

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

NEPR Received: Dec 14, 2023 11:16 AM

IN RE:

IN RE: REVIEW OF THE PUERTO RICO
ELECTRIC POWER AUTHORITY'S 10-
YEAR INFRASTRUCTURE PLAN-
DECEMBER 2020

CASE NO. NEPR-MI-2021-0002

**SUBJECT: Motion Submitting One FEMA
Approval of Project, Request for Confidential
Treatment, and Supporting Memorandum of Law**

**MOTION SUBMITTING ONE FEMA APPROVAL OF PROJECT,
REQUEST FOR CONFIDENTIAL TREATMENT AND
SUPPORTING MEMORANDUM OF LAW**

TO THE PUERTO RICO ENERGY BUREAU:

COME NOW LUMA Energy, LLC¹, and LUMA Energy ServCo, LLC², (jointly referred to as "LUMA"), through the undersigned legal counsel and respectfully submits the following:

I. Submittal of FEMA Approval and Request for Confidentiality

1. On March 26, 2021, this Honorable Puerto Rico Energy Bureau ("Energy Bureau") issued a Resolution and Order in the instant proceeding, ordering, in pertinent part, that the Puerto Rico Electric Power Authority ("PREPA") submit to the Energy Bureau the specific transmission and distribution projects ("T&D Projects" or "Projects") to be funded with Federal Emergency Management Agency ("FEMA") funds or any other federal funds at least thirty (30) calendar days prior to submitting these Projects to the Puerto Rico Central Office for Recovery, Reconstruction and Resiliency ("COR3"), FEMA or any other federal agency ("March 26th Order"). It also directed PREPA to continue reporting to the Energy Bureau and FEMA, within the next five years,

¹ Register No. 439372.

² Register No. 439373.

the progress of all ongoing efforts related to the approval of the submitted Projects not yet approved by the Energy Bureau. This Energy Bureau thereafter determined that this directive applied to PREPA and LUMA. *See* Resolution and Order of August 20, 2021.

2. On March 29, 2023, LUMA filed a *Motion Submitting Two Scopes of Work and Updated List of Projects and Request for Confidentiality and Supporting Memorandum of Law* (“March 29th Motion”). In the March 29th Motion, LUMA submitted the “FAASt [Advanced Metering Infrastructure (AMI)] (Telecommunications)” T&D Project for the Energy Bureau’s review and approval prior to submitting them to COR3 and FEMA.

3. On April 5, 2023, the Energy Bureau issued a Resolution and Order (April 5th Order”) whereby it approved the projects submitted in the March 29th Motion, including the “FAASt [Advanced Metering Infrastructure (AMI)] (Telecommunications)” project. *See* April 5th Order at pages 3-4. The Energy Bureau also ordered LUMA to submit a copy of the approval of the Project by COR3 and/or FEMA, which shall contain the costs obligated for each Project within ten (10) days of receiving such approval.

4. In compliance with the April 5th Order, LUMA hereby submits a copy of the Project approval by FEMA issued on December 7, 2023.³ *See Exhibit 1* to this Motion. The document contains FEMA’s approval and includes the cost obligated for the Project.

5. LUMA is submitting herein a redacted public version of the FEMA approval (**Exhibit 1**) protecting confidential information associated with Critical Energy Infrastructure Information (“CEII”). The FEMA approval of the “FAASt [Advanced Metering Infrastructure

³ It is important to note that LUMA acquires knowledge of any FEMA approval for a T&D Project once FEMA makes the information available via its grant portal.

(AMI)] (Telecommunications)” T&D Project is protected from disclosure as CEII, *see, e.g.*, 6 U.S.C. §§ 671-674; 18 C.F.R. §388.113 (2020), and pursuant to the Energy Bureau’s Policy on Management of Confidential Information. *See* Energy Bureau’s Policy on Management of Confidential Information, CEPR-MI-2016-0009, issued on August 31, 2016, as amended by Resolution dated September 20, 2016.

II. Memorandum of Law in Support of Request for Confidentiality

A. Applicable Laws and Regulations to Submit Information Confidentially Before the Energy Bureau

6. The bedrock provision on the management of confidential information filed before this Energy Bureau, is Section 6.15 of Act 57-2014, known as the “Puerto Rico Energy Transformation and Relief Act.” It provides, in pertinent part, that: “[i]f 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 [Energy Bureau] to treat such information as such [...]” 22 LPRA §1054n. If the Energy Bureau determines, after appropriate evaluation, that the 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.” *Id.* §1054n(a).

7. Access to confidential information shall be provided “only to the lawyers and external consultants involved in the administrative process after the execution of a confidentiality agreement.” *Id.* §1054n(b). Finally, Act 57-2014 provides that this Energy Bureau “shall keep the documents submitted for its consideration out of public reach only in exceptional cases. In these cases, 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. However,

the [Energy Bureau] shall direct that a non-confidential copy be furnished for public review.” *Id.* §1054n(c).

8. Relatedly, in connection with the duties of electric power service companies, Section 1.10 (i) of Act 17-2019 provides that electric power service companies shall provide the information requested by customers, except for confidential information in accordance with the Rules of Evidence of Puerto Rico.

9. Moreover, the Energy Bureau’s Policy on Management of Confidential Information details the procedures a party should follow to request that a document or portion thereof be afforded confidential treatment. In essence, the referenced Policy requires identifying confidential information and filing a memorandum of law explaining the legal basis and support for a request to file information confidentially. *See* CEPR-MI-2016-0009, Section A, as amended by the Resolution of September 20, 2016, CEPR-MI-2016-0009. The memorandum should also include a table that identifies the confidential information, a summary of the legal basis for the confidential designation, and why each claim or designation conforms to the applicable legal basis of confidentiality. *Id.* at ¶ 3. The party who seeks confidential treatment of information filed with the Energy Bureau must also file both a “redacted” or “public version” and an “unredacted” or “confidential” version of the document that contains confidential information. *Id.* at ¶ 6.

10. The Energy Bureau’s Policy on Management of Confidential Information states the following with regard to access to validated Trade Secret Information and CEII:

1. Trade Secret Information
Any document designated by the [Energy Bureau] as Validated Confidential Information because it is a trade secret under Act 80-2011 may only be accessed by the Producing Party and the [Energy Bureau], unless otherwise set forth by the [Energy Bureau] or any competent court.

2. Critical Energy Infrastructure Information (“CEII”)

The information designated by the [Energy Bureau] as Validated Confidential Information on the grounds of being CEII may be accessed by the parties’ authorized representatives only after they have executed and delivered the Nondisclosure Agreement.

Those authorized representatives who have signed the Non-Disclosure Agreement may only review the documents validated as CEII at the [Energy Bureau] or the Producing Party’s offices. During the review, the authorized representatives may not copy or disseminate the reviewed information and may bring no recording device to the viewing room.

Id. at § D (on Access to Validated Confidential Information).

11. Regulation No. 8543, *Regulation on Adjudicative, Notice of Noncompliance, Rate Review, and Investigation Proceedings*, also includes a provision for filing confidential information in proceedings before this Energy Bureau. To wit, Section 1.15 provides that “a person has the duty to disclose information to the [Energy Bureau] 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 [that] the material merits protection, proceed according to [...] Article 6.15 of Act No. 57-2015, as amended.” *See also* Energy Bureau Regulation No. 9137 on *Performance Incentive Mechanisms*, § 1.13 (addressing disclosure before the Energy Bureau of Confidential Information and directing compliance with Resolution CEPR-MI-2016-0009).

B. Request for Confidentiality

12. The FEMA approval with CEII included in **Exhibit 1** contains portions of CEII that, under relevant federal law and regulations, are protected from public disclosure. LUMA

stresses that the FEMA approval with CEII warrants confidential treatment to protect critical infrastructure from threats that could undermine the system and negatively affect electric power services to the detriment of the interests of the public, customers, and citizens of Puerto Rico. In several proceedings, this Energy Bureau has considered and granted requests by PREPA to submit CEII under seal of confidentiality.⁴ In at least two proceedings on Data Security,⁵ and Physical Security,⁶ this Energy Bureau, *motu proprio*, has conducted proceedings confidentially, thereby recognizing the need to protect CEII from public disclosure.

13. Additionally, this Energy Bureau has granted requests by LUMA to protect CEII in connection with LUMA's System Operation Principles. *See* Resolution and Order of May 3, 2021, table 2 on page 4, Case No. NEPR-MI-2021-0001 (granting protection to CEII included in LUMA's Responses to Requests for Information). Similarly, in the proceedings on LUMA's proposed Initial Budgets and System Remediation Plan, this Energy Bureau granted confidential designation to several portions of LUMA's Initial Budgets and Responses to Requests for Information. *See* Resolution and Order of April 22, 2021, on Initial Budgets, table 2 on pages 3-4, and Resolution and Order of April 22, 2021, on Responses to Requests for Information, table 2 on

⁴ *See e.g., In re Review of LUMA's System Operation Principles*, NEPR-MI-2021-0001 (Resolution and Order of May 3, 2021); *In re Review of the Puerto Rico Power Authority's System Remediation Plan*, NEPR-MI-2020-0019 (order of April 23, 2021); *In re Review of LUMA's Initial Budgets*, NEPR-MI-2021-0004 (order of April 21, 2021); *In re Implementation of Puerto Rico Electric Power Authority Integrated Resource Plan and Modified Action Plan*, NEPR MI 2020-0012 (Resolution of January 7, 2021, granting partial confidential designation of information submitted by PREPA as CEII); *In re Optimization Proceeding of Minigrad Transmission and Distribution Investments*, NEPR-MI 2020-0016 (where PREPA filed documents under seal of confidentiality invoking, among others, that a filing included confidential information and CEII); *In re Review of the Puerto Rico Electric Power Authority Integrated Resource Plan*, CEPR-AP-2018-0001 (Resolution and Order of July 3, 2019 granting confidential designated and request made by PREPA that included trade secrets and CEII. However, *see* Resolution and Order of February 12, 2021, reversing in part, grant of confidential designation).

⁵ *In re Review of the Puerto Rico Electric Power Authority Data Security Plan*, NEPR-MI-2020-0017.

⁶ *In re Review of the Puerto Rico Electric Power Authority Physical Security Plan*, NEPR-MI-2020-0018.

pages 8-10, Case No. NEPR-MI-2021-0004; Resolution and Order of April 23, 2021, on Confidential Designation of Portions of LUMA's System Remediation Plan, table 2 on page 5, and Resolution and Order of May 6, 2021, on Confidential Designation of Portions of LUMA's Responses to Requests for Information on System Remediation Plan, table 2 at pages 7-9, Case No. NEPR-MI-2020-0019.

14. Similarly, the Energy Bureau has granted LUMA's requests for confidential treatment of portions of SOWs submitted for approval in the present case. Notably, the Energy Bureau designated portions of SOWs as confidential CEII in its Resolution and Order of February 22, 2023, *see* Table 1 on page 3, Resolution and Order of April 5, 2023, *see* Table 1 on page 4, and Resolution and Order of May 5, 2023, *see* table 1 at page 3. Likewise, the Energy Bureau has granted LUMA's request for confidential treatment of portions of FEMA Approvals of Projects submitted for consideration and authorization. Recently, the Energy Bureau designated portions of submitted FEMA Approvals of Projects as confidential CEII in its Resolution and Order of March 20, 2023; *see* Table 1 on pages 1-2.

15. As mentioned above, the Energy Bureau's Policy on Management of Confidential Information provides for the management of CEII. It directs that the parties' authorized representatives access information validated as CEII only after executing and delivering a Non-Disclosure Agreement.

16. Generally, CEII or critical infrastructure information is exempted from public disclosure because it involves assets and information which pose public security, economic, health, and safety risks. Federal Regulations on CEII, particularly, 18 C.F.R. § 388.113, state that:

Critical energy infrastructure information means specific engineering, vulnerability, or detailed design information about proposed or existing critical infrastructure that:

- (i) Relates details about the production, generation, transportation, transmission, or distribution of energy;
- (ii) Could be useful to a person in planning an attack on critical infrastructure;
- (iii) Is exempt from mandatory disclosure under the Freedom of Information Act, 5 U.S.C. 552; and
- (iv) Does not simply give the general location of the critical infrastructure.

Id.

17. Additionally, “[c]ritical 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. *Id.* Finally, “[c]ritical 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.” *Id.*

18. The Critical Infrastructure Information Act of 2002, 6 U.S.C. §§ 671-674 (2020), part of the Homeland Security Act of 2002, protects critical infrastructure information (“CII”).⁷

⁷ Regarding protection of voluntary disclosures of critical infrastructure information, 6 U.S.C. § 673, provides in pertinent part, that CII:

- (A) shall be exempt from disclosure under the Freedom of Information Act;
- (B) shall not be subject to any agency rules or judicial doctrine regarding ex parte communications with a decision-making official;
- (C) shall not, without the written consent of the person or entity submitting such information, be used directly by such agency, any other Federal, State, or local authority, or any third party, in any civil action arising under Federal or State law if such information is submitted in good faith;
- (D) shall not, without the written consent of the person or entity submitting such information, be used or disclosed by any officer or employee of the United States for purposes other than the purposes of this part, except—
 - (i) in furtherance of an investigation or the prosecution of a criminal act; or
 - (ii) when disclosure of the information would be--

CII is defined as “information not customarily in the public domain and related to the security of critical infrastructure or protected systems [...]” 6 U.S.C. § 671 (3).⁸

19. The FEMA approval with CEII in **Exhibit 1** qualifies as CEII because each of these documents contains the express coordinates to power transmission and distribution facilities (18 C.F.R. § 388.113(iv)), and these specific coordinates could potentially be helpful to a person planning an attack on the energy facilities listed as part of this FEMA approval. The information identified as confidential in this paragraph is not common knowledge and is not made publicly

(I) to either House of Congress, or to the extent of matter within its jurisdiction, any committee or subcommittee thereof, any joint committee thereof or subcommittee of any such joint committee; or

(II) to the Comptroller General, or any authorized representative of the Comptroller General, in the course of the performance of the duties of the Government Accountability Office

(E) shall not, be provided to a State or local government or government agency; of information or records;

(i) be made available pursuant to any State or local law requiring disclosure of information or records;

(ii) otherwise be disclosed or distributed to any party by said State or local government or government agency without the written consent of the person or entity submitting such information; or

(iii) be used other than for the purpose of protecting critical Infrastructure or protected systems, or in furtherance of an investigation or the prosecution of a criminal act.

(F) does not constitute a waiver of any applicable privilege or protection provided under law, such as trade secret protection.

⁸ CII includes the following types of information:

(A) actual, potential, or threatened interference with, attack on, compromise of, or incapacitation of critical infrastructure or protected systems by either physical or computer-based attack or other similar conduct (including the misuse of or unauthorized access to all types of communications and data transmission systems) that violates Federal, State, or local law, harms interstate commerce of the United States, or threatens public health or safety;

(B) the ability of any critical infrastructure or protected system to resist such interference, compromise, or incapacitation, including any planned or past assessment, projection, or estimate of the vulnerability of critical infrastructure or a protected system, including security testing, risk evaluation thereto, risk management planning, or risk audit; or

(C) any planned or past operational problem or solution regarding critical infrastructure or protected systems, including repair, recovery, construction, insurance, or continuity, to the extent it is related to such interference, compromise, or incapacitation.

available. Therefore, it is respectfully submitted that, on balance, the public interest in protecting CEII weighs in favor of protecting the relevant portions of the FEMA approval with CEII in **Exhibit 1** from disclosure, given the nature and scope of the details included in those portions of the Exhibit.

20. Based on the above, LUMA respectfully submits that the FEMA approval with CEII should be designated as CEII. This designation is a reasonable and necessary measure to protect the specific location of the energy facilities listed or discussed in this FEMA approval in **Exhibit 1**. Given the importance of ensuring the safe and efficient operation of the generation assets and the T&D System, LUMA respectfully submits that these materials constitute CEII that should be maintained confidentially to safeguard their integrity and protect them from external threats.

C. Identification of Confidential Information

21. In compliance with the Energy Bureau’s Policy on Management of Confidential Information (CEPR-MI-2016-0009) below, find a table summarizing the portions of that FEMA approval for which we present this request for confidential treatment.

Document	Name	Pages in which Confidential Information is Found, if applicable	Summary of Legal Basis for Confidentiality Protection, if applicable	Date Filed
Exhibit 1	FAASt [Advanced Metering Infrastructure (AMI)] (Telecommunications)	Pages 1 and 11.	Critical Energy Infrastructure Information, 18 C.F.R. § 388.113;	December 14, 2023

Document	Name	Pages in which Confidential Information is Found, if applicable	Summary of Legal Basis for Confidentiality Protection, if applicable	Date Filed
			6 U.S.C. §§ 671-674.	

WHEREFORE, LUMA respectfully requests that the Energy Bureau **take notice** of the aforementioned; **accept** the copy of the FEMA approval attached herein as **Exhibit 1**; and **grant** the request for confidential treatment of **Exhibit 1**.

RESPECTFULLY SUBMITTED.

We hereby certify that we filed this motion using the electronic filing system of this Energy Bureau. We will send an electronic copy of this motion to PREPA’s General Counsel, Lionel Santa, lionel.santa@prepa.pr.gov, and to Genera PR LLC, through its counsel of record, Jorge Fernández-Reboredo, jfr@sbglaw.com and Alejandro López Rodríguez, alopez@sbglaw.com

In San Juan, Puerto Rico, on this 14th day of December 2023.



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Exhibit 1

One (1) FEMA Approval

Department of Homeland Security Federal Emergency Management Agency

General Info

Project #	714654	PW #	11583	Project Type	Specialized
Project Category	F - Utilities	Applicant	PR Electric Power Authority (000-UA2QU-00)	Event	4339DR-PR (4339DR)
Project Title	FAASt [Advanced Metering Infrastructure (AMI)] (Telecommunications)		Declaration Date	9/20/2017	
Project Size	Large	Incident Start Date	9/17/2017		
Activity Completion Date	9/20/2027	Incident End Date	11/15/2017		
Process Step	Obligated				

Damage Description and Dimensions

The Disaster # 4339DR, which occurred between 09/17/2017 and 11/15/2017, caused:

Damage #1317761; FAASt [Islandwide smart kWh meters]

DDD for this facility codified in the 136271 - MEPA078 Puerto Rico Electrical Power Authority Island Wide FAASt Project.

General Facility Information:

- **Facility Type:** Power generation, transmission, and distribution facilities
- **Facility:** Islandwide smart kWh meters
- **Facility Description:** Advanced Metering Infrastructure (AMI), which is a two-way communication system to collect detailed metering information throughout a utility's service territory. AMI consists of smart meters, a digital communications network (DCN), a head-end system, and a meter data management system (MDMS).
- **Approx. Year Built:** 1970
- **GPS Latitude/Longitude:** [REDACTED]

General Damage Information:

- **Date Damaged:** 9/20/2017
- **Cause of Damage:** High winds & wind driven rain, caused by Cat 4 Hurricane Maria

Final Scope

1317761 FAASt [Islandwide smart kWh meters]

Introduction

The purpose of this document is to submit for approval the Detailed Scope of Work (SOW) to COR3 and FEMA for the Advanced Metering Infrastructure (AMI) under DR-4339-PR Public Assistance. The document provides a description of the project including scope, schedule, and cost estimates as well as In-Scope Environmental & Historical Preservation requirements and proposed 406 hazard mitigation work. LUMA Energy is seeking approval from COR3 and FEMA for project funding to repair, replace, and upgrade the eligible island-wide facilities for all secondary feeder terminations at energy point of delivery.

LUMA submits this Detailed SOW pursuant to the T&D O&M Agreement between Puerto Rico, Puerto Rico Electric Power Authority ("PREPA"), the Puerto Rico Public-Private Partnerships Authority ("P3A") and LUMA Energy, and in accordance with the Consent to Federal Funding Letter issued by PREPA and P3A and provided herein as Attachment E which collectively provides the necessary consent for LUMA Energy, as agent of PREPA, to undertake work in connection with any Federal Funding requests related to the T&D System submitted to FEMA.

As per PREB approval on resolution and order dated August 25, 2022. The purpose of this document is to present and update Detailed Scope of Work (DSOW) with Cost Estimates to COR3 and FEMA for the Advanced Metering Infrastructure Project under DR-4339-PR Telecommunication

System. The completed document will be reviewed by COR3 and FEMA to create and version a specific project worksheet and post fixed-cost estimates to repair, restore, or replace eligible facilities including Section 406 hazard mitigation for a specific project.

LUMA Energy provides the Operations and Maintenance of the electric service to the entire island of Puerto Rico. Puerto Rico Electric Power Authority (PREPA) is the agency that owns the facilities, sites, and systems identified in this Scope of Work that are eligible as critical services facilities as defined in the PAAP (Section 428) and BBA 2018 guidance documents.

Executive Summary

Advanced Metering Infrastructure (AMI)

Puerto Rico's power grid has been compromised due to severe weather events and aging and historically under-maintained infrastructure. To address these issues, various programs and goals are planned or in place to improve reliability, resiliency, decarbonization efforts, and customer service/societal benefits. Reliable system data from all devices, sensors, and assets that can share intelligence and provide actionable results can support equitable, sustainable, and reliable electricity for all of Puerto Rico. This DSOW aims to fill that gap by adding communications, adding sensors at the end customer location, utilizing existing programs, and developing a near real-time system model through advanced analytics.

The outcome will be a grid modernization utilizing the grid of the future solution that provides communication access for distribution assets and sensors to monitor real-time grid power flow and capacity, advanced analytics to proactively manage and mitigate grid system challenges, and the agility to accept innovative grid technologies. Ensuring reliable grid operations by reducing the frequency, scale, and/or duration of disruptions, reducing capacity interconnection time, increasing regional and interregional transfer capacity, or reducing costs associated with increased reliability. Enhancing collaboration between and among eligible entities and private and public sector owners and operators on grid resilience, including alignment with regional resilience strategies and plans.

Facilities

Facilities List

Name	Number	Location
Metering units (damaged)	36,394	Island Wide
Island wide Two-Way Automatic Communications Systems (TWACS) kWh meter PLC Comms module	2,299	Island Wide
Total new point of energy delivery meters	1,446,249	Island Wide

This project is part of the breakdown division for Telecommunication, Energy Management System (EMS) and Grid Automation Programs which impact each of the 78 municipalities. Characteristics are defined to serve as grid interactive and parameter metering edge points at secondary feeders replacing damaged, legacy, and obsolete devices.

PREPA identified the following damages resulting from Hurricane Maria:

- 36,394 metering units (damaged) to be replaced and upgraded.
- 209 concentrators (remote reading system) to be replaced and upgraded.
- 2,299 legacy Island wide Two-Way Automatic Communications Systems.
- (TWACS) kWh meter to be replaced and upgraded.
- 1,446,249 island wide obsolete meters to be replaced and upgraded.

Island wide there are approximately 98% residential or commercial single phase bidirectional and 2% three phase commercial or industrial point of energy delivery metering devices that form approximately 1.5 million delivery points in the distribution grid. A new island wide digital communications network will allow the operation and monitoring of the new smart meter devices (see Attachment A. AMI Architecture) delivering data information vital to management of the grid through different EMS modules and subsystems. Smart meters collect data from the delivery point and provide subsets of the data to different Energy Management System (EMS) submodules (e.g., ADMS, DERMS). The EMS collects the data from the Smart Meters for monitoring, grid interaction and analysis purposes. Additionally, the EMS can send signals or commands to the Smart Meters to control the edge load of the respective site for operational decision (e.g., Demand Response, Black start).

The Advanced Metering Infrastructure Project includes a Head End system and monitoring console located at the Grid Control Centers for daily operations, along with a Meter Data Management platform that will enable additional functionality and applications.

Due to the damage caused by Hurricane Maria the system requires the replacement of the existing point of delivery meters deemed obsolete as well as remote read legacy meters. The system interdependency between the Advanced Meter Infrastructure and the EMS submodules requires all remaining point of delivery metering devices to be replaced. Interdependency includes the latest industry cyber security standards and architectures.

A small number of new Smart Meters, called a "Meter Farm", will also be used as part of operational technology functionality for interoperability and integration with the new systems and telecom network.

In this environment, LUMA will include meters, meter boards, recloser control units, load control devices, fault circuit indicators, and other smart grid assets. A regression test environment will also be built inclusive of a meter farm with outdoor meter fixtures necessary for testing releases of firmware from the selected solutions providers to test for proper function of new releases and utility changes in meter programming before being released to the field devices. The project will also include community education to ensure that the impacts of this project are understood, and training for personnel, including internal communications, to execute the work.

To fulfill the requirement in LUMA's Operational Maintenance Agreement (OMA) for a Quality Management System (QMS) for metering, it is required that a meter asset management system be procured and put in place as a part of this program. This system will provide required meter testing equipment fixtures and the software that manages the test equipment and archives the results. It will also allow for the collection and storage of results from field test equipment. These results are required for regulatory compliance and for effective meter operations. Lot identification, periodic testing schedules and accuracy tests are key to the QMS and the solution to provide this ability is a part of the DSOW.

A list of regions and primary grid functionality of the point of delivery smart metering devices to be replaced can be found in Attachment B.

System Description

Advanced Metering Infrastructure (AMI) is a two-way communication system to collect detailed metering information throughout a utility's service territory. AMI consists of smart meters (SM), a digital communications network (DCN), a head-end system (HE), a meter data management system (MDM) and an Emergency Management System Customer Portal (EMSCP).

With AMI, utilities leverage the customer edge metering devices, typically used for reading consumption, to proactively manage and control key aspects of the distribution grid remotely using Wideband communications from the Field Area Network (FAN) [Under a separate program] and the vendors' data collection network (NAN) typically licensed in UHF or ISM Band, depending on the selected solution. This Radio Frequency (RF) based 2-way network communication delivers crucial data from the customer edge metering devices to the concentrator devices at the distribution level and into the substation where high speed backhaul is available. The DCN collectors or repeaters are primarily installed on existing utility poles.

Using modern analytics and predictive science allows monitoring, automating, and controlling the grid, enabling unbalance mitigating self-healing capabilities. AMI and Distribution Automation (DA) converge via the ability to monitor and control DA devices through AMI's communication network to ADMS and DERMS.

The availability of high-speed low latency secure data service for connected smart meters utilizing high performance, IP-based narrowband or wideband networks present numerous opportunities for the grid operator by taking advantage of newly developed applications for the AMI's smart edge metering devices.

The Digital Communication Network (DCN) would be deployed across the entire distribution system connected into the FAN which also incorporate distribution assets E.g., Fault- current indicators, demand response units, remote terminal units, reclosers, microgrids, power electronics.

The DCN and FAN connected distribution assets provide grid wide critical data to the Energy Management System (EMS), (including the Distributed Energy Management System (DERMS), and the Advanced Distribution Management System (ADMS)), with intelligence previously

unavailable in the grid.

The OMS' ability to detect and locate power outages is DFKLHYHG by placing AMI smart meters at every customer location and providing communications to distribution assets. This will DGGUHVV grid instability, and nested outages, reducing the demands on federally funded resources to restore power to critical infrastructure during emergencies.

AMI must communicate with upwards of 15 existing systems for which LUMA is responsible (e.g., Distribution Management System, Outage Management System). This will be accomplished by integrating the existing IT systems architectures of ADMS, EMS, OMS, and other capabilities with the data provided by AMI smart meters together with other distribution asset data flows. Doing so requires the development and deployment of a complex AMI system architecture that integrates the subsets of AMI (e.g., DCN, MDM) as well as interfaces to allow it to communicate with the other existing IT systems. Advanced Analytics with Machine Learning (AAML) will process this large volume of data and use machine learning algorithms to provide actionable tasks that can be either manually or automatically executed by the grid operator. AAML predictive algorithms will improve the detection of problem areas where mitigation efforts are required. Results derived from the meters communication and sensor data allow the grid operator to compute performance metrics such as System Average Interruption Duration Index (SAIDI) / System Average Interruption Frequency Index (SAIFI) on a municipality and feeder basis accurately. This real time analysis allows the grid operator to evaluate mitigation options such as installing additional distribution assets, improving vegetation clearance, or performing other measures to address reliability issues.

System Benefits

For the community, AMI offers numerous advantages, including the following:

- A. AMI communication significantly improves outage detection, restoration, and outage time reduction. Importantly, this can not only reduce outage duration but provide more accurate estimated outage time to affected customers.
- B. AMI will enable improved system operation, metrics, and situational awareness (e.g., ensuring the distribution grid operates as it should) during abnormal situations or severe weather events.
- C. AMI enhances customer safety by using smart meter data, such as alerts and voltage data, to detect safety issues relating to customer meters and power connections (e.g., hot sockets and fallen wires). In such cases, AMI alerts affected customers and the utility, who can quickly dispatch a crew as needed.
- D. AMI facilitates integrating microgrids and DER. AMI data will provide a view of the capacity for challenged or underserved areas and provide optimal DER interconnection points, reduce energy demand related outages, and support possible islanding of energy during critical peak periods or weather-related events, enhancing resiliency. This will also help us meet policy objectives at the Puerto Rico and federal levels (e.g., DOE's PR 100 initiative).
- E. DCNs, regardless of the technology, are reliable, redundant, battery-backed, self-configuring and healing, and allow for visibility to field devices after events or storms where the distribution grid has been affected. The networks will also support the ability to migrate to new standards as they become available allowing the utility to utilize microgrid networks to restore power utilizing alternate energy providers on the island.

High-level overview of the components in an AMI solution. Components include:

- Meters
- Digital Communications Network
- AMI Head End Software Servers
- Security Modules
- Integration to existing and future systems, (e.g., Meter Asset Management, Work Order Management System (WOMS), Meter Data Management, CIS, OMS, GIS, ADMS, DERMS)

Additional information can be found in:

Attachment C - AMIDetailedTechnicalDocument

Project Scope of Work

The scope of the work consists of the planning, design, procurement, and implementation of new AMI system infrastructure, including replacement of meters and telecom system damaged by Hurricane Maria.

Proposed 428 Public Assistance Scope of Work

Base AMI field installation:

The scope of work for this project is derived from the Telecommunication and IT estimating package. A quantity of 36,394 metering kWh units were damaged due to Hurricane Maria. An additional quantity of 2,299 legacy Island wide Two-Way Automatic Communications Systems (TWACS) kWh meters and 209 concentrators were damaged as well. The existing system includes a total of 1,446,249 meters that will be replaced and brought up to codes & standards with a functionality of modern metering and communications systems.

Environmental and historical preservation considerations for the project will be identified and evaluated during the design phase and submitted to FEMA for review. Requirements will be incorporated into the final design to be approved by FEMA prior to implementation.

The AMI implementation does not involve the construction of any facilities and / or any land disturbances outside of PREPA property. Therefore, the EHP considerations are focused on the disposal of existing legacy equipment that will be replaced as part of the project. Disposal of equipment will be in accordance with standard LUMA Energy environmental practices and procedures - 0315 Waste Management, 0316 Waste Classification and Disposal and LUMA Waste Management Plan for Projects.

EHP Staging Areas

LUMA's Advanced Metering Infrastructure will follow the company's Health, Safety, Environment and Quality (HSEQ) Policy and Manual. All activities as proposed in this scope of work will comply with policies and best industry practices.

As part of the environmental compliance, we have defined the following existing indoor staging areas on impacted warehouses for both decommissioned as well as new equipment to be installed.

These locations will work as warehouses along with those regional existing warehouses from the vendor to be selected through competitive process. We will deploy from warehouse to location. We will collect legacy equipment to existing warehouses for scrap or recycling per approved manual.

Project Estimate

The estimated costs (Class 3 Accuracy +/-30%) to complete the project are captured in the below table.

The cost estimate was developed utilizing preliminary Architectural and Engineering design information and may be subject to change. LUMA has identified risks and allowances (10% of project cost) for the mitigation of potential known risks.

LUMA PROJECT COST ESTIMATE (LPCE)	
Cost Element	428

PLANNING	\$ 709,293
Environmental Documentation & Management (A&E FAASSt 335168)	\$ 250,339
Engineering Services & Design (A&E FAASSt 335168)	\$ 458,954
MANAGEMENT	\$ 3,195,991
Project Management (A&E FAASSt 335168)	\$ 834,462
Construction Management (A&E FAASSt 335168)	\$ 1,668,925
Contracting, Procurement & Contract Administration (A&E FAASSt 335168)	\$ 83,446
Projects Controls (Scheduling, Estimating, Support, Cost Control, Risk, Document Control & Reporting) (A&E FAASSt 335168)	\$ 584,124
Legal (A&E FAASSt 335168)	\$ 12,517
Finance & Accounting (A&E FAASSt 335168)	\$ 12,517
AMI Project SW & IT HW	\$834,211,942
AMI Project SW & IT HW material, labor, and equipment	\$ 832,543,018
Start Up / Commissioning	\$ 1,084,801
Transportation Expenses	\$ 584,124
Contingency	\$ 39,636,958
Contingency	\$ 12,516,934
Escalation	\$ 25,033,868
Overhead	\$ 2,086,156
Total Estimated Cost	\$ 877,754,184

Work To Be Completed (WTBC):	\$877,754,184
A&E Deduction (Global A&E FAASSt 335168):	-\$3,905,283
Project Total Cost:	\$873,848,901

Project Notes:

1. Refer to detailed SOW provided in document labeled: "714654-DR4339PR-DSOW-AMI-11.15.23 Revised - signed.pdf"
2. For reference documents Appendix A thru F.
3. For EHP Requirements, refer to page 11 of the detailed SOW.
4. This project is part of a FAASSt project, please reference project 136271.
5. Architectural and Engineering (A&E) costs are deducted given previously obligated Global A&E Project for the subject FAASSt PREPA work (see project: 335158 - FAASSt A&E PREPA).

406 HMP Scope

As per applicant request, the initial version of the Advance Meeting Infrastructure project will be obligated using PA 428 funds only. A future version (1) will include PA 406 funds as identified on the Hazard Mitigation proposal and identified in the attached documents and Hazard Mitigation Cost

Estimate.

Cost

Code	Quantity	Unit	Total Cost	Section
3510 (Engineering And Design Services (Global A&E FAASSt 335168))	1.00	Lump Sum	(\$3,905,283.00)	Uncompleted
9001 (Contract (FAASSt project 136271-Total Cost Estimate))	1.00	Lump Sum	\$877,754,184.00	Uncompleted

CRC Gross Cost \$873,848,901.00

Total 406 HMP Cost \$0.00

Total Insurance Reductions \$0.00

CRC Net Cost \$873,848,901.00

Federal Share (90.00%) \$786,464,010.90

Non-Federal Share (10.00%) \$87,384,890.10

Award Information

Version Information

Version #	Eligibility Status	Current Location	Bundle Number	Project Amount	Cost Share	Federal Share Obligated	Date Obligated
0	Eligible	Awarded	PA-02-PR-4339-PW-11583(14529)	\$873,848,901.00	90 %	\$786,464,010.90	12/7/2023

Drawdown History

EMMIE Drawdown Status As of Date	IFMIS Obligation #	Expenditure Number	Expended Date	Expended Amount
No Records				

Obligation History

Version #	Date Obligated	Obligated Cost	Cost Share	IFMIS Status	IFMIS Obligation #
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Subgrant Conditions

- As described in Title 2 Code of Federal Regulations (C.F.R.) § 200.333, financial records, supporting documents, statistical records and all other non-Federal entity records pertinent to a Federal award must be retained for a period of three (3) years from the date of submission of the final expenditure report or, for Federal awards that are renewed quarterly or annually, from the date of the submission of the quarterly or annual financial report, respectively, as reported to the Federal awarding agency or pass-through entity in the case of a subrecipient. Federal awarding agencies and pass-through entities must not impose any other record retention requirements upon non-Federal entities. Exceptions are stated in 2 C.F.R. §200.333(a) – (f)(1) and (2). All records relative to this project are subject to examination and audit by the State, FEMA and the Comptroller General of the United States and must reflect work related to disaster-specific costs.
- In the seeking of proposals and letting of contracts for eligible work, the Applicant/Subrecipient must comply with its Local, State (provided that the procurements conform to applicable Federal law) and Federal procurement laws, regulations, and procedures as required by FEMA Policy 2 CFR Part 200, Procurement Standards, §§ 317-326.
- The Recipient must submit its certification of the subrecipient's completion of this project, the final claim for payment, and supporting documentation within 180 days from the date that the applicant completes the scope of work, or the project deadline, whichever occurs first. FEMA reimburses Large Projects (those with costs above the large project threshold) based on the actual eligible final project costs. Therefore, during the final project reconciliation (closeout), the project may be amended to reflect the reconciliation of actual eligible costs.
- When any individual item of equipment purchased with PA funding is no longer needed, or a residual inventory of unused supplies exceeding \$5,000 remains, the subrecipient must follow the disposition requirements in Title 2 Code of Federal Regulations (C.F.R.) § 200.313-314.
- The terms of the FEMA-State Agreement are incorporated by reference into this project under the Public Assistance award and the applicant must comply with all applicable laws, regulations, policy, and guidance. This includes, among others, the Robert T. Stafford Disaster Relief and Emergency Assistance Act; Title 44 of the Code of Federal Regulations; FEMA Policy No. 104-009-2, Public Assistance Program and Policy Guide; and other applicable FEMA policy and guidance.
- The DHS Standard Terms and Conditions in effect as of the declaration date of this emergency declarations or major disaster, as applicable, are incorporated by reference into this project under the Public Assistance grant, which flow down from the Recipient to subrecipients unless a particular term or condition indicates otherwise.
- The Uniform Administrative Requirements, Cost Principles, and Audit Requirements set forth at Title 2 Code of Federal Regulations (C.F.R.) Part 200 apply to this project award under the Public Assistance grant, which flow down from the Recipient to all subrecipients unless a particular section of 2 C.F.R. Part 200, the FEMA-State Agreement, or the terms and conditions of this project award indicate otherwise. See 2 C.F.R. §§ 200.101 and 110.
- The subrecipient must submit a written request through the Recipient to FEMA before it makes a change to the approved scope of work in this project. If the subrecipient commences work associated with a change before FEMA approves the change, it will jeopardize financial assistance for this project. See FEMA Policy No. 104-009-2, Public Assistance Program and Policy Guide.
- The Subrecipient provided the estimate for this PW. FEMA validated the estimate and found it to be reasonable for the work to be performed.
- Pursuant to section 312 of the Stafford Act, 42 U.S.C. 5155, FEMA is prohibited from providing financial assistance to any entity that receives assistance from another program, insurance, or any other source for the same work. The subrecipient agrees to repay all duplicated assistance to FEMA if they receive assistance for the same work from another Federal agency, insurance, or any other source. If an subrecipient receives funding from another federal program for the same purpose, it must notify FEMA through the Recipient and return any duplicated funding.

Insurance

Additional Information

11/21/2023

GENERAL INFORMATION

Event: DR4339-PR

Project: SP 714654

Category of Work: Cat F - Utilities

Applicant: PR Electric Power Authority

Event Type: Hurricane / Hurricane Maria

Cause of Loss: Wind / Wind Driven Rain

Incident Period: 9/17/2017 to 11/15/2017

Total Public Assistance Amount: \$873,848,901.00

COMMERCIAL INSURANCE INFORMATION

Does the applicant have a Commercial Policy that extends coverage for this facility: Yes

Policies Issued by: Willis Towers Watson, Multinational Insurance Company and Mapfire

Policy Numbers: Willis Towers Watson (B0804Q1966F17, B0804Q14312F17, B0804Q19673F17, B0804Q19672F17, B0804Q18529F17, B0804Q14312F17, B0804Q19674F17, B0804Q18411F17, B0804Q14310F17, B0804Q11038F17, B0804Q14507F17, B0804Q14312F17)

Mapfire Praico Insurance Company (1398178000644)

Multinational Insurance Company (88-CP-000307831-2, 88-CP-000318673-0, 88-CP000318674-0, 88-CP-000318675-0, 88-CP-000318676-0, 88-CP-000318677-0)

Policy Period: From: 5/15/2017 To: 5/15/2018

Policy Limits: \$300,000,000.00

RCV or ACV: Replacement Cost Value

Deductible Amount \$25,000,000.00 each and every occurrence property damage and 30 days each and every occurrence business interruption in respect of Named Windstorm

Does the Applicant's Commercial Policy extend coverage for the damage described in this project: No

NUMBER OF DAMAGED LOCATIONS INCLUDED IN THIS PROJECT: (1)

Damaged Inventory (DI) #1317761:

FAAST [Islandwide smart kWh meters]

Location Description: Islandwide smart kWh meters

GPS Coordinates: XXXXXXXXXX

Cause of Loss: Wind / Wind Driven Rain

Damage Inventory Amount: \$873,848,901.00

-

Prior Obtain and Maintain Requirement:

No prior insurance requirements were found for this facility.

-

Reduction(s):

No insurance reduction will be applied to this project as coverage is not anticipated. An anticipated insurance reduction of \$193,746,436.00 was applied to FAAST project # 136271 for anticipated insurance proceeds for Hurricane Maria losses. For ease of reference, please see table of insurance allocations: 'PREPA Allocation Plan - All Disasters' file.

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Obtain and Maintain Requirement:

No Obtain & Maintain Requirement is being mandated for the FAASt [Islandwide smart kWh meters] because facility does not meet the definition of building, equipment, contents, or vehicle.

Insurance Proceeds Statement:

FEMA acknowledges that the Applicant is in negotiations with their insurance carrier at the time of the FEMA insurance review and might have received partial settlements. In accordance with 44 CFR §206.250-253, in the absence of an actual settlement, anticipated insurance recoveries will be deducted from this project based on Applicant's insurance policy limits. FEMA subsequently adjusts the eligible costs based on the actual amount of insurance proceeds the Applicant receives after a final settlement.

FEMA's Recovery Policy FP 206-086-1, Public Assistance Policy on Insurance (June 29, 2015), requires applicants to take reasonable efforts to recover insurance proceeds that it is entitled to receive from its insurers. FEMA will consider final insurance settlements that may be less than the insurance policy limits when an applicant demonstrates that it has taken reasonable efforts to recover insurance proceeds that it is entitled on a case-by-case basis.

Standard Insurance Comments

FEMA Policy 206-086-1

PART 2: Other Insurance-Related Provisions. (Sections 312 and 406(d) of the Stafford Act)

A. Duplication of Benefits. FEMA cannot provide assistance for disaster-related losses that duplicate benefits available to an applicant from another source, including insurance.

1. Before FEMA approves assistance for a property, an applicant must provide FEMA with information about any actual or anticipated insurance settlement or recovery it is entitled to for that property.
2. FEMA will reduce assistance to an applicant by the amount of its actual or anticipated insurance proceeds.
3. Applicants must take reasonable efforts to recover insurance proceeds that they are entitled to receive from their insurer(s).
- ...
5. If an applicant has an insurance requirement from a previous event:
 - a. FEMA will reduce assistance by the actual or anticipated insurance proceeds, or the amount of insurance required in the previous disaster, whichever is greater.
 - b. FEMA will only consider insolvent insurers, legal fees, or apportionment of proceeds as described in Section VII, Part 2(A)(3) and (4) when the applicant's anticipated or actual insurance proceeds are higher than the amount of insurance required in the previous disaster.

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Olga Renta, PA Insurance Specialist, CRC Atlantic, Guaynabo, PR

O&M Requirements

There are no Obtain and Maintain Requirements on **FAASt [Advanced Metering Infrastructure (AMI)] (Telecommunications)**.

406 Mitigation

There is no additional mitigation information on **FAASt [Advanced Metering Infrastructure (AMI)] (Telecommunications)**.

Environmental Historical Preservation

Is this project compliant with EHP laws, regulations, and executive orders?

Yes

EHP Conditions

- Any change to the approved scope of work will require re-evaluation for compliance with NEPA and other Laws and Executive Orders.
- This review does not address all federal, state and local requirements. Acceptance of federal funding requires recipient to comply with all federal, state and local laws. Failure to obtain all appropriate federal, state and local environmental permits and clearances may jeopardize funding.
- If ground disturbing activities occur during construction, applicant will monitor ground disturbance and if any potential archaeological resources are discovered, will immediately cease construction in that area and notify the State and FEMA.
- National Historic Preservation Act (NHPA) - a. The Subrecipient and/or Subrecipient's contractor shall follow the Low Impact Debris Removal Stipulations (LIDRS) as stated in Appendix E of the Project-Specific Programmatic Agreement Among FEMA, the SHPO, ACHP, COR3, and PREPA (PSPA), executed on August 2, 2022. b. Unexpected Discoveries: Pursuant to Stipulation III.B of the PSPA, if, in the course of implementing this Individual Undertaking(s), previously unidentified structures, sites, buildings, objects, districts, or archaeological deposits, that may be eligible for listing in the National Register, or human remains are uncovered, or if it appears that an Individual Undertaking has affected or will affect a previously identified historic property in an unanticipated manner, the contractor must notify Subrecipient who will immediately notify the Recipient. Work must stop in the vicinity of the discovery and measures must be taken to protect the discovery and avoid additional harm. c. Additional staging areas and/or work pads within work site area haven't been identified yet. The Recipient/Subrecipient and/or private operator must provide the information of any additional staging areas or work pads for EHP evaluation as soon as available specially if any construction activity will be necessary to prepare the site(s). Information for staging areas and/or work pads confined to hardened surfaces can be provided at closeout.
- Resource Conservation and Recovery Act, aka Solid Waste Disposal Act (RCRA) - 1. The Applicant shall handle, manage, and dispose of all types of hazardous waste in accordance with requirements of local, state, and federal laws, regulations, and ordinances. In addition, the Applicant shall ensure that all debris is separated and disposed of in a manner consistent with the PR DNER guidelines at a permitted site or landfill. The contractor/applicant will be responsible for the proper disposition of construction debris in authorized landfills providing the name, location, coordinates and permits of the facility to the corresponding authorities. 2. Unusable equipment, debris, white goods, scrap metal any other material shall be disposed in approved manner and location. In the event significant items are discovered during the implementation or development of the project the Applicant shall handle, manage, and dispose petroleum products, hazardous materials, and toxic waste in accordance with the requirements of the local and federal agencies. Noncompliance with these requirements may jeopardize receipt of federal funds.

EHP Additional Info

There is no additional environmental historical preservation on **FAASt [Advanced Metering Infrastructure (AMI)] (Telecommunications)**.

Final Reviews

Final Review

Reviewed By Amaro, Luis N.

Reviewed On 12/04/2023 7:28 AM AST

Review Comments

LNA 12/04/23. This project has been reviewed, found eligible and cost reasonable, and it is ready to continue the award process.

Recipient Review

Reviewed By Salgado, Gabriel

Reviewed On 12/04/2023 11:58 AM AST

Review Comments

Recipient review completed. Applicant must ensure to compliance with all regulatory requirements and PA policy. Project is ready for applicant review.

Project Signatures

Signed By Miller, Thomas

Signed On 12/04/2023

