

BEFORE THE GUAM PUBLIC UTILITIES COMMISSION



IN THE MATTER OF:) GPA Docket 24-21
)
)
 GUAM POWER AUTHORITY'S) **ORDER**
 OVERHAUL OF PITI 7)
)
)
 _____)

INTRODUCTION

This matter comes before the Guam Public Utilities Commission ["PUC"] upon the Petition of the Guam Power Authority ["GPA"] for Review and Approval of its Contract with Taiwan Electrical and Mechanical Engineering Services Inc. ["TEMES"] to Overhaul Piti 7.¹

BACKGROUND

The Piti 7 plant, a 40MW combustion turbine, was commissioned in December 1997 by TEMES under a build, operate and transfer (BOT) contract for a 20-year term. The plant was turned over to GPA in December of 2017 and has been operated and maintained by GPA ever since.² GPA seeks to perform a major gas turbine and generator overhaul of Piti 7 "to ensure the plant's reliability and availability until the new Ukudu power plant is commissioned." GPA states that "Piti 7 provides critical generation capacity until the Ukudu Power Plant is commissioned and will provide the necessary reserve capacity going forward."³

¹ GPA Petition to Approve the Contract with TEMES Inc. to Overhaul Piti 7, GPA Docket 24-21, dated August 7, 2024.

² Id. at p. 1.

³ Id.

The estimated cost of the overhaul of Piti 7 is \$3.5M. GPA further contends that the Piti 7 unit is “essential” to the island-wide power system.⁴

In GPA Resolution No. FY2024-24, the Guam Consolidated Commission on Utilities authorized GPA to petition the PUC for approval of its contract with TEMES under the PMC to purchase parts and labor for Piti 7 turbine and generator overhauls estimated at \$3.5M. The turbine and generator overhauls are planned for FY2025.⁵

The ALJ filed his Report herein dated August 24, 2024.⁶ The PUC adopts the conclusions and recommendations therein.

DETERMINATIONS

The issue before the PUC is whether it should approve the overhauls of the Piti 7 turbine and generator at a cost of \$3.5M. The ALJ has submitted detailed Requests for Information to GPA. The Requests indicate concerns that the ALJ has with GPA’s Petition.⁷ The PUC Requests for Information and the GPA Responses are attached collectively to the ALJ Report as Exhibit “1”.

A. Contract Review Protocol

The PUC-GPA Contract Review Protocol mandates that any contract which exceeds \$1,500,000 requires PUC approval.⁸ This contract must be reviewed by the PUC.⁹

⁴ Id. at p. 2.

⁵ Guam Consolidated Commission on Utilities, GPA Resolution No. FY2024-24, Relative to Authorizing Guam Power Authority (GPA) Management to Overhaul Piti 7, adopted and approved on July 23, 2024.

⁶ ALJ Report, GPA Docket 24-21, dated August 24, 2021.

⁷ PUC Requests for Information and GPA Responses, GPA Docket 24-21, Exhibit “1”.

⁸ Contract Review Protocol for Guam Power Authority, Administrative Docket, dated February 15, 2008, at par. 1(e).

⁹ Id. at par. 4(b).

B A Description of the Piti 7 Overhaul Project

GPA has not had a PMC for Piti 7 since 2017. In its Amendment No. 2 of its Performance Management Contract with TEMES for GPA's Combustion Turbine Power Plants, dated December 12, 2023, GPA authorized the PMC TEMES to "provide operations and maintenance services to support the Piti 7 CT Plant, and other plants. The scope and price for such services were to be negotiated between GPA and TEMES.¹⁰ Piti 7 was not included in the original Contract as one of the plants for which TEMES would be the performance management contractor.

TEMES will provide technical engineering and overhaul services regarding Piti 7. Attached to the ALJ Report as Exhibit "2" is a portion of the TEMES Report for the 2016 Piti 7 Overhaul. Services included checks of the generator stator, auxiliary equipment, voltage transformer, ground resistance measurement, rotor, coil (megger test), stator coil (disassembly and cleaning), and others.¹¹ The proposed overhaul may include similar services as those performed in 2016, but it may also include different services.

GPA estimates that there will be a \$3.5M cost for the proposed parts and labor to perform turbine and generator overhauls for Piti 7. GPA indicates that the cost of labor for the 2016 Piti 7 overhaul was approximately \$1M. It estimates the current cost of labor at \$1.5M.¹² By ordering "Refurbished" parts, GPA has reduced the cost of parts to \$1.4M. GPA has already purchased the first half of the parts at a cost of \$442,716.¹³ GPA has submitted Attachments 1 and 2, which support such costs.

¹⁰ GPA Responses to PUC RFIs, GPA Docket 24-21, Attachment 1.

¹¹ PUC Request for Information, GPA Docket 24-21, at par. 7, Attachment 4.

¹² Email from GPA Attorney Marianne Woloschuk to PUC ALJ Fred Horecky, Re: Requests for Information, GPA Docket 24-21, dated August 22, 2024.

¹³ Id.

As to the Project schedule, GPA seeks to complete the project in FY2025:

“GPA has not previously performed an overhaul on this type of unit and has very little information since TEMES last overhauled Piti 7 in 2016. The start date of the project is subject to the availability and delivery of parts, which is estimated to take 4 to 6 months. Upon the PUC's approval of the project in August 2024 and provided that the parts arrive in the expected time, the overhaul work can begin in February or March 2025. The actual overhaul is estimated to take 20 to 30 days in April 2025. The project should be completed by May 2025 if all goes according to plan.”¹⁴

There are many other costs that just the \$3.5M repair which will be incurred by GPA with the continued operation of the Piti 7 plant. GPA has already incurred fuel costs of over \$32.8M in FY 2024 for Piti 7 operation and millions of additional dollars in fuel handling and operation and maintenance costs. See Exhibit “3”, Piti 7 Cost to Produce, attached to the ALJ Report.¹⁵ These fuel and other costs will be repeating on an annual basis for so long as Piti 7 is in operation. Yearly costs could exceed \$40M, as was the case in FY2023.¹⁶

C. There are issues as to whether the expenditure of \$3.5M on the Piti 7 Overhaul, as well as on the continuing annual operating expenses, are reasonable, prudent or necessary expenses.

Piti 7 is the second most costly plant to operate in the island-wide power system. Its fuel cost per kilowatt-hour is \$0.3345, making it the second most expensive plant in

¹⁴ Id.

¹⁵ Email from GPA Attorney Marianne Woloschuk to PUC ALJ Fred Horecky, re: Requests for Information, GPA Docket 24-21, dated August 19, 2024, Piti 7 Cost to Produce.

¹⁶ Id.

terms of fuel costs after the Dededo CT plants.¹⁷ Of all plants, Piti 7 has one of the lowest rates of production of kWh per barrel, and one of the highest heat rates. Given the expensive cost and low efficiency of Piti 7, it is not necessarily evident as to why GPA would seek to expend \$3.5M for a gas turbine generator and overhaul on Piti 7 when the Ukudu plant will be in operation in one year.

The Ukudu plant will add almost 200MW of demand capacity to the GPA power system and the 41MW Hanwha solar plant will come online in September of 2026. In addition, there are several other power sources that have either placed in or restored to the power system recently, including the 20MW of temporary power at the Yigo CT, as well as the repair of the Yigo combustion CT. Work is being done to increase the production of the Tenjo vista units, and repairs are contemplated to the Yigo Diesel 40MW units.

On August 24, GPA has announced that it will be seeking approval for two new Phase IV solar projects totaling 192 MW.¹⁸

With all this additional energy production coming into the system, Piti 7 could potentially be retired after the Ukudu plant comes online. The expenditure of \$3.5M, and the over \$40M of operating expense for each continuing year of operation, could be avoided. It also appears that a contemplated overhaul of Piti 7 was supposed to be performed in 2022 but was never done.

D. Notwithstanding the above concerns, GPA has presented several convincing justifications as to why the PUC should approve the Piti 7 overhaul.

¹⁷ PUC Request for Information, GPA Docket 24-21, at par. 3, Exhibits 1 & 2.

¹⁸ <https://edition.pagesuite-professional.co.uk/html5/reader/production/default.aspx?pubname=&pubid=5357166a-437c-4b2c-9983-d9639655a6e7>

- (1) In recent years, there has been insufficient generation power capacity to meet ratepayer demand. As the Petition indicates, Piti 7 will provide “critical generation capacity until the Ukudu power plant is commissioned”, a period of about one year.¹⁹
- (2) GPA does intend to keep Piti 7 in operation after the commissioning of Ukudu Power Plant for at least the next 5 years. After the Ukudu power plant is commissioned and the Hanwha 41MW solar PV project comes online in March of 2026, there will be no additional capacity to support peak until almost two years later under the Phase IV solar bids.²⁰
- (3) When other units are down, Piti 7 provides reserve capacity to support maintenance schedules for other units.
- (4) In the next few years, GPA is anticipating load growth based upon its discussions with the military and the private sector. GPA wishes to ensure capacity that can meet future growth. At present, Piti 7, which has a full capacity of 40MW, is only producing 23MW.²¹ Previously, GPA had discussions with the military indicating that potential load requirements over the span of 10 years could increase the load by 50MW. In its Attachment 2, GPA has listed developments and estimated loads which include approximately 38MW of military projects.²² Also, GPA estimates that private and government projects will increase load by 36MW. This increase includes data centers, apartment buildings, schools and commercial businesses.²³

¹⁹ GPA Petition at p. 1.

²⁰ GPA Responses to PUC RFIs, GPA Docket 24-21, dated August 21, 2024, at Response No. 2.

²¹ Id. at Response No. 3.

²² Id. at Response No. 4.

²³ Id.

- (5) There will be some loss of generation capacity regarding the 40MW Yigo diesels. Only a portion of the units can be restored (probably 20MW total recovery at most).²⁴
- (6) During the period from 2016 through 2024, Piti 7 has produced generation of between 30,250,739 kWh and 124,015,229 kWh per year. While Piti 7's production has not reached that of the baseload plants, its production for 2023 appears to be higher than that of the other combustion turbine plants.²⁵ GPA asserts that the delay of the retirement of Piti 7 is in GPA's best interest and will avoid any unnecessary future temporary contracts or other programs for additional generation that can be more costly or complicated to execute.²⁶

CONCLUSION

Despite the considerable costs for the Piti 7 overhaul, and its continued operation, GPA has justified the expenditure of funds. It is necessary for GPA to maintain adequate generation capacity so that the demand of the island-wide power system can be met. In addition, the material provided by GPA suggests that there will be a considerable increase in load from both the military and private sectors in the upcoming years. Since Piti 7 is an existing asset in the power system, it makes sense to maintain such asset rather than procuring other temporary power resources.

ORDERING PROVISIONS

After review of the record herein, including GPA's Petition for Review and Approval Review and Approval of its Contract with Taiwan Electrical and Mechanical

²⁴ Id.

²⁵ PUC Request for Information, GPA Docket 24-21, at par. 3, Exhibit 2.

²⁶ Id. at RFI No. 9.

Engineering Services Inc. [“TEMES”] to Overhaul Piti 7, at a costs of \$3.5M, the PUC Requests for Information and the GPA Responses thereto, 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’s contract award to Taiwan Electrical and Mechanical Engineering Services Inc. [“TEMES”] to Overhaul Piti 7 is approved.
2. GPA is authorized to expend up to the amount of \$3.5M for the Piti 7 overhaul.
3. 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 TEMES Inc.
Contract to Overhaul Piti 7
GPA Docket 24-21
August 29, 2024

Dated this 29th day of August, 2024.



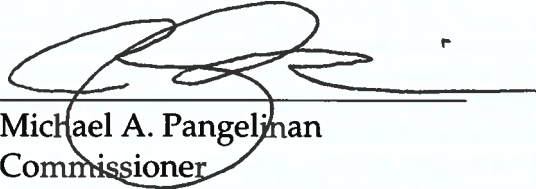
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