation of the system impact study with no change in bid price.
- ✓ It has been indicated that an award is time sensitive due to escalating project cost which could make a contract not economically feasible.

PROPONENT	1st. Year Price	ANNUAL kWh	AMOUNT	MW Capacity	ESS MW	ESS MWh	LOCATION
Core Tech Solar	\$ 0.173618	114,545,000	\$ 19,887,061	60	30	120	Harmon
KEPCO/EWP/Samsung	\$ 0.178990	216,055,000	\$ 38,671,684	132	67	260	Cross Island Rd.
Ph IV Awards (Pt 1) Totals:	\$ 0.177129	330,600,000	\$ 58,558,745	192	97	380	

- *GPA requests that this award be the first of a series of awards to be recommended over likely the next six months as each of the remaining bidders listed agree to installing the infrastructure delineated by the System Impact Study with no change in bid price.*
- *As noted earlier, GPA recommends awarding a contract to all the proponents qualified in the Phase IV bid.*



Phase IV Renewable Energy Projects Provide Capacity For Growth

	WITHOUT PHASE IV	WITH PHASE IV
Ukudu Power Plant	198	198
Piti 8&9	86	86
Piti 7	31	31
Macheche CT	20	20
Yigo CT	20	20
Dededo CTs	40	40
Tenjo Diesels	20	20
Manenggon Diesels	8	8
Talofofo Diesels	8	8
Yigo Diesels Replacement (online 2026)	20	20
Total Conventional Capacity:	451	451
Renewables + Shifting ESS	22	195
TOTAL CAPACITY:	473	646
Reserve Requirement	146	146
Load Capacity	327	500
Projected Demand 2028 – 2% Growth	289	289
Capacity for Growth in 2028:	38	211
Additional Military Demand by 2033	44	44
Additional Demand 2033 – 2% Growth	30	30
Projected 2033 Total Growth – 2% Growth	74	74
Capacity for Growth in 2028	38	211
BALANCE FOR GROWTH/UNIT RETIREMENTS:	(36)	137

Phase IV Projects with ESS capacity provides capacity to meet growth, and customer demands for greater energy reliability and resiliency.

CONSIDERATIONS:

- Without adequate load capacity,
 - Retirement of older units not recommended
 - Load-shedding is possible
- Current reserve units will be 35 years old by 2028
- Military demand may ramp up quickly to address regional threats. The Phase IV projects provide capacity to GPA to meet concurrent customer needs.

Guam Power Authority March 19, 2025 Northern Outages

Prepared for
Consolidated Commission on Utilities

March 25, 2025

**John M. Benavente, P.E.
General Manager**

Event Occurred: **Wednesday, March 19, 2025**

2:21 am

Fault occurred on Harmon to Macheche 34.5 kV line resulting in burned out of 115 kV to 34.5 kV transformer in Harmon (Redundant transformer T-501 currently undergoing an overhaul).

3:44 am

The 34.5KV system blackout in Harmon caused overloading and tripping of the Yigo and Aggreko generating units and other substations including Dededo, Yigo, Anderson and North Finegayan.

4:44 am through 6:33 am

All GPA customers restored.

7:32 am

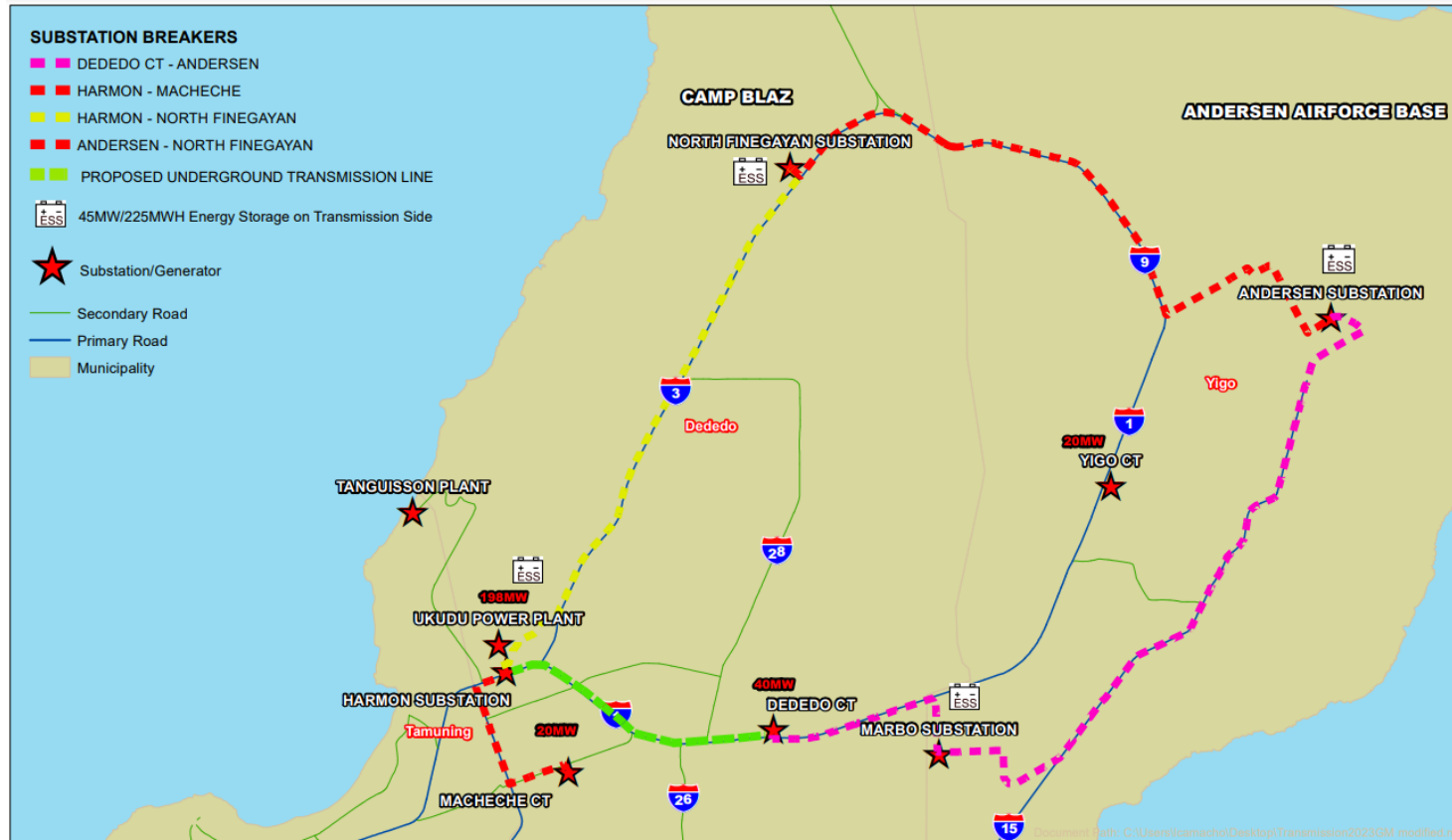
Andersen Air Force Base (AAFB) customers restored.

Investigation continues...

This situation has not occurred in decades. Relays in the north have been upgraded and significant changes in the system made more recently to integrate the new Ukudu power plant and renewables. System relaying most likely need fine tuning which our team are working quickly to address.

One Guam Power Infrastructure Resiliency Plan

Resilient 34.5 kV Underground Transmission System: Northern Guam



Proposed UG Line included in Item 1, *Infrastructure Resiliency Plan*