

COMMONWEALTH OF PUERTO RICO  
PUERTO RICO ENERGY BUREAU

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IN RE: REVIEW OF THE PUERTO  
RICO ELECTRIC POWER  
AUTHORITY INTEGRATED  
RESOURCE PLAN

NO. CEPR-AP-2018-0001

**SUBJECT:** PREPA'S COMBINED  
COMPLIANCE FILING AND  
MEMORANDUM ON  
CONFIDENTIALITY FOR ITEMS DUE  
AUGUST 24, 2018

**PREPA'S COMBINED COMPLIANCE FILING  
AND MEMORANDUM ON CONFIDENTIALITY  
FOR ITEMS DUE AUGUST 24, 2018**

TO THE HONORABLE PUERTO RICO ENERGY BUREAU:

COMES NOW the Puerto Rico Electric Power Authority ("PREPA") and respectfully submits to the honorable Puerto Rico Energy Bureau (the "Bureau")<sup>1</sup> PREPA's Combined Compliance Filing and Memorandum on Confidentiality for Items Due August 24, 2018, under the Bureau's Resolution and Order of August 17, 2018, Appendix A, Section I. This Compliance Filing consists of information provided in the body of this document and the Attachments hereto.

PLEASE NOTE that the Attachments, which are voluminous, will be filed by means of PREPA providing the documents through sharepoint, rather than in hard copy or by email. (Go to CEPR-AP-2018-0001-20180824)

PLEASE ALSO NOTE that PREPA, pursuant to federal and Puerto Rico law, including the Bureau's Regulation on Integrated Resource Plan for the Puerto Rico Electric Power Authority (Regulation No. 9021), has designated many of the Attachments

<sup>1</sup> References herein to the Bureau also include the former Energy Commission when applicable.

as Confidential, in most cases because they include information that is Critical Energy Infrastructure Information ("CEII")<sup>2</sup> and that is protected under federal and Puerto Rico law. CEII is highly sensitive information that needs very careful protection, as has been recognized by the Energy Bureau on many occasions in many past dockets. When PREPA has been required to produce CEII, the material usually has restricted to possession and review by Commissioners and staff only, although sometimes formal intervenors have been allowed very carefully controlled opportunities to review some CEII material in some circumstances. For the sake of efficiency, PREPA has included in this filing a Memorandum of Law to support its designations.

**I. MATERIAL BEING PRODUCED**

1. The material being produced includes an Attachment called "Narrative Responses.pdf" that contains PREPA's narrative responses to the items in Section I of Appendix A to the Bureau's August 17<sup>th</sup> order.

2. That Narrative Responses Attachment also identifies all of the other Attachments, and it identifies which Attachments are being designated as Confidential, either because they contain CEII or because they contain confidential customer data.

3. Please also note that in two instances, the Narrative Responses request additional time for an answer or part of an answer. PREPA respectfully requests that additional time be allowed for those items.

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<sup>2</sup> To the extent that any of the Critical Infrastructure Information involved in this filing involves the water system rather than the energy system, the same concerns and legal principles apply, although some of the citations in the Memorandum of Law are specific to CEII.

## II. MEMORANDUM OF LAW

### A. Legal Principles

4. In brief, the public disclosure of CEII may pose a security threat to Puerto Rico in that the information could be useful to a person or group in planning an attack on critical infrastructure. See, e.g., 18 C.F.R. § 388.113, as amended by Federal Energy Regulatory Commission ("FERC") Order No. 683, "Critical Energy Infrastructure Information" (issued September 21, 2006); "USA Patriot Act of 2001", § 1016, creating the "Critical Infrastructures Protection Act of 2001", including 42 U.S.C. § 5195c(e) (defining "Critical infrastructure").

5. Under the Critical Infrastructures Protection Act of 2001, the term "critical infrastructure" means "systems and assets, whether physical or virtual, so vital to the United States that the incapacity or destruction of such systems and assets would have a debilitating impact on security, national economic security, national public health, safety, or any combination of those matters." 42 U.S.C. § 5195c(e).

6. In 2006, FERC Order No. 683 amended the regulations for gaining access to CEII and simplified procedures for obtaining access to CEII without increasing vulnerability of the energy infrastructure and ensuring that access to CEII does not facilitate acts of terrorism.

7. A utility is not required to obtain FERC or other federal government approval in order to designate information as CEII. For example, information required by FERC's Annual Transmission Planning and Evaluation Report, Form No. 715, ("FERC No. 715"), is *de facto* considered CEII and is automatically afforded the heightened protections thereto. FERC No. 715 requires that any transmitting utility that operates integrated (non-radial) transmission facilities at or above 100 kV must annually submit information



included but not limited to: Power Flow Base Cases, Transmitting Utility Maps and Diagrams, Transmission Planning Reliability Criteria, Transmission Planning Assessment Practices, and Evaluation of Transmission System Performance. Any utility that submits the required transmission information pursuant to FERC No. 715 does so under the knowledge that FERC "considers the information collected by this report to be Critical Energy Infrastructure Information (CEII) and will treat it as such." 18 C.F.R. § 141.300(d).

8. PREPA further states that its advisors from Siemens and its outside regulatory counsel have informed it that, in their experience, when involved in investigations or discovery before mainland utility regulatory commissions, the regulator has not required a utility that designated material as CEII to follow any process before the federal government in order to make or support such a designation before the commission, and, further, that the regulator at its informed discretion can establish limits on how information that it consider CEII can be accessed.

9. As noted earlier, the Energy Bureau, on many occasions in many prior dockets, has accepted PREPA's designations of material as CEII, recognizing that both federal law and Puerto Rico law support such designations when applicable.

10. Puerto Rico law also recognizes other grounds for confidentiality designations. For example, Puerto law includes recognition of the confidentiality of trade secrets. The principal law providing for the protection of the confidentiality of trade secrets, codified in Act 80-2011, is the "Industrial and Trade Secret Protection Act of Puerto Rico." Act 80-2011 recognizes that information should be protected when it has the potential for financial or commercial value. The Legislative Assembly noted that "failure to protect trade secrets could leave companies at the mercy of any competitor or

former employee who gains knowledge of any such secret, whether directly from the owner or by other means.” As a public body whose costs are ultimately borne by citizens of the Commonwealth, PREPA also has a strong interest in protecting the trade secrets of actual and prospective vendors and contractors who entrust PREPA with that information in confidence as part of business and financial dealings. Violating those protections (e.g., by public release of confidential vendor or financial data) could not only harm those other parties, but also threaten PREPA’s ability to acquire goods and services from the markets at the lowest cost, ultimately harming customers.

11. Act 80-2011 defines a trade secret as any information that:

... has a present or a potential independent financial value or that provides a business advantage, insofar as such information is not common knowledge or readily accessible through proper means by persons who could make a monetary profit from the use or disclosure of such information; and [f]or which reasonable security measures have been taken, as circumstances dictate, to maintain its confidentiality.

12. Trade secrets may take a variety of forms, including “a process to manufacture, treat or preserve materials, a formula or recipe, a project or pattern to develop machinery, or simply a list of specialized clients that constitute a specific market which provide the owner with an advantage over his/her competitors.” However, these examples are not exhaustive, and the Legislative Assembly reinforced in the Statement of Motives of Act 80-2011 that the broad definition of a trade secret includes “any confidential information with trade or industrial value, which its owner reasonably protects to prevent its disclosure.” In Puerto Rico, moreover, trade secrets “do not require registration or compliance with any formalities in order to be protected.”



13. In addition, the Bureau's IRP regulation contains multiple provisions that recognize CEII and other grounds for confidentiality designations. See, e.g., Regulation No. 9021, § 1.15.

14. PREPA has made the confidentiality designations in this filing based on its careful assessment of the contents of the materials.

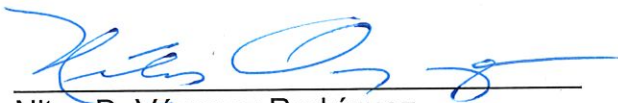
15. Accordingly, PREPA respectfully requests that the Bureau accept the confidentiality designations and treat all of the designated material as possession and review restricted to Commissioners and their staff only.

WHEREFORE, the Puerto Rico Electric Power Authority respectfully requests that the Honorable Puerto Rico Energy Bureau accept this Compliance Filing, including the Confidentiality designations.

RESPECTFULLY SUBMITTED,

IN SAN JUAN, PUERTO RICO, THIS 24<sup>th</sup> DAY OF AUGUST, 2018

**PUERTO RICO ELECTRIC POWER AUTHORITY**



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### **CERTIFICATION OF FILING AND SERVICE**

I hereby certify that on August 24, 2018, I have sent the above Combined Compliance Filing to the Puerto Rico Energy Commission through its Clerk via email to [secretaria@energia.pr.gov](mailto:secretaria@energia.pr.gov) and [bmulero@energia.pr.gov](mailto:bmulero@energia.pr.gov); and to the office of the Commission's internal legal counsel via email to [legal@energia.pr.gov](mailto:legal@energia.pr.gov), provided that the Attachments are being provided not in hard copy of by email but rather through sharepoint as noted in the Filing.



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PREPA's Narrative Responses to the Energy Bureau's Resolution and Order of August 17, 2018, Appendix A, Section I

Information Requirements on PREPA's IRP Development

PREPA is providing the documentation requested as it continues with its consultant, Siemens PTI, in the development of the IRP. Please note that, the IRP being in development, the information is DRAFT and subject to substantial changes. Also, care must be taken with the documents submitted, since both confidential customer data, and Critical Energy Infrastructure Information (CEII), is included. These items will be marked as CONFIDENTIAL, and they must only be shared with the Energy Bureau Commissioners and the Bureau's Staff.

**1. Please provide a summary of the comments received during the Stakeholder Meetings held by PREPA for the development of the IRP.**

Please see attached document *PREPA 2018 IRP Stakeholder Workshop Summary June 2018.pdf*. Please note that, as explained during the Technical Conference held on August 14, 2018, PREPA and Siemens are working on preparing summaries of the July and August stakeholder meetings. PREPA respectfully requests an extension of time for the additional summaries.

**2. Please provide information regarding the critical loads determined by PREPA to be included within each potential electrical island or minigrid. The information should include, but not be limited to, peak capacity requirements for each critical load area, the expected duration requirements associated with the peak load, the location and substation from where the load is served.**

The following documents are provided with the information available at the moment, subject to substantial review, as PREPA and Siemens PTI are still working with the identification of critical loads in the potential minigrids. Also note that none of the tables presented are final. All must be treated as CEII information.

See attached files with currently available data:

DRAFT Confidential Critical Infrastructure of the Distribution System - Arecibo Region.pdf  
DRAFT Confidential Critical Infrastructure of the Distribution System - Bayamón Region.pdf  
DRAFT Confidential Critical Infrastructure of the Distribution System - Caguas Region.pdf  
DRAFT Confidential Critical Infrastructure of the Distribution System - Carolina Region.pdf  
DRAFT Confidential Critical Infrastructure of the Distribution System - Ponce Region.pdf  
DRAFT Confidential Critical Infrastructure of the Distribution System - Mayagüez Region.pdf  
DRAFT Confidential Critical Infrastructure of the Distribution System - San Juan . pdf  
DRAFT Confidential Critical Infrastructure of the Transmission System\_Distrito Carolina.pdf  
DRAFT Confidential Critical Infrastructure of the Transmission System\_Distrito Fajardo.pdf  
DRAFT Confidential Critical Infrastructure of the Transmission System\_Distrito Canovanas.pdf  
DRAFT Confidential Critical Infrastructure of the Transmission System\_Region Mayaguez\_Distrito Mayaguez.pdf  
DRAFT Confidential Critical Infrastructure of the Transmission System\_Region Mayaguez\_Distrito San German.pdf  
DRAFT Confidential Critical Infrastructure of the Transmission System\_Region Mayaguez\_Distrito San Sebastian.pdf  
DRAFT Confidential Critical Infrastructure of the Transmission System\_Region Mayaguez\_Distrito Aguadilla.pdf



PREPA will submit the remainder documents once Siemens PTI completes this task.

**3. Please provide information regarding the distributed generation determined by PREPA to be included within each potential electrical island or minigrid. The information should include, but not be limited to, the capacity of the installation and location by feeder.**

Please see attached document CONFIDENTIAL-DRAFT PREPA Minigrid Memo20180820.pdf.

**4. Please provide the following transmission and subtransmission level detailed maps with high resolution:**

**a. A detailed map or maps of the Puerto Rico transmission and subtransmission grid, such as the ones shown on slides 33 and 40 of PREPA's August 14, 2018, Technical Conference presentation.**

See response to item 3, above.

**b. Additional detailed maps, such as those shown with information on the potential electrical islands to be considered in the analysis, such as shown on slides 35 and 36 of PREPA's August 14, 2018, Technical Conference presentation.**

See response to item 3, above.

**c. Provide on the maps required above the location and name of all transmission and major subtransmission stations; the location of critical loads, priority loads, reliable generation injection points, possible microgrid areas, and any additional data that informs said map.**

See response to item 3, above.

**5. Please also provide available underlying information used for the development of the maps in Question 4 above. This would include in tabular form the peak loads for each considered microgrid, and/or confirm that these data are the same as seen in slide 40 of PREPA's August 14, 2018, Technical Conference presentation. Please include the current transmission transfer capabilities that exist between the designated minigrid areas. Include any other quantitative information that would support an understanding of the technical parameters (e.g., but not limited to, peak load, existing local resource information, special circumstances) associated with each minigrid area.**

Please see response to item 3, above, for the current loads for the proposed microgrids, transfer capabilities, and the current version of table on slide 40 of the August 14 presentation.

**6. Please provide a detailed explanation of the assumptions used to determine the technical and non-technical losses included in the load forecast. Please provide in Excel compatible electronic format with all formulae intact, all quantitative analysis used to generate the components of the net load forecast seen on slide 56 of PREPA's August 14, 2018, Technical Conference presentation, and include analogous quantitative information for the peak load in addition to the net energy for load.**

See attached files:

DRAFT-PREPA\_LoadForecastMemo\_20180824.pdf

**7. Please provide a copy of the Potential Study, and any related documentation, on Energy Efficiency and Demand Response Programs developed by Siemens that serves as a basis for the determination of the assumptions to be modeled in the IRP. This includes information requested as part of Question 6 of the Commission's August 8, 2018 Resolution and Order in the instant proceeding (partially answered by PREPA on its August 13, 2018 Information Submission).**

See attached files:

DRAFT Siemens\_EE and DR\_PREPA\_08212018.pdf  
DRAFT DSM Cost Calculation FOR PREPA 08212018.xlsx

**8. Please provide a summary of the maintenance requirements and schedule for the following generating units: Palo Seco 3 and 4, San Juan 7 and 8, and San Juan 9 and 10.**

Unit Maintenance Information

Palo Seco 3	Available, recommendation to do an extended environmental maintenance to repair boiler tubing in March, April, and May 2019
Palo Seco 4	Reparations of turbines, generator, and condenser. Expected to return to service by the end of 2018.
San Juan 7	Currently under environmental repairs until September 15, 2018. (limited use)
San Juan 8	Next environmental maintenance scheduled for 4 to 6 weeks, beginning in May 2019 (limited use)
San Juan 9	Proposal presented for mayor work between March to July 2019, for new boiler tubing, repair turbine rotor, generator inspection among others, approximate cost of \$12 million.
San Juan 10	Unit out due to turbine outage. Proposal to repair turbine rotors and boiler repair work until January 30, 2019. Approximate cost is \$5-6 million.

**9. Please provide information on how the commencement of the construction of new resources is constrained or modeled in the development of the Action Plan for the IRP.**

For new thermal resources, assuming the minimum time to start of the permitting process in July 2019, after the RFP process has been completed, the following times are assumed:

Representative New Resource Candidates	Capacity (MW)	Development Duration (Years)	EPC Duration (Years)
F Class CC (GE S107F.04) (Duct Fired)	302	2.5	3.0
F Class CC (GE S107F.05) (Duct Fired)	369	2.5	3.0
Medium CC (Hitachi H-100) (Duct Fired)	144	2.5	2.5
Small CC (GE LM6000 DLE) (Duct Fired)	66	2.0	2.0
Small CC (GE LM2500+ G4 SAC) (Duct Fired)	47.7	2.0	2.0
Small CC (GE LM2500 SAC) (Duct Fired)	35	2.0	2.0
Aero/Small SC Peaker (GE LM6000 DLE)	41	1.5	1.5
Aero/Small SC Peaker (GE LM2500 SAC)	22	1.5	1.5
Small CHP (Solar Turbines Mars 100)	9	1.5	1.5
RICE (Wartsila 18V50DF)	16	1.5	1.5

As for new renewable resources, we are assuming a 12 month development period, and a 12 month construction period.