COMMONWEALTH OF PUERTO RICO
PUERTO RICO ENERGY BUREAU

PREB Workshop on Distributed Generation
Per Law 17 (2019) **PREB DOCKET: NEPR-MI-2019-0011**

COMMENTS OF THE SOLAR AND ENERGY STORAGE ASSOCIATION OF PEURTO RICO (SESA-PR)

SESA-PR thanks the Puerto Rico Energy Bureau (PREB) for hosting two full-day workshops in August and September 2019 on the topic of integration of Distributed Generation into PREPA's power grid, as required by Law 17. SESA-PR offers these comments as suggestions to consider from the perspective of the solar and storage industries. We thank PREB for the opportunity to have participated in these workshops, and to submit these written comments today in anticipation of draft rules being promulgated in the coming weeks.

The main focus of our suggestions is that PREB take concrete actions to result in the infrastructure upgrades necessary for the rapid adoption of distributed generation onto the power grid, both because of the resilience benefits as well as to meet the requirements of reaching the 20% by 2022 and 40% by 2025 requirements of renewable energy generation per Law 17.

About SESA-PR

SESA-PR is the Puerto Rico trade association representing companies who develop solar and energy storage systems at all scales on the island. Our member companies focus on marketing, design, manufacturing, financing, procurement, installation and maintenance of solar and/or energy storage systems. Founded in February 2018, SESA-PR is the local affiliate of the national Solar Energy Industries Association (SEIA).

Comments on this Docket

I. Data Transparency

Many of the issues discussed during the workshops pertaining to the rapid integration of distributed generation onto Puerto Rico's power grid revolved around making available certain data about PREPA's power grid. We request that PREB issue an order to require the public publication of all non-confidential data regarding distributed generation, including:

a. Amount of distributed generation, in both Megawatts and Megawatt-Hours, which has come online on PREPA's power grid, monthly, for the last 10 years.

b. Updating this data within the first week of each month for the preceding month.

c. Forecasting the trend of distributed generation adoption going forward for the following 20 years, with this forecasting also updated monthly, using an applicable regression analyses.

d. Feeder and substation capacity modeling, updated monthly.

e. Forecasting of certain dates when feeders, substations and any other pertinent infrastructure is anticipated to reach capacity.

f. All of the above broken down to the most granular level possible, ie regionally, per substation, and per feeder.

II. Requiring System Upgrades

Requiring transparency of data will help the solar & storage industries to be able respond to the increasing demand for distributed generation. But the forecasting of distributed generation adoption should make it clear what system upgrades will be necessary in the near future in order to avoid delays caused by inadequate wires, substations, feeders and other infrastructure.

While long-term planning is important, we urge PREB to focus on the legislative requirements for the quickest shift to renewables ever attempted in this country, focusing specifically on what will be needed to attain 40% of PREPA's power coming from renewable sources by 2025. While the walk-jog-run analogy is appropriate and applicable, as were the multiple examples of lessons learned and methodology developed in other jurisdictions, we recommend PREB take an all-hands on deck approach of requiring a serious study focused on what, exactly, will be required for PREPA's infrastructure to be able to facilitate 40% renewable energy existing by 2025, and reverse engineer from that point what measures need to be taken today to pave that pathway.

Such study could involve modeling the likely locations around the island of renewable energy development, based on historical trends and likely development trajectories, taking into account a variety of scenarios, preparing for the most likely scenario while leaving flexibility for continual adjustment based on the actual scale and location of distributed generation deployment.

III. The Role of Federal Funding

While PREPA's requirement to transition to 40% renewable energy by 2025 isn't contingent on anything (it's simply a requirement), special attention should be given to how federal funds might be best solicited, deployed and administered in facilitating this rapid transition. Various scenarios could be considered, including the scenario where no federal

funding is deployed at all. In this scenario, 100% of the costs of facilitating the transition to renewable energy need to be borne by the beneficiaries – the customers – unless other funding is dedicated for such purposes locally.

We encourage PREB to play a very active role in oversight of how federal funding is designed, deployed, administered and verified. This should include CDBG-DR, FEMA, and any other potential federal funding that is either directly approved and allocated for distributed generation, or could be used for such purposes.

Specifically, there is $400 million already approved in the second tranche of CDBG-DR funding to support the development of residential and small commercial distributed generation. PREB should ensure that modeling exists to contrast the business-as-usual scenario with the increase in DG deployment that would happen should these funds be deployed, and over what timeline. For example, if these funds were to support a 50% incentive of solar and storage systems, at an average blended cost of, for example, $4 per watt for solar systems with 8 hours of storage, this would result in 200MW of new distributed generation coming online, in addition to whatever amount would have otherwise come online in the business-as-usual scenario. Will this be enough funding to encourage adequate amounts of distributed generation in order to meet the requirements of Law 17? What upgrades will need to be made to the power grid in order to account for this? How much will this cost? What are the ramifications if the power grid becomes a bottleneck and federal funding cannot be spent for distributed generation deployment within the federally mandated timeline for funds deployment? These are all questions directly related to Law 17 compliance, and we urge PREB to either order an expedited study to address these questions or become involved in an inter-agency effort to do so, with ample participation from the solar & storage industry and other energy stakeholders.

One time-sensitive issue is the remaining two tranches of CDBG-DR funding which have been approved by US Congress, but have yet to begin the very first step of promulgation, the posting of notice on the Federal Registrar. The $1.9 billion approved for "POWER GRID" could be dedicated entirely to the upgrading of PREPA's infrastructure with the explicit focus of the resilient transition to a distributed-generation paradigm that leads to Law 17 compliance. A great portion of the final tranche of $8.3 billion for "MITIGATION FUNDS" could also be directed at this same focus.

There are only two components to accelerating distributed generation deployment: Funding the generation, and funding the utility infrastructure needed to integrate the generation. Both could be greatly catalyzed by federal funding, and PREB could take an active role in orchestrating the studies needed and advocacy for directing federal funding for this purpose.

IV. Noncompliance is Not an Option

Law 17, created as a response to the humanitarian tragedy caused by the inadequate, not resilient power grid that failed spectacularly after Hurricane Maria, is very clear in its directive: Puerto Rico's power system shall transition to 100% renewable energy, with transformative stairstep requirements of 20% by 2022 and 40% by 2025. This requirement is not contingent on the availability of federal funding, or the outcome of the attempt to privatize the Transmission & Distribution system through a concession model, or on anything else.

Much of the workshop discussions focused on safety and security issues around the ramp-up of distributed generation. While safety and security are of course of utmost importance, it's worth keeping in mind the big picture: Puerto Rico has the most unsafe, insecure power system in the nation, by leaps and bounds. Much of the reason for this extremely unsafe,

insecure power system existing is the lack of distributed power generation located close to the point of consumption.

In our view, the fastest way to transition Puerto Rico's power system to one that is modern, resilient, safe and secure is to focus on doing everything possible to facilitate the development of distributed generation. While there's a certain amount of walk-jog-run that will be necessary along the way, with all due respect, Puerto Rico's transition to renewable distributed generation is not akin to training for a marathon; it's akin to mobilizing the village to put out a fire that's spreading. Law 17 is a well thought-out reaction to one of the nation's worst natural disasters ever, and there's a high and increasing likelihood of this phenomena repeating soon.

For these reasons, we urge PREB to order PREPA to take whatever feasible actions possible to facilitate the rapid deployment of distributed generation in the short and medium term. This includes:

a. Eliminating any regulatory delay to customer interconnection of customer-sited distributed generation (already discussed in the Interconnection Workshops).
b. Immediate offering of financial compensation for customer generation of Renewable Energy Credits, with valuation set at a high enough threshold to incent rapid development of distributed generation projects (already discussed in the Renewable Portfolio Standard Workshops).
c. Completion of already-contracted-for utility-scale renewable energy, and the issuance of RFPs for the development of far more.
d. Ordering expedited studies and implementation thereof for the utility infrastructure to be overhauled to whatever extent necessary to facilitate rapid distributed generation adoption.

e. Monitoring of PREPA's progress in upgrading infrastructure in order to avoid any delays in distributed generation deployment due to lack of adequate utility infrastructure.

f. Requirements of complete transparency and ample stakeholder involvement at every step of the way.

V. PREPA Personnel Challenges

It should be noted that PREPA staff actively participated in these workshops, having sent engineers and managers in leadership positions to devote their full attention to this process. One thing we heard articulated time and time again from PREPA staff was the staffing challenges they face. With the possibility of PREPA's virtual disappearance via the T&D concession, retirement pensions in bankruptcy court, and federally imposed austerity measures having cut the salary and benefits of PREPA staff, many are opting to take jobs in the mainland, which commonly pay three times as much as the same position within PREPA today, while also offering long-term employment stability and opportunities for growth. There is a very real safety and security vulnerability developing by crucial institutional knowledge literally leaving the island.

We urge PREB to commission an expedited study focused on analyzing the increasing safety and security risk for Puerto Rico due to loss of institutional knowledge. We urge PREB also to consider what corrective measures they could require to not only stop the leakage but also create a paradigm where top talent is attracted to work on the complex engineering, management, procurement and administrative challenges which will require offering something greater than the lowest salaries and benefits in the entire nation. Resources are probably already available to

start addressing the situation today: Hundreds of PREPA employees have left or retired already this year, and electric rates haven't gone down; yet there's no serious effort being undertaken to meaningfully fill those positions. It's possible that the funds exist today to both increase salaries and benefits and also hire new talent to address the necessary challenges.

Although there is much speculation that the T&D concession will usher new infusions of capital which could help address these issues, we urge PREB to consider the possibility that the concession won't ever happen, or that if it does happen, the transition could take well past the timeframe of Law 17's requirement of 20% renewable energy by 2022 and 40% by 2025. It may very well be that we just have to work with what we have, for now; and in that case, we urge PREB to consider the reality that the best laid-out plans will go nowhere without the person-power to implement them. We urge PREB to consider the ramifications of what will happen if PREPA's brain-drain continues at its current rate, and what corrective actions are within its sphere of influence to take in the short and medium terms.

Conclusion

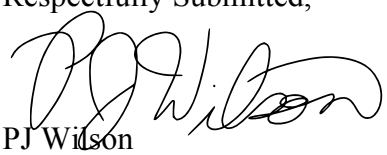
We encourage PREB to take the most active role possible in deploying programs modeled from those around the nation that have resulted in the most rapid deployment of distributed generation. The municipal utility in Austin, Texas has continually developed supportive financial and policy mechanisms to encourage DG. The Long Island Power Authority has been incentivizing deployment of customer-sited solar as a cost-reduction strategy to avoid having to overbuild transmission infrastructure to quickly growing towns. NYSERDA now has

decades of experience overseeing and administering distributed generation as well as demand-side management incentives.

Working together with PREPA and energy stakeholders, we encourage PREB to take whatever concrete measures possible in the short-term to encourage distributed generation deployment. We thank you for holding these facilitated workshops, and we offer our time and any resources we have available to assist PREB, PREPA and other stakeholders in the swift, safe development of distributed generation across the island.

Thank you for the opportunity to submit these comments.

Respectfully Submitted,



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