

COMMONWEALTH OF PUERTO RICO
PUERTO RICO ENERGY COMMISSION

SECRETARIA
COMISION DE ENERGIA DE
PUERTO RICO

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IN RE: ENERGY COMMISSION
INVESTIGATION REGARDING THE
STATE OF PUERTO RICO'S
ELECTRICAL SYSTEM AFTER
HURRICANE MARIA

CASE NO.: CEPR-IN-2017-0002

Subject: PREPA's (1) Motion Regarding
Investigation Plan and (2) Provisional
Comments

**THE PUERTO RICO ELECTRIC POWER AUTHORITY'S
(1) MOTION REGARDING INVESTIGATION PLAN AND
(2) PROVISIONAL COMMENTS**

The Puerto Rico Electric Power Authority ("PREPA") hereby submits: (1) PREPA's Motion regarding the plan for this Investigation as reflected thus far in the Puerto Rico Energy Commission's (the "Commission") Resolution of October 27, 2017, and the Commission's Resolution and Order of November 10, 2017; and (2) PREPA's Provisional Comments in response to Appendix A of the November 10th Resolution and Order. This combined filing is divided into four parts: (1) a Background discussion, (2) the Motion, (3) General Comments, and (4) Specific Comments.¹

For PREPA, the emergency condition caused by Category 5 Hurricanes Irma and María has not ceased since September 6, 2017. Significant numbers of customers and load remain without electrical service, and PREPA is currently using all available resources, along with resources from the Army Corps of Engineers (the "Corps") and the Federal Emergency Management Administration ("FEMA"), to restore service safely and as soon as possible. The diversion of significant resources from the Planning, Customer Service, Transmission and

¹ PREPA has received from the Commission and is in the process of reviewing an Order issued on the afternoon of November 17th in docket no. CEPR-MI-2017-0008 that appears to have substantial overlap with portions of the subject matter of the two orders referenced above. PREPA's submission of the instant filing is not and should be understood a waiver of any right, issue, or point arising out of that other Order.

Distribution, Generation, and Operations areas of PREPA, among others, to engage in regulatory work, unless it is essential for public safety, would be counterproductive in any emergency situation. There cannot be diversions from the main goal of system restoration and public safety. Please note that the Governor already has broad power over regulations and public policy, and has full authority to suspend regulations, in order to expedite recovery processes as best he sees fit, and he already has done so. (Please see Executive Order OE-2017-064.)

PREPA, in financial distress, and suffering from mass retirements and personnel reduction due to imposed laws, regulations, and other financial conditions, was already challenged to meet the demands of all the regulatory and legal issues before September 6, 2017, and nothing since has improved this situation. As soon as the emergency situation passes, PREPA will be able to assess and work on these issues, and be able to have constructive dialogue related to issues presented in the restoration information portions of the Commission's October 27th and November 10th orders, remembering that the public policy will be set by the Office of the Governor, Legislative Assembly, and AFAAF, with PREPA's Governing Board playing its appropriate role, and necessarily reflecting the PREPA Fiscal Plan, as it may be reviewed, revised, and ultimately certified by the Fiscal Oversight and Management Board ("FOMB").

The Background discussion and the Motion discuss further PREPA's serious concerns regarding the nature and breadth of the Investigation, its timing and timeline, and resources it will occupy and divert. The Motion proposes an alternative approach and timeline for PREPA's providing information to the Commission regarding the restoration of electric service to the Island, and, except for public Comments, eliminating or suspending other aspects of the

Investigation plan. The Motion also asks that the public be given more than six business days to comment.

The General Comments and the Specific Comments provide certain information regarding some of the subjects and specific items in Appendix A to the November 10th Resolution and Order. The General and Specific Comments are provisional in nature, however, because it is not possible to fully and meaningfully address the over 100 topics and questions, including sub-parts, in Appendix A in the six business days allotted by the November 10th order, even setting aside that diverting PREPA personnel away from restoration and reconstruction would be an unsound course of action at this time.

I. BACKGROUND

A. Existing Circumstances and Prior Filings and Orders

1. The Island is in the throes of recovering from the devastation wrought by Hurricane Maria, as referenced in the introduction of this filing. PREPA's resources are fully devoted to furthering the recovery effort.

2. PREPA filed several previous motions with the Commission that reference the impacts of Hurricane Maria on the people of Puerto Rico, the electric system, and PREPA's priorities, facilities, operations, and human resources: (1) PREPA's September 29, 2017, motion (as corrected on October 2, 2017) filed in the Rate Review proceeding (No. CEPR-AP-2015-0002) to extend dates and periods related to the provisional and permanent rates and the reconciliation thereof, essentially to July 1, 2018; (2) PREPA's September 29, 2017, motion in the Integrated Resource Plan ("IRP") case (No. CEPR-AP-2015-0001) to extend the September 30, 2017, compliance filing due dates to December 21, 2017; and (3) PREPA's October 24, 2017, motion in the Commission's Miscellaneous overall scheduling case

(No. CEPR-MI-2017-0007) for an omnibus extension of due dates in Commission matters involving PREPA.

3. PREPA's October 24th Motion (at paragraph 3(a)) stated in part: "While dedicated PREPA restoration efforts are proceeding, those efforts and the ability of PREPA to conduct non-restoration activities are impaired by the impact on other infrastructure and other businesses. Please note that, consistent with standard operating procedures for electric utilities, the vast majority of PREPA's personnel, including support personnel as well as operations personnel, are assisting emergency restoration work. The direct effect of this necessary prioritization is to put on hold all tasks that are not restoration or other public safety-related."

4. Those facts remain true. Personnel devoted to restoration and reconstruction activities include engineers and others that, under normal circumstances, would be central to responding to the Commission's requests for information.

5. In addition, on October 31, 2017, the FOMB directed the Government to prepare and submit a new (revised) Fiscal Plans for PREPA (as well as separate plans for two other entities) by December 22, 2017. While the Government and AAFAF have central roles in preparing the Fiscal Plan, PREPA must be involved in providing support and input in the development of the Fiscal Plan (which includes PREPA's budget). The FOMB directive anticipates that the process will take at least until mid-January 2018.

6. The Commission ruled on PREPA's three Motions on November 1, 2017. The Commission in effect largely granted the relief sought by the first two motions, but it did so only for an indefinite period, subject to further Commission determinations, rather than through July 1, 2018. The Commission generally denied the relief sought by the third motion, which sought a more general stay of regulatory proceedings in the fact of the emergency. Although the

Commission did stay some particular cases, it did not stay this very broad and demanding Investigation docket that it had launched less than a week earlier.

7. PREPA's primary activities at this time continue and must continue to be the restoration of electric service and working to protect public safety in the wake of Hurricane Maria. There is a long way to go before the entire Island will have electric service again. As of 6:00 a.m. AT on November 17, 2017, PREPA was reporting that 44.70% of service was restored, as reflected on the Government's status web site, *status.pr*. The Government's plan is to achieve 95% restoration by December 15, 2017. Whether that plan will be achieved will depend on many factors, including but not limited to the ability of PREPA's personnel to continue to focus on restoration and safety.

B. The Investigation Plan

8. The Commission's initiating order in this Investigation docket, the October 27th Resolution (at pp. 3-4), sets forth the four pillars of the Investigation plan: (1) an investigation of the state of the electrical system after the passage of Hurricane Maria; (2) implementation of regulatory actions to facilitate the restoration of electric service and encouraging the deployment of new technologies, including distributed generation and microgrids; (3) a new energy model (for the Island / PREPA); and (4) analysis around the effects of these developments on PREPA's Integrated Resource Plan as approved / established by the Commission on September 23, 2016.

9. The November 10th Resolution and Order (at p. 1) contains a similar description, but adds that the Investigation has two main phases: "The first phase will focus on the restoration of the electric service and the identification and correction of those vulnerabilities in the electric system which contributed to its general collapse. The second phase consists of a medium- and long-term analysis 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.”²

10. Based on those Resolutions, it appears that the first phase of this proceeding will focus on potential regulation of the restoration by the Commission. The second phase appears to focus on medium and long term planning and design of energy markets, models, and structures that would likely swallow the Commission’s statutory role of reviewing and approving IRPs proposed by PREPA, but that extends far beyond that role and deviates from the statutory IRP process. For example, the second phase apparently includes policy-making and planning concerning the structural transformation of the electric system and PREPA and does not afford PREPA the opportunity to prepare and submit a proposed IRP or other proposal as the first step of the process. It also does not recognize the PREPA Fiscal Plan (and budget) process discussed earlier, which centrally involves the Government, AFSAF, and the FOMB. Nor does it expressly reflect the pending PROMESA Title III case, in which PREPA is a debtor.

11. The FOMB by itself does not “own” the transformation process or manage PREPA, an issue recently litigated before the Title III court. *See also* the Title III court’s written order of November 16, 2017.

12. However, the PREPA Fiscal Plan (and budget) process in which the Government (including the role of AFSAF) “goes first” and then there is an iterative and consultative process between the Government and the FOMB that results in a final approved Fiscal Plan that includes a PREPA budget is a process that significantly bears upon the transformation of the electric system and PREPA as well as the narrower questions addressed in the normal IRP process. Moreover, on October 30, 2017, the Governor, under Act 5-2017, appointed Ottmar J. Chávez,

² The November 10th order (at pp. 1-3) goes on to explain that the “these phases are not separate and independent evaluations or procedures” and to discuss distributed generation and microgrids at some length.

who has worked at AAFAF as director of procurement strategy and who has significant prior procurement experience, as receiver for the purchases and supplies division of PREPA.

13. The Investigation as currently envisioned plainly is going to involve immense and unnecessarily expedited demands on PREPA's personnel. The Commission's November 10th Resolution and Order was issued by e-mail at approximately 5:39 pm AT on a Friday, the day before Veterans Day. Appendix A to the November 10th Resolution and Order is a list of over 100 topics and questions, including sub-parts, relating to the four areas of this Docket identified above. The November 10th Resolution and Order solicits public Comments, but (on p. 3) it orders PREPA to submit Comments. The Comments are due in ten days from November 10th, which presumably means November 21, 2017, because November 20th is the Discovery Day holiday. The November 10th Resolution and Order thus gave PREPA (and the public) just six business days to prepare Comments on over 100 topics and questions, including sub-parts. Those topics encompass a range of complex and often technical questions and their scope extends far beyond an investigation into "restoration of the electric service" or "vulnerabilities" of the pre-Maria system.

14. PREPA respectfully submits that the requirement that PREPA provide Comments on all of those items is not productive and appropriate, and, moreover, that the rushed deadline is not realistic and is counter-productive. PREPA has discussed the subject of resources and demands above. Even setting aside all of those concerns, any detailed Comments that PREPA could prepare and provide in just six business days inevitably will be hastily prepared and formed at very high level, and without full internal review, at best.

15. PREPA supports the idea of public Comments at a suitable time and through a suitable procedure. Yet, the public, too, will not be well served by asking it to provide

Comments on such short notice. At the moment, important information about the state of the system and related topics is not yet known or compiled for the public, and the public is trying to get back on its feet.

II. PREPA'S MOTION REGARDING THE INVESTIGATION PLAN

A. Accessing Information

16. PREPA incorporates the introductory paragraphs and the prior numbered paragraphs of this filing.

17. The first pillar of the Investigation plan is an investigation of "the state of the electrical system after the passage of Hurricane Maria". October 27th Resolution, p. 3 (unofficial English translation).

18. PREPA is and must be focused on restoration and public safety, as discussed above.

19. However, PREPA is already providing significant information to other agencies and the public. As part of the restoration process, PREPA is engaged in significant works and tasks that, once the emergency state is over, will be reported to the corresponding governmental entities, such as the Governor, AAFAF, other Puerto Rico emergency and public service authorities, FEMA, and the Corps. PREPA is providing information that is reported on the Government's web site *status.pr*, and is providing somewhat more detailed restoration information through its Twitter account (@aceonline).

20. Furthermore, PREPA notes that, on November 14, 2017, the Written Statement of Governor Ricardo Rosselló stated in part: "... I commit to you today that I will lead the most transparent disaster reconstruction in American history. Toward that end I have issued an executive order creating the Central Office of Recovery and Reconstruction of Puerto Rico,

which has been tasked with ensuring full accountability and transparency for all state and federal funds directed toward the island's reconstruction. To foster a culture of accountability we will create a Recovery Transparency Portal that will not only track the status of recovery, but will also provide information to the public about how and where funds are being used." See Executive Order OE-2017-069.

21. Notwithstanding the foregoing, PREPA is open to providing cumulative available information about the restoration to the Commission as promptly as is reasonably practicable after the restoration is complete without the need for the formal investigation that is contemplated by the October 27th and November 10th Commission orders. It is noted that the gathering and validation of restoration information regularly take several months after the emergency state has ceased. Hence, PREPA will provide the validated restoration information to the Commission as it becomes available. That approach would be beneficial in that it would provide the Commission with significant information in line with what the orders appear to contemplate without requiring PREPA to "reinvent the wheel", engage in redundant efforts, or spend extra time dealing with procedural formalities that will detract from the restoration efforts.

22. PREPA accordingly respectfully asks the Commission to modify the orders to provide for PREPA's provision of cumulative information about the restoration within 30 days after the restoration is complete in lieu of a formal investigation.

B. Regulatory Actions Concerning Restoration

23. The first part of the second pillar of the Investigation Plan is "implementation of regulatory actions to facilitate the restoration of the electric service...." October 27th Resolution, p. 3 (unofficial English translation).

24. It is unclear what the contemplated regulatory actions would be, or if or how additional regulation would aid restoration. Adding a regulatory investigation to be conducted at

the same time as the restoration is not, for good reason, a customary practice in utility regulation. The restoration, by its nature, is an emergency effort, one in which PREPA is acting in coordination with other elements of the Government, including emergency authorities and AFAAF, as well as FEMA and the Corps. In restoring services, the obstacles that PREPA is working to overcome are not, in general, regulatory.

25. Even more importantly, PREPA is concerned that responding to such a process would divert essential PREPA resources from restoration to regulatory work. On balance, PREPA respectfully submits that additional regulatory proceedings associated with this proceeding are likely to significantly delay, rather than speed, restoration.

26. PREPA respectfully asks the Commission to eliminate or stay that portion of the Investigation plan.

C. Transformation of the Electric Utility Sector

27. The second part of the second pillar, and the third and fourth pillars of the Investigation plan are "... encourag[ing] the deployment of new technologies, including distributed generation and microgrids; (iii) a new energy model; and (iv) analysis around the effect on the Authority's Integrated Resource Plan approved by the Commission on September [23], 2016." October 27th Resolution, pp. 3-4 (unofficial English translation). PREPA's has grouped the above items together because they all seem to be aspects of a contemplated regulatory process for the transformation of PREPA and, beyond PREPA, the Island's electric system and electric industry. As noted above, such an inquiry would subsume the statutory IRP process, but would extend far beyond it. Also, the investigation is not structured in accordance with the processes applicable to IRPs.

28. PREPA respectfully submits that the Government's referenced statements and actions relating to distributed generation and microgrids are best understood as part of the current

emergency efforts, and not as a present proposal to amend PREPA's IRP or an update to that IRP over which this Commission has jurisdiction. The future of PREPA and the Island's electric system were being examined by the Government as well, as part the Fiscal Plan process, before the hurricanes, and that process has not ended. (Implementation of the Fiscal Plan will occur through the Title III case.) The Government as well as AAFAF and PREPA plus the FOMB also are involved in those processes. Those processes are ongoing.

29. Moreover, in the event that aspects of such efforts did relate to the development of a new IRP, this Commission's role is to review such an IRP once presented, not to conduct formal investigatory proceedings concerning PREPA's development of a plan before any such plan or amendment is presented. Indeed, the IRP statutory provisions as PREPA understands them not only speak to resource planning on an ongoing cyclic basis but also to expediting review of PREPA's IRP in the event of substantial change in the energy demand or group of resources, but with PREPA being the party that prepares and submits the original IRP and subsequent IRPs, and with the Commission conducting the regulatory process and issuing the final order, subject to rehearing and administrative review, if any. *See, e.g.,* 22 L.P.R.A. § 196c(h)(1), § 1052c(h), § 1054v.³ While PREPA is focused on restoration, PREPA also is planning for the future of the utility and the electric system and, absent a change in law, will be preparing the next IRP at the appropriate time. (This discussion sets aside how the Fiscal Plan and budget process relate to the IRP process.)

30. PREPA is concerned that this third area of the Investigation Plan is premature and out of synch with the roles of different entities in PREPA's future in general and the IRP in particular. Perhaps most problematically, this third area also would divert very substantial

³ The Commission's final order in the IRP proceeding also directed PREPA to prepare the next IRP, and gave PREPA a number of directives about subjects and methods.

resources from restoration work to regulatory litigation over policy-making that is both far beyond and in conflict with the statutory IRP process. The November 10th Resolution and Order shows that the Investigation plan, in its current form, will place immense demands on PREPA and its personnel at a time when they and the people can ill afford a loss of dedication to restoration and safety.

31. Accordingly, PREPA respectfully asks the Commission to clarify what is contemplated by what PREPA has called the third area of the Resolution, and to eliminate or stay all activities under the November 10th Resolution and Order, with the possible exception of proceeding with public Comments relating to the restoration, but in that event giving the public more time to develop Comments. The public also will be afforded a full opportunity for comments on the next IRP as part of the IRP process.

III. GENERAL COMMENTS

32. PREPA incorporates, without repeating here, the many concerns referenced above regarding the regarding the nature, breadth, resource requirements, timing, and timeline of the Investigation plan. These concerns not only support the relief requested in Section II, above, but they prevent PREPA – and, PREPA believes, the public and others – from presenting full Comments, especially on the abbreviated timeline required.

33. PREPA's above General Comments and its Specific Comments below are, thus, provisional in nature, as discussed earlier. PREPA simply has not been afforded sufficient time to prepare Comments, even before factoring in the extraordinary circumstances and resource demands now faced by PREPA. Indeed, the scope of the questions parallel or exceed those addressed in legislative, policy, and regulatory forums in other jurisdictions over the course of months or years. By stating that the Comments are provisional, PREPA means that they are

tentative and that they are subject to further review, correction or other amendment or update, and supplementation.

34. PREPA also observes that the Commission's initial inquiries focus on distributed generation and microgrids. PREPA believes, as it long has believed, in the value of expanding distributed generation on the Island. The current IRP, as proposed by PREPA and approved by the Commission, envisions a significant expansion of distributed generation in a manner that is sound from a system perspective. Also, while the last IRP did not itself focus on microgrids, for practical and jurisdictional reasons, microgrids are under consideration and PREPA fully anticipates microgrid technologies will be addressed in the next IRP. PREPA emphasizes that it is open to further discussion of microgrids in the next IRP.

35. Yet, in relation to the restoration itself, most of developments in these areas are temporary or short-term in nature. In brief, FEMA is funding restoration work that replaces existing damaged or destroyed equipment, but is not currently funding significant changes to the electric system.

36. While longer-term issues concerning these technologies are very important, PREPA does not believe that such an inquiry into distributed generation and microgrids should get ahead of the Fiscal Plan and IRP processes. PREPA does not see either of these topics as subjects that must or should be rushed or considered out of context or in a portion of a proceeding focused on emergency restoration.

IV. SPECIFIC COMMENTS

Appendix I

Microgrids in Unserved Areas

1. Microgrid Organization:

- 1.1. What legal authority does the Commission have to regulate actors and actions involved in microgrids? Consider the following actions, among others: Creation of a microgrid business, interconnection with other microgrids, interconnection with PREPA's transmission or distribution system, sales of microgrid output to PREPA (for resale), sales of microgrid output to retail customers (with or without participation by PREPA).

PREPA Comments: PREPA has not had sufficient time to perform the extensive legal analysis called for by item 1.1. Such a legal analysis would require review of Acts 83-1941, 57-2014, 4-2016, and many other Puerto Rico statutes, and that analysis also would need to consider whether or to what extent any federal law or actions might be relevant, as well as the rights of private and other parties not subject to direct regulation.

Without waiving those concerns, PREPA will further state as follows. If the question relates to PREPA-owned or operated microgrids as a general topic, then the Commission would have a regulatory role as part of the IRP process and in relation to interconnection. The Commission also has a regulatory role in reviewing the rates through which PREPA costs of microgrids are recovered. If the question relates to customer-owned or operated microgrids as a general topic, then the answer is likely to be even more complex, as both the PREPA side and the customer side of the subject would have to be reviewed for possible regulatory aspects. To the extent that the question involves the purchase of power by PREPA, the Commission does have a regulatory role, in terms of its role under the purchased power tariff rider and its roles in relation to purchased power agreements and net metering rates. If the question involves "community" distributed generation and the sales are limited to transactions with the owners of that generation, then further legal analysis would be needed, both as to those arrangements themselves and their interaction with PREPA and PREPA's grid.

PREPA notes that further microgrids items below ask many legal, regulatory, technical, operational, financial, and other questions that PREPA is not able to answer at this time.

- 1.2. What are the advantages and disadvantages of alternative microgrid ownership structures (e.g., third-party, customer co-op, anchor load)? Consider such factors as reliability, economics, accountability.¹ [FN1: An anchor load is a large customer, such as a hospital, water-treatment facility, or big-box store that owns its own power supply (possibly including a storage system). It uses this system to serve itself but could extend to neighboring facilities through a microgrid.]

PREPA Comments: PREPA is not able to answer at this time or at the level of generality posed by Question 1.2 and other questions about microgrids below. In addition to the limitations of time and resources identified above, the questions are affected by economic, legal, financial, and practical factors and actions that extend well beyond the scope of this proceeding or the

Commission's statutory role. PREPA anticipates that aspects of this subject may also be addressed as part of PREPA's overall transformation and in PREPA's next proposed IRP. PREPA does not, by this response, mean to opine on the scope of the Commission's regulatory authority on any particular aspect of this subject. However, PREPA provisionally notes that there are likely to be suitable roles for microgrids on the Island and that different ownership structures may prove appropriate and may evolve over time.

- 1.2.1. For each possible ownership structure, what actions by the owners, users and customers should be guided, constrained or rewarded through regulatory actions? What regulatory actions are necessary? What regulatory actions might be unnecessary or problematic?

PREPA Comments: See 1.2.

- 1.3. Are there legal or practical obstacles to any desirable ownership structures? If so, what are the solutions, within and outside the Commission's authority?

PREPA Comments: See 1.2.

- 1.4. What financing sources are available to support various ownership forms? Consider private investment (both independent investors and commercial entities like large stores), government investment, and foundation and other non-profit sources.

PREPA Comments: See 1.2.

- 1.5. What types of expertise (e.g., planning, engineering, customer education, other) are necessary to make the planning, development and operation of microgrids a success? What are current examples of success and failure?

PREPA Comments: See 1.2.

2. **Microgrid placement and availability:** Given the Commonwealth's need and desire to getting service restored to all customers as soon as possible, consider these questions:

- 2.1. What are the advantages and disadvantages of focusing microgrid development on specific types of customer loads (e.g., large industrial loads, urban loads, rural loads, residential neighborhood loads)? Are some types of load profiles, or some geographic areas, better suited than others? What data exist to support your answer?

PREPA Comments: See 1.2. PREPA will add, based on publicly available information regarding microgrids in other jurisdictions, that it is likely that the feasibility and value of a microgrid at any given location is affected by specifics of its location and the load, generation, and grid at that location, although general factors also are or may be relevant.

- 2.2. Regardless of the possible priorities to place on different types of loads, what are the most cost-effective paths to getting microgrid service universally available to all customers regardless of their locations?

PREPA Comments: See 1.2 and 2.1. PREPA will add that, to the extent Question 2.2 seems to assume from a policy perspective that microgrids should be “universally available”, that is a premise that should be the subject of examination and not assumed.

2.3. What level of financial assurance will microgrid developers reasonable require before investing their own funds in Puerto Rico microgrids?

PREPA Comments: See 1.2. PREPA additionally notes that this question does not specify from whom financial assurances might be sought and that many aspects of development are not regulated, including the terms on which many developers secure capital.

2.4. What can the Commission do to facilitate universal service in the restoration?

PREPA Comments: Question 2.4 is ambiguous because it is tied to the restoration and because it does not explicitly refer to microgrids. PREPA will add the following. The restoration is an ongoing process that aims ultimately to resume electric service to all PREPA customers. PREPA believes in universal electric service, as those terms commonly are understood, subject to the concomitant obligation to offer service in reasonable ways and to normal exceptions due to extreme inaccessibility and cost, safety, commercial prerequisites for service, and appropriate service terminations.

3. Microgrid Regulation

3.1. What form of registration and/or approval by the Commission should be required for microgrids?

PREPA Comments: See 1.2.

3.1.1. What regulatory changes would be needed to permit various microgrid arrangements?

PREPA Comments: See 1.2.

3.1.2. What aspects of microgrid operations should be regulated?

PREPA Comments: See 1.2. PREPA additionally notes that the Commission’s regulatory authority is statutory and, while the Commission can lawfully issue certain rules and decisions, its regulatory authority is not subject to expansion or contraction by the Commission.

3.1.3. What are the advantages and disadvantages of the Commission establishing technical and financial qualifications for the microgrid developers?

PREPA Comments: See 1.2 and 3.1.2.

3.1.4. What are the risks of incompetent or unscrupulous developers and what are reasonable ways to prevent such problems?

PREPA Comments: See 1.2.

3.2. What technical standards should apply to islanded microgrids?

PREPA Comments: See 1.2. PREPA will add that technical aspects of microgrids, such as interconnection standards, are important, without any implication about the scope of the Commission's regulatory authority. As an absolute minimum, any interconnections should be subject to safety and operating standards.

3.2.1. What safety standards should apply?

PREPA Comments: See 1.2. PREPA will add that safety aspects of microgrids are important, without any implication about what is the scope of the Commission's regulatory authority.

3.2.1.1. Are the existing standards—IEE Standard 1547 for design; UL Standard 1703, UL Standard 1741, or IEE Standard 1547 for equipment; and the 2011 National Electric Code—sufficient? Why or why not?

PREPA Comments: See 1.2.

3.2.2. What are the advantages and disadvantages of requiring inspections? If the Commission requires inspections, what types of professionals and entities should be responsible for conducting them and certifying compliance? Consider registered engineers (working for the developer, for the Commission or for some other independent entity, municipal construction permit inspectors, others). What technical specifications should apply to the process of interconnecting a microgrid to PREPA's transmission or distribution system?

PREPA Comments: See 1.2.

3.2.3. Based on what factors should the Commission determine whether microgrids be interconnected only to PREPA's distribution system vs. to PREPA's transmission or sub-transmission system?

PREPA Comments: See 1.2.

3.3. How should the location of microgrids be determined?

PREPA Comments: See 1.2 and 2.1. PREPA will add that there are many concerns that relate to the siting of distributed generation. For example, as was discussed in the IRP case, some distribution feeders are congested or would be if distributed generation were to be added and others are not. PREPA also will add that it needs to be involved, for operational and safety purposes, with the siting and other aspects of any facilities or equipment that will be connected with its system. Market forces also have a role.

3.3.1. Should the Commission establish limits on the size of a microgrid? On what factors should that limit be based (geographic extent, capacity, number of customers, other)?

PREPA Comments: See 1.2.

3.3.2. Should the Commission issue franchise rights for microgrids? What conditions should be applied for a franchisee to maintain franchise rights?

PREPA Comments: See 1.2.

3.4. What customer protections are required, and how should those vary with the ownership of the microgrid?

PREPA Comments: See 1.2.

3.4.1. Prices and costs.

3.4.1.1. Assuming (for the purposes of this question) that microgrid owners can sell their output directly to retail customers, what are the advantages and disadvantages of different pricing methods (including traditional cost-based pricing, price caps based on reasonable projected cost, and allowing market forces to set prices)? Is it reasonable for there to be an administrative charge to cover the Commission's oversight costs?

PREPA Comments: See 1.2.

3.4.2. Contract terms.

PREPA Comments: See 1.2. PREPA additionally notes that the Commission's regulatory authority is statutory and, while the Commission can lawfully issue certain rules and decisions, its regulatory authority is not subject to expansion or contraction by the Commission. PREPA's answers may ultimately depend, among other things, on the nature and basis for any proposed regulation.

3.4.2.1. What are the advantages and disadvantages of the Commission establishing standard contract terms for retail and wholesale (to PREPA) sales?

PREPA Comments: See 1.2.

3.4.2.2. How does the answer to the preceding question vary by customer group? For example, should standard terms be required only for residential and small-commercial customers?

PREPA Comments: See 1.2.

3.4.2.3. Should the standard terms be required only for microgrids owned or operated with the main purpose of selling energy at retail?

PREPA Comments: See 1.2.

3.4.2.4. Should the contract provisions be subject to Commission review?

PREPA Comments: See 1.2.

3.4.2.5. Should the Commission set limits on contract duration?

PREPA Comments: See 1.2.

3.4.2.6. How should the Commission address customers who decide they no longer wish to be a part of a microgrid?

PREPA Comments: See 1.2.

3.4.2.7. Should the development of microgrids require unanimous approval of customers within the area to be served by microgrids?

PREPA Comments: See 1.2.

3.4.2.8. What are the advantages or disadvantages of allowing specific customers to opt in or opt-out from being served by a microgrid?

PREPA Comments: See 1.2.

3.4.3. What types of pre-payment or deposits are appropriate? How does the answer vary by customer group?

PREPA Comments: See 1.2.

3.4.4. Are non-discrimination rules necessary?

PREPA Comments: See 1.2.

3.4.5. Are other protections necessary?

PREPA Comments: See 1.2, 3.2, and 3.2.1.

3.5. Must all microgrids (at least those serving multiple customers) charge for services by metering delivered energy, or are there other pricing structures acceptable?

PREPA Comments: See 1.2.

3.6. To ensure that a microgrid project is cost-effective, safe and reliable, what information should the Commission receive from a microgrid developer prior its connecting customers? For example, should the Commission require developers to specify:

PREPA Comments: See 1.2.

3.6.1. Maximum set of customers to be served? Type of customers to be served?

PREPA Comments: See 1.2.

3.6.2. Maximum generation and storage capacity anticipated?

PREPA Comments: See 1.2.

3.6.3. Costs?

PREPA Comments: See 1.2.

3.6.4. Pricing?

PREPA Comments: See 1.2.

- 3.7. What timing requirements, in terms of the development process, must the Commission take into account, when determining how long it will take to approve or reject a microgrid proposal?

PREPA Comments: See 1.2.

4. **Microgrid Generation Technology:** Solar photovoltaics, supplemented with storage, have been employed to power microgrids. The Commission is interested in the range of other options for reenergizing the disconnected portions of the island.
- 4.1. Information provided to the Commission by Pattern Santa Isabel, LLC suggests that the Santa Isabel wind farm is operable, but lacks load and a source of energizing power. This condition could affect other renewable independent power producers, whose installations are operable but require power from PREPA to get back online.

PREPA Comments: Question 4.1 does not appear to call for a Comment. Without limitation, PREPA notes that unit black start resources, as a technical matter, need not always be provided by the grid operator.

- 4.1.1. Is there a technical solution to add a small solar or diesel generator to restart the wind farm, and storage to firm up the supply?

PREPA Comments: See item 1.2.

- 4.1.2. Is there load close to the wind farm that could be served from a microgrid based on the wind farm?

PREPA Comments: See item 1.2.

- 4.1.3. What legal or contractual obstacles would prevent or limit the ability of the Santa Isabel wind farm from (i) procuring a small-scale generation source to power up its turbines and (ii) serve surrounding communities directly through the use of microgrids?

 **PREPA Comments:** See 1.2.

- 4.2. Are there any existing solar facilities that could be firmed up with the storage and connected to load?

PREPA Comments: See 1.2.

4.3. For generation facilities under contract with PREPA, how would use of those facilities to serve a microgrid affect PREPA's contract?

PREPA Comments: Question 4.3 is unclear. PREPA does not understand what contract is being referenced.

4.3.1. Can a party other than PREPA develop a microgrid from such a facility?

PREPA Comments: See 1.2.

4.4. Can any of PREPA's hydro-electric facilities be firmed up with storage and connected to load?

PREPA Comments: See 1.2.

4.4.1. Can other parties use those facilities to serve local load?

PREPA Comments: See 1.2.

4.4.2. What arrangements would be needed with PREPA to implement this option?

PREPA Comments: See 1.2.

4.5. Is it legal, practical, and necessary for solar-storage or wind-storage microgrids to have some fossil fuel back-up capacity?

PREPA Comments: See 1.2. PREPA will add that Question 4.5 raises a question that can be considered both in general and with respect to a specific microgrid.

4.5.1. How much fossil fuel based back-up capacity can be used in a microgrid without compromising its renewable status and ability to sell to customers?

PREPA Comments: See 1.2. PREPA will add that Question 4.5.1 is in part unclear when it refers to "renewable status".

5. Restoring operation of existing industrial generation using combined heat and power (CHP) systems.

5.1. How much CHP is currently installed on the island? (The Commission would be interested in anecdotal information about specific facilities, as well as more comprehensive data.)

PREPA Comments: PREPA is not able to prepare comments on the subject of CHP at this time given the circumstances and resource constraints discussed earlier.

5.1.1. What portion of the installed CHP capacity is operating interconnected with PREPA?

PREPA Comments: See 5.1.

5.1.2. What portion of the installed CHP capacity is operating in islanded mode, without PREPA supply?

PREPA Comments: See 5.1.

5.1.3. What portion of the installed CHP capacity is physically capable of operating, if utility power were restored to the host facility?

PREPA Comments: See 5.1.

5.2. Are those systems capable of operating in islanded mode?

PREPA Comments: See 5.1.

5.2.1. For those that cannot operate islanded, would a small amount of additional on-site generation allow the CHP to restart?

PREPA Comments: See 5.1.

5.3. For CHP installations that could operate now, but are sitting idle, what else would be needed to bring those plants back into service, to serve the host facility, feed power back to PREPA and/or power a microgrid?

PREPA Comments: See 5.1.

5.4. Do any CHP facilities have unused electrical capacity that could be delivered to PREPA or a microgrid?

PREPA Comments: See 5.1.

5.5. What regulatory actions would be required to allow a CHP to sell excess power to PREPA?

PREPA Comments: See 5.1.

5.6. What regulatory actions would be required to allow a CHP to sell excess power to a microgrid?

PREPA Comments: See 1.2 and 5.1.

6. Coordination of Islanded Microgrids with PREPA:

6.1. To PREPA: Please provide the Commission with any information relating to plans for serving rural communities with solar/storage microgrids. Such information should include responses to the following questions:

If so,

6.1.1. What details are available regarding this plan?

PREPA Comments: See 1.2.

6.1.2. When will the first of these systems be installed?

PREPA Comments: See 1.2.

6.1.3. What duties does PREPA propose to assume for these communities?

PREPA Comments: See 1.2.

6.1.4. How would PREPA's rates and role in these areas differ from areas served by central generation?

PREPA Comments: See 1.2.

6.1.5. For all commenters: What are the advantages and disadvantages of the Commission requiring PREPA to develop microgrids in some areas? Would such a requirement avoid duplication of effort and conflict? Would it discourage competitors from entering the Puerto Rico microgrid market?

PREPA Comments: See 1.2. PREPA will add that a question like Question 6.1.5, even assuming it is appropriate and the Commission were to have the authority implied here, should be considered in the IRP process.

6.2. Are there areas that should be reserved for PREPA restoration, or should microgrids be encouraged everywhere?

PREPA Comments: See 1.2 and 2.2.

7. Use of Stranded PREPA Equipment: This set of questions addresses the possibility of assisting microgrid development by using existing PREPA equipment that PREPA is temporarily unable to use.

7.1. Should microgrids be allowed to deliver power to customers through existing PREPA metering equipment?

PREPA Comments: See 1.2. PREPA will add that it has significant concerns about third parties using PREPA equipment, especially in the context of disaster recovery where the safety of the public and PREPA crews may be at issue.

7.1.1. If so, how and when should PREPA be compensated for that use?

PREPA Comments: See 1.2 and 7.1.

7.1.1.1. Should the Commission set a fixed rate per meter, based on the average embedded costs of PREPA meters?

PREPA Comments: See 1.2 and 7.1.

7.1.1.2. Should the microgrid pay a monthly fee, or purchase the equipment outright?

PREPA Comments: See 1.2 and 7.1.

- 7.2. Should microgrids be allowed to purchase distribution equipment (poles, primary lines, secondary lines, service drops, and transformers) that PREPA is not currently able to use due to lack of connection to central generation?

PREPA Comments: See 1.2 and 7.1.

- 7.2.1. If so, how and when should PREPA be compensated for that use?

PREPA Comments: See 1.2 and 7.1.

8. What tools are available to the Commission or other parties to enable behind-the-meter resources in areas without electric service?

PREPA Comments: See 1.2. PREPA will add that it is understandable that customers whose service has not yet been restored will consider the use of distributed generation, although this is a topic with many aspects, including but not limited to safety.

- 8.1. Are there technical resources (such as pile drivers for ground mount systems) in short supply in Puerto Rico? If so, what can be done to alleviate those shortages?

PREPA Comments: PREPA is not able to prepare comments at this time given the circumstances and resource constraints discussed earlier.

- 8.2. Do firms that are new to Puerto Rico need information about local design and approval processes and standards? If so, how can that information be efficiently shared?

PREPA Comments: Question 8.2 is unclear / vague.

Appendix II

Distributed Resources to Augment Northern Supply

Although these questions are primarily addressed to PREPA, the Commission welcomes comments from any other stakeholder.

1. What is the status of power restoration?

PREPA Comments: See Section II(A) of this filing.

- 1.1. What areas currently have PREPA power supply?

PREPA Comments: See 1. Question 1.1 is a very "granular" question, and the answer changes daily in real time at a detail level.

- 1.1.1. Which PREPA-owned and PREPA-contracted power plants are currently serving customers?

PREPA Comments: PREPA is not able to comment at this time given the circumstances and resource constraints discussed earlier. Also, the situation is dynamic and not static, meaning it can and does change over time. PREPA also would point Section II(A) of this filing.

- 1.2. What is the status of transmission from the southern power plants (EcoEléctrica, AES, Aguirre, Costa Sur) to the San Juan area?

PREPA Comments: See 1.1.1.

- 1.2.1. On each of the transmission routes:
 - 1.2.1.1. How many towers were damaged by Hurricane María?

PREPA Comments: See 1.1.1.

- 1.2.1.2. How many towers were destroyed?

PREPA Comments: See 1.1.1.

- 1.2.1.3. How many towers have been repaired or replaced?

PREPA Comments: See 1.1.1.

- 1.2.1.4. How many spans of conductor have been broken or separated from their towers?

PREPA Comments: See 1.1.1.

- 1.2.1.5. How many spans have been restored?

PREPA Comments: See 1.1.1.

- 1.3. What is the status of the Palo Seco plant?

PREPA Comments: See 1.1.1.

- 1.4. How much more load (or customers) could PREPA serve from the restored northern delivery system, if adequate generation supply were available?

PREPA Comments: See 1.1.1.

2. What factors have been impeding deployment of behind-the-meter resources in the restored northern delivery system?

PREPA Comments: See 1.1.1. PREPA also notes that Question 2 assumes facts.

- 2.1. Has PREPA actions been helpful in getting deployed since late September?

PREPA Comments: See 1.1.1 and 2. PREPA also notes that Question 2.1 appears to be missing one or more words, although PREPA infers that it likely is intended to refer to “behind-the-meter resources in the restored northern delivery system”.

2.2. Has PREPA created any obstacles to behind-the-meter restoration, through either action or inaction (including lack of administrative capacity)?

PREPA Comments: See 1.1.1.

2.3. What can and should the Commission do to facilitate behind-the-meter resources to increase power supply in the restored northern delivery system?

PREPA Comments: See 1.1.1.

3. What PREPA regulations need to be amended, at least temporarily, to address the supply emergency?

PREPA Comments: PREPA notes that Question 3 is vague. In addition, for PREPA to comment on the additional Questions 3.1 through 3.5 would take substantial time to prepare the comments. In addition, please note the provisions of Executive Order OE-2017-064, including but not limited to its provisions regarding Regulation No. 8915.

3.1. Section IV, Article D (3)(f) of PREPA Regulation No. 8915² limits the aggregate capacity of distributed generation connected to a transformer to be less than or equal to the capacity of that transformer. [FN2: *Reglamento para Interconectar Generadores con el Sistema de Distribución Eléctrica de la Autoridad de Energía Eléctrica y Participar en los Programas de Medición Neta.*]

3.1.1. Should this requirement be modified to reflect the ability of distributed generation, especially with storage, to limit flow back to the distribution system?

PREPA Comments: See 3.

3.2. Section IV, Article D (3)(g) of Regulation No. 8915 limits distributed generation installed on a feeder to not exceed 15% of the annual peak demand on that feeder.

3.2.1. What is the practical purpose of this requirement?

PREPA Comments: See 3.

3.2.2. Should this requirement be waived for the duration of the emergency?

PREPA Comments: See 3.

3.2.3. Does PREPA have data on peak load by feeder, or is this provision unworkable?

PREPA Comments: See 3.

- 3.2.4. Should the limit be raised to an approximation of the minimum load on the feeder, such as 50% of peak?

PREPA Comments: See 3.

- 3.3. Regulation No. 8915 requires a more complex study for projects ineligible for Expedited Interconnection Process as defined in the Regulation.

- 3.3.1. Should the size limit for the Expedited Interconnection Process be increased, at least temporarily?

PREPA Comments: See 3.

- 3.4. Section V, Article B (10) of Regulation No. 8915 states that the cost of any required upgrades to PREPA's distribution system in order for the distribution generation facility to be interconnected are the client's responsibility.

- 3.4.1. How should this provision be amended, if at all, to reflect the current process of reconstruction of much of the distribution system?

PREPA Comments: See 3.

- 3.5. PREPA Regulation No. 8916³ establishes the interconnection requirements for generators to PREPA's transmission or sub-transmission system. Should any of the provisions of said regulation be amended in order to incorporate microgrids to PREPA's transmission or sub-transmission system in an expeditious manner?
[FN3: *Reglamento para Interconectar Generadores con el Sistema de Transmisión o Subtransmisión Eléctrica de la Autoridad de Energía Eléctrica y Participar en los Programas de Medición Neta.*]

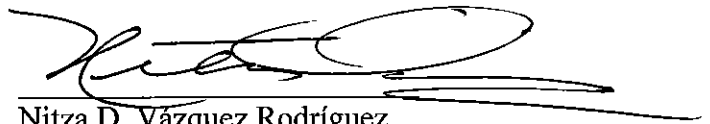
PREPA Comments: See 1.2 (in Appendix I) and 3.

WHEREFORE, the Puerto Rico Electric Power Authority respectfully requests its Motion be granted, its provisional Comments be accepted as such, and that such other relief as is appropriate be entered.

RESPECTFULLY SUBMITTED,

IN SAN JUAN, PUERTO RICO, THIS 21 DAY OF NOVEMBER 2017

PUERTO RICO ELECTRIC POWER AUTHORITY



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CERTIFICATION OF FILING AND SERVICE

I HEREBY CERTIFY on November 27, 2017, I have sent the above "PREPA's (1) Motion Regarding Investigation Plan and (2) Provisional Comments" 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, Ste. 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 the other recipients (except not including other Commission personnel and PREPA personnel and outside counsel) of the Commission's October 27, 2017, 3:12 p.m. email serving the Resolution of that date in this docket, *i.e.*, pbarcelo@estrellallc.com, lmorera@estrellallc.com, serdar.tufekci@na.engie.com, richard.houston@na.engie.com, jperez@oipc.pr.gov, codiot@oipc.pr.gov, rstgo2@gmail.com, ladrian@gasnaturalfenosa.com, francisco.rullan@aae.pr.gov, wilma.lopez@aae.pr.gov, tonytorres2366@gmail.com, sierra@arctas.com, molinilawoffices@gmail.com, ccf@tcmrslaw.com, carlos.reyes@ecoelectrica.com, hmc@mcvpr.com, mgrpcorp@gmail.com, victorluisgonzalez@yahoo.com, epo@amgprlaw.com, acasellas@amgprlaw.com, lfortuno@steptoe.com, agraitfe@agraitlawpr.com, ana.rodriguez@oneillborges.com, carlos.valldejuly@oneillborges.com, cfl@mcvpr.com, pnieves@fglaw.com, dortiz@elpuente.us, dperez@cabprlaw.com, energiaverdepr@gmail.com, hburgos@cabprlaw.com, fermin.fontanes@oneillborges.com, felipelozada1949@gmail.com, fviejo@amgprlaw.com, ivc@mcvpr.com, lga@elpuente.us, lionel.orama@upr.edu, lmateo@ferraiuoli.com, valvarados@gmail.com, jmehernandez@fglaw.com, maribel.cruz@acueductospr.com, pga@caribe.net, jfeliciano@constructorespr.net, nydinmarie.watlington@cemex.com, epenergypr@gmail.com, aconer.pr@gmail.com, pnieves@vnblegal.com, abogados@fuerteslaw.com, jorgehernandez@escopr.net, ecandelaria@camarapr.net, manuelgabrielfernandez@gmail.com, mmuntanerlaw@gmail.com, licenciadamasferrer@gmail.com.



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