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7 **BEFORE THE GUAM PUBLIC UTILITIES COMMISSION**

9 IN THE MATTER OF:) GPA DOCKET NO. 23-20
10 **YIGO COMBUSTION TURBINE PLANT:**)
11 **PMC PROCUREMENT & REPAIRS**) **PETITION OF THE GUAM POWER**
12) **AUTHORITY TO PROCURE A HOT**
13) **SECTION EXCHANGE &**
14) **GENERATOR REPAIR FOR YIGO CT**

15 **COMES NOW**, the GUAM POWER AUTHORITY (“GPA”), by and through its counsel
16 of record, THERESA G. ROJAS, ESQ., and hereby files its petition for approval to permit
17 GPA’s Performance Management Contractor (“PMC”) Taiwan Electrical and Mechanical
18 (“TEMES”) to procure a Hot Section Exchange and necessary generator repairs for the Yigo
19 Combustion Turbine (CT) power plant estimated to cost \$3.3 million.

21 **I. BACKGROUND**

22 The Yigo Combustion Turbine (“CT”) power plant has been in operation for more than
23 25 years and is used above all to support peak loads and base load unit outages. On May 23,
24 2023, and prior to the landfall of Typhoon Mawar on May 24, the Yigo CT plant was operational;
25 however, post-Mawar and to date, GPA’s Yigo CT plant remains offline.

Following inspections and a generator overhaul of the plant, GPA's PMC has concluded that needed replacements within the turbine and generator rotor sections require repair. Specifically, a complete replacement of the Hot Section Exchange inside the turbine rotor and a full disassembly of the generator rotors are required. The replacement of the Hot Section Exchange can be performed on-site locally; yet, repairs inside the generator rotor must be shipped off-island for inspection and disassembly to determine whether coil replacements or a full rotor rewind is needed.

II. REQUEST FOR APPROVAL

Under GPA's Contract Review Protocol GPA must seek PUC approval if cost estimates for a procurement will exceed \$1,500,000.00 (One Million Five Hundred Thousand and 00/100 Dollars). Here, the estimated cost for the expected generator repair with transportation costs to and from an off-island facility is estimated to cost \$1,500,000.00 (One Million Five Hundred Thousand and 00/100 Dollars). The Hot Section Exchange is also estimated to cost a separate \$1,800,000.00 (One Million Eight Hundred Thousand and 00/100 Dollars). Combined, GPA requests and requires the approval of \$3,300,000.00 (Three Million Three Hundred Thousand and 00/100 Dollars) to permit its PMC, TEMES, to complete the necessary repairs to the turbine and generator components of the Yigo CT power plant unit. The funding source for above-referenced procurement and repairs will come from GPA revenue funds.

Prior to Typhoon Mawar, the Yigo CT plant had an operating capacity of 20MW. As a result, the Unit's loss now reduces the number of GPA generating units able to support the Island-Wide Power System ("IWPS"). This shortage, together with damages the now under-construction Ukudu power plant sustained from Typhoon Mawar, makes the immediate and

1 long-term repairs to restore the generation capacity of the Yigo CT plant more critical. GPA and
2 the PMC intend to minimize the downtime of the Yigo CT unit by completing the above-
3 mentioned repairs swiftly to ensure the unit returns to support the IWPS without delay; however,
4 funding approvals are required to ensure the repairs can begin immediately and be completed
5 timely. The estimated time to complete repairs to the Yigo CT is four months for the generator
6 repairs from the date of shipment and four months from the date of purchase order delivery for
7 the Hot Section Exchange.
8

9 In support of this Petition, the CCU has approved GPA Resolution FY2023-24. This
10 Resolution and its supporting exhibits are attached as **EXHIBIT A** and are incorporated by
11 reference as if fully set forth herein.
12

13 **III. CONCLUSION**

14 Based on the foregoing, GPA requests the PUC approve GPA to contract TEMES to
15 procure and replace the Hot Section Exchange and generator repairs for the Yigo CT plant for a
16 total cost of \$3,300,000.00 (Three Million Three Hundred Thousand & 00/100 Dollars) as it is
17 reasonable, prudent, and necessary.
18

19 **RESPECTFULLY SUBMITTED** this 11th day of August 2023.
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21
22 By:


23 **THERESA G. ROJAS, ESQ.**
24 GPA Interim Counsel
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CONSOLIDATED COMMISSION ON UTILITIES

Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671) 648-3002 | guamccu.org

GPA RESOLUTION NO. FY2023-24

RELATIVE TO THE APPROVAL TO PROCURE A HOT SECTION EXCHANGE & REPAIR GENERATOR FOR YIGO CT

WHEREAS, the Yigo CT current turbine has been running for 11,575 hours with 438 starts through end May 2023 and was operational up to 8:59PM on May 23, 2023 prior to the typhoon; and

WHEREAS, on May 27, 2023, post typhoon, Yigo CT was started up to support the Island Wide Power System (IWPS) reaching full speed with no load but failed to synchronize due to Exciter/Modular Automatic Voltage Regulator (MAVR) issue; and

WHEREAS, since the Yigo CT was not able to return the unit to service, the schedule generator overhaul commenced on July 8, 2023; and

WHEREAS, the Yigo CT generator rotor was determined to be grounded requiring further inspection and repairs which cannot be done locally and is necessary to ship the generator off-island; and

WHEREAS, the extent of the generator repair will not be known until it is disassembled and tested at the off-island facility where repairs may be a coil replacement or a full rotor rewind; and

WHEREAS, generator and exciter ground was likely caused by water intrusion into the generator from the typhoon as water was found coming from the panels during the generator disassembly; and

WHEREAS, on May 9, 2023 an annual borescope inspection performed on the Yigo CT revealed 3 cracks on the High Pressure Turbine (HPT) stage 1 nozzles and rotor; and

WHEREAS, the cracks are unserviceable and a Hot Section Exchange is required; and

WHEREAS, Yigo CT had an operating capacity of 20 MW during its operation on May 23, 2023; and

WHEREAS, on May 23, 2023, prior to the typhoon, the total firm generation capacity was over 305MW;

1 **WHEREAS**, maintaining the current generation capacity is critical to meet the system
2 demand until the commissioning of the Ukudu Power Plant; and

3 **WHEREAS**, the Ukudu Power Plant had sustained significant damage which has
4 potentially delayed the new power plant commissioning to the end of 2025; and

5 **WHEREAS**, the estimated cost for the Generator Repair for a full rotor rewind with
6 transportation is \$1.5 million and Hot Section Exchange is estimated at \$1.8 million, totaling \$3.3
7 million; and

8 **WHEREAS**, the Yigo CT is under the Performance Management Contract with TEMES
9 who manages the procurement and contracts for the Yigo CT; and

10 **WHEREAS**, these costs require Public Utilities Commission (PUC) for approval prior to
11 procurement under the Contract Review Protocol for GPA.

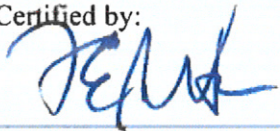
12
13 **NOW BE IT THEREFORE RESOLVED**, the Consolidated Commission on Utilities
14 does hereby approve the following, subject to the approval from the Public Utilities Commission:

- 15
16 1. The CCU authorizes the GPA General Manager to contract TEMES for the Hot
17 Section Exchange and Generator Repair for the Yigo CT estimated to cost \$3.3
18 million.

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20 **RESOLVED**, that the Chairman of the Commission certifies and the Secretary of the
21 Commission attests to the adoption of this Resolution.

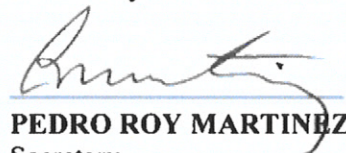
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23 **DULY AND REGULARLY ADOPTED**, this 25th day of July 2023.

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25 Certified by:

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27 **JOSEPH T. DUENAS**
28 Chairperson

25 Attested by:

26 

27 **PEDRO ROY MARTINEZ**
28 Secretary

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

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

5 AYES:

5

6 NAYS:

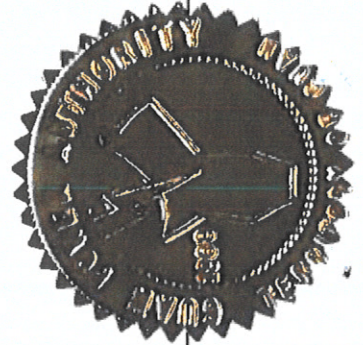
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7 ABSTENTIONS:

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8 ABSENT:

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