

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

NEPR

Received:

Feb 2, 2024

8:09 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: Urgent Submission of One Scope of
Work and a Request for Confidentiality and
Supporting Memorandum of Law**

**URGENT MOTION SUBMITTING ONE SCOPE OF WORK AND A REQUEST
FOR CONFIDENTIALITY AND SUPPORTING MEMORANDUM OF LAW**

TO THE PUERTO RICO ENERGY BUREAU:

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

I. Submittal of Scope of Work and Request for Confidentiality

1. On March 26, 2021, this Puerto Rico Energy Bureau (“Energy Bureau”) issued a Resolution and Order in the instant proceeding (the “March 26 Order”), ordering—in pertinent part—that the Puerto Rico Electric Power Authority (“PREPA”) submit to the Energy Bureau the specific 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. *See* March 26 Order on pages 18-19. This Energy Bureau thereafter determined that this directive applied to both PREPA and LUMA. *See* Resolution and Order of August 20, 2021 (“August 20 Order”) on page 3.

¹ Register No. 439372.

² Register No. 439373.

2. Consequently, LUMA has submitted to this Energy Bureau several Transmission and Distribution projects (“T&D Projects”) on July 8, 2021 (twenty-eight (28) Scopes of Work and an itemized list of T&D Projects), August 30, 2021 (twenty-nine (29) SOWs and an updated list of T&D Projects) and October 4, 2021 (thirty-eight (38) SOWs and an updated list of T&D Projects), February 2, 2022 (three (3) SOWs and an updated list of T&D Projects), May 20, 2022 (one (1) SOW and an updated list of T&D Projects), July 29, 2022 (four (4) SOWs and an updated list of T&D projects), August 10, 2022 (two (2) SOWs and an updated list of T&D projects), November 11, 2022 (sixty (60) SOWs and an updated list of T&D projects), November 16, 2022 (one (1) SOW and an updated list of T&D Projects), January 30, 2023 (one (1) SOW and an updated list of T&D projects), March 29, 2023 (two (2) SOWs and an updated list of T&D projects), April 24, 2023 (one (1) SOW), April 27, 2023 (three (3) SOWs), August 25, 2023 (one (1) SOW), and November 7, 2023 (one (1) SOW). The Energy Bureau has approved all the T&D Project SOWs submitted by LUMA as of November 7, 2023.

3. On November 1, 2022, LUMA filed before the Energy Bureau a *Motion Submitting Hazard Mitigation Grant Program Projects and Request for Confidentiality and Supporting Memorandum of Law*. Therein, LUMA identified preliminary scopes of work that were developed for six (6) projects that it proposed to submit to FEMA, through COR3, for approval of funding under FEMA’s 404 Hazard Mitigation Grant Program (“HMGP”), a program under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (known as “Stafford Act”). Funding under Section 404 is used to provide protection to undamaged parts of a facility or to prevent or reduce the potential damages caused by future disasters. Among the preliminary scopes of work submitted to the Energy Bureau by LUMA were the interconnected microgrids and

submarine cable replacement in Vieques and Culebra (these projects, respectively, the “V&C Microgrid Project” and the “V&C Cable Projects”) (described in the document titled “LUMA’s FEMA 404 Hazard Mitigation Grant Program Project – Modernizing for Improved Resilience and Storm Mitigation in Vieques and Culebra” (“V&C Package”)).

4. Section 428 of the Stafford Act, administered by FEMA, provides funding through grants to states, local, tribal, and territorial governments through its Public Assistance Program to help communities respond to and recover from major disasters. LUMA has presented and received approval from the Energy Bureau for 208 initial SOWs for projects under Section 428 as of this date. The Energy Bureau's approval of these SOWs allows LUMA to engage with COR3 and federal agencies to seek different federal funding sources. These include FEMA Hazard Mitigation funding under Section 406 of the Stafford Act. Section 406 provides FEMA with discretionary authority to fund mitigation measures and repair disaster-damaged facilities. The application for and determination of Section 406 funding is part of the preliminary design phase for projects approved by the Energy Bureau and the assignment of FAAS numbers by FEMA to award Section 428 funding. At the time of submission of the initial SOW to the Energy Bureau, it is unknown whether and in what amounts funding through Section 406 will be available, if any. LUMA develops proposals for additional hazard mitigation measures consistent with the damages. The proposals are reviewed and approved by FEMA and COR3. LUMA’s efforts to add mitigation measures under Section 406 comply with the Energy Bureau directives and are consistent with LUMA’s commitment to pursue federal funding from all potential sources, maximize available funds, and efficiently execute proposed projects. As part of this effort, LUMA has developed an SOW for the implementation of two distinct microgrid installations on the islands of Vieques and

Culebra. These installations are designed to serve as hazard mitigation measures, capable of providing power to vital infrastructure on the islands in the event of similar damage to the main source of power, as well as acting as a redundancy of the existing grid.

5. The “Vieques and Culebra Microgrid” T&D Project, which derives from the “V&C Microgrid Project” previously submitted under Section 404, is now being submitted for approval by this Energy Bureau as a project under the DR-4339-PR Public Assistance program. This submission comes as a result of a thorough analysis performed by LUMA, where it has been determined that executing this project under Section 428 and Section 406 of the Stafford Act will streamline the approval process, while facilitating a more effective execution and construction of the projects (e.g., engineering, procurement, and construction phases).

6. In accordance with the March 26 Order issued in this instant proceeding, LUMA hereby submits to the Energy Bureau one SOW for T&D Project for this Energy Bureau’s review and approval prior to submittal to COR3 and FEMA in thirty (30) days for the following project: “Vieques and Culebra Microgrid,” dated January 26, 2024. See Exhibit 1.

7. LUMA hereby requests that *Exhibit 1* be maintained confidential and is submitting a redacted version for public disclosure and an unredacted non-public version under seal of confidentiality. LUMA submits below its Memorandum of Law stating the legal basis for which the unredacted version of *Exhibit 1* should be filed under seal of confidentiality. As will be explained below, the SOW in *Exhibit 1* should be protected from public disclosure as these documents contain confidential information associated with Critical Energy Infrastructure Information (“CEII”) as defined in federal regulations, 18 C.F.R. §388.113; 6 U.S.C. §§ 671-674, and per the Energy Bureau’s Policy on Management of Confidential Information (the “SOW with

CEII”). *See* Energy Bureau’s Policy on Management of Confidential Information, CEPR-MI-2016-0009 (“Policy on Management of Confidential Information”), issued on August 31, 2016, as amended by the Resolution dated September 20, 2016. In addition, the SOW includes personal identifying information of individuals who are LUMA staff or contractors that are protected under Puerto Rico’s legal framework on privacy emanating from the Puerto Rico Constitution and should also be protected pursuant to the Energy Bureau’s Policy on Management of Confidential Information.

II. Memorandum of Law in Support of Request for Confidentiality

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

8. The bedrock provision on the management of confidential information filed before this Energy Bureau, is Section 6.15 of Act 57-2014, known as the “Puerto Rico Energy Transformation and Relief Act”. It provides, in pertinent part, that: “[i]f any person who is required to submit information to the [Energy Bureau] believes that the information to be submitted has any confidentiality privilege, such person may request the [Energy Bureau] to treat such information as such [...]” 22 LPRA §1054n. If the Energy Bureau determines, after appropriate evaluation, that the information should be protected, “it shall grant such protection in a manner that least affects the public interest, transparency, and the rights of the parties involved in the administrative procedure in which the allegedly confidential document is submitted.” *Id.* §1054n(a).

9. 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).

10. 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 Puerto Rico Rules of Evidence.

11. 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 “redacted” or “public version” and an “unredacted” or “confidential” version of the document that contains confidential information. Id. at ¶ 6.

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

1. Trade Secret Information

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

2. Critical Energy Infrastructure Information (“CEII”)

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

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

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

13. Energy Bureau 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

14. The SOW with CEII included in Exhibit 1 contain portions of CEII that, under relevant federal law and regulations, are protected from public disclosure. LUMA stresses that the SOW with CEII warrants confidential treatment to protect critical infrastructure from threats that could undermine the system and negatively affect electric power services to the detriment of the interests of the public, customers, and citizens of Puerto Rico. In several proceedings, this Energy Bureau has considered and granted requests by PREPA to submit CEII under seal of confidentiality.³ In at least two proceedings on Data Security,⁴ and Physical Security,⁵ this Energy Bureau, *motu proprio*, has conducted proceedings confidentially, thereby recognizing the need to protect CEII from public disclosure.

15. Additionally, this Energy Bureau has granted requests by LUMA to protect CEII in connection with LUMA's System Operation Principles. See Resolution and Order of May 3, 2021, table 2 on page 4, Case No. NEPR-MI-2021-0001 (granting protection to CEII included in

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

⁴ *In re Review of the Puerto Rico Electric Power Authority Data Security Plan*, NEPR-MI-2020-0017.

⁵ *In re Review of the Puerto Rico Electric Power Authority Physical Security Plan*, NEPR-MI-2020-0018.

LUMA's Responses to Requests for Information). Similarly, in the proceedings on LUMA's proposed Initial Budgets and System Remediation Plan, this Energy Bureau granted confidential designation to several portions of LUMA's Initial Budgets and Responses to Requests for Information. See Resolution and Order of April 22, 2021, on Initial Budgets, table 2 on pages 3-4 and Resolution and Order of April 22, 2021, on Responses to Requests for Information, table 2 on pages 8-10, Case No. NEPR-MI-2021-0004; Resolution and Order of April 23, 2021, on Confidential Designation of Portions of LUMA's System Remediation Plan, table 2 on page 5, and Resolution and Order of May 6, 2021, on Confidential Designation of Portions of LUMA's Responses to Requests for Information on System Remediation Plan, table 2 at pages 7-9, Case No. NEPR-MI-2020-0019.

16. 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.

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

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

- (i) Relates details about the production, generation, transportation, transmission, or distribution of energy;
- (ii) Could be useful to a person in planning an attack on critical infrastructure;
- (iii) Is exempt from mandatory disclosure under the Freedom of Information Act, 5 U.S.C. 552; and

- (iv) Does not simply give the general location of the critical infrastructure.

Id.

18. 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.*

19. 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”).⁶

⁶ 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).⁷

20. The SOW contains diagrams that qualify as CEII because it contains information on the engineering and design of critical infrastructure, as existing and proposed, relating to the transmission of electricity, which is provided in sufficient detail that it could potentially be helpful to a person planning an attack on this or other energy infrastructure facilities interconnected with or served by this facility and equipment. In addition, the SOW with CEII in Exhibit 1 qualifies as CEII because each of these documents contains the express coordinates to power transmission and distribution facilities (18 C.F.R. § 388.113(iv)), and these specific coordinates could potentially be helpful to a person planning an attack on the energy facilities listed as part of these SOW. The information identified as confidential in this paragraph is not common knowledge and is not made publicly available. Therefore, it is respectfully submitted that, on balance, the public interest in protecting CEII weighs in favor of protecting the relevant portions of the SOW with CEII in

(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.

⁷ 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.

Exhibit 1 from disclosure, given the nature and scope of the details included in those portions of the Exhibit.

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

22. In addition, each SOW in Exhibit 1 contains the name, signature, and role of two individuals who are LUMA employees and a contractor, respectively, who reviewed the SOW as part of LUMA's internal review and approval of each document. LUMA respectfully requests that information on the names, signatures, and roles of these individuals be maintained confidentially in the context that these reveal details of their employment duties and that their protection is in the public interest and aligned with Puerto Rico's legal framework on privacy which protects from the disclosure of personal information. See e.g., Const. ELA, Art. II, Sections 8 and 10, which protect the right to control personal information and distinctive traits, which applies *ex proprio vigore* and against private parties. See also e.g. *Vigoreaux v. Quiznos*, 173 D.P.R. 254, 262 (2008); *Bonilla Medina v. P.N.P.*, 140 D.P.R. 294, 310-11 (1996), *Pueblo v. Torres Albertorio*, 115 D.P.R. 128, 133-34 (1984). See also Act 122-2019, Article 4(vi) (which provides, as an exception to the rule on public disclosure, information the disclosure of which could invade the privacy of third parties or affect their fundamental rights); and Article 3(c) of Act 122-2019 (stating that personnel files

and similar information does not constitute public information subject to disclosure). It is respectfully submitted that the redaction of the aforementioned information does not affect the public's or the Energy Bureau's review of the SOW nor interfere with processes before this Energy Bureau. Therefore, on balance, the public interest to protect privacy weighs in favor of protecting the relevant portions of the SOW.

C. Identification of Confidential Information

23. In compliance with the Energy Bureau's Policy on Management of Confidential Information, CEPR-MI-2016-0009, below, find a table summarizing the hallmarks of 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	Vieques and Culebra Microgrid	Page 1	Right to privacy (<i>see e.g.</i> , Const. ELA, Art. II, Sections 8 and 10)	February 2, 2024
		Pages 4, 5 and 8	Critical Energy Infrastructure Information, 18 C.F.R. § 388.113; 6 U.S.C. §§ 671-674.	February 2, 2024

WHEREFORE, LUMA respectfully requests that the Energy Bureau **take notice** of the aforementioned; **approve** the SOW for T&D Project submitted as *Exhibit 1* to this Motion; and **grant** the request for confidential treatment of *Exhibit 1*.

RESPECTFULLY SUBMITTED.

In San Juan, Puerto Rico, this 2nd day of February 2024.

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



DLA Piper (Puerto Rico) LLC

500 Calle de la Tanca, Suite 401

San Juan, PR 00901-1969

Tel. 787-945-9132

Fax 939-697-6102

/s/ Yahaira De la Rosa Algarín

Yahaira De la Rosa Algarín

RUA Núm. 18,061

yahaira.delarosa@us.dlapiper.com

Exhibit 1

One Scope of Work

Redacted Version (Unredacted Version Submitted under Seal of Confidentiality)



FEMA Initial Scope of Work
Project Name:
Vieques and Culebra Microgrid
Date: January 26, 2024

APPROVALS

The signatures below formally approve the FEMA Initial Scope of Work.





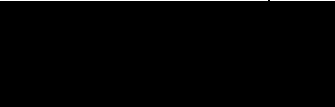

Grant Manager	Signature	Date
	Signature:  Email: 	02/02/2024
Program Brief Owner	Signature	Date
	Signature:  Email: 	02/02/2024



Table of Contents

<u>OVERVIEW.....</u>	<u>3</u>
<u>INTRODUCTION</u>	<u>3</u>
<u>FACILITIES.....</u>	<u>4</u>
<u>Proposed 406 Hazard Mitigation Grant Program Scope of Work:</u>	<u>9</u>
<u>DESCRIPTION OF THE PROJECT</u>	<u>10</u>
<u>TYPE OF PROJECT.....</u>	<u>12</u>
<u>CODES AND STANDARDS</u>	<u>12</u>
<u>PROJECT ESTIMATE</u>	<u>13</u>
<u>Environmental & Historic Preservation Requirements</u>	<u>14</u>
<u>Document Change Control.....</u>	<u>14</u>



OVERVIEW

Project Name	Vieques & Culebra Microgrid
Region	Vieques and Culebra
Project Type	Hazard Mitigation
Damage Number	206253
Damaged Inventory/Asset Category	Island Wide / Transmission Line System
FEMA Project Number	

INTRODUCTION

This document's purpose is to submit for approval the Initial Scope of Work (ISOW) to the Central Office for Recovery, Reconstruction and Resiliency (COR3) and the Federal Emergency Management Agency (FEMA) for the Vieques and Culebra Microgrid (VCMG) project under DR-4339-PR Public Assistance. The completed document will be reviewed by COR3 and FEMA to create and version a specific project worksheet and post fixed-cost estimates to repair, restore, or replace eligible facilities including Section 406 hazard mitigation for a specific project which means any sustained action taken to reduce or eliminate the long-term risk to human life and property from hazards. Hazard Mitigation: Any cost-effective measure which will reduce the potential for damage to a facility from a disaster event.

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

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

FACILITIES

- The new facilities listed below will include the construction of a new microgrid system on both islands Vieques and Culebra. LUMA will construct two microgrid systems capable of running in a grid connected mode or islanded mode. The microgrid will include Microgrid Controllers (MGC), Solar PV, Battery Energy Storage Systems (BESS), and upgraded dual-fuel thermal capabilities. The microgrid will be designed and constructed to operate as part of the existing PREPA grid. See Figure 2 and Table 1.

Site	Coordinates	MGC	PV	BESS	Dual-Fuel Thermal	Thermal Controls
Vieques (PRIDCO Site)		✓	✓	✓	✓	✓
Culebra #1 (Water Tank Site)		✓		✓		
Culebra #2 (Airport Site)			✓			
Culebra Thermal (Existing Site)						✓

Table 1: Microgrid Sites and Microgrid Component Locations



Figure 1. Vieques & Culebra 38 kV Submarine Cable (TL 5400)

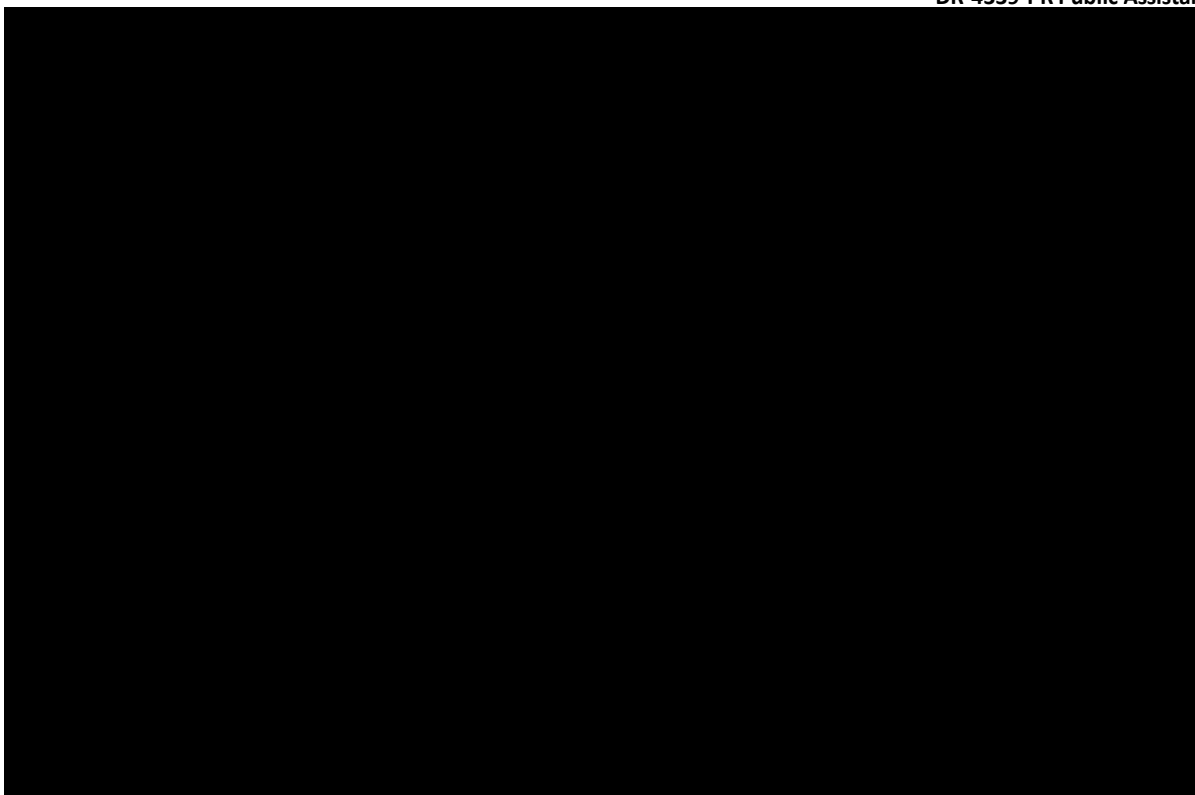


Figure 2: Vieques & Culebra Microgrid Single Line Diagram (SLD)

Vieques Site (PRIDCO): The Vieques Microgrid site is shown in Figure 3. It is sited on approximately 45 acres owned by the Puerto Rico Industrial Development Company (PRIDCO), a public corporation of the Government of Puerto Rico.

As shown in Table 1, the Scope of Work (SOW) for the Vieques site includes MGC, PV, BESS, and new Dual-Fuel Thermal Generation. The capacity values for the Vieques Microgrid are shown in Table 2.



Figure 3: Vieques Proposed Side (PRIDCO Site)

Culebra Site #1 (Water Tank):

The first of two parcels for the Culebra Microgrid is shown in Figure 4. It is sited on approximately 19 acres of which 16 acres are classified as “Suelo Rústico Especialmente Protegido-Hídrico”. The total buildable area consists of approximately 3 acres and is shown in highlighted portion of Figure 5. The objective is to acquire the entire land parcel in order to streamline the project execution by avoiding time consuming land segregation procedures. Additionally, this will safeguard the site from any potential obstructions that could affect the operation of the proposed microgrid infrastructure.

As shown above in Table 1, the SOW for Culebra Site #1 includes MGC and BESS. The capacity values for the Culebra Microgrid sites are shown in Table 2.



Figure 4: Culebra Site #1 (Water Tank Site)

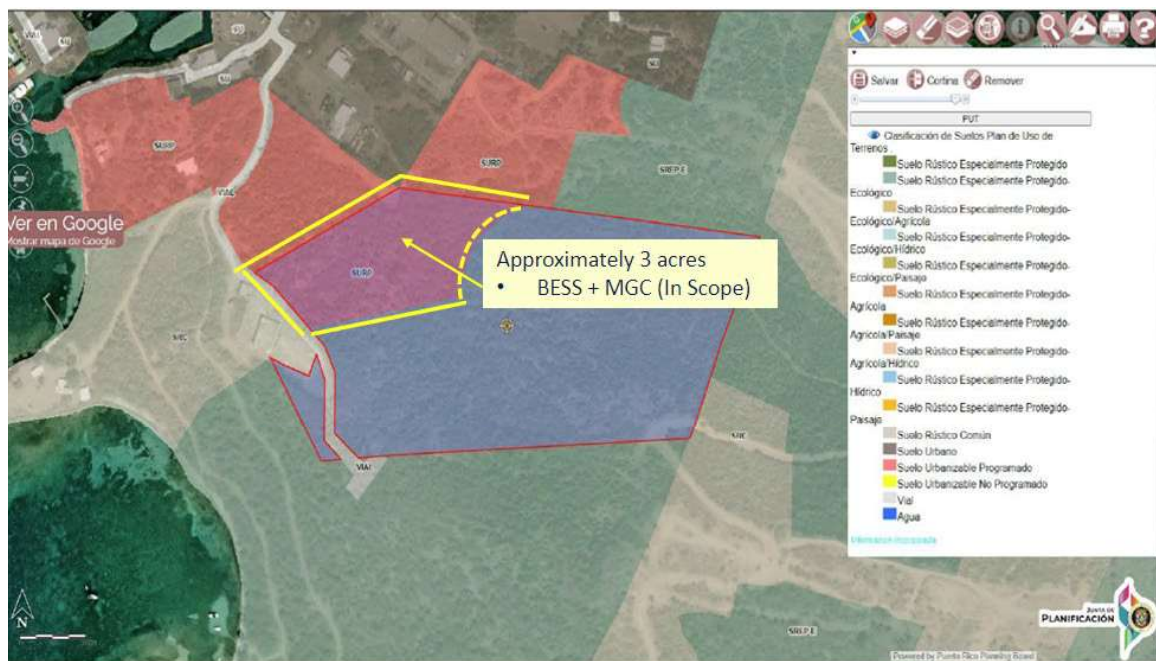


Figure 5: Culebra Site #1 (Water Tank Site) With Soil Types as per “Junta de Planificación de Puerto Rico”



Culebra Site #2 (Airport):

Culebra Site #2 is shown in Figure 6. It is owned by the Puerto Rico Ports Authority. The project will use approximately 9 acres of land.

As shown above in Table 1, the SOW for Culebra Site #2 only includes PV. The capacity values for the Culebra Microgrid sites are shown in Table 2.



Figure 6: Culebra Site #2 (Airport Site)

Culebra Thermal Site (Existing):

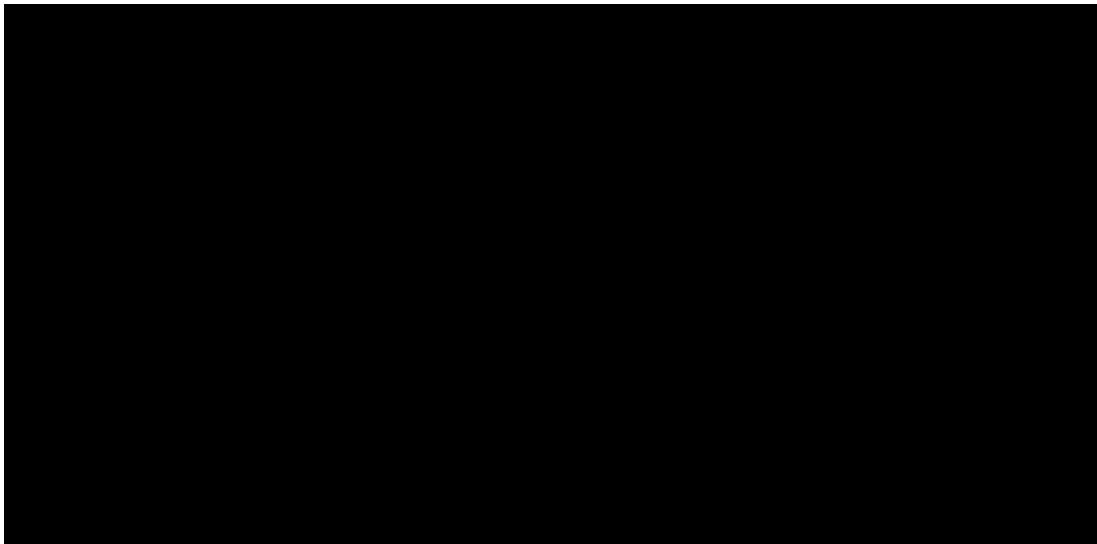


Figure 7: Culebra Generator Existing Site



Proposed 406 Hazard Mitigation Grant Program Scope of Work:

The transmission system's main objective is to provide efficient and reliable interconnection of generation sources with the load centers distributed throughout the island. PREPA Transmission Grid connects Power Generation Plants, Transmission Centers, Sectionalizers, and Distribution Substations through a complex and extensive network of lines, all dependent upon one another.

The residents of Vieques and Culebra are particularly vulnerable to impacts from natural hazards due to their location. Vieques is a 52 square mile island located eight miles off the eastern coast of mainland Puerto Rico with an estimated population of 9,301 residents. Culebra is an 11 square mile island located 17 miles off the northeastern coast of mainland Puerto Rico with an estimated population of 1,818 residents. Both islands' economies are heavily reliant on tourism. Residents' access to basic commodities and services, e.g., food, water, and medical services, in the wake of a disaster or emergency is hampered due to their geographical separation from the mainland of Puerto Rico. Critical resources and services take longer to arrive on the islands and these challenges are compounded during prolonged power outages, as demonstrated after Hurricane Maria. On Vieques and Culebra, electrical transmission and distribution equipment was devastated. Power generation remained tenuous for months as temporary repairs and short-term solutions were undertaken to restore electrical generation and supply.

Damage to buildings, homes, roads, bridges, agricultural crops, ports, and airports were only a portion of the impact to Vieques and Culebra following Hurricane Maria. Hospitals were unable to power their buildings and medical equipment. Water supply and treatment facilities were unable to treat and supply water. Loss of telecommunications towers impacted emergency responders and the public alike, and commerce came to a halt.

After Hurricane Maria, it took 465 days (about 1 and a half years) to get service back to the resident populations of Vieques and Culebra. Understanding that scenario's impact, LUMA is proposing two separate microgrid installations as 406 Hazard Mitigation capable of providing power to critical infrastructure for the islands in the event of similar damage to the main source of power. The proposal would act as a redundancy of the existing Transmission and Distribution grid, providing an alternative and, in consequence, power restoration for all customers in Vieques and Culebra. Thus, commercial and residential activities would be able to continue, in support of the economic activity and quality of life of residents.

The main goal of this project is to reduce the vulnerability and fragility of the interconnected system and improve the resiliency of the power system transmission grid by reducing the potential of future similar damage to the system, thus minimizing the risk of power loss during disaster events. A microgrid can be interconnected to the larger grid system, and during an outage is able to disconnect and self-regulate supply and demand. This factor makes microgrid an appealing solution in terms of resiliency. The importance of microgrid was also established in PREPA's Integrated Resource Plan (IRP).

LUMA is proposing to construct a new microgrid system to provide resiliency, power quality, energy redundancy, stand-alone and black start capabilities to the islands of Vieques and Culebra. The



VCMG will consist of two integrated island-based microgrids that contain new BESS, new PV generation, and augmentation and upgrades to dual-fuel thermal power plants, all of which to be integrated through microgrid controllers.

In order to address the loss of power situation, LUMA has put forward a proposal for the implementation of two distinct Microgrid installations. These installations are designed to serve as hazard mitigation measures, capable of supplying power to vital infrastructure on the island during a tropical cyclone event similar to the one experienced during Hurricanes Irma and Maria. It is worth noting that the Islands of Vieques and Culebra endured a power outage due to the loss of power feed from the main island of Puerto Rico.

These actions will mitigate the continual susceptibility to loss of electrical supply and distribution due to natural hazards such as hurricanes, storm surge, flooding, and fires.

LUMA has included 406 Hazard Mitigation measures in its preliminary design that meet the standards described above.

DESCRIPTION OF THE PROJECT

The VCMG project will consist of several major components/resources that are designed to meet the specific needs of each island in an “islanded” mode and to also work in a “grid-connected” mode during normal operations. The major components are the MGC, The BESS, The Solar PV and the dual-fuel Thermal Generators. The design capacities for each major component, by island, are shown in Table 2.

Major Component	Design Target	Vieques	Culebra
BESS	Min Capacity	8MW/8MWh	4MW/4MWh
Solar PV	Min Capacity	12MW	3MW
Thermal Generation	Min Capacity	10MW	Control Upgrades Only

Table 2: Capacity Targets by Major Component and Project Location

A brief description of the implementation considerations associated with each of these major components is provided below. These are referenced by the VCMG site they are associated with.

Implementation of BESS: Each BESS will be interconnected at 38 kV feeder upstream of the existing distribution substations for both islands with sizes proportional to the level of demand and with energy to serve load demand.

- Vieques BESS: 8MW/8MWh capacity and associated step-up transformer. Inverter sizes to be finalized during procurement (see Table 2).
- Culebra BESS: 4MW/4MWh capacity and associated step-up transformer. Inverter sizes to be finalized during procurement (see Table 2).

Implementation of Solar PV: Each Solar PV array will be interconnected at 38 kV feeder upstream of the existing distribution substations for both islands with sizes proportional to the level of demand and with energy to serve load demand. The Solar PV for Vieques will be co-located with the other



major components of the microgrid at the PRIDCO site. The Solar PV for Culebra will be located at the Airport site due to space limitations at the Water Tank Site. This will require a project substation and a transmission solution to interconnect with the existing Transmission system.

- Vieques PV generation plant: 12MW and associated step-up transformer (see Table 2).
- Culebra PV generation plant: 3 MW and associated step-up transformer (see Table 2).

Implementation of Thermal Generation: Thermal Generation will be an integral part of the VCMG design. It is intended to supplement the microgrid during outages where the solar PV and BESS cannot support (i.e., BESS state of charge too low and no solar resources available). The project will include new dual-fuel generation on Vieques as the PRIDCO site and upgrades to the existing thermal generators on Culebra to integrate them into the microgrid.

Vieques Dual-Fuel Thermal Generation

- New generator units totaling minimum of 10 MW, with dual fuel (diesel and a renewable based alternative fuel such as biodiesel) and microgrid integration capabilities (see Table 2).
- Evaluation of the land plot provided by LUMA for construction of the new generation plant (PRIDCO site).
- Permitting and environmental studies for the new generation plant.
- Installation and construction of communication network and control system for the new generation plant in Vieques to integrate into the microgrid control system.

Culebra Thermal Generation Upgrades

- Evaluation of the suitability and condition assessment of existing diesel plant in Culebra for integration into the microgrid control system.
- Retrofit (control and communications) the diesel generation plant in Culebra to allow integration with the microgrid.
- Installation and construction for communication network and control upgrades for the generation plant in Culebra to integrate into the microgrid control system.

Telecommunication Upgrades: The project will necessitate telecommunication upgrades.

- Implementation of microgrid-dedicated telecom systems for autonomous and coordinated operation of the V&C microgrid in both individual microgrid and clustered microgrid modes.
- Construction of new fiber links between each microgrid site (i.e., new equipment included in this microgrid development proposal) and the existing substation on each island.



TYPE OF PROJECT

Choose One (Restoration, Improved, or Alternate)
If improved, provide changes in facility size, capacity, dimension, or footprint. If alternate, provide the rationale for the recommendation.
Restoration
This work is to comply with FEMA (Public Assistance Alternative Procedures (Section 428) Guide for Permanent Work FEMA-4339-DR-PR February 2020).

CODES AND STANDARDS

The following will be referenced when applying specific codes, specifications, and standards to the project design:

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

Codes, Specifications, and Standards

Yes
Applicable codes and standards will be identified and incorporated into the plans and specifications.

Industry Standards

Yes
Applicable industry standards will be identified and incorporated into the plans and specifications.



PROJECT ESTIMATE

The estimated costs (Class 5 Accuracy +/-50%) 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.

VIEQUES COST ESTIMATE			
Cost Element	428	406	PROJECT TOTAL
PLANNING	\$ -	\$ 310,553	\$ 310,553
Permitting and Assessments	\$ -	\$ 41,096	\$ 41,096
Environmental Documentation & Management	\$ -	\$ 193,543	\$ 193,543
Engineering Services & Design	\$ -	\$ 75,914	\$ 75,914
MANAGEMENT	\$ -	\$ 296,065	\$ 296,065
Project Management	\$ -	\$ 68,323	\$ 68,323
Construction Management	\$ -	\$ 75,914	\$ 75,914
Contracting, Procurement & Contract Administration	\$ -	\$ 60,731	\$ 60,731
Projects Controls (Scheduling, Estimating, Support, Cost Control, Risk, Document Control & Reporting)	\$ -	\$ 60,731	\$ 60,731
Legal	\$ -	\$ 15,183	\$ 15,183
Finance & Accounting	\$ -	\$ 15,183	\$ 15,183
VIEQUES MICROGRID	\$ -	\$ 73,520,359	\$ 73,520,359
Major Components	\$ -	\$ 72,886,697	\$ 72,886,697
Start Up/Commissioning	\$ -	\$ 322,897	\$ 322,897
Transportation Expenses	\$ -	\$ 269,669	\$ 269,669
Security (Field 24 hr)	\$ -	\$ 41,096	\$ 41,096
GENERAL CONDITIONS	\$ -	\$ 2,159,187	\$ 2,159,187
Sales Tax	\$ -	\$ 1,057,453	\$ 1,057,453
Municipal Construction Tax	\$ -	\$ 1,101,733	\$ 1,101,733
CONTINGENCY	\$ -	\$ 5,124,207	\$ 5,124,207
Contingency	\$ -	\$ 3,795,709	\$ 3,795,709
Escalation	\$ -	\$ 1,138,713	\$ 1,138,713
Overhead	\$ -	\$ 189,785	\$ 189,785
COST TOTALS	\$ -	\$ 81,410,371	\$ 81,410,371
DEDUCTIONS	TOTAL INSURANCE PROCEEDS RECEIVED		\$ -
FAAST ALLOCATIONS	FAAST PROJECT # TOTAL		\$ 81,410,371
	FAAST A&E # 335168 TOTAL		\$ -



CULEBRA COST ESTIMATE			
Cost Element	428	406	PROJECT TOTAL
PLANNING	\$ -	\$ 410,756	\$ 410,756
Permitting and Assessments	\$ -	\$ 41,096	\$ 41,096
Environmental Documentation & Management	\$ -	\$ 293,543	\$ 293,543
Engineering Services & Design	\$ -	\$ 76,117	\$ 76,117
MANAGEMENT	\$ -	\$ 296,854	\$ 296,854
Project Management	\$ -	\$ 68,505	\$ 68,505
Construction Management	\$ -	\$ 76,117	\$ 76,117
Contracting, Procurement & Contract Administration	\$ -	\$ 60,893	\$ 60,893
Projects Controls (Scheduling, Estimating, Support, Cost Control, Risk, Document Control & Reporting)	\$ -	\$ 60,893	\$ 60,893
Legal	\$ -	\$ 15,223	\$ 15,223
Finance & Accounting	\$ -	\$ 15,223	\$ 15,223
CULEBRA MICROGRID	\$ -	\$ 32,941,403	\$ 32,941,403
Major Components	\$ -	\$ 32,207,741	\$ 32,207,741
Start Up/Commissioning	\$ -	\$ 322,897	\$ 322,897
Transportation Expenses	\$ -	\$ 369,669	\$ 369,669
Security (Field 24 hr)	\$ -	\$ 41,096	\$ 41,096
GENERAL CONDITIONS	\$ -	\$ 2,059,187	\$ 2,059,187
Sales Tax	\$ -	\$ 957,453	\$ 957,453
Municipal Construction Tax	\$ -	\$ 1,101,733	\$ 1,101,733
CONTINGENCY	\$ -	\$ 5,137,880	\$ 5,137,880
Contingency	\$ -	\$ 3,805,837	\$ 3,805,837
Escalation	\$ -	\$ 1,141,751	\$ 1,141,751
Overhead	\$ -	\$ 190,292	\$ 190,292
COST TOTALS	\$ -	\$ 40,846,080	\$ 40,846,080
DEDUCTIONS	TOTAL INSURANCE PROCEEDS RECEIVED		
	\$ -		
FAAST ALLOCATIONS	FAAST PROJECT # TOTAL		
	\$ 40,846,080		
	FAAST A&E # 335168 TOTAL		
	\$ -		

Environmental & Historic Preservation Requirements

EHP considerations will be identified and evaluated during the preliminary design phase and submitted to FEMA for review. Requirements will be incorporated into the final design and construction documents to be approved by FEMA prior to construction activities.

Document Change Control

This table contains a history of the revisions made to this document.

Rev.	Effective Date	Lead Reviewer / Job Title	Brief Description of Change
0	1/26/2024		Initial Release