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

IN RE:
INTERCONNECTION REGULATIONS

CASE NO.: NEPR-MI-2019-0009
CEPR-MI-2018-0008

SUBJECT: Submittal of LUMA's Comments on Key issues Relating to Preliminary Draft of Interconnection Regulation

MOTION TO SUBMIT LUMA'S COMMENTS ON KEY ISSUES RELATING TO PRELIMINARY DRAFT OF INTERCONNECTION REGULATION

TO THE PUERTO RICO ENERGY BUREAU:

COME NOW, LUMA ENERGY, LLC as Management Co., and **LUMA ENERGY SERVCO, LLC** (collectively, LUMA), through the undersigned legal counsel and respectfully state and request the following:

I. Introduction

LUMA submits with this Motion its comments in attention to the Resolution and Order issued by this Puerto Rico Energy Bureau of the Public Service Regulatory Board ("Energy Bureau") on March 24, 2026, in which the Energy Bureau welcomed comments from stakeholders and interested persons with respect to certain key issues identified by the Energy Bureau in connection with the preliminary draft of a comprehensive Interconnection Regulation for distributed generation resources ("DER"). That preliminary draft Interconnection Regulation was issued by the Energy Bureau on June 21, 2021, when it commenced an informal process seeking stakeholder input. Since 2021, LUMA has been an active participant in that process, by providing comments and recommendations on the preliminary draft and preparing and submitting a separate complementary document with Technical Interconnection Requirements ("TIR"), which were

proposed by LUMA and accepted by the Energy Bureau as a standalone document. LUMA's comments submitted herein expand upon these prior submissions. LUMA's comments are intended to support the establishment of a modernized, technically robust, and administratively efficient interconnection regulatory framework that ensures the safe integration of all DERs.

II. Procedural History

1. On May 20, 2019, this Puerto Rico Energy Bureau of the Public Service Regulatory Board ("Energy Bureau") issued a Resolution and Order in which it opened Case No. NEPR-MI-2019-0009 to address the process to modify the interconnection regulations.

2. On July 15, 2021, this Puerto Rico Energy Bureau of the Public Service Regulatory Board ("Energy Bureau") issued a Resolution and Order (the "July 15 Resolution") in which it consolidated Case No. NEPR-MI-2019-0009 and Case No. CEPR-MI-2018-008, and notified that it had developed a draft for a new comprehensive interconnection regulation (titled *Generating Facility and Microgrid Interconnection Regulation*) ("Preliminary Draft") governing the interconnection of distributed generators and inviting LUMA and other stakeholders to provide comments to this Preliminary Draft, on or before July 30, 2021, before initiating a formal rulemaking procedure.

3. On July 30, 2021, LUMA submitted preliminary comments to the Preliminary Draft. See LUMA's *Motion Submitting LUMA's Comments to Preliminary Draft of Proposed Generating Facility and Microgrid Interconnection Regulation* of that date.

4. On November 15, 2021, LUMA submitted additional comments to the Preliminary Draft which were included as proposed revisions or narrative comments marked on the draft.[1] *See* LUMA's *Motion to Submit Additional Comments to Preliminary Draft of Proposed Generating Facility and Microgrid Interconnection Regulation* of that date ("November 15th Motion"). LUMA proposed that the provisions containing detailed technical requirements for interconnection be removed from the Preliminary Draft and be included in a separate document of "Technical Interconnection Requirements" ("TIR") and submitted a preliminary draft of this proposed document ("Preliminary Draft TIR"). *See* November 15th Motion, pages 3-4.

5. On May 19, 2022, LUMA submitted to the Energy Bureau a more comprehensive draft TIR ("Proposed Comprehensive TIR"). *See Motion Submitting Complete Version of Technical Interconnection Requirements Document* of that date ("May 19th Motion"). LUMA explained that, although the Proposed Comprehensive TIR addressed the subject of smart inverters, further elaboration was required to address the complex subject of smart inverter settings in this document. LUMA also informed this Energy Bureau that after going through the rigorous process of drafting the Proposed Comprehensive TIR as a complementary document to the Preliminary Draft, LUMA had additional comments to the Preliminary Interconnection Regulation Draft, particularly with respect to the subjects of DG evaluations, supplemental study cost values, and DG interconnection capacity cap per feeder and that LUMA planned to submit these comments at the appropriate time.

[1] On October 15, 2021, LUMA had requested this Energy Bureau, to provide LUMA until November 15, 2021, to submit additional and more detailed comments to the Preliminary Interconnection Regulation Draft. *See* LUMA's *Motion Requesting Additional Time to Submit Additional Comments to Preliminary Draft of Proposed Generating Facility and Microgrid Interconnection Regulation* of that date.

6. On September 9, 2022, the Energy Bureau issued a Resolution and Order ("September 9th Order") accepting LUMA's proposal to remove the detailed TIR from the interconnection regulation and granting LUMA until October 7, 2022 to file the additional comments mentioned by LUMA in the May 19th Motion "regarding the subjects of DG evaluations, supplemental study cost values, and DG interconnection capacity cap per feeder" ("Additional Comments"). In addition, the Energy Bureau requested stakeholders and other interested persons to provide comments on the version of the Preliminary Draft containing LUMA's comments ("LUMA Proposed IR Draft"), the Proposed Comprehensive TIR document and the Additional Comments by October 21, 2022.

7. On November 1, 2021, LUMA submitted the Additional Comments.[2] *See Motion to Submit Additional Comment.* These Additional Comments addressed the subjects of DG evaluations, supplemental study cost values, and DG interconnection capacity cap per feeder, as well as the subject of smart inverters which LUMA indicated required further elaboration in the Proposed Comprehensive TIR document. *See id*., pp. 3-4 and Exhibit 1. The Additional Comments also included proposed revisions to the Comprehensive TIR document and the LUMA Proposed IR Draft as a result of the comments on the mentioned subjects. *See id*.

8. On March 19, 2026, the Energy Bureau issued a Resolution and Order ("March 19th Resolution") indicating that, in light of the provisions of the House of Representatives' Joint Resolution 193, signed by the Governor on January 7, 2026 ("RC 193"), the Energy Bureau is

[2] This, following an extension of the deadline to submit comments until November 1, 2022, granted by the Energy Bureau in attention to a LUMA request, and which applied to LUMA, stakeholders and interested persons and extended to the LUMA Proposed IR Draft, the Proposed Comprehensive TIR document, and the Additional Comments. *See* Resolution and Order of October 18, 2022.

"resum[ing] the administrative processes in this case for the purpose of completing and adopting interconnection rules in line with current energy public policy"; that as part of this process the Energy Bureau must conduct workshops with interested entities to consider new inputs and feedback from stakeholders before the issuance of a draft interconnection regulation by July 7, 2026; and that this rulemaking process must be completed by January 7, 2027. *See* March 19th Resolution, p. 2.

9. In the March 19th Resolution, the Energy Bureau sets forth a list of issues that the Energy Bureau understands remain unresolved in connection with the Preliminary Draft and that are "appropriate for further discussion during the workshop process to develop the interconnection regulation".[3] *See id*. The Energy Bureau also indicates that, "although the TIR does not form part of the regulation and since it is intrinsically related to the interconnection of DGs, the Energy Bureau welcomes comments and discussion regarding the contents of the TIR". *See id*. The Energy Bureau further informs that the Smart Inverter Settings, which form part of the TIR and have been in effect since January of 2025, are being amended, and that an independent study is being conducted regarding possible amendments which will be presented to stakeholders once complete. *See id*.

10. The Energy Bureau then invites all stakeholders and interested persons to provide their comments and feedback on the key issues that should be examined through the workshop process and addressed in the interconnection regulation on or before April 15, 2026. *See id*.

[3] These issues are: (1) The scope of technologies included in the regulation; (2) interconnection timeline and enforcement; (3) application process and review tracks (e.g., simplified, fast-track); (4) cost allocation for distribution system upgrades; (5) standard for interconnection studies; (6) interconnection queue management and data transparency; and (7) technical issues of system performance. *See id*.

III. LUMA's Comments

11. In attention to the March 19th Resolution, herein, LUMA submits LUMA's comments on the issues listed in the March 19th Resolution. *See Exhibit 1*.

12. LUMA highlights in its comments the critical need to coordinate regulatory and policy adjustments to address the operational challenges experienced as a result of the high penetration of DERs into the grid, which has resulted in significant grid impacts, including in many instances voltage instability. *See Exhibit 1*, p.2. LUMA also emphasizes, among others, the need to have a unified DER inclusive interconnection regulatory network grounded in mandatory pre-energization screenings, transparent cost recovery, and clear separation of interconnection requirements from customer programs. *See id*., p. 3. This interconnection regulatory framework should further promote standardized study procedures, updated application and information technology (IT) systems, feeder specific hosting capacity considerations, and mechanisms for proactive grid management. *See id*. Collectively, these measures will enhance operational consistency, improve system reliability, ensure equitable cost allocation, and enable the continued growth of DERs while maintaining the safety, stability, and affordability of Puerto Rico's electric system. *See id*., p. 7.

13. LUMA appreciates the opportunity to contribute to this important regulatory effort and remains committed to supporting a safe, reliable and sustainable integration of DERs across Puerto Rico's electric system.

WHEREFORE, LUMA respectfully requests this honorable Energy Bureau to **take notice** of the above and **accept** LUMA's Comments included in *Exhibit 1*.

RESPECTFULLY SUBMITTED.

In San Juan, Puerto Rico, this 15th day of April 2026.

We certify that we filed this motion using the electronic filing system of the Puerto Rico Energy Bureau.

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EXHIBIT 1

LUMA's Comments

LUMA Comments: Interconnection Regulation

NEPR-MI-2019-0009

April 15, 2026

Executive Summary

LUMA submits these comments in continued support of the Puerto Rico Energy Bureau's (Energy Bureau) efforts to modernize Puerto Rico's interconnection regulatory framework and to ensure a safe, reliable, and scalable integration of Distributed Energy Resources (DERs). LUMA has actively participated in this rulemaking process since the Bureau issued its Draft Comprehensive Interconnection Regulation on July 15, 2021[1]. On November 15, 2021, LUMA submitted preliminary comments to the draft regulation[2], recommending that all technical interconnection requirements, including smart inverter settings, be removed from the Interconnection Regulation and placed in a standalone document titled Technical Interconnection Requirements (TIR). LUMA subsequently submitted a more comprehensive version of the TIR on May 19, 2022[3], noting that while the draft addressed smart inverters, additional development was necessary to reflect the complexity of evolving DER technologies. The Energy Bureau accepted LUMA's proposal to remove the TIR from the Interconnection Regulation by Resolution and Order of September 9, 2022.

Revisions to the Interconnection Regulation are critical, as significant grid impacts are experienced due to DER interconnection. For example, more than 121 substations already serve feeders operating above 90% load capacity, with more than 145 individual circuits exceeding that same threshold. Within this group, 105 circuits now operate beyond 100% load capacity, meaning that DER nameplate capacity exceeds the daytime load these feeders were originally designed to serve.

Further, analysis of 'high-voltage' customer complaints reinforces this trend. Of the more than 25,000 complaints reviewed, LUMA was able to correlate over 21,000 to DER over-capacity feeders (feeders operating above 15% capacity). Of those correlated cases, more than 70% originated either from customers with DER installed at their premises or from customers sharing a service transformer with a DER owner, demonstrating a clear, data-driven relationship between DER saturation and voltage instability experienced by customers. These findings confirm that current interconnection volumes are now producing widespread operational challenges that cannot be resolved without coordinated regulatory and policy adjustments. High DER penetration reduces minimum daytime net loads and conventional generation's inertia, challenging frequency response and increasing the likelihood of daytime high-voltage

[1] See Resolution and Order, Notice of Availability of Preliminary Draft on Proposed Regulation and Request for Feedback filed on July 15, 2021, under case NEPR-MI-2019-0009

[2] See Motion to Submit Additional Comments to Preliminary Draft of Proposed Generating Facility and Microgrid Interconnection Regulation filed on November 15, 2021, under case NEPR-MI-2019-0009

[3] See Motion-Submitting-Complete-Version-of-Technical-Interconnection-Requirements-Document-NEPR-MI-2019-0009.pdf filed on May 19, 2022, under case NEPR-MI-2019-0009

excursions, transformer overloads, and unintentional islanding on feeders, which poses an operational challenge to everyday grid operation.

These challenges are compounded when considering that the pace of DER, especially rooftop solar photovoltaic ("PV") and behind-the-meter batteries, integration is taking place across a network with aging assets, limited redundancy, and a transmission backbone that does not consistently meet N-1 reliability[4], elevating operational risk during contingencies. High volumes of small DER interconnections on heterogeneous distribution voltages and a substation fleet with many transformers beyond their 40-year design life have contributed to poor reliability, capacity constraints, and limited flexibility.

In response to the Energy Bureau's September 9, 2022 Resolution and Order, on November 1, 2022, LUMA submitted additional comments on DER evaluation processes, supplemental study cost values, and feeder level interconnection capacity limits, together with proposed revisions to both the Draft Interconnection Regulation and the Draft Comprehensive TIR, as well as further elaboration on technical topics such as smart inverters and associated configuration requirements[5]. These matters were again addressed in the Smart Inverter Settings Sheet that LUMA submitted for the Energy Bureau's approval on June 20, 2025[6].

Through this filing, LUMA expands upon these prior submissions and proposes a unified, DER inclusive interconnection regulatory framework grounded in mandatory pre-energization screenings, transparent cost recovery, and clear separation of interconnection requirements from customer programs. LUMA recommends maintaining the TIR as a stand-alone, formally approved document that the utility may update as needed to reflect changing system conditions and technological advancements. The filing further supports standardized study procedures; modernized, commercially available IT platforms to administer interconnection applications; feeder-specific hosting capacity integration into the screening process; the use of non-export pathways in high penetration areas; and equitable, well-defined grid-upgrade cost allocation consistent with industry norms and with the cost-causer principle.

LUMA suggests that a unified interconnection regulatory framework is built upon existing regulations (Regulations 8915, 8916 and 9028) and recognized utility practices, such as those in the US Federal Energy Regulatory Commission (FERC)'s Standard Interconnection Agreements and Procedures for Small Generators (SGIP)[7] and guidance provided by the US Department of Energy, such as their DER - Interconnection Roadmap[8]. In addition, as stated in Puerto Rico's Act 17-1019 State of Motives "Act No. 120-2018 set forth the process whereby the electric power system shall be transformed into one that is modern, sustainable, reliable, efficient, cost effective, and resilient to the ravages of nature."[9]

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[4] N-1 reliability refers to a contingency planning standard. The electric grid must be able to withstand the loss of any single major element (one generator, one transmission line, one transformer, etc.) without causing a service interruption or cascading failure.

[5] See Motion-to-Submit-Additional-Comments-NEPR-MI-2019-0009.pdf filed on November 1, 2022, under case NEPR-MI-2019-0009, *In Re: Interconnection Regulations*

[6] See Submittal of LUMA's Revised Smart Inverter Sheets and Responses to Stakeholder Comments filed on June 20, 2025, under case NEPR-MI-2019-0009, *In Re: Interconnection Regulations*

[7] Federal Energy Regulatory Commission (FERC), Standard Interconnection Agreements and Procedures for Small Generators (SGIP); https://www.ferc.gov/electric-transmission/generator-interconnection/standard-interconnection-agreements-and-procedures

[8] US Department of Energy, Distributed Energy Resource Interconnection Roadmap, 2025; https://www.osti.gov/biblio/2997033

[9] See Act 17-2019, from April 19, 2019 as amended, "Ley de Política Pública Energética de Puerto Rico" [Ley 17-2019]

NEPR-MI-2019-0009

These comments reflect LUMA's ongoing commitment to working collaboratively with the Energy Bureau and stakeholders to advance a transparent, technically robust, efficient, and scalable interconnection process. LUMA appreciates the opportunity to contribute to this important regulatory effort and remains committed to supporting a safe, reliable, and sustainable integration of DERs across Puerto Rico's electric system.

NEPR-MI-2019-0009

Contents

List of Acronyms

ACRONYM	DEFINITION
CHP	Combined Heat and Power
DBESS	Distributed Battery Energy Storage System
DER	Distributed Energy Resources
DOE	Department of Energy
DOER	Massachusetts Department of Energy Resources
EV	Electric Vehicle
FERC	Federal Energy Regulatory Commission
IT	Information Technology
MassCEC	Massachusetts Clean Energy Center
NEM	Net Energy Metering
PV	Photovoltaic
SGIP	Small Generator Interconnection Procedures
SIR	Standardized Interconnection Requirements
TIR	Technical Interconnection Requirements

1.0 General Comments

LUMA provides these general comments to the proposed Interconnection Regulation to support the establishment of a modernized, technically robust, and administratively efficient interconnection regulatory framework that ensures the safe integration of all DERs. LUMA's comments emphasize the importance of a unified interconnection regulatory framework that is:

- applicable to all DER technologies, remaining technology-agnostic to accommodate future resources,
- aligns with prudent utility practices for interconnection, including those outlined or recommended by the US Federal Energy Regulatory Commission (FERC) and the US Department of Energy (DOE),
- allows for pre-energization screens or evaluations,
- separates interconnection regulations from customer programs,
- enables transparent and equitable cost recovery mechanisms,
- relies on utility maintained TIRs.

This interconnection regulatory framework should further promote standardized study procedures, updated application and information technology (IT) systems, feeder specific hosting capacity considerations, and mechanisms for proactive grid management. Collectively, these measures will enhance operational consistency, improve system reliability, ensure equitable cost allocation, and enable the continued growth of DERs while maintaining the safety, stability, and affordability of Puerto Rico's electric system. LUMA respectfully provides the following general comments addressing the principal areas that should guide the development of Puerto Rico's interconnection regulation for DER systems. These areas include the definition of the scope of applicable technologies, the establishment of clear interconnection timelines, refinement of the application process, determination of appropriate cost allocation for system upgrades, adoption of consistent standards for interconnection studies, enhancement of interconnection queue management and data transparency practices, and consideration of technical matters related to system performance.

The average feeder capacity in Puerto Rico is over 61.3%. The Interconnection Regulation should expressly allow non-export interconnection options for feeders with high DER penetration, thereby enabling continued DER integration in constrained areas while protecting grid stability.

LUMA recommends a unified interconnection regulatory framework that builds upon existing regulations (Regulations 8915, 8916 and 9028) and recognized utility practices, such as those in the FERC's Standard Interconnection Agreements and Procedures for Small Generators (SGIP)[10] and guidance provided by the DOE, such as their DER Interconnection Roadmap[11].

LUMA hereby provides general comments and will further refine its position during the rulemaking process.

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[10] Federal Energy Regulatory Commission (FERC), Standard Interconnection Agreements and Procedures for Small Generators (SGIP); https://www.ferc.gov/electric-transmission/generator-interconnection/standard-interconnection-agreements-and-procedures

[11] US Department of Energy, Distributed Energy Resource Interconnection Roadmap, 2025; https://www.osti.gov/biblio/2997033

1.1 Scope of Technologies Included in Regulation

The new Interconnection Regulation should clearly establish that all DERs, including, but not limited to, Distributed Solar (DPV), Distributed Battery Energy Storage System (DBESS), Combined Heat and Power (CHP) facilities, Community Solar and Microgrids, fall within its scope. The regulatory language should remain technology agnostic, to accommodate for emerging and future technologies, thereby ensuring the electric grid has the flexibility needed to address new DERs as they arise while maintaining continuity with established processes and technical criteria. For example, the Minnesota Public Utilities Distributed Interconnection Process recognizes the rapidly evolving technology landscape and uses a technology agnostic approach[12].

Within this unified interconnection regulatory framework, DER technologies should have clearly defined treatments, including applicable requirements, such as those submitted by LUMA in the TIRs, initially filed in 2021[13], with modifications subsequently submitted in May 2022[14] and November 2022[15].The Interconnection Regulation should also consider limits related to export capacity and voltage to allow safe and reliable operation of the electricity grid and customers[16].

Additionally, all DERs should be subject to structured provisions governing their technical operations and interactions with the utility, including cost responsibilities and the use of utility infrastructure. These provisions will promote consistent, transparent and predictable operational expectations and planning.

1.1.1 Separation of Customer Programs

LUMA understands that interconnection regulations determine how a DER connects to the grid and sit separate from customer programs, which determine what the customer receives or how the DER operates once connected. Customer programs are utility or regulatory-approved programs that allow customers to operate or participate in markets using DER technologies. Customer programs can include, among others, Net Energy Metering (NEM), Net Energy Billing, Virtual Power Plants, Battery Storage Programs, among others.

Separation of customer programs helps avoid unnecessary amendments to the Interconnection Regulation. Customer program elements should be managed through separate, program-specific tracks, ensuring that future program updates do not trigger mandatory revisions to the regulation. For example, California's Net Billing Tariff defines export compensation separately from interconnection[17]; Hawaii's

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[12] Minnesota Public Utilities Commission, Distributed Energy, https://mn.gov/puc/activities/economic-analysis/distributed-energy/

[13] See Motion to Submit Additional Comments to Preliminary Draft of Proposed Generating Facility and Microgrid Interconnection Regulation filed on November 15, 2021, under case NEPR-MI-2019-0009, *In Re: Interconnection Regulations*

[14] See Motion-Submitting-Complete-Version-of-Technical-Interconnection-Requirements-Document-NEPR-MI-2019-0009.pdf filed on May 19, 2022, under case NEPR-MI-2019-0009, *In Re: Interconnection Regulations*

[15] See Motion-to-Submit-Additional-Comments-NEPR-MI-2019-0009.pdf filed on November 1, 2022, under case NEPR-MI-2019-0009, *In Re: Interconnection Regulations*

[16] See Submittal of LUMA's Revised Smart Inverter Sheets and Responses to Stakeholder Comments filed on June 20, 2025, under case NEPR-MI-2019-0009, *In Re: Interconnection Regulations*

[17] California Public Utility Commission, Customer Generation: https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/customer-generation

Smart DER Program establishes distinct export/non-export options[18]; and New York's Value of Distributed Energy Resources Costumer Distributed Generation Program determines bill credits independently of its Standardized Interconnection Requirements (SIR)[19].

1.2 Interconnection Timeline and Enforcement

The Interconnection Regulation must require that all DERs undergo a mandatory pre-energization screening, and no DER may be able to energize prior to the completion of this review. To ensure consistency and transparency, a standardized screening and study process should be adopted, to include application reviews, technical screenings, and any other additional studies needed to identify required network upgrades. The Interconnection Regulation should further allow the utility to conduct an initial screening immediately upon receipt of a complete application, while expressly granting the utility authority to hold processing of the application until applicable fees are paid.

As part of this regulatory framework, the utility must retain the authority to deny energization on feeders that have reached their hosting capacity limits caused by thermal or voltage violations, and to condition any interconnection on full compliance with all applicable technical standards. In addition, the Interconnection Regulation must ensure that DERs meet utility-defined smart inverter settings[20] and technical requirements prior to energization. The utility must retain the right to isolate any DER that fails to meet these requirements or presents a safety concern, thereby protecting system reliability and the safety of utility personnel and the public. For example, Hawaii requires inverter certification and utility review prior to energization[21]. LUMA remains committed to supporting the responsible integration of DERs while safeguarding the safety reliability, and operational integrity of Puerto Rico's electric power system. Therefore, proper implementation of smart inverter settings is necessary to prevent DER systems from exacerbating voltage and reliability challenges to maintain grid stability as DER penetration continues to increase[22].

While automatic interconnection for systems of up to 25kW is part of Act 17-2019[23], an enforcement mechanism is still necessary to address safety and reliability concerns. Participation in customer programs may therefore be conditioned on compliance with applicable laws and regulations, including the Interconnection Regulation.

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[18] Hawaii Public Utilities Commission, Distributed Energy Policy: https://puc.hawaii.gov/energy/der/

[19] New York Public Service Commission: https://dps.ny.gov/electric

[20] See Submittal of LUMA's Revised Smart Inverter Sheets and Responses to Stakeholder Comments filed on June 20, 2025, under case NEPR-MI-2019-0009, *In Re: Interconnection Regulations*

[21] Hawaiian Electric Smart Renewable Energy Programs: https://www.hawaiianelectric.com/products-and-services/smart-renewable-energy-programs

[22] See LUMA's Comments on Smart Inverter Settings Workshops filed on April 25, 2025, under case NEPR-MI-2019-0009, *In Re: Interconnection Regulations*

[23] See Act 17-2019, from April 19, 2019 as amended, "Ley de Política Pública Energética de Puerto Rico" [Ley 17-2019]

1.3 Application Process and Review Tracks

The Interconnection Regulation should establish a screening structure aligned with the principles of FERC's SGIP[24], including a fast-track pathway for smaller DERs. The unified interconnection regulatory framework should allow the utility to identify pre-approved feeders to enable expedited evaluation and interconnection where system conditions permit. This approach would preserve the existing interconnection process while updating it as needed to ensure clarity, consistency and alignment with modern technical practices, rather than replacing the unified interconnection regulatory framework entirely.

Application forms, interconnection agreements, and related documentation should be revised and modernized, to enable faster implementation and minimize transition challenges. LUMA submits that, similar to the TIR document, agreement forms should remain flexible so they can be revised or updated to reflect changes in circumstances, such as applicable laws and regulations, technical standards, and advancements, without requiring amendments to the Interconnection Regulation. To implement this proposal, corresponding language should be included in the TIR, pending applicable regulatory changes.

The Interconnection Regulation should also establish a clearly defined transition plan to guide all stakeholders from current practices to the updated requirements, ensuring regulatory and operational continuity.

Notably, and because Puerto Rico's Law 17-2019[25] allows automatic interconnection, the utility's ability to take proactive measures is significantly constrained. This limitation reduces the utility's ability to evaluate system risk and operational constraints prior to energization. Unlike other jurisdictions, where utilities may conduct interconnection studies in advance, LUMA lacks the ability to implement proactive safety measures that could prevent the types of grid impact observed in Puerto Rico.

1.4 Cost Allocation for Distribution System Upgrades

The Interconnection Regulation needs enforceable mechanisms to recover unrecovered fees and upgrade costs under the existing framework. All costs associated with interconnection studies, required grid upgrades, and the implementation or modification of tools that facilitate the process should be assigned to interconnection beneficiaries and paid prior to energization. On June 11th, 2024, LUMA filed a motion in the DG Interconnection Docket[26] that outlines potential cost recovery alternatives.

In circumstances where applicable law requires automatic interconnection, Interconnection Regulation should require compliance with regulation, technical requirements, and applicable interconnection payments as a pre-requisite for participation in customer programs. To ensure proportionality for larger

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[24] Federal Energy Regulatory Commission (FERC), Standard Interconnection Agreements and Procedures for Small Generators (SGIP); https://www.ferc.gov/electric-transmission/generator-interconnection/standard-interconnection-agreements-and-procedures

[25] See Act 17-2019, from April 19, 2019 as amended, "Ley de Política Pública Energética de Puerto Rico" [Ley 17-2019]

[26] See Motion Submitting Outstanding Responses in Further Compliance with Bench Order Issued at the Compliance Hearing Held on May 6, 2024 filed on June 11, 2024, under case NEPR-MI-2019-0016, *In Re: Informes de Progreso de Interconexion de la Autoridad de Energia Electrica de Puerto Rico*

systems, the Interconnection Regulation may also establish standard fees for systems exceeding a certain capacity, which may be applied to studies, network upgrades and/or both, with the specific scope of such charges determined during implementation.

Cost allocation for grid upgrades should be transparent and tied to measurable thresholds. The utility may, for example, publish indicative annual cost schedules for common upgrades or system enhancements. LUMA further suggests that cost allocation methods should remain at the utility's discretion, consistent with the type and complexity of studies and upgrades performed, recognizing that a uniform one-to-one cost assignment is not feasible across all project sizes.

In the absence of a fully defined cost recovery mechanism, the Interconnection Regulation must include effective measures to ensure the DER applicants fund the system upgrades needed to accommodate their interconnection, consistent with the cost-causer principles.

LUMA supports the establishment of a mechanism to recover interconnection-related costs within the legal framework on charges for supplemental studies. Accordingly, the Interconnection Regulation should incorporate a process that: (1) allows automatic for interconnection where legally required, subject to technical pre-screening; (2) still permits the utility to conduct studies as necessary; and (3) authorizes disconnection or non-export if a subsequent study identifies operational issues. This unified interconnection regulatory framework would preserve compliance with statutory mandates while protecting system reliability and maintaining equitable cost allocation.

1.5 Standard for Interconnection Studies

LUMA proposes that the Interconnection Regulation requires mandatory technical screening for all DERs prior to energization, ensuring that no system is interconnected or subject to non-export before the utility completes this review. The study structure should maintain the current two-tier approach, consisting of a simplified screening and a full study, without introducing additional stages such as feasibility assessments, system impact studies, or facility studies stages intended for large commercial (non-DER) projects. To promote efficiency, a standardized combined fee could apply to all projects qualifying for an expedited-style process, covering the costs associated with screenings, studies and related administrative activities.

Interconnection application forms and agreements should be updated to reflect modernized practices. Technical components can be revised easily, while legal and contractual elements may require more rigorous review and formal approval. All required fees should be collected at the time of application submission to ensure timely cost recovery and to prevent delays in project initiation. Additionally, hosting capacity limits must be directly integrated into the screening criteria to ensure that these values are effectively applied when determining system eligibility and assessing potential impacts on the distribution network. Incorporating hosting capacity constraints into the evaluation process will improve transparency, support consistent decision-making, and help maintain system reliability.

1.6 Interconnection Queue Management and Data Transparency

LUMA proposes that all IT requirements associated with the interconnection process be funded through interconnection related fees. To promote efficiency and cost-effectiveness, the Interconnection Regulation should allow the utility to implement a commercial off-the-shelf platform, which provides standardized

functionality, reduces custom development costs, and supports long-term scalability. Any system adopted must include automated technical screening capabilities and workflow-tracking features to ensure consistent, timely, and transparent processing of applications.

Additionally, the Interconnection Regulation must establish clear requirements for queue transparency to ensure that DER applicants have clear and timely visibility into the status of their applications, the assignment of upgrade responsibilities, and feeder-level capacity constraints. In some jurisdictions, for example in Massachusetts, both utilities, as Eversource[27], and pertinent government agencies as Massachusetts Department of Energy Resources (DOER)[28] and Massachusetts Clean Energy Center (MassCEC)[29], publish guides, templates, and checklists that improve applicant preparedness for compliance, processing, and clarity on timelines.

1.7 Technical Issues and System Performance

LUMA's proposed TIRs, including the Smart Inverter Settings technical bulletin, must receive formal approval, while preserving the utility's authority to update the TIRs as needed. Given the rapid evolution of DER technologies, all technical requirements should be removed from the Interconnection Regulation itself and instead be addressed through a separate technical track. The proposed TIRs were submitted for approval on May 19, 2022[30], and the Energy Bureau approved their separation from the Interconnection Regulation on September 9, 2022[31].

Maintaining the TIRs as a standalone document allows the technical criteria to be updated more frequently without requiring amendments to the Interconnection Regulation, thereby keeping system safety and reliability as the central focus in all interconnection determination. Within this unified interconnection regulatory framework, export limits and operating requirements should be defined by DER technology to ensure proper alignment with system conditions and hosting capacity constraints.

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[27] Eversource Interconnection Resources: https://www.eversource.com/residential/about/doing-business-with-us/interconnections/massachusetts/massachusetts-application-to-interconnect/interconnection-resources

[28] Massachusetts Department of Energy Resources, Interconnection: https://www.mass.gov/info-details/utility-interconnection-in-massachusetts

[29] Massachusetts Clean Energy Center, Interconnection Guide: https://www.masscec.com/interconnection-guide-distributed-generation

[30] See Motion-Submitting-Complete-Version-of-Technical-Interconnection-Requirements-Document-NEPR-MI-2019-0009.pdf filed on May 19, 2022, under case NEPR-MI-2019-0009, *In Re: Interconnection Regulations*

[31] See Resolution and Order September 9, 2022. filed on September 9, 2022 under case NEPR-MI-2019-0009, *In Re: Interconnection Regulations*