BEFORE THE GUAM PUBLIC UTILITIES COMMISSION

SECOND AMENDED PETITION TO APPROVE PROCUREMENT OF ENERGY STORAGE SYSTEM ENERGY-SHIFTING AND GRID SERVICES (ESS PHASE II PROJECT) BY THE GUAM POWER AUTHORITY	**GPA DOCKET 25-15** **ALJ REPORT**

INTRODUCTION

This matter comes before the Guam Public Utilities Commission (the "PUC" or the "Commission") pursuant to the August 7, 2025 Second Amended Petition for Approval of the Procurement for Energy Storage System Energy-Shifting and Grid Services (the "Petition"), filed by the Guam Power Authority ("GPA").

BACKGROUND

As referenced by GPA in its Petition, Guam Public Law 35-46 mandates that GPA establish a "preliminary renewable portfolio standard goal" of "fifty percent (50%) of its net electricity sales by December 31, 2035"; and "one hundred percent (100%) of its net electricity sales by December 31, 2045." P.L. 35-46, p. 3 (Oct. 19, 2019); 8 G.C.A. §8311(c). In addition, the Guam Legislature indicated that such renewable sources should include "technology that is capable of providing storage for shifting energy"; noting too that industry outlook "suggests that continual improvements in solar energy technology to address intermittency and energy shifting will be able to meet total generation needs." P.L. 35-46, p. 2. GPA has indicated that it is committed to providing fifty percent (50%) of Guam's energy needs from clean energy and renewables by 2030; and one hundred percent (100%) by 2040.[1]

[1] Petition, p. 2.

Back in December of 2022, GPA issued an Invitation for Multi-Step Bid No. GPA-012-23, which involved GPA's Phase IV Renewable Energy Resource Acquisition project. This procurement sought non-intermittent power from one, or more, renewable generation resources with a total minimum annual energy output of 300,000 MWh. The procurement indicated that after the selection of the winning bidders, GPA would conduct a System Integration Study to determine system upgrades or improvements required, along with costs necessary, for the renewable resource's integration into GPA's transmission system.

In November of 2024, S&C Electric Company submitted a report titled "Renewable Resource Interconnection System Impact Study," which concluded that certain transmission infrastructure upgrades and new "Stand-Alone Batteries" were necessary in order to integrate the Phase IV renewable projects into the grid.[2]

On May 27, 2025, the Consolidated Commission on Utilities (the "CCU") found that the Stand-Alone Batteries, which it now calls the "Energy Storage System ("ESS") Phase II Project", will allow GPA to shift and dispatch energy to support the grid at any time of the day.[3] The CCU further found that the Energy Shifting and Grid Services from the batteries are "critical for maintaining a stable and reliable electrical grid, by ensuring consistent voltage and frequency regulation, and responding to sudden major and minor disturbances to the grid, as well as optimizing energy resources to alleviate peak demand." The CCU authorized the procurement of the ESS Services Phase II project.[4]

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[2] Renewable Resource Interconnection System Impact Study, by S&C Electric Company, pp. 45-46 (Nov. 13, 2024); *See also* Petition, p. 2.

[3] Petition, Exhibit A, p. 1-2 (GPA Resolution No. 2025-19).

[4] Petition, Exhibit A, p. 3.

On June 6, 2025, GPA filed a petition requesting PUC review and approval of the ESS Services Phase II procurement, which included the procurement of a grid controller. Then on June 13, 2025, GPA amended the petition.

On July 17, 2025, the ALJ assigned to this matter attended a presentation given by GPA to further explain the purposes of the procurement. On August 7, 2025, GPA filed this Amended Petition, which amended its First Amended Petition filed on June 13, 2025, eliminating the procurement of a grid controller. On August 8, 2025, the ALJ issued a Request for Information, which GPA responded to on August 13, 2025.

DISCUSSION

A. 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**."[5] GPA submits that the ESS Phase II Project is estimated to exceed $1.5 million per year, thereby requiring PUC review.

B. GPA's Petition for Approval of Multi-Step Invitation for Bid

In its Petition, GPA maintains that the system impact study, which was conducted pursuant to GPA's Phase IV Renewable Energy Resource Acquisition project, concluded that "stand-alone batteries, along with transmission infrastructure upgrades, will best

[5] GPA's Contract Review Protocol ("GPA CRP"), Administrative Docket 00-04, p. 1 (Feb. 15, 2008) (emphasis in original).

mitigate stability limit violations when the Phase IV projects tie into the grid."[6] Accordingly, the subject ESS Phase II Project intends to procure the battery energy storage system, with the necessary grid services.

In particular, GPA seeks approval to procure 90 MW/360 MWh of energy shifting services that charge primarily during the day and discharge primarily at night; 180 MW/90 MWh of fast response grid services that can charge and discharge at any time of the day under the control of GPA's SCADA; and interconnection to the 115 kV GPA transmission system.[7] GPA intends on entering into a 25-year contract for the ESS services.[8]

GPA submits that the project is reasonable, prudent, and necessary inasmuch as the energy storage technology will provide GPA with stable and reliable energy, "ensuring consistent voltage and frequency regulation"; and, can assist during "sudden disturbances" and "peak demand."[9] GPA further submits that the ESS energy shifting will allow GPA to "shift and dispatch energy at any time of day or night to support the grid."[10] The project also is structured such that a "fixed price" will cover all costs, such as interconnection, commissioning, and operations and maintenance; and puts all construction and operations risks on the vendor.[11]

GPA has further noted that it intends to seek federal funding to assist with this procurement. GPA further submits that the ESS Phase II Project will provide capacity that will allow the retirement of GPA's aging generators.

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[6] Petition, p. 2.

[7] Petition, p. 2.

[8] Petition, p. 2.

[9] Petition, p. 3.

[10] Petition, p. 3.

[11] Petition, p. 3.

C. Multi-Step Invitation for Bid

In the instant procurement, GPA intends to solicit bids for ESS services: (1) a total of 90MW/360MWh of energy storage capacity for Energy-Shifting; and (2) a total of 180MW/90MWh of energy storage capacity for Grid Services. GPA intends on entering into power purchase agreements with selected vendors for these energy storage systems, which will be interconnected to GPA's 115kV transmission system.

The IFB requires that the ESS sites must also provide certain Grid Services, which include the following requirements. The ESS must be able to provide energy-shifting, which means that it must charge from the GPA grid during the daylight solar PV production hours, and discharge to the GPA grid during the non-daylight hours.[12] The ESS must also be able to provide high-speed response to rapidly inject or absorb power from the GPA grid for quick recovery from frequency deviations.[13] It must also be able to provide rapid reserve services to arrest any frequency decay, and rapid reserve hold, to withstand major weather intermittency caused by large decreases in renewable production.[14]

The ESS must also be able to provide Reactive Power Support that will dynamically inject or absorb reactive power into or from the grid, in order to maintain grid voltage and improve grid stability.[15] The dispatchable active and reactive power capabilities must be available at all times. The ESS must further provide "Blackstart"

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[12] Petition, Exhibit B, pp. 102-103 (Technical Qualification Proposal Requirements).

[13] Petition, Exhibit B, p. 103 (Technical Qualification Proposal Requirements).

[14] Petition, Exhibit B, p. 103 (Technical Qualification Proposal Requirements).

[15] Petition, Exhibit B, pp. 104-105 (Technical Qualification Proposal Requirements).

capability to form and supply microgrids after a natural disaster, in the event of a large-scale outage caused by system instability, uncontrolled separation, or cascading outages.[16]

The IFB further makes plain that all costs throughout the term of any power purchase agreement in place is the responsibility of the vendor, which include costs related to permitting, financing, construction of facilities and interconnection, and operations and maintenance.[17] Additionally, the IFB contains certain cyber-security and physical security requirements.[18] And all vendors are required to obtain all necessary insurance.[19]

D. Cost

GPA submits that it bears no upfront capital costs, but instead will pay for the installation, construction, interconnection infrastructure, labor, operations and maintenance, through the ESS project agreement, which will have a 25-year initial term. GPA further submits that the cost for these services will be recovered through GPA's LEAC, which GPA estimates will cost at an additional $.0204 per KWh. GPA further estimates an average annual cost (over 25 years) of $34,547,065.21.

E. CCU Resolution No. 2018-20

The Petition is supported by GPA Resolution No. 2025-19 issued by the CCU at its May 27, 2025 meeting. In the Resolution, the CCU found that the Stand-Alone Batteries, which it now calls the "Energy Storage System ("ESS") Phase II Project", will allow GPA to shift and dispatch energy to support the grid at any time of the day.[20] The CCU further

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[16] Petition, Exhibit B, pp. 105-106 (Technical Qualification Proposal Requirements).

[17] Petition, Exhibit B, p. 112 (Technical Qualification Proposal Requirements).

[18] Petition, Exhibit B, pp. 119-123 (Technical Qualification Proposal Requirements).

[19] Petition, Exhibit B, p. 60 ("Commercial Terms and Conditions").

[20] Petition, Exhibit A, p. 1-2 (GPA Resolution No. 2025-19).

found that the Energy Shifting and Grid Services are "critical for maintaining a stable and reliable electrical grid, by ensuring consistent voltage and frequency regulation, and responding to sudden major and minor disturbances to the grid, as well as optimizing energy resources to alleviate peak demand." Accordingly, the CCU authorized the procurement of the ESS Services Phase II project.[21]

CONCLUSION

GPA has indicated that this project is a part of its efforts "to mitigate impacts to the GPA Island Wide Power System associated with ongoing renewable projects which are intended to comply with Public Law 29-62."[22] Further, GPA has consistently stated that it is committed to 50% renewable energy production by 2030, and 100% renewable energy production by 2040.[23] The implementation of this project, particularly the provision of energy-shifting and grid services, is necessary to integrate high amounts of inverter-based resources into the GPA grid, which will improve grid stability, energy resiliency, reliability, and affordability.[24]

Accordingly, the ALJ finds that the ESS Phase II Project is reasonable, prudent, and necessary inasmuch as the energy storage technology will provide GPA with stable and reliable energy, "ensuring consistent voltage and frequency regulation"; and, can assist during "sudden disturbances" and "peak demand."[25] This ESS energy shifting will allow

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21 Petition, Exhibit A, p. 3 (GPA Resolution No. 2025-19).

22 Petition, Exhibit B, p. 8 (Commercial Terms and Conditions).

23 Petition, Exhibit B, p. 8 (Commercial Terms and Conditions).

24 Petition, Exhibit B, p. 8 (Commercial Terms and Conditions).

25 Petition, p. 3.

GPA to "shift and dispatch energy at any time of day or night to support the grid."[26] Further, the "fixed price" structure is reasonable inasmuch as it is intended to cover all costs, such as interconnection, commissioning, and operations and maintenance; and puts all construction and operations risks on the vendor.[27] This additional resource further provides GPA with capacity to retire its older units. Lastly, this project squarely aligns with the Guam Legislature's findings that GPA's renewable sources should include "technology that is capable of providing storage for shifting energy"; along with the intimation that "continual improvements in solar energy technology to address intermittency and energy shifting" may provide GPA with "all its generation needs." *See* P.L. 35-46, p. 2. For these reasons, the ALJ finds the instant procurement to be reasonable, prudent, and necessary.

RECOMMENDATION

Based on the documentation provided by GPA in this docket, and for the other reasons set forth herein, the ALJ recommends that the PUC approve GPA's Petition. Accordingly, GPA should be authorized to issue a Multi-Step Invitation for Bid related to the procurement of Energy Storage System Energy-Shifting and Grid Services. A proposed Order for the PUC is attached hereto for the PUC's consideration.

Dated this 27th day of August, 2025.

JOEPHET R. ALCANTARA
Administrative Law Judge

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[26] Petition, p. 3.

[27] Petition, p. 3.