

CONSOLIDATED COMMISSION ON UTILITIES

Guam Power Authority • Guam Waterworks Authority P.O.BOX 2977 • Agana, Guam 96932

RESOLUTION NO. 2016-49

RELATIVE TO AUTHORIZING THE GUAM POWER AUTHORITY TO SEEK APPROVAL FROM THE PUC TO PROCEED WITH THE CABRAS UNIT #1 MAJOR OVERHAUL

WHEREAS, Guam Power Authority (GPA) and Taiwan Electrical and Mechanical Engineering Services, Inc. TEMES entered into a five-year Performance Management Contract (PMC) for Cabras 1 & 2, which commenced on October 1, 2010; and

WHEREAS, this Performance Management Contract has been extended until December 31, 2016; and

WHEREAS, Cabras Unit #1's last major overhaul was completed in December 2013 and the unit has been in operation for 33 months without a major overhaul and will be running for 40 months before the scheduled overhaul; and

WHEREAS, Cabras Unit 1 is scheduled for its next overhaul in July of 2017; and

WHEREAS, this overhaul is expected to last 50-days; and

WHEREAS, the PMC recommends the overhaul of Cabras Unit 1 to restore reliability and availability of plant equipment, restore overall plant efficiency, and support economic dispatching of the generation system; and

WHEREAS, key items designated for overhaul include the main steam turbine generator, archway tubes, burner front system and flame detectors, and air preheaters; and

WHEREAS, the total overhaul cost is anticipated to be \$5,490,000; and

WHEREAS, this project will be programmed under revenue funds and a breakdown of cost can be seen in Attachment 1; and

WHEREAS, approval is requested to petition the PUC to utilize revenue funds for the Cabras Unit 1 Overhaul in the amount of \$5,490,000.

NOW, THEREFORE, BE IT RESOLVED, by the Consolidated Commission on Utilities as follows:

- 1. After careful consideration, the Consolidated Commission on Utilities finds the Cabras Unit 1 overhaul to be reasonable, prudent, and necessary for the reliable operation of the generating plant.
- 2. The General Manager of Guam Power Authority may petition to PUC to utilize revenue funds in the amount of \$5,490,000, for the Cabras Unit 1 Overhaul.

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Certified by:

JOSEPH T. DUENAS

Chairman

Attested by:

GEORGE BAMBA

Secretary

SECRETARY'S CERTIFICATE

| 1 | I, J. George Bamba, Secretary for the Consolidated Commission on Utilities do hereby certify | | | | | |
|----|---|--|--|--|--|--|
| 2 | that the foregoing is a full, true, and correct copy of the resolution duly adopted at a regular meeting of | | | | | |
| 3 | the members of Guam's Consolidated Commission on Utilities, duly and legally held at the meeting place | | | | | |
| 4 | thereof on September 27, 2016, at which meeting of all said members had due notice and at which at | | | | | |
| 5 | least a majority thereof were present, and | | | | | |
| 6 | At said meeting said resolution was adopted by the following vote: | | | | | |
| 7 | | | | | | |
| 8 | Ayes: <u>3</u> | | | | | |
| 9 | Nays: <u>O</u> | | | | | |
| 10 | Absent: <u>2</u> | | | | | |
| 11 | Abstain: 0 | | | | | |
| 12 | | | | | | |
| 13 | Said original resolution has not been amended, modified, or rescinded since the date of its | | | | | |
| 14 | adoption, and the same is now in full force and effect. | | | | | |
| 15 | | | | | | |
| 16 | SO CERTIFIED this 27 th day of September, 2016. | | | | | |
| 17 | south & Bolom | | | | | |
| 18 | VVV P. IVV | | | | | |
| 19 | J. Ģeørge Bamba | | | | | |
| 20 | Secretary | | | | | |
| 21 | Consolidated Commission on Utilities | | | | | |
| 22 | | | | | | |
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Attachment 1 – Cabras Unit 1 Overhaul Cost Summary

| NO. | DESCRIPTION | Cost | | Purpose |
|-----|---|------|-----------|---------------------------------------|
| 1 | Unit 1 main turbine generator major overhaul (50 days) | \$ | 2,100,000 | Reliability, Availability, Efficiency |
| 2 | Turbine exhaust hood expansion joint replacement | \$ | 160,000 | Life Extension |
| 3 | Upgrade the unit 1 burner front system with electronic ignition oil lighter control system: ignition probe tips (sparks), cylinder and flame detectors for all 4 burners | \$ | 500,000 | Upgrade, Reliability |
| 4 | API standard open inspection and repairs for light diesel oil tank | \$ | 200,000 | Life Extension |
| 5 | Boiler casing and refractory Renewal during overhaul, including soot waste and insulation waste disposal (\$100,000.00) | \$ | 170,000 | Availability, Efficiency |
| 6 | Boiler water wall tube replacement based on NDE (UT) Inspection results | \$ | 95,000 | Availability, Efficiency |
| 7 | A.H. duct expansion joint replacement | \$ | 120,000 | Efficiency |
| 8 | Components and part preparation for unit overhaul: boiler system and auxiliaries, including oil injection spray plates, oil guns, air register parts, APH rotating components, and Iks (for soot blowing parts), etc. | \$ | 250,000 | Reliability |
| 9 | Plant Safety Valve Replacement after verification by Basin Valve Inc. | \$ | 95,000 | Safety, Reliability |
| 10 | Upgrade the heavy oil heater temperature control system with better control valve and instruments | \$ | 40,000 | Upgrade, Efficiency |
| 11 | Procurements of DCS/BMS system critical control components for spares which failure of these components would require instant replacements to prevent long term shutdown of the unit | \$ | 95,000 | Reliability, Availability |
| 12 | Stack refurbishment and support structure painting | \$ | 300,000 | Safety |
| 13 | Water treatment system (RO+EDI) inspection, repairs, and component replacement | \$ | 35,000 | Availability |
| 14 | Fire protection systems annual inspection, repair, and certification. | \$ | 50,000 | Safety |
| 15 | Waste oil sludge cleaning and disposal | \$ | 150,000 | Efficiency |
| 16 | Inlet vane control assembly and Venturi cone replacement for Unit 1 FDF. | \$ | 150,000 | Availability, Increased Capacity |
| 17 | Air preheater basket replacement | \$ | 230,000 | Efficiency |
| 18 | Archway tube replacement | \$ | 750,000 | Efficiency |
| | TOTAL OVERHAUL COST | \$ | 5,490,000 | |