

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

IN RE: REVIEW OF THE PUERTO RICO
ELECTRIC POWER AUTHORITY
INTEGRATED RESOURCE PLAN

CASE NO.: NEPR-AP-2023-0004

SUBJECT: Agenda for the October 31, 2023
Technical Conference – IRP Prefiling Process
(Phase 1).

RESOLUTION AND ORDER

On August 24, 2020, the Energy Bureau of the Puerto Rico Public Service Regulatory Board (“Energy Bureau”) issued the IRP Order¹, regarding the Puerto Rico Electric Power Authority’s (“PREPA”) Integrated Resource Plan (“IRP”). The IRP Order included a Section titled “Preparing for the Next IRP Cycle”, containing action items and internal process improvements to be implemented by the for the next IRP.² The action items included specific technical elements about how the IRP considered energy efficiency, distributed generation and storage, load forecasting, wind resources, resource need assessment, transmission and distribution and a Modified Action Plan.³

SM On July 1, 2023, Genera PR, a subsidiary of New Fortress Energy Inc., began operations and maintenance of the Puerto Rico Electric Power Authority’s aging power-generation assets, also known as the “legacy” power plants, formerly operated by PREPA.

SM
JM On August 8, 2023, the Energy Bureau held an initiating technical conference for the 2024 IRP. The technical conference included a presentation by LUMA on some of the agenda items about the technical aspects of the IRP (“August 8 Presentation”). LUMA filed the materials it used during the August 8 Presentation. Presentation and discussion of other technical items from the agenda were postponed pending the availability of LUMA's selected technical contractor.

JM
SM On September 7, 2023, the Energy Bureau approved the revised technical contract between LUMA and its selected technical contractor. The Energy Bureau has scheduled a second pre-IRP filing period technical conference for October 31, 2023 from 10:00 AM to 5:00 PM. The focus of the October 31, 2023 technical conference is to address the technical elements excluded from discussion during the first technical conference.

SM
JM The purpose of the technical conferences during the IRP Prefiling period is for the Energy Bureau to make sure LUMA reasonably complies with Regulation 9021,⁴ to ensure that LUMA’s analysis will be sufficiently robust to comply with Puerto Rico public policy goals and to meet Energy Bureau expectations as to the quality of the analysis and the information provided. The purpose of the Prefiling period technical conferences is also to provide an opportunity for LUMA to seek clarifications from the Energy Bureau about compliance with Regulation 9021.

The Energy Bureau **ORDERS** LUMA’s personnel to attend the second pre-IRP filing period technical conference scheduled for **October 31, 2023 from 10:00 AM to 5:00 PM**, together with its technical contractor. The Energy Bureau **EXPECTS** both, LUMA’s personnel and its

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 IRP Order, pp. 285-289, ¶ 912-922.

³ IRP Order, pp. 285-287, ¶ 913-919.

⁴ *Regulation on Integrated Resource Plan for the Puerto Rico Electric Power Authority*, April 24, 2018 (“Regulation 9021”).



technical consultant, to be prepared to answer questions from the Energy Bureau's and its consultants.

Attachment A to this Resolution and Order has a detailed agenda for the **October 31, 2023** second pre-IRP filing period technical conference. The Energy Bureau **ORDERS** LUMA to prepare presentation materials in accordance with the agenda and submit the presentation materials by **Tuesday, October 25, 2023**.

Attachment B to this Resolution and Order has the first set of pre-IRP filing period Requests of Information ("ROI") to LUMA. The Energy Bureau **ORDERS** LUMA to respond to these ROIs by **Tuesday, October 24, 2023**.

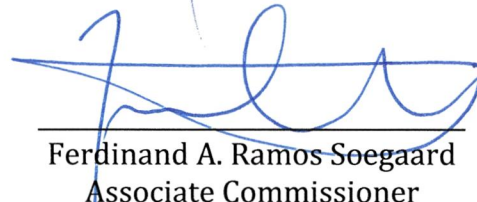
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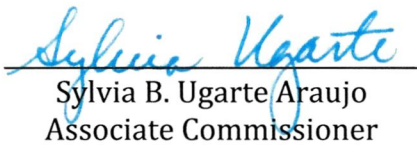
Edison Avilés Deliz
Chairman



Lillian Mateo Santos
Associate Commissioner



Ferdinand A. Ramos Soegaard
Associate Commissioner



Sylvia B. Ugarte Araujo
Associate Commissioner



Antonio Torres Miranda
Associate Commissioner

CERTIFICATION

I certify that the majority of the members of the Puerto Rico Energy Bureau agreed on September 27, 2023. Associate Commissioner Ferdinand A. Ramos Soegaard did not intervene. Also certify that on September 27, 2023, I have proceeded with the filing of this Resolution and Order and was notified by email to laura.rozas@us.dlapiper.com; margarita.mercado@us.dlapiper.com, mvazquez@diazvaz.law; ana.rodriquezrivera@us.dlapiper.com; jmarrero@diazvaz.law; brannen@genera-services.com; kbolanos@genera-pr.com; regulatory@genera-pr.com. I also certify that on September 27, 2023, I have moved forward with filing the Resolution and Order issued by the Puerto Rico Energy Bureau.

For the record, I sign in San Juan, Puerto Rico, today, September 27, 2023.



Sonia Seda Gaztambide
Clerk



Attachment A

Agenda for 2024 IRP Second Technical Conference, October 31, 2023

1. Introduction – Energy Bureau
 - a. Purpose and scope of pre-IRP period technical conferences
 - i. Information dissemination
 - ii. Discussion of assumptions and approaches
 - b. Expectations of the Energy Bureau for LUMA and its technical contractor during the pre-IRP period
 - c. Role of Requests of Information (ROI) during the pre-IRP filing period
 - i. Advance dissemination of critical input assumptions and planned methodologies
 - d. Optimization Proceeding intentions / purposes folded into this IRP exercise
 - i. Distributed scale vs. utility scale resource decisions and determinations
2. LUMA presentation or discussion on PR100 / DOE information to inform assumptions in the IRP:
 - a. Solar potential and performance
 - b. Wind potential and performance
 - c. Distributed scale vs. Utility scale resource scenarios
 - d. Transmission and/or distribution analysis
3. LUMA presentation(s) on core Modeling Assumptions –quantitative information presentation and explanation expected across the following areas:
 - a. Load forecast - components for IRP modeling
 - i. Base forecast (peak load and annual energy)
 - ii. Energy efficiency effects on base forecast (energy and peak load modification)
 - iii. Distributed generation (solar PV) behind-the-meter (BTM) effects on base forecast (energy load modification)
 - iv. Distributed battery storage BTM effects on base forecast, if any (energy and peak load modification)
 - b. New resource options – attributes, cost trajectories and implementation constraints for IRP modeling
 - i. Utility scale solar PV
 - ii. Utility scale wind - onshore
 - iii. Utility scale wind – offshore
 - iv. Utility scale battery resources
 - v. Distributed scale solar PV
 - vi. Distributed scale battery resources
 - vii. Demand response resources including BTM battery resources
 - viii. Combustion turbines
 - ix. Reciprocating engines
 - x. Combined cycle units



- c. Existing supply side resources – characterization
 - i. Overview – fossil and hydro
 - ii. Operating metrics
 - iii. Availability metrics
 - iv. Retirement trajectories – fossil
 - v. Hydro incremental capacity and improved performance
 - d. Resources under procurement or implementation – role in modeling – how are they accounted for in the IRP
 - i. Tranches – solar PV and battery storage
 - ii. New Genera resources – peakers, black start
 - iii. Emergency demand response procurements
 - iv. DOE solar and battery storage for low-income participants
4. LUMA presentation(s) on Modeling Scenarios / Analysis Structure / Approach
- a. Scenarios
 - b. Methodologies
 - c. How to evaluate and value distributed energy resources compared to utility scale resources in the IRP modeling – characterization of DER beyond load modifier context
 - i. Optimization of distributed scale vs. utility scale – inclusive of on-site resiliency
5. Topics and Schedule for Next Technical Conferences – LUMA and Energy Bureau
- a. Transmission analysis
 - b. Distribution analysis
 - c. Other – Regulation 9021 elements as necessary
 - d. Two additional technical conferences: Mid-December and Late January



Attachment B

First Set of pre-IRP filing period ROIs – Load Forecast, Resource Adequacy, and New Resource Cost Parameters

1. Provide the 2023 Resource Adequacy Analysis Report; and any associated analytical workpapers in Excel file format.
2. Provide Puerto Rico historical total hourly load for all hours for 2020 to the present, including consistent estimates of the hourly consumption and the hourly system losses on the transmission and distribution system. As available, provide this information by Puerto Rico district and by major sector (residential, commercial, industrial) as categorized. Provide in Excel file format.
3. Provide LUMA's projected load forecast to be used in IRP modeling, with annual energy, annual peak load, and 8,760 hourly load projections for the 2024-2044 period. Provide in Excel file format.
4. Provide LUMA's breakdown of the load forecast (2024-2044) to be used in IRP modeling by Puerto Rico district and by major sector (residential, commercial, industrial) as categorized, in Excel file format.
5. Clearly describe how energy efficiency and distributed resources (solar PV and battery energy storage) affect the load forecast provided in the above ROIs. If energy efficiency and distributed resources are explicitly factored into the load forecast, provide the hourly component values for each of energy efficiency and distributed resources. Provide in Excel file format.
6. Provide current planned capital costs and fixed O&M cost trajectories for all years across the planning horizon of 2025-2044 for supply resources to be used as options in the IRP modeling. These cost trajectories should capture any changes in capital and O&M costs across the planning horizon. Provide estimated cost trajectories for resources including (but not limited to) the following:
 - a. Wind – onshore.
 - b. Wind – offshore.
 - c. Solar PV utility scale.
 - d. Solar PV distributed scale.
 - e. Battery energy storage utility scale – 4-hour duration
 - f. Battery energy storage utility scale – 2-hour duration
 - g. Battery energy storage utility scale – 6-hour duration
 - h. Battery energy storage – distributed scale.
 - i. Small combustion turbines or gas turbines.
 - j. Small reciprocating engines (RICE units).
 - k. Other size CT, GT, or RICE units.
 - l. Combined cycle units.

For all cost estimates including sources and the vintage of the estimate. Where feasible provide in Excel file format.

7. Provide planned availability for first “new” resource in-service year, and planned allowed pace of installation (e.g., MW/year, for each year of the planning horizon) for each of the resource types considered as options in the IRP modeling.

