GOVERNMENT OF PUERTO RICO
PUBLIC SERVICE REGULATORY BOARD
PUERTO RICO ENERGY BUREAU

IN RE: OPTIMIZATION PROCEEDING OF MINIGRID TRANSMISSION AND DISTRIBUTION INVESTMENTS	**CASE NO**.: NEPR-MI-2020-0016 **SUBJECT**: Responses to Appendix B

THE PUERTO RICO ELECTRIC POWER AUTHORITY'S RESPONSES TO APPENDIX B OF THE RESOLUTION AND ORDER ENTERED ON DECEMBER 22, 2020

COMES NOW the Puerto Rico Electric Power Authority through its legal representation and respectfully submits the responses to Appendix B of the *Resolution and Order* entered by the Puerto Rico Energy Bureau of the Public Service Regulatory Board on December 22, 2020.

RESPECTFULLY SUBMITTED.

In San Juan Puerto Rico, this 7th day of January 2021.

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Responses to Appendix B
Questions for PREPA

PREPA Responses to Appendix B – Questions for PREPA

NEPR-MI-2020-0016

01/07/2021

1. **The Energy Bureau is proposing an initial segmentation approach to identify at a more granular level categories of "critical", "priority", and potentially "balance" load that are potential candidates for distributed resiliency provided by either on-site distributed generation and storage, or load served by a microgrid.**

   a. PREPA's response to Energy Bureau ROI 2-9 (e) provided in Excel format critical and priority load data, by region, transmission line source, substation, and feeder. Provide any additional information PREPA has on the classification of these loads to the Essential Facility categories as listed in PREPA's response to Energy Bureau ROI 2-9 (a).

   Response: The following response was provided by Miguel F. Irizarry Silvestrini, Acting Superintendent, Planning and Research Division and Tomás Vélez Sepúlveda, Manager, Planning and Research Division.

   At this moment, PREPA does not have additional categories for the loads presented in ROI 2-9 (e). However, see our response to part c that provides information that could be used for further subclassification of loads.

   b. Confirm that all critical and priority load in Puerto Rico is connected to PREPA's system at distribution / feeder voltages; or explain and provide data indicating the type and voltage of interconnection to PREPA's grid.

   Response: The following response was provided by Nelson Bacalao, Principal Consultant Siemens PTI.

   Not all the critical and priority load is connected at the distribution level, there is also load connected at the 38 kV level typically at customer owned generation. The workpaper IRP_12_Substation_LoadProcessing_Final_v1.xlsx (see Item 1-c.zip) provides an analysis done under the IRP that shows the split of the load by substation and provides a separation between transmission connected and distribution connected. See T&D separation worksheet and Load_by_PSS_B worksheet. There is can be observed that approximately 17% of the critical load is connected at the transmission level and 55% of the priority load.

c. Provide an Excel file with peak MW consumption summaries by feeder of the connected critical load and priority load.

Response: The following response was provided by Tomás Vélez Sepúlveda, Manager, Planning and Research Division and Nelson Bacalao, Principal Consultant, Siemens PTI.

PREPA has available the peak demands for the distribution feeders with critical and priority loads. PREPA does not have the specific demand for the critical and priority loads.

See attachment Item 1-c.zip for the excel file with the requested information regarding peak load by feeder. This file that was already submitted to PREB during the IRP filing was a wealth of information that can be used to establish priorities as per question 1-e below.

In the Excel file in the worksheet "Feeder_Conversion_Priority" it shows in column H the feeder demand in MVA and in column I the demand in Amps (2019 values). Also, in this worksheet, in columns AE and AF the number of critical loads and the number of priority loads by feeder is provided. Finally, in column AL there is information on the load type. In Siemens experience this information could be used for further subdivision of the critical and priority loads by assigning weights, for example hospitals, firehouses, police & large communications centers have typically the highest weights (priority) and within these the priority can have two values, one for the immediate term (few hours / days) when the facility can be assumed to rely in local generation and sustained term value when the local generation supply cannot be depended on. Establishments that can be used as shelters (*e.g.* stadiums / hotels, etc.), pumping stations, assisted living facilities, other communications, etc. are typically next in weights (priority) and finally load like centers of town are have lower wights, but higher than the priority loads. Similar classification can be made for the priority loads. Note that the above is provided just for illustrative purposes.

d. Provide any data PREPA has on the distance between critical load as located on feeders, and the source substations supplying those feeders.

Response: The following response was provided by Reinaldo Baretty Huertas, Technical Advisor for T&D Directorate.

We don't have information readily available of all the distances for critical loads by feeder. At the moment, we can provide some information of critical loads as prepared for Phase I of Short Term Projects for the 10Yr Plan. The information is segregated by geographical region (see attachment 1D.rar). Only feeders that have critical load have been measured, the rest have been estimated for purposes of cost estimation.

e. What additional data does PREPA have on critical and priority loads that would help to segment such load as part of the Optimization Proceeding? Provide such data in Excel format.

Response: The following response was provided by Alfonso Baretty Huertas, Director of Planning.

See answer to question 1-c above.

2. The proposed analytical approach in Appendix A indicates a need to determine transmission costs for specific components of MiniGrid enhancements. The confidential file entitled "MiniGrids CapEx Summary_wPriority_Final.xls" was provided as part of the filed IRP workpapers. The costs in total for the MiniGrid, included in the non-confidential portion of Appendix 1 (e.g., Exhibits 2-85 through 2-93), summarize the total cost of all MiniGrid elements.

a. Is this underlying data source still valid as an estimate of the costs of the transmission components of the MiniGrid approach?
b. Provide any additional data on transmission cost components associated with the MiniGrid approach, if applicable.

Response: The following response was provided by Larry Marini, Project Manager at NYPA.

2-a As a requirement for FEMA's $10.7 billion funding obligation, FEMA and COR3 requested from PREPA a work plan, called a 10-Year Infrastructure Plan, to be submitted within 90 days of the funding obligation announcement. This plan would outline PREPA's proposed investments in Puerto Rico's electric systems over the next 10 years. In addition, PREPA is required to update and resubmit this work plan to COR3 and FEMA every 90 days after the initial submission. The 10-Year Infrastructure Plan includes PREPA's assets in the following categories: Transmission, Distribution, Substations, Generation, Hydro, Dams & Irrigation, IT & Telecommunications, Buildings and Environmental.

PREPA's investment strategy for the development of this 10-Year Infrastructure Plan was guided by foundational elements including the development of PREPA's Governing Board Vision Statement, FEMA's Damage Assessment Reports, Puerto Rico's Integrated Resource Plan (IRP), PREPA Certified Fiscal Plan(s), Puerto Rico Energy Public Policy Act 17, Sargent & Lundy's (S&L) T&D Roadmap, Independent Engineer's Reports, and COR3's Grid Modernization Plan.

In addition, a comprehensive analysis was conducted by PREPA and its lead technical advisor, Sargent & Lundy, to ensure all projects included in the plan align with PREPA's IRP and comply with all applicable laws and regulations.

It is important to note that all cost estimates provided in this document are "class 5" estimates. A class 5 cost estimate is one that is prepared at an early stage in the project development process and is expected, based on industry standards, to range from 50% below to 100% above the actual final project cost. Leading industry practice is to revise estimates, so they become more accurate as engineering design progresses and project requirements are solidified.

PREPA will begin in Q1 2021 performing field assessment and A&E design on T&D assets. Once completed, PREPA can provide more accurate estimates.

The list of assets (Transmission lines and substations) listed in the IRP (Exhibits 2-85 to 2-93) needed in support to developed the MiniGrids were part of the 10-Year Infrastructure Plan and as such a "class 5" estimate was prepared and are included in the attached Excel file.

2-b Please find attached an updated class 5 Cost Estimate for the required Transmission system infrastructure in support to MiniGrids development as described in the IRP and summarized in Exhibit 2-93.

3. How would PREPA propose to estimate the value of avoiding MiniGrid transmission costs to a collective set of DER resources providing distributed resiliency? Provide as much specificity in your response as possible, including the specification of which underlying data is required to calculate an avoided cost, and an example of such a computation.

Response: The following response was provided by Nelson Bacalao, principal consultant Siemens PTI.

The procedure that we propose to follow is a simplified version of the co-optimization of transmission and distribution (T&D) and generation that can be used for IRPs. The proposed procedure has the following steps.

1- **Identify the location of the load to be served and resiliency requirements.** In this initial step the load types (Critical or Priority) are identified as well as the minimum time requirement for restauration. This information will include the substation serving the load(s), the feeder serving the load(s) and the expected load levels to be served considering that there is a major event ongoing.
2- **Identify clustering of Critical and Priority loads**. In this step substations (or feeders) serving groups of Critical and Priority demands are identified. These clusters may be candidate for local microgrids as described in the next step.
3- **Formulation of Non Wires Alternative (NWA) solutions**. In this phase a local solution that addresses the reliability need of the loads identified is formulated. For example, if it a cluster of critical loads is located at the distribution level (e.g. a medical center consisting of a number of buildings) a microgrid is proposed including separation points with the utility, internal reinforcement of the distribution system to ensure resiliency and the selection of generation investments considering; a) the reliability needs (time to recover) and b) economics under normal operation. This last assessment typically takes the form of a simplified long term capacity expansion plan (LTCE) where optimal resource investments are identified (PV, diesel generators, storage, etc.). Other investments as is the case of the microgrid controller is identified. For larger clusters of Critical and/or Priority load the microgrid may include various substations at the 38 kV level, in which case the procedure is very similar to the one described for the distribution level, with the difference on the size of the resources.
4- **Formulation of the MiniGrid alternative.** As proposed under the IRP larger utility scale resources are proposed to be added to the system and these resources will be local to the MiniGrid. For these resources to reach the critical and priority loads investments at the transmission level are necessary and include the connection of the generation to the MiniGrid backbone, the connection of the critical load substations to the backbone and in the case of distribution level loads the investments necessary to connect the critical and priority loads to the substations; e.g. undergrounding of facilities. We note that the investments in the backbone and the resilient interconnection of the utility scale generation to the backbone is shared by all the loads in the MiniGrid and hence the design is to be done considering the entire load to be supplied, the location of existing resources and the expected location of the new resources.
5- **Economic Assessment.** In this phase the investments needs for the NWA option for each load cluster (cluster) formulated in step 3 are compared with the investments identified in Step 4 consisting of the sum of a) the individual investments to connect the cluster to the MiniGrid

backbone, b) an allocation of the costs of the MiniGrid backbone to the cluster (typically using the MW ratios) and c) an allocation of the cost of the utility scale generation, if this is to be included as part of the optimization process (i.e. it could be replaced by local resources). As a result of this step for some critical and priority load clusters the NWA may be selected as the preferred option while for other the MiniGrid solution will be selected.

6- **Iteration:** In this last step the MiniGrid design is reviewed considering the reduction in loads that were selected be supplied locally by MWA and the design of the backbone is updated as well if applicable the need for utility scale generation. This step has the potential to increase the cost allocation to the loads that were selected to be supplied by the MiniGrid and in it, it is confirmed that with this added cost the load clusters would still remain part of the MiniGrid instead of being supplied by the NWA option. Typically, this is the case, but if some clusters drop then the design is revised until there is convergency (i.e. all clusters that remained connected to the MiniGrid can economically support its cost).

4. The proposed analytical approach in Appendix A includes (as Table 1) an illustration of the load segmentation approach under consideration by the Energy Bureau. Provide critiques, suggestions, and a technical opinion on the structure and possible metrics to use to produce a load segmentation approach appropriate for Puerto Rico.

Response: The following response was provided by Miguel F. Irizarry Silvestrini, Acting Superintendent, Planning and Research Division and Tomás Vélez Sepúlveda, Manager, Planning and Research Division.

Can the PREB provide information or references regarding the source for the data included in the table. For example, are the values included based on studies? If so, can they be referenced?

The first column of the table is labeled “Essential Facility Category”. Page 9 lists the types of “Essential Service Facilities” defined by Act 17-2019. Some of the facility categories included in the “Customer Type” column (example: residences) are not included in the Essential Facility Category definition. We suggest modifying the label of the first column (and Table Title) in order to reduce potential confusion.

The customer types listed for each Facility Category could be revised. For example, Nursing Homes are included in the Large (1-5 MW) category. Based on our experience, many nursing homes typically interconnect to distribution circuits and are serviced by substations with capacities in the tens to hundreds of kilowatts. Another example is the “dense residential area” customer type, which is grouped under the medium to small (50-250 kW) facility category. Many dense residential areas have

aggregated loads that can reach the megawatt range. We understand that the customer types may not reflect all possible load types, however we recommend reviewing this to prevent confusion.

Consider including additional customer types not listed (example: banks/financial institutions).

5. Provide the current status of the availability, eligibility criteria, and disbursement of FEMA or other federal agency funding for transmission investments.

Response: The following response was provided Maricarmen Rivera Castro, Administrator, Disaster Funding Management Office.

As of the date of this communications, PREPA has a current obligation of $10.7 Billion to perform repairs, replace and restore PREPA's infrastructure damaged by the storm. Current obligation considers a total of $2,642,131,655 assigned to Transmission Investment.

Nonetheless, Federal Grant is subject to section 428 Alternate project methodology which permits the subrecipient to redirect funds from other asset categories to achieve PREPA's intent and over all execution to repair and restore the system.

Current obligation of funds is approved but have yet to be authorized for construction. Current conditions of approval included with in the current obligation state the following:

> "Other than design, planning and non-destructive due diligence studies, no construction nor work should commence prior to the issuance of specific FEMA approval for each incremental amendment. A thorough EHP compliance review will proceed on each proposed scope of work submitted. FEMA EHP review does not relieve the Subrecipient of its responsibility for coordinating, notifying, obtaining permits, and complying with applicable Federal, State, and local laws, regulations, and executive orders. Failure to comply with EHP requirements may jeopardize FEMA funding."

As of the date of this communication PREPA has submitted to FEMA for review and approval the following transmission projects with related subset of costs:

Project #	Title	Process Step	# Damages	Best Available Cost	Best Available Federal Share Cost
165208	165208 FAASt Transmission Access Roads (Transmission)	Pending Formulation Completion	10	15,186,702.60	13,668,032.34
165213	165213 FAASt – Line 5400 – Río Blanco HP to Daguao TC to Punta Lima TO to Vieques 2501 to Culebra 3801 (Transmission)	Pending Initial Project Development	6	73,060,000.00	65,754,000.00
Pending	Transmission - San Juan 115kV Underground Loop - SOW Cost Estimate	Pending FEMA Project Creation	9	10,000,000.00	Pending
Pending	Transmission - Line 37100 - Costa Sur SP to Acacias TC Initial SOW & CE 12-29-20.pdf	Pending FEMA Project Creation	3	91,990,000.00	Pending
Pending	Transmission - Line 50100 - Cambalache GP TC to Manatí TC Initial SOW & CE	Pending FEMA Project Creation	1	43,470,000.00	Pending
Pending	Transmission - Line 51300 - Ponce TC to Costa Sur SP TC	Pending FEMA Project Creation	1	26,080,000.00	Pending

	Initial SOW & CE				
Pending	Transmission - Line 37800 - Jobos TC to Cayey TC to Caguas TC Initial SOW & CE	Pending FEMA Project Creation	2	26,870,000.00	Pending
Pending	Transmission - Line 36200 - Monacillos TC to Juncos TC Initial SOW	Pending FEMA Project Creation	1	42,730,000.00	Pending
Pending	Transmission - Line 37800 TC - Caguas to Monacillos TC Initial SOW & CE	Pending FEMA Project Creation	2	22,370,000.00	Pending
Pending	Transmission - Line 40100 & 40200 - Aguirre SP TC to Jobos TC Initial SOW & CE	Pending FEMA Project Creation	2	15,980,000.00	Pending
Pending	Transmission - Line 36100 - Dos Bocas HP to Monacillos TC Initial SOW & CE	Pending FEMA Project Creation	8	115,490,000.00	Pending

6. Provide the current status of the availability, eligibility criteria, and disbursement of FEMA or other federal agency funding for each of the following utility-scale (connection at or above 38 kV) or distributed resiliency scale (connection below 38 kV) resources addressed as part of the IRP process:

a. Battery energy storage resources (utility scale);
b. Battery energy storage resources (distributed scale);
c. Solar PV (utility scale);
d. Solar PV (distributed scale);
e. Other renewable energy resources (utility scale or distributed scale);
f. Microgrid resources;
g. Utility scale fossil fuel resources;
h. Distributed scale fossil fuel resources.

Response: The following response was provided Maricarmen Rivera Castro, Administrator, Disaster Funding Management Office.

As of the date of this communications, PREPA has a current obligation of $10.7 Billion to perform repairs, replace and restore PREPA's infrastructure damage by the storm. Nonetheless, subrecipients (PREPA), could utilize those funds to perform alternate projects, pre-approved by FEMA, as long as the projects complies with BBA Policy D.1

> "If the Applicant wishes to use these funds toward an Alternate Project, the Alternate Project must still provide a BBA-eligible critical service and must be constructed to an approved industry standard. FEMA will evaluate the proposed use for reasonableness to ensure funds are used in an appropriate manner based on the intent to improve the resiliency of the critical services defined in the BBA [policy]."

Therefore, PREPA currently has yet to submit alternate projects for FEMA's review and approval which includes the utilization of the resources stated above. Nonetheless, PREPA's investment strategy included five investment focus areas designated to ensure all projects included in PREPA's 10 Year Infrastructure plan ("the Plan") aligns with its IRP and comply with all applicable laws and regulations. Please refer to PREPA's 10-year Infrastructure Plan for further details. Furthermore, the Plan within section IV PREPA's Prioritized Infrastructure Projects further details PREPA's prioritization, funding strategy and the Projects IRP reference section.

7. Concerning PREPA's underlying Geographical Information System ("GIS") analysis utilized in developing MiniGrid map Exhibits in the confidential version of Appendix 1 of the filed IRP, provide:

a. Identify the GIS software and the version used.

b. Provide the underlying geospatial data files in ESRI shapefile format for all layers shown in all maps.

c. Provide the source of all geospatial data files listed in (b) above, and whether any files were edited or developed by PREPA.

d. Provide a description (and the associated units, if/as necessary) of each metadata field/column name for each data file.

Response: The following response was provided by Alfonso Baretty Huertas, Director of Planning & Environmental Protection.

7a – 7d - The staff that worked in these files no longer works in the Planning Division thus we have limited access to the raw data that was used. The information provided here is the one used and most recent, to the best of my knowledge.

7a – The version used was ArcGIS / ArcMap 10.6.0.8321

7b & 7c – The files were edited by PREPA in order to show loads, potential upgrades and projects to the transmission and distribution system. The files have been segregated in a Main File (database) and maps based on each of the proposed MiniGrids: Arecibo, Bayamon, Caguas, Carolina, Mayagüez, Ponce and San Juan. Some of these folders have layers for infrastructure and loads; some areas have both consolidated.

8. For the data provided in response to question 7 above:

a. Identify which data elements PREPA considers to be confidential.

b. Provide the explicit rationale for treating any such identified element as confidential data.

Response: The following response was provided by Katiuska Bolaños, Counsel, Diaz & Vázquez Law Firm.

8 a-b - The Authority respectfully submits that responses to questions **1** and **7** are confidential and thus, must remain under seal.

The Supreme Court of Puerto Rico has acknowledged that the right of the citizens in general to have access to public information as a fundamental right of constitutional rank.[1] However, "the right to information is not absolute and will be subject to those limitations that by imperious need the State imposes."[2]

Article 6.15 of the *Puerto Rico Energy Transformation and RELIEF Act*, Act No. 57 of 2014, as amended ("Act 57-2014"), provides that "any person who is required to submit information to the Energy [Bureau] believes that the information to be submitted has any confidentiality privilege, such person may request the [Bureau] to treat such information as such[.]"[3] "If the Energy [Bureau], after the appropriate evaluation, believes such information should be protected, it shall grant such protection in a manner that least affects the public interest, transparency, and the rights of the parties involved in the administrative procedure in which the allegedly confidential document is submitted."[4] If the Energy Bureau determines that the information is confidential, "the information shall be duly safeguarded and delivered exclusively to the personnel of the Energy [Bureau] who needs to know such information under nondisclosure agreements."[5] "The Energy [Bureau] shall swiftly act on any privilege and confidentiality claim made by a person subject to its jurisdiction by means of a resolution to such purposes before any allegedly confidential information is disclosed."[6]

Pursuant to its vested powers, the Energy Bureau approved the Regulation 8543. Regarding the safeguards that the Energy Bureau gives to confidential information, Regulation 8543 provides that:

> [i]f in compliance with the provisions of [Regulation 8543] or any of the Energy Bureau's orders, a person has the duty to disclose to the Energy Bureau information considered to be privileged pursuant to the Rules of Evidence, said person shall identify the allegedly privileged information, request the Energy Bureau the protection of said information, and provide supportive arguments, in writing, for a claim of information of privileged nature. The Energy Bureau shall evaluate the petition and, if it understands the material merits protection,

[1] *Bhatia Gautier v. Gobernador*, 100 D.P.R. 59, at pág. 80
[2] *Id.,* at 81.
[3] 9 L.P.R.A § 1054n.
[4] *Id.,* at § 1054n(a).
[5] *Id.,* at **§ 1054n(**c).
[6] *Id.,* **§ 1054n(**d).

> proceed according to what is set forth in Article 6.15 of Act No. 57-2014, as amended.[7]

Federal and Puerto Rico law and Energy Bureau include multiple provisions and recognitions of critical energy infrastructure information (CEII). Among the definitions that the Federal Energy Regulatory Commission of the Department of Energy of the United States gives to CEII are:

> (3) Critical electric infrastructure means a system or asset of the bulk-power system, whether physical or virtual, the incapacity or destruction of which would negatively affect national security, economic security, public health or safety, or any combination of such matters.
> (4) Critical infrastructure means existing and proposed systems and assets, whether physical or virtual, the incapacity or destruction of which would negatively affect security, economic security, public health or safety, or any combination of those matters.[8]

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 or safety, or any combination of those matters."[9]

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.

A utility is not required to obtain FERC or other federal government approval 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. FERC No. 715 requires that any transmitting utility that operates integrated (non-radial) transmission facilities at or above 100 kV must annually submit information including 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 with the knowledge that, as stated in the Form's Instructions, FERC

[7] Regulation 8543, Sec. 1.15.
[8] 18 C.F.R. § 388.113
[9] 42 U.S.C. § 5195c(e).

"considers the information collected by this report to be Critical Energy Infrastructure Information (CEII) and will treat it as such."[10]

The Authority further states that mainland regulators typically do not require a utility that designates material as CEII to follow any process before the federal government to make or support such a designation, and, further, that the regulator, in its informed discretion, can establish limits on how information that it considers CEII can be accessed.

The Energy Bureau, on numerous occasions in prior dockets has accepted the Authority's designations of material as CEII, recognizing that both federal law and Puerto Rico law support such designations when applicable.

Attachments provided in response to request for information 1(c) includes detailed critical loads and behavior per feeder, such as peak current and maximum load, and their location. Disclosure of this information could open the doors to manipulation of the system, which could in turn lead to affect national security, economic security, public health or safety, or any combination of such matters.

The GIS data produced in response to request for information 7 includes records all the generation and distribution assets of the Authority and reveals a georeferenced information system which has electrical connectivity. This means that the data contains information that would allow a third party to have access to geo-referenced critical infrastructure information that would be as specific as providing the ability to view the exact location of particular customer meter and their account information. In addition, the information includes precise geolocation data of towers, breakers, stations, substations, electrical connectivity -which allows the visualization of where electricity flows- and logistics data of localized and specific infrastructure. The GIS information is considered confidential, since it details the location of critical elements of the system that are used to protect the electrical network (fuses, circuit breakers, reclosers, among others), supply critical loads (hospitals, airports, infrastructure of the Puerto Rico Aqueducts and Sewers Authority, food storage centers, among others) and customer information (*i.e.*, capacities of photovoltaic systems that have private customers installed on their roofs). In addition, GIS data is protected by law since its disclosure represents public safety issues that may result in threats against the Authority, its assets, employees and customers. Third parties with access to GIS data may have the ability to destroy specific infrastructure including localized and precise planning of terrorist attacks to the electrical infrastructure of the government, hospitals, courts, federal buildings, public security agencies, among others.

[10] *See also* 18 C.F.R. § 141.300(d) relating to the Form and CEII.

The Authority respectfully submits that responses to questions **1** and **7** are confidential and thus, must remain under seal.

9. Concerning MiniGrid transmission capital expenditures proposed as part of the MiniGrid approach:

a. If not already answered as part of question 1 above, how would PREPA propose to determine a ranking of the relative value of specific MiniGrid transmission projects for any MiniGrid region, for those projects likely to be an intrinsic part of providing resiliency for connected critical load, and potentially for priority and other balance load?

Response: The following response was provided by Nelson Bacalao, Principal Consultant Siemens PTI.

The procedure proposed in response to question 3 is designed to ensure that the investments in transmission are the preferred solution. However, we agree that a priority needs to be defined and in this case we would consider the level of load whose timely restoration depends on the transmission project to be in service so it can be connected back to the MiniGrid generation. Note that we would recommend to use weights that account for the importance of the load and at least weighs for the critical, priority and balance as was used in the IRP should be used, but also weights developed using the observations in response to question 1(e) could be used as well to increase the granularity.