

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

**NEPR**

**Received:**

**Sep 11, 2024**

**10:36 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  
the Fifth Set of IRP Prefiling Period Requests  
of Information and Request for Confidential  
Treatment, and Memorandum in Support of  
Confidentiality

**MOTION SUBMITTING RESPONSES TO THE  
FIFTH SET OF IRP PREFILING PERIOD REQUESTS OF INFORMATION, 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:**

1. LUMA is committed to supporting and advancing the transformation of Puerto Rico’s energy system into one that is more resilient, cleaner, and sustainable for all. As Operator of the transmission and distribution system, LUMA is responsible for developing an Integrated Resource Plan (“IRP”) that outlines the transformation of the island’s energy resources over the next two decades. The goal of the IRP is to reflect the energy needs and priorities of the customers while advancing responsibly towards clean energy objectives that will serve Puerto Rico for generations to come.

2. LUMA’s approach to energy planning considers diverse factors, including resource constraints, land use, cost dynamics, and technological integration. The objective is to ensure the IRP presents a diverse and analytically robust set of future scenarios and resource portfolios. This

will help create a sustainable and reliable energy future for Puerto Rico, aligning with both customer needs and the island's public policy energy goals.

3. LUMA herein submits as Exhibit 1 the responses addressing inquiries included in the *Fifth Set of 2024 IRP Prefiling Request Of Information* from the Energy Bureau regarding the results of the base case and the assumptions and parameters used by LUMA and Black and Veatch ("B&V"), LUMA's IRP Technical Consultant, and as Exhibit 2 a letter from B&V, explaining additional delays on the completion of the base case scenario caused by unexpected issues with Version 10 of the modeling software.

## **II. Submission and Request for Confidentiality**

4. On August 20, 2024, the Puerto Rico Energy Bureau ("Energy Bureau") entered a Resolution and Order in which it instructed LUMA, among other matters, to respond on or before fifteen (15) business days to a *Fifth Set of Requests of Information- 2024 IRP* set forth in Attachment A to the Resolution and Order ("August 20<sup>th</sup> Order"). The *Fifth Set of Requests of Information- 2024 IRP* requests the base case scenario results, all input assumptions, and all related work papers, with all quantitative materials in Excel file format with formulas intact. In addition, it requests all PLEXOS parameters used in the capacity expansion and production cost modeling exercise for the base case scenario.

5. In compliance with the August 20<sup>th</sup> Order, LUMA hereby submits as *Exhibit 1* the information responsive to the *Fifth Set of Requests of Information- 2024 IRP*. LUMA provides these documents supported by preliminary information. Data, estimates, and other information provided now may change and be revised as LUMA develops the 2024 IRP.

6. LUMA respectfully submits that the information and/or documents included in *Exhibit 1* should be designated as confidential material protected from disclosure. Certain

information and/or documents included in *Exhibit 1* are protected from disclosure as trade secrets; *see, e.g.*, Act 80-2011, P.R. Laws Ann. tit. 10, §§ 4131-4144 (2023), contain confidential information associated with Critical Energy Infrastructure Information (“CEII”) as defined in federal regulations, 18 C.F.R. §388.113; 6 U.S.C. §§ 671-674, and pursuant to the Energy Bureau’s Policy on Management of Confidential Information. *See* Energy Bureau’s Policy on Management of Confidential Information, CEPR-MI-2016-0009, issued on August 31, 2016, as amended by Resolution dated September 20, 2016.

## **II. Applicable Laws and Regulations to Submit Information Confidentially Before the Energy Bureau**

7. The bedrock provision on the management of confidential information filed before this Energy Bureau is Section 6.15 of Act 57-2014, known as the “Puerto Rico Energy Transformation and Relief Act.” It provides, in pertinent part, that: “[i]f any person who is required to submit information to the Energy Commission 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. If after appropriate evaluation the Energy Bureau determines 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.* § 1054n(a).

8. 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.” *Id.* § 1054n(b). 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 needs to know such information under nondisclosure agreements. However,

the [Energy Bureau] shall direct that a nonconfidential copy be furnished for public review.” *Id.* § 1054n(c).

9. Relatedly, in connection with the duties of electric power service companies, Section 1.10(i) of Act 17-2019 states that electric power service companies shall provide the information requested by customers, except for confidential information under the Rules of Evidence of Puerto Rico.

10. Moreover, the Energy Bureau’s Policy on Confidential Information details the procedures a party should follow to request that a document or portion thereof be afforded confidential treatment. In essence, the referenced Policy requires identifying confidential information and filing a memorandum of law explaining the legal basis and support for a request to file information confidentially. *See* CEPR-MI-2016-0009, Section A, as amended by the Resolution of September 20, 2016, CEPR-MI-2016-0009. The memorandum should also include a table that identifies the confidential information, a summary of the legal basis for the confidential designation, and why each claim or designation conforms to the applicable legal basis of confidentiality. *Id.* at ¶ 3. The party who seeks confidential treatment of information filed with the Energy Bureau must also file both “redacted” or “public version” and an “unredacted” or “confidential” version of the document that contains confidential information. *Id.* at ¶ 6.

### **III. Grounds for Confidentiality**

11. The Energy Bureau’s Policy on Management of Confidential Information states the following with regard to access to validated Trade Secret Information and CEII:

1. Trade Secret Information

Any document designated by the [Energy Bureau] as Validated Confidential Information because it is a trade secret under 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 grounds of being CEII may be accessed by the parties’ authorized representatives only after they have executed and delivered the Nondisclosure 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.* at § D (on Access to Validated Confidential Information).

12. Under the Industrial and Trade Secret Protection Act of Puerto Rico, Act 80-2011, P.R. Laws Ann. tit. 10, §§ 4131-4144 (2023), industrial or trade secrets are deemed to be any information:

- (a) That has a present or a potential independent financial value or that provides a business advantage, **insofar as such information is not common knowledge or readily accessible** through proper means by **persons who could make a monetary profit from the use or disclosure of such information**, and
- (b) for which reasonable security measures have been taken, as circumstances dictate, to maintain its confidentiality.

*Id.* § 4131, Section 3, Act. 80-2011.<sup>1</sup> They include, but are not limited to, processes, methods and mechanisms, manufacturing processes, formulas, projects, or patterns to develop machinery, and lists of specialized clients that may afford an advantage to a competitor. *See* Statement of Motives, Act 80-2011; *see also* Puerto Rico Open Data Law, Act 122-2019, Article 4 (ix) (exempting from

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<sup>1</sup> Relatedly, Rule 513 of the Rules of Evidence of Puerto Rico provides that the owner of a trade secret may invoke the privilege to refuse to disclose, and to prevent another person from disclosing trade secrets, provided that these actions do not tend to conceal fraudulent actions or lead to an injustice. 32 P.R. Laws Ann. Ap. VI, R. 513. If a court of law mandates disclosure of a trade secret, precautionary measures should be adopted to protect the interests of the owner of the trade secret. *Id.*

public disclosure trade secrets) and Article 4(x) (exempting from public disclosure commercial or financial information whose disclosure will cause competitive harm).

13. The Puerto Rico Supreme Court has explained that the trade secrets privilege protects free enterprise and extends to commercial information that is confidential in nature. *Ponce Adv. Med. v. Santiago Gonzalez*, 197 DPR 891, 901-02 (2017) (citation omitted).

14. The Energy Bureau should protect the working documents and/or information included in *Exhibit 1* because they pertain to processes and methods that may prove advantageous or useful to LUMA's competitors in the energy business and utilities in Puerto Rico. LUMA takes reasonable security measures, such as this one, to maintain the confidentiality of its data and information in draft form.

15. LUMA respectfully submits that the working documents and/or information presented as part of LUMA's response in *Exhibit 1* should be designated as commercially sensitive or trade secret information. This designation is a reasonable and necessary measure to protect the information and enable LUMA to compete fairly in the future.

16. It is respectfully submitted that the right of public access to information is promoted and protected by the public version. The protection of the specific information pertaining to the working documents and/or information will not hinder nor preclude the public in a material way from gaining access to relevant and necessary information to the working documents and/or information. As such, the interest in the public viewing the information that LUMA hereby requests be kept confidential is outweighed by the harm that LUMA would be exposed to should the information be made available to the public.

17. Further, the working documents and/or information submitted in *Exhibit 1* contain portions of CEII that, under relevant federal law and regulations, are protected from public

disclosure. LUMA stresses that the working documents and/or information with CEII warrant confidential treatment to protect critical infrastructure from threats that could undermine the system and negatively affect electric power services to the detriment of the interests of the public, customers, and citizens of Puerto Rico. In several proceedings, this Energy Bureau has considered and granted requests by PREPA to submit CEII under seal of confidentiality.<sup>2</sup> In at least two proceedings on Data Security,<sup>3</sup> and Physical Security,<sup>4</sup> this Energy Bureau, *motu proprio*, has conducted proceedings confidentially, thereby recognizing the need to protect CEII from public disclosure.

18. 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

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<sup>2</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 Minigrig 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>3</sup> *In re Review of the Puerto Rico Electric Power Authority Data Security Plan*, NEPR-MI-2020-0017.

<sup>4</sup> *In re Review of the Puerto Rico Electric Power Authority Physical Security Plan*, NEPR-MI-2020-0018.

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

19. Generally, CEII or critical infrastructure information is exempted from public disclosure because it involves assets and information that 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.*

20. 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.*

21. 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>5</sup>

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<sup>5</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;



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>6</sup>

22. The working documents and/or information contain data that qualify as CEII because they contain information on the engineering and design of critical infrastructure, as existing and proposed, relating to the transmission of electricity, which is provided in sufficient detail that it could potentially be helpful to a person planning an attack on this or other energy

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- (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>6</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.

infrastructure facilities interconnected with or served by this facility and equipment. The information identified as confidential in the working documents and/or information is not common knowledge and is not made publicly available. Therefore, it is respectfully submitted that, on balance, the public interest in protecting CEII weighs in favor of protecting the working documents and/or information with CEII in *Exhibit 1* from disclosure, given the nature and scope of the details included in those portions of the Exhibit.

23. Based on the above, LUMA respectfully submits that the working documents and/or information with CEII in *Exhibit 1* should be designated as CEII. This designation is a reasonable and necessary measure to protect the specific location and other engineering and design information of the energy facilities listed or discussed in the working documents and/or information in *Exhibit 1*. Given the importance of ensuring the safe and efficient operation of the generation assets and the T&D System, LUMA respectfully submits that these materials constitute CEII that should be maintained confidentially to safeguard their integrity and protect them from external threats.

24. It is respectfully submitted that the right of public access to information is promoted and protected by the public version. The protection of the specific information will not hinder nor preclude the public in a material way from gaining access to relevant and necessary information. As such, the interest in the public viewing the information that LUMA hereby requests be kept confidential is outweighed by the harm that LUMA would be exposed to should the information be made available to the public.

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

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

treatment.

Document	Name	Pages in which Confidential Information is Found, if applicable	Summary of Legal Basis for Confidentiality Protection, if applicable	Date Filed
Exhibit 1	a. Base Case Results b. Assumptions, Parameters, and Costs c. Forecasts d. Transmission Transfer Capability e. Workpapers	Entire documents	Trade Secret Information under Section D(1) of the Energy Bureau’s Policy on Confidential Information, CEPR-MI-2016-0009	September 11, 2024
			Critical Energy Infrastructure Information, 18 C.F.R. § 388.113; 6 U.S.C. §§ 671-674.	
Exhibit 2	Letter from B&V, dated September 11, 2024	Entire Document	Trade Secret Information under Section D(1) of the Energy Bureau’s Policy on Confidential Information, CEPR-MI-2016-0009	September 11, 2024

**WHEREFORE**, LUMA respectfully requests that the Energy Bureau **take notice** of the aforementioned for all purposes, **approve the request for confidential treatment** of the

documents and/or information submitted with *Exhibit 1 and Exhibit 2* to this Motion, and **deem** LUMA to have complied with the Resolution and Order of August 20, 2024.

**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: [lionel.santa@prepa.pr.gov](mailto:lionel.santa@prepa.pr.gov) and through its attorneys of record González & Martínez, Mirelis Valle-Cancel, [mvalle@gmlex.net](mailto:mvalle@gmlex.net); and Alexis G. Rivera Medina, [arivera@gmlex.net](mailto:arivera@gmlex.net); and Genera PR, LLC: [brannen@genera-services.com](mailto:brannen@genera-services.com); [kbolanos@genera-pr.com](mailto:kbolanos@genera-pr.com); [regulatory@genera-pr.com](mailto:regulatory@genera-pr.com).

**RESPECTFULLY SUBMITTED.**

In San Juan, Puerto Rico, on September 11, 2024.



**DLA Piper (Puerto Rico) LLC**  
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Exhibit 1



# 2024 Integrated Resource Plan (2024 IRP)

NEPR-AP-2023-0004

Responses to August 20, 2024 R&O

# 2024 INTEGRATED RESOURCE PLAN

## INTRODUCTION

LUMA is committed to supporting and advancing the transformation of Puerto Rico's energy system into one that is more resilient, cleaner, and sustainable for everyone.

As operator of the transmission and distribution system, LUMA is responsible for developing an Integrated Resource Plan (IRP) that maps out the transformation of the island's energy resources over the next two decades. LUMA is developing an IRP that best reflects the energy needs and priorities of our customers, while reliably and responsibly progressing towards the clean energy goals that will best serve the interests of Puerto Rico for generations to come.

This response addresses inquiries from the Energy Bureau regarding the base case results and the assumptions and parameters used by LUMA and the IRP Technical Consultant.

LUMA's approach to energy planning incorporates diverse considerations such as resource constraints, land usage, cost dynamics, and technological integration. LUMA's goal is to ensure that the IRP presents a diverse and analytically robust set of future scenarios and resource portfolios in order to map a sustainable and reliable energy future for Puerto Rico that is responsive to customer needs and Puerto Rico's public policy objectives.

## 2024 INTEGRATED RESOURCE PLAN

### PREFILING PROCESS OF THE 2024 INTEGRATED RESOURCE PLAN (2024 IRP)

NEPR-AP-2023-0004

#### **RESPONSE: RFI-LUMA-AP-2023.0004-20240820-PREB-001C-002**

The Energy Bureau issued on August 20, 2024, a Resolution and Order (August 20th R&O) ordering LUMA to submit responses to the Fifth Set of Prefiling 2024 Integrated Resource Plan (2024 IRP) Requests of Information (RFI). LUMA hereby complies and submits its response to Attachment A of the August 20<sup>th</sup> R&O addressing questions on:

- Base Case Scenario results
- PLEXOS® modeling parameters

Please note that LUMA provides the following responses on a preliminary and informational basis.



# 2024 INTEGRATED RESOURCE PLAN

## List of Responses and Attachments

Response ID	Document Type	Response Subject
RFI-LUMA-AP-2023.0004-20240820-PREB-001A	Excel document CONFIDENTIAL	Base Case Results
RFI-LUMA-AP-2023.0004-20240820-PREB-001B.001	Excel document CONFIDENTIAL	Assumptions, Parameters, Costs
RFI-LUMA-AP-2023.0004-20240820-PREB-001B.002	Excel document CONFIDENTIAL	Forecasts
RFI-LUMA-AP-2023.0004-20240820-PREB-001B.003	Excel document CONFIDENTIAL	Transmission Transfer Capability
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.001	Excel document CONFIDENTIAL	WorkpapersC.001_Base_Case 03.08
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.002	Excel document CONFIDENTIAL	WorkpapersC.002_Base_Case_03.15
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.003	Excel document CONFIDENTIAL	Workpapers C.003_Base_Case_03.21
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.004	Excel document CONFIDENTIAL	Workpapers C.004_Base_Case_03.25
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.005	Excel document CONFIDENTIAL	WorkpapersC.005_Base_Case_03.25.V2
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.006	Excel document CONFIDENTIAL	WorkpapersC.006_Base_Case_04.01
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.007	Excel document CONFIDENTIAL	WorkpapersC.007_Base_Case_04.16
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.008	Excel document CONFIDENTIAL	WorkpapersC.008_Base_Case_04.16_ST
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.009	Excel document CONFIDENTIAL	WorkpapersC.009_Base_Case_04.22
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.010	Excel document CONFIDENTIAL	WorkpapersC.010_Base_Case_04.25
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.011	Excel document CONFIDENTIAL	WorkpapersC.011_Base_Case_04.29
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.012	Excel document CONFIDENTIAL	WorkpapersC.012_Base_Case_05.01_LT

## 2024 INTEGRATED RESOURCE PLAN

Response ID	Document Type	Response Subject
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.013	Excel document CONFIDENTIAL	WorkpapersC.013_Base_Case_05.01_ST
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.014	Excel document CONFIDENTIAL	WorkpapersC.014_Base_Case_05.02
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.015	Excel document CONFIDENTIAL	WorkpapersC.015_Base_Case_05.08
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.016	Excel document CONFIDENTIAL	WorkpapersC.016_Base_Case_05.09_ST
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.017	Excel document CONFIDENTIAL	WorkpapersC.017_Base_Case_05.09_TEST
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.018	Excel document CONFIDENTIAL	WorkpapersC.018_Base_Case_05.12
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.019	Excel document CONFIDENTIAL	WorkpapersC.019_Base_Case_05.15_V1
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.020	Excel document CONFIDENTIAL	WorkpapersC.020_Base_Case_05.15_V2
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.021	Excel document CONFIDENTIAL	WorkpapersC.021_Base_Case_05.16_V1
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.022	Excel document CONFIDENTIAL	WorkpapersC.022_Base_Case_05.16_V2
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.023	Excel document CONFIDENTIAL	WorkpapersC.023_Base_Case_05.20_V1
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.024	Excel document CONFIDENTIAL	WorkpapersC.024_Base_Case_05.20_V2
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RFI-LUMA-AP-2023.0004-20240820-PREB-001C.027	Excel document CONFIDENTIAL	WorkpapersC.027_Base_Case_05.21_V3
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RFI-LUMA-AP-2023.0004-20240820-PREB-001C.029	Excel document CONFIDENTIAL	WorkpapersC.029_Base_Case_05.22_V2
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.030	Excel document CONFIDENTIAL	WorkpapersC.030_Base_Case_05.22_V3
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.031	Excel document CONFIDENTIAL	WorkpapersC.031_Base_Case_05.22_V4

## 2024 INTEGRATED RESOURCE PLAN

Response ID	Document Type	Response Subject
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.032	Excel document CONFIDENTIAL	WorkpapersC.032_Base_Case_05.22_V5
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.033	Excel document CONFIDENTIAL	WorkpapersC.033_Base_Case_05.23_V1
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.034	Excel document CONFIDENTIAL	WorkpapersC.034_Base_Case_05.23_V2
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.035	Excel document CONFIDENTIAL	WorkpapersC.035_Base_Case_05.23_V3
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.036	Excel document CONFIDENTIAL	WorkpapersC.036_Base_Case_05.23_V4
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.037	Excel document CONFIDENTIAL	WorkpapersC.037_Base_Case_05.23_V5
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.038	Excel document CONFIDENTIAL	WorkpapersC.038_Base_Case_05.23_V6
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.039	Excel document CONFIDENTIAL	WorkpapersC.039_Base_Case_05.23_V7
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.040	Excel document CONFIDENTIAL	WorkpapersC.040_Base_Case_05.24
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.041	Excel document CONFIDENTIAL	WorkpapersC.041_Base_Case_05.28
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.042	Excel document CONFIDENTIAL	WorkpapersC.042_Base_Case_05.29
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.043	Excel document CONFIDENTIAL	WorkpapersC.043_Base_Case_05.31
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.044	Excel document CONFIDENTIAL	WorkpapersC.044_Base_Case_06.01_V1
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.045	Excel document CONFIDENTIAL	WorkpapersC.045_Base_Case_06.01_V2
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.046	Excel document CONFIDENTIAL	WorkpapersC.046_Base_Case_06.04
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.047	Excel document CONFIDENTIAL	WorkpapersC.047_Base_Case_06.05_V1
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.048	Excel document CONFIDENTIAL	WorkpapersC.048_Base_Case_06.05_V2
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.049	Excel document CONFIDENTIAL	WorkpapersC.049_Base_Case_06.05_V3
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.050	Excel document CONFIDENTIAL	WorkpapersC.050_Base_Case_06.08_V1

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Response ID	Document Type	Response Subject
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.051	Excel document CONFIDENTIAL	WorkpapersC.051_Base_Case_06.08_V2
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.052	Excel document CONFIDENTIAL	WorkpapersC.052_Base_Case_06.08_V3
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.053	Excel document CONFIDENTIAL	WorkpapersC.053_Base_Case_06.08_V4
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.054	Excel document CONFIDENTIAL	WorkpapersC.054_Base_Case_06.09
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.055	Excel document CONFIDENTIAL	WorkpapersC.055_Base_Case_06.11
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.056	Excel document CONFIDENTIAL	WorkpapersC.056_Base_Case_06.12_v1
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.057	Excel document CONFIDENTIAL	WorkpapersC.057_Base_Case_06.12_v2
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.058	Excel document CONFIDENTIAL	WorkpapersC.058_Base_Case_06.12_v3
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.059	Excel document CONFIDENTIAL	WorkpapersC.059_Base_Case_06.12_v4
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.060	Excel document CONFIDENTIAL	WorkpapersC.060_Base_Case_06.12_v5
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.061	Excel document CONFIDENTIAL	WorkpapersC.061_Base_Case_06.14
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.062	Excel document CONFIDENTIAL	WorkpapersC.062_Base_Case_06.19_v1
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.063	Excel document CONFIDENTIAL	WorkpapersC.063_Base_Case_06.19_v2
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.064	Excel document CONFIDENTIAL	WorkpapersC.064_Base_Case_06.19_v3
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.065	Excel document CONFIDENTIAL	WorkpapersC.065_Base_Case_06.20
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.066	Excel document CONFIDENTIAL	WorkpapersC.066_Base_Case_06.21_v1
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.067	Excel document CONFIDENTIAL	WorkpapersC.067_Base_Case_06.21_v2
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.068	Excel document CONFIDENTIAL	WorkpapersC.068_Base_Case_06.22
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.069	Excel document CONFIDENTIAL	WorkpapersC.069_Base_Case_06.23_v1

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Response ID	Document Type	Response Subject
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.070	Excel document CONFIDENTIAL	WorkpapersC.070_Base_Case_06.23_v2
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.071	Excel document CONFIDENTIAL	WorkpapersC.071_Base_Case_06.23_v3
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.072	Excel document CONFIDENTIAL	WorkpapersC.072_Base_Case_06.23_v4
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.073	Excel document CONFIDENTIAL	WorkpapersC.073_Base_Case_06.24
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.074	Excel document CONFIDENTIAL	WorkpapersC.074_Base_Case_06.25_v1
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.075	Excel document CONFIDENTIAL	WorkpapersC.075_Base_Case_06.25_v2
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.076	Excel document CONFIDENTIAL	WorkpapersC.076_Base_Case_06.28
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.077	Excel document CONFIDENTIAL	WorkpapersC.077_Base_Case_07.03
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.078	Excel document CONFIDENTIAL	WorkpapersC.078_Base_Case_07.08_v1
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.079	Excel document CONFIDENTIAL	WorkpapersC.079_Base_Case_07.08_v2
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.080	Excel document CONFIDENTIAL	WorkpapersC.080_Base_Case_07.09
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.081	Excel document CONFIDENTIAL	WorkpapersC.081_Base_Case_07.12
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.082	Excel document CONFIDENTIAL	WorkpapersC.082_Base_Case_07.16
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.083	Excel document CONFIDENTIAL	WorkpapersC.083_Base_Case_07.18
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.084	Excel document CONFIDENTIAL	WorkpapersC.084_Base_Case_07.19
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.085	Excel document CONFIDENTIAL	WorkpapersC.085_Base_Case_07.20_v1
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.086	Excel document CONFIDENTIAL	WorkpapersC.086_Base_Case_07.20_v2
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.087	Excel document CONFIDENTIAL	WorkpapersC.087_Base_Case_07.22
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.088	Excel document CONFIDENTIAL	WorkpapersC.088_Base_Case_07.26

## 2024 INTEGRATED RESOURCE PLAN

Response ID	Document Type	Response Subject
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.089	Excel document CONFIDENTIAL	WorkpapersC.089_Base_Case_08.05
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.090	Excel document CONFIDENTIAL	WorkpapersC.090_Base_Case_08.06
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.091	Excel document CONFIDENTIAL	WorkpapersC.091_Base_Case_08.07
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.092	Excel document CONFIDENTIAL	WorkpapersC.092_Base_Case_08.08_v1
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.093	Excel document CONFIDENTIAL	WorkpapersC.093_Base_Case_08.08_v2
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.094	Excel document CONFIDENTIAL	WorkpapersC.094_Base_Case_08.09_v1
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.095	Excel document CONFIDENTIAL	WorkpapersC.095_Base_Case_08.09_v2
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.096	Excel document CONFIDENTIAL	WorkpapersC.096_Base_Case_08.12_10R6
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.097	Excel document CONFIDENTIAL	WorkpapersC.097_Base_Case_08.12_RM40
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.098	Excel document CONFIDENTIAL	WorkpapersC.098_Base_Case_08.12
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.099	Excel document CONFIDENTIAL	WorkpapersC.099_Base_Case_08.13_RM30
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.100	Excel document CONFIDENTIAL	WorkpapersC.100_Base_Case_08.14_RM30
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.101	Excel document CONFIDENTIAL	WorkpapersC.101_Base_Case_08.14_RM35
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.102	Excel document CONFIDENTIAL	WorkpapersC.102_Base_Case_08.14_RM40
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.103	Excel document CONFIDENTIAL	WorkpapersC.103_Base_Case_08.14_RM45
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.104	Excel document CONFIDENTIAL	WorkpapersC.104_Base_Case_08.14_RM50
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.105	Excel document CONFIDENTIAL	WorkpapersC.105_Base_Case_08.14_RM50V
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.106	Excel document CONFIDENTIAL	WorkpapersC.106_Base_Case_08.15_RM30
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.107	Excel document CONFIDENTIAL	WorkpapersC.107_Base_Case_08.15_RM35

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Response ID	Document Type	Response Subject
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.108	Excel document CONFIDENTIAL	WorkpapersC.108_Base_Case_08.15_RM40
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.109	Excel document CONFIDENTIAL	WorkpapersC.109_Base_Case_08.15_RM42
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.110	Excel document CONFIDENTIAL	WorkpapersC.110_Base_Case_08.15_RM44
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.111	Excel document CONFIDENTIAL	WorkpapersC.111_Base_Case_08.15_RM45
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.112	Excel document CONFIDENTIAL	WorkpapersC.112_Base_Case_08.15_RM46
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.113	Excel document CONFIDENTIAL	WorkpapersC.113_Base_Case_08.15_RM48
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.114	Excel document CONFIDENTIAL	WorkpapersC.114_Base_Case_08.15_RM50
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.115	Excel document CONFIDENTIAL	WorkpapersC.115_Base_Case_08.17_RM46_Linear
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.116	Excel document CONFIDENTIAL	WorkpapersC.116_Base_Case_08.17_RM46
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.117	Excel document CONFIDENTIAL	WorkpapersC.117_Base_Case_08.17_RM47_Linear
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.118	Excel document CONFIDENTIAL	WorkpapersC.118_Base_Case_08.17_RM47
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.119	Excel document CONFIDENTIAL	WorkpapersC.119_Base_Case_08.17_RM48_Linear
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.120	Excel document CONFIDENTIAL	WorkpapersC.120_Base_Case_08.17_RM48
RFI-LUMA-AP-2023.0004-20240820-PREB-001C.121	Excel document CONFIDENTIAL	WorkpapersC.121_Base_Case_08.19

# 2024 INTEGRATED RESOURCE PLAN

## Attachment A

NEPR-AP-2023-0004

Response: RFI-LUMA-AP-2023.0004-20240820-PREB-001

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### SUBJECT

Base Case Scenario Results.

### REQUEST

File the base case scenario results, all input assumptions, and all related workpapers, with all quantitative materials that exist in Excel file format with formulas intact. This must include all transmission transfer capabilities modeled in PLEXOS between the eight transmission planning areas.

### RESPONSE

See attachments:

*RFI-LUMA-AP-2023.0004-20240820-PREB-001A\_BaseCaseResults*

*RFI-LUMA-AP-2023.0004-20240820-PREB-001B.001\_Input\_Assumptions\_Parameters\_and\_Costs*

*RFI-LUMA-AP-2023.0004-20240820-PREB-001B.002\_IRP\_Forecasts*

*RFI-LUMA-AP-2023.0004-20240820-PREB-001B.003\_Transmission\_Transfer\_Capability; and*

*RFI-LUMA-AP-2023.0004-20240820-PREB-001C.001 to 122 Workpapers\_BaseCaseResults*



# 2024 INTEGRATED RESOURCE PLAN

## Attachment A

NEPR-AP-2023-0004

Response: RFI-LUMA-AP-2023.0004-20240820-PREB-002

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### SUBJECT

PLEXOS parameters

### REQUEST

File all PLEXOS parameters used in the capacity expansion and production cost modeling exercise for the base case scenario.

### RESPONSE

See attachments:

*RFI-LUMA-AP-2023.0004-20240820-PREB-001B.001\_Input\_Assumptions\_Parameters\_and\_Costs.*

Exhibit 2