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Attorney for Guam Power Authority

BEFORE THE GUAM PUBLIC UTILITIES COMMISSION

IN THE MATTER OF:

GPA DOCKET NO. 24-15

**GUAM POWER AUTHORITY
AWARD OF 20 MW OF TEMPORARY
POWER**

**PETITION OF THE GUAM POWER
AUTHORITY TO APPROVE THE
AWARD OF 20 MW OF TEMPORARY
POWER**

The Guam Power Authority hereby petitions the Public Utilities Commission of Guam to review and approve GPA's request to award a contract to a vendor, Aggreko, to supply, install, operate and maintain 20MW of Temporary Power Services at the Yigo CT site.

I. Background.

A confluence of events in 2022 and 2023 greatly affected GPA's capacity to generate power and precipitated the need for this temporary power project. First, the promise of a 40MW solar PV project by Engie evaporated in mid-2022 when the contractor, following the conclusion of a meritless three-year protest by an unsuccessful bidder, withdrew due to its inability to honor its original pricing after the passage of so much time. Another 60MW solar PV project by Hanwha experienced significant delays due to pandemic-related supply chain costs; this project will not come online until late 2025 or early 2026. GPA's effort to overhaul the thirty-nine Yigo Diesel units to bring them from

1 their current generation capacity of approximately 8MW back or close to their original capacity of
2 approximately 40MW was also thwarted by a bid protest of the performance management contract.

3 At about the same time as that bid protest, Typhoon Mawar hit the island, striking a severe
4 blow to two major GPA assets. The typhoon damaged the Yigo combustion turbine, taking that plant
5 down hard and requiring GPA to transport the Yigo CT to Texas for necessary repairs. Until the Yigo
6 CT can be brought back to Guam and returned to service, another 20MW of generation capacity
7 remains offline. Finally, the typhoon flattened two aboveground storage tanks under construction at
8 the Ukudu Power Plant. This delayed by approximately eighteen months the commissioning date,
9 from spring 2024 to early 2026 (but now pegged at autumn 2025), at a time when Guam would have
10 welcomed the new plant's promise of 198MW of generation capacity.

11 In the meantime, the nearly fifty-year-old Cabras 1 & 2 plants continue to experience
12 problems due to their great age, taking those baseloads offline from time to time. Their
13 long-anticipated retirement must await the commissioning of the Ukudu plant.

14 In the aftermath of the typhoon, GPA partnered with local customers in the Interruptible Load
15 Program (ILP), a voluntary program that allows customers to reduce the power they draw from the
16 grid when demand is high by using their own generators. The ILP assisted GPA in lowering the
17 amount of load-shedding after the typhoon, but ILP partners have begun to drop out of the program
18 as the increased wear and tear on their generators necessitates repairs. Thus, GPA must reduce its
19 reliance on the ILP or risk significantly degrading ILP partner generation.

20 As a result of all these events, GPA must undertake occasional load-shedding during peak
21 hours. While load-shedding appears to have decreased in recent weeks and months, this is due to the
22 nature of customer demand at this time of the year. As the weather grows warmer, given the
23 constraints on GPA's generation capacity, load-shedding will likely return to previous levels,
24 beginning in May. For this reason, the General Manager issued a certificate of emergency detailing
25 the threats to public health, welfare and safety, as well as the health and safety of the environment.

1 See Exs. A (Certificate of Emergency, Dec. 7, 2023, Verified Feb. 1, 2024) & B (Determination of
2 Need, Dec. 11, 2023). The Governor's approval of the certificate of emergency remains pending and
3 will be provided as Exhibit C to an amendment to this petition as soon as it is available.
4

5 GPA solicited Temporary Power Services through GPA RFQ No. 38586 and approached four
6 vendors: APR Energy, Pacific Energy Corporation, Guam Shipyard, and Aggreko. GPA selected
7 Aggreko as the most qualified and responsive of the four, able to supply the temporary power within
8 100 days of contract execution. GPA and Aggreko have negotiated a contract for 20MW of temporary
9 power at a cost of approximately \$25 million over the two-year base period. The cost is based on
10 GPA's estimate of the annual production of the temporary power at 105,120,000 kWh, which is 60%
11 of the potential operating capacity. The terms of the contract provide for a capacity charge of
12 \$27.35/kW/month; a fixed O&M charge of \$192,081.00/month; and an energy conversion rate of
13 \$9.00/MWH. The cost also includes: (1) a one-time \$1 million fee for the initial mobilization of the
14 project; (2) \$3 million total to repair up to eighteen of the existing Yigo Diesel units that are still
15 capable of being repaired to supply up to an additional 20MW of generation capacity; and
16 (3) \$4.3 million over the two-year term for GPA to purchase a supply of urea for the purpose of
17 supporting mandatory emission controls. Contract negotiations are nearing completion and a copy
18 of the contract will be provided as Exhibit D to an amendment to this petition as soon as it is
19 available.
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25 This contract will require an increase of GPA's IPP operations & maintenance (O&M) budget
26 by \$8.1 million for FY2024 and \$10.1 million for FY2025 for the period of the contract within the
27 approved budgets for these two fiscal years.
28

29 **II. Request for Approval.**

30 The PUC's contract review protocol requires PUC authorization for all contracts in
31 excess of \$1.5 million. The contract to supply, install, operate and maintain 20MW of temporary
32 power services at the Yigo CT site (plus up to an additional 20MW from the overhauled Yigo

1 Diesels) will cost approximately \$25 million over two years. The cost includes mobilization,
2 capacity charge, fixed O&M charge, energy conversion charge, urea, and assessment and repair
3 of Yigo Diesel units. GPA also requests the PUC to approve the increase of the IPP O&M Budget
4 to accommodate the temporary power project. The Consolidated Commission on Utilities has
5 reviewed the particulars of this project and authorized GPA to seek the PUC's approval. *See*
6 Ex. E (CCU's GPA Resolution No. FY2024-16, Jan. 23, 2024).
7

8 **III. Conclusion.**

9
10 Based on the foregoing, GPA requests that the PUC grant its petition to proceed with the
11 \$25 million temporary power services project with Aggreko. This project will provide 20MW of
12 Temporary Power Services at the Yigo CT site, as well as up to 20MW from the repaired Yigo
13 Diesel Units. GPA also requests approval of the increase in its IPP O&M Budget. The award is
14 reasonable, necessary, and prudent.
15
16

17 Respectfully submitted this 16th day of February, 2024.

18 *Attorney for Guam Power Authority*

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21 By: 

22 Marianne Woloschuk
23 GPA Legal Counsel
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GUAM POWER AUTHORITY

ATURIDĀT ILEKTRESEDĀT GUĀHAN
P.O.BOX 2977 • HAGĀTŊA, GUAM U.S.A. 96932-2977

AGMA2403
December 7, 2023

MEMORANDUM

To: Assistant General Manager, Administration
Supply Management Administrator

From: General Manager

Subject: **Certificate of Emergency (5 GCA § 5215)**
Procurement to Increase Generation Capacity

Pursuant to 5 GCA § 5215 and for the reasons discussed below, I authorize emergency procurement of supplies, services, and minor construction work in support of such supplies and services necessary to increase the generation capacity of GPA's Diesel Generators, specifically Yigo Diesels, Tenjo Diesels, Manenggon Diesels, and Talo'fo'fo Diesels. Emergency procurement shall include:

1. Repair of Diesel Generators
2. Replacement of Diesel Generators
3. Temporary Power Services (40MW)

FACTS

GPA's aged power generation infrastructure will be replaced by the planned commissioning of the new 198 MW Ukudu combined cycle power plant, several utility-scale renewable energy projects, and battery energy storage systems. The Integrated Resource Plan, also known as the Clean Energy Master Plan, confirms that these projects will improve reliability, resiliency, and affordability of clean energy on a sustainable basis.

As of December 2019, GPA forecasted the commissioning of 180+ MW of utility-scale renewable solar PV and the 198 MW Ukudu power plant by 2023. The new generation capacity would allow the retirement of the aged Cabras plants and reduced output of certain existing plants.

Unforeseen Events Impacting Generation Projects

The global COVID-19 pandemic impacted material, equipment, and personnel supply chain delaying the project nearly 2 years. Delayed government permits and legislative approvals extended months to critical milestones completion dates and the loss of reserve generation capacity, with revised commissioning in 2024.

In late 2019, a procurement protest blocking GPA's award of a 40 MW renewable energy project was finally resolved in 2022. While the Public Auditor and Superior Court upheld GPA's procurement decision, the contract did not proceed due to the increased project costs.

In May 2023, Typhoon Mawar caused irreparable damage to the Ukudu project's nearly complete fuel and water tanks, requiring reconstruction and further delaying the power plant's commissioning to about January 2026. Typhoon Mawar also damaged the Yigo 20 MW combustion turbine significantly impacting its ability to meet demand. The unit is now under repair but the return to service is not expected at best February 2024, limiting reserve capacity evident by the increased load shedding frequency.

Impact on Generation Capacity

The delays to the Ukudu and renewable energy projects presents significant challenges for GPA to meet the demand over the next two years. The retirement of the nearly 50-year-old baseload Cabras plants is overdue; as such, the plants have decreased capacity and reliability, and increased repairs with longer completion timeframes.

GPA has been addressing the need for generation capacity by restoring down units and bringing in reasonably cost temporary power. As of today, the ongoing efforts include:

PLANT	ACTION	TARGET DATE
Yigo CT 20 MW	Typhoon damaged rotor under repair in Texas. GPA seeking assistance from federal partners to expedite return shipping.	Feb 2024
Yigo Diesels 40 MW	Award Performance Management Contract (PMC) to increase capacity by 22 MW. Alternative: expedite repairs with passage of Bill 201	ASAP if legal procurement constraints are lifted
Manenggon/ Pulantat Diesels	Current plant capacity at 3 MW. Unit control system replacement to increase plant capacity to 8 MW	Apr 2024
Tenjo, Talo'fo'fo Diesels	Perform significant repairs and/or rehabilitate units to increase plant capacity from by 12 MW to 27 MW	Apr 2024
Hagåtña & Talo'fo'fo BESS	Utilize existing Battery Energy Storage System (ESS) to shift 40 MW energy during peak time	Reviewing feasibility
Interruptible Load (IL) Program	Expand participation. Currently at ~16 MW.	Ongoing
Temporary Power 40 MW	Procure 40 MW of temporary power generation. Expedite procurement with passage of Bill 206	May 2024, if no procurement protests or other delays

Ongoing supply chain delays, procurement protests (Yigo Diesels PMC), and limited on-island resources (parts, labor, technical assistance, etc.) continues to challenge GPA's efforts to provide an immediate increase in generation capacity.

Threats to Public Health, Welfare, or Safety, or the Health and Safety of the Environment

The threat of load shedding looms with the pending repairs to the diesel power plants and the projected increase in power demand beginning in May 2024. Monthly load shedding schedules have been and will continue to be issued monthly until sufficient backup generation capacity is achieved. A summary of load shedding (September – November 2023) is provided below:

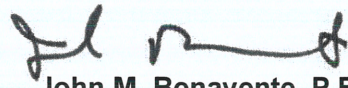
Month	Feeders Impacted	Feeder Outages	Hours Outaged	Avg. MW/Feeder	Avg. Hrs/Feeder	Unserved kWh	% Energy Unserved	Days LS
Sep-23	49	370	290	2,860	5.9	792,367	0.59%	20
Oct-23	48	162	115	2,919	2.4	328,075	0.25%	11
Nov-23	49	349	301	2,860	6.1	867,119	0.70%	8

	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

While the load shedding outages are designed to be brief (<1 hour or less), the frequency and duration is dependent on the generation capacity and demand. Frequent and prolonged outages negatively impact critical needs of residents and businesses, especially those dependent on powered medical devices; public infrastructure (traffic lights, streetlights, water and wastewater operations); telecommunication, etc.

Emergency Procurement

Increasing the capacity of the Diesel Generators (Yigo Diesels, Tenjo Diesels, Manenggon Diesels, and Talo'fo'fo Diesels) through repair and replacement; and procure temporary power services will significantly increase generation capacity and mitigate load shedding. Further unforeseen challenges to GPA's ongoing efforts that delay the capacity increase beyond May 2024 (beginning of summer demand) will exacerbate the existing shortfall of generation. Thus, emergency procurement to increase the capacity of the Diesel Generators is necessary and prudent.


John M. Benavente, P.E.

Cc: Legal Counsel
CFO
AGMO
AGMETS

Verification pursuant to 5 GCA § 5215(b)(2)(B)

I declare under penalty of perjury that the foregoing Certificate of Emergency (5 GCA § 5215) for Procurement to Increase Generation Capacity dated December 7, 2023, is true, correct, and complete to my best, informed knowledge, and good faith belief.

Executed on February 1, 2024.

A handwritten signature in black ink, appearing to read 'J. Benavente', with a stylized flourish at the end.

John M. Benavente, P.E.



GUAM POWER AUTHORITY

ATURIDÁT ILEKTRESEDÁT GUÅHAN
P.O.BOX 2977 • HAGÂTÑA, GUAM U.S.A. 96932-2977

MEMORANDUM

TO: General Manager

FROM: SPORD Manager (A)

DATE: December 11th, 2023

SUBJECT: Planned Procurement / Determination of Need

REF.: OR No.: 38586 For: Temporary Power Services

With respect to the above described Guam Power Authority (GPA), I have made the following determinations:

Invitation For Bid (IFB) ☐ Multi-Step Bid (MSB) ☐ Request For Proposal (RFP) ☐

Emergency Procurement ☒

- o Description of Equipment / Service: Guam Power Authority seeks the services of a firm for the supply of temporary electric power service to GPA's grid for a firm capacity of approximately 40 MW under a lease agreement including the design, construction, operation and maintenance.
- o Why is the procurement required: (please explain in detail) Emergency procurement of 40 MW of Temporary Power Services is required to maintain sufficient reserves and prevent load shedding due to potential outages of the Cabras 1&2 units. The Ukudu Power Plant's 14.5-month delay and degradation of ILP participant generators further amplify the issue. The emergency generators must be operational by May 2024 to prevent extensive load shedding during the summer, which is typically the year's peak demand period
- o Term of Contract: 2 years with an option to extend annually for three (3) additional one (1)-year terms upon mutual agreement
- o What is the funding source: CIP: _____ Revenue: X Account No.: 58410.555004.43
- o What is the government estimated cost: \$13,000,000 per year

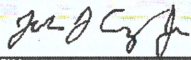
- If GRANT Funded, identify Grant Number: N/A
Expiration Date: _____

Roel A. Cahinhinan



Name of Division Manager/Signature

CONCURRED BY:



12/12/2023

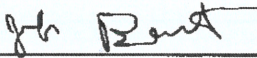
John J. Cruz Jr., P.E.

DATE

Assistant General Manager -E &TS

[x] APPROVED

[] DISAPPROVED



12/11/2023

JOHN M. BENAVENTE, P.E. DATE

General Manager



CONSOLIDATED COMMISSION ON UTILITIES

Guam Power Authority | Guam Waterworks Authority

P.O. Box 2977 Hagåtña, Guam 96932 | (671) 648-3002 | guamccu.org

GPA RESOLUTION NO. FY2024-16

RELATIVE TO AUTHORIZING GUAM POWER AUTHORITY (GPA) MANAGEMENT TO AWARD 20 MW OF TEMPORARY POWER

WHEREAS, 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); and

WHEREAS, a procurement protest has delayed and prevented the award of GPA's Diesel PMC Bid contract thereby, preventing the repair and maintenance of GPA medium speed diesel generators; and

WHEREAS, a significant Ukudu Power Plant COD delay, due to catastrophic damages inflicted by Typhoon Mawar, leave GPA with having to continue to rely upon the aged and deteriorating Cabras 1&2 Power Plant slated for retirement after the commissioning of the Ukudu Power Plant; and

WHEREAS, although GPA's Interruptible Load Program (ILP) partners have reduced the amount of load shedding of other customers during GPA capacity shortages, GPA cannot overuse this resource since doing so will cause ILP partner generation to significantly degrade; and

WHEREAS, the pool of potential ILP partners has been severely reduced by the running of customer generation during Typhoon Mawar to the point where large customer generators are in need of significant repairs; and

WHEREAS, GPA has on several occasions has had to shed customer loads during generation capacity shortfalls; and

WHEREAS, the unreliability of Cabras 1&2 is expected to persist placing GPA in an untenable position of having very tight margins for available reserve generation especially whenever with one large baseload unit under scheduled maintenance outage Cabras 1 or 2 have a forced outage; and

WHEREAS, the Guam Power Authority (GPA) has solicited the Temporary Power Services through GPA RFQ# 38586; and

WHEREAS, GPA has selected Aggreko to be the most qualified and responsive vendor among four (4) vendors: APR Energy, Pacific Energy Corporation, Guam Shipyard, and Aggreko; and

1 **WHEREAS**, GPA has completed negotiations with Aggreko for the contracting of 20MW of
2 temporary power for the following:

3

	Rate
Capacity Charge, \$/KW/Month	27.35
Fixed O&M Charge, \$/Month	192,081
Energy Conversion Rate (\$/MWH)	9.00

7

8 ; and

9 **WHEREAS**, GPA estimates the annual production of the temporary power to be
10 105,120,000 KWH, which is 60% of its potential operating capacity; and

11 **WHEREAS**, Aggreko requires \$1M for initial mobilization costs; and

12 **WHEREAS**, GPA has initiated discussions on the existing Yigo Diesel units and seeks
13 approval for a budget of \$3M to further negotiate the assessment and repair of up to 18 Yigo
14 Diesel units in order to restore up to an additional 20MW of capacity at the Yigo Diesel site; and

15 **WHEREAS**, GPA shall supply UREA to support the required emissions controls for the
16 temporary power plant totaling an estimated amount of \$4.3M over the two year term; and

17 **WHEREAS**, approval is requested to allow the General Manager to petition the PUC to
18 authorize awarding Aggreko to supply, install, operate and maintain 20 MW of temporary power
19 services at Yigo CT site to include a \$3M budget amount for the repair of existing Yigo Diesel units,
20 and \$1M for mobilization cost for an estimated contract amount of \$25M over the two-year term.

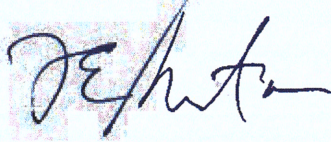
21 **NOW, THEREFORE BE IT RESOLVED**, by the Consolidated Commission on
22 Utilities, as the Governing Body of GPA, authorizes GPA to petition the Public Utilities
23 Commission (PUC) as follows:

- 24
- 25 1. Allow GPA to petition the PUC to award Aggreko to supply, install, operate and maintain
26 20 MW of Temporary Power Services at Yigo CT site for estimated \$25M for the
27 Capacity Charge, Fixed O&M Charge, Energy Conversion Charge, Assessment and
28 Repair of Yigo Diesel Units, and Mobilization.
 - 29 2. Approve the increase of the IPP O&M Budget by \$8.1M for FY 2024 and by \$10.1M for
30 FY 2025 for the period of the contract within these Fiscal Years approved budgets.

31 **RESOLVED**, that the Vice Chairman of the Commission certifies and the Secretary of
32 the Commission attests to the adoption of this Resolution.

1
2 **DULY AND REGULARLY ADOPTED**, this day of 23th of January, 2024.
3
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5 Certified by:

6 
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8
9 **FRANCIS E. SANTOS**
10 Vice Chairperson
11

Attested by:

12 
13

14 **PEDRO ROY MARTINEZ**
15 Secretary
16
17
18

19 I, **Pedro Roy Martinez**, Secretary of the Consolidated Commission on Utilities (CCU)
20 as evidenced by my signature above do hereby certify as follows:
21

22 The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular
23 meeting by the members of the Guam Consolidated Commission on Utilities, duly and
24 legally held at a place properly noticed and advertised at which meeting a quorum was
25 present and the members who were present voted as follows:
26

27 AYES:

4

28 NAYS:

0

29 ABSTAIN:

0

30 ABSENT:

1



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

17

Capacity (kW):	20,000	Est. Capacity Factor:	60%	Year 1	Year 2	Key Responsibilities:
Est. Annual Production (kWh)				105,120,000	105,120,000	1. Aggreko utilizes a delineated portion of Yigo Diesel compound.
Capacity Charge (kW/month)				\$6,564,000	\$6,892,200	2. GPA provides DEF (Urea) and disposes of waste oil.
Fixed O&M (month)				\$2,304,972	\$2,420,221	3. Aggreko removes all GPA containerized units on the designated site and store on GPA-designated adjacent lot.
Total Fixed Charges				\$8,868,972	\$9,312,421	4. Aggreko to remove non-working units from GPA-designated side and relocate/install existing working units (est. \$260,000).
ECA (\$9/MWH)				\$946,080	\$993,384	5. Aggreko to provide assessment, recommendations, and cost estimates for repair/overhaul of existing units (est. budget \$3M).
				\$9,815,052	\$10,305,805	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.
ANNUAL TOTAL:						
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	



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

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

