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

Jun 22, 2023

11:16 AM

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

IN RE:

DECEMBER 2020

CASE NO. NEPR-MI-2021-0002

SUBJECT: Motion Submitting Four FEMA Approval of Projects, Request for Confidential Treatment, and Supporting Memorandum of Law

MOTION SUBMITTING FOUR FEMA APPROVAL OF PROJECTS, 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 Approvals 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,

NEPR

Received:

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 April 14, 2021, PREPA filed a *Motion in Compliance with the Resolution and Order Entered on March 26, 2021*, which included a list of projects under the categories of transmission, distribution, and substations. PREPA submitted the list of projects to the Energy Bureau at least thirty (30) calendar days before their submittal to COR3 and/or FEMA, aligning with the March 26th Order. The list of projects submitted by PREPA included "FAASt [Bayamón TC – MC-BKRS-Y1] (Substation)."

3. Then, on April 22, 2021, the Energy Bureau issued a Resolution and Order ("April 22nd Order"). It determined that additional information was required to thoroughly evaluate the projects submitted by PREPA and evaluate its compliance with the March 26th Order. The Energy Bureau ordered PREPA to provide detailed information: (i) on or before April 28, 2021, for each project already submitted to COR3 and/or FEMA; and (ii) on or before May 21, 2021, for each project in that will be submitted to COR3 and/or FEMA under the different project categories. It also ordered PREPA to include a list of all the substations to be relocated to mitigate possible future flooding damages.

4. In compliance with the April 22nd Order, on April 28, 2021, PREPA filed a *Motion in Compliance with the Resolution and Order entered on April 22, 2021*. PREPA submitted the Scopes of Work ("SOW") provided to COR3 and FEMA in compliance with the April 22nd Order. Among the SOWs submitted to this Energy Bureau were the "FAASt [Bayamón TC – MC-BKRS-Y1] (Substation)" T&D Project. 5. On June 8, 2021, the Energy Bureau entered a Resolution and Order in which it determined that the majority of the SOWs for T&D projects submitted by PREPA were necessary to improve the system's reliability ("June 8th Order"). Therefore, it approved the majority of the projects presented in the April 28th Submission, including the "FAASt [Bayamón TC – MC-BKRS-Y1] (Substation)" T&D Project SOW. Further, the Energy Bureau ordered PREPA to submit a copy of the approval by COR3 and/or FEMA of the projects, which shall contain the costs obligated for each project within ten (10) days of receiving such approval.

6. Thereafter, on August 30, 2021, LUMA filed a *Motion Requesting Clarification of a Portion of the Energy Bureau's Resolution and Order Entered on August 20, 2021, and Submitting Updated List of Transmission and Distribution Projects and Twenty-Nine Scope of Work* ("August 30th Motion"). In the August 30th Motion, LUMA submitted twenty-nine (29) SOWs for T&D Projects for the Energy Bureau's review and approval prior to submitting them to COR3 and FEMA. The SOWs submitted by LUMA included the "FAASt [Distribution Pole and Conductor Repair - Ponce Groups 14 & 15] (Distribution)"³ T&D Project.

7. On September 22, 2021, the Energy Bureau issued a Resolution and Order where it determined that most of the SOWs for T&D projects submitted by LUMA were necessary to improve the system's reliability ("September 22nd Order"). Therefore, it approved most of the projects presented in the August 30th Motion, including the "FAASt [Distribution Pole and Conductor Repair - Ponce Groups 14 & 15] (Distribution)" T&D Project SOW. The Energy

³ The "FAASt [Distribution Pole and Conductor Repair - Ponce Groups 14 & 15] (Distribution)" T&D Project was submitted initially to the Energy Bureau as the "Distribution Pole and Conductor Replacement," which encompassed pole and conductor replacement projects throughout Puerto Rico but were later divided into individual projects per region.

Bureau also ordered LUMA to submit a copy of the approval by COR3 and/or FEMA of the Projects, which shall contain the costs obligated for each project within ten (10) days of receiving such approval.

8. On October 4, 2021, LUMA filed a *Motion Submitting Update List of Transmission and Distribution Projects and Thirty-Eight Scopes of Work*. Therein, LUMA submitted thirty-eight (38) SOWs for T&D Projects for its review and approval before submitting them to COR3 and FEMA ("October 4th Motion"). Among the SOWs submitted to this Energy Bureau were the "FAASt Physical Security - Group 2 (Substation)" and "FAASt [Physical Security - Group 3] (Substation)"⁴ T&D Projects.

9. Then, on October 18, 2021, the Energy Bureau entered a Resolution and Order in which it determined that the thirty-eight (38) SOWs for T&D projects submitted by LUMA were necessary to improve the system's reliability ("October 18th Order"). Therefore, it approved all the projects presented in the October 4th Motion, including the "FAASt Physical Security - Group 2 (Substation)" and "FAASt [Physical Security - Group 3] (Substation)" T&D Projects SOWs. Further, the Energy Bureau ordered LUMA to submit a copy of the approval by COR3 and/or FEMA of the approved projects and the costs obligated for each project within ten (10) days of receiving such approval.

⁴ This T&D Project was submitted initially to the Energy Bureau as the "Physical Security", which encompassed physical security practices and components, including perimeter protection, facilities access control, company property and assets throughout 230 kV, 115 kV, 38 kV critical substations, transmission substations, distribution substations, control centers, warehouses, business and administration offices but were later divided into individual projects per group.

10. In compliance with the June 8th, September 22nd and October 18th Orders, LUMA hereby submits copies of approvals by FEMA of the Projects issued on June 15, 2023.⁵ See Exhibit
1 to this Motion. The document contains FEMA's approvals and includes the cost obligated for each Project.

11. LUMA is submitting herein a redacted public version of the FEMA approvals (**Exhibit 1**) protecting confidential information associated with Critical Energy Infrastructure Information ("CEII"). The FEMA approvals of the "FAASt [Bayamón TC – MC-BKRS-Y1] (Substation)," "FAASt [Distribution Pole and Conductor Repair - Ponce Groups 14 & 15] (Distribution)," "FAASt Physical Security - Group 2 (Substation)," and "FAASt [Physical Security - Group 3] (Substation)" T&D Projects are 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 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

12. 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

⁵ 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.

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).

13. 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).

14. 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.

15. 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 \mathbb{P} 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 \mathbb{P} 6.

16. 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).

17. 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

18. The FEMA approvals with CEII included in **Exhibit 1** contain portions of CEII that, under relevant federal law and regulations, are protected from public disclosure. LUMA stresses that the FEMA approvals with CEII warrant 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.⁶ In at least two proceedings on Data Security,⁷ and Physical Security,⁸ this Energy Bureau, *motu proprio*, has conducted proceedings confidentially, thereby recognizing the need to protect CEII from public disclosure.

19. 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 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 System Remediation Plan, table 2 on page 5, and Resolution and Order of May 6, 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 System Remediation Plan, table 2 on page 5, and Resolution and Order of May 6, 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 System Remediation Plan, table 2 on page 5, and Resolution and Order of May 6, 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 System Remediation Plan, table 2 on page 5, and Resolution and Order of May 6, 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 D

⁶ 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 Minigrid 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).

⁷ In re Review of the Puerto Rico Electric Power Authority Data Security Plan, NEPR-MI-2020-0017.

⁸ In re Review of the Puerto Rico Electric Power Authority Physical Security Plan, NEPR-MI-2020-0018.

Responses to Requests for Information on System Remediation Plan, table 2 at pages 7-9, Case No. NEPR-MI-2020-0019.

20. 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.

21. 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.

22. Additionally, "[c]ritical electric infrastructure means a system or asset of the bulkpower 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.* 23. 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").⁹ 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).¹⁰

- (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--

(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.

¹⁰ 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;

⁹ Regarding protection of voluntary disclosures of critical infrastructure information, 6 U.S.C. § 673, provides in pertinent part, that CII:

24. The FEMA approvals with CEII in **Exhibit 1** qualify as CEII because each of these documents contains the <u>express</u> 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 these FEMA approvals. The information identified as confidential in this paragraph is not common knowledge and is not made publicly 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 approvals with CEII in **Exhibit 1** from disclosure, given the nature and scope of the details included in those portions of the Exhibit.

25. Based on the above, LUMA respectfully submits that the FEMA approvals 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 these FEMA approvals 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

⁽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.

26. 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 those FEMA approvals 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 [Bayamón TC – MC-BKRS- Y1] (Substation)	Pages 1, 2, 4, and 11	Critical Energy Infrastructure Information, 18 C.F.R. § 388.113; 6 U.S.C. §§ 671- 674.	June 22, 2023
Exhibit 1	FAASt Physical Security - Group 2 (Substation)	Pages 1, 2, 4, 7, 8, 14, and 15	Critical Energy Infrastructure Information, 18 C.F.R. § 388.113; 6 U.S.C. §§ 671- 674.	June 22, 2023
Exhibit 1	FAASt [Physical Security - Group 3] (Substation)	Pages 1, 2, 3, 7, 9, 12, 14, 17, 24, and 25	Critical Energy Infrastructure Information, 18 C.F.R. § 388.113; 6 U.S.C. §§ 671- 674.	June 22, 2023
Exhibit 1	FAASt [Distribution Pole and Conductor Repair - Ponce Groups 14 & 15] (Distribution)	Pages 1, 2, 3, 9, and 16	Critical Energy Infrastructure Information, 18 C.F.R. § 388.113; 6 U.S.C. §§ 671- 674.	June 22, 2023

WHEREFORE, LUMA respectfully requests that the Energy Bureau **take notice** of the aforementioned; **accept** the copies of the FEMA approvals 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 the attorney for PREPA, Joannely Marrero-Cruz, jmarrero@diazvaz.law.

In San Juan, Puerto Rico, on this 22st day of June 2023.



DLA Piper (Puerto Rico) LLC 500 Calle de la Tanca, Suite 401 San Juan, PR 00901-1969 Tel. 787-945-9132 Fax 939-697-6102

/s/ Yahaira De la Rosa Algarín Yahaira De la Rosa Algarín RUA NÚM. 18,061 yahaira.delarosa@us.dlapiper.com <u>Exhibit 1</u>

FEMA Approvals

Department of Homeland Security Federal Emergency Management Agency

General Info

Project #	169500 P/W# 11347	Project Type	Specialized
Project Category	F - Utilities	Applicant	PR Electric Power Authority (000-UA2QU-
Project Title	FAASt [Bayamon TC – MC-BKRS-Y1] (Substation)	Event	4339DR-PR (4339DR)
Project Size	Large	Declaration Date	9/20/2017
Activity	9/20/2027	Incident Start Date	9/17/2017
Completion Date		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 #433871; FAASt - Bayamon TC – MC-BKRS-Y1 - Substations

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: Bayamon TC MC-BKRS-Y1 Substations
- Facility Description: Bayamon TC is a 230/115/13.2 kV transmission center that includes a control house, circuit breakers, transformers, equipment structures, cables, surge arresters, and other related components in a fenced yard.
- Approx. Year Built: 1980
- GPS Latitude/Longitude:

General Damage Information:

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

Final Scope

433871 FAASt - Bayamon TC – MC-BKRS-Y1 - Substations

Introduction

The purpose of this document is to submit for approval the Detailed Scope of Work ("SOW") to COR3 and FEMA for the Bayamón TC - MC - BRKRS - Y1 - 1711 project ("Bayamón TC Substation") under DR-4339-PR Public Assistance. The document provides a description of the



project including scope, schedule, and cost estimates as well as Environmental & Historical Preservation ("EHP") requirements and proposed 406 hazard mitigation work. LUMA Energy is seeking approval from COR3 and FEMA for project funding to repair, restore, or replace the eligible facility for the Bayamón TC Substation.

LUMA submits this Detailed SOW pursuant to the T&D O&M Agreement between the 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 Appendix K 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.

Facilities

The Bayamón TC Substation experienced substantial damages due to Hurricane María in September 2017. The purpose of this project is to repair damages, mitigate flooding issues, and harden the substation to improve the reliability and resiliency of the Puerto Rico electrical grid.

Physical Address	Road 2 km 9.2 Bayamón, Puerto Rico
Coordinates	
Date of Construction	1973

Project Scope of Work

Substation:

Proposed 428 Public Assistance Scope of Work:

- Replace three (3) existing 230KV oil circuit breakers (OCBs) with three (3) new 230KV gas circuits breakers (GCBs) from equipment bay positions, breaker secondary control cable terminations, cable to breaker control cabinets.
 Ground equipment to substation ground grid.
 - Install three (3) new disconnect switches and their corresponding foundations for new circuit breakers.
 - Re-used three (3) existing disconnect switches,
 - Install One (1) new Ground Disconnect Switch.

Structure Age

- Bayamón TC substation was constructed in 1973. Along the time major apparatus were installed within existing substation footprint:
- Bayamón TC 115/38kV substation was built in 1978.

Staging Area:

• The main staging area will be located inside the premises of the substation and will serve as an assembly point for all the materials to be installed.

Ground disturbance:

• Cable trenching and ground grid will occur within the substation up to 10 ft deep. The ground grid and cable and trenching will be a maximum of 42 inches below underground within the substation.

Material Disposal

• The type of debris that may be found in the process of demolition are metal scrap, domestic and construction waste. The debris will be separated and disposed of on an approved waste disposal facility. Hazardous Material:

- The possible hazardous materials that can be found in the substation are polychlorinated biphenyl (PCB), sulfur hexafluoride (SF6) gas, oil from the breakers, chemicals used for construction fuel and other chemical wastes typical of a construction site. These hazardous materials will be handled and disposed of per LUMA Waste Management Plan.
- Material amounts will be provided by a certified management contractor performing a site evaluation and calculation for asbestos, lead paint, and roof material.

Specific List of Permits Required

- Environmental Compliance Determination in Oficina de Gerencia de Permisos (OGPe)
- General Consolidate Permit OGPe
- Bayamón Municipality Notifications
- Excavation and Demolition Notification in Department of Transportation and Public Works Agency(DTOP)
- AsbestosPermit–EnvironmentalQualityBoard(EQB)nowDepartmentofNaturalResources Agency(DNR)
- Lead Permit EQB / DNR and Hazardous Waste Disposal Permit EQB / DNR

Fill, gravel, sand, etc.

• Fill, Gravel, and Sand materials will be obtained from an approved supplier as referenced in Appendix A Preferred Vendors list.

Equipment to be used.

- Skid Steer, Excavator, Dump trucks, Manlifts, Boom Trucks 45-ton Crane, Zoom Boom, Air compressor, Truck Digger, Water truck, Pump Truck, Concrete Vibrator, Oil Tanker, Filtering Machine, Flatbed platform, portable generators, and gas small tools.
- All equipment used will comply with Tier 4 EPA Emission Standards, if available

Proposed 406 Hazard Mitigation Grant Program Scope of Work- please refer to Hazard Mitigation Section in Grants Manager.

COST ESTIMATE	
Bayamon TC - Phase 1	428
PLANNING (FAASt 335168)	\$398,708
MANAGEMENT (FAASt 335168)	\$235,338
SUBSTATION	\$2,078,151
GENERAL CONDITIONS	\$356,971
CONTINGENCY	\$361,060
TOTAL PROJECT COST	\$3,430,227
ESTIMATE	
FAASt A&E # 335168 Total	\$634,045
FAASt PROJECT # 169500 (428)	\$2,796,182
Total	

Work To Be Completed (WTBC): \$3,430,227

A&E Deduction (Global A&E FAASt 335168) -\$634,045

Project Total Cost: \$2,796,182

For detailed cost estimate, please refers to document labeled: APPENDIX J- LPCE Bayamón TC Estimate Breakdown.

1. Refer to detailed SOW provided in document 169500-DR4339PR - FEMA Detailed Scope of Work - Bayamon TC (10100-CP-SOW-0002_Rev.4) 2023-04-2700-CP-SOW-0002_Rev.4 20230427 - signed.pdf

- 2. For reference documents Appendix A thru J, see file labeled:
 - a. APPENDIX A- Approved Supplier List
 - b. APPENDIX B- Aerial Photo Map
 - c. APPENDIX C- Waste Management Plan
 - d. APPENDIX D- Engineering Designs
 - e. APPENDIX E- LUMA Wildlife Avian and Historical Protection Procedure #335
 - f. APPENDIX F- Substation Photos
 - g. APPENDIX G- Boring Test Plan
 - h. APPENDIX H- Existing Site Plan
 - i. APPENDIX I- Consent to Federal Funding Letter- FEMA/COR3
 - j. APPENDIX J- LPCE Bayamón TC Estimate Breakdown

3. Architectural and Engineering (A&E) costs are deducted given previously obligated Global A&E Project for the subject FAASt PREPA work (see project: 335168 - FAASt A&E PREPA)

4. This project is part of a FAAST project, please reference project 136271.

406 HMP Scope

Project number: 169500 FAASt [Bayamon TC - MC-BKRS-Y1] (Substation)

Damage #433871; FAASt - Bayamon TC - MC-BKRS-Y1 - Substations

Applicant: PR Electric Power Authority (000-UA2QU-00)

Location: Bayamon, Puerto Rico

GPS Latitude/Longitude:

Hazard Mitigation Narrative

During the incident period from September 17, 2017, to November 15, 2017, the Commonwealth of Puerto Rico experienced hurricane-force winds, heavy rain, flooding, and power outage from Hurricane Maria. The incident caused damage to the electrical system, such as the power generation plants, transmission and distribution lines, substations, communication systems, buildings, among other damages to the infrastructures owned, operated, and maintained by the Puerto Rico Electric Power Authority (PREPA).

The Bayamon Transmission Center (TC) was built approximately in 1973 and is located in the Municipality of Bayamon, Puerto Rico. The facility is a 230/115/13.2 KV Transmission Center that includes a control house, circuit breakers, transformers, equipment structures, cables, surge arresters, and other related components in a fenced yard. The portion included in this project consist in the elevation of the 230KV switch structure that includes three (3) 230KV oil circuit breakers [0096T (552), 50230 (352), & 50940 (452)] in accordance with the Advisory Base Flood Elevation Maps (ABFE), the replacement of the existing oil circuit breakers (OCBs) to gas circuit breakers (GCBs) and the reconfiguration of the existing "Ring Bus" to a "Breaker and a Half Bus" configuration.

System Approach:

As per most updated ABFE Maps, the Bayamon Transmission Center (TC) is in a Special Flood Hazard Area (SFHA) Zone A. The recommended guides stated essential facilities (Flood Design Class 4) must be elevated or protected to the base flood elevation (BFE) + 2ft or 500-year flood elevation, whichever is higher. In case of a major flood or heavy rain event, if the facilities were not elevated as recommended, the risk to the functionality of the substation facility will be compromised. To ensure continue future operation of the facility and to protect federal investments, it is proposed to mitigate the risk of flooding by elevating all critical components of this portion of the Bayamon TC.

Note: The components of the transmission center operate as a system and are interdependent. If one component fails, the function of the substation will be compromised resulting in the interruption of the substation causing lack of power to the customers (loss of function of the transmission center).

Floodplain Evaluation:

Before Hurricane Maria, according to the Flood Insurance Rate Map (FIRM), a portion of the Bayamon TC was in a 0.2 pct annual chance Flood Zone X, which is

a zone with a minimum or moderate flood risk. After Hurricane Maria, the Government of PR adopted the Advisory Base Flood Elevation Maps (ABFE) to determine if a facility is within a Special Flood Hazard Area (SFHA). The Policy states that the most restrictive map (FIRM or ABFE) is to be used to determine flood zone for any site, that in this case, is the ABFE map labeled it in Zone A. A request to determine the base flood elevation (BFE) was requested to FEMA Floodplain Management Specialist, which determined that the (BFE) + 2 ft or 500-year flood elevation for Bayamon TC is 2.53 meters (14.5 meters – 11.97 meters) above the existing floor elevation (EFE).

Improved Project:

The mitigation strategy for future similar damages at Bayamon TC- MC BKRS- Y1 is accomplished by elevating of the existing oil circuit breakers (OCBs) above ABFE + 2'0" or 2 ft above 500-year elevation whichever is higher. In this case, the breakers shall be elevated at least 8.3 feet (2.53 meters) above the existing grade.

Note: The option to elevate the existing OCBs is neither cost effective nor technically feasible due to the weight, as it will require a significantly larger structure. In other words, the elevation of the existing breakers will cause a major modification to the existing structure since the height of the OCBs is approximately 15 feet, so the entire structure will need to be elevated as well. The weight of each OCBs array (3ea) is about 339,150 pounds, which means that the footing and metal structure will be huge and expensive.

To avoid an expensive and massive structure, the sub-applicant (as part of the 428 PA recovery solution), is proposing as a least cost alternative and good constructions practices, replace the existing oil circuit breakers (OCBs) by gas circuit breakers (GCBs) that are smaller and lighter than the OCBs. An array of GCBs (3ea) weights approximately 39,000 pounds which is approximately 8 times lighter than the OCBs array. Also, since the height of the GCBs is smaller some connection of the existing auxiliary switches will be reused, and the structure does not have to suffer a major modification.

In addition to the elevation, as part of the mitigation strategy for mitigating future loss of service and create redundancy, the sub-applicant is requesting the addition of three (3) sets of GCBs. The intension of these new breakers is to move from the "Ring Bus" configuration to a "Breaker and a Half Bus" configuration because it is a more reliable and resilient configuration for the operation of the transmission center and not for increase of the system capacity. In case of a failure of a breaker, the "Breaker and a Half" configuration will allow a better operation and the risk loss of service will be less than with the previous configuration. By doing this, we are adding redundancy and resiliency by reducing the potential loss of service to over 200,000 people, 30ea critical facilities, including 3ea major hospitals and several emergency medical services (EMS) municipal centers. It also eliminates single line failure for lines 50200 and 50900 specifically, because both lines would have a separate bay further improving the resiliency and redundancy of the Grid while reducing the potential of major outage events. The "Breaker and a Half" configuration will give the ability to install a secondary transformer as a redundant measure to provide the appropriate reliability and resiliency to the Bayamon area customers which will be addressed in the Phase 2 of this substation.

These mitigation measures will reduce future similar damage such as hurricane heavy rain, flooding, outages, as well as decrease the future likelihood of loss of function of the system.

Hazard Mitigation Proposal (HMP) Scope of Work:

In order to prevent or reduce future damages from similar events, the applicant proposed the following mitigation measures:

Mitigation Measures (Supplement)

1. To avoid damage in a future flood event, the sub-applicant is proposing as a mitigation measure, the elevation of the circuit breakers above ABFE + 2 feet or 2 feet above 500-year elevation whichever is higher (2.53 meters above the existing grade).

- Elevate six (6) GCBs [3ea existing and 3ea new (redundancy) circuit breakers] + twelve (12) [6ea existing and 6ea new (redundancy) auxiliary disconnect switches] on an elevated structural platform, including foundations, with structural personnel access stairs to control cabinets (2.53 meters +/- above existing grade) to avoid flood damage and complying with FEMA's Advisory Base Flood Elevations (ABFEs) for Puerto Rico.
- Includes all required works (material, equipment & labor) for full operation at job site.

2. To provide redundancy and avoid loss of function, the sub-applicant is requesting the addition of three (3) sets of GCBs. The intention of these new breakers is to move from the "Ring Bus" to a "Breaker and a Half Bus" configuration, as it is a more reliable and resilient configuration for the operation of the transmission center. In case of a failure of a breaker, the new configuration will allow a better operation and the risk loss of service will be less than with the previous configuration.

- Install three (3) new 230KV GCBs on an elevated structural platform with their corresponding foundations for new redundant circuit breakers. The existing ring bus configuration will be modified to add three (3) additional breakers that will add redundancy and resiliency to the system.
- Install six (6) new auxiliary disconnect switches with their corresponding foundations for new redundant circuit breakers.
- Install one (1) new ground disconnect switch for the new redundant area.
- Includes all required works (material, equipment & labor) for full operation at job site.

Hazard Mitigation Proposal (HMP) Cost:

Hazard Mitigation Total Cost =	\$ 3,575,881.00
+ HM (Applicant A&E, Management & General Conditions) =	<u>\$1,496,809.00</u>
Total Net Hazard Mitigation Cost (Base Cost) =	\$2,079,072.00

HMP Cost-Effectiveness Calculations:

FEMA's Benefit-Cost Analysis (BCA), methodology evaluates expected risk reduction benefits of a hazard mitigation project and compares those benefits to the cost of the mitigation project. FEMA Public Assistance Program and Policy Guide (PAPPG) Chapter 2. Section VII. C. defines cost effective mitigation as: The Hazard Mitigation Measure is cost effective through an acceptable Benefit Cost Analysis (BCA) with a resulting Benefit Cost Ratio equal to or greater than (1).

The Island Wide Benefit Cost Analysis (IWBCA) created for the PREPA infrastructure defines a maximum potential benefit using the incurred costs of the PREPA FEMA Accelerated Award Strategy (FAASt) fixed cost estimate, the mission assignments utilized for the reconnection effort, and the costs associated with loss of service. This maximum benefit has been developed to fund all mitigation projects from both Public Assistance Hazard Mitigation and the Hazard Mitigation Grant program.

It is the applicant's responsibility to maintain a record of approved IWBCA related projects to avoid running out of funds for their Mitigation portion projects.". Please see attached IWBCA Package

The cost of the Hazard Mitigation Proposal (HMP) described herein is \$3,575,881.00 (Hazard Mitigation Total Cost). The cost of this HMP combined will all other proposals (both PA and HMGP) does not exceed the maximum potential benefit and is therefore deemed cost effective per FEMA Public Assistance Program and Policy Guide (PAPPG) V3.1 April 2018, Chapter 2, VII., Section C, BCA Rule. This Hazard Mitigation Proposal meets eligible repair and restoration cost-effective requirements.

**See Mitigation Profile Documents Tab in Grants Manager for complete version of this HMP and supporting documents (HMP, HMP cost estimate, Supporting documents file).

Cost

Code	Quantity	Unit	Total Cost	Section
3510 (Engineering And Design Services (PREPA FAASt Global A&E 335168))	1.00	Lump Sum	(\$634,045.00)	Uncompleted
9001 (Contract (PREPA FAASt Project 136271))	1.00	Lump Sum	\$3,430,227.00	Uncompleted

CRC Gross Cost	\$2,796,182.00
Total 406 HMP Cost	\$3,575,881.00
Total Insurance Reductions	\$0.00
CRC Net Cost	\$6,372,063.00
CRC Net Cost Federal Share (90.00%)	\$6,372,063.00 \$5,734,856.70

Award Information

Version Information

Version	Eligibility	Current	Bundle Number	Project	Cost	Federal Share	Date
#	Status	Location		Amount	Share	Obligated	Obligated
0	Eligible	Awarded	PA-02-PR-4339-PW- 11347(13798)	\$6,372,063.00	90 %	\$5,734,856.70	6/15/2023

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

No adjustments to be made to the previous insurance coverage determination, no revisions to narrative needed, updated applicant tracker if needed, providing administrative function and forwarding project for completion.

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

<u>4/13/2023</u>

GENERAL INFORMATION

Event: DR4339-PR

Project: SP 169500

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: \$6,372,063.00 (CRC Gross Cost \$2,796,182.00 + Mitigation Amount \$3,575,881.00)

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 Mapfre

Policy Numbers: <u>Willis Towers Watson</u> (B0804Q1966F17, B0804Q14312F17, B0804Q19673F17, B0804Q19672F17B0804Q18529F17, B0804Q14312F17, B0804Q14312F17, B0804Q14312F17, B0804Q14507F17, B0804Q14312F17)

Mapfre Praico Insurance Company (1398178000644)

<u>Multinational Insurance Company</u> (88-CP-000307831-2, 88-CP-000318673-0, 88-CP-000318674-0, 88-CP-000318675-0, 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: Yes

The amount of the deductible being funded in this project is \$0.00

The amount of the deductible previously funded in other projects is \$25,000,000.00

Final Insurance Settlement Status: Insurance proceeds for this project are anticipated

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

Damaged Inventory (DI) #433871:

FAASt - Bayamon TC – MC-BKRS-Y1 – Substations

Location Description: Bayamon TC – MC-BKRS-Y1 - Substations

GPS Coordinates:

Cause of Loss: Wind / Wind Driven Rain

SOV / Schedule #: "Sub-Stations"

SOV / Schedule Amount: \$1,345,700,000.00

Applicable Deductible Amount: \$25,000,000.00

Damage Inventory Amount: \$6,372,063.00 (CRC Gross Cost \$2,796,182.00 + Mitigation Amount \$3,575,881.00)

Prior Obtain and Maintain Requirement:

No prior insurance requirements were found for this facility.

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Reduction(s):

No insurance reduction will be applied to this project. 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:

An Obtain & Maintain Requirement is being required for Equipment, for the peril of Wind (all wind associated losses including "wind driven rain") for the *FAASt* - *Bayamon* TC - MC-*BKRS-Y1* Substations in the amount of \$6,372,063.00 (CRC Gross Cost \$2,796,182.00 + Insurable Mitigation Amount \$3,575,881.00).

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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 caseby-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).

FEMA Policy 206-086-1

H. Subsequent Assistance. When a facility that received assistance is damaged by the same hazard in a subsequent disaster:

1. If the applicant failed to maintain the required insurance from the previous disaster, then the facility is not eligible for assistance in any subsequent disaster.

2. Upon proof that the applicant maintained its required insurance, FEMA will reduce assistance in the subsequent disaster by the amount of insurance required in the previous disaster regardless of:

a. The amount of any deductible or self-insured retention the applicant assumed (i.e., "retained risk").

Obtain and Maintain Requirements:

44 CFR § 206.253 Insurance requirements for facilities damaged by disasters other than flood.

(a) Prior to approval of a Federalgrant for the restoration of a facility and its contents which were damaged by a disaster other than flood, the recipient shall notify the Regional Administrator of any entitlement to insurance settlement or recovery for such facility and its contents. The Regional Administrator shall reduce the eligible costs by the actual amount of insurance proceeds relating to the eligible costs.

(b)

(1) Assistance under section 406 of the Stafford Act will be approved only on the condition that the recipient obtain and maintain such types and amounts of insurance as are reasonable and necessary to protect against future loss to such property from the types of hazard which caused the major disaster. The extent of insurance to be required will be based on the eligible damage that was incurred to the damaged facility as a result of the major disaster. The Regional Administrator shall not require greater types and extent of insurance than are certified as reasonable by the State Insurance Commissioner.

(2) Due to the high cost of insurance, some applicants may request to insure the damaged facilities under a blanket insurance policy covering all their facilities, an insurance pool arrangement, or some combination of these options. Such an arrangement may be accepted for other than flood damages. However, if the same facility is damaged in a similar future disaster, eligible costs will be reduced by the amount of eligible damage sustained on the previous disaster.

(c) The Regional Administrator shall notify the recipient of the type and amount of insurance required. The recipient may request that the State Insurance Commissioner review the type and extent of insurance required to protect against future loss to a disaster-damaged facility, the Regional Administrator shall not require greater types and extent of insurance than are certified as reasonable by the State Insurance Commissioner.

(d) The requirements of section 311 of the Stafford Act are waived when eligible costs for an insurable facility do not exceed \$5,000.00. The Regional Administrator may establish a higher waiver amount based on hazard mitigation initiatives which reduce the risk of future damages by a disaster similar to the one which resulted in the major disaster declaration which is the basis for the application for disaster assistance.

(e) The recipient shall provide assurances that the required insurance coverage will be maintained for the anticipated life of the restorative work or the insured facility, whichever is the lesser.

(f) No assistance shall be provided under section 406 of the Stafford Act for any facility for which assistance was provided as a result of a previous major disaster unless all insurance required by FEMA as a condition of the previous assistance has been obtained and maintained.

Final Obtain and Maintain requirement amount will be determined during the closeout process after the final actual eligible costs to repair or replace the insurable facility have been determined.

FEMA Policy 206-086-1

F. Timeframes for Obtaining Insurance. FEMA will only approve assistance under the condition that an applicant obtains and maintains the required insurance.

The applicant must document its commitment to comply with the insurance requirement with proof of insurance.

If an applicant cannot insure a facility prior to grant approval (for example, if a building is being reconstructed), the applicant may provide a letter of commitment stating that they agree to the insurance requirement and will obtain the types and extent of insurance required, followed at a later date by proof of insurance once it is obtained. In these cases, the applicant should insure the property:

- 1. When the applicant resumes use of or legal responsibility for the property (for example, per terms of construction contract or at beneficial use of the property); or
- 2. When the scope of work is complete.

FEMA and the recipient will verify proof of insurance prior to grant closeout to ensure the applicant has complied with the insurance requirement.

An applicant should notify FEMA—in writing through the recipient—of changes to their insurance which impact their ability to satisfy the insurance requirement after it provides proof of insurance to FEMA. This includes changes related to self-insurance. If an applicant fails to do this, FEMA may de-obligate assistance and not provide assistance in a future disaster.

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

O&M Requirements

Insured Peril	Item Type	Description	Required Coverage Amount
Wind	Equipment	An Obtain & Maintain Requirement is being required for Equipment, for the peril of Wind (all wind associated losses including "wind driven rain") for the FAASt - Bayamon TC – MC-BKRS-Y1 – Substations in the amount of \$6,372,063.00	\$6,372,063.00

406 Mitigation

There is no additional mitigation information on **FAASt** [Bayamon TC – MC-BKRS-Y1] (Substation).

Environmental Historical Preservation

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

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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.
- Executive Order 11988 Floodplains Applicant must obtain any required permits from the Puerto Rico Permits Management Office (OGPe) prior to initiating work and comply with any conditions of the permit established by the Planning Board (JP) for constructions in floodplains. All coordination (emails, letters, documented phone calls) pertaining to these activities and compliance must be provided and maintained in the Applicant's permanent files.

- National Historic Preservation Act (NHPA) 1. 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 previously disturbed or hardened surfaces can be provided at close-out. 2. 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. 3. 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.
- 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. The applicant is responsible to ensure damaged transformers are handled, managed, and disposed of in accordance with all federal and state laws and requirements. Downed electrical equipment may contain toxic and hazardous materials, such as polychlorinated biphenyls (PCBs), and may spill these materials if a rupture occurs. Applicant is responsible for screening transformers that do or may contain PCBs and the area where any related spill occurred. The applicant is then responsible to handle, manage, dispose of, or recycle damaged equipment and contaminated soil as appropriate. Where possible, temporary measures should be implemented to prevent, treat, or contain further releases or mitigate the migration of PCBs into the environment. If damaged equipment or material storage containers must be stored temporarily, containers should be placed on hardened surface areas, such as a concrete or an asphalt for no more than 90 days. Excavated contaminated material should be disposed of in accordance with federal and state laws and requirements. 3. 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.
- NEPA Determination 1- 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 previously disturbed or hardened surfaces can be provided at close-out. 2- All borrow or fill material must come from pre-existing stockpiles, material reclaimed from maintained roadside ditches (provided the designed width or depth of the ditch is not increased), or commercially procured material from a source existing prior to the event. For any FEMA-funded project requiring the use of a non-commercial source or a commercial source that was not permitted to operate prior to the event (e.g., a new pit, agricultural fields, road ROWs, etc.) in whole or in part, regardless of cost, the Applicant must notify FEMA and the Recipient prior to extracting material. FEMA must review the source for compliance with all applicable federal environmental planning and historic preservation laws and executive orders prior to a Sub-recipient or their contractor beginning borrow extraction. Consultation and regulatory permitting may be required. Non-compliance with this requirement may jeopardize receipt of federal funding.

EHP Additional Info

There is no additional environmental historical preservation on **FAASt [Bayamon TC** – **MC-BKRS-Y1] (Substation)**.

Final Reviews

Final Review

Reviewed By Soto Toro, Hildelix L.

Reviewed On 05/04/2023 11:59 AM PDT

Review Comments

Approved for obligation- Applicant is responsible for compliance with all applicable laws, regulations, policy, and guidance applicable to FEMA's Public Assistance Program.

Recipient Review

Reviewed By Salgado, Gabriel

Reviewed On 05/04/2023 12:52 PM PDT

Review Comments

Recipient review completed. Project is ready for applicant review.

Project Signatures

Signed By Miller, Thomas

Signed On 05/08/2023

Department of Homeland Security Federal Emergency Management Agency

General Info

Project #	549764 P/W# 11350	Project Type	Specialized	
Project Category	F - Utilities	Applicant	PR Electric Power Authority (000-UA2QU-	
Project Title	FAASt Physical Security - Group 2 (Substation)	Event	00) 4339DR-PR (4339DR)	
Project Size	Large	Declaration Date	9/20/2017	
Activity Completion Date	9/20/2027	Incident Start Date	9/17/2017	
		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 #925095; Mayaguez TC

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: Mayaguez TC
- Facility Description: The above facilities are composed of 230/115/38 kV critical substations, transmission substations, distribution substations, control centers, warehouses, business offices and administration offices which requires an effectively physical security improvement applying a comprehensive risk-based security strategies and developing cost-effective security solution to alleviate the risks. The physical security practices includes facilities perimeter protection, facilities access control, and company property and assets. The objective is to replace these components based on LUMA and industry standards, improve system resiliency, and alleviate safety hazards and environmental concerns.
- Approx. Year Built: 1980
- GPS Latitude/Longitude:

General Damage Information:

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

Damage #925096; Mora TC 7505

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: Mora TC 7505
- Facility Description: The above facilities are composed of 230/115/38 kV critical substations, transmission substations, distribution substations, control centers, warehouses, business offices and



administration offices which requires an effectively physical security improvement applying a comprehensive risk-based security strategies and developing cost-effective security solution to alleviate the risks. The physical security practices includes facilities perimeter protection, facilities access control, and company property and assets. The objective is to replace these components based on LUMA and industry standards, improve system resiliency, and alleviate safety hazards and environmental concerns.

- Approx. Year Built: 1980
- GPS Latitude/Longitude:

General Damage Information:

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

Final Scope

925095 Mayaguez TC

Introduction

The purpose of this document is to submit for approval the Detailed Scope of Work (SOW) to COR3 and FEMA for the Physical Security – Group 2 under DR-4339-PR Public Assistance. The document provides a description of the project including scope, schedule, and cost estimates as well as Environmental & Historical Preservation ("EHP") requirements and proposed 406 hazard mitigation work. LUMA Energy is seeking approval from COR3 and FEMA for project funding to repair, the associated substations related to the Physical Security – Group 2. This project is part of the Physical Security Program which has been classified as critical to system operation, location, and scope complexity.

LUMA submits this Detailed SOW pursuant to the T&D O&M Agreement between the 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 Appendix A 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.

Facility

Island-wide Substations experienced substantial damages due to Hurricane Maria in September 2017. The facilities addressed by this project are transmission and distribution substations which require significant physical security improvements to avoid safety hazards, violations of federal or local ordinance, potential security breaches, and damage from future severe weather events.

This project includes the following substations located in the Arecibo and San Juan regions.

Name	Substation Number	Physical Address	GPS Coordinate	Date of Construction
Mayaguez TC		Carr. 2 km. 149.5 Sector Cuba Bo. Sabana frente Vertedero, Mayagüez.		April 1990

Project Scope of Work

Substation:

- 1. Mayaguez TC
- a. Proposed 428 Public Assistance Scope of Work

o Remove vegetative and non-vegetative debris from the site and buildings, including

damaged fencing, windows, and doors. Vegetative debris to be removed extend along the existing perimeter, 1,120 ft long x 3 ft wide x 3 ft height.

- o Remove existing gravel, regrade terrain to ensure proper drainage, and replace gravel within substation
- o Install erosion control system to affected areas
- o Install new signage on fencing and gates

o Install new padlocks on gates and equipment

- o Install new electronic access system for the Control and IT Rooms
- o Install new security lighting and external lighting on the control room and outdoor structures

 Replace 1 control room interior single doors with 90 minutes fire rated 16-gauge doors designed to reduce the windborne debris, wind driven rain, water intrusion and high hurricane winds impact and/or effects
 Install within substation footprint new closed-circuit television (CCTV) system, including approximately 15 cameras,

o Install within substation footprint new closed-circuit television (CCTV) system, including approximately 15 cameras, allowing real-time site monitoring to evaluate critical substation integrity during and after a major event. This measure reduces public safety concerns, potential electric system downtime and improves resiliency. It also will prevent outages caused by possible physical security breaches

Refer to Appendix B and D for additional details on drawings, facility pictures, and GPS coordinates of the site.

COST ESTIMATE				
Physical Security Group 2	428			
PLANNING (FAASt 335168)	\$68,505.59			
ENGINEERING SERVICES & DESIGN (FAASt 335168)	\$139,638.75			
MANAGEMENT (FAASt 335168)	\$79,160.22			
SUBSTATION	\$930,925.00			
Mayaguez TC	\$930,925.00			
GENERAL CONDITIONS	\$117,186.09			
CONTINGENCY	\$122,759.96			
TOTAL PROJECT COST ESTIMATE	\$1,458,175.63			
FAASt PROJECT # 549764, 428 Total	\$1,170,871.06			
FAASt A&E # 335168 Total	\$287,304.57			

Work To Be Completed (WTBC): \$1,458,175.63 A&E Deduction (Global A&E FAASt 335168): -\$287,304.57 DI 925095 WTBC Total Cost: \$1,170,871.06

Total Project Cost (Sum of all DI's): \$2,159,012.31

For detailed cost estimate, please refers to document labeled: APPENDIX H- LPCE Physical Security Group 2.

Project Notes:

1. Refer to detailed SOW provided in document 549764-DR4339PR- 00 FEMA Detailed Scope of Work Physical Security Group 2 (40000-

CP-SOW-0012Rev2)(2023-03-23) - signed.pdf

2. For reference documents Appendix A thru S, see file labeled APPENDIX A - Consent to Federal Funding Letter- FEMA/COR3

APPENDIX B - Mayaguez TC PSRR

APPENDIX C - Mayaguez TC Existing Drawings

- APPENDIX D Mayaguez TC General Management and Access Roads
- APPENDIX E Mora TC PSRR
- APPENDIX F Mora TC Existing Drawings
- APPENDIX G Mora TC General Management and Access Roads
- APPENDIX H LPCE Physical Security Group 2
- APPENDIX I LUMA Waste Management Plan
- APPENDIX J E.H.P. Checklist for Physical Security Program Group 2
- APPENDIX K Desktop Review Maps Group 2 Mayaguez TC and Juncos TC Substations
- APPENDIX L Project Specific Programmatic Agreement (PSPA)
- APPENDIX M Wildlife, Avian, and Historical Resources Protection
- APPENDIX N Preferred Vendor List Directory PR
- APPENDIX O LUMA Standard for Fencing
- APPENDIX P PREPA Standard for Fencing
- APPENDIX Q Class 3 LP Evaluation Physical Security Group 2 Mayaguez TC
- APPENDIX R Class 3 LP Evaluation Physical Security Group 2 Mora TC
- APPENDIX S BCA Narrative for Physical Security Group 2
- 3. For EHP Requirements, refer to pages 8 to 10 of the detailed SOW and reference documents: Appendix J, K & M.
- 4. This project is part of Donor FAASt 136271 MEPA078 Puerto Rico Electrical Power Authority (PREPA) Island Wide FAASt Project.

406 HMP Scope

Project number: 549764 FAASt [Physical Security - Group 2] (Substation)

Damage #925095; Mayaguez TC

Applicant: PR Electric Power Authority (000-UA2QU-00)

Location: Mayaguez, Puerto Rico

GPS Latitude/Longitude:

Hazard Mitigation Narrative

During the incident period from September 17, 2017, to November 15, 2017, the Commonwealth of Puerto Rico experienced hurricane-force winds, heavy rain, flooding, and power outage "loss of power" from Hurricane Maria. The incident caused damage to the electrical system, such as the power generation plants, transmission and distribution lines, substations, communication systems, buildings, among other damages to the infrastructures owned, operated, and maintained by the Puerto Rico Electric Power Authority (PREPA).

The FAASt [Physical Security - Group 2] (Substation) consists of 2 transmission centers facilities (sites) which are distributed as follows: Mayaguez TC and Mora TC (7505, 7502).

The above facilities are composed of 230/115/38 KV critical substations (transmission and distribution) which requires an effectively physical security improvement applying a comprehensive risk-based security strategies and developing cost-effective security solution to alleviate the risks. The physical security practices include facilities perimeter protection, facilities access control, and company property and assets. The objective is to replace these components based on LUMA/PREPA and industry standards, improve system resiliency, and alleviate safety hazards and environmental concerns. According to the information provided by the sub-applicant, due to the high hurricane winds, wind-borne debris, and prolonged heavy rain was the main cause of the damages of the facilities.

In order to minimize the damages in a future event, the sub-applicant is proposing as a mitigation measure, reduce the spacing of the chain-link fence posts from 10ft to 8ft, raise an additional 12" above grade for erosion control (and prevent the gravel from becoming contaminated with soil and/or dirt), strengthen the posts and fence foundation, replace the aluminum jalousie window by wind-resistant aluminum-louver windows, replace the exterior fire rated steel doors by 16ga. fire rated steel door and increase the strength of the CCTV (cameras) poles from 90mph to +160mph sustained winds material. The above mitigation measures will protect and make the affected elements more resistant to similar hazards.

Hazard Mitigation Proposal (HMP) Scope of Work:

In order to prevent or reduce future damages from similar events, the applicant proposed the following mitigation measures:

Mitigation Measures (Supplement)

Chain-link fence [8ft(H) plus barbed wire, 6 ga. 2" mesh, sch-40 1-5/8" top rail, 2.5" line post and 3" end post installed in a concrete footing (LUMA/PREPA Standard for Fencing)], instead of 10ft spacing between post, provide and install (37ea) new 2.5" x 11ft(H) sch-40 line post with barbed wire extension arm to reduce the spacing from 10ft to 8ft to increase the resistance against wind-borne debris, and high hurricane winds impacts and/or effects, 407 LF.

Note: To comply with LUMA/PREPA codes and standards, each alternate pole is required to be grounded to the existing substation grounding grid:

- Exothermic weld, 4/0 wire to 1" ground rod = 18 EA.
- Pipe ground clamps, heavy duty, bronze, 1-1/4" to 2" diameter = 18 EA.
- Pipe ground clamps, heavy duty, bronze, 2-1/2" to 3" diameter = 36 EA.
- Crimp 2-way connectors, copper, or aluminum, 600 volt, #4 = 54 EA.
- Ground wire, copper wire, bare stranded, #4 = 54 LF.
- Ground wire, copper wire, bare stranded, 4/0 = 360 LF
- Chain-link fence foundation wall will be raised an additional 12" [1,495ft(L) x 1ft(H) x 0.5ft(W)] above grade for erosion control, strengthen the posts and fence foundation, and prevent the gravel from becoming contaminated with soil and/or dirt, 27.7CY.

Mitigation Measures (Replacement)

- Replace (1ea) aluminum jalousie windows (36" x 48") by wind-resistant aluminum-louver windows to reduce the wind-borne debris, wind driven rain and high hurricane winds impact and/or effects, 12SF.
- Replace (1ea) control house exterior double door (6ft x 7ft) by 90-minutes fire-proof 16-gauge doors designed to reduce the wind-borne debris, wind driven rain, water intrusion and high hurricane winds impact and/or effects.
- Replace (3ea) control house exterior single doors (3ft x 7ft) by 90-minutes fire-proof 16-gauge doors designed to reduce the wind-borne debris, wind driven rain, water intrusion and high hurricane winds impact and/or effects.
- Replace (15ea) poles for closed-circuit television (CCTV) system. This measure will increase the strength of the poles by increasing the wind tolerance from 90mph to +160mph.

CCTV System - The installation of the cameras will help in the response phase. Hazard Mitigation funds are to eliminate, avoid or prevent a damage due to a natural hazard event such as hurricane winds, flooding, wind borne debris and others. HM funds are not intended for response improvement. Nevertheless, HM funds can be provided to harden the elements of the equipment installed through the recovery solution. At the meeting with the Applicant held on 7/12/22, it was agreed that the CCTV System (cameras) will be included in the 428 PA portion and not in 406 HM as initially proposed by the sub-applicant.

Hazard Mitigation Proposal (HMP) Cost:

Hazard Mitigation Total Cost =	\$110,188.77
+ HM (Applicant A&E, Management & General Conditions) =	<u>\$ 36,374.50</u>
Total Net Hazard Mitigation Cost (Base Cost) =	\$ 73,814.27

HMP Cost-Effectiveness Calculations:

FEMA's Benefit-Cost Analysis (BCA), methodology evaluates expected risk reduction benefits of a hazard mitigation project and compares those benefits to the cost of the mitigation project. FEMA Public Assistance Program and Policy Guide (PAPPG) Chapter 2. Section VII. C. defines cost effective mitigation as: The Hazard Mitigation Measure is cost effective through an acceptable Benefit Cost Analysis (BCA) with a resulting Benefit Cost Ratio equal to or greater than (1).

The Island Wide Benefit Cost Analysis (IWBCA) created for the PREPA infrastructure defines a maximum potential benefit using the incurred costs of the PREPA FEMA Accelerated Award Strategy (FAASt) fixed cost estimate, the mission assignments utilized for the reconnection effort, and the costs associated with loss of service. This maximum benefit has been developed to fund all mitigation projects from both Public Assistance Hazard Mitigation and the Hazard Mitigation Grant program.

It is the applicant's responsibility to maintain a record of approved IWBCA related projects to avoid running out of funds for their Mitigation portion projects.". Please see attached IWBCA Package

The cost of the Hazard Mitigation Proposal (HMP) described herein is \$110,188.77 (Hazard Mitigation Total Cost). The cost of this HMP combined will all other proposals (both PA and HMGP) does not exceed the maximum potential benefit and is therefore deemed cost effective per FEMA Public Assistance Program and Policy Guide (PAPPG) V3.1 April 2018, Chapter 2, VII., Section C, BCA Rule. This Hazard Mitigation Proposal meets eligible repair and restoration cost-effective requirements.

**See Mitigation Profile Documents Tab in Grants Manager for complete version of this HMP and supporting documents (HMP, HMP cost estimate, Supporting documents file).

925096 Mora TC 7505

Introduction

The purpose of this document is to submit for approval the Detailed Scope of Work (SOW) to COR3 and FEMA for the Physical Security – Group 2 under DR-4339-PR Public Assistance. The document provides a description of the project including scope, schedule, and cost estimates as well as Environmental & Historical Preservation ("EHP") requirements and proposed 406 hazard mitigation work. LUMA Energy is seeking approval from COR3 and FEMA for project funding to repair, the associated substations related to the Physical Security – Group 2. This project is part of the Physical Security Program which has been classified as critical to system operation, location, and scope complexity.

LUMA submits this Detailed SOW pursuant to the T&D O&M Agreement between the 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 Appendix A 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.

F i. Т Islandа С i. t V wide Substations experienced substantial damages due to Hurricane Maria in September 2017. The facilities addressed by this project are transmission and distribution substations which require significant physical security improvements to avoid safety hazards, violations of federal or local ordinance, potential security breaches, and damage from

future severe weather events.

This project includes the following substations located in the Arecibo and San Juan regions.
Name	Substation Number	Physical Address	GPS Coordinate	Date of Construction
Mora TC	7505, 7502	Carr. 2 km 112.4 Isabela, PR		June 1969

Project Scope of Work

Substation:

- 1. Mora TC
- a. Proposed 428 Public Assistance Scope of Work

o Remove vegetative and non-vegetative debris from the site and buildings, including damaged fencing, windows, and doors. No vegetative debris to be removed outside substation boundary. Vegetative debris to be removed extend in some sections of the perimeter: east side (154 ft long x 3 ft wide x 3 ft height), south side (348 ft long x 3 ft wide x 3 ft height) and west side (95 ft long x 3 ft wide x 3 ft height)

- o Remove existing gravel, regrade terrain to ensure proper drainage, and replace gravel within substation
- o Install new signage on fencing and gates
- o Install new padlocks on gates and equipment
- o Install new electronic access system for the Control and IT Rooms
- o Install new security lighting and external lighting on the control room and outdoor structures

o Replace 3 control room interior single doors with 90 minutes fire rated 16-gauge doors designed to reduce the wind-borne debris, wind driven rain, water intrusion and high hurricane winds impact and/or effects

o Replace 1 control room interior double doors with 90 minutes fire rated 16-gauge doors designed to reduce the windborne debris, wind driven rain, water intrusion and high hurricane winds impact and/or effects

o Install within substation footprint new closed-circuit television (CCTV) system, including approximately 15 cameras, allowing real-time site monitoring to evaluate critical substation integrity during and after a major event. This measure reduces public safety concerns, potential electric system downtime and improves resiliency. It also will prevent outages caused by possible physical security breaches

Refer to Appendix E and G for additional details on drawings, facility pictures, and GPS coordinates of the site.

COST ESTIMATE	
Physical Security Group 2	428
PLANNING (FAASt 335168)	\$57,814.40
ENGINEERING SERVICES & DESIGN (FAASt 335168)	\$117,846.29
MANAGEMENT (FAASt 335168)	\$66,806.23
SUBSTATION	\$785,641.93
Mora TC	\$785,641.93
GENERAL CONDITIONS	\$98,897.66
CONTINGENCY	\$103,601.65
TOTAL PROJECT COST ESTIMATE	\$1,230,608.17

FAASt PROJECT # 549764, 428 Total	\$988,141.25
FAASt A&E # 335168 Total	\$242,466.92

Work To Be Completed (WTBC): \$ 1,230,608.17 A&E Deduction (Global A&E FAASt 335168): -\$ 242,466.92

DI 925096 WTBC Total Cost: \$ 988,141.25

For detailed cost estimate, please refers to document labeled: APPENDIX H-LPCE Physical Security Group 2.

406 HMP Scope

Project number: 549764 FAASt [Physical Security - Group 2] (Substation)

Damage #925096; Mora TC (7505,7502)

Applicant: PR Electric Power Authority (000-UA2QU-00)

Location: Isabela, Puerto Rico

GPS Latitude/Longitude:

Hazard Mitigation Narrative

During the incident period from September 17, 2017, to November 15, 2017, the Commonwealth of Puerto Rico experienced hurricane-force winds, heavy rain, flooding, and power outage "loss of power" from Hurricane Maria. The incident caused damage to the electrical system, such as the power generation plants, transmission and distribution lines, substations, communication systems, buildings, among other damages to the infrastructures owned, operated, and maintained by the Puerto Rico Electric Power Authority (PREPA).

The FAASt [Physical Security - Group 2] (Substation) consists of 2 transmission centers facilities (sites) which are distributed as follows: Mayaguez TC and Mora TC (7505, 7502).

The above facilities are composed of 230/115/38 KV critical substations (transmission and distribution) which requires an effectively physical security improvement applying a comprehensive risk-based security strategies and developing cost-effective security solution to alleviate the risks. The physical security practices include facilities perimeter protection, facilities access control, and company property and assets. The objective is to replace these components based on LUMA/PREPA and industry standards, improve system resiliency, and alleviate safety hazards and environmental concerns. According to the information provided by the sub-applicant, due to the high hurricane winds, wind-borne debris, and prolonged heavy rain was the main cause of the damages of the facilities.

In order to minimize the damages in a future event, the sub-applicant is proposing as a mitigation measure, reduce the spacing of the chain-link fence posts from 10ft to 8ft, raise an additional 12" above grade for erosion control (and prevent the gravel from becoming contaminated with soil and/or dirt), strengthen the posts and fence foundation, replace the aluminum jalousie window by wind-resistant aluminum-louver windows, replace the exterior fire rated steel doors by 16ga. fire rated steel door and increase the strength of the CCTV (cameras) poles from 90mph to +160mph sustained winds material. The above mitigation measures will protect and make the affected elements more resistant to similar hazards.

Hazard Mitigation Proposal (HMP) Scope of Work:

In order to prevent or reduce future damages from similar events, the applicant proposed the following mitigation measures:

Mitigation Measures (Supplement)

• Chain-link fence [8ft(H) plus barbed wire, 6 ga. 2" mesh, sch-40 1-5/8" top rail, 2.5" line post and 3" end post installed in a concrete footing (LUMA/PREPA Standard for Fencing)], instead of 10ft spacing between post, provide and install (35ea) new 2.5" x 11ft(H) sch-40 line post with barbed wire extension arm to reduce the spacing from 10ft to 8ft to increase the resistance against wind-borne debris, and high hurricane winds impacts and/or

Note: To comply with LUMA/PREPA codes and standards, each alternate pole is required to be grounded to the existing substation grounding grid:

- Exothermic weld, 4/0 wire to 1" ground rod = 17 EA.
- Pipe ground clamps, heavy duty, bronze, 1-1/4" to 2" diameter = 17 EA.
- Pipe ground clamps, heavy duty, bronze, 2-1/2" to 3" diameter = 34 EA.
- Crimp 2-way connectors, copper, or aluminum, 600 volt, #4 = 51 EA.
- Ground wire, copper wire, bare stranded, #4 = 51 LF.
- Ground wire, copper wire, bare stranded, 4/0 = 340 LF
- Chain-link fence foundation wall will be raised an additional 12" [1,370ft(L) x 1ft(H) x 0.5ft(W)] above grade for erosion control, strengthen the posts and fence foundation, and prevent the gravel from becoming contaminated with soil and/or dirt, 25.4CY.

Mitigation Measures (Replacement)

- Replace (10ea) aluminum jalousie windows (36" x 48") by wind-resistant aluminum-louver windows to reduce the wind-borne debris, wind driven rain and high hurricane winds impact and/or effects, 120SF.
- Replace (2ea) control house exterior double door (6ft x 7ft) by 90-minutes fire-proof 16-gauge doors designed to reduce the wind-borne debris, wind driven rain, water intrusion and high hurricane winds impact and/or effects.
- Replace (2ea) control house exterior single doors (3ft x 7ft) by 90-minutes fire-proof 16-gauge doors designed to reduce the wind-borne debris, wind driven rain, water intrusion and high hurricane winds impact and/or effects.
- Replace (15ea) poles for closed-circuit television (CCTV) system. This measure will increase the strength of the poles by increasing the wind tolerance from 90mph to +160mph.

CCTV System - The installation of the cameras will help in the response phase. Hazard Mitigation funds are to eliminate, avoid or prevent a damage due to a natural hazard event such as hurricane winds, flooding, wind borne debris and others. HM funds are not intended for response improvement. Nevertheless, HM funds can be provided to harden the elements of the equipment installed through the recovery solution. At the meeting with the Applicant held on 7/12/22, it was agreed that the CCTV System (cameras) will be included in the 428 PA portion and not in 406 HM as initially proposed by the sub-applicant.

Hazard Mitigation Proposal (HMP) Cost:

Hazard Mitigation Total Cost =	\$114,491.91
+ HM (Applicant A&E, Management & General Conditions) =	<u>\$ 37,795.01</u>
Total Net Hazard Mitigation Cost (Base Cost) =	\$ 76,696.90

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HMP Cost-Effectiveness Calculations:

FEMA's Benefit-Cost Analysis (BCA), methodology evaluates expected risk reduction benefits of a hazard mitigation project and compares those benefits to the cost of the mitigation project. FEMA Public Assistance Program and Policy Guide (PAPPG) Chapter 2. Section VII. C. defines cost effective mitigation as: The Hazard Mitigation Measure is cost effective through an acceptable Benefit Cost Analysis (BCA) with a resulting Benefit Cost Ratio equal to or greater than (1).

The Island Wide Benefit Cost Analysis (IWBCA) created for the PREPA infrastructure defines a maximum potential benefit using the incurred costs of the PREPA FEMA Accelerated Award Strategy (FAASt) fixed cost estimate, the mission assignments utilized for the reconnection effort, and the costs associated with loss of service. This maximum benefit has been developed to fund all mitigation projects from both Public Assistance Hazard Mitigation and the Hazard Mitigation Grant program.

It is the applicant's responsibility to maintain a record of approved IWBCA related projects to avoid running out of funds for their Mitigation portion projects.". Please see attached IWBCA Package

The cost of the Hazard Mitigation Proposal (HMP) described herein is \$114,491.91 (Hazard Mitigation Total Cost). The cost of this HMP combined will all other

proposals (both PA and HMGP) does not exceed the maximum potential benefit and is therefore deemed cost effective per FEMA Public Assistance Program and Policy Guide (PAPPG) V3.1 April 2018, Chapter 2, VII., Section C, BCA Rule. This Hazard Mitigation Proposal meets eligible repair and restoration cost-effective requirements.

**See Mitigation Profile Documents Tab in Grants Manager for complete version of this HMP and supporting documents (HMP, HMP cost estimate, Supporting documents file).

Cost

Code	Quantity	Unit	Total Cost	Section
3510 (Engineering And Design Services (Global A&E FAASt 335168))	1.00	Lump Sum	(\$287,304.57)	Uncompleted
9001 (Contract (PREPA FAASt 136271))	1.00	Lump Sum	\$1,458,175.63	Uncompleted
3510 (Engineering And Design Services (Global A&E FAASt 335168))	1.00	Lump Sum	(\$242,466.92)	Uncompleted
9001 (Contract (PREPA FAASt 136271))	1.00	Lump Sum	\$1,230,608.17	Uncompleted

CRC Gross Cost	\$2,159,012.31
Total 406 HMP Cost	\$224,680.68
Total Insurance Reductions	\$0.00
CRC Net Cost	\$2,383,692.99
CRC Net Cost Federal Share (90.00%)	\$2,383,692.99 \$2,145,323.70

Award Information

Version Information

Version	Eligibility	Current	Bundle Number	Project	Cost	Federal Share	Date
#	Status	Location		Amount	Share	Obligated	Obligated
0	Eligible	Awarded	PA-02-PR-4339-PW- 11350(13799)	\$2,383,692.99	90 %	\$2,145,323.69	6/15/2023

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 #	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

4/14/2023

GENERAL INFORMATION

Event: DR4339-PR Project: SP 549764 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: \$2,383,692.99 (CRC Gross Cost \$2,159,012.31 + HMP Cost \$224,680.68).

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 Mapfre

Policy Numbers: <u>Willis Towers Watson</u> (B0804Q1966F17, B0804Q14312F17, B0804Q19673F17, B0804Q19672F17, B0804Q18529F17, B0804Q14312F17, B0804Q147, B0804Q147, B0804Q147, B0804Q147, B0804Q147,

Mapfre 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: (2)

Damaged Inventory (DI) # 925095:

Mayaguez TC

Location: Mayaguez TC

GPS Coordinates:

Cause of Loss: Wind / Wind Driven Rain

SOV/ Schedule #: Not insured

SOV/ Schedule Amount: Not insured

Applicable Deductible Amount: N/A

Damage Inventory Amount: \$1,281,059.83 (CRC Gross Cost \$1,170,871.06 + HMP Cost \$110,188.77)

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.

Obtain and Maintain Requirement:

An Obtain & Maintain Requirement is being required for Building, for the peril of Wind (all wind associated losses including "wind driven rain" for (*Mayaguez TC*) in the amount of \$204,812.28 (CRC Gross Cost \$1,170,871.06 - Uninsurable cost \$894,497.02 – Equipment Cost \$59,520.00 – Content Cost \$19,441.00 + Insurable HMP Amount \$7,398.24). See; 549764-DR4339PR- 08 Appendix H - LPCE Physical Security Group 2 - Estimate (2023-03-23)-Insurance.

An Obtain & Maintain Requirement is being required for Equipment, for the peril of Wind (all wind associated losses including "wind driven rain" for (*Mayaguez TC*) in the amount of \$59,520.00 (CRC Gross Cost) See; 549764-DR4339PR- 08 Appendix H - LPCE Physical Security Group 2 - Estimate (2023-03-23)-Insurance.

An Obtain & Maintain Requirement is being required for Contents, for the peril of Wind (all wind associated losses including "wind driven rain" for (*Mayaguez TC*) in the amount of \$19,441.00 (CRC Gross Cost) See; 549764-DR4339PR- 08 Appendix H - LPCE Physical Security Group 2 - Estimate (2023-03-23)-Insurance.

Damaged Inventory (DI) # 925096:

Mora TC 7505

Location: Mora TC 7505

GPS Coordinates:

Cause of Loss: Wind / Wind Driven Rain

SOV/ Schedule #: Not insured

SOV/ Schedule Amount: Not insured

Applicable Deductible Amount: N/A

Damage Inventory Amount: \$1,102,633.16 (CRC Gross Cost \$988,141.25 + HMP Cost \$114,491.91)

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.

Obtain and Maintain Requirement:

An Obtain & Maintain Requirement is being required for Building, for the peril of Wind (all wind associated losses including "wind driven rain" for (*Mora TC 7505*) in the amount of \$198,505.89 (CRC Gross Cost \$988,141.25 - Uninsurable cost \$728,774.07 – Equipment Cost \$59,520.00 – Content Cost \$19,441.00 + Insurable HMP Amount \$18,099.71). See; 549764-DR4339PR- 08 Appendix H - LPCE Physical Security Group 2 - Estimate (2023-03-23)-Insurance.

An Obtain & Maintain Requirement is being required for Equipment, for the peril of Wind (all wind associated losses including "wind driven rain" for (*Mora TC 7505*) in the amount of \$59,520.00 (CRC Gross Cost) See; 549764-DR4339PR- 08 Appendix H - LPCE Physical Security Group 2 - Estimate (2023-03-23)-Insurance.

An Obtain & Maintain Requirement is being required for Contents, for the peril of Wind (all wind associated losses including "wind driven rain" for (*Mora TC 7505*) in the amount of \$19,441.00 (CRC Gross Cost) See; 549764-DR4339PR- 08 Appendix H - LPCE Physical Security Group 2 - Estimate (2023-03-23)-Insurance.

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).

FEMA Policy 206-086-1

H. Subsequent Assistance. When a facility that received assistance is damaged by the same hazard in a subsequent disaster:

1. If the applicant failed to maintain the required insurance from the previous disaster, then the facility is not eligible for assistance in any subsequent disaster.

2. Upon proof that the applicant maintained its required insurance, FEMA will reduce assistance in the subsequent disaster by the amount of insurance required in the previous disaster regardless of:

a. The amount of any deductible or self-insured retention the applicant assumed (i.e., "retained risk").

Obtain and Maintain Requirements:

44 CFR § 206.253 Insurance requirements for facilities damaged by disasters other than flood.

(a) Prior to approval of a Federal grant for the restoration of a facility and its contents which were damaged by a disaster other than flood, the recipient shall notify the Regional Administrator of any entitlement to insurance settlement or recovery for such facility and its contents. The Regional Administrator shall reduce the eligible costs by the actual amount of

(b)

(1) Assistance under section 406 of the Stafford Act will be approved only on the condition that the recipient obtain and maintain such types and amounts of insurance as are reasonable and necessary to protect against future loss to such property from the types of hazard which caused the major disaster. The extent of insurance to be required will be based on the eligible damage that was incurred to the damaged facility as a result of the major disaster. The Regional Administrator shall not require greater types and extent of insurance than are certified as reasonable by the State Insurance Commissioner.

(2) Due to the high cost of insurance, some applicants may request to insure the damaged facilities under a blanket insurance policy covering all their facilities, an insurance pool arrangement, or some combination of these options. Such an arrangement may be accepted for other than flood damages. However, if the same facility is damaged in a similar future disaster, eligible costs will be reduced by the amount of eligible damage sustained on the previous disaster.

(c) The Regional Administrator shall notify the recipient of the type and amount of insurance required. The recipient may request that the State Insurance Commissioner review the type and extent of insurance required to protect against future loss to a disaster-damaged facility, the Regional Administrator shall not require greater types and extent of insurance than are certified as reasonable by the State Insurance Commissioner.

(d) The requirements of section 311 of the Stafford Act are waived when eligible costs for an insurable facility do not exceed \$5,000. The Regional Administrator may establish a higher waiver amount based on hazard mitigation initiatives which reduce the risk of future damages by a disaster similar to the one which resulted in the major disaster declaration which is the basis for the application for disaster assistance.

(e) The recipient shall provide assurances that the required insurance coverage will be maintained for the anticipated life of the restorative work or the insured facility, whichever is the lesser.

(f) No assistance shall be provided under section 406 of the Stafford Act for any facility for which assistance was provided as a result of a previous major disaster unless all insurance required by FEMA as a condition of the previous assistance has been obtained and maintained.

Final Obtain and Maintain requirement amount will be determined during the closeout process after the final actual eligible costs to repair or replace the insurable facility have been determined.

FEMA Policy 206-086-1

F. Timeframes for Obtaining Insurance. FEMA will only approve assistance under the condition that an applicant obtains and maintains the required insurance.

The applicant must document its commitment to comply with the insurance requirement with proof of insurance.

If an applicant cannot insure a facility prior to grant approval (for example, if a building is being reconstructed), the applicant may provide a letter of commitment stating that they agree to the insurance requirement and will obtain the types and extent of insurance required, followed at a later date by proof of insurance once it is obtained. In these cases, the applicant should insure the property:

a. When the applicant resumes use of or legal responsibility for the property (for example, per terms of construction contract or at beneficial use of the property); or

b. When the scope of work is complete.

FEMA and the recipient will verify proof of insurance prior to grant closeout to ensure the applicant has complied with the insurance requirement.

An applicant should notify FEMA—in writing through the recipient—of changes to their insurance which impact their ability to satisfy the insurance requirement after it provides proof of insurance to FEMA. This includes changes related to self-insurance. If an applicant fails to do this, FEMA may de-obligate assistance and not provide assistance in a future disaster.

Virginia Hernandez Rivera, PA Insurance Specialist, CRC Atlantic, Guaynabo, PR

O&M Requirements

Insured Peril	ltem Type	Description	Required Coverage Amount
Wind	Building, Contents, Equipment	An Obtain & Maintain Requirement is being required for Building, for the peril of Wind (all wind associated losses including "wind driven rain" for (Mayaguez TC) in the amount of \$204,812.28 An Obtain & Maintain Requirement is being required for Equipment, for the peril of Wind (all wind associated losses including "wind driven rain" for (Mayaguez TC) in the amount of \$59,520.00 An Obtain & Maintain Requirement is being required for Contents, for the peril of Wind (all wind associated losses including "wind driven rain" for (Mayaguez TC) in the amount of \$19,441.00	\$283,773.28

Insured Peril	ltem Type	Description	Required Coverage Amount
Wind	Building, Contents, Equipment	An Obtain & Maintain Requirement is being required for Building, for the peril of Wind (all wind associated losses including "wind driven rain" for (Mora TC 7505) in the amount of \$198,505.89 An Obtain & Maintain Requirement is being required for Equipment, for the peril of Wind (all wind associated losses including "wind driven rain" for (Mora TC 7505) in the amount of \$59,520.00 An Obtain & Maintain Requirement is being required for Contents, for the peril of Wind (all wind associated losses including "wind driven rain" for (Mora TC 7505) in the amount of \$59,520.00 An Obtain & Maintain Requirement is being required for Contents, for the peril of Wind (all wind associated losses including "wind driven rain" for (Mora TC 7505) in the amount of \$19,441.00	\$277,466.89

406 Mitigation

There is no additional mitigation information on **FAASt Physical Security - Group 2 (Substation)**.

Environmental Historical Preservation

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

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.

Yes

- 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.
- Endangered Species Act (ESA) Conditions for the Puerto Rican Boa apply for damage#925095 Mayaguez TC and 925096 Mora TC 7505 1. Inform all personnel about the potential presence of the PR boa and the VI boa in areas where the proposed work will be conducted. Photographs of the PR and VI Boa are to be prominently displayed at the site. The recipient must ensure that project personnel is able to correctly identify a PR or VI boa. For information on PR boa, please visit: https://ecos.fws.gov/ecp/species/6628. 2. Prior to any construction activity, including removal of vegetation and earth movement, the boundaries of the project area must be delineated, buffer zones, and areas to be excluded and protected, should be clearly marked in the project plan and in the field to avoid further habitat degradation into forested areas. Once areas are clearly marked, and prior to any construction activity, including site preparation, project personnel able to correctly identify a PR or VI boa must survey the areas to be cleared to ensure that no boas are present within the work area. Vehicle and equipment operation must remain on designated access roads/paths and within rights-of way. 3. If a PR boa is found within any of the working or construction areas, activities should stop in the area where the boa was found. Do not capture the boa. If boas need to be moved out of harm's way, project personnel designated by the recipient shall immediately contact the Puerto Rico Department of Natural and Environmental Resources (PRDNER) Rangers for safe capture and relocation of the animal (PRDNER phone #s; 787-724-5700, 787-230-5550, 787-771-1124). If immediate relocation is not an option, project-related activities at this area must stop until the boa moves out of harm's way on its own. Activities at other work sites, where no boas have been found after surveying the area, may continue. 4. Measures should be taken to avoid and minimize PR boa casualties by heavy machinery or motor vehicles being used on site. Any heavy machinery left on site (staging) or near potential PR boa habitat (within 50 meters of potential boa habitat), needs to be thoroughly inspected each morning before work starts to ensure that no boas have sheltered within engine compartments or other areas of the equipment. If PR boas are found within vehicles or equipment, do not capture the animal and let it move on its own or call PRDNER Rangers for safe capture and relocation of the boa (PRDNER phone #s: 787-724-5700, 787-230-5550, 787-771-1124). If not possible, the animal should be left alone until it leaves the vehicle on its own. 5. PR boas may seek shelter in debris piles. Measures should be taken to avoid and minimize boa casualties associated with sheltering in debris piles as a

result of project activities. Debris piles should be placed far away from forested areas. Prior to moving, disposing or shredding, debris piles should be carefully inspected for the presence of boas. If PR boas are, found within debris piles, do not capture the animal and let it move on its own or call PRDNER Rangers for safe capture and relocation of the animal. If debris piles will be left on site, we recommend they be placed in areas that will not be disturbed in the future. 6. For all boa sightings (dead or alive), personnel designated by the recipient must record the time and date of the sighting and the specific location where the boa was found. Data should also include a photo of the animal dead or alive, and site GPS coordinates, and comments on how the animal was detected and its behavior. If the PR boa was accidentally killed as part of the project actions, please include information on what conservation measures had been implemented and what actions will be taken to avoid further killings. All boa sighting reports should be sent to the USFWS Caribbean Ecological Services Field Office, Marelisa Rivera - Deputy Field Supervisor, 787-851-7297 extension 206, 787-510-5207, marelisa_rivera@fws.gov.

- Resource Conservation and Recovery Act, aka Solid Waste Disposal Act (RCRA) 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. 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 to the requirements of the local and federal agencies. Noncompliance with these requirements may jeopardize receipt of federal funds.
- National Historic Preservation Act (NHPA) 1. 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. 2. 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. 3. 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 previously disturbed or hardened surfaces can be provided at close-out.

EHP Additional Info

There is no additional environmental historical preservation on **FAASt Physical Security - Group 2 (Substation)**.

Final Reviews

Final Review

Reviewed By MARTINEZ SANTIAGO, ISRAEL

Reviewed On 05/03/2023 11:46 AM PDT

Review Comments

FEMA Final review completed. Project ready for Recipient review.

Recipient Review

Reviewed By Salgado, Gabriel

Reviewed On 05/04/2023 1:52 PM PDT

Review Comments

Recipient review completed. Project is ready for applicant review.

Project Signatures

Signed By Miller, Thomas

Signed On 05/08/2023

Department of Homeland Security Federal Emergency Management Agency

General Info

Project #	551861 P/W# 11372	Project Type	Specialized
Project Category	F - Utilities	Applicant	PR Electric Power Authority (000-UA2QU-
Project Title	FAASt [Physical Security - Group 3] (Substation)	Event	4339DR-PR (4339DR)
Project Size	Large	Declaration Date	9/20/2017
Activity	9/20/2027	Incident Start Date	9/17/2017
Completion Date		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 #927248; FAASt [Aguas Buenas GIS]

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: Aguas Buenas GIS
- Facility Description: The above facilities are composed of 230/115/38 kV critical substations, transmission substations, distribution substations, control centers, warehouses, business offices and administration offices which requires an effectively physical security improvement applying a comprehensive risk-based security strategies and developing cost-effective security solution to alleviate the risks. The physical security practices includes facilities perimeter protection, facilities access control, and company property and assets. The objective is to replace these components based on LUMA and industry standards, improve system resiliency, and alleviate safety hazards and environmental concerns.
- Approx. Year Built: 1970
- GPS Latitude/Longitude:

General Damage Information:

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

Damage #927264; FAASt [Yabucoa TC]

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: Yabucoa TC
- Facility Description: The above facilities are composed of 230/115/38 kV critical substations, transmission substations, distribution substations, control centers, warehouses, business offices and administration offices which requires an effectively physical security improvement applying a



comprehensive risk-based security strategies and developing cost-effective security solution to alleviate the risks. The physical security practices includes facilities perimeter protection, facilities access control, and company property and assets. The objective is to replace these components based on LUMA and industry standards, improve system resiliency, and alleviate safety hazards and environmental concerns.

- Approx. Year Built: 1970
- GPS Latitude/Longitude:

General Damage Information:

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

Damage #927272; FAASt [Juncos TC 3201/3205]

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: Juncos TC 3201/3205
- Facility Description: The above facilities are composed of 230/115/38 kV critical substations, transmission substations, distribution substations, control centers, warehouses, business offices and administration offices which requires an effectively physical security improvement applying a comprehensive risk-based security strategies and developing cost-effective security solution to alleviate the risks. The physical security practices includes facilities perimeter protection, facilities access control, and company property and assets. The objective is to replace these components based on LUMA and industry standards, improve system resiliency, and alleviate safety hazards and environmental concerns.
- Approx. Year Built: 1970
- GPS Latitude/Longitude:

General Damage Information:

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

Final Scope

927248 FAASt [Aguas Buenas GIS]

Introduction

The purpose of this document is to submit for approval the Detailed Scope of Work (SOW) to COR3 and FEMA for the Physical Security -Group 3 under DR-4339-PR Public Assistance. The document provides a description of the project including scope, schedule, and cost estimates as well as Environmental & Historical Preservation ("EHP") requirements and proposed 406 hazard mitigation work. LUMA Energy is seeking approval from COR3 and FEMA for project funding to repair, the associated substations related to the Physical Security - Group 3. This project is part of the Physical Security Program which has been classified as critical to system operation, location, and scope complexity.

LUMA submits this Detailed SOW pursuant to the T&D O&M Agreement between the 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 Appendix A 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.

Facilities

Island-wide Substations experienced substantial damage due to Hurricane Maria in September 2017. The facilities addressed by this project are transmission and distribution substations which require significant physical security improvements to avoid safety hazards, violations of federal or local ordinance, potential security breaches, and damage from future severe weather events.

This project includes the following substations in Group 3 located in the Caguas region.

Name	Substation Number	Physical Address	GPS Coordinate	Date of Construction
Aguas Buenas GIS		Carr. 794 interior Bo. Sumidero Sec La Araña Aguas Buenas		June 1999

Project Scope of Work

Substation:

Aguas Buenas GIS

a. Proposed 428 Public Assistance Scope of Work

o Remove debris from the site and buildings, including damaged fencing, windows, doors, and other items as site preparation measure for construction works. Vegetative debris to be removed extend along the existing perimeter, 1,000 ft long x 3 ft wide x 3 ft height.

- o Add insulating gravel
- o Install new signage on fencing and gates
- o Install new padlocks on gates and equipment
- o Install new electronic access system for the Control and IT Rooms
- o Install new security lighting and external lighting on the control room and outdoor structures
- o Construction of new Driveway. Existing driveway to be demolished and disposed.
- o Install 27ea new aluminum jalousie windows (36" x 48").
- o Install 3ea new control house exterior double door (6ft x 7ft) 90-minutes fire-proof.
- o Install 5ea new control house exterior single doors (3ft x 7ft) 90-minutes fire-proof.

o Install within substation footprint new closed-circuit television (CCTV) system, including approximately 15 cameras, allowing real-time site monitoring to evaluate critical substation integrity during and after a major event. Install underground conduits and cabling to connect to communication equipment. This measure reduces public safety concerns, potential electric system downtime and improves resiliency. It also will prevent outages caused by possible physical security breaches

• Conduits for closed-circuit television (CCTV) system will be installed to a maximum depth of 42" below final grade from the control room to each pole with CCTV for power and communication.

Structure Age

Aguas Buenas GIS Bank 1 (230/115kV) was built in June 1999.

Debris Removal

• The type of debris that may be found in the process of demolition are concrete, metal scrap, domestic waste, wood, etc. The debris will be separated and taken to an approved waste disposal facility per LUMA Waste Management Plan.

Staging Area

The main staging area will be located inside the premises of the substation and will serve as an assembly point for all

Equipment to be used.

Skid Steer, Excavator, Dump trucks, Manlifts, Boom Trucks 45-ton Crane, Zoom Boom, Air compressor, Truck Digger, Water truck, Pump Truck, Concrete Vibrator, Oil Tanker, Filtering Machine, Flatbed platform, portable generators, and gas small tools.

· All equipment used will comply with Tier 4 EPA Emission Standards, if available

Fill, gravel, sand, etc.

Fill, Gravel, and Sand materials will be obtained from an approved supplier as referenced in Appendix P.

Hazardous Material:

• The identified hazardous materials that can be found in the substation are asbestos and lead. If the presence of asbestos and lead is confirmed in the structures to be demolished, LUMA will follow all permits protocols required by law to properly remove and dispose of the hazardous materials from the premises.

Material amounts will be provided by a certified management contractor performing a site evaluation calculation for asbestos and lead paint.

Ground disturbance:

• All project construction activities will take place within the existing substation boundary that has been previously disturbed 30" below the surface for construction of the existing substation ground grid.

Specific List of Permits Required

• Environmental Compliance Determination and Construction Permit in Oficina de Gerencia de Permisos (OGPe) – Administrative Order OGPe 2021-07

- Aguas Buenas Municipality Notifications
- Excavation and Demolition Notification in Department of Transportation and Public Works Agency (DTOP) General Consolidated Permit or Incidental Single Permit for: Emission Sources Permit
 - · Hazardous Waste Disposal Permit EQB / DNR
 - · Erosion Control and Sedimentation Prevention Plan (Plan CES) EQB / DNR

- Asbestos Permit – Environmental Quality Board (EQB) now the Department of Natural Resources Agency (DNR) – if asbestos is present at the site

• Lead Permit - EQB / DNR - is lead is present at the site

b. Refer to Section 406 Section in Grants Manager for Proposed 406 Hazard Mitigation Grant Program Scope of Work.

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 site detail assessment using LUMA engineering department and may be subject to change. LUMA has identified risks and allowances for the mitigation of potential known risks.

COST ESTIMATE	
Physical Security Group 3	428
PLANNING (FAASt 335168)	\$46,906.73
ENGINEERING SERVICES & DESIGN (FAASt 335168)	\$168,128.45
MANAGEMENT (FAASt 335168)	\$93,790.65
SUBSTATION	\$1,120,856.39
Aguas Buenas GIS	\$1,120,856.39
GENERAL CONDITIONS	\$142,216.35
CONTINGENCY	\$88,331.27
TOTAL PROJECT COST ESTIMATE	\$1,660,229.87
FAASt PROJECT # 5551861, 428 Total	\$1,351,404.02
FAASt A&E # 335168 Total	\$308,825.84

Work To Be completed (WBTC): \$ 1,660,229.87

A&E Deduction (Global A&E FAASt 335168): - \$308,825.84

Project Total Cost: \$ 1,351,404.03

For detailed cost estimate, please refers to document labeled: 551861-DR4339PR- 15 Appendix O - LPCE Physical Security Group 3 - Estimate (04-27-2023).xlsx

Total Project Cost (Sum of all DI's): \$3,696,956.60

Project Notes:

1. Refer to detailed SOW provided in document 551861-DR4339PR- 00 FEMA Detailed Scope of Work for Physical

Security - Group 3 (40000-CP-SOW-0009Rev5)(2023-04-27) - signed.pdf

2. Refer to detailed Cost Estimate provided in document 551861-DR4339PR- 15 Appendix O - LPCE Physical Security

Group 3 - Estimate (04-27-2023).xlsx

- 3. For reference documents Appendix A thru U, see file labeled
 - a. APPENDIX A Consent to Federal Funding Letter- FEMA/COR3
 - b. APPENDIX B Aguas Buenas GIS PSRR
 - c. APPENDIX C Aguas Buenas GIS Existing Drawings
 - d. APPENDIX D Aguas Buenas GIS General Management and Access Roads
 - e. APPENDIX E Juncos TC PSRR
 - f. APPENDIX F Juncos TC Existing Drawings
 - g. APPENDIX G Juncos TC General Management and Access Roads
 - h. APPENDIX H Yabucoa TC PSRR
 - i. APPENDIX I Yabucoa TC Existing Drawings
 - j. APPENDIX J Yabucoa TC General Management and Access Roads
 - k. APPENDIX K LUMA Waste Management Plan
 - I. APPENDIX L EHP Desktop Review
 - m. APPENDIX M EHP Checklist
 - n. APPENDIX N Project Specific Programmatic Agreement (PSPA)
 - o. APPENDIX O LPCE Physical Security Group 3
 - p. APPENDIX P Preferred Vendor List Directory PR
 - q. APPENDIX Q LUMA Standard for Fencing
 - r. APPENDIX R PREPA Standard for Fencing
 - s. APPENDIX S Land & Permit Evaluation
 - t. APPENDIX T LUMA Wildlife, Avian and Historical Resources Protection
 - u. APPENDIX U BCA Narrative for Physical Security Group 3

4. This project is part of Donor FAASt 136271 – MEPA078 Puerto Rico Electrical Power Authority (PREPA) Island

Wide FAASt Project.

406 HMP Scope

Project number: 551861 FAASt [Physical Security - Group 3] (Substation)

Damage # 927248; FAASt [Aguas Buenas GIS]

Applicant: PR Electric Power Authority (000-UA2QU-00)

Location: Aguas Buenas, Puerto Rico

GPS Latitude/Longitude:

Hazard Mitigation Narrative

During the incident period from September 17, 2017, to November 15, 2017, the Commonwealth of Puerto Rico experienced hurricane-force winds, heavy rain, flooding, and power outage "loss of power" from Hurricane Maria. The incident caused damage to the electrical system, such as the power generation plants, transmission and distribution lines, substations, communication systems, buildings, among other damages to the infrastructures owned, operated, and maintained by the Puerto Rico Electric Power Authority (PREPA).

The FAASt [Physical Security - Group 3] (Substation) consists of 3 transmission centers facilities (sites) which are distributed as follows: Aguas Buenas GIS, Yabucoa TC (2604), and Juncos TC (3201, 3205).

The above facilities are composed of 230/115/38 KV critical substations (transmission and distribution) which requires an effectively physical security improvement applying a comprehensive risk-based security strategies and developing cost-effective security solution to alleviate the risks. The physical security practices include facilities perimeter protection, facilities access control, and company property and assets. The objective is to replace these components based on LUMA/PREPA and industry standards, improve system resiliency, and alleviate safety hazards and environmental concerns. According to the information provided by the sub-applicant, due to the high hurricane winds, wind-borne debris, and prolonged heavy rain was the main cause of the damages of the facilities.

In order to minimize the damages in a future event, the sub-applicant is proposing as a mitigation measure, reduce the spacing of the chain-link fence posts from 10ft to 8ft, raise an additional 12" above grade for erosion control (and prevent the gravel from becoming contaminated with soil and/or dirt), strengthen the posts and fence foundation, replace the aluminum jalousie window by wind-resistant aluminum-louver windows, replace the exterior fire rated steel doors by 16ga. fire rated steel door and increase the strength of the CCTV (cameras) poles from 90mph to +160mph sustained winds material. The above mitigation measures will protect and make the affected elements more resistant to similar hazards.

Hazard Mitigation Proposal (HMP) Scope of Work:

In order to prevent or reduce future damages from similar events, the applicant proposed the following mitigation measures:

Mitigation Measures (Supplement)

Chain-link fence [8ft(H) plus barbed wire, 6 ga. 2" mesh, sch-40 1-5/8" top rail, 2.5" line post and 3" end post installed in a concrete footing (LUMA/PREPA Standard for Fencing)], instead of 10ft spacing between post, provide and install (37ea) new 2.5" x 11ft(H) sch-40 line post with barbed wire extension arm to reduce the spacing from 10ft to 8ft to increase the resistance against wind-borne debris, and high hurricane winds impacts and/or effects, 407 LF.

Note: To comply with LUMA/PREPA codes and standards, each alternate pole is required to be grounded to the existing substation grounding grid:

- Exothermic weld, 4/0 wire to 1" ground rod = 18 EA.
- Pipe ground clamps, heavy duty, bronze, 1-1/4" to 2" diameter = 18 EA.
- Pipe ground clamps, heavy duty, bronze, 2-1/2" to 3" diameter = 36 EA.
- Crimp 2-way connectors, copper, or aluminum, 600 volt, #4 = 54 EA.
- Ground wire, copper wire, bare stranded, #4 = 54 LF.
- Ground wire, copper wire, bare stranded, 4/0 = 360 LF

• Chain-link fence foundation wall will be raised an additional 12" [1,496ft(L) x 1ft(H) x 0.5ft(W)] above grade for erosion control, strengthen the posts and fence foundation, and prevent the gravel from becoming contaminated with soil and/or dirt, 27.7CY.

Mitigation Measures (Replacement)

- Replace (27ea) aluminum jalousie windows (36" x 48") by wind-resistant aluminum-louver windows to reduce the wind-borne debris, wind driven rain and high hurricane winds impact and/or effects, 324SF.
- Replace (3ea) control house exterior double door (6ft x 7ft) by 90-minutes fire-proof 16-gauge doors designed to reduce the wind-borne debris, wind driven rain, water intrusion and high hurricane winds impact and/or effects.
- Replace (5ea) control house exterior single doors (3ft x 7ft) by 90-minutes fire-proof 16-gauge doors designed to reduce the wind-borne debris, wind driven rain, water intrusion and high hurricane winds impact and/or effects.
- Replace (15ea) poles for closed-circuit television (CCTV) system. This measure will increase the strength of the poles by increasing the wind tolerance from 90mph to +160mph.

CCTV System - The installation of the cameras will help in the response phase. Hazard Mitigation funds are to eliminate, avoid or prevent a damage due to a natural hazard event such as hurricane winds, flooding, wind borne debris and others. HM funds are not intended for response improvement. Nevertheless, HM funds can be provided to harden the elements of the equipment installed through the recovery solution. At the meeting with the Applicant held on 7/12/22, it was agreed that the CCTV System (cameras) will be included in the 428 PA portion and not in 406 HM as initially proposed by the sub-applicant.

Hazard Mitigation Proposal (HMP) Cost:

Hazard Mitigation Total Cost =	\$ 141,416.17
+ HM (Applicant A&E, Management & General Conditions) =	<u>\$43,167.27</u>
Total Net Hazard Mitigation Cost (Base Cost) =	\$98,248.90

HMP Cost-Effectiveness Calculations:

FEMA's Benefit-Cost Analysis (BCA), methodology evaluates expected risk reduction benefits of a hazard mitigation project and compares those benefits to the cost of the mitigation project. FEMA Public Assistance Program and Policy Guide (PAPPG) Chapter 2. Section VII. C. defines cost effective mitigation as: The Hazard Mitigation Measure is cost effective through an acceptable Benefit Cost Analysis (BCA) with a resulting Benefit Cost Ratio equal to or greater than (1).

The Island Wide Benefit Cost Analysis (IWBCA) created for the PREPA infrastructure defines a maximum potential benefit using the incurred costs of the PREPA FEMA Accelerated Award Strategy (FAASt) fixed cost estimate, the mission assignments utilized for the reconnection effort, and the costs associated with loss of service. This maximum benefit has been developed to fund all mitigation projects from both Public Assistance Hazard Mitigation and the Hazard Mitigation Grant program.

It is the applicant's responsibility to maintain a record of approved IWBCA related projects to avoid running out of funds for their Mitigation portion projects.". Please see attached IWBCA Package

The cost of the Hazard Mitigation Proposal (HMP) described herein is \$141,416.17 (Hazard Mitigation Total Cost). The cost of this HMP combined will all other proposals (both PA and HMGP) does not exceed the maximum potential benefit and is therefore deemed cost effective per FEMA Public Assistance Program and Policy Guide (PAPPG) V3.1 April 2018, Chapter 2, VII., Section C, BCA Rule. This Hazard Mitigation Proposal meets eligible repair and restoration cost-effective requirements.

**See Mitigation Profile Documents Tab in Grants Manager for complete version of this HMP and supporting documents (HMP, HMP cost estimate, Supporting documents file).

927264 FAASt [Yabucoa TC]

Introduction

The purpose of this document is to submit for approval the Detailed Scope of Work (SOW) to COR3 and FEMA for the Physical Security -Group 3 under DR-4339-PR Public Assistance. The document provides a description of the project including scope, schedule, and cost estimates as well as Environmental & Historical Preservation ("EHP") requirements and proposed 406 hazard mitigation work. LUMA Energy is seeking approval from COR3 and FEMA for project funding to repair, the associated substations related to the Physical Security - Group 3. This project is part of the Physical Security Program which has been classified as critical to system operation, location, and scope complexity.

LUMA submits this Detailed SOW pursuant to the T&D O&M Agreement between the 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 Appendix A 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.

Facilities

Island-wide Substations experienced substantial damage due to Hurricane Maria in September 2017. The facilities addressed by this project are transmission and distribution substations which require significant physical security improvements to avoid safety hazards, violations of federal or local ordinance, potential security breaches, and damage from future severe weather events.

This project includes the following substations in Group 3 located in the Caguas region.

Name	Substation Number	Physical Address	GPS Coordinate	Date of Construction
Yabucoa TC	2604	Carr. 3 KM 90 Candelero Arriba, Humacao		October 1991

Project Scope of Work

Substations:

Yabucoa TC

- a. Proposed 428 Public Assistance Scope of Work
 - Remove debris from the site and buildings, including damaged fencing, windows, doors, and other items as site preparation measure for construction works. Vegetative debris to be removed extend along the south-west side, 500 ft long x 3 ft wide x 3 ft height, and to the south side, 150 ft long x 3 ft wide x 3 ft height, of the existing perimeter
 - Add insulating gravel
 - Install new signage on fencing and gates
 - Install new padlocks on gates and equipment, as required
 - Install new security lighting and external lighting on the control room and outdoor structures
 - Construction of concrete swale 3 ft wide x 6 inches deep for storm water control
 - Install 9ea new aluminum jalousie windows (36" x 48").
 - Install 1ea new control house exterior double door (6ft x 7ft) 90-minutes fire-proof.
 - Install 2ea new control house exterior single doors (3ft x 7ft) 90-minutes fire-proof.
 - Install within substation footprint new closed-circuit television (CCTV) system, including approximately 15 cameras, allowing real-time site monitoring to evaluate critical substation integrity during and after a major event. Install underground conduits and cabling to connect to communication equipment. This measure reduces public safety concerns, potential electric system downtime and improves resiliency. It also will prevent outages caused by possible physical security breaches
 - · Conduits for closed-circuit television (CCTV) system will be installed to a maximum depth of 42" below final grade

from the control room to each pole with CCTV for power and communication.

Structure Age

• Yabucoa TC Auto 1 (230/115kV) was built in October 1991. Along the time major apparatus were installed within the existing substation footprint considered as system improvements:

- ? Yabucoa TC Auto 2 (3230/115kV0 built on January 2003
- ? Yabucoa TC Candelero 2604 (115/13.2kV) built on May 2007

Debris Removal

• The type of debris that may be found in the process of demolition are concrete, metal scrap, domestic waste, wood, etc. The debris will be separated and taken to an approved waste disposal facility per LUMA Waste Management Plan.

Staging Area

• The main staging area will be located inside the premises of the substation and will serve as an assembly point for all the materials to be installed. See Appendix J

Equipment to be used.

Skid Steer, Excavator, Dump trucks, Manlifts, Boom Trucks 45-ton Crane, Zoom Boom, Air compressor, Truck Digger, Water truck, Pump Truck, Concrete Vibrator, Oil Tanker, Filtering Machine, Flatbed platform, portable generators, and gas small tools.

All equipment used will comply with Tier 4 EPA Emission Standards, if available

Fill, gravel, sand, etc.

Fill, Gravel, and Sand materials will be obtained from an approved supplier as referenced in Appendix P.

Hazardous Material:

The identified hazardous materials that can be found in the substation are asbestos and lead. If the presence of asbestos and lead is confirmed in the structures to be demolished, LUMA will follow all permits protocols required by law to properly remove and dispose of the hazardous materials from the premises.

• Material amounts will be provided by a certified management contractor performing a site evaluation calculation for asbestos and lead paint.

Ground disturbance:

• All project construction activities will take place within the existing substation boundary that has been previously disturbed 30" below the surface for construction of the existing substation ground grid.

Specific List of Permits Required

- Environmental Compliance Determination and Construction Permit in Oficina de Gerencia de Permisos (OGPe) Administrative Order OGPe 2021-07
- Yabucoa Municipality Notifications
- •

Department of Transportation (DTOP) Notification

- Excavation and Demolition Notification in Department of Transportation and Public Works Agency (DTOP) General Consolidated Permit or Incidental Single Permit for: Emission Sources Permit
- · Hazardous Waste Disposal Permit EQB / DNR
- · Erosion Control and Sedimentation Prevention Plan (Plan CES) EQB / DNR
- · Asbestos Permit Environmental Quality Board (EQB) now the Department of Natural Resources Agency (DNR) if asbestos is present at the site
 - Lead Permit EQB / DNR and Hazardous Waste Disposal Permit EQB / DNR if lead is present at the site
- b. Refer to Section 406 Section in Grants Manager for Proposed 406 Hazard Mitigation Grant Program Scope of Work

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 site detail assessment using LUMA engineering department and may be subject to change. LUMA has identified risks and allowances for the mitigation of potential known risks.

COST ESTIMATE	
Physical Security Group 3	428
PLANNING (FAASt 335168)	\$59,804.88
ENGINEERING SERVICES & DESIGN (FAASt 335168)	\$214,359.46
MANAGEMENT (FAASt 335168)	\$119,580.67
SUBSTATION	\$1,429,063.08
Yabucoa	\$1,429,063.08
GENERAL CONDITIONS	\$181,322.20
CONTINGENCY	\$112,620.10
TOTAL PROJECT COST ESTIMATE	\$2,116,750.39
FAASt PROJECT # 5551861, 428 Total	\$1,723,005.38
FAASt A&E # 335168 Total	\$393,745.01

Project Total Cost: \$1,723,005.38

For detailed cost estimate, please refers to document labeled: 551861-DR4339PR- 15 Appendix O - LPCE Physical Security Group 3 - Estimate (04-27-2023)

406 HMP Scope

Project number: 551861 FAASt [Physical Security - Group 3] (Substation)

Damage #927264; FAASt [Yabucoa TC]

Applicant: PR Electric Power Authority (000-UA2QU-00)

Location: Yabucoa, Puerto Rico

GPS Latitude/Longitude:

Hazard Mitigation Narrative

During the incident period from September 17, 2017, to November 15, 2017, the Commonwealth of Puerto Rico experienced hurricane-force winds, heavy rain, flooding, and power outage "loss of power" from Hurricane Maria. The incident caused damage to the electrical system, such as the power generation plants, transmission and distribution lines, substations, communication systems, buildings, among other damages to the infrastructures owned, operated, and maintained by the Puerto Rico Electric Power Authority (PREPA).

The FAASt [Physical Security - Group 3] (Substation) consists of 3 transmission centers facilities (sites) which are distributed as follows: Aguas Buenas GIS, Yabucoa TC (2604), and Juncos TC (3201, 3205).

The above facilities are composed of 230/115/38 KV critical substations (transmission and distribution) which requires an effectively physical security improvement applying a comprehensive risk-based security strategies and developing cost-effective security solution to alleviate the risks. The physical security practices include facilities perimeter protection, facilities access control, and company property and assets. The objective is to replace these components based on LUMA/PREPA and industry standards, improve system resiliency, and alleviate safety hazards and environmental concerns. According to the information provided by the sub-applicant, due to the high hurricane winds, wind-borne debris, and prolonged heavy rain was the main cause of the damages of the facilities.

In order to minimize the damages in a future event, the sub-applicant is proposing as a mitigation measure, reduce the spacing of the chain-link fence posts from 10ft to 8ft, raise an additional 12" above grade for erosion control (and prevent the gravel from becoming contaminated with soil and/or dirt), strengthen the posts and fence foundation, replace the aluminum jalousie window by wind-resistant aluminum-louver windows, replace the exterior fire rated steel doors by 16ga. fire rated steel door and increase the strength of the CCTV (cameras) poles from 90mph to +160mph sustained winds material. The above mitigation measures will protect and make the affected elements more resistant to similar hazards.

Hazard Mitigation Proposal (HMP) Scope of Work:

In order to prevent or reduce future damages from similar events, the applicant proposed the following mitigation measures:

Mitigation Measures (Supplement)

Chain-link fence [8ft(H) plus barbed wire, 6 ga. 2" mesh, sch-40 1-5/8" top rail, 2.5" line post and 3" end post installed in a concrete footing (LUMA/PREPA Standard for Fencing)], instead of 10ft spacing between post, provide and install (95ea) new 2.5" x 11ft(H) sch-40 line post with barbed wire extension arm to reduce the spacing from 10ft to 8ft to increase the resistance against wind-borne debris, and high hurricane winds impacts and/or effects, 1,045 LF.

Note: To comply with LUMA/PREPA codes and standards, each alternate pole is required to be grounded to the existing substation grounding grid:

- Exothermic weld, 4/0 wire to 1" ground rod = 48 EA.
- Pipe ground clamps, heavy duty, bronze, 1-1/4" to 2" diameter = 48 EA.

- Pipe ground clamps, heavy duty, bronze, 2-1/2" to 3" diameter = 96 EA.
- Crimp 2-way connectors, copper, or aluminum, 600 volt, #4 = 144 EA.
- Ground wire, copper wire, bare stranded, #4 = 144 LF.
- Ground wire, copper wire, bare stranded, 4/0 = 960 LF
- Chain-link fence foundation wall will be raised an additional 12" [3,780ft(L) x 1ft(H) x 0.5ft(W)] above grade for erosion control, strengthen the posts and fence foundation, and prevent the gravel from becoming contaminated with soil and/or dirt, 70CY.

Mitigation Measures (Replacement)

- Replace (9ea) aluminum jalousie windows (36" x 48") by wind-resistant aluminum-louver windows to reduce the wind-borne debris, wind driven rain and high hurricane winds impact and/or effects, 108SF.
- Replace (1ea) control house exterior double door (6ft x 7ft) by 90-minutes fire-proof 16-gauge doors designed to reduce the wind-borne debris, wind driven rain, water intrusion and high hurricane winds impact and/or effects.
- Replace (2ea) control house exterior single doors (3ft x 7ft) by 90-minutes fire-proof 16-gauge doors designed to reduce the wind-borne debris, wind driven rain, water intrusion and high hurricane winds impact and/or effects.
- Replace (15ea) poles for closed-circuit television (CCTV) system. This measure will increase the strength of the poles by increasing the wind tolerance from 90mph to +160mph.

CCTV System - The installation of the cameras will help in the response phase. Hazard Mitigation funds are to eliminate, avoid or prevent a damage due to a natural hazard event such as hurricane winds, flooding, wind borne debris and others. HM funds are not intended for response improvement. Nevertheless, HM funds can be provided to harden the elements of the equipment installed through the recovery solution. At the meeting with the Applicant held on 7/12/22, it was agreed that the CCTV System (cameras) will be included in the 428 PA portion and not in 406 HM as initially proposed by the sub-applicant.

Hazard Mitigation Proposal (HMP) Cost:

Hazard Mitigation Total Cost =	\$239,502.58
+ HM (Applicant A&E, Management & General Conditions) =	<u>\$ 73,108.14</u>
Total Net Hazard Mitigation Cost (Base Cost) =	\$166,394.44

HMP Cost-Effectiveness Calculations:

FEMA's Benefit-Cost Analysis (BCA), methodology evaluates expected risk reduction benefits of a hazard mitigation project and compares those benefits to the cost of the mitigation project. FEMA Public Assistance Program and Policy Guide (PAPPG) Chapter 2. Section VII. C. defines cost effective mitigation as: The Hazard Mitigation Measure is cost effective through an acceptable Benefit Cost Analysis (BCA) with a resulting Benefit Cost Ratio equal to or greater than (1).

The Island Wide Benefit Cost Analysis (IWBCA) created for the PREPA infrastructure defines a maximum potential benefit using the incurred costs of the PREPA FEMA Accelerated Award Strategy (FAASt) fixed cost estimate, the mission assignments utilized for the reconnection effort, and the costs associated with loss of service. This maximum benefit has been developed to fund all mitigation projects from both Public Assistance Hazard Mitigation and the Hazard Mitigation Grant program.

It is the applicant's responsibility to maintain a record of approved IWBCA related projects to avoid running out of funds for their Mitigation portion projects.". Please see attached IWBCA Package

The cost of the Hazard Mitigation Proposal (HMP) described herein is \$239,502.58 (Hazard Mitigation Total Cost). The cost of this HMP combined will all other proposals (both PA and HMGP) does not exceed the maximum potential benefit and is therefore deemed cost effective per FEMA Public Assistance Program and Policy Guide (PAPPG) V3.1 April 2018, Chapter 2, VII., Section C, BCA Rule. This Hazard Mitigation Proposal meets eligible repair and restoration cost-effective requirements.

**See Mitigation Profile Documents Tab in Grants Manager for complete version of this HMP and supporting documents (HMP, HMP cost estimate, Supporting documents file).

927272 FAASt [Juncos TC 3201/3205]

Introduction

The purpose of this document is to submit for approval the Detailed Scope of Work (SOW) to COR3 and FEMA for the Physical Security -Group 3 under DR-4339-PR Public Assistance. The document provides a description of the project including scope, schedule, and cost estimates as well as Environmental & Historical Preservation ("EHP") requirements and proposed 406 hazard mitigation work. LUMA Energy is seeking approval from COR3 and FEMA for project funding to repair, the associated substations related to the Physical Security - Group 3. This project is part of the Physical Security Program which has been classified as critical to system operation, location, and scope complexity.

LUMA submits this Detailed SOW pursuant to the T&D O&M Agreement between the 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 Appendix A 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.

Facilities

Island-wide Substations experienced substantial damage due to Hurricane Maria in September 2017. The facilities addressed by this project are transmission and distribution substations which require significant physical security improvements to avoid safety hazards, violations of federal or local ordinance, potential security breaches, and damage from future severe weather events.

This project includes the following substation in Group 3 located in the Caguas region.

Name	Substation Number	Physical Address	GPS Coordinate	Date of Construction
Juncos TC	3201 / 3205	Carr. 31 KM 25.4 Int Carr 198, Juncos		June 1975

Project Scope of Work

Substation:

Juncos TC

- a. Proposed 428 Public Assistance Scope of Work
 - •

Remove debris from the site and buildings, including damaged fencing, windows, doors, and other items as site preparation measure for construction works. Vegetative debris to be removed extend along the south-east side of the existing perimeter, 200 ft long x 3 ft wide x 3 ft height.

•

- Add insulating gravel
- Install new signage on fencing and gates
- Install new padlocks on gates and equipment, as required
- Install new electronic access system for the Control and IT Rooms
- Install new security lighting and external lighting on the control room and outdoor structures

- Install 1ea new aluminum jalousie windows (36" x 48").
- Install 1ea new control house exterior double door (6ft x 7ft) 90-minutes fire-proof.
- Install 7ea new control house exterior single doors (3ft x 7ft) 90-minutes fire-proof.
- Install within substation footprint new closed-circuit television (CCTV) system, including approximately 15 cameras, allowing real-time site monitoring to evaluate critical substation integrity during and after a major event. Install underground conduits and cabling to connect to communication equipment. This measure reduces public safety concerns, potential electric system downtime and improves resiliency. It also will prevent outages caused by possible physical security breaches

? Conduits for closed-circuit television (CCTV) system will be installed to a maximum depth of 42" below final grade from the control room to each pole with CCTV for power and communication.

Structure Age

Juncos TC 3201 (38/4.16kV) was built in June 1975. Along the time major apparatus were installed within the existing substation footprint considered as system improvements:

- ? Juncos TC 115/38kV built on May 1997
- ? Juncos TC 3205 (115/13.2kV) built on May 1998
- ? Juncos TC Bank 2 (115/40kV) built on February 2007

Debris Removal

The type of debris that may be found in the process of demolition are concrete, metal scrap, domestic waste, wood, etc. The debris will be separated and taken to an approved waste disposal facility per LUMA Waste Management Plan.

Staging Area

 \cdot The main staging area will be located inside the premises of the substation and will serve as an assembly point for all the materials to be installed. See Appendix G

Equipment to be used.

Skid Steer, Excavator, Dump trucks, Manlifts, Boom Trucks 45-ton Crane, Zoom Boom, Air compressor, Truck Digger, Water truck, Pump Truck, Concrete Vibrator, Oil Tanker, Filtering Machine, Flatbed platform, portable generators, and gas small tools.

All equipment used will comply with Tier 4 EPA Emission Standards, if available

Fill, gravel, sand, etc.

Fill, Gravel, and Sand materials will be obtained from an approved supplier as referenced in Appendix P.

Hazardous Material:

The identified hazardous materials that can be found in the substation are asbestos and lead. If the presence of asbestos and lead is confirmed in the structures to be demolished, LUMA will follow all permits protocols required by law to properly remove and dispose of the hazardous materials from the premises.

• Material amounts will be provided by a certified management contractor performing a site evaluation calculation for asbestos and lead paint.

Ground disturbance:

• All project construction activities will take place within the existing substation boundary that has been previously disturbed 30" below the surface for construction of the existing substation ground grid.

Specific List of Permits Required

Environmental Compliance Determination and Construction Permit in Oficina de Gerencia de Permisos (OGPe) – Administrative Order OGPe 2021-07

- · Juncos Municipality Notifications
- · Excavation and Demolition Notification in Department of Transportation and Public Works Agency (DTOP)
 - · General Consolidated Permit or Incidental Single Permit for: Emission Sources Permit
 - · Hazardous Waste Disposal Permit EQB / DNR
 - · Erosion Control and Sedimentation Prevention Plan (Plan CES) EQB / DNR
- Asbestos Permit Environmental Quality Board (EQB) now the Department of Natural Resources Agency (DNR) if asbestos is present at the site
 - Lead Permit EQB / DNR if lead is present at the site
- b. Refer to Section 406 Section in Grants Manager for Proposed 406 Hazard Mitigation Grant Program Scope of Work

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 site detail assessment using LUMA engineering department and may be subject to change. LUMA has identified risks and allowances for the mitigation of potential known risks.

COST ESTIMATE	
Physical Security Group 3	428
PLANNING (FAASt 335168)	\$21,608.38
ENGINEERING SERVICES & DESIGN (FAASt 335168)	\$77,451.23
MANAGEMENT (FAASt 335168)	\$43,206.26
SUBSTATION	\$516,341.51
Juncos TC	\$516,341.51
GENERAL CONDITIONS	\$65,514.38
CONTINGENCY	\$40,691.30
TOTAL PROJECT COST ESTIMATE	\$764,813.05

FAASt PROJECT # 5551861, 428 Total	\$622,547.19
FAASt A&E # 335168 Total	\$142,265.86

Work To Be completed (WBTC): \$ 764,813.05

A&E Deduction (Global A&E FAASt 335168): - \$142,265.86

Project Total Cost: \$ 622,547.19

For detailed cost estimate, please refers to document labeled: 551861-DR4339PR- 15 Appendix O - LPCE Physical Security Group 3 - Estimate (04-27-2023).xlsx

406 HMP Scope

Project number: 551861 FAASt [Physical Security - Group 3] (Substation)

Damage #927272; FAASt [Juncos TC 3201/3205]

Applicant: PR Electric Power Authority (000-UA2QU-00)

Location: Juncos, Puerto Rico

GPS Latitude/Longitude:

Hazard Mitigation Narrative

During the incident period from September 17, 2017, to November 15, 2017, the Commonwealth of Puerto Rico experienced hurricane-force winds, heavy rain, flooding, and power outage "loss of power" from Hurricane Maria. The incident caused damage to the electrical system, such as the power generation plants, transmission and distribution lines, substations, communication systems, buildings, among other damages to the infrastructures owned, operated, and maintained by the Puerto Rico Electric Power Authority (PREPA).

The FAASt [Physical Security - Group 3] (Substation) consists of 3 transmission centers facilities (sites) which are distributed as follows: Aguas Buenas GIS, Yabucoa TC (2604), and Juncos TC (3201, 3205).

The above facilities are composed of 230/115/38 KV critical substations (transmission and distribution) which requires an effectively physical security improvement applying a comprehensive risk-based security strategies and developing cost-effective security solution to alleviate the risks. The physical security practices include facilities perimeter protection, facilities access control, and company property and assets. The objective is to replace these components based on LUMA/PREPA and industry standards, improve system resiliency, and alleviate safety hazards and environmental concerns. According to the information provided by the sub-applicant, due to the high hurricane winds, wind-borne debris, and prolonged heavy rain was the main cause of the damages of the facilities.

In order to minimize the damages in a future event, the sub-applicant is proposing as a mitigation measure, reduce the spacing of the chain-link fence posts from 10ft to 8ft, raise an additional 12" above grade for erosion control (and prevent the gravel from becoming contaminated with soil and/or dirt), strengthen the posts and fence foundation, replace the aluminum jalousie window by wind-resistant aluminum-louver windows, replace the exterior fire rated steel doors by 16ga. fire rated steel door and increase the strength of the CCTV (cameras) poles from 90mph to +160mph sustained winds material. The above mitigation measures will protect and make the affected elements more resistant to similar hazards.

Hazard Mitigation Proposal (HMP) Scope of Work:

In order to prevent or reduce future damages from similar events, the applicant proposed the following mitigation measures:

Mitigation Measures (Supplement)

Chain-link fence [8ft(H) plus barbed wire, 6 ga. 2" mesh, sch-40 1-5/8" top rail, 2.5" line post and 3" end post installed in a concrete footing (LUMA/PREPA Standard for Fencing)], instead of 10ft spacing between post, provide and install (12ea) new 2.5" x 11ft(H) sch-40 line post with barbed wire extension arm to reduce the spacing from 10ft to 8ft to increase the resistance against wind-borne debris, and high hurricane winds impacts and/or effects, 132 LF.

Note: To comply with LUMA/PREPA codes and standards, each alternate pole is required to be grounded to the existing substation grounding grid:

- Exothermic weld, 4/0 wire to 1" ground rod = 6 EA.
- Pipe ground clamps, heavy duty, bronze, 1-1/4" to 2" diameter = 6 EA.
- Pipe ground clamps, heavy duty, bronze, 2-1/2" to 3" diameter = 12 EA.
- Crimp 2-way connectors, copper, or aluminum, 600 volt, #4 = 18EA.
- Ground wire, copper wire, bare stranded, #4 = 18 LF.
- Ground wire, copper wire, bare stranded, 4/0 = 120 LF
- Chain-link fence foundation wall will be raised an additional 12" [456ft(L) x 1ft(H) x 0.5ft(W)] above grade for erosion control, strengthen the posts and fence foundation, and prevent the gravel from becoming contaminated with soil and/or dirt, 8.4CY.

Mitigation Measures (Replacement)

- Replace (1ea) aluminum jalousie windows (36" x 48") by wind-resistant aluminum-louver windows to reduce the wind-borne debris, wind driven rain and high hurricane winds impact and/or effects, 12SF.
- Replace (1ea) control house exterior double door (6ft x 7ft) by 90-minutes fire-proof 16-gauge doors designed to reduce the wind-borne debris, wind driven rain, water intrusion and high hurricane winds impact and/or effects.
- Replace (7ea) control house exterior single doors (3ft x 7ft) by 90-minutes fire-proof 16-gauge doors designed to reduce the wind-borne debris, wind driven rain, water intrusion and high hurricane winds impact and/or effects.
- Replace (15ea) poles for closed-circuit television (CCTV) system. This measure will increase the strength of the poles by increasing the wind tolerance from 90mph to +160mph.

CCTV System - The installation of the cameras will help in the response phase. Hazard Mitigation funds are to eliminate, avoid or prevent a damage due to a natural hazard event such as hurricane winds, flooding, wind borne debris and others. HM funds are not intended for response improvement. Nevertheless, HM funds can be provided to harden the elements of the equipment installed through the recovery solution. At the meeting with the Applicant held on 7/12/22, it was agreed that the CCTV System (cameras) will be included in the 428 PA portion and not in 406 HM as initially proposed by the sub-applicant.

Hazard Mitigation Proposal (HMP) Cost:

Hazard Mitigation Total Cost =	\$55,464.48
+ HM (Applicant A&E, Management & General Conditions) =	<u>\$16,930.53</u>
Total Net Hazard Mitigation Cost (Base Cost) =	\$38,533.95

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HMP Cost-Effectiveness Calculations:

FEMA's Benefit-Cost Analysis (BCA), methodology evaluates expected risk reduction benefits of a hazard mitigation project and compares those benefits to the cost of the mitigation project. FEMA Public Assistance Program and Policy Guide (PAPPG) Chapter 2. Section VII. C. defines cost effective mitigation as: The Hazard Mitigation Measure is cost effective through an acceptable Benefit Cost Analysis (BCA) with a resulting Benefit Cost Ratio equal to or greater than (1).

The Island Wide Benefit Cost Analysis (IWBCA) created for the PREPA infrastructure defines a maximum potential benefit using the incurred costs of the PREPA FEMA Accelerated Award Strategy (FAASt) fixed cost estimate, the mission assignments utilized for the reconnection effort, and the costs associated with loss of service. This maximum benefit has been developed to fund all mitigation projects from both Public Assistance Hazard Mitigation and the Hazard Mitigation Grant program.

It is the applicant's responsibility to maintain a record of approved IWBCA related projects to avoid running out of funds for their Mitigation portion projects.". Please see attached IWBCA Package The cost of the Hazard Mitigation Proposal (HMP) described herein is \$55,464.48 (Hazard Mitigation Total Cost). The cost of this HMP combined will all other proposals (both PA and HMGP) does not exceed the maximum potential benefit and is therefore deemed cost effective per FEMA Public Assistance Program and Policy Guide (PAPPG) V3.1 April 2018, Chapter 2, VII., Section C, BCA Rule. This Hazard Mitigation Proposal meets eligible repair and restoration cost-effective requirements.

**See Mitigation Profile Documents Tab in Grants Manager for complete version of this HMP and supporting documents (HMP, HMP cost estimate, Supporting documents file).

Cost

Code	Quantity	Unit	Total Cost	Section
3510 (3510 (Engineering And Design Services (Global A&E FAASt 335168))	1.00	Lump Sum	(\$308,825.84)	Uncompleted
9201 (PAAP Fixed Estimate (No Value - Tracking Purposes Only))	1.00	Lump Sum	\$0.00	Completed
9001 (9001 (Contract (FAASt 136271)))	1.00	Lump Sum	\$1,660,229.87	Uncompleted
3510 (3510 (Engineering And Design Services (Global A&E FAASt 335168)))	1.00	Lump Sum	(\$393,745.01)	Uncompleted
9201 (PAAP Fixed Estimate (No Value - Tracking Purposes Only))	1.00	Lump Sum	\$0.00	Completed
9001 (9001 (Contract (FAASt 136271)))	1.00	Lump Sum	\$2,116,750.39	Uncompleted
3510 (3510 (Engineering And Design Services (Global A&E FAASt 335168))	1.00	Lump Sum	(\$142,265.86)	Uncompleted
9201 (PAAP Fixed Estimate (No Value - Tracking Purposes Only))	1.00	Lump Sum	\$0.00	Completed
9001 (9001(Contract (FAASt 136271)))	1.00	Lump Sum	\$764,813.05	Uncompleted

CRC Gross Cost	\$3,696,956.60
Total 406 HMP Cost	\$436,383.23
Total Insurance Reductions	\$0.00
CRC Net Cost	\$4,133,339.83
CRC Net Cost Federal Share (90.00%)	\$4,133,339.83 \$3,720,005.85

Award Information

Version Information

Version	Eligibility	Current	Bundle Number	Project	Cost	Federal Share	Date
#	Status	Location		Amount	Share	Obligated	Obligated
0	Eligible	Awarded	PA-02-PR-4339-PW- 11372(13801)	\$4,133,339.83	90 %	\$3,720,005.85	6/15/2023

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 #	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
5/4/2023

GENERAL INFORMATION

Event: DR4339-PR Project: SP 551861 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: \$4,133,339.83 (CRC Gross Cost \$3,696,956.60 + Mitigation Amount \$436,383.23)

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 Mapfre

Policy Numbers: <u>Willis Towers Watson</u> (B0804Q1966F17, B0804Q14312F17, B0804Q19673F17, B0804Q19672F17B0804Q18529F17, B0804Q14312F17, B0804Q19674F17, B0804Q18529F17, B0804Q14312F17, B0804Q11038F17, B0804Q14507F17, B0804Q14312F17)

Mapfre Praico Insurance Company (1398178000644)

<u>Multinational Insurance Company</u> (88-CP-000307831-2, 88-CP-000318673-0, 88-CP000318674-0, 88-CP-000318675-0, 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: Yes

The amount of the deductible being funded in this project is \$0.00

The amount of the deductible previously funded in other projects is \$25,000,000.00

Final Insurance Settlement Status: Insurance proceeds for this project are anticipated

The amount of Anticipated Insurance Reduction applied for Project: \$0.00

NUMBER OF DAMAGED LOCATIONS INCLUDED IN THIS PROJECT: (3)

Damaged Inventory (DI) #927248:

FAASt [Aguas Buenas GIS]

Location Description: Aguas Buenas GIS

GPS Coordinates:

Cause of Loss: Wind / Wind Driven Rain

SOV / Schedule #: "Sub-Stations"

SOV / Schedule Amount: \$1,345,700,000.00

Applicable Deductible Amount: \$25,000,000.00

Damage Inventory Amount: \$1,492,820.20 (CRC Gross Cost \$1,351,404.03 + Mitigation Amount \$141,416.17)

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. 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:

An Obtain & Maintain Requirement is being required forBuilding, for the peril of Wind (all wind associated losses including "wind driven rain" for the FAASt [Aguas Buenas GIS]in the amount of \$309,641.10 (CRC Gross Cost \$1,351,404.03 – Uninsurable Cost \$1,113,244.00 + Insurable Mitigation Amount \$71,481.07). Please see "551861 Cost Estimate Insurance" and "551861 HMP Insurance" files.

Damaged Inventory (DI) #927264:

FAASt [Yabucoa TC]

Location Description: Yabucoa TC

GPS Coordinates:

Cause of Loss: Wind / Wind Driven Rain

SOV / Schedule #: "Sub-Stations"

SOV / Schedule Amount: \$1,345,700,000.00

Applicable Deductible Amount: \$25,000,000.00

Damage Inventory Amount: \$1,962,507.96 (CRC Gross Cost \$1,723,005.38 + Mitigation Amount \$239,502.58)

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. 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.

Obtain and Maintain Requirement:

An Obtain & Maintain Requirement is being required for Building, for the peril of Wind (all wind associated losses including "wind driven rain" for the FAASt [Yabucoa TC] in the amount of \$231,718.72 (CRC Gross Cost \$1,723,005.38 – Uninsurable Cost \$1,574,116.00 + Insurable Mitigation Amount \$82,829.34). Please see "551861 Cost Estimate Insurance" and "551861 HMP Insurance" files.

Damaged Inventory (DI) #927272:

FAASt [Juncos TC 3201/3205]

Location Description: Juncos TC 3201/3205

GPS Coordinates:

Cause of Loss: Wind / Wind Driven Rain

SOV / Schedule #: "Sub-Stations"

SOV / Schedule Amount: \$1,345,700,000.00

Applicable Deductible Amount: \$25,000,000.00

Damage Inventory Amount: \$678,011.67 (CRC Gross Cost \$622,547.19 + Mitigation Amount \$55,464.48)

Prior Obtain and Maintain Requirement:

No prior insurance requirements were found for this facility.

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Reduction(s):

No insurance reduction will be applied to this project. 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:

An Obtain & Maintain Requirement is being required for Building, for the peril of Wind (all wind associated losses including "wind driven rain" for the FAASt [Juncos TC 3201/3205] in the amount of \$113,652.19 (CRC Gross Cost \$622,547.19 – Uninsurable Cost \$525,826.00 + Insurable Mitigation Amount \$16,931.00). Please see "551861 Cost Estimate Insurance" and "551861 HMP Insurance" files.

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 caseby-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).

FEMA Policy 206-086-1

H. Subsequent Assistance. When a facility that received assistance is damaged by the same hazard in a subsequent disaster:

1. If the applicant failed to maintain the required insurance from the previous disaster, then the facility is not eligible for assistance in any subsequent disaster.

2. Upon proof that the applicant maintained its required insurance, FEMA will reduce assistance in the subsequent disaster by the amount of insurance required in the previous disaster regardless of:

a. The amount of any deductible or self-insured retention the applicant assumed (i.e., "retained risk").

Obtain and Maintain Requirements:

44 CFR § 206.253 Insurance requirements for facilities damaged by disasters other than flood.

(a) Prior to approval of a Federalgrant for the restoration of a facility and its contents which were damaged by a disaster other than flood, the recipient shall notify the Regional Administrator of any entitlement to insurance settlement or recovery for such facility and its contents. The Regional Administrator shall reduce the eligible costs by the actual amount of insurance proceeds relating to the eligible costs.

(b)

(1) Assistance under section 406 of the Stafford Act will be approved only on the condition that the recipient obtain and maintain such types and amounts of insurance as are reasonable and necessary to protect against future loss to such property from the types of hazard which caused the major disaster. The extent of insurance to be required will be based on the eligible damage that was incurred to the damaged facility as a result of the major disaster. The Regional Administrator shall not require greater types and extent of insurance than are certified as reasonable by the State Insurance Commissioner.

(2) Due to the high cost of insurance, some applicants may request to insure the damaged facilities under a blanket insurance policy covering all their facilities, an insurance pool arrangement, or some combination of these options. Such an arrangement may be accepted for other than flood damages. However, if the same facility is damaged in a similar future disaster, eligible costs will be reduced by the amount of eligible damage sustained on the previous disaster.

(c) The Regional Administrator shall notify the recipient of the type and amount of insurance required. The recipient may request that the State Insurance Commissioner review the type and extent of insurance required to protect against future loss to a disaster-damaged facility, the Regional Administrator shall not require greater types and extent of insurance than are certified as reasonable by the State Insurance Commissioner.

(d) The requirements of section 311 of the Stafford Act are waived when eligible costs for an insurable facility do not exceed \$5,000.00. The Regional Administrator may establish a higher waiver amount based on hazard mitigation initiatives which reduce the risk of future damages by a disaster similar to the one which resulted in the major disaster declaration which is the basis for the application for disaster assistance.

(e) The recipient shall provide assurances that the required insurance coverage will be maintained for the anticipated life of the restorative work or the insured facility, whichever is the lesser.

(f) No assistance shall be provided under section 406 of the Stafford Act for any facility for which assistance was provided as a result of a previous major disaster unless all insurance required by FEMA as a condition of the previous assistance has been obtained and maintained.

Final Obtain and Maintain requirement amount will be determined during the closeout process after the final actual eligible costs to repair or replace the insurable facility have been determined.

FEMA Policy 206-086-1

F. Timeframes for Obtaining Insurance. FEMA will only approve assistance under the condition that an applicant obtains and maintains the required insurance.

The applicant must document its commitment to comply with the insurance requirement with proof of insurance.

If an applicant cannot insure a facility prior to grant approval (for example, if a building is being reconstructed), the applicant may provide a letter of commitment stating that they agree to the insurance requirement and will obtain the types and extent of insurance required, followed at a later date by proof of insurance once it is obtained. In these cases, the applicant should insure the property:

- 1. When the applicant resumes use of or legal responsibility for the property (for example, per terms of construction contract or at beneficial use of the property); or
- 2. When the scope of work is complete.

FEMA and the recipient will verify proof of insurance prior to grant closeout to ensure the applicant has complied with the insurance requirement.

An applicant should notify FEMA—in writing through the recipient—of changes to their insurance which impact their ability to satisfy the insurance requirement after it provides proof of insurance to FEMA. This includes changes related to self-insurance. If an applicant fails to do this, FEMA may de-obligate assistance and not provide assistance in a future disaster.

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

O&M Requirements

Insured Peril	ltem Type	Description	Required Coverage Amount
Wind	Building	An Obtain & Maintain Requirement is being required for Building, for the peril of Wind (all wind associated losses including "wind driven rain" for the FAASt [Aguas Buenas GIS] in the amount of \$309,641.10	\$309,641.10
Wind	Building	An Obtain & Maintain Requirement is being required for Building, for the peril of Wind (all wind associated losses including "wind driven rain" for the FAASt [Yabucoa TC] in the amount of \$231,718.72	\$231,718.72
Wind	Building	An Obtain & Maintain Requirement is being required for Building, for the peril of Wind (all wind associated losses including "wind driven rain" for the FAASt [Juncos TC 3201/3205] in the amount of \$113,652.19	\$113,652.19

406 Mitigation

There is no additional mitigation information on **FAASt** [Physical Security - Group 3] (Substation).

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.
- Endanger Species Act (ESA) PR Boa applicable to DI#927248: 1. Inform all personnel about the potential presence of the PR boa and the VI boa in areas where the proposed work will be conducted. Photographs of the PR and VI Boa are to be prominently displayed at the site. The recipient must ensure that project personnel is able to correctly identify a PR or VI boa. For information on PR boa, please visit: https://ecos.fws.gov/ecp/species/6628. 2. Prior to any construction activity, including removal of vegetation and earth movement, the boundaries of the project area must be delineated, buffer zones, and areas to be excluded and protected, should be clearly marked in the project plan and in the field to avoid further habitat degradation into forested areas. Once areas are clearly marked, and prior to any construction activity, including site preparation, project personnel able to correctly identify a PR or VI boa must survey the areas to be cleared to ensure that no boas are present within the work area. Vehicle and equipment operation must remain on designated access roads/paths and within rights-of way. 3. If a PR boa is found within any of the working or construction areas, activities should stop in the area where the boa was found. Do not capture the boa, if boas need to be moved out of harm's way, project personnel designated by the recipient shall immediately contact the Puerto Rico Department of Natural and Environmental Resources (PRDNER) Rangers for safe capture and relocation of the animal (PRDNER phone #s: 787-724-5700, 787-230-5550, 787-771-1124). If immediate relocation is not an option, project-related activities at this area must stop until the boa moves out of harm's way on its own. Activities at other work sites, where no boas have been found after surveying the area, may continue. 4. Measures should be taken to avoid and minimize PR boa casualties by heavy machinery or motor vehicles being used on site. Any heavy machinery left on site (staging) or near potential PR boa habitat (within 50 meters of potential boa habitat), needs to be thoroughly inspected each morning before work starts to ensure that no boas have sheltered within engine compartments or other areas of the equipment. If PR boas are found within vehicles or equipment, do not capture the animal and let it move on its own or call PRDNER Rangers for safe capture and relocation of the boa (PRDNER phone #s: 787-724-5700, 787-230-5550, 787-771-1124). If not possible, the animal should be left alone until it leaves the vehicle on its own. 5. PR boas may seek shelter in debris piles. Measures should be taken to avoid and minimize boa casualties associated with sheltering in debris piles as a result of project activities. Debris piles should be placed far away from forested areas. Prior to moving, disposing or shredding, debris piles should be carefully inspected for the presence of boas. If PR boas are found within debris piles, do not capture the animal and let it move on its own or call PRDNER Rangers for safe capture and relocation of the animal. If debris piles will be left on site, we recommend they be placed in areas that will not be disturbed in the future. 6. For all boa sightings (dead or alive), personnel designated by the recipient must record the time and date of the sighting and the specific location where the boa was found. Data should also include a photo of the animal dead or alive, and site GPS coordinates, and comments on how the animal was detected and its behavior. If the PR boa was accidentally killed as part of the project actions, please include information on what conservation measures had been implemented and what actions will be taken to avoid further killings. All boa sighting reports should be sent to the USFWS Caribbean Ecological Services Field Office, Marelisa Rivera - Deputy Field Supervisor, 787-851-7297 extension 206, 787-510-5207, marelisa rivera@fws.gov. ***The Applicant must provide documentation at close-out that proves completion of required Conservation Measures.
- Endanger Species Act (ESA) Puerto Rican Plain Pigeon applicable to D# 927272: During breeding seasons (see below), nest surveys shall be conducted if a project occurs in a species' range. Nest searches must be conducted by qualified personnel with the appropriate DNER permits prior to start of work. If nesting activity is detected, all construction activities or human disturbance must be avoided within a 200-meter buffer to the closest nest. This avoidance strategy must be kept until fledglings successfully leave the nest permanently. Outside the nesting season, if a nest is encountered, work shall not interfere with the species until they have left the site. If nesting activity is detected, all construction activities or human disturbance must be avoided within a 200-meter buffer to the closest nest. This avoidance strategy must be kept until juvenile birds fledge the nest and are permanently gone. Nesting season/breeding season: Puerto Rican parrot (Amazona vittata): February to June: Puerto Rican plain pigeon (Patagioenas inornata wetmorei [Columba inornata]): April-September: Puerto Rican broad-winged hawk (Buteo platypterus): December-June; Puerto Rican sharp-shinned hawk (Accipiter striatus venator): December-June; Puerto Rican nightjar (Antrostomus noctitherus): February-August; Elfin-woods warbler (Setophaga angelae): March-June; vellow-shouldered blackbird (Agelaius xanthomus): February through November. For all nest sightings, the Applicant must record the time and date of the sighting and the specific location where it was found. Data should also include a photo of the nest and eggs, relocation site GPS coordinates, and the time and date of the relocation. All sightings and incidental lethal take reports should be sent to the USFWS Caribbean Ecological Services Field Office, Marelisa Rivera - Deputy Field Supervisor, 787-851-7297 extension 206, 787-510-5207, marelisa rivera@fws.gov. ***The Applicant must provide documentation at close-out that proves completion of required Conservation Measures.
- Endanger Species Act (ESA) Coquí Guajón (Puerto Rican Rock Frog) applicable to DI #927264 and DI #927272: a. Inform all project personnel about the potential presence of the coquí guajón in areas where the proposed work will be conducted. A pre-construction meeting shall be conducted to inform all project personnel about the requirement of avoiding harm to the

species. An educational poster or sign with photos or illustrations of the species should be displayed at the project site. b. Project boundaries, buffer zones and areas to be excluded or protected shall be clearly marked in the project plans and in the field, prior to any construction activity, including removal of vegetation and earth movement. c. Erosion and Sedimentation Control Best Management Practices (BMPs) shall be included in the project scope of work when working within or adjacent to the coquí guajón habitat (e.g., rivers, streams, drainages, ravines, big boulder areas) to avoid or minimize erosion and sedimentation. Sediment runoff from the project can adversely affect the species and its habitat by filling the caves and crevices where the species occurs and uses to lay its eggs. As water is a very important component of the species, hence it shall be protected to the maximum extent possible. d. All project associated with streams, rivers, bridges, culverts, etc., shall follow the Post-Disaster Guidance for Repair, Replacement, and Clean-up Projects in Streams and Waterways of Puerto Rico from Hurricane María. The guide is available at:

https://www.fws.gov/southeast/pdf/guidelines/post-disaster-guidance-for-projects-in-streams-and-waterways-of-puertorico.pdf. ***The Applicant must provide documentation at close-out that proves completion of required Conservation Measures.

- 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) applicable to DI#551861: 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. 3. All construction material and debris deposited in eroded embankments must be removed before start of work. Final disposal of bituminous and any non-recyclable debris materials resulting from the restoration and demolition activities must take place at an authorized sanitary landfill. Noncompliance with these requirements may jeopardize receipt of federal funds.

EHP Additional Info

There is no additional environmental historical preservation on **FAASt [Physical Security - Group 3] (Substation)**.

Final Reviews

Final Review

Reviewed By MARTINEZ SANTIAGO, ISRAEL

Reviewed On 05/10/2023 6:31 AM PDT

Review Comments

FEMA Final Review completed. Project ready for Recipient Review.

Recipient Review

Reviewed By Salgado, Gabriel

Reviewed On 05/10/2023 7:22 AM PDT

Review Comments

Recipient review completed. Project is ready for applicant review.

Fixed Cost Offer

As a Public Assistance (PA) Subrecipient PR Electric Power Authority (000-UA2QU-00), in accordance with Section 428 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, the Applicant agrees to accept a permanent work subaward based on a Fixed Cost Offer in the amount of \$4,133,339.83 for subaward number 11372 under Disaster # 4339. The Applicant accepts responsibility for all costs above the Fixed Cost Offer.

The Applicant understands that by participating in this pilot program they will be reimbursed for allowable costs in accordance with 2 CFR Part 200, and the reimbursement will not exceed the Fixed Cost Offer. The Applicant also understands that by agreeing to this Fixed Cost Offer, they will not receive additional funding related to the facilities or sites included in the subaward. The Applicant also acknowledges that failure to comply with the requirements of applicable laws and regulations governing assistance provided by FEMA and the PA Alternative Procedures Pilot Program Guidance (such as procurement and contracting; environmental and historic preservation compliance; and audit and financial accountability) may lead to loss of federal funding.

Project Signatures

Signed By Miller, Thomas

Signed On 05/10/2023

Department of Homeland Security Federal Emergency Management Agency

General Info

Project #	705584 P/W# 11365	Project Type	Specialized
Project Category	F - Utilities	Applicant	PR Electric Power Authority (000-UA2QU-
Project Title	FAASt [Distribution Pole and Conductor Repair - Ponce Groups 14 & 15]	Event	4339DR-PR (4339DR)
	(Distribution)	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 #1300727; FAASt [Distribution Pole and Conductor Repair - Ponce Groups 14 &15]

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: Distribution pole and conductor Ponce Groups 14 &15
- Facility Description: The specific facilities included in this project are: poles and structures (including their foundations), framing and insulators, load break switches (manual and automated), capacitor banks, voltage regulators, transformers (including lightning arresters and fuse cut-outs), conductors, guy wires, anchoring, grounding assemblies, underground cable, underground cable systems, fault interrupting equipment (fuses, reclosers, and sectionalizers), and any other associated components.
- Approx. Year Built: 1970
- GPS Latitude/Longitude:

General Damage Information:

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

Final Scope

1300727 FAASt [Distribution Pole and Conductor Repair - Ponce Groups 14 &15]

INTRODUCTION

The purpose of this document is to submit for approval the detailed Scope of Work ("SOW") to COR3 and FEMA for the Distribution Pole and Conductor Repair – Ponce Group 14-15 Project under DR-4339-PR Public Assistance. The document



provides a description of the project including scope, schedule, and cost estimates as well as Environmental & Historical Preservation ("EHP") requirements and proposed 406 hazard mitigation work. LUMA Energy is seeking approval from COR3 and FEMA for project funding to repair, restore, or replace the eligible facilities.

LUMA submits this detailed SOW pursuant to the Transmission and Distribution Operations & Maintenance Agreement between 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 Appendix F 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 Transmission and Distribution System submitted to FEMA.

FACILITIES

The facilities listed below are part of the feeder systems in the Ponce Region. These interconnected and inter-functional distribution feeders (sites) are part of the electrical distribution system. All the feeders originate from a substation (start) and serve customers along the route to various locations (end). The coordinates shown below as "GPS End" represent the end of the mainline backbone of each feeder.

		1	Ponce C	Froup 14	1	1	
Name	Feeder Number	# Of Poles to Replace	GPS Start	GPS End	Phase	Voltage Level (kV)	Constructed Date
GUAYAMA	4001-04	3			3 Phase	4.16	More than 20 Years
BRANDERI	4002-01	2			3 Phase	4.16	More than 20 Years
BRANDERI	4002-02	22			3 Phase	4.16	More than 20 Years
guayama PDS	4006-02	1			3 Phase	13.2	More than 20 Years
ARROYO	4101-02	1			3 Phase	4.16	More than 20 Years
ARROYO	4101-03	6			3 Phase	4.16	More than 20 Years
			Ponce C	Froup 15			
Name	Feeder Number	# Of Poles to Replace	GPS Start	GPS End	Phase	Voltage Level (kV)	Constructed Date
MAUNABO	4301-04	1			3 Phase	4.16	More than 20 Years
SANTA ISABEL	4401-03	5			3 Phase	4.16	More than 20 Years

SANTA ISABEL	4401-04	6	3 Phase	4.16	More than 20 Years
SANTA ISABEL	4402-02	7	3 Phase	13.2	More than 20 Years
SALINAS RURAL	4502-01	6	3 Phase	4.16	More than 20 Years
SALINAS RURAL	4502-02	8	3 Phase	4.16	More than 20 Years

PROJECT SCOPE OF WORK

Below includes a breakdown of pole replacement by feeder for "Proposed 428 Public Assistance Scope of Work" and "Proposed 406 Hazard Mitigation Grant Program Scope of Work", followed by descriptions of each work type specific to the Scope of Work for this group.

Proposed 428 Public Assistance Scope of Work:

Feeder 4001-04 Scope:

Remove	Quantity	Install	Quantity
35ft Wood Pole(s)	1	50ft Galvanized Steel S8 pole(s)	1
40ft Wood Pole(s)	1	50ft Galvanized Steel S8 pole(s)	1
40ft Concrete Pole(s)	1	45ft H4 Concrete Pole(s)	1

Feeder 4002-01 Scope:

Remove	Quantity	Install	Quantity
35ft Wood Pole(s)	1	45ft H4 Concrete Pole(s)	1
40ft Concrete Pole(s)	1	45ft H4 Concrete Pole(s)	1

Feeder 4002-02 Scope:

Remove	Quantity	Install	Quantity
35ft Wood Pole(s)	9	45ft H4 Concrete Pole(s)	9
35ft Wood Pole(s)	12	45ft H6 Concrete Pole(s)	12
40ft Wood Pole(s)	1	45ft H6 Concrete Pole(s)	1

Feeder 4006-02 Scope:

Remove	Quantity	Install	Quantity
40ft Wood Pole(s)	1	50ft Galvanized Steel S8 pole(s)	1

Feeder 4101-02 Scope:

Remove	Quantity	Install	Quantity
35ft Wood Pole(s)	1	45ft H4 Concrete Pole(s)	1

Feeder 4101-03 Scope:

Remove	Quantity	Install	Quantity
35ft Wood Pole(s)	2	45ft H4 Concrete Pole(s)	2
40ft Wood Pole(s)	3	45ft H4 Concrete Pole(s)	3
45ft Wood Pole(s)	1	45ft H4 Concrete Pole(s)	1

Feeder 4301-04 Scope:

Remove	Quantity	Install	Quantity
40ft Concrete Pole(s)	1	45ft H4 Concrete Pole(s)	1

Feeder 4401-03 Scope:

Remove	Quantity	Install	Quantity
35ft Wood Pole(s)	1	45ft H4 Concrete Pole(s)	1
40ft Wood Pole(s)	2	45ft H4 Concrete Pole(s)	2
40ft Wood Pole(s)	2	45ft H6 Concrete Pole(s)	2

Feeder 4401-04 Scope:

Remove	Quantity	Install	Quantity
35ft Wood Pole(s)	3	45ft H4 Concrete Pole(s)	3
35ft Wood Pole(s)	1	45ft H6 Concrete Pole(s)	1
40ft Wood Pole(s)	2	45ft H4 Concrete Pole(s)	2

Feeder 4402-02 Scope:

Remove Quantity Install		Install	Quantity
35ft Wood Pole(s)	2	45ft H4 Concrete Pole(s)	2
35ft Wood Pole(s)	3	45ft H6 Concrete Pole(s)	3
45ft Wood Pole(s)	2	45ft H6 Concrete Pole(s)	2

Feeder 4502-01 Scope:

Remove	Quantity	Install	Quantity
35ft Wood Pole(s)	3	45ft H4 Concrete Pole(s)	3
40ft Wood Pole(s)	2	45ft H4 Concrete Pole(s)	2
45ft Steel Pole(s)	1	45ft H4 Concrete Pole(s)	1

Feeder 4502-02 Scope:

Remove	Quantity Install		Quantity
35ft Wood Pole(s)	6	45ft H4 Concrete Pole(s)	6
35ft Wood Pole(s)	1	50ft Galvanized Steel S8 pole(s)	1
40ft Wood Pole(s)	1	45ft H4 Concrete Pole(s)	1

Detail Descriptions for Planned Field Work:

Pole Replacement

• Remove existing poles, including hardware and install new poles, including hardware, in the same location. If unable to install the replacement in the same location, the pole will be installed within 3 feet.

• All pole installations are to replace existing pole locations; no new locations are included in this scope of work. Refer to Appendix J- EHP Checklist, column C (Soil area and depth impact) for the depths of the poles to be installed.

• Remove the existing foundations as specified in Appendix J- EHP Checklist column I (Concrete Foundation) and replace them with a new concrete foundation bases as per Appendix D-Distribution Construction Standards (Concrete Base Standard). The maximum auger width used is 42" and the maximum depth drilled is 15ft.

• New guy wire/ anchors are to be installed in compliance with Appendix D- Distribution Construction Standards within 3ft from the existing anchor. The maximum distance an anchor will be installed for a 50ft pole is 25ft from the base of the pole, within the right-of-way.

• Brushing will be required in locations to gain access to the pole for replacement. Brushing refers to the removal and clearing of vegetation solely to the extent that it allows crews to conduct work. The brushing of vegetation will be limited to a 15 ft radius

surrounding the surface of the pole but not to exceed the width of the right-of-way for the exclusive purpose of gaining access to the pole to conduct repairs. Please see Appendix J- EHP Checklist column H (Brushing/Clearing), Refer to Appendix B- Maps and Pictures for pictures of the vegetation.

• All work for this program will be performed within the current electrical right-of-way.

• This scope of work will not affect water or sewer utility services.

Material Disposal

• PCBs, oil from the transformer and breakers, sealants, and other chemical wastes typical of a construction site are considered hazardous waste and will be disposed of by the contractor in approved facilities as per applicable local regulations. Refer to Appendix C - Waste Management Plan.

• The type of debris that may be found in the process of removal are luminaires, pole arms, photocells, metal scrap, wiring, concrete, steel, and wood poles, etc. The debris will be separated and taken to an approved waste disposal facility in compliance with applicable local regulations. Refer to Appendix C- Waste Management Plan.

• Transformers will be contained and returned to LUMA in compliance with applicable local regulations. The removal of the transformer will require testing of the existing oil for PCB levels, drain oil, and delivery to the approved waste disposal site as per Environmental Regulations. Refer to Appendix C- Waste Management Plan.

Access Roads

• Poles are in close proximity to the roads and are site accessible. The construction of access roads is not required for this scope of work. Refer to Appendix J- EHP Checklist in column G "Site Accessible"

Staging Area

• All materials are stored and dispatched from the Ponce Regional Warehouse. Refer to Appendix L- Warehouse locations. No additional or temporary staging areas are required.

Fill, gravel, sand, etc .:

• Fill, Gravel, and Sand materials will be obtained from an approved supplier as referenced in Appendix A- Approved Supplier List.

List of Equipment to be used:

• Skid Steer, Excavator, Dump trucks, Manlifts, 120-Ton Motor Crane, Boom Trucks 45-ton Crane, Zoom Boom, Air compressor, Truck Digger, Water truck, Pump Truck, Concrete Vibrator, Oil Tanker, Filtering Machine and Flatbed platform.

• Vegetation will be removed utilizing machete, chainsaw, electric pruner, telescopic pole pruner, bucket truck, and/or chipper

Specific List of Permits Required:

- DTOP Endorsements & Municipality Notifications.
- Excavation and Demolition Notification in Department of Transportation and Public Works Agency (DTOP).

• LUMA will provide proof of all permits.

PROJECT ESTIMATE

The estimated costs (Class 3 Accuracy +/-30%) to complete the project are captured in the table below. The cost estimate was developed utilizing preliminary Architectural and Engineering design information and may be subject to change. LUMA has allocated 10% of the project cost for the mitigation of potential known risks.

Project Cost Estimate	428 Public Assistance
Planning, Permits and Applications (FAASt 335168)	\$36,584

Environmental Management (FAASt 335168)	\$52,292
Engineering (FAASt 335168)	\$130,548
Project Management (FAASt 335168)	\$65,274
Distribution Line	\$1,305,478
Contingency	\$159,018
Total Project Cost Estimate:	\$1,749,194
FAASt Project # 705584 (428) Total	\$1,464,496
FAASt A&E #335168 Total	\$284,698

Please refer to Appendix H for Cost Estimate Details.

428 Work To Be Completed (WTBC): \$1,749,194

428 A&E Deduction (Global A&E FAASt 335168) -\$284,698

428 Project Total Cost: \$1,464,496

For detailed cost estimate, please refers to document labeled: 705584-DR4339PR-Appendix H - Detail Cost Estimate - Ponce Group 14-15 Rev0.xlsx

Project Notes:

- 1. Refer to detailed SOW provided in document 705584-DR4339PR-Detailed SOW Ponce Group 14-15 Rev0.pdf
- 2. For reference documents Appendix A thru L, see file labeled

APPENDIX A - Approved Supplier List

- **APPENDIX B Maps and Pictures**
- APPENDIX C Waste Management Plan
- APPENDIX D Distribution Construction Standards
- APPENDIX E LUMA Wildlife Avian and Historical Protection Procedure #335
- APPENDIX F Consent to Federal Funding Letter FEMA/COR3
- **APPENDIX G Structure Coordinates**
- APPENDIX H Detail Cost Estimate
- APPENDIX I PAPPG Appendix J Cost-Effective Hazard Mitigation Measures

APPENDIX J - EHP Checklist APPENDIX K - EHP Maps APPENDIX L - Warehouse Locations

3. For EHP Requirements, refer to pages 7 to 8 of the detailed SOW and reference documents: Appendix J & K.

4. Architectural and Engineering (A&E) costs are deducted given previously obligated Global A&E Project for the subject FAASt PREPA work (see project: 335168 - FAASt A&E PREPA).

5. This project is part of a FAAST project, please reference project 136271.

406 HMP Scope

Project number: 705584; FAASt [Distribution Pole and Conductor Repair-Ponce Group 14 &15] (Distribution)

Damage #1300727; FAASt [Distribution Pole and Conductor Repair - Ponce Groups 14 &15 (Ponce Group 14: GUAYAMA 4001-04, BRANDERI 4002-01, BRANDERI 4002-02, GUAYAMA PDS 4006-02, ARROYO 4101-02, ARROYO 4101-03; Ponce Group 15: MAUNABO 4301-04, SANTA ISABEL 4401-03, SANTA ISABEL 4401-04, SANTA ISABEL 4402-02, SALINAS RURAL 4502-01 SALINAS RURAL 4502-02.

Applicant: PR Electric Power Authority (000-UA2QU-00)

Location: Ponce, Puerto Rico	
GPS Latitude/Longitude:	

Hazard Mitigation Narrative

During the incident period from September 17, 2017, to November 15, 2017, the Commonwealth of Puerto Rico experienced hurricane-force winds, heavy rain, flooding, and power outage "loss of power" from Hurricane Maria. The incident caused damage to the electrical system, such as the power generation plants, transmission and distribution lines, substations, communication systems, buildings, among other damages to the infrastructures owned, operated, and maintained by the Puerto Rico Electric Power Authority (PREPA).

Project #705584 Distribution Pole and Conductor Repair-Ponce Group 14 &15

The Distribution Pole and Conductor Repair-Ponce Group 14 &15 consists of 12 interconnected and inter-functional distribution feeders (sites) establish the electrical distribution system as follows: Ponce Group 14 GUAYAMA 4001-04, BRANDERI 4002-01, BRANDERI 4002-02, GUAYAMA PDS 4006-02, ARROYO 4101-02, ARROYO 4101-03; Ponce Group 15: MAUNABO 4301-04, SANTA ISABEL 4401-03, SANTA ISABEL 4401-04, SANTA ISABEL 4402-02, SALINAS RURAL 4502-01 SALINAS RURAL 4502-02.

The Method of Repair (MOR) included the replacement of the damaged critical distribution poles (wood, concrete or galvanized), cross-arms, insulators, and all associated hardware needed for the new structure. According to the information provided by the Applicant, due to the high velocity hurricane winds, wind-blown debris, and prolonged heavy rain, were the main cause of the damages of the facilities.

In order to minimize the damages in a future event, the Applicant is proposing as a mitigation measure, increase the strength of the poles by increasing the wind tolerance to +160mph. Note: The FEMA Accelerated Award Strategy (FAASt) MOR included the PREPA distribution standards and specifications that were based on a 145mph sustained winds. However, the new PREPA Standard 2021 updates the design-criteria to a 160mph sustained winds resistant. The +160mph wind tolerance mitigation measure, will protect and make the affected infrastructure more resistant, stronger, and resilient to similar hazards

Hazard Mitigation Proposal (HMP) Scope of Work:

In order to prevent or reduce future damages from similar events, the applicant proposed the following mitigation measures:

Mitigation Measures (Replacement)

To avoid damage in a future event, the Applicant is proposing as a mitigation measure, increase the strength of the poles by increasing the wind tolerance of all materials to +160mph. The FAASt MOR included the PREPA distribution standards and specifications that were based on a 145mph sustained winds. However, the new PREPA Standard 2021 updates the design-criteria to a 160mph sustained winds resistant. The above mitigation measures will protect and make the affected infrastructure more resistant, stronger, and resilient to similar hazards. Refer to Appendix J: Section VI.D.1 of the PAPPG V3.1.

[Distribution Critical Poles Replacement] 406 Mitigation Scope of Work:

- 1. [Feeder 4001-04 Scope (3 ea.):
 - No 406 Hazard Mitigation work identified to replace two (2) 50ft galvanized steel S8 poles. In this case, Mitigation is accomplished by 428 PA method of repair (MOR).
 - Replace one (1) 45ft concrete H4 poles by one (1) 50ft galvanized steel S8 poles.
- 1. Feeder 4002-01 Scope (2 ea.):
 - Replace two (2) 45ft concrete H4 poles by two (2) 50ft galvanized steel S8 poles.
- 1. Feeder 4002-02 Scope (22 ea.):
 - Replace nine (9) 45ft concrete H4 poles by nine (9) 50ft galvanized steel S8 poles.
 - Replace thirteen (13)45ft concrete H6 poles by thirteen (13) 50ft galvanized steel S8 poles.
- 1. Feeder 4006-02 Scope (1 ea.):
 - No 406 Hazard Mitigation work identified to replace one (1) 50ft galvanized steel S8 pole. In this case, Mitigation is accomplished by 428 PA method of repair (MOR).
- 1. Feeder 4101-02 Scope (1ea.):
 - Replace one (1) 45ft concrete H4 pole by one (1) 50ft galvanized steel S8 pole.
- **1.** Feeder 4101-03 Scope (6 ea.):
 - Replace six (6) 45ft concrete H4 poles by six (6) 50ft galvanized steel S8 poles.
- 1. Feeder 4301-04 Scope (1 ea.):
 - Replace one (1) 45ft concrete H4 pole by one (1) 50ft galvanized steel S8 pole.
- 1. Feeder 4401-03 Scope (5 ea.):
 - Replace three (3) 45ft concrete H4 poles by three (3) 50ft galvanized steel S8 poles.
 - Replace two (2) 45ft concrete H6 poles by two (2) 50ft galvanized steel S8 poles.
- 1. Feeder 4401-04 Scope (6 ea.):
 - Replace five (5) 45ft concrete H4 poles by five (5) 50ft galvanized steel S8 poles.
 - Replace one (1) 45ft concrete H6 pole by one (1) 50ft galvanized steel S8 pole.
- 1. Feeder 4402-02 Scope (7 ea.):
 - Replace four (4) 45ft concrete H4 poles by four (4) 50ft galvanized steel S8 poles.
 - Replace three (3) 45ft concrete H6 poles by three (3) 50ft galvanized steel S8 poles.
- 1. Feeder 4502-01 Scope (6 ea.):
 - Replace six (6) 45ft concrete H4 poles by six (6) 50ft galvanized steel S8 poles.

- 1. Feeder 4502-02 Scope (8 ea.):
 - Replace seven (7) 45ft concrete H4 poles by seven (7) 50ft galvanized steel S8 poles.
 - No 406 Hazard Mitigation work identified to replace one (1) 50ft galvanized steel S8 pole. In this case, Mitigation is accomplished by 428 PA method of repair (MOR).

Hazard Mitigation Proposal (HMP) Cost:

Hazard Mitigation Total Cost =	\$ 378,483.00
+ HM Soft Cost) =	\$ <u>79,287.00</u>
Total Net Hazard Mitigation Cost (Base Cost) =	\$ 299,196.00

HMP Cost-Effectiveness Calculations:

FEMA's Benefit-Cost Analysis (BCA), methodology evaluates expected risk reduction benefits of a hazard mitigation project and compares those benefits to the cost of the mitigation project. FEMA Public Assistance Program and Policy Guide (PAPPG) Chapter 2. Section VII. C. defines cost effective mitigation as: The Hazard Mitigation Measure is cost effective through an acceptable Benefit Cost Analysis (BCA) with a resulting Benefit Cost Ratio equal to or greater than (1).

The Island Wide Benefit Cost Analysis (IWBCA) created for the PREPA infrastructure defines a maximum potential benefit using the incurred costs of the PREPA FEMA Accelerated Award Strategy (FAASt) fixed cost estimate, the mission assignments utilized for the reconnection effort, and the costs associated with loss of service. This maximum benefit has been developed to fund all mitigation projects from both Public Assistance Hazard Mitigation and the Hazard Mitigation Grant program.

It is the applicant's responsibility to maintain a record of approved IWBCA related projects to avoid running out of funds for their Mitigation portion projects.". Please see attached IWBCA Package

The cost of the Hazard Mitigation Proposal (HMP) described herein is \$378,483.00_(Hazard Mitigation Total Cost). The cost of this HMP combined will all other proposals (both PA and HMGP) does not exceed the maximum potential benefit and is therefore deemed cost effective per FEMA Public Assistance Program and Policy Guide (PAPPG) V3.1 April 2018, Chapter 2, VII., Section C, BCA Rule. This Hazard Mitigation Proposal meets eligible repair and restoration cost-effective requirements.

*See Mitigation Profile Documents Tab in Grants Manager for complete version of this HMP and supporting documents. (HMP, HMP cost estimate, Supporting documents file).

Cost

Code	Quantity	Unit	Total Cost	Section
3510 (Engineering And Design Services (FAASt Global A&E 335168))	1.00	Lump Sum	(\$284,698.00)	Uncompleted
9201 (PAAP Fixed Estimate (No Value - Tracking Purposes Only))	1.00	Lump Sum	\$0.00	Completed
9001 (Contract (FAASt Project 136271))	1.00	Lump Sum	\$1,749,194.00	Uncompleted

	CRC Gross Cost	\$1,464,496.00
Total 406 HMP Cost		\$378,483.00
	Total Insurance Reductions	\$0.00
	CRC Net Cost	\$1,842,979.00
	CRC Net Cost Federal Share (90.00%)	\$1,842,979.00 \$1,658,681.10

Award Information

Version Information

Version	Eligibility	Current	Bundle Number	Project	Cost	Federal Share	Date
#	Status	Location		Amount	Share	Obligated	Obligated
0	Eligible	Awarded	PA-02-PR-4339-PW- 11365(13800)	\$1,842,979.00	90 %	\$1,658,681.10	6/15/2023

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

05/04/2023

No adjustments to be made to the previous insurance coverage determination, no revisions to narrative needed, updated applicant tracker if needed, providing administrative function and forwarding project for completion.

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

4/28/2023

GENERAL INFORMATION

Event: DR4339-PR

Project: SP 705584

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: \$1,842,979.00 (CRC Gross Cost \$1,464,496.00 + Mitigation Amount \$378,483.00)

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 Mapfre

Policy Numbers: <u>Willis Towers Watson</u> (B0804Q1966F17, B0804Q14312F17, B0804Q19673F17, B0804Q19672F17, B0804Q18529F17, B0804Q14312F17, B0804Q19674F17, B0804Q18411F17, B0804Q14310F17, B0804Q11038F17, B0804Q14507F17, B0804Q14312F17

Mapfre Praico Insurance Company (1398178000644)

<u>Multinational Insurance Company</u> (88-CP-000307831-2, 88-CP-000318673-0, 88-CP-000318674-0, 88-CP-000318675-0, 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) #1300727:

FAASt [Distribution Pole and Conductor Repair - Ponce Groups 14 &15]

Location: Distribution pole and conductor - Ponce Groups 14 &15

GPS Coordinates:

Cause of Loss: Wind / Wind Driven Rain

SOV / Schedule #: Not insured

SOV / Schedule Amount: Not insured

Applicable Deductible Amount: N/A

Damage Inventory Amount: \$1,842,979.00 (CRC Gross Cost \$1,464,496.00 + Mitigation Amount \$378,483.00)

Prior Obtain and Maintain Requirement:

No prior insurance requirements were found for this facility.

D. 1.....

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.

Obtain and Maintain Requirement:

No Obtain & Maintain Requirement is being mandated for the FAASt [Distribution Pole and Conductor Repair - Ponce Groups 14 &15]because the 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 caseby-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).

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

O&M Requirements

There are no Obtain and Maintain Requirements on **FAASt** [Distribution Pole and Conductor Repair - Ponce Groups 14 & 15] (Distribution).

406 Mitigation

There is no additional mitigation information on FAASt [Distribution Pole and Conductor Repair - Ponce Groups 14 & 15] (Distribution).

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.
- Executive Order 11988 Floodplains Condition applicable to the following feeders : Feeder 4101-03, Feeder 4301-04, Feeder 4401-03, Feeder 4502-02, and Feeder 4001-04: Applicant must obtain any required permits from the Puerto Rico Permits Management Office (OGPe) prior to initiating work and comply with any conditions of the permit established by the Planning Board (JP) for constructions in floodplains. All coordination (emails, letters, documented phone calls) pertaining to these activities and compliance must be provided and maintained in the Applicant's permanent files.
- Endangered Species Act (ESA) Conditions for Epicrates inornatus applicable to: Feeder_4006_02, Feeder_4502_01, Feeder_4502-02., Feeder_4101_02, Feeder_4401_04, Feeder_4301_04, Feeder_4401_03: 1. Inform all personnel about the potential presence of the PR boa and the VI boa in areas where the proposed work will be conducted. Photographs of the PR and VI Boa are to be prominently displayed at the site. The recipient must ensure that project personnel is able to correctly identify a PR or VI boa. For information on PR boa, please visit: https://ecos.fws.gov/ecp/species/6628.2. Prior to

any construction activity, including removal of vegetation and earth movement, the boundaries of the project area must be delineated, buffer zones, and areas to be excluded and protected, should be clearly marked in the project plan and in the field to avoid further habitat degradation into forested areas. Once areas are clearly marked, and prior to any construction activity, including site preparation, project personnel able to correctly identify a PR or VI boa must survey the areas to be cleared to ensure that no boas are present within the work area. Vehicle and equipment operation must remain on designated access roads/paths and within rights-of way. 3. If a PR boa is found within any of the working or construction areas, activities should stop in the area where the boa was found. Do not capture the boa. If boas need to be moved out of harm's way, project personnel designated by the recipient shall immediately contact the Puerto Rico Department of Natural and Environmental Resources (PRDNER) Rangers for safe capture and relocation of the animal (PRDNER phone #s: 787-724-5700, 787-230-5550, 787-771-1124). If immediate relocation is not an option, project-related activities at this area must stop until the boa moves out of harm's way on its own. Activities at other work sites, where no boas have been found after surveying the area, may continue. 4. Measures should be taken to avoid and minimize PR boa casualties by heavy machinery or motor vehicles being used on site. Any heavy machinery left on site (staging) or near potential PR boa habitat (within 50 meters of potential boa habitat), needs to be thoroughly inspected each morning before work starts to ensure that no boas have sheltered within engine compartments or other areas of the equipment. If PR boas are found within vehicles or equipment, do not capture the animal and let it move on its own or call PRDNER Rangers for safe capture and relocation of the boa (PRDNER phone #s: 787-724-5700, 787-230-5550, 787-771-1124). If not possible, the animal should be left alone until it leaves the vehicle on its own. 5. PR boas may seek shelter in debris piles. Measures should be taken to avoid and minimize boa casualties associated with sheltering in debris piles as a result of project activities. Debris piles should be placed far away from forested areas. Prior to moving, disposing or shredding, debris piles should be carefully inspected for the presence of boas. If PR boas are, found within debris piles, do not capture the animal and let it move on its own or call PRDNER Rangers for safe capture and relocation of the animal. If debris piles will be left on site, we recommend they be placed in areas that will not be disturbed in the future. 6. For all boa sightings (dead or alive), personnel designated by the recipient must record the time and date of the sighting and the specific location where the boa was found. Data should also include a photo of the animal dead or alive, and site GPS coordinates, and comments on how the animal was detected and its behavior. If the PR boa was accidentally killed as part of the project actions, please include information on what conservation measures had been implemented and what actions will be taken to avoid further killings. All boa sighting reports should be sent to the USFWS Caribbean Ecological Services Field Office, Marelisa Rivera - Deputy Field Supervisor, 787-851-7297 extension 206, 787-510-5207, marelisa rivera@fws.gov.

Endangered Species Act (ESA) - Conditions for (Caretta caretta), (Chelonia mydas), and (Dermochelys coriacea) applicable to: Feeder 4301 04, Feeder 4401 03 10. During nesting season (March1-November 30) a qualified sea turtle monitor shall survey each beach work area for possible sea turtle nests during the morning. Any nests found within the area will be marked or flagged in place. Outside of peak nesting season, beaches where work will occur shall be surveyed at least twice a week. If required, debris removal Construction activities on beaches shall initiate only after the sea turtle monitor has completed surveys that morning and nests are clearly marked. Surveys shall be conducted by sea turtle permit holders or trained personnel following DNER/DPNR protocols (see list of PR sea turtle groups, for USVI contact DPNR). Nests laid adjacent to the work area shall be marked by flagging with a 10-foot square roped off buffer and an unobstructed path seaward from the nest to the water. Surveys will start 45 minutes prior to any construction activity. Sea turtle monitoring groups shall have site specific information for nests in their areas and inform work crews of areas to avoid. This measure will be conducted in accordance with FEMA/USFWS/DNER-approved SOP for employee sea turtle awareness training, project site preparation, and nest season monitoring. 11. During the sea turtle nesting season, repair or replacement of structures shall occur in the same location or footprint of the previously permitted structure. If the current project footprint does not stay within previously permitted structure footprint, then the applicant must consult with USFWS. 12. Relocation of sea turtle nests to accommodate construction is not authorized. 13. All project activity shall be confined to daylight hours and shall not occur prior to 0800 AST or following the completion of all necessary marine turtle surveys and conservation activities. The sea turtle monitor shall be available via phone after the initial inspection for any coordination throughout the workday. This measure will be conducted in accordance with FEMA/USFWS/DNER-approved SOP for employee sea turtle awareness training, project site preparation, and nest season monitoring. 14. Only native plant species are authorized to be planted. Existing native dune vegetation shall be disturbed to the minimum extent necessary. For information on appropriate coastal plants see Fish and Wildlife Service BMP document, Sea Turtle Friendly Vegetation. Removal of standing and live coastal vegetation (e.g. sea grapes, mangroves) that are not a hazard is unauthorized. No sea grass, sea weeds, algae nor beach sand shall be removed during beach debris removal efforts. Any vegetation planting shall be installed by hand labor and tools. Irrigation systems shall not be installed within nesting habitat. Applicant will submit a vegetation plan that confirms compliance with these requirements and submit to USFWS at: caribbean es@fws.gov. If a sea turtle nest is disturbed or uncovered during vegetation planting activity or project excavation, all work shall cease and the sea turtle monitor shall immediately be contacted. If a nest(s) cannot be safely avoided during construction, all activity within the affected project area shall be delayed until complete hatching and emergence of the nest. This measure will be conducted in accordance with FEMA/USFWS/DNER-approved SOP for employee sea turtle awareness training, project site preparation, and nest season monitoring. 15. Placement of fill shall not occur within 10 feet of or in any area seaward of a marked sea turtle nest. Nests shall be marked in place with a roped off 10-foot buffer. Dependent upon the fill volume and slope, distance offset

from marked turtle nests may be required to be larger to avoid indirect impacts (e.g., fill slumping) to the nest. If the turtle nest cannot be avoided by this distance due to the scope of the project, all work near the nest must be postponed until completion of the sea turtle nesting season (November 30). This measure will be conducted in accordance with FEMA/USFWS/DNER-approved SOP for employee sea turtle awareness training, project site preparation, and nest season monitoring. 16. All excavations and temporary alteration of beach topography shall be contoured or leveled to the natural beach profile prior to dusk each day. This includes raking of tire ruts, filling pits or holes where debris was removed, etc. Any potential obstructions such as debris piles, equipment, etc. shall also be removed from the beach by the end of each day. Fill must be placed as landward as practicable to establish or repair dune features. The existing or pre-disaster beach and dune profile must be considered when determining the appropriate siting of fill to provide reasonable longevity of the project. This measure will be conducted in accordance with FEMA/USFWS/DNER-approved SOP for employee sea turtle awareness training, project site preparation, and nest season monitoring. 17. No vehicles, equipment, staging or debris should be used, parked or stored landward of the primary dune or in vegetated areas. Staging/parking/storage areas shall be located on paved surfaces as much as possible and outside of vegetated areas. Lightweight, all terrain style vehicles, with tire pressures of 10 psi or less can operate on the beach and are the preferred transportation method. However, use of heavy equipment on the beach can be allowed provided it is taken off the beach by 1600 AST local time every night using an approved and designated beach access. All driving on the beach shall be between the high-water mark and the water's edge. This measure will be conducted in accordance with FEMA/USFWS/DNER-approved SOP for employee sea turtle awareness training, project site preparation, and nest season monitoring. 18. Removal of vegetation, fence installation, construction activities, and light installation shall be limited within 50 meters from the high tide line. This measure will be conducted in accordance with FEMA/USFWS/DNER-approved SOP for employee sea turtle awareness training, project site preparation, and nest season monitoring. 19. No construction involving lights shall be used during the nesting season. For Puerto Rico and the USVI, a lighting plan utilizing sea turtle friendly lights for coastal areas is required where lights will be repaired or newly installed. Lighting plans shall be sent to USFWS at: caribbean es@fws.gov. Once the plan is fully implemented, a lighting inspection shall be conducted by the Applicant to identify and correct any remaining problematic lights. For projects in Puerto Rico the project shall comply with Puerto Rico Law 218 of 2008, Control and Prevention of the Lighting Pollution of Puerto Rico and the PR EQB 2016 Regulation to Control and Prevent Light Contamination. 20. If an unmarked sea turtle crawl is encountered during or prior to project activity, the work crew shall not disturb the integrity of the crawl. Project personnel shall follow the crawl up the beach or into the dune and contact the gualified sea turtle monitor to inform of the location of the crawl. Care shall be taken to avoid walking or driving equipment over or near a crawl so that a potential nest is not damaged. This measure will be conducted in accordance with FEMA/USFWS/DNER-approved SOP for employee sea turtle awareness training, project site preparation, and nest season monitoring. 21. Any collision(s) with and/or injury to any sea turtle in water, occurring during the construction of a project, shall be reported immediately to DNER/DPNR and NMFS's Protected Resources Division (PRD) at (1-727-824-5312) or by email to take report.nmfsser@noaa.gov and SAJ-RD- Enforcement@usace.army.mil. This measure will be conducted in accordance with FEMA/USFWS/DNER-approved SOP for employee sea turtle awareness training, project site preparation, and nest season monitoring. 22. All sea turtle sightings and incidents involving nesting sea turtles or hatchlings shall be reported to DNER/DPNR and the USFWS: Caribbean Ecological Services Field Office, P.O. Box 491, Boquerón, PR, Marelisa Rivera - Deputy Field Supervisor, 787-851-7297 extension 2016, 787-510-5207, marelisa rivera@fws.gov. This measure will be conducted in accordance with FEMA/USFWS/DNER approved SOP for employee sea turtle awareness training, project site preparation, and nest season monitoring.

- National Historic Preservation Act (NHPA) 1. 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. 2. 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. 3. 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 previously disturbed or hardened surfaces can be provided at close-out.
- Resource Conservation and Recovery Act, aka Solid Waste Disposal Act (RCRA) Conditions applicable to 4001-04 (3 poles), 4002-01 (2 poles), 4002-02 (22 poles), 4006-02 (1 pole), 4101-02 (1 pole), 4101-03 (6 poles), 4301-04 (1 pole), 4401-03 (5 poles), 4401-04 (6 poles), 4402-02 (7 poles), 4502-01 (6 poles), 4502-02 (8 poles) and Ponce Regional Warehouse. 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. 3. The applicant is responsible to ensure damaged transformers are handled, managed, and disposed of in accordance with all federal and state laws and requirements. Downed electrical equipment may contain toxic and hazardous materials, such as polychlorinated biphenyls (PCBs), and may spill these materials if a rupture occurs. Applicant is responsible for screening transformers that do or may contain PCBs and the area where any related spill occurred. The applicant is then responsible to handle, manage, dispose of, or recycle damaged equipment and contaminated soil as appropriate. Where possible, temporary measures should be implemented to prevent, treat, or contain further releases or mitigate the migration of PCBs into the environment. If damaged equipment or material storage containers must be stored temporarily, containers should be placed on hardened surface areas, such as a concrete or an asphalt for no more than 90 days. Excavated contaminated material should be disposed of in accordance with federal and state laws and requirements.

NEPA Determination - NEPA Conditions applicable to 4001-04 (3 poles), 4002-01 (2 poles), 4002-02 (22 poles), 4006-02 (1 pole), 4101-02 (1 pole), 4101-03 (6 poles), 4301-04 (1 pole), 4401-03 (5 poles), 4401-04 (6 poles), 4402-02 (7 poles), 4502-01 (6 poles), 4502-02 (8 poles), and Ponce Regional Warehouse: 1. All borrow or fill material must come from preexisting stockpiles, material reclaimed from maintained roadside ditches (provided the designed width or depth of the ditch is not increased), or commercially procured material from a source existing prior to the event. For any FEMA-funded project requiring the use of a non-commercial source or a commercial source that was not permitted to operate prior to the event (e.g., a new pit, agricultural fields, road ROWs, etc.) in whole or in part, regardless of cost, the Applicant must notify FEMA and the Recipient prior to extracting material. FEMA must review the source for compliance with all applicable federal environmental planning and historic preservation laws and executive orders prior to a Sub-recipient or their contractor beginning borrow extraction. Consultation and regulatory permitting may be required. Non-compliance with this requirement may jeopardize receipt of federal funding. Documentation of borrow sources utilized is required at close-out and must include fill type (private, commercial, etc.), name, fill site GPS coordinates (not of the company/governmental office), address, and type of material. 2. 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 close-out.

EHP Additional Info

There is no additional environmental historical preservation on **FAASt [Distribution Pole and Conductor Repair - Ponce Groups 14 & 15] (Distribution)**.

Final Reviews

Final Review

Reviewed By MARTINEZ SANTIAGO, ISRAEL

Reviewed On 06/05/2023 9:56 AM PDT

Review Comments

FEMA Final Review completed. Project ready for recipient review.

Recipient Review

Reviewed By Salgado, Gabriel

Reviewed On 06/05/2023 2:03 PM PDT

Review Comments

Recipient review completed. Project is ready for applicant review.

Fixed Cost Offer

As a Public Assistance (PA) Subrecipient PR Electric Power Authority (000-UA2QU-00), in accordance with Section 428 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, the Applicant agrees to accept a permanent work subaward based on a Fixed Cost Offer in the amount of \$1,842,979.00 for subaward number 11365 under Disaster # 4339. The Applicant accepts responsibility for all costs above the Fixed Cost Offer.

The Applicant understands that by participating in this pilot program they will be reimbursed for allowable costs in accordance with 2 CFR Part 200, and the reimbursement will not exceed the Fixed Cost Offer. The Applicant also understands that by agreeing to this Fixed Cost Offer, they will not receive additional funding related to the facilities or sites included in the subaward. The Applicant also acknowledges that failure to comply with the requirements of applicable laws and regulations governing assistance provided by FEMA and the PA Alternative Procedures Pilot Program Guidance (such as procurement and contracting; environmental and historic preservation compliance; and audit and financial accountability) may lead to loss of federal funding.

Project Signatures

Signed By Miller, Thomas

Signed On 06/06/2023