COMMONWEALTH OF PUERTO RICO
PUERTO RICO ENERGY COMMISSION

IN RE: REGULATION OF MICROGRID DEVELOPMENT	**CASE NO.: CEPR-MI-2018-0001** Subject: PREPA's General Comments on Microgrids, Statement of Concerns With the Timing and Structure of this Docket, and Provisional Comments on Proposed Regulation

THE PUERTO RICO ELECTRIC POWER AUTHORITY'S GENERAL COMMENTS ON MICROGRIDS, STATEMENT OF CONCERNS WITH THE TIMING AND STRUCTURE OF THIS DOCKET, AND PROVISIONAL COMMENTS ON PROPOSED REGULATION

The Puerto Rico Electric Power Authority ("PREPA") hereby respectfully submits to the Puerto Rico Energy Commission (the "Commission") PREPA's General Comments on Mirogrids, its Statement of concerns with the timing and structure of this Docket, and its Provisional Comments regarding the Resolution dated January 3, 2018 ("Resolution"), and the "Proposed Regulation on Microgrid Development" ("Proposed Regulation").

I. INTRODUCTION

PREPA supports the expansion of microgrids in Puerto Rico. PREPA supports the use of microgrids in the form of "islanding" in restoration efforts and is, in fact, using islanding to help restore service after Hurricanes Irma and Maria. PREPA also supports microgrid expansion as part of long-term resource planning and in the transformation of the electricity sector.

Establishing the regulatory framework for microgrids must be handled, however, at the right time and in the right manner. Otherwise, the potential benefits may be lost. Even worse, depending on where and how they are planned, sited, installed, operated, and paid for, whom they serve, and the associated prices, rates, and terms, an attempt to promote microgrids can cause serious harm. A poorly timed and designed effort can lead to legal and regulatory

violations including Puerto Rico statutory violations, contravening the certified Fiscal Plan and the Transformation Plan for PREPA and violating the jurisdiction and orders of the Puerto Rico Oversight, Management, and Economic Stability Act ("PROMESA") "Title III" court. Well-intentioned but inadequately considered actions in this regard can also result in damaging PREPA's finances and liquidity; rates that unfairly "strand" costs and/or shift them to other customers, confounding efficient resource planning, operational problems, interference with restoration efforts, and violations of customers' service and billing rights. In short, however much promise microgrids hold, getting it wrong can cause serious harms to customers, the utility, and Puerto Rico as a whole.

PREPA respectfully submits that, while the pending microgrids proposal is well-intentioned, this Docket has been initiated at the wrong time, and its structure jeopardizes the potential benefits and risks all of the potential problems. This matter, ironically, itself is being conducted as an "island". The proposal treats microgrids in isolation, without recognizing that this subject touches a host of aspects of the transformation, rates, and resource planning. This matter has no mechanism for conforming to the certified Fiscal Plan or the Transformation Plan. The docket does not allow meaningful participation by PREPA and other interested parties, due to haphazard resolution and the rushed time frame; the absence of opportunity for parties to respond to each other; and, in PREPA's case, the fact that its personnel must focus on restoration and public safety, with little time for unexpected regulatory proceedings. Although raising various microgrid concepts that PREPA may be able to support, subject to its Provisional Comments and other factors, this Docket at this time should be dismissed or, alternatively, stayed until such time as it can be conformed with the Fiscal Plan and the Transformation Plan,

and "synched up" with a holistic view of PREPA's rates and with the process to establish PREPA's next integrated resource plan ("IRP").

II. GENERAL COMMENTS ON MICROGRIDS

Microgrids can play useful roles both in efforts to restore electric service and as part of long-term plans for how best to serve its customers. PREPA has taken advantage of the key attribute of microgrids, islanding of discrete areas of the electric delivery system, throughout its history during system emergencies, including the current restoration. PREPA also is aware of current discussions relating to microgrids, including by the U.S. Department of Energy.[1]

In addition, "behind the meter" single customer-owned microgrids already exist in Puerto Rico. Expansion of such microgrids can be a positive development and should not be prevented, although as with any microgrids, there are issues to be managed, including legal and regulatory requirements, and financial, planning, rate, and operational issues, which grow with the scale of such microgrids. The issues are expanded if the microgrid includes distributed generation that is interconnected, through the microgrid, to PREPA's system, *e.g.*, net metering issues.

Microgrids that are "in front of the meter(s)" and/or serve multiple customers, however, are qualitatively different, and much more complex. They present intricate legal and regulatory issues, including issues that may require statutory changes to address, especially to the extent that they may make private microgrid operators, in essence, "mini-utilities". They also present more significant financial, planning, rate, and operational issues for PREPA. Handled poorly, the mini-utilities can evade regulation, and "cherry-pick" PREPA's load, resulting in PREPA's grid and overall customer base being fragmented or shattered, to the detriment of the public as a

[1] *See* this November 22, 2017, post by the U.S. DOE on its web site: https://www.energy.gov/articles/how-energy-department-helping-restore-power-puerto-rico-and-us-virgin-islands.

whole. Moreover, such microgrids also can raise customer service and rights issues, including with respect to disconnections, service and billing complaints, and opting or later trying to opt out of the mini-utility. Some issues can be addressed via regulation, while others should or must be addressed through tariffs and other vehicles, potentially including legislation. Those issues are not, however, addressed or in many cases acknowledged, in the Proposed Regulation.

III. PREPA'S SERIOUS CONCERNS WITH THE TIMING AND STRUCTURE OF THIS DOCKET

PREPA has expressed certain serious concerns at a general level in Section I of this filing. PREPA here presents expanded discussion of its concerns.

A. Substantive Concerns Regarding an "Islanded" Microgrid Rulemaking Docket

The first set of concerns involve the "islanding" of the subject of microgrids in this docket.

First, the Government of Puerto Rico is involved in an active Fiscal Plan process under PROMESA before the Federal Oversight and Management Board ("FOMB") relating to PREPA. On January 24, 2018, the Puerto Rico Fiscal Agency and Financial Advisory Authority ("AAFAF"), on behalf of the Government and as fiscal agent of PREPA, filed, subject to disclaimers, a draft Fiscal Plan for PREPA and attached a draft Transformation Plan for PREPA (both subject to revision). That process should result in a certified Fiscal Plan in the near future. The subject of microgrids has many aspects that must be resolved in a manner that is consistent with the certified Fiscal Plan and the final Transformation Plan. Otherwise, the microgrid resolutions will not be valid and/or will interfere with the Plans, unnecessarily harming customers, the utility, and Puerto Rico.

Second, this rulemaking ignores in several respects the PROMESA "Title III" case. For example, the Proposed Regulation provides for the purchase and lease of PREPA assets, apparently including without the consent of PREPA or approval by the Title III court, and, PREPA is aware of no authority of the Commission to order such actions in the first place. Also, there is no mechanism to keep the proposal in compliance with the Title III court's orders.

Third, this rulemaking ignores that a full set of rate issues is implicated. Attempts to set rates for services relating to microgrids will impact other PREPA costs, rates, and revenues, and thus will affect all customers.

This proceeding has been initiated, however, outside of the ratemaking process. Even apart from the legal flaws of that approach, rates should be set in Commission-approved tariffs, using the ratemaking process. Costs, prices, and revenues will change over time, particularly in an emerging market. Changing a regulation is much more tedious than updating a tariff.

Moreover, microgrids can create or increase risks of uneconomic bypass of the utility's system, and of stranded costs, harming other customers and the utility. Large multi-customer private microgrids may need to be rate-regulated. Microgrids also can raise net metering issues, which must be resolved fairly for all customers and the utility. Thus, if this case were to proceed, it would need to be accompanied or followed by a process that properly establishes a new tariff.

Fourth, the Proposed Regulation also does not appear to recognize that some types of microgrids, especially those in front of the meter and/or serving multiple customers, may be contrary to law or lack legal authorization and, thus, would require legislation. At a minimum, such microgrids present more substantive questions concerning not only PREPA, but the rights and obligations of customers. For example, what if a customer is within a microgrid footprint

but does not wish to participate, or initially opts in but later wishes to opt out of the mimi-utility? The customer might be denied their right to utility service. The Proposed Regulation has a section on non-discrimination, but not one on opting in and out, and it also does not handle procedures for disconnections and other customer service issues such as exit fees, back-up power charges, etc.

Fifth, microgrids raise significant issues of resource planning. Microgrids with distributed generation can create legal, regulatory, financial, and operational issues of whether or when PREPA must take or buy power. Microgrids, especially if large in scale and loosely or not regulated, can make resource planning difficult or impossible. Yet, this case was initiated outside of the statutory IRP process, under which the utility "goes first" by proposing an IRP.

Sixth, the microgrids proposal does not appear to have taken into account PREPA's comments in the underlying investigation (case no. CEPR-IN-2017-0002); the roles of the Federal Emergency Management Administration ("FEMA") and the Army Corps of Engineers ("ACE") in the restoration; or, various measures taken by the Governor, AAFAF, and PREPA.

Seventh, the proposal also appears to overlook other law or issues relating to public property and taxes.

B. Procedural Concerns Regarding this Docket

PREPA's second set of concerns involve other aspects of this docket's timing and nature.

First, PREPA remains focused on restoration and public safety. PREPA personnel do not have sufficient time to perform their restoration and customer service duties and simultaneously support an unexpected rulemaking.

Second, handling this technical subject through a limited notice and comment rulemaking, not as a well-designed multi-phase, contested proceeding, without a meaningful

advance stakeholder process or robust comment process (the comment window is short and does not allow responses), is unusual and is highly unlikely to yield a sound result.

Third, the Proposed Regulation lacks sufficient support and vetting. The Proposed Regulation is detailed, including on technical and financial points. Appendix A to the proposal reflects specific cost figures. Appendix B has specific values. Those data all apparently were developed at the Commission and much if not all perhaps was taken from materials relating to other utilities, situations, or locations. None of that material has been vetted by PREPA. None of it has been through a vigorous stakeholder process, much less the crucible of a contested case. The assumptions and data are not even described and supported in a transparent manner. Although PREPA generally supports the well-planned expansion of microgrids, a "30-day one round of comments" approach is not a sound means of vetting this material or developing and considering alternatives.

Fourth, PREPA has not had sufficient time to review and analyze the Comments of other parties, and the case schedule thus far does not provide for responses to other parties.

Finally, there does not appear to be any actual need for this docket to go ahead at this time and in this manner.

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For the above reasons, this case should be dismissed or stayed. At a minimum, it should be stayed until after finalization of the Fiscal and Transformation Plans. A stay until rates can be considered holistically and the next IRP is being established would be even more sound.

IV. PROVISIONAL COMMENTS

While PREPA believes that this proceeding should be dismissed or stayed, and has not had time to develop a full analysis, PREPA nonetheless offers Provisional Comments. Not

providing the comments that PREPA has been able to develop at this time could lead to a much worse outcome. By providing these comments, PREPA does not waive any rights.

A. Section 1.08(B) -- Definitions

- Definition 8 of "Distributed Generator" is defined as a person or legal entity, where in Definition 10 it is used to refer to a piece of equipment. Should Definition 8 be "Distributed Generator Owner"?

- Definition 10 - Distributed Generator as referred to here applies to generation connected to a grid, not an isolated system. The proposal is unclear whether an isolated system can be a Distributed Generator.

- Definition 24 of "Meter" does not include meters included with secondary and transmission networks. It should refer to an electrical network.

- Definition 25 of "Microgrid" does not mention resilience as a goal.

- Definition 27 of "Net Meter" needs to clear that Net Metering is defined by Act 114-2007, as amended. Either way, it is not used in the proposal, however, so it could be eliminated if the subject were not to be addressed. The proposal should either establish a Metering definition, or a bi-directional metering definition.

- Definition 32 of "Transmission Infrastructure" and "transmission system" does not include systems operating at 38,000 volts, which PREPA uses as a transmission voltage, not distribution.

- There is missing a definition of Renewable Energy, it is freely used in the document, where it is not clear where the energy referred to is Alternative Renewable Energy, or Sustainable Renewable Energy, or both.

B. Other Sections and Appendices A and B

- Section 2.01(C). What is an individual system with two owners? The Commission should explain and identify at least one example.

- Section 2.01(E)(1). What does no requirement for self-supply entail? The microgrids must comply with security, PREPA interconnection regulations, and items referenced below regarding Section 3.05, among others.

- Section 3.02(A)(1). Renewable resource is not defined (see Definitions).

- Section 3.02(A)(2)(b). It must be clear that storage is needed in order to not push extra energy into the grid under normal conditions. Excess energy should only be exported out of the grid if offered by the microgrid operator and accepted by the electric system operator.

- Section 3.03. Hybrid microgrids are not well-defined. Are they required to be 75% renewable energy with the remainder being combined heat and power? If not, what are the qualifying system characteristics?

- Section 3.05.

    - The following standards regarding microgrids should be included: IEEE2030 IEEE Guide for Smart Grid Interoperability of Energy Technology and Information Technology Operation with the Electric Power System (EPS), and End-Use Applications and Loads.

    - Also, microgrids should be compliant with any existing and future PREPA regulations for their interconnection and operation.

- Section 4.01(A). How is the 35% participation limit established?

- Section 4.04

    - As an overall rate or tariff comment, PREPA reserves the right to prepare a tariff proposal for the Energy Commission's evaluation through the corresponding rate revision procedure.

    - How was the value of $25 per month derived? The value should relate to PREPA system and costs. What components are included in the $25? What are the responsibilities to PREPA and the customer? Moreover, it is necessary to have detailed work papers in order to have a clear, transparent process.

    - Is this a lease? Rent? Purchase?

    - What does this value include? Use, maintenance?

    - Is it the same for secondary, primary, transmission, residential, commercial, industrial, government, metered, unmetered, public housing, street lighting?

    - What does the term "use PREPA infrastructure" imply? The free use of infrastructure?

    - Who does maintenance?

    - PREPA facilities are located on public right of ways. Does the title and responsibility of such lands change with a purchase?

    - If the property is not maintained, who is responsible for fixing it?

    - If the microgrid is dissolved, is PREPA forced to receive and accept the property as is? Is PREPA forced to accept the customers back, as is?

- Section 5.02.
    - It is not clear whether the infrastructure is at a particular voltage, or whether it is a radial or network. PREPA has serious issues if it is part of a networked structure, or if another PREPA service area is served through this proposed microgrid. The microgrid service area must be able to be isolated from PREPA, and not affect any other customers not part of the microgrid.
    - Also, this list must be approved by PREPA as part of the Commission approval process.
    - Section 5.02(I) provides for purchase and lease of PREPA assets, apparently without PREPA or Title III court consent or approval. The Commission lacks legal authority for this structure.
- Section 5.03(A)(3).
    - Why are diesel-fired generators treated differently?
    - Using the fuel calculator, 12.5 gallons of diesel per month per kW of PV translates to roughly 21% capacity factor from PV. That is short of the 75% renewable requirement. Why?
- Section 5.05 and Appendix A.
    - Please see comments regarding Section 4.04, plus:
    - How are the values in Appendix A derived? What is their justification? Do they provide a fair value for customers NOT in the microgrid? For bondholders? Will PREPA be expected to provide maintenance for this property? Is PREPA still the owner of the property? If the microgrid is isolated, the current PREPA meters cannot be read remotely, has this been taken into account?
    - Is meter reading included in the cost? Will PREPA be expected to continue to read the meters?
    - There is no mention of the fee to be charged to the microgrid for backup service, or what will it look like. Is PREPA allowed to charge a backup rate? The regulation must establish that PREPA is allowed to charge such a rate for backup and ancillary services.
    - If the microgrid does not pay the backup fee, will PREPA be allowed to suspend service? How will they dispute backup fees?
- Section 6.02. Same comments as Section 5.02(I).

- Section 6.05. How is the $0.2022 per kWh value determined? Overall, residential, commercial, industrial, secondary, primary, transmission? Over what period will the average be determined?

- Section 6.10(C)(1). This is a procedure for denying entry to a customer. There needs to be a procedure for a customer requesting out of a microgrid, and the consequence of such action.

- Section 6.12. How are these fees determined? Are they just?

- Section 7.02(B)(1). What is meant by permission? To operate? To begin construction? Construction permits? EPA Permits? The system cannot operate if it does not comply with the safety and operating regulations. Is this not more that the Commission provides a concession to operate a microgrid, subject to other requirements? This should not be construed as an operating permit without having complied with all other requirements.

- Section 7.02(B)(1) and (3). It is important to consider that this type of project shall apply for construction and use permits issued by the Permits Management Office (OGPe, by its Spanish acronym).

- Appendix B. In Appendix B, are there options for other fuels, such as propane?

WHEREFORE, the Puerto Rico Electric Power Authority respectfully requests that this proceeding be dismissed or, alternatively, stayed, as requested above, and that such other relief as is appropriate be entered.

RESPECTFULLY SUBMITTED,

IN SAN JUAN, PUERTO RICO, THIS 2ND DAY OF FEBRUARY 2018.

PUERTO RICO ELECTRIC POWER AUTHORITY

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CERTIFICATION OF FILING AND SERVICE

I HEREBY CERTIFY on February 2, 2018, I have sent the above PREPA filing to the Puerto Rico Energy Commission through its Clerk via U.S.P.S. at the Clerk's office located at 268 Munoz Rivera Ave., Seaborne Building Plaza, Plaza Level, Suite 202, San Juan, Puerto Rico 00918, and via email to comentarios@energia.pr.gov, secretaria@energia.pr.gov, and mcintron@energia.pr.gov, and to the office of its General Counsel via email to afigueroa@energia.pr.gov, tnegron@energia.pr.gov, viacaron@energia.pr.gov, and legal@energia.pr.gov; and via email to the following email addresses, which are email addresses of other parties that have filed Comments, of which PREPA is aware based on the filings, as of January 31, 2018: viacaron@energia.pr.gov, francisco@genmoji.com, rlrpr1@hotmail.com, sarasantiago450@gmail.com, mikek.kor@gmail.com, randy@electriqpower.com, johnhenry@changeover.com, anna.pavlova@schneider-electric.com.

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