

SECRETARIA
COMISION DE ENERGIA DE
PUERTO RICO

**COMMONWEALTH OF PUERTO RICO
PUERTO RICO ENERGY COMMISSION**

IN RE: REVIEW OF THE PUERTO
RICO ELECTRIC POWER
AUTHORITY INTEGRATED
RESOURCE PLAN

18 AGO 27 P4:04

CASE NO.: CEPR-AP-2018-0001

SUBJECT: Intervenors' additional comments
and questions following the August 14, 2018
Technical Conference

**INTERVENORS' ADDITIONAL COMMENTS AND QUESTIONS
FOLLOWING THE AUGUST 14, 2018 TECHNICAL CONFERENCE**

Assured Guaranty Corp., Assured Guaranty Municipal Corp., and National Public Finance Guarantee Corporation (collectively, the "Intervenors") respectfully submit that the Puerto Rico Electric Power Authority's ("PREPA") presentation at the August 14, 2018 Technical Conference (the "Conference") evidenced a nonstandard approach to its Integrated Resource Plan (the "IRP"), as well as substandard oversight and management of this important process. If left uncorrected, these issues threaten to deprive the Puerto Rico Electric Commission (the "Commission") and all of PREPA's stakeholders of the IRP that they deserve and require at this critical juncture. As detailed below, PREPA intends to complete an IRP without considering or modeling one of three strategies under consideration. Strategy 1, a traditional, centrally supplied energy program, may be the most cost-effective and reliable of the three strategies identified, even with constraints such as hardening. Strategy 1 should be modeled in accordance with standard industry practice, and to ensure that the Commission has a baseline from which to compare the other two strategies in the IRP. It is no justification for PREPA to point to unspecified "feedback" in order to exclude Strategy 1 from consideration, particularly when the bias against a centrally supplied energy program is more likely based on PREPA's own mismanagement. PREPA should not have excluded Strategy 1 from consideration, but having done so, the Commission should instruct PREPA to reverse this ill-advised decision.

Similarly, PREPA intends to complete the IRP before it has finished and provided the Commission with a distribution-level analysis. That analysis is essential to the IRP process, because it will determine the costs necessary to implement the proposed strategies. How can the Commission determine which strategy—1, 2, or 3—is the most appropriate without knowing how much Strategies 2 and 3 will cost to implement? PREPA claims it will take fourteen months to complete this analysis, but that kind of delay is unacceptable given that PREPA must complete the distribution-level analysis before it can produce a comprehensive and proper IRP. The Commission should direct PREPA to complete this analysis so that it can be included in the IRP it submits this fall. PREPA also has failed to provide other important information that should be made public, such as: Why is PREPA considering at least four new natural gas delivery proposals without having first developed and made public the information necessary to evaluate them? What economic assumptions and models will PREPA rely upon, and when they will be disclosed? And why is PREPA making significant, and previously unannounced, changes to its existing generation fleet?

After the Conference, several participants petitioned the Commission to allow public comments and questions during Phase 1 of the IRP.¹ On August 21, 2018, the Commission issued an Order allowing all interested parties to submit additional questions or comments on the IRP, including any Phase I assumptions and scenarios, by August 27, 2018.² Accordingly, Intervenors respectfully submit the following comments and questions.

¹ See *Request for Public Comment Period During Pre-Filing Process*, Case No. CEPR-AP-2018-0001, Dkt. No. 14 (Aug. 17, 2018) (listing justifications for public participation in Phase 1 of the IRP, including: (i) the fact that a prior IRP proceeding was substantially delayed because PREPA ultimately submitted an inadequate plan that had to be redone; (ii) the public interest weighs in favor of participation at this critical time; (iii) PREPA's presentation at the Conference deviated from prior information submitted; and (iv) the need to avoid delay and prejudice to participants.

² See *Resolution and Order*, Case No. CEPR-AP-2018-0001, Dkt. No. 15 (Aug. 21, 2018).

1. ELIMINATION OF “STRATEGY 1” FROM MODELING

Based on the PREPA Presentation³ and other statements made at the Conference, it appears that PREPA intends not to model or otherwise factor into the future IRP what it has identified as “Strategy 1”—namely, “[a] traditional, centralized energy program; *reliable & economic*.”⁴ PREPA indicated⁵ that it will not model Strategy 1 based on: (i) purported feedback from unspecified stakeholders; (ii) a desire to save time and analysis; and (iii) hardening that would purportedly be needed for a resilient Strategy 1 electrical system.

None of these concerns warrants failing to model Strategy 1. *First*, while some unspecified stakeholders may have disfavored Strategy 1 as a general matter, PREPA has explicitly acknowledged that stakeholders also believe that Strategy 1 should be considered “as a reference point” and that it should be modeled.⁶ Intervenor strongly agree that such modeling and referencing is appropriate in this IRP. It is not possible to give due consideration to other strategies without knowing the relative cost, as well as any advantages or disadvantages, of Strategy 1.⁷ In fact, Intervenor believe there is a strong likelihood that Strategy 1 would prove more cost-effective and reliable than Strategies 2 or 3—as PREPA itself has repeatedly acknowledged in this

³ See *PREPA PREC Technical Conference Presentation*, Case No. CEPR-AP-2018-0001, Dkt. No. 12 (Aug. 14, 2018) (the “PREPA Presentation”).

⁴ *Id.* at p.16 (emphasis in original).

⁵ Siemens, a consultant working on PREPA’s IRP, appeared on PREPA’s behalf at the Conference. For simplicity, any representations made by Siemens are herein attributed to PREPA.

⁶ See *PREPA’s Compliance Filing for Items Due August 1, 2018*, Case No. CEPR-AP-2018-0001, Dkt. No. 4, at pp.27-28 (Aug. 1, 2018) (the “Compliance Filing”) (admitting that stakeholders believed Strategy 1 should be used “**as a reference point**,” and that “**stakeholder groups requested [] strategy 1 to be explicitly modeled**” (emphasis added)).

⁷ That is precisely why it is standard practice for an IRP to consider a range of different options, such that the Commission has all information necessary to meet its legal and regulatory duties.

case.⁸ Cost-effectiveness, reliability, resiliency, and practicality are crucial to Puerto Rico at this time, and should not be ignored in this IRP.

Second, the mere fact that failing to consider Strategy 1 will save time is not grounds for doing so. Of course, it would also save time if PREPA could simply bypass the IRP and unilaterally dictate the energy policy of Puerto Rico without any regard for efficacy, quality, or service to stakeholders. But the Commission is all too familiar with the harm that results from PREPA lacking oversight—which is the very reason for the Commission’s creation. Absent continued analysis of Strategy 1, the Commission will not be able to fulfill its fundamental oversight duties. Time savings are no excuse for PREPA to submit an inadequate IRP.

Finally, while PREPA suggested at the Conference that it may be challenging to harden a centrally supplied grid in order to make it more resilient, this does not support failing to even model Strategy 1. At the outset, the suggestion that Strategy 1 cannot be resilient contradicts PREPA’s prior representations.⁹ Indeed, any lack of resilience in PREPA’s centrally supplied grid likely results from PREPA’s own failure to properly repair and maintain the system—which increased its vulnerability to hurricanes—rather than some shortcoming of centrally supplied grids generally. And there will doubtless be challenges associated with hardening Puerto Rico’s power system *for each and every strategy*, which may well prove greater in connection with Strategies 2 and 3. After all, PREPA has acknowledged that a “[k]ey concern” of the IRP as a whole is “resiliency vs cost trade-off.”¹⁰ Ultimately, if PREPA does not even model Strategy 1, neither the stakeholders nor the Commission will ever know how it compares to other strategies, whether in

⁸ See, e.g., Compliance Filing at p.27 (“Strategy 1 reflects a traditional and centralized energy program **that emphasizes reliability and economic metrics**.” (emphasis added)); PREPA Presentation at p.16 (depicting Strategy 1 as “**Reliable & Economic**” (emphasis added)).

⁹ See *supra* fn.8.

¹⁰ PREPA/AEE 2018 Integrated Resource Plan: PR SESA Conference, at p.19 (June 26, 2018).

terms of resiliency, reliability, or cost. This is why the analysis cannot be skipped. Rather, PREPA should model Strategy 1 while factoring in any constraints related to necessary hardening, which is much more appropriate than simply ignoring Strategy 1.

Consistent with the comments above, the Intervenors submit the following questions:

- Which stakeholders (and what proportion of stakeholders) disfavored Strategy 1?
On what basis?
- Which stakeholders (and what proportion of stakeholders) suggested that Strategy 1 should not be used as a reference point and/or modeled?
- If Strategy 1 is not modeled, how will there be a meaningful comparison of the strategies? In particular, given that Strategy 3 is “a mixture of the first two strategies,”¹¹ how will it be possible to model Strategy 3 without also modeling Strategy 1?
- If Strategy 1 is not modeled, how will a complete potential range of costs and options be developed?
- Please reconcile PREPA’s statement at the Conference that Strategy 1 is not seen as sustainable given the need for resiliency, with PREPA’s repeated prior representations that Strategy 1 reflects a “resilient” system.
- What specific challenges are associated with hardening a centrally supplied system as in Strategy 1? How do those challenges compare, quantitatively and

¹¹ PREPA Presentation at p.16.

qualitatively, to the challenges associated with hardening more-distributed systems as in Strategies 2 and 3?

- For Strategies 2 and 3, please explain the basis for the requirement that 90% of “normal load” be generated within a given mini/microgrid. What analysis was used to set this threshold, as opposed to any other threshold?
- What assumptions were made with respect to stranded costs of generation?
- For Strategies 2 and 3, please provide an interim cost analysis associated with any contemplated hardening,
- For Strategies 2 and 3, please provide information on what critical loads exist, what level of renewable/DER facilities will be assumed (with what storage), and what interconnection and inter-tie assumptions will be made (at what cost).
- For all strategies, please provide information on the magnitude and timing of expected federal assistance, and whether it is expected to meet the capital requirements of each strategy.

2. DISTRIBUTION-LEVEL ANALYSIS

During the Conference, PREPA represented that local meetings are being held with various potential mini/microgrid regions of the Island, in order to understand what distribution system hardening is needed and what critical customers exist. PREPA expects to then use this information to analyze what investment is needed at a distribution level (*e.g.*, for voltage regulation). PREPA

indicated that this analysis will take 14 months to complete—long past the target date for submission of an IRP.¹²

Intervenors are concerned that by prolonging this analysis past the target date for submission of an IRP, PREPA is jeopardizing the Commission's and stakeholders' ability to reasonably assess the range of options in the IRP—particularly given PREPA's overriding focus on Strategies 2 and 3, as discussed in Part I *supra*. In other words, without knowing the costs associated with distribution upgrades that would be necessary to implement Strategies 2 and 3, it will be difficult (if not impossible) to properly evaluate such strategies. Again, this would hinder the Commission in fulfilling its statutory oversight role in this proceeding, and deprive stakeholders of the ability to meaningfully assess different options.

Consistent with the comments above, the Intervenors submit the following questions:

- Given PREPA's 14-month estimated timeline for the distribution-level analysis, how will it be possible to determine in the IRP the cost and feasibility of a portfolio that assumes mini/microgrids with 90% local generation of “normal load”?
- Further, without such information on cost and feasibility—and particularly in light of the concerns expressed in Part I *supra*—how will it be possible in the IRP to compare the relative strategies?
- Please explain how PREPA's 14-month estimated timeline for the distribution-level analysis will impact the IRP.

¹² See *Resolution and Order*, Case No. CEPR-AP-2018-0001, Dkt. No. 1, at p.4 (Mar. 14, 2018) (setting October 2018 as the target date for submission of an updated IRP).

- Please describe any steps that PREPA will take to gather preliminary distribution-level information, in advance of submitting an IRP.

3. NEW GAS SCENARIOS

During the Conference, PREPA proposed four new gas options: (i) floating liquid natural gas (“FLNG”) at Yabucoa; (ii) FLNG at Mayaguez; (iii) FLNG at San Juan; and (iv) onshore LNG at San Juan.¹³ PREPA represented that it is currently developing details related to these proposals, and provided limited information for some options and none for others.¹⁴

Intervenors are concerned by PREPA’s lack of information development with respect to these new gas proposals. For example, PREPA offered no information on cost, permitting, feasibility, or timing of the Yabucoa and Mayaguez LNG proposals. PREPA offered extremely limited information on the two San Juan LNG proposals—which did not include permitting, feasibility, or timing. Once more, this lack of relevant information hampers the Commission as well as other participants in this proceeding.

Consistent with the comments above, the Intervenors submit the following questions:

- On what basis did PREPA decide to propose these four new gas options at the Conference? What analysis has been done in conjunction with such proposals?
- On what basis is AOGP demoted from consideration? What information was considered when deciding whether to pursue AOGP versus the four new gas

¹³ See, e.g., PREPA Presentation at p.71. While the presentation also depicts other gas options—such as the Aguirre Offshore Gas Port (“AOGP”) and small-scale LNG containers shipped into San Juan—PREPA indicated by omission that the former is no longer a priority, and the latter is no longer under consideration due to logistical challenges.

¹⁴ See *id.* at pp.72-74 (providing some estimates regarding the San Juan options, but stating that the Yabucoa and Mayaguez proposals are “Pending Analysis and Information”).

proposals? Is the decision to demote AOGP from consideration related to the decision to eliminate Strategy 1?

- For each of the four proposals, please provide information on: (i) permitting; (ii) feasibility; (iii) cost; and (iv) timeline.

4. TITLE V CRITICAL PROJECTS

There was a lack of clarity at the Conference regarding the relationship between Title V critical projects and the IRP process.¹⁵ Intervenors believe that it would be beneficial to the Commission and all stakeholders if PREPA clarified whether and to what extent PREPA contends that the IRP process should include consideration of critical projects, as well as what the relationship is between the Title V process and the IRP process.

5. ECONOMIC ASSUMPTIONS

There also was not sufficient information provided at the Conference regarding economic assumptions for the IRP, and how those align with the economic assumptions underlying the FOMB's fiscal plans. For example, PREPA's load forecast relies on variables that are also relevant to the FOMB's fiscal plans, such as GNP, population, and demand.¹⁶ Yet, PREPA suggested that its model operates differently than do those in the FOMB's fiscal plans. When the Commission observed that this results in meaningfully divergent forecasts,¹⁷ PREPA admitted that alignment

¹⁵ See, e.g., PREPA Presentation at p.14 (asserting that "FOMB's 'critical project' process under Section 503 of PROMESA is a separate process outside the accelerated timeline of the IRP development," but offering no further detail about the relationship between the two).

¹⁶ See *id.* at pp.53-56.

¹⁷ For example, the Commission pointed to page 55 of the PREPA Presentation, where the approximately 13GW of electrical demand in 2018 diverges from the 12GW estimated by FOMB.

of the economic assumptions was a work in progress. Intervenor is concerned that this lack of alignment will lead to inconsistency over PREPA's path forward.

Consistent with the comments above, the Intervenor submit the following questions:

- Will the economic assumptions and models underlying the IRP be disclosed to stakeholders? If so, when?
- Which specific economic assumptions are currently out of line with those used in the FOMB's fiscal plan?
- When and how does PREPA expect to achieve alignment with each of the economic assumptions underlying the FOMB's fiscal plans?
- Are a range of possibilities regarding population being modeled? What is the relationship between population change and demand, and what would be the effect of underestimating population growth? And underestimating GNP growth?
- What is the relationship between population growth and GNP?
- When will Weighted Average Cost of Capital ("WACC") for generation be determined?
- What does it mean that WACC is "pending alignment with stakeholders"¹⁸? Which stakeholders? And how is such alignment relevant?

¹⁸ *Id.* at p.83.

- PREPA’s preliminary capital cost assumptions show a steep decline in solar photovoltaic and lithium-ion battery storage costs through 2035¹⁹—what is the basis for these assumptions? Is this consistent with industry expectations?

6. EXISTING GENERATION

PREPA announced several drastic changes to the existing generation fleet at the Conference. Among other things, PREPA indicated that: (i) hydroelectric assets may be transferred out of PREPA and into PRASA; (ii) the Costa Sur plant has recently begun burning 100% fuel (which the Commission had not been informed of); and (iii) Aguirre is apparently assumed to be retired. The Intervenor is concerned that these sudden changes—some of which PREPA implemented before informing the Commission—have not been duly explained or evaluated. Taking the hydroelectric asset transfer as an example, PREPA has not explained why it is necessary for this transaction to occur, what approvals are necessary, nor how it would work as a practical matter (including whether PRASA would be consuming the power itself, selling it, or entering into some other arrangement).

Consistent with the comments above, the Intervenor submit the following questions:

- What are the specific reasons for the contemplated transfer of hydroelectric assets from PREPA to PRASA? How would such a transfer be implemented?
- How would power generated from such assets be treated post-transfer? What would replace this generation capacity in PREPA’s portfolio?
- When and how does PREPA expect to achieve alignment with each of the economic assumptions underlying the FOMB’s fiscal plans?

¹⁹ See *id.* at p.51 (costs declining from roughly \$1,700 to \$800 and \$1,400 to \$700, respectively).

- Why is Aguirre—a previously significant asset—now apparently assumed to be retired?

The Intervenors expressly reserve all rights, and waive none, including but not limited to their rights to submit additional questions or comments regarding the Conference, as well as to submit questions and comments, and otherwise participate in, any future IRP conferences or proceedings.

RESPECTFULLY SUBMITTED,

THIS 27th DAY OF AUGUST, 2018

CERTIFICATE OF SERVICE: We hereby certify that on this same date a true and accurate copy of the foregoing comments was sent via electronic means to **Autoridad de Energía Eléctrica de Puerto Rico** to Nélida Ayala Jiménez, Esq., Nitza D. Vázquez Rodríguez, Esq. and Carlos M. Aquino Ramos, Esq. at n-ayala@aeep.pr.com, n-vazquez@aeep.pr.com, c-aquino@aeep.pr.com; to the **Oficina Independiente de Protección al Consumidor**, to Coral M. Odiot Rivera, Esq. and José Pérez Vélez, Esq. at codiot@oipc.gov, and jperez@oipc.gov; and to the **Oficina Estatal de Política Pública Energética** to Wilma I. López Mora at wilma.lopez@aee.pr.gov.

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