

**GOVERNMENT OF PUERTO RICO
PUBLIC SERVICE REGULATORY BOARD
PUERTO RICO ENERGY BUREAU**

IN RE: REVIEW OF THE PUERTO RICO
ELECTRIC POWER AUTHORITY'S 10-YEAR
INFRASTRUCTURE PLAN - DECEMBER
2020

CASE NO.: NEPR-MI-2021-0002

SUBJECT: Determination on GENERA's
November 21 Motion Submitting Response
in Compliance with Resolution and Order
Dated November 8, 2023 and Request a
Time Extension to Provide the Detailed
Scope of Work per Site.

RESOLUTION AND ORDER

I. Introduction

On March 26, 2021, the Energy Bureau of the Puerto Rico Public Service Regulatory Board ("Energy Bureau") issued a Resolution and Order ("March 26 Resolution") in the instant case, through which it ordered the Puerto Rico Electric Power Authority ("PREPA") to submit each specific capital investment project for approval to avoid potential noncompliance with the Approved Integrated Resource Plan ("IRP") and Modified Action Plan.¹ To streamline the process, the Energy Bureau requested PREPA to submit the specific projects to the Energy Bureau at least thirty (30) calendar days before their submittal to the Puerto Rico Central Office for Recovery, Reconstruction and Resiliency ("COR3") and the Federal Emergency Management Agency ("FEMA"), and any other federal agency,² and to continue reporting to the Energy Bureau and FEMA, within the next five (5) years, the progress of all ongoing efforts related to the final approval of the submitted projects not yet approved by the Energy Bureau.

On January 24, 2023, GENERA PR LLC ("GENERA"), PREPA and the Puerto Rico Public-Private Partnership Authority ("P3A") executed the Puerto Rico Thermal Generation Facilities Operation and Maintenance Agreement ("LGA OMA"). According to the LGA OMA, GENERA is the sole operator and administrator of the Legacy Generation Assets³, and the exclusive entity authorized to represent PREPA before the Energy Bureau about any matter related to the performance of the Operation and Maintenance ("O&M") services provided by GENERA under the LGA OMA. Further, GENERA is the sole entity responsible for procuring and administering federal funds for projects to repair or replace the LGA⁴.

On October 27, 2023, GENERA filed a document titled *Amended Motion for Leave to Submit Amendment to Project and 406 BESSs Initial Scope of Work* ("October 27 Motion").⁵ Through the October 27 Motion, GENERA requested the Energy Bureau to grant GENERA leave to present to COR3 and FEMA, the Project Amendment, and the Section 406 Initial SOW, and to continue with all activities required to complete all the essential documentation and analysis

¹ Final Resolution and Order on the Puerto Rico Electric Power Authority's Integrated Resource Plan, *In re: Review of the Integrated Resource Plan of the Puerto Rico Electric Power Authority*, Case No. CEPR-AP-2018-0001, August 24, 2020 ("IRP Order").

² March 26 Resolution, pp. 18-19.

³ As defined in the LGA OMA.

⁴ LGA OMA, Section 5.8 (c).

⁵ The October 27 Motion amends the document titled *Motion for Leave to Submit Amendment to Project and 406 BESS Initial Scope of Work*, *In re: Review of the Puerto Rico Electric Power Authority's 10-Year Infrastructure Plan-December 2020*, case no. NEPR-MI-2021-0002, October 26, 2023 ("October 26 Motion").



to complete the Battery Energy Storage System (“BESS”) Project⁶. GENERA stated that a detailed Scope of Work (“SOW”) will be submitted to FEMA per facility.⁷

On November 8, 2023, the Energy Bureau issued a Resolution and Order (“November 8 Resolution”) conditionally approving the projects submitted by GENERA in the October 27 Motion, subject to the submittal by GENERA of the detailed SOWs.⁸

On November 9, 2023, LUMA⁹ informally presented to the Commissioners of the Energy Bureau a concept known as Accelerated Storage Addition Program (“ASAP”). LUMA stated this program may allow the integration of much needed BESS to the Puerto Rico Electrical System in a significantly reduced amount of time than the time expected through the ongoing renewable energy and storage procurement process¹⁰ (“Tranches”).

On November 21, 2023, GENERA filed a document titled *Motion Submitting Response in Compliance with Resolution and Order Dated November 8, 2023, and Request a Time Extension to Provide the Detailed Scope of Work per Site* (November 21 Motion”). Through the November 21 Motion, GENERA submitted as Exhibit A, a detailed explanation of the steps needed to complete the SOWs per site.

On November 30, 2023, the Energy Bureau issued a Resolution and Order (“November 30 Resolution”) ordering LUMA to present the following information related to the ASAP: (i) a detailed description and discussion of the concept, including its benefits, (ii) status of the efforts toward formalizing it, (iii) discussion on any barriers that may affect its implementation, including any input from stakeholders, (iv) discussion of any impact on the GENERA BESS Project conditionally approved through the November 8 Resolution, and (v) status of LUMA’s due diligence to allow the GENERA BESS projects to the interconnect at the sites.

On December 4, 2023, LUMA filed a document titled *LUMA’s Motion Requesting Extension to Submit Information on Accelerated Storage Addition Program Requested in Resolution and Order of November 30, 2023* (“December 4 Motion”). Through the December 4 Motion LUMA requested an extension of time until December 21, 2023, to submit the information requested by the Energy Bureau on the November 30 Resolution. On December 11, 2023, the Energy Bureau issued a Resolution and Order (“December 11 Resolution”) granting LUMA the extension of time until December 21, 2023.

On December 7, 2023, LUMA filed a document titled *LUMA’s Motion to Submit Information on Status of Due Diligence to allow GENERA BESS Projects to Interconnect, in Compliance with the Resolution and Order of November 30, 2023* (“December 7 Motion”). LUMA submitted as Exhibit 1 information related to the request of item (v) of the November 30 Resolution.

On December 21, 2023, LUMA filed a document titled *LUMA’s Motion to Submit Information on Accelerated Storage Addition Program in Compliance with Resolution and Order of November 30, 2023, and of December 11, 2023, and Request for Energy Bureau to Open a Separate Docket for the Evaluation of this Program* (“December 21 Motion”). LUMA included as Exhibit 1 the information requested in items (i) to (iv) in the November 30 Resolution.

⁶ See October 27 Motion, p. 9

⁷ *Id.*, Exhibit B, Section IV.

⁸ See November 8 Resolution, p.2.

⁹ LUMA Energy, LLC and LUMA Energy ServCo, LLC (jointly referred as “LUMA”)

¹⁰ Refers to docket NEPR-MI-2020-0012 under which the implementation of the IRP is supervised and monitored by the Energy Bureau.



II. Evaluation and Analysis.

A. October 27 Motion

Through the October 27 Motion, GENERA described the importance of deploying BESSs at distribution substations to offer ancillary and distributed-based benefits and for reducing pollutant emissions, adding resilient generation, and reducing energy costs.¹¹

GENERA states that BESSs provide a rapid spinning reserve, frequency regulation, voltage control, and other ancillary services required to keep continuity of the service under emergency events and different scenarios that can put the system at risk of load shedding and blackouts. GENERA also propose to use existing points of interconnections in PREPA's legacy generation facilities to install utility-scale batteries. The intention is to co-locate BESSs with existing conventional generation, **peakers, or baseload**, on each location to maximize the electrical injection capacity available without overloading the existing grid capabilities.¹² BESSs will inject active power at the interconnection point for up to 4 hours to cover temporary generation deficits or initiate fast-generating units.¹³

B. November 21 Motion

Through the November 21 Motion GENERA submitted as Exhibit A, a detailed explanation of the steps needed to complete the detailed SOWs per site of the conditionally approved BESS projects of the November 8 Resolution. LUMA states that to provide a Detailed SOW for each site, the following tasks must be completed¹⁴:

1. LUMA will undertake interconnection studies to determine capacity size per site.
2. Upon capacity size is determined, the A&E will develop a Detailed SOW per site once 30% of the design is completed.
3. With the information capacities, the footprint will be determined, and the Environmental Impact details will be available to develop the FEMA EHP Report.

GENERA propose to submit a monthly report on the progress of interconnection studies to be undertaken by LUMA and the development status of the detailed SOWs and the other process described in Exhibit A of the November 21 Motion¹⁵.

C. December 7 Motion

As a response to the item (v) of the November 30 Motion, LUMA indicates in its December 7 Motion that: (i) is working with GENERA to review the opportunities to install BESS and peakers at existing PREPA/GENERA operating generation locations and that several meetings have been held between GENERA and LUMA team members to discuss GENERA's request for maximum capacity injection evaluation at the generation facilities, (ii) documentation has been exchanged and discussed related to Energy Storage, Cyber Security and Telemetry, (iii) GENERA and LUMA verbally agreed that the Initial Scope of Reviews ("SORs") covers the amount of BESS and peakers capacity limited by the existing Point of Interconnection ("POI"). This involves batteries and peakers that can be added to the system with the existing transformers and other assets installed, and (iv) to identify maximum capacity at each site, impact studies are required which would be coordinated with

¹¹ See October 27 Motion, p.2.

¹² See October 27 Motion, p. 5.

¹³ *Id.*, p. 6.

¹⁴ See November 21 Motion, Exhibit A, p.1.

¹⁵ *Id.*, p. 3.



contracted projects and in coordination with the Tranches being procured by PREPA and the Energy Bureau¹⁶.

D. December 21 Motion

Through the December 21 Motion, LUMA requests the Energy Bureau to open a separate docket to consider the ASAP concept where additional more detailed information is submitted, as it is developed. LUMA states this docket¹⁷ was established for the Energy Bureau to evaluate the 10-Years Plan submitted by PREPA to FEMA to ensure it was aligned with approved IRP and Modified Action Plan¹⁸.

LUMA included as Exhibit 1 of the December 21 Motion the responses to items (i) to (iv) of the November 30 Resolution. LUMA specifically explains in their responses to the item (iv), that multiple BESS projects are under development in Puerto Rico¹⁹:

1. Utility-scale storage procured by the renewable energy RFPs overseen by the Energy Bureau (Tranches).
2. Virtual Power Plants ("VPP").
3. Vieques and Culebra Microgrid.
4. 4x25 BESS Interconnection to LUMA 38 kV System.
5. GENERA BESS.

LUMA indicates these projects are being developed in parallel and should not be affected by the ASAP. LUMA also recognizes that no specific conversation has been held with GENERA about any potential impact between the ASAP and the GENERA BESS project, **but that the two (2) projects have no meaningful overlap with each other. LUMA understands that the ASAP program will have no impact on the GENERA BESS project conditionally approve by the Energy Bureau through the November 8 Resolution** and states that²⁰:

1. There is no expected negative RESOURCE Adequacy impact of ASAP on the GENERA BESS project, nor GENERA BESS project have a negative impact on ASAP that can be seen at this time. That the entire bulk power system would benefit from additional BESS projects and would benefit from both projects being added to the system.
2. There is no operational impact since ASAP and GENERA BESS projects can proceed in parallel because they have different interconnection points, and they will have not affect System Operations ability to dispatch each other.
3. There is no financial impact of the two (2) projects on each other since they will be funded and paid for from different sources.

Upon review of the Exhibit A filed with the October 27 Motion, the explanation of the steps need to complete the SOWs per site in the November 21 Motion, and the information from LUMA in the December 7 and December 21 Motions , the Energy Bureau **DETERMINES** that the projects are necessary to improve the reliability and resiliency of the electrical system by offering ancillary grid service such as rapid spinning reserve, frequency regulation voltage control while also benefiting the environment. The Energy Bureau **APPROVES** the projects included in **Attachment A** to this Resolution and Order. This approval represents **\$647,580,000.00** based on Cost Estimates, as informed by GENERA.²¹

¹⁶ See December 7 Motion, Exhibit 1 p.1.

¹⁷ Referring to docket NEPR-MI-2021-0002, *In re: Review of the Puerto Rico Electric Power Authority's 10-Year Infrastructure Plan-December 2020*.

¹⁸ December 21 Motion, p. 6 ¶ 15 and 16.

¹⁹ *Id.*, Exhibit 1, p.6.

²⁰ *Id.*, p.6.

²¹ *Id.*, pp. 6-7.



III. Energy Bureau Determination

The Energy Bureau **APPROVES** the projects included in **Attachment A** to this Resolution and Order. GENERA **SHALL** present the approved projects to FEMA and COR3 to finalize their approval process. The Energy Bureau approves these projects based on the information from GENERA, **should the scope of the project change, GENERA SHALL immediately seek the Energy Bureau's approval of such changes.** With this approval, the Energy Bureau **RECOGNIZE** that the BESSs can be used as an asset for power generation, for power transmission and distribution, or both. This Resolution and Order does not limit its use, nor does it decide on any party operation or maintenance responsibility. Such a determination will be addressed by the Energy Bureau on a separate Resolution.

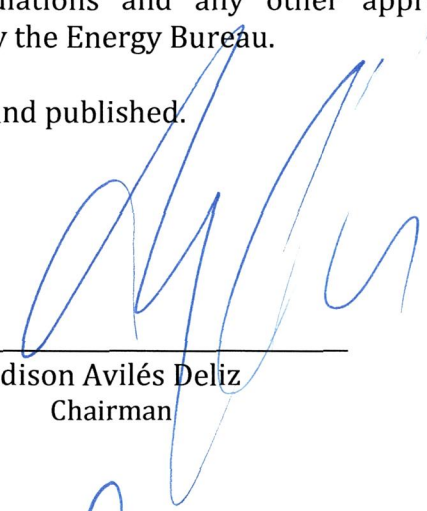
The Energy Bureau **TAKES NOTICE** of the information presented by LUMA for the ASAP concept, in the December 7 and December 21 Motions, and of LUMA's request for the Energy Bureau to open a separate non-adjudicative docket to review the ASAP concept. The Energy Bureau **DETERMINES** that such request will be addressed on a separate Resolution.

The Energy Bureau **ORDERS** GENERA to: (i) submit to the Energy Bureau monthly reports on the progress of interconnection studies to be undertaken by LUMA and the development status for the progress of the detailed SOWs and the BESS RFP's;; (ii) submit to the Energy Bureau copy of the approval by COR3 and/or FEMA of the projects included in **Attachment A**, which shall have the costs obligated for each individual site, **within ten (10) days of receipt of this approval**; (iii) inform the Energy Bureau on the actual contracted cost to construct each individual site of the projects listed in **Attachment A, within ten (10) days from the execution of the contract**; and (iv) inform the Energy Bureau once each of the projects are completed (should construction is completed at different dates).


The order established in the March 26 Resolution regarding the submission of projects before the Energy Bureau **at least thirty (30) calendar days before submitting such projects to FEMA and/or COR3 remains unaltered.**

The Energy Bureau **WARNS** GENERA that, noncompliance with any provision of this Resolution and Order, may result in the imposition of fines pursuant to Act 57-2014 and applicable Energy Bureau's regulations and any other appropriate administrative sanctions, as deemed appropriate by the Energy Bureau.

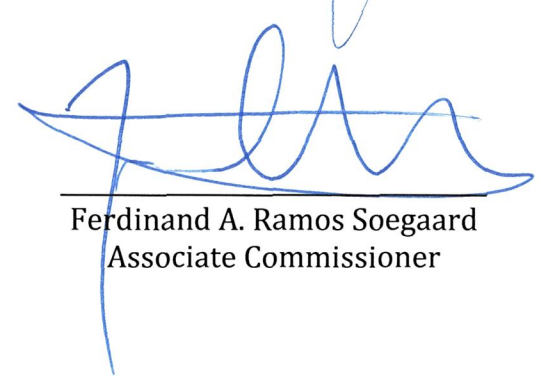
Be it notified and published.



Edison Avilés Deliz
Chairman



Lillian Mateo Santos
Associate Commissioner



Ferdinand A. Ramos Soegaard
Associate Commissioner



Sylvia B. Ugarte Araujo
Associate Commissioner



CERTIFICATION

I certify that the majority of the members of the Puerto Rico Energy Bureau have agreed on February 1st, 2024. Associate Commissioner Antonio Torres Miranda did not intervene. I also certify that in February 1st, 2024 a copy of this Resolution and Order was notified by electronic mail to arivera@gmlex.net; laura.rozas@us.dlapiper.com; margarita.mercado@us.dlapiper.com, Yahaira.delarosa@us.dlapiper.com; julian.angladapagan@us.dlapiper.com; alopez@sbgblaw.com; jfr@sbgblaw.com, legal@genera-pr.com, regulatory@genera-pr.com; and I have moved forward with filing the Resolution and Order issued by the Puerto Rico Energy Bureau.

I sign this in San Juan, Puerto Rico, today February 1st, 2024.



Sonia Seda Gaztambide
Clerk



Attachment A

Conditionally Approved BESS Project Under Section 406 Initial SOW

| Site (POI) | Units ²² per Site | Estimated Cost ²³ | Unit Installation Cost | Total Cost per Site |
|------------------------|------------------------------|------------------------------|------------------------|---------------------|
| Daguao | 20 | \$23,740,000.00 | \$6,380,000.00 | \$30,120,000.00 |
| Yabucoa | 20 | \$23,740,000.00 | \$6,380,000.00 | \$30,120,000.00 |
| Jobos | 20 | \$23,740,000.00 | \$6,380,000.00 | \$30,120,000.00 |
| Aguirre Power Plant | 100 | \$118,700,000.00 | \$31,900,000.00 | \$150,600,000.00 |
| Costa Sur Power Plant | 100 | \$118,700,000.00 | \$31,900,000.00 | \$150,600,000.00 |
| Cambalache Power Plant | 20 | \$23,740,000.00 | \$6,380,000.00 | \$30,120,000.00 |
| Vega Baja | 50 | \$59,350,000.00 | \$15,950,000.00 | \$75,300,000.00 |
| Palo Seco Power Plant | 50 | \$59,350,000.00 | \$15,950,000.00 | \$75,300,000.00 |
| San Juan Power Plant | 50 | \$59,350,000.00 | \$15,950,000.00 | \$75,300,000.00 |
| Total | 430 | \$510,410,000.00 | \$137,170,000.00 | \$647,580,000.00 |



²² Each unit is a 4-hour 1 MW power output battery.

²³ Unit Cost with a 20-year warranty is \$1,187,000.00.