

BEFORE THE GUAM PUBLIC UTILITIES COMMISSION



IN THE MATTER OF:

GPA DOCKET 18-13

THE APPLICATION OF THE GUAM  
POWER AUTHORITY TO APPROVE  
THE PITI 8 & 9 CONTRACT  
EXTENSION WITH MARIANAS  
ENERGY COMPANY

ORDER

INTRODUCTION

1. This matter comes before the Guam Public Utilities Commission [“PUC”] upon the Guam Power Authority [“GPA”] Petition for Review and Approval by the PUC of GPA’s Piti 8 & 9 Contract Extension with Marianas Energy Company [“MEC”].<sup>1</sup>

BACKGROUND

2. On September 30, 1996, GPA contracted with Enron Development Piti Corp. for a Build, Operate and Transfer project (BOT) to construct the Piti 8 & 9 power plant).<sup>2</sup>
3. The Marianas Energy Company (MEC) currently manages and operates the plant under the Energy Conversion Agreement (ECA).<sup>3</sup>
4. Pursuant to paragraph 14 of the Energy Conversion Agreement, ownership of Piti 8 & 9 will be transferred to GPA in January 2019.<sup>4</sup>
5. The Piti 8 & 9 Power Plant contains two slow speed diesel units providing 88MW of production capacity, which is 42% of GPA’s total baseload capacity.<sup>5</sup>
6. GPA had intended to solicit for a new IPP contract, but indicates that it was only “recently able to complete a site inspection of the plant performed by specialists in slow speed technology that identifies necessary life extension, safety, and

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<sup>1</sup> GPA Petition for Approval of the Piti 8 & 9 Contract Extension with Marianas Energy Company, GPA Docket 18-13, filed April 10, 2018.

<sup>2</sup> Energy Conversion Agreement for a Diesel Engine Generator Power Station, Piti Project, between GPA and Enron Development Piti Corp., dated September 30, 1996.

<sup>3</sup> GPA Petition for Approval of the Piti 8 & 9 Contract Extension with Marianas Energy Company, GPA Docket 18-13, filed April 10, 2018, at p. 1.

<sup>4</sup> Energy Conversion Agreement for a Diesel Engine Generator Power Station, Piti Project, between GPA and Enron Development Piti Corp., dated September 30, 1996, at p. 24.

<sup>5</sup> Guam Consolidated Commission on Utilities, Resolution No. 2018-07, Relative to Authorization of Piti 8 & 9 Contract Extension, adopted March 27, 2018, at p. 1.

environmental projects required for optimum plant operation...the delay in this task prevented timely completion of the bid documents and may impact the transition to a new IPP contract prior to the ECA expiration date..."<sup>6</sup>

7. GPA therefore now proposes that it enter into a 5-year contract extension with Marianas Energy Company for its continued management and operation of the power plant beyond January 2019. GPA and MEC have mutually agreed to negotiate a 5-year extension of the contract starting in January 2019 pursuant to Article 32 of the ECA.<sup>7</sup>
8. Section 32 of the ECA provides that "This Agreement may be amended at any time by mutual agreement of the Parties in writing and signed by a duly authorized representative of each Party."<sup>8</sup>
9. The current ECA costs GPA approximately \$30.5M per year. The proposed extension would provide for Fixed O&M estimated fees of \$10.085M annually; Variable O&M estimated fees of \$2.245M annually; and Annual Fixed Recapitalization fees of \$7.067M for projects which GPA believes are needed to ensure plant reliability and the fuel conversion project to comply with USEPA requirements.<sup>9</sup>
10. The Proposed annual cost to GPA under the proposed extension is roughly \$20M per annum.
11. PUC Counsel filed his Report herein on May 22, 2018.

### **DETERMINATIONS**

- A. EXTENSION OF THE EXISTING ENERGY CONVERSION AGREEMENT THROUGH CONTRACT AMENDMENT WILL HELP TO ENSURE CONTINUED OPERATION, MANAGEMENT, AND RELIABILITY OF PITI 8 & 9.

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<sup>6</sup> Id. at p. 1.

<sup>7</sup> Id. at p. 2.

<sup>8</sup> Energy Conversion Agreement for a Diesel Engine Generator Power Station, Piti Project, between GPA and Enron Development Piti Corp., dated September 30, 1996, at p. 37.

<sup>9</sup> GPA Petition for Approval of the Piti 8 & 9 Contract Extension with Marianas Energy Company, GPA Docket 18-13, filed April 10, 2018, at p. 1.



12. GPA has provided reasonable justifications as to why it requires MEC to continue to manage, operate and maintain the Piti 8 & 9. GPA does not have the staff to manage, operate and maintain the plants itself.<sup>10</sup>
13. Although GPA would own the plant after January 2019, under the proposed contract extension, its personnel will not be responsible for the management and operation of the plant. Those tasks will be undertaken solely by Marianas Energy Corporation.
14. It is crucial to GPA that Piti 8 & 9 power plant continue to operate and provide 88MW of production capacity until GPA's new generation plants are online. This proposed contract extension will help to ensure that the Piti 8 & 9 plants continue to operate in the hands of an experienced contractor that has maintained high plant efficiency and reliability in the past.
15. As GPA indicates, it "only requests for an extension of the current contract to ensure continued reliability of the plant by the current contractor until GPA can commission the new power plant."<sup>11</sup>
16. A concern has been raised as to whether there should be a contract extension, or if GPA should bid out this matter.
17. The ECA clearly gives the Parties the right to "amend" the agreement by mutual agreement of the Parties. The agreement in no manner places any restrictions upon the parties regarding the amendment power. It is a broad, unlimited power.
18. In light of the broad amendment power granted to the parties under the agreement, and the Commission's longstanding view that it does not function as a procurement board, GPA should not be prohibited from amending the agreement or be required to issue a bid or RFP.
19. For GPA to put this matter out to bid now could result in disruption of plant operations. The remaining time period before transfer of plant ownership in January 2019 does not allow enough time for the bid process and a transition period, if a new plant operator were selected.

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<sup>10</sup> Guam Consolidated Commission on Utilities, Resolution No. 2018-07, Relative to Authorization of Piti 8 & 9 Contract Extension, adopted March 27, 2018, at p. 1.

<sup>11</sup> GPA Responses to First Set of PUC Requests for Information, dated April 19, 2018, at Question 4.

20. The bid process itself could lead to uncertainty as to which contractor would continue to operate and manage the plant. With MEC, GPA knows that it is getting an experienced plant operator that has successfully operated the plant for 20 years.
  21. For continuity and assurance of stability in plant operation, extension of the contract with MEC has an inherent logic. Any disruption in the operation of those plants would endanger the ability of the IWPS to provide the necessary generation capacity.
  22. Until GPA's new plants become operational, Piti 8 & 9 must continue to be operated as baseload plants. Thereafter GPA will likely reduce reliance upon such plants and operate them more in the nature of peaking units.<sup>12</sup>
- B. SALE OF THE PITI 8 & 9 PLANTS AT THE PRESENT TIME IS NOT A PRACTICAL OR DESIREABLE OPTION.
23. The question arises as to whether it would be advantageous for GPA to sell the Piti 8 & 9 assets to an IPP and have the IPP be responsible for all aspects of maintaining and operating the plant.
  24. GPA believes that the sale of the Piti plants would not be cost effective.<sup>13</sup>
  25. From a practical viewpoint, GPA could not sell the Piti plants until January 2019, when title will be transferred to it. GPA would have to put any such sale out to bid and would have to incorporate the plant assessments that it has undertaken into a bid.
  26. Another potential problem with a sale is that, if GPA did not own the plants, there could be difficulty in verifying if the Purchaser had completed all agreed-upon investments to the standards GPA requires. These shifted costs, risk premiums, and profit would all be shouldered by GPA customers in the form of fees to the purchaser for energy supply to GPA.<sup>14</sup>
  27. A specific problem with sale of the units will be the change in operation, within the next 3-5 years, from baseload to intermediate load (after the new generation plants

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<sup>12</sup> GPA's Response to the Second Set of PUC Requests for Information, filed May 11, 2018, at Question 1.

<sup>13</sup> GPA's Response to the Second Set of PUC Requests for Information, filed May 11, 2018, at Question 2.

<sup>14</sup> Id. at Question 4.



are operational). As GPA states: “even if sold at the current unit conditions and operating parameters, uncertainty regarding future operating parameters may impact the cost of selling the units, with the tendency for purchasers to provide high prices to cover for uncertainties in future operations vs. recovery of financial capital.”<sup>15</sup>

28. With a bid process for any proposed sale, protests could occur, and uncertainty result concerning what entity would own and operate a plant that is crucial to the continued operation of the island wide power system.

29. For the foregoing reasons, GPA should not be required to consider a sale for Piti 8 & 9 at the present time.

C. GPA’S CAPITAL INVESTMENT PLAN/RECAPITALIZATION FEES FOR THE PITI 8 & 9 PLANTS SHOULD BE APPROVED, WITH THE EXCEPTION OF THE FUEL RETROFIT/CONVERSION.

30. GPA has submitted a proposed Capital Investment Plan as Attachment A to its petition. This plan proposes a 5-year “recapitalization fee” for the Piti 8 & 9 plants. The total amount for the plan is \$35,334,484. As the plant owner, GPA would pay such amount over the five-year period.

31. GPA and MEC have agreed that the amount of \$35,334,484 is necessary to properly operate and maintain the plants during the period. Included are capital improvement and performance improvement projects, equipment replacement and repair, major overhaul, cost of money (4% of subtotal) and “EPC O & M Fee (10% of sub-total).

32. The recapitalization amounts were requested by MEC and its consultant BWSC. The amount was reviewed by GPA and its consultant Leidos. GPA Sub-consultant Valhalla Technical Consultants LLC prepared a “Service Report” on the Plant Condition Survey of Piti Plants 8 & 9 and determined that upgrades and modifications would need to be made on the plants in the upcoming years.<sup>16</sup>

33. With one exception, the recapitalization fee requested has been adequately reviewed and justified.

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<sup>15</sup> Id. at Question 1.

<sup>16</sup> Excerpts of the draft of Valhalla Technical Consultants Plant Condition Survey of Piti Plants 8 & 9, Service Report, dated February-March 2018.

34. The recapitalization fee includes the expenditure of \$16,022,512 for the “retrofit from BWSC”, which is the amount for fuel conversion from RFO to ULSD. GPA has long contended that conversion of the Piti 8 & 9 plants from use of RFO to ultra-low sulfur diesel or LNG is necessary to comply with the federal RICE MACT rules.<sup>17</sup>
35. GPA has not yet finalized any consent decree with USEPA regarding retrofit of Piti Plants 8 & 9. GPA has previously agreed that any such consent decree will be submitted to the PUC for final review and approval before it is entered into with USEPA.
36. There has been no final determination by PUC as to whether such retrofit expense is reasonable or necessary. GPA can still negotiate this issue with USEPA.
37. GPA’s own subcontractor Valhalla questions the efficacy of the retrofit/conversion proposed by GPA: “as for the LNG/gas conversion, an optimistic timeline to get gas on the island is probably 3-5 years from now, whereby the engines will be approaching 25 years of operation. There are currently none of these engine types that have been converted (or currently operating on) gas, whereby the engineering and manufacturing would need to be done for these two engines only. This would make the project extremely expensive, and it with an estimated remaining lifetime of 5-10 years for these engines, this conversion would not be economical (sic) feasible in any way.” (emphasis added).<sup>18</sup>
38. There is no need for the PUC to approve the fuel conversion plan at the present time. The PUC can consider this issue in more detail prior to 2022.
- D. GPA SHOULD NOT BE REQUIRED TO IMPLEMENT “CARBON CAPTURE” TECHNOLOGY FOR THE PITI 8 & 9 PLANTS.
39. A final issue for consideration concerns what is referred to as “carbon capture” technology. The issues are whether use of such technology would render it unnecessary for GPA to retrofit the Piti 8 & 9 plants, and whether GPA should be required to implement such technology.

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<sup>17</sup> GPA’s Response to the Second Set of PUC Requests for Information, filed May 11, 2018, at Questions 10-16.

<sup>18</sup> Excerpts of the draft of Valhalla Technical Consultants Plant Condition Survey of Piti Plants 8 & 9, Service Report, dated February-March 2018, at page 9 of 118.



40. One of the potential bidders for GPA new generation (Kar Power Ship) has suggested that it may be unnecessary for GPA to retrofit the Piti 8 & 9 plants, and that another type of technology known as “carbon capture” could be more effectively utilized.<sup>19</sup>
41. Carbon Capture technology involves a process whereby CO<sub>2</sub> is converted to methanol. The first such plant is the George Olah Renewable Methanol Plant in Iceland, which was commissioned in 2012. It converts CO<sub>2</sub>, the source of which is a Geothermal Plant, to 4,500 tons of methanol annually.<sup>20</sup>
42. Another 1MW pilot project plant for conversion of CO<sub>2</sub> to methanol is being constructed in Germany.<sup>21</sup>
43. However, GPA’s consultants cite a 2015 article in Power Engineering International (PEI) that states: “Although a tried-and-tested process, direct methanol synthesis has not as yet been used in combination with a utility power plant and under load-flexible operation.”<sup>22</sup>
44. GPA’s EPCM Consultant, Stanley Consultants, has advised GPA that this technology is “still in development.”<sup>23</sup>
45. GPA posits that it is extremely unlikely that the carbon capture process can lead to the creation of saleable by-products which have economic value. It points out that the Kar Power Ship has requested that GPA fund a feasibility study concerning the carbon technology which could cost ratepayers \$3M.<sup>24</sup>
46. According to GPA, it is likely that the carbon capture technology is in its early phases and may take several more years before it can be applied on an

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<sup>19</sup> GPA’s Response to the Second Set of PUC Requests for Information, filed May 11, 2018, at Questions 10-16.

<sup>20</sup> Id.

<sup>21</sup> Id.

<sup>22</sup> Id.

<sup>23</sup> Id.

<sup>24</sup> GPA’s Response to the Second Set of PUC Requests for Information, filed May 11, 2018, at Question 9.

industrial/utility level. There are great uncertainties as to whether this technology can be applied at the volumes and concentrations necessary for power plants.<sup>25</sup>

47. Stanley Consultants, based upon a study of another GPA consultant TRC Environmental Corporation, finds that the carbon capture technology is not presently cost effective.<sup>26</sup> GPA should not be required to expend amounts for the study of this technology or to implement it, since the technology does not appear to be proven at the present time.
48. GPA has not yet submitted a final contract to implement the proposed contract extension. Once GPA has prepared such contract extension, it should be submitted to the PUC for final approval.

#### **ORDERING PROVISIONS**

After review of the record herein, GPA's Petition for Review and Approval by the PUC of GPA's Piti 8 & 9 Contract Extension with Marianas Energy, and the PUC Counsel 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. The extension of the contract with Marianas Energy Company for the Piti 8 & 9 Plants is approved, subject to final review and approval by the PUC of the contract form.
2. GPA's Capital Investment Plan and proposed 5-year "recapitalization fee" for the Piti 8 & 9 plants are approved, with the exception of the retrofit/fuel conversion from BWSC.
3. When GPA finalizes its contract extension, it should submit the same for final review and approval by the PUC.
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 the PUC's regulatory fees and

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<sup>25</sup> Id. at Question 11.

<sup>26</sup> Id.

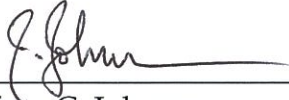


Order  
GPA Petition to Approve the  
Piti 8 & 9 Contract Extension with MEC  
GPA Docket 18-13  
May 31, 2018

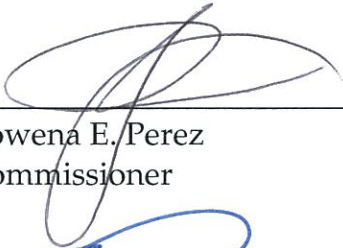
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expenses is authorized pursuant to 12 GCA §12002(b) and 12024(b), and Rule 40 of the Rules of Practice and Procedure before the Public Utilities Commission.

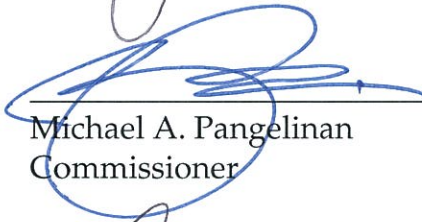
Dated this 31st day of May, 2018.



Jeffrey C. Johnson  
Chairman



Rowena E. Perez  
Commissioner



Michael A. Pangelinan  
Commissioner



Andrew L. Niven  
Commissioner

Joseph M. McDonald  
Commissioner



Filomena M. Cantoria  
Commissioner



Peter Montinola  
Commissioner