

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

NEPR
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IN RE:

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

CASE NO. NEPR-MI-2021-0002

**SUBJECT: Motion Submitting Five FEMA
Approvals of Projects, Request for Confidential
Treatment, and Supporting Memorandum of Law**

**MOTION SUBMITTING FIVE FEMA APPROVALS 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 Five 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,

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. The Energy Bureau thereafter determined that this directive should be applied to PREPA and LUMA. *See* Resolution and Order of August 20, 2021.

2. 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 [Substation Minor Repairs – Group E] (Substation),”³ “FAASt [Comerío Streetlighting] (Distribution),” “FAASt [Naguabo Streetlighting] (Distribution),” “FAASt [Cidra Streetlighting] (Distribution),” and “FAASt [Vega Alta Streetlighting] (Distribution)” T&D Projects.⁴

3. On September 22, 2021, the Energy Bureau issued a Resolution and Order that 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 [Substation Minor Repairs – Group E] (Substation),” “FAASt [Comerío Streetlighting] (Distribution),” “FAASt [Naguabo Streetlighting] (Distribution),” “FAASt [Cidra Streetlighting] (Distribution),” and “FAASt [Vega Alta Streetlighting] (Distribution)” T&D Projects SOWs. The Energy Bureau also ordered LUMA

³ The “FAASt [Substation Minor Repairs – Group E] (Substation)” T&D Project was submitted initially to the Energy Bureau as the “Substation Minor Repairs,” but was later divided into individual projects per region.

⁴ The “FAASt [Comerío Streetlighting] (Distribution),” “FAASt [Naguabo Streetlighting] (Distribution),” “FAASt [Cidra Streetlighting] (Distribution),” and “FAASt [Vega Alta Streetlighting] (Distribution)” T&D Projects were submitted initially to the Energy Bureau as the “Distribution Streetlighting,” but were later divided into individual projects per municipality.

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

4. In compliance with the September 22nd Order, LUMA hereby submits copies of the approvals by FEMA issued on May 9, 2024, of the aforementioned T&D Projects.⁵ *See Exhibit 1*⁶ to this Motion. The document contains FEMA’s approvals and includes the costs obligated for each Project.

5. LUMA is submitting herein a redacted public version of the FEMA approvals (**Exhibit 1**) protecting confidential information associated with Critical Energy Infrastructure Information (“CEII”). As explained in this Motion, portions of the FEMA approvals of the 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 Energy Bureau’s Policy on Management of Confidential Information. *See* Energy Bureau’s Policy on Management of Confidential Information, CEPR-MI-2016-0009, issued on August 31, 2016, as amended by Resolution dated September 20, 2016.

II. Memorandum of Law in Support of Request for Confidentiality

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

6. The bedrock provision on the management of confidential information filed before this Energy Bureau, is Section 6.15 of Act 57-2014, known as the “Puerto Rico Energy Transformation and Relief Act.” It provides, in pertinent part, that: “[i]f any person who is required to submit information to the [Energy Bureau] believes that the information to be submitted has any

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.

⁶ Please note that Exhibit 1 has digitalization and table format issues found on the documents as issued by FEMA.

confidentiality privilege, such person may request the [Energy Bureau] to treat such information as such [...]” 22 LPRA §1054n. If the Energy Bureau determines, after appropriate evaluation, that the information should be protected, “it shall grant such protection in a manner that least affects the public interest, transparency, and the rights of the parties involved in the administrative procedure in which the allegedly confidential document is submitted.” *Id.* §1054n(a).

7. Access to confidential information shall be provided “only to the lawyers and external consultants involved in the administrative process after the execution of a confidentiality agreement.” *Id.* §1054n(b). Finally, Act 57-2014 provides that this Energy Bureau “shall keep the documents submitted for its consideration out of public reach only in exceptional cases. In these cases, the information shall be duly safeguarded and delivered exclusively to the personnel of the [Energy Bureau] who needs to know such information under nondisclosure agreements. However, the [Energy Bureau] shall direct that a non-confidential copy be furnished for public review.” *Id.* §1054n(c).

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

9. Moreover, the Energy Bureau’s Policy on Management of Confidential Information details the procedures that a party should follow to request that a document or portion thereof be afforded confidential treatment. In essence, the referenced Policy requires identifying confidential information and filing a memorandum of law explaining the legal basis and support for a request to file information confidentially. *See* CEPR-MI-2016-0009, Section A, as amended by the

Resolution of September 20, 2016, CEPR-MI-2016-0009. The memorandum should also include a table that identifies the confidential information, a summary of the legal basis for the confidential designation, and why each claim or designation conforms to the applicable legal basis of confidentiality. *Id.* at ¶ 3. The party who seeks confidential treatment of information filed with the Energy Bureau must also file both a “redacted” or “public version” and an “unredacted” or “confidential” version of the document that contains confidential information. *Id.* at ¶ 6.

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

Critical Energy Infrastructure Information (“CEII”)

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

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

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

11. Regulation No. 8543, *Regulation on Adjudicative, Notice of Noncompliance, Rate Review, and Investigation Proceedings*, also includes a provision for filing confidential information in proceedings before this Energy Bureau. To wit, Section 1.15 provides that “a person has the duty to disclose information to the [Energy Bureau] considered to be privileged pursuant to the Rules of Evidence, said person shall identify the allegedly privileged information, request the [Energy Bureau] the protection of said information, and provide supportive arguments, in

writing, for a claim of information of privileged nature. The [Energy Bureau] shall evaluate the petition and, if it understands [that] the material merits protection, proceed according to [...] Article 6.15 of Act No. 57-2015, as amended.” *See also* Energy Bureau Regulation No. 9137 on *Performance Incentive Mechanisms*, § 1.13 (addressing disclosure before the Energy Bureau of Confidential Information and directing compliance with Resolution CEPR-MI-2016-0009).

B. Request for Confidentiality

12. The FEMA approvals 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.⁷ In at least two Data Security and Physical Security proceedings,⁸ this Energy Bureau, *motu proprio*, has conducted proceedings confidentially, thereby recognizing the need to protect CEII from public disclosure.

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

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

13. Additionally, this Energy Bureau has granted requests by LUMA to protect CEII in connection with LUMA's System Operation Principles. *See* Resolution and Order of May 3, 2021, table 2 on page 4, Case No. NEPR-MI-2021-0001 (granting protection to CEII included in LUMA's Responses to Requests for Information). Similarly, in the proceedings on LUMA's proposed Initial Budgets and System Remediation Plan, this Energy Bureau granted confidential designation to several portions of LUMA's Initial Budgets and Responses to Requests for Information. *See* Resolution and Order of April 22, 2021, on Initial Budgets, Table 2 on pages 3-4, and Resolution and Order of April 22, 2021, on Responses to Requests for Information, table 2 on pages 8-10, Case No. NEPR-MI-2021-0004; Resolution and Order of April 23, 2021, on Confidential Designation of Portions of LUMA's System Remediation Plan, table 2 on page 5, and Resolution and Order of May 6, 2021, on Confidential Designation of Portions of LUMA's Responses to Requests for Information on System Remediation Plan, table 2 at pages 7-9, Case No. NEPR-MI-2020-0019.

14. Similarly, the Energy Bureau has granted LUMA's requests for confidential treatment of portions of the FEMA approvals submitted for approval in the present case. Notably, the Energy Bureau has granted LUMA's request for confidential treatment of portions of FEMA Approvals of Projects submitted for consideration and authorization. Furthermore, this Energy Bureau designated portions of submitted FEMA Approvals of Projects as confidential CEII in its Resolution and Order of March 20, 2023; *see* Table 1 on pages 1-2.

15. As mentioned above, the Energy Bureau's Policy on Management of Confidential Information provides for the management of CEII. It directs that the parties' authorized

representatives access information validated as CEII only after executing and delivering a Non-Disclosure Agreement.

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

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

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

Id.

17. Additionally, “[c]ritical electric infrastructure means a system or asset of the bulk-power system, whether physical or virtual, the incapacity or destruction of which would negatively affect national security, economic security, public health or safety, or any combination of such matters. *Id.* Finally, “[c]ritical infrastructure means existing and proposed systems and assets, whether physical or virtual, the incapacity or destruction of which would negatively affect security, economic security, public health or safety, or any combination of those matters.” *Id.*

18. The Critical Infrastructure Information Act of 2002, 6 U.S.C. §§ 671-674 (2020), part of the Homeland Security Act of 2002, protects critical infrastructure information (“CII”).⁹

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

(A) shall be exempt from disclosure under the Freedom of Information Act;

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

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- (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;
- (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.

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

20. Based on the above, LUMA respectfully submits that portions of the FEMA approvals 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 the 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

21. In compliance with the Energy Bureau's Policy on Management of Confidential Information (CEPR-MI-2016-0009) below, find a table summarizing the portions of the 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 [Substation Minor Repairs – Group E] (Substation)	Pages 1, 2, 6, 7, 11, 13, 16, 23 and 24	Critical Energy Infrastructure Information, 18 C.F.R. § 388.113; 6 U.S.C. §§ 671-674.	May 17, 2024
Exhibit 1	FAASt [Comerío Streetlighting] (Distribution)	Pages 1, 5, and 10	Critical Energy Infrastructure Information, 18 C.F.R. § 388.113; 6 U.S.C. §§ 671-674.	May 17, 2024
Exhibit 1	FAASt [Naguabo Streetlighting] (Distribution)	Pages 1, 3, 5, and 10	Critical Energy Infrastructure Information, 18 C.F.R. § 388.113; 6 U.S.C. §§ 671-674.	May 17, 2024
Exhibit 1	FAASt [Cidra Streetlighting] (Distribution)	Pages 1, 6, and 12	Critical Energy Infrastructure Information, 18 C.F.R. § 388.113; 6 U.S.C. §§ 671-674.	May 17, 2024
Exhibit 1	FAASt [Vega Alta Streetlighting] (Distribution)	Pages 1, 3, 5 and 11	Critical Energy Infrastructure Information, 18 C.F.R. § 388.113;	May 17, 2024

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

WHEREFORE, LUMA respectfully requests that the Energy Bureau **take notice** of the aforementioned; **accept** the 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 counsel for PREPA Alexis Rivera, arivera@gmlex.net, and to Genera PR LLC, through its counsel of record, Jorge Fernández-Reboredo, jfr@sbgblaw.com and Alejandro López Rodríguez, alopez@sbgblaw.com.

In San Juan, Puerto Rico, on this 17th day of May 2024.



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Exhibit 1

Five (5) FEMA Approvals

Department of Homeland Security Federal Emergency Management Agency

General Info

Project #	549725	PW #	11707	Project Type	Specialized
Project Category	F - Utilities	Applicant	PR Electric Power Authority (000-UA2QU-00)	Event	4339DR-PR (4339DR)
Project Title	FAASt [Substation Minor Repairs - Group E] (Substation)		Declaration Date	9/20/2017	
Project Size	Large	Incident Start Date	9/17/2017	Incident End Date	11/15/2017
Activity Completion Date	9/20/2027				
Process Step	Obligated				

Damage Description and Dimensions

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

Damage #925057; Coamo PDS Substation 4603

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:** Coamo PDS Substation 4603
- **Facility Description:** The substation facilities needing minor repairs are typically composed of transformers, circuit breakers, disconnect switches, a control house, steel structures, poles, lights, and other components enclosed with a perimeter fence.
- **Approx. Year Built:** 1980
- **GPS Latitude/Longitude:** [REDACTED]

General Damage Information:

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

Damage #925064; Jobos 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:** Jobos TC
- **Facility Description:** The substation facilities needing minor repairs are typically composed of transformers, circuit breakers, disconnect switches, a control house, steel structures, poles, lights, and other components enclosed with a perimeter fence.
- **Approx. Year Built:** 1980
- **GPS Latitude/Longitude:** [REDACTED]

General Damage Information:

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

Damage #925067; Salinas Urbano Substation 4501

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

General Facility Information:

- **Facility Type:** Power generation, transmission, and distribution facilities
- **Facility:** Salinas Urbano Substation 4501
- **Facility Description:** The substation facilities needing minor repairs are typically composed of transformers, circuit breakers, disconnect switches, a control house, steel structures, poles, lights, and other components enclosed with a perimeter fence.
- **Approx. Year Built:** 1980
- **GPS Latitude/Longitude:** [REDACTED]

General Damage Information:

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

Final Scope

925057 Coamo PDS Substation 4603

Introduction

The purpose of this document is to submit for approval the Detailed Scope of Work (SOW) to COR3 and FEMA for the Substation Minor Repairs Group E 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 Substation Minor Repairs Group D. 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 facility 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 Group E substation located in the Ponce region:

Name	Substation Number	Physical Address	GPS Coordinate	Date of Construct
Coamo PDS	4603	CARR. 14 KM 31 H1, COAMO	[REDACTED]	November - 200

Project Scope of Work

Proposed 428 Public Assistance Scope of Work

- Remove debris from the site, including damaged fencing, old equipment, and other items as site preparation measure for construction works.

- Perform a cleanup for the Spill Prevention Control and Countermeasure (SPCC) of the transformers on site. Construct walls for the secondary oil containment.
- Remove existing gravel, regrade terrain to ensure good drainage, and replace insulating gravel within substation over a geosynthetic material.
- Install new signage on fencing and gates.
- Install new padlocks on gates and equipment.
- Remove 2ea existing concrete lighting poles and fixtures.
- Install 8ea new steel poles for area lighting.
- Install 14ea new pole-mounted roadway LED lighting fixtures.
- Install 4ea structure-mounted LED lighting fixtures.
- Removal of approximately 355-ft of damaged Perimeter Fence, and two 20-ft double gate.
- Install approximately 355-ft of perimeter fence, including barbed wire, and two 20-ft double gate:
 - Fence posts will be installed to a maximum depth of 36" below final grade. Typical excavation will be 1'-0" in diameter and a maximum of 42" in depth.
 - Fence foundations will be built around the perimeter to a maximum depth of 36" below final grade. Typical excavation will be 4'-0" center to center and a maximum of 42" in depth.
- Replace eyewash and shower station.
- Install within substation footprint new closed-circuit television (CCTV) system, including 8ea cameras, with their respective steel poles (one per camera), 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 House to each pole with CCTV for power and communications.
- Replace 1ea 48VDC battery bank, charger, and associated equipment.
- Replace the Battery Cabinet's Exhaust Fan.
- Perform an integrity test on grounding connections and perform electrical soil resistivity measurements to analyze the existing grid layout using CDEGS software.
- Provide Animal/pest control equipment as required, including rodent traps.

Proposed 406 Hazard Mitigation Grant Program Scope of Work

- On the damaged 355 linear feet chain link fence, reduce the spacing from 10ft to 8ft to increase resistance against wind-borne debris, and high hurricane winds impacts and/or effects. To comply with LUMA/PREPA codes and standards, each alternate pole is required to be grounded to the existing substation grounding grid. Foundation wall will be raised an additional 12" [355 ft (L) x 1ft (H) x 0.5ft (W)] above grade to prevent erosion, strengthen the posts and fence foundation and prevent the gravel from becoming contaminated with soil and/or dirt. Refer to Appendix O and Appendix P.
 - Fencing Ground grid connection will occur every 16 ft to a grounding loop located up to 3 ft inside substation. If no loop was found a grounding bar is to be installed or an excavation of 6" wide and a maximum 30" in depth along the shortest necessary distance needs to be performed to attach fence grounding to an existing grounding point within the substation.
- Install 3,443 sq.ft. of geosynthetic material between subbase soil and the new gravel as a layer separator to act as a soil stabilization measure on all the areas where the gravel is used for traffic. It is required by design criteria to avoid gravel contamination with soil and to minimize the loss of depth due to pressure exerted by vehicles or equipment moving over for maintenance or testing.
- Replace 8ea poles for closed-circuit television (CCTV) system (one per camera). This measure will increase the strength of the poles by increasing the wind tolerances to +160mph.
- Install new 31.3KVA/25KW backup power generator system with transfer switch to avoid damage to the battery bank by the discharge drainage effect.

Structure Age

- The Coamo PDS Substation 4603 (38/13.2kV) was built in November 2004.

Debris Removal

- The type of debris that may be found in the process of demolition are batteries, battery chargers, 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. Refer to Appendix F.

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 I.

Hazardous Material

- The identified hazardous materials that may 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, and down to 42" for underground conduit runs.

Specific List of Permits Required

- Permits Management Office of Puerto Rico (OGPe), Administrative Order 2021-07
- Coamo Municipality Endorsement
- Department of Transportation and Public Works Agency – (DTOP)- Excavation and Demolition Notification
- Erosion Control and Sedimentation Prevention Plan (Plan CES) - EQB / DNR (if exceed 40 cubic meters in an area of more than 900 meters)
- Asbestos Certification
- Lead Certification
- Waste Disposal Permit
- Spill Prevention Countermeasure Control Plan (SPCC)
- Hazardous Waste Permit
- The United Fish and Wildlife Service (USFWS) permit (Threatened and Endangered Species)

For detailed information, please refer to APPENDIX C- Coamo Substation Engineering & Asset Management- Site Assessment Minor Repairs Report, APPENDIX N- Coamo PDS Substation Design Drawings, and APPENDIX B Class III Estimate Group E.

The scope of this project is only for the repairs and activities presented in this Coamo substation. All other scope, including SCADA and RTU replacements, microwave point-to-point network, transport network, field area network, and high voltage equipment may be provided as part of separate projects in the future.

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. Refer to Appendix B- Class III Estimate Breakdown.

COST ESTIMATE			
Minor repair Group E	428	406	TOTAL
PLANNING	\$ 13,842.27	\$ -	\$ 13,842.27
ENGINEERING SERVICES & DESIGN	\$ 54,253.68	\$ 7,272.88	\$ 61,526.56
MANAGEMENT	\$ 30,253.55	\$ 4,055.59	\$ 34,309.14
SUBSTATION: Coamo PDS	\$ 361,691.21	\$ 48,485.88	\$ 410,177.09
GENERAL CONDITIONS	\$ 41,247.39	\$ 5,529.35	\$ 46,776.74

CONTINGENCY	\$ 68,721.33	\$ 9,212.32	\$ 77,933.65
TOTAL PROJECT COST ESTIMATE	\$ 570,009.44	\$ 74,556.00	\$ 644,565.45
FAASt PROJECT # 549725, 428 Total			\$ 471,659.93
FAASt PROJECT # 549725, 406 Total			\$ 74,556.00
FAASt A&E # 335168 Total			\$ 98,349.51

FEMA CRC Project Cost Summary, 428 Version 0

Work to be Completed (WTBC): \$570,009.44

A&E Deduction (Global A&E FAASt 335168): -\$98,349.51

Project Total: \$471,659.93

Project Notes

1. For detailed information, refer to documents/attachments labeled:

- APPENDIX A - Consent to Federal Funding Letter- FEMA/COR3
- APPENDIX B - LPCE Class III Estimate Breakdown Group E
- APPENDIX C - Coamo Substation Engineering & Asset Management- Site Assessment Minor Repairs Report
- APPENDIX F - Coamo PDS Substation Access Roads-Staging Area
- APPENDIX I - Preferred Vendor List Directory PR
- APPENDIX J - Standard for Substation Transformer Oil Containment
- APPENDIX K - Class 3 Land & Permits Evaluation (Jobs TC, Coamo PDS & Salinas Urbano)
- APPENDIX L - Desktop Review Map Group E_Environmental Maps
- APPENDIX M - E.H.P Check List for Sub Minor Repairs Program Group E
- APPENDIX N - Coamo Substation Design Drawings
- APPENDIX Q - PREPA Standard for Fencing
- APPENDIX R - LUMA Standard for Fencing

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

3. Architectural and Engineering (A&E) costs are deducted given previously obligated PREPA FAASt Global A&E 335168 project.

406 HMP Scope

Project number / Title: 549725 / FAASt [Substation Minor Repairs - Group E] (Substation)
 Damage # / Name: D# 925057; Coamo PDS Substation 4603
 Applicant: PR Electric Power Authority (000-UA2QU-00)
 Location: Coamo, Puerto Rico

GPS Latitude/Longitude: [REDACTED]

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 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 Substation Minor Repairs Group E (Substation) consists of 3ea facilities (sites) which are distributed as follows: Coamo PDS 4603; Jobos TC 4003, and Salinas Urbano 4603.

The substation facilities minor repairs are typically composed of transformers, circuit breakers, disconnect switches, a control house, steel structures, poles, lights, and other components enclosed with a perimeter fence. The minor repair practices include facilities security upgrades (locks, fencing upgrade, CCTV), repair drainage, grading, and restoration of gravel, repair and replace the grounding grid, replace broken perimeter fence and gates, clean, and paint control room, replace lights, doors, and windows of the control room, replace battery charger and batteries, replace leaning or broken poles, among others. 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, reducing chain link fence post spacing from 10 feet to 8 feet to reinforce the fence and raise an additional 12" above grade to prevent erosion and strengthen the posts and fence, install a geosynthetic material between the sub-base soil and the new gravel to act as soil stabilization, correct slope using tapered lightweight concrete to improve drainage and prevent water damages to the roof waterproofing system and water infiltration in the control room, install new back-up power generator to provide continuous power to the circuits breakers that allow PREPA to operate the system remotely in the event of a distribution line failure, replace aluminum jalousie window by wind-resistant steel-louver windows, replace exterior steel doors by 16ga. fire rated steel door to reduce door damage due to wind-borne debris and high winds, and increase the strength of the CCTV poles from 90mph to +160mph sustained winds material to reduce pole damage due high winds. 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

1. On the damaged 355 linear feet chain link fence, reduce the spacing from 10ft to 8ft to increase resistance against wind-borne debris, and high hurricane winds impacts and/or effects. To comply with LUMA/PREPA codes and standards, each alternate pole is required to be grounded to the existing substation grounding grid. Foundation wall will be raised an additional 12" [355 ft (L) x 1ft (H) x 0.5ft (W)] above grade to prevent erosion, strengthen the posts and fence foundation and prevent the gravel from becoming contaminated with soil and/or dirt. Refer to Appendix O and Appendix P.
 - a. Fencing Ground grid connection will occur every 16 ft to a grounding loop located up to 3 ft inside substation. If no loop was found a grounding bar is to be installed or an excavation of 6" wide and a maximum 30" in depth along the shortest necessary distance needs to be performed to attach fence grounding to an existing grounding point within the substation.
2. Install 3,443 sq.ft. of geosynthetic material between subbase soil and the new gravel as a layer separator to act as a soil stabilization measure on all the areas where the gravel is used for traffic. It is required by design criteria to avoid gravel contamination with soil and to minimize the loss of depth due to pressure exerted by vehicles or equipment moving over for maintenance or testing.
3. Replace 8ea poles for closed-circuit television (CCTV) system (one per camera). This measure will increase the strength of the poles by increasing the wind tolerances to +160mph.
4. Install new 31.3KVA/25KW backup power generator system with transfer switch to avoid damage to the battery bank by the discharge drainage effect.

Hazard Mitigation Proposal (HMP) Cost:

Total Net Hazard Mitigation Cost (Base Cost) = \$ 48,485.78
+ HM (Applicant A&E, Management & General Conditions) = \$ 26,070.24
Hazard Mitigation Total Cost = **\$ 74,556.02**

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 **\$ 74,556.02** (Hazard Mitigation Total Cost). The cost of this HMP combined with 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, HMP Cost Effective Analysis, among others).

925064 **Jobs TC**


Introduction

The purpose of this document is to submit for approval the Detailed Scope of Work (SOW) to COR3 and FEMA for the Substation Minor Repairs Group E 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 Substation Minor Repairs Group D. 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 facility 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 Group E substation located in the Ponce region:

Name	Substation Number	Physical Address	GPS Coordinate	Date of Construct
Jobs TC	4003	CARR. 3 KM 141.4 BO. STO. DOMINGO, GUAYAMA		August - 1967

Project Scope of Work

Proposed 428 Public Assistance Scope of Work

- Remove debris from the site, including damaged fencing, old equipment, and other items as site preparation measure for construction works.
- Perform a cleanup for the Spill Prevention Control and Countermeasure (SPCC) of the transformers on site. Construct walls for the secondary oil containment.
- Remove existing gravel, regrade terrain to ensure good drainage, and replace insulating gravel within substation over a geosynthetic material.
- Construction of new Driveways; existing driveways to be demolished and disposed of.
- Construct new concrete swales along the new driveways, which will help prevent gravel loss and erosion.
- Install new signage on fencing and gates.
- Install new padlocks on gate and equipment.
- Remove 5a existing wooden and concrete lighting poles, and fixtures.
- Install 9ea new steel poles for area lighting.
- Install 31ea pole-mounted roadway LED lighting fixtures.
- Install 4ea new wall-mounted security LED lighting and external lighting at the Control House.
- Remove and install approximately 2,805-ft of perimeter fence, including barbed wire, 1ea 20-ft double gate, and 1ea 20-ft ornamental steel sliding gate:
 - Fence posts will be installed to a maximum depth of 36" below final grade. Typical excavation will be 1'-0" in diameter and a maximum of 42" in depth.
 - Fence foundations will be built around the perimeter to a maximum depth of 36" below final grade. Typical excavation will be 4'-0" center to center and a maximum of 42" in depth.
- Perform Control House repairs:
 - Repair of concrete surfaces.
 - Paint Control House including roof treatment cement plaster for ceiling where water damage is presented and apply roof waterproofing.
 - Replace doors and jalousie windows.
 - Painting of existing louvers.
 - Install smoke detector, exhaust fan equipment, epoxy floor paint and fire extinguisher for the battery room.
 - Replace 8ea interior LED fixtures, and 4ea exterior building lighting fixtures.
 - Replace eyewash and shower station.
 - Replace bathroom fixtures (sink, toilet, plumbing, etc.).
 - Construction of a new battery pit and paint with Epoxy floor paint on battery room.
 - Replace metal roof over Control House annex.
- Install 3ea new Control House exterior single doors (3ft x 7ft) 90-minutes fire-proof.
- Install 1ea Control House exterior double door (6ft x 7ft) 90-minutes fire-proof.
- Install 4ea Control House interior single doors (3ft x 7ft) 90-minutes fire-proof.
- Install 15ea new aluminum jalousie windows (36" x 48").
- Install within substation footprint new closed-circuit television (CCTV) system, including 15ea cameras, with their respective steel poles (one per camera), 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 House to each pole with CCTV for power and communications.
- Replace 2ea 125VDC battery banks, chargers, and associated equipment.
- Perform an integrity test on grounding connections and perform electrical soil resistivity measurements to analyze the existing grid layout using CDEGS software.
- Provide Animal/pest control equipment as required, including rodent traps and bird spikes.

Proposed 406 Hazard Mitigation Grant Program Scope of Work

- Replace 3ea Control House exterior single doors with 90 minutes fire rated 16-gauge, designed to reduce the wind-borne debris, wind driven rain, water intrusion and high hurricane winds impact and/or effects.
- Replace 1ea Control House exterior double door with 90 minutes fire rated 16-gauge, designed to reduce the wind-borne debris, wind driven rain, water intrusion and high hurricane winds impact and/or effects.
- Replace 15ea Control House aluminum jalousie windows with wind-resistant aluminum louver windows to reduce the wind-borne debris, wind driven rain and high hurricane winds impact and/or effects.
- Install 12CY of insulation roof fill for correction of low slope roof. This measure will correct the slope using tapered lightweight concrete to improve drainage and prevent water damages to the roof waterproofing system and water infiltration.
- On the damage 2,805 linear feet chain link fence reduce the spacing from 10ft to 8ft to increase resistance against wind-borne debris, and high hurricane winds impacts and/or effects. To comply with LUMAPREPA codes and standards, each alternate pole is required to be grounded to the existing substation grounding grid. Foundation wall will be raised an additional 12" [2,805-ft (L) x 1ft (H) x 0.5ft (W)] above grade to prevent erosion, strengthen the posts and fence foundation and prevent the gravel from becoming contaminated with soil and/or dirt. Refer to Appendix O and Appendix P.
 - Fencing Ground grid connection will occur every 16-ft to a grounding loop located up to 3-ft inside substation. If no loop was found a grounding bar is to be installed or an excavation of 6" wide and a maximum 30" in depth along the shortest necessary distance needs to be performed to attach fence grounding to an existing grounding point within the substation.
- Install 156,276 sq.ft. of geosynthetic material between subbase soil and the new gravel as a layer separator to act as a soil stabilization measure on all the areas where the gravel is used for traffic. It is required by design criteria to avoid gravel contamination with soil and to minimize the loss of depth due to pressure exerted by vehicles or equipment moving over for maintenance or testing.
- Replace 15ea poles for closed-circuit television (CCTV) system (one per camera). This measure will increase the strength of the poles by increasing the wind tolerances to +160mph.

- Install new 31.3KVA/25KW backup power generator system with transfer switch to avoid damage to the battery bank by the discharge drainage effect.

Structure Age:

The Jobos TC substation was built in several stages within the existing yard footprint, considered as system improvements:

- Jobos 115-38kV Bank 1: August 1967
- Jobos 115-38kV Bank 2: November 1971
Jobos 38-13.2kV: January 1990
- Jobos 115-38kV Bank 2: March 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 the materials to be installed. Refer to 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 I.

Hazardous Material:

- The identified hazardous materials that may be found in the substation are asbestos and lead. If the presence of asbestos and lead is confirmed in the concrete 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, and down to 42" for underground conduit runs.

Specific List of Permits Required:

- Environmental Assessment Determination (DEA) (OGPe)
- Regulation 13, Planning Board (JP)
- Guayama Municipality Endorsement
- Department of Transportation and Public Works Agency – (DTOP)- Excavation and Demolition Notification
- Construction Permit (OGPe)
- Erosion Control and Sedimentation Prevention Plan (Plan CES) - EQB / DNR (if exceed 40 cubic meters in an area of more than 900 meters)
- Asbestos Certification
- Lead Certification
- Waste Disposal Permit
- Spill Prevention Countermeasure Control Plan (SPCC)
- Hazardous Waste Permit

For detailed information, please refer to APPENDIX D- Jobos TC Substation Engineering & Asset Management- Site Assessment Minor Repairs Report, APPENDIX O- Jobos TC Substation Design Drawings, and APPENDIX B Class III Estimate.

The scope of this project is only for the repairs and activities presented in this Jobos TC substation. All other scope, including SCADA and RTU replacements, microwave point-to-point network, transport network, field area network, and high voltage equipment may be provided as part of separate projects in the future.

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. Refer to Appendix B- Class III Estimate Breakdown.

COST ESTIMATE			
Minor repair Group E	428	406	TOTAL
PLANNING	\$ 87,803.57	\$ -	\$ 87,803.57
ENGINEERING SERVICES & DESIGN	\$ 344,139.04	\$ 43,110.35	\$ 387,249.39
MANAGEMENT	\$ 191,902.70	\$ 24,039.68	\$ 215,942.38
SUBSTATION: Jobos TC	\$ 2,294,260.29	\$ 287,402.31	\$ 2,581,662.60
GENERAL CONDITIONS	\$ 261,638.24	\$ 32,775.46	\$ 294,413.70
CONTINGENCY	\$ 435,909.46	\$ 54,606.44	\$ 490,515.89
TOTAL PROJECT COST ESTIMATE	\$ 3,615,653.31	\$ 441,934.23	\$ 4,057,587.54
FAASt PROJECT # 549725, 428 Total			\$ 2,991,808.00
FAASt PROJECT # 549725, 406 Total			\$ 441,934.23
FAASt A&E # 335168 Total			\$ 623,845.31

FEMA CRC Project Cost Summary, 428 Version 0

Work to be Completed (WTBC): \$3,615,653.31

A&E Deduction (Global A&E FAASt 335168): -\$623,845.31

Project Total: \$2,991,808.00

Project Notes

1. For detailed information, refer to documents/attachments labeled:

APPENDIX A - Consent to Federal Funding Letter- FEMA/COR3

APPENDIX B - LPCE Class III Estimate Breakdown Group E

APPENDIX D - Jobs TC Substation Engineering & Asset Management- Site Assessment Minor Repairs Report
APPENDIX G - Jobs TC Substation Access Roads-Staging Area
APPENDIX I - Preferred Vendor List Directory PR
APPENDIX J - Standard for Substation Transformer Oil Containment
APPENDIX K - Class 3 Land & Permits Evaluation (Jobs TC, Coamo PDS & Salinas Urbano)
APPENDIX L - Desktop Review Map Group E_Environmental Maps
APPENDIX M - E.H.P Check List for Sub Minor Repairs Program Group E
APPENDIX O - Jobs TC Substation Design Drawings
APPENDIX Q - PREPA Standard for Fencing
APPENDIX R - LUMA Standard for Fencing

2. This project is part of Donor FAAS 136271 – MEPA078 Puerto Rico Electrical Power Authority (PREPA) Island Wide FAAS Project.
3. Architectural and Engineering (A&E) costs are deducted given previously obligated PREPA FAAS Global A&E 335168 project.

406 HMP Scope

Project number / Title: 549725 / FAAS [Substation Minor Repairs - Group E] (Substation)
Damage # / Name: D# 925064 JOBOS TC
Applicant: PR Electric Power Authority (000-UA2QU-00)
Location: Guayama, Puerto Rico
GPS Latitude/Longitude: [REDACTED]

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 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 FAAS Substation Minor Repairs Group E (Substation) consists of 3ea facilities (sites) which are distributed as follows: Coamo PDS 4603; Jobs TC 4003, and Salinas Urbano 45601.

The substation facilities minor repairs are typically composed of transformers, circuit breakers, disconnect switches, a control house, steel structures, poles, lights, and other components enclosed with a perimeter fence. The minor repair practices include facilities security upgrades (locks, fencing upgrade, CCTV), repair drainage, grading, and restoration of gravel, repair and replace the grounding grid, replace broken perimeter fence and gates, clean, and paint control room, replace lights, doors, and windows of the control room, replace battery charger and batteries, replace leaning or broken poles, among others. 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, reducing chain link fence post spacing from 10 feet to 8 feet to reinforce the fence and raise an additional 12" above grade to prevent erosion and strengthen the posts and fence, install a geosynthetic material between the sub-base soil and the new gravel to act as soil stabilization, correct slope using tapered lightweight concrete to improve drainage and prevent water damages to the roof waterproofing system and water infiltration in the control room, install new back-up power generator to provide continuous power to the circuits breakers that allow PREPA to operate the system remotely in the event of a distribution line failure, replace aluminum jalousie window by wind-resistant steel-louver windows, replace exterior steel doors by 16ga. fire rated steel door to reduce door damage due to wind-borne debris and high winds, and increase the strength of the CCTV poles from 90mph to +160mph sustained winds material to reduce pole damage due high winds. 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

1. Replace 3ea Control House exterior single doors with 90 minutes fire rated 16-gauge, designed to reduce the wind-borne debris, wind driven rain, water intrusion and high hurricane winds impact and/or effects.

2. Replace 1ea Control House exterior double door with 90 minutes fire rated 16-gauge, designed to reduce the wind-borne debris, wind driven rain, water intrusion and high hurricane winds impact and/or effects.
3. Replace 15ea Control House aluminum jalousie windows with wind-resistant aluminum louver windows to reduce the wind-borne debris, wind driven rain and high hurricane winds impact and/or effects.
4. Install 12CY of insulation roof fill for correction of low slope roof. This measure will correct the slope using tapered lightweight concrete to improve drainage and prevent water damages to the roof waterproofing system and water infiltration.
5. On the damage 2,805 linear feet chain link fence reduce the spacing from 10ft to 8ft to increase resistance against wind-borne debris, and high hurricane winds impacts and/or effects. To comply with LUMA/PREPA codes and standards, each alternate pole is required to be grounded to the existing substation grounding grid. Foundation wall will be raised an additional 12" [2,805 ft (L) x 1ft (H) x 0.5ft (W)] above grade to prevent erosion, strengthen the posts and fence foundation and prevent the gravel from becoming contaminated with soil and/or dirt. Refer to Appendix O and Appendix P.
 - a. Fencing Ground grid connection will occur every 16 ft to a grounding loop located up to 3 ft inside substation. If no loop was found a grounding bar is to be installed or an excavation of 6" wide and a maximum 30" in depth along the shortest necessary distance needs to be performed to attach fence grounding to an existing grounding point within the substation.
6. Install 156,276 sq.ft. of geosynthetic material between subbase soil and the new gravel as a layer separator to act as a soil stabilization measure on all the areas where the gravel is used for traffic. It is required by design criteria to avoid gravel contamination with soil and to minimize the loss of depth due to pressure exerted by vehicles or equipment moving over for maintenance or testing.
7. Replace 15ea poles for closed-circuit television (CCTV) system (one per camera). This measure will increase the strength of the poles by increasing the wind tolerances to +160mph.
8. Install new 31.3KVA/25KW backup power generator system with transfer switch to avoid damage to the battery bank by the discharge drainage effect.

Hazard Mitigation Proposal (HMP) Cost:

Total Net Hazard Mitigation Cost (Base Cost) =	\$ 287,402.39
+ HM (Applicant A&E, Management & General Conditions) =	\$ 154,531.85
Hazard Mitigation Total Cost =	\$ 441,934.24

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 **\$ 441,934.24** (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, HMP Cost Effective Analysis, among others).

925067 **Salinas Urbano Substation 4501**

Introduction

The purpose of this document is to submit for approval the Detailed Scope of Work (SOW) to COR3 and FEMA for the Substation Minor Repairs Group E 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 Substation Minor Repairs Group D. 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 facility 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 Group E substation located in the Ponce region:

Name	Substation Number	Physical Address	GPS Coordinate	Date of Construct
Salinas Urbano	4501	CARR. 3 KM 158.3, SALINAS		December - 197

Project Scope of Work

Proposed 428 Public Assistance Scope of Work

- Remove debris from the site and building, including damaged fencing, windows, doors, and other items as site preparation measure for construction works.
- Perform a cleanup for the Spill Prevention Control and Countermeasure (SPCC) of the transformers on site. Construct walls for the secondary oil containment.
- Remove existing gravel, regrade terrain to ensure good drainage, and replace insulating gravel within substation over a geosynthetic material.
- Construction of new Driveway with concrete gutters/swales (which will also prevent gravel loss and erosion) at each side.
- Install new signage on fencing and gates.
- Install new padlocks on gates and equipment.
- Install 4ea new wall-mounted security LED lighting and external lighting at the Control House.
- Install 8ea new steel poles for area lighting.
- Install 8ea pole-mounted roadway LED lighting fixtures.
- Demolish, replace steel reinforcement, and replace damaged columns and beams, and repair of approximately 502 ft of damaged CMU Perimeter Wall.
- Remove existing 20-ft ornamental gate.
- Install approximately 502-ft of barbed wire on top of existing wall.
- Install 1ea 20-ft chain-link double gate.
- Perform Control House repairs:
 - Repair of concrete surfaces.
 - Paint Control House including roof treatment cement plaster for ceiling where water damage is presented and apply roof waterproofing.
 - Replace doors and jalousie windows.
 - Install smoke detector, exhaust fan equipment, epoxy floor paint and fire extinguisher for the battery room.
 - Replace 5ea interior LED fixtures, and 4ea exterior building lighting fixtures.
 - Construction of a new battery pit and paint with Epoxy floor paint on battery room.
 - Replace eyewash and shower station.
 - Replace bathroom fixtures (sink, toilet, plumbing, etc.).
 - Install 2ea new exterior single doors (3ft x 7ft) 90-minutes fire-proof.
 - Install 4ea new aluminum jalousie windows (36" x 48").
- Install within substation footprint new closed-circuit television (CCTV) system, including 8ea cameras, with their respective poles, 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 House to each pole with CCTV for power and communications.

- Replace 1ea 48VDC battery bank, charger, and associated equipment.
- Perform an integrity test on grounding connections and perform electrical soil resistivity measurements to analyze the existing grid layout using CDEGS software.
- Provide Animal/pest control equipment as required, including rodent traps and bird spikes.

Proposed 406 Hazard Mitigation Grant Program Scope of Work

- Replace 2ea Control House exterior single doors with 90 minutes fire rated 16-gauge, designed to reduce the wind-borne debris, wind driven rain, water intrusion and high hurricane winds impact and/or effects.
- Replace 4ea Control House aluminum jalousie windows with wind-resistant aluminum louver windows to reduce the wind-borne debris, wind driven rain and high hurricane winds impact and/or effects.
- Install 3CY of insulation roof fill for correction of low slope roof. This measure will correct the slope using tapered lightweight concrete to improve drainage and prevent water damages to the roof waterproofing system and water infiltration.
- Install 7,216 sq.ft. of geosynthetic material between subbase soil and the new gravel as a layer separator to act as a soil stabilization measure on all the areas where the gravel is used for traffic. It is required by design criteria to avoid gravel contamination with soil and to minimize the loss of depth due to pressure exerted by vehicles or equipment moving over for maintenance or testing.
- Replace 8ea poles for closed-circuit television (CCTV) system (one per camera). This measure will increase the strength of the poles by increasing the wind tolerances to +160mph.
- Install new 31.3KVA/25KW backup power generator system with transfer switch to avoid damage to the battery bank by the discharge drainage effect.

Structure Age

- The Salinas Urbano Substation 4501 (38/4.16kV) was built in December 1978.

Debris Removal

- The type of debris that may be found in the process of demolition are batteries, battery chargers, 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

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. Refer to Appendix H

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 I.
- Hazardous Material:
- The identified hazardous materials that may 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, and down to 42" for underground conduit runs.

Specific List of Permits Required:

- Environment Assessment Determination (DEA) (OGPe)
Regulation 13, Planning Board (JP)
- Salinas Municipality Endorsement
- Department of Transportation and Public Works Agency (DTOP) Endorsement
- EROSION Control and Sedimentation Prevention Plan (Plan CES) - EQB / DNR (if exceed 40 cubic meters in an area of more than 900 meters)
- Asbestos Certification
- Lead Certification
- Waste Disposal Permit
- Spill Prevention Countermeasure Control Plan (SPCC)

- Hazardous Waste Permit
- Construction Permit OGPe
- Department of Transportation and Public Works Agency – (DTOP)- Excavation and Demolition Notification

For detailed information, please refer to APPENDIX E- Salinas Urbano Substation Engineering & Asset Management- Site Assessment Minor Repairs Report, Appendix P- Salinas Urbano Substation Design Drawings, and APPENDIX B Class III Estimate Breakdown.

The scope of this project is only for the repairs and activities presented in Salinas Urbano substation. All other scope, including SCADA and RTU replacements, microwave point-to-point network, transport network, field area network, and high voltage equipment may be provided as part of separate projects in the future.

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. Refer to Appendix B- Class III Estimate Breakdown.

COST ESTIMATE			
Minor repair Group E	428	406	TOTAL
PLANNING	\$ 13,516.15	\$ -	\$ 13,516.15
ENGINEERING SERVICES & DESIGN	\$ 52,975.48	\$ 6,172.65	\$ 59,148.13
MANAGEMENT	\$ 29,540.79	\$ 3,442.06	\$ 32,982.85
SUBSTATION: Salinas Urbano	\$ 353,169.87	\$ 41,150.99	\$ 394,320.87
GENERAL CONDITIONS	\$ 40,275.62	\$ 4,692.87	\$ 44,968.49
CONTINGENCY	\$ 67,102.28	\$ 7,818.69	\$ 74,920.96
TOTAL PROJECT COST ESTIMATE	\$ 556,580.18	\$ 63,277.27	\$ 619,857.45
FAASt PROJECT # 549725, 428 Total			\$ 460,547.76
FAASt PROJECT # 549725, 406 Total			\$ 63,277.27
FAASt A&E # 335168 Total			\$ 96,032.42

FEMA CRC Project Cost Summary, 428 Version 0

Work to be Completed (WTBC): \$556,580.18

A&E Deduction (Global A&E FAAS 335168): -\$96,032.42

Project Total: \$460,547.76

Project Notes

1. For detailed information, refer to documents/attachments labeled:

APPENDIX A - Consent to Federal Funding Letter- FEMA/COR3

APPENDIX B - LPCE Class III Estimate Breakdown Group E

APPENDIX E - Salinas Urbano Substation Engineering & Asset Management- Site Assessment Minor Repairs Report

APPENDIX H - Salinas Urbano Substation Access Roads-Staging Area

APPENDIX I - Preferred Vendor List Directory PR

APPENDIX J - Standard for Substation Transformer Oil Containment

APPENDIX K - Class 3 Land & Permits Evaluation (Jobos TC, Coamo PDS & Salinas Urbano)

APPENDIX L - Desktop Review Map Group E_ Environmental Maps

APPENDIX M - E.H.P Check List for Sub Minor Repairs Program Group E

APPENDIX P - Salinas Urbano Substation Design Drawings

APPENDIX Q - PREPA Standard for Fencing

APPENDIX R - LUMA Standard for Fencing

2. This project is part of Donor FAAS 136271 – MEPA078 Puerto Rico Electrical Power Authority (PREPA) Island Wide FAAS Project.

3. Architectural and Engineering (A&E) costs are deducted given previously obligated PREPA FAAS Global A&E 335168 project.

406 HMP Scope

Project number / Title: 549725 / FAAS [Substation Minor Repairs - Group E] (Substation)

Damage # / Name: D# 925067 SALINAS URBANO SUBSTATION 4510

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

Location: Salinas, Puerto Rico

GPS Latitude/Longitude: [REDACTED]

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 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 FAAS Substation Minor Repairs Group E (Substation) consists of 3ea facilities (sites) which are distributed as follows: Coamo PDS 4603; Jobos TC 4003, and Salinas Urbano 45601.

The substation facilities minor repairs are typically composed of transformers, circuit breakers, disconnect switches, a control house, steel structures, poles, lights, and other components enclosed with a perimeter fence. The minor repair practices include facilities security upgrades (locks, fencing upgrade, CCTV), repair drainage, grading, and restoration of gravel, repair and replace the grounding grid, replace broken perimeter fence and gates, clean, and paint control room, replace lights, doors, and windows of the control room, replace battery charger and batteries, replace leaning or broken poles, among others. 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, reducing chain link fence post spacing from 10 feet to 8 feet to reinforce the fence and raise an additional 12" above grade to prevent erosion and strengthen the posts

and fence, install a geosynthetic material between the sub-base soil and the new gravel to act as soil stabilization, correct slope using tapered lightweight concrete to improve drainage and prevent water damages to the roof waterproofing system and water infiltration in the control room, install new back-up power generator to provide continuous power to the circuits breakers that allow PREPA to operate the system remotely in the event of a distribution line failure, replace aluminum jalousie window by wind-resistant steel-louver windows, replace exterior steel doors by 16ga. fire rated steel door to reduce door damage due to wind-borne debris and high winds, and increase the strength of the CCTV poles from 90mph to +160mph sustained winds material to reduce pole damage due high winds. 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

1. Replace 2ea Control House exterior single doors with 90 minutes fire rated 16-gauge, designed to reduce the wind-borne debris, wind driven rain, water intrusion and high hurricane winds impact and/or effects.
2. Replace 4ea Control House aluminum jalousie windows with wind-resistant aluminum louver windows to reduce the wind-borne debris, wind driven rain and high hurricane winds impact and/or effects.
3. Install 3CY of insulation roof fill for correction of low slope roof. This measure will correct the slope using tapered lightweight concrete to improve drainage and prevent water damages to the roof waterproofing system and water infiltration.
4. Install 7,216 sq.ft. of geosynthetic material between subbase soil and the new gravel as a layer separator to act as a soil stabilization measure on all the areas where the gravel is used for traffic. It is required by design criteria to avoid gravel contamination with soil and to minimize the loss of depth due to pressure exerted by vehicles or equipment moving over for maintenance or testing.
5. Replace 8ea poles for closed-circuit television (CCTV) system (one per camera). This measure will increase the strength of the poles by increasing the wind tolerances to +160mph.
6. Install new 31.3KVA/25KW backup power generator system with transfer switch to avoid damage to the battery bank by the discharge drainage effect.

Hazard Mitigation Proposal (HMP) Cost:

Total Net Hazard Mitigation Cost (Base Cost) =	\$ 41,151.13
+ HM (Applicant A&E, Management & General Conditions) =	\$ 22,126.13
Hazard Mitigation Total Cost =	\$ 63,277.26

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 **\$ 63,277.26** (Hazard Mitigation Total Cost). The cost of this HMP combined with 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, HMP Cost Effective Analysis, among others).

Cost

Code	Quantity	Unit	Total Cost	Section
3510 (v0 Engineering and Design Services, Deduction - PREPA FAASSt Global A&E 335168)	1.00	Lump Sum	(\$98,349.51)	Uncompleted
9201 (PAAP Fixed Estimate (No Value - Tracking Purposes Only))	1.00	Lump Sum	\$0.00	Completed
9001 (v0 Contract - PREPA FAASSt Donor Project 136271)	1.00	Lump Sum	\$570,009.44	Uncompleted
3510 (v0 Engineering and Design Services, Deduction - PREPA FAASSt Global A&E 335168)	1.00	Lump Sum	(\$623,845.31)	Uncompleted
9201 (PAAP Fixed Estimate (No Value - Tracking Purposes Only))	1.00	Lump Sum	\$0.00	Completed
9001 (v0 Contract - PREPA FAASSt Donor Project 136271)	1.00	Lump Sum	\$3,615,653.31	Uncompleted
3510 (v0 Engineering and Design Services, Deduction - PREPA FAASSt Global A&E 335168)	1.00	Lump Sum	(\$96,032.42)	Uncompleted
9201 (PAAP Fixed Estimate (No Value - Tracking Purposes Only))	1.00	Lump Sum	\$0.00	Completed
9001 (v0 Contract - PREPA FAASSt Donor Project 136271)	1.00	Lump Sum	\$556,580.18	Uncompleted

CRC Gross Cost	\$3,924,015.69
Total 406 HMP Cost	\$579,767.52
Total Insurance Reductions	\$0.00
<hr/>	
CRC Net Cost	\$4,503,783.21
Federal Share (90.00%)	\$4,053,404.89
Non-Federal Share (10.00%)	\$450,378.32

Award Information

Version Information

Version #	Eligibility Status	Current Location	Bundle Number	Project Amount	Cost Share	Federal Share Obligated	Date Obligated
0	Eligible	Awarded	PA-02-PR-4339-PW-11707(15231)	\$4,503,783.21	90%	\$4,053,404.89	5/9/2024

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

3/4/2024

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.

Jean-Carlo Echevarria, PA Insurance Specialist, CRC Atlantic, Guaynabo P.R.

2/26/2024

GENERAL INFORMATION

Event: DR4339-PR

Project: SP 549725

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: \$4,503,783.21 (CRC Gross Cost \$3,924,015.69 + Mitigation Amount \$579,767.52)

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

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: 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) #925057:

Coamo PDS Substation 4603

Location Description: Coamo PDS Substation 4603

GPS Coordinates: [REDACTED]

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: \$546,215.95 (CRC Gross Cost \$471,659.93 + Mitigation Amount \$74,556.02)

-

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 Coamo PDS Substation 4603 - Building in the amount of \$116,355.09 (CRC Gross Cost \$471,659.93 – Uninsurable Items \$283,612.21 – Equipment \$71,163.50 – Contents \$529.13 + Insurable Building Mitigation Amount \$0.00). Please see "SP549725 – Cost Estimate – Insurance" file.

An Obtain & Maintain Requirement is being required for Equipment, for the peril of Wind (all wind associated losses including "wind driven rain" for the Coamo PDS Substation 4603 - Equipment in the amount of \$95,752.50 (Equipment \$71,163.50 + Insurable Equipment Mitigation Amount \$24,589.00). Please see "SP549725 – Cost Estimate – Insurance" file.

No Obtain & Maintain Requirement is being mandated for the Coamo PDS Substation 4603 - Contents because insurable damages do not exceed \$5,000.00. Please see "SP549725 – Cost Estimate – Insurance" file.

-

Damaged Inventory (DI) #925064:

Jobos TC

Location Description: Jobos TC

GPS Coordinates: [REDACTED]

Cause of Loss: Wind / Wind Driven Rain

SOV / Schedule #: "Transmission Centers"

SOV / Schedule Amount: \$335,000,000.00

Applicable Deductible Amount: \$25,000,000.00

Damage Inventory Amount: \$3,433,742.24 (CRC Gross Cost \$2,991,808.00 + Mitigation Amount \$441,934.24)

-

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 FFAST 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 Jobos TC - Building in the amount of \$954,497.42 (CRC Gross Cost \$2,991,808.00 – Uninsurable Items \$2,052,830.17 – Equipment \$152,835.50 – Contents \$1,508.26 + Insurable Building Mitigation Amount \$169,863.35). Please see "SP549725 – Cost Estimate – Insurance" file.

An Obtain & Maintain Requirement is being required for Equipment, for the peril of Wind (all wind associated losses including "wind driven rain" for the Jobos TC - Equipment in the amount of \$177,424.50 (Equipment \$152,835.50 + Insurable Equipment Mitigation Amount \$24,589.00). Please see "SP549725 – Cost Estimate – Insurance" file.

No Obtain & Maintain Requirement is being mandated for the Jobos TC - Contents because insurable damages do not exceed \$5,000.00. Please see "SP549725 – Cost Estimate – Insurance" file.

Damaged Inventory (DI) #925067:

Salinas Urbano Substation 4501

Location Description: Salinas Urbano Substation 4501

GPS Coordinates: [REDACTED]

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: \$523,825.02 (CRC Gross Cost \$460,547.76 + Mitigation Amount \$63,277.26)

-

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 FFAST 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 Salinas Urbano Substation 4501 - Building in the amount of \$160,758.63 (CRC Gross Cost \$460,547.76 – Uninsurable Items \$255,817.75 – Equipment \$70,540.00 – Contents \$608.26 + Insurable Building Mitigation Amount \$27,176.88). Please see "SP549725 – Cost Estimate – Insurance" file.

An Obtain & Maintain Requirement is being required for Equipment, for the peril of Wind (all wind associated losses including "wind driven rain" for the Salinas Urbano Substation 4501 - Equipment in the amount of \$95,129.00 (Equipment \$70,540.00 + Insurable Equipment Mitigation Amount \$24,589.00). Please see "SP549725 – Cost Estimate – Insurance" file.

No Obtain & Maintain Requirement is being mandated for the Salinas Urbano Substation 4501 - Contents because insurable damages do not exceed \$5,000.00. Please see "SP549725 – Cost Estimate – Insurance" file.

Insurance Proceeds Statement:

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

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

Standard Insurance Comments

FEMA Policy 206-086-1

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

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

1. Before FEMA approves assistance for a property, an applicant must provide FEMA with information about any actual or anticipated insurance settlement or recovery it is entitled to for that property.
2. FEMA will reduce assistance to an applicant by the amount of its actual or anticipated insurance proceeds.
3. Applicants must take reasonable efforts to recover insurance proceeds that they are entitled to receive from their insurer(s).

...

5. If an applicant has an insurance requirement from a previous event:
 - a. FEMA will reduce assistance by the actual or anticipated insurance proceeds, or the amount of insurance required in the previous disaster, whichever is greater.
 - b. FEMA will only consider insolvent insurers, legal fees, or apportionment of proceeds as described in Section VII, Part 2(A)(3) and (4) when the applicant’s anticipated or actual insurance proceeds are higher than the amount of insurance required in the previous disaster.

-

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").

...

4. If the applicant's anticipated or actual insurance proceeds are higher than the amount of insurance required in the previous disaster, FEMA will reduce assistance by that amount in accordance with Section VII, Part 2(A) of this policy.

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 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:

- 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.

Jean-Carlo Echevarria, PA Insurance Specialist, CRC Atlantic, Guaynabo, PR

O&M Requirements

Insured Peril	Item 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 Coamo PDS Substation 4603 - Building in the amount of \$116,355.09.	\$116,355.09
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 Coamo PDS Substation 4603 - Equipment in the amount of \$95,752.50.	\$95,752.50
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 Jobos TC - Building in the amount of \$954,497.42.	\$954,497.42
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 Jobos TC - Equipment in the amount of \$177,424.50.	\$177,424.50
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 Salinas Urbano Substation 4501 - Building in the amount of \$160,758.63.	\$160,758.63
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 Salinas Urbano Substation 4501 - Equipment in the amount of \$95,129.00.	\$95,129.00

406 Mitigation

There is no additional mitigation information on **FAASt [Substation Minor Repairs - Group E] (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.
- Executive Order 11988 - Floodplains - For DI925064 and DI925067, 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.
- Clear Air Act (CAA) - Applicant is required to obtain a Source of Emission Permit (PFE) from Puerto Rico Department of Natural and Environmental Resources (PR DNER) or General Permit for Emergency Power Generators (PG-GE) from the PR Office of Permits Management (OGPe) prior to construction and operation of the proposed source of emissions. Documentation of DNER and other state, local or federal guideline compliance, may be required as a condition of closeout.
- Endangered Species Act (ESA) - The Applicant must provide documentation at close-out that proves completion of required Conservation Measures.
- Endangered Species Act (ESA) - . For DI# 925064: Puerto Rican Boa 1. Inform all project personnel about the potential presence of the Puerto Rican (PR) boa and Virgin Islands (VI) boa in areas where the proposed work will be conducted and

provide training on PR and VI boa identification. A pre-construction meeting will be conducted to inform all project personnel about the need to avoid harming these species. All personnel will be advised that there are civil and criminal penalties for harming, harassing, or killing species protected under the Endangered Species Act of 1973. An educational poster or sign with photo or illustration of these species will be displayed at the project site. 2. Prior to any construction activity, including removal of vegetation and earth movement, the boundaries of the project area and any area to be excluded and protected will be clearly marked in the project plan and in the field to avoid further habitat degradation outside of the footprint of the project. 3. Once areas are clearly marked, and right before the use of heavy machinery and any construction activity (including removal of vegetation and earth movement), biologist or designated project personnel with experience on these species will survey the areas to be cleared to verify the presence of any PR or VI boa within the Action Area. If a PR or VI boa is found during the search, it should be captured and managed as per #6 below. Once the removal of vegetation begins, the biologist or designated personnel must remain at the work site and be ready to capture any boa that might be in harm's way as the result of the habitat disturbance (see #6). 4. For VI boas, once the Action Area has been searched, vegetation will be cut about one meter above ground prior to the use of heavy machinery for land clearing. Cutting vegetation by hand will allow VI boas present on site to move away on their own to adjacent available habitat. If there is no suitable habitat adjacent to the project site, any VI boa found will be relocated accordingly (see #6). 5. For all boa sightings (dead or alive), record the time and date of the sighting and the specific location where it was found. Data will also include a photo of the animal (dead or alive), relocation site GPS coordinates, time and date of the relocation, and comments on how the animal was detected and its behavior. 6. If any PR or VI boa (dead or alive) is found within the Action Area and on harm's way, the action will stop, and information will be recorded (see #5). All attempts will be made to immediately safely capture and relocate the animal within suitable habitat (forested) at least 1km from the Action Area and away from construction areas. PR boa relocation sites will be pre-determined before the project starts and sites shared with the Service for revision and concurrence. Relocation of PR boas will be conducted by trained, designated personnel ensuring the animal is not harmed or injured during the capture and relocation process. 7. Measures will be taken to avoid and minimize PR boa and VI boa casualties by heavy machinery or motor vehicles being left in the Action Area. - Any heavy machinery left on site (staging areas) or near potential PR or VI boa habitat will be thoroughly inspected each morning before work starts to ensure that no boas have sheltered within engine compartments or other areas of the heavy machinery. If a PR boa or VI boa is found within vehicles or heavy machinery, boas will be safely captured accordingly. If not possible, the animal will be left alone until it leaves the vehicle or machine by itself. - The PR boa and VI boa may seek shelter within debris piles. Measures should be taken to avoid and minimize boa casualties associated with sheltering in new debris piles as a result of project activities. New debris piles should be placed in areas as far as possible from forested areas. Prior to moving, disposing, or shredding, debris piles should be carefully inspected for the presence of PR boas and VI boas. If debris piles will be left on site, we recommend they be placed in an undisturbed area. - In the event a PR boa and VI boa is found dead within the project area, the Federal Agency and the Recipient must contact the Service to appropriately dispose the animal. - If a PR boa or a VI boa is accidentally injured or killed during capture and relocation activities during the Action, the Federal Agency and the Recipient shall terminate the authorized activities and contact the Service within 24 hours to reinstate consultation. The Federal Agency will consult with the Service to determine whether authorized activities should continue as proposed and whether modifications are warranted. - Should the forms of take reach the amount of exempted take during the Action, the Federal Agency and the Recipient shall terminate the authorized activities and contact the Service within 24 hours to reinstate consultation. The Federal Agency will consult with the Service to determine whether authorized activities should continue as proposed and whether modifications are warranted. For questions and to submit reports, the Service's Point of Contact (POC) is José Cruz-Burgos, Endangered Species Coordinator, and can be contacted at: Mobile: 305-304-1386 Office phone: 786-244-0081 Office Direct Line: 939-320-3120

- Endangered Species Act (ESA) - For DI# 925064: condition measures for Yellow-shouldered blackbird 9. All personnel will be advised that there are civil and criminal penalties for harming, harassing, or killing species protected under the Endangered Species Act of 1973, as amended. During breeding seasons (see below), nest surveys shall be conducted if a project occurs within the range of any of the species listed above and if habitat for those species will be impacted by the proposed actions. Nest searches must be conducted by qualified personnel with the appropriate permits from the Puerto Rico Department of Natural and Environmental Resources (PRDNER) prior to start of work. If nesting activity is detected, all construction activities or human disturbance must be avoided within a 50-meter buffer around any nest(s) found within the project area. This avoidance strategy must be kept until fledglings successfully leave the nest(s) permanently. Outside the breeding season no nest surveys are required, but if a nest is encountered, all construction activities or human disturbance must be avoided within a 50-meter buffer around that nest(s). This avoidance strategy must be kept until fledglings successfully leave the nest(s) permanently. Furthermore, if any of the species indicated above is observed (e.g., foraging, resting) within the project area, avoid any disturbance to the individual(s) and do not flush the bird until it leaves on its own. Nesting seasons: Yellow-shouldered blackbird: February-November. For all nest sightings, the Applicant must record the time and date of the sighting and the specific location where it was found. All sightings and incidental lethal take reports should be sent to the USFWS Caribbean Ecological Services Field Office at Caribbean_es@fws.gov. For questions, the Point of Contact (POC) is José Cruz-Burgos, Endangered Species Program Coordinator, and can be contacted at: Mobile: 305-304-1386 Office phone: 786-244-0081 Office Direct Line: 939-320-3120 Email: jose_cruz-burgos@fws.gov
- 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 previously disturbed or hardened surfaces can be provided at close-out.

- 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. 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. 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. 4. 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. 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. Documentation of borrow sources utilized is required at closeout 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 previously disturbed or hardened surfaces can be provided at close-out.

EHP Additional Info

There is no additional environmental historical preservation on **FAASt [Substation Minor Repairs - Group E] (Substation)**.

Final Reviews

Final Review

Reviewed By Amaro, Luis N.

Reviewed On 03/26/2024 7:24 AM PDT

Review Comments

LNA 03/26/24. This project has been reviewed, found eligible and cot reasonable, and it is ready to continue the award process.

Recipient Review

Reviewed By Salgado, Gabriel

Reviewed On 03/27/2024 4:15 AM PDT

Review Comments

Recipient review completed. Applicant must ensure to compliance with all regulatory requirements and PA policy. 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 \$4,503,783.21 for subaward number 11707 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 04/02/2024

Department of Homeland Security Federal Emergency Management Agency

General Info

Project #	701472 P/W # 11727	Project Type	Specialized
Project Category	F - Utilities	Applicant	PR Electric Power Authority (000-UA2QU-00)
Project Title	FAASt [Comerio Streetlighting] (Distribution)	Event	4339DR-PR (4339DR)
Project Size	Large	Declaration Date	9/20/2017
Activity Completion Date	9/20/2027	Incident Start Date	9/17/2017
Process Step	Obligated	Incident End Date	11/15/2017

Damage Description and Dimensions

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

Damage #1280329; FAASt Distribution Streetlighting - Comerío

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 Streetlighting - Comerío
- **Facility Description:** The Comerío municipality has a total of 2282 luminaires of which damage was estimated for 70% of these luminaires. • Pole – This can be either a standalone structure intended to house a streetlight, or a utility pole shared with other overhead utilities • Arm – A piece of hardware affixed to a pole to which a luminaire is mounted. The arm serves to position the streetlight over the street for optimal lighting • Luminaire/Light Bulb – The light emitting part of a streetlight • Light controller (e.g., photocell) – A hardware device affixed to the luminaire which controls the operating mode • Communication network – A wired or wireless system that allows the smart streetlight to communicate with other devices and the control system • Technology control system – A software platform that allows a remote operator to set the operating parameters for the smart streetlight or manually override the parameter if needed.
- **Approx. Year Built:** 1970
- **GPS Latitude/Longitude:** [REDACTED]

General Damage Information:

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

Final Scope

1280329 FAASt Distribution Streetlighting - Comerío

[Introduction](#)

The purpose of this document is to submit for approval the Detailed Scope of Work (SOW) to COR3 and FEMA for the Distribution Streetlighting Comerío project (Comerío municipality) 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, replace, and upgrade the eligible facilities in the municipality of Comerío.

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

This document will be updated with information developed during the initial design and engineering phase through the construction phase.

Facilities

Facilities List:

This project is part of the breakdown division for the Distribution Streetlighting Program which will be impacting each of the municipalities, listed. Characteristics were previously defined to serve the municipality of Comerío according to the priorities and findings after conducting the assessments.

Physical Address	Comerío, Puerto Rico
Coordinates	Please refer to Appendix F for Coordinates

Proposed 428 Public Assistance Scope of Work

A. Lighting Components Replacement

1. Remove existing lighting components, including photo controls, luminaires, arms, and associated hardware, and install new lighting components in the same location.
2. Perform brushing of vegetation, when required, for the exclusive purpose of gaining access to the pole to conduct repairs.
3. Perform site evaluation and disposal of hazardous photocells in an approved facility.

B. Pole Replacement

1. Remove and replace existing streetlight poles, including lighting components, at the same location or within 3 feet.
2. Perform brushing of vegetation, when required, for the exclusive purpose of gaining access to the pole to conduct repairs. (See project note #6)
3. Remove existing foundations, when required, and replace them with concrete foundations, in the same location, following design criteria. (See project note #7)
4. All work for this program will be performed within the current electrical right-of-way for each of the municipalities.

C. Trenching/Underground (Replacing Underground Circuit)

1. If required, perform new trenching and replace underground circuit components following LUMA Trench Standards STL-16.

Scope Notes:

1. Project doesn't include removal and/or disposal of transformers because they are secondary voltage utilities and transformers removal pertain to primary voltage utilities.
2. 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. All equipment used will comply with Tier 4 EPA Emission Standards, if available.
3. All materials are stored and dispatched from the assigned LUMA's Regional Warehouse. The warehouse assigned is the Caguas Warehouse, **18.25669, -66.02994**. Refer to Appendix M for Warehouse location.
4. All work for this program will be performed within the current electrical right-of-way for each of the municipalities. Poles are near the roads and are site accessible. The construction of **access roads** is not

required for this scope of work. (Refer to Appendix K in the "Site Accessible" column).

5. The **brushing of vegetation** will be limited to a 10 ft radius that surrounds the surface of the pole without exceeding the width of the right-of-way. No tree removal will occur as part of this scope. Refer to Appendix K ("Brushing/Clearing Req'd" column) for locations where vegetation brushing is anticipated. The vegetation removal process will be managed according to applicable federal and state regulations.

6. The poles that will require replacement of the existing **foundation** can be found in Appendix G in the tab "Global Initial Scope of Work," column BD (Concrete Pole Base (40ft)), filter by values equal to 1. This represents the same information as Appendix K, column O (Concrete Foundation), filter by values equal to YES. Further, the dimensions for the foundations are 10 feet deep by 3 feet in diameter. The depth of the foundation can be found in Appendix K, column D (Soil area and depth impact).

7. Fill, gravel, and sand materials will be obtained from a preferred vendor as referenced in the *Approved Supplier List Directory PR* (see Appendix A). LUMA will provide actual suppliers' documentation as a condition of the FEMA Record of Environmental Considerations.

8. Coordinates for streetlight poles where **ground disturbance** is anticipated can be found in Appendix G and Appendix K. Refer to Appendix K column D (Soil area and depth impact) for the depths of the poles to be installed.

9. **Trenching** work will be performed within our existing 5' electrical Right of Way as specified in Appendix K. The trench's dimensions are described by LUMA Trench Standard STL-16 (Appendix I), which states that the typical trench width is 1 foot, and the typical trench depth is 3.5 feet. For this project, the typical trench was defined to have an average length of 100 feet and follow a straight line between the streetlight pole and its power connection. This activity does not require any vegetation clearance and/or access clearance.

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

11. 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. The debris will be separated and taken to an approved waste disposal facility in compliance with applicable federal and local laws and regulations.

12. Photocells are considered **hazardous waste** and will be disposed of by the contractor in approved facilities in compliance with applicable federal and local laws and regulations. Material amounts will be provided by a certified management contractor performing a site evaluation calculation for asbestos, lead paint, and roof material.

13. Removal of wood poles with creosote treatment will be handled in accordance with all applicable State and Federal regulations.

14. LUMA will provide actual **disposal locations** and quantities as a condition of FEMA Record of Environmental Considerations.

15. It is not anticipated that the proposed project will involve dredging or disposal of dredged material, excavation, the addition of fill material, or result in any modification to water bodies or **wetlands** designated as "waters of the United States" as identified by the U.S. Army Corps of Engineers or on the National Wetland Inventory.

16. It is not anticipated that the project will alter a watercourse, water flow patterns, or a drainage way.

17. Specific List of Permits Required:

- i. Department of Transportation (DTOP) Endorsement.
- ii. Comerio Municipality Notifications.
- iii. Excavation and Demolition Notification in the Department of Transportation and Public Works Agency (DTOP).
- iv. Lead Permit - EQB / DNR and Hazardous Waste Disposal Permit – EQB / DNR.

Project HMP) Total Cost Estimate (428 & 406

Cost estimates to complete the work have been generated at a class 3 level, which is between -10% and +30% of the final project cost. The estimate includes materials, construction labor and equipment, engineering, management, and contingencies. LUMA has allocated 10% of the project cost for the mitigation of potential known risks. For more details, please refer to LUMA LPCE.

Project Cost Estimate	428 Estimate
Planning, Permits and Applications	\$113,080.70
Environmental Management	\$629,778.00
Project Management	\$277,948.30
Engineering	\$619,575.50
Construction	\$6,003,684.70
Contingency	\$535,084.70
TOTAL PROJECT COST ESTIMATE	\$8,179,152.14
428 FAAsT Project 701472	\$6,538,769.44
FAAsT Project A&E 335168	\$1,640,382.70

Project Cost Summary, Version 0

Work to be Completed (WTBC): \$8,179,152.14

A&E Deduction (Global A&E FAAsT 335168): - \$1,640,382.70

Project Total: \$6,538,769.44

For a detailed cost estimate, please refer to document labeled: 701472-DR4339PR- Appendix G - Cost Estimate Comerio Municipality.xlsx

Project Notes:

1. Refer to the detailed SOW provided in document 701472-DR4339PR-Detailed SOW Comerio-DSOW-Work To Be Completed Rev2 - signed.pdf

2. For reference documents Appendix A through N, see the file labelled:

Appendix A – Preferred Vendor List Directory PR

Appendix B – Comerio Work Zones Map

Appendix C – LUMA Waste Management Plan

Appendix D – LUMA Wildlife Avian and Historical Protection Procedure #335

Appendix E – Consent to Federal Funding Letter- FEMA/COR3

Appendix F – Comerio Work Zones FIDs SIDs and Coordinates

Appendix G – Cost Estimate Comerio Municipality

Appendix H – Intentionally Left in Blank*

Appendix I – LUMA Streetlighting Construction Standards

Appendix J – LUMA Distribution Design Manual

Appendix K – EHP Checklist Comerio

Appendix L – EHP Maps Comerio

Appendix M – Warehouse Locations

Appendix N – FEMA Work Completed Reference Doc

3. For EHP Requirements, refer to pages 6 to 7 of the detailed SOW and reference documents: Appendix K & L.

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 136271-MEPA078 Puerto Rico Electrical Power Authority Island Wide FAAsT Project.

6. All streetlight trench rebuilds will be performed in the same location and with the same dimensions as the existing damaged one.

7. No new trenches are considered under the project.

8. The trenches are described by LUMA Trench Standard STL-16 (attached in the project), which states that the typical trench width is 1 foot, and the typical trench depth is 3.5 feet. For this project, the typical trench was defined to have an average length of 100 feet and following a straight line between the streetlight poles.

406 HMP Scope

Project number: 701472 - FAASt [Comerio Streetlighting] (Distribution)

Damage #1280329; FAASt Distribution Streetlighting - Comerio

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

Location: Comerio, Puerto Rico

GPS Latitude/Longitude: [REDACTED]

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).

In the Comerio Municipality, PREPA has a total of 1,686ea streetlights luminaries. The Method of Repair (MOR) include the replacement of the damage lighting components including photocells, luminaires, arms, and associated hardware. Also include the replacement of the damage distribution and streetlight poles (wood, concrete, galvanized & aluminum), the replacement of the aerial secondary wiring connections, the construction of new concrete base for the aluminum streetlight poles and new trenches for the streetlighting secondary underground circuits. 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, arms, aluminum poles breakaway bases, and foundations (concrete bases) by increasing the wind tolerance of all materials to 160mph. Note: The FEMA Accelerated Award Strategy (FAASt) MOR included the PREPA distribution standards and specifications that were based on a 90mph sustained winds for all materials. Although in PREPA Technical Communication #13-02 (August 22, 2013) a design-criteria of 145mph winds were published, the specifications for streetlighting material were never revised, and in the specification documents, the 90mph winds stayed as the requirement for procurement purposes of all streetlighting materials. 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)

1. To avoid damage in a future event, the Applicant is proposing as a mitigation measure, increase the strength of the poles, arms, aluminum poles breakaway bases, and foundations (concrete bases) by increasing the wind tolerance of all materials to 160mph. The FAASt MOR used PREPA distribution standards and specifications that were based on a 90mph sustained winds for all materials. Although in PREPA Technical Communication #13-02 (August 22, 2013) a design-criteria of 145mph winds were published, the specifications for streetlighting material were never revised, and in the specification documents, the 90mph winds stayed as the requirement for procurement purposes of all streetlighting materials. 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.

406 Mitigation Scope of Work:

- Replace (1034ea) 4ft galv. steel arms (90mph by 160mph winds resistant) for (steel/concrete/wood) poles.
- Replace (124ea) 8ft galv. steel arms (90mph by 160mph winds resistant) for (steel/concrete/wood) poles.
- Replace (24ea) 4ft galv. steel arms (90mph by 160mph winds resistant) for (octagonal concrete) poles.
- Replace (3ea) 12ft aluminum arm (90mph by 160mph winds resistant) for (aluminum) poles.
- Replace (11ea) 33ft octagonal concrete poles by (11ea) 39ft octagonal concrete poles.
- Replace (510ea) 35ft galvanized poles by (510ea) 35ft 53.5 galvanized poles.
- Replace (2ea) 30ft aluminum poles by (2ea) 40ft aluminum poles.
- Replace (1ea) 30ft aluminum poles breakaway bases by (1ea) 40ft aluminum poles breakaway bases.
- Replace (2ea) 30ft aluminum poles concrete bases [2.5ft(D) x 5.5ft(H)] by (2ea) 40ft aluminum poles.

Hazard Mitigation Proposal (HMP) Cost:

Total Net Hazard Mitigation Cost (Base Cost) = \$585,944.46

+ HM (Applicant A&E, Management & General Conditions) = \$276,181.29

Hazard Mitigation Total Cost = \$862,125.75

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 **\$862,125.75** (Hazard Mitigation Total Cost). The cost of this HMP combined with 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 (v0 Engineering and Design Services, Deduction - PREPA FAASt Global A&E 335168)))	1.00	Lump Sum	(\$1,640,382.70)	Uncompleted
9201 (PAAP Fixed Estimate (No Value - Tracking Purposes Only))	1.00	Lump Sum	\$0.00	Completed
9001 (Contract (9001 (v0 Contract - PREPA FAASt Donor Project 136271)))	1.00	Lump Sum	\$8,179,152.14	Uncompleted

CRC Gross Cost	\$6,538,769.44
Total 406 HMP Cost	\$862,125.75
Total Insurance Reductions	\$0.00
<hr/>	
CRC Net Cost	\$7,400,895.19
Federal Share (90.00%)	\$6,660,805.68
Non-Federal Share (10.00%)	\$740,089.51

Award Information

Version Information

Version #	Eligibility Status	Current Location	Bundle Number	Project Amount	Cost Share	Federal Share Obligated	Date Obligated
0	Eligible	Awarded	PA-02-PR-4339-PW-11727(15234)	\$7,400,895.19	90%	\$6,660,805.67	5/9/2024

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

4/5/2024

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.

Jean-Carlo Echevarria, PA Insurance Specialist, CRC Atlantic, Guaynabo P.R.

3/12/2024

GENERAL INFORMATION

Event: DR4339-PR

Project: SP 701472

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: \$7,400,895.19 (CRC Gross Cost \$6,538,769.44 + Mitigation Amount \$862,125.75)

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

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: (1)

Damaged Inventory (DI) #1280329:

FAAST Distribution Streetlighting – Comerio

Location: Distribution Streetlighting - Comerio

GPS Coordinates: [REDACTED]

Cause of Loss: Wind / Wind Driven Rain

Damage Inventory Amount: \$7,400,895.19 (CRC Gross Cost \$6,538,769.44 + Mitigation Amount \$862,125.75)

-

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:

No Obtain & Maintain Requirement is being mandated for the FAAsT Distribution Streetlighting – Comerio 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 case-by-case basis.

Standard Insurance Comments

FEMA Policy 206-086-1

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

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

1. Before FEMA approves assistance for a property, an applicant must provide FEMA with information about any actual or anticipated insurance settlement or recovery it is entitled to for that property.

2. FEMA will reduce assistance to an applicant by the amount of its actual or anticipated insurance proceeds.

3. Applicants must take reasonable efforts to recover insurance proceeds that they are entitled to receive from their insurer(s).

...

5. If an applicant has an insurance requirement from a previous event:

- a. FEMA will reduce assistance by the actual or anticipated insurance proceeds, or the amount of insurance required in the previous disaster, whichever is greater.
- b. FEMA will only consider insolvent insurers, legal fees, or apportionment of proceeds as described in Section VII, Part 2(A)(3) and (4) when the applicant's anticipated or actual insurance proceeds are higher than the amount of insurance required in the previous disaster.

Jean-Carlo Echevarria, PA Insurance Specialist, CRC Atlantic, Guaynabo, PR

O&M Requirements

There are no Obtain and Maintain Requirements on **FAAST [Comerio Streetlighting] (Distribution)**.

406 Mitigation

There is no additional mitigation information on **FAAST [Comerio Streetlighting] (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 - 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.
- Executive Order 11990 - Wetlands - The Applicant shall ensure best management practices are implemented to prevent erosion and sedimentation to surrounding, nearby or adjacent wetlands. To ensure that wetlands are not adversely impacted, per the Clean Water Act and Executive Order 11990, equipment storage and staging of construction materials and machinery must be in a location that would prevent erosion and sedimentation.
- Endangered Species Act (ESA) - The Applicant must provide documentation at close-out that proves completion of required Conservation Measures.
- Endangered Species Act (ESA) - Conservation Measures for Puerto Rican Boa DI#1280329 : 1. Inform all project personnel about the potential presence of the Puerto Rican (PR) boa and Virgin Islands (VI) boa in areas where the proposed work will be conducted and provide training on PR and VI boa identification. A pre-construction meeting will be conducted to inform all project personnel about the need to avoid harming these species. All personnel will be advised that there are civil and criminal penalties for harming, harassing, or killing species protected under the Endangered Species Act of 1973. An educational poster or sign with photo or illustration of these species will be displayed at the project site. 2. Prior to any construction activity, including removal of vegetation and earth movement, the boundaries of the project area and any area to be excluded and protected will be clearly marked in the project plan and in the field to avoid further habitat degradation outside of the footprint of the project. 3. Once areas are clearly marked, and right before the use of heavy machinery and any construction activity (including removal of vegetation and earth movement), biologist or designated project personnel with experience on these species will survey the areas to be cleared to verify the presence of any PR or VI boa within the Action Area. If a PR or VI boa is found during the search, it should be captured and managed as per #6 below. Once the removal of vegetation begins, the biologist or designated personnel must remain at the work site and be ready to capture any boa that might be in harm's way as the result of the habitat disturbance (see #6). 4. For VI boas, once the Action Area has been searched, vegetation will be cut about one meter above ground prior to the use of heavy machinery for land clearing. Cutting vegetation by hand will allow VI boas present on site to move away on their own to adjacent available habitat. If there is no suitable habitat adjacent to the project site, any VI boa found will be relocated accordingly (see #6). 5. For all boa sightings (dead or alive), record the time and date of the sighting and the specific location where it was found. Data will also include a photo of the animal (dead or alive), relocation site GPS coordinates, time and date of the relocation, and comments on how the animal was detected and its behavior. 6. If any PR or VI boa (dead or alive) is found within the Action Area and on harm's way, the action will stop, and information will be recorded (see #5). All attempts will be made to immediately safely capture and relocate the animal within suitable habitat (forested) at least 1km from the Action Area and away from construction areas. PR boa relocation sites will be pre-determined before the project starts and sites shared with the Service for revision and concurrence. Relocation of PR boas will be conducted by trained, designated personnel ensuring the animal is not harmed or injured during the capture and relocation process. 7. Measures will be taken to avoid and minimize PR boa and VI boa casualties by heavy machinery or motor vehicles being left in the Action Area. *. Any heavy machinery left on site (staging areas) or near potential PR or VI boa habitat will be thoroughly inspected each morning before work starts to ensure that no boas have sheltered within engine compartments or other areas of the heavy machinery. If a PR boa or VI boa is found within vehicles or heavy machinery, boas will be safely captured accordingly. If not possible, the animal will be left alone until it leaves the vehicle or machine by itself. *. The PR boa and VI boa may seek shelter within debris piles. Measures should be taken to avoid and minimize boa casualties associated with sheltering in new debris piles as a result of project activities. New debris piles should be placed in areas as far as possible from forested areas. Prior to moving, disposing, or shredding, debris piles should be carefully inspected for the presence of PR boas and VI boas. If debris piles will be left on site, we recommend they be placed in an

undisturbed area. *. In the event a PR boa and VI boa is found dead within the project area, the Federal Agency and the Recipient must contact the Service to appropriately dispose the animal. *. If a PR boa or a VI boa is accidentally injured or killed during capture and relocation activities during the Action, the Federal Agency and the Recipient shall terminate the authorized activities and contact the Service within 24 hours to reinstate consultation. The Federal Agency will consult with the Service to determine whether authorized activities should continue as proposed and whether modifications are warranted. *. Should the forms of take reach the amount of exempted take during the Action, the Federal Agency and the Recipient shall terminate the authorized activities and contact the Service within 24 hours to reinstate consultation. The Federal Agency will consult with the Service to determine whether authorized activities should continue as proposed and whether modifications are warranted. For questions and to submit reports, the Service's Point of Contact (POC) is José Cruz-Burgos, Endangered Species Coordinator, and can be contacted at: Mobile: 305-304-1386 Office phone: 786-244-0081 Office Direct Line: 939-320-3120

- Endangered Species Act (ESA) - Conservation Measures for Puerto Rican Plain Pigeon (*Columba inornata wetmorei*) (DI#1280329): All personnel will be advised that there are civil and criminal penalties for harming, harassing, or killing species protected under the Endangered Species Act of 1973, as amended. During breeding seasons (see below), nest surveys shall be conducted if a project occurs within the range of any of the species listed above and if habitat for those species will be impacted by the proposed actions. Nest searches must be conducted by qualified personnel with the appropriate permits from the Puerto Rico Department of Natural and Environmental Resources (PRDNER) prior to start of work. If nesting activity is detected, all construction activities or human disturbance must be avoided within a 50-meter buffer around any nest(s) found within the project area. This avoidance strategy must be kept until fledglings successfully leave the nest(s) permanently. Outside the breeding season no nest surveys are required, but if a nest is encountered, all construction activities or human disturbance must be avoided within a 50-meter buffer around that nest(s). This avoidance strategy must be kept until fledglings successfully leave the nest(s) permanently. Furthermore, if any of the species indicated above is observed (e.g., foraging, resting) within the project area, avoid any disturbance to the individual(s) and do not flush the bird until it leaves on its own. Nesting seasons: *. Puerto Rican plain pigeon: April-September. For all nest sightings, the Applicant must record the time and date of the sighting and the specific location where it was found. All sightings and incidental lethal take reports should be sent to the USFWS Caribbean Ecological Services Field Office at Caribbean_es@fws.gov. For questions, the Point of Contact (POC) is José Cruz Burgos, Endangered Species Program Coordinator, and can be contacted at: Mobile: 305-304-1386 Office phone: 786-244-0081 Office Direct Line: 939-320-3120 Email: jose_cruz-burgos@fws.gov
- National Historic Preservation Act (NHPA) - a. The Subrecipient and/or Subrecipient's contractor shall follow the Low Impact Debris Removal Stipulations (LIDRS) as stated in Appendix E of the Project Specific Programmatic Agreement Among FEMA, the SHPO, ACHP, COR3, and PREPA (PSPA), executed on August 2, 2022. b. Unexpected Discoveries: Pursuant to Stipulation III.B of the PSPA, if, in the course of implementing this Individual Undertaking(s), previously unidentified structures, sites, buildings, objects, districts, or archaeological deposits, that may be eligible for listing in the National Register, or human remains are uncovered, or if it appears that an Individual Undertaking has affected or will affect a previously identified historic property in an unanticipated manner, the contractor must notify Subrecipient who will immediately notify the Recipient. Work must stop in the vicinity of the discovery and measures must be taken to protect the discovery and avoid additional harm. c. Additional staging areas and/or work pads within work site area haven't been identified yet. The Recipient/Subrecipient and/or private operator must provide the information of any additional staging areas or work pads for EHP evaluation as soon as available specially if any construction activity will be necessary to prepare the site(s). Information for staging areas and/or work pads confined to hardened surfaces can be provided at closeout.
- Resource Conservation and Recovery Act, aka Solid Waste Disposal Act (RCRA) - 1. The Applicant shall handle, manage, and dispose of all types of hazardous waste in accordance with requirements of local, state, and federal laws, regulations, and ordinances. In addition, the Applicant shall ensure that all debris is separated and disposed of in a manner consistent with the PR DNER guidelines at a permitted site or landfill. The contractor/applicant will be responsible for the proper disposition of construction debris in authorized landfills providing the name, location, coordinates and permits of the facility to the corresponding authorities. 2. Unusable equipment, debris, white goods, scrap metal any other material shall be disposed in approved manner and location. In the event significant items are discovered during the implementation or development of the project the Applicant shall handle, manage and dispose petroleum products, hazardous materials and toxic waste in accordance to 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 to 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.

EHP Additional Info

There is no additional environmental historical preservation on **FAAST [Comerio Streetlighting] (Distribution)**.

Final Reviews

Final Review

Reviewed By Amaro, Luis N.

Reviewed On 04/24/2024 7:38 AM PDT

Review Comments

LNA 04/24/24. This project has been reviewed, found eligible and cost reasonable, and it is ready to continue the award process.

Recipient Review

Reviewed By Salgado, Gabriel

Reviewed On 04/27/2024 3:07 AM PDT

Review Comments

Recipient review completed. Applicant must ensure to compliance with all regulatory requirements and PA policy. 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 \$7,400,895.19 for subaward number 11727 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 04/29/2024

Department of Homeland Security Federal Emergency Management Agency

General Info

Project #	704849	PW #	11658	Project Type	Specialized	
Project Category	F - Utilities	Applicant	PR Electric Power Authority (000-UA2QU-00)	Event	4339DR-PR (4339DR)	
Project Title	FAASt [Naguabo Streetlighting] (Distribution)		Declaration Date	9/20/2017	Incident Start Date	9/17/2017
Project Size	Large	Incident End Date	11/15/2017			
Activity Completion Date	9/20/2027					
Process Step	Obligated					

Damage Description and Dimensions

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

Damage #1297100; FAASt [Distribution Streetlighting - Naguabo]

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:** Naguabo Distribution Streetlighting
- **Facility Description:** The Naguabo municipality has a total of 4731 luminaires of which damage was estimated for 70% of these luminaires. Additional descriptions of typical components of a streetlight system are described below:
 - Pole – This can be either a standalone structure intended to house a streetlight, or a utility pole shared with other overhead utilities
 - Arm – A piece of hardware affixed to a pole to which a luminaire is mounted. The arm serves to position the streetlight over the street for optimal lighting
 - Luminaire/Light Bulb – The light emitting part of a streetlight
 - Light controller (e.g., photocell) – A hardware device affixed to the luminaire which controls the operating mode
 - Communication network – A wired or wireless system that allows the smart streetlight to communicate with other devices and the control system
 - Technology control system – A software platform that allows a remote operator to set the operating parameters for the smart streetlight or manually override the parameter if needed.
- **Approx. Year Built:** 1970
- **GPS Latitude/Longitude:** [REDACTED]

General Damage Information:

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

Final Scope

1297100 FAASt [Distribution Streetlighting - Naguabo]

Introduction

The purpose of this document is to submit for approval the Detailed Scope of Work (SOW) to COR3 and FEMA for the Distribution Streetlighting Naguabo project (Naguabo municipality) 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, replace, and upgrade the eligible facilities in the municipality of Naguabo.

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

Facilities _____

This project is part of the breakdown division for the Distribution Streetlighting Program which will be impacting each of the municipalities. Characteristics were previously defined to serve the municipality of Naguabo according to the priorities and findings after conducting the assessments.

Physical Address	Naguabo, Puerto Rico
Coordinates	Please refer to Appendix F for Coordinates

Project Scope of Work _____ Streetlight Repairs:

Proposed 428 Public Assistance Scope of Work:

Lighting Components Replacement

- Remove existing lighting components, including photo controls, luminaires, arms, and associated hardware, and install new lighting components in the same location. No ground disturbance will be required as part of this scope of work.
- Brushing will be required in locations as identified in Appendix K ("Brushing/Clearing Req'd" column) to enable construction. 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 10 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. No tree removal will be completed as part of this scope.
- All work for this program will be performed within the current electrical right-of-way for each of the municipalities.

Pole Replacement

- Remove existing streetlight poles, including lighting components and install new streetlight poles, including lighting components, 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 poles locations; no new locations are included in this scope of work. Refer to Appendix K column D (Soil area and depth impact) for the depths of the poles to be installed.
- Remove the existing foundations as specified in Appendix G- Cost Estimate and replace them with a new concrete foundation in the same location. Refer to Appendix J for design criteria.¹
- Brushing will be required in locations as identified in Appendix K ("Brushing/Clearing Req'd" column) to enable construction. 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 10 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. No tree removal will be completed as part of this scope.

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- 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 K in "Site Accessible" column)
- All work for this program will be performed within the current electrical right-of-way for each of the municipalities.
- Coordinates for streetlight poles where ground disturbance is anticipated can be found in Appendix G² and Appendix K³.
- This scope of work will not affect water or sewer utility services.

Trenching/Underground (Replacing Underground Circuit)

- Remove existing trenching and install new trenching within our existing 5' electrical Right of Way as specified in Appendix K. The trench's dimensions are described by LUMA Trench Standard STL-16 (Appendix I), which states that the typical trench width is 1 foot, and the typical trench depth is 3.5 feet. For this project, the typical trench was defined to have an average length of 100 feet and follow a straight line between the streetlight pole and its power connection. This activity does not require any vegetation clearance and/or access clearance.
- Coordinates for streetlight poles where ground disturbance is anticipated can be found in Appendix G² and Appendix K³.
- This scope of work will not affect water or sewer utility services.

Material Disposal

- Photocells are considered hazardous waste and will be disposed of by the contractor in approved facilities in compliance with applicable federal and local laws and regulations. Material amounts will be provided by a certified management contractor performing a site evaluation calculation for asbestos, lead paint, roof material.
- No transformer will be removed or disposed of during the Program.
- 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 federal and local laws and regulations.

Staging Area

- All materials are stored and dispatched from the assigned LUMA's Regional Warehouse. The warehouse assigned is the Caguas Warehouse, [REDACTED] Refer to Appendix M for Warehouse location.

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 as a Condition of FEMA Record of Environmental Considerations.

Fill, gravel, sand, etc.:

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

Project Estimate

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

Project Cost Estimate	428
Planning, Permits and Applications (FAASt 335168)	\$11

Environmental Management (FAASt 335168)	\$62
Project Management (FAASt 335168)	\$49
Engineering (FAASt 335168)	\$1,15
Construction	\$10,70
Contingency	\$91
PROJECT COST ESTIMATE	\$14,00
428 FAASt Project 704849	\$11,620,676.42
FAASt Project A&E 335168	\$2,38

Work To Be Completed (WTBC): \$14,000,919.41

A&E Deduction (Global A&E FAASt 335168) -\$2,380,242.99

Project Total Cost: \$11,620,676.42

For detailed cost estimate, please refer to document labeled: Appendix G - Cost Estimate Naguabo Municipality.xlsx

Attachments

1. Refer to detailed SOW provided in document: 704849-DR4339PR-Detailed SOW Naguabo - DSOW - signed

2. For reference documents Appendix A thru M, see file labeled:

Appendix A – Preferred Vendor List Directory PR

Appendix B – Naguabo Work Zones Map

Appendix C – LUMA Waste Management Plan

Appendix D – LUMA Wildlife Avian and Historical Protection Procedure #335

Appendix E – Consent to Federal Funding Letter- FEMA/COR3

Appendix F – Naguabo Work Zones FIDs SIDs and Coordinates

Appendix G – Cost Estimate Naguabo Municipality

Appendix H – Intentionally Left In Blank

Appendix I – LUMA Streetlighting Construction Standards

Appendix J – LUMA Distribution Design Manual

Appendix K – EHP Checklist Naguabo

Appendix L – EHP Maps Naguabo

Appendix M – Warehouse Locations

3. For EHP Requirements, refer to pages 5 to 6 of the detailed SOW and reference documents: Appendix K & L.

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. All streetlight trench rebuilds will be performed in the same location and with the same dimensions as the existing damaged one.
6. No new trenches are considered under the project.
7. The trenches are described by LUMA Trench Standard STL-16 (attached in the project), which states that the typical trench width is 1 foot, and the typical trench depth is 3.5 feet. For this project, the typical trench was defined to have an average length of 100 feet and following a straight line between the streetlight poles.

406 HMP Scope

Project number: 704849; FAAS [Naguabo Streetlighting] (Distribution)

Damage # 1297100; FAAS [Distribution Streetlighting - Naguabo]

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

Location: Naguabo, Puerto Rico

GPS Latitude/Longitude: [REDACTED]

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).

In the Naguabo Municipality, PREPA has a total of 3,733 ea. streetlights luminaries. The Method of Repair (MOR) include the replacement of the damage lighting components including photocells, luminaires, arms, and associated hardware. Also include the replacement of the damage distribution and streetlight poles (wood, concrete, galvanized & aluminum), the replacement of the aerial secondary wiring connections, the construction of new concrete base for the aluminum streetlight poles and new trenches for the streetlighting secondary underground circuits. 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, arms, aluminum poles breakaway bases, and foundations (concrete bases) by increasing the wind tolerance of all materials to 160mph. Note: The FEMA Accelerated Award Strategy (FAAS) MOR included the PREPA distribution standards and specifications that were based on a 90mph sustained winds for all materials. Although in PREPA Technical Communication #13-02 (August 22, 2013) a design-criteria of 145mph winds were published, the specifications for streetlighting material were never revised, and in the specification documents, the 90mph winds stayed as the requirement for procurement purposes of all streetlighting materials. 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)

1. To avoid damage in a future event, the Applicant is proposing as a mitigation measure, increase the strength of the poles, arms, aluminum poles breakaway bases, and foundations (concrete bases) by increasing the wind tolerance of all materials to 160mph. The FAAS MOR used PREPA distribution standards and specifications that were based on a 90mph sustained winds for all materials. Although in PREPA Technical Communication #13-02 (August 22, 2013) a design-criteria of 145mph winds were published, the specifications for streetlighting material were never revised, and in the specification documents, the 90mph winds stayed as the requirement for procurement purposes of all streetlighting materials. 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.

406 Mitigation Scope of Work:

- Replace (2,238 ea.) 4ft galv. steel arms (90mph by 160mph winds resistant) for (steel/concrete/wood) poles.
- Replace (71 ea.) 8ft galv. steel arms (90mph by 160mph winds resistant) for (steel/concrete/wood) poles.
- Replace (139 ea.) 4ft galv. steel arms (90mph by 160mph winds resistant) for (octagonal concrete) poles.
- Replace (38 ea.) 33ft octagonal concrete poles by (38 ea.) 39ft octagonal concrete poles.
- Replace (1,031 ea.) 35ft galvanized poles by (1,031 ea.) 35ft S3.5 galvanized poles.

Hazard Mitigation Proposal (HMP) Cost:

Total Net Hazard Mitigation Cost (Base Cost) =	\$1,182,070.57
+ HM (Applicant A&E, Management & General Conditions) =	\$ 487,666.40
Hazard Mitigation Total Cost =	\$1,669,736.97

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 \$1,669,736.97 (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 (v0 Engineering and Design Services, Deduction - PREPA FAASSt Global A&E 335168)	1.00	Lump Sum	(\$2,380,242.99)	Uncompleted
9001 (v0 Contract - PREPA FAASSt Donor Project 136271)	1.00	Lump Sum	\$14,000,919.41	Uncompleted

CRC Gross Cost \$11,620,676.42

Total 406 HMP Cost \$1,669,736.97

Total Insurance Reductions \$0.00

CRC Net Cost \$13,290,413.39

Federal Share (90.00%) \$11,961,372.06

Non-Federal Share (10.00%) \$1,329,041.33

Award Information

Version Information

Version #	Eligibility Status	Current Location	Bundle Number	Project Amount	Cost Share	Federal Share Obligated	Date Obligated
0	Eligible	Awarded	PA-02-PR-4339-PW-11658(15233)	\$13,290,413.39	90%	\$11,961,372.05	5/9/2024

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

1/16/2024

GENERAL INFORMATION

Event: DR4339-PR

Project: SP 704849

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: \$13,290,413.39 (CRC Gross Cost \$11,620,676.42 + Mitigation Amount \$1,669,736.97)

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

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: (1)

Damaged Inventory (DI) #1297100:

FAAST [Distribution Streetlighting - Naguabo]

Location: Naguabo Distribution Streetlighting

GPS Coordinates: [REDACTED]

Cause of Loss: Wind / Wind Driven Rain

Damage Inventory Amount: \$13,290,413.39 (CRC Gross Cost \$11,620,676.42 + Mitigation Amount \$1,669,736.97)

-

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:

No Obtain & Maintain Requirement is being mandated for the FAAsT [Distribution Streetlighting - Naguabo] 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 to on a case-by-case basis.

Standard Insurance Comments

FEMA Policy 206-086-1

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

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

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

Jean-Carlo Echevarria, PA Insurance Specialist, CRC Atlantic, Guaynabo, PR

O&M Requirements

There are no Obtain and Maintain Requirements on **FAAsT [Naguabo Streetlighting] (Distribution)**.

406 Mitigation

There is no additional mitigation information on **FAAsT [Naguabo]**

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 - 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.
- Executive Order 11990 - Wetlands - The Applicant shall ensure best management practices are implemented to prevent erosion and sedimentation to surrounding, nearby or adjacent wetlands. To ensure that wetlands are not adversely impacted, per the Clean Water Act and Executive Order 11990, equipment storage and staging of construction materials and machinery must be in a location that would prevent erosion and sedimentation.
- Endangered Species Act (ESA) - The Applicant must provide documentation at close-out that proves completion of required Conservation Measures.
- Endangered Species Act (ESA)- Conservation measures for PR Boa (*Chilabortus inornatus*)
 1. Inform all project personnel about the potential presence of the Puerto Rican (PR) boa and Virgin Islands (VI) boa in areas where the proposed work will be conducted and provide training on PR and VI boa identification. A pre-construction meeting will be conducted to inform all project personnel about the need to avoid harming these species. All personnel will be advised that there are civil and criminal penalties for harming, harassing, or killing species protected under the Endangered Species Act of 1973. An educational poster or sign with photo or illustration of these species will be displayed at the project site.
 2. Prior to any construction activity, including removal of vegetation and earth movement, the boundaries of the project area and any area to be excluded and protected will be clearly marked in the project plan and in the field to avoid further habitat degradation outside of the footprint of the project.
 3. Once areas are clearly marked, and right before the use of heavy machinery and any construction activity (including removal of vegetation and earth movement), biologist or designated project personnel with experience on these species will survey the areas to be cleared to verify the presence of any PR or VI boa within the Action Area. If a PR or VI boa is found during the search, it should be captured and managed as per #6 below. Once the removal of vegetation begins, the biologist or designated personnel must remain at the work site and be ready to capture any boa that might be in harm's way as the result of the habitat disturbance (see #6).
 4. For VI boas, once the Action Area has been searched, vegetation will be cut about one meter above ground prior to the use of heavy machinery for land clearing. Cutting vegetation by hand will allow VI boas present on site to move away on their own to adjacent available Last update: December 2023 habitat. If there is no suitable habitat adjacent to the project site, any VI boa found will be relocated accordingly (see #6).
 5. For all boa sightings (dead or alive), record the time and date of the sighting and the specific location where it was found. Data will also include a photo of the animal (dead or alive), relocation site GPS coordinates, time and date of the relocation, and comments on how the animal was detected and its behavior.
 6. If any PR or VI boa (dead or alive) is found within the Action Area and on harm's way, the action will stop, and information will be recorded (see #5). All attempts will be made to immediately safely capture and relocate the animal within suitable habitat (forested) at least 1km from the Action Area and away from construction areas. PR boa relocation sites will be pre-determined before the project starts and sites shared with the Service for revision and concurrence. Relocation of PR boas will be conducted by trained, designated personnel ensuring the animal is not harmed or injured during the capture and relocation process.
 7. Measures will be taken to avoid and minimize PR boa and VI boa casualties by heavy machinery or motor vehicles being left in the Action Area.
 - *. Any heavy machinery left on site (staging areas) or near potential PR or VI boa habitat will be thoroughly inspected each morning before work starts to ensure that no boas have sheltered within engine compartments or other areas of the heavy machinery. If a PR boa or VI boa is found within vehicles or heavy machinery, boas will be safely captured accordingly. If not possible, the animal will be left alone until it leaves the vehicle or machine by itself.
 - *. The PR boa and VI boa may seek shelter within debris piles. Measures should be taken to avoid and minimize boa casualties associated with sheltering in new debris piles as a result of project activities. New debris piles should be placed in areas as far as possible from forested areas. Prior to moving, disposing, or shredding, debris piles should be carefully inspected for the presence of PR boas and VI boas. If debris piles will be left on site, we recommend they be placed in an undisturbed area.
 - *. In the event a PR boa and VI boa is found dead within the project area, the Federal Agency and the Recipient must contact the Service to appropriately dispose the animal.
 - *. If a PR boa or a VI boa is accidentally injured or killed during capture and relocation activities during the Action, the Federal Agency and the Recipient shall terminate the authorized activities and contact the Service within 24 hours to reinstate consultation. The Federal Agency will consult with the Service to determine whether authorized activities should continue as proposed and whether modifications are warranted.

Should the forms of take reach the amount of exempted take during the Action, the Federal Agency and the Recipient shall terminate the authorized activities and contact the Service within 24 hours to reinstate consultation. The Federal Agency will consult with the Service to determine whether authorized activities should continue as proposed and whether modifications are warranted. For questions and to submit reports, the Service's Point of Contact (POC) is José Cruz-Burgos, Endangered Species Coordinator, and can be contacted at: ¿ Mobile: 305-304-1386 ¿ Office phone: 786-244-0081 ¿ Office Direct Line: 939-320-3120 ¿ Email: Caribbean_es@fws.gov or jose_cruz-burgos@fws.gov

- Endangered Species Act (ESA)-Amazona vittate/ Buteo platypterus brunnescens/ Accipiter striatus venator 9. All personnel will be advised that there are civil and criminal penalties for harming, harassing, or killing species protected under the Endangered Species Act of 1973, as amended. During breeding seasons (Puerto Rican parrot: February-June/ Puerto Rican broad winged hawk: December-June. Puerto Rican sharp-shinned hawk: December-June.), nest surveys shall be conducted if a project occurs within the range of any of the species listed above and if habitat for those species will be impacted by the proposed actions. Nest searches must be conducted by qualified personnel with the appropriate permits from the Puerto Rico Department of Natural and Environmental Resources (PRDNER) prior to start of work. If nesting activity is detected, all construction activities or human disturbance must be avoided within a 50-meter buffer around any nest(s) found within the project area. This avoidance strategy must be kept until fledglings successfully leave the nest(s) permanently. 10. Outside the breeding season no nest surveys are required, but if a nest is encountered, all construction activities or human disturbance must be avoided within a 50-meter buffer around that nest(s). This avoidance strategy must be kept until fledglings successfully leave the nest(s) permanently. Furthermore, if any of the species indicated above is observed (e.g., foraging, resting) within the project area, avoid any disturbance to the individual(s) and do not flush the bird until it leaves on its own. Nesting seasons: • Puerto Rican parrot: February-June. • Puerto Rican plain pigeon: April-September. • Puerto Rican broad-winged hawk: December-June. • Puerto Rican sharp-shinned hawk: December-June. • Puerto Rican nightjar: February-August. • Elfín-woods warbler: March-June. • Yellow-shouldered blackbird: February-November. For all nest sightings, the Applicant must record the time and date of the sighting and the specific location where it was found. All sightings and incidental lethal take reports should be sent to the USFWS Caribbean Ecological Services Field Office at Caribbean_es@fws.gov. For questions, the Point of Contact (POC) is José Cruz-Burgos, Endangered Species Program Coordinator, and can be contacted at: - Mobile: 305-304-1386 - Office phone: 786-244-0081 - Office Direct Line: 939-320-3120 - Email: jose_cruz-burgos@fws.gov
- Endangered Species Act (ESA) - Conservation measures for Eretmochelys imbricata/ Caretta Caretta/ Chelonia Mydas / Dermochelys coriacea 11. During sea turtle nesting season (March 1 to November 30), a qualified sea turtle monitor must survey beach work areas each morning for possible nests. Nests found in the area should be marked or flagged in place. Outside of nesting season, these areas should be surveyed at least twice a week. Debris removal or construction on beaches may only begin after morning surveys are completed by the sea turtle monitor, and nests are clearly marked. *. All personnel will be advised that there are civil and criminal penalties for harming, harassing, or killing species protected under the Endangered Species Act of 1973, as amended. *. Surveys shall be conducted by sea turtle permit holders or trained personnel following PRDNER/DPNR-DFW protocols. *. Nests located adjacent to the work area should be marked with flagging, creating a 10-foot square roped-off buffer with an unobstructed path leading from the nest to the water. *. Nest surveys must be conducted in the mornings, immediately before any construction activity commences. *. Sea turtle monitoring groups should possess site-specific information for nests in their designated areas and should communicate these details to work crews to ensure avoidance. For Puerto Rico contact: *. ATMAR: 787-448-8627 *. Chelonia: 787-306-0916 *. DRNA Loiza: - 787-453-6484 *. DRNA Rio Grande: - 787-646-9689 *. Reserva Natural de Humacao: 787-594-6568 *. Siete Quillas: 787-688-6763 *. TICATOVE Vieques: 787-438-4493 *. Tortugueros del CEN: 787-635-4493 *. Tortugueros de Culebra: 787-685-7820 *. Tortugueros de Isla Verde: 787-604-4959 *. Tortugeros del Sur: 787-341-8888 *. Vida Marina: 787-380-5254, 787-206-6800 *. Yo Amo el Tinglar: 939-276-9901 12. 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's footprint does not stay within previously permitted structure's footprint, then the Service must be consulted. 13. Relocation of sea turtle nests to accommodate construction is not authorized. 14. All project activity shall be confined to daylight hours following the completion of all necessary marine turtle surveys and conservation activities. The sea turtle monitor shall be available via telephone after the initial inspection throughout the workday. 15. If planting will occur, only native plant species are authorized to be planted. Existing native dune vegetation shall be disturbed to the minimum extent necessary. 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. Prior to any planting, the Applicant will submit a vegetation plan to the Service 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 be immediately contacted to assess the situation and provide guidance on the appropriate steps to safeguard the nest. 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. 16. 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 nestlings emerge from the nest and make their way safely to the sea. If a sea turtle nest is found after November, work should be postponed until the nestlings have safely hatched and made their way to the sea. 17. 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 workday. 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. 18. 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. 19. Removal of vegetation, fence installation, construction activities, and light installation shall be limited within 50 meters from the high tide line. 20. No construction involving lights shall be used during the nesting season. Outside of the nesting season, in Puerto Rico and the U.S. Virgin Islands, it is mandatory to have a lighting plan that incorporates sea turtle-friendly lights for coastal areas whenever lights are being repaired or newly installed. For projects in Puerto Rico, compliance with Puerto Rico Law 218 of 2008, which addresses the Control and Prevention of Lighting Pollution in Puerto Rico, and the PR EQB 2016 Regulation to Control and Prevent Light Contamination, is also required. These lighting plans should be submitted to the Service at caribbean_es@fws.gov for review. When submitting the lighting plan, please include: *. The name and location of the project. *. A brief description of the project. *. An associated tracking number (if available). *. A Point of Contact. After the plan has been fully implemented, the Applicant is responsible for conducting a lighting inspection to identify and correct any remaining problematic lights. 21. 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 qualified 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. 22. 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 PRDNER/DPNR-DFW and the National Marine Fisheries Service's (NMFS) Protected Resources Division (PRD) at (1-727- 824-5312) or by email to takereport.nmfsser@noaa.gov and SAJ-RD-Enforcement@usace.army.mil. 23. All sea turtle sightings and incidents involving nesting sea turtles or hatchlings shall be reported to PRDNER/DPNR-DFW and the Service. The Service's point of contact is José Cruz-Burgos, Endangered Species Program Coordinator: ¿ Mobile: 305-304-1386 ¿ Office phone: 786-244-0081 ¿ Office Direct Line: 939-320-3120 Last update: December 2023 ¿ Email: caribbean_es@fws.gov or jose_cruz-burgos@fws.gov

- Resource Conservation and Recovery Act, aka Solid Waste Disposal Act (RCRA) - 1. The Applicant shall handle, manage, and dispose of all types of hazardous waste in accordance with requirements of local, state, and federal laws, regulations, and ordinances. In addition, the Applicant shall ensure that all debris is separated and disposed of in a manner consistent with the PR DNER guidelines at a permitted site or landfill. The contractor/applicant will be responsible for the proper disposition of construction debris in authorized landfills providing the name, location, coordinates and permits of the facility to the corresponding authorities. 2. Unusable equipment, debris, white goods, scrap metal any other material shall be disposed in approved manner and location. In the event significant items are discovered during the implementation or development of the project the Applicant shall handle, manage, and dispose petroleum products, hazardous materials, and toxic waste in accordance with the requirements of the local and federal agencies. Noncompliance with these requirements may jeopardize receipt of federal funds
- NEPA conditions: 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. 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.
- National Historic Preservation Act (NHPA) a. The Subrecipient and/or Subrecipient's contractor must follow the Low Impact Debris Removal Stipulations (LIDRS) outlined in Appendix E of the Project-Specific Programmatic Agreement Among FEMA, the SHPO, ACHP, COR3, and PREPA (PSPA), executed on August 2, 2022. b. 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. If there are any further changes to the SOW, including any increase in the extent of ground disturbance, the applicant must notify FEMA beforehand, prior to engaging in further activities not within the current SOW.

EHP Additional Info

There is no additional environmental historical preservation on **FAASt [Naguabo Streetlighting] (Distribution)**.

Final Reviews

Final Review

Reviewed By Amaro, Luis N.

Reviewed On 04/16/2024 9:52 AM PDT

Review Comments

LNA 04/16/24. This project has been reviewed, found eligible and cost reasonable, and it is ready to continue the award process.

Recipient Review

Reviewed By Salgado, Gabriel

Reviewed On 04/17/2024 11:15 AM PDT

Review Comments

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

Project Signatures

Signed By Miller, Thomas

Signed On 04/18/2024

Department of Homeland Security Federal Emergency Management Agency

General Info

Project #	724825	P/W #	11725	Project Type	Specialized
Project Category	F - Utilities			Applicant	PR Electric Power Authority (000-UA2QU-00)
Project Title	FAASt [Cidra Streetlighting] (Distribution)				
Project Size	Large			Event	4339DR-PR (4339DR)
Activity Completion Date	9/20/2027			Declaration Date	9/20/2017
Process Step	Obligated			Incident Start Date	9/17/2017
				Incident End Date	11/15/2017

Damage Description and Dimensions

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

Damage #1336051; FAASt Distribution Streetlighting - Cidra

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 Streetlighting - Cidra
- **Facility Description:** The Cidra municipality has a total of 5486 luminaires of which damage was estimated for 70% of these luminaires.
 - Pole – This can be either a standalone structure intended to house a streetlight, or a utility pole shared with other overhead utilities
 - Arm – A piece of hardware affixed to a pole to which a luminaire is mounted. The arm serves to position the streetlight over the street for optimal lighting
 - Luminaire/Light Bulb – The light emitting part of a streetlight
 - Light controller (e.g., photocell) – A hardware device affixed to the luminaire which controls the operating mode
 - Communication network – A wired or wireless system that allows the smart streetlight to communicate with other devices and the control system
 - Technology control system – A software platform that allows a remote operator to set the operating parameters for the smart streetlight or manually override the parameter if needed.
- **Approx. Year Built:** 1970
- **GPS Latitude/Longitude:** [REDACTED]

General Damage Information:

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

Final Scope

1336051 **FAASt Distribution Streetlighting - Cidra**

[Introduction](#)

The purpose of this document is to submit for approval the Detailed Scope of Work (SOW) to COR3 and FEMA for the Distribution Streetlighting Cidra project (Cidra municipality) 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, replace, and upgrade the eligible facilities in the municipality of Cidra.

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

This document will be updated with information developed during the initial design and engineering phase through the construction phase.

Facilities

Facilities List:

This project is part of the breakdown division for the Distribution Streetlighting Program which will be impacting each of the municipalities, listed. Characteristics were previously defined to serve the municipality of Cidra according to the priorities and findings after conducting the assessments.

Physical Address	Cidra, Puerto Rico
Coordinates	Please refer to Appendix F for Coordinates

Proposed 428 Public Assistance Scope of Work

A. Lighting Components Replacement

1. Remove existing lighting components, including photo controls, luminaires, arms, and associated hardware, and install new lighting components in the same location.
2. Perform brushing of vegetation, when required, for the exclusive purpose of gaining access to the pole to conduct repairs.
3. Perform site evaluation and disposal of hazardous photocells in an approved facility.

B. Pole Replacement

1. Remove and replace existing streetlight poles, including lighting components, at the same location or within 3 feet.

2. Perform brushing of vegetation, when required, for the exclusive purpose of gaining access to the pole to conduct repairs. (See project note #6)
3. Remove existing foundations, when required, and replace them with concrete foundations, in the same location, following design criteria. (See project note #7)
4. All work for this program will be performed within the current electrical right-of-way for each of the municipalities.

C. Trenching/Underground (Replacing Underground Circuit)

1. If required, perform new trenching and replace underground circuit components following LUMA Trench Standards STL-16.

Scope Notes:

1. Project doesn't include removal and/or disposal of transformers because they are secondary voltage utilities and transformers removal pertain to primary voltage utilities.
2. 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. All equipment used will comply with Tier 4 EPA Emission Standards, if available.
3. All materials are stored and dispatched from the assigned LUMA's Regional Warehouse. The warehouse assigned is the Caguas Warehouse, **18.25669, -66.02994**. Refer to Appendix M for Warehouse location.
4. All work for this program will be performed within the current electrical right-of-way for each of the municipalities. Poles are near the roads and are site accessible. The construction of **access roads** is not required for this scope of work. (Refer to Appendix K in the "Site Accessible" column).
5. The **brushing of vegetation** will be limited to a 10 ft radius that surrounds the surface of the pole without exceeding the width of the right-of-way. No tree removal will occur as part of this scope. Refer to Appendix K ("Brushing/Clearing Req'd" column) for locations where vegetation brushing is anticipated. The vegetation removal process will be managed according to applicable federal and state regulations.
6. The poles that will require replacement of the existing **foundation** can be found in Appendix G in the tab "Global Initial Scope of Work," column BD (Concrete Pole Base (40ft)), filter by values equal to 1. This represents the same information as Appendix K, column O (Concrete Foundation), filter by values equal to YES. Further, the dimensions for the foundations are 10 feet deep by 3 feet in diameter. The depth of the foundation can be found in Appendix K, column D (Soil area and depth impact).
7. Fill, gravel, and sand materials will be obtained from a preferred vendor as referenced in the *Approved Supplier List Directory PR* (see Appendix A). LUMA will provide actual suppliers' documentation as a condition of the FEMA Record of Environmental Considerations.
8. Coordinates for streetlight poles where **ground disturbance** is anticipated can be found in Appendix G and Appendix K. Refer to Appendix K column D (Soil area and depth impact) for the depths of the poles to be installed.
9. **Trenching** work will be performed within our existing 5' electrical Right of Way as specified in Appendix

K. The trench's dimensions are described by LUMA Trench Standard STL-16 (Appendix I), which states that the typical trench width is 1 foot, and the typical trench depth is 3.5 feet. For this project, the typical trench was defined to have an average length of 100 feet and follow a straight line between the streetlight pole and its power connection. This activity does not require any vegetation clearance and/or access clearance.

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

11. 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. The debris will be separated and taken to an approved waste disposal facility in compliance with applicable federal and local laws and regulations.

12. Photocells are considered **hazardous waste** and will be disposed of by the contractor in approved facilities in compliance with applicable federal and local laws and regulations. Material amounts will be

provided by a certified management contractor performing a site evaluation calculation for asbestos, lead paint, and roof material.

13. Removal of wood poles with creosote treatment will be handled in accordance with all applicable State and Federal regulations.

14. LUMA will provide actual **disposal locations** and quantities as a condition of FEMA Record of Environmental Considerations.

15. It is not anticipated that the proposed project will involve dredging or disposal of dredged material, excavation, the addition of fill material, or result in any modification to water bodies or **wetlands** designated as "waters of the United States" as identified by the U.S. Army Corps of Engineers or on the National Wetland Inventory.

16. It is not anticipated that the project will alter a watercourse, water flow patterns, or a drainage way.

17. Specific List of Permits Required:

- i. Department of Transportation (DTOP) Endorsement.
- ii. Cidra Municipality Notifications.
- iii. Excavation and Demolition Notification in the Department of Transportation and Public Works Agency (DTOP).
- iv. Lead Permit - EQB / DNR and Hazardous Waste Disposal Permit – EQB / DNR.

Project Total Cost Estimate (428 & 406 HMP)

Cost estimates to complete the work have been generated at a class 3 level, which is between -10% and +30% of the final project cost. The estimate includes materials, construction labor and equipment, engineering, management, and contingencies. LUMA has allocated 10% of the project cost for the mitigation of potential known risks. For more details, please refer to LUMA LPCE.

Project Cost Estimate	428 Estimate
Planning, Permits and Applications	\$111,615.2
Environmental Management	\$621,616.4
Project Management	\$546,743.1

Engineering	\$1,236,480.9
Construction	\$11,809,651.3
Contingency	\$1,002,827.5
TOTAL PROJECT COST ESTIMATE	\$15,328,934.58
428 FAASSt Project 724825	\$12,812,478.84
FAASSt Project A&E 335168	\$2,516,455.74

Work To Be Completed (WTBC): \$15,328,934.58

A&E Deduction (Global A&E FAASSt 335168) - \$2,516,455.74

Project Total Cost: \$12,812,478.84

For detailed cost estimate, please refer to document labeled: 724825-DR4339PR- Appendix G- Cost Estimate Cidra Municipality.xlsx

Project Notes:

1. Refer to the detailed SOW provided in document 724825-DR4339PR-Detailed SOW Cidra-DSOW-Work To Be Completed Rev2 - signed.pdf

2. For reference documents Appendix A through N, see the file labeled:

Appendix A – Preferred Vendor List Directory PR

Appendix B – Cidra Work Zones Map

Appendix C – LUMA Waste Management Plan

Appendix D – LUMA Wildlife Avian and Historical Protection Procedure #335

Appendix E – Consent to Federal Funding Letter- FEMA/COR3

Appendix F – Cidra Work Zones FIDs SIDs and Coordinates

Appendix G – Cost Estimate Cidra Municipality

Appendix H – Intentionally Left in Blank*

Appendix I – LUMA Streetlighting Construction Standards

Appendix J – LUMA Distribution Design Manual

Appendix K – EHP Checklist Cidra

Appendix L – EHP Maps Cidra

Appendix M – Warehouse Locations

Appendix N – FEMA Work Completed Reference Doc

3. For EHP Requirements, refer to pages 6 to 7 of the detailed SOW and reference documents: Appendix K & L.

4. Architectural and Engineering (A&E) costs are deducted given previously obligated Global A&E Project for the subject FAASSt

PREPA work (see project: 335168 - FAASt A&E PREPA).

5. This project is part of 136271-MEPA078 Puerto Rico Electrical Power Authority Island Wide FAASt Project.
6. All streetlight trench rebuilds will be performed in the same location and with the same dimensions as the existing damaged one.
7. No new trenches are considered under the project.
8. The trenches are described by LUMA Trench Standard STL-16 (attached in the project), which states that the typical trench width is 1 foot, and the typical trench depth is 3.5 feet. For this project, the typical trench was defined to have an average length of 100 feet and following a straight line between the streetlight poles.

406 HMP Scope

Project number: 724825 - FAASt [Cidra Streetlighting] (Distribution)

Damage #336051; FAASt Distribution Streetlighting - Cidra

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

Location: Cidra, Puerto Rico

GPS Latitude/Longitude: [REDACTED]

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).

In the Cidra Municipality, PREPA has a total of 3,866a streetlights luminaries. The Method of Repair (MOR) include the replacement of the damage lighting components including photocells, luminaires, arms, and associated hardware. Also include the replacement of the damage distribution and streetlight poles (wood, concrete, galvanized & aluminum), the replacement of the aerial secondary wiring connections, the construction of new concrete base for the aluminum streetlight poles and new trenches for the streetlighting secondary underground circuits. 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, arms, aluminum poles breakaway bases, and foundations (concrete bases) by increasing the wind tolerance of all materials to 160mph. Note: The FEMA Accelerated Award Strategy (FAASt) MOR included the PREPA distribution standards and specifications that were based on a 90mph sustained winds for all materials. Although in PREPA Technical Communication #13-02 (August 22, 2013) a design-criteria of 145mph winds were published, the specifications for streetlighting material were never revised, and in the specification documents, the 90mph winds stayed as the requirement for procurement purposes of all streetlighting materials. 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*)

1. To avoid damage in a future event, the Applicant is proposing as a mitigation measure, increase the strength of the poles, arms, aluminum poles breakaway bases, and foundations (concrete bases) by increasing the wind tolerance of all materials to 160mph. The FAASt MOR used PREPA distribution standards and specifications that were based on a 90mph sustained winds for all materials. Although in PREPA Technical Communication #13-02 (August 22, 2013) a design-criteria of 145mph winds were published, the specifications for streetlighting material were never revised, and in the specification documents, the 90mph winds stayed as the requirement for procurement purposes of all streetlighting materials. 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.

406 Mitigation Scope of Work:

- Replace (2236ea) 4ft galv. steel arms (90mph by 160mph winds resistant) for (steel/concrete/wood) poles.
- Replace (107ea) 8ft galv. steel arms (90mph by 160mph winds resistant) for (steel/concrete/wood) poles.

- Replace (267ea) 4ft galv. steel arms (90mph by 160mph winds resistant) for (octagonal concrete) poles.
- Replace (3ea) 12ft galv. steel arms (90mph by 160mph winds resistant) for (octagonal concrete) poles..
- Replace (5ea) 12ft aluminum arm (90mph by 160mph winds resistant) for (aluminum) poles
- Replace (181ea) 33ft octagonal concrete poles by (181ea) 39ft octagonal concrete poles.
- Replace (1065ea) 35ft galvanized poles by (1065ea) 35ft S3.5 galvanized poles.
- Replace (4ea) 30ft aluminum poles by (4ea) 40ft aluminum poles.
- Replace (3ea) 30ft aluminum poles breakaway bases by (3ea) 40ft aluminum poles breakaway bases.
- Replace (4ea) 30ft aluminum poles concrete bases [2.5ft(D) x 5.5ft(H)] by (4ea) 40ft aluminum poles concrete bases [3ft(D) x 10ft(H)].

Hazard Mitigation Proposal (HMP) Cost:

Total Net Hazard Mitigation Cost (Base Cost) = \$1,311,297.11

+ HM (Applicant A&E, Management & General Conditions) = \$ 526,932.49

Hazard Mitigation Total Cost = \$1,838,229.60

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 **\$1,838,229.60** (Hazard Mitigation Total Cost). The cost of this HMP combined with 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 FAASSt Global A&E 335168))	1.00	Lump Sum	(\$2,516,455.74)	Uncompleted
9201 (PAAP Fixed Estimate (No Value - Tracking Purposes Only))	1.00	Lump Sum	\$0.00	Completed
9001 (Contract (PREPA FAASSt Donor Project 136271))	1.00	Lump Sum	\$15,328,934.58	Uncompleted

CRC Gross Cost	\$12,812,478.84
Total 406 HMP Cost	\$1,838,229.60
Total Insurance Reductions	\$0.00
<hr/>	
CRC Net Cost	\$14,650,708.44
Federal Share (90.00%)	\$13,185,637.60
Non-Federal Share (10.00%)	\$1,465,070.84

Award Information

Version Information

Version #	Eligibility Status	Current Location	Bundle Number	Project Amount	Cost Share	Federal Share Obligated	Date Obligated
0	Eligible	Awarded	PA-02-PR-4339-PW-11725(15232)	\$14,650,708.44	90%	\$13,185,637.60	5/9/2024

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

4/5/2024

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.

Jean-Carlo Echevarria, PA Insurance Specialist, CRC Atlantic, Guaynabo P.R.

3/13/2024

GENERAL INFORMATION

Event: DR4339-PR

Project: SP 724825

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: \$14,650,708.44 (CRC Gross Cost \$12,812,478.84 + Mitigation Amount \$1,838,229.60)

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

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: (1)

Damaged Inventory (DI) #1336051:

FAASt Distribution Streetlighting – Cidra

Location: Distribution Streetlighting - Cidra

GPS Coordinates: [REDACTED]

Cause of Loss: Wind / Wind Driven Rain

Damage Inventory Amount: \$14,650,708.44 (CRC Gross Cost \$12,812,478.84 + Mitigation Amount \$1,838,229.60)

-

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 FFAST 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 FFAST Distribution Streetlighting – Cidra 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 case-by-case basis.

Standard Insurance Comments

FEMA Policy 206-086-1

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

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

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

O&M Requirements

There are no Obtain and Maintain Requirements on **FAASt [Cidra Streetlighting] (Distribution)**.

406 Mitigation

There is no additional mitigation information on **FAASt [Cidra Streetlighting] (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 - 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.
- Executive Order 11990 - Wetlands - The Applicant shall ensure best management practices are implemented to prevent erosion and sedimentation to surrounding, nearby or adjacent wetlands. To ensure that wetlands are not adversely impacted, per the Clean Water Act and Executive Order 11990, equipment storage and staging of construction materials and machinery must be in a location that would prevent erosion and sedimentation.
- Endangered Species Act (ESA) - The Applicant must provide documentation at close-out that proves completion of required Conservation Measures.
- Endangered Species Act (ESA) - Conditions for: Puerto Rican boa (*Chilabothrus inornatus*) (Pole sites) 1. Inform all project personnel about the potential presence of the Puerto Rican (PR) boa and Virgin Islands (VI) boa in areas where the proposed work will be conducted and provide training on PR and VI boa identification. A pre-construction meeting will be conducted to inform all project personnel about the need to avoid harming these species. All personnel will be advised that there are civil and criminal penalties for harming, harassing, or killing species protected under the Endangered Species Act of 1973. An educational poster or sign with photo or illustration of these species will be displayed at the project site. 2. Prior to any construction activity, including removal of vegetation and earth movement, the boundaries of the project area and any area to be excluded and protected will be clearly marked in the project plan and in the field to avoid further habitat degradation outside of the footprint of the project. 3. Once areas are clearly marked, and right before the use of heavy machinery and any construction activity (including removal of vegetation and earth movement), biologist or designated project personnel with experience on these species will survey the areas to be cleared to verify the presence of any PR or VI boa within the Action Area. If a PR or VI boa is found during the search, it should be captured and managed as per #6 below. Once the removal of vegetation begins, the biologist or designated personnel must remain at the work site and be ready to capture any boa that might be in harm's way as the result of the habitat disturbance (see #6). 4. For VI boas, once the Action Area has been searched, vegetation will be cut about one meter above ground prior to the use of heavy machinery for land clearing. Cutting vegetation by hand will allow VI boas

present on site to move away on their own to adjacent available habitat. If there is no suitable habitat adjacent to the project site, any VI boa found will be relocated accordingly (see #6). 5. For all boa sightings (dead or alive), record the time and date of the sighting and the specific location where it was found. Data will also include a photo of the animal (dead or alive), relocation site GPS coordinates, time and date of the relocation, and comments on how the animal was detected and its behavior. 6. If any PR or VI boa (dead or alive) is found within the Action Area and on harm's way, the action will stop, and information will be recorded (see #5). All attempts will be made to immediately safely capture and relocate the animal within suitable habitat (forested) at least 1km from the Action Area and away from construction areas. PR boa relocation sites will be pre-determined before the project starts and sites shared with the Service for revision and concurrence. Relocation of PR boas will be conducted by trained, designated personnel ensuring the animal is not harmed or injured during the capture and relocation process. 7. Measures will be taken to avoid and minimize PR boa and VI boa casualties by heavy machinery or motor vehicles being left in the Action Area. *. Any heavy machinery left on site (staging areas) or near potential PR or VI boa habitat will be thoroughly inspected each morning before work starts to ensure that no boas have sheltered within engine compartments or other areas of the heavy machinery. If a PR boa or VI boa is found within vehicles or heavy machinery, boas will be safely captured accordingly. If not possible, the animal will be left alone until it leaves the vehicle or machine by itself. *. The PR boa and VI boa may seek shelter within debris piles. Measures should be taken to avoid and minimize boa casualties associated with sheltering in new debris piles as a result of project activities. New debris piles should be placed in areas as far as possible from forested areas. Prior to moving, disposing, or shredding, debris piles should be carefully inspected for the presence of PR boas and VI boas. If debris piles will be left on site, we recommend they be placed in an undisturbed area. *. In the event a PR boa and VI boa is found dead within the project area, the Federal Agency and the Recipient must contact the Service to appropriately dispose the animal. *. If a PR boa or a VI boa is accidentally injured or killed during capture and relocation activities during the Action, the Federal Agency and the Recipient shall terminate the authorized activities and contact the Service within 24 hours to reinstate consultation. The Federal Agency will consult with the Service to determine whether authorized activities should continue as proposed and whether modifications are warranted. *. Should the forms of take reach the amount of exempted take during the Action, the Federal Agency and the Recipient shall terminate the authorized activities and contact the Service within 24 hours to reinstate consultation. The Federal Agency will consult with the Service to determine whether authorized activities should continue as proposed and whether modifications are warranted. *. For questions and to submit reports, the Service's Point of Contact (POC) is José Cruz-Burgos, Endangered Species Coordinator, and can be contacted at: o Mobile: 305-304-1386 o Office phone: 786-244-0081 o Office Direct Line: 939-320-3120 o Email: Caribbean_es@fws.gov or jose_cruz-burgos@fws.gov

- Endangered Species Act (ESA) - Conditions for Puerto Rican plain pigeon (*Patagioenas inornata wetmorei*) and Puerto Rican broad-winged hawk (*Buteo platypterus brunescens*) (Pole sites): 1. All personnel will be advised that there are civil and criminal penalties for harming, harassing, or killing species protected under the Endangered Species Act of 1973, as amended. During breeding seasons (see below), nest surveys shall be conducted if a project occurs within the range of any of the species listed above and if habitat for those species will be impacted by the proposed actions. Nest searches must be conducted by qualified personnel with the appropriate permits from the Puerto Rico Department of Natural and Environmental Resources (PRDNER) prior to start of work. If nesting activity is detected, all construction activities or human disturbance must be avoided within a 50-meter buffer around any nest(s) found within the project area. This avoidance strategy must be kept until fledglings successfully leave the nest(s) permanently. 2. Outside the breeding season no nest surveys are required, but if a nest is encountered, all construction activities or human disturbance must be avoided within a 50-meter buffer around that nest(s). This avoidance strategy must be kept until fledglings successfully leave the nest(s) permanently. Furthermore, if any of the species indicated above is observed (e.g., foraging, resting) within the project area, avoid any disturbance to the individual(s) and do not flush the bird until it leaves on its own. 3. Nesting seasons: *. Puerto Rican plain pigeon: April-September. *. Puerto Rican broad-winged hawk: December-June. 4. For all nest sightings, the Applicant must record the time and date of the sighting and the specific location where it was found. All sightings and incidental lethal take reports should be sent to the USFWS Caribbean Ecological Services Field Office at Caribbean_es@fws.gov. For questions, the Point of Contact (POC) is José Cruz-Burgos, Endangered Species Program Coordinator, and can be contacted at: *. Mobile: 305-304-1386 *. Office phone: 786-244-0081 *. Office Direct Line: 939-320-3120 *. Email: jose_cruz-burgos@fws.gov
- National Historic Preservation Act (NHPA) - a. The Subrecipient and/or Subrecipient's contractor shall follow the Low Impact Debris Removal Stipulations (LIDRS) as stated in Appendix E of the Project-Specific Programmatic Agreement Among FEMA, the SHPO, ACHP, COR3, and PREPA (PSPA), executed on August 2, 2022. b. Unexpected Discoveries: Pursuant to Stipulation III.B of the PSPA, if, in the course of implementing this Individual Undertaking(s), previously unidentified structures, sites, buildings, objects, districts, or archaeological deposits, that may be eligible for listing in the National Register, or human remains are uncovered, or if it appears that an Individual Undertaking has affected or will affect a previously identified historic property in an unanticipated manner, the contractor must notify Subrecipient who will immediately notify the Recipient. Work must stop in the vicinity of the discovery and measures must be taken to protect the discovery and avoid additional harm. c. Additional staging areas and/or work pads within work site area haven't been identified yet. The Recipient/Subrecipient and/or private operator must provide the information of any additional staging areas or work pads for EHP evaluation as soon as available specially if any construction activity will be necessary to prepare the site(s). Information for staging areas and/or work pads confined to hardened surfaces can be provided at closeout.
- Resource Conservation and Recovery Act, aka Solid Waste Disposal Act (RCRA) - 1. The Applicant shall handle, manage, and dispose of all types of hazardous waste in accordance with requirements of local, state, and federal laws, regulations, and ordinances. In addition, the Applicant shall ensure that all debris is separated and disposed of in a manner consistent with the PR DNER guidelines at a permitted site or landfill. The contractor/applicant will be responsible for the proper disposition of

construction debris in authorized landfills providing the name, location, coordinates and permits of the facility to the corresponding authorities. 2. Unusable equipment, debris, white goods, scrap metal any other material shall be disposed in approved manner and location. In the event significant items are discovered during the implementation or development of the project the Applicant shall handle, manage and dispose petroleum products, hazardous materials and toxic waste in accordance to the requirements of the local and federal agencies. Noncompliance with these requirements may jeopardize receipt of federal funds.

- NEPA Determination - 1. 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. 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 previously disturbed or hardened surfaces can be provided at close-out.

EHP Additional Info

There is no additional environmental historical preservation on **FAASt [Cidra Streetlighting] (Distribution)**.

Final Reviews

Final Review

Reviewed By Amaro, Luis N.

Reviewed On 04/25/2024 10:23 AM PDT

Review Comments

LNA 04/25/24. This project has been reviewed, found eligible and cost reasonable, and it is ready to continue the award process.

Recipient Review

Reviewed By Salgado, Gabriel

Reviewed On 04/27/2024 3:04 AM PDT

Review Comments

Recipient review completed. Applicant must ensure to compliance with all regulatory requirements and PA policy. 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 \$14,650,708.44 for subaward number 11725 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 04/29/2024

Department of Homeland Security Federal Emergency Management Agency

General Info

Project #	724938	PW#	11673	Project Type	Specialized
Project Category	F - Utilities			Applicant	PR Electric Power Authority (000-UA2QU-00)
Project Title	FAASt [Vega Alta Streetlighting] (Distribution)			Event	4339DR-PR (4339DR)
Project Size	Large			Declaration Date	9/20/2017
Activity Completion Date	9/20/2027			Incident Start Date	9/17/2017
Process Step	Obligated			Incident End Date	11/15/2017

Damage Description and Dimensions

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

Damage #1336172; FAASt-Distribution Streetlighting - Vega Alta

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 Streetlighting - Vega Alta
- **Facility Description:** The Vega Alta municipality has a total of 5752 luminaires of which damage was estimated for 70% of these luminaires. Additional descriptions of typical components of a streetlight system are described below:
 - Pole – This can be either a standalone structure intended to house a streetlight, or a utility pole shared with other overhead utilities
 - Arm – A piece of hardware affixed to a pole to which a luminaire is mounted. The arm serves to position the streetlight over the street for optimal lighting
 - Luminaire/Light Bulb – The light emitting part of a streetlight
 - Light controller (e.g., photocell) – A hardware device affixed to the luminaire which controls the operating mode
 - Communication network – A wired or wireless system that allows the smart streetlight to communicate with other devices and the control system
 - Technology control system – A software platform that allows a remote operator to set the operating parameters for the smart streetlight or manually override the parameter if needed.
- **Approx. Year Built:** 1970
- **GPS Latitude/Longitude:** [REDACTED]

General Damage Information:

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

Final Scope

1336172 **FAASt-Distribution Streetlighting - Vega Alta**

Introduction

The purpose of this document is to submit for approval the Detailed Scope of Work (SOW) to COR3 and FEMA for the Distribution Streetlighting Isabela Phase 1 High Priority project (Isabela municipality) 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, replace, and upgrade the eligible facilities in the municipality of Isabela Phase 1 High Priority.

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

Facilities

This project is part of the breakdown division for the Distribution Streetlighting Program which will be impacting each of the municipalities. Characteristics were previously defined to serve the municipality of Isabela according to the priorities and findings after conducting the assessments.

Physical Address	Vega Alta, Puerto Rico
Coordinates	Please refer to Appendix F for Coordinates

Project Scope of Work Streetlight Repairs

Proposed 428 Public Assistance Scope of Work:

Lighting Components Replacement

- Remove existing lighting components, including photo controls, luminaires, arms, and associated hardware, and install new lighting components in the same location. No ground disturbance will be required as part of this scope of work.
- Brushing will be required in locations as identified in Appendix K ("Brushing/Clearing Req'd" column) to enable construction. 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 10 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. No tree removal will be completed as part of this scope.
- All work for this program will be performed within the current electrical right-of-way for each of the municipalities.

Pole Replacement

- Remove existing streetlight poles, including lighting components and install new streetlight poles, including lighting components, 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 poles locations; no new locations are included in this scope of work. Refer to Appendix K column D (Soil area and depth impact) for the depths of the poles to be installed.
- Remove the existing foundations as specified in Appendix G- Cost Estimate and replace them with a new concrete foundation in the same location. Refer to Appendix J for design criteria.
- Brushing will be required in locations as identified in Appendix K ("Brushing/Clearing Req'd" column) to enable construction. 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 10 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. No tree removal will be completed as part of this scope.

- 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 K in "Site Accessible" column)
- All work for this program will be performed within the current electrical right-of-way for each of the municipalities.
- Coordinates for streetlight poles where ground disturbance is anticipated can be found in Appendix G and Appendix K.
- This scope of work will not affect water or sewer utility services.

Trenching/Underground (Replacing Underground Circuit)

- Remove existing trenching and install new trenching within our existing 5' electrical Right of Way as specified in Appendix K. The trench's dimensions are described by LUMA Trench Standard STL-16 (Appendix I), which states that the typical trench width is 1 foot, and the typical trench depth is 3.5 feet. For this project, the typical trench was defined to have an average length of 100 feet and follow a straight line between the streetlight pole and its power connection. This activity does not require any vegetation clearance and/or access clearance.
- Coordinates for streetlight poles where ground disturbance is anticipated can be found in Appendix G and Appendix K.
- This scope of work will not affect water or sewer utility services.

Material Disposal

- Photocells are considered hazardous waste and will be disposed of by the contractor in approved facilities in compliance with applicable federal and local laws and regulations. Material amounts will be provided by a certified management contractor performing a site evaluation calculation for asbestos, lead paint, roof material.
- No transformer will be removed or disposed of during the Program.
- 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 federal and local laws and regulations.

Staging Area

- All materials are stored and dispatched from the assigned LUMA's Regional Warehouse. The warehouse assigned is the Mayaguez Warehouse, [REDACTED]. Refer to Appendix M for Warehouse location.

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 as a Condition of FEMA Record of Environmental Considerations

Fill, gravel, sand, etc.:

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

Project Estimate

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

Project Cost Estimate	428 Estimate
Planning, Permits and Applications	\$111,071.40
Environmental Management	\$618,587.73
Project Management	\$531,015.63
Engineering	\$1,199,067.90
Construction	\$11,469,937.70
Contingency	\$975,077.63
TOTAL PROJECT COST ESTIMATE	\$14,904,757.99
428 FAASt Project 724938	\$12,445,015.33
FAASt Project A&E 335168	\$2,459,742.66

FEMA CRC Project Cost Summary, Version 0:

Work to be Completed (WTBC): \$14,904,757.99

A&E Deduction (Global A&E FAASt 335168): - \$2,459,742.66

Project Total: \$12,445,015.33

Project Notes:

1. For detailed information, refer to documents/attachments labeled:

DSOW – 724938-DR4339PR-Detailed SOW Vega Alta - DSOW - signed.pdf

Appendix A – Preferred Vendor List Directory PR

Appendix B – Work Zones Map

Appendix C – LUMA Waste Management Plan

Appendix D – LUMA Wildlife Avian and Historical Protection Procedure #335

Appendix E – Consent to Federal Funding Letter- FEMA/COR3

Appendix F – Work Zones FIDs SIDs and Coordinates

Appendix G – Cost Estimate, *724938-DR4339PR-Appendix G - Cost Estimate Vega Alta Municipality.xlsx*

Appendix H – Intentionally Left In Blank

Appendix I – LUMA Streetlighting Construction Standards

Appendix J – LUMA Distribution Design Manual

Appendix K – EHP Checklist

Appendix L – EHP Maps

Appendix M – Warehouse Locations

2. This project is part of Donor FAASSt 136271 – MEPA078 Puerto Rico Electrical Power Authority (PREPA) Island Wide FAASSt Project.
3. Architectural and Engineering (A&E) costs are deducted given previously obligated Global A&E Project for the subject FAASSt PREPA work (see project: 335168 - FAASSt A&E PREPA).
4. All streetlight trench rebuilds will be performed in the same location and with the same dimensions as the existing damaged one.
5. No new trenches are considered under the project.
6. The trenches are described by LUMA Trench Standard STL-16 (attached in the project), which states that the typical trench width is 1 foot, and the typical trench depth is 3.5 feet. For this project, the typical trench was defined to have an average length of 100 feet and following a straight line between the streetlight poles.

406 HMP Scope

Project number: 724938; FAASSt Vega Alta Streetlight (Distribution)

Damage # 1336172; FAASSt Vega Alta Streetlight (Distribution)

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

Location: Vega Alta, Puerto Rico

GPS Latitude/Longitude: [REDACTED]

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).

In the Vega Alta Municipality, PREPA has a total of 4,040 ea. streetlights luminaries. The Method of Repair (MOR) include the replacement of the damage lighting components including photocells, luminaires, arms, and associated hardware. Also include the replacement of the damage distribution and streetlight poles (wood, concrete, galvanized & aluminum), the replacement of the aerial secondary wiring connections, the construction of new concrete base for the aluminum streetlight poles and new trenches for the streetlighting secondary underground circuits. 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, arms, aluminum poles breakaway bases, and foundations (concrete bases) by increasing the wind tolerance of all materials to 160mph. Note: The FEMA Accelerated Award Strategy (FAASSt) MOR included the PREPA distribution standards and specifications that were based on a 90mph sustained winds for all materials. Although in

PREPA Technical Communication #13-02 (August 22, 2013) a design-criteria of 145mph winds were published, the specifications for streetlighting material were never revised, and in the specification documents, the 90mph winds stayed as the requirement for procurement purposes of all streetlighting materials. 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*)

1. To avoid damage in a future event, the Applicant is proposing as a mitigation measure, increase the strength of the poles, arms, aluminum poles breakaway bases, and foundations (concrete bases) by increasing the wind tolerance of all materials to 160mph. The FAAsT MOR used PREPA distribution standards and specifications that were based on a 90mph sustained winds for all materials. Although in PREPA Technical Communication #13-02 (August 22, 2013) a design-criteria of 145mph winds were published, the specifications for streetlighting material were never revised, and in the specification documents, the 90mph winds stayed as the requirement for procurement purposes of all streetlighting materials. 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.

406 Mitigation Scope of Work:

- Replace (1,976 ea.) 4ft galv. steel arms (90mph by 160mph winds resistant) for (steel/concrete/wood) poles.
- Replace (195 ea.) 8ft galv. steel arms (90mph by 160mph winds resistant) for (steel/concrete/wood) poles.
- Replace (230 ea.) 4ft galv. steel arms (90mph by 160mph winds resistant) for (octagonal concrete) poles.
- Replace (1 ea.) 12ft galv. steel arms (90mph by 160mph winds resistant) for (octagonal concrete) poles.
- Replace (7 ea.) 4ft aluminum arm (90mph by 160mph winds resistant) for (aluminum) poles.
- Replace (34 ea.) 8ft aluminum arm (90mph by 160mph winds resistant) for (aluminum) poles.
- Replace (118 ea.) 12ft aluminum arm (90mph by 160mph winds resistant) for (aluminum) poles.
- Replace (56 ea.) 33ft octagonal concrete poles by (56 ea.) 39ft octagonal concrete poles.
- Replace (994 ea.) 35ft galvanized poles by (994 ea.) 35ft S3.5 galvanized poles.
- Replace (62 ea.) 30ft aluminum poles by (62 ea.) 40ft aluminum poles.
- Replace (47 ea.) 30ft aluminum poles breakaway bases by (47 ea.) 40ft aluminum poles breakaway bases.
- Replace (62 ea.) 30ft aluminum poles concrete bases [2.5ft(D) x 5.5ft(H)] by (62 ea.) 40ft aluminum poles concrete bases [3ft(D) x 10ft(H)].

Hazard Mitigation Proposal (HMP) Cost:

Total Net Hazard Mitigation Cost (Base Cost) =	\$1,331,810.63
+ HM (Applicant A&E, Management & General Conditions) =	<u>\$ 537,278.89</u>
Hazard Mitigation Total Cost =	\$1,869,089.52

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 \$1,869,089.52 (Hazard Mitigation Total Cost). The cost of this HMP combined with 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 (v0 Engineering and Design Services - PREPA FAASSt Global A&E 335168)	1.00	Lump Sum	(\$2,459,742.66)	Uncompleted
9201 (PAAP Fixed Estimate (No Value - Tracking Purposes Only))	1.00	Lump Sum	\$0.00	Completed
9001 (v0 Contract - PREPA FAASSt Donor Project 136271)	1.00	Lump Sum	\$14,904,757.99	Uncompleted

CRC Gross Cost \$12,445,015.33

Total 406 HMP Cost \$1,869,089.52

Total Insurance Reductions \$0.00

CRC Net Cost \$14,314,104.85

Federal Share (90.00%) \$12,882,694.37

Non-Federal Share (10.00%) \$1,431,410.48

Award Information

Version Information

Version #	Eligibility Status	Current Location	Bundle Number	Project Amount	Cost Share	Federal Share Obligated	Date Obligated
0	Eligible	Awarded	PA-02-PR-4339-PW-11673(15230)	\$14,314,104.85	90%	\$12,882,694.37	5/9/2024

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

1/29/2024

GENERAL INFORMATION

Event: DR4339-PR

Project: SP 724938

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: \$14,314,104.85 (CRC Gross Cost \$12,445,015.33 + Mitigation Amount \$1,869,089.52)

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

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: (1)

Damaged Inventory (DI) #1336172:

FAAsT-Distribution Streetlighting - Vega Alta

Location: Distribution Streetlighting - Vega Alta

GPS Coordinates: XXXXXXXXXX

Cause of Loss: Wind / Wind Driven Rain

SOV / Schedule #: Not insured

SOV / Schedule Amount: Not insured

Applicable Deductible Amount: N/A

Damage Inventory Amount: \$14,314,104.85 (CRC Gross Cost \$12,445,015.33 + Mitigation Amount \$1,869,089.52)

-

Prior Obtain and Maintain Requirement:

No prior insurance requirements were found for this facility.

-

Reduction(s):

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

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Obtain and Maintain Requirement:

No Obtain & Maintain Requirement is being mandated for the FAAST-Distribution Streetlighting - Vega Alta 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 case-by-case basis.

Standard Insurance Comments

FEMA Policy 206-086-1

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

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

1. Before FEMA approves assistance for a property, an applicant must provide FEMA with information about any actual or anticipated insurance settlement or recovery it is entitled to for that property.

2. FEMA will reduce assistance to an applicant by the amount of its actual or anticipated insurance proceeds.

3. Applicants must take reasonable efforts to recover insurance proceeds that they are entitled to receive from their insurer(s).

...

5. If an applicant has an insurance requirement from a previous event:

a. FEMA will reduce assistance by the actual or anticipated insurance proceeds, or the amount of insurance required in the previous disaster, whichever is greater.

b. FEMA will only consider insolvent insurers, legal fees, or apportionment of proceeds as described in Section VII, Part 2(A)(3) and

(4) when the applicant's anticipated or actual insurance proceeds are higher than the amount of insurance required in the previous disaster.

Jean-Carlo Echevarria, PA Insurance Specialist, CRC Atlantic, Guaynabo, PR

O&M Requirements

There are no Obtain and Maintain Requirements on **FAAST [Vega Alta Streetlighting] (Distribution)**.

406 Mitigation

There is no additional mitigation information on **FAAST [Vega Alta Streetlighting] (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 - For pole sites: 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.
- Executive Order 11990 - Wetlands - The Applicant shall ensure best management practices are implemented to prevent erosion and sedimentation to surrounding, nearby or adjacent wetlands. To ensure that wetlands are not adversely impacted, per the Clean Water Act and Executive Order 11990, equipment storage and staging of construction materials and machinery must be in a location that would prevent erosion and sedimentation.
- Endangered Species Act (ESA) - The Applicant must provide documentation at close-out that proves completion of required Conservation Measures.
- Endangered Species Act (ESA) - For: *Chelonia mydas*, *Eretmochelys imbricata*, *Dermochelys coriacea* and *Caretta caretta* (Pole sites) 1. During sea turtle nesting season (March 1 to November 30), a qualified sea turtle monitor must survey beach work areas each morning for possible nests. Nests found in the area should be marked or flagged in place. Outside of nesting season, these areas should be surveyed at least twice a week. Debris removal or construction on beaches may only begin after morning surveys are completed by the sea turtle monitor, and nests are clearly marked. *. All personnel will be advised that there are civil and criminal penalties for harming, harassing, or killing species protected under the Endangered Species Act of 1973, as amended. *. Surveys shall be conducted by sea turtle permit holders or trained personnel following PRDNER/DPNR-DFW protocols. (See image and list of contacts below.) *. Nests located adjacent to

the work area should be marked with flagging, creating a 10-foot square roped-off buffer with an unobstructed path leading from the nest to the water. *. Nest surveys must be conducted in the mornings, immediately before any construction activity commences. *. Sea turtle monitoring groups should possess site-specific information for nests in their designated areas and should communicate these details to work crews to ensure avoidance. For Puerto Rico contact: *. ATMAR: 787-448-8627 *. Chelonia: 787-306-0916 *. DRNA Loiza: - 787-453-6484 *. DRNA Rio Grande: - 787-646-9689 *. Reserva Natural de Humacao: 787-594-6568 *. Siete Quillas: 787-688-6763 *. TICATOVE Vieques: 787-438-4493 *. Tortugueros del CEN: 787-635-4493 *. Tortugueros de Culebra: 787-685-7820 *. Tortugueros de Isla Verde: 787-604-4959 *. Tortugeros del Sur: 787-341-8888 *. Vida Marina: 787-380-5254, 787-206-6800 *. Yo Amo el Tinglar: 939-276-9901

2. 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's footprint does not stay within previously permitted structure's footprint, then the Service must be consulted. 3. Relocation of sea turtle nests to accommodate construction is not authorized. 4. All project activity shall be confined to daylight hours following the completion of all necessary marine turtle surveys and conservation activities. The sea turtle monitor shall be available via telephone after the initial inspection throughout the workday. 5. If planting will occur, only native plant species are authorized to be planted. Existing native dune vegetation shall be disturbed to the minimum extent necessary. 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. Prior to any planting, the Applicant will submit a vegetation plan to the Service 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 be immediately contacted to assess the situation and provide guidance on the appropriate steps to safeguard the nest. 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. 6. 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 nestlings emerge from the nest and make their way safely to the sea. If a sea turtle nest is found after November, work should be postponed until the nestlings have safely hatched and made their way to the sea. 7. 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 workday. 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. 8. 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. 9. Removal of vegetation, fence installation, construction activities, and light installation shall be limited within 50 meters from the high tide line. 10. No construction involving lights shall be used during the nesting season. Outside of the nesting season, in Puerto Rico and the U.S. Virgin Islands, it is mandatory to have a lighting plan that incorporates sea turtle-friendly lights for coastal areas whenever lights are being repaired or newly installed. For projects in Puerto Rico, compliance with Puerto Rico Law 218 of 2008, which addresses the Control and Prevention of Lighting Pollution in Puerto Rico, and the PR EQB 2016 Regulation to Control and Prevent Light Contamination, is also required. These lighting plans should be submitted to the Service at caribbean_es@fws.gov for review. When submitting the lighting plan, please include: *. The name and location of the project. *. A brief description of the project. *. An associated tracking number (if available). *. A Point of Contact. After the plan has been fully implemented, the Applicant is responsible for conducting a lighting inspection to identify and correct any remaining problematic lights. 11. 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 qualified 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. 12. 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 PRDNER/DPNR-DFW and the National Marine Fisheries Service's (NMFS) Protected Resources Division (PRD) at (1-727-824-5312) or by email to takereport.nmfs@noaa.gov and SAJ-RD-Enforcement@usace.army.mil. 13. All sea turtle sightings and incidents involving nesting sea turtles or hatchlings shall be reported to PRDNER/DPNR-DFW and the Service. The Service's point of contact is José Cruz-Burgos, Endangered Species Program Coordinator: ¿ Mobile: 305-304-1386 ¿ Office phone: 786-244-0081 ¿ Office Direct Line: 939-320-3120 ¿ Email: caribbean_es@fws.gov or jose_cruz-burgos@fws.gov

- Endangered Species Act (ESA) - For: *Chilabothrus inornatus* (Pole sites) 1. Inform all project personnel about the potential presence of the Puerto Rican (PR) boa and Virgin Islands (VI) boa in areas where the proposed work will be conducted and provide training on PR and VI boa identification. A pre-construction meeting will be conducted to inform all project personnel

about the need to avoid harming these species. All personnel will be advised that there are civil and criminal penalties for harming, harassing, or killing species protected under the Endangered Species Act of 1973. An educational poster or sign with photo or illustration of these species will be displayed at the project site. 2. Prior to any construction activity, including removal of vegetation and earth movement, the boundaries of the project area and any area to be excluded and protected will be clearly marked in the project plan and in the field to avoid further habitat degradation outside of the footprint of the project. 3. Once areas are clearly marked, and right before the use of heavy machinery and any construction activity (including removal of vegetation and earth movement), biologist or designated project personnel with experience on these species will survey the areas to be cleared to verify the presence of any PR or VI boa within the Action Area. If a PR or VI boa is found during the search, it should be captured and managed as per #6 below. Once the removal of vegetation begins, the biologist or designated personnel must remain at the work site and be ready to capture any boa that might be in harm's way as the result of the habitat disturbance (see #6). 4. For VI boas, once the Action Area has been searched, vegetation will be cut about one meter above ground prior to the use of heavy machinery for land clearing. Cutting vegetation by hand will allow VI boas present on site to move away on their own to adjacent available habitat. If there is no suitable habitat adjacent to the project site, any VI boa found will be relocated accordingly (see #6). 5. For all boa sightings (dead or alive), record the time and date of the sighting and the specific location where it was found. Data will also include a photo of the animal (dead or alive), relocation site GPS coordinates, time and date of the relocation, and comments on how the animal was detected and its behavior. 6. If any PR or VI boa (dead or alive) is found within the Action Area and on harm's way, the action will stop, and information will be recorded (see #5). All attempts will be made to immediately safely capture and relocate the animal within suitable habitat (forested) at least 1km from the Action Area and away from construction areas. PR boa relocation sites will be pre-determined before the project starts and sites shared with the Service for revision and concurrence. Relocation of PR boas will be conducted by trained, designated personnel ensuring the animal is not harmed or injured during the capture and relocation process. 7. Measures will be taken to avoid and minimize PR boa and VI boa casualties by heavy machinery or motor vehicles being left in the Action Area. *. Any heavy machinery left on site (staging areas) or near potential PR or VI boa habitat will be thoroughly inspected each morning before work starts to ensure that no boas have sheltered within engine compartments or other areas of the heavy machinery. If a PR boa or VI boa is found within vehicles or heavy machinery, boas will be safely captured accordingly. If not possible, the animal will be left alone until it leaves the vehicle or machine by itself. *. The PR boa and VI boa may seek shelter within debris piles. Measures should be taken to avoid and minimize boa casualties associated with sheltering in new debris piles as a result of project activities. New debris piles should be placed in areas as far as possible from forested areas. Prior to moving, disposing, or shredding, debris piles should be carefully inspected for the presence of PR boas and VI boas. If debris piles will be left on site, we recommend they be placed in an undisturbed area. *. In the event a PR boa and VI boa is found dead within the project area, the Federal Agency and the Recipient must contact the Service to appropriately dispose the animal. *. If a PR boa or a VI boa is accidentally injured or killed during capture and relocation activities during the Action, the Federal Agency and the Recipient shall terminate the authorized activities and contact the Service within 24 hours to reinstate consultation. The Federal Agency will consult with the Service to determine whether authorized activities should continue as proposed and whether modifications are warranted. *. Should the forms of take reach the amount of exempted take during the Action, the Federal Agency and the Recipient shall terminate the authorized activities and contact the Service within 24 hours to reinstate consultation. The Federal Agency will consult with the Service to determine whether authorized activities should continue as proposed and whether modifications are warranted. *. For questions and to submit reports, the Service's Point of Contact (POC) is José Cruz-Burgos, Endangered Species Coordinator, and can be contacted at: ¿ Mobile: 305-304-1386 ¿ Office phone: 786-244-0081 ¿ Office Direct Line: 939-320-3120 ¿ Email: Caribbean_es@fws.gov or jose_cruz-burgos@fws.gov

- 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.
- NEPA Determination - 1. 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. 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 previously disturbed or hardened surfaces can be provided at close-out.

- Resource Conservation and Recovery Act, aka Solid Waste Disposal Act (RCRA) - 1. The Applicant shall handle, manage, and dispose of all types of hazardous waste in accordance with requirements of local, state, and federal laws, regulations, and ordinances. In addition, the Applicant shall ensure that all debris is separated and disposed of in a manner consistent with the PR DNER guidelines at a permitted site or landfill. The contractor/applicant will be responsible for the proper disposition of construction debris in authorized landfills providing the name, location, coordinates and permits of the facility to the corresponding authorities. 2. Unusable equipment, debris, white goods, scrap metal any other material shall be disposed in approved manner and location. In the event significant items are discovered during the implementation or development of the project the Applicant shall handle, manage and dispose petroleum products, hazardous materials and toxic waste in accordance to the requirements of the local and federal agencies. Noncompliance with these requirements may jeopardize receipt of federal funds.

EHP Additional Info

There is no additional environmental historical preservation on **FAASt [Vega Alta Streetlighting] (Distribution)**.

Final Reviews

Final Review

Reviewed By Amaro, Luis N.

Reviewed On 04/04/2024 12:40 PM PDT

Review Comments

LNA 04/04/24. This project has been reviewed, found eligible and cost reasonable, and it is ready to continue the award process.

Recipient Review

Reviewed By Salgado, Gabriel

Reviewed On 04/05/2024 5:01 AM PDT

Review Comments

Recipient review completed. Applicant must ensure to compliance with all regulatory requirements and PA policy. 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 \$14,314,104.85 for subaward number 11673 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 04/08/2024