

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

NEPR

Received:

Jul 14, 2026

7:25 PM

IN RE:

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

CASE NO. NEPR-MI-2021-0002

**SUBJECT: Motion Submitting One (1) Amended
FEMA Approval of Project and Six (6) FEMA
Approvals of Project, Request for Confidential
Treatment, and Supporting Memorandum of Law**

**MOTION SUBMITTING ONE (1) AMENDED FEMA APPROVAL OF PROJECT AND
SIX (6) FEMA APPROVALS OF PROJECT, REQUEST FOR CONFIDENTIAL
TREATMENT AND SUPPORTING MEMORANDUM OF LAW**

TO THE PUERTO RICO ENERGY BUREAU:

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

I. Relevant Procedural Background

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, on the progress of all ongoing efforts related to the approval of the submitted Projects that have

not yet been approved by the Energy Bureau.¹ 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 Scopes 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. Among the twenty-nine (29) SOWs, LUMA submitted the “38 kV Transmission Priority Poles and Structures Replacements” and the “Distribution Pole and Conductor Replacement” SOWs.

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 in the August 30th Motion 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 “38 kV Transmission Priority Poles and Structures Replacements” and the “Distribution Pole and Conductor Replacement” SOWs. The Energy Bureau also ordered LUMA 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. On April 24, 2023, LUMA submitted a *Motion Submitting Scope of Work and Request for Confidentiality and Supporting Memorandum of Law* (“April 24th Motion”), whereby it submitted one (1) SOW for the Energy Bureau’s review and approval prior to submitting it to

¹ On April 22, 2026, the Energy Bureau issued a Resolution and Order (“April 22nd Order”), in which it extended the March 26th Order’s reporting period for an additional five (5) years. *See* April 22nd Order, p.2. The Energy Bureau stated that all the other provisions of the March 26th Order would remain in full force and effect. *Id.*

COR3 and FEMA (“April 24th Motion”). The SOW submitted by LUMA was for the “Island-Wide Vegetation Clearing” T&D Project.

5. On May 5, 2023, the Energy Bureau issued a Resolution and Order in which it approved the “Island-Wide Vegetation Clearing” SOW and determined it necessary to improve the system’s reliability (“May 5th Order”). Further, the Energy Bureau ordered LUMA to submit a copy of the approval by COR3 and/or FEMA of the projects, which shall contain the costs obligated for each project within ten (10) days of receiving such approval.

6. As shown in Exhibit 1 of the Motion filed on January 24, 2022, *Motion Submitting Updated List of Transmission and Distribution Projects and Three Scopes of Work*, and most recently in Exhibit 5 of the Motion filed on July 31, 2024, *Motion Submitting Three Amended Scopes of Work, and One Scope of Work, an Updated Project List, and Request for Confidentiality and Supporting Memorandum of Law*, the “38 kV Transmission Priority Poles and Structures Replacements” SOW is divided into individual projects per region, which include the “FAAST [Transmission Priority Pole Replacements – Line 6700] (Transmission)” and the “FAAST [Priority Pole Replacement Program Line 800 Comsat Sect – Cidra Sect (Transmission)]”² T&D Projects. The “Distribution Pole and Conductor Replacement” SOW is also divided into individual projects per region, which include the “FAAST [Pole and Conductor Repair – Caguas Group 7 - Phase 2] (Distribution),”³ the “FAAST [Pole and Conductor Repair-Caguas Group 5 Phase 2] (Distribution),”⁴ and the “FAAST [Pole and Conductor Repair – Caguas Group 4 – Phase 2] (Distribution)”⁵ T&D Projects.

² The “FAAST [Priority Pole Replacement Program Line 800 Comsat Sect – Cidra Sect (Transmission)]”, as well as the three Pole and Conductor Repair T&D projects mentioned herein were projects deactivated by FEMA. However, these projects are now reactivated and were assigned a new FAAST number. The former FAAST number for this T&D project was 753781; the current FAAST number is 1064452.

³ The former FAAST number for this T&D project was 817249; the current FAAST number is 1066741.

⁴ The former FAAST number for this T&D project was 790427; the current FAAST number is 1066737.

⁵ The former FAAST number for this T&D project was 790446; the current FAAST number is 1066740.

7. Similarly, the “Island-Wide Vegetation Clearing” SOW was also divided into separate projects, by group, which include, among others, the “FAAST [Ponce Region 6 Feeder 5602-02] (Vegetation)” and the “FAAST [San Juan Region 1 - Feeder 2401-01] (Vegetation)” T&D Projects. *Id.*

II. Submittal of One Amended FEMA Approval of Project

8. On August 11, 2022, LUMA filed a *Motion Submitting Nine FEMA Approvals of Project, Request for Confidential Treatment and Supporting Memorandum of Law* (“August 11th Motion”), whereby, in compliance with the September 22nd Order, LUMA submitted a copy of the project approval issued by FEMA on August 5, 2022, for the “FAAST [Line 6700 Martin Penna TC to Villamar Sect.] (Transmission)”⁶ T&D Project.

9. In compliance with the September 22nd Order, LUMA hereby submits a copy of the amended approval (“Version 2”) for the “FAAST [Transmission Priority Pole Replacements – Line 6700] (Transmission)” T&D Project, which states it was re-obligated on July 6, 2026. *See Exhibit 1*⁷ to this Motion.

10. Version 2 of the “FAAST [Transmission Priority Pole Replacements – Line 6700] (Transmission)” T&D project was created to capture the LUMA change in cost of the project and request an amendment to the Scope of Work (SOW) and Hazard Mitigation (HM) proposal change/additions. LUMA requested the following component additions to the project SOW and cost estimate the replacement of 9 round steel poles of 145mph windspeed resistance ASCE/SEI 48-19 with new nine (S-8) steel galvanized, 12-sided, tapered shaft distribution pole to increase

⁶ Despite their different project names, both the “FAAST [Line 6700 Martin Penna TC to Villamar Sect.] (Transmission)” and the “FAAST [Transmission Priority Pole Replacements – Line 6700] (Transmission)” maintain the same FAASt project number: 550896.

⁷ Please note that **Exhibit 1** has digitalization and table format issues, which are found on the documents as issued by FEMA. Furthermore, Exhibit 1

the strength of the pole by increasing the wind tolerance b design to 160mph as a HM measure instead. The SOW from the previous version has been removed from the current SOW. *See Exhibit 1* to this Motion, FEMA-reobligation of this project, p. 15. Thus, Version 2 of the “FAASt [Transmission Priority Pole Replacements – Line 6700] (Transmission)” T&D project incorporates scope changes, mitigation additions, and cost revisions, increasing the cost from \$690,703 to \$1,022,153.58. *Id.* p. 26.

III. Submittal of Six FEMA Approvals of Projects

11. In compliance with the September 22nd and the May 5th Orders, LUMA hereby submits copies of the “FAASt [San Juan Region 1 - Feeder 2401-01] (Vegetation)”, the “FAASt [Ponce Region 6 Feeder 5602-02] (Vegetation)”, the “FAASt [Pole and Conductor Repair-Caguas Group 5 Phase 2] (Distribution)”, the “FAASt [Pole and Conductor Repair – Caguas Group 4 – Phase 2] (Distribution),” the “FAASt [Pole and Conductor Repair – Caguas Group 7 – Phase 2] (Distribution),” the “FAASt [Priority Pole Replacement Program Line 800 Comsat Sect – Cidra Sect] (Transmission)” T&D Project approvals by FEMA, which were obligated on July 8, 2026.⁸ *See Exhibit 2* to this Motion.⁹ The document contains FEMA’s approvals and includes the costs obligated for each of the projects.

IV. Request for Confidential Treatment of Exhibit 1 and 2

12. LUMA is submitting herein redacted public versions of the amended FEMA approval for the “FAASt [Transmission Priority Pole Replacements – Line 6700] (Transmission)” (**Exhibit 1**) and the FEMA approvals for the “FAASt [San Juan Region 1 - Feeder 2401-01] (Vegetation)”, the “FAASt [Ponce Region 6 Feeder 5602-02] (Vegetation)”, the “FAASt [Pole

⁸ With the exception of the “FAASt [Priority Pole Replacement Program Line 800 Comsat Sect – Cidra Sect]” T&D Project, which was obligated on July 6, 2026.

⁹ Please note that **Exhibit 2** has digitalization and table format issues, which are found on the documents as issued by FEMA.

and Conductor Repair-Caguas Group 5 Phase 2] (Distribution)”, the “FAASt [Pole and Conductor Repair – Caguas Group 4 – Phase 2] (Distribution),” the “FAASt [Pole and Conductor Repair – Caguas Group 7 – Phase 2] (Distribution),” the “FAASt [Priority Pole Replacement Program Line 800 Comsat Sect – Cidra Sect] (Transmission)” T&D Projects (**Exhibit 2**) (collectively, the “FEMA Approvals”) protecting confidential information associated with Critical Energy Infrastructure Information (“CEII”). As explained below, portions of the FEMA Approvals 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.

V. Memorandum of Law in Support of Request for Confidentiality

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

13. The bedrock provision on the management of confidential information filed before this Energy Bureau, is Section 6.15 of Act 57-2014, known as the “Puerto Rico Energy Transformation and Relief Act.” It provides, in pertinent part, that: “[i]f any person who is required to submit information to the [Energy Bureau] believes that the information to be submitted has any confidentiality privilege, such person may request the [Energy Bureau] to treat such information as such” 22 LPRA § 1054n (2026). 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).

14. 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).

15. 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.

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

17. 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).

18. 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

19. Portions of the FEMA Approvals included in **Exhibits 1 and 2** contain 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.

20. This 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.

21. 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.

22. 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.

23. 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.*

24. 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”).¹⁰

¹⁰ Regarding protection of voluntary disclosures of critical infrastructure information, 6 U.S.C. § 673, provides in pertinent part, that CII:

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

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).¹¹

25. Portions of the FEMA Approvals in **Exhibits 1 and 2** 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 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 **Exhibits 1 and 2** from disclosure, given the nature and scope of the details included in those portions of the Exhibit.

26. 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 **Exhibits 1 and 2**. Given the importance of ensuring the safe and efficient operation of the

(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.

¹¹ 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.

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

27. 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 approval for which we present this request for confidential treatment.

Document	Name	Pages in which Confidential Information is Found, if applicable	Summary of Legal Basis for Confidentiality Protection, if applicable	Date Filed
Exhibit 1	FAASt [Transmission Priority Pole Replacements – Line 6700] (Transmission)	Pages 1-2, 8-9, 15-16, 19,	Critical Energy Infrastructure Information, 18 C.F.R. § 388.113; 6 U.S.C. §§ 671-674.	July 14, 2026
Exhibit 2	FAASt [San Juan Region 1 - Feeder 2401-01] (Vegetation)	Pages 1, 3, 13	Critical Energy Infrastructure Information, 18 C.F.R. § 388.113; 6 U.S.C. §§ 671-674.	July 14, 2026
	FAASt [Ponce Region 6 Feeder 5602-02] (Vegetation)	Pages 1, 3, 14	Critical Energy Infrastructure Information, 18 C.F.R. § 388.113; 6 U.S.C. §§ 671-674.	July 14, 2026
	FAASt [Pole and Conductor Repair-	Pages 1-2, 6, 8	Critical Energy Infrastructure	July 14, 2026

Document	Name	Pages in which Confidential Information is Found, if applicable	Summary of Legal Basis for Confidentiality Protection, if applicable	Date Filed
	Caguas Group 5 Phase 2] (Distribution)		Information, 18 C.F.R. § 388.113; 6 U.S.C. §§ 671-674.	
	FAASt [Pole and Conductor Repair – Caguas Group 4 – Phase 2] (Distribution)	Pages 1-2, 5, 7	Critical Energy Infrastructure Information, 18 C.F.R. § 388.113; 6 U.S.C. §§ 671-674.	July 14, 2026
	FAASt [Pole and Conductor Repair – Caguas Group 7 – Phase 2] (Distribution)	Pages 1-3, 6, 8	Critical Energy Infrastructure Information, 18 C.F.R. § 388.113; 6 U.S.C. §§ 671-674.	July 14, 2026
	FAASt [Priority Pole Replacement Program Line 800 Comsat Sect – Cidra Sect] (Transmission)	Pages 1-2, 4, 6	Critical Energy Infrastructure Information, 18 C.F.R. § 388.113; 6 U.S.C. §§ 671-674.	July 14, 2026

WHEREFORE, LUMA respectfully requests that the Energy Bureau **take notice** of the aforementioned; **accept** the copy of the Amended FEMA approval attached herein as **Exhibit 1**; accept the copies of the FEMA Approvals attached herein as **Exhibit 2**; and **grant** the request for confidential treatment of **Exhibit 1 and 2**

RESPECTFULLY SUBMITTED.

We hereby certify that we filed this Motion using the electronic filing system of this Energy Bureau. We will send an electronic copy of this Motion to PREPA via Alexis Rivera, alexis.rivera@prepa.pr.gov, and through its counsel of record, Natalia Zayas Godoy, nzayas@gmlex.net, Richard Cruz Franqui, rcruzfranqui@gmlex.net, and Mirelis Valle Cancel, mvalle@gmlex.net, to Genera PR LLC, through its counsel of record, Jorge Fernández-Reboredo, jfernandez@ecija.com, José J. Díaz Alonso, jdiaz@ecija.com, and Ernesto R. Ramos Maldonado, eramos@ecija.com.

In Guaynabo, Puerto Rico, on this 14th day of July 2026.



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Exhibit 1

(public version, confidential version to be filed under seal of confidentiality)

**Department of Homeland Security
Federal Emergency Management Agency**

v0

General Info

Project #	550896	P/W #	10837	Project Type	Specialized
Project Category	F - Utilities	Applicant	PR Electric Power Authority (000-UA2QU-00)	Event	4339DR-PR (4339DR)
Project Title	FAASt [Transmission Priority Pole Replacements – Line 6700] (Transmission)			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 #921067; FAASt [Line 6700 Martin Peña TC to Villamar Sect.]

General Facility Information:

- **Facility Type:** Power generation, transmission, and distribution facilities
- **Facility:** Line 6700 Martin Peña TC to Villamar Sect.
- **Facility Description:** The specific facilities included in this proposed project are structures (including their foundations), framing and insulators, load break switches (manual and automated), conductors, guy wires, anchoring, grounding assemblies, and any other associated components. Most of the construction along this line segment consists of wood monopole guyed structures with some interspersed self-supporting steel and concrete monopoles. This line primarily traverses urban areas between Martin Pena TC substation and Villamar Sect substation.
- **Approx. Year Built:** 1970
- **Start GPS Latitude/Longitude:** [REDACTED]
- **End GPS Latitude/Longitude:** [REDACTED]

Final Scope

921067 FAASt [Line 6700 Martin Peña TC to Villamar Sect.]

Introduction

The purpose of this document is to submit for approval the detailed Scope of Work ("SOW") to COR3 and FEMA for the Transmission Priority Pole Replacement – Line 6700 Project under DR-4339-PR Public Assistance. The document provides a description of the project including scope, schedule, and cost estimates as well as Environmental & Historical Preservation ("EHP") requirements. LUMA Energy is seeking approval from COR3 and FEMA for project funding to repair, restore, or replace the eligible facilities.

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

Facilities

The facilities listed below are part of the 3.1 mile long 38 kV overhead transmission Line 6700. This line is a Near-Term rebuild priority identified by LUMA. However, these structures were identified as having System Remediation Plan (SRS) issues and were considered degraded during a High-Level Assessment (HLA). Because of risk to the public these structures will be replaced by the Transmission Priority Pole Replacement Program on an expedited basis. Later, the remainder of the line will be rebuilt, except for the structures that would already have been replaced to LUMA Codes & Standards.

Line		FID	Coordinates	Voltage Level (kV)	Construction Date
L6700	Martin Pena TC – Seboruco TO	15131760		38 kV	1965
		15131766			
		15131791			
		15131795			
		15131798			
		15131801			
		15131804			
		15131815			
		15131817			

Project Scope of Work

Proposed 428 Public Assistance Scope of Work:

Martin Peña TC - Seboruco TO Structures Scope:

- Remove six 60ft wood poles and install six 70ft galvanized steel S8 poles in the same location. Cross arms, insulators and all associated hardware will also be replaced along with the new structure.
- Remove three 65ft concrete poles and install three 70ft galvanized steel S8 poles in the same location. Cross arms, insulators and all associated hardware will also be replaced along with the new structure.

Project Estimate

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

Project Cost Estimate	Total 428 Public Assistance
Planning	\$57,239
Management	\$76,177
Transmission Line Construction	\$505,537
General Conditions	\$68,084
Contingency	\$117,082
Total Project Cost Estimate	\$824,119

Work to be Completed: \$824,119 - \$133,416 (FAASt A&E 335168) = **\$690,703**

Project Notes

1. For a full description of the Scope of Work contents for this project, plus related Appendix, please refer to file: 550896-DR4339PR-Detailed SOW - Line 6700 Rev.0.pdf.
2. WTBC costs were obtained from Applicant provided document: 550896-DR4339PR-Appendix G - Detailed Cost Estimate - Line 6700 Rev.0.pdf.
3. Architectural and Engineering (A&E) costs are deducted given previously obligated Global A&E Project for the subject FAASt PREPA work (see project: 335168 - FAASt A&E PREPA).
4. For Environmental & Historical Preservation (EHP) requirements, details, and supporting documentation please refer to pages 8 to 12 of the document labeled: 550896-DR4339PR-Detailed SOW - Line 6700 Rev.0.pdf.

406 HMP Scope

There is no feasible Hazard Mitigation opportunity, nor requested, by Sub-applicant for this project.

Cost

Code	Quantity	Unit	Total Cost	Section
3510	1	Lump Sum	(\$133,416.00)	Uncompleted
9001	1	Lump Sum	\$824,119.00	Uncompleted
9201	1	Lump Sum	\$0.00	Completed

CRC Gross Cost \$690,703.00

Total 406 HMP Cost \$0.00

Total Insurance Reductions \$0.00

CRC Net Cost \$690,703.00

Federal Share (90.00%) \$621,632.70

Non-Federal Share (10.00%) \$69,070.30

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.
- 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.
- 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.
- 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.
- 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.
- The Subrecipient provided the estimate for this PW. FEMA validated the estimate and found it to be reasonable for the work to be performed.

Insurance

Additional Information

5/7/2026

Does the Applicant have a Commercial Policy: Yes.

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

Property insurance coverage for the electrical distribution facilities represented on this project are not insured or insurable. No insurance relief is anticipated. No Obtain and Maintain requirement will be made.

FEMA requires the applicant to take reasonable efforts to pursue claims to recover insurance proceeds that it is entitled to receive from its insurer(s). In the event that any insurance proceeds are received for these expenses those proceeds must be reduced from FEMA Public Assistance funding to ensure no duplication of benefits has occurred.

No duplication of benefits from insurance is anticipated for work described in this application. In the event any part or all costs are paid by an insurance policy, a duplication of benefits from insurance will occur. Applicant must notify grantee and FEMA of such recoveries and the Sub-Grant award amount must be reduced by actual insurance proceeds.

No insurance requirements will be required for this project. Insurance requirements are specific to permanent work to replace, restore, repair, reconstruct, or construct buildings, contents, equipment, or vehicles. (FEMA Recovery Policy FP 206-086-1).

No insurance narrative will be produced or uploaded into documents or attachments.

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

O&M Requirements

There are no Obtain and Maintain Requirements on **FAAST [Transmission Priority Pole Replacements – Line 6700] (Transmission)**.

406 Mitigation

There is no additional mitigation information on **FAAST [Transmission Priority Pole Replacements – Line 6700] (Transmission)**.

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.
- Endangered Species Act (ESA) - The Applicant must provide documentation at close-out that proves completion of required Conservation Measures. Conditions for the Puerto Rican Boa 1. Inform all personnel about the potential presence of the PR boa and the VI boa in areas where the proposed work will be conducted. Photographs of the PR and VI Boa are to be prominently displayed at the site. The recipient must ensure that project personnel is able to correctly identify a PR or VI boa. For information on PR boa, please visit: <https://ecos.fws.gov/ecp/species/6628>. 2. Prior to any construction activity, including removal of vegetation and earth movement, the boundaries of the project area must be delineated, buffer zones, and areas to be excluded and protected, should be clearly marked in the project plan and in the field to avoid further habitat degradation into forested areas. Once areas are clearly marked, and prior to any construction activity, including site preparation, project personnel able to correctly identify a PR or VI boa must survey the areas to be cleared to ensure that no boas are present within the work area. Vehicle and equipment operation must remain on designated access roads/paths and within rights-of-way. 3. If a PR boa is found within any of the working or construction areas, activities should stop in the area where the boa was found. Do not capture the boa. If boas need to be moved out of harm's way, project personnel designated by the recipient shall immediately contact the Puerto Rico Department of Natural and Environmental Resources (PRDNER) Rangers for safe capture and relocation of the animal (PRDNER phone #s: 787-724-5700, 787-230-5550, 787-771-1124). If immediate relocation is not an option, project-related activities at this area must stop until the boa moves out of harm's way on its own. Activities at other work sites, where no boas have been found after surveying the area, may continue. 4. Measures should be taken to avoid and minimize PR boa casualties by heavy machinery or motor vehicles being used on site. Any heavy machinery left on site (staging) or near potential PR boa habitat (within 50 meters of potential boa habitat), needs to be thoroughly inspected each morning before work starts to ensure that no boas have sheltered within engine compartments or other areas of the equipment. If PR boas are found within vehicles or equipment, do not capture the animal and let it move on its own or call PRDNER Rangers for safe capture and relocation of the boa (PRDNER phone #s: 787-724-5700, 787-230-5550, 787-771-1124). If not possible, the animal should be left alone until it leaves the vehicle on its own. 5. PR boas may seek shelter in debris piles. Measures should be taken to avoid and minimize boa casualties associated with sheltering in debris piles as a result of project activities. Debris piles should be placed far away from forested areas. Prior to moving, disposing or shredding, debris piles should be carefully inspected for the presence of boas. If PR boas are found within debris piles, do not capture the animal and let it move on its own or call PRDNER Rangers for safe capture and relocation of the animal. If debris piles will be left on site, we recommend they be placed in areas that will not be disturbed in the future. 6. For all boa sightings (dead or alive), personnel designated by the recipient must record the time and date of the sighting and the specific location where the boa was found. Data should also include a photo of the animal dead or alive, and site GPS coordinates, and comments on how the animal was detected and its behavior. If the PR boa was accidentally killed as part of the project actions, please include information on what conservation measures had been implemented and what actions will be taken to avoid further killings. All boa-sighting reports should be sent to the USFWS Caribbean Ecological Services Field Office, Marelisa Rivera - Deputy Field Supervisor, 787- 851-7297 extension 206, 787-510-5207, marelisa_rivera@fws.gov.
- Resource Conservation and Recovery Act, aka Solid Waste Disposal Act (RCRA) 1. The Applicant shall handle, manage, and dispose of all types of hazardous waste in accordance with requirements of local, state, and federal laws, regulations, and ordinances. In addition, the Applicant shall ensure that all debris is separated and disposed of in a manner consistent with the PR DNER guidelines at a permitted site or landfill. The contractor/applicant will be responsible for the proper disposition of construction debris in authorized landfills providing the name, location,

coordinates and permits of the facility to the corresponding authorities. 2. The applicant is responsible to ensure damaged transformers are handled, managed and disposed of in accordance with all federal and state laws and requirements. Downed electrical equipment may contain toxic and hazardous materials, such as polychlorinated biphenyls (PCBs), and may spill these materials if a rupture occurs. Applicant is responsible for screening transformers that do or may contain PCBs and the area where any related spill occurred. The applicant is then responsible to handle, manage, dispose of, or recycle damaged equipment and contaminated soil as appropriate. Where possible, temporary measures should be implemented to prevent, treat, or contain further releases or mitigate the migration of PCBs into the environment. If damaged equipment or material storage containers must be stored temporarily, containers should be placed on hardened surface areas, such as a concrete or an asphalt for no more than 90 days. Excavated contaminated material should be disposed of in accordance with federal and state laws and requirements. 3. Unusable equipment, debris, white goods, scrap metal any other material shall be disposed in approved manner and location. In the event significant items are discovered during the implementation or development of the project the Applicant shall handle, manage and dispose petroleum products, hazardous materials and toxic waste in accordance 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 [Transmission Priority Pole Replacements – Line 6700] (Transmission)**.

Final Reviews

Final Review

Reviewed By MARTINEZ SANTIAGO, ISRAEL **Reviewed On** 07/22/2022 7:44 PM PDT

Review Comments

FEMA final review completed. Project ready for recipient review.

Recipient Review

Reviewed By Salgado, Gabriel **Reviewed On** 07/22/2022 8:16 PM PDT

Review Comments

Recipient review completed. Project is ready for Applicant review.

Project Signatures

Reviewed By Nieves, Ezequiel **Reviewed On** 08/02/2022 5:13 PM PDT

General Info

Project #	550896 P/W # 10837	Project Type	Specialized
Project Category	F - Utilities	Applicant	PR Electric Power Authority (000-UA2QU-00)
Project Title	FAAST [Transmission Priority Pole Replacements – Line 6700] (Transmission)	Event	4339DR-PR (4339DR)
Project Size	Large	Declaration Date	9/20/2017
Activity	9/20/2027	Incident Start Date	9/17/2017
Completion Date		Incident End Date	11/15/2017
Process Step	Obligated		

Damage Description and Dimensions

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

Damage # 921067; F (FAAST [Line 6700 Martin Peña TC to Villamar Sect.])

PA-02-PR-4339-PW-10837(0) The Disaster #4339DR, which occurred between 9/17/2017 and 11/15/2017 , caused: Damage #921067; FAAS [Line 6700 Martin Peña TC to Villamar Sect.] 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: Line 6700 Martin Peña TC to Villamar Sect. Facility Description: The specific facilities included in this proposed project are structures (including their foundations), framing and insulators, load break switches (manual and automated), conductors, guy wires, anchoring, grounding assemblies, and any other associated components. Most of the construction along this line segment consists of wood monopole guyed structures with some interspersed self-supporting steel and concrete monopoles. This line primarily traverses urban areas between Martin Peña TC substation and Villamar Sect substation. Approx. Year Built: 1970 Start GPS Latitude/Longitude: [REDACTED] End 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 Location: Puerto Rico Electrical Power Authority Island Wide PA-02-PR-4339-PW-10837(1)

Final Scope

921067 FAAS [Line 6700 Martin Peña TC to Villamar Sect.]

PA-02-PR-4339-PW-10837(0)

921067 FAAS [Line 6700 Martin Peña TC to Villamar Sect.]

Introduction

The purpose of this document is to submit for approval the detailed Scope of Work ("SOW") to COR3 and FEMA for the Transmission Priority Pole Replacement ? Line 6700 Project under DR-4339-PR Public Assistance. The document provides a description of the project including scope, schedule, and cost estimates as well as Environmental & Historical Preservation ("EHP") requirements. LUMA Energy is seeking approval from COR3 and FEMA for project funding to repair, restore, or replace the eligible facilities.

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

Facilities

The facilities listed below are part of the 3.1 mile long 38 kV overhead transmission Line 6700. This line is a Near-Term rebuild priority identified by LUMA. However, these structures were identified as having System Remediation Plan (SRS) issues and were considered degraded during a High-Level Assessment (HLA). Because of risk to the public these structures will be replaced by the Transmission Priority Pole Replacement Program on an expedited basis. Later, the remainder of the line will be rebuilt, except for the structures that would already have been replaced to LUMA Codes & Standards.

Line FID Coordinates Voltage Construction

Level (kV) Date

L6700 Martin Pena TC [redacted] 38 kV 1965

? Seboruco TO

15131766	[redacted]
15131791	[redacted]
15131795	[redacted]
15131798	[redacted]
15131801	[redacted]
15131804	[redacted]
15131815	[redacted]
15131817	[redacted]

Project Scope of Work

Proposed 428 Public Assistance Scope of Work:

Martin Peña TC - Seboruco TO Structures Scope:

Remove six 60ft wood poles and install six 70ft galvanized steel S8 poles in the same location. Cross arms, insulators and all associated hardware will also be replaced along with the new structure.

Remove three 65ft concrete poles and install three 70ft galvanized steel S8 poles in the same location. Cross arms, insulators and all associated hardware will also be replaced along with the new structure.

Project Estimate

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

Project Cost Estimate Total 428 Public Assistance

Planning \$57,239

Management \$76,177

Transmission Line Construction \$505,537

General Conditions \$68,084

Contingency \$117,082

Total Project Cost Estimate \$824,119

Work to be Completed: \$824,119 - \$133,416 (FAASt A&E 335168) = \$690,703

Project Notes

1. For a full description of the Scope of Work contents for this project, plus related Appendix, please refer to file: 550896-DR4339PR-Detailed SOW - Line 6700 Rev.0.pdf.

2. WTBC costs were obtained from Applicant provided document: 550896-DR4339PR-Appendix G - Detailed Cost Estimate - Line 6700 Rev.0.pdf.

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

4. For Environmental & Historical Preservation (EHP) requirements, details, and supporting documentation please refer to pages 8 to 12 of the document labeled: 550896-DR4339PR-Detailed SOW - Line 6700 Rev.0.pdf.

PA-02-PR-4339-PW-10837(1)

406 HMP Scope

PA-02-PR-4339-PW-10837(0)

PA-02-PR-4339-PW-10837(1)

Cost

Code	Quantity	Unit	Total Cost	Section
3510	1	Lump Sum	(\$133,416.00)	Uncompleted
9001	1	Lump Sum	\$824,119.00	Uncompleted
9201	1	Lump Sum	\$0.00	Completed

CRC Gross Cost \$690,703.00

Total 406 HMP Cost \$0.00

Total Insurance Reductions \$0.00

CRC Net Cost \$690,703.00

Federal Share (90.00%) \$621,632.70

Non-Federal Share (10.00%) \$69,070.30

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.
- 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.
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- 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.
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- The Subrecipient provided the estimate for this PW. FEMA validated the estimate and found it to be reasonable for the work to be performed.

Insurance

Additional Information

5/7/2026

Does the Applicant have a Commercial Policy: Yes.

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

Property insurance coverage for the electrical distribution facilities represented on this project are not insured or insurable. No insurance relief is anticipated. No Obtain and Maintain requirement will be made.

FEMA requires the applicant to take reasonable efforts to pursue claims to recover insurance proceeds that it is entitled to receive from its insurer(s). In the event that any insurance proceeds are received for these expenses those proceeds must be reduced from FEMA Public Assistance funding to ensure no duplication of benefits has occurred.

No duplication of benefits from insurance is anticipated for work described in this application. In the event any part or all costs are paid by an insurance policy, a duplication of benefits from insurance will occur. Applicant must notify grantee and FEMA of such recoveries and the Sub-Grant award amount must be reduced by actual insurance proceeds.

No insurance requirements will be required for this project. Insurance requirements are specific to permanent work to replace, restore, repair, reconstruct, or construct buildings, contents, equipment, or vehicles. (FEMA Recovery Policy FP 206-086-1).

No insurance narrative will be produced or uploaded into documents or attachments.

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

O&M Requirements

There are no Obtain and Maintain Requirements on **FAAST [Transmission Priority Pole Replacements – Line 6700] (Transmission)**.

406 Mitigation

There is no additional mitigation information on **FAAST [Transmission Priority Pole Replacements – Line 6700] (Transmission)**.

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.
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- Endangered Species Act (ESA) - The Applicant must provide documentation at close-out that proves completion of required Conservation Measures. Conditions for the Puerto Rican Boa 1. Inform all personnel about the potential presence of the PR boa and the VI boa in areas where the proposed work will be conducted. Photographs of the PR and VI Boa are to be prominently displayed at the site. The recipient must ensure that project personnel is able to correctly identify a PR or VI boa. For information on PR boa, please visit: <https://ecos.fws.gov/ecp/species/6628>. 2. Prior to any construction activity, including removal of vegetation and earth movement, the boundaries of the project area must be delineated, buffer zones, and areas to be excluded and protected, should be clearly marked in the project plan and in the field to avoid further habitat degradation into forested areas. Once areas are clearly marked, and prior to any construction activity, including site preparation, project personnel able to correctly identify a PR or VI boa must survey the areas to be cleared to ensure that no boas are present within the work area. Vehicle and equipment operation must remain on designated access roads/paths and within rights-of-way. 3. If a PR boa is found within any of the working or construction areas, activities should stop in the area where the boa was found. Do not capture the boa. If boas need to be moved out of harm's way, project personnel designated by the recipient shall immediately contact the Puerto Rico Department of Natural and Environmental Resources (PRDNER) Rangers for safe capture and relocation of the animal (PRDNER phone #s: 787-724-5700, 787-230-5550, 787-771-1124). If immediate relocation is not an option, project-related activities at this area must stop until the boa moves out of harm's way on its own. Activities at other work sites, where no boas have been found after surveying the area, may continue. 4. Measures should be taken to avoid and minimize PR boa casualties by heavy machinery or motor vehicles being used on site. Any heavy machinery left on site (staging) or near potential PR boa habitat (within 50 meters of potential boa habitat), needs to be thoroughly inspected each morning before work starts to ensure that no boas have sheltered within engine compartments or other areas of the equipment. If PR boas are found within vehicles or equipment, do not capture the animal and let it move on its own or call PRDNER Rangers for safe capture and relocation of the boa (PRDNER phone #s: 787-724-5700, 787-230-5550, 787-771-1124). If not possible, the animal should be left alone until it leaves the vehicle on its own. 5. PR boas may seek shelter in debris piles. Measures should be taken to avoid and minimize boa casualties associated with sheltering in debris piles as a result of project activities. Debris piles should be placed far away from forested areas. Prior to moving, disposing or shredding, debris piles should be carefully inspected for the presence of boas. If PR boas are found within debris piles, do not capture the animal and let it move on its own or call PRDNER Rangers for safe capture and relocation of the animal. If debris piles will be left on site, we recommend they be placed in areas that will not be disturbed in the future. 6. For all boa sightings (dead or alive), personnel designated by the recipient must record the time and date of the sighting and the specific location where the boa was found. Data should also include a photo of the animal dead or alive, and site GPS coordinates, and comments on how the animal was detected and its behavior. If the PR boa was accidentally killed as part of the project actions, please include information on what conservation measures had been implemented and what actions will be taken to avoid further killings. All boa-sighting reports should be sent to the USFWS Caribbean Ecological Services Field Office, Marelisa Rivera - Deputy Field Supervisor, 787- 851-7297 extension 206, 787-510-5207, marelisa_rivera@fws.gov.
- Resource Conservation and Recovery Act, aka Solid Waste Disposal Act (RCRA) 1. The Applicant shall handle, manage, and dispose of all types of hazardous waste in accordance with requirements of local, state, and federal laws, regulations, and ordinances. In addition, the Applicant shall ensure that all debris is separated and disposed of in a manner consistent with the PR DNER guidelines at a permitted site or landfill. The contractor/applicant will be responsible for the proper disposition of construction debris in authorized landfills providing the name, location,

coordinates and permits of the facility to the corresponding authorities. 2. The applicant is responsible to ensure damaged transformers are handled, managed and disposed of in accordance with all federal and state laws and requirements. Downed electrical equipment may contain toxic and hazardous materials, such as polychlorinated biphenyls (PCBs), and may spill these materials if a rupture occurs. Applicant is responsible for screening transformers that do or may contain PCBs and the area where any related spill occurred. The applicant is then responsible to handle, manage, dispose of, or recycle damaged equipment and contaminated soil as appropriate. Where possible, temporary measures should be implemented to prevent, treat, or contain further releases or mitigate the migration of PCBs into the environment. If damaged equipment or material storage containers must be stored temporarily, containers should be placed on hardened surface areas, such as a concrete or an asphalt for no more than 90 days. Excavated contaminated material should be disposed of in accordance with federal and state laws and requirements. 3. Unusable equipment, debris, white goods, scrap metal any other material shall be disposed in approved manner and location. In the event significant items are discovered during the implementation or development of the project the Applicant shall handle, manage and dispose petroleum products, hazardous materials and toxic waste in accordance 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 [Transmission Priority Pole Replacements – Line 6700] (Transmission)**.

Final Reviews

Final Review

Reviewed By Not Reviewed

Reviewed On Not Reviewed

Review Comments

No comments available for the Final Review step

Recipient Review

Reviewed By Not Reviewed

Reviewed On Not Reviewed

Review Comments

No comments available for the Final Review step

Project Signatures

Reviewed By Unsigned

Reviewed On Unsigned

General Info

Project #	550896 P/W # 10837	Project Type	Specialized
Project Category	F - Utilities	Applicant	PR Electric Power Authority (000-UA2QU-00)
Project Title	FAAST [Transmission Priority Pole Replacements – Line 6700] (Transmission)	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 #921067; FAASt [Line 6700 Martin Peña TC to Villamar Sect.]

General Facility Information:

- **Facility Type:** Power generation, transmission, and distribution facilities
- **Facility:** Line 6700 Martin Peña TC to Villamar Sect.
- **Facility Description:** The specific facilities included in this proposed project are structures (including their foundations), framing and insulators, load break switches (manual and automated), conductors, guy wires, anchoring, grounding assemblies, and any other associated components. Most of the construction along this line segment consists of wood monopole guyed structures with some interspersed self-supporting steel and concrete monopoles. This line primarily traverses urban areas between Martin Pena TC substation and Villamar Sect substation.
- **Approx. Year Built:** 1970
- **Start GPS Latitude/Longitude:** [REDACTED]
- **End GPS Latitude/Longitude:** [REDACTED]

Final Scope

921067 FAASt [Line 6700 Martin Peña TC to Villamar Sect.]

***** VERSION 2 *****

Version 2 was created to capture the LUMA change in cost of the project and request an amendment to the Scope of Work (SOW) and Hazard Mitigation proposal change/additions. LUMA requests the following component additions to the project scope of work and cost estimate: the replacement of 9 round steel poles of 145mph windspeed resistance ASCE/SEI 48-19 with new nine (S-8) steel galvanized, 12-sided, tapered shaft distribution pole to increase the strength of the pole by increasing the wind tolerance by design to 160mph as a HM measure instead. SOW from previous version has been removed from current SOW. It can be found in the "Versioning and Amendments" tab in GM.

INTRODUCTION

Pursuant to FEMA's Post-Fixed Cost Estimate Obligation SOP (the "SOP") for FAASt projects, FAASt subrecipients must provide to FEMA recovery project scopes of work ("SOW") for the proposed construction work to be performed. The SOW may include § 406 hazard mitigation proposals ("HMPs"). The SOW defines the activities that will be performed using Public Assistance ("PA") funding.

According to the SOP, FEMA "anticipates that [SOW] submissions might include preliminary designs, including drawings and cost estimates. FEMA also recognizes that, generally, architects and engineers do not include or delineate the information needed to enable FEMA to complete programmatic reviews. Therefore, in those cases, subrecipients must ensure to submit all the information described [in the SOP] and not limit the submission to a drawing set. Refer to Part C - II. "Recipient/Subrecipient Checklist for Submissions as a guide to review completeness." SOP at 4.

This document contains the detailed SOW for FEMA PA Project 136271 – **Transmission Priority Pole Replacement Program Line 6700** under DR-4339-PR Public Assistance. The document provides a detailed description of the project, scope of Public Assistance "PA" construction activities to be

completed, common EHP review information, proposed hazard mitigation measures, and project cost estimates. LUMA is seeking approval from COR3 and FEMA for Public Assistance "PA" funding for the scope described in this document.

LUMA submits this Detailed SOW pursuant to the Transmission and Distribution Operations and Maintenance Agreement between the Puerto Rico Electric Power Authority ("PREPA"), the Puerto Rico Public-Private Partnerships Authority ("P3A"), and LUMA, and in accordance with the Consent to Federal Funding Letter issued by PREPA and P3A, which collectively provides the necessary consent for LUMA, as agent of PREPA, to undertake work in connection with any Federal Funding requests related to the T&D System submitted to FEMA. References to "Subrecipient" herein refer to PREPA pursuant to this agreement and consent for LUMA to act as its agent with respect to federal funds.

PROJECT DESCRIPTION

LUMA determined that the nine (9) poles identified in Section 7.0 of this DSOW were degraded during a high-level assessment. These nine (9) poles are part of the 3.1 circuit miles of overhead transmission for 38kV Line 6700. This project will replace the nine (9) degraded poles through the Transmission Priority Pole Replacement Program on an expedited basis.

FACILITIES LIST

The following table identifies the start and end GPS coordinates of the TL 6700 segment from Martin Peña TC to Seboruco TO.

Line Segment	Line Number	GPS Start	GPS End	Voltage (kV)
Martin Peña TC – Seboruco TO	6700			38

The following table identifies the location of each pole to be replaced in this project.

Pole	FID	Lat	Long
1	15131760		
2	15131766		
3	15131791		
4	15131795		
5	15131798		
6	15131801		
7	15131804		
8	15131815		
9	15131817		

PROJECT AREA MAP WITH BOUNDARIES OF CONSTRUCTION

See the attached map of the T-Pole 6700

For additional information please refer to the TL6700 TC Map at **Appendix J**.

§ 428 SCOPE OF WORK

The proposed type of work for this project:

- ? Standard Project: Restores the facility/facilities to pre-disaster design and function to locally adopted codes/standards and FEMA-approved industry standards.
- ? Improved Project: Restores the pre-disaster function of the facilities and incorporates improvements or changes to its pre-disaster design not required by codes or standards.
- ? Subrecipient's request letter included, see **Appendix** ____.
- ? Recipient's approval letter included, see **Appendix** ____.
- ? Alternate Project: Does not restore the pre-disaster function of the damage facility. The Subrecipient, through the Recipients, must obtain approval from FEMA.
- ? Subrecipient's request letter included, see **Appendix** ____.
- ? Recipient's approval letter included, see **Appendix** _____. In the obligated submission, LUMA proposed:

· Martin Peña TC - Seboruco TO Structures Scope:

- o Remove six (6) 60ft wood poles and install six (6) 70ft round galvanized steel S8 poles in the same location. Cross arms, insulators and all associated hardware will also be replaced along with the new structure.
- o Remove three (3) 65ft concrete poles and install three (3) 70ft round galvanized steel S8 poles in the same location. Cross arms, insulators and all associated hardware will also be replaced along with the new structure.

The requested change for this Version is as follows:

Nine (9) poles will be replaced with this 406-mitigation proposal:

- Replace nine (9) 70ft round galvanized steel poles of 145mph windspeed resistance ASCE/SEI 48-19 with nine (9) new 70ft 12-sided galvanized steel pole, tapered shaft distribution pole to increase the strength of the pole by increasing the wind tolerance by design to 160mph.

For more information, refer to the amendment request letter of this project.

DESCRIPTION OF PROPOSED WORK TO BE PERFORMED

1. Poles and components will be replaced per the design methodology and Project Design Criteria.
2. Martin Peña TC – Seboruco TO. Structures Scopes:
 - Remove six (6) 60ft wood poles and install six (6) 70ft galvanized steel (round) poles in the same location. Cross arms, insulators and all associated hardware will also be replaced along with the new structure.
 - Remove three (3) 65ft concrete poles and install three (3) 70ft galvanized steel (round) poles in the same location. Cross arms, insulators and all associated hardware will also be replaced along with the new structure

CODES & STANDARDS

Per FEMA's SOP, the locally adopted codes/standards and FEMA-approved industry standards used for this project are provided below:

3. Consensus-based codes, per FEMA (Public Assistance Alternative Procedures (Section 428) Guide for Permanent Work FEMA-4339-DR-PR February 2020).
4. Industry standards per FEMA Recovery Policy FP-104-009-5, Version 2, Implementing Section 20601 of the 2018 Bipartisan Budget Act through the Public Assistance Program.
5. FEMA Recovery Interim Policy FP-104-009-11 Version 2.1, Consensus-Based Codes, Specifications, and Standards for Public Assistance.
6. LUMA's latest Design Criteria Document (DCD) which aggregates the design considerations of most of the consensus-based codes, specifications, and standards listed in FEMA Recovery Interim Policy 104-009-11 Version 2.1 (December 20, 2019)

PROJECT COST ESTIMATE (PCE)

The estimated costs (compliant with **Class 3 Accuracy +/-30%**) for completing the project are summarized in the table(s) below. The cost estimate(s) was developed utilizing preliminary Architectural and Engineering design information. For a more detailed cost estimate refer to the referenced appendix/appendices.

Cost Estimate			
Cost Element	428	406	PROJECT TOTAL
PLANNING	\$79,999.40	\$1,119.44	\$81,118.84

MANAGEMENT	\$154,139.88	\$2,156.90	\$156,642.62
Transmission Pole Replacement and Critical Repairs 38 KV TL-6700 Martin TC to Seboruco TO, FAASt#: 550896	\$965,128.10	\$13,514.52	\$978,642.62
GENERAL CONDITIONS	\$50,552.27	\$707.38	\$51,259.65
COST TOTALS	\$1,249,819.66	\$17,498.23	\$1,267,317.89
DEDUCTIONS	TOTAL INSURANCE PROCEEDS RECEIVED		\$ -
	DE-OBLIGATION TO FAASt IF APPLICABLE?		\$ -
FAASt ALLOCATIONS	FAASt PROJECT #550897 – 428		\$1,004,655.35
	FAASt PROJECT #550897 – 406 HM		\$17,498.23
	FAASt Project #550896 TOTAL:		\$1,022,153.58
	FAASt A&E #355168 - 428		\$86,031.65
	FAASt A&E #355168 – 406 HM		\$1,203.85
	FAASt A&E #335168 TOTAL:		\$87,235.50
	FAASt E&M #673691 - 428		\$159,132.66
	FAASt E&M #673691 – 406 HM		\$ 10,982.34
	FAASt E&M #673691 TOTAL		\$170,115.00

Refer to **Appendix E** – Detailed Cost Estimate

Project Cost Summary, Version 2

Work to be Completed (WTBC): \$1,249,819.66

A&E Deduction: - \$86,031.65

E&M Deduction: - \$159,132.66

Total Cost: \$1,004,655.35

VERSION SUMMARY OF KEY CHANGES:

Version 0: \$690,703.00 (WTBC, A&E Deduction)

Version 1: No Cost Change (Emmie Migration)

Version 2: \$1,022,153.58 (WTBC, A&E Deduction, E&M Deduction, Reconcile funding from De-obligation of V0)

Project Notes:

- A&E costs included in this project will be reduced from this project and obligated under the FAASt Project #335168, A&E, as shown in the table above.
- Equipment and material costs included in this project will be reduced from this project and obligated under FAASt Project #673691, Equipment and Materials, as shown in the table above. Only the base costs of equipment and/or material will be reduced from this project (not labor). All costs associated with Planning, Management, General Conditions, and Contingencies will remain in this project.
- Refer to detailed SOW provided in document: 550896-DR4339PR DSOW TL 6700 Signed 2026-01-27 15_34-1.pdf.
- Refer to detailed cost estimate in document: 550896-DR4339PR LPCE T-Pole Priority Replacement TL-6700 Martín Peña TC to Seboruco TO Rev Jan-15-2025 (FEMA)(1).xlsx.
- This project is part of 136271-MEPA078 Puerto Rico Electrical Power Authority Island Wide FAASt Project.
- Attachments: The following attachments and appendices are provided with this DSOW:

Item	Document Description or Filename
A	Approved Supplier List

B	General Arrangement
C	LUMA Waste Management Plan
D	Engineering Plans
E	LUMA Wildlife, Avian, and Historical Protection Procedure #335
F	Consent to Federal Funding Letter - FEMA COR3
G	Detailed Cost Estimate - Line 6700
H	PAPPG Appendix J - Cost Effective Hazard Mitigation Measures
I	Line 6700 FEMA-EHP Checklist
J	Line 6700 Environmental Maps
K	HM Narrative TL 6700

406 HMP Scope

Project number: 550896; FAASt [Transmission Priority Pole Replacements – Line 6700] (Transmission)

Damage: 921067; FAASt [Line 6700 Martin Peña TC to Villamar Sect.]

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

Location: San Juan, Puerto Rico

GPS Latitude/Longitude: Start: [REDACTED] End: [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 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 Method of Repair (MOR) included the replacement of the damaged critical distribution pole (wood), cross-arms, insulators, guy wires, and all associated hardware needed for the new structure. The facilities listed below is part of the 3.1 circuit miles of 38kV Overhead Transmission Line 6700 from Martin Peña TC to Seboruco TO segment. The Subrecipient determined that nine (9) poles were degraded during a high-level assessment. Given that, this project will replace the nine (9) degraded poles through the Transmission Priority Pole Replacement Program on an expedited basis.

In order to minimize the damages in a future event, the sub-recipient proposes as a mitigation measure to increase the strength of the poles by replacing it with a with new steel galvanized, 12-sided, tapered shaft distribution pole to mitigate future damage to the structure due to high wind (160mph). Note: The FEMA Accelerated Award Strategy (FAASt) MOR included the PREPA distribution standards and specifications that were based on a 145mph sustained winds. However, the new 2021 PREPA Standard updates the design-criteria to a 160mph sustained winds resistant. The 160mph wind tolerance mitigation measure will protect and make the affected infrastructure more resistant, stronger, and resilient to similar hazards.

Hazard Mitigation Proposal (HMP) Scope of Work:

In order to prevent, reduce and/or eliminate future natural disaster damage, the subrecipient proposed the following mitigation measures:

Mitigation Measures (*Replacement*)

To avoid damage in a future event, the Subrecipient proposes as a mitigation measure to increase the strength of the poles by replacing it with a 12-sided, tapered shaft distribution pole to mitigate future damage to the structure due to high wind (160mph). The above mitigation measures will protect and make the affected infrastructure more resistant, stronger, and resilient to similar hazards. Refer to Appendix J: Section VLD.1 of the PAPPG V5.?

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

1. Monacillos TC – Sabana Llana TC O Replace nine (9ea) 70ft round galvanized steel
poles of 145mph windspeed resistance ASCE/SEI 48-19 with nine **(9ea)** new 70ft 12-sided galvanized steel pole, tapered shaft distribution pole to increase the strength of the
pole **by increasing the wind tolerance by design to 160mph.**

Hazard Mitigation Proposal (HMP) Cost:

Total Net Hazard Mitigation Cost (Base Cost) = \$ 12,651.05
+ HM (Subrecipient A&E, Management & General Conditions) = \$ 4,847.18
Hazard Mitigation Total Cost = **\$17,498.23**

Hazard Mitigation Proposal (HMP) Cost Distribution:

Equipment and Materials (E&M) = \$10,982.34
Architecture and Engineering (A&E) = \$ 1,203.85
Construction Cost = \$ 5,312.04
Hazard Mitigation Total Cost = **\$17,498.23**

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 Subrecipient 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 **\$17,498.23 (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	1	Lump Sum	(\$133,416.00)	Uncompleted
9001	1	Lump Sum	\$824,119.00	Uncompleted
9201	1	Lump Sum	\$0.00	Completed
9001	1	Lump Sum	(\$690,703.00)	Uncompleted
3510	1	Lump Sum	(\$86,031.65)	Uncompleted
9001	1	Lump Sum	(\$159,132.66)	Uncompleted
9001	1	Lump Sum	\$1,249,819.66	Uncompleted

CRC Gross Cost \$1,004,655.35

Total 406 HMP Cost \$17,498.23

Total Insurance Reductions \$0.00

CRC Net Cost \$1,022,153.58

Federal Share (90.00%) \$919,938.23

Non-Federal Share (10.00%) \$102,215.35

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.
- 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.
- 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.
- 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.
- 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.
- The Subrecipient provided the estimate for this PW. FEMA validated the estimate and found it to be reasonable for the work to be performed.

Insurance

Additional Information

5/7/2026

Does the Applicant have a Commercial Policy: Yes.

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

Property insurance coverage for the electrical distribution facilities represented on this project are not insured or insurable. No insurance relief is anticipated. No Obtain and Maintain requirement will be made.

FEMA requires the applicant to take reasonable efforts to pursue claims to recover insurance proceeds that it is entitled to receive from its insurer(s). In the event that any insurance proceeds are received for these expenses those proceeds must be reduced from FEMA Public Assistance funding to ensure no duplication of benefits has occurred.

No duplication of benefits from insurance is anticipated for work described in this application. In the event any part or all costs are paid by an insurance policy, a duplication of benefits from insurance will occur. Applicant must notify grantee and FEMA of such recoveries and the Sub-Grant award amount must be reduced by actual insurance proceeds.

No insurance requirements will be required for this project. Insurance requirements are specific to permanent work to replace, restore, repair, reconstruct, or construct buildings, contents, equipment, or vehicles. (FEMA Recovery Policy FP 206-086-1).

No insurance narrative will be produced or uploaded into documents or attachments.

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

O&M Requirements

There are no Obtain and Maintain Requirements on **FAAST [Transmission Priority Pole Replacements – Line 6700] (Transmission)**.

406 Mitigation

There is no additional mitigation information on **FAAST [Transmission Priority Pole Replacements – Line 6700] (Transmission)**.

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.
- On May 16, 2025, the Secretary of the U.S. Department of Energy (DOE) issued Order 202-25-2 (Order), pursuant to the authority vested in him by section 202(c) of the Federal Power Act (FPA), 16 U.S.C. § 824a(c), and section 301(b) of the Department of Energy Organization Act, 42 U.S.C. § 7151(b). The Order sought to expedite repair and maintenance efforts to the electrical grid of Puerto Rico by directing the Puerto Rico Electric Power Authority (PREPA) to perform vegetation management, including vegetation clearing to re-establish a right-of-way, for particular transmission and distribution facilities in the Territory as specified in the Order. The Order required PREPA to identify certain parameters by which the directed work would be performed, and required that all work be performed, to the maximum extent practicable, in a manner consistent with all applicable Federal, State, or local environmental laws or regulations and minimize any adverse environmental impacts. However, pursuant to Section 202(c)(3) of the FPA, to the extent any omission or action taken by PREPA that was necessary to comply with the Order, including any omission or action taken to voluntarily comply with the Order, caused PREPA to not comply with any Federal, State, or local environmental law or regulation, including any environmental conditions in this REC's "Standard Conditions," such omission or action shall not be considered a violation of such environmental law or regulation, or subject PREPA to any requirement, civil or criminal liability, or citizen suit under such environmental law or regulation. On August 15, 2025, DOE reissued the Order to direct PREPA to also perform asset management, including component refurbishment and replacement. To renew/reissue the Order, DOE was required to consult with the primary Federal agency with expertise in the environmental interest protected by such law or regulation and include in the Order conditions necessary to minimize any adverse environmental impacts to the extent practicable. Pursuant to Section 202(c)(4)(B) of the FPA, DOE provided the relevant agencies the opportunity to submit conditions for work performed under the Order, to be included in the Order. According to DOE, no conditions were submitted by the agencies for inclusion in the Order. On November 12, 2025, DOE reissued the Order to direct PREPA to also perform asset management, including component refurbishment and replacement. DOE and FEMA have agreed that DOE is the lead agency for activities that fall under the prior and any future DOE 202(c) orders issued under the Federal Power Act to resolve the current and related emergencies in Puerto Rico. FEMA has requested that DOE provide FEMA with all documentation relating to their EHP compliance. FEMA will review and incorporate all available information and data for this project pertaining to applicable environmental laws and regulations into this REC when it is received from DOE. On February 10, 2026, and again on May 7, 2026, DOE reissued the Order to direct PREPA to perform vegetation management, including vegetation clearing to re-establish the right-of-way, and asset management, including component refurbishment and replacement, to ensure operational availability of the transmission and distribution facilities.

EHP Additional Info

There is no additional environmental historical preservation on **FAAST [Transmission Priority Pole Replacements – Line 6700] (Transmission)**.

Final Reviews

Final Review

Reviewed By LEFRANC-GARCIA, CARLOS L.

Reviewed On 06/11/2026 8:54 PM PDT

Review Comments

Version 2 was created to capture the LUMA change in cost of the project and request an amendment to the Scope of Work (SOW) and Hazard Mitigation proposal change/additions. LUMA requests the following component additions to the project scope of work and cost estimate: the replacement of 9 round steel poles of 145mph windspeed resistance ASCE/SEI 48-19 with new nine (S-8) steel galvanized, 12-sided, tapered shaft distribution pole to increase the strength of the pole by increasing the wind tolerance by design to 160mph as a HM measure instead. SOW from previous version has been removed from current SOW. It can be found in the "Versioning and Amendments" tab in GM. CRC Gross Cost \$1,004,655.35, Total 406 HMP Cost \$17,498.23 , Federal Share (90.00%) \$919,938.23

Recipient Review

Reviewed By Mulero, Noel

Reviewed On 06/22/2026 9:13 PM PDT

Review Comments

Recipient review completed. Applicant must ensure to compliance with all regulatory requirements, Record of Environmental Consideration (REC) Special Conditions and PA policy. Project is ready for applicant review.

Project Signatures

Reviewed By Unsigned

Reviewed On Unsigned

Fixed Cost Offer

As a Public Assistance (PA) Subrecipient PR Electric Power Authority (000-UA2QU-00), in accordance with Section 428 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, the Applicant agrees to accept a permanent work subaward based on a Fixed Cost Offer in the amount of \$1,022,153.58 for subaward number 10837 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.

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-10837(12234)	\$690,703.00	90%	\$621,632.70	8/5/2022
1	Eligible	Notified		\$0.00	90%	\$0.00	

Drawdown History

EMMIE Drawdown Status As of Date	IFMIS Obligation #	Expenditure Number	Expended Date	Expended Amount
1/30/2024	4339DRPRP00108371	20172ZVI-01292024	1/26/2024	\$155,408.18

Obligation History

Version #	Date Obligated	Obligated Cost	Cost Share	IFMIS Status	IFMIS Obligation #
0	8/5/2022	\$621,632.70	90%	Accepted	4339DRPRP00108371
2	7/6/2026	\$298,305.53	90%	Accepted	4339DRPRP00108371

Exhibit 2

(public version, confidential version to be filed under seal of confidentiality)

**Department of Homeland Security
Federal Emergency Management Agency**

v0

General Info

Project #	956332	P/W #	108147	Project Type	Specialized
Project Category	F - Utilities	Applicant	PR Electric Power Authority (000-UA2QU-00)		
Project Title	FAASt [San Juan Region 1 - Feeder 2401-01] (Vegetation)			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 #1716278; San Juan Region 1 - Feeder 2401-01

General Facility Information:

- **Facility Type:** Power generation, transmission, and distribution facilities
- **Facility:** Feeder 2401-01
- **Facility Description:** Single line distribution feeder project for line 2401-01 (4.80/8.32 kV) in San Jauna Region 1. The total length miles 85.26.
- **Approx. Year Built:** 1980
- **Start GPS Latitude/Longitude:** [REDACTED]
- **End GPS Latitude/Longitude:** [REDACTED]

Final Scope

1716278 San Juan Region 1 - Feeder 2401-01

Project 136271 (hereinafter PREPA FAASt Project) authorized \$9,459,885,412.39 (Federal Share) to be awarded to the Puerto Rico Electric Power Authority (PREPA, Subrecipient) as a fixed cost estimate (FAASt FCE agreement) based on eligible work without detailed scopes of work to restore disaster-damaged facilities. Eligible work for the Transmission and Distribution (T&D) system included restoration of:

Broken structures due to high winds such as poles/towers (counted as broken when poles where inclined, bent, torn, and/or cracked); and other damages/broken components such as transformers, insulators, conductors, grounding system, jumpers, Gang Operated Air Breakers (GOABs), pole hardware, guy wires and anchors.

FEMA deferred the 406 Hazard Mitigation Proposal (HMP) fixed cost offer in the PREPA FAASt Project until the Subrecipient submits its actual recovery solutions. FEMA also issued a clarification letter regarding whether hazard mitigation funding under Section 404 or Section 406 of the Stafford Act may be made available for the execution of a one-time, island-wide vegetation clearing and removal operation intended to mitigate the threat to the existing vegetation, if untended to, poses to Puerto Rico's electric T&D system. See FEMA's letter to COR3, document Signed Vegetation Management March 24 2023.pdf. The Subrecipient's actual recovery solution seeks a one-time Island-wide vegetation clearance and removal operation intended to mitigate the threat to the existing vegetation, if untended to, poses to Puerto Rico's electric T&D system. The actual recovery solution seeks to mitigate the Puerto Rico's electric T&D system, including areas without infrastructure repairs.

The actual recovery solution (scope and cost) will be captured in multiple individual projects (hereinafter Vegetation clearance HMP Sub-FAASt

projects) to provide flexibility and enable multiple programmatic reviews simultaneously. The Vegetation clearance HMP Sub-FAAST projects do not include infrastructure repair work.

This project captures a portion of the Island-wide actual recovery solution, specifically the one-time vegetation clearance and removal operation intended to mitigate the San Juan Region 1 Feeder 2401-01 (see project note #1 and #2).

FEMA 406 Hazard Mitigation (HM) team will review this actual recovery solution and issue a FCE offer for the portion of the recovery solution that reduces risk of future similar damages. The Work to be Completed will be captured in the 406 HM scope section. To address the overlap between the incidental vegetation work needed to carry out the repairs and the mitigation work, the Vegetation clearance HMP Sub-FAAST projects will be adjusted as describe in FEMA-4339-DR-PR Public Assistance PREPA FAAST Post-Fixed Cost Estimate Obligation Vegetation HMP Approach: Distribution. See document FAASTVegetationHMPApproach_Distribution_03.24.2025.pdf. The PA Scope of Work and Cost is limited to the incidental vegetation clearance. No permanent infrastructure repairs are included as part of this scope. WTBC Cost (PA) = \$34,908.51 per mile. Therefore, the total cost (PA) for this project will be \$2,664,861.34

D#	PA Vegetation Clearance Overlap per mile	Total miles	WTBC - PA Cost with Subrecipient Management & General Conditions	A&E - PA	Total - PA
1716278	\$ 34,908.51	82.68	\$2,886,235.61	\$221,374.27	\$2,664,861.34

Work to be Completed Total: \$2,886,235.61

A&E Deduction (Global A&E FAAST 335168): -\$221,374.27

Project Total: \$2,664,861.34

Project Notes:

1. This is a Distribution-Vegetation clearance HMP Sub-FAAST project.
2. Vegetation clearance HMP Sub-FAAST projects will be written according to line type (Distribution: 13.2kV and down, and Transmission: 38 kV, 115kV, and 230 kV) because of the different ROWs and other characteristics. Multiple projects of each type will be submitted and reviewed for eligible PA 406 HM funding. Vegetation clearing work will only be submitted for those areas that vegetation represents strike potential (may cause future similar damage to the T&D system when subject to high winds). However, at times there is overlap between these lines (i.e., multiple distribution lines (13.2kV and down) coexist on the same pole infrastructure, transmission lines (38 KV and up) can be located above distribution lines within the same right of way, various lines may pass each other with overlapping right of ways, etc.). In the submittal of this project the Subrecipient’s Authorized Representative attests that only the vegetation clearance submitted is to reduce strike potential and that the ROW for these lines has been, and will be, counted only once to avoid duplication within the vegetation clearance projects.
3. For more details of the requirements and conditions for the execution of a one-time, island- wide vegetation clearance and removal operation considered as an eligible Section 406 hazard mitigation proposal (HMP), please refer to document labeled: Attachment A - FEMA letter dated March 24 2023.pdf.
4. For details on the SOW, refer to filename 956332 - FAAST [San Juan Region 1 - Feeder 2401- 01] (Vegetation) DSOW Rev1.pdf
5. Vegetation clearance funds will not be allocated to SubFAAST projects.
6. A&E cost included in this project will be reduced from this project and obligated under the FAAST Project #335168, A&E, as shown in the table above. The A&E project was obligated to track and account for costs associated with individual FAAST projects.
7. This project is part of Donor FAAST 136271 – MEPA078 Puerto Rico Electrical Power Au-thority (PREPA) Island Wide FAAST Project.

406 HMP Scope

Project number: 956332; FAASr [San Juan Region 1 Feeder 2401-01] (Vegetation)

Damage #: 1716278; San Juan Region 1 Feeder 2401-01

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

Location: San Juan, Puerto Rico

GPS Latitude/Longitude: Start: [REDACTED]; End: [REDACTED]

Introduction

Puerto Rico's electrical grid infrastructure has been severely compromised by extreme weather events, particularly with Hurricane Maria in September 2017. The hurricane caused widespread disruptions to transmission and distribution systems, largely due to vegetation impacts that collapsed distribution and transmission lines. Substantial infrastructure was damaged when trees downed utility power lines and poles, causing most of the transmission/distribution system fail. Post-hurricane vegetation clearance to enable grid repair and restoration progressed slowly, considerably delaying overall electrical recovery. Remaining excess vegetation continues to cause operational outages, as ground faults occur when vegetation contacts power lines even during normal weather events. After the passage of Hurricane Maria, minimal cleaning work was carried out exclusively to clear the areas to carry out emergency repairs to the electrical system. These works were covered by Category B Emergency Protective Measure, but excess vegetation on the electrical system remains an outstanding vulnerability.

The Puerto Rico's grid modernization and mitigation one time ROW clearance strategy will prioritize effective and proactive vegetation management protocols to prevent prolonged storm-related outages, thereby increasing the reliability of the electric system. These reliability and resiliency gaps are especially impactful to Puerto Rico which has been facing increasingly frequent natural hazards such as hurricanes. This project is part of the for Vegetation Reset Program which will impact the Transmission and Distribution systems for each of the 78 municipalities.

Hazard Mitigation Narrative

In order to minimize damages in a future event, the Subrecipient's actual recovery solution seeks a one-time Island-wide vegetation remediation clearance for the above work included in the PREPA FAASr Project, as according to the Public Assistance Alternative Procedures (PAAP) (Section 428) Guide for Permanent Work FEMA-4339-DR-PR (hereinafter PR PAAP Guide) and FEMA's letter to COR3, document Signed Island-Wide Vegetation Clearance March 24, 2023. Section 406 hazard mitigation are funds that can be added to projects for the restoration of disaster-damaged facilities and must prevent future damage to that caused by the declared event. Under DR-4339-PR, Section 406 hazard mitigation funds are based on eligible, technically feasible, and cost-effective mitigation activities proposed to reduce risk to the function of the disaster- damaged facilities. The portion of the recovery solution that reduces risk of future damages may be considered as eligible 406 mitigation.

The island-wide transmission and distribution grid was significantly damaged by the strong winds and heavy rainfall during the atmospheric event hurricane Maria. This resulted in many trees and other vegetation becoming a direct hazard to the electrical grid. A one-time 406 hazard mitigation island-wide vegetation clearance will benefit the reliability and resiliency of the Puerto Rico electrical grid, including the number and duration of customer outages during and after the work to complete the repairs to the electrical grid through other PREPA 428 FAASr Projects. The scope of the global 406 Hazard Mitigation (HM) projects includes vegetation clearing across the entire width of the easement, plus a radius of 12 to 15 feet from energized conductors to directly reduce the potential for future damage to the "transmission and/or distribution" (T&D) systems (refer to "LUMA Vegetation Management 10ft and 12ft clearance diagram (1).pdf" in project documents). Each 406 HM Vegetation Reset project is correlated with an eligible 428 T&D project, in association with PREPA's electrical grid. Different regional projects are developed to impact all lines of the electrical system, including distribution lines and high-voltage transmission lines. Also, projects are defined in terms of line type (distribution or transmission) and population density of the area (high or low) to simplify the evaluation by the Environmental and Historical Preservation team (EHP).

The global project was divided into the following regions:

- Region 1 – San Juan
- Region 2 – Arecibo
- Region 3 – Bayamón
- Region 4 – Caguas
- Region 5 – Mayagüez
- Region 6 – Ponce

For each Region of the island, there will be two types of projects to capture the Vegetation Clearing activities within scopes of work: (1) single transmission line projects based on LUMA's priority list, capturing the lines or segments of lines affected most by vegetation interference, and (2) Regional DSOWs divided into groups (Groups A – F), as follows:

- Group A – High/Low Density Distribution Lines
- Group B – 38 kV Transmission.

- Group C – Overlapped Distribution and Transmission Lines
- Group D - 115 kV Facilities
- Group E - Substation and Telecommunication Facilities.
- Group F – 230 Kv Facilities (Non Region – Specific)

This 406 HM work is limited to what is necessary to directly reduce the potential of future damage to the T&D system assets, that exceeds what is necessary to clear vegetation for accessing facilities when carrying out repairs which are already established as eligible for FEMA funding utilizing the 428 FAAsT Grant. Each 406 HM will correlate to an eligible 428 Transmission and/or Distribution (T&D) project in association with the PREPA power grid. There will be 7 Regional DSOW's developed capturing planned actions within scopes of work formulated with an established criteria detailed for Distribution and Transmission lines/facility locations. The first DSOW is Group A - High Density areas with a low reflection of infrared light, which is associated with impervious locations within the San Juan Region where the majority of the distribution lines are located parallel or adjacent to maintained roads, along maintained land near residential and industrial areas; including disturbed forest fragments around power facilities and non-agricultural areas 13.2kV and below; the second DSOW is Group A Low Density locations where more vegetation density is present, which is determined by a higher level of reflection of infrared associated with Vegetation for 13.2kV and below locations; the third DSOW is Group B locations at 38kV level; the fourth DSOW is Group C - with known local environmental sensitivities at 38kV and below levels locations; the fifth DSOW is 115kV Facilities; and the sixth DSOW is Substation and Telecommunication Facilities. There will also be a 230 kV Facilities (these installations have a separate Vegetation Clearance project that is not region- specific).

This SOW is aligned with and leverages FEMA's Island-Wide Benefits Cost Analysis (IWBCA), which was used for this purpose and fully support the mitigation measures employed within this project scope of work.

The Subrecipient's authorized representative (LUMA) estimates that this 406 Hazard Mitigation proposal for island-wide vegetation clearance will have immediate and future widespread benefits, including:

- Mitigation of the hazards due to vegetation impacts and damages.
- 70% annual reduction of outages caused by vegetation.
- 35-45% annual reduction of customer interruptions.
- Faster restoration for impacted customers.
- Improved safety for utility workers and the public.
- Support the rebuilding of the grid and effective execution of large-scale construction projects.

The following terms, when used in this document, shall have the meaning described below.

Compatible Species – Compatible species are those that are congruent with the intended use of the site, and include small trees, shrubs and herbaceous vegetation that will never grow into conflict with overhead conductors.

Incompatible Species – Incompatible species are those that are not congruent with the intended use of the site and include tall growing trees and other plant forms (e.g., bamboo and palms) with the potential to conflict with overhead conductors.

Clearance - The minimum distance between two conductors, between conductors and their supports or other objects, or between conductors and the ground. The National Electrical Safety Code (NESC) and PREPA's Technical Communication (See 12-02 attached) determine the minimum requirements regarding distances (vertical and horizontal) between an energized conductor or device and a structure, building or surface. Vegetation Clearing will be limited to clearing any vegetation affecting these clearances. This term is not synonymous with easement. Clearances can be met without being within an easement. Clearance requirements must be complied with either when the Authority builds its facilities, as well as when a third party builds a structure. Clearances, in both cases, must be complied with by regulation, regardless of whether an easement exists.

Easement - is a lien imposed on a property for the benefit of another belonging to a different owner. The property, in favor of which the easement is constituted, is called the dominant estate; the one who suffers it, servant property. An easement for electrical power lines provides PREPA and LUMA as its agent various rights including: reasonable access to the electric infrastructure to provide maintenance, repair, expand, operate and is established on the strips or portions of land where facilities of the T&D system are located or will be located, such as: lines, poles, towers, equipment, and accessories. These acquired rights make it easier to carry out vegetation clearing work.

The PREPA distribution and transmission systems are populated with millions of plants but only some have the conditions, growth characteristics, and/or locations that make them compatible or incompatible with the safe and reliable energy delivery service. The Subrecipient's authorized representative recognizes the diversity of species in tropical ecosystems, and the general remediation strategy is to control incompatible species while encouraging the growth of compatible species. Compatible species may, on occasion, need control if their height or density impedes the necessary line of sight for inspections or access to perform resilience work. Within Appendix A and B are lists of protected flora species and incompatible flora species expected to be encountered during scope performance.

(I) Proposed 428 Public Assistance Scope of Work (SOW):

This project includes Public Assistance (PA) works; however, PA Scope of Work and Cost is limited to the incidental vegetation clearance. No permanent infrastructure repairs are included as part of this scope. WTBC Cost (PA) = \$34,908.51 per mile.

PA incidental works will be deducted from the Section 406 Hazard Mitigation project costs to avoid duplication of works. To address the overlap between the incidental vegetation work needed to carry out the repairs and the mitigation work, the Vegetation clearance HMP Sub-FAAST projects will be adjusted as describe in FEMA-4339-DR-PR Public Assistance PREPA FAAST Post-Fixed Cost Estimate Obligation Vegetation HMP Approach: Distribution "FAASTVegetationHMPApproach_Distribution_03.24.2025.pdf".

Note: This unit cost specifically applies to the Distribution System projects. The Transmission System projects will require a separate evaluation to determine a unit cost according to the assets characteristics.

(II) Hazard Mitigation Proposal (HMP) Scope of Work:

As a result of DR-4339-PR, vegetation surrounding T&D assets are falling onto these facilities and interfering with the safe and reliable operation of the assets. The vegetation at present is currently causing outages when vegetation is in contact with the T&D assets. To mitigate the future damage across T&D assets and protect the 428 repairs and replacement along these facilities, clearing vegetation materials will be required. This 406 Hazard Mitigation Scope of Work is to directly reduce the potential of future damages to the T&D system by clearing vegetative materials that pose an immediate threat to the power distribution lines, and identification for corrective actions related to clearing vegetation (consisting of shrubs, branches, limbs, stumps, bamboo, and trees that are directly impacting the resilience and productivity of the power grid) applicable to the existing PREPA electrical grid within Region 1 (San Juan) of Puerto Rico.

The extent and execution of this scope includes performing verification of facilities, assets, and condition assessments for determining the most appropriate remediation, preparing work orders for executing the necessary vegetation remediation, by ways of tree felling, vegetation remediation, mechanical vegetation remediation, vegetative debris disposal via chipping, mulching, hauling, and recycling where applicable in easement of the PREPA power Distribution lines. LUMA is not planning to construct access roads. If the work to be done is not adjacent to an existing road, our contractor tree crews will minimize environmental disturbance by utilizing vegetation crews hiking by foot in and out of our existing easement.

Parameters for Performing 406 Hazard Mitigation Vegetation Clearing

Regulation 7282 requires that only shrubs and plants (no trees) be planted within the easement under power lines. Climbing plants and vines, as well as bamboo, are prohibited from being planted within an easement. The branches of trees planted outside the easement must not obstruct free passage of the power lines. The National Electrical Safety Code (NESC) and PREPA's Technical Communication establish the minimum required distances, both vertical and horizontal, between an energized conductor or device and any structure, building, or surface. Vegetation clearing will be restricted to removing any vegetation that interferes with these clearances. For power distribution lines, NESC and Regulation 7282 defines the vertical distance from vegetation as 12 feet. By law, any trees, shrubs, or plants planted in violation of Regulation 7282 may be uprooted, removed, or cut down in accordance with the provisions of Regulation 7282 – for both compatible and incompatible species.

Industry standard practices will determine how the work will be performed. A healthy tree is less likely to fall over in a storm and damage overhead lines; therefore, vegetation will be pruned according to ANSI A300 (Part 1) – 2017 Tree, Shrub, and Other Woody Plant Management – Standard Practices (Pruning). Vegetation that is improperly pruned could become susceptible to disease and decay, resulting in a hazard to both the line and public safety. ANSI A300 is the tree care industry standard of care in the USA. It was developed by Tree Care Industry Association and maintained by a consensus of various industry stakeholders through periodically reviewing and updating the guidelines. These standards provide guidance on how and where to prune vegetation to achieve clearances and maintain a healthy plant. In all cases, Subrecipient's authorized representative's vegetation clearing contractors will be required to perform clearing activities in a manner consistent with ANSI A300, NESC, and Regulation 7282 alignment with Resolution 4987, Organic Law 83 (amended version), Communication 12-02, and PREPA 's Comprehensive Vegetation Management Plan establishing standard Distribution easement widths. Easement Clearance widths for distribution lines are given in the table below:

Line Type	Voltage Class	Easement Width Edge to Edge Centerline)
Single Phase (1Ø)	7.6/13.2kV	10' (5')
Multi-phase (2-3Ø)	7.6/13.2kV	10' (5')
Double circuit 3Ø	7.6/13.2kV	10' (5')
Aerial Spacer Cable	7.6/13.2kV	10' (5')
Single Phase (1Ø)	=4.8/8.3kV	10' (5')
Multi-phase (2-3Ø)	=4.8/8.3kV	10' (5')

Scope of Work Inside Easement – Incompatible Species

Incompatible species are those that are not congruent with the intended use of the site and include tall growing trees and other plant forms (e.g., bamboo and palms) with the potential to conflict with overhead conductors. For the power distribution lines, all Incompatible Species will be cleared from the full width of the easement. "Clearing" in this context includes the following activities: tree removal, severing of vines, cutting, vegetation mastication.

- Tree removal: Qualified line clearance crews work at ground level or on aerial platforms to remove the portion of the tree that is above ground, leaving the stump in place.
- Severing of vines: Vines will be severed at the base with an airgap created between the root system and the portion of the vine climbing on the structure. Vines are severed and treated by a qualified working at ground level. The upper portion of the vine remains attached and is not removed.
- Cutting: Cutting typically involves the removal of small diameter Incompatible Species by hand.
- Vegetation mastication: also known as mulching, slash-busting, or brush-cutting, involves technique for reducing the size of vegetation and downed material in forests. It involves grinding, shredding, or chopping vegetation into smaller pieces, which are then left on the site as mulch.

Scope of Work Inside Easement – Compatible Species

Compatible vegetation species will be cleared consistent with the distances identified in Regulation 7282, which means that any species with the potential to encroach within 12 feet of the conductors at full size will be removed using the same methods discussed above. Even though the distances identified in Regulation 7282 are vertical clearances, Compatible Species encroaching on the conductors from any direction can pose a hazard to the distribution system, with the maximum edge of the conductors to be 12 feet wide centered on the pole. Therefore, the 12-foot clearance is being applied to both vertical and horizontal clearances. For areas with overhead distribution systems located in the backyard or side yard, the certified easement width from LUMA Land Records office will use for clearing.

In rare cases where Subrecipient's authorized representative encounters significant resistance from landowners or stakeholders to remediate vegetation, Subrecipient's authorized representative will work with landowners or stakeholders to determine if Incompatible and Compatible Species can be pruned to mitigate the hazard to the lines instead of being completely removed.

Scope of Work Outside Easement – Species Growing into the Easement

There is the potential for vegetation outside or along the boundary of the easement to interfere with the operation of power distribution lines. Appropriate clearances around the conductors must be achieved to protect the lines from future damage. For distribution lines, Subrecipient's authorized representative has established a minimum clearance distance of 12 feet from all conductors, with the maximum edge of the conductors to be 12 feet wide centered on the pole. This distance is consistent with the vertical distance established in Regulation 7282. If there are species encroaching on the 12-foot clearance outside or along the boundary of the easement, these species will be pruned to obtain at least 12 feet of clearance from the conductors at the time clearance work occurs. In cases where following ANSI A300 best practices require clearance beyond 12 feet, the maximum distance cleared will not exceed 15 feet. Diagrams illustrating these clearing distances are provided as attachments within Grants Portal. The following clearing methods will be provided as Attachment B-"FAASTVegetationHMPApproach_Distribution_03.24.2025.pdf".

- Tree pruning: Qualified personnel work from an aerial platform or while climbing within a crown of trees to prune the tree. All pruning work wounds the tree. Done poorly, pruning can result in an exaggerated regrowth response by adversely altering tree architecture and increasing exposure to decay organisms that can weaken the tree. These adverse consequences increase the likelihood of tree-initiated faults causing system interruptions and customer outages. Proper arboriculture techniques will be utilized.
- Tree removal: Qualified line clearance crews work at ground level or on aerial platforms to remove the portion of the tree that is above ground, leaving the stump in place.
- Severing of vines: Vines will be severed at the base with an airgap created between the root system and the portion of the vine climbing on the structure. Vines are severed and treated by a qualified worker at ground level. The upper portion of the vine remains attached and is not removed.
- Cutting: Cutting typically involves the removal of small diameter species by hand.
- Vegetation mastication: also known as mulching, slash-busting, or brush-cutting, involves technique for reducing the size of vegetation and downed material in forests. It involves grinding, shredding, or chopping vegetation into smaller pieces, which are then left on the site as mulch.

Power Distribution Primary Group A - Vegetation Clearing Work Locations, Cost, and Description

Distribution lines typically start at substations and branch out in multiple directions to serve end-use customers. The GPS coordinate points provided in "Appendix C", are for the PREPA substations where the Distribution lines start. GIS shapefiles, which show the locations of the lines and the end points, have been uploaded to Grants Portal.

Duplication Analysis

Every project is evaluated for convergence between Distribution and Transmission lines (Overlapped Distribution and Transmission Lines), which typically share poles among different voltages. In cases where overlapped T&D systems are allocated on the same pole, the highest voltage will determine the Vegetation Clearance requirements for that facility. A full review of this analysis will be included in the cost estimation of the project. For damage #1716278 in the San Juan Region 1 Feeder 2401-01, the sub-grantee claimed a total length of 85.26 circuit miles (CM). After analysis, we identified duplication of 1.95 CM for 38 KV, 0.157 CM for 115KV and 0.48 CM for 230 KV. The CM evaluated for vegetation clearance is 82.68 CM. Please refer to the table below for further details.

Duplicity Check (Summary)					
Total Project Miles	Duplicity With 38KV in Miles	Duplicity With 115KV in Miles	Duplicity With 230KV in Miles	Duplicity with distribution	Miles to Evaluate
85.26	1.95	0.157	0.48	0.00	82.68

(III) Hazard Mitigation Proposal (HMP) Cost:

HM Vegetation Clearance Cost per Mile (Base Cost) = \$108,102.81 / mile
 HM Vegetation General Conditions per Mile (15% Soft Cost) = \$16,215.42 / mile
 HM Vegetation Clearance Cost per Mile (w/Soft Cost) = \$124,318.23 / mile
 *Risk Factor approved by the DR4339-PR leadership (5%) = \$130,534.15 / mile

PA Vegetation Clearance Overlap per Mile (Deduction) = (\$34,908.51 / mile)

Hazard Mitigation Total Cost per Mile = \$95,625.64 / mile

Project Total Miles (PN956332) = 82.68 miles

Hazard Mitigation Total Cost per Mile = \$95,625.64 / mile

Hazard Mitigation Total Cost = \$7,906,327.92

Note:

The \$95,625.64 / mile calculation represents the total cost (base costs + soft costs – PA Overlap). For this project, breaking down that total cost further yields the approximate figures below. For additional information please see the attached document.

Total Net Hazard Mitigation Cost (Base Cost) = \$6,542,481.63

+ HM (Applicant A&E, Management & General Conditions) = \$1,363,846.29

Hazard Mitigation Total Cost = \$7,906,327.92

(IV) Hazard Mitigation Proposal (HMP) Cost Distribution:

Architecture and Engineering (A&E) =	\$606,415.35
Remaining Vegetation Clearance Cost =	<u>\$7,299,912.57</u>
Hazard Mitigation Total Cost =	\$7,906,327.92

(V) 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 Subrecipient 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 **\$7,906,327.92** (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).

(VI) Compliance and Assurance Requirements:

HMP GENERAL NOTES:

By agreeing to implement the hazard mitigation measures in this HMP, the Applicant/Sub-Applicant is bound by the specific guidelines listed within this document.

COSTS AND GENERAL CONDITIONS: The vegetation removal cost is established according to the average base cost of **\$108,102.81 / mile**. An additional 15% amount was added to this base cost for General Conditions, resulting in a total cost of **\$124,318.23 / mile**. Additionally, the DR4339-PR leadership has approved the application of a 5% risk factor to the average cost per mile, resulting in **\$130,534.15 / mile**. After deducting Public Assistance (PA) \$34,908.51 amount (incidental work-refer to document FAASTVegetationHMPApproach_Distribution_03.24.2025.pdf), the final total is **\$95,625.64 / mile**.

DOCUMENTATION REQUIREMENTS: The subrecipient shall document all vegetation removal work, including but not limited to the following:

- Before and after photographs of the total distance included in the HMP Scope of work that clearly show the condition of the area before and after the vegetation clearance.
- A digital map in ArcGIS format showing all areas where vegetation removal was performed. Location information must be provided, including the physical

address, GPS coordinates from start to finish of clearance work, and contact information for private property (when applicable).

- Work orders must account for the entire feeder length distance and include a description of the sections both with and without vegetation. Material disposal documentation must specify whether the material was chipped and removed, left on-site, or transported to a landfill.

Note: All vegetation clearance projects must include the above documentation to define the work completed prior to project closeout.

COST DISTRIBUTION: Recognizing that the established cost is an average per mile, it is understood that actual expenses for each feeder or area may deviate (either underrun or overrun) from the estimated project amount. The 406 HMP scope and cost agreement sets an average cost per mile for vegetation clearance, allowing the subrecipient to manage funds across the various projects that comprise the vegetation asset. The Public Assistance Alternative Procedures (Section 428) Guide for Permanent Work FEMA-4339-DR-PR, January 1, 2022 (PR PAAP Guide), states that if funds for 406 Mitigation are included in the fixed-cost subaward, the subrecipient must complete the approved Scope of Work (SOW) of the Hazard Mitigation Proposal (HMP) in order to retain the 406 Mitigation funding. Consequently, only completed distance in the HM Scope of work, supported by the necessary back-up documentation (e.g., verified mitigated clearance distance), will be eligible for fund retention. Any uncompleted work from the HM SOW (e.g., miles not documented with mitigated clearance distance) will be de-obligated during the closeout process.

SCOPE OF WORK DEVELOPMENT OF HAZARD MITIGATION: FEMA will evaluate each mitigation opportunity to first determine what measures or portions of solutions could be funded through Section 406 mitigation. FEMA analyzes the proposed mitigation measures for cost-effectiveness, technical feasibility, and compliance with EHP laws, regulations, and Eos. FEMA, the Applicant, Recipient, and Sub-recipients will develop and agree to scopes of work (SOW) and cost estimates to repair, restore, or replace eligible facilities including 406 Hazard Mitigation" (Page 6).

COMPLETION OF HAZARD MITIGATION SCOPE OF WORK: If this HMP is approved and the mitigation is not performed, the Applicant must apply for a change in the Scope of Work and a de-obligation of the HMP funding. Failure to complete the work of the HMP may limit future FEMA funding of repairs at the site in the event that a similar disaster event results in similar damage at the site.

CHANGES TO THE HAZARD MITIGATION SCOPE OF WORK FOR LARGE PROJECTS:

Per PAAP PA Process (Section 428), Guide for Permanent Work, February 10, 2020, "A Subrecipient may alter the 406-hazard mitigation SOW (HMP) after FEMA, the Recipient, and Subrecipient agree on the cost estimate for the initial proposal. After the project is obligated, the SOW for the HMP can be changed only once and the timeline for this change will be established based on a facility-by-facility basis. The proposed change will require evaluation by FEMA for eligibility and EHP. As part of the eligibility review, FEMA will evaluate the SOW, technical feasibility, the level of protection, the revised cost estimate, and cost effectiveness of the new hazard mitigation proposal, and, if approved, will adjust the scope and cost estimate accordingly." (Page 14)

HAZARD MITIGATION UNDERSTANDING STATEMENT: This HMP is for estimating purposes only and not to be construed as a project design. If the site's final placement and configuration are different than the preliminary estimate, the Applicant should submit a change in scope request. This HMP is subject to further review prior to award.

HAZARD MITIGATION PERFORMANCE: The Applicant must provide & maintain competent & adequate project performance & supervision during the execution phase to ensure that the completed work conforms to the approved plans & specifications & all applicable material & industry standards.

As a condition of the FEMA mitigation grant, the Applicant is responsible for the determination of and compliance with all applicable requirements, codes, standards and specifications in connection with the project, including but not limited to the Puerto Rico Building Code of 2018 (2018 PRBC), IBC, IRBC, NFIP Floodplain Management Regulations outlined in 44 C.F.R 60.3, ASCE 24, ASCE 7, and receiving all applicable permits & approvals prior to construction.

MAINTENANCE OF HAZARD MITIGATION: The Applicant shall ensure proper maintenance of the installed mitigation measures, per manufacturer and designer specifications. Any adaptations or installations not approved or that renders the hazard mitigation measure ineffective shall be removed by the Applicant. Examples include, but are not limited to, improper installation of roof-mounted equipment or installation of window-mounted air-conditioning units.

ENVIRONMENTAL AND HISTORIC PRESERVATION: Eligibility and funding for the mitigation at this site on this project will be subject to the compliance of all environmental laws, regulations, and executive orders applicable to the site. This project will undergo a EHP compliance review, after obligation any changes to the SOW will likely trigger an additional EHP compliance review of the revised SOW.

HEAVY MACHINERY USED ON SITE: Tree uprooting and/or removal may be necessary to comply with Regulation 7282. However, uprooting will be minimized and will only be carried out when necessary to ensure the safety of people or protect the asset. There will not be any synthetic or biological chemicals utilized for tree stump removals, however, there may be heavy machinery used for uprooting trees, tree removal, and mulching includes specialized equipment designed for efficient and safe vegetation management.

Below is a description of commonly utilized heavy machinery:

I. Tree Removal and Uprooting

- **Excavators with Grapple Attachments:** Equipped with powerful hydraulic grapples or thumbs to grab and uproot trees, these machines are ideal for handling large trees and stumps.
- **Bulldozers:** Used to push over trees and remove roots. Bulldozers with a ripper attachment can also break up soil and roots.
- **Skid Steers with Tree Pullers:** Compact and versatile, skid steers fitted with tree puller attachments can uproot smaller trees and shrubs effectively.
- **Backhoes:** Used for digging out tree stumps and roots, particularly in areas requiring precision.
- **Stump Grinders:** Specialized machines that grind tree stumps into mulch, leaving the area ready for replanting or other uses.

II. Mulching

- **Forestry Mulchers:** These machines are designed to shred trees, branches, and other vegetation into mulch directly on-site. They are typically mounted on excavators, skid steers, or tractors and are suitable for clearing large areas of vegetation.
- **Chippers:** Convert cut branches, tree limbs, and smaller logs into wood chips for disposal or reuse.

III. Additional Equipment

- **Cranes:** Used for safely removing large trees in sections, especially in urban or constrained environments.
- **Tree Spades:** Specialized for uprooting and transplanting trees while keeping the root system intact.
- **Tracked Feller Bunchers:** Machines that cut and gather trees in a single operation, useful for logging or large-scale clearing projects.
- **Log Loaders:** Used for handling and transporting felled trees and logs.
- **Brush Cutters:** Heavy-duty cutters designed to clear dense vegetation and small trees.

Each piece of equipment is selected based on the size of the trees, site conditions, environmental considerations, and project goals.

ARBORICULTURE TECHNIQUES: The ANSI A300 standards for arboriculture establish industry best practices for tree care and maintenance. They provide guidelines for techniques such as pruning, planting, transplanting, soil management, support systems (cabling and bracing), lightning protection, and risk assessment. These standards aim to promote tree health, safety, and structural integrity while minimizing environmental impact. They serve as a resource for professionals, property owners, and organizations to develop effective tree care specifications and ensure consistent, high-quality practices.

ATTACHMENTS:

Please refer the following documents.

1. "Island-Wide Vegetation Clearance - FEMA letter dated March 24 2023.pdf"
2. "LUMA Vegetation Management 10ft and 12ft clearance diagram (1).pdf"
3. "FAASTVegetationHMPApproach_Distribution_03.24.2025.pdf"
4. "Appendix A and B - Protected Flora and Incompatible Flora Species.pdf"
5. "IWBCA HMP Package.pdf"
6. "PN956332-DR4339PR-HMCE-20251007-RIBR.xlsx"
7. "PN956332-DL2401-01.KMZ"

Cost

Code	Quantity	Unit	Total Cost	Section
3510	1	Lump Sum	(\$221,374.27)	Uncompleted
9001	1	Lump Sum	\$2,886,235.61	Uncompleted

CRC Gross Cost	\$2,664,861.34
Total 406 HMP Cost	\$7,906,327.92
Total Insurance Reductions	\$0.00
CRC Net Cost	\$10,571,189.26
Federal Share (90.00%)	\$9,514,070.34
Non-Federal Share (10.00%)	\$1,057,118.92

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.
- 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.
- 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.
- 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.
- 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.
- The Subrecipient provided the estimate for this PW. FEMA validated the estimate and found it to be reasonable for the work to be performed.

Insurance

Additional Information

10/8/2025

GENERAL INFORMATION

Event: DR4339-PR

Project: SP 956332

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

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

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: (1)

Damaged Inventory (DI) #1716278:

San Juan Region 1 - Feeder 2401-01

Location Description: Single line distribution feeder project for line 2401-01 (4.80/8.32 kV) in San Jauna Region 1.

GPS Coordinates: [REDACTED]

Cause of Loss: Wind / Wind Driven Rain

SOV / Schedule #: Not Insured

SOV / Schedule Amount: \$0.00

Applicable Deductible Amount: \$0.00

Damage Inventory Amount: \$10,571,189.26 (CRC Gross Cost \$2,664,861.34 + HMP Cost \$7,906,327.92)

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:

No Obtain & Maintain Requirement is being mandated for San Juan Region 1 - Feeder 2401-01 because facility does not meet the definition of building, equipment, contents, or vehicle.

Insurance Proceeds Statement:

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

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

Jorge Parrilla, PA Insurance Specialist

CRC Atlantic, Guaynabo, PR

O&M Requirements

There are no Obtain and Maintain Requirements on **FAAST [San Juan Region 1 - Feeder 2401-01] (Vegetation)**.

406 Mitigation

There is no additional mitigation information on **FAAST [San Juan Region 1 - Feeder 2401-01] (Vegetation)**.

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.
- *. FEMA will require that an archaeologist, who meets the Secretary of the Interior (SOI) Qualification Standards (36 CFR Part 61) for archaeology, conduct a Level II Desktop Review and Background Research, as outlined in Stipulation II.D.3.b of the PSPA, for all projects that includes vegetation clearing activities not covered by Tier II Programmatic Allowances and require further Section 106 consultation, as described in the FEMA letter dated March 7, 2025. In this case, the areas of potential effects (APEs) that would be subject to this level of analysis are: ROW segments of unmaintained T&D lines in suburban and/or rural areas where work cannot be conducted from an existing shoulder and/or requires construction of new access roads through undisturbed land within or outside of existing ROWs. The Level II Desktop Review and Background Research results shall be documented in a Phase I Analysis Report, as described in Stipulation II.D.5 of the PSPA, to be submitted to FEMA for review prior to the initiation of any work in the areas defined above.
- *. 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.
- *. 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.
- *. 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.
- On May 16, 2025, the Secretary of the U.S. Department of Energy (DOE) issued Order 202-25-2 (Order), pursuant to the authority vested in him by section 202(c) of the Federal Power Act (FPA), 16 U.S.C. § 824a(c), and section 301(b) of the Department of Energy Organization Act, 42 U.S.C. § 7151(b). The Order sought to expedite repair and maintenance efforts to the electrical grid of Puerto Rico by directing the Puerto Rico Electric Power Authority (PREPA) to perform vegetation management, including vegetation clearing to reestablish a right-of-way, for particular transmission and distribution facilities in the Territory as specified in the Order. The Order required PREPA to identify certain parameters by which the directed work would be performed, and required that all work be performed, to the maximum extent practicable, in a manner consistent with all applicable Federal, State, or local environmental laws or regulations and minimize any adverse environmental impacts. However, pursuant to Section 202(c) (3) of the FPA, to the extent any omission or action taken by PREPA that was necessary to comply with the Order, including any omission or action taken to voluntarily comply with the Order, caused PREPA to not comply with any Federal, State, or local

environmental law or regulation, including any environmental conditions in this REC's "Standard Conditions," such omission or action shall not be considered a violation of such environmental law or regulation, or subject PREPA to any requirement, civil or criminal liability, or citizen suit under such environmental law or regulation. On August 15, 2025, DOE reissued the Order to direct PREPA to also perform asset management, including component refurbishment and replacement. To renew/reissue the Order, DOE was required to consult with the primary Federal agency with expertise in the environmental interest protected by such law or regulation and include in the Order conditions necessary to minimize any adverse environmental impacts to the extent practicable. Pursuant to Section 202(c)(4)(B) of the FPA, DOE provided the relevant agencies the opportunity to submit conditions for work performed under the Order, to be included in the Order. According to DOE, no conditions were submitted by the agencies for inclusion in the Order. On November 12, 2025, DOE reissued the Order to direct PREPA to also perform asset management, including component refurbishment and replacement. DOE and FEMA have agreed that DOE is the lead agency for activities that fall under the prior and any future DOE 202(c) orders issued under the Federal Power Act to resolve the current and related emergencies in Puerto Rico. FEMA has requested that DOE provide FEMA with all documentation relating to their EHP compliance. FEMA will review and incorporate all available information and data for this project pertaining to applicable environmental laws and regulations into this REC when it is received from DOE. On February 10, 2026, and again on May 7, 2026, DOE reissued the Order to direct PREPA to perform vegetation management, including vegetation clearing to reestablish the right-of-way, and asset management, including component refurbishment and replacement, to ensure operational availability of the transmission and distribution facilities.

EHP Additional Info

There is no additional environmental historical preservation on **FAAST [San Juan Region 1 - Feeder 2401-01] (Vegetation)**.

Final Reviews

Final Review

Reviewed By LEFRANC-GARCIA, CARLOS L.

Reviewed On 06/11/2026 8:51 PM PDT

Review Comments

he PA Scope of Work and Cost is limited to the incidental vegetation clearance. No permanent infrastructure repairs are included as part of this scope. Therefore, the total cost (PA) for this project will be \$2,664,861.34 This 406 HM work is limited to what is necessary to directly reduce the potential of future damage to the T&D system assets, that exceeds what is necessary to clear vegetation for accessing facilities when carrying out repairs which are already established as eligible for FEMA funding utilizing the 428 FAAST Grant. Hazard Mitigation Total Cost= \$7,906,327.92.

Recipient Review

Reviewed By Mulero, Noel

Reviewed On 06/22/2026 6:43 PM PDT

Review Comments

Recipient review completed. Applicant must ensure to compliance with all regulatory requirements, Record of Environmental Consideration (REC) Special Conditions and PA policy. Project is ready for applicant review.

Project Signatures

Reviewed By Unsigned

Reviewed On Unsigned

Award Information

Version Information

Version #	Eligibility Status	Current Location	Bundle Number	Project Amount	Cost Share	Federal Share Obligated	Date Obligated
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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 #
0	7/8/2026	\$9,514,070.34	90%	Validation Error	4339DRPRP01081471
0	7/8/2026	\$9,514,070.34	90%	Accepted	4339DRPRP01081471

Department of Homeland Security Federal Emergency Management Agency

v0

General Info

Project #	956340	P/W #	108151	Project Type	Specialized
Project Category	F - Utilities	Applicant	PR Electric Power Authority (000-UA2QU-00)		
Project Title	FAASt [Ponce Region 6 Feeder 5602-02] (Vegetation)			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 #1716286; Ponce Region 6 Feeder 5602-02

General Facility Information:

- **Facility Type:** Power generation, transmission, and distribution facilities
- **Facility:** Feeder 5602-02
- **Facility Description:** Single line distribution feeder project for distribution line 5602-02 (2.40/4.16 kV) in Ponce Region 6. The total length 49.70 miles.
- **Approx. Year Built:** 1980
- **Start GPS Latitude/Longitude:** [REDACTED]
- **End GPS Latitude/Longitude:** [REDACTED]

Final Scope

1716286 Ponce Region 6 Feeder 5602-02

Project 136271 (hereinafter PREPA FAASt Project) authorized \$9,459,885,412.39 (Federal Share) to be awarded to the Puerto Rico Electric Power Authority (PREPA, Subrecipient) as a fixed cost estimate (FAASt FCE agreement) based on eligible work without detailed scopes of work to restore disaster-damaged facilities. Eligible work for the Transmission and Distribution (T&D) system included restoration of:

Broken structures due to high winds such as poles/towers (counted as broken when poles were inclined, bent, torn, and/or cracked); and other damages/broken components such as transformers, insulators, conductors, grounding system, jumpers, Gang Operated Air Breakers (GOABs), pole hardware, guy wires and anchors.

FEMA deferred the 406 Hazard Mitigation Proposal (HMP) fixed cost offer in the PREPA FAASt Project until the Subrecipient submits its actual recovery solutions. FEMA also issued a clarification letter regarding whether hazard mitigation funding under Section 404 or Section 406 of the Stafford Act may be made available for the execution of a one-time, island-wide vegetation clearing and removal operation intended to mitigate the threat to the existing vegetation, if unintended to, poses to Puerto Rico's electric T&D system. See FEMA's letter to COR3, document Signed Vegetation Management March 24 2023.pdf. The Subrecipient's actual recovery solution seeks a one-time Island-wide vegetation clearance and removal operation intended to mitigate the threat to the existing vegetation, if unintended to, poses to Puerto Rico's electric T&D system. The actual recovery solution seeks to mitigate the Puerto Rico's electric T&D system, including areas without infrastructure repairs.

The actual recovery solution (scope and cost) will be captured in multiple individual projects (hereinafter Vegetation clearance HMP Sub-FAASt projects) to provide flexibility and enable multiple programmatic reviews simultaneously. The Vegetation clearance HMP Sub-FAASt projects do not include infrastructure repair work.

This project captures a portion of the Island-wide actual recovery solution, specifically the one-time vegetation clearance and removal operation intended to mitigate the Ponce Region 6 Feeders 5602-02 (see project note #1 and #2).

FEMA406 Hazard Mitigation (HM) team will review this actual recovery solution and issue a FCE offer for the portion of the recovery solution that reduces risk of future similar damages. The Work to be Completed will be captured in the 406 HMscope section. To address the overlap between the incidental vegetation work needed to carry out the repairs and the mitigation work, the Vegetation clearance HMP Sub-FAAST projects will be adjusted as describe in FEMA-4339-DR-PR Public Assistance PREPAFAAST Post-Fixed Cost Estimate Obligation Vegetation HMP Approach: Distribution. See document FAASTVegetationHMPApproach_Distribution_03.24.2025.pdf. The PA Scope of Work and Cost is limited to the incidental vegetation clearance. No permanent infrastructure repairs are included as part of this scope. WTBC Cost (PA) = \$34,908.51 per mile. Therefore, the total cost (PA) for this project will be \$1,210,919.69.

DI#	PA Vegetation Clearance Overlap per mile	Total miles	WTBC - PA Cost with Subrecipient Management & General Conditions	A&E - PA	Total - PA
1716286	\$ 34,908.51	37.57	\$1,311,512.72	\$100,593.03	\$1,210,919.69

Work to be completed total: \$1,311,512.72

A&E Deduction (Global A&E FAAST 335168): -\$100,593.03

Project Total: \$1,210,919.69

Project Notes:

1. This is a Distribution-Vegetation clearance HMP Sub-FAAST project.
2. Vegetation clearance HMP Sub-FAAST projects will be written according to line type (Distribution: 13.2kV and down, and Transmission: 38 kV, 115kV, and 230 kV) because of the different ROWs and other characteristics. Multiple projects of each type will be submitted and reviewed for eligible PA406 HM funding. Vegetation clearing work will only be submitted for those areas that vegetation represents strike potential (may cause future similar damage to the T&D system when subject to high winds). However, at times there is overlap between these lines (i.e., multiple distribution lines (13.2kV and down) coexist on the same pole infrastructure, transmission lines (38 kV and up) can be located above distribution lines within the same right of way, various lines may pass each other with overlapping right of ways, etc.). In the submittal of this project the Subrecipient's Authorized Representative attests that only the vegetation clearance submitted is to reduce strike potential and that the ROW for these lines has been, and will be, counted only once to avoid duplication within the vegetation clearance projects.
3. For more details of the requirements and conditions for the execution of a one-time, island-wide vegetation clearance and removal operation considered as an eligible Section 406 hazard mitigation proposal (HMP), please refer to document labeled: Attachment A - FEMA letter dated March 24 2023.pdf.
4. For details on the SOW, refer to filename 956340 - FAAST [Ponce Region 6 Feeder 5602-02] (Vegetation) DSOV Rev 1.pdf.
5. Vegetation clearance funds will not be allocated to SubFAAST projects.
6. A&E cost included in this project will be reduced from this project and obligated under the FAAST Project #335168, A&E, as shown in the table above. The A&E project was obligated to track and account for costs associated with individual FAAST projects.
7. This project is part of Donor FAAST 136271 – MEPA078 Puerto Rico Electrical Power Authority (PREPA) Island Wide FAAST Project.

406 HMP Scope

406 HMP Scope

Project number: [956340] FAAST [Ponce Region 6 Feeder 5602-02] (Vegetation)

Damage number: 956340

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

Location: Region 3 - Bayamon, Puerto Rico

GPS Latitude/Longitude: [REDACTED] to [REDACTED]

Introduction:

Puerto Rico's electrical grid infrastructure has been severely compromised by extreme weather events, particularly with Hurricane Maria in September 2017. The hurricane caused widespread disruptions to transmission and distribution systems, largely due to vegetation impacts that collapsed distribution and transmission lines. Substantial infrastructure was damaged when trees downed utility power lines and poles, causing most of the transmission/distribution system fail. Post-hurricane vegetation clearance to enable grid repair and restoration progressed slowly, considerably delaying overall electrical recovery. Remaining excess vegetation continues to cause operational outages, as ground faults occur when vegetation contacts power lines even during normal weather events. After the passage of Hurricane María, minimal cleaning work was carried out exclusively to clear the areas to carry out emergency repairs to the electrical system. These works were covered by Category B - Emergency Protective Measure, but excess vegetation on the electrical system remains an outstanding vulnerability.

The Puerto Rico's grid modernization and mitigation one time ROW clearance strategy will prioritize effective and proactive vegetation management protocols to prevent prolonged storm-related outages, thereby increasing the reliability of the electric system. These reliability and resiliency gaps are especially impactful to Puerto Rico which has been facing increasingly frequent natural hazards such as hurricanes. This project is part of the for Vegetation Reset Program which will impact the Transmission and Distribution systems for each of the 78 municipalities.

Hazard Mitigation Narrative:

In order to minimize damages in a future event, the Subrecipient's actual recovery solution seeks a one-time Island-wide vegetation remediation clearance for the above work included in the PREPA/FAAST Project, as according to the *Public Assistance Alternative Procedures (PAAP) (Section 428) Guide for Permanent Work FEMA-4339-DR-PR (hereinafter PR PAAP Guide)* and *FEMA's letter to COR3, document Signed Island-Wide Vegetation Clearance March 24, 2023*. Section 406 hazard mitigation are funds that can be added to projects for the restoration of disaster-damaged facilities and must prevent future damage to that caused by the declared event. Under DR-4339-PR, Section 406 hazard mitigation funds are based on eligible, technically feasible, and cost-effective mitigation activities proposed to reduce risk to the function of the disaster-damaged facilities. The portion of the recovery solution that reduces risk of future damages may be considered as eligible 406 mitigation.

The island-wide transmission and distribution grid was significantly damaged by the strong winds and heavy rainfall during the atmospheric event hurricane Maria. This resulted in many trees and other vegetation becoming a direct hazard to the electrical grid. A one-time 406 hazard mitigation island-wide vegetation clearance will benefit the reliability and resiliency of the Puerto Rico electrical grid, including the number and duration of customer outages during and after the work to complete the repairs to the electrical grid through other PREPA/FAAST Projects. The scope of the global 406 Hazard Mitigation (HM) projects includes vegetation clearing across the entire width of the easement, plus a radius of 12 to 15 feet from energized conductors to directly reduce the potential for future damage to the "transmission and/or distribution" (T&D) systems (refer to "*LUMA Vegetation Management 10ft and 12ft clearance diagram (1).pdf*" in project documents). Each 406 HM Vegetation Reset project is correlated with an eligible 428 T&D project, in association with PREPA's electrical grid. Different regional projects are developed to impact all lines of the electrical system, including distribution lines and high-voltage transmission lines. Also, projects are defined in terms of line type (distribution or transmission) and population density of the area (high or low) to simplify the evaluation by the Environmental and Historical Preservation team (EHP).

The global project was divided into the following regions:

- Region 1 – San Juan
- Region 2 – Arecibo
- Region 3 – Bayamón
- Region 4 – Caguas
- Region 5 – Mayagüez
- Region 6 – Ponce

For each Region of the island, there will be two types of projects to capture the Vegetation Clearing activities within scopes of work: (1) single transmission line projects based on LUMA's priority list, capturing the lines or segments of lines affected most by vegetation interference, and (2) Regional DSOWs divided into groups (Groups A– F), as follows:

- Group A – High/Low Density Distribution Lines
- Group B – 38 kV Transmission.
- Group C – Overlapped Distribution and Transmission Lines
- Group D - 115 kV Facilities
- Group E - Substation and Telecommunication Facilities.
- Group F – 230 Kv Facilities (Non Region – Specific)

This 406 HM work is limited to what is necessary to directly reduce the potential of future damage to the T&D system assets, that exceeds what is necessary to clear vegetation for accessing facilities when carrying out repairs which are already established as eligible for FEMA funding utilizing the 428 FAAST Grant. Each 406 HM will correlate to an eligible 428 Transmission and/or Distribution (T&D) project in association with the PREPA power grid. There will be 7 Regional DSOWs developed capturing planned actions within scopes of work formulated with an established criteria detailed for Distribution and Transmission lines/facility/locations. The first DSOW is Group A - High Density areas with a low reflection of infrared light, which is associated with impervious locations within the Ponce Region where the majority of the distribution lines

are located parallel or adjacent to maintained roads, along maintained land near residential and industrial areas; including disturbed forest fragments around power facilities and non- agricultural areas 13.2kV and below; the second DSOW is Group A Low Density locations where more vegetation density is present, which is determined by a higher level of reflection of infrared associated with Vegetation for 13.2kV and below locations; the third DSOW is Group B locations at 38kV level; the fourth DSOW is Group C - with known local environmental sensitivities at 38kV and below levels locations; the fifth DSOW is 115kV Facilities; and the sixth DSOW is Substation and Telecommunication Facilities. There will also be a 230 kV Facilities (these installations have a separate Vegetation Clearance project that is not region- specific). This SOW is aligned with and leverages FEMA's Island-Wide Benefits Cost Analysis (IWBCA), which was used for this purpose and fully support the mitigation measures employed within this project scope of work.

The Subrecipient's authorized representative (LUMA) estimates that this 406 Hazard Mitigation proposal for island-wide vegetation clearance will have immediate and future widespread benefits, including:

- Mitigation of the hazards due to vegetation impacts and damages.
- 70% annual reduction of outages caused by vegetation.
- 35-45% annual reduction of customer interruptions.
- Faster restoration for impacted customers.
- Improved safety for utility workers and the public.
- Support the rebuilding of the grid and effective execution of large-scale construction projects.

The following terms, when used in this document, shall have the meaning described below.

Compatible Species – Compatible species are those that are congruent with the intended use of the site, and include small trees, shrubs and herbaceous vegetation that will never grow into conflict with overhead conductors.

Incompatible Species – Incompatible species are those that are not congruent with the intended use of the site and include tall growing trees and other plant forms (e.g., bamboo and palms) with the potential to conflict with overhead conductors.

Clearance - The minimum distance between two conductors, between conductors and their supports or other objects, or between conductors and the ground. The National Electrical Safety Code (NESC) and PREPA's Technical Communication (See 12-02 attached) determine the minimum requirements regarding distances (vertical and horizontal) between an energized conductor or device and a structure, building or surface. Vegetation Clearing will be limited to clearing any vegetation affecting these clearances. This term is not synonymous with easement. Clearances can be met without being within an easement. Clearance requirements must be complied with either when the Authority builds its facilities, as well as when a third party builds a structure. Clearances, in both cases, must be complied with by regulation, regardless of whether an easement exists. regardless of whether an easement exists.

Easement - is a lien imposed on a property for the benefit of another belonging to a different owner. The property, in favor of which the easement is constituted, is called the dominant estate; the one who suffers it, servant property. An easement for electrical power lines provides PREPA and Luma as its agent various rights including reasonable access to the electric infrastructure to provide maintenance, repair, expand, operate and is established on the strips or portions of land where facilities of the T & D system are located or will be located, such as: lines, poles, towers, equipment, and accessories. These acquired rights make it easier to carry out vegetation clearing work.

The PREPA distribution and transmission systems are populated with millions of plants but only some have the conditions, growth characteristics, and/or locations that make them compatible or incompatible with the safe and reliable energy delivery service. The Subrecipient's authorized representative recognizes the diversity of species in tropical ecosystems, and the general remediation strategy is to control incompatible species while encouraging the growth of compatible species. Compatible species may, on occasion, need control if their height or density impedes the necessary line of sight for inspections or access to perform resilience work. Within Appendix A and B are lists of protected flora species and incompatible flora species expected to be encountered during scope performance.

(I) Proposed 428 Public Assistance Scope of Work (SOW):

This project includes Public Assistance (PA) works; however, PA Scope of Work and Cost is limited to the incidental vegetation clearance. No permanent infrastructure repairs are included as part of this scope. WTBC Cost (PA) = \$34,908.51 per mile.

PA incidental works will be deducted from the Section 406 Hazard Mitigation project costs to avoid duplication of works. To address the overlap between the incidental vegetation work needed to carry out the repairs and the mitigation work, the Vegetation clearance HMP Sub-FAAST projects will be adjusted as describe in FEMA-4339-DR-PR Public Assistance PREPA FAASt Post-Fixed Cost Estimate Obligation Vegetation HMP Approach: Distribution "FAAStVegetationHMPApproach_Distribution_03.24.2025.pdf".

Note: This unit cost specifically applies to the Distribution System projects. The Transmission System projects will require a separate evaluation to determine a unit cost

according to the assets characteristics.

(II) Hazard Mitigation Proposal (HMP) Scope of Work:

Damage # 1716286; Ponce Region 6 Feeder 5602-02

As a result of DR-4339-PR, vegetation surrounding T&D assets are falling onto these facilities and interfering with the safe and reliable operation of the assets. The vegetation at present is currently causing outages when vegetation is in contact with the T&D assets. To mitigate the future damage across T&D assets and protect the 428 repairs and replacement along these facilities, clearing vegetation materials will be required. This 406 Hazard Mitigation Scope of Work is to directly reduce the potential of future, damages to the T&D system by clearing vegetative materials that pose an immediate threat to the power distribution lines, and identification for corrective actions related to clearing vegetation (consisting of shrubs, branches, limbs, stumps, bamboo, and trees that are directly impacting the resilience and productivity of the power grid) applicable to the existing PREPA electrical grid within Region 6 (Ponce) of Puerto Rico.

The extent and execution of this scope includes performing verification of facilities, assets and condition assessments for determining the most appropriate remediation, preparing work orders for executing the necessary vegetation remediation, by ways of tree felling, vegetation remediation, mechanical vegetation remediation, vegetative debris disposal via chipping, mulching, hauling, and recycling where applicable in easement of the PREPA power Distribution lines. LUMA is not planning to construct access roads. If the work to be done is not adjacent to an existing road, our contractor tree crews will minimize environmental disturbance by utilizing vegetation crews hiking by foot in and out of our existing easement.

Parameters for Performing 406 Hazard Mitigation Vegetation Clearing

Regulation 7282 requires that only shrubs and plants (no trees) be planted within the easement under power lines. Climbing plants and vines, as well as bamboo, are prohibited from being planted within an easement. The branches of trees planted outside the easement must not obstruct free passage of the power lines. The National Electrical Safety Code (NESC) and PREPA's Technical Communication establish the minimum required distances, both vertical and horizontal, between an energized conductor or device and any structure, building, or surface. Vegetation clearing will be restricted to removing any vegetation that interferes with these clearances. For power distribution lines, NESC and Regulation 7282 defines the vertical distance from vegetation as 12 feet. By law, any trees, shrubs, or plants planted in violation of Regulation 7282 may be uprooted, removed, or cut down in accordance with the provisions of Regulation 7282 – for both compatible and incompatible species.

Industry standard practices will determine how the work will be performed. A healthy tree is less likely to fall over in a storm and damage overhead lines; therefore, vegetation will be pruned according to ANSI A300 (Part 1) – 2017 Tree, Shrub, and Other Woody Plant Management – Standard Practices (Pruning). Vegetation that is improperly pruned could become susceptible to disease and decay, resulting in a hazard to both the line and public safety. ANSI A300 is the tree care industry standard of care in the USA. It was developed by Tree Care Industry Association and maintained by a consensus of various industry stakeholders through periodically reviewing and updating the guidelines. These standards provide guidance on how and where to prune vegetation to achieve clearances and maintain a healthy plant. In all cases, Subrecipient's authorized representative's vegetation clearing contractors will be required to perform clearing activities in a manner consistent with ANSI A300, NESC, and Regulation 7282 alignment with Resolution 4987, Organic Law 83 (amended version), Communication 12-02, and PREPA's Comprehensive Vegetation Management Plan establishing standard Distribution easement widths. Easement Clearance widths for distribution lines are given in the table below:

Line Type	Voltage Class	Easement Width Edge to Edge (from Centerline)
Single Phase (1Ø)	7.6/13.2kV	10' (5')
Multi-phase (2-3Ø)	7.6/13.2kV	10' (5')
Double circuit 3Ø	7.6/13.2kV	10' (5')
Aerial Spacer Cable	7.6/13.2kV	10' (5')
Single Phase (1Ø)	=4.8/8.3kV	10' (5')

Multi-phase (2-3Ø)	=4.8/8.3kV	10' (5')
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Scope of Work Inside Easement – Incompatible Species

Incompatible species are those that are not congruent with the intended use of the site and include tall growing trees and other plant forms (e.g., bamboo and palms) with the potential to conflict with overhead conductors. For the power distribution lines, all Incompatible Species will be cleared from the full width of the easement. "Clearing" in this context includes the following activities: tree removal, severing of vines, cutting, vegetation mastication.

- Tree removal: Qualified line clearance crews work at ground level or on aerial platforms to remove the portion of the tree that is above ground, leaving the stump in place.
- Severing of vines: Vines will be severed at the base with an airgap created between the root system and the portion of the vine climbing on the structure. Vines are severed and treated by a qualified working at ground level. The upper portion of the vine remains attached and is not removed.
- Cutting: Cutting typically involves the removal of small diameter Incompatible Species by hand.
- Vegetation mastication: also known as mulching, slash-busting, or brush-cutting, involves technique for reducing the size of vegetation and downed material in forests. It involves grinding, shredding, or chopping vegetation into smaller pieces, which are then left on the site as mulch.

Scope of Work Inside Easement – Compatible Species

Compatible vegetation species will be cleared consistent with the distances identified in Regulation 7282, which means that any species with the potential to encroach within 12 feet of the conductors at full size will be removed using the same methods discussed above. Even though the distances identified in Regulation 7282 are vertical clearances, Compatible Species encroaching on the conductors from any direction can pose a hazard to the distribution system, with the maximum edge of the conductors to be 12 feet wide centered on the pole. Therefore, the 12-foot clearance is being applied to both vertical and horizontal clearances. For areas with overhead distribution systems located in the backyard or side yard, the certified easement width from LUMA Land Records office will use for clearing.

In rare cases where Subrecipient's authorized representative encounters significant resistance from landowners or stakeholders to remediate vegetation, Subrecipient's authorized representative will work with landowners or stakeholders to determine if Incompatible and Compatible Species can be pruned to mitigate the hazard to the lines instead of being completely removed.

Scope of Work Outside Easement – Species Growing into the Easement

There is the potential for vegetation outside or along the boundary of the easement to interfere with the operation of power distribution lines. Appropriate clearances around the conductors must be achieved to protect the lines from future damage. For distribution lines, Subrecipient's authorized representative has established a minimum clearance distance of 12 feet from all conductors, with the maximum edge of the conductors to be 12 feet wide centered on the pole. This distance is consistent with the vertical distance established in Regulation 7282. If there are species encroaching on the 12-foot clearance outside or along the boundary of the easement, these species will be pruned to obtain at least 12 feet of clearance from the conductors at the time clearance work occurs. In cases where following ANSI A300 best practices require clearance beyond 12 feet, the maximum distance cleared will not exceed 15 feet. Diagrams illustrating these clearing distances are provided as attachments within Grants Portal. The following clearing methods will be provided as Attachment B-*"FAASTVegetationHMPApproach_Distribution_03.24.2025.pdf"*.

- Tree pruning: Qualified personnel work from an aerial platform or while climbing within a crown of trees to prune the tree. All pruning work wounds the tree. Done poorly, pruning can result in an exaggerated regrowth response by adversely altering tree architecture and increasing exposure to decay organisms that can weaken the tree. These adverse consequences increase the likelihood of tree-initiated faults causing system interruptions and customer outages. Proper arboriculture techniques will be utilized.
- Tree removal: Qualified line clearance crews work at ground level or on aerial platforms to remove the portion of the tree that is above ground, leaving the stump in place.
- Severing of vines: Vines will be severed at the base with an airgap created between the root system and the portion of the vine climbing on the structure. Vines are severed and treated by a qualified worker at ground level. The upper portion of the vine remains attached and is not removed.
- Cutting: Cutting typically involves the removal of small diameter species by hand.
- Vegetation mastication: also known as mulching, slash-busting, or brush-cutting, involves technique for reducing the size of vegetation and downed material in forests. It involves grinding, shredding, or chopping vegetation into smaller pieces, which are then left on the site as mulch.

Power Distribution Primary Group A - Vegetation Clearing Work Locations, Cost, and Description

Distribution lines typically start at substations and branch out in multiple directions to serve end-use customers. The GPS coordinate points provided in "Appendix C", are for the PREPA substations where the Distribution lines start. GIS shapefiles, which show the locations of the lines and the end points, have been uploaded to Grants Portal.

Duplication Analysis

Every project is evaluated for convergence between Distribution and Transmission lines (Overlapped Distribution and Transmission Lines), which typically share poles among different voltages. In cases where overlapped T&D systems are allocated on the same pole, the highest voltage will determine the Vegetation Clearance requirements for that facility. A full review of this analysis will be included in the cost estimation of the project. For damage #1716286 in the Ponce Region 6 Feeder 5602-02, the sub-grantee claimed a total length of 49.70 circuit miles (CM). After analysis, we identified duplication of 0.01 CM for 115KV, 11.66 CM for 38KV, and 0.46 CM for duplicated distribution lines. The CM evaluated for vegetation clearance is 37.57 CM. Please refer to the table below for further details.

Duplicity Check (Summary)					
Total Project Miles	Duplicity With 38KV in Miles	Duplicity With 115KV in Miles	Duplicity With 230KV in Miles	Duplicity with distribution	Miles to Evaluate
49.70	11.66	0.01		0.46	37.57

(III) Hazard Mitigation Proposal Cost:

HM Vegetation Clearance Cost per Mile (Base Cost) =	\$108,102.81
Vegetation General Conditions per Mile (15% Soft Cost) =	<u>\$16,215.42</u>
HM Vegetation Clearance Cost per Mile (w/Soft Cost) =	<u>\$124,318.23</u>
*Risk Factor approved by the DR4339-PR leadership (5%) =	\$130,534.15
PA Vegetation Clearance Overlap per Mile (Deduction) =	<u>(\$28,972.65)</u>
Hazard Mitigation Total Cost per Mile =	\$95,625.64
Project Total Miles (PN956340) =	37.57
Hazard Mitigation Total Cost per Mile =	<u>\$95,625.64</u>
Hazard Mitigation Total Cost =	\$3,592,6

Note: The \$95,625.64 / mile calculation represents the total cost (base costs + soft costs – PA Overlap). For this project, breaking down that total cost further yields the approximate figures below. For additional information please see the attached document.³

Total Net Hazard Mitigation Cost (Base Cost) =	\$2,972
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+ HM (Management & General Conditions Factors) =	\$619
Hazard Mitigation Total Cost =	\$3,592

(IV) Hazard Mitigation Proposal (HMP) Cost Distribution:

Architecture and Engineering (A&E) =	\$275
Remaining Vegetation Clearance Cost =	\$3,317
Hazard Mitigation Total Cost =	\$3,592

Note: The \$95,625.64 / mile calculation represents the total cost (base costs + soft costs – PA Overlap). For this project, breaking down that total cost further yields the approximate figures below. For additional information please see the attached document.

Total Net Hazard Mitigation Cost (Base Cost) =	\$2,972
+ HM (Management & General Conditions Factors) =	\$619
Hazard Mitigation Total Cost =	\$3,592

(IV) Hazard Mitigation Proposal (HMP) Cost Distribution:

Architecture and Engineering (A&E) =	\$275
Remaining Vegetation Clearance Cost =	\$3,317
Hazard Mitigation Total Cost =	\$3,592

Cost Summary:

The Hazard Mitigation Proposal is divided in 1ea Sub-Project: **D#1716286; Ponce Region 6 Feeder 5602-02**. The total HMP Cost is the HMNet Cost (\$2,972,920.11) + Applicant A&E, Management & General Conditions \$619,735.18= \$3,592,655.29.

(V) 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 HM 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 Subrecipient responsibility to maintain a record of approved IWBCA related projects to avoid running out of funds for their Mitigation portion projects. Please see attached IWBCA Package.

The cost of the Hazard Mitigation Proposal (HMP) described herein is **\$3,592,655.29** (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).**

VI) Compliance and Assurance Requirements:

A) HMP GENERAL NOTES:

By agreeing to implement the hazard mitigation measures in this HMP, the Applicant/Sub-Applicant is bound by the specific guidelines listed within this document.

COSTS AND GENERAL CONDITIONS: The vegetation removal cost is established according to the average base cost of **\$108,102.81 / mile**. An additional 15% amount was added to this base cost for General Conditions, resulting in a total cost of **\$124,318.23/mile**. Additionally, the DR4339-PR leadership has approved the application of a 5% risk factor to the average cost per mile, resulting in **\$130,534.15 / mile**. After deducting Public Assistance (PA) \$34,908.51 amount (incidental work-refer to document *FAASVegetationHMPApproach_Distribution_03.24.2025.pdf*), the final total is **\$95,625.64 / mile**.

DOCUMENTATION REQUIREMENTS: The subrecipient shall document all vegetation removal work, including but not limited to the following:

- Before and after photographs of the total distance included in the HMP Scope of work that clearly show the condition of the area before and after the vegetation clearance.
- A digital map in ArcGIS format showing all areas where vegetation removal was performed. Location information must be provided, including the physical address, GPS coordinates from start to finish of clearance work, and contact information for private property (when applicable).
- Work orders must account for the entire feeder length distance and include a description of the sections both with and without vegetation. Material disposal documentation must specify whether the material was chipped and removed, left on-site, or transported to a landfill.

Note: All vegetation clearance projects must include the above documentation to define the work completed prior to project closeout.

COST DISTRIBUTION: Recognizing that the established cost is an average per mile, it is understood that actual expenses for each feeder or area may deviate (either underrun or overrun) from the estimated project amount. The 406 HMP scope and cost agreement sets an average cost per mile for vegetation clearance, allowing the subrecipient to manage funds across the various projects that comprise the vegetation asset. The *Public Assistance Alternative Procedures (Section 428) Guide for Permanent Work FEMA-4339-DR-PR, January 1, 2022 (PR PAAP Guide)*, states that if funds for 406 Mitigation are included in the fixed-cost subaward, the subrecipient must complete the approved Scope of Work (SOW) of the Hazard Mitigation Proposal (HMP) in order to retain the 406 Mitigation funding. Consequently, only completed distance in the HM Scope of work, supported by the necessary back-up documentation (e.g., verified mitigated clearance distance), will be eligible for fund retention. Any uncompleted work from the HMSOW (e.g., miles not documented with mitigated clearance distance) will be de-obligated during the closeout process.

SCOPE OF WORK DEVELOPMENT OF HAZARD MITIGATION: FEMA will evaluate each mitigation opportunity to first determine what measures or portions of solutions could be funded through Section 406 mitigation. FEMA analyzes the proposed mitigation measures for cost-effectiveness, technical feasibility, and compliance with EHP laws, regulations, and Eos. FEMA, the Applicant, Recipient, and Sub-recipients will develop and agree to scopes of work (SOW) and cost estimates to repair, restore, or replace eligible facilities including 406 Hazard Mitigation" (Page 6).

COMPLETION OF HAZARD MITIGATION SCOPE OF WORK: If this HMP is approved and the mitigation is not performed, the Applicant must apply for a change in the Scope of Work and a de-obligation of the HMP funding. Failure to complete the work of the HMP may limit future FEMA funding of repairs at the site in the event that a similar disaster event results in similar damage at the site.

CHANGES TO THE HAZARD MITIGATION SCOPE OF WORK FOR LARGE PROJECTS:

Per PAAP PAM Process (Section 428), Guide for Permanent Work, February 10, 2020, "A Subrecipient may alter the 406-hazard mitigation SOW (HMP) after FEMA, the Recipient, and Subrecipient agree on the cost estimate for the initial proposal. After the project is obligated, the SOW for the HMP can be changed only once and the timeline for this change will be established based on a facility-by-facility basis. The proposed change will require evaluation by FEMA for eligibility and EHP. As part of the eligibility review, FEMA will evaluate the SOW, technical feasibility, the level of protection, the revised cost estimate, and cost effectiveness of the new hazard mitigation proposal, and, if approved, will adjust the scope and cost estimate accordingly." (Page 14)

HAZARD MITIGATION UNDERSTANDING STATEMENT: This HMP is for estimating purposes only and not to be construed as a project design. If the site's final placement

and configuration are different than the preliminary estimate, the Applicant should submit a change in scope request. This HMP is subject to further review prior to award.

HAZARD MITIGATION PERFORMANCE: The Applicant must provide & maintain competent & adequate project performance & supervision during the execution phase to ensure that the completed work conforms to the approved plans & specifications & all applicable material & industry standards.

As a condition of the FEMA mitigation grant, the Applicant is responsible for the determination of and compliance with all applicable requirements, codes, standards and specifications in connection with the project, including but not limited to the Puerto Rico Building Code of 2018 (2018 PRBC), IBC, IRBC, NFIP Floodplain Management Regulations outlined in 44 C.F.R 60.3, ASCE 24, ASCE 7, and receiving all applicable permits & approvals prior to construction.

MAINTENANCE OF HAZARD MITIGATION: The Applicant shall ensure proper maintenance of the installed mitigation measures, per manufacturer and designer specifications. Any adaptations or installations not approved or that renders the hazard mitigation measure ineffective shall be removed by the Applicant. Examples include, but are not limited to, improper installation of roof-mounted equipment or installation of window-mounted air-conditioning units.

ENVIRONMENTAL AND HISTORIC PRESERVATION: Eligibility and funding for the mitigation at this site on this project will be subject to the compliance of all environmental laws, regulations, and executive orders applicable to the site. This project will undergo a EHP compliance review, after obligation any changes to the SOW will likely trigger an additional EHP compliance review of the revised SOW.

HEAVY MACHINERY USED ON SITE: *Tree uprooting and/or removal may be necessary to comply with Regulation 7282. However, uprooting will be minimized and will only be carried out when necessary to ensure the safety of people or protect the asset. There will not be any synthetic or biological chemicals utilized for tree stump removals, however, there may be heavy machinery used for uprooting trees, tree removal, and mulching includes specialized equipment designed for efficient and safe vegetation management.*

Below is a description of commonly utilized heavy machinery:

I. Tree Removal and Uprooting

- *Excavators with Grapple Attachments: Equipped with powerful hydraulic grapples or thumbs to grab and uproot trees, these machines are ideal for handling large trees and stumps.*
- *Bulldozers: Used to push over trees and remove roots. Bulldozers with a ripper attachment can also break up soil and roots.*
- *Skid Steers with Tree Pullers: Compact and versatile, skid steers fitted with tree puller attachments can uproot smaller trees and shrubs effectively.*
- *Backhoes: Used for digging out tree stumps and roots, particularly in areas requiring precision.*
- *Stump Grinders: Specialized machines that grind tree stumps into mulch, leaving the area ready for replanting or other uses.*

II. Mulching

- *Forestry Mulchers: These machines are designed to shred trees, branches, and other vegetation into mulch directly on-site. They are typically mounted on excavators, skid steers, or tractors and are suitable for clearing large areas of vegetation.*
- *Chippers: Convert cut branches, tree limbs, and smaller logs into wood chips for disposal or reuse.*

III. Additional Equipment

- *Cranes: Used for safely removing large trees in sections, especially in urban or constrained environments.*
- *Tree Spades: Specialized for uprooting and transplanting trees while keeping the root system intact.*
- *Tracked Feller Bunchers: Machines that cut and gather trees in a single operation, useful for logging or large-scale clearing projects.*
- *Log Loaders: Used for handling and transporting felled trees and logs.*
- *Brush Cutters: Heavy-duty cutters designed to clear dense vegetation and small trees.*

Each piece of equipment is selected based on the size of the trees, site conditions, environmental considerations, and project goals.

ARBORICULTURE TECHNIQUES: The ANSI A300 standards for arboriculture establish industry best practices for tree care and maintenance. They provide guidelines for techniques such as pruning, planting, transplanting, soil management, support systems (cabling and bracing), lightning protection, and risk assessment. These standards aim to promote tree health, safety, and structural integrity while minimizing environmental impact. They serve as a resource for professionals, property owners, and organizations to develop effective tree care specifications and ensure consistent, high-quality practices.

ATTACHMENTS:

Please refer the following documents.

1. "Island-Wide Vegetation Clearance - FEMA letter dated March 24 2023.pdf"
2. "LUMA Vegetation Management 10ft and 12ft clearance diagram (1).pdf"

3. "FAASVegetationHMPApproach_Distribution_03.24.2025.pdf"
4. "Appendix A and B - Protected Flora and Incompatible Flora Species.pdf"
5. "IWBCA HMP Package.pdf"
6. "PN 956340-DR4339PR-HMCE-20251001-REG.xlsx"
7. "PN 956340-DL5602-02.KMZ"

Cost

Code	Quantity	Unit	Total Cost	Section
9001	1	Lump Sum	\$1,311,512.72	Uncompleted
3510	1	Lump Sum	(\$100,593.03)	Completed

CRC Gross Cost	\$1,210,919.69
Total 406 HMP Cost	\$3,592,655.29
Total Insurance Reductions	\$0.00
CRC Net Cost	\$4,803,574.98
Federal Share (90.00%)	\$4,323,217.49
Non-Federal Share (10.00%)	\$480,357.49

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.
- 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.
- 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.
- 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.
- 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.
- The Subrecipient provided the estimate for this PW. FEMA validated the estimate and found it to be reasonable for the work to be performed.

Insurance

Additional Information

10/6/2025

GENERAL INFORMATION

Event: DR4339-PR

Project: SP 956340

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

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

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: (1)

Damaged Inventory (DI) #1716286:

Ponce Region 6 Feeder 5602-02

Location Description: Single line distribution feeder project for distribution line 5602-02 (2.40/4.16 kV) in Ponce Region 6. The total length 49.70 miles.

GPS Coordinates: [REDACTED]

Cause of Loss: Wind / Wind Driven Rain

SOV / Schedule #: Not Insured

SOV / Schedule Amount: \$0.00

Applicable Deductible Amount: \$0.00

Damage Inventory Amount: \$4,803,574.98 (CRC Gross Cost \$1,210,919.69 + HMP Cost \$3,592,655.29)

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:

No Obtain & Maintain Requirement is being mandated for Ponce Region 6 Feeder 5602-02 because facility does not meet the definition of building, equipment, contents, or vehicle.

Insurance Proceeds Statement:

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

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

Jorge Parrilla, PA Insurance Specialist

CRC Atlantic, Guaynabo, PR

O&M Requirements

There are no Obtain and Maintain Requirements on **FFAST [Ponce Region 6 Feeder 5602-02] (Vegetation)**.

406 Mitigation

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.
- *. FEMA will require that an archaeologist, who meets the Secretary of the Interior (SOI) Qualification Standards (36 CFR Part 61) for archaeology, conduct a Level II Desktop Review and Background Research, as outlined in Stipulation II.D.3.b of the PSPA, for all projects that includes vegetation clearing activities not covered by Tier II Programmatic Allowances and require further Section 106 consultation, as described in the FEMA letter dated March 7, 2025. In this case, the areas of potential effects (APEs) that would be subject to this level of analysis are: ROW segments of unmaintained T&D lines in suburban and/or rural areas where work cannot be conducted from an existing shoulder and/or requires construction of new access roads through undisturbed land within or outside of existing ROWs. The Level II Desktop Review and Background Research results shall be documented in a Phase I Analysis Report, as described in Stipulation II.D.5 of the PSPA, to be submitted to FEMA for review prior to the initiation of any work in the areas defined above.
- *. 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.
- *. 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.
- *. 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.
- On May 16, 2025, the Secretary of the U.S. Department of Energy (DOE) issued Order 202-25-2 (Order), pursuant to the authority vested in him by section 202(c) of the Federal Power Act (FPA), 16 U.S.C. § 824a(c), and section 301(b) of the Department of Energy Organization Act, 42 U.S.C. § 7151(b). The Order sought to expedite repair and maintenance efforts to the electrical grid of Puerto Rico by directing the Puerto Rico Electric Power Authority (PREPA) to perform vegetation management, including vegetation clearing to reestablish a right-of-way, for particular transmission and distribution facilities in the Territory as specified in the Order. The Order required PREPA to identify certain parameters by which the directed work would be performed, and required that all work be performed, to the maximum extent practicable, in a manner consistent with all applicable Federal, State, or local environmental laws or regulations and minimize any adverse environmental impacts. However, pursuant to Section 202(c)(3) of the FPA, to the extent any omission or action taken by PREPA that was necessary to comply with the Order, including any omission or action taken to voluntarily comply with the Order, caused PREPA to not comply with any Federal, State, or local environmental law or regulation, including any environmental conditions in this REC's "Standard Conditions," such omission or action shall not be considered a violation of such environmental law or regulation, or subject PREPA to any requirement, civil or criminal liability, or

citizen suit under such environmental law or regulation. On August 15, 2025, DOE reissued the Order to direct PREPA to also perform asset management, including component refurbishment and replacement. To renew/reissue the Order, DOE was required to consult with the primary Federal agency with expertise in the environmental interest protected by such law or regulation and include in the Order conditions necessary to minimize any adverse environmental impacts to the extent practicable. Pursuant to Section 202(c)(4)(B) of the FPA, DOE provided the relevant agencies the opportunity to submit conditions for worked performed under the Order, to be included in the Order. According to DOE, no conditions were submitted by the agencies for inclusion in the Order. On November 12, 2025, DOE reissued the Order to direct PREPA to also perform asset management, including component refurbishment and replacement. DOE and FEMA have agreed that DOE is the lead agency for activities that fall under the prior and any future DOE 202(c) orders issued under the Federal Power Act to resolve the current and related emergencies in Puerto Rico. FEMA has requested that DOE provide FEMA with all documentation relating to their EHP compliance. FEMA will review and incorporate all available information and data for this project pertaining to applicable environmental laws and regulations into this REC when it is received from DOE. On February 10, 2026, and again on May 7, 2026, DOE reissued the Order to direct PREPA to perform vegetation management, including vegetation clearing to reestablish the right-of-way, and asset management, including component refurbishment and replacement, to ensure operational availability of the transmission and distribution facilities.

EHP Additional Info

There is no additional environmental historical preservation on **FAASt [Ponce Region 6 Feeder 5602-02] (Vegetation)**.

Final Reviews

Final Review

Reviewed By LEFRANC-GARCIA, CARLOS L.

Reviewed On 06/11/2026 8:48 PM PDT

Review Comments

The PA Scope of Work and Cost is limited to the incidental vegetation clearance. No permanent infrastructure repairs are included as part of this scope. Therefore, the total cost (PA) for this project will be \$1,210,919.69. This 406 HM work is limited to what is necessary to directly reduce the potential of future damage to the T&D system assets, that exceeds what is necessary to clear vegetation for accessing facilities when carrying out repairs which are already established as eligible for FEMA funding utilizing the 428 FAASt Grant. Hazard Mitigation Total Cost= \$3,592,655.29. Subrecipient and its agents are responsible for complying with all grants and subgrant conditions, including any applicable Federal, State and Local requirements. CLG 06112026

Recipient Review

Reviewed By Mulero, Noel

Reviewed On 06/22/2026 6:59 PM PDT

Review Comments

Recipient review completed. Applicant must ensure to compliance with all regulatory requirements, Record of Environmental Consideration (REC) Special Conditions and PA policy. Project is ready for applicant review.

Project Signatures

Reviewed By Unsigned

Reviewed On Unsigned

Award Information

Version Information

Version #	Eligibility Status	Current Location	Bundle Number	Project Amount	Cost Share	Federal Share Obligated	Date Obligated
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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 #
0	7/8/2026	\$4,323,217.49	90%	Accepted	4339DRPRP01081511
0	7/8/2026	\$4,323,217.49	90%	Validation Error	4339DRPRP01081511

**Department of Homeland Security
Federal Emergency Management Agency**

v0

General Info

Project #	1066737	PW #	108247	Project Type	Specialized
Project Category	F - Utilities	Applicant	PR Electric Power Authority (000-UA2QU-00)		
Project Title	FAASt [Pole and Conductor Repair-Caguas Group 5 Phase 2] / Former project 790427 (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 #1472679; FAASt [Pole and Conductor Repair -Caguas Group 5 Phase 2 (Distribution)

General Facility Information:

- **Facility Type:** Power generation, transmission, and distribution facilities
- **Facility:** Pole and Conductor Repair -Caguas Group 5 Phase 2
- **Facility Description:** The specific facilities included in this project are poles and structures (including their foundations), framing and insulators, load break switches (manual and automated), capacitor banks, voltage regulators, transformers (including lightning arresters and fuse cut-outs), conductors, guy wires, anchoring, grounding assemblies, underground cables, underground cable systems, and fault interrupting equipment (fuses, reclosers, and sectionalizes).
- **Approx. Year Built:** 1980
- **Start GPS Latitude/Longitude:** [REDACTED]
- **End GPS Latitude/Longitude:** [REDACTED]

Final Scope

1472679 FAASt [Pole and Conductor Repair -Caguas Group 5 Phase 2 (Distribution)

INTRODUCTION

Pursuant to FEMA's Post-Fixed Cost Estimate Obligation SOP (the "SOP") for FAASt projects, FAASt subrecipients must provide to FEMA recovery project scopes of work ("SOW") for the proposed construction work to be performed. The SOW defines the activities that will be performed using Public Assistance ("PA") funding and includes § 406 hazard mitigation proposals ("HMPs").

According to the SOP, FEMA "anticipates that [SOW] submissions might include preliminary designs, including drawings and cost estimates. FEMA also recognizes that, generally, architects and/or engineers do not include or delineate the information needed to enable FEMA to complete programmatic reviews. Therefore, in those cases, subrecipients must ensure to submit all the information described [in the SOP] and not limit the submission to a drawing set. Refer to Part C - II. Recipient/Subrecipient Checklist for Submissions as a guide to review completeness." SOP at 4.

This document contains the detailed SOW for FEMA PA project 1066737 – Distribution Pole and Conductor Repair – Caguas Group 5 – Phase 2 under DR-4339-PR Public Assistance. The document provides a detailed description of the project, scope of PA construction activities to be completed, common EHP review information, proposed hazard mitigation measures, and project cost estimates. LUMA is seeking approval from COR3 and FEMA for PA funding for the scope described in this document.

LUMA submits this Detailed SOW pursuant to the Transmission and Distribution Operations and Maintenance Agreement between the Puerto Rico Electric Power Authority ("PREPA"), the Puerto Rico Public-Private Partnerships Authority ("P3A"), and LUMA, and in accordance with the Consent to Federal Funding Letter issued by PREPA and P3A, which collectively provides the necessary consent for LUMA, as agent of PREPA, to undertake work in connection with any Federal Funding requests related to the T&D System submitted to FEMA. References to "Subrecipient" herein refer to PREPA pursuant to this agreement and consent for LUMA to act as its agent with respect to federal funds.

PROJECT DESCRIPTION

The project's scope is the replacement of poles and the repair of conductors of the specific feeders listed in Section 7.2 located in Caguas region. The proposed restoration includes the replacement of eligible disaster damage up to required codes and standards and the request to upgrade undamaged infrastructure to fully effectuate the restoration of disaster-damaged components and restore the system's function to an approved industry standard. The Scope of Work consists of the removal and replacement of infrastructure to restore this facility to codes and standards. As a hazard mitigation proposal this project will replace damaged poles with higher-rated poles to withstand winds of up to 160mph

FACILITIES

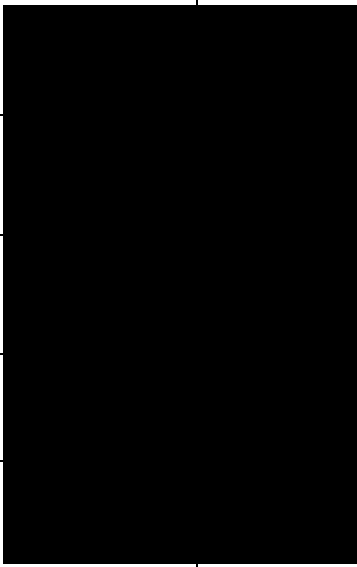
FACILITIES LIST – BUILDINGS AND SUBSTATIONS

None.

FACILITIES LIST – OTHER FACILITIES

The following list includes the name and GPS coordinates identifying the areas of work for other types of facilities. For any access roads or other line work, coordinates listed below are the beginning and end points.

The interconnected and inter-functional distribution feeders (sites) that are the object of this scope of work are part of the electrical distribution system in the Caguas Region. All the feeders originate from a substation (start) and serve customers along the route to various locations (end). The coordinates shown below as "GPS End" represent the end of each feeder's mainline backbone.

Name	Feeder Number	# Of Poles To Be Replaced	GPS Start	GPS End	Phase	Voltage Level (kV)	Construction Date
CAYEY, SUB. 3401	3401-02	91			1 Phase	8.32	More than 20 years
CAYEY RURAL (NUEVA GUINEA), SUB. 3405	3405-01	21			1 Phase	8.32	More than 20 years
CAYEY RURAL (NUEVA GUINEA), SUB. 3405	3405-03	29			1 Phase	8.32	More than 20 years
AIBONITO PDS, SUB. 3502	3502-02	67			1 Phase	8.32	More than 20 years
CIDRA PUEBLO, SUB. 3601	3601-04	67			1 Phase	8.32	More than 20 years

See Appendix A – Structure Coordinates for the coordinates of each structure included in this project.

PROJECT AREA MAP WITH BOUNDARIES OF CONSTRUCTION

Please refer to the attached map, which identifies the boundaries of construction. For more detailed, feeder-specific maps, please

consult Appendix 1066737-DR4339PR-Appendix D – Caguas Group 5, Phase 2: Boundaries of Construction, including the feeder route.

For Figure 1 please see project report uploaded “1066737-DR4339PR-Detailed SOW Caguas Group 5 - Phase 2 Rev1.pdf”

428 SCOPE OF WORK

The proposed type of work for this project:

_ Standard Project: Restores the facility/facilities to pre-disaster design and function to locally adopted codes/standards and/or FEMA-approved industry standards.

_ Improved Project: Restores the pre-disaster function of the facilities and incorporates improvements or changes to its pre-disaster design not required by codes or standards.

_ Subrecipient's request letter included, see **Appendix** ____.

_ Recipient's approval letter included, see **Appendix** ____.

_ Alternate Project: Does not restore the pre-disaster function of the damaged facility. The Subrecipient, through the Recipients, must obtain approval from FEMA.

_ Subrecipient's request letter included, see **Appendix** ____.

_ Recipient's approval letter included, see **Appendix** ____.

DESCRIPTION OF PROPOSED WORK TO BE PERFORMED

The Scope of Work entails the removal and replacement of infrastructure necessary to restore the facility in compliance with applicable codes and standards.

Feeder 3401-02 Scope:

Remove	Quantity	Replace With	Quantity
30' WOOD	1	50FT GAL STEEL ROUND POLE	1
35' WOOD	47	50FT GAL STEEL ROUND POLE	47
40' WOOD	42	50FT GAL STEEL ROUND POLE	42
40' CONCRETE	1	50FT GAL STEEL ROUND POLE	1

Feeder 3405-01 Scope:

Remove	Quantity	Replace With	Quantity
35' WOOD	10	50FT GAL STEEL ROUND POLE	10
35' CONCRETE	4	50FT GAL STEEL ROUND POLE	4
40' WOOD	5	50FT GAL STEEL ROUND POLE	5
40' CONCRETE	2	50FT GAL STEEL ROUND POLE	2

Feeder 3502-02 Scope:

Remove	Quantity	Replace With	Quantity
30' WOOD	1	50FT GAL STEEL ROUND POLE	1

35' WOOD	26	50FT GAL STEEL ROUND POLE	26
40' WOOD	39	50FT GAL STEEL ROUND POLE	39
50' WOOD	1	50FT GAL STEEL ROUND POLE	1

Feeder 3601-04 Scope:

Remove	Quantity	Replace With	Quantity
30' WOOD	2	50FT GAL STEEL ROUND POLE	2
35' WOOD	45	50FT GAL STEEL ROUND POLE	45
40' WOOD	19	50FT GAL STEEL ROUND POLE	19
40' CONCRETE	1	50FT GAL STEEL ROUND POLE	1

Feeder 3405-03 Scope:

Remove	Quantity	Replace With	Quantity
35' WOOD	15	50FT GAL STEEL ROUND POLE	15
40' WOOD	5	50FT GAL STEEL ROUND POLE	5
40' CONCRETE	4	50FT GAL STEEL ROUND POLE	4
45' WOOD	4	50FT GAL STEEL ROUND POLE	4
50' WOOD	1	50FT GAL STEEL ROUND POLE	1

The pole replacement work includes the following actions:

1. Remove existing poles, including hardware, and install new poles, including hardware. Columns C and D of the "LPCE" tab of Appendix B lists each pole that is proposed as a \$428 replacement and \$406 replacement, respectively. Column E of the "LPCE" tab of Appendix B lists each pole that is to be removed, with Column F describing each pole's hardware scenario, and scenarios are in turn described in the "Hardware Scenarios" tab of Appendix B. That tab is correlated with cost information. New guy wire/anchors are to be installed within 3 feet of the existing anchor location in compliance with the LUMA Overhead Electrical Distribution System Manual. The maximum distance an anchor will be installed for a 50-foot pole is 25 feet from the base of the pole, within the easement.
2. All work for this program will be performed within the current electrical easement.

CODES & STANDARDS

Per FEMA's SOP, the locally adopted codes/standards and/or FEMA-approved industry standards used for this project are provided

below:

1. Distribution Construction Standards (Concrete Base Standard), available in Grants Portal - Applicant Event Profiles.
2. LUMA Overhead Electrical Distribution System Manual, version 4.0, available in Grants Portal - Applicant Event Profiles.
3. Consensus-based codes, per FEMA's Public Assistance Alternative Procedures (Section 428) Guide for Permanent Work FEMA-4339-DR-PR (Feb. 2020).
4. Industry standards per FEMA Recovery Policy FP-104-009-5, Version 2, Implementing Section 20601 of the 2018 Bipartisan Budget Act through the Public Assistance Program.
5. FEMA Recovery Interim Policy FP-104-009-11 Version 2.1, Consensus-Based Codes, Specifications, and Standards for Public Assistance.
6. LUMA's latest Design Criteria Document (DCD) which aggregates the design considerations of most of the consensus-based codes, specifications, and standards listed in FEMA Recovery Interim Policy 104-009-11 Version 2.1 (Dec. 20, 2019).

COMMON EHP REVIEW INFORMATION

Please check any items applicable to the proposed scope of work in this Project. If an item is checked, provide a description of the scope extent and location of the selected activity.

☒ **Ground disturbance outside of existing footprint.** If checked, provide a description of the ground disturbing activities including the extent, location, and depth of the disturbance.

- Remove existing poles, including hardware, and install new poles, including hardware. No ground disturbance will occur outside the footprint.
- All pole installations are to replace existing pole locations; no new locations are included in this scope of work. For the depths of the poles to be installed, refer to APPENDIX C—Project Considerations, column D (Soil area and depth impact). The maximum auger width to be used is 42" and the maximum depth to be drilled is 15ft.
- New guy wires/anchors are to be installed within 3 feet of the existing anchor in compliance with the LUMA Overhead Electrical Distribution System Manual. The maximum distance an anchor will be installed for a 50-foot pole is 25 feet from the base of the pole, within the easement.
- The following equipment will 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.

☐ **Soil testing or boring to be performed as part of pre-construction activities.** If checked, provide a description, location, and dimensions of the testing/boring activities.

☐ **Relocation of utilities.** If checked, include a description of the relocation including the type of utility, relocation coordinates, and the extent and depth of associated ground disturbance.

☒ **Vegetative Removal.** If checked, describe the removal work to be performed, its location, and its extent.

- Vegetation clearance will be performed solely to the extent that it allows crews to conduct work and will be limited to 10 feet radius surrounding the surface of the pole, but not to exceed the width of the easement for the exclusive purpose of gaining access to the pole to conduct repairs. The costs related to Vegetation clearance procedures are in project [727692] FAAsT [Region 4 -Caguas Group A] High Density (Vegetation) and [727694]

FAAsT [Region 4 -Caguas Group C] (Vegetation). The vegetation removal process will be managed according to federal and state regulations.

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

☒ **Demolition.** If checked, include a description of what will be removed and the extent and depth of any ground disturbing activities. Additionally, include a description of (1) demolition debris type (construction debris, white goods, hazardous materials, etc.); (2) GPS location of temporary debris storage sites; (3) final debris disposal location; and (4) final debris disposal method.

- PCBs, oil from the transformer and breakers, sealants, and other chemical waste typical of a construction site are considered hazardous waste and will be disposed of by the contractor in approved facilities.
- Transformers will be contained and returned to LUMA in compliance with applicable regulations. Removing the transformer will require testing the existing oil for PCB levels. Per environmental regulations, the oil will be drained and delivered to the authorized waste disposal site.

☒ **Staging areas, landing area for air transport, and access roads.** If checked, provide GPS location of staging areas, and access roads. Include a description of the extent of any related vegetative removal, ground disturbance, or stabilization measures required (such as gabion walls, retaining walls, paving, etc.).

- All work for this program will be performed within the current electrical easement.

· Poles are close to the roads and are site accessible with existing access points at the established locations. **The construction of access roads is not required for this scope of work.** Refer to **APPENDIX C** — Project Considerations in column H, "Site Accessible."

· All materials are stored and dispatched from the Caguas Regional Warehouse located at Carretera #1 Esquina Jose Mercado, Caguas ([REDACTED]).

For Figure 1 please see project report uploaded "1066737-DR4339PR-Detailed SOW Caguas Group 5 - Phase 2 Rev1.pdf"

x **Fill material.** If the project includes the use of fill material, provide the source of the fill material including the provider's name and address (if known).

· Fill, gravel, and sand materials will be obtained from an approved supplier as referenced in the LUMA Vendor Directory List in Grants Portal - Applicant Event Profiles. LUMA will retain and make available for review the documentation provided by material suppliers.

_ **Work in water including coffer dams, dredging, placement of equipment in water, or other work in wetlands.** If checked, provide a description of the activities to be performed in water or wetlands.

The following items are generally intended for buildings:

_ **Facility is over 45 years old.** If checked, provide a thorough description of materials to be used and method of repair, including cleaning methods. If substitute materials will be used in the restoration, specify whether they match the original color, texture, and design of the damaged

facility.

_ **Known renovations to the facility.** If checked, provide dates of any previous major renovations to the interior or exterior of the facility.

_Photos of all sides of the facility are provided.

PROJECT COST ESTIMATE (PCE)

The estimated costs (compliant with **Class 3 Accuracy +/-30%**) to complete the project are summarized in the table(s) below. The cost estimate(s) was developed utilizing preliminary Architectural and Engineering ("A&E") design information. For a more detailed cost estimate refer to the referenced appendix/appendices.

Refer to **APPENDIX B** - Detailed Cost Estimate. Project Cost Estimate Notes:

Cost Estimate			
Cost Element	428	406	PROJECT TOTAL
PLANNING	\$ 665,047.19	\$ 19,975.80	\$ 685,022.99
(A&E) Permitting and Assessments	\$ 31,668.91	\$ 951.23	\$ 32,620.14
A&E) Environmental Documentation & Management	\$ 140,750.73	\$ 4,227.68	\$ 144,978.41
(A&E) Engineering Services & Design	\$ 492,627.55	\$ 14,796.89	\$ 507,424.44

MANAGEMENT	\$ 253,351.32	\$ 7,609.82	\$ 260,961.14
(A&E) Design Development Project Management A&E	\$ 8,445.04	\$ 253.66	\$ 8,698.70
(A&E) - Design Lodging & Per Diem A&E	\$ -	\$ -	\$ -
Project Management	\$ 47,855.25	\$ 1,437.41	\$ 49,292.66
Construction Management	\$ 70,375.37	\$ 2,113.84	\$ 72,489.21
Contracting, Procurement & Contract Administration	\$ 84,450.44	\$ 2,536.61	\$ 86,987.05
Projects Controls (Scheduling, Estimating, Support, Cost Control, Risk, Document Control & Reporting)	\$ 42,225.22	\$ 1,268.30	\$ 43,493.52
Caguas Group 5 - Phase 2	\$ 7,862,190.10	\$ 236,153.95	\$ 8,098,344.05
material, labor and equipment	\$ 6,108,174.01	\$ 211,384.11	\$ 6,319,558.12
Lodging & Per Diem & Travel	\$ 929,362.50	\$ -	\$ 929,362.50
Construction Contingency	\$ 613,527.49	\$ 18,428.32	\$ 631,955.81
Escalation	\$ 211,126.10	\$ 6,341.52	\$ 217,467.62
COST TOTALS	\$ 8,780,588.61	\$ 263,739.57	\$ 9,044,328.18
DEDUCTIONS	TOTAL INSURANCE PROCEEDS RECEIVED		-
	DE-OBLIGATION TO FAASt IF APPLICABLE		-
FAASt ALLOCATIONS	FAASt PROJECT # 1066737 - 428		\$ 7,591,896.49
	FAASt PROJECT # 1066737 - 406 HM		\$ 263,739.57
	FAASt PROJECT # 1066737 TOTAL:		\$ 7,855,636.06
	FAASt A&E # 335168 - 428		\$ 673,492.23
	FAASt A&E # 335168 - 406 HM		\$ 20,229.46
	FAASt A&E # 335168 TOTAL		\$ 693,721.69

	FAAST E&M #673691 - 428	\$ 515,199.89
	FAAST E&M #673691 - 406 HM	\$ 211,384.11
	FAAST E&M #673691 TOTAL	\$ 726,584.00

Project 1064452 Cost Summary, 428 PAAP:

Work To Be Completed (WTBC): \$ 8,780,588.61

A&E Deduction (Global A&E FAAS 335168): - \$ 673,492.23

E&M Deduction (Global E&M FAAS 673691): -\$ 515,199.89

Project Total Cost: \$ 7,591,896.49

Project Notes:

1. Refer to detailed SOW provided in document labeled: "1066737-DR4339PR-Detailed SOW Caguas Group 5 - Phase 2 Rev1.pdf"
2. Refer to detailed Cost Estimate provided in document labeled: "1066737-DR4339PR-Appendix B - Detail Cost Estimate - Caguas Group 5 - Phase 2 REV1.xlsx"
3. This project is part of Donor FAAS 136271 – MEPA078 Puerto Rico Electrical Power Authority (PREPA) Island Wide FAAS Project.
4. Equipment and material costs included in this project will be reduced from this project and obligated under FAAS Project #673691, Equipment and Materials, as shown in the table above. Only the base cost of equipment and/or material will be reduced from this project (not labor). All costs associated with Planning, Management, General Conditions, and Contingencies will remain in this project.
5. A&E costs included in this project will be reduced from this project and obligated under the FAAS Project #335168, A&E, as shown in the table above. The A&E project was obligated to track and account for costs associated with individual FAAS projects.
6. Attachments:

Item	Document Description or Filename
A	1066737-DR4339PR-Appendix A - Structure Coordinates
B	1066737-DR4339PR-Appendix B - Detailed Cost Estimate
C	1066737-DR4339PR-Appendix C - Project Considerations
D	1066737-DR4339PR-Appendix D - Caguas Group 5 - Phase 2 -Boundaries of Construction

406 HMP Scope

Project number: [1066737] FAAS [Pole and Conductor Repair-Caguas Group 5 Phase 2] / Former project 790427 (Distribution)

Damage: #1472679; FAAS [Pole and Conductor Repair -Caguas Group 5 Phase 2 (Distribution)

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

Location: Caguas, Puerto Rico

GPS Latitude/Longitude: Start: [REDACTED]; End: [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 the power generation plants, transmission and distribution lines, substations, communication systems, buildings, among other damages to the infrastructures owned, operated, and maintained by the Puerto Rico Electric Power Authority (PREPA).

Project #1066737 FAASt [Pole and Conductor Repair-Caguas Group 5 Phase 2] / Former project 790427 (Distribution)

The Distribution Pole and Conductor Repair -- Caguas Group 5 Phase 2 consists of seven (5ea) interconnected and inter-functional distribution feeders (sites) establish the electrical distribution system as follows: CAYEY, SUB. 3401 (3401-02); CAYEY RURAL (NUEVA GUINEA) SUB. 3405 (3405-01); CAYEY RURAL (NUEVA GUINEA) SUB. 3405 (3405-03); AIBONITO PDS SUB. 3502 (3502-02); CIDRA PUEBLO, SUB. 3601 (3601-04).

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

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

Cost Summary:

The Hazard Mitigation Proposal is divided in 1ea Sub-Project: DI # 1472679; FAASt [Pole and Conductor Repair -Caguas Group 5 Phase 2 (Distribution)]. The total HMP Cost is the HM Net Cost \$211,384.11) + Applicant A&E, Management & General Conditions (\$52,355.46) = \$263,739.57.

(I) 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 by increasing the wind tolerance of all materials to +160mph. The FAASt MOR included the PREPA distribution standards and specifications that were based on a 145mph sustained winds. However, the new PREPA Standard 2021 updates the design-criteria to a 160mph sustained winds resistant. The above mitigation measures will protect and make the affected infrastructure more resistant, stronger, and resilient to similar hazards. Refer to Appendix J: Section VI.D.1 of the PAPPG V3.1.

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

1. Feeder 3401-02 Scope:

- Replace eighty-six (86) 50' Galvanized Steel Round Poles by eighty-six (86) 45' S5.7 Galvanized Steel Poles.
- Replace five (5) 50' Galvanized Steel Round Poles by five (5) 50' S8.5 Galvanized Steel Poles.

2. Feeder 3405-01 Scope:

- Replace twenty-one (21) 50' Galvanized Steel Round Poles by twenty-one (21) 45' S5.7 Galvanized Steel Poles.

3. Feeder 3502-02 Scope:

- Replace sixty-four (64) 50' Galvanized Steel Round Poles by sixty-four (64) 45' S5.7 Galvanized Steel Poles.
- Replace three (3) 50' Galvanized Steel Round Poles by three (3) 50' S8.5 Galvanized Steel Poles.

4. Feeder 3601-04 Scope:

- Replace sixty-four (64) 50' Galvanized Steel Round Poles by sixty-four (64) 45' S5.7 Galvanized Steel Poles.
- Replace three (3) 50' Galvanized Steel Round Poles by three (3) 50' S8.5 Galvanized Steel Poles.

5. Feeder 3405-03 Scope:

- Replace twenty-seven (27) 50' Galvanized Steel Round Poles by twenty-seven (27) 45' S5.7 Galvanized Steel Poles.
- Replace two (2) 50' Galvanized Steel Round Poles by two (2) 50' S8.5 Galvanized Steel Poles.

(II) Hazard Mitigation Proposal (HMP) Cost

Total Net Hazard Mitigation Cost (Base Cost) =	\$211,384.11
+ HM (Applicant A&E, Management & General Conditions) =	\$ 52,355.46
Hazard Mitigation Total Cost =	\$263,739.57

(III) Hazard Mitigation Proposal (HMP) Cost Distribution:

Equipment and Materials (E&M) =	\$211,384.11
Architecture and Engineering (A&E) =	\$ 20,229.46
Construction Cost =	\$ 32,126.00
Hazard Mitigation Total Cost =	\$263,739.57

(IV) 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 **\$263,739.57 (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).**

(VI) Compliance and Assurance Requirements

HMP: GENERAL NOTES:

By agreeing to implement the hazard mitigation measures in this HMP, the Applicant/Sub-Applicant is bound by the specific guidelines listed within this document.

SCOPE OF WORK DEVELOPMENT OF HAZARD MITIGATION: FEMA will evaluate each mitigation opportunity to first determine what measures or portions of solutions could be funded through Section 406 mitigation. FEMA analyzes the proposed mitigation measures for cost-effectiveness, technical feasibility, and compliance with EHP laws, regulations, and Eos. FEMA, the Applicant, Recipient, and Sub-recipients will develop and agree to scopes of work (SOW) and cost estimates to repair, restore, or replace eligible facilities including 406 Hazard Mitigation" (Page 6).

COMPLETION OF HAZARD MITIGATION SCOPE OF WORK: If this HMP is approved and the mitigation is not performed, the Applicant must apply for a change in the Scope of Work and a de-obligation of the HMP funding. Failure to complete the work of the HMP may limit future FEMA funding of repairs at the site in the event that a similar disaster event results in similar damage at the site.

CHANGES TO THE HAZARD MITIGATION SCOPE OF WORK FOR SMALL PROJECTS: All changes in SOW should be brought to FEMAs and the Recipients attention, including those to the HMP SOW. Per the Public Assistance Program and Policy Guide (PAPPG), April 2018, "FEMA only adjusts the approved amount on individual Small Projects if one of the following

conditions applies: The Subrecipient did not complete the approved SOW; the Subrecipient requests additional funds related to an eligible change in SOW; the PW contains inadvertent errors or omissions; or Actual insurance proceeds differ from the amount deducted in the PW..."

CHANGES TO THE HAZARD MITIGATION SCOPE OF WORK FOR LARGE PROJECTS:

Per typical FEMA PA Process (Section 406) all changes in the SOW should be brought to FEMA and the Recipient's attention, including those to the HMP SOW. Per the Public Assistance Program and Policy Guide (PAPPG FP 104-009-2 / April 2018). "If the project included approved hazard mitigation measures; FEMA does not re-evaluate the cost-effectiveness of the HMP based on the final actual cost. If during the review, FEMA determines that the Subrecipient performed work that was not included in the approved SOW, FEMA will designate the project as an Improved Project, cap the funding at the original estimated amount, and review the additional SOW for EHP compliance." (Page 144)

Per PAAP PA Process (Section 428), Guide for Permanent Work, February 10, 2020, "A Subrecipient may alter the 406-hazard mitigation SOW (HMP) after FEMA, the Recipient, and Subrecipient agree on the cost estimate for the initial proposal. After the project is obligated, the SOW for the HMP can be changed only once and the timeline for this change will be established based on a facility-by-facility basis. The proposed change will require evaluation by FEMA for eligibility and EHP. As part of the eligibility review, FEMA will evaluate the SOW, technical feasibility, the level of protection, the revised cost estimate, and cost effectiveness of the new hazard mitigation proposal, and, if approved, will adjust the scope and cost estimate accordingly." (Page 14)

HAZARD MITIGATION DESIGN: This HMP is for estimating purposes only and not to be construed as a project design. If the site's final placement and configuration are different than the preliminary estimate, the Applicant should submit a change in scope request. This HMP is subject to further review prior to award.

The Applicant is responsible for final design, placement, configuration, choice of contractors or vendors, permits and compliance with all regulatory codes and standards of the Commonwealth of Puerto Rico. FEMA will pay only the incremental difference in cost between repairs and mitigation and will not duplicate funding for repair or replacement of eligible work.

HAZARD MITIGATION CONTRUCTION: The Applicant must provide & maintain competent & adequate engineering design & supervision during the construction phase to ensure that the completed work conforms to the approved plans & specifications & all applicable material & construction standards.

As a condition of the FEMA mitigation grant, the Applicant is responsible for the determination of and compliance with all applicable requirements, codes, standards, and specifications in connection with the project, including but not limited to the Puerto Rico Building Code of 2018 (2018 PRBC), IBC, IRBC, NFIP Floodplain Management Regulations outlined in 44 C.F.R 60.3, ASCE 24, ASCE 7, and receiving all applicable permits & approvals prior to construction.

MAINTENANCE OF HAZARD MITIGATION: The Applicant shall ensure proper maintenance of the installed mitigation measures, per manufacturer and designer specifications. Any adaptations or installations not approved or that renders the hazard mitigation measure ineffective shall be removed by the Applicant. Examples include, but are not limited to, improper installation of roof-mounted equipment or installation of window-mounted air-conditioning units.

ENVIRONMENTAL AND HISTORIC PRESERVATION: Eligibility and funding for the mitigation at this site on this project will be subject to the compliance of all environmental laws, regulations, and executive orders applicable to the site. This project will undergo a EHP compliance review, after obligation any changes to the SOW will likely trigger an additional EHP compliance review of the revised SOW.

Cost

Code	Quantity	Unit	Total Cost	Section
9008	1	Lump Sum	(\$515,199.89)	Uncompleted
3510	1	Lump Sum	(\$673,492.23)	Uncompleted
9001	1	Lump Sum	\$8,780,588.61	Uncompleted

CRC Gross Cost \$7,591,896.49

Total 406 HMP Cost \$263,739.57

Total Insurance Reductions \$0.00

CRC Net Cost \$7,855,636.06

Federal Share (90.00%) \$7,070,072.46

Non-Federal Share (10.00%) \$785,563.60

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.
- 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.
- 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.
- 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.
- 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.

Insurance

Additional Information

5/20/2026

Does the Applicant have a Commercial Policy: Yes.

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

Property insurance coverage for the electrical distribution facilities represented on this project are not insured or insurable. No insurance relief is anticipated. No Obtain and Maintain requirement will be made.

FEMA requires the applicant to take reasonable efforts to pursue claims to recover insurance proceeds that it is entitled to receive from its insurer(s). In the event that any insurance proceeds are received for these expenses those proceeds must be reduced from FEMA Public Assistance funding to ensure no duplication of benefits has occurred.

No duplication of benefits from insurance is anticipated for work described in this application. In the event any part or all costs are paid by an insurance policy, a duplication of benefits from insurance will occur. Applicant must notify grantee and FEMA of such recoveries and the Sub-Grant award amount must be reduced by actual insurance proceeds.

No insurance requirements will be required for this project. Insurance requirements are specific to permanent work to replace, restore, repair, reconstruct, or construct buildings, contents, equipment, or vehicles. (FEMA Recovery Policy FP 206-086-1).

No insurance narrative will be produced or uploaded into documents or attachments.

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

O&M Requirements

There are no Obtain and Maintain Requirements on **FAASt [Pole and Conductor Repair-Caguas Group 5 Phase 2] / Former project 790427 (Distribution)**.

406 Mitigation

There is no additional mitigation information on **FAASt [Pole and Conductor Repair-Caguas Group 5 Phase 2] / Former project 790427 (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.
- On May 16, 2025, the Secretary of the U.S. Department of Energy (DOE) issued Order 202-25-2 (Order), pursuant to the authority vested in him by section 202(c) of the Federal Power Act (FPA), 16 U.S.C. § 824a(c), and section 301(b) of the Department of Energy Organization Act, 42 U.S.C. § 7151(b). The Order sought to expedite repair and maintenance efforts to the electrical grid of Puerto Rico by directing the Puerto Rico Electric Power Authority (PREPA) to perform vegetation management, including vegetation clearing to re-establish a right-of-way, for particular transmission and distribution facilities in the Territory as specified in the Order. The Order required PREPA to identify certain parameters by which the directed work would be performed, and required that all work be performed, to the maximum extent practicable, in a manner consistent with all applicable Federal, State, or local environmental laws or regulations and minimize any adverse environmental impacts. However, pursuant to Section 202(c)(3) of the FPA, to the extent any omission or action taken by PREPA that was necessary to comply with the Order, including any omission or action taken to voluntarily comply with the Order, caused PREPA to not comply with any Federal, State, or local environmental law or regulation, including any environmental conditions in this REC's "Standard Conditions," such omission or action shall not be considered a violation of such environmental law or regulation, or subject PREPA to any requirement, civil or criminal liability, or citizen suit under such environmental law or regulation. On August 15, 2025, DOE reissued the Order to direct PREPA to also perform asset management, including component refurbishment and replacement. To renew/reissue the Order, DOE was required to consult with the primary Federal agency with expertise in the environmental interest protected by such law or regulation and include in the Order

conditions necessary to minimize any adverse environmental impacts to the extent practicable. Pursuant to Section 202(c)(4)(B) of the FPA, DOE provided the relevant agencies the opportunity to submit conditions for worked performed under the Order, to be included in the Order. According to DOE, no conditions were submitted by the agencies for inclusion in the Order. On November 12, 2025, DOE reissued the Order to direct PREPA to also perform asset management, including component refurbishment and replacement. DOE and FEMA have agreed that DOE is the lead agency for activities that fall under the prior and any future DOE 202(c) orders issued under the Federal Power Act to resolve the current and related emergencies in Puerto Rico. FEMA has requested that DOE provide FEMA with all documentation relating to their EHP compliance. FEMA will review and incorporate all available information and data for this project pertaining to applicable environmental laws and regulations into this REC when it is received from DOE. On February 10, 2026, and again on May 7, 2026, DOE reissued the Order to direct PREPA to perform vegetation management, including vegetation clearing to re-establish the right-of-way, and asset management, including component refurbishment and replacement, to ensure operational availability of the transmission and distribution facilities.

EHP Additional Info

There is no additional environmental historical preservation on **FAASt [Pole and Conductor Repair-Caguas Group 5 Phase 2] / Former project 790427 (Distribution)**.

Final Reviews

Final Review

Reviewed By LEFRANC-GARCIA, CARLOS L.

Reviewed On 06/11/2026 8:44 PM PDT

Review Comments

roject is part of the feeder systems in Caguas and included in the PREPA 10-Year infrastructure plan. Project consist of poles and structures (including their foundations), framing and insulators, load break switches (manual and automated), capacitor banks, voltage regulators, transformers (including lightning arresters and fuse cut-outs), conductors, guy wires, anchoring, grounding assemblies, underground cables, underground cable systems, and fault interrupting equipment (fuses, reclosers, and sectionalizes). Estimated A&E : \$673,492.23 Estimated total: \$7,591,896.49 Federal share: \$7,070,072.46. Reviewed, found eligible and cost reasonable. CLG 06/11/26

Recipient Review

Reviewed By Mulero, Noel

Reviewed On 06/17/2026 10:17 PM PDT

Review Comments

Recipient review completed. Applicant must ensure to compliance with all regulatory requirements, Record of Environmental Consideration (REC) Special Conditions and PA policy. Project is ready for applicant review.

Project Signatures

Reviewed By Unsigned

Reviewed On Unsigned

Award Information

Version Information

Version #	Eligibility Status	Current Location	Bundle Number	Project Amount	Cost Share	Federal Share Obligated	Date Obligated
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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 #
0	7/8/2026	\$7,070,072.46	90%	Validation Error	4339DRPRP01082471
0	7/8/2026	\$7,070,072.46	90%	Accepted	4339DRPRP01082471

**Department of Homeland Security
Federal Emergency Management Agency**

v0

General Info

Project #	1066740	P/W #	108250	Project Type	Specialized
Project Category	F - Utilities	Applicant	PR Electric Power Authority (000-UA2QU-00)		
Project Title	FAASt [Pole and Conductor Repair – Caguas Group 4 – Phase 2] / Former project 790446 (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 #1472670; FAASt [Pole and Conductor Repair -Caguas Group 4 Phase 2 (Distribution)]

General Facility Information:

- **Facility Type:** Power generation, transmission, and distribution facilities
- **Facility:** Pole and Conductor Repair -Caguas Group 4 Phase 2
- **Facility Description:** The specific facilities included in this project are poles and structures (including their foundations), framing and insulators, load break switches (manual and automated), capacitor banks, voltage regulators, transformers (including lightning arresters and fuse cut-outs), conductors, guy wires, anchoring, grounding assemblies, underground cables, underground cable systems, and fault interrupting equipment (fuses, reclosers, and sectionalizes).
- **Approx. Year Built:** 1980
- **Start GPS Latitude/Longitude:** [REDACTED]
- **End GPS Latitude/Longitude:** [REDACTED]

Final Scope

1472670 FAASt [Pole and Conductor Repair -Caguas Group 4 Phase 2 (Distribution)]

5.0 INTRODUCTION

Pursuant to FEMA's Post-Fixed Cost Estimate Obligation SOP (the "SOP") for FAASt projects, FAASt subrecipients must provide to FEMA recovery project scopes of work ("SOW") for the proposed construction work to be performed. The SOW defines the activities that will be performed using Public Assistance ("PA") funding and includes § 406 hazard mitigation proposals ("HMPs").

According to the SOP, FEMA "anticipates that [SOW] submissions might include preliminary designs, including drawings and cost estimates. FEMA also recognizes that, generally, architects and/or engineers do not include or delineate the information needed to enable FEMA to complete programmatic reviews. Therefore, in those cases, subrecipients must ensure to submit all the information described [in the SOP] and not limit the submission to a drawing set. Refer to Part C - II. Recipient/Subrecipient Checklist for Submissions as a guide to review completeness." SOP at 4.

This document contains the detailed SOW for FEMA PA Project 1066740 -Distribution Pole and Conductor Repair – Caguas Group 4 – Phase 2 under DR-4339-PR Public Assistance. The document provides a detailed description of the project, the scope of PA construction activities to be completed, common EHP review information, proposed hazard mitigation measures, and project cost estimates. LUMA is seeking approval from COR3 and FEMA for PA funding for the scope described in this document.

LUMA submits this Detailed SOW pursuant to the Transmission and Distribution Operations and Maintenance Agreement between the Puerto Rico Electric Power Authority ("PREPA"), the Puerto Rico Public-Private Partnerships Authority ("P3A"), and LUMA, and in accordance with the Consent to Federal Funding Letter issued by PREPA and P3A, which collectively provides the necessary consent for LUMA, as agent of PREPA, to undertake work in connection with any Federal Funding requests related to the T&D System submitted to FEMA. References to "Subrecipient" herein refer to PREPA pursuant to this agreement and consent for LUMA to act as its agent with respect to federal funds.

6.0 PROJECT DESCRIPTION

The project’s scope is the replacement of poles and the repair of conductors for specific feeders in the Caguas region. The proposed restoration includes the replacement of eligible disaster damage up to required codes and standards and the request to upgrade undamaged infrastructure to fully effectuate the restoration of disaster-damaged components and restore the system’s function to an approved industry standard. The scope of work consists of the removal and replacement of infrastructure to restore this facility to codes and standards. As a hazard mitigation proposal this project will replace damaged poles with higher-rated poles to withstand winds of up to 160mph.

7.0 FACILITIES

7.1 FACILITIES LIST – BUILDINGS AND SUBSTATIONS

None.

7.2 FACILITIES LIST – OTHER FACILITIES

The following list includes the name and GPS coordinates identifying the areas of work for other types of facilities. For any access roads or other line work, coordinates listed below are the beginning and end points. The interconnected and inter-functional distribution feeders (sites) that are the object of this scope of work are part of the electrical distribution system in the Caguas Region. All the feeders originate from a substation (start) and serve customers along the route to various locations (end). The coordinates shown below as "GPS End" represent the end of each feeder's mainline backbone.

Name	Feeder Number	# Of Poles to Replace	GPS Start	GPS End	Phase	Voltage Level (kV)	Constructed Date
CAGUAS, SUB. 3004	3004-01	9			Single Phase	8.32	More than 20 years
CAGUAS, SUB. 3006	3006-02	17			Single Phase	13.2	More than 20 years
CAGUAS, SUB. 3006	3006-03	1			Single Phase	13.2	More than 20 years
CAGUAS, SUB. 3006	3006-05	25			Single Phase	13.2	More than 20 years
VILLAS DE CASTRO, SUB. 3013	3013-02	85			Single Phase	8.32	More than 20 years

See Appendix A for the coordinates of each structure included in this project.

8.0 PROJECT AREA MAP WITH BOUNDARIES OF CONSTRUCTION

Please see the attached map identified as the boundaries of construction in Appendix 1066740-DR4339PR-Appendix D – Caguas Group 4 – Phase 2 – Boundaries of Construction, including the feeder route.

Refer to document: 1066740-DR4339PR-Detailed SOW Caguas Group 4 - Phase 2 Rev0.pdf

9.0 SECTION 428 SCOPE OF WORK

The proposed type of work for this project:

(X) Standard Project: Restores the facility/facilities to pre-disaster design and function to locally adopted codes/standards and/or FEMA-approved industry standards.

___ Improved Project: Restores the pre-disaster function of the facilities and incorporates improvements or changes to its pre-disaster design not required by codes or standards.

___ Subrecipient's request letter included, see Appendix .

___ Recipient's approval letter included, see Appendix .

___ Alternate Project: Does not restore the pre-disaster function of the damage facility. The Subrecipient, through the Recipients, must obtain approval from FEMA.

___ Subrecipient's request letter included, see **Appendix** __.

___ Recipient's approval letter included, see **Appendix** __.

9.0 DESCRIPTION OF PROPOSED WORK TO BE PERFORMED

The Scope of Work entails the removal and replacement of infrastructure necessary to restore the facility in compliance with applicable codes and standards.

Feeder3004-01 Scope:

Remove	Quantity	Replace With	Quantity
35FT WOOD	3	50FT GAL STEEL ROUND POLE	3
40FT WOOD	5	50FT GAL STEEL ROUND POLE	5
45FT WOOD	1	50FT GAL STEEL ROUND POLE	1

Feeder 3006-02 Scope:

Remove	Quantity	Replace With	Quantity
35FT CONCRETE	9	50FT GAL STEEL ROUND POLE	9
40FT WOOD	2	50FT GAL STEEL ROUND POLE	2
40FT CONCRETE	5	50FT GAL STEEL ROUND POLE	5
40FT STEEL	1	50FT GAL STEEL ROUND POLE	1

Feeder 3006-03 Scope:

Remove	Quantity	Replace With	Quantity
45FT CONCRETE	1	50FT GAL STEEL ROUND POLE	1

Feeder 3006-05 Scope:

Remove	Quantity	Replace With	Quantity
35FT WOOD	13	50FT GAL STEEL ROUND POLE	13
40FT WOOD	9	50FT GAL STEEL ROUND POLE	9
45FT WOOD	3	50FT GAL STEEL ROUND POLE	3

Feeder 3013-02 Scope:

Remove	Quantity	Replace With	Quantity
30FT WOOD	1	50FT GAL STEEL ROUND POLE	1
35FT WOOD	30	50FT GAL STEEL ROUND POLE	30
40FT WOOD	46	50FT GAL STEEL ROUND POLE	46
45FT WOOD	6	50FT GAL STEEL ROUND POLE	6
55FT WOOD	2	50FT GAL STEEL ROUND POLE	2

9.1 The pole replacement work includes the following actions:

1. Remove existing poles, including hardware, and install new poles, including hardware. Columns C and D of the "LPCE" tab of Appendix B lists each pole that is proposed as a \$428 replacement and \$406 replacement, respectively. Column E of the "LPCE" tab of Appendix B lists each pole that is to be removed, with Column F describing each pole's hardware scenario, and scenarios are in turn described in the "Hardware Scenarios" tab of Appendix B. The "Hardware Scenarios" tab is correlated with cost information. New guy wire/ anchors are to be installed within 3 feet of the existing anchor location in compliance with the LUMA Overhead Electrical Distribution System Manual. The maximum distance an anchor will be installed for a 50-foot pole is 25 feet from the base of the pole, within the easement.
2. All work for this program will be performed within the current electrical easement.

9.2 CODES & STANDARDS

Per FEMA's SOP, the locally adopted codes/standards and/or FEMA-approved industry standards used for this project are provided below:

1. Distribution Construction Standards (Concrete Base Standard), available in Grants Portal - Applicant Event Profiles.
2. LUMA Overhead Electrical Distribution System Manual, version 4.0, available in Grants Portal - Applicant Event Profiles.
3. Consensus-based codes, per FEMA's Public Assistance Alternative Procedures (Section 428) Guide for Permanent Work FEMA-4339-DR-PR (Feb. 2020).
4. Industry standards per FEMA Recovery Policy FP-104-009-5, Version 2, Implementing Section 20601 of the 2018 Bipartisan Budget Act through the Public Assistance Program.
5. FEMA Recovery Interim Policy FP-104-009-11 Version 2.1, Consensus-Based Codes, Specifications, and Standards for Public Assistance.
6. LUMA's latest Design Criteria Document (DCD) which aggregates the design considerations of most of the consensus-based codes, specifications, and standards listed in FEMA Recovery Interim Policy 104-009-11 Version 2.1 (Dec. 20, 2019).

10.0 SECTION 406 HAZARD MITIGATION PROPOSAL

11.0 COMMON EHP INFORMATION

Please check any items applicable to the proposed scope of work in this Project. If an item is checked, provide a description of the scope extent and location of the selected activity.

(X) **Ground disturbance outside of existing footprint.** If checked, provide a description of the ground disturbing activities including the extent, location, and depth of the disturbance.

- Remove existing poles, including hardware, and install new poles, including hardware. No ground disturbance will occur outside the footprint.
- All pole installations are to replace existing pole locations; no new locations are included in this scope of work. For the depths of the poles to be installed, refer to APPENDIX C—Project Considerations, column D (Soil area and depth impact). The maximum auger width to be used is 42" and the maximum depth to be drilled is 15ft.
- New guy wires/anchors are to be installed within 3 feet of the existing anchor in compliance with the LUMA Overhead Electrical Distribution System Manual. The maximum distance an anchor will be installed for a 50-foot pole is 25 feet from the base of the pole, within the easement.
- The following equipment will 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.

___ **Soil testing or boring to be performed as part of pre-construction activities.** If checked, provide a description, location, and dimensions of the testing/boring activities.

___ **Relocation of utilities.** If checked, include a description of the relocation including the type of utility, relocation coordinates, and the extent and depth of associated ground disturbance.

(X) **Vegetative Removal.** If checked, describe the removal work to be performed, its location, and its extent.

- Vegetation clearance will be performed solely to the extent that it allows crews to conduct work and will be limited to a 10 foot radius surrounding the surface of the pole but not to exceed the width of the easement for the exclusive purpose of gaining access to the pole to conduct repairs. The costs related to Vegetation clearance procedures are in project [727694] FAAS [Region 4 -Caguas Group C] (Vegetation). The vegetation removal process will be managed according to federal and state regulations.
- Vegetation will be removed utilizing machete, chainsaw, electric pruner, telescopic pole pruner, bucket truck, and/or chipper.

(X) **Demolition.** If checked, include a description of what will be removed and the extent and depth of any ground disturbing activities. Additionally, include a description of (1) demolition debris type (construction debris, white goods, hazardous materials, etc.); (2) GPS location of temporary debris storage sites; (3) final debris disposal location; and (4) final debris disposal method.

- PCBs, oil from the transformer and breakers, sealants, and other chemical waste typical of a construction site are considered hazardous waste and will be disposed of by the contractor in approved facilities.
- Transformers will be contained and returned to LUMA in compliance with applicable regulations. Removing the transformer will require testing the existing oil for PCB levels. Per environmental regulations, the oil will be drained and delivered to the authorized waste disposal site.

(X) **Staging areas, landing area for air transport, and access roads.** If checked, provide GPS location of staging areas, and access roads. Include a description of the extent of any related vegetative removal, ground disturbance, or stabilization measures required (such as gabion walls, retaining walls, paving, etc.)

- All work for this program will be performed within the current electrical easement.
- Poles are close to the roads and are site accessible with existing access points at the
- All materials are stored and dispatched from the Caguas Regional Warehouse located at Carretera #1 Esquina Jose Mercado, Caguas ().

(X) **Fill material.** If the project includes the use of fill material, provide the source of the fill material including the provider's name and address (if known).

- Fill, gravel, and sand materials will be obtained from an approved supplier as referenced in the LUMA Vendor Directory List in Grants Portal - Applicant Event Profiles. LUMA will retain and make available for review the documentation provided by material suppliers.

___ **Work in water including coffer dams, dredging, placement of equipment in water, or other work in wetlands.** If checked, provide a description of the activities to be performed in water or wetlands.

The following items are generally intended for buildings:

___ **Facility is over 45 years old.** If checked, provide a thorough description of materials to be used and method of repair, including cleaning methods. If substitute materials will be used in the restoration, specify whether they match the original color, texture, and design of the damaged facility.

___ **Known renovations to the facility.** If checked, provide dates of any previous major renovations to the interior or exterior of the facility.

___ **Photos of all sides of the facility are provided.**

12.0 PROJECT COST ESTIMATE (PCE)

The estimated costs (compliant with **Class 3 Accuracy +/-30%**) to complete the project are summarized in the table(s) below. The cost estimate(s) was developed utilizing preliminary Architectural and Engineering design information. For a more detailed cost estimate refer to Appendix B - Detailed Cost Estimate.

COST ESTIMATE			
Cost Element	428	406	PROJECT TOTAL
PLANNING	\$ 338,415.83	\$ 10,005.65	\$ 348,421.48
(A&E) Permitting and Assessments	\$ 16,115.04	\$ 476.46	\$ 16,591.50
(A&E) Environmental Documentation & Management	\$ 71,622.40	\$ 2,117.60	\$ 73,740.00
(A&E) Engineering Services & Design	\$ 250,678.39	\$ 7,411.59	\$ 258,089.98
MANAGEMENT	\$ 128,920.32	\$ 3,811.68	\$ 132,732.00
(A&E) Design Development Project Management A&E	\$ 4,297.34	\$ 127.06	\$ 4,424.40
(A&E) - Design Lodging & Per Diem A&E	\$ -	\$ -	\$ -
Project Management	\$ 24,351.62	\$ 719.98	\$ 25,071.60
Construction Management	\$ 35,811.20	\$ 1,058.80	\$ 36,870.00
Contracting, Procurement & Contract Administration	\$ 42,973.44	\$ 1,270.56	\$ 44,244.00
Projects Controls (Scheduling, Estimating, Support, Cost Control, Risk, Document Control & Reporting)	\$ 21,486.72	\$ 635.28	\$ 22,122.00
Caguas Group 4 - Phase 2	\$ 4,001,696.00	\$ 118,314.59	\$ 4,120,010.59
material, labor and equipment	\$ 3,118,128.47	\$ 105,879.80	\$ 3,224,008.27
Lodging & Per Diem & Travel	\$ 462,991.50	\$ -	\$ 462,991.50
Construction Contingency	\$ 313,142.43	\$ 9,258.40	\$ 322,400.83
Escalation	\$ 107,433.60	\$ 3,176.39	\$ 110,609.99
COST TOTALS	\$ 4,469,032.15	\$ 132,131.92	\$ 4,601,164.07
DEDUCTIONS	TOTAL INSURANCE PROCEEDS RECEIVED		\$ -
	E-OBLIGATION TO FAAST IF APPLICABLE		\$ -

FAAST ALLOCATIONS	FAAST PROJECT # 1066740- 428	\$ 3,867,419.78
	FAAST PROJECT # 1066740 - 406 HM	\$ 132,131.92
	FAAST PROJECT # 1066740 TOTAL:	\$ 3,999,551.70
	FAAST A&E# 335168 - 428	\$ 342,713.17
	FAAST A&E# 335168 - 406 HM	\$ 10,132.71
	FAAST A&E# 335168 TOTAL	\$ 352,845.88
	FAAST E&M#673691 - 428	\$ 258,899.20
	FAAST E&M#673691 - 406 HM	\$ 105,879.80
	FAAST E&M #673691 TOTAL	\$ 364,779.00

Project Cost Summary, 428 Version 0:

Work to be Completed (WTBC): \$4,469,032.15

A&E Deduction (Global A&E FAASt 335168): -\$342,713.17

E&M Deduction (Global E&M FAASt 673691): -\$258,899.20

Project Total: \$3,867,419.78

Project Cost Estimate Notes:

1. Refer to detailed SOW provided in document labeled: "1066740-DR4339PR-Detailed SOW Caguas Group 4 - Phase 2 Rev0.pdf"
2. Refer to detailed Cost Estimate provided in document labeled: "1066740-DR4339PR-Appendix B - Detail Cost Estimate - Caguas Group 4 - Phase 2 REV0.xlsx".
3. A&E cost included in this project will be reduced from this project and obligated under the FAASt Project #335168, A&E, as shown in the table above. The A&E project was obligated to track and account for costs associated with individual FAASt projects.
4. Equipment and material costs included in this project will be reduced from this project and obligated under FAASt Project #673691, Equipment and Materials, as shown in the table above. Only the base cost of equipment and/or material will be reduced from this project (not labor). All costs associated with Planning, Management, General Conditions, and Contingencies will remain in this project.
5. This project is part of Donor FAASt 136271 – MEPA078 Puerto Rico Electrical Power Authority (PREPA) Island Wide FAASt Project.697.
6. Attachments:
 - A. Appendix A - Structure Coordinates, 1066740-DR4339PR-Appendix A - Structure Coordinates - Caguas Group 4 - Phase 2 Rev0.xlsx
 - B. 1066740-DR4339PR-Appendix B - Detail Cost Estimate - Caguas Group 4 - Phase 2 REV0.xlsx
 - C. Appendix C - Project Considerations, 1066740-DR4339PR-Appendix C - Project Considerations Caguas Group 4 - Phase 2 Rev0.xlsx
 - D. 1066740-DR4339PR-Appendix D - Caguas Group 4 - Phase 2 -Boundaries of construction.pdf

406 HMP Scope

Project number: [1066740] FAASt [Pole and Conductor Repair - Caguas Group 4 - Phase 2] / Former project 790446 (Distribution)

Damage # 1472670; FAASt [Pole and Conductor Repair - Caguas Group 4 Phase 2] (Distribution)

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

Location: Caguas, Puerto Rico

GPS Latitude/Longitude: Start: [REDACTED]; End: [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 the power generation plants, transmission and distribution lines, substations, communication systems, buildings, among other damages to the infrastructures owned, operated, and maintained by the Puerto Rico Electric Power Authority (PREPA).

Project #1066740 - FAAsT [Pole and Conductor Repair - Caguas Group 4 - Phase 2] (Distribution)

The Distribution Pole and Conductor Repair - Caguas Group 4 - Phase 2] (Distribution) consists of five (5 ea.) interconnected and inter-functional distribution feeders (sites) establish the electrical distribution system as follows: CAGUAS (3004-01); CAGUAS (3006-02); CAGUAS (3006-03); CAGUAS (3006-05) & VILLAS DE CASTRO (3013-02).

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

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

Hazard Mitigation Proposal (HMP) Scope of Work:

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

Mitigation Measures (*Replacement*)

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

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

1. Feeder 3004-01 Scope:

- Replace seven (7) 50' Galvanized Steel Round Poles by seven (7) 45' Galvanized Steel S-5.7 12-sided poles.
- Replace two (2) 50' Galvanized Steel Round Poles by two (2) 50' Galvanized Steel S8.5 12-sided Poles.

2. Feeder 3006-02 Scope:

- Replace seventeen (17) 50' Galvanized Steel Round Pole by seventeen (17) 45' S5.7 Galvanized Steel Poles.

3. Feeder 3006-03 Scope:

- Replace one (1) 50' Galvanized Steel Round Pole by one (1) 45' S5.7 Galvanized Steel Poles.

4. Feeder 3006-05 Scope:

- Replace twenty-three (23) 50' Galvanized Steel Round Pole by twenty-three (23) 45' S5.7 Galvanized Steel Poles.
- Replace two (2) 50' Galvanized Steel Round Pole by two (2) 50' S8.5 Galvanized Steel Pole.

5. Feeder 3013-02 Scope:

- Replace eighty-one (81) 50' Galvanized Steel Round Pole by eighty-one (81) 45' S5.7 Galvanized Steel Poles.
- Replace four (4) 50' Galvanized Steel Round Pole by four (4) 50' S8.5 Galvanized Steel Pole.

Hazard Mitigation Proposal (HMP) Cost:

Total Net Hazard Mitigation Cost (Base Cost) =	\$ 105,879.80
+ HM (Applicant A&E, Management & General Conditions) =	\$ 25,252.12
Hazard Mitigation Total Cost =	\$ 132,131.92

Hazard Mitigation Proposal (HMP) Cost Distribution:

Equipment and Materials (E&M)	\$ 105,879.80
Architecture and Engineering (A&E)	\$ 10,132.71

Construction Cost	\$ 16,119.41
Hazard Mitigation Total Cost =	\$ 132,131.92

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 **\$132,131.92** (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	1	Lump Sum	(\$342,713.17)	Uncompleted
9001	1	Lump Sum	\$4,469,032.15	Uncompleted
9001	1	Lump Sum	(\$258,899.20)	Uncompleted

CRC Gross Cost \$3,867,419.78

Total 406 HMP Cost \$132,131.92

Total Insurance Reductions \$0.00

CRC Net Cost \$3,999,551.70

Federal Share (90.00%) \$3,599,596.53

Non-Federal Share (10.00%) \$399,955.17

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.
- 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.
- 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.
- 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.
- 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.
- The Subrecipient provided the estimate for this PW. FEMA validated the estimate and found it to be reasonable for the work to be performed.

Insurance

Additional Information

6/4/2026

Does the Applicant have a Commercial Policy: Yes.

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

Property insurance coverage for the electrical distribution facilities represented on this project are not insured or insurable. No insurance relief is anticipated. No Obtain and Maintain requirement will be made.

FEMA requires the applicant to take reasonable efforts to pursue claims to recover insurance proceeds that it is entitled to receive from its insurer(s). In the event that any insurance proceeds are received for these expenses those proceeds must be reduced from FEMA Public Assistance funding to ensure no duplication of benefits has occurred.

No duplication of benefits from insurance is anticipated for work described in this application. In the event any part or all costs are paid by an insurance policy, a duplication of benefits from insurance will occur. Applicant must notify grantee and FEMA of such recoveries and the Sub-Grant award amount must be reduced by actual insurance proceeds.

No insurance requirements will be required for this project. Insurance requirements are specific to permanent work to replace, restore, repair, reconstruct, or construct buildings, contents, equipment, or vehicles. (FEMA Recovery Policy FP 206-086-1).

No insurance narrative will be produced or uploaded into documents or attachments.

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

O&M Requirements

There are no Obtain and Maintain Requirements on **FAASt [Pole and Conductor Repair – Caguas Group 4 – Phase 2] / Former project 790446 (Distribution)**.

406 Mitigation

There is no additional mitigation information on **FAASt [Pole and Conductor Repair – Caguas Group 4 – Phase 2] / Former project 790446 (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.
- On May 16, 2025, the Secretary of the U.S. Department of Energy (DOE) issued Order 202-25-2 (Order), pursuant to the authority vested in him by section 202(c) of the Federal Power Act (FPA), 16 U.S.C. § 824a(c), and section 301(b) of the Department of Energy Organization Act, 42 U.S.C. § 7151(b). The Order sought to expedite repair and maintenance efforts to the electrical grid of Puerto Rico by directing the Puerto Rico Electric Power Authority (PREPA) to perform vegetation

management, including vegetation clearing to re-establish a right-of-way, for particular transmission and distribution facilities in the Territory as specified in the Order. The Order required PREPA to identify certain parameters by which the directed work would be performed, and required that all work be performed, to the maximum extent practicable, in a manner consistent with all applicable Federal, State, or local environmental laws or regulations and minimize any adverse environmental impacts. However, pursuant to Section 202(c)(3) of the FPA, to the extent any omission or action taken by PREPA that was necessary to comply with the Order, including any omission or action taken to voluntarily comply with the Order, caused PREPA to not comply with any Federal, State, or local environmental law or regulation, including any environmental conditions in this REC's "Standard Conditions," such omission or action shall not be considered a violation of such environmental law or regulation, or subject PREPA to any requirement, civil or criminal liability, or citizen suit under such environmental law or regulation. On August 15, 2025, DOE reissued the Order to direct PREPA to also perform asset management, including component refurbishment and replacement. To renew/reissue the Order, DOE was required to consult with the primary Federal agency with expertise in the environmental interest protected by such law or regulation and include in the Order conditions necessary to minimize any adverse environmental impacts to the extent practicable. Pursuant to Section 202(c)(4)(B) of the FPA, DOE provided the relevant agencies the opportunity to submit conditions for work performed under the Order, to be included in the Order. According to DOE, no conditions were submitted by the agencies for inclusion in the Order. On November 12, 2025, DOE reissued the Order to direct PREPA to also perform asset management, including component refurbishment and replacement. DOE and FEMA have agreed that DOE is the lead agency for activities that fall under the prior and any future DOE 202(c) orders issued under the Federal Power Act to resolve the current and related emergencies in Puerto Rico. FEMA has requested that DOE provide FEMA with all documentation relating to their EHP compliance. FEMA will review and incorporate all available information and data for this project pertaining to applicable environmental laws and regulations into this REC when it is received from DOE. On February 10, 2026, and again on May 7, 2026, DOE reissued the Order to direct PREPA to perform vegetation management, including vegetation clearing to re-establish the right-of-way, and asset management, including component refurbishment and replacement, to ensure operational availability of the transmission and distribution facilities.

EHP Additional Info

There is no additional environmental historical preservation on **FAASt [Pole and Conductor Repair – Caguas Group 4 – Phase 2] / Former project 790446 (Distribution)**.

Final Reviews

Final Review

Reviewed By LEFRANC-GARCIA, CARLOS L.

Reviewed On 06/11/2026 8:43 PM PDT

Review Comments

Distribution Pole and Conductor Repair – Caguas Group 4 – Phase 2 intends the replacement of poles and the repair of conductors for specific feeders in the Caguas region. As a hazard mitigation proposal this project will replace damaged poles with higher-rated poles to withstand winds of up to 160mph. CRC Gross Cost \$3,867,419.78 Total 406 HMP Cost \$132,131.92 Federal Share (90.00%) \$3,599,596.53. Reviewed, found eligible and reasonable. Subrecipient and its agents are responsible for complying with all grants and subgrant conditions, including any applicable Federal, State and Local requirements. CLG 6.11.2026

Recipient Review

Reviewed By Mulero, Noel

Reviewed On 06/15/2026 8:47 PM PDT

Review Comments

Recipient review completed. Applicant must ensure to compliance with all regulatory requirements, Record of Environmental Consideration (REC) Special Conditions and PA policy. Project is ready for applicant review.

Project Signatures

Reviewed By Unsigned

Reviewed On Unsigned

Award Information

Version Information

Version #	Eligibility Status	Current Location	Bundle Number	Project Amount	Cost Share	Federal Share Obligated	Date Obligated
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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 #
0	7/8/2026	\$3,599,596.53	90%	Accepted	4339DRPRP01082501
0	7/8/2026	\$3,599,596.53	90%	Validation Error	4339DRPRP01082501

**Department of Homeland Security
Federal Emergency Management Agency**

v0

General Info

Project #	1066741	P/W #	108251	Project Type	Specialized
Project Category	F - Utilities	Applicant	PR Electric Power Authority (000-UA2QU-00)		
Project Title	FAASt [Pole and Conductor Repair – Caguas Group 7 – Phase 2] / Former project 817249 (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 #1527660; FAASt [Pole and Conductor Repair -Caguas Group 7 - Phase 2] Feeders: 3103-04, 3101-02, 3103-01, 3103-05, 3102-01

General Facility Information:

- **Facility Type:** Power generation, transmission, and distribution facilities
- **Facility:** Pole and Conductor Repair -Caguas Group 7 - Phase 2
- **Facility Description:** The specific facilities included in this project are poles and structures (including their foundations), framing and insulators, load break switches (manual and automated), capacitor banks, voltage regulators, transformers (including lightning arresters and fuse cut-outs), conductors, guy wires, anchoring, grounding assemblies, underground cables, underground cable systems, and fault interrupting equipment (fuses, reclosers, and sectionalizes).
- **Approx. Year Built:** 1980
- **Start GPS Latitude/Longitude:** [REDACTED]
- **End GPS Latitude/Longitude:** [REDACTED]

Final Scope

1527660

FAASt [Pole and Conductor Repair -Caguas Group 7 - Phase 2] Feeders: 3103-04, 3101-02, 3103-01, 3103-05, 3102-01

5.0 INTRODUCTION

Pursuant to FEMA's Post-Fixed Cost Estimate Obligation SOP (the "SOP") for FAASt projects, FAASt subrecipients must provide to FEMA recovery project scopes of work ("SOW") for the proposed construction work to be performed. The SOW defines the activities that will be performed using Public Assistance ("PA") funding and includes § 406 hazard mitigation proposals ("HMPs").

According to the SOP, FEMA "anticipates that [SOW] submissions might include preliminary designs, including drawings and cost estimates. FEMA also recognizes that, generally, architects and/or engineers do not include or delineate the information needed to enable FEMA to complete programmatic reviews. Therefore, in those cases, subrecipients must ensure to submit all the information

described [in the SOP] and not limit the submission to a drawing set. Refer to Part C - II. Recipient/Subrecipient Checklist for Submissions as a guide to review completeness.” SOP at 4.

This document contains the detailed SOW for FEMA PA Project 1066741 -Distribution Pole and Conductor Repair – Caguas Group 7 – Phase 2 under DR-4339-PR Public Assistance. The document provides a detailed description of the project, scope of PA construction activities to be completed, common EHP review information, proposed hazard mitigation measures, and project cost estimates. LUMA is seeking approval from COR3 and FEMA for PA funding for the scope described in this document.

LUMA submits this Detailed SOW pursuant to the Transmission and Distribution Operations and Maintenance Agreement between the Puerto Rico Electric Power Authority ("PREPA"), the Puerto Rico Public-Private Partnerships Authority ("P3A"), and LUMA, and in accordance with the Consent to Federal Funding Letter issued by PREPA and P3A, which collectively provides the necessary consent for LUMA, as agent of PREPA, to undertake work in connection with any Federal Funding requests related to the Transmission and Distribution ("T&D") System submitted to FEMA. References to "Subrecipient" herein refer to PREPA pursuant to this agreement and consent for LUMA to act as its agent with respect to federal funds.

6.0 PROJECT DESCRIPTION

The project's scope is the replacement of poles and the repair of conductors of the feeders listed in Section 7.2 located in the Caguas region.

The proposed restoration includes the replacement of eligible disaster damage up to required codes and standards and the request to upgrade undamaged infrastructure to fully effectuate the restoration of disaster-damaged components and restore the system's function to an approved industry standard. The scope of work consists of the removal and replacement of infrastructure to restore this facility to codes and standards. As a hazard mitigation proposal this project will replace damaged poles with higher-rated poles to withstand winds of up to 160mph.

7.0 FACILITIES

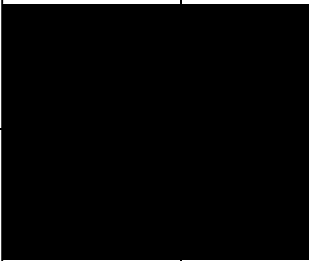
7.1 FACILITIES LIST – BUILDINGS AND SUBSTATIONS

None.

7.2 FACILITIES LIST – OTHER FACILITIES

The following list includes the name and GPS coordinates identifying the areas of work for other types of facilities. For any access roads or other line work, coordinates listed below are the beginning and end points.

The interconnected and inter-functional distribution feeders (sites) that are the object of this scope of work are part of the electrical distribution system in the Caguas Region. All the feeders originate from a substation (start) and serve customers along the route to various locations (end). The coordinates shown below as "GPS End" represent the end of each feeder's mainline backbone.

Name	Feeder Number	# Of Poles to Replace	GPS Start	GPS End	Phase	Voltage Level (kV)	Constructed Date
GURABO PUEBLO, SUB. 3101	3101-02	69			Single Phase	4.16	More than 20 years
GURABO PDS, SUB. 3102	3102-01	32			Single Phase	13.2	More than 20 years

VEREDAS, SUB. 3103	3103-01	17		Single Phase	13.2	More than 20 years
VEREDAS, SUB. 3103	3103-04	61		Single Phase	13.2	More than 20 years
VEREDAS, SUB. 3103	3103-05	16		Single Phase	13.2	More than 20 years

See Appendix A – Structure Coordinates for the coordinates of each structure included in this project.

8.0 PROJECT AREA MAP WITH BOUNDARIES OF CONSTRUCTION

Please see the attached map identified as Caguas Group 7 - Phase 2 -Boundaries of Construction at Appendix D, which includes images of the individual feeders.

Refer to document: 1066741-DR4339PR-DSOW_Rev0-CP_Caguas_Group7_PH2-ARR_20260601.pdf

9.0 SECTION 428 SCOPE OF WORK

The proposed type of work for this project:

(X) Standard Project: Restores the facility/facilities to pre-disaster design and function to locally-adopted codes/standards and/or FEMA-approved industry standards.

___ Improved Project: Restores the pre-disaster function of the facilities and incorporates improvements or changes to its pre-disaster design not required by codes or standards.

___ Subrecipient's request letter included, see **Appendix** .

___ Alternate Project: Does not restore the pre-disaster function of the damaged facility. ___ The Subrecipient, through the Recipients, must obtain approval from FEMA.

___ Subrecipient's request letter included, see **Appendix** .

___ Recipient's approval letter included, see **Appendix** .

9.1 DESCRIPTION OF PROPOSED WORK TO BE PERFORMED

The Scope of Work entails the removal and replacement of infrastructure necessary to restore the facility in compliance with applicable codes and standards.

Feeder 3101-02 Scope

Remove	Quantity	Replace With	Quantity
35' WOOD	34	50FT GAL STEEL ROUND POLE	34

40' WOOD	22	50FT GAL STEEL ROUND POLE	22
45' WOOD	12	50FT GAL STEEL ROUND POLE	12
55' WOOD	1	50FT GAL STEEL ROUND POLE	1

Feeder 3102-01 Scope

Remove	Quantity	Replace With	Quantity
35' CONCRETE	3	50FT GAL STEEL ROUND POLE	3
40' WOOD	5	50FT GAL STEEL ROUND POLE	5
40' CONCRETE	23	50FT GAL STEEL ROUND POLE	23
45' WOOD	1	50FT GAL STEEL ROUND POLE	1

Feeder 3103-01 Scope

Remove	Quantity	Replace With	Quantity
35' WOOD	9	50FT GAL STEEL ROUND POLE	9
40' WOOD	3	50FT GAL STEEL ROUND POLE	3
40' CONCRETE	4	50FT GAL STEEL ROUND POLE	4
45' WOOD	1	50FT GAL STEEL ROUND POLE	1

Feeder 3103-04 Scope

Remove	Quantity	Replace With	Quantity
35' WOOD	28	50FT GAL STEEL ROUND POLE	28
35' CONCRETE	5	50FT GAL STEEL ROUND POLE	5
40' WOOD	14	50FT GAL STEEL ROUND POLE	14
40' CONCRETE	10	50FT GAL STEEL ROUND POLE	10
45' WOOD	2	50FT GAL STEEL ROUND POLE	2
45' CONCRETE	1	50FT GAL STEEL ROUND POLE	1
50' WOOD	1	50FT GAL STEEL ROUND POLE	1

Feeder 3103-05 Scope

Remove	Quantity	Replace With	Quantity
35' WOOD	7	50FT GAL STEEL ROUND POLE	7
40' WOOD	4	50FT GAL STEEL ROUND POLE	4
40' CONCRETE	5	50FT GAL STEEL ROUND POLE	5

The pole replacement work includes the following actions:

1. Remove existing poles, including hardware, and install new poles, including hardware. Columns C and D of the “LPCE” tab of Appendix B lists each pole that is proposed as a §428 replacement and §406 replacement, respectively. Column E of the “LPCE” tab of Appendix B lists each pole that is to be removed, with Column F describing each pole’s hardware scenario, and scenarios are in turn described in the “Hardware Scenarios” tab of Appendix B. That tab is correlated with cost information.
2. New guy wire/anchors are to be installed within 3 feet of the existing anchor location in compliance with the LUMA Overhead Electrical Distribution System Manual. The maximum distance an anchor will be installed for a 50-foot pole is 25 feet from the base of the pole, within the easement.
3. All work for this program will be performed within the current electrical easement.

9.2 CODES & STANDARDS

Per FEMA’s SOP, the locally adopted codes/standards and/or FEMA-approved industry standards used for this project are provided below:

1. Distribution Construction Standards (Concrete Base Standard), available in Grants Portal
- Applicant Event Profiles.
2. LUMA Overhead Electrical Distribution System Manual, version 4.0, available in Grants Portal - Applicant Event Profiles.
3. Consensus-based codes, per FEMA’s Public Assistance Alternative Procedures (Section 428) Guide for Permanent Work FEMA-4339-DR-PR (Feb. 2020).
4. Industry standards per FEMA Recovery Policy FP-104-009-5, Version 2, Implementing Section 20601 of the 2018 Bipartisan Budget Act through the Public Assistance Program.
5. FEMA Recovery Interim Policy FP-104-009-11 Version 2.1, Consensus-Based Codes, Specifications, and Standards for Public Assistance.
6. LUMA’s latest Design Criteria Document (DCD) which aggregates the design considerations of most of the consensus-based codes, specifications, and standards listed in FEMA Recovery Interim Policy 104-009-11 Version 2.1 (Dec. 20, 2019).

10.0 SECTION 406 HAZARD MITIGATION PROPOSAL

(Refer to document: 1066741-DR4339PR-DSOW_Rev0-CP_Caguas_Group7_PH2-ARR_20260601.pdf)

11.0 COMMON EHP INFORMATION

Please check any items applicable to the proposed scope of work in this Project. If an item is checked, provide a description of the scope extent and location of the selected activity.

(X) **Ground disturbance outside of existing footprint.** If checked, provide a description of the ground disturbing activities including the extent, location, and depth of the disturbance.

- Remove existing poles, including hardware, and install new poles, including hardware.
- All pole installations are to replace existing pole locations; no new locations are included in this scope of work. For the depths of the poles to be installed, refer to APPENDIX C—Project Considerations, column D (Soil area and depth impact).
- The existing foundation will be removed and replaced with a new concrete foundation base as per Distribution Construction Standards (Concrete Base Standard). The maximum auger width to be used is 42” and the maximum depth to be drilled is 15ft. Refer to APPENDIX C – Project Considerations column J (Concrete Foundation) for specific locations where this work applies.

- New guy wires/anchors are to be installed within 3 feet of the existing anchor in compliance with the LUMA Overhead Electrical Distribution System Manual. The maximum distance an anchor will be installed for a 50-foot pole is 25 feet from the base of the pole, within the easement.

- The following equipment will 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.

___ **Soil testing or boring to be performed as part of pre-construction activities.** If checked, provide a description, location, and dimensions of the testing/boring activities.

___ **Relocation of utilities.** If checked, include a description of the relocation including the type of utility, relocation coordinates, and the extent and depth of associated ground disturbance.

(X) **Vegetative Removal.** If checked, describe the removal work to be performed, its location, and its extent.

- Vegetation clearance will be performed solely to the extent that it allows crews to conduct work and will be limited to 10-foot radius surrounding the surface of the pole but not to exceed the width of the right-of-way. This is for the exclusive purpose of gaining access to the pole to conduct repairs. The costs related to Vegetation clearance procedures are covered in project [727692] FAAS [Region 4 -Caguas Group A] High Density (Vegetation) and [750066] FAAS [Region 4 -Caguas Group A] Low Density (Vegetation). The vegetation removal process will be managed according to federal and state regulations.

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

(X) **Demolition.** If checked, include a description of what will be removed and the extent and depth of any ground-disturbing activities. Additionally, include a description of (1) demolition debris type (construction debris, white goods, hazardous materials, etc.); (2) GPS location of temporary debris storage sites; (3) final debris disposal location; and (4) final debris disposal method.

- PCBs, oil from the transformer and breakers, sealants, and other chemical wastes typical of a construction site are considered hazardous waste and will be disposed of by the contractor in approved facilities.

- Transformers will be contained and returned to LUMA in compliance with applicable regulations. Removing the transformer will require testing the existing oil for PCB levels. Per environmental regulations, the oil will be drained and delivered to the authorized waste disposal site.

- GPS location of temporary debris storage sites, final debris disposal locations, and final debris disposal methods are not yet available.

(X) **Staging areas, landing area for air transport, and access roads.** If checked, provide GPS location of staging areas, and access roads. Include a description of the extent of any related vegetative removal, ground disturbance, or stabilization measures required (such as gabion walls, retaining walls, paving, etc.).

- All work for this program will be performed within the current electrical easement.

- Poles are close to the roads and are site accessible with existing access points at the established locations. **The construction of access roads is not required for this scope of work.** Refer to APPENDIX C—Project Considerations in column H, "Site Accessible."

- All materials are stored and dispatched from the Caguas Regional Warehouse located at Carretera #1 Esquina Jose Mercado, Caguas ().

(X) **Fill material.** If the project includes the use of fill material, provide the source of the fill material including the provider's name and address (if known).

- Fill, gravel, and sand materials will be obtained from an approved supplier as referenced in the LUMA Vendor Directory List in Grants Portal - Applicant Event Profiles. LUMA will retain and make available for review the documentation provided by material suppliers.

___ **Work in water including coffer dams, dredging, placement of equipment in water, or other work in wetlands.** If

checked, provide a description of the activities to be performed in water or wetlands.

12.0 PROJECT COST ESTIMATE (PCE)

The estimated costs (compliant with **Class 3 Accuracy +/-30%**) to complete the project are summarized in the table(s) below. The cost estimate(s) was developed utilizing **preliminary** Architectural and Engineering design information. For a more detailed cost estimate refer to **Appendix B - Detailed Cost Estimate**.

COST ESTIMATE			
Cost Element	428	406	PROJECT TOTAL
PLANNING	\$ 492,279.67	\$ 14,547.22	\$ 506,826.89
(A&E) Permitting and Assessments	\$ 23,441.89	\$ 692.72	\$ 24,134.61
(A&E) Environmental Documentation & Management	\$ 104,186.17	\$ 3,078.78	\$ 107,264.95
(A&E) Engineering Services & Design	\$ 364,651.61	\$ 10,775.72	\$ 375,427.33
MANAGEMENT	\$ 187,535.12	\$ 5,541.80	\$ 193,076.92
(A&E) Design Development Project Management A&E	\$ 6,251.17	\$ 184.73	\$ 6,435.90
(A&E) - Design Lodging & Per Diem A&E	\$ -	\$ -	\$ -
Project Management	\$ 35,423.30	\$ 1,046.78	\$ 36,470.08
Construction Management	\$ 52,093.09	\$ 1,539.39	\$ 53,632.48
Contracting, Procurement & Contract Administration	\$ 62,511.70	\$ 1,847.27	\$ 64,358.97
Projects Controls (Scheduling, Estimating, Support, Cost Control, Risk, Document Control & Reporting)	\$ 31,255.86	\$ 923.63	\$ 32,179.49
Caguas Group 7 - Phase 2	\$ 5,822,510.12	\$ 172,059.34	\$ 5,994,569.46
material, labor and equipment	\$ 4,550,306.23	\$ 153,938.80	\$ 4,704,245.03
Lodging & Per Diem & Travel	\$ 659,002.50	\$ -	\$ 659,002.50
Construction Contingency	\$ 456,922.12	\$ 13,502.38	\$ 470,424.50
Escalation	\$ 156,279.27	\$ 4,618.16	\$ 160,897.43
COST TOTALS	\$ 6,502,324.91	\$ 192,148.36	\$ 6,694,473.27
DEDUCTIONS	TOTAL INSURANCE PROCEEDS RECEIVED		\$ -
	E-OBLIGATION TO FAASf IF APPLICABLE		\$ -
FAASf ALLOCATIONS	FAASf PROJECT # 1066741- 428		\$ 5,614,901.87
	FAASf PROJECT # 1066741 - 406 HM		\$ 192,148.36
	FAASf PROJECT # 1066741 TOTAL:		\$ 5,807,050.23
	FAASf A&E # 335168 - 428		\$ 498,530.84
	FAASf A&E # 335168 - 406 HM		\$ 14,731.95
	FAASf A&E # 335168 TOTAL		\$ 513,262.79
	FAASf E&M #673691 - 428		\$ 388,892.20
	FAASf E&M #673691 - 406 HM		\$ 153,938.80
	FAASf E&M #673691 TOTAL		\$ 542,831.00

Project Cost Summary, 428 Version 0:

Work to be Completed (WTBC): \$6,502,324.91

A&E Deduction (Global A&E FAASf 335168): -\$498,530.84

E&M Deduction (Global E&M FAASf 673691): -\$388,892.20

Project Total: \$5,614,901.87

Project Cost Estimate Notes:

1. Refer to detailed SOW provided in document labeled: "1066741-DR4339PR-DSOW_Rev0-CP_Caguas_Group7_PH2-ARR_20260601.pdf".
2. Refer to detailed Cost Estimate provided in document labeled: "1066741-DR4339PR-Appendix B - Detailed Cost Estimate - Caguas Group 7 - Phase 2 REV0.xlsx".
3. A&E cost included in this project will be reduced from this project and obligated under the FAAS Project #335168, A&E, as shown in the table above. The A&E project was obligated to track and account for costs associated with individual FAAS projects.
4. Equipment and material costs included in this project will be reduced from this project and obligated under FAAS Project #673691, Equipment and Materials, as shown in the table above. Only the base cost of equipment and/or material will be reduced from this project (not labor). All costs associated with Planning, Management, General Conditions, and Contingencies will remain in this project.
5. This project is part of Donor FAAS 136271 – MEPA078 Puerto Rico Electrical Power Authority (PREPA) Island Wide FAAS Project.697.
6. Attachments:
 - A. Appendix A - Structure Coordinates, 1066741-DR4339PR-Appendix A - Structure Coordinates - Caguas Group 7 - Phase 2 Rev0.xlsx
 - B. Appendix B - Detailed Cost Estimate, 1066741-DR4339PR-Appendix B - Detailed Cost Estimate - Caguas Group 7 - Phase 2 REV0.xlsx
 - C. Appendix C - Project Considerations, 1066741-DR4339PR-Appendix C - Project Considerations Caguas Group 7 - Phase 2 Rev0.xlsx
 - D. Appendix D - Caguas Group 6 - Phase 2 -Boundaries of construction - 1066741-DR4339PR-Appendix D - Caguas Group 7 - Phase 2 - Boundaries of construction - SATELLITE VIEW.pdf

406 HMP Scope

Project number: 1066741; FAAS [Pole and Conductor Repair – Caguas Group 7 – Phase 2 / Former Project 817249] (Distribution)

Damage: 1527660; FAAS [Pole and Conductor Repair -Caguas Group 7 - Phase 2] Feeders 3103-04, 3101-02, 3103-01, 3103-05, 3102-01

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

Location: Caguas, Puerto Rico

GPS Latitude/Longitude: Start: [REDACTED]; End: [REDACTED]

Hazard Mitigation Narrative

The Distribution Pole and Conductor Repair Caguas Group 7 – Phase 2 consists of five (5) interconnected and inter-functional distribution feeders (sites) establish the electrical distribution system as follow: Gurabo Pueblo, Sub. 3101 (3101-02); Gurabo PDS, Sub. 3102 (3102-01) and Veredas, Sub. 3103 (3103-01, 3103-04 and 3103-05).

The 428 PA Method of Repair (MOR) included the replacement of the damaged critical distribution poles (wood, concrete or galvanized), cross-arms, insulators, and all associated hardware needed for the new structure. According to the information provided by the Subrecipient, due to the high-velocity hurricane winds, wind-blown debris, and prolonged heavy rain, were the main cause of damages to the facilities.

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

Hazard Mitigation Proposal (HMP) Scope of Work:

In order to prevent, reduce and/or eliminate future natural disaster damage, the Subrecipient proposed the following mitigation measures:

Mitigation Measures (*Replacement*)

To avoid damage in a future event, the Subrecipient is proposing as a mitigation measure, increase the strength of the poles by increasing the wind tolerance of all materials to 160mph. 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:**

1. Feeder 3101-02 Scope (69ea):
 - Replace fifty-five (55) 50' Galvanized Steel Round Poles with fifty-five (55) 45' S5.7 12-sided Galvanized Steel Poles.
 - Replace fourteen (14) 50' Galvanized Steel Round Poles with fourteen (14) 50' S8.5 12-sided Galvanized Steel Poles.
2. Feeder 3102-01 Scope (32ea):
 - Replace thirty-two (32) 50' Galvanized Steel Round Poles with thirty-two (32) 45' S5.7 12-sided Galvanized Steel Poles.
3. Feeder 3103-01 Scope (17ea):
 - Replace seventeen (17) 50' Galvanized Steel Round Poles with seventeen (17) 45' S5.7 12-sided Galvanized Steel Poles.
4. Feeder 3103-04 Scope (61ea):
 - Replace fifty-eight (58) 50' Galvanized Steel Round Poles with fifty-eight (58) 45' S5.7 12-sided Galvanized Steel Poles.
 - Replace three (3) 50' Galvanized Steel Round Poles with three (3) 50' S8.5 12-sided Galvanized Steel Poles.
5. Feeder 3103-05 Scope (16ea):
 - Replace thirteen (13) 50' Galvanized Steel Round Poles with thirteen (13) 45' S5.7 12-sided Galvanized Steel Poles.
 - Replace three (3) 50' Galvanized Steel Round Poles with three (3) 50' S8.5 12-sided Galvanized Steel Poles.

Hazard Mitigation Proposal (HMP) Cost:

Total Net Hazard Mitigation Cost (Base Cost) =	\$153,938.80
+ HM (Subrecipient A&E, Management & General Conditions) =	<u>\$ 38,209.56</u>
Hazard Mitigation Total Cost =	?\$192,148.36

Hazard Mitigation Proposal (HMP) Cost Distribution:

Equipment and Materials (E&M) =	\$153,938.80
Architecture and Engineering (A&E) =	?\$ 14,731.95
Construction Cost =	<u>?\$ 23,477.61</u>
Hazard Mitigation Total Cost =	\$192,148.36

-

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 Subrecipient 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 **\$192,148.36 (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 by 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
9001	1	Lump Sum	\$6,502,324.91	Uncompleted
3510	1	Lump Sum	(\$498,530.84)	Uncompleted
9001	1	Lump Sum	(\$388,892.20)	Uncompleted

CRC Gross Cost	\$5,614,901.87
Total 406 HMP Cost	\$192,148.36
Total Insurance Reductions	\$0.00
CRC Net Cost	\$5,807,050.23
Federal Share (90.00%)	\$5,226,345.21
Non-Federal Share (10.00%)	\$580,705.02

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.
- 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.
- 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.
- 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.
- 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.
- The Subrecipient provided the estimate for this PW. FEMA validated the estimate and found it to be reasonable for the work to be performed.

Insurance

Additional Information

6/4/2026

Does the Applicant have a Commercial Policy: Yes.

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

Property insurance coverage for the electrical distribution facilities represented on this project are not insured or insurable. No insurance relief is anticipated. No Obtain and Maintain requirement will be made.

FEMA requires the applicant to take reasonable efforts to pursue claims to recover insurance proceeds that it is entitled to receive from its insurer(s). In the event that any insurance proceeds are received for these expenses those proceeds must be reduced from FEMA Public Assistance funding to ensure no duplication of benefits has occurred.

No duplication of benefits from insurance is anticipated for work described in this application. In the event any part or all costs are paid by an insurance policy, a duplication of benefits from insurance will occur. Applicant must notify grantee and FEMA of such recoveries and the Sub-Grant award amount must be reduced by actual insurance proceeds.

No insurance requirements will be required for this project. Insurance requirements are specific to permanent work to replace, restore, repair, reconstruct, or construct buildings, contents, equipment, or vehicles. (FEMA Recovery Policy FP 206-086-1).

No insurance narrative will be produced or uploaded into documents or attachments.

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

O&M Requirements

There are no Obtain and Maintain Requirements on **FAASt [Pole and Conductor Repair – Caguas Group 7 – Phase 2] / Former project 817249 (Distribution)**.

406 Mitigation

There is no additional mitigation information on **FAASt [Pole and Conductor Repair – Caguas Group 7 – Phase 2] / Former project 817249 (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.
- On May 16, 2025, the Secretary of the U.S. Department of Energy (DOE) issued Order 202-25-2 (Order), pursuant to the authority vested in him by section 202(c) of the Federal Power Act (FPA), 16 U.S.C. § 824a(c), and section 301(b) of the Department of Energy Organization Act, 42 U.S.C. § 7151(b). The Order sought to expedite repair and maintenance efforts to the electrical grid of Puerto Rico by directing the Puerto Rico Electric Power Authority (PREPA) to perform vegetation

management, including vegetation clearing to reestablish a right-of-way, for particular transmission and distribution facilities in the Territory as specified in the Order. The Order required PREPA to identify certain parameters by which the directed work would be performed, and required that all work be performed, to the maximum extent practicable, in a manner consistent with all applicable Federal, State, or local environmental laws or regulations and minimize any adverse environmental impacts. However, pursuant to Section 202(c)(3) of the FPA, to the extent any omission or action taken by PREPA that was necessary to comply with the Order, including any omission or action taken to voluntarily comply with the Order, caused PREPA to not comply with any Federal, State, or local environmental law or regulation, including any environmental conditions in this REC's "Standard Conditions," such omission or action shall not be considered a violation of such environmental law or regulation, or subject PREPA to any requirement, civil or criminal liability, or citizen suit under such environmental law or regulation.

- On August 15, 2025, DOE reissued the Order to direct PREPA to also perform asset management, including component refurbishment and replacement. To renew/reissue the Order, DOE was required to consult with the primary Federal agency with expertise in the environmental interest protected by such law or regulation and include in the Order conditions necessary to minimize any adverse environmental impacts to the extent practicable. Pursuant to Section 202(c)(4)(B) of the FPA, DOE provided the relevant agencies the opportunity to submit conditions for work performed under the Order, to be included in the Order. According to DOE, no conditions were submitted by the agencies for inclusion in the Order.
- On November 12, 2025, DOE reissued the Order to direct PREPA to also perform asset management, including component refurbishment and replacement. DOE and FEMA have agreed that DOE is the lead agency for activities that fall under the prior and any future DOE 202(c) orders issued under the Federal Power Act to resolve the current and related emergencies in Puerto Rico. FEMA has requested that DOE provide FEMA with all documentation relating to their EHP compliance. FEMA will review and incorporate all available information and data for this project pertaining to applicable environmental laws and regulations into this REC when it is received from DOE.
- On February 10, 2026, and again on May 7, 2026, DOE reissued the Order to direct PREPA to perform vegetation management, including vegetation clearing to reestablish the right-of-way, and asset management, including component refurbishment and replacement, to ensure operational availability of the transmission and distribution facilities.

EHP Additional Info

There is no additional environmental historical preservation on **FAASt [Pole and Conductor Repair – Caguas Group 7 – Phase 2] / Former project 817249 (Distribution)**.

Final Reviews

Final Review

Reviewed By LEFRANC-GARCIA, CARLOS L.

Reviewed On 06/11/2026 8:41 PM PDT

Review Comments

Distribution Pole and Conductor Repair Caguas Group 7 intends the replacement of eligible disaster damage up to required codes and standards and the request to upgrade undamaged infrastructure to fully effectuate the restoration of disaster-damaged components and restore the system's function to an approved industry standard. The scope of work consists of the removal and replacement of infrastructure to restore this facility to codes and standards. As a hazard mitigation proposal this project will replace damaged poles with higher-rated poles to withstand winds of up to 160mph. CRC Gross Cost \$5,614,901.87 Total 406 HMP Cost \$192,148.36 Federal Share (90.00%) \$5,226,345.21. Reviewed, found eligible and reasonable. Subrecipient and its agents are responsible for complying with all grants and subgrant conditions, including any applicable Federal, State and Local requirements. CLG 06.11.2026

Recipient Review

Reviewed By Mulero, Noel

Reviewed On 06/22/2026 9:19 PM PDT

Review Comments

Recipient review completed. Applicant must ensure to compliance with all regulatory requirements, Record of Environmental Consideration (REC) Special Conditions and PA policy. Project is ready for applicant review.

Project Signatures

Reviewed By Unsigned

Reviewed On Unsigned

Award Information

Version Information

Version #	Eligibility Status	Current Location	Bundle Number	Project Amount	Cost Share	Federal Share Obligated	Date Obligated
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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 #
0	7/8/2026	\$5,226,345.21	90%	Accepted	4339DRPRP01082511
0	7/8/2026	\$5,226,345.21	90%	Validation Error	4339DRPRP01082511

**Department of Homeland Security
Federal Emergency Management Agency**

v0

General Info

Project #	1064452	P/W #	108242	Project Type	Specialized
Project Category	F - Utilities	Applicant	PR Electric Power Authority (000-UA2QU-00)	Event	4339DR-PR (4339DR)
Project Title	FAASt [Priority Pole Replacement Program Line 800 Comsat Sect – Cidra Sect] / Former project 753781(Transmission)		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 #1387174; FAASt [Comsat Sect – Cidra Sect]

General Facility Information:

- **Facility Type:** Power generation, transmission, and distribution facilities
- **Facility:** Line 800 - Comsat Sect - Cidra Sect
- **Facility Description:** The facilities are part of the 10.30 circuit miles of overhead transmission for 38kV Line 800 from the Comsat Sect – Cidra Sect segment. The line segments are supported by sixteen (16) wood, steel, and concrete pole structures and have existing underbuilt distribution and/or third-party attachments.
- **Approx. Year Built:** 1980
- **Start GPS Latitude/Longitude:** [REDACTED]
- **End GPS Latitude/Longitude:** [REDACTED]

Final Scope

1387174 FAASt [Comsat Sect – Cidra Sect]

INTRODUCTION

Pursuant to FEMA's Post-Fixed Cost Estimate Obligation SOP (the "SOP") for FAASt projects, FAASt subrecipients must provide to FEMA recovery project scopes of work ("SOW") for the proposed construction work to be performed. The SOW may include § 406 hazard mitigation proposals ("HMPs"). The SOW defines the activities that will be performed using Public Assistance ("PA") funding.

According to the SOP, FEMA "anticipates that [SOW] submissions might include preliminary designs, including drawings and cost estimates. FEMA also recognizes that, generally, architects and engineers do not include or delineate the information needed to enable FEMA to complete programmatic reviews. Therefore, in those cases, subrecipients must ensure to submit all the information described [in the SOP] and not limit the submission to a drawing set. Refer to Part

C - II. "Recipient/Subrecipient Checklist for Submissions as a guide to review completeness." SOP at 4.

This document contains the detailed SOW for FEMA PA Project 1064452 – **Transmission Priority Pole Replacement Program Line 800** under DR-4339-PR Public Assistance. The document provides a detailed description of the project, scope of Public Assistance "PA" construction activities to be completed, common EHP review information, proposed hazard mitigation measures, and project cost estimates. LUMA is seeking approval from COR3 and FEMA for Public Assistance "PA" funding for the scope described in this document.

LUMA submits this Detailed SOW pursuant to the Transmission and Distribution Operations and Maintenance Agreement between the Puerto Rico Electric Power Authority ("PREPA"), the Puerto Rico Public-Private Partnerships Authority ("P3A"), and LUMA, and in

accordance with the Consent to Federal Funding Letter issued by PREPA and P3A, which collectively provides the necessary consent for LUMA, as agent of PREPA, to undertake work in connection with any Federal Funding requests related to the T&D System submitted to FEMA. References to "Subrecipient" herein refer to PREPA pursuant to this agreement and consent for LUMA to act as its agent with respect to federal funds.

PROJECT DESCRIPTION

LUMA determined that the seven (7) poles identified in Section 9.0 of this DSOW were degraded during a high-level assessment. These seven (7) poles are part of the 10.30 circuit miles of overhead transmission for 38kV Line 800. This project will replace the seven (7) degraded poles through the Transmission Priority Pole Replacement Program on an expedited basis.

The following table identifies the start and end GPS coordinates of the TL 800 Comsat Sect – Cidra Sect.

Line Segment	Line Number	GPS Start	GPS End	Voltage (kV)
Comsat Sect – Cidra Sect	800	[REDACTED]	[REDACTED]	38

The following table identifies the location of each pole to be replaced in this project.

Pole	FID	Lat	Long
1	7248681	[REDACTED]	[REDACTED]
2	7250666		
3	7250671		
4	10654500		
5	10654498		
6	10657418		
7	10657216		

PROJECT AREA MAP WITH BOUNDARIES OF CONSTRUCTION

See the map below of the T-Pole 800. (See document: 1064452 DR4339PR Detailed SOW Rev6Line 800 2026-04-30 08_09.pdf)

SCOPE OF WORK

The proposed type of work for this project:

? Standard Project: Restores the facility/facilities to pre-disaster design and function to locally adopted codes/standards and FEMA-approved industry standards.

? Improved Project: Restores the pre-disaster function of the facilities and incorporates improvements or changes to its pre-disaster design not required by codes or standards.

? Subrecipient's request letter included, see **Appendix** __.

? Recipient's approval letter included, see **Appendix** __.

? Alternate Project: Does not restore the pre-disaster function of the damage facility. The Subrecipient, through the Recipients, must obtain approval from FEMA.

? Subrecipient's request letter included, see **Appendix** __.

? Recipient's approval letter included, see **Appendix** __.

DESCRIPTION OF PROPOSED WORK TO BE PERFORMED

1. Poles and components will be replaced per the design methodology and Project Design Criteria.
2. Comsat Sect – Cidra Sect. Structures Scopes:
 - o Remove seven (7) 60ft wood poles and replace with six (6) 70ft galvanized steel (round) and one (1) 85ft galvanized steel (round) poles in the same location.
 - o Remove and replace six (6) cross arms, forty-eight (48) disk insulators (transmission), one hundred and three (103) disk insulators (underbuilt), fifteen (15) polymer horizontal post insulators, and all associated hardware along with the new structure.

CODES & STANDARDS

Per FEMA's SOP, the locally adopted codes/standards and FEMA-approved industry standards used for this project are provided below:

1. Consensus-based codes, per FEMA (Public Assistance Alternative Procedures (Section 428) Guide for Permanent Work FEMA-4339-DR-PR February 2020).
2. Industry standards per FEMA Recovery Policy FP-104-009-5, Version 2, Implementing Section 20601 of the 2018 Bipartisan Budget Act through the Public Assistance Program.
3. FEMA Recovery Interim Policy FP-104-009-11 Version 2.1, Consensus-Based Codes, Specifications, and Standards for Public Assistance.
4. LUMA's latest Design Criteria Document (DCD) which aggregates the design considerations of most of the consensus-based codes, specifications, and standards listed in FEMA Recovery Interim Policy 104-009-11 Version 2.1 (December 20, 2019).

§ 406 Hazard Mitigation Proposal

FEMA PAPPG v.3.1 provides, "Hazard mitigation is any sustained action taken to reduce or eliminate long-term risk to people and property from natural hazards and their effects." Subrecipient proposes to lessen or eliminate long-term risk to people and property from future natural hazards and their effects by performing the work described in this project to Subrecipient's Transmission Design Criteria, which exceeds required codes and standards. Doing so will directly reduce the potential of the future, similar negative consequences of damage to the T&D system as occurred after Hurricane Maria by improving the system's physical resilience, functional resiliency, and/or both.

Below is a description of the proposed mitigation opportunity and the proposed scope of work.

§ 406 HAZARD MITIGATION OPPORTUNITY

The transmission system's main objective is to provide efficient and reliable interconnection of generation sources with the load centers distributed throughout the island. LUMA's transmission grid connects power generation plants, transmission centers, sectionalizers, and distribution substations through a complex and extensive network of lines, all dependent on one another.

LUMA has included 406 Hazard Mitigation measures in its preliminary design that meet these new and higher standards described above. These standards increased the resiliency of transmission structures and hardware in higher risk exposed areas and incorporate more robust structures that can withstand higher wind speeds in vulnerable regions on the island. As part of the 406-mitigation initiative.

See Appendix H. § 406 Hazard Mitigation Narrative for details.

1. Replace seven (7) round galvanized steel poles of 145mph wind speed resistance ASCE/SEI48-19 with the 12-sided galvanized steel poles, tapered shaft distribution pole to increase the strength of the pole by increasing the wind tolerance by design to 160mph.
 - 6 x 70ft 12-sided galvanized steel poles.
 - 1 x 85ft 12-sided galvanized steel pole.

COMMON EHP REVIEW INFORMATION

Please check any items applicable to the proposed scope of work in this Project. If an item is checked, provide a description of the scope and location of the selected activity.

Ground disturbance inside of existing footprint. If checked, provide a description of the ground disturbing activities including the extent, location, and depth of the disturbance.

1. Installation of (6) poles include ground disturbance of 10' Depth x 5' Diameter.
2. Installation of 85 ft. (1) poles includes ground disturbance of 12' Depth x 2' 4" Diameter
3. Skid steer, excavator, dump trucks, manlifts, 120-Ton motor crane, boom trucks 45-ton crane, zoom boom, air compressor, truck digger and flatbed platform.

? **Soil testing or boring to be performed as part of pre-construction activities.** If checked, provide a description, location, and dimensions of the testing/boring activities.

? **Relocation of utilities.** If checked, include a description of the relocation including the type of utility, relocation coordinates, and the extent and depth of associated ground disturbance.

? **Vegetative Removal.** If checked, describe the removal work to be performed, its location, and its extent.

Vegetation clearance will be performed solely to the extent that it allows crews to conduct work and will be limited to a 10 ft radius surrounding the surface of the pole, but not to exceed the width of the easement. This is for the exclusive purpose of gaining access to the pole to conduct repairs. The vegetation removal process will be managed in accordance with federal and state regulations.

? **Demolition.** If checked, include a description of what will be removed and the extent and depth of any ground disturbing activities. Additionally, include a description of (1) demolition debris type (construction debris, white goods, hazardous materials, etc.); (2) GPS location of temporary debris storage sites; (3) final debris disposal location; and (4) final debris disposal method.

1. The types of debris to be removed during the demolition process include insulated and bare aluminum and copper cables, PVC conduits, concrete, metal scrap, construction waste, and wood. The debris will be separated and taken to an authorized waste disposal facility.
2. PCBs (Polychlorinated Biphenyls), oil from the transformers, breakers, sealants, and chemical waste will be handled and disposed of according to applicable state and federal regulations. LUMA will provide actual disposal locations and quantities.
3. Pole disposal will be performed per applicable regulations. Final debris disposal site location and disposal method will be provided at closeout.

? **Staging areas, landing areas for air transport, and access roads.** If checked, provide GPS location of staging areas, and access roads. Include a description of the extent of any related vegetative removal, ground disturbance, or stabilization measures required (such as gabion walls, retaining walls, paving, etc.).

1. The construction of **access roads** is not required for this scope of work. All work for this program will be performed within the current easement of the municipality(ies). Poles are near the roads and are site accessible without need for a new access road.

2. All materials will be stored and dispatched from LUMA's assigned Regional Warehouse. No additional or temporary staging areas are required to store or dispose of them. The existing Regional Warehouse to be utilized as a **staging area** for this project is the Caguas Region Warehouse (A31), whose coordinates are [REDACTED].

? **Fill material.** If the project includes the use of fill material, provide the source of the fill material including the provider's name and address (if known).

1. Fill, gravel, and sand materials will be obtained from a preferred vendor as referenced in the **Appendix A – Approved Supplier List Directory PR.**

? **Work in water including coffer dams, dredging, placement of equipment in water, or other work in wetlands.** If checked, provide a description of the activities to be performed in water or wetlands.

PROJECT COST ESTIMATE (PCE)

The estimated costs (compliant with **Class 3 Accuracy +/-30%**) to complete the project are summarized in the table(s) below. The cost estimate(s) was developed utilizing **preliminary** Architectural and Engineering design information. For a more detailed cost estimate refer to the referenced appendix/appendices.

COST ESTIMATE			
Cost Element	428	406	PROJECT TOTAL
PLANNING	\$ 104,902.10	\$ 1,840.81	\$ 106,742.91
MANAGEMENT	\$ 34,697.48	\$ 609.23	\$ 35,306.71
Transmission Priority Pole Replacement and Critical Repairs TL-800 COMSAT SECT to Cidra SECT, FAAS #: 1064452	\$ 599,895.25	\$ 10,536.18	\$ 610,431.43
GENERAL CONDITIONS	\$ 31,884.42	\$ 558.01	\$ 32,442.43
COST TOTALS	\$ 771,379.25	\$ 13,544.23	\$ 784,923.48

Project 1064452 Cost Summary. 428 PAAP:

Work To Be Completed (WTBC): \$ 771,379.25

A&E Deduction (Global A&E FAAS 335168): - \$ 110,184.09

E&M Deduction (Global E&M FAAS 673691): - \$ 52,018.89

Project Total Cost: \$ 609,176.27

DEDUCTIONS	TOTAL INSURANCE PROCEEDS RECEIVED	\$ -	Project Notes 1. A&E cost included in this project will be reduced from this project and obligated under the FAASt Project #335168, A&E, as show in in the table above. The A&E project was obligated to track and account for costs associated with individual FAASt projects. 2. Equipment and material costs included in this project will be reduced from this project and obligated under FAASt Project #673691, Equipment and Materials, as shown in the table above. Only the base cost of equipment and/or material will be reduced from this project (not labor). All costs associated with Planning, Management, General Conditions, and Contingencies will remain in this project. 3. This project is part of Donor FAASt 136271 – MEPA078 Puerto Rico Electrical Power Authority (PREPA) Island Wide FAASt Project. 4. For details on the updated SOW and CE, refer to filenames: · 1064452 DR4339PR Detailed SOW Rev 6Line 800 2026-04-30 08_09.pdf · 1064452-DR4339PR-Appendix E -
	DE-OBLIGATION TO FAASt IF APPLICABLE?	\$ -	
FAASt ALLOCATIONS		\$ 609,176.27	
	FAASt PROJECT #: 1064452 - 428		
		\$ 13,544.23	
	FAASt PROJECT #: 1064452 - 406 HM		
		\$ 622,720.50	
	FAASt PROJECT #: 1064452 TOTAL:		
	FAASt A&E # 335168 - 428	\$ 110,184.09	
	FAASt A&E # 335168 - 406 HM	\$ 1,933.55	
	FAASt A&E # 335168 TOTAL	\$ 112,117.64	
	FAASt E&M #673691 - 428	\$ 52,018.89	
	FAASt E&M #673691 - 406 HM	\$ 8,792.11	
	FAASt E&M #673691 TOTAL	\$ 60,811.00	

Detailed Cost Estimate TL 800 Rev.7.xlsx

ATTACHMENTS/APPENDICES

The following attachments and appendices are provided with this DSOW:

Item	Document Description or Filename
A	Approved Supplier List
B	General Arrangement
C	Engineering Plans
D	Consent to Federal Funding Letter - FEMA COR3
E	Detailed Cost Estimate TL 800 Rev.7
F	Project Considerations
G	Cost-Effective Hazard Mitigation Measures
H	HM Narrative 800
I	Staging Area Plan TL 800

406 HMP Scope

Project number: 1064452; FAAsT [Priority Pole Replacement Program Line 800 Comsat Sect – Cidra Sect] / Former project 753781(Transmission)

Damage #1387174; FAAsT [Comsat Sect – Cidra Sect]

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

Location: Cayey - Cidra, Puerto Rico

GPS Latitude/Longitude: Start: [REDACTED]; End: [REDACTED]

(I) Hazard Mitigation Narrative

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

The Method of Repair (MOR) included the replacement of the damaged critical distribution pole (wood), cross-arms, insulators, guy wires, and all associated hardware needed for the new structure. The facilities listed below is part of the 3.1 circuit miles of 38kV Overhead Transmission Line 800 from Comsat Sect to Cidra Sect segment. The Subrecipient determined that nine (7) poles were degraded during a high-level assessment. Given that, this project will replace the nine (7) degraded poles through the Transmission Priority Pole Replacement Program on an expedited basis.

In order to minimize the damages in a future event, the sub-recipient proposes as a mitigation measure to increase the strength of the poles by replacing it with a with new steel galvanized, 12-sided, tapered shaft distribution pole to mitigate future damage to the structure due to high wind (160mph). Note: The FEMA Accelerated Award Strategy (FAAsT) MOR included the PREPA distribution standards and specifications that were based on a 145mph sustained winds. However, the new 2021 PREPA Standard updates the design-criteria to a 160mph sustained winds resistant. The 160mph wind tolerance mitigation measure, will protect and make the affected infrastructure more resistant, stronger, and resilient to similar hazards.

(II) Hazard Mitigation Proposal (HMP) Scope of Work:

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

Mitigation Measures (Replacement)

To avoid damage in a future event, the Subrecipient proposes as a mitigation measure to increase the strength of the poles by replacing it with a 12-sided, tapered shaft distribution pole to mitigate future damage to the structure due to high wind (160mph). 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 PAPPV V5.

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

1. Comsat Sect – Cidra Sect

- Replace six (6) 70 ft round galvanized steel poles of 145mph windspeed resistance ASCE/SEI 48-19 with six (6) new 70ft 12-sided galvanized steel pole, tapered shaft distribution pole to increase the strength of the pole by increasing the wind tolerance by design to 160mph.
- Replace one (1) 85 ft round galvanized steel poles of 145mph windspeed resistance ASCE/SEI 48-19 with one (1) new 85ft 12-sided galvanized steel pole, tapered shaft distribution pole to increase the strength of the pole by increasing the wind tolerance by design to 160mph.

(III) Hazard Mitigation Proposal (HMP) Cost

Total Net Hazard Mitigation Cost (Base Cost) =	\$ 10,117.35
+ HM (Recipient A&E, Management & General Conditions) =	<u>\$ 3,426.88</u>
Hazard Mitigation Total Cost =	\$13,544.23

(IV) Hazard Mitigation Proposal (HMP) Cost Distribution

Equipment and Materials (E&M) =	\$ 8,792.11
Architecture and Engineering (A&E) =	\$ 1,933.55
Construction Cost =	<u>\$ 2,818.57</u>
Hazard Mitigation Total Cost =	\$13,544.23

(V) 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 sub-recipient'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 **\$13,544.23 (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
9001	1	Lump Sum	\$771,379.25	Uncompleted
3510	1	Lump Sum	(\$110,184.09)	Uncompleted
9008	1	Lump Sum	(\$52,018.89)	Uncompleted

CRC Gross Cost \$609,176.27

Total 406 HMP Cost \$13,544.23

Total Insurance Reductions \$0.00

CRC Net Cost \$622,720.50

Federal Share (90.00%) \$560,448.45

Non-Federal Share (10.00%) \$62,272.05

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.
- 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.
- 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.
- 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.
- The Recipient must submit its certification of the subrecipient's completion of all of its small projects and compliance with all environmental and historic preservation requirements within 180 days of the applicant's completion of its last small project, or the latest approved deadline, whichever is sooner.
- 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 Subrecipient provided the estimate for this PW. FEMA validated the estimate and found it to be reasonable for the work to be performed.

Insurance

Additional Information

5/14/2026

Does the Applicant have a Commercial Policy: Yes.

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

Property insurance coverage for the electrical distribution facilities represented on this project are not insured or insurable. No insurance relief is anticipated. No Obtain and Maintain requirement will be made.

FEMA requires the applicant to take reasonable efforts to pursue claims to recover insurance proceeds that it is entitled to receive from its insurer(s). In the event that any insurance proceeds are received for these expenses those proceeds must be reduced from FEMA Public Assistance funding to ensure no duplication of benefits has occurred.

No duplication of benefits from insurance is anticipated for work described in this application. In the event any part or all costs are paid by an insurance policy, a duplication of benefits from insurance will occur. Applicant must notify grantee and FEMA of such recoveries and the Sub-Grant award amount must be reduced by actual insurance proceeds.

No insurance requirements will be required for this project. Insurance requirements are specific to permanent work to replace, restore, repair, reconstruct, or construct buildings, contents, equipment, or vehicles. (FEMA Recovery Policy FP 206-086-1).

No insurance narrative will be produced or uploaded into documents or attachments.

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

O&M Requirements

There are no Obtain and Maintain Requirements on **FAAST [Priority Pole Replacement Program Line 800 Comsat Sect – Cidra Sect] / Former project 753781(Transmission)**.

406 Mitigation

There is no additional mitigation information on **FAAST [Priority Pole Replacement Program Line 800 Comsat Sect – Cidra Sect] / Former project 753781(Transmission)**.

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.

EHP Additional Info

There is no additional environmental historical preservation on **FAAST [Priority Pole Replacement Program Line 800 Comsat Sect – Cidra Sect] / Former project 753781(Transmission)**.

Final Reviews

Final Review

Reviewed By LEFRANC-GARCIA, CARLOS L.

Reviewed On 06/11/2026 8:52 PM PDT

Review Comments

Project reviewed and moved to FEMA Final review. Project 38kV Line 800 from the Comsat Sect – Cidra Sect segment is a Near-Term rebuild priority identified by LUMA. These structures were considered degraded during a High-Level Assessment ("HLA") and thus recognized as having issues under the System Remediation Plan ("SRP"). Due to the degraded condition of these structures, they will be replaced through the Transmission Priority Pole Replacement Program on an expedited basis. Former Project 753781. This project will replace the seven (7) degraded poles that are part of the 10.30 circuit through the Transmission Priority Pole Replacement Program on an expedited basis. CRC Gross Cost \$609,176.27 Total 406 HMP Cost \$13,544.23 Federal Share (90.00%) \$560,448.45

Recipient Review

Reviewed By Mulero, Noel

Reviewed On 06/22/2026 9:28 PM PDT

Review Comments

Recipient review completed. Applicant must ensure to compliance with all regulatory requirements, Record of Environmental Consideration (REC) Special Conditions and PA policy. Project is ready for applicant review.

Project Signatures

Reviewed By Unsigned

Reviewed On Unsigned

Award Information

Version Information

Version #	Eligibility Status	Current Location	Bundle Number	Project Amount	Cost Share	Federal Share Obligated	Date Obligated
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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 #
0	7/6/2026	\$560,448.45	90%	Accepted	4339DRPRP01082421