

BEFORE THE GUAM PUBLIC UTILITIES COMMISSION



IN THE MATTER OF:) GPA Docket 21-07
)
The Application of the Guam Power)
Authority to Approve the Amendment to) **ORDER**
the Energy Conversion Agreement (ECA))
with KEPCO for the 198MW Power Plant.)
_____)

INTRODUCTION

This matter comes before the Guam Public Utilities Commission [“PUC”] upon the Guam Power Authority [“GPA”] Petition to Approve the Amendment to the Energy Conversion Agreement (ECA) with Korean Electric Power Company [“KEPCO”] for the 198MW Power Plant.¹

The essentials of the Proposed Amendment are set forth in Exhibit “1” to the ALJ Report. Exhibit “1” is Attachment A to Guam Consolidated Commission on Utilities Resolution No. 2021-02.² GPA has also provided to the PUC five proposed Schedule Attachments to the Energy Conversion Agreement which specify the requirements for the proposed operation of a 41MW diesel facility at Cabras: Schedule 1, Functional Specifications for Reserve Facility; Schedule 2, Technical Limit and Contracted Characteristics; Schedule 3, Commissioning and Testing; Schedule 4, Determination of Tariff; and Schedule 10, ULSD and Natural Gas Metering System and Settlement.³

¹ GPA Petition to Approve the Amendment to the Energy Conversion Agreement (ECA) with KEPCO for the 198MW Power Plant, GPA Docket 21-07, filed February 5, 2021.

² Guam Consolidated Commission on Utilities Resolution No. 2021-02, Relative to Authorization of Ukudu Power Plant Energy Conversion Agreement (ECA) Amendment for Relocation of Emergency Diesel Units and Pursuit of Minor Source Air Permit, Attachment 1, adopted and approved on January 26, 2021; see Exhibit “1” attached hereto.

³ Copies of these Schedules were provided in an email from GPA Legal Counsel Graham Botha to PUC ALJ Fred Horecky dated February 5, 2021.

The Amendment negotiated by GPA and KEPCO contains three basic aspects: (1) in the original KEPCO Proposal, KEPCO was to build a diesel facility of 65MW of standby generation capacity at the Ukudu new plant site. The parties have now agreed that, instead of the construction of a 65MW standby generator facility at the Ukudu site, 41MW of diesel engines will be installed near the GPA Cabras Fuel Oil Storage Facility⁴; (2) The Commercial Operation Date (COD) for the 198MW Power Plant will be changed from October 31, 2022, to April 2024⁵; and (3) the air permitting for the new power plant will be “minor source” rather than “major source.”

BACKGROUND

A. Prior PUC Actions

On October 31, 2019, in GPA Docket 19-13, the PUC approved the Energy Conversion Agreement between GPA and KEPCO for the construction and operation of the 198MW Power Plant in Ukudu.⁶ On December 5, 2019, the PUC approved the Consent Decree between GPA and USEPA, which constituted a final resolution of environmental violations alleged by EPA.⁷ Both the Consent Decree and the ECA presently require the construction and operation of the new power plant burning ultra-low sulfur diesel (ULSD) by October 31, 2022.⁸ Based upon KEPCO’s bid proposal, the parties agreed that KEPCO would construct a 65MW reserve facility that would serve as a backup in the event that the new power plant could not operate. The site of the reserve facility was at Ukudu.

⁴ GPA Petition to Approve the Amendment to the Energy Conversion Agreement (ECA) with KEPCO for the 198MW Power Plant, GPA Docket 21-07, filed February 5, 2021, at p. 1.

⁵ Id., at p. 2.

⁶ PUC Order, GPA Docket 19-13, dated October 31, 2019, at p. 19.

⁷ PUC Order, GPA Docket 20-01, dated December 5, 2019, at p. 6.

⁸ GPA Petition to Approve the Consent Decree with the United States Environmental Protection Agency (EPA), GPA Docket 20-01, filed November 12, 2019, at p. 1.

B. GPA's Stated Justification for the Relocation of the Reserve Facility

GPA's justification for the relocation of the Reserve Facility is set forth in a Letter from GPA General Manager John Benavente to CCU Commissioners, dated December 14, 2020, which is attached to the ALJ Report as Exhibit "2".⁹ The reason for relocation of the diesel standby generator facility from Ukudu to Cabras relates in part to the permitting process for the new power plant. KEPCO originally pursued "Major Source Permitting" to meet its performance obligations for the new power plant. USEPA expressed concerns that major source permitting would result in substantial delays in the construction of the new power plant. Subsequently, KEPCO and GPA agreed on a minor source permit process and the relocation of the diesel standby engine plant to a Cabras site directly adjacent to the GPA Bulk Fuel Oil Storage Tank Facility.¹⁰

A "minor source" permitting was not feasible if the 65MW facility continued to be located at the Ukudu site. With minor source, there is a 100 ton per year limitation on emissions. With the combination of both the 198MW combined cycle and the 65 MW diesels at Ukudu, the production capability of the Ukudu plant would have been significantly limited when the steam turbine is overhauled every four years.¹¹ The 65MW reserve facility was only intended to be used for short duration outages and was only capable of operating for 300 hours continuously.¹² The 65MW reserve facility could only operate at a maximum of 500 hours per year.¹³

⁹ Letter from General Manager John Benavente to CCU Commissioners, Subject: Update on New Power Plant and USEPA Negotiations, dated December 14, 2020, attached hereto as Exhibit "2".

¹⁰ Id. at p. 2.

¹¹ GPA Responses to PUC Requests for Information, GPA Docket 21-07, dated February 16, 2021, Response No. 5.

¹² Id., at Response No. 3.

¹³ Letter from General Manager John Benavente to CCU Commissioners, Subject: Update on New Power Plant and USEPA Negotiations, dated December 14, 2020, at p. 2.

C. CCU Resolution No. 2021-02

On January 26, 2021, the Guam Consolidated Commission on Utilities, in Resolution No. 2021-02, authorized the Amendment of the Ukudu Power Plant Energy Conversion Agreement for relocation of the emergency diesel units and pursuit of minor source air permit.¹⁴ The CCU recognized that the USEPA had expressed concerns that the local company constructing the plant, Guam Ukudu Power ["GUP"] LLC, intended to pursue a major source air permit path, which would result in significant delays because of the lengthy air monitoring requirements before a major source permit could be issued. This delay could extend the Commercial Operation Date past 2025.

The USEPA encouraged GPA to work out an alternative which would permit the plant under minor source permitting.¹⁵ The CCU recognized that GPA and GUP LLC had reached an agreement to permit the Ukudu Combined Cycle Plant as a minor source air permit, to install a 41MW plant of diesel engines in Cabras, and to agree to fixed and variable O&M rates to compensate for the operation and maintenance of the new diesel plant.

The CCU also authorized GPA to amend the Ukudu Power Plant Energy Conversion Agreement for the relocation and operation of a 41MW diesel unit facility at Cabras, and to require GUP LLC to pursue a minor source air permit, with the new Commercial Operation Date of the Ukudu plant to be no later than April 2024. The parties also agreed to "best efforts" to achieve a target COD of November

¹⁴ Guam Consolidated Commission on Utilities Resolution No. 2021-02, Relative to Authorization of Ukudu Power Plant Energy Conversion Agreement (ECA) Amendment for Relocation of Emergency Diesel Units and Pursuit of Minor Source Air Permit, adopted and approved on January 26, 2021.

¹⁵ *Id.*, at p. 1.

2023.¹⁶ The proposed diesel plant at Cabras would consist of 15 units of 2.75MW capacity each available for continuous operations.¹⁷ In accordance with the agreement between GPA and GUP LLC, GPA would pay a fixed O&M of \$2M annually, and a variable O&M of \$0.025/kWh. GPA would provide the ULSD for the diesel units.¹⁸

D. Contract Review Protocol

Pursuant to 12 G.C.A. § 12105, GPA may not enter into any contractual agreements or obligations which could increase rates and charges without the PUC's express approval. Furthermore, GPA's Contract Review Protocol requires that "[a]ll professional service procurements in excess of \$1,500,000" require "prior PUC approval. . . which shall be obtained before the procurement process is begun." The annual fixed management fees of \$2M for the 41MW plant alone will exceed the contract review threshold, thus requiring PUC review.

The Administrative Law Judge filed his Report herein dated February 22, 2021. The PUC adopts the conclusions and recommendations in the Report.¹⁹

DETERMINATIONS

A. The 41MW Diesel Plant at Cabras provides significant advantages to GPA over the previously proposed 65MW facility at Ukudu.

¹⁶ Id., at pgs. 2-3.

¹⁷ Proposed Amendment of the Ukudu Power Plant Energy Conversion Agreement, January 21, 2021, at p. 6.

¹⁸ Id.

¹⁹ ALJ Report, GPA Docket 21-06, dated February 22, 2021.

41MW of continuous operating diesel units would be installed on GPA property next to the GPA Bulk Fuel Oil Storage Facility. The original KEPCO proposal was for 65MW of standby generators at the Ukudu site.²⁰ The Reserve Facility at Ukudu was a 65MW power generation plant consisting of twenty-six (26) high speed reciprocating engines operating on ULSD. However, the diesel units at Ukudu were “designed for operation of no more than 500 hours per year and of no more than 300 hours of continuous operation.”²¹

The 65MW reserve facility had an extremely limited operating capacity of 500 hours annually. Only KEPCO, and not GPA, could dispatch the unit. The only purpose of the 65MW reserve facility was to provide backup to KEPCO when it was not meeting availability guarantees with the new power plant. GPA had absolutely no say as to when the facility would be run, and GPA could not use the 65MW facility for grid support.²²

With the change to minor source permitting, the 41MW facility at Cabras would be permitted to run for a minimum of 2,600 hours and likely as much 5,000 hours.²³ With the 41MW facility, GPA is in complete control as to when the facility is dispatched. The facility is continuously dispatchable throughout the year. It will provide generation capacity and grid support to the island-wide power system. The change in the proposed site of the diesel units to Cabras is clearly advantageous to

²⁰ Letter from General Manager John Benavente to CCU Commissioners, Subject: Update on New Power Plant and USEPA Negotiations, dated December 14, 2020, at pgs. 1-2.

²¹ GPA Workpaper on Proposed Amendment of the Ukudu Power Plant Energy Conversion Agreement, January 21, 2021, at p. 4.

²² Phone Conference between ALJ Horecky, Graham Botha, and Jennifer Sablan on February 17, 2021.

²³ Letter from General Manager John Benavente to CCU Commissioners, Subject: Update on New Power Plant and USEPA Negotiations, dated December 14, 2020, at p.2.

GPA. Such change would allow the 41MW to be run continuously, as opposed to the limitation on the Ukudu site to 500 hours.²⁴

This advantageous change is premised upon KEPCO's agreement to proceed with a minor source air permit application process rather than the major source permitting. GPA provided KEPCO the alternative of relocating the diesel generator facility to Cabras and making "adjustments to the capacity factor of the combined cycle during the steam turbine overhaul years."²⁵ GPA agreed to adjust the new plant availability from 85% to 66% during steam turbine overhaul once every 4 years.²⁶ The PUC should approve the change in location of the diesel units, the minor source permitting process, and the adjustments to the capacity factor of the combined cycle during the steam turbine overhaul years. USEPA has indicated that it is not opposed to change the diesel location, and the permitting process to minor source. It believes that the amendment would address the avoiding of delays in the permitting process.²⁷

- B. Although there are additional Costs resulting from placing the 41MW plant at Cabras, there does not appear to be any viable alternative; the relocation of the 41 MW facility to Cabras also will result in savings that will offset the costs.

According to GPA, there was simply no way that the proposal for the 65MW reserve facility could be worked out. It was not cost effective for KEPCO to proceed with it

²⁴ Phone Conference between ALJ Horecky, Graham Botha, and Jennifer Sablan on February 17, 2021.

²⁵ Letter from General Manager John Benavente to CCU Commissioners, Subject: Update on New Power Plant and USEPA Negotiations, dated December 14, 2020, at p.2.

²⁶ GPA Workpaper on Proposed Amendment of the Ukudu Power Plant Energy Conversion Agreement, January 21, 2021, at p. 6.

²⁷ Letter from General Manager John Benavente to CCU Commissioners, Subject: Update on New Power Plant and USEPA Negotiations, dated December 14, 2020, at p.2.

under minor source permitting. GPA was concerned that, without a resolution to these issues, KEPCO may well have declined to proceed with the ECA.²⁸ Placing the 65MW facility at Ukudu is no longer realistic. Therefore, there is no alternative to location of the 41MW facility at Cabras.

As with the prior proposal for a 65MW facility, the 41MW facility will be constructed by KEPCO. GPA does not pay any additional amount for the construction of the plant.²⁹ GPA will pay a fixed annual fee to KEPCO of \$2M to operate and maintain the plant. KEPCO will need about 35 personnel to operate and maintain the plant including overhauls throughout the plant life, which are funded from fixed cost.³⁰ Fixed O&M covers personnel costs for manning the plant, and other costs such as administration, permitting, licensing, etc. Variable O&M include such consumable items as oil, filters, equipment replacements, and other operation items.³¹ GPA estimates that variable costs will be \$2.425M annually.³² The variable O&M will be \$0.025/kWh.³³ There will likely be additional costs of \$4.425M annually for the operation of the 41 MW plant.³⁴ The annual cost for the 41MW facility is over \$400,000 less than that for the Aggreko plant.³⁵

The 41MW plant would result in cost savings, although it is difficult to quantify those at the present time. The 41MW plant would allow GPA to retire units which

²⁸ Id. at p. 1.

²⁹ Phone Conference between ALJ Horecky, Graham Botha, and Jennifer Sablan on February 17, 2021.

³⁰ GPA Responses to PUC Requests for Information, GPA Docket 21-07, dated February 16, 2021, Response No. 9.

³¹ Phone Conference between ALJ Horecky, Graham Botha, and Jennifer Sablan on February 17, 2021.

³² GPA Responses to PUC Requests for Information, GPA Docket 21-07, dated February 16, 2021, Response No.11.

³³ GPA Workpaper on Proposed Amendment of the Ukudu Power Plant Energy Conversion Agreement, January 21, 2021, at p. 6.

³⁴ Id.

³⁵ Id.

are already 30 years old.³⁶ Possible candidates include the Tenjo diesels, the Talofoto diesels, the Yigo CT, and Piti 8 & 9.³⁷ Savings would include the operation costs of such older plants. The 41MW plant would provide fuel saving and would be more efficient than the older plants. GPA has provided calculations showing that the 41MW plant is less expensive to run than the Aggreko plant, which both have similar energy production. Since the 41MW plant is close to the ULSD storage facility at Cabras, tanker transportation required to other plants (\$9.24/Bbl. Delivery costs) will be avoided.³⁸

C. The Amendment to Change Commercial Operation Date to April 2024 is justified by several Factors.

The parties have targeted a COD date as April 2024, although they have also agreed to “make all best efforts to reduce the COD to November 30, 2023.”³⁹

There are many factors that justify the amendment of the ECA to change the Commercial Operation Date. There had been several delays caused by the negotiations on major source/minor source permitting. Minor source permitting does result in a shorter commissioning period but is potentially not economically feasible to KEPCO due to higher capital investment requirements to meet contract performance.⁴⁰

³⁶ GPA Responses to PUC Requests for Information, GPA Docket 21-07, dated February 16, 2021, Response No. 5.

³⁷ Phone Conference between ALJ Horecky, Graham Botha, and Jennifer Sablan on February 17, 2021.

³⁸ GPA Responses to PUC Requests for Information, GPA Docket 21-07, dated February 16, 2021, Response No. 5.

³⁹ Conditions for DG Plant relocation and Minor Air Permit Acquisition for Ukudu Project, dated December 11, 2020 and signed by GPA/Guam Ukudu Power, LLC, at p. 3 (Exhibit “1” hereto).

⁴⁰ Proposed Amendment of the Ukudu Power Plant Energy Conversion Agreement, January 21, 2021, at p. 5.

According to GM Benavente, these economic feasibility issues had even led to a possibility of contract termination. However, the parties were able to work out an appropriate compromise. The environmental and construction permitting has presented challenges. This is the first new power plant construction in 23 years. The resources of applicable local permitting agencies have been taxed. There has been substantially increased scrutiny on historical preservation and environmental permitting due to the military build-up and other community concerns.⁴¹

On top of the foregoing challenges, there have been delays related to the COVID-19 pandemic. The relevant local government permitting agencies have had reduced availability during the pandemic due to closures. Quarantine requirements and other travel restrictions made it difficult for KEPCO personnel to travel to Guam. There have been work inefficiencies resulting from the changes in the operating mode.⁴² KEPCO was unable to contract with its originally selected Engineering, Procurement, and Construction Contractor, Hyundai, because of the delays and uncertain schedules for the plant causing the contract cost to increase. KEPCO issued a new tender for its EPC, and is engaging a new EPC, Doosan Industries.⁴³

Therefore, the proposed change in the Commercial Operation Date is justified due to the legitimate delays that have occurred, which delays were beyond the ability of the parties to avoid.

⁴¹ Id.

⁴² Id.

⁴³ Letter from General Manager John Benavente to CCU Commissioners, Subject: Update on New Power Plant and USEPA Negotiations, dated December 14, 2020, at p.2.

ORDERING PROVISIONS

After review of the record herein, including GPA's Petition and the Proposed Amendments to the Energy Conversion Agreement between GPA and KEPCO, GPA's Responses to PUC's Requests for Information, and the ALJ Report, for good cause shown, on motion duly made, seconded and carried by the undersigned Commissioners, the Guam Public Utilities Commission **HEREBY ORDERS** that:


1. GPA' proposed Amendments to the Energy Conversion Agreement between GPA and KEPCO are approved. The changes which PUC approves include:
 - (a) Removal from KEPCO's proposal of the construction of a 65MW diesel reserve facility at Ukudu, and location of a 41MW diesel engine reserve facility at the Cabras site, and the agreement by the parties for Minor Source permitting for such facility and the new power plant; and
 - (2) a change in the Commercial Operation Date from October 31, 2022, to April 2024, with the agreement by the parties to use best efforts to meet a November 30, 2023 target.
2. GPA is authorized to pay to KEPCO a fixed annual fee of \$2M and a variable O&M fee of \$0.025/kWh to operate and maintain the 41MW diesel plant.
3. GPA shall continue to work with USEPA to expeditiously approve the changes to the ECA reflected in paragraph 1 above. GPA shall provide quarterly reports to the PUC concerning the status of its negotiations with USEPA.
4. GPA is ordered to pay the Commission's regulatory fees and expenses,

including, without limitation, consulting and counsel fees and the fees and expenses of conducting the hearing proceedings. Assessment of PUC's regulatory fees and expenses is authorized pursuant to 12 GCA §§12103(b) and 12125(b), and Rule 40 of the Rules of Practice and Procedure before the Public Utilities Commission.

[SIGNATURES TO FOLLOW ON NEXT PAGE]

Order
Approval for Amendment
to the ECA with KEPCO for 198MW Power Plant
GPA Docket 21-07
February 25, 2021

Dated this 25th day of February 2021.



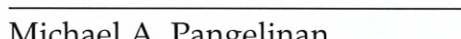
Jeffrey C. Johnson
Chairman



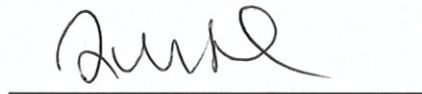
Rowena E. Perez-Camacho
Commissioner



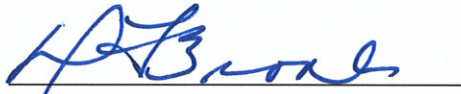
Joseph M. McDonald
Commissioner



Michael A. Pangelinan
Commissioner



Peter Montinola
Commissioner



Doris Flores Brooks
Commissioner



Pedro S.N. Guerrero
Commissioner