

Written Questions regarding pending PREPA RFP for 1,000 MW Renewable Energy & 500 MW Storage

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In response to the invitation to submit written questions following the Energy Bureau's 5-hour Stakeholder Meeting held on January 14th, 2021, the Solar & Energy Storage Association of Puerto Rico (SESA-PR) respectfully submits these questions.

Questions are detailed below, with the background, concern, and specific questions listed, and to which entity each question is addressed - the Energy Bureau (PREB), PREPA, or Sargent & Lundy.

Our intention with each topic and question is to encourage this RFP process to move forward based on best practices observed from other recent successful similar RFPs. Our hope is that these questions help improve the probability of attracting qualified companies to submit bids on all scales of solar & storage in response to the important forthcoming RFP to develop 1,000 MW of renewables and 500 MW of battery storage, as the first substantial step toward realizing Law 17's requirement that 40% of Puerto Rico's electricity be derived from renewable energy by 2025, and ultimately 100% by 2050.

A. Public transparency of the RFP itself, and the RFP process.

Background: PREPA's comments during the Stakeholder Meeting indicate a plan is for the procurement process to be nontransparent, with the RFP itself and the RFP process to be nonpublic, visible to no entity other than PREPA and the bidders.

Concern: We advocate for a preponderance of transparency, and are concerned that the stated approach would provide no information publicly regarding the content of, and development of the procurement process for, this RFP. This indicates the danger that this process could transpire in a sort of "black box", invisible to important interveners such as those who intervened in the recent PREPA IRP (consumer advocates, environmental advocates, industry associations and others), legislators, journalists, and the public, and even to the Energy Bureau itself.

Question for the Energy Bureau: Can PREB issue an order requiring that the entire RFP itself be Publicly Posted, in this docket, the same day it's issued, along with all Questions & Answers submitted by and to bidders as part of the RFP procurement process?

B. Basing this RFP on best practices; setting the stage for success.

Background: PREPA’s comments during the Stakeholder Meeting indicate a potential lack of awareness of recently administered RFPs in other jurisdictions that could serve as useful models for this process.

Concern: We feel that this RFP will be most likely to succeed if it is based on known current best practices of rapid integration of large quantities of renewable energy & storage.

Questions for PREPA:

1. During the drafting process of this RFP thus far, which examples were used of successful recent RFPs for rapid integration of large quantities of renewable energy & storage?
2. What guiding principles were gleaned from analyses of these exemplary successful RFPs?
3. Were any of the following RFPs considered when crafting the current RFP? If so, which ones? If not, could their merits be considered while finishing drafting of the pending RFP?

List of examples of recent similar RFPs

Example 1

Utility: Hawaiian Electric Company (HECO)

Scope: 900 MW Renewables, 240 MW Storage

Document: Bid Documents & Procedures (July 2019)

Link to Document:

https://www.hawaiianelectric.com/documents/clean_energy_hawaii/selling_power_to_the_utility/competitive_bidding/20190710_exhibit_8_grid_services_rfp.pdf

Example 2

Utility: City of San Antonio Texas, “CPS Energy”

Scope: 900 MW Solar, 50 MW Storage, and 500 MW “All-Source”

Document: Bid Documents & Procedures (November 2020)

Link to Documents:

<https://www.cpsenergy.com/flexrfp>

Example 3

Utility: Northern Indiana Public Service Company (NIPSCO)

Scope: 1,485MW of Solar, Wind, & Demand Side Management

Document: Bid process overview and results (February 2020)

Link to Document:

<https://www.nipsco.com/docs/librariesprovider11/rates-and-tariffs/irp/post-submission-documents/nipsco-request-for-proposal-results.pdf?sfvrsn=2>

C. How is this RFP going to be funded / How is PREPA going to pay for it?

Background: Multiple questions were raised during the Stakeholder Meeting regarding the impact of FEMA funding on this RFP.

Concern: An ongoing lack of clarity on this topic could be an obstacle to the success of this RFP.

Question for PREPA: Please detail all of the possibilities for FEMA funding being used to support the success of this RFP.

Question for PREPA: Can PREPA use FEMA funding to pre-pay, all or a portion of, the PPOAs that result from the forthcoming RFPs for renewable energy & battery storage?

Background: The Renewable Integration Study (P. 9 of the PDF, printed Page II), states: “...Peaking generators and the combined-cycle power plant funded by FEMA 404 and 428 will help PREPA provide a reliable electrical system through Puerto Rico’s ongoing transition to renewable energy.”

Questions for Sargent & Lundy:

1. What is the total dollar amount of the assumed FEMA funding to be used to fund “peaking generators and the combined-cycle power plant”?
2. What is this total, separated by FEMA 404 and FEMA 428 funds?
3. Is there any reason why a portion of, or the entirety of, these funds, rather than being spent on new natural gas plants, couldn’t be instead requested to be spent directly on renewable energy and/or battery storage?

D. The Gas Peaker versus Battery Storage comparison in the Renewables Integration Study seems to indicate that unless new natural gas peaker plants are completely paid for by FEMA, new Battery Storage is more economical than new Gas Peaker Plants.

Background: The Renewable Integration Report published by Sargent & Lundy in December 2020 includes a financial analysis of new natural gas peaker plants compared to new large-scale battery storage. The analyses assumes that the purchase and installation of new gas peaker plants are completely paid for by FEMA funding (with PREPA paying for ongoing maintenance and fuel costs), and also assumes that no FEMA funding is used to support the large-scale battery storage which it is being compared to.

Concern: Much of the key information in this analyses is redacted, but the implication seems to be that new gas peaker plants are more economical than new battery storage if & only if the new gas peaker plants themselves are completely paid for with FEMA funds.

Questions for Sargent & Lundy:

1. On the Renewable Integration Report (December 2020), P. 54 & 55 of the PDF, labeled P. 44 & 45) is a “Estimated Comparison of FEMA Funded Peaking Generator to BESS”, comparing the costs of new natural gas peaker plants with new large-scale battery storage. Please provide all of the information that’s redacted on these pages. If there’s an assertion that any of this information should be confidential, please plainly state the reasons for this assertion.
2. The stated conclusion is “The natural gas peaking generator is somewhat less expensive than the BESS if FEMA funding can be utilized for the installation of the peaking generator.” This apparently implies that, without FEMA funding, building new BESS would be more economical than building new peaker plants. Please confirm if this implication is correct – ie please confirm whether, in this analysis, if removing the assumed FEMA funding support for the installation of peaking generators, that BESS is more economical.
3. Question for Sargent & Lundy: Please provide this same analyses, assuming that no FEMA funding is utilized for the installation of peaking generators, but that the same amount of FEMA funding previously assumed to be used for peaking generators is instead utilized to support BESS.

E. Clarification of derivation and impact of stated 650 MW limitation in Renewable Integration Study.

Background: PREPA published, in December 2020, a Renewables Integration Study performed by the firm Sargent & Lundy that concludes that Puerto Rico’s current power system can only handle a total of 650MW of “inverter-based” renewable energy, including both what’s already online and any new inverter-based renewable energy, of any scale.

Concern: There doesn’t appear to be a full explanation substantiating how this study arrived at concluding that the grid can only handle 650 MW of renewables.

Questions for Sargent & Lundy:

1. Please share all data utilized in order to derive the stated conclusion that a total of 650 MW of renewables can exist on the grid as it is today.
2. Subtracting out all known installed inverter-based renewable energy today, please clarify the

amount of additional MW of inverter-based renewables could be installed on the current grid as it is today.

3. Please clarify your recommendations on how much spending would be required, and on what, in order for PREPA's power grid to be able to accommodate the required 3,500 MW of new renewables coming online by 2025.

F. Rationale behind assertion of 60% limit of instantaneous inverter-based generation included in the Renewables Integration Study, as published.

Background: The Renewable Integration Study (P. 8 of the PDF, printed page I) says "For this reason, a 60% limit on instantaneous inverter-based generation levels is essential."

Concern: Although the text says "for this reason", there appears to be no actual reason for the specific 60% limit, as opposed to 50% or 80% or some other number.

Questions for Sargent & Lundy:

1. Why was the specific number 60% chosen, as opposed to a different number other than 60%?
2. What % are we at today?
3. Would this limitation of 60% translate to a limitation of the % of renewable energy produced on an annual by inverter-based renewable energy? If so, to what extent would this 60% limitation inhibit coming online by 2025?

Section 2.4, P. 20 says: "...The highest instantaneous penetration of inverter-based renewable energy generation studied in that report is 1,316 MW with 400 MW supplied by Distributed Generation. This level of inverter-based renewable power generation is equivalent to approximately 50% of instantaneous renewable penetration."

4. If 1,316 MW of inverter-based renewable generation is equivalent to approximately 50% of instantaneous renewable generation, what amount of inverter-based renewable energy generation is equivalent to the 60% number recommended on P. 8 of this study? Would it be $(60\% / 50\%) * 1,316 = 1,579$ MW?
5. What timeframe is referred to by "...for the near to intermediate future"?

P. 21 of the PDF states: "...S&L conducted an earlier analysis of the PREPA system to determine the maximum instantaneous inverter-based renewable energy penetration level that can be incorporated into PREPA's power grid as it exists today, while maintaining acceptable frequency response."

6. Question: When was this “earlier analysis” conducted?
7. Question: Were the inputs into, and conclusions of, this “earlier analyses” publicly published? If so, where can they be found?

P. 26 of the PDF, Table 3-2 – “Modeled Renewable Energy Generation”, states “291 MW of Dispatched Real Power – Pgen (MW).

8. Question: How was this number of 291 MW derived? What data was it based upon? What assumptions were made about the growth of Distributed Generation for the last few years, as compared to projected growth over the next few years?
9. Question: Why does this chart state that there are 65.6 MW of “Existing Renewables”?
10. Question: Why does this chart show 1,015 MW of “New Solar PV Resources”, when the IRP calls for development of at least 3,500 MW of new renewables to be online by 2025?

P. 44 of the PDF categorizes “New Technologies to Support a High Penetration of Renewable Energy” as a “Mid / Long Term” recommendation.

11. Why would “New Technologies to Support a High Penetration of Renewable Energy” be considered “Mid / Long Term”, as opposed to “Short / Mid Term”, or some other term?

P. 47 of the PDF states “...Our modeling indicates that with the integration of the 2,750 MW of new inverter-based renewable energy resources shown in Table 4-2 (new solar PV and new wind resources), an estimated [BLACKED OUT] of energy storage resources are needed for PREPA to be able to both meet the 2025 RPS target and ensure that no more than 60% of all instantaneous generation comes from inverter-based generators.”

12. Question: What is the information that is blacked out? If there’s an assertion that this information is “confidential”, on what, specifically, is that assertion based?

G. Selection process for administrator & development of Renewable Integration Study

Background: Law 17 requires 100% renewable energy. During the stakeholder meeting, Sargent & Lundy stated that no analyses has been done regarding what the grid needs to look like in order to be transformed to 100% renewable energy. There appears to be no information given regarding how the firm Sargent & Lundy was chosen to administer this Renewable Integration Study, what other firms were considered, or even why the study was administered when it was.

Concern: The Sargent & Lundy Renewables Integration Study appears to have been administered in a “black box”, without having been ordered by PREB, with no oversight from PREB, and with no input from or interaction with any energy stakeholders during its development.

We’re concerned that the study’s conclusions could be inaccurate.

We’re also concerned that the intention of the study could be to artificially limit, delay or hamper the success of Law 17, as opposed to helping to define the best pathway for Law 17 implementation.

Questions for PREPA:

1. What process was used to procure the contract with Sargent & Lundy to do the Renewables Integration study published in December 2020?
2. What firms, other than Sargent & Lundy, were considered for this study?
3. What was the rationale for selecting Sargent & Lundy, as opposed to any of the other firms considered?
4. What stakeholders gave input in the development of content of this study?

Questions for PREB:

1. If any stakeholders wish to assert that the Renewables Integration Study is substantially inaccurate, what mechanisms exist to prevent the December 2020 study from being an impediment to the success of this 1,000MW RFP?
2. If PREB deems this Renewable Integration Study as inadequate, does PREB have the authority to order that a different study be conducted?
3. If PREB deems that the selection process for choosing Sargent & Lundy as the administrator of this study was sufficiently flawed, does PREB have the authority to require a broader selection process to occur in order to ensure the most qualified firm available is chosen to administer this study, with ample stakeholder input?

H. Possibility of a Regulator-Appointed Independent Observer

Background: From the documentation presented thus far, and Q&A during the Stakeholder Meeting, it appears that PREB has no clear role (directly or indirectly) in overseeing the RFP process.

Concern: Much of PREPA’s communication in response to PREB’s orders to issue this RFP seems to indicate that PREPA doesn’t feel that rapid integration of large quantities of renewable energy and storage of all scales is what they want to do. The “target date” for issuance of this RFP of December 2020 has come & gone, and there is no date on the calendar on which potential RFP respondents can expect an RFP to be issued.

There were also many concerns brought up during the Stakeholder Meeting regarding transparency of the RFP process, many or all of which were responded to by PREPA or their consultants indicating that their intention is for the RFP process itself to be nontransparent to the public.

One tool being used as part of Hawaii’s recent, similar RFP is a regulator-appointed “Independent Observer”, with duties described in their recent RFP to be:

“The PUC has retained an Independent Observer both to advise and monitor the process for this RFP. All phases of the RFP process will be subject to the Independent Observer’s oversight, and the Independent Observer will coordinate with PUC staff throughout the RFP process to ensure that it is undertaken in a fair and unbiased manner. In particular, the Company will review and discuss with the Independent Observer all decisions regarding the evaluation, disqualification, non-selection, and selection of Proposals.”¹

In the case of Hawaii, a firm named Bates White LLC was chosen to play the role of Independent Observer for their most recent RFP.

Question for PREB: Has PREB considered appointing an Independent Observer to play a key role in this RFP process, similar to how happened with the recent similar RFP in Hawaii?

Conclusion

We applaud the Energy Bureau’s leadership in overseeing the recently-finalized IRP, and including clear requirements for RFP issuance in order to meet the Law 17 requirement that 40% of Puerto Rico’s power be supplied by renewable energy by 2025. We’re concerned however that this RFP issuance is neither on-schedule, nor is there an actual schedule, and that the entire process appears murky, opaque, or unclear to many stakeholders.

Thank you for consideration of and response to these important questions.

¹ P. 6,

https://www.hawaiianelectric.com/documents/clean_energy_hawaii/selling_power_to_the_utility/competitive_bidding/20190710_exhibit_8_grid_services_rfp.pdf