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

IN RE:

PUERTO RICO TEST FOR DEMAND RESPONSE AND ENERGY EFFICIENCY

CASE NO.: NEPR-MI-2021-0009

SUBJECT: Motion Submitting Comments

MOTION SUBMITTING LUMA'S COMMENTS AND SUGGESTIONS TO THE PUERTO RICO ENERGY BUREAU:

COME NOW LUMA Energy, LLC[1], and **LUMA Energy ServCo, LLC**[2] (jointly referred to as "LUMA") and respectfully state, submit and request the following:

1. On August 13, 2021, this honorable Energy Bureau issued a Resolution and Order in the instant case ("August 13th Resolution") requesting LUMA and PREPA to, by August 18th, 2021, provide the Energy Bureau responses to a request for information included as Attachment A to the August 13th Order ("Attachment A").

2. On August 17, 2021, LUMA filed before the Energy Bureau a motion requesting that the Energy Bureau stay the August 13th Resolution and schedule a Technical Workshop "to present the need for an avoided cost study in this proceeding, and, if such study is required, the acceptance of the [m]arginal [c]ost [s]tudy as part of the [proceeding *In Re: the Unbundling of the Assets of the Puerto Rico Electric Power Authority*, in NEPR-AP-2018-004 (the "Marginal Cost Study")] for use within the avoided cost study and/or the proposed approach to develop the avoided

[1] Register No. 439372.
[2] Register No. 439373.

cost study, the methodology thereof, alignment with the Marginal Cost Study, the cost effectiveness of having the Energy Bureau perform this study, and any other matters relevant to the information requests in Attachment A of the August 13th Order." See *LUMA's Motion Requesting Energy Bureau to Stay Resolution and Order of August 13, 2021 and Schedule Technical Workshop* of that date ("LUMA's August 17th Motion") at page 6.

3. In attention to LUMA's August 17th Motion, on October 27, 2021, the Energy Bureau issued a Resolution and Order ("October 27 Order") ordering LUMA to attend a Virtual Technical Conference "to address the question on the request for information regarding avoided costs included as part of the August 13 Resolution and to clarify the scope, process and schedule for such work effort." *See* October 27 Order, page 1. The Energy Bureau added that the discussion during such Technical Conference would include, but not be limited to: "1. The need for an avoided cost study in the PR Test Proceeding, 2. LUMA's suggestion to utilize aspects of their marginal cost study to inform the avoided costs, and 3. clarify the Energy Bureau's request for information to LUMA regarding input data to the avoided cost modeling." *See id.*

4. The Technical Conference was held on November 18, 2021. Energy Bureau consultants offered a presentation. Collaborative discussions were had on data requested by Energy Bureau consultants and LUMA representatives offered explanations on data that LUMA may provide. Additionally, LUMA representatives and consultants offered suggestions and considerations for this proceeding.

5. LUMA hereby submits comments, proposals, recommendations, and concerns for consideration by this Energy Bureau in this proceeding. *See* Exhibit A.

6. First, in Exhibit A, LUMA respectfully outlines a proposed approach to advancing Energy Efficiency and Demand Response programs, including a proposal to integrate activities of the six active dockets that involve distributed energy resources (DER).

7. Second, LUMA details its concerns with multiple studies on benefit-costs analyses and avoided costs across several active proceedings before this Energy Bureau. In this regard, LUMA is concerned with the process followed in this regulatory proceeding *vis à vis* the adjudicative proceeding for Unbundling of Rates in Case NEPR-AP-2020-AP-2018-0004, where discovery was allowed, and a formal administrative evidentiary hearing was held ("Unbundling Proceeding"). While in the Unbundling Proceeding this Energy Bureau conducted an adjudicative process pursuant to Regulation 8543 on Adjudicative, Notice of Noncompliance, Rate Review and Investigation Proceedings of December 18, 2014 ("Regulation 8543"), to consider several proposals filed by the Puerto Rico Electric Power Authority ("PREPA") and supported by LUMA that included a Cost of Service Study (COSS) which methodology and soundness was not challenged, here, a more informal regulatory (miscellaneous) proceeding has been initiated where the procedural guarantees set out in Regulation 8543 including, for example, discovery and formal presentation of evidence for the record, do not seem to apply or have not been scheduled. LUMA respectfully submits that it has not been able to identify a principled reason for the Energy Bureau to consider and adopt an avoided costs study for Energy Efficiency in an "MI" regulatory proceeding. In the interests of consistency and procedural fairness, LUMA recommends that if the Energy Bureau determines that it will adopt an avoided costs study in this docket, additional procedural guarantees be adopted and followed pursuant to Regulation 8543 and an adjudicative proceeding be convened.

8. Third, LUMA provides comments on considerations for this PR Cost Test Proceeding. Finally, LUMA includes comments on comparisons made by Energy Bureau consultants in the presentation offered in the November 18th Technical Conference between marginal and avoided costs studies.

WHEREFORE, LUMA respectfully requests the Energy Bureau to **take notice** of the aforementioned and **consider** the comments and recommendations submitted in Exhibit A.

RESPECTFULLY SUBMITTED.

In San Juan, Puerto Rico, this 13th day of December 2021.

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

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Exhibit A

Puerto Rico Test for Demand Response and Energy Efficiency

NEPR-MI-2021-0009

December 13, 2021

Contents

1.0 Introduction

LUMA is eager to collaborate with the Bureau to advance distributed energy resources (DERs) as set forth in public policy. LUMA believes that a well-planned deployment of DERs, as part of a set of energy sector modernization efforts will advance public policy and objectives set forth in Act 17-2019. LUMA continues to engage meaningfully across multiple dockets by providing detailed, timely and fulsome filings and comments. Within the PR Test proceeding, LUMA has provided substantive discussion and detailed submissions during the Technical Workshops.

To that end, LUMA believes that a consistent, equitable, and transparent process with a clear roadmap is essential to allow stakeholders the ability to participate and provide meaningful comments in the development of the PR Test Framework and related DER dockets. The PR Test Framework will be used across DER evaluations and its associated inputs have many interrelated components that need to be considered, discussed and tested to prevent unintended conflicts that may delay or affect efficacy of program planning and implementation in the future. These unintended conflicts could open the door to not meeting policy targets and/or increase costs to consumers.

LUMA does not suggest that taking a systematic approach to these foundational steps creates a delay, and, to the contrary, recommended initiating quick launch pilots in our comments within the Draft Regulation for Energy Efficiency (EE). LUMA recommends a three-track approach to advancing Energy Efficiency and Demand Response (DR) programs:

- Track one: Continue a systematic development of the PR Test framework, including development of common and agreed to definitions and testing methodologies and inputs.
- Track two: Conduct a Baseline Study to generate valid primary data on Puerto Rico's market conditions. Use the Baseline Study data to inform the Potenetial Study.
- Track three: Quick launch programs, pilots and other initiatives implemented and test new program strategies in the Puerto Rico market.

Using this parallel three track method, a systematic development of the PR Test framework does not slow down the advancement of public policy. The quick launch pilot initiatives can advance public policy and provide valuable insights into the Puerto Rican market, including data points that are currently unavailable. At the same time the systematic development and testing of the PR Test, a Baseline Study and Potential Study will establish a consistent, equitable and transparent foundation that is applicable to Puerto Rico – enabling more effective program design and portfolio optimization.

As part of a fair and transparent process, providing definitions and roadmaps that include meaningful comments from stakeholders, will add clarity around application of different avoided costs. This is critically important to identify when certain avoided costs will be used and how conflict between those avoided costs are resolved. A near-term consideration is the Integrated Resource Plan (IRP) as by its nature requires comparison of distributed energy resources with traditional generation and associated T&D expenditures in order to develop a portfolio of least cost options. In this context the inputs to cost-effectiveness testing for comparing all these options must be consistent.

LUMA also provides key considerations for the PR Test Framework proceeding including reiterating its invitation to joint site visits within the new year, a collaborative approach including development of common and accepted definitions and discussion of the avoided cost methodology.

2.0 Consolidated Roadmap for DER Proceedings

There are currently seven interrelated and active dockets on DER topics. These include the PR Test, Energy Efficiency and Demand Response Regulation, Demand Response, Energy Efficiency, Electric Vehicles, DG Interconnection and Interconnection Regulation. Each of these dockets have various requirements and are in various stages of activity – some are waiting resolution by the Energy Bureau (the Energy Efficiency and Demand Response Regulation), some have a regular compliance schedule (DG Interconnection), some are new workstreams (Electric Vehicles) and some are currently ongoing but without a schedule (PR Test, Energy Efficiency and Demand Response).

There are multiple steps and stages both within each docket and between each docket that require proper coordination and planning to integrate and efficiently and effectively advance these dockets. Visibility into upcoming activities will allow the utility to plan work efficiently and avoid issues with competing deadlines and duplication of efforts.

LUMA is requesting that the Energy Bureau provide a roadmap of activities associated with the above dockets and three workstream tracks in order to add clarity and transparency to the processes and support collaborative stakeholder engagement. In consideration of a 'DER roadmap' – LUMA proposes the following high level process steps within each work track. In consideration of the advancement of Puerto Rico public policy, these can be performed as parallel paths. LUMA welcomes a discussion and providing a perspective on alignment of these workstreams.

Track 1

- Development of PR Test Framework
- Agreed definitions and discussion and uses of methodology (avoided costs)
- Collection of inputs
- Avoided costs and PR Test results, review and testing
- Determination of avoided costs and PR Test

Track 2

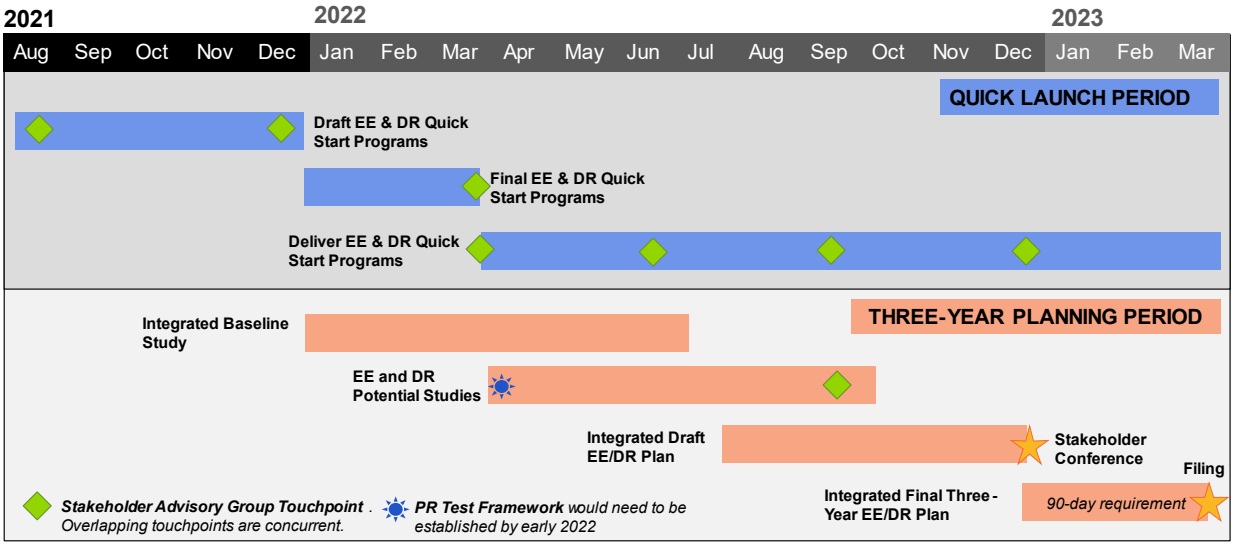
- Develop Baseline Study
- Conduct Baseline Study
- Review results of Baseline Study
- Conduct Potential Study *(requires Track 1 to be completed)*
- Testing of Potential Study results and determination of three year targets
- Development of program plans for EE and DR
- Implementation of EE and DR programs

Track 3

- Plan quick launch pilots and initiatives
- Implementation of quick launch pilots
- Refine program and pilots

LUMA proposed a similar roadmap in June 2021 for the development of the 3-year Energy Efficiency and Demand Response Plan with the docket NEPR-MI-2021-0005 and as depicted in the figure below.[1] Without a clear schedule such as this, LUMA is unable to proceed confidently with the planning activities need to prepare for eventual delivery of programs.

LUMA's Initial Proposed Roadmap for EE/DR and PR Test development.



[1] https://energia.pr.gov/wp-content/uploads/sites/7/2021/06/Motion-Submitting-Comments-to-Proposed-Regulation-for-Energy-Efficiency-NEPR-MI-2021-0005-1.pdf

3.0 Implications of Multiple Avoided Costs Across Proceedings

As stated by Synapse in the November 18, 2021 technical conference, the avoided costs calculated by their team would only be used in the Energy Efficiency and Demand Response evaluations, however the recent Electric Vehicle Resolution and Order requires LUMA to use the PRCT for evaluation of Electric Vehicle programs.

Further, LUMA identifies the following dockets that may impact or be impacted by the results of the PR Test therefore need clarity around how they might overlap in terms of benefit-cost analyses and avoided costs. These dockets include:

- NEPR-AP-2018-0004: Unbundling of the Assets of the Puerto Rico Electric Power Authority
- NEPR-MI-2021-0009: Puerto Rico Test for Demand Response & Energy Efficiency
- NEPR-MI-2021-0005: Regulation for Energy Efficiency
- NEPR-MI-2019-0015: Regulation for Energy Efficiency and Demand Response
- NEPR-MI-2021-0006: Demand Response Plan Review, Implementation and Monitoring
- NEPR-MI-2021-0013: Deployment of Electric Vehicle Charging Infrastructure
- NEPR-MI-2020-0016: Optimization Proceeding of Minigrid Transmission and Distribution Investments
- CEPR-AP-2018-0001: Review of the Puerto Rico Electric Power Authority Integrated Resource Plan

All these dockets reference a benefit-cost analysis and/or avoided costs, while only the Unbundling, Puerto Rico Test, Integrated Resource Plan, and Optimization proceeding explicitly noted marginal cost. The table below summarizes the results of the review.

Docket Name	Docket Number	Benefit-Cost Analysis	Avoided Cost	Marginal Cost
Unbundling of the Assets of the Puerto Rico Electric Power Authority	NEPR-AP-2018-0004	Y	Y	Y
Puerto Rico Test for Demand Response & Energy Efficiency	NEPR-MI-2021-0009	Y	Y	Y
Energy Efficiency	NEPR-MI-2021-0005	Y	Y	
Demand Response	NEPR-MI-2021-0006	Y	Y	
Deployment of Electric Vehicle Charging Infrastructure	NEPR-MI-2021-0013	Y	Y	
Optimization Proceeding of Minigrid Transmission and Distribution Investments	NEPR-MI-2020-0016	Y	Y[1]	Y[2]
Review of the Puerto Rico Electric Power Authority Integrated Resource Plan[3]	CEPR-AP-2018-0001	Y	Y	Y

1 *Avoided transmission and distribution cost noted on Optimization – Workshop #3*

2 *Marginal cost for new transmission and distribution noted on a December 22, 2020, Optimization Proceeding Resolution and Order*

3 *IRP encompasses EE, DR and Minigrid programs*

Having multiple sets of avoided costs creates problems for comparing EE, DR and other DER options. For example, if the avoided costs for EE and DR come from the PR Test and for energy supply and associated infrastructure upgrades, if approved, come from the Unbundling Proceeding and those avoided cost numbers for these parameters are not the same, this prevents an 'apples to apples' comparison.

This is particularly relevant to the next IRP, which by its nature requires comparison of distributed energy resources with traditional generation and associated infrastructure upgrades in order to develop a portfolio of least cost options. In this context the inputs to cost-effectiveness testing for comparing all these options must be consistent. Otherwise the next IRP may differ from PREB's studies and create challenges with meeting policy targets and potentially cause increased cost to consumers. LUMA recommends that the avoided costs determined in the PR Test do not translate to the next IRP.

Unbundling Proceeding

As discussed during the Technical Conference on November 18, 2021, the Marginal Cost Study was presented and tested in NEPR-AP-2018-0004, the Unbundling Proceeding. LUMA's witness was cross-examined on the Marginal Cost Study and the docket remains open. This Marginal Cost Study contains marginal costs that are avoided costs from the utility perspective – T&D costs and energy supply costs – and are relevant inputs to cost-effectiveness for DR and EE.

The avoided costs in the Unbundling Proceeding have an impact on customer rates. As such any other avoided cost inputs selected that impact customer rates must be tested in an Adjudicative Proceeding proceeding such that all parties to the Unbundling Proceeding have a similar opportunity to provide evidence, have it tested and adjudicated. LUMA was not expecting the matter of avoided costs to be addressed in the PR Test proceeding as that proceeding was originally constituted to develop the PR Test framework only. While it is an administrative matter in the PR Test proceeding to broaden the scope of the PR Test proceeding, the scope change could impact the parties to the Unbundling Proceeding and its adjudication. LUMA may have addressed matters related to avoided costs differently in the Unbundling Proceeding had LUMA been aware avoided costs would be a matter discussed and potentially determined in the PR Test proceeding.

Further, the administrative record in the Unbundling Proceeding has closed and LUMA's proposal is submitted for adjudication. Thus, formally and procedurally, other dockets should not affect the evidence submitted in the Unbundling Proceeding. As a matter of administrative procedure, the testing of avoided costs in this proceeding cannot affect the record in the Unbundling Proceeding. Given the risk that there could be overlap between the avoided cost study announced in this proceeding and the avoided costs within Marginal Cost Study in the Unbundling Proceeding pending adjudicaiton, LUMA recommends that the Energy Bureau confirm that whatever avoided costs are chosen within the PR Test proceeding will not affect directly or indirectly the open Unbundling Proceeding.

Lastly, within the Unbundling Procedure, stakeholders had the opportunity to present evidence and testimony for adjudication, ask discovery and examine witnesses on the avoided costs presented in the Marginal Cost Study. It is unclear if all stakeholders will have this equal opportunity in the PR Test proceeding as there is no set procedure for presentation of testimonies, examining witnesses and presentation of evidence for adjudication in a miscelaneous proceeding.

4.0 Key Considerations for PR Test Proceeding

Inclusive and Transparent Approach to PR Test and Subsequent Proceedings

Subject to the above constraints regarding the avoided costs provided by LUMA in the Unbundling Proceeding, LUMA is very supportive of a collaborative approach to determining the avoided costs for the PR Test. LUMA reiterates its suggestion for site visits and more informal working sessions such that PREB staff and consultants can become more familiar with LUMA grid operations in carrying out the modeling for the avoided costs. Similarly, LUMA looks forward to such sessions with PREB and its consultants to better understand the modelling methodology and model being used for the PREB avoided cost study.

Applying Consistent Terms/Definitions

LUMA recommends that the PR Test Framework include a summary of definitions discussed within the Workshopes in order to develop a common and agreed to understanding between stakeholders and the Energy Bureau. It is useful for understanding, consistency, and comparative purposes to have a common and accepted definitions for terms to support the framework. LUMA recommends that the National Standard Practice Manual, used for the framework adopted for the PR Test, also be the basis for the definitions outlined in the framework.

It is also important to define the type of grid service the DER provides (permenant reduction, shed, shift, shimmy, shape, etc.) so the ability to implement these services can be understood in the context of Puerto Rico and modeled accordingly in order to represent the avoided costs for the type of grid service being provided.

Concerns Regarding the use of New England Avoided Cost Model

The Energy Bureau's consultants propose using the New England avoided cost model. This model does not form a basis for an equivalent comparisons of avoided costs, making it difficult for the model to be meaningfully calibrated for determining avoided costs in Puerto Rico. There are features included in the New England competitive market construct and incentives offered by the six member states that do not afford a fair and balanced comparison to Puerto Rico.

Firstly - Energy costs are based on locational marginal pricing formed from a centrally coordinated, bid-based, and security-constrained economic dispatch. Differences in market prices form the basis for the marginal cost of transmission and the marginal cost of energy. Congestion Revenue Rights, a financial representation of physical rights, means that wholesale marginal price differences are rebated according to the transmission service awarded. Because of these rebates, there is no way to clearly represent the marginal value of energy or transmission at a particular location.

Secondly - Marginal losses, included in New England as a component of forming a locational marginal price, are not available as part of the Puerto Rico approach and has no basis for equivalent comparison. This component also changes the representation of the energy and congestion component of the locational marginal prices. There is limited information about the marginal loss rebate mechanism to make a consistent comparison, as marginal losses over-recover the true cost of losses.

Thirdly - Using a Value of Lost Load (VOLL) component, in addition to a capacity component, has the potential for double counting. Since the loss of load probability is a main driver of a forward capacity requirement, there is no clear path for LUMA to weigh a VOLL relative to the capacity component of the generation avoided cost.

Lastly - Mass market EE and DR, driven by incentives from EE / DR vary by state. Locational EE and DR appear as non-wires solutions to traditional infrastructure. The jurisdictional and geographic breakdown does not easily translate to a framework to be applied in Puerto Rico.

Overall, Puerto Rico does not have an equivalent dispatch structure which means we do not have a comparable grid operations or market framework – which forms the basis for avoided cost components in New England. The avoided cost methodology within the Marginal Cost Study, if approved, could provide a reasonable methodology and basis for avoided costs determined for the purpose of the PR Test framework.

5.0 Comparison of Marginal and Avoided Costs Studies

The comparison presented by Synapse at the November 18, 2021 Technical Conference pointed to the differences between Marginal Cost and Avoided Cost studies. However, LUMA notes that the comparison does not necessarily point to fundamental differences between the two sets of studies. They could be different along the dimensions presented in the comparison table, but don't necessarily need to be, provided there is clarity on what the differences are and why.

LUMA provides the following comments regarding the comparisons:

- ***Study Period****:* The presentation noted that a Marginal Cost Study was for a nearer term (e.g., today through 2024), while an avoided cost study would cover a longer term (e.g., 20 years).

  LUMA notes that a Marginal Cost Study does not need to be necessarily restricted to a near term. The Marginal Cost Study was done for a 5-year period and can be extended over a longer timeframe, if needed. The difference in study period is not a fundamental difference between the two sets of studies. As stated above, the marginal cost methodology should be considered for the avoided cost study given the limitations to the New England model.

- ***Cases or Scenarios****:* The presentation noted that the Marginal Cost Study used expected load while the avoided cost study would use load without projected EE savings.

  LUMA notes that load without projected EE savings applies to avoided costs for EE and DR but would not apply when DERs are included. Moreover, in the case of Puerto Rico, the expected load used in the Marginal Cost Study does not include projected EE savings since no EE savings currently exist in Puerto Rico.

- ***Granularity of Results****:* The presentation noted that a Marginal Cost Study does not have any time variation while an avoided cost study would have time variation (by time of day, season, year)

  LUMA notes that marginal costs typically have high level of granularity (e.g., energy markets have 4 sec. granularity). The granularity of results is a functionof the granularity of the input data and the purpose for which the output would be utilized. This does not necessarily point to a fundamental difference between the two sets of studies.