

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

**NEPR**

**Received:**

**Mar 9, 2026**

**9:49 PM**

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

**CASE NO.:** NEPR-AP-2023-0004

**SUBJECT:** Motion Submitting Responses to  
Further Requests for Information in  
Compliance with Resolution and Order of  
February 13, 2026, Request for Confidential  
Treatment, and Memorandum in Support of  
Confidentiality

**MOTION SUBMITTING RESPONSES TO FURTHER REQUESTS FOR  
INFORMATION IN COMPLIANCE WITH RESOLUTION AND ORDER OF  
FEBRUARY 13, 2026, REQUEST FOR CONFIDENTIAL TREATMENT, AND  
MEMORANDUM IN SUPPORT OF CONFIDENTIALITY**

**TO THE HONORABLE PUERTO RICO ENERGY BUREAU:**

**COME NOW LUMA Energy, LLC** (“ManagementCo”), and **LUMA Energy ServCo, LLC** (“ServCo”), (jointly referred to as “LUMA”), and respectfully state and request the following:

**I. Introduction and Submission of Responses**

1. On October 17, 2025, LUMA filed the *Motion Submitting the 2025 Integrated Resource Plan (IRP) and Request for Confidential Treatment*, Puerto Rico Energy Bureau’s (Energy Bureau) review of the 2025 IRP. In its filing, along with that Motion, LUMA submitted the 2025 IRP Report, along with the workpapers and models relied upon in its development.

2. On October 29, 2025, LUMA filed a *Memorandum of Law in Support of Request for Confidential Treatment of Revised 2025 IRP and Submission of Public Version and Confidential Version of Revised 2025 IRP*. LUMA submitted a revised, redacted version of the 2025 IRP Report, along with the workpapers and models relied on in its development, for public

disclosure.<sup>1</sup> Moreover, pursuant to this Energy Bureau’s Policy on Confidential Information, LUMA filed the corresponding memorandum of law stating the legal basis for the request to treat certain portions of the revised version of the 2025 IRP and the workpapers and models relied on in developing the 2025 IRP confidentially.

3. Thereafter, on November 21, 2025, LUMA filed a *Motion Submitting the Transmission Needs Studies Report, Request for Confidential Treatment, and Memorandum in Support of Confidentiality*. LUMA submitted the Transmission Needs Studies Report in compliance with the portion of Regulation 9021 that requires LUMA to test the Preferred Resource Plan to determine any implications for the transmission and distribution system. It also filed a revised version of the pre-filed direct testimony of Dr. Ajit Kulkarni, Grid Modernization Manager, in support of the Transmission Needs Studies Report.

4. On December 3, 2025, the Energy Bureau issued a Resolution and Order directing LUMA to respond to the *First Set of 2025 IRP Post-Filing Request for Information* within fifteen business days (“December 3 Order”). The *First Set of 2025 IRP Post-Filing Request for Information* addresses 2025 IRP completeness, including the need for LUMA to provide further clarity on some aspects of the 2025 IRP Report and to provide further explanation and workpapers in support of the material filed.

5. On December 22, 2025, LUMA filed a *Motion Submitting Responses to the First Set of 2025 IRP Post Filing Request of Information in Compliance with Resolution and Order of December 3, 2025*. Therein, LUMA submitted narrative responses to all questions, except those that required the data referenced in question four of the *First Set of 2025 IRP Post-Filing Request*

---

<sup>1</sup> The revised version differed from the version filed on October 17, 2025, in that it addressed some grammatical errors and formatting issues, and revised the data presented in Tables 66, 67, and 68, specifically the values in the second column labeled “PR100 Cost Scaling Factor.” It also revisited some of the confidential designations originally made.

*for Information*. LUMA requested an extension to submit no later than January 15, 2026, the hourly data requested in question four of the *First Set of 2025 IRP Post-Filing Request for Information*, along with detailed responses to questions 4b, 4c, 4d, and 8d, which are directly related to that data.

6. On December 23, 2025, the Energy Bureau issued a Resolution and Order granting LUMA until January 15, 2026, to submit the hourly data of all Scenarios along with detailed responses to questions 4b, 4c, 4d, and 8d, which are directly related to that data.

7. On January 15, 2026, LUMA filed a *Motion Submitting Supplemental Responses to the First Set of 2025 IRP Post Filing Request for Information, Request for Confidential Treatment, and Memorandum in Support of Confidentiality*. Therein, LUMA submitted detailed responses to questions 4b, 4c, 4d, and 8d of the *First Set of 2025 IRP Post-Filing Request for Information*, along with the hourly data requested in question four.

8. On February 13, 2026, the Energy Bureau issued a Resolution and Order deeming LUMA's 2025 IRP filing complete for meeting Regulation 9021 requirements ("February 13 Order"). However, the Energy Bureau determined that additional material from LUMA is needed to ensure a comprehensive record from which to continue the review of the 2025 IRP and LUMA's proposed Preferred Resource Plan. Accordingly, the Energy Bureau directed LUMA to submit the information required in Appendix A of the February 13 Order within the next fifteen business days, by March 9, 2026.

9. In compliance with the February 13 Order, LUMA hereby submits its responses to the requests for information included in Appendix A of the February 13 Order, as *Exhibit 1* to this Motion.

10. However, LUMA is currently working on the response to the request for information 18, which instructs LUMA to provide a much fuller description of how the distribution system can accommodate incremental penetration of distributed generation. Thus, a brief extension of time until Wednesday, March 11, 2026, will be required for LUMA to submit its response to Request for Information 18.

11. LUMA respectfully submits that certain information and/or workpapers attached to *Exhibit 1* contain confidential information that garners protection from public disclosure pursuant to applicable law and regulations, as explained below. Accordingly, pursuant to this Energy Bureau's Policy on Confidential Information, LUMA hereby submits the corresponding memorandum of law stating the legal basis for the request to treat certain files and/or workpapers attached to *Exhibit 1* confidentially.

## **II. Applicable Laws and Regulations for submitting information confidentially before the Energy Bureau**

12. Section 6.15 of Act 57-2014 regulates the management of confidential information filed before this Energy Bureau. It provides, in pertinent part, that: “[i]f any person who is required to submit information to the Energy [Bureau] believes that the information to be submitted has any confidentiality privilege, such person may request the Commission to treat such information as such . . .” 22 LPRA § 1054n (2025). If the Energy Bureau determines, after appropriate evaluation, that the information should be protected, “it shall grant such protection in a manner that least affects the public interest, transparency, and the rights of the parties involved in the administrative procedure in which the allegedly confidential document is submitted.” *Id.*, Section 6.15(a).

13. In connection with the duties of electric power service companies, Section 1.10(i) of Act 17-2019<sup>2</sup> further provides that electric power service companies shall submit information

---

<sup>2</sup> Known as the “Puerto Rico Energy Public Policy Act” (hereinafter, “Act 17-2019”).

requested by customers, except for: (i) confidential information in accordance with the Rules of Evidence of Puerto Rico. 22 LPRA § 1141i (2025).

14. Access to the confidential information shall be provided “only to the lawyers and external consultants involved in the administrative process after the execution of a confidentiality agreement.” Section 6.15(b) of Act 57-2014, 22 LPRA § 1054n (2025). Finally, Act 57-2014 provides that this Energy Bureau “shall keep the documents submitted for its consideration out of public reach only in exceptional cases. In these cases, the information shall be duly safeguarded and delivered exclusively to the personnel of the [Energy Bureau] who need to know such information under nondisclosure agreements. However, the [Energy Bureau] shall direct that a non-confidential copy be furnished for public review”. *Id.*, Section 6.15(c).

15. Moreover, the Energy Bureau’s Policy on Confidential Information details the procedures that a party should follow to request that a document or portion thereof be afforded confidential treatment. In essence, the Energy Bureau’s Policy on Confidential Information requires identification of the confidential information and the filing of a memorandum of law, “no later than ten (10) days after filing of the Confidential Information”, explaining the legal basis and support for a request to file information confidentially. *See* Policy on Confidential Information, Section A, as amended by the Resolution of September 16, 2016, CEPR-MI-2016-0009. The memorandum should also include a table identifying the confidential information, a summary of the legal basis for the confidential designation, and a summary of the reasons each claim or designation conforms to the applicable legal basis for confidentiality. *Id.*, paragraph 3. The party that seeks confidential treatment of information filed with the Energy Bureau must also file both a “redacted” or “public version” and an “unredacted” or “confidential” version of the document that contains confidential information. *Id.*, paragraph 6.

16. The Energy Bureau's Policy on Confidential Information also states the following with regard to access to Validated Confidential Information:

1. Trade Secret Information

Any document designated by the [Energy Bureau] as Validated Confidential Information on the grounds that it is a trade secret pursuant to Act 80-2011 may only be accessed by the Producing Party and the [Energy Bureau], unless otherwise set forth by the [Energy Bureau] or any competent court.

2. Critical Energy Infrastructure Information ("CEII")

The information designated by the [Energy Bureau] as Validated Confidential Information on the ground of being CEII may be accessed by the parties' authorized representatives only after they have executed and delivered the Non-Disclosure Agreement.

Those authorized representatives who have signed the Non-Disclosure Agreement may only review the documents validated as CEII at the [Energy Bureau] or the Producing Party's offices. During the review, the authorized representatives may not copy or disseminate the reviewed information and may bring no recording device to the viewing room.

*Id.*, Section D (on Access to Validated Confidential Information).

17. Relatedly, Energy Bureau Regulation No. 8543, *Regulation on Adjudicative, Notice of Noncompliance, Rate Review, and Investigation Proceedings*, includes a provision for filing confidential information in adjudicatory proceedings before this honorable Energy Bureau. To wit, Section 1.15 provides that, "a person has the duty to disclose information to the [Energy Bureau] considered to be privileged pursuant to the Rules of Evidence, said person shall identify the allegedly privileged information, request the [Energy Bureau] the protection of said information, and provide supportive arguments, in writing, for a claim of information of privileged nature. The [Energy Bureau] shall evaluate the petition and, if it understands [that] the material merits protection, proceed accordingly to . . . Article 6.15 of Act No. 57-2015, as amended."

### III. Legal Basis and Arguments in Support of Confidentiality

18. Act 40-2024, better known as the *Commonwealth of Puerto Rico Cybersecurity Act*, defines “Critical Infrastructure” as those “services, systems, resources, and essential assets, whether physical or virtual, the incapacity or destruction of which would have a debilitating impact on Puerto Rico’s cybersecurity, health, economy, or any combination thereof.” 3 LPRA § 10124(p) (2024). Generally, CEII or critical infrastructure information is generally exempted from public disclosure because it involves assets and information, pose public security, economic, health, and safety risks. Federal Regulations on CEII, particularly, 18 C.F.R. § 388.113, state that:

Critical energy infrastructure information means specific engineering, vulnerability, or detailed design information about proposed or existing critical infrastructure that:

- (i) Relates details about the production, generation, transportation, transmission, or distribution of energy;
- (ii) Could be useful to a person in planning an attack on critical infrastructure;
- (iii) Is exempt from mandatory disclosure under the Freedom of Information Act, 5 U.S.C. 552; and
- (iv) Does not simply give the general location of the critical infrastructure.

*Id.*

19. Additionally, “[c]ritical electric infrastructure means a system or asset of the bulk-power system, whether physical or virtual, the incapacity or destruction of which would negatively affect national security, economic security, public health or safety, or any combination of such matters.” *Id.* Finally, “[c]ritical infrastructure means existing and proposed systems and assets, whether physical or virtual, the incapacity or destruction of which would negatively affect security, economic security, public health or safety, or any combination of those matters.” *Id.*

20. The Critical Infrastructure Information Act of 2002, 6 U.S.C. §§ 671-674 (2020), part of the Homeland Security Act of 2002, protects critical infrastructure information (“CII”).<sup>3</sup> CII is defined as “information not customarily in the public domain and related to the security of critical infrastructure or protected systems...” 6 U.S.C. § 671 (3).<sup>4</sup>

---

<sup>3</sup> Regarding protection of voluntary disclosures of critical infrastructure information, 6 U.S.C. § 673, provides in pertinent part, that CII:

- (A) shall be exempt from disclosure under the Freedom of Information Act;
- (B) shall not be subject to any agency rules or judicial doctrine regarding ex parte communications with a decision making official;
- (C) shall not, without the written consent of the person or entity submitting such information, be used directly by such agency, any other Federal, State, or local authority, or any third party, in any civil action arising under Federal or State law if such information is submitted in good faith;
- (D) shall not, without the written consent of the person or entity submitting such information, be used or disclosed by any officer or employee of the United States for purposes other than the purposes of this part, except—
  - (i) in furtherance of an investigation or the prosecution of a criminal act; or
  - (ii) when disclosure of the information would be--
    - (I) to either House of Congress, or to the extent of matter within its jurisdiction, any committee or subcommittee thereof, any joint committee thereof or subcommittee of any such joint committee; or
    - (II) to the Comptroller General, or any authorized representative of the Comptroller General, in the course of the performance of the duties of the Government Accountability Office;
- (E) shall not, be provided to a State or local government or government agency; of information or records;
  - (i) be made available pursuant to any State or local law requiring disclosure of information or records;
  - (ii) otherwise be disclosed or distributed to any party by said State or local government or government agency without the written consent of the person or entity submitting such information;
  - or
  - (iii) be used other than for the purpose of protecting critical Infrastructure or protected systems, or in furtherance of an investigation or the prosecution of a criminal act.
- (F) does not constitute a waiver of any applicable privilege or protection provided under law, such as trade secret protection.

<sup>4</sup> CII includes the following types of information:

- (A) actual, potential, or threatened interference with, attack on, compromise of, or incapacitation of critical infrastructure or protected systems by either physical or computer-based attack or other similar conduct (including the misuse of or unauthorized access to all types of communications and data transmission systems) that violates Federal, State, or local law, harms interstate commerce of the United States, or threatens public health or safety;
- (B) the ability of any critical infrastructure or protected system to resist such interference, compromise, or incapacitation, including any planned or past assessment, projection, or estimate of the vulnerability of critical infrastructure or a protected system, including security testing, risk evaluation thereto, risk management planning, or risk audit; or
- (C) any planned or past operational problem or solution regarding critical infrastructure or protected systems, including repair, recovery, construction, insurance, or continuity, to the extent it is related to such interference, compromise, or incapacitation.

21. Certain files attached to *Exhibit 1*, identified in Section IV of the present Motion, include CEII, because it contains single-line diagrams that qualify as CEII. They contain information on the engineering and design of critical infrastructure, existing and proposed, for the transmission of electricity, provided in sufficient detail to be helpful to a person planning an attack on this or other energy infrastructure facilities interconnected with or served by this facility and its equipment. In addition, the files attached to *Exhibit 1* that have been identified in Section IV qualify as CEII because each of these documents contains the express location for power transmission and distribution facilities (18 C.F.R. § 388.113(iv)), and these specific locations could potentially be helpful to a person planning an attack on the energy facilities. The information identified as confidential in this paragraph is not common knowledge, is not made publicly available, and if disclosed to the public, will expose key assets to security vulnerabilities or attacks by people seeking to cause harm to the systems. Therefore, it is in the public interest to keep the information confidential. Confidential designation is a reasonable and necessary measure to protect critical infrastructure from attacks and to enable LUMA to leverage information without external threats, *see e.g.*, 6 U.S.C §§ 671-674; 18 C.F.R. §388.113 (2020), and the Energy Bureau's Policy on Confidential Information.

22. In several proceedings, this Energy Bureau has considered and granted requests by PREPA to submit CEII under seal of confidentiality.<sup>5</sup> In at least two proceedings on Data Security<sup>6</sup> and Physical Security,<sup>7</sup> this Energy Bureau, *motu proprio*, has conducted proceedings confidentially, thereby recognizing the need to protect CEII from public disclosure.

23. Additionally, this Energy Bureau has granted requests by LUMA to protect CEII in connection with LUMA's System Operation Principles. *See* Resolution and Order of May 3, 2021, table 2 on page 4, Case No. NEPR-MI-2021-0001 (granting protection to CEII included in LUMA's Responses to Requests for Information). Similarly, in the proceedings on LUMA's proposed Initial Budgets and System Remediation Plan, this Energy Bureau granted confidential designation to several portions of LUMA's Initial Budgets and Responses to Requests for Information. *See* Resolution and Order of April 22, 2021, on Initial Budgets, table 2 on pages 3-4, and Resolution and Order of April 22, 2021, on Responses to Requests for Information, table 2 on pages 8-10, Case No. NEPR-MI-2021-0004; Resolution and Order of April 23, 2021, on Confidential Designation of Portions of LUMA's System Remediation Plan, table 2 on page 5, and Resolution and Order of May 6, 2021, on Confidential Designation of Portions of LUMA's

---

<sup>5</sup> *See e.g., In re Review of LUMA's System Operation Principles*, NEPR-MI-2021-0001 (Resolution and Order of May 3, 2021); *In re Review of the Puerto Rico Power Authority's System Remediation Plan*, NEPR-MI-2020-0019 (order of April 23, 2021); *In re Review of LUMA's Initial Budgets*, NEPR-MI-2021-0004 (order of April 21, 2021); *In re Implementation of Puerto Rico Electric Power Authority Integrated Resource Plan and Modified Action Plan*, NEPR MI 2020-0012 (Resolution of January 7, 2021, granting partial confidential designation of information submitted by PREPA as CEII); *In re Optimization Proceeding of Minigrad Transmission and Distribution Investments*, NEPR MI 2020-0016 (where PREPA filed documents under seal of confidentiality invoking, among others, that a filing included confidential information and CEII); *In re Review of the Puerto Rico Electric Power Authority Integrated Resource Plan*, CEPR-AP-2018-0001 (Resolution and Order of July 3, 2019 granting confidential designated and request made by PREPA that included trade secrets and CEII) *but see* Resolution and Order of February 12, 2021 reversing in part, grant of confidential designation).

<sup>6</sup> *In re Review of the Puerto Rico Electric Power Authority Data Security Plan*, NEPR-MI-2020-0017.

<sup>7</sup> *In re Review of the Puerto Rico Electric Power Authority Physical Security Plan*, NEPR-MI-2020-0018.

Responses to Requests for Information on System Remediation Plan, table 2 at pages 7-9, Case No. NEPR-MI-2020-0019.

24. Likewise, Section 4(x) of the *Puerto Rico Open Government Data Act*, Act 122-2019, exempts from public disclosure commercial or financial information whose disclosure will cause competitive harm. 3 L.P.R.A. § 9894. The workpapers and models relied on in the development of the responses to the requests for information, included as *Exhibit 1* to this Motion, contain or reference proprietary PLEXOS© formulas and pivot tables belonging to third parties. These PLEXOS© formulas and pivot tables constitute commercial or financial information within Section 4(x) of Act 122-2019, as they possess independent economic value and provide a business advantage by virtue of not being generally known or readily accessible to competitors or the public.

25. Moreover, reasonable measures have been taken to maintain the confidentiality of this information, consistent with statutory requirements. Disclosure of these PLEXOS© formulas and pivot tables would risk competitive harm to the third party and undermine public policy favoring the protection of commercially valuable confidential information. Therefore, LUMA requests that the Energy Bureau grant confidential treatment to these PLEXOS© formulas and pivot tables, all of which are proprietary to third parties, to ensure compliance with the statutory protections afforded under Puerto Rico law.

#### **IV. Identification of Confidential Information**

26. In compliance with the Energy Bureau's Policy on Confidential Information, CEPR-MI-2016-0009, a table summarizing the hallmarks of this request for confidential treatment is hereby included.

<b>Document</b>	<b>Name</b>	<b>Pages in Which Confidential Information is Found</b>	<b>Summary of Legal Basis for Confidentiality Protection</b>	<b>Date Filed</b>
Exhibit 1	Figure 2: Schematic Map	Page 34	Critical Energy Infrastructure Information 18 C.F.R. § 388.113; 6 U.S.C. §§ 671-674	March 9, 2026
	Table 7: Analysis of Transfer Limits Mapped to Critical Circuits in the Schematic Diagram, Represented by Circles in the Illustrated Figure 2	Pages 34-35	Critical Energy Infrastructure Information 18 C.F.R. § 388.113; 6 U.S.C. §§ 671-674	March 9, 2026
	CONFIDENTIAL_RFI-LUMA-AP-2023.0004-20260213-PREB-002	Entire File	Third-Party Proprietary Information	March 9, 2026
	CONFIDENTIAL_RFI-LUMA-AP-2023.0004-20260213-PREB-005	Entire File	Third-Party Proprietary Information	March 9, 2026
	CONFIDENTIAL - 2026.03.04_Attachment Battery AS and Net Gen Data - RFI 2-10.1	Entire File	Third-Party Proprietary Information	March 9, 2026

<b>Document</b>	<b>Name</b>	<b>Pages in Which Confidential Information is Found</b>	<b>Summary of Legal Basis for Confidentiality Protection</b>	<b>Date Filed</b>
	CONFIDENTIAL - 2026.02.26_Attachment PRP_Reserve data for batteries- RFI 2-11-2	Entire File	Third-Party Proprietary Information	March 9, 2026
	CONFIDENTIAL_RFI-LUMA-AP-2023.0004-20260213-PREB-012	Entire File	Third-Party Proprietary Information	March 9, 2026
	CONFIDENTIAL_Puerto Rico Transmission System_36X72_Roads_Region.jpg	Entire File	Critical Energy Infrastructure Information 18 C.F.R. § 388.113; 6 U.S.C. §§ 671-674	March 9, 2026
	CONFIDENTIAL_Puerto Rico Transmission System_36X72_Roads_Region.pdf	Entire File	Critical Energy Infrastructure Information 18 C.F.R. § 388.113; 6 U.S.C. §§ 671-674	March 9, 2026
	CONFIDENTIAL_TransferLimitsTable.xlsx	Entire File	Critical Energy Infrastructure Information 18 C.F.R. § 388.113; 6 U.S.C. §§ 671-674	March 9, 2026

**WHEREFORE**, LUMA respectfully requests that the Energy Bureau **take notice** of the above information; **accept** the responses to Appendix A of the February 13 Order as *Exhibit 1* of this Motion, **deem** LUMA complied with the February 13 Order, **approve the request for confidential treatment** of the information submitted in *Exhibit 1*, and **grant** a brief extension until Wednesday, March 11, 2026, to submit the response to Request for Information 18.

**WE HEREBY CERTIFY** that this Motion was filed using the electronic filing system of this Energy Bureau and that electronic copies of this Motion will be notified to the Puerto Rico Electric Power Authority: Alexis Rivera, [alexis.rivera@prepa.pr.gov](mailto:alexis.rivera@prepa.pr.gov), and through its counsel of record, Natalia Zayas Godoy, [nzayas@gmlex.net](mailto:nzayas@gmlex.net), Richard Cruz Franqui, [rcruzfranqui@gmlex.net](mailto:rcruzfranqui@gmlex.net), and Mirelis Valle Cancel, [mvalle@gmlex.net](mailto:mvalle@gmlex.net), and Genera PR, LLC, through its attorney of record Luis R. Román Negrón, [lrm@roman-negrom.com](mailto:lrm@roman-negrom.com).

**RESPECTFULLY SUBMITTED.**

In San Juan, Puerto Rico, on March 6, 2026.



**DLA Piper (Puerto Rico) LLC**  
Calle de la Tanca #500, Suite 401  
San Juan, PR 00901-1969  
Tel. 787.945.9132  
Fax 939.697.6102

/s/ *Yahaira De la Rosa Algarín*  
Yahaira De la Rosa Algarín  
PR Bar No. 18,061  
[yahaira.delarosa@us.dlapiper.com](mailto:yahaira.delarosa@us.dlapiper.com)

Exhibit 1

# 2025 Integrated Resource Plan (2025 IRP)

Attachment A Responses to  
Second Set of 2025 IRP Post-  
Filing Request for Information  
(RFI)



# 2025 INTEGRATED RESOURCE PLAN

## Attachment A NEPR-AP-2023-0004

### INTRODUCTION

On February 13, 2026, the Energy Bureau issued its February 13 R&O<sup>1</sup>, determining that LUMA's 2025 IRP filing is complete for purposes of meeting the requirements of Regulation 9021. The February 13 R&O includes the Second Set of 2025 IRP Post Filing RFIs, which requires LUMA to provide additional information within 15 business days, by March 9, 2026.

This response by LUMA addresses inquiries from the Energy Bureau related to the Second Set of 2025 IRP Post-Filing RFIs, on questions related to the completeness of the 2025 IRP for the following items: 1) Exhibit 2 Workpapers Section 3 Load Forecast; 2) Exhibit 2 Section 7 Workpaper file provided; 3) Consolidated workpapers list and updated consolidated workpapers list and Workpapers Draft; 4) Table illustrating the key differences between resource plans; 5) Annual capacity factor for each of the last five years; 6) Planning Reserve Margin Assessment and Planned and Forced Outage Modeling; 7) Effective load carrying capacity; 8) Projections by customer class; 9) Section 3 Load Forecast, Section 8 Modeling workpapers and pre-IRP ROI response to ROI 6-10; 10) Description of each storage option's anticipated use; 11) Workpapers, and Section 8.24, pages 245-246 (control reserves); 12) Capital costs and basis of forecast range; 13) Table illustrating the key differences between resource plans; 14) A cash-flow table comprised of annual cost values for, at a minimum, fuel spending by type of fuel, generation capital, transmission capital, fuel infrastructure capital, total generating unit variable O&M, total generating unit fixed O&M; fuel Infrastructure O&M; Co2, NOx, and SO2 emissions; fossil power purchase agreements; and renewable power purchase agreements; 15) Resource Plans; 16) Resource Plan Development Analysis; 17) Existing Transmission Facilities Description; 18) Appendix 1 Transmission and Distribution Plan; 19) Action Plan Documentation; 20) Filed IRP published on website; and 21) pre-filed written testimony.

---

<sup>1</sup> Id.

# 2025 INTEGRATED RESOURCE PLAN

## List of Acronyms

ACRONYM	DEFINITION
AEO	Annual Energy Outlook
ASAP	Accelerated Storage Addition Program
ATB	advanced technology baseline
BESS	battery energy storage system
BTU	British thermal unit
DBESS	distributed battery energy storage system
DPV	distributed solar photovoltaic
ELCC	effective Load Carrying Capacity
EUE	expected unserved energy
FOR	forced outage rate
IRP	Integrated Resource Plan
kW	kilowatt
LNG	liquefied natural gas
LOLE	loss of load expectation
LOLP	loss of load probability
LT	long-term
NREL	National Renewable Energy Laboratory
PPA	Power Purchase Agreement
PR100	Puerto Rico Grid Resilience and Transition to 100% Renewable Energy Study
PRP	Preferred Resource Plan
PV	solar photovoltaic
PVRR	present value revenue requirement
RFI	request for information
RPS	renewable portfolio standard
R&O	resolution and order
SCED	security-constrained economic dispatch
SCUC	security constrained unit commitment
SJ	San Juan
ST	short-term

# 2025 INTEGRATED RESOURCE PLAN

ACRONYM	DEFINITION
TM	trailer-mounted
TPA	transmission planning area
UBESS	utility-scale battery energy storage system
USE	unserved energy

# 2025 INTEGRATED RESOURCE PLAN

## List of Responses and Attachments

Response ID	Document Type	Response Subject
RFI-LUMA-AP-2023.0004-20260213-PREB-001	Response in PDF	Source documents not publicly available.
	Folder with Excel documents	The Load Forecasts shall take into account all anticipated naturally occurring energy efficiency, as well as any energy efficiency resulting from existing and expected building codes and appliance standards. The coincident peak electricity demand for the utility and each customer class
RFI-LUMA-AP-2023.0004-20260213-PREB-002	Response in PDF	Fuel price forecast development workpapers
	Excel document	
RFI-LUMA-AP-2023.0004-20260213-PREB-003	Response in PDF	Tables and figures index associated with electronic files and worksheet
	Excel document	
RFI-LUMA-AP-2023.0004-20260213-PREB-004	Response in PDF	Key differences between 2025 IRP scenarios
	Excel document	
RFI-LUMA-AP-2023.0004-20260213-PREB-005	Response in PDF	Existing units installed capacity and capacity factor
	Excel document	
RFI-LUMA-AP-2023.0004-20260213-PREB-006	Response in PDF	
RFI-LUMA-AP-2023.0004-20260213-PREB-007	Response in PDF	
RFI-LUMA-AP-2023.0004-20260213-PREB-008	Response in PDF	
RFI-LUMA-AP-2023.0004-20260213-PREB-009	Response in PDF	
RFI-LUMA-AP-2023.0004-20260213-PREB-010	Response in PDF	Battery use and hourly production costs
	Folder with Excel documents	
RFI-LUMA-AP-2023.0004-20260213-PREB-011	Response in PDF	Energy storage use
	Folder with Excel documents	
RFI-LUMA-AP-2023.0004-20260213-PREB-012	Response in PDF	Cost comparison PR100 Cost Escalator
	Excel document	
RFI-LUMA-AP-2023.0004-20260213-PREB-013	Response in PDF	
RFI-LUMA-AP-2023.0004-20260213-PREB-014	Response in PDF	Detailed cash flow table with PRP and 5 least cost scenarios
	Excel document	
RFI-LUMA-AP-2023.0004-20260213-PREB-015	Response in PDF	
RFI-LUMA-AP-2023.0004-20260213-PREB-016	Response in PDF	Biodiesel costs comparison
	Excel document	
RFI-LUMA-AP-2023.0004-20260213-PREB-017	Response in PDF	Transmission system information

# 2025 INTEGRATED RESOURCE PLAN

	Excel document	
RFI-LUMA-AP-2023.0004-20260213-PREB-018	Response in PDF	
RFI-LUMA-AP-2023.0004-20260213-PREB-019	Response in PDF	Status of LUMA related key demand-side programs
	Excel document	
RFI-LUMA-AP-2023.0004-20260213-PREB-020	Response in PDF	
RFI-LUMA-AP-2023.0004-20260213-PREB-021	Response in PDF	

# 2025 INTEGRATED RESOURCE PLAN

## Attachment A NEPR-AP-2023-0004

### **Response: RFI-LUMA-AP-2023.0004-20260213-PREB-001.1-6**

---

#### **SUBJECT**

Exhibit 2 Workpapers Section 3 Load Forecast; Section 2.02 (E)(2), Section 2.03 (C)(2)(d), Section 2.03(C)(1)(a)(i); Source documents not publicly available or readily accessible are included electronically. The Load Forecasts shall take into account all anticipated naturally occurring energy efficiency, as well as any energy efficiency resulting from existing and expected building codes and appliance standards. The coincident peak electricity demand for the utility and each customer class.

#### **REQUEST**

1. Provide (in machine readable electronic form – Excel files)
  - 1.1. All relevant load forecast workpaper sources used in the development of the load forecasts, such as the tables in the Guidehouse reports.
  - 1.2. The hourly load forecast for the entire planning period including the base forecast and hourly load modifiers forecast, or state exactly where in the modeling workpapers the data exist.
  - 1.3. A single file with the aggregated energy efficiency forecast for every hour in the IRP period, or state exactly where in the modeling workpapers the data exist.
  - 1.4. A file with forecasted energy and demand energy efficiency impacts by year and customer class at the generator level, or state exactly where in the modeling workpapers the data exist.
  - 1.5. Confirmation that LUMA did not use the forecasts provided in the October workpapers in Act17 subfolder in any of the IRP scenarios.
  - 1.6. Provide forecast combined coincident peak electricity demand by customer class at the generator level for the base, low, and high load scenarios for the entire IRP period. Include the date and hour of the peak.

#### **RESPONSE**

- 1.1. LUMA herein provides all relevant load forecast workpaper sources used in developing the load forecasts, including the tables in the Guidehouse reports. See files contained in the folder RFI-LUMA-AP-2023.0004-20260213-PREB-001.
- 1.2. LUMA herein provides the hourly load forecast for the entire planning period, including the base forecast and the hourly load modifier forecast. See Attachment “2026.02.23\_Attachment 1.2 Hourly Load Data”, which shows the hourly customer load forecast and load modifier components.

## 2025 INTEGRATED RESOURCE PLAN

- 1.3. LUMA herein provides a single file with the aggregated energy efficiency forecast for every hour in the 2025 IRP period, as provided in attachment “2026.02.19\_Attachment Hourly EE Data - RFI 2-1.3” submitted in response to RFI question 1.2, item b above.
- 1.4. LUMA herein provides a file with forecasted energy and demand-efficiency impacts by year and customer class at the generator level, in attachment “2026.02.19\_Attachment Hourly EE Data - RFI 2-1.3”
- 1.5. LUMA hereby confirms that it did not use the forecasts provided in the October workpapers in the Act 17 subfolder in any of the 2025 IRP scenarios<sup>2</sup>. LUMA did not use any of the files contained in the workpapers located at the following subfolder path: Workpapers>06. Section 8\_Resource Plan Development>CONFIDENTIAL LUMA PLEXOS Database>LUMA PLEXOS Database>CSV files>EE>Act17. The files in this subfolder were created for discarded EE scenarios that were not included in the final 12 primary and five supplemental scenarios ordered by the Energy Bureau and included in LUMA’s 2025 IRP filings. The Act 17 compliance scenario assumes 30 percent energy-efficiency savings by 2040 and was not modeled in the 2025 IRP because it was not included in the scenarios ordered by the Energy Bureau.
- 1.6. LUMA herein provides the forecast combined coincident peak electricity demand by customer class at the generator level for the base, low, and high load scenarios for the entire 2025 IRP period in the following attachments:  
  
“2026.02.19\_Attachment Hourly BaseLoad Data - RFI 2-1.6”,  
“2026.02.19\_Attachment Hourly 1.6 LowLoad Data - RFI 2-1.6” and  
“2026.02.19\_Attachment Hourly 1.6 HighLoad Data - RFI 2-1.6.”

The day and hour of peak are listed at the top of each file (i.e., base, high, low) on the System Data tab, cell F2.

---

<sup>2</sup> Filed with the Energy Bureau in case: NEPR-AP-2023-0004, on October 29, 2025.

# 2025 INTEGRATED RESOURCE PLAN

## Attachment A

### NEPR-AP-2023-0004

#### **Response: RFI-LUMA-AP-2023.0004-20260213-PREB-002**

---

##### **SUBJECT**

Exhibit 2 Section 7 Workpaper file provided Section 2.02 (F)(1)(b); Fuel Price Forecast Development workpapers.

##### **REQUEST**

2. Provide the underlying computations showing the explicit commodity cost (e.g., the Henry Hub price projection for gas sources) and the transportation adder for each generator type category contained in the IRP Fuel Workpaper. Show this for the base forecast used in the IRP filing, and for the updated 2025 forecast shown in Table 2 of the response to ROI-2c submitted on December 22, 2025.

##### **RESPONSE**

2. LUMA herein provides the underlying computations showing the explicit commodity cost and the transportation adder for each generator-type category contained in the 2025 IRP Fuel Workpaper, in the Attachment titled “RFI-LUMA-AP-2023.0004-20260213-PREB-002.” The Attachment also provides the values for both the fuel price forecast used in the 2025 IRP filing and the updated 2025 forecast referenced in Table 2 of LUMA’s response to ROI 2c, submitted on December 22, 2025.

# 2025 INTEGRATED RESOURCE PLAN

## Attachment A

### NEPR-AP-2023-0004

#### **Response: RFI-LUMA-AP-2023.0004-20260213-PREB-003**

---

##### **SUBJECT**

Consolidated workpapers list and updated consolidated workpapers list and Workpapers Draft; Section 2.02 (F)(1)(f); Electronic, spreadsheet-based versions of all tables and figures

##### **REQUEST**

3. For all quantitative tables and figures in the IRP, provide a single index that lists each table and figure in the IRP and identifies which electronic file and related worksheet it is sourced from.

##### **RESPONSE**

3. LUMA herein provides a single index that lists each table and figure in the 2025 IRP Report and identifies which electronic file and related worksheet it is sourced from in Attachment RFI-LUMA-AP-2023.0004-20260213-PREB-003.

# 2025 INTEGRATED RESOURCE PLAN

## Attachment A

### NEPR-AP-2023-0004

#### **Response: RFI-LUMA-AP-2023.0004-20260213-PREB-004**

---

##### **SUBJECT**

Section 8, esp. 8.2.12 through 8.2.22; Section 2.03 (H) (1) (a) (iii); Table illustrating the key differences between resource plans;

##### **REQUEST**

4. Provide a cohesive Table in Excel file format illustrating the key differences in capacity built or converted and capacity retired across the scenarios, by year and by type including core and supplemental scenarios.

##### **RESPONSE**

4. LUMA provides a Table in Excel file format illustrating the key differences in capacity built or converted and capacity retired across the scenarios, by year and by type, including core and supplemental scenarios in the Attachment titled “RFI-LUMA-AP-2023.0004-20260213-PREB-004.”

# 2025 INTEGRATED RESOURCE PLAN

## Attachment A NEPR-AP-2023-0004

### **Response: RFI-LUMA-AP-2023.0004-20260213-PREB-005**

---

#### **SUBJECT**

Section 4.2 Technical Information on Supply-Side Resources, Section 2.03 (D)(1)(b)(iii); Annual capacity factor for each of the last five years;

#### **REQUEST**

5. Provide the annual capacity factor for each of the last five years, for each legacy unit, including an indication of the underlying capacity basis (nameplate or available capacity) for the capacity factor.

#### **RESPONSE**

5. LUMA herein provides the annual capacity for each of the last five years, for each legacy unit, including an indication of the underlying capacity basis for the capacity factor in the Attachment titled "RFI-LUMA-AP-2023.0004-20260213-PREB-005."

# 2025 INTEGRATED RESOURCE PLAN

## Attachment A

### NEPR-AP-2023-0004

#### **Response: RFI-LUMA-AP-2023.0004-20260213-PREB-006**

---

##### **SUBJECT**

Section 5.1 and 8.2.5 and 8.2.6, Section 2.03 (E)(1); Planning Reserve Margin Assessment and Planned and Forced Outage Modeling.

##### **REQUEST**

6. Confirm that LUMA has no additional information on the underlying modeling methodology and input assumptions used to develop its iterative approach used in the capacity expansion modeling and the way forced and planned outages are represented in the production cost modeling processes. Provide additional material if or as necessary.

##### **RESPONSE**

6. LUMA hereby confirms that it has no additional documentation regarding the underlying modeling methodology and input assumptions used to develop its iterative approach for capacity expansion modeling, or regarding how forced and planned outages are represented in its production cost modeling processes.

# 2025 INTEGRATED RESOURCE PLAN

## Attachment A

### NEPR-AP-2023-0004

#### **Response: RFI-LUMA-AP-2023.0004-20260213-PREB-007**

---

##### **SUBJECT**

No discussion of peak coincidence or ELCC in Section 6 or 7; Section 2.03 (F)(1)(a)(vi); Effective load carrying capacity.

##### **REQUEST**

7. Add discussion of peak coincidence and ELCC forecast development for all resource types. Account for locational variability in distribution peaks, such as commercial and industrial peaks that occur during daylight hours, as required.

##### **RESPONSE**

7. LUMA herein provides additional information on peak coincidence, and effective load carrying capability capacity (ELCC) forecast development for all resource types. The ELCC values from the Southeastern U.S. were gathered by LUMA's technical consultant as part of the initial simulations. These values were used as inputs to PLEXOS®'s LT module in the first step of the iterative process with PLEXOS®; specifically, they were used to achieve the target planning reserve margin (PRM). As described in the report, this proved insufficient to achieve the target level of reliability for expected unserved energy (EUE), and hence a multi-step, iterative process was designed and used to resolve the issues. The final process used by LUMA does not rely on the ELCC values, as the various options and technology types were tested through the more detailed PLEXOS® ST module. The ST module's hourly Security-Constrained Unit Commitment (SCUC)/Security-Constrained Economic Dispatch (SCED) simulation natively accounts for the spatial and temporal alignment of the load and renewable profiles, consistent with the eight TPA topology discussed in the report.

# 2025 INTEGRATED RESOURCE PLAN

## Attachment A NEPR-AP-2023-0004

### Response: RFI-LUMA-AP-2023.0004-20260213-PREB-008.1-3

---

#### SUBJECT

Sections 3 and 5; Section 2.03 (F)(2); Projections by customer class.

#### REQUEST

8. LUMA provides its base DPV forecast in Table 35 of the IRP report. Table 52 of the report provides annual forecasted DPV capacity.
  1. Explain why the values in these tables are not equivalent.
  2. LUMA provided multiple .csv files in subfolder "RenewableProfiles" with capacity forecasts for Distributed PV resources. LUMA states it only used the Base case forecast in its IRP scenarios. Confirm which .csv file was used as an input in LUMA's scenarios and explain why these capacities differ from the DPV capacities in Table 35 and 52.
  3. Provide DPV projections broken down by customer class.

#### RESPONSE

- 8.1. Table 35 is a forecast of total DPV capacity installed at customer sites by fiscal year. The DPV forecast was stated by fiscal year since it was developed for a financial forecast which was based on that basis.

Table 52 of the 2025 IRP Report provides a forecast of DPV capacity that is grossed up to include system losses to reflect the equivalent reduction in generation that DPV has on Puerto Rico's utility scale generation requirements. The data in Table 52 of the 2025 IRP Report and all results in the 2025 IRP Report are stated in calendar years. The DPV values in Table 52 of the 2025 IRP Report subtract cumulative DPV additions through 2023 and gross up the resulting value with system losses to arrive at the DPV capacity impact at utility-scale generators. As noted in the 2025 IRP Report, the impact of the cumulative DPV installations before 2024 is included in the customer load forecast. The same methodology was used to adjust the fiscal-year forecast of DPV energy production to a utility-scale generator equivalent impact.

- 8.2 The .csv file used as the DPV forecast input for scenarios is PLEXOS® file: V2\_Base\_DPVMaxCap.csv in the subfolder path: Workpapers>06. Section 8\_Resource Plan Development>CONFIDENTIAL LUMA PLEXOS® Database>LUMA PLOXOS Database>CSV files>RenewableProfiles>V2\_Base\_DPVMaxCap.csv. The input data from this file matches the output data shown in Table 52, with a less than 1.6 percent reduction for the assumed DPV forced outage rate.

# 2025 INTEGRATED RESOURCE PLAN

**Table 1: Comparison of DPV Forecast from PLEXOS® Input and Output, Both Forecast as Utility Scale Generator Impact**

Calendar Year	DPV Input Data From File: V2_Base_DPVMaXCap. csv (MW)	DPV Input Less 1.6% (MW)	DPV Output Results From Table 52 (MW)
2025	258	254	254
2026	303	298	298
2027	319	314	314
2028	338	333	333
2029	362	356	356
2030	390	384	384
2031	425	418	418
2032	465	458	458
2033	509	501	501
2034	552	543	543
2035	588	579	579
2036	625	615	615
2037	668	658	658
2038	720	709	709
2039	781	769	769
2040	852	839	839
2041	933	919	919
2042	1,024	1008	1,008
2043	1,125	1,107	1,107
2044	1,234	1,215	1,215

8.3 LUMA herein provides in Table 2 the DPV projections broken down by customer class as shown in Table 35 from the 2025 IRP Report.

**Table 2: Fiscal Year Forecast of DPV by Customer Class – Forecasted at Customer DPV Site**

Fiscal Year	Total	Residential (MW)	Commercial (MW)	Industrial (MW)	Agriculture (MW)
2025	1,089	925	136	23	4
2026	1,156	982	145	25	5
2027	1,170	992	146	26	5
2028	1,186	1,005	148	27	5
2029	1,205	1,021	151	29	5

# 2025 INTEGRATED RESOURCE PLAN

Fiscal Year	Total	Residential (MW)	Commercial (MW)	Industrial (MW)	Agriculture (MW)
2030	1,228	1,041	154	29	5
2031	1,256	1,065	157	29	5
2032	1,290	1,095	162	29	5
2033	1,329	1,129	166	29	5
2034	1,370	1,164	172	29	5
2035	1,405	1,195	176	29	5
2036	1,436	1,222	180	29	5
2037	1,471	1,253	185	29	5
2038	1,513	1,289	190	29	5
2039	1,564	1,334	197	29	5
2040	1,624	1,386	204	29	5
2041	1,692	1,446	213	29	5
2042	1,770	1,513	223	29	5
2043	1,856	1,588	234	29	5
2044	1,951	1,671	246	29	5

Table 3 contains the projections of the incremental DPV forecast since 2025, with the customer class level detail for the PLEXOS® input data in file: V2\_Base\_DPVMaCap.csv. This data aligns with the output data shown in Table 52 of the 2025 IRP Report, with less than 1.7 percent per year.

**Table 3: Calendar Year Forecast of Incremental DPV by Customer Class – Forecasted as Utility-Scale Generator Impact**

Calendar Year	Total	Residential (MW)	Commercial (MW)	Industrial (MW)	Agriculture (MW)
2025	258	223	32	2	1
2026	303	260	37	4	1
2027	319	273	39	5	1
2028	338	289	41	7	1
2029	362	309	44	7	1
2030	390	334	48	7	1
2031	425	364	52	7	1
2032	465	399	57	7	1
2033	509	438	63	7	1
2034	552	475	68	7	1
2035	588	507	73	7	1

# 2025 INTEGRATED RESOURCE PLAN

Calendar Year	Total	Residential (MW)	Commercial (MW)	Industrial (MW)	Agriculture (MW)
2036	625	539	77	7	1
2037	668	577	83	7	1
2038	720	622	89	7	1
2039	781	675	97	7	1
2040	852	738	106	7	1
2041	933	809	116	7	1
2042	1,024	888	127	7	1
2043	1,125	976	140	7	1
2044	1,234	1,072	154	7	1

# 2025 INTEGRATED RESOURCE PLAN

## Attachment A

### NEPR-AP-2023-0004

#### **Response: RFI-LUMA-AP-2023.0004-20260213-PREB-009.**

---

#### **SUBJECT**

Section 2.03 (F)(2)(b); Inclusion as an expected reduction from baseline load forecasts; Section 3 Load Forecast, Section 8 Modeling workpapers and pre-IRP ROI response to ROI 6-10.

#### **REQUEST**

9. LUMA previously stated that: “Contributions from DPV installations made prior to January 2024... serve as load modifiers” and that “Incremental DPV installations made from January 2024 onward are modeled as generation-side resources.”

Provide a forecast or confirm the specific location of these data as already filed for the quantity of DPV modeled on the demand side and a forecast for the quantity of DPV modeled on the supply side.

#### **RESPONSE**

9. LUMA hereby confirms that the continuing contribution from cumulative DPV installed through December 2023 was embedded in the customer load forecast. The contribution from total DPV installed from January 2024 was included as a separate forecast for the DPV as the utility-scale generator impact and was with the 2025 IRP Report in the Attachment V2\_Base\_DPVMaxCap.csv, which is also discussed in the response to question 8 of this Second Post-Filing RFI.

# 2025 INTEGRATED RESOURCE PLAN

## Attachment A NEPR-AP-2023-0004

### Response: RFI-LUMA-AP-2023.0004-20260213-PREB-0010.1-2

---

#### SUBJECT

Section 2.03 (F)(4)(a); Description of each storage option's anticipated use.

#### REQUEST

- 10.1 For each resource scenario: describe storage use, and provide at least sampled modeled output (e.g., one 24-hour day) indicating what services it is providing in each hour.
- 10.2 For the PRP scenario, provide hourly production cost output files clearly showing charge and discharge levels for all battery resources for at least one full year at the scenario's maximum storage penetration.

#### RESPONSE

- 10.1 LUMA herein provides, for each resource scenario, the storage-use data in Attachment "CONFIDENTIAL - 2026.02.23\_Attachment Battery AS and Net Gen Data - RFI 2-10.1," which includes the following:
  - Battery energy storage system (BESS) properties, such as state of charge (SoC %),
  - Net generation (defined as either the charging or discharging at any given hour in MW)
  - Generation capacity (defined as the capacity of the battery in MW),
  - Available response (defined as the maximum amount of ancillary service that could be provided given the current unit commitment, in MW)
  - Provision (defined as the total reserve provided by the battery, in MW).

The above-referenced attachment shows the charge and discharge activity through the Net Generation column and the reserve provisions allocated to the different reserves modeled. The data also shows the different types of reserves each BESS unit provides at any given hour. This can be identified by filtering for "Battery.Reserves" data in column B of each tab in the workbook.

- 10.2 LUMA previously provided the requested file in its response to the first RFI filed on December 22, 2025. Attachment "Attach LUMA 4b\_iteration 4b" contains the hourly production cost output files, which show charge and discharge levels for all battery resources across the entire study period at the maximum storage penetration for the PRP scenario. This attachment resides in the following subfolder path: 2025.12.22\_Responses to First Post Filing RFI > Attachments > Hourly data for 4b and 4c > 4b > Hourly ST Data > PRP > Iteration 4 > Attach LUMA 4b\_iteration 4b; tab "Battery Net Generation."

# 2025 INTEGRATED RESOURCE PLAN

## Attachment A

### NEPR-AP-2023-0004

#### Response: RFI-LUMA-AP-2023.0004-20260213-PREB-0011.1-9

---

#### SUBJECT

Section 2.03 (F)(4)(b) and sub-parts; Includes valuation framework for energy storage options; Ancillary services, which may include avoidance of load shedding; Load-shaping services Locational benefits Forced Outage Rates; Workpapers, and Section 8.24, pages 245-246 (control reserves).

#### REQUEST

- 11.1 Please confirm that batteries can contribute to ancillary service requirements in LUMA's Plexos model.
- 11.2 Given that the "Battery ST" tab does not contain any columns describing the ancillary service contributions of the batteries, please explain where data regarding annual ancillary service performance of batteries can be found in the filing, or otherwise provide documentation of this from the Plexos results.
- 11.3 Provide a valuation framework that quantitatively assigns value to storage for all ancillary service provisions benefits. Also describe how Plexos treats these resources as part of the commitment and dispatch process.
- 11.4 Provide at least example days for each scenario that shows charging / discharging patterns.
- 11.5 Provide information on the load-shaping aspects of the storage resource.
- 11.6 Provide information on the relative value of location for storage resources.
- 11.7 Do the tabs of the PLEXOS annual output files contained in the "solution spreadsheets" workpaper folder contain documentation of the level and resource identity of the spinning and control reserves used in the modeling runs?
- 11.8 If so, please confirm and state where such data can be found.
- 11.9 If not, provide documentation for the PRP scenario that shows how the spinning and control reserves are accounted for and which resources are providing these ancillary services, and state where such data can be found in the workpapers or in the detailed modeling files provided elsewhere or in response to the ROIs filed on December 22, 2025 or January 15, 2026.

#### RESPONSE

- 11.1 LUMA hereby confirms that batteries can contribute to ancillary service requirements in the PLEXOS® model.

## 2025 INTEGRATED RESOURCE PLAN

- 11.2 LUMA hereby confirms that the file: “CONFIDENTIAL - 2026.02.26\_Attachment PRP\_Reserve data for batteries- RFI 2-11-2” contains the data regarding annual ancillary service performance of batteries.
- 11.3 LUMA herein explains the valuation framework PLEXOS® uses to quantitatively assign values to storage for all ancillary service provision benefits:
- The PLEXOS® model, through its native functionality, co-optimizes commitment and dispatch to meet demand and all ancillary service requirements.
  - The PLEXOS® solution provides the least-cost mix of resources to meet demand and ancillary services, based on the costs of the individual BESS, as well as all other energy resource costs. Consequently, the model does not require a separate valuation framework for ancillary services.
- Furthermore, in the formulation of the Security Constrained Unit Commitment (SCUC) and Security Constrained Economic Dispatch (SCED), the model solves to ensure that energy plus reserves is less than or equal to the unit’s capacity. PLEXOS® models BESS resources like any other resource (thermal, renewable, etc.) in its SCUC and SCED algorithms, subject to BESS unit constraints like state-of-charge, available state-of-charge, etc.
- 11.4 LUMA herein provides example days for each scenario that show charging and discharging patterns in the attachment to the above RFI 10 titled “CONFIDENTIAL - 2026.02.23\_Attachment Battery AS and Net Gen Data - RFI 2-10.1.”
- 11.5 LUMA herein provides information on the load-shaping aspects of the storage resource in the attachment titled “2026.02.23\_Attachment Battery Load Shaping - RFI 2-11.5.” This attachment provides the hourly details for the Arecibo TPA for the year 2030. The BESS units in the Arecibo TPA generate during peak-load hours to reduce demand. Similarly, the BESS units charge during low-load hours, exhibiting a load-following charging and discharging pattern.
- 11.6 LUMA herein provides information on how PLEXOS® evaluates the relative value of location for storage resources. The 2025 IRP modeling framework assumes the island is divided into eight transmission planning areas (TPAs) with thirteen transmission links. The ability to transfer power within and between the TPAs is assumed to be a lossless transfer. The transfer of power between TPAs is limited only by the capacity of the transmission links between each TPA. BESS, as well as other resources, are built factoring in the costs of various resources in a TPA, transmission costs, and associated costs to increase capacities on these thirteen (13) transmission links, if needed, for the formulation of a least-cost plan. The hourly SCUC and SCED also account for these transmission constraints when determining the charge and discharge schedules.
- 11.7 LUMA herein clarifies that the tabs of the PLEXOS® annual output files contained in the “solution spreadsheets” do not contain documentation of the level and resource identity of the spinning and control reserves used in the modeling runs.

## 2025 INTEGRATED RESOURCE PLAN

- 11.8 LUMA hereby confirms that documentation of the level and resource identity of the spinning and control reserves used in the modeling runs data can be found in the attachment titled “2026.02.23\_Attachment BESS for a listing of units providing reserves and RFI 2-11.8.”
- 11.9 LUMA herein provides documentation for the PRP scenario that shows how the spinning and control reserves are accounted for and which resources are providing these ancillary services. The BESS units modeled in PLEXOS® are used not only to meet demand but also to meet reserve provision. Please refer to the Attachment provided titled “CONFIDENTIAL - 2026.02.26\_Attachment PRP\_Reserve data for batteries- RFI 2-11-2.” This Attachment provides data such as the reserves being provided by each BESS unit at an hourly/annual sample. This file shows the different reserves being served at any given hour (along with the provision amount) by each BESS in the model.

# 2025 INTEGRATED RESOURCE PLAN

## Attachment A NEPR-AP-2023-0004

### Response: RFI-LUMA-AP-2023.0004-20260213-PREB-0012.1-3

---

#### SUBJECT

Section 2.03 (G)(2)(a)(vii) and (G) (2) (b); Capital costs and basis of forecast range; Section 7.3, Tables 66, 67, 69, 70, and 71.

#### REQUEST

- 12.1 Provide further explanation as to why the PR100 cost scaling factor was applied to thermal unit capital cost trajectories.
- 12.2 Provide further explanation and opinion as to the validity of the cost scaling factor given the industry and policy developments currently affecting renewable, battery and thermal unit costs.
- 12.3 Explain how the effects of the 2025 federal policy change on tax credits for utility-scale renewable and battery storage resources are, or are not, reflected in the costs used for these resources in the modeling runs.

#### RESPONSE

- 12.1 LUMA hereby confirms that the PR100 cost scaling factor was applied to all forms of generation, both renewable and fossil-fueled generation, to reflect the higher costs of building utility-scale generation in Puerto Rico compared with the mainland United States. The cost-scaling factor (escalator) developed as part of the U.S. Department of Energy's PR100 study was used in the 2025 IRP Report based on LUMA's and its technical consultant's understanding of why and how the escalator was developed for the PR100. LUMA participated in discussions with the U.S. Department of Energy's PR100 team as they analyzed methodologies for forecasting long-term pricing for both renewable and fossil generation in Puerto Rico. While including fossil-fueled thermal generation and renewable fuel in thermal generation were contemplated by the PR100 team early in the PR100 study development process, the fossil and renewable fuel options were not included in the scenarios that were modeled in the PR100 study.

LUMA prepared a comparison of the PR100 cost escalator with the Energiza cost ratio relative to the NREL 2024 ATB V3 data for a comparable unit. The NREL ATB forecasts the costs of building energy resources on the U.S. mainland. The Energiza costs reflect a capacity payment that increases annually with a fixed rate of inflation. Figure 1 below summarizes the analysis and illustrates that the PR100 cost scaling factor and the Energiza capacity pricing are lower than those of the 2024 ATB V3. For the year of the planned commercial operation in 2028, the PR100 cost-scaling factor forecasted a cost escalator of 1.99. The actual

# 2025 INTEGRATED RESOURCE PLAN

cost ratio of energy capacity costs to that of the Capital costs forecasted by the 2024 ATB V3 was 1.63, or a 36% difference. However, in 2033, the large, combined cycle (i.e., a 378 MW combined cycle unit) is recommended to be added in the PRP. The graph indicates the cost difference would be 9% (1.56 for the PR100 escalator versus 1.65 for the future costs of the Energiza plant in 2033).

**Figure 1: Comparison of PR100 Cost Scaling Factor vs. Ratio of the Energiza Cost to the 2024 NREL ATB V3<sup>3</sup>**



12.2 LUMA hereby confirms the validity of the cost scaling factor given the industry and policy developments currently affecting renewable, battery, and thermal unit costs. LUMA finds that Puerto Rico is likely to face higher power-plant construction costs than the mainland U.S. for the foreseeable future, due in part to the additional shipping requirements for importing materials and specialized construction equipment and labor to the island. Therefore, a cost scaling factor will likely remain appropriate for Puerto Rico to reflect the cost differential between the mainland U.S. or other locations that supply Puerto Rico with goods and services. However, as reflected in the PR100 costs scaling factor, LUMA would also expect the cost differential to reduce and reach a lower, more stable value should Puerto Rico achieve a more stable and predictable financial and regulatory environment.

12.a. LUMA herein clarifies that the effects of the 2025 federal policy change on tax credits for utility-scale renewable and battery storage resources are not reflected in the costs used for the 2025 IRP resources in the modeling runs.

<sup>3</sup> The 2024 ATB V3 pricing is based on a 1x1 combined cycle based on a GE H-Frame unit.

# 2025 INTEGRATED RESOURCE PLAN

## Attachment A

### NEPR-AP-2023-0004

#### **Response: RFI-LUMA-AP-2023.0004-20260213-PREB-0013**

---

##### **SUBJECT**

Section 8; Section 2.03 (H)(1)(a)(iii); Table illustrating the key differences between resource plans.

##### **REQUEST**

13. LUMA's IRP falls short of providing a coherent table that illustrates the key differences between resource plans and includes the metrics prescribed in the regulation. Table 94 and Figure 75 provide some information, but it is not fully responsive to this requirement. To aid with stakeholder review, LUMA should file additional table(s) that capture the information required by the regulation.

Per the regulation, these tables must clearly show resource additions, retrofits, conversions, and retirements by year, NPV, relative differences in T&D infrastructure (if any) across each plan.

##### **RESPONSE**

13. LUMA herein provides the information relevant to this RFI in Attachment titled "RFI-LUMA-AP-2023.0004-20260213-PREB-004."

This Attachment includes data on resource additions, retrofits, conversions, and retirements by year, NPV, and relative differences in T&D infrastructure (if any) across each scenario.

# 2025 INTEGRATED RESOURCE PLAN

## Attachment A

### NEPR-AP-2023-0004

#### Response: RFI-LUMA-AP-2023.0004-20260213-PREB-0014

---

##### SUBJECT

Section 8; Section 2.03 (H)(1)(b)(v); A cash-flow table comprised of annual cost values for, at a minimum, fuel spending by type of fuel, generation capital, transmission capital, fuel infrastructure capital, total generating unit variable O&M, total generating unit fixed O&M; fuel infrastructure O&M; Co2, NOx, and SO2 emissions; fossil power purchase agreements; and renewable power purchase agreements.

##### REQUEST

14. LUMA's cash-flow table falls slightly short of the regulation requirements as it does not provide data for each of the categories listed. For example, LUMA does not present fuel spending by type of fuel or data on power purchase agreements.

Provide a summary cash flow table for the body of the IRP and as a workpaper, for the Preferred Resource Plan, and for at least the top 5 least-cost plans, including all elements identified in 2.03 (H)(1) (b) (v).

##### RESPONSE

14. LUMA herein provides the revised cash flow tables with additional information for the PRP and the five least cost scenario results in the Attachment RFI-LUMA-AP-2023.0004-20260213-PREB-014.

# 2025 INTEGRATED RESOURCE PLAN

## Attachment A

### NEPR-AP-2023-0004

#### **Response: RFI-LUMA-AP-2023.0004-20260213-PREB-0015**

---

##### **SUBJECT**

Section 8; Section 2.03 (H)(2)(b); Each of the Resource Plans shall be subjected to sensitivity analyses exploring a reasonable range of uncertainty in forecast assumptions.

##### **REQUEST**

15. LUMA did not conduct sensitivity analyses on all of its resource plans. For example, no sensitivity analyses were considered for the Supplemental Scenarios. For this reason, the Energy Bureau may request further sensitivity analyses if it is needed at later points in the process.

##### **RESPONSE**

15. LUMA hereby confirms that it did not conduct sensitivity analyses on all resource plans. LUMA is aware that the Energy Bureau may request further sensitivity analyses if needed later in the process and will work to satisfy such requests.

# 2025 INTEGRATED RESOURCE PLAN

## Attachment A

### NEPR-AP-2023-0004

#### Response: RFI-LUMA-AP-2023.0004-20251203-PREB-0016.1-2

---

#### SUBJECT

Section 2.03 (H)(2); Resource Plan Development Analysis; Resource Plan Results, all scenarios except Scenario 12;

#### REQUEST

- 16.1 Provide a further explanation with supporting quantitative metrics as to why the resource planning process selected the use of biodiesel fuels to meet RPS requirements for the PRP scenario, which produce electricity at a rate generally far exceeding \$300/MWh based on fuel cost alone, rather than combinations of solar PV and battery energy storage resources whose combined costs on a delivered per MWh basis appear to be much less than the costs of biodiesel fuel produced electricity.
- 16.2 Provide an update to the response given to pre-IRP filing period ROI 6-2(e) on October 29, 2024, including a comparison of the annual costs associated with biodiesel electricity production in the years 2039-2044 of the PRP scenario, versus the costs of an equivalent amount of renewable energy from a renewable source in combination with battery energy storage capacity. Use this update to demonstrate quantitatively why the biodiesel produced electricity is less costly than the renewable plus battery capacity produced electricity for an equivalent amount of electricity delivered in similar time frames.

#### RESPONSE

- 16.1 Regulation 9021 specifically requires that the 2025 IRP development process use the present value of revenue requirements (PVRR) as the primary performance indicator for selecting the preferred resource plan, and that all quantifiable costs must be included in the PVRR. Regulation 9021, Section 2.03(H)(2)(d) states that:

“In selecting the Preferred Resource Plan, [LUMA] shall use the minimization of the present value of revenue requirements as the primary selection criterion. [LUMA] shall also consider other criteria including, but not limited to, system reliability; short and long-term risk; environmental impacts; transmission needs and implications; distribution needs and implications; financial impacts on [the energy system]; and the public interest as set forth in Act 57-2014. Where meeting these needs is associated with quantifiable costs, these costs shall be included in the calculation of the present value of revenue requirements.”

The selection of resources must consider the combined impacts of the differing operating capabilities and limitations of candidate resources, in addition to their costs. The cost of energy for individual technologies or pairs of technologies (e.g., the solar plus battery

# 2025 INTEGRATED RESOURCE PLAN

technology pair referenced in the question) cannot effectively be used as the sole determinant in selecting a least cost resource plan for a complex system such as Puerto Rico.

The levelized cost of energy (LCOE) is a standard industry indicator for comparing the average cost of energy of technologies and resource plans over a period of time. The LCOE for a resource plan is the combined costs of the different resources working in a coordinated manner to meet the system’s specific demand and ancillary service needs. LCOE uses PVRR as one of the two elements in its formula:

$$LCOE = \frac{\text{Sum of the present value revenue requirements (PVRR)}}{\text{Sum of present value of annual electrical energy (Produced or consumed)}}$$

To compare the results of the PRP and Scenario 12, which excluded biodiesel as an option, LUMA calculated the LCOE of both based on the native load energy. The native load energy is identical for both scenarios. The native load represents the customer load, including impacts of energy efficiency, electric vehicle charging, and system losses. The value includes system losses to reflect the energy required at the utility-scale generators to serve the native load. Table 4 shows the native load forecast.

**Table 4: Native Load Forecast**

Calendar Year	Native Load (GWh)
2025	18,567
2026	17,764
2027	17,610
2028	17,384
2029	17,203
2030	17,073
2031	16,923
2032	16,672
2033	16,462
2034	16,278
2035	16,111
2036	15,984
2037	15,916
2038	15,726
2039	15,606
2040	15,507
2041	18,567
2042	17,764
2043	17,610
2044	17,384

# 2025 INTEGRATED RESOURCE PLAN

Table 5 below provides the cumulative LCOE for the PRP and Resource Plan (based on Scenario 12 with no biodiesel) for each successive year in the 2025 IRP. Year 2025 shows LCOE results of 2025, year 2026 shows cumulative LCOE results for 2025 to 2026, year 2027 shows cumulative LCOE results for 2025 to 2027, and so on through 2044. The data shows that, in all but the first year, the LCOE is lower for the PRP.

**Table 5: LCOE for PRP and Resource Plan H**

Calendar Year	PRP LCOE by Year (\$/MWh)	Resource Plan H LCOE by Year (\$/MWh)	LCOE of PRP Minus Resource Plan H (\$/MWh)
2025	\$177.04	\$176.90	\$0.14
2026	\$174.99	\$175.00	-\$0.01
2027	\$179.17	\$180.25	-\$1.08
2028	\$183.96	\$185.66	-\$1.71
2029	\$187.67	\$189.73	-\$2.06
2030	\$190.45	\$192.76	-\$2.31
2031	\$193.62	\$195.80	-\$2.18
2032	\$196.31	\$198.40	-\$2.09
2033	\$198.47	\$200.48	-\$2.01
2034	\$200.38	\$202.46	-\$2.08
2035	\$202.17	\$204.64	-\$2.47
2036	\$203.65	\$206.43	-\$2.78
2037	\$205.31	\$208.06	-\$2.75
2038	\$206.86	\$209.82	-\$2.96
2039	\$208.51	\$211.73	-\$3.22
2040	\$210.24	\$213.56	-\$3.32
2041	\$212.40	\$215.75	-\$3.36
2042	\$214.21	\$217.72	-\$3.51
2043	\$215.99	\$219.77	-\$3.78
2044	\$217.76	\$222.03	-\$4.26

# 2025 INTEGRATED RESOURCE PLAN

16.2 LUMA hereby confirms that a comparison of the annual costs of biodiesel electricity production versus the costs of renewable plus battery electricity production in the years 2039-2044 amounts to a new scenario that requires definition of the detailed input assumptions as well as additional PLEXOS® modeling to complete.

However, the comparison of the results of the PRP, which uses biodiesel resource to meet the RPS requirements, and the results of Resource Plan H, which uses wind and solar resources to meet the RPS requirement, effectively accomplishes the same analysis requested by this RFI, as one scenario includes the option to incorporate biodiesel as a resource, while the other does not, allowing for a direct evaluation of the differences between both approaches. Furthermore, the comparison of the PRP to Resource Plan H is a more realistic analysis than a manual substitution of one resource cost for another, without allowing the system to redispatch resources. Table 6 below compares the average power cost (i.e., the annual power cost divided by the annual energy production) and the cumulative LCOE for the PRP and Resource Plan H. The LCOE calculations are cumulative from the year shown to 2039. As shown in the table, the PRP provides the lowest average power cost in all years and the lowest LCOE in all but the first year, where the LCOE is the same for both resource plans.

**Table 6: LCOE for PRP and Resource Plan H for Only 2039 to 2044**

Calendar Year	PRP Average Cost of Power (\$/MWh)	Resource Plan H Average Cost of Power (\$/MWh)	Average Cost of Power of PRP Minus Resource Plan H (\$/MWh)	PRP LCOE by Year (\$/MWh)	Resource Plan H LCOE by Year (\$/MWh)	LCOE of PRP Minus Resource Plan H (\$/MWh)
2039	\$255.87	\$266.42	-\$10.55	\$255.87	\$266.42	-\$10.55
2040	\$265.95	\$272.56	-\$6.62	\$260.70	\$269.36	-\$8.67
2041	\$290.42	\$295.01	-\$4.58	\$269.80	\$277.22	-\$7.42
2042	\$287.54	\$297.33	-\$9.79	\$273.68	\$281.62	-\$7.93
2043	\$296.46	\$312.40	-\$15.94	\$277.50	\$286.77	-\$9.27
2044	\$306.98	\$335.39	-\$28.40	\$281.43	\$293.26	-\$11.83

# 2025 INTEGRATED RESOURCE PLAN

## Attachment A

### NEPR-AP-2023-0004

#### Response: RFI-LUMA-AP-2023.0004-20251203-PREB-0017.a

---

##### SUBJECT

Appendix 1, Transmission and Distribution Plan, including Figure 1 (page 39); Section 2.03 (J)(1)(a)(iii) and (iv):

Existing Transmission Facilities Description

iii. A schematic map of the transmission and subtransmission network showing transfer limits, which shall be treated as critical energy infrastructure information and handled in accordance with the procedures set forth in CEPR-MI-2016-0009 as currently amended and may be amended from time to time; and

iv. A map showing the actual, physical routing of the transmission and subtransmission lines, geographic landmarks, major metropolitan areas, and the location of substations and generating plants, and interconnections with distribution substations. The map shall be treated as critical energy infrastructure information and handled in accordance with the procedures set forth in CEPR-MI-2016-0009 as currently amended and may be amended from time to time. The IRP shall include two copies of this map on a 1:250,000 scale.

##### REQUEST

17.a Provide the Energy Bureau with 2 hard copies of the complete schematic map, at a reasonable scale.17.

17.b Provide the Energy Bureau with 2 hard copies of the complete transmission map, at a large scale

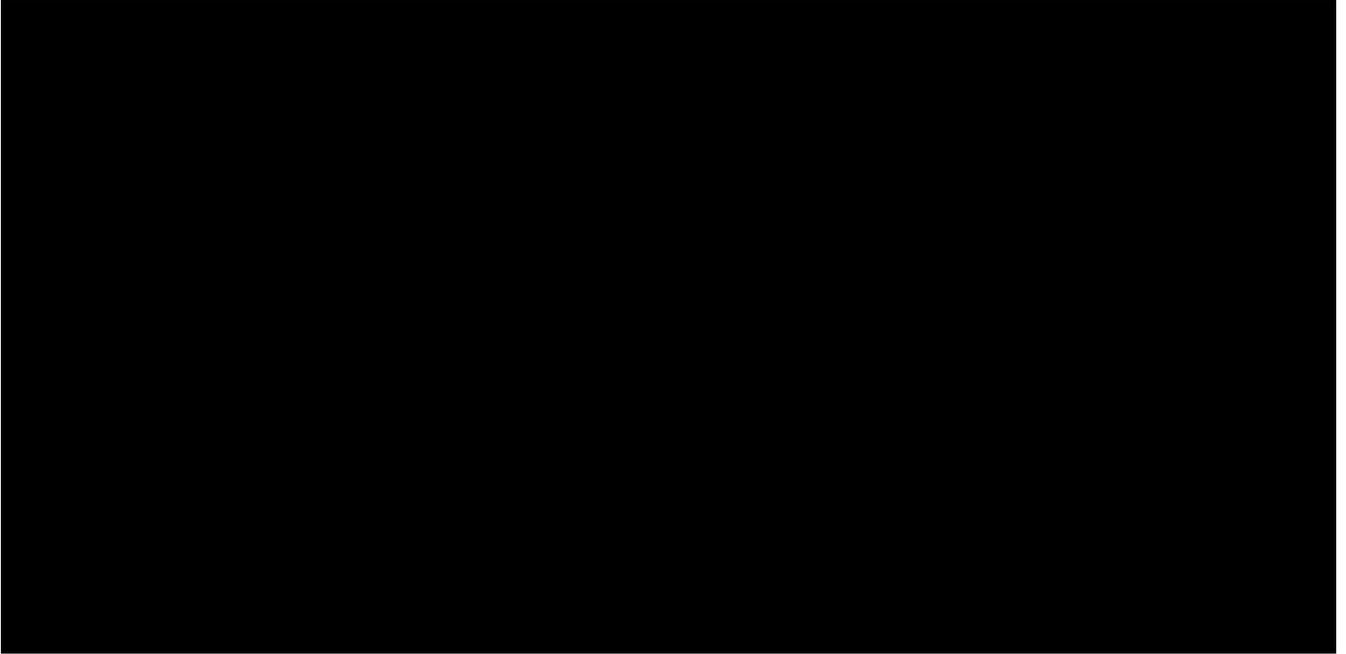
17.c Provide a separate electronic copy of the complete schematic map with annotations on transfer (LR)limits, if any, or a summary table of limits, if any, with a clear mapping to the critical circuits on the schematic diagram. Provide a separate electronic copy of the physical transmission map at a higher resolution than that provided in the Appendix filing on page 39.

##### RESPONSE

17.a-c LUMA herein provides 2 hard copies of the schematic map illustrated in Figure 2 with the above requirements. The schematic map shows the transmission and sub-transmission lines, along with geographic landmarks, metropolitan areas, and the location of substations, generating plants, and interconnections with distribution substations. The map features nine distinct circles, each numbered, where transfer limits analysis was conducted. These transfer limits are detailed in Table 7, which also examines potential contingencies related to these limits in order to identify the system's vulnerabilities.

# 2025 INTEGRATED RESOURCE PLAN

**Figure 2: Schematic Map**



**Table 7: Analysis of Transfer Limits Mapped to Critical Circuits in the Schematic Diagram, Represented by Circles in the Illustrated Figure 2**

Item	Transmission Lines Corridors	Referenced in IRP Report	Transfer Limit (Sum of Line Flows)
[Redacted Table Content]			

# 2025 INTEGRATED RESOURCE PLAN

Item	Transmission Lines Corridors	Referenced in IRP Report	Transfer Limit (Sum of Line Flows)
[Redacted Content]			

# 2025 INTEGRATED RESOURCE PLAN

## Attachment A

### NEPR-AP-2023-0004

#### **Response: RFI-LUMA-AP-2023.0004-20251203-PREB-0018**

---

#### **SUBJECT**

Appendix 1 Transmission and Distribution Plan; 2.03 (J) (1) (e); Planned Distribution Facilities Description- The IRP shall provide a detailed narrative description of any planned changes in approach, standard practice, or broadly applicable substation, circuit, or feeder design for PREPA's distribution system for the next ten years. This description shall address any changes in distribution facilities that impact the ability to accommodate incremental penetration of distributed generation, including intermittent distributed generation, and the ability to receive new loads over time. PREPA shall submit a substantiation of distribution development plans, including, if available.

#### **REQUEST**

- 18.1 LUMA needs to provide a much fuller description of how the distribution system can accommodate incremental penetration of distributed generation – as opposed to just documenting the concerns that DERs bring, especially concerning voltage issues. There are references to distribution upgrades but there is no concise distillation that describes how LUMA is proactively planning for such an updated system to accommodate more DERs. The distribution section seems to indicate that LUMA envisions DERs as a reliability burden, as opposed to planning to accommodate the resources, given that they are currently being installed at roughly 240 MW per year (e.g., PV) with additional small battery systems.
- 18.2 Provide a further explanation, with specificity, of what LUMA is proactively planning to do to accommodate incremental penetration of distributed generation.

#### **RESPONSE**

- 18.1 LUMA hereby requests an extension until Wednesday, March 11, 2026, to submit a response to Question 18.

# 2025 INTEGRATED RESOURCE PLAN

## Attachment A NEPR-AP-2023-0004

### Response: RFI-LUMA-AP-2023.0004-20251203-PREB-0019a

---

#### SUBJECT

Section 10; Section 2.03 (K)(1); Action Plan Documentation - The Action Plan shall include a table of key actions in the first five years after approval of the IRP including, at a minimum, expected procurement processes for supply-side resources and energy efficiency, permitting requirements, construction activities, required studies, and other significant events. The Action Plan shall cover intended acquisitions of demand-side, supply-side, transmission, distribution, and/or fuel infrastructure resources; retirements and/or retrofits of existing generating resources; entrance into, renegotiation or cessation of power purchase agreements; and any other resource commitments.

#### REQUEST

19. LUMA's Action Plan, while providing a general framework, lacks certain detailed information required by Regulation 9021. The Energy Bureau recognizes that many of the critical actions outlined in the Action Plan, such as the procurement, permitting, and installation of fixed resource decisions, fall outside of LUMA's direct responsibilities. Given this limitation, the Energy Bureau will not withhold the completeness determination despite the absence of detailed information on demand-side resource acquisitions. LUMA retains greater control over the implementation of customer programs included in the Preferred Resource Plan (PRP), such as demand response initiatives and controlled Distributed Battery Energy Storage Systems (DBESS). To ensure clarity and accountability, LUMA is directed to file supplemental information detailing the timing and milestones for key demand-side program implementation dates.

#### RESPONSE

19. LUMA herein provides supplemental information detailing the timing and milestones for key demand-side program implementation dates:
  - The Customer Battery Energy Sharing (CBES) represented in the 2025 IRP study as Controlled Distributed Battery Energy Storage Systems (DBESS) began in 2023 with 1,885 participants. This group provides an aggregated capacity of 12,067 kW and 31,582 kWh of stored energy available for dispatch.  
  
During 2024, the program experienced sustained growth, reaching 5,812 participants with a cumulative capacity of 36,806 kW and 95,658 kWh.  
  
In 2025, the program experienced its largest expansion to date, reaching 74,164 participants. In terms of capacity, the program achieved 457,004 kW of aggregated power and 1,145,580 kWh of stored energy. During this year, the permanent CBES was submitted and approved, enabling the program's expansion for the Summer 2025 period.

## 2025 INTEGRATED RESOURCE PLAN

This growth demonstrates the accelerated integration of battery systems and the effectiveness of enrollment efforts and coordination with aggregators.

In 2026, the reported data include an additional 272 participants for the most recently reported period, which explains why the capacity and energy values are proportionally lower than the previous year.

Cumulatively, the CBES program has reached:

- 82,133 participants
- 508.64 MW of aggregated installed capacity
- 1,277.34 MWh of stored energy available

The CBES program is a formal DR measure, as it enables the dispatch of stored energy from customer batteries during periods of high demand to relieve stress on the electric system. CBES remains the only active and planned DR program of this type within the current portfolio. The program could eventually sunset. Thus, between now and the termination date, evolving grid needs and system reliability requirements will strictly dictate LUMA's strategy for enrollment and capacity growth. This approach ensures that the program remains a functional tool for load management rather than a volume-based initiative.

- The Energy Efficiency (EE) program encompasses various initiatives that aim to reduce total customer energy demand. These programs include:
  - Residential Rebates: This program provides residential customers with financial incentives for purchasing and installing eligible high-efficiency measures.
  - Business Rebates: This program provides commercial customers with financial incentives for purchasing and installing eligible high-efficiency measures.
  - In-Store Discounts: This program offers point-of-sale discounts for eligible measures at participating stores.
  - Residential EE Kits: This program provides free mail-order kits containing simple EE measures and educational materials.
  - Business EE Kits: This program provides free mail-order kits containing simple EE measures and educational materials.

During 2024, the program demonstrated sustained growth, reaching 43,106 participants and cumulative peak demand savings of 3.8 MW and 943,106 MWh.

The year 2025 represented an increase in the energy savings delivered by this program, which achieved cumulative peak demand savings of 4 MW and 29,719 MWh across 37,733 participants.

For 2026, the EE programs were on hold due to a lack of available funds. The savings shown for 2026 correspond to the In-Store Discount program, which remained active until October 2025. In addition, Residential Rebates savings reflect FY2025 applications paid in FY2026.

Cumulatively, the EE program has reached:

- 87,360 participants
- 8.3 MW of aggregated peak demand savings
- 52,327 MWh of energy savings

# 2025 INTEGRATED RESOURCE PLAN

A summary of the DR and EE programs is provided in the attachment “RFI-LUMA-AP-2023.0004-20260213-PREB-019.”

# 2025 INTEGRATED RESOURCE PLAN

## Attachment A NEPR-AP-2023-0004

### Response: RFI-LUMA-AP-2023.0004-20251203-PREB-0020

---

#### SUBJECT

Section 2.04 (B); Filed IRP published on website

#### REQUEST

20. Publish the redacted version of the IRP as filed and/or provide a link on LUMA's webpage where the public can view a copy of the IRP.

#### RESPONSE

20. LUMA hereby confirms that on October 20, 2025, the company published a direct link to the 2025 IRP Report on its main webpage carousel at <https://lumapr.com/>. This link also resides on the SETPR<sup>4</sup> website, where a redacted version of the 2025 IRP Report is available:
  - 2025 IRP Main Report: [https://setpr.com/wp-content/uploads/2025/10/0.00\\_IRP-Report\\_Main-Report\\_Revised\\_Redacted.pdf](https://setpr.com/wp-content/uploads/2025/10/0.00_IRP-Report_Main-Report_Revised_Redacted.pdf)
  - Appendices: [https://setpr.com/wp-content/uploads/2025/10/0.01\\_IRP-Report\\_Appendix-Section\\_Revised\\_Redacted-002.pdf](https://setpr.com/wp-content/uploads/2025/10/0.01_IRP-Report_Appendix-Section_Revised_Redacted-002.pdf)

---

<sup>4</sup> Solutions for the Energy Transformation for Puerto Rico (SETPR)

# 2025 INTEGRATED RESOURCE PLAN

## Attachment A

### NEPR-AP-2023-0004

#### **Response: RFI-LUMA-AP-2023.0004-20251203-PREB-0021**

---

##### **SUBJECT**

Workpapers; Section 3.06 (D); Prefiled written testimony or accompanying work-papers must contain all analyses, facts and calculations necessary for the Commission to perform a comprehensive analysis and assign it the appropriate probative value;

##### **REQUEST**

21. This requirement will be met when all of the identified documents, further work, and detailed descriptions identified in this Appendix and its accompanying Order have been provided.

##### **RESPONSE**

21. LUMA hereby affirms that the identified documents and the detailed descriptions provided in the responses to the Second Set of 2025 IRP Post-Filing RFIs satisfy the requirements of Section 3.06(D).