

BEFORE THE GUAM PUBLIC UTILITIES COMMISSION



IN THE MATTER OF:) GPA Docket 15-05
)
The Petition of the Guam Power Authority))
for Approval of Procurement of New) **ORDER**
Generation Combined Cycle Units and to)
Proceed with Implementation of the)
Integrated Resource Plan (IRP).)

INTRODUCTION

1. This matter comes before the Guam Public Utilities Commission ["PUC"] upon the Petition of Guam Power Authority ["GPA"] for Approval of Procurement of New Generation Combined Cycle Units.¹
2. GPA requests approval to procure 120 megawatts of dual fired Combined Cycle generation plant, with an option for an additional 60 megawatts of dual fired Combined Cycle generation plants as needed.²

BACKGROUND

3. This matter was first addressed by the PUC on January 29, 2015.³
4. In the January 29, 2015, Order, the PUC rejected GPA's petition for Approval of Procurement of New Generation Combined Cycle Units "on the grounds that it does not present sufficient evidence that the proposed new generation is justified. Further consideration is deferred pending GPA providing more specific and complete information as requested by the PUC in both the July, 2013 Order related to the IRP and in this Order".⁴
5. GPA was required to submit additional analysis and plans which included an increased emphasis on DSM, renewable energy of both utility and customer scale, financial modeling, and inclusion of potential impact of specific electric grid related measures to address reliability.⁵
6. GPA's primary justification for procuring combined cycle power plants was that there is a need for GPA to come into compliance with certain environmental

¹ GPA Petition for Approval of Procurement of New Generation Combined Cycle Units, GPA Docket 15-05, filed November 10, 2014.

² Id. at p. 2.

³ PUC Order, GPA Docket 15-05, dated January 29, 2015.

⁴ Id at p. 5.

⁵ Id at p. 6.

regulations issued by the United States Environmental Protection Agency (“USEPA”), which include the RICE-MACT regulations (slow speed generators), EGU-MACT regulations (steam generators), and MATS regulations.⁶

7. Thereafter, between February and August 2015, GPA and the PUC Consultants, Lummus, engaged in an extended discussion concerning GPA’s plans on building new generation units and complying with the USEPA environmental regulations. Lummus submitted numerous Requests for Information to GPA, and GPA presented a number of potential compliance cases “as generation alternatives”. GPA evaluated “case” proposals through use of its “Strategist” program and the development of the Financial Model.
8. On August 21, 2015, the PUC Consultant Lummus issued its Report: Review of GPA Petition to Acquire up to 180MW of New Combined Cycle Capacity in Docket 15-05.⁷
9. In its August 21, 2015 Report, Lummus Consultants recommended that the PUC reject GPA’s requested Petition. Lummus relied upon numerous findings for its recommendation, which have been set forth in detail in the PUC Counsel Report filed herein on October 21, 2015.⁸
10. The major finding of Lummus was that GPA had not justified procurement of new generation capacity. Its principal argument has been that the new generation capacity is justified because of GPA’s need to comply with USEPA environmental regulations. Lummus found that GPA’s analysis and approach required significant modification to produce a low-cost, realistic approach in addressing USEPA requirements in the Base Case (without new generating resources). Based upon the material and evidence presented by GPA, it did not justify a need for additional generation capacity.

DETERMINATIONS

11. On August 31, 2015, GPA experienced a major failure of Cabras Nos. 3&4 Power Plants when an explosion and fire occurred.⁹

⁶ GPA Petition for Approval of Procurement of New Generation Combined Cycle Units, GPA Docket 15-05, filed November 10, 2014, at p. 1-2.

⁷ Lummus Consultants Int’l Report: Review of GPA Petition to Acquire up to 180MW of New Combined Cycle Capacity in Docket 15-05, submitted on August 21, 2015.

⁸ PUC Counsel Report, GPA Docket 15-05, filed October 21, 2015.

⁹ GPA Petition for Approval of Procurement of the Temporary Power Generation Services, GPA Docket 15-18, filed September 17, 2015.

12. There has been no detailed investigation of the root cause of the explosion, nor any data indicating that Cabras Nos. 3 or 4 could potentially return to service and, if so, when. GPA's General Manager John Benavente has stated his opinion that, subject to a full investigation, Cabras No. 4 unit may be irreparable; there is no estimated date for its return to service. He believes that Cabras No. 3 may be able to produce power by March 2016.¹⁰
13. The explosion resulted in the loss of 78MW of base load capacity, which places GPA in a difficult position of meeting system demand if there is an outage in one of the base load or other large units. The outage of one of the Cabras Steam Units could result in insufficient generation reserve.¹¹ GPA would have no reserve capacity and would be short approximately 40 to 60MW.¹²
14. GPA does not presently have a sufficient reserve of generation capacity. There is a 50MW reserve capacity available. However, basing necessary reserve on the loss of its two largest units, GPA believes that it needs a required reserve of 94MW. Thus, there is a present shortage in reserve capacity available of 44MW.¹³
15. GPA is presently seeking to lease generators from off-island as a temporary solution for providing additional reserve generation capacity. However, this is not a long term solution for dealing with the situation of inadequate generation reserve.
16. There have been numerous occurrences of load shedding and power outages since the Cabras plant explosion.¹⁴ GPA GM Benavente has estimated that a total of 42 hours of load shedding has occurred since August 31, 2015.¹⁵
17. It is a general principle that a utility does not need additional generation capacity unless the load requires additional resources.
18. Prior to the Cabras 3 and 4 explosion, the monthly and peak load demand figures did not indicate that there was insufficient generation capacity on Guam, or that the

¹⁰ Id at p. 1.

¹¹ Id at p. 1.

¹² Guam Consolidated Commission on Utilities Resolution No.2015-45, Authorizing Management of the Guam Power Authority to Lease Generation Capacity Services to Meet System Demand, adopted September 16, 2015, at p. 1.

¹³ Guam Power Authority Generation Capacity Alternatives, September 16, 2015, Reserve Restoration Plan.

¹⁴ Interview with John Benavente, Guam Post, October 15, 2015,

¹⁵ Id.

existing generation capacity could not handle the load. The monthly and peak load demand figures from 2013 to the present did not demonstrate an overall trend toward increased peak load. The highest peak load this year has been 255MW. The highest peak load in 2013 was 257MW.¹⁶ Overall it cannot be said that increasing load would demand more generation capacity. Prior to the explosion, GPA was unable to make the case that there was a need for new generation to meet the existing load.

19. As indicated, GPA's load justification for new generation was the necessity of meeting USEPA environmental regulations. However, Lummus concluded that GPA had failed to adequately explore low cost compliance plans that did not necessitate the addition of new generation.
20. However, as a result of the Cabras 3 & 4 explosion on August 31, 2015, circumstances have been considerably altered. At present, existing reserve generation capacity is not sufficient to meet the required load. Over the past two months, there have been a number of instances of outages and load shedding where generation capacity was insufficient to serve the needs of ratepayers.
21. The Reserve Restoration Plan submitted by GPA on October 14, 2015, shows that GPA may have insufficient generation capacity from September 2015, through February 2016 to meet customer demand. The insufficiency ranges from 44MW to 15MW.¹⁷
22. The Reserve Restoration Plan does show that by March 2017, the reserve generation capacity will be 94MW. However, a number of factors suggest that the PUC cannot be sanguine concerning the availability of future reserve load capacity. Cabras 3 & 4 are both included in the Restoration Plan as being "restored." However, there is no assurance at this point that either plant will be available. Furthermore, the PUC is aware that Cabras Nos. 1 & 2 are both over 40 years old, and their future availability is also not certain. There is, at present, uncertainty as to whether GPA possesses sufficient generation capacity to meet the required load.
23. It is the responsibility of the PUC to ensure that GPA provides safe and reliable power at the lowest reasonable cost. Since the explosion on August 31, 2015, the power provided by GPA has not been reliable.

¹⁶ Guam Power Authority Generation Capacity Alternatives, Guam Consolidated Commission on Utilities Work Session, October 14, 2015 (Monthly Peak Demand, Jan. 2013 through September 2015 and Historical Peaks).

¹⁷ Id.

24. In light of this new situation, it is prudent for the PUC to authorize GPA to procure additional generation capacity, rather than run the risk that ratepayers will be exposed to continuing episodes of load shedding and outages.
25. GPA's emergency solution of procuring leased off island generators of 40-60MW is only, at best, a temporary solution. With leasing, GPA does not obtain any permanent generation that will contribute long term to the power system. It would be more advantageous to have GPA put resources into new generation, as opposed to leasing generators for an extended period of time.
26. To date GPA has not submitted anything in this docket to respond to the August 21, 2015 Lummus Report or to update or revise its original Petition in the wake of the August 31, 2015 explosion.
27. The ratepayers of Guam should not be placed in the uncertain and fragile position of exposure to load shedding and insufficient load capacity. The PUC must take proactive action to remedy the current generation situation.

ORDERING PROVISIONS

After review of the record herein, GPA's Petition for Approval to Procure New Generation, the Lummus Consultants Report dated August 21, 2015, 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. GPA shall submit a plan to the PUC, and a proposed request for procurement, for new generation capacity. GPA's Plan must address the following issues: (1) How much new generation should be procured, in megawatts? (The amount may be different than the original request for 120 MW plus an option for an additional 60 MW.) (2) What size units (for example, 30 MW or 60 MW) should be procured? (3) Should the procurement only be for combined cycle units (i.e., should GPA's procurement be broader, and leave to the proponent the specific type of technology to be utilized)? (4) What should be the fuel source for the new units? (It is anticipated by GPA that the new units will burn ULSD).
2. As a part of its Plan, GPA must include an evaluation of whether Cabras 3 and/or 4 can be returned to service, and if so, when. It is difficult for the PUC to make a rational determination as to how many megawatts GPA should be authorized to

procure until it is known as to whether those plants will be available for future generation.

3. As a prerequisite to approval of a procurement by PUC, GPA must implement the four initial Demand Side Management programs and submit its Report to PUC on long term funding sources for DSM. These have already been significantly delayed by GPA. Lummus has pointed out that GPA has not fully considered the potential for expansion of DSM and its utility in minimizing future load requirements. DSM must be a part of GPA's long term plan on the need for additional generation capacity. Implementation of a more extensive DSM program by GPA could well reduce the necessity for additional load or new generation in the future.
4. GPA's Plan must also include Time of Use Rates to reduce load. TOU should be implemented prior to approval of the procurement.
5. GPA's Plan must include a Third Party Condition Assessment of the Cabras 1 & 2 plants and Life Extension Study, or at least a proposal for obtaining such assessment and study. To date, GPA has not provided any information to establishing that either one or both of these plants cannot continue to be operated and to remain a part of the island wide power system.
6. GPA's Plan for new generation capacity should be based upon the Independent Power Producer Model rather than upon issuance of revenue bonds and ownership by GPA. GPA appears to have concluded, as evidenced by the new solar plant, that it is preferable for future generation to be operated by third party plant managers/operators. It should place responsibility for new plant generation operation with Independent Power Producers.
7. As a part of its Plan, GPA must provide an analysis of the customer rate impacts over the long term from a decision to procure the proposed new generation capacity. There should be as accurate an estimate as possible concerning the total cost for the procurement of additional generation, including capital investment requirements and funding costs. GPA's Plan must include a present value analysis from the ratepayer perspective based on revenue requirements for the new generation rather than on the costs incurred by the utility.
8. GPA's Plan must also provide time lines for necessary environmental permitting, procurement, construction and operation of the new generation facilities.

9. Another element which must be included in GPA's Plan is the further development of renewable energy resources. Lummus determined that GPA's resource/compliance planning does not adequately incorporate the potential impact of renewable energy. GPA's current projections call for a maximum of 120MW of renewable energy; after that limit is reached, there is no further provision for additional renewable energy resources.
 10. Although GPA has received bids on Phase 2 of its Renewable Procurement, for up to 40MW of renewables, no selection has yet been made on the Phase 2 Procurement. As an element of its Plan, GPA should update the PUC as to when the award(s) for the Phase 2 Procurement will be issued.
 11. GPA is also initiating a solar program with the US Military for development of solar facilities on military land. Further updates must be provided to PUC on this program in the GPA Plan.
 12. GPA's Plan must include projected action on its proposed Phase 2 of Energy Storage Systems, which proposed to procure battery storage for solar power. GPA's future proposals and intended actions for implementation of renewables and battery storage for renewables should be included in its Plan. GPA should further explore the introduction of storage facilities to support the intermittency of solar.
 13. GPA's Plan must consider a more gradual replacement of its base load generating assets. GPA may be able to continue to operate at least one steam unit at Cabras on LSRO: such a decision would provide the opportunity for additional fuel diversity for the Island.
 14. In general, GPA must address the recommendations of Lummus Consultants in their August 21, 2015, Report, and address those concerns in their Plan. Although PUC has not adopted the Lummus recommendation to reject a proposal to procure new generation, it believes that Lummus' conclusions merit a serious response by GPA.
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15. GPA is required to submit its Plan to the PUC within (120) days from the date of the PUC Order herein. At the time GPA submits its Plan to the PUC, it should also submit its Request for Proposals for the new generation capacity.
 16. At present, the Liquefied Natural Gas (LNG) option is disapproved. Lummus has found that GPA did not provide sufficient planning for and evaluation of the

potential impacts of LNG infrastructure costs within its Financial Model. Because of the substantial cost of LNG infrastructure, the LNG option is not approved at the present time.

17. 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 §§12002(b) and 12024(b), and Rule 40 of the Rules of Practice and Procedure before the Public Utilities Commission.

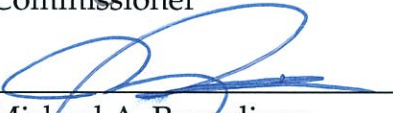
Dated this 29th day of October, 2015.



Jeffrey C. Johnson
Chairman



Rowena E. Perez
Commissioner

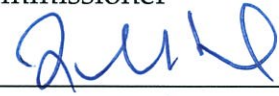


Michael A. Pangelinan
Commissioner

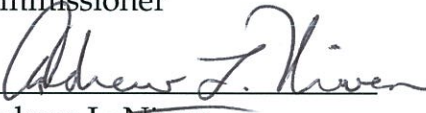
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Commissioner



Joseph M. McDonald
Commissioner



Peter Montinola
Commissioner



Andrew L. Niven
Commissioner