

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

**NEPR**  
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**IN RE:**

**INTERCONNECTION REGULATIONS**

**CASE NO. NEPR-MI-2019-0009**

**SUBJECT: LUMA's Comments on Subjects Discussed in Virtual Stakeholder Workshop Held on March 30, 2026**

**MOTION TO SUBMIT LUMA'S COMMENTS ON SUBJECTS DISCUSSED IN THE  
VIRTUAL STAKEHOLDER WORKSHOP HELD ON MARCH 30, 2026**

**TO THE PUERTO RICO ENERGY BUREAU:**

**COME NOW LUMA Energy ServCo, LLC and LUMA Energy, LLC** (collectively "LUMA"), through the undersigned legal counsel, and respectfully state and request the following:

**I. Introduction**

LUMA respectfully submits its comments following the Virtual Stakeholder's Workshop held by the Puerto Rico Energy Bureau of the Public Service Regulatory Board ("Energy Bureau") in which staff of the Sandia National Laboratory ("Sandia") discussed the results of an independent study conducted by Sandia, using real word data, regarding the voltage effects on the grid related to the power injection of distributed generators and the possible modifications to the Inverter Settings that are currently in effect. As explained in more detail by LUMA in the attached comments, the findings of this study support the implementation of the Smart Inverter Settings proposed by LUMA applicable to all systems installed after 2018, the year following the effective date of Regulation 8915<sup>1</sup> which mandated the implementation of Standard IEEE 1547.

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<sup>1</sup> *The Regulation to Interconnect Generators with the Electric Distribution System of the Puerto Rico Electric Power Authority and Participate in the Net Metering Programs*, issued by the Puerto Rico Electric Power Authority effective March 8, 2017.

## II. Relevant Procedural Background

1. On January 1, 2025, the Smart Inverter Settings developed by LUMA and submitted to the Energy Bureau on November 15, 2024<sup>2</sup> took effect (“January 2025 Settings”), as approved by the Energy Bureau’s Resolution and Order of November 7, 2024 (“November 7<sup>th</sup> Order”). These settings were designed to enhance grid support, operational efficiency, and the integration of distributed energy resource (“DER”) systems while maintaining grid safety and reliability.<sup>3</sup>

2. Pursuant to the November 7<sup>th</sup> Order, the Energy Bureau commenced a series of meetings of a Smart Inverters Working Group (“SIWG”) and associated public comment periods to address the implementation and future possible modifications to the January 2025 Settings.<sup>4</sup> The SIWG meetings were held on November 21, 2024, February 11, 2025, and April 3, 2025, with the participation of LUMA, various stakeholders, and Energy Bureau consultants, including the Electric Power Research Institute. Following each meeting, some SIWG stakeholders submitted comments to the Energy Bureau regarding the subjects discussed in the meeting.<sup>5</sup> Additional comments were submitted by LUMA and stakeholders after this process.<sup>6</sup>

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<sup>2</sup> See *Motion to Submit Final Technical Bulletin Regarding Smart Inverter Settings Sheets in Compliance with Resolution and Order of November 7, 2025, and Request for Agenda for Workshop Scheduled for November 21, 2024*, filed on November 15, 2024 (“November 15<sup>th</sup> Motion”).

<sup>3</sup> See *id.*, p. 2.

<sup>4</sup> See November 7<sup>th</sup> Order, pp. 6-7; Resolutions issued by the Energy Bureau on January 13, 2025, and March 10, 2025.

<sup>5</sup> See *Enphase Energy, Inc. Comments to PREB Smart Inverter Working Group re: Customer Protections for System Curtailments under the Volt-Watt Smart Inverter Function* filed on December 11, 2024; *Initial Feedback from the Solar & Energy Storage Association of Puerto Rico (SESA)* filed on December 11, 2024; *Comentarios Suplementarios de la Oficina Independiente de Protección (OIPC) al Consumidor Sobre lo Discutido en el Primer Taller Sobre “Smart Inverters”* filed on December 26, 2024; *Input regarding real-world impact of new Smart Inverter Settings since going into effect January 1<sup>st</sup>, 2025, and Request for Urgent Modifications to required Smart Inverter Settings* filed on February 10, 2025; and *SESA Re-Filing of Smart Inverter Settings Recommendations* filed on April 25, 2025.

<sup>6</sup> See *Motion to Submit LUMA’s Comments on Subjects Discussed During Smart Inverter Working Group Meetings* filed on April 25, 2025; *Enphase Energy, Inc. Comments to PREB re: Smart Inverter Working Group Filings* filed on May 7, 2025; *Comments of the Solar and Energy Storage Association of Puerto Rico (SESA) Regarding Urgent Need for Immediate Action on Smart Inverter Settings* filed on May 14, 2025; and *Enphase Energy, Inc. Comments to PREB*

3. Following the conclusion of the lengthy SIWG process, on June 20, 2025, LUMA submitted to the Energy Bureau proposed revised Smart Inverter Settings (“Proposed Revised Settings”), as well as responses to comments from stakeholders that participated in the SIWG meetings.<sup>7</sup> LUMA proposed that the Proposed Revised Settings become effective as soon as possible.<sup>8</sup> LUMA also submitted a document explaining LUMA’s revisions to the January 2025 Settings.

4. After other procedural events, on March 26, 2026, the Energy Bureau issued a Resolution and Order (as corrected by *Nun Pro Tunc* Resolution issued on March 27, 2026, the “March 26<sup>th</sup> Order”) informing that as part of the U.S. Department of Energy’s support to Puerto Rico, Sandia had “conducted an independent study, with real word data, regarding the voltage effects (on the grid related to the power injection of distributed generators) and the possible modifications to the Inverter Settings that are currently in effect” (“Sandia Study”). *See* March 26<sup>th</sup> Resolution, p. 1. The Bureau also stated that “[i]n the interest of reaching a consensus between stakeholders regarding the modifications to said Inverter Settings”, the Energy Bureau was inviting all stakeholders and any other interested persons or groups to a Virtual Stakeholder Workshop scheduled for March 31, 2026, where Sandia’s staff would present the study’s findings. *See id.* The Energy Bureau noted that, after the presentation, the stakeholders would have the opportunity to provide comments and feedback. *See id*

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*re: Smart Inverter Working Group Filings* filed on May 7, 2025; *Comments of the Solar and Energy Storage Association of Puerto Rico (SESA) Regarding Urgent Need for Immediate Action on Smart Inverter Settings* filed on May 14, 2025; *LUMA’s Notice of Intent to File Comments in Response to Comments Presented by Enphase and SESA and to Submit LUMA’s Proposal Regarding the Smart Inverter Settings Sheets*, filed on May 24, 2025; and *SESA’s Urgent Request Regarding LUMA’s “Notice of Intent to File Comments in Response to Comments by Enphase and SESA to Submit LUMA’s Proposal Regarding the Smart Inverter Settings”* dated May 27, 2025.

<sup>7</sup> *See* June 20<sup>th</sup> Motion, Exhibits 1 and 2.

<sup>8</sup> *Id.*, p. 5.

5. On March 31, 2026, the Virtual Stakeholder Workshop was held, and Sandia’s staff gave a presentation of the Sandia Study. LUMA and other stakeholders participated, asking questions and providing comments.

### **III. Submittal of Comments**

6. Having reviewed the Sandia Study and the comments discussed in the Virtual Stakeholder Workshop, LUMA understands it is important for LUMA to provide its written comments regarding this study for the benefit of a complete record in this proceeding. Therefore, LUMA submits herein, as *Exhibit 1*, these comments and respectfully requests the Energy Bureau to accept them and consider them in making its determination on the Smart Inverter Settings.

7. As discussed in more detail in Exhibit 1, and among other comments included therein, LUMA submits that the Sandia Study confirms that (a) high-voltage disconnects remain the primary cause of solar photo-voltaic (“PV”) curtailment, (b) any level of Smart Inverter Settings helps reduce these events by improving voltage management, and (c) Volt/VAR offered the greatest benefit, by stabilizing voltage with minimal impact on real-power output, while Volt-Watt served as a secondary control for elevated-voltage conditions. *See Exhibit 1*, p. 2. In addition, the Study findings indicate that if more than fifty percent (50%) of inverters on a feeder adopt the recommended settings, high voltage disconnects disappear and curtailment falls close to zero at roughly sixty (60%) percent. *See id.*

8. LUMA’s internal assessments show that DER penetration, which is growing at a rapid rate, now exceeds the operational limits in distribution feeders. *See id.* In addition, LUMA customer complaint data shows that the vast majority of high voltage complaints reviewed (over 21,000 of more than 25,000 complaints) were linked to DER-overloaded feeders, and more than 70 percent of complaints came from customers with DER systems or those sharing a transformer

with a DER customer. *See id.* The foregoing information demonstrates a clear relationship between high DER saturation and voltage instability experienced at the customer level. *See id.* Furthermore, LUMA's preliminary analysis using Automatic Meter Reading (AMR) data shows that approximately 40 percent of monitored locations experience voltage violations above the ANSI C84.1 standard voltage band, with violations occurring throughout the day and worsening during high-solar-export hours. *See id.*, p. 3.

9. Looking at all of this information, LUMA concludes that a clear and compelling technical basis is established for immediate, system-wide adoption of Smart Inverter Settings, for all systems installed after 2018, as per Regulation 8915 (which entered into effect in 2017), which mandates the implementation of standard IEEE-1547. *Id.*

10. LUMA acknowledges stakeholder interest in additional studies but emphasizes that the existing evidence, as discussed in Exhibit 1, already provides a strong basis for regulatory action on Smart Inverter Settings. *See id.*, p. 6. At this stage, the record sufficiently supports Volt/VAR as the primary voltage-control function, Volt/Watt as the secondary safeguard, and the need for feeder-level participation exceeding fifty percent (50%). *Id.* Delaying implementation of these Settings only worsens voltage-related challenges, increases the likelihood of inverter trips, and diminishes customer reliability outcomes as DER penetration continues to grow. *Id.*, p. 2.

11. In further support of LUMA's comments herein, LUMA submits as *Exhibit 2*, a letter it sent to the Puerto Rico Public-Private Partnerships Authority ("P3A") addressing voltage instability and service reliability concerns raised by the P3A, in which LUMA explains the direct association between these issues and the uncontrolled DER interconnection, further corroborating the urgent need for LUMA's proposed Smart Inverter Settings.

**WHEREFORE**, LUMA respectfully requests the Energy Bureau to (i) **take notice** of the aforementioned; (ii) **take into consideration** LUMA's comments in *Exhibit 1* and the correspondence submitted as *Exhibit 2*; and **approve** the proposed Revised Settings submitted by LUMA on June 20, 2025.

**RESPECTFULLY SUBMITTED.**

In San Juan, Puerto Rico, this 22<sup>nd</sup> day of May 2025.

We hereby certify that we filed this Motion using the electronic filing system of this Puerto Rico Energy Bureau and that copy of this Motion will be notified to hrivera@jrsp.pr.gov; arivera@gmlex.net; mvalle@gmlex.net; agustin.irizarry@upr.edu; javrua@sesapr.org; contratistas@jrsp.pr.gov; aconer.pr@gmail.com; john.jordan@nationalpfg.com; cfl@mcvpr.com; and mqs@mcvpr.com.



**DLA Piper (Puerto Rico) LLC**  
B-7 Tabonuco St., Suite 1501  
Guaynabo, PR 00968  
Tel. 787-945-9147  
Fax 939-697-6147

/s/ Laura T. Rozas  
Laura T. Rozas  
RUA Núm. 10,398  
Laura.rozas@us.dlapiper.com

Exhibit 1

LUMA's Comments

# Comments on Smart Inverter Settings Stakeholder Workshop held on March 31, 2026

NEPR-MI-2019-0009

May 22, 2026



# Comments on Smart Inverter Settings Workshop

## Executive Summary

LUMA submits these comments following the Puerto Rico Energy Bureau's (Energy Bureau) Smart Inverters Stakeholder Workshop held on March 31, 2026. Since November 2024, LUMA has actively participated in these proceedings, including through participation in all five SIWG workshops, presenting comments after each along with additional filings, and held multiple individual stakeholder meetings. Throughout the process, LUMA's position has incorporated stakeholder input, system simulations, operational data, and industry best practices. The use of IEEE-1547 Standard is mandated in Regulation 8915, published in 2018.

The March 31<sup>st</sup> workshop was convened to discuss proposed updates to the Smart Inverter Settings and seek alignment on measures that balance customer benefits and system reliability. Sandia National Laboratories (Sandia) presented results from its independent analysis using real-world inverter data and high-penetration feeder simulations. Information sources included the utility and an inverter manufacturer.

Sandia's analysis used simulations across various feeders to evaluate smart inverter performance under varying DER participation levels and voltage conditions. The analysis confirmed that high-voltage disconnects remain the primary cause of solar photo-voltaic (PV) curtailment and that any level of Smart Inverter Settings helps reduce these events by improving voltage management. Volt/VAR offered the greatest benefit, stabilizing voltage with minimal impact on real-power output, while Volt/Watt served as a secondary control for elevated-voltage conditions.

LUMA highlights Sandia's finding that when more than 50 percent of inverters on an individual feeder adopt the recommended settings, high-voltage disconnects disappear and curtailment falls close to zero at roughly 60 percent participation.

These findings are significant as Puerto Rico continues to face a rapidly growing rate of DER interconnection. LUMA's internal assessments show that DER penetration now exceeds the operational limits of many distribution feeders. More than 121 substations serve feeders operating above 90 percent of load capacity, and over 145 individual circuits exceed that threshold. Of these, 105 circuits operate above 100 percent daytime load, meaning DER nameplate capacity surpasses what the feeders were originally designed to support.

Customer-complaint data reinforces these findings. Of more than 25,000 high-voltage complaints reviewed, over 21,000 were linked to DER-overloaded feeders, and *more than 70 percent of complaints came from customers with DER systems or those sharing a transformer with a DER customer*. This demonstrates a clear relationship between high DER saturation and voltage instability experienced at the customer level. Implementation of the recommended smart inverter settings would allow more customers to stay connected and minimize the impacts of DER interconnections.

Overall, convergence across Sandia's independent findings, LUMA's feeder-level assessments and customer complaint data establishes a clear and compelling technical basis for immediate, system-wide adoption of Smart Inverter Settings for all systems installed after 2018 as per Regulation 8915 (which entered into effect in 2017), which mandates the implementation of Standard IEEE-1547. Delaying implementation only worsens voltage-related challenges, increases the likelihood of inverter trips, and diminishes customer reliability outcomes as DER penetration continues to grow.

# Comments on Smart Inverter Settings Workshop

In other words, implementation of Smart Inverter Settings not only mitigates impacts of DERs on voltage fluctuations, but by reducing voltage fluctuations, it allows more DER and non-DER customers to stay connected.

## 1.0 LUMA's Technical Assessments and Sandia's Analysis

LUMA agrees that Sandia's analysis provides strong, independent validation of LUMA's earlier technical filings and operational assessments. Sandia's simulations confirm that standardized Smart Inverter Settings, especially Volt/VAR, are essential to managing Puerto Rico's increasingly challenging voltage conditions under high DER penetration. Volt/VAR consistently stabilizes voltage with minimal impact on energy production, while Volt/Watt serves as an effective secondary measure only when voltage approaches critical levels. This hierarchy aligns with LUMA's longstanding recommendations and reflects the most efficient and least disruptive approach to voltage control.

In his Executive Order, US Department of Energy Secretary Wright in his preliminary analysis that Automatic Meter Reading (AMR) data shows that approximately 40 percent of monitored locations experiencing voltage violations above the ANSI C84.1 Standard voltage band, with violations occurring throughout the day and worsening during high-solar-export hours. These elevated voltages contribute to nuisance PV trips, increased risk of customer equipment damage, and broader power-quality issues.<sup>1</sup> This evidence directly supports the urgent need for comprehensive and consistent voltage-management controls across all DER systems.

Sandia's analysis also confirms that the effectiveness of Smart Inverter Settings depends heavily on the level of adoption. While any amount of participation helps reduce curtailment, the most meaningful improvements occur only once at least 50 percent of inverters on a feeder implement the recommended settings. LUMA emphasizes that this threshold must be met consistently across all levels of the distribution system, including individual transformer groups, to achieve the full benefits observed in Sandia's modeling.

Sandia National Lab's simulations relied on 2024 voltage data, before widespread implementation of Smart Inverter Settings, actual curtailment reductions are expected to be even greater using the updated configuration.

*There's one really important caveat to all of this, which is noted, we ran all this with the voltage measurements as they existed in 2024. In other words, these inverter controls Volt/VAR and Volt/Watt that are intended to reduce the voltage, were not considered, so when you come up with **curtailment in real life, will actually be less than what we modeled because when Volt/VAR and Volt/Watt are activated, they will help lower the system voltage and hence we will have less curtailment.*** (Sandia National Laboratories, 2026, 19:07)<sup>2</sup>

<sup>1</sup> DOE Secretary's Emergency Order No. 202-25-2 (May 16, 2025); <https://www.energy.gov/sites/default/files/2025-05/EXEC-2025-006064%20-%20PR%20202c%20Emergency%20Measures%20Transmission%20signed%20by%20Secretary%20Wright%205-16-25.pdf>

<sup>2</sup> Puerto Rico Energy Bureau. (2026, March 31). NEPR-MI-2019-0009 Virtual Stakeholder Workshop [Video]. YouTube. <https://www.youtube.com/watch?v=GiRshWVYtKM>

# Comments on Smart Inverter Settings Workshop

Sandia estimated that typical customers would have lost approximately two percent of energy production due to these voltage conditions. The study reiterated that Volt/VAR introduces almost no curtailment and stabilizes voltage effectively, while Volt/Watt contributes meaningfully only as voltage nears upper operational limits. LUMA agrees with Sandia's conclusion that any tradeoff between applying Smart Inverter Settings and preserving customer production is negligible, especially given the far greater production variability caused even by normal weather-related intermittency.

*I will mention again that these controls are meant to reduce the voltages so we may not see as much Volt/Watt curtailment in an actual sample once Smart Inverters Settings are in place as we did based on our 2024 model output, when these settings were not in place. (Sandia National Laboratories, 2026, 20:27)<sup>3</sup>*

Sandia also confirmed that Smart Inverter Settings remain effective even when baseline system voltage is already high, reiterating that curtailment declines sharply once inverter-control participation exceeds 50 percent. LUMA agrees with the clarification that this benefit must be achieved across all relevant levels of a feeder, not merely in the aggregate.

*The advanced inverter settings are still quite effective even when the grid voltage itself starts high. You still see that curtailment decreases. I'll just mention this 50% or greater participation in inverter controls really seems to be an important point where the concerns around curtailment get very close to zero. (Sandia National Laboratories, 2026, 29:08)<sup>4</sup>*

## 1.1 Curtailment Impacts and Customer Protections

Curtailment occurs when DER output is reduced due to system constraints, and in Puerto Rico's current conditions, high voltage remains the primary cause. Sandia's workshop analysis showed that under 2024 voltage conditions, before widespread adoption of Smart Inverter Settings, customers experienced an average energy loss of about two percent, illustrating a system-wide issue that requires corrective action. Volt/VAR significantly reduces this curtailment with minimal impact on real-power production, providing a practical balance between grid support and DER customer interests.

Sandia confirmed that the tradeoff between applying Smart Inverter Settings and preserving energy yield is minimal, as Volt/VAR stabilizes voltage with virtually no curtailment, and Volt/Watt activates only when voltage nears upper limits. Natural intermittency, such as cloud cover, has a far greater effect on daily energy production than these controls. Standardized Smart Inverter Settings therefore protect customers from involuntary inverter trips, inconsistent performance, and uneven impacts across circuits. LUMA emphasizes that failing to adopt Smart Inverter Settings will intensify curtailment as DER penetration grows, making Volt/VAR the essential default control and Volt/Watt a necessary safeguard to enable more customers to interconnect and for existing DER customers to avoid increased curtailment.

## 1.2 Requests for Additional Studies

LUMA acknowledges stakeholder interest in additional studies but emphasizes that the existing evidence, spanning Sandia's independent analysis, LUMA's feeder simulations, cluster studies, complaint trends, and hosting-capacity work, already provides a strong basis for regulatory action on Smart Inverter

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<sup>3</sup> See *Id.*

<sup>4</sup> See *Id.*

# Comments on Smart Inverter Settings Workshop

Settings. Revisiting prior debates without new, shared data risks delaying implementation that is clearly warranted. At this stage, the record sufficiently supports Volt/VAR as the primary voltage-control function, Volt/Watt as the secondary safeguard, and the need for feeder-level participation exceeding 50 percent.

## 1.3 Activation for DER Systems Installed after 2018

LUMA reiterates that DER systems installed after 2018 should be required to comply with the proposed Smart Inverter Settings, as per Regulation 8915 in effect since 2017, which mandates the implementation of IEEE 1547 Standards. Therefore, all systems installed after 2018 should already have the technical capability to receive updated configurations under the IEEE 1547 Standards. Activation of these settings by these systems is essential to achieving feeder-level participation necessary to deliver the curtailment and voltage-stability benefits demonstrated by Sandia. Applying uniform settings across historically connected systems accelerates system-wide improvements, reduces inverter trips, minimizes curtailment, and ensures consistent treatment of customers on the same circuit.

## 1.4 Adoption of Revised Smart Inverter Settings

LUMA recommends prompt adoption of all revised Smart Inverter Settings. Volt/VAR should remain the default control for all DER installations, providing continuous voltage stabilization with minimal curtailment, while Volt/Watt should be applied selectively on high-penetration or voltage-challenged circuits. Enter-service voltage thresholds and updated frequency ride-through parameters should remain as proposed in 2025 to reflect current system needs.

LUMA's assessments show that these low-cost measures can substantially reduce high-voltage violations and increase hosting capacity, especially when paired with behind-the-meter batteries configured for daytime charging and with fast-frequency-response programs that help stabilize the system in low-inertia conditions. These approaches align with IEEE 1547-2018, UL 1741 SB, and ANSI C84.1 Standards. Sandia's modeling reinforces that once inverter-control participation exceeds roughly 50 percent on a feeder, high-voltage disconnects disappear and curtailment drops below one percent, underscoring the need for broad, consistent adoption.

Beyond inverter settings, LUMA's broader DER integration strategy includes retroactive activation of Volt/VAR (and targeted Volt/Watt) on all systems installed after 2018, as per Regulation 8915, which mandates the implementation of Standard IEEE- 1547, transformer upgrades guided by IEEE C57.91 thermal modeling, voltage-standardization efforts, feeder reconfiguration, expanded grid visibility, hosting-capacity mapping with improved interconnection screening, and transmission reinforcements to support N-1 reliability. LUMA also continues to advance customer-technology strategies, such as battery energy-sharing programs and non-export systems that shift midday PV production to evening peaks, to ensure DER growth supports system safety and reliability.

## 1.5 Hosting Capacity and Grid Needs

Hosting capacity depends on voltage conditions, feeder loading, and the location of DERs. LUMA recognizes that some heavily loaded or structurally limited circuits will still require infrastructure upgrades before supporting additional DER, even with Smart Inverter Settings in place. In these cases, applying Volt/VAR and targeted Volt/Watt immediately can improve short and mid-term performance by reducing voltage violations and preventing inverter trips while longer-term upgrades proceed. This combined

# Comments on Smart Inverter Settings Workshop

approach protects customers, supports orderly interconnections, and ensures that incremental improvements do not come at the expense of long-term system integrity.

## 1.6 Data Reporting and Stakeholder Collaboration Framework

LUMA reaffirms that it seeks access only to non-personal, technical operational data such as voltage, frequency, and real-power output, sufficient to verify settings performance, diagnose voltage issues, and support hosting-capacity assessments. To enable consistent, cross-stakeholder analysis, LUMA recommends adopting the EPRI Common File Format (CFF), which would standardize reporting across manufacturers, aggregators, and utility systems while improving data quality and reducing integration challenges.

LUMA supports continued Smart Inverters Working Group (SIWG) sessions when new, substantive data is available and recommends structuring workshops around standardized and shared datasets, performance evaluations, and focused questions with clear analytical methods and timelines. To maintain regulatory efficiency, previously settled matters should not be revisited without compelling new evidence; instead, efforts should prioritize implementation details, data standardization, and feeder-specific needs where near-term actions can produce measurable improvements.

LUMA remains committed to collaborating with stakeholders to ensure consistent activation of Smart Invert Settings, effective customer communications, and transparent reporting. Centering SIWG discussions on common data and agreed-upon evaluation frameworks will help accelerate consensus and support timely, predictable improvements to Puerto Rico's distribution system.

Exhibit 2

LUMA correspondence to the Puerto Rico Public-Private Partnerships Authority dated April 27, 2026 regarding Voltage Instability and System Reliability



April 27, 2026

**BY ELECTRONIC MAIL**

**To: Puerto Rico Public-Private Partnerships Authority (“P3A”)**

Attention: Josué A. Colón Ortiz

Executive Director

Email: [josue.colon@p3.pr.gov](mailto:josue.colon@p3.pr.gov)

**Subject: LUMA's Response to P3A's March 18, 2026, Letter, re: Notice of Non-Compliance and Demand for Cure - Voltage Instability and System Reliability**

Dear Executive Director Colón:

LUMA Energy LLC and LUMA Energy ServCo., LLC, in our capacity as the Puerto Rico Transmission and Distribution System (“T&D System”) Operator pursuant to the Transmission and Distribution Operation and Maintenance Agreement (“T&D OMA”),<sup>1</sup> acknowledge receipt of P3A's correspondence dated March 18, 2026, titled *Notice of Non-Compliance and Demand for Cure - Voltage Instability and System Reliability* (“March 18<sup>th</sup> Letter”).

**System Conditions Identified in the March 18<sup>th</sup> Letter are the Result of Government-mandated Energy Public Policy, not Alleged “non-compliances” by LUMA**

LUMA rejects the assertion that the conditions described in the March 18<sup>th</sup> Letter constitute “non-compliance” under Article 14 of the T&D OMA or trigger a cure obligation. The voltage instability and service reliability concerns raised are direct consequences of current, Government-mandated policy decisions that promote the uncontrolled interconnection of Distributed Energy Resources (“DER”) into the grid while simultaneously prohibiting the assessment and collection of supplemental study fees and network upgrades costs. These policies severely limit access to funding needed to perform network upgrades and remove the prudent and standard technical and cost-causation tools that utilities rely on to validate safe DER interconnections and sequence grid upgrades.

Puerto Rico's framework differs materially from prudent utility practices in North America, where utilities screen interconnections, recover study and upgrade costs consistent with cost-causation, and stage integrations to remain within hosting capacity. Ascribing these policy-driven outcomes to LUMA as contractual breach disregards the governing legal context and the constraints those policies impose on pre-interconnection engineering review and cost recovery.

Notwithstanding, LUMA remains fully committed to collaborating with P3A, the Government of Puerto Rico and DER industry representatives, to align policy, funding, and engineering for the benefit of

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<sup>1</sup> The *Puerto Rico Transmission and Distribution System Operation and Maintenance Agreement* executed on June 22, 2020, by and amongst the Puerto Rico Electric Power Authority (“PREPA”), the Puerto Rico Public-Private Partnerships Authority (“P3A”) and LUMA Energy, LLC and LUMA Energy ServCo, LLC (collectively, “LUMA”).

customers, support the safe and orderly growth of DER systems on the Island and maximize their benefit to the energy system.

### **Energy System Impacts of Accelerated Distributed Generation**

LUMA agrees that Puerto Rico's energy system ("Energy System") faces significant safety and reliability challenges resulting from the exponential growth of DER on the Island. LUMA has documented those challenges and has developed tools such as the Incremental Hosting Capacity Maps and Asset Verification Tool<sup>2</sup> to provide visibility into the extent of DER penetration throughout the T&D System, including feeders beyond their safe hosting capacity which already have an impact of approximately \$51 million in increased costs associated with network upgrades. LUMA has identified and attempted to implement low-cost solutions, including the application of Smart Inverter Settings, that help mitigate these impacts while the necessary network upgrades can be performed.

The uncoordinated interconnection of DERs carry real risks and measurable impacts. Equipment safety ratings are measured; they identify the parameters at which it is safe to operate the equipment. If a significant number of customers connect DERs to an overloaded location, the equipment will experience degradation and a shorter lifecycle. Once the electrical equipment exceeds its safety ratings, it will immediately start to overheat, a condition that could result in a fire hazard risk, a transformer explosion, as well as an incrementally unreliable electric service. Individual properties and structures in the area could also be affected, and the broader T&D System could be damaged as the electric surge cascades across the lines.

LUMA's internal assessments demonstrate that DER penetration has now reached levels that materially exceed the operational capabilities of many distribution feeders across Puerto Rico. 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.<sup>3</sup> This trend has direct operational consequences, including increased risk of transformer overloading,<sup>4</sup> system frequency excursions, load sheds, and frequent voltage fluctuations in areas where uncontrolled customer-sited DER exports exceed available hosting capacity. Thermally overloaded transformers and distribution circuits violate industry safety practices as defined by National Fire Protection Association ("NFPA") and National Electric Code ("NEC"), which commonly lead to fire hazard risks, equipment damage and operational downtime.

Further, analysis of 'high-voltage' customer complaints reinforces LUMA's assessments. Out of more than 25,000 complaints reviewed, LUMA was able to correlate over 21,000 to DER overloaded feeders. Of those, over 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

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<sup>2</sup> All tools available at <https://lumapr.com/residencial/energia-renovable/>

<sup>3</sup> See as Attachment 1 *Substations with Circuits over 100% Penetration*.

<sup>4</sup> Studies performed by LUMA have identified at least 2,200 services transformers that are overloaded due to DER.

relationship between DER saturation and voltage instability experienced by customers.<sup>5</sup> Operationally, high DER penetration reduces minimum daytime net loads and conventional generation's inertia, challenging frequency response and increasing the likelihood of daytime high-voltage excursions, transformer overloads, and unintentional islanding on feeders.

Current policies promoting automatic interconnection also pose elevated safety risks (e.g. thermal overloading, code noncompliance) that increase fire hazard risk and equipment failure risks and can exacerbate service interruptions, along with endangering the safety of field crews, one of LUMA's foremost priorities. These risks are compounded when considering that the pace of DER integration, especially rooftop solar photovoltaic ("PV") and behind-the-meter batteries, is taking place across a network with aging assets, limited redundancy, and a transmission backbone that does not consistently meet N-1 reliability, 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 lifecycle have contributed to poor reliability, capacity constraints, and limited flexibility.

DER overloading affects more than just the T&D grid. When large numbers of DERs reduce the output of conventional generators, the Energy System loses the mechanical inertia provided by their large rotating turbines. This inertia is essential for maintaining stable frequency during grid disturbances. Without it, the grid becomes more vulnerable to instability, increasing the risk of widespread outages. Electric grids with high levels of rooftop solar across the globe are experiencing voltage swings on neighborhood power lines due to rapid PV output changes. These swings happen because solar output can change very quickly, especially when clouds move fast, and because traditional grid equipment was never designed for thousands of small power generators sending energy back into the system. These voltage fluctuations strain traditional grid equipment and can cause flickering lights, overvoltage, and accelerated wear on transformers and regulators. Studies from Australia, Hawaii, the United Kingdom, and California confirm these impacts, and the same effects have been documented in Puerto Rico as rooftop solar expands.<sup>6</sup>

The rate at which DERs are currently being installed far exceeds the pace at which any utility can implement upgrades. California, Puerto Rico, and Florida led the residential solar installed capacity rankings in 2025. While California and Florida both experienced year-over-year declines in capacity, Puerto Rico posted a record year by more than 25%.<sup>7</sup> This becomes even more challenging when

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<sup>5</sup> See as Attachment 2 *Complaints from Customers with DER Installed at their Premises*.

<sup>6</sup> See, for example, Rahman, O., Elphick, S., & Robinson, D. A. (2026). Voltage Regulation in Rooftop PV-Rich Distribution Networks: A Review and Detailed Case Study. *Electronics*, 15(5), 1074. <https://doi.org/10.3390/electronics15051074>; Zhang, Y., & Palmintier, B. (2023). *Hawaiian Electric Company (HECO) Grid Optimization with Solar: Cooperative Research and Development Final Report, CRADA Number CRD-17-00705*. National Renewable Energy Laboratory. NREL/TP-6A40-86408. <https://www.nrel.gov/docs/fy23osti/86408.pdf>; A. T. Procopiou and L. F. Ochoa, "On the Limitations of Volt-var Control in PV-Rich Residential LV Networks: A UK Case Study," *2019 IEEE Milan PowerTech*, Milan, Italy, 2019; Ghatikar, Girish, Amardeep Mehat, Walt Johnson, Harby Sehmar, Md Arifujaman, Gabriel Andaya, Richard Bravo, Ryan May, Ben Baczenas, and John Sartain. 2021. *Assessing Communications and Control of Smart Inverters and Consumer Devices to Enable More Residential Solar Energy*. California Energy Commission. Publication Number: CEC-500-2023- 032.

<sup>7</sup> Solar Energy Industries Association & Wood Mackenzie Power & Renewables. (2026, March 9). U.S. Solar Market Insight 2025 Year in Review. Solar Energy Industries Association. <https://www.seia.org/research-resources/solar-market-insight-report-2025-year-in-review>.

considering the critical state of Puerto Rico Electric Power Authority's ("PREPA") grid and the constrained financial environment the Energy System operates in.

### **LUMA's Operational Measures and Required System Interventions**

Under the T&D OMA, LUMA is responsible for ensuring the safety and reliability of the electric grid. To meet this responsibility, LUMA performs feeder-level studies, also known as cluster studies, to analyze how large numbers of DER interconnections affect distribution system operations.

Cluster studies use detailed, data-driven distribution power flow models that represent the actual electrical network and field equipment, including service transformers, switches, conductors, thermal limits, capacitor banks, and voltage regulators. These cluster studies identify potential violations or risks and identify the necessary network upgrades. A safe and reliable Energy System must operate within equipment thermal ratings and within industry-standard voltage limits, such as American National Standards Institute ("ANSI") C84.1.

Numerous circuits have been found to require upgrades due to DER-driven overloading. Every circuit is unique; each has its own customer mix, topology, and voltage profile, so each study produces different results. However, current legal framework governing DER interconnection does not follow standard industry practices.<sup>8</sup> Puerto Rico currently allows DERs to interconnect even when initial assessments (for example LUMA's hosting capacity maps) reflect that further connections increase the likelihood of safety hazards and reduced grid reliability. Because systems can automatically interconnect, in feeders where initial hosting capacity is not an issue, the impact of DER installation at a localized level is not known until after the DER is installed and interconnected, meaning that any damage to equipment, or safety and reliability impact, takes place prior to the utility having a reasonable opportunity to identify and mitigate the impact.

In the near term, cluster study data shows that low-cost solutions, such as standard smart-inverter settings (Volt/VAR and Volt/Watt), can nearly eliminate sustained high-voltage violations and allow for additional hosting capacity at worst-case locations, providing "do-no-harm" control at each interconnection while aligning with Institute of Electrical and Electronics Engineers ("IEEE") 1547-2018 and Underwriters Laboratories ("UL") 1741 SB certification pathways and planning against ANSI C84.1 voltage limits. These conclusions have been independently assessed by external parties such as Sandia National Laboratories, which concluded that no high-voltage disconnects were observed when over 50% of inverters at an individual feeder were controlled.<sup>9</sup> Complementary use of behind-the-meter batteries for daytime charging and Fast Frequency Response ("FFR") adds sub-second stabilization

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<sup>8</sup> "The fact that the feeder exceeds its capacity shall not constitute an obstacle for the interconnection of photovoltaic or renewable energy systems with a generation capacity that does not exceed 25 kilowatts." Act 114-2007, §9(b), as amended by Act 17-2019 (22 L.P.R.A. § 1019).

<sup>9</sup> As part of the discussion at the Virtual Stakeholder Workshop held on March 31, 2026, scheduled by PREB under case number NEPR-MI-2019-0009 and CEPR-MI-2018-0008, to present Sandia National Laboratories' study findings on the Smart Inverter Settings Profiles.

during disturbances, helping arrest frequency excursions in low-inertia conditions, like the ones experienced in Puerto Rico.

Some of the proposals made by LUMA to the Puerto Rico Energy Bureau (“PREB”) to address these challenges, which include both near-term and long-term actions, include:

1. The retroactive fleet-wide activation of Volt/VAR and targeted Volt/Watt on existing solar PV to quickly reduce violations and increase hosting capacity, including the adoption of NEC Article 705-compliant interconnections and export limits where local thermal margins are exceeded.
2. Targeted transformer replacements and capacity upgrades guided by IEEE C57.91 thermal modeling.
3. Voltage standardization, feeder reconfiguration, and grid-edge visibility (Advanced Metering Infrastructure (“AMI”)/telemetry, DER monitoring).
4. Hosting-capacity mapping and interconnection screening to direct investments.
5. Transmission reinforcements to achieve N-1 reliability and coordinated battery FFR programs to stabilize frequency.

Together, these measures convert near-term risk into a scalable, standards-aligned pathway for safe, reliable, DER-optimized operations across Puerto Rico’s grid.

Further to these proposals, LUMA has also developed a multi-step, data-driven plan to address the challenges identified and to support the safe, reliable integration of DERs.<sup>10</sup> These steps are essential to ensure that DER growth does not compromise grid performance. However, for the plan to be effective, it requires stable, predictable funding and updates to existing policies, so T&D System upgrades can catch up to today’s DER penetration levels and continue at a pace that supports future growth.

LUMA’s proactive multi-step plan for DER interconnections includes:

Implementation of Smart-Inverter Volt/VAR and Volt/Watt Settings consistent with IEEE Std.1547-2018 – Interconnection and Interoperability of Distributed Energy Resources with Associated Electric Power Systems Interfaces, which slow the pace at which voltage violations occur on the circuit to which the customer is connecting. This can create additional headroom to interconnect more DERs with fewer distribution upgrades, provided that all historically

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<sup>10</sup> See [Motion Submitting Response to Request for Information No. 18 of the Second Set of Post-Filing 2025 IRP Request for Information in Further Compliance with Resolution and Order of February 13, 2026](#), filed on March 11, 2026, under PREB case number NEPR-AP-2023-0004, *In Re: Review of the Puerto Rico Electric Power Authority Integrated Resource Plan*.

connected DER on that circuit adopt the Smart-Inverter Settings. LUMA has also identified circuits with such a high penetration of DERs, that implementation of Smart Inverter Settings on every inverter would improve circuit performance in the short-term and mid-term, but not allow future interconnections until infrastructure upgrades are implemented. LUMA submitted to PREB for approval recommended updated Smart Inverter Settings in June 2025.<sup>11</sup>

Implementation of Smart Inverter High and Low Voltage and Frequency Ride-Through Settings and Disconnect / Reconnect timeline settings. These settings are recommended primarily to respond to grid frequency issues (related to loss of large central-station generation) and transmission faults and have been documented as allowing higher volumes of small DER connections while maintaining grid stability within defined limits.

As identified in the 2025 Integrated Resource Plan (“IRP”) report, further engagements with customer technologies to better align PV production (mid-day - when load is lowest) with peak demands (late evenings - when demand is highest) through customer battery energy sharing programs, and/or requirements for non-export systems that charge the battery in the mid-day and discharge every evening over peak have the potential to significantly align the value of DER with system needs, which also help drive decarbonization targets.

LUMA’s rate-case petition requested funding for upgrading distribution circuit infrastructure to first address the most urgent safety and reliability impacts when studies of already connected distributed photovoltaic (“DPV”) systems identify that they cause thermal overloads - like service transformers or voltage violations that cause high voltage that can damage customer electronics and home equipment. LUMA suggested process improvements that limit feeder interconnection where violations exist but have not been resolved. Over 6,000 pieces of equipment have been forecasted to require an upgrade over a 3-year period.<sup>12</sup> Some of this equipment is already overloaded or at risk and will fail if not replaced, causing extended outages for all customers. Conversely, proactively addressing these items could yield better customer experience but require grid investments.

**Grid Investments due to Increased DER Penetration Over the Next Three Years**

Equipment	Quantity
Transformer upgrades	3,316
Cap bank conversions	2,648
Feeder segment upgrade	69
Voltage regulators	62
Switch installations	14

<sup>11</sup> See [Motion to Submit LUMA’s Revised Smart Inverter Sheets and Responses to Stakeholders Comments to LUMA’s Comments of April 25, 2025, filed on June 20, 2025](#), under PREB case number NEPR-MI-2019-0009, *In Re: Interconnection Regulations*.

<sup>12</sup> This amount includes both the backlog (i.e. pieces of equipment already identified), plus the expected upgrades in the three-year period.

## The Public Policy Challenge

Implementation of the above-mentioned initiatives has been burdened by public policy that promotes the deployment of DERs at a pace that challenges any utility's ability to invest and harden its system ahead of the DER integration curve. Considering the state of PREPA's energy system and the limited financial resources available to invest in DER-related network upgrades, this challenge becomes insurmountable without coherent and fact-based policies that align investment and network upgrade requirements, including financing requirements, with the need to continue to promote customers access to DERs.

Absent access to unlimited levels of funding, three distinct public policies, two of which were enacted in the last 16 months, currently represent the biggest challenges to keeping up with the pace of DER installations:

1. **Automatic Interconnection** – Current Puerto Rico public policy provides for the automatic interconnection of DER systems into the grid, specifically providing that such interconnections cannot be conditioned on the completion of supplemental or impact studies, even on feeders that already exceed their safe operating capacity.<sup>13</sup> This policy remains the number one challenge to overall grid safety and reliability and removes the utility's ability to ensure DER installations are coordinated along with necessary network upgrades and do not pose a risk to service reliability, electric infrastructure and public and field worker safety.
2. **Prohibition of Supplemental Study Fee and Network Upgrade Costs** – On January 7, 2026, Joint Resolution No. 5-2026<sup>14</sup> was enacted, prohibiting the assessment of any charges otherwise required for the performance of supplemental studies and the implementation of network upgrades. This action removed the only dedicated source of funding for these costs, preventing LUMA from collecting the funding required to continuously assess the grid's ability to safely integrate incremental quantities of DERs and over \$51 million in network upgrades costs required to enable such DER interconnections.<sup>15</sup>
3. **Net Energy Metering Program Study and Proceedings** – Enacted on January 10, 2024, Act 10-2024, prohibits PREB from reviewing the existing Net Energy Metering Program

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<sup>13</sup> See Act 114-2007, §9(b), as amended by Act 17-2019 (22 L.P.R.A. § 1019), cited *ante*.

<sup>14</sup> Puerto Rico House of Representatives Joint Resolution 193 (2026), signed by the Governor on January 7, 2026, as Joint Resolution No. 5-2026.

<sup>15</sup> See [PREB Final Resolution and Order](#) dated April 15, 2026, filed under in case number NEPR-AP-2023-003, *In Re: Puerto Rico Electric Power Authority Rate Review*, allocates approximately \$4.2 million for feeder-level studies in FY2027, but provides no funding for network upgrades or supplemental studies.

until at least 2030, creating a disconnect between Puerto Rico's mature DER/Net Energy Metering market and policies designed to promote the growth of an incipient program.<sup>16</sup>

### **These concerns are known and are well-documented by LUMA**

LUMA has repeatedly and proactively raised concerns regarding the operational and Energy System stability implications associated with the accelerated DER growth.

These concerns have been formally presented and documented across multiple forums, including: (i) PREPA's Fiscal Plan for Fiscal Year 2025,<sup>17</sup> (ii) LUMA's submissions in interconnection regulations proceedings before the PREB,<sup>18</sup> (iii) IRP proceedings before PREB,<sup>19</sup> (iv) Monthly Operations Report on the T&D System,<sup>20</sup> and (v) legislative hearings before the Puerto Rico House and Senate. In each of these venues, LUMA has identified the need for system-level planning, voltage management solutions, updated interconnection frameworks, and targeted infrastructure investments.

Specifically, in filings before PREB, LUMA has:

**Developed Technical Interconnection Requirements ("TIR") for grid interconnection,** seeking to ensure that DER interconnections do not compromise the safety of the public or LUMA's field crews, degrade service by causing interruptions or power quality events, or compromise the security or reliability of the system.<sup>21</sup> The TIR was filed with the PREB on May 19, 2022. Final determination has remained pending since and is now expected to be addressed through the rulemaking proceeding required by Joint Resolution No. 5. This TIR establishes the requirements for all aspects of connecting and operating DER on the grid, outlines the responsibilities of the Interconnecting Customer ("IC") related to grid integration, the Point of Connection, and overall system performance, and covers operational performance, power quality, protection, monitoring, control, and telemetry requirements, among others.

**Develop cost recovery options for Supplemental Studies and Network Upgrades.** Alternatives for recovering costs associated with supplemental studies and network upgrades were filed with the PREB on June 11, 2024.<sup>22</sup> These options were intended to enable the collection of previously assessed but unpaid supplemental study fees, as well as provide a

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<sup>16</sup> See [PREB Resolution](#), dated June 14, 2024, filed under case number NEPR-MI-2024-0006, *In Re: Borrador de Estudio Sobre Medición Neta y Energía Distribuida*, which includes a report titled *Puerto Rico Net Energy Metering*.

<sup>17</sup> See as Attachment 3 *February 2025 Fiscal Plan for the Puerto Rico Electric Power Authority* as certified by the Financial Oversight and Management Board for Puerto Rico on February 6, 2025, at page 55.

<sup>18</sup> See PREB case numbers NEPR-MI-2019-0009 and CEPR-MI-2018-0008.

<sup>19</sup> See PREB case number NEPR-AP-2023-0004.

<sup>20</sup> See as Attachment 4 *Monthly Operations Report on the T&D System* for the month of February 2026, at page 24.

<sup>21</sup> See [Motion to Submit Additional Comments to Preliminary Draft of Proposed Generating Facility and Microgrid Interconnection Regulation](#) filed on November 15, 2021, under PREB case number NEPR-MI-2019-0009, *In Re: Interconnection Regulations*.

<sup>22</sup> See [Motion Submitting Outstanding Responses in Further Compliance with Bench Orders Issued at the Compliance Hearing Held on May 6, 2024](#) filed on June 11, 2024, under PREB case number NEPR-MI-2019-0016, *In Re: Informes de Progreso de Interconexión de la Autoridad de Energía Eléctrica de Puerto Rico*.

mechanism for their prospective assessment and collection. Alternatives for collection of network upgrades fees were also submitted, including options for recovering such costs directly from installers and developers (as intended by Act 114-2007) or through mechanisms that distributed those costs throughout a broader range of stakeholders. Determination over these alternatives remained pending and are now expected to be addressed through an upcoming rulemaking process mandated by Joint Resolution No. 5.

**Proposed the adoption of industry standard Smart Inverter settings.** Smart Inverter Settings were first proposed to PREB in 2021 as part of the TIR development process. LUMA published an initial technical bulletin in 2024 with updated settings and PREB approved a subset of those (pausing the implementation of updated Volt-Watt settings). Implementation of approved settings commenced in January 2025 for new Net Energy Metering (“NEM”) customers. LUMA met with stakeholders to discuss implementation of the updated IEEE Std. 1547-2018 settings, including the Volt-Watt settings, using system-level data, simulation results, operational experience, alignment with industry standards and best practices. Participating stakeholders included the Solar Energy Association (“SESA”) and Electric Power Research Institute (“EPRI”)<sup>23</sup>. Certain parties have opposed implementation of the Volt-Watt setting, and the PREB has not yet made a final determination on this matter.

An assessment by Sandia National Laboratory reflected that implementing both Volt/Watt control modes as part of the settings help limit voltage increases and maintain acceptable voltage levels. In their findings, Sandia National Laboratory concluded that high voltage disconnects were the main cause of PV curtailment. Further, findings showed that no high voltage disconnects were observed when over 50% of inverters in a feeder had updated settings activated.<sup>24</sup>

LUMA has also raised these concerns directly before the Puerto Rico Legislative Assembly, through formal legislative submissions, technical presentations, and public hearings, and, notably, in comments submitted on March 1, 2023, regarding Senate Bill 1064, which then became Act 10-2024. This law made two major changes. First, it postponed PREB’s ability to conduct and finish a net energy metering study, and second, established feeder limitations, including exceeding safe operational ratings, will not constitute an impediment to the interconnection of photovoltaic or renewable energy systems, raising serious grid reliability and safety risks.

Additionally, in subsequent legislative submissions dated May 23, 2025, regarding House Resolution 88 (investigating voltage fluctuation and damages to electrical appliances), LUMA highlighted how the uncontrolled interconnection of DERs, coupled with a legal and fiscal framework that limits proactive investments, can result in service instability and reliability issues.

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<sup>23</sup> See [Motion to Submit LUMA's Revised Smart Inverter Sheets and Responses to Stakeholder Comments to LUMA's Comments of April 20, 2025](#), filed on June 20, 2025, under PREB case number NEPR-MI-2019-0009, *In Re: Interconnection Regulations*.

<sup>24</sup> See [Nunc Pro Tunc Resolution](#), dated March 27, 2026, under PREB case numbers NEPR-MI-2019-0009 and CEPR-MI-2018-0008, *In Re: Interconnection Regulations*.

Finally, in responding to a request for comments regarding House Joint Resolution 193, LUMA highlighted criticality of performing supplemental studies and identifying and completing network upgrades, the importance of a stable source of funding to keep up with the pace of DER interconnections, and the safety and reliability risks of implementing policies that constrain the ability to assess and harden the grid while enabling automatic and uncontrolled DER interconnections. Despite the concerns raised, HJR 193 was enacted as Joint Resolution 5.

## Conclusion

For the foregoing reasons, the conditions described in the March 18<sup>th</sup> Letter are the result of broad policy determinations made by the Government of Puerto Rico, which are contrary to standard industry practices in North America, depart from prudent utility practices and promote the uncontrolled interconnection of DERs at the expense of grid safety and reliability. Accordingly, they cannot be attributed to LUMA and thus do not constitute non-compliance with the T&D OMA nor trigger a requirement to cure in the context of the T&D OMA.

Notwithstanding the above, LUMA remains fully committed to supporting the safe and reliable operation of the T&D System and looks forward to a collaborative effort to establish policies that align service reliability, grid and human safety with the uninterrupted and increasing desire for DER by our customers.

Nothing in this letter shall be deemed a waiver of any rights, remedies, or defenses available to LUMA under the T&D OMA, applicable law, or otherwise, all of which are expressly reserved.

Sincerely,



**Janisse Quiñones**

President & Chief Executive Officer

CC: Rubén Lugo Mas, Contract Compliance and Control Manager, P3A; [ruben.lugo@p3.pr.gov](mailto:ruben.lugo@p3.pr.gov)  
Lionel E. Santa Crispín, Chief Legal Officer, P3A; [lionel.santa@p3.pr.gov](mailto:lionel.santa@p3.pr.gov)  
Robert F. Mujica Jr., Executive Director, FOMB; [robert.mujica@promesa.gov](mailto:robert.mujica@promesa.gov)  
Fausto J. Hernández, Infrastructure Manager, Economic Growth Revitalization, FOMB; [fausto.hernandez@promesa.gov](mailto:fausto.hernandez@promesa.gov)  
Edison Avilés Deliz, President, PREB, [eavilesdeliz@jrsp.pr.gov](mailto:eavilesdeliz@jrsp.pr.gov)  
Catherine Jereza, Senior Advisor, Office of the Undersecretary of Infrastructure, U.S. DOE; [catherine.jereza@hq.doe.gov](mailto:catherine.jereza@hq.doe.gov)  
David Wells, Senior Technical Communications Program Manager, DOE; [david.wells@hq.doe.gov](mailto:david.wells@hq.doe.gov)  
Isahi Cortés Hunt, Program Manager, Territory and Recovery Assistance, DOE; [isahi.corteshunt@hq.doe.gov](mailto:isahi.corteshunt@hq.doe.gov)  
Mary C. Zapata Acosta, Executive Director, PREPA; [mary.zapata@prepa.pr.gov](mailto:mary.zapata@prepa.pr.gov)  
Alejandro J. Figueroa Ramírez, Chief Regulatory Officer, LUMA; [alejandro.figueroara@lumapr.com](mailto:alejandro.figueroara@lumapr.com)  
Francisco Prego, Vice-President T&D OMA Contract Management, LUMA; [francisco.prego@lumapr.com](mailto:francisco.prego@lumapr.com)  
Angel Rotger Sabat, Chief Legal & Compliance Officer, LUMA; [angel.rotger@lumapr.com](mailto:angel.rotger@lumapr.com)  
Pedro A. Meléndez, Chief Capital Programs & Grid Transformation Officer, LUMA; [pedro.melendez@lumapr.com](mailto:pedro.melendez@lumapr.com)