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

IN RE: REVIEW OF THE PUERTO RICO ELECTRIC POWER AUTHORITY INTEGRATED RESOURCE PLAN	**CASE NO.:** NEPR-AP-2023-0004 **SUBJECT**: Request for Partial Waiver of Certain Section of Regulation 9021

MOTION FOR PARTIAL WAIVER OF REQUIREMENTS OF REGULATION 9021

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:

1. On December 20, 2023, this Puerto Rico Energy Bureau ("Energy Bureau") issued a Resolution and Order ("December 20th Order") in this proceeding whereby it ordered LUMA to attend the third in-person pre-IRP filing period technical conference scheduled for January 30, 2024 (the "Third Prefiling Technical Conference").

2. Among the items to be discussed during the Third Prefiling Technical Conference, the Energy Bureau required LUMA to discuss "[a]ny waivers LUMA may be aware of at this time, to consider for particular requirements of Regulation 9021 as they pertain to sections about existing or planned transmission and distribution system analysis." *See* December 20th Order at p. 4.

3. On January 25, 2024, LUMA submitted the presentation to be used during the Third Prefiling Technical Conference, which presentation included a discussion of the potential waivers to Regulation 9021.

4. The potential waivers identified by LUMA in its presentation were discussed during the January 30, 2024, Third Prefiling Technical Conference, during which the Energy Bureau

directed LUMA to formally submit in writing such requests for waivers for the Energy Bureau's consideration.

5. Consistent with the Energy Bureau's directive, LUMA hereby submits its request for partial waivers of Regulation 9021. *See* Exhibit 1 to this Motion.

6. Specifically, LUMA seeks partial waivers to Sections 2.03(J)(1)(b)(i)(B), 203(J)(1)(e)(i)(B), Section 2.03(J)(1)(d) and Section 2.03(J)(1)(e) of Regulation 9021. The rationale and arguments in support of such request for partial waivers are included in Exhibit 1.

7. The waivers requested herein will enable LUMA to produce an Integrated Resource Plan proposal that appropriately and accurately reflects the state of the system based on information that is currently available and on which LUMA can reasonably rely.

8. Accordingly, LUMA respectfully requests this Energy Bureau to approve the waivers to Regulation 9021 identified by LUMA in Exhibit 1.

9. As LUMA continues with the development of an Integrated Resource Plan proposal to be submitted to the Energy Bureau, additional waivers to Regulation 9021 may be identified as necessary and appropriate, at which point, LUMA will promptly prepare and submit such request for waiver to the Energy Bureau. Accordingly, LUMA reserves the right to submit additional requests for waivers to the Energy Bureau.

WHEREFORE, LUMA respectfully requests the Energy Bureau to **take notice** of the foregoing request for waivers of Regulation 9021 and **approve** such request as outlined by LUMA in Exhibit 1 to this Motion.

RESPECTFULLY SUBMITTED.

I 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 and through its attorneys of record González & Martínez, Mirelis Valle-Cancel, mvalle@gmlex.net; and Alexis G. Rivera Medina, arivera@gmlex.net; and Genera PR, LLC: brannen@genera-services.com; kbolanos@genera-pr.com; regulatory@genera-pr.com .

RESPECTFULLY SUBMITTED.

In San Juan, Puerto Rico, on February 29, 2024

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EXHIBIT 1
Regulation 9021
Request for Waivers

NEPR-AP-2023-0004
February 29, 2024

LUMA Request for Waivers of Requirements of Regulation 9021

1. INTRODUCTION

LUMA recognizes its responsibility to the development of a pragmatic Integrated Resource Plan (IRP) built upon accurate data and analyses that meet public policy goals and regulations, as well as the needs and priorities of customers for reliable and modern service at the lowest reasonable cost. 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.

In the Resolution and Order of December 12, 2023, the Energy Bureau ordered LUMA to include in the presentation of the third Prefiling IRP Technical Conference scheduled on January 30, 2024, "***[a]ny waivers LUMA may be aware of at this time, to consider for particular requirements of Regulation 9021 as they pertain to sections about existing or planned transmission, and transmission system analysis.***" On January 25, 2024, LUMA submitted its presentation to the Energy Bureau which included three requests for partial waivers. During the January 30, 2024, Third Prefiling Technical Conference these partial waivers were discussed, and the Energy Bureau directed LUMA to submit in writing its arguments to approve the waivers.

LUMA hereby submits in writing its arguments to the Energy Bureau to consider and approve the partial waivers to Regulation 9021 as described below. The request for waivers, presented herein, must be evaluated taking into consideration all the significant progress that LUMA has completed so far and its continuing monumental efforts to transform the distribution and transmission system of Puerto Rico.

2. WAIVER 1

LUMA requests the Energy Bureau grant a partial waiver for the requirements described in sections 2.03(J)(1)(b)(i)(B) and (1)(e)(i)(B) of Regulation 9021 that include system wide load flow analyses, lists of circuits that do not comply with the American National Standard Institute voltage variation.

The LUMA data on Distribution feeder voltage is derived from a combination of three sources:

1. Operational data which may include customer calls referencing voltage concerns,

2. Substation and circuit measurement data which provides partial visibility to voltage, but can be used to corroborate operational data, and

3. Models and power flow studies and analyses that simulate system power flow and voltage under various operational conditions.

LUMA will provide all available data on circuits and circuit sections that do not comply with the current version of ANSI C84.1. LUMA is providing transparency that all the data may not exist, which means that there may be circuits or circuit sections for which no data is available. In this case, the voltage at that circuit or circuit section is unknown and has not been corroborated via simulation, field inspection, or customer service calls.

During the IRP Technical Conference on Transmission Planning on January 30, 2024, there was discussion on existing data gaps. Specifically, the asset data, facility ratings, circuit models, and system studies. However, the asset data and facility ratings are used to build circuit power flow models; the power flow models are used to run studies. These models and studies are continuously being refined by learning from operational experiences, validating data in the field, performing high-level assessments, and even by placing temporary circuit sensors that provide visibility to all three-phase line current measurements where most substations only provide one phase of the three-phase measurements.

Since the circuit or circuit section voltage may not be known, but may be simulated, these circuit models represent the best digital representation of the physical grid. Possible violations of ANSI C84.1 identified by simulation are then prioritized for further investigation. These circuit models also allow predictive assessments to identify circuits and circuit sections that do not comply with the current version of ANSI C84.1 where customers experience high/low voltage.

Summary of Waiver Reason

LUMA's request for a partial waiver is being made because:

1. All data that is available will be provided. The data may be based on actual measured data or based on simulated data where available.

2. Some circuits and circuit sections may not have measured and verified data that show non-compliance with the current version of ANSI C84.1.

LUMA's requests for a partial waiver is because of known data deficiencies from lack of adequate circuit level metering (only one of three phases at the substation) and lack of AMI data to ascertain voltage measurements at customer premise without manual data gathering. Information available will be provided at the time of 2024 IRP filing.

Specific Waiver Requested

LUMA seeks a partial waiver of Sections 2.03(J)(1)(b)(i)(B) and 2.03(J)(1)(e)(i)(B) of Regulation 9021 such that any load flow or other system analysis by voltage class of the electric utility's distribution system performance will identify voltage variations on distribution circuits that do not comply with the current version of the American National Standard Institute ("ANSI") Standard C 84.1, to the extent such information is available and has been verified by LUMA as of the date of the filing of the 2024 IRP.

3. WAIVER 2

LUMA requests the Energy Bureau grant a partial waiver for the requirements described in Section 2.03(J)(1)(d) of Regulation 9021 which requires a description of planned transmission facilities additions or changes for the next ten years.

LUMA's transmission planning teams have developed power flow models that represent as accurately as possible the digital model of the physical network. Since commencement, LUMA has worked to:

- Include the 38kV transmission network in the transmission model, validate its connectivity, and baseline its performance against actual measured power flow and voltage (complete)
- Verified conductor technical parameters including resistance, reactance, and admittance based on conductor type, size, and tower configuration, and update in asset records and simulation models (complete)
- Verified transformer size, nameplate data and ratings for application in power flow models based on NERC Facility Ratings (FAC) standards (complete)

2024 IRP Regulation 9021 - Request for Waivers

- Updated generator dynamic characteristics to closely mirror actual recorded performance based on historical events based on NERC Modeling (MOD) standards (complete)

- Verify conductor size and rating of 230kV and 115kV transmission lines consistent with NERC FAC standards (ongoing)

- Generator testing to produce test-based dynamic characteristic and tuning information consistent with NERC MOD standards (not started)

LUMA transmission power flow models have been built and are being used to simulate future scenarios to support Transmission Planning, Generation Interconnection, and Renewable Integration, Integrated Resource Plan, and to adapt industry standards and best practices for planning a reliable and resilient transmission grid. To this end, LUMA has developed project plans that span a ten-year planning horizon. However, the project and plans that will have been completed by the filing date of the 2024 IRP will not comprise the full set of projects. It will include many, but not all the potential future transmission planning projects required to build and maintain a reliable, resilient, and effective transmission grid. LUMA will include all projects proposed for development, but the scope and timing of these projects over the 10-year planning horizon is subject to potential modification as future scenarios identify additional areas that require transmission investment or future determination of actual conditions warrant project modifications.

Summary of Waiver Reason

The focus of LUMA's transmission planning efforts to initiate rebuilds and projects are primarily centered on a 5-year horizon, including asset data cleansing, modeling improvements, and other industry-standard best practice implementation as discussed in the IRP Prefiling Technical Conference, held on January 30, 2024. Ten-year project plans that are developed will be provided as part of the 2024 IRP filing, but additional projects and plans will continue to be developed as additional data is collected and cleansed and further analyses are completed. Due to these ongoing efforts, the full project list will remain subject to change.

Specific Waiver Requested

LUMA seeks a partial waiver of Section 2.03(J)(1)(d) of Regulation 9021 such that the description of planned electric transmission and sub-transmission facilities

and plans for the development of facilities during the next ten years of the Planning Period include only those projects and plans which have been identified, assessed, and validated by LUMA as of the date of filing of the 2024 IRP.

4. WAIVER 3

LUMA requests the Energy Bureau grant a partial waiver for the requirements described in Section 2.03(J)(1)(e) of Regulation 9021 which requires a detailed description of planned changes to the distribution system.

LUMA is in the process of developing Distribution Area Plans which detail changes that LUMA plans to make to specific areas across Puerto Rico. The Puerto Rico grid was subdivided into 71 areas for the purposes of developing Distribution Area Plans: each area consists of adjacent substations and all distribution circuits. The purpose of the area plan analysis is to develop and rebuild reliability improvement and power quality improvement recommendations to achieve industry-standard distribution system performance. The recommendations from the distribution area plans may include:

- Primary circuit backbone reconductor and rebuild to improve reliability and harden the system to reduce the probability of events and outages
- Circuit lateral reconductor and rebuild to harden the system and reduce the probability of events and outages
- Circuit extensions to establish ties to adjacent circuits for improved reliability and operational flexibility
- Targeted conversion of overhead circuit sections to underground to increase reliability, especially to critical customer facilities
- Repair and rebuild of provisional overheads (temporary overhead service) for failed underground segments to remedy non-standard, unsafe conditions
- Voltage and reactive power control devices such as regulators and capacitor banks to manage power quality and DG integration
- Voltage conversion to a higher voltage to increase capacity, reduce losses, and enable DG integration

2024 IRP Regulation 9021 - Request for Waivers

LUMA will provide all distribution projects identified in Distribution Area Plans which are completed prior to the date of the IRP filing. As of February 2024, LUMA has completed 24 of the 71 areas and will continue area plan studies and assessments until each area is completed. However, the schedule for completing all the Distribution Area Plans extends beyond the 2024 IRP filing deadline. Therefore, LUMA intends to submit all distribution projects that have been defined as of the date of the 2024 IRP filing. However, the project listing will not include projects within the next ten years that are associated with Distribution Area Plans that are not yet complete. As Distribution Area Plan studies are completed, and additional projects are developed, the full project list is expected to expand.

Specific Waiver Requested

LUMA requests that the Energy Bureau grant a partial waiver of the requirements in Section 2.03(J.)(1)(e) – Distribution Upgrade plans for 10 years of Regulation 9021, to limit the required data and analysis filed with the 2024 IRP to only those planned distribution facilities projects for which the plans have been completed and verified by LUMA, with the commitment that any remaining planned distribution facilities projects, required by the referenced sections of Regulation 9021 will be filed with the Energy Bureau as they are completed and verified by LUMA.