GOVERNMENT OF 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**: Comments on Distributed Generation and Microgrid Interconnection Regulation - Case No. NEPR-MI-2019-0009

COMMENTS OF ROBERT A. GARCIA COOPER ON THE REVISED PRELIMINARY DRAFT DISTRIBUTED GENERATION AND MICROGRID INTERCONNECTION REGULATION

TO THE HONORABLE PUERTO RICO ENERGY BUREAU:

Attention: Edison Avilés Deliz, Chairman

COMES NOW Robert A. Garcia Cooper, in his individual capacity as state-certified Engineer in Training (EIT, Certificate No. 28591), licensed Expert Electrician (Perito Electricista, License No. 10971), PhD student in electrical engineering at the University of Puerto Rico at Mayaguez, published researcher in energy systems and resilience economics, Senior Member of the Institute of Electrical and Electronics Engineers (IEEE), and former electricity metering technician, Probador Especial de Contadores by its official Spanish title, at PREPA's Electricity Metering Research Center Centro de Estudios de Medición, and Wholesale Metering Districts of San Juan and Bayamón, and respectfully submits these comments on the Revised Preliminary Draft Distributed Generation and Microgrid Interconnection Regulation published by the Puerto Rico Energy Bureau on July 13, 2026, pursuant to the Resolution and Order issued in the above-captioned proceeding.

The undersigned commends the Energy Bureau for the thoroughness and transparency of the rulemaking process to date, including the convening of stakeholder workshops, the facilitation of independent technical analysis by Sandia National Laboratories through the United States Department of Energy, and the issuance of a Revised Preliminary Draft that reflects the feedback gathered through that process. The Revised Preliminary Draft represents a meaningful step toward the goal stated in Section 1.03 of the regulation: a safe, reliable, efficient, transparent, and nondiscriminatory interconnection process that supports the reliability and operational integrity of the Electric Power System.

These comments are offered in that same spirit, as the observations of a technically qualified practitioner with direct professional experience in Puerto Rico's electric distribution system, metering infrastructure, and energy regulatory proceedings. They are not intended to challenge the Energy Bureau's work or authority, but to place on the record several interconnected engineering and policy questions that, if addressed before the final regulation is adopted, may strengthen the framework's capacity to achieve the public interest goals the Energy Bureau has articulated.

I. THE FIVE TOPICS IDENTIFIED AS UNRESOLVED SHARE A COMMON TECHNICAL FOUNDATION THAT MAY BENEFIT FROM UNIFIED TREATMENT

The Revised Preliminary Draft and the Resolution and Order of July 13, 2026 identify five topics requiring further development: smart inverter settings, daytime minimum load, meter socket adapters, fees, and hosting capacity screening methodology. The Resolution thoughtfully schedules additional stakeholder workshops and orders a Revised Draft Technical Interconnection Requirements document to address these matters.

The undersigned respectfully offers the following observation for the Energy Bureau's consideration. These five topics, while distinct in their regulatory expression, share a common technical foundation. They are all expressions of a question that the regulation has not yet fully addressed: what operational framework will govern the grid services that smart inverters will perform on Puerto Rico's distribution system, who bears the cost of those services, and what technical infrastructure exists to verify their performance.

Smart inverter settings cannot be finalized without knowing the compensation framework. The compensation framework cannot be designed without knowing which functions will be required. The functions cannot be evaluated without knowing whether the measurement infrastructure can capture their performance. And the measurement infrastructure question cannot be fully answered without a fleet audit that has not yet been conducted.

The Energy Bureau may find it useful, as it proceeds through the workshop process and reviews the Revised Draft Technical Interconnection Requirements, to consider these topics in their relationship to one another rather than exclusively as separate line items. A resolution of any one that is inconsistent with the others may require revision when the dependent questions are addressed. The undersigned offers this observation not as a criticism of the workshop structure but as a framing device that may assist the Energy Bureau in evaluating whether the forthcoming Technical Interconnection Requirements addresses these dependencies adequately.

II. THE ENGINEERING CONDITION CREATED BY THE STATUTORY EXEMPTION FOR SYSTEMS UNDER 25 KILOWATTS MAY BENEFIT FROM TECHNICAL SUPPLEMENTATION IN THE TECHNICAL INTERCONNECTION REQUIREMENTS

Article 3, Section D(2)(i)(1) of the draft regulation faithfully carries forward the mandate of Act 114-2007, providing that feeder capacity exceedance shall not constitute an obstacle for photovoltaic or renewable energy systems with a generation capacity not exceeding 25 kilowatts. The undersigned fully recognizes the Legislature's authority to make this policy determination and does not suggest that the Energy Bureau modify or circumvent it.

The observation offered here is narrower and technical in nature. The draft regulation establishes throughout its screening architecture that feeder capacity conditions are material to the interconnection determination. Section 2.02.G(4) requires the Pre-Application Report to disclose available circuit capacity and capacity constraints. Section 2.02.G(13) requires disclosure of existing or known capacity constraints at the proposed Point of Common Coupling. Section 4.02.B(1) establishes that aggregated Export Capacity on the circuit shall not exceed 15 percent of the line section annual peak load as a Fast Track screen. Section 4.04.C(1) establishes the minimum load screen for Supplemental Review. These provisions collectively reflect the regulation's recognition that feeder capacity conditions identify reliability risks that the screening process exists to evaluate.

The statutory exemption in Article 3 Section D(2)(i)(1) appropriately addresses the allocation of upgrade costs when the exemption applies. What it does not address, and what the current draft regulation also does not address, is what technical mechanism is being relied upon to manage the reliability condition that the screening process would otherwise have acted upon.

Smart inverter settings are the implied answer. The undersigned does not dispute that they may be part of an effective answer. The question the Energy Bureau may wish to consider is whether the Technical Interconnection Requirements, when submitted for approval, should be required to specify for feeders where the statutory exemption is invoked in the face of an identified capacity constraint, what specific technical measures are in place and how their performance will be verified. This would give the exemption's application a technical grounding that the current regulatory text does not provide, and would help the Energy Bureau assess whether the reliability conditions on those feeders are being adequately managed as the system continues to evolve.

III. THE DAYTIME MINIMUM LOAD DATA GAP MAY BE NARROWER THAN REPRESENTED, AND THE COMMUNICATION INFRASTRUCTURE THAT COULD CLOSE IT MAY ALREADY EXIST

The Energy Bureau has recognized daytime minimum load as a topic requiring additional workshop discussion, which the undersigned views as an important and appropriate acknowledgment of the complexity of this issue. The following observations are offered to assist the Energy Bureau in framing the questions for this particular topic.

LUMA's June 11, 2026 [1] filing states that accurate daytime minimum load calculation requires inverter output and per-site generation data held by developers and manufacturers, which is not available in a usable format. The undersigned respectfully suggests that this characterization may describe a net load calculation challenge rather than a gross load data gap.

Daytime minimum load at the feeder level, measured as what the feeder actually draws from the substation, is derivable from feeder-level metering data that has always been a basic operational requirement of distribution system management. A utility cannot dispatch generation, manage voltage, or operate a distribution system without knowing load at the substation and feeder level. Puerto Rico's aggregate hourly demand record, available from at least June 2019 [2] through September 2023 [3] , confirms that hourly load data exists at the system level and was compiled from substation and feeder-level measurements. That data represents gross load before any netting for behind-the-meter generation.

Additionally, LUMA holds the net metering agreement for every system interconnected to the grid, as the counterparty to each of those agreements. Each agreement contains the system's nameplate capacity, equipment registration, and interconnection point. The nameplate capacity and feeder location of every registered distributed energy resource are therefore already in LUMA's possession.

The Energy Bureau may also find it useful to note that LUMA's June 11 filing documents how the Hawaiian Electric Company (HECO) coordinated with inverter manufacturers to implement remote firmware updates to legacy devices in the field, as described in their Annex 2 IEEE 1547-2018, which the regulation incorporates as a baseline reference, establishes in Section 10.2 that distributed energy resource systems shall support information exchange with the Area EPS

[1] June 11, 2026. Submittal of LUMA's Comments Following the Virtual Stakeholder Workshop held May 28, 2026: https://energia.pr.gov/wp-content/uploads/sites/7/2026/06/20260611-MI20190009-Motion-to-Submit-LUMAs-Comments-Following-the-Virtual-Stakeholder-Workshop-held-on-May-28-2026.pdf

[2] Puerto Rico Energy Bureau. Docket: NEPR-MI-2019-0007: June 22, 2021. Performance Metrics by Area- Overall System: https://energia.pr.gov/wp-content/uploads/sites/7/2021/07/Performance-Metrics-by-Area-Overall-System-NEPR-MI-2019-0007.xlsx

[3] Puerto Rico Energy Bureau. Docket: NEPR-MI-2019-0007: October 20, 2023. Performance Metrics by Area-Overall System: https://energia.pr.gov/wp-content/uploads/sites/7/2023/10/FY24-Q1-Performance-Metrics-by-Area-Overall-System-1.xlsx

operator. If the communication capability required to implement remote firmware updates, as illustrated by the HECO example, were extended to data collection, the same infrastructure through which settings are adjusted could serve as the pathway through which operational performance data is retrieved. Whether LUMA has undertaken the necessary coordination with the manufacturers of inverters approved for interconnection to the Puerto Rico grid to implement such data collection is a question the Energy Bureau may wish to pose as part of the Technical Interconnection Requirements review process.

The undersigned further notes that LUMA's Section 6.0 of the June 11 filing acknowledges a substantial reduction in daytime minimum load as a current condition on the system. If actual net daytime minimum load is already declining below historical gross load baselines due to behind-the-meter generation, the practical consequence is that feeder saturation is worse than the current screening thresholds reflect. This is an argument for more conservative screening criteria, not for treating daytime minimum load as merely an indicative planning tool.

The undersigned suggests that the Energy Bureau consider whether the Technical Interconnection Requirements, when submitted for its approval, should be required to address the data collection obligations that would allow LUMA to calculate net daytime minimum load using the assets already at its disposal, including its feeder metering history, its net metering contract database, and the communication infrastructure it currently operates for smart inverter management.

IV. THE DRAFT REGULATION'S SILENCE ON SPECIFIC SMART INVERTER FUNCTIONS AND THE UNIT OF MEASURE QUESTION RAISED IN THE WORKSHOP RECORD MAY WARRANT ATTENTION IN THE FINAL REGULATION

The Energy Bureau's decision to incorporate IEEE 1547-2018 by reference in Section 8.01.C is technically appropriate and consistent with national best practices. The undersigned notes that Section 8.01.C also establishes that where conflicts exist between IEEE 1547-2018 and the regulation, the regulation and the Technical Interconnection Requirements approved by the Energy Bureau shall govern. The observations that follow treat the standard accordingly, as a baseline technical reference whose requirements inform but do not override the regulatory framework the Energy Bureau is developing.

The draft regulation does not name Volt-VAR, Volt-Watt, ride-through, reactive power control, or frequency droop in its operative provisions. Reactive power appears once in the regulation, in the definition of Cease to Energize in Section 1.11(5), where it is described as something to be limited during shutdown rather than provided as a grid service. Export capacity is defined in Section 1.11(19) in terms of the amount of power that can be transferred in alternating current, without distinguishing between active and reactive components.

For the Energy Bureau's reference, IEEE 1547-2018 establishes the following as minimum technical requirements for the systems this regulation governs, subject to the Energy Bureau's governing authority under Section 8.01.C. Section 4.3 of the standard establishes that voltage-reactive power mode, commonly called Volt-VAR, is a required capability for all distributed energy resource systems. Section 5.3.3 establishes the operational parameters within which the Area EPS operator may require the function to be activated. Section 4.3 of the standard further establishes that voltage-active power mode, commonly called Volt-Watt, is a required capability whose activation is determined by the Area EPS operator through settings. In the context of voltage-reactive and voltage-active power control, Category A in the standard refers to DER operating at the rated voltage range, while Category B refers to DER operating across the full ANSI C84.1 range A voltage extent. Section 5.2 requires at DER rated voltage a minimum reactive power injection capability of 44 percent of nameplate apparent power rating and absorption capability of 25 percent of nameplate apparent power rating. Page 37 of IEEE 1547-2018 states verbatim that curtailment of active power to meet apparent power constraints is permissible, acknowledging that reactive power provision under these requirements will constrain active power output. While section 6.5.2 covers frequency-active power mode, commonly called frequency droop, with Section 6.5.2.7 requires active power curtailment during high frequency conditions and active power increase during low frequency conditions, with frequency droop taking precedence over other operating requirements.

LUMA's own Section 10 of their June 11 filing discloses that more than 121 substations and 145 circuits are operating above 90 percent of load capacity, that 105 circuits exceed 100 percent of load capacity, while in Section 6 it highlights that the afternoon ramp rises between 700 and 1,100 megawatts in fewer than five hours. These conditions are relevant to the Energy Bureau's determination of which capability categories and settings are appropriate for Puerto Rico's feeders when it reviews and approves the Technical Interconnection Requirements.

The Energy Bureau may also wish to note that Engineer Gabriel Ferrer of Enphase Energy, one of the primary manufacturers whose equipment is deployed in Puerto Rico, stated at 2 hours 27 minutes and 20 seconds of the NEPR-MI-2019-0009 Virtual Stakeholder Workshop of May 28, 2026, [4] that the regulation should consider shifting from kilowatts to kilovolt-amperes because smart inverters will export reactive power. That observation is on the record of this proceeding. The undersigned respectfully concurs with that technical observation and suggests that the Energy Bureau consider whether the Technical Interconnection Requirements, when submitted for approval, should be required to address the unit of measure question and the capability category assignment question as part of its content, and that those determinations be subject to full stakeholder notice and Energy Bureau approval before taking effect.

[4] Puerto Rico Energy Bureau. (2026, May 28). NEPR-MI-2019-0009 Virtual Stakeholder Workshop [Video]. YouTube. https://www.youtube.com/watch?v=xoXQphxH8Wo&t=2242s

V. THE SANDIA NATIONAL LABORATORIES STUDY PRESENTED AT THE ENERGY BUREAU'S MARCH 31 WORKSHOP CONTAINS FINDINGS THAT MAY ASSIST THE ENERGY BUREAU IN EVALUATING ARGUMENTS ABOUT CURTAILMENT COMPENSATION

As part of United States Department of Energy support to the island of Puerto Rico, Sandia National Laboratories conducted an independent study with real world data regarding the voltage effects on the grid related to the power injection of distributed generators and the possible modifications to the inverter settings currently in effect. The Energy Bureau became aware of this study, deemed it appropriate to discuss its findings with all stakeholders, and scheduled a Virtual Stakeholder Workshop on March 31, 2026 for that purpose, as reflected in the Resolution and Order of March 26, 2026 as corrected by the Nunc Pro Tunc of March 27, 2026.

The undersigned commends the Energy Bureau for creating the opportunity for all stakeholders to hear and respond to these independent findings, and offers the following observations about the study's content as an aid to the Energy Bureau's own evaluation of the positions stakeholders have taken in response.

The Sandia findings were presented at that workshop at timestamp 0 hours 19 minutes and 45 seconds of the recorded proceedings [5]. For the Energy Bureau's convenience, those findings include the following. One in six customers evaluated experienced voltages above 1.10 per unit. Average curtailment due to high voltages is modeled at 2 percent across all customers. One in 20 customers experiences 10 percent or more curtailment from overvoltages under existing control settings. Volt-VAR causes approximately negative 1 percent curtailment, meaning essentially no curtailment but not zero. The study explicitly did not explore the voltage stabilization benefits of Volt-VAR and Volt-Watt, and the authors acknowledge those benefits may significantly reduce overvoltage and Volt-Watt activation. Frequency and temporal settings and voltage ride-through were not considered in the study due to data limitations. The 50 percent participation finding addresses very high voltages above 1.07 per unit specifically, not all high voltages and not all curtailment.

LUMA's June 11, 2026 filing in Section 4.0 characterizes this analysis as showing curtailment close to zero at approximately 60 percent participation and high-voltage disconnects disappearing at 50 percent adoption. The Energy Bureau, having convened the workshop at which these findings were presented, is well positioned to evaluate how that characterization compares with what Sandia presented at timestamp 0:19:45 of those proceedings. The undersigned places these specific findings on the record so that the Energy Bureau has a precise reference point for that evaluation. The undersigned further notes that the study's explicit exclusion of frequency response, ride-

[5] Puerto Rico Energy Bureau. (2026, May 28). NEPR-MI-2019-0009 Virtual Stakeholder Workshop [Video]. YouTube. https://www.youtube.com/watch?v=GiRshWVYtKM

through, and the stabilization benefits of the functions it does address means the study does not speak to the full range of smart inverter functions whose economic consequences for prosumer net metering credits are examined in the following section.

VI. THE ECONOMIC CONSEQUENCES OF SMART INVERTER FUNCTIONS FOR PROSUMER NET METERING CREDITS RAISE QUESTIONS THAT MAY WARRANT A PARALLEL TARIFF PROCEEDING

The undersigned wishes to bring to the Energy Bureau's attention a set of interconnected economic questions that arise from the interaction between the smart inverter functions IEEE 1547-2018 requires and the net metering compensation framework Article 9 of the draft regulation establishes. These observations are offered as informational, with the recognition that their full resolution may require a separate tariff proceeding, and with the hope that naming them here assists the Energy Bureau in determining whether such a proceeding should be initiated.

Under Article 9, Section 9.05, exported energy accumulates as net metering credits throughout the billing year and is settled at the close of the June billing period at the greater of ten cents per kilowatt-hour or the calculated average rate. Seventy-five percent of any surplus goes to the customer and twenty-five percent is credited to the Department of Education. That annual settlement is the primary economic benefit prosumers receive under their net metering agreements.

Each of the four primary smart inverter functions required by IEEE 1547-2018 systematically affects the active power export that feeds that annual credit accumulation in ways the current regulation does not acknowledge or address.

When Volt-VAR is active, the inverter's fixed apparent power ceiling measured in kilovolt-amperes means that providing reactive power reduces available active power through the relationship S squared equals P squared plus Q squared. Active power that could have been exported and credited is instead allocated to reactive support. This is a continuous condition, not an event, and it produces no register on the export meter and no credit accumulation.

When Volt-Watt activates, as LUMA's own Section 4.0 in June 11, 2026 filing confirms it does when Volt-VAR is fully utilized, active power output is intentionally reduced as a function of voltage level. The customer loses export energy the system was physically capable of producing, with no credit and no compensation. The Sandia study presented at the Energy Bureau's March 31 workshop models average curtailment at 2 percent across all customers and finds that 1 in 20 customers experiences 10 percent or more curtailment, without having evaluated the stabilization benefits that would need to exist to reduce those figures to near zero.

When frequency droop requires active power curtailment during high frequency conditions, export energy is lost in the same manner. IEEE 1547-2018 itself acknowledges at page 57 that pre-curtailment and other measures to provide frequency response reserve may belong in contractual or interconnection agreements, explicitly placing the compensation question for frequency response reserve in the interconnection agreement. The draft regulation's interconnection agreement contains no such provision.

When reactive power injection and absorption are required in both directions as grid services performed at the utility's direction, customer-owned equipment provides a continuous bilateral service. Neither direction is measured at the customer meter under the current framework. Section 1.11(36) of the draft regulation defines metering as measurement of the bidirectional flow of electric energy without specifying active or reactive energy. Article 9 compensates exclusively in kilowatt-hours. There is no reactive energy measurement, no reactive energy credit, and no reactive energy settlement in the regulation.

Additionally, when feeder voltage violations trigger inverter trip protection under IEEE 1547-2018 abnormal voltage response requirements, the prosumer loses export entirely during that trip. The prosumer did not create the voltage violation. The violation exists because the feeder carries generation the system accepted through interconnection. The prosumer bears an economic cost attributable to a grid condition outside their control, with no mechanism in the regulation for documenting, attributing, or remedying that loss. This loss reduces the accumulation of credits that would have built toward the annual June settlement, invisibly and without attribution.

The cumulative effect across all four functions and voltage trip events is a systematic, continuous, unacknowledged reduction in the annual settlement the prosumer was promised under the net metering agreement they signed, caused by grid service obligations imposed after the agreement was executed, measured by nobody, attributed to nothing, and compensated by no one.

The undersigned acknowledges that the compensation mechanisms these observations imply involve tariff structures outside the strict scope of this interconnection proceeding. These comments therefore place this analysis on the record as informational and respectfully suggest that the Energy Bureau consider whether the questions raised here warrant opening a parallel tariff proceeding to establish the compensation framework before the Technical Interconnection Requirements are finalized. The technical obligations of smart inverter operation and the economic consequences of those obligations for prosumers are two sides of the same decision. Finalizing one without addressing the other may create regulatory gaps that are more difficult to remedy after the fact.

VII. THE TECHNICAL INTERCONNECTION REQUIREMENTS MAY BENEFIT FROM PROVISIONS ADDRESSING EQUIPMENT RISK AND LIABILITY ALLOCATION

The draft regulation in Section 8.02 establishes equipment certification and compliance requirements and requires that inverters have the ability to adjust settings in the field. These are appropriate and necessary provisions.

The undersigned offers the observation that the regulation currently provides interconnecting customers with no information about what smart inverter settings will require their equipment to do before those customers execute the interconnection agreement. The specific settings for Volt-VAR, Volt-Watt, frequency droop, and reactive power provision are deferred entirely to a Technical Interconnection Requirements document that has not yet been approved and whose update process, as discussed in prior sections, remains to be defined. A customer executing an interconnection agreement today cannot evaluate what operational demands will be placed on their inverter, how those demands will affect the active power export that feeds their annual net metering credit accumulation, or how those demands compare across different inverter models that may have different apparent power ceilings and operating characteristics.

IEEE 1547-2018 Section 5.2 requires minimum reactive power injection capability of 44 percent of nameplate apparent power rating and absorption capability of 25 percent of nameplate apparent power rating. These are capability floors. The actual operating setpoints that LUMA will require within those ranges are undefined in this regulation. The difference between a setpoint near zero and a setpoint at the capability limit has direct economic consequences for the prosumer, because it determines how much of the inverter's apparent power ceiling is allocated to reactive support versus active power export at any given moment.

The customers who installed these systems made purchasing decisions based on expected useful life and expected annual export credits. Mandatory smart inverter functions, applied through settings the customer cannot anticipate at the time of agreement execution and subject to modification through a TIR update process whose parameters are still being defined, have the potential to alter both variables in ways that are not disclosed at the time of contracting. The undersigned respectfully suggests that the Energy Bureau consider whether the Technical Interconnection Requirements should include provisions addressing the allocation of responsibility when mandatory operating modes affect equipment useful life or warranty status, and whether the interconnection agreement should be required to disclose the inverter's apparent power ceiling and the potential active power reduction associated with each required smart function before the customer executes that agreement. This would allow customers to make informed decisions, give the interconnection agreement the transparency that its economic

consequences warrant, and ensure that the operational authority the utility exercises over customer-owned equipment is matched by commensurate accountability.

VIII. METER SOCKET ADAPTER PROVISIONS, IF INCLUDED IN THE FINAL REGULATION, MAY BENEFIT FROM STRENGTHENED REVENUE INTEGRITY REQUIREMENTS

The Energy Bureau's attention to meter socket adapters as a topic for workshop discussions reflects its awareness of the practical and safety dimensions of this issue. The following observations are offered to assist the Energy Bureau in framing the revenue integrity dimension of that discussion, drawn from direct professional experience in Puerto Rico's metering system.

Energy theft has been publicly acknowledged to reach hundreds of millions of dollars in annual losses. Those losses are not absorbed by the utility in isolation. They are distributed among all customers as system losses embedded in electric rates. Every honest ratepayer in Puerto Rico effectively subsidizes the consumption of those who steal energy. This makes meter security a public interest question, not merely a utility revenue question.

Professional experience in Puerto Rico's metering system, extending across multiple technology transitions, establishes a consistent pattern: when PREPA reduced physical field presence at the meter point through the transition to remote metering, energy theft increased and new theft modalities emerged specifically adapted to the new meter technology. This outcome was anticipated as early as 2004, when the undersigned recommended implementation of a periodic meter testing program consistent with the ANSI C12.1 Periodic Interval Plan to address the increased risk of unauthorized electricity consumption associated with remote meter reading. Subsequent experience validated those concerns. The pattern throughout Puerto Rico's metering history has been consistent: reductions in utility physical presence at the meter point are followed by the emergence and adaptation of theft methods targeted to whatever access pathway has been created or expanded. Individuals engaged in meter tampering have historically demonstrated detailed knowledge of meter construction, operating principles, and communication protocols. For that reason, the chain of forensic custody at the meter point must remain unbroken.

The meter socket adapter reduces the need for LUMA personnel to be present at meter removal and reinstallation. This is precisely the reduction in physical presence at the meter point that professional experience in this system associates with increased theft and weakened prosecution. The meter socket adapter creates a new access pathway to the revenue measurement point, handled by parties who are not metering specialists and whose chain of custody over the most sensitive revenue integrity location on the service is not established in the proposed framework.

Every meter socket adapter installation creates three new sealing obligations: the adapter-to-socket connection, the adapter body itself, and the meter seated over the adapter. The undersigned conducted at minimum 16,323 documented meter tests on precision test boards during service as a Probador de Contadores and Probador Especial de Contadores at PREPA's Electricity Metering Research Center, Centro de Estudios de Medición, and Wholesale Metering Districts of San Juan and Bayamón, not counting portable field testing performed during the same period of service. Of those documented tests, at minimum 1,831 were energy theft investigation cases involving meters flagged for improper energy use, tested to determine the nature, method, and magnitude of the intervention. The technically sensitive and analytically complex cases among those investigations were referred to the undersigned specifically, given the specialized knowledge required to evaluate novel tamper methods and their effects on meter registration accuracy. That direct professional experience with both standard metering and energy theft investigation at the forensic level establishes that each of the three sealing points created by a meter socket adapter installation is a potential tampering location whose integrity cannot be confirmed remotely and cannot be assumed from a third-party installation conducted without utility supervision.

The undersigned notes that LUMA's position in Section 9.0 of their June 11 filing appropriately cites Regulation 7982, Section IX, Article A, which prohibits non-utility personnel from tampering with or interfering with metering equipment and affirms that meters remain utility property. The undersigned concurs with that framing.

If the Energy Bureau determines that meter socket adapters serve the public interest and should be included in the final regulation, the undersigned respectfully suggests that any such framework require utility supervision of all installation and sealing steps, utility approval before energization, a three-point sealing protocol verified by utility personnel, and clear customer liability for any revenue irregularity attributable to the meter socket adapter installation. If a customer elects to install a meter socket adapter for their own economic convenience, the cost of maintaining revenue integrity at that installation should follow that election and not be redistributed to the ratepayer base that had no voice in the decision. This approach is consistent with the consumer protection orientation the Energy Bureau has articulated in Section 1.07 of the draft regulation, which directs that the regulation be interpreted to promote the highest public benefit and consumer protection.

IX. PERIOD BETWEEN THE TECHNICAL INTERCONNECTION REQUIREMENTS FILING DEADLINE AND THE REGULATION COMMENT DEADLINE MAY LIMIT THE ABILITY OF STAKEHOLDERS TO EVALUATE THE LATTER

The Resolution and Order of July 13, 2026 orders LUMA to file the Revised Draft Technical Interconnection Requirements by August 11, 2026, and establishes August 14, 2026 as the

deadline for comments on the Revised Preliminary Draft Regulation. Section III of the Resolution further provides that after LUMA files the Revised Draft TIR, the Energy Bureau will issue a separate resolution and order inviting stakeholders to submit comments on the TIR prior to its consideration for approval.

The undersigned recognizes and commends this two-stage structure. The observation offered here is narrower. The Technical Interconnection Requirements will contain the smart inverter capability settings, capability category assignments, fee structures, daytime minimum load methodology, and technical screening criteria that are central to the questions this proceeding is seeking to resolve. A stakeholder evaluating whether the Revised Preliminary Draft Regulation is adequate cannot meaningfully assess that question without reviewing the Revised Draft Technical Interconnection Requirements, since many of the regulation's practical effects will depend on the technical requirements ultimately established therein. While the Resolution contemplates that the Revised Draft TIR will be filed on August 11, 2026, the August 14, 2026 deadline for comments on the Revised Preliminary Draft Regulation may not provide sufficient time for stakeholders to review the TIR, analyze the interaction between the two documents, and incorporate those observations into their comments on the regulation.

The undersigned respectfully suggests that the Energy Bureau consider whether extending the comment period on the Revised Preliminary Draft Regulation to allow for meaningful review of the Revised Draft TIR alongside it would better serve the transparency and participation goals the Energy Bureau has articulated throughout this proceeding. The Energy Bureau's stated objective of seeking consensus solutions that are aligned with public policy is more likely to be achieved when stakeholders have the opportunity to evaluate the interdependence of the two documents before their comments on the regulation close.

X. DECLARATION

In compliance with applicable Energy Bureau procedural requirements, the undersigned declares as follows:

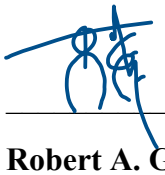
A) No party or attorney in this proceeding assisted in drafting these comments.

B) No party or attorney in this proceeding contributed funds or any other type of resource for the preparation or submission of these comments.

C) No person other than the undersigned contributed funds or any other type of resource for the preparation or submission of these comments.

Respectfully submitted,

In San Juan, Puerto Rico, on July 18, 2026.



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CERTIFICATE OF SERVICE

I hereby certify that on July 18, 2026, a copy of these Comments was filed with the Puerto Rico Energy Bureau under the title Comments on Distributed Generation and Microgrid Interconnection Regulation, Case No. NEPR-MI-2019-0009, addressed to the attention of Edison Aviles Deliz, Chairman, and submitted electronically through the Energy Bureau's electronic filing tool at https://radicacion.energia.pr.gov/.

Robert A. Garcia Cooper