

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

SECRETARIA
COMISION DE ENERGIA DE
PUERTO RICO

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

CASE NO.: CEPR-AP-2018-0001
18 AGO -7 P3:58

SUBJECT: Intervenors' topics and questions
for consideration in establishing the agenda for
the August 14, 2018 Technical Conference

**INTERVENORS' TOPICS AND QUESTIONS FOR CONSIDERATION
IN ESTABLISHING THE AGENDA FOR THE AUGUST 14, 2018
TECHNICAL CONFERENCE**

TO THE HONORABLE ENERGY COMMISSION:

On August 14, 2018 at 8:30am, the Puerto Rico Energy Commission (the "Commission") will hold a Technical Conference (the "Conference") regarding the Puerto Rico Electric Power Authority's ("PREPA") Integrated Resource Plan (the "IRP"). During the Conference, PREPA will, among other things, answer questions regarding the IRP process. In response to the Commission's request for questions to establish an agenda for the Conference, Assured Guaranty Corp., Assured Guaranty Municipal Corp., and National Public Finance Guarantee Corporation (collectively, the "Intervenors") respectfully submit the following topics and questions:

1. MICROGRIDS/MINIGRIDS

- Does PREPA and/or Siemens have preliminary economic information that provides insight into whether a mini/microgrid strategy would be cost-effective compared to traditional central station models?
- What cost assumptions will PREPA use for the mini/microgrid interconnections?
- What type of Transmission & Distribution ("T&D") interface and reliance will PREPA assume, and what tariff structure does it envision?

- The PREPA response filed in this proceeding on August 1, 2018 (the “Response”) described how PREPA would identify potential mini/microgrid sites. Please provide additional information about the size and number of mini/microgrids that PREPA will assume and model.
- Siemens recently released a white paper titled “Resilient by Design,” which describes how PREPA’s electric grid could be comprised of ten minigrids.¹ How, if at all, does this white paper relate to Siemens’s IRP work?
- How does Siemens and/or PREPA envision addressing the current supply and demand imbalance as between the north and south of the island? For the San Juan metro area, what are the real estate assumptions for siting renewables and battery storage systems?
- Will inherent redundancy be created by the use of mini/microgrids?
- What are the reliability trade-offs between mini/microgrids and centralized generation? What are the risks and concerns PREPA will assume regarding interconnecting mini/microgrids?
- What are the design assumptions for renewables and battery storage that would withstand hurricanes?

¹ See Siemens, Resilient by Design: Enhanced Reliability and Resiliency for Puerto Rico’s Electric Grid (2018), online at <https://www.siemens.com/content/dam/webassetpool/mam/tag-siemens-com/smdb/regions/usa/company/topic-areas/onsite-power-generation/documents/puertorico-resiliency-wp-fprint.pdf>.

- In its Response, PREPA discusses private microgrids—how would PREPA incorporate private microgrids? Would PREPA require exit fees related to stranded costs if a customer goes “off the grid”?

2. FISCAL PLAN

- How will the IRP operate in conjunction with the Fiscal Plan?
- Siemens indicated that they have used forecasts from Moody’s instead of the Fiscal Plan. What is the reason for this divergence?

3. TITLE V “CRITICAL PROJECTS”

- In its Response, PREPA asserts that Title V Critical Projects are outside of the IRP process. To the extent Critical Projects are generation and/or energy-efficiency projects, how is this consistent with the IRP protocol?

4. TRANSMISSION

- What reinforcements or hardening to the existing transmission system are being assumed in Strategy 1, both in terms of scope and cost? What about Strategies 2 and 3?

5. EXISTING PLANT ASSUMPTIONS

A. FORCED OUTAGE RATES

- What relative change in performance of existing power plants (*e.g.*, forced outage rates, heat rate, and availability) does PREPA anticipate with and without privatization?

B. SARGENT & LUNDY REPORT

- Will the Sargent & Lundy report be available before the IRP is completed?

- If not, is it PREPA's position that the Sargent & Lundy report does not provide information relevant to the IRP (*e.g.*, capital expenditures for various capital improvements—including for emissions compliance and other performance improvement—and operating assumptions such as maintenance costs and performance metrics)?

6. INPUT REVIEW

The Intervenor request that PREPA and/or Siemens release the following information:

- **Fuel Forecast:** PREPA's Response stated that Siemens prepared fuel price forecasts, but those forecasts were not provided.
- **CO2:** Siemens did not provide CO2 cap and price assumptions.
- **Renewable Energy Credits ("RECs"):** Siemens should also provide assumptions regarding solar RECs, including market structure and value of RECs.
- **Economic and Population Forecasts:** Siemens indicated that it plans to use forecasts from Moody's instead of the Fiscal Plan.

7. PROMOD

A. LOLH AND ENS

- Siemens indicates that ProMod will be used to determine expected LOLH and ENS. Are there not-to-exceed LOLH and ENS criteria that shall be met, or will LOLH and ENS only be used to prefer one plan to another?

- Are not-to-exceed LOLH and ENS used as criteria in the Aurora capacity expansion model? If so, what are the not-to-exceed LOLH and ENS criteria used for capacity expansion planning?

B. WEATHER AND CLIMATE

- How will the ProMod inputs be varied to capture weather and climate change impacts?

8. MODEL INPUT OPTIONS

A. GAS TO THE NORTH

- What alternatives will be explored regarding gas to the north? Will PREPA consider different infrastructure requirements and permitting needs?
- Has PREPA identified different fuel options? What are they?

B. FUEL BLENDING

- Will Fuel Blending be modeled in the IRP as an option for existing steam units to meet MATS?

C. RIGHTS OF WAY

- What, if any, assumptions will PREPA make about usage of highway rights of way in the IRP?

D. CLEAN POWER PLAN (“CPP”)

- What are PREPA’s assumptions regarding the requirements of the CPP?

The Intervenors expressly reserve all rights, and waive none, to submit additional questions or comments in, and otherwise participate in, the Conference as well as any future IRP proceedings.

RESPECTFULLY SUBMITTED,

This 7th day of August, 2018

CERTIFICATE OF SERVICE: We hereby certify that on this same date a true and accurate copy of the foregoing agenda submission was sent via electronic means to **Autoridad de Energía Eléctrica de Puerto Rico** to Astrid I. Rodríguez Cruz, Jorge R. Ruiz, and Nitza D. Vázquez Rodríguez, Esq. at n-vazquez@aeep.pr.com, and PO Box 36928 San Juan PR 00936-4267; 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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