

**BEFORE THE COMMONWEALTH OF PUERTO RICO  
PUERTO RICO ENERGY COMMISSION**

In the Matter of ENERGY COMMISSION     )  
INVESTIGATION REGARDING THE STATE OF    )  
PUERTO RICO’S ELECTRIC SYSTEM AFTER    )  
HURRICANE MARIA                            )

**Case No. CEPR-IN-2017-0002**  
**Subject: Request for Public Comments**

**COMMENTS OF PUERTO RICO SOLAR ENERGY INDUSTRIES ASSOCIATION (PR-SEIA)**

The Puerto Rico Solar Energy Industries Association (“PR-SEIA”) is pleased to offer these comments on this matter. Please note that comments herein are not offered in response to all of the questions posed, and that where comments are offered, the question to which they pertain is notated. PR-SEIA thanks the Energy Commission for the opportunity to comment on this important and urgent matter.

Please note that PR-SEIA’s mission is to represent the interests of all solar industries which are currently operating and will operate in Puerto Rico, as the local chapter of the national Solar Electric Industries Association (SEIA), based in Washington, D.C. However, PR-SEIA is in its initial formation stages, so comments herein have not been vetted with the majority of solar companies currently operating in Puerto Rico. PR-SEIA urges the Energy Commission to consider and give credence to all comments filed by each company responding to this Request for Public Comments.

**I. Introduction**

PR-SEIA applauds the intent and content of the matter introduced in the Introduction section. In particular, PR-SEIA appreciates the statement “However, these phases are not separate and independent evaluations or procedures. Both phases are interrelated, and

therefore the information gathered and the determinations made in one phase will inform and influence the analyses made by the Commission in the other.”

While acknowledging the urgency of the first phase, PR-SEIA cautions against the approach of considering the second phase as a “medium- and long-term analyses with the aim of identifying Puerto Rico’s energy needs and formulating and adopting the energy model best suited to meet those needs, promote economic development and the protection of the environment, and produce quality energy services at just and reasonable prices.” Companies such as Tesla are offering to provide solar + battery solutions today to Puerto Rico’s energy crises, thus PR-SEIA urges the Commission to place a high importance on the development of standards and guidance for interconnection of off-grid and micro-grid systems which are interconnected with PREPA’s distribution and/or transmission system in the short-term, while considering implications of and planning for a proliferation of such systems in the medium- and long-term.

## **II. Distributed generation and microgrids as alternate models for restoring and strengthening electric service.**

PR-SEIA applauds both strategies outlined in this section of the Request for Public Comments. Strategies for accelerating the deployment of off-grid distributed energy generation and storage systems as well as the deployment of distributed generation sources throughout PREPA’s electric grid are both important and urgent. Many companies in the solar industry stand ready to invest in the deployment of solar systems to support both strategies, and the main barrier right now is the legal and pricing uncertainty for these companies regarding deployment.

PR-SEIA offers the following in response to the statement “Accordingly, the Commission is interested in receiving input from the general public and, in particular, from persons and entities with direct interest over the electric sector, regarding rules that the Commission should adopt in order to regulate the development and operation of microgrids and other distributed generation systems in Puerto Rico and implement the strategies identified above.”

PR-SEIA cautions against the approach of creating rules with the intent of “regulating the development and operation of microgrids and other distributed generation systems.” While regulation is crucial for effective deployment, PR-SEIA requests that the Commission focus first and foremost on developing rules which “*promote the rapid and safe deployment of microgrids and other distributed generation systems*”. In the energy regulation space, there’s a real danger that “regulating the development and operation of...” could result, in the real world, in “slowing down the deployment of” such crucial systems.

PR-SEIA recommends considering the “business as usual” scenario, wherein implementation of new rules has a minimal impact or takes an inordinate amount of time to implement. In that case, FEMA funds are already allocated for, generally, rebuilding Puerto Rico’s power grid to be exactly the same as it was before. If those billions of dollars are allocated in that way, then even ideal rules for microgrid deployment will be moot. PR-SEIA recommends the Commission seriously consider identifying funding sources, including a significant restructuring of FEMA funds earmarked for utility infrastructure rebuilding, in order to *incent* the rapid, safe deployment of microgrids and other distributed generation systems.

One such model that has worked effectively in many states has been the offering a financial rebate paid directly to customers, from either the utility itself, or from a governmental

or quasi-governmental agency. PR-SEIA recommends the Commission consider offer financial incentives to customers seeking individual deployment of offgrid solar and battery systems, as well as to communities who wish to go that route.

In the development of such rebates, PR-SEIA cautions against using a model such as what has previously been used in Puerto Rico in the past, through the incentives offered as the “green energy fund”. It has been shown in this case, as in many states which have offered similar programs, to be disruptive to the solar industry to offer incentives which suddenly start and suddenly stop. Solar incentives are most effective when offered over an extended period of time, with terms that are clearly understood by all entities involved in the promotion and utilization of such incentives.

PR-SEIA urges the Commission to consider the development of incentives for solar generation which function something like the following: The Commission could secure a large pool of funds, and offer this pool of funds to solar customers based on either an installed-kW (DC) basis or on a produced-solar basis (AC). If offered on an installed-kW basis, these funds could be offered something similar to the following:

Assuming \$1billion could be secured for such purpose, the funds could be offered and distributed on an installed-Watt(DC) basis, at the following levels. The first customers to apply for and have verified installation of solar would receive \$1.00 per installed

\$/watt	million \$	mW installed
\$1.00	\$100	100
\$0.90	\$100	111
\$0.80	\$100	125
\$0.70	\$100	143
\$0.60	\$100	167
\$0.50	\$100	200
\$0.40	\$100	250
\$0.30	\$100	333
\$0.20	\$100	500
\$0.10	\$100	1,000
TOTAL	\$1,000	2,929

DC Watt of solar, and when the first \$100 million in funding is exhausted, the next customers would receive \$0.90/watt until that \$100 million is exhausted, and so forth, resulting in 3,000 MW (or 3GW) of solar incentivized.

## **I. General Instructions**

1.2 Contact information for PR-SEIA is as follows:

Name: Puerto Rico Solar Electric Industry Association (PR-SEIA)

Name of Representative: Patrick J (PJ) Wilson

Postal Address: 171 Calle Carlos F. Chardón #302, San Juan, 00918, Puerto Rico

Email Address: [pjcleanenergy@gmail.com](mailto:pjcleanenergy@gmail.com)

Telephone Number: 417-459-7468

1.2.1 PR-SEIA recommends the establishment of a fund to incentivize the installation of solar energy systems. See above section for details.

1.4 PR-SEIA recommends considering the following funding sources: FEMA funds, utility rate-based incentives, and funds made available by banking institutions in a model similar to the Property Assessed Clean Energy (PACE) policy, which has unleashed hundreds of millions of dollars in states around the country.

2.1 Large industrial loads should be considered independently, on a case-by-case basis. Standards should be developed for urban and rural areas based on population size and density, geography, terrain, existence and condition of existing infrastructure, and other factors.

2.3 Microgrid developers will require the ability to contract with individuals and groups of individuals (neighborhoods, homeowners associations, and municipalities), for the installation of microgrids, and know that their contracts are legal and sound.

3.1 Any registration and/or approval required by the Commission should be of an expedited nature, so as to not hamper the deployment of microgrids.

3.1.4 These risks are real. Microgrid developers should be licensed to do business in Puerto Rico, should carry a significant amount of liability insurance, and the Commission should plan for the scenario to unfold wherein one or more microgrid developer declares bankruptcy or bankruptcy-type protection at some point after the installation of microgrids. A fund should be required to be set aside so that, in this case, funds are made available to the contractees for repair and maintenance of systems.

One strategy that has worked well in many states is requiring that solar companies doing business be registered on an “approved list” of solar contractors. One way to expedite and outsource this list is to require membership in the local SEIA chapter, which requires that each member sign and adhere to a strict “code of ethics”, allowing the industry to forecast, prevent, and otherwise “self-police” problems with companies that may be inexperienced, incompetent or unscrupulous.

3.4 The Commission should consider implementing what’s referred to in many states as a “Construction Work In Progress” policy, wherein customers cannot be charged for electricity that does not exist; ie customers may be permitted to contract for the deployment of microgrids and provide assurances of payment, however actual payment for the substantial portion of the project should not occur until the product (electrons) is actually being delivered.

While this may make projects slightly more expensive than they would otherwise be, it shifts the liability to the microgrid developer and shields the customer from risk.

3.4.2.2 PR-SEIA recommends that standard terms be required only for residential and small-commercial customers.

3.4.2.8 Allowing specific customers to opt in or opt-out from being served by a microgrid should be discouraged, if not disallowed. While all customers currently have and should definitely retain the legal right to go “completely off-grid”, there should be no scenario unfold where every other house in a neighborhood chooses to become part of a micro-grid, or of multiple micro-grids, while other houses remain part of PREPA’s traditional power supply.

In the case of groups of houses, neighborhoods, and towns, a vote of the people should be taken, and so long as more than 50% of the constituents desire entering into a contract for a microgrid, all constituents should be bound by the contract that ensues.

3.5 Yes, all microgrids should be required to charge for service based on measured product (electrons) actually delivered.

3.6.1 A sustainability plan should be required, demonstrating that all existing customers in a microgrid will be adequately served, and allowing for reasonable predicted growth and shrinkage of load, as well as scenarios of rapid growth or shrinkage of load.

3.6.2 Yes; both maximum and minimum.

3.6.3 No; developers’ costs should not be required to be made public or otherwise required by the Commission.

3.6.4 Yes, pricing should be required by the Commission.

3.7 The Commission should in no circumstances take greater than 30 days to approve or reject any application for deployment of a microgrid; and in the case of rejection, clear and specific reasons should be given for the rejection, and the opportunity to re-file an application should be given.

4.1.1 It's important to allow for the inclusion of generators, with preference to biodiesel and other lowest-emission technologies, to be included in the design and deployment of microgrids, as their inclusion significantly reduces the total amount of photovoltaics required.

7.1 Yes

7.1.1 Customers should be allowed the option to buy and/or lease meters, at their choice.

7.1.1.1 Yes.

7.1.1.2 It depends on who maintains the meters. If the customer purchases the meter, then no monthly fee should be assessed; if PREPA maintains the meter, then a low rate of \$3/month or another reasonable amount should be required.

8.1 These types of resources should not be regulated by the Commission; the microgrid developers should be responsible for providing all their own installation equipment.

8.2 This information should be made publicly available, in Spanish & English.

PJ Wilson  
PR-SEIA  
171 Calle Carlos F. Chardón #302, San Juan, 00918, Puerto Rico  
(417)459-7468  
[pjcleanenergy@gmail.com](mailto:pjcleanenergy@gmail.com)