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

IN RE: PUERTO RICO ELECTRIC POWER AUTHORITY'S EMERGENCY RESPONSE PLAN	**CASE NO.:** NEPR-MI-2019-0006 SUBJECT: Request to Seal Appendix B to Annex A to LUMA's Emergency Response Plan

REQUEST TO SEAL AND MAINTAIN CONFIDENTIAL APPENDIX B TO ANNEX A TO LUMA'S EMERGENCY RESPONSE PLAN

TO THE HONORABLE PUERTO RICO ENERGY BUREAU:

COME NOW LUMA Energy, LLC ("ManagementCo")[1], and **LUMA Energy ServCo, LLC** ("ServCo")[2], (jointly referred to as "LUMA"), and, through the undersigned legal counsel and respectfully submit the following:

I. Introduction

On May 31, 2021, LUMA filed with this honorable Puerto Rico Energy Bureau, its Emergency Response Plan ("LUMA's ERP".) On June 3, 32021, LUMA submitted Annex A (Major Outage Restoration), Annex B (Fire Response) and Annex C (Earthquake Response) to LUMA's ERP. A Technical Conference is scheduled in this proceeding for September 2, 2021.

LUMA hereby respectfully requests that the Energy Bureau grant confidential treatment to Appendix B to Annex A of LUMA's ERP on Major Outage Restoration ("Appendix B to the Major Outage Restoration Annex"), which was originally filed for the public record. Appendix B to the Major Outage Restoration Annex includes LUMA's Restoration Prioritization Lists. More importantly, Appendix B to the Major Outage Restoration Annex identifies transmission and

[1] Register No. 439372.
[2] Register No. 439373.

distribution feeders and line numbers; transmission and distribution critical facilities; and transmission and distribution stations and substations, including the locations of those critical assets in different municipalities in Puerto Rico as well as the relevant customers per regions and districts.

LUMA respectfully requests that Appendix B to the Major Outage Restoration Annex be removed from the record in its public form and substituted by a redacted version of the same that is submitted as Exhibit 1 to this Motion. This, to protect its contents and references to critical assets and loads that are 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 and in furtherance of public interests. *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 16, 2016.

II. Request for Confidential Treatment

A. Applicable Laws and Regulation to submit information confidentially before the Bureau.

The bedrock provision on management of confidential information that is filed before this 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 Commission believes that the information to be submitted has any confidentiality privilege, such person may request the Commission to treat such information as such . . . . " 22 LPRA §1054n. If the 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.*, Section 6.15 (a).

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

Access to the 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.* Section 6.15(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 [Bureau] who needs to know such information under nondisclosure agreements. However, the [Bureau] shall direct that a non-confidential copy be furnished for public review". *Id.* Section 6.15 (c).

The Bureau's Policy on Management of Confidential Information states the following with regards to access to 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. Section D (on Access to Validated Confidential Information).

Relatedly, Bureau Regulation No. 8543, *Regulation on Adjudicative, Notice of Noncompliance, Rate Review, and Investigation Proceedings*, includes a provision for filing confidential information in adjudicatory proceedings before this honorable Bureau. To wit, Section 1.15 provides that, "a person has the duty to disclose information to the [Bureau] considered to be privileged pursuant to the Rules of Evidence, said person shall identify the allegedly privileged information, request the [Bureau] the protection of said information, and provide supportive arguments, in writing, for a claim of information of privileged nature. The [Bureau] shall evaluate the petition and, if it understands [that] the material merits protection, proceed accordingly to . . . Article 6.15 of Act No. 57-2015, as amended." *See also* Bureau Regulation No. 9137 on *Performance Incentive Mechanisms,* Section 1.13 (addressing disclosure before the Bureau of Confidential Information and directing compliance with Resolution CEPR-MI-2016-0009).

B. Discussion in Support of Request for Confidential Treatment

Appendix B to the Major Outage Restoration Annex contains LUMA's restoration prioritization lists that are the product of LUMA's analysis of community lifelines which are determined to be more vulnerable and in need of priority to stabilize electric power services to ensure safety and protect property and the environment in Puerto Rico. The facilities and infrastructures identified by location and characteristics in Appendix B to the Major Outage Restoration Annex include critical facilities[3] and critical infrastructure[4] that are key for the health

[3]LUMA's ERP defines Critical facilities as including facilities "identified as a Level 1, 2, or 3 facility provide services that are critical to the health and safety of the public and are tied to at least one of the five critical community lifelines. Examples include hospitals, fire/police stations, restoration staging areas, and communications facilities." *See* LUMA's ERP at page 94.

[4] LUMA's ERP considers critical infrastructure as including customers which the loss of electrical service

and safety of the public and are tied to critical community lifelines. Examples include hospitals, fire and police stations, restoration staging areas, communications facilities, waste, water treatment plants and transportation.

LUMA initially filed Appendix B to the Major Outage Restoration Annex as part of its submission on June 3, 2021 for the record. LUMA erroneously neglected at that time to seek confidential treatment of the list of critical facilities in this annex. In preparation of the Technical Conference scheduled for September 2, 2021, LUMA respectfully requests that the Energy Bureau grant confidential treatment to the contents of Appendix B to the Major Outage Restoration Annex and substitute it with a redacted version of the document. LUMA also respectfully requests that the contents of Appendix B to the Major Outage Restoration Annex are not discussed during the public technical conference. This, because Appendix B to the Major Outage Restoration Annex not only identifies critical infrastructures and facilities, but also contains details on the location of those critical assets and of several assets of the Transmission and Distribution System ("T&D System") that serve them and would be restored with priority in case of an emergency. LUMA understands that maintaining in public form that level of identification and information of critical components of the T&D System is not necessary for the public to have sufficient information on LUMA's ERP. To the contrary, continued publicity of this information would affect implementation of the ERP and potentially also affect customers and facilities that LUMA has identified as warranting priority in case of a major outage and during major outage restoration processes.

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would result in disruption of a critical public safety function are designated as "Critical Infrastructure". Examples include waste, water treatment plants and transportation. *Id.*

It is respectfully submitted that Appendix B to the Major Outage Restoration Annex references CEII and should be protected. It also contains information that should be protected from disclosure as its continued disclosure could undermine LUMA's ability to implement the ERP. Protecting Appendix B to the Major Outage Restoration Annex is in the public interest as it would enhance LUMA's ability to protect community lifelines and customers that are vulnerable during emergencies.

Generally, CEII or critical infrastructure information is exempted from public disclosure because it involves assets and information the disclosure of which poses public security, economic, health and safety risks. Federal Regulations on CEII, particularly, 18 C.F.R. § 388.113, states 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.

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.*

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").[5] 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)[6].

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[5] 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
>
> (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.

[6] 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

In several proceedings, this Energy Bureau has considered and/or granted requests by PREPA to submit CEII under seal of confidentiality.[7] In at least two proceedings on Data Security,[8] and Physical Security,[9] this Bureau, *motu proprio*, has conducted proceedings confidentially, thereby recognizing the need to protect CEII from public disclosure. This honorable 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 at page 4, Case No. NEPR-MI-2021-0001, granting protection to CEII included in LUMA's Responses to Requests for Information. Similarly, in the proceedings on LUMA's proposed Initial Budgets and System Remediation Plan, this honorable Energy Bureau granted confidential designation to several portions of LUMA's Initial Budgets and Responses to Requests for Information, recognizing that they included CEII, *see* Resolution and Order of April 22, 2021 on Initial Budgets,

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> 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.

[7] *See e.g., In re Review of LUMA's System Operation Principles,* NEPR-MI-2021-0001 (Resolution and Order of May 3, 2021); *In re Review of the Puerto Rico Power Authority's System Remediation Plan*, NEPR-MI-2020-0019 (order of April 23, 2021); *In re Review of LUMA's Initial Budgets*, NEPR-MI-2021-0004 (order of April 21, 2021); *In re Implementation of Puerto Rico Electric Power Authority Integrated Resource Plan and Modified Action Plan,* NEPR MI 2020-0012 (Resolution of January 7, 2021, granting partial confidential designation of information submitted by PREPA as CEII); *In re Optimization Proceeding of 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).

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

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

table 2 at pages 3-4 and Resolution and Order of April 22, 2021 on Responses to Requests for Information, table 2 at 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 at 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.

Appendix B to the Major Outage Restoration Annex identifies critical infrastructures and facilities in Puerto Rico, as well as critical infrastructures and assets of the T&D System that are protected as CEII. In addition to identifying critical assets, loads and infrastructures of the T&D System, Appendix B to the Major Outage Restoration Annex includes their locations in Puerto Rico, identifying the municipalities where the critical infrastructures assets are located and naming the clients that are served from said critical infrastructures. The critical loads and associated electric T&D System assets are by definition critical to the resilience of Puerto Rico. Their release to the public provides information to those who may wish to cause damage to Puerto Rico's infrastructure and in particular the vulnerable assets in the system and those facilities whose restoration would be prioritized in the case of an emergency. This information then should be protected and LUMA submits respectfully that it would be in the public interest to do so.

It is respectfully submitted that important safety and security interests are served if the Energy Bureau determines that Appendix B to the Major Outage Restoration Annex should be removed from the public record and substituted with a redacted version of Appendix B to the Major Outage Restoration Annex that is submitted with this Motion. The redacted version of Appendix B to the Major Outage Restoration Annex protects from disclosure the details and specific locations of critical assets and critical infrastructures of the T&D System and of critical community

lifelines that are part of LUMA's prioritization for restoration during emergencies. LUMA is not proposing that the existence of the prioritization lists or the categories of community lifelines be removed from the public record. LUMA only requests that the Energy Bureau remove from the public record, the identification by location, characteristics and details on customers served, that are found in Appendix B to the Major Outage Restoration Annex and provides insights to their vulnerabilities.

In sum, LUMA respectfully submits that Appendix B to the Major Outage Restoration Annex includes CEII on the T&D System and how it serves critical customers and critical lifelines in Puerto Rico, that should be maintained confidentially. Confidentiality is proper to safeguard the assets and enable LUMA to efficiently protect customers, the public and the environment, free from external threats from parties that would want to interfere with critical infrastructures and facilities during emergencies In addition, LUMA submits that the redaction of this information does not prevent interested parties and the public from the ability to review the ERP and its annexes and to evaluate LUMA's plans for preparation and response to an emergency.

III. Identification of Confidential Information.

In compliance with the Bureau's Policy on Management of Confidential Information, CEPR-MI-2016-0009, a table summarizing the hallmarks of this request for confidential treatment:

	Document or file	**Pages in which Confidential Information is Found, if applicable**	**Summary of Legal Basis for Confidentiality Protection, if applicable**	**Date Filed**
1	Appendix B to the Major Outage Restoration Annex (Annex A)	Redacted portions of Appendix B to the Major Outage Restoration	Critical Energy Infrastructure Information 18 C.F.R. §388.113; 6 U.S.C. §§ 671-674.	June 3, 2021

	Document or file	Pages in which Confidential Information is Found, if applicable	Summary of Legal Basis for Confidentiality Protection, if applicable	Date Filed
		Annex at pages 77-139.		

WHEREFORE, LUMA respectfully requests that the Energy Bureau **take notice** of the aforementioned, **accept** the redacted version of Appendix B to the Major Outage Restoration Annex that is tendered with this Motion as Exhibit 1, and **order** that Appendix B to the Major Outage Restoration Annex that was filed on June 3, 2021, be removed from the record and kept confidential.

RESPECTFULLY SUBMITTED.

In San Juan, Puerto Rico, this 30th day of August 2021.

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 the attorneys for PREPA**, Joannely Marrero-Cruz, jmarrero@diazvaz.law; and Katiuska Bolaños-Lugo, kbolanos@diazvaz.law.

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Exhibit 1
Redacted Appendix B to Major Restoration Annex (Annex A)

Emergency Response Plan

Annex A
Major Outage Restoration

LUMA ENERGY, LLC

CRISIS MANAGEMENT OFFICE

MaZ 10, 2021

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Handling Instructions

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Comments and requests for additional information should be directed to:

Crisis Management Office
LUMA Energy, LLC

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Approval and Implementation

LUMA Energy Emergency Response Plan

Annex A – Major Outage Restoration

[redacted]

May 23, 2021
Date

Director, Emergency Operational Response and Readiness

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I. Purpose

The purpose of LUMA's Major Outage Restoration Annex (the "Annex" or "Annex A") is to establish an operational and tactical comprehensive framework for responding to major outage restoration events. This Annex will assist the Emergency Operations Team to carry out the actions necessary to protect lives, maintain continuity of service, and protect property. It also provides the Puerto Rico Energy Bureau (PREB), the Puerto Rico Public Private Partnerships Authority (P3A), the Puerto Rico Emergency Management Bureau (PREMB), and other agencies the guidance for how LUMA responses and prioritizes electrical system outages with Community Lifeline overarching principles. This Annex helps ensure the safety of the public and employees and implements an effective restoration strategy that is consistent Companywide.

A. NIMS and the Incident Command System

LUMA has adopted the National Incident Management System (NIMS), a consistent, nationwide framework and approach that enables government at all levels (federal, state, local, tribal), the private sector and non-governmental organizations to work together to prepare for, respond to, and recover from the effects of incidents, regardless of cause, size, or complexity.

LUMA incorporates the use of Incident Command System (ICS) principles which provides a consistent, all hazards incident management methodology that allows LUMA's organization to integrate seamlessly into a nationally standardized response and recovery structure.

II. Scope

This Emergency Response Plan (ERP) Restoration Annex applies to emergency events caused by any hazard or threat that results in, or could result in, a major potential impact to the integrity of LUMA's Transmission and Distribution (T&D) system and/or a disruption of electrical service to LUMA customers. Additionally, the ERP applies to LUMA personnel and to any staff of LUMA Energy, affiliate company employees, contractors and mutual aid resources, or any other personnel working at the direction or under the authority of LUMA Energy.

For the purpose of this Annex, an Emergency Event is defined as a Level 3, 2, or 1 event. Non-emergency events are defined as Level 5 and 4 events. All five of these levels are described in the Event Classification and Emergency Operations Center (EOC) Activation Table, located in the LUMA ERP, Appendix B.

LUMA's Emergency Operational Boundaries (shown in Figure 1) are split geographically into the West Division and East Division. There are three Regions within each Division and twenty SERT Boundaries which are made up of 78 municipalities.

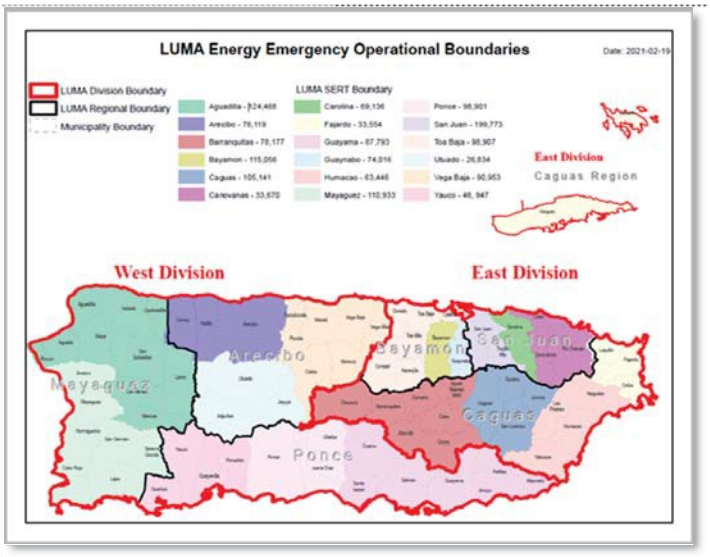


Figure 1: LUMA's Operational Boundaries

A. Guiding Principles

The guiding principles within this Annex are primary mechanisms to coordinate LUMAs preparedness, response and recovery actions when faced with any type of minor or major emergency event.

- LUMA will treat all customers, LUMA personnel and contract personnel with consideration and respect.
- LUMA will assess damage and relay information promptly. A high-level Company damage assessment will be provided within a reasonable timeline depending on the level of damage. Restoration estimates will be provided as each affected geographic area is assessed.
- LUMA follows all safety protocols creating the ability to respond to sites that pose a risk to public safety (such as downed energized conductors) with the highest priority.
- LUMA maintains environmental stewardship by complying with all environmental work practices and regulations.

III. Situation and Assumptions

A. Situation

Puerto Rico sits between the North Atlantic Ocean and the Caribbean Sea as the smallest and most eastern island of the Greater Antilles. Out of the five geographical regions that make up Puerto Rico, the northern region is the most populated and economically diverse, and is home to the capital, San Juan.

The effectiveness of this Annex is based on LUMA's commitment to prepare and implement procedures outlined within this Annex and the ERP – Base Plan. The development of an After-Action Report (AAR) will further enable ongoing improvement in LUMA's response and restoration processes. Execution of the appropriate responses to affect rapid and safe recovery is dependent upon the scalability of this Annex. The number of customers affected, and the magnitude of a major outage event vary, but the operational concept stays consistent. The level of recovery resources can be adjusted as needed.

LUMA will be taking an aggressive approach to harden the T&D electrical system across Puerto Rico, in order to withstand major weather events. Because of this, major hurricanes like Maria will be less impactful to the T&D system which supplies critical energy to LUMA customers. Due to the configuration of Puerto Rico's T&D grid to the location of the generation, LUMA will focus the hardening on key transmission lines to distribute energy to key load centers, critical system substation rebuilding will also be another area focus.

LUMA is committed to applying NME (Necessary Maintenance Expense) and FEMA funds to take the actions necessary to improve System Resilience through Storm Hardening, thus reducing the size and frequency of service interruptions even during Major Events. This involves a multi-faceted approach, including:

- Hardening key Transmission Lines that distribute energy to key load centers.

- Hardening the Feeder Backbone (alternatively referred to as the mainline or main gut, normally the three-phase part of the circuit that runs unfused from the substation to the normally open ties to other circuits or to the physical end of the circuit).
- Hardening Distribution Express Feeders that serve community lifelines:
  - Targeting High-Risk Vegetation (excessive overhang or trees near lines that appear susceptible to falling during a major event) for proactive "hot spotting".
  - Testing and Inspecting Poles and Structures and remediating identified risks.
  - Sectionalizing with strategic placement of reclosers (enhanced with directional finding capabilities) and addressing any unfused taps.
  - Strategically placing of Lightning Arrestors.
  - Performing physical inspections, identifying and categorizing deficiencies, and performing corrective maintenance on those deemed as requiring urgent or emergency action.
- Rebuilding of critical substations (particularly those susceptible to flooding), and
- Addressing the damaged or partially restored infrastructure caused by Hurricane Maria and recent seismic events.

This two-pronged approach will, over time, result in continued and sustainable improvement in restoration performance, while simultaneously reducing the number of customers experiencing outages during these major events.

B. Assumptions and Considerations

The ERP - Base Plan, Section III, identifies the overall assumptions and considerations. Identified within this Annex are in addition to, but not be limited to the following:

- Damaged sections of the electrical system may be de-energized and isolated, allowing service to be restored up to the point of damage, leaving the site safe until permanent repairs can be completed.
- Any delayed repairs are scheduled and completed in a timely manner.
- Assessments and the scheduling of needed repairs are conducted prior to discharging restoration crew resources.
- Mutual Aid Agreements or Memorandum of Agreements are maintained and activated when the scope of the incident will require additional resources beyond LUMA's capabilities.
- Facilitate coordinated response efforts and share information prior to and during the event to assist in establishing a common operating picture and efficient response.

IV. Organization

This section outlines the key functions of the various components and positions of the Storm Restoration organizational structure. An orderly and consistent flow of information between Operations, Communications, Logistics, and associated support organizations is necessary in times of emergency events. LUMA has nine (9) EOCs; one LEOC, two Division EOCs, and six Regional EOCs. Organizational charts indicating lines of authority and the interrelation between organizational groups are included are included in Appendix A.

A. LUMA Leadership

Prior to, and during major storm events, LUMA's senior leadership will maintain an on-going and open dialogue to discuss and share intelligence regarding an impending emergency event that may affect the electric system. This proactive dialogue ensures the most complete and timely "situational awareness" between leadership teams and provides a platform to facilitate discussions regarding the potential sharing of personnel resources and other support functions between entities.

This coordinated approach is also important to the overall restoration response from a communications perspective, as it provides the mechanism for consistent messaging to employees, customers, and other external stakeholders. With the threat of a major storm or other system emergency, LUMA's leadership team and the Crisis Management Office (CMO) will activate all applicable functional areas (i.e., Operations, Planning, Communications, Logistics, etc.) to discuss and strategize a response to an event.

B. Emergency Response Organization

Figure 2 provides an overview of LUMA's Emergency Response Organization (ERO) and General Staff structure utilized during restoration activities. LUMA's organizational structure during outage restoration can be found in Appendix A to Annex A. Please refer to LUMA's ERP – Base Plan for a list of roles and responsibilities.

C. Employee Staffing Roster

LUMA maintains an employee contact sheet for all roles detailed within the Incident Command System (ICS) Restoration Roles and Responsibilities in Table 1. LUMA will continue to update the list annually or when required, due to personnel changes and/or updates. The full supplemental contact sheet can be found within Attachment 2 upon request.

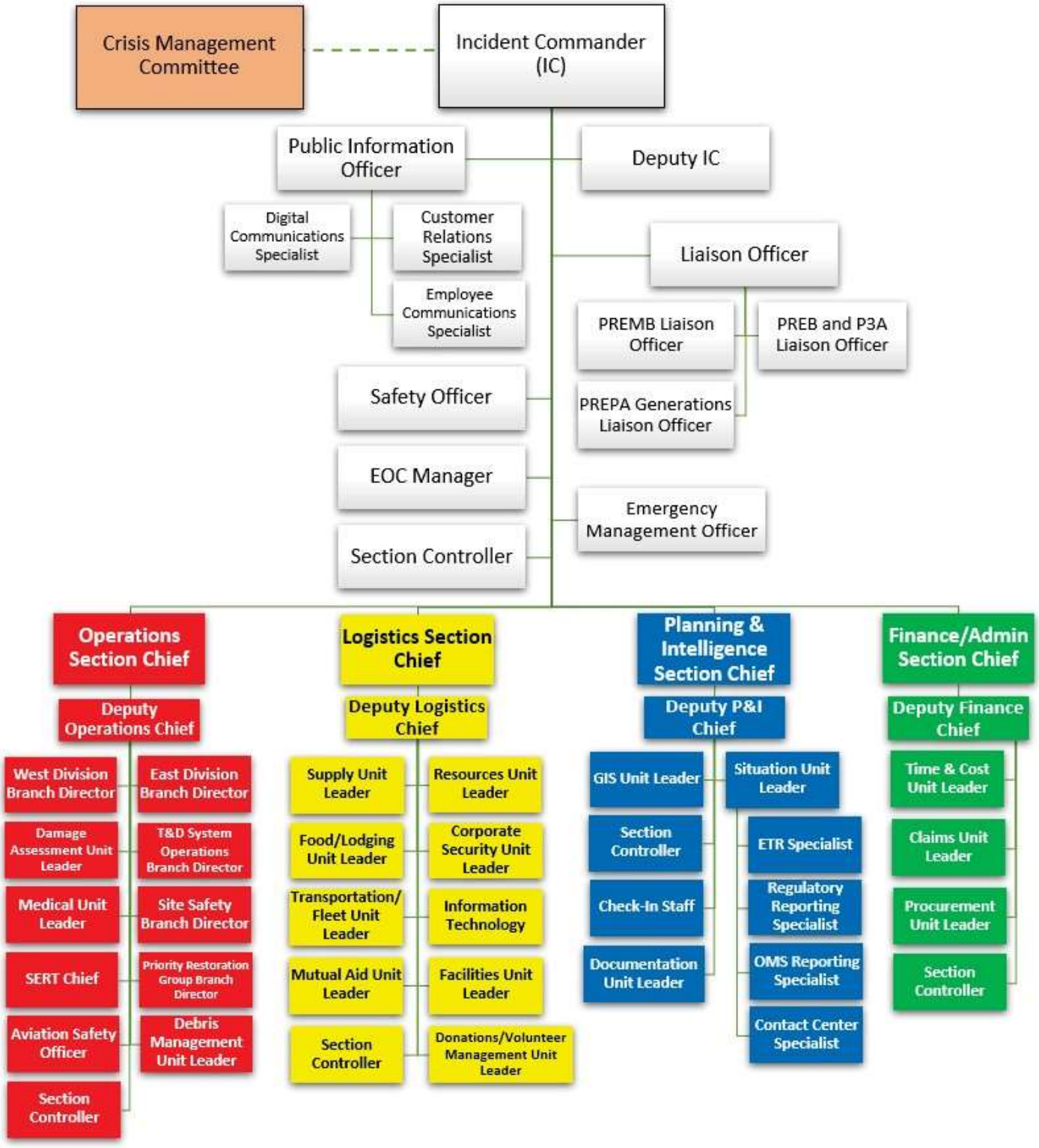


Figure 2: LUMA's Emergency Response Organization

V. Roles and Responsibilities

Table 1 details the key leadership roles during restoration operations and delineates significant corresponding function(s) that are coordinated in the respective areas

A. EOC Actions by Position

Actions by Incident Command System Position			
Responsibility	**Pre-Event**	**During Event**	**Post-Event**
Incident Commander (IC)	1. Once notified of a pending emergency event, begin an Activity Log to document actions and decisions throughout the event. 2. Review all related policies, procedures, forms and templates used during an event to ensure accuracy. 3. Initiate activities for appropriate resource acquisition and internal mobilization. 4. Initiate Pre-Event notifications and reports to regulatory, municipal and elected officials, when applicable (for Event Levels 1-3).	1. Ensure public safety maintains highest priority during restoration efforts and oversee restoration activities at the LEOC including resource acquirement and release, and demobilization. 2. Review and approve the IAP for the next operational period and continually reassess restoration response and objectives to ensure it addresses event escalation issues. 3. Establish a communication process and protocol to transfer restoration information to customers, regulators, and employees in a timely manner. 4. Using the information obtained from the different functions, determine if you need to alter response objectives/priorities and communicate any changes to the IC organization.	1. Ensure a proper demobilization of all restoration activities. 2. Initiate a post-emergency review to identify lessons learned. 3. Ensure all documentation is submitted or stored appropriately and provide additional information as requested to aid in the development of the AAR for the event. 4. Ensure the development of an AAR when necessary and the implementation of resulting lessons learned.
Operations Section Chief (OSC)	1. Ensure the staffing rosters for the Operations Section positions are up to date and ready to be used. 2. Following activation of the Incident Management Team, activate the appropriate Operations Section personnel, as needed. 3. Verify with the Branch Directors that all Operations positions are sufficiently staffed and that arrangements are made for 24-hour coverage.	1. Obtain a preliminary assessment of the number of customers affected and assist in development of restoration plans. 2. Oversees the conversion of the IAP's strategic goals into executable tactical plans that implement LUMA's restoration priorities. 3. Monitors the overall effectiveness of the field restoration activities to accomplish the stated IAP goals. 4. Ensure the Planning and Logistics Sections are aware of the operational resource requirements and are requesting and obtaining the necessary additional resources. 5. Ensure adherence to the restoration priorities with all actions.	1. Ensure a proper demobilization of all restoration activities. 2. Initiate a post-emergency review to identify lessons learned. 3. Ensure all documentation is submitted or stored appropriately and provide additional information as requested to aid in the development of the AAR for the event. 4. Ensure the development of an AAR when necessary and the implementation of resulting lessons learned.

Actions by Incident Command System Position			
Responsibility	**Pre-Event**	**During Event**	**Post-Event**
West Division Branch Director	1. Ensure the staffing rosters for the Branch Director's staff positions are up to date and ready to be used for their respective EOC. 2. Brief their respective EOC and staff on the impending threat and level of response. 3. Initiate activities for appropriate resource acquisition and internal mobilization.	1. Notify the Operations Section Chief if additional operational resources are needed. 2. Ensure safety procedures and protocols are being followed. 3. Ensure crew movements are communicated with Planning and Logistics Sections. 4. Maintain an awareness of the number of customers affected. 5. Notify the Operations Section Chief when it is known the restoration crews are being ready to be demobilized and redeployed, if necessary. 6. Ensure adherence to the restoration priorities with all actions.	1. Ensure a proper demobilization of all restoration activities. 2. Initiate a post-emergency review to identify lessons learned. 3. Ensure all documentation is submitted or stored appropriately and provide additional information as requested to aid in the development of the AAR for the event. 4. Ensure the development of an AAR when necessary and the implementation of resulting lessons learned.
East Division Branch Director	1. Ensure the staffing rosters for the Branch Director's staff positions are up to date and ready to be used. 2. Brief the EOC and SERT staff on the impending threat and level of response. 3. Initiate activities for appropriate resource acquisition and internal mobilization.	1. Notify the Operations Section Chief if additional operational resources are needed. 2. Ensure safety procedures and protocols are being followed. 3. Ensure crew movements are communicated with Planning and Logistics Sections. 4. Maintain an awareness of the number of customers affected. 5. Notify the Operations Section Chief when it is known the restoration crews are being ready to be demobilized and redeployed, if necessary. 6. Ensure adherence to the restoration priorities with all actions.	1. Ensure a proper demobilization of all restoration activities. 2. Initiate a post-emergency review to identify lessons learned. 3. Ensure all documentation is submitted or stored appropriately and provide additional information as requested to aid in the development of the AAR for the event. 4. Ensure the development of an AAR when necessary and the implementation of resulting lessons learned.

Actions by Incident Command System Position			
Responsibility	**Pre-Event**	**During Event**	**Post-Event**
T&D System Operations Branch Director	1. Assess generation status. 2. Asses T&D System status. 3. Evaluate Black Start Procedures 4. Ensure all T&D redundant systems are in functional operating condition. 5. Prepare staffing plan, schedules, and briefing for control centers as dictated for the event classification and LEOC activation level. 6. Ensure equipment is set up for the T&D System Operations ICS organization.	1. Control what comes on or off the system from a Generation, substation and line perspective. 2. Direct all operational requests and requirements to field personnel. 3. Isolate the grid as necessary during system constraints or lack of capacity 4. Provide field resourcing needs to planning and intelligence teams. 5. Provide IC and LEOC awareness of overall system capacity loading, issues and priorities for the planning periods. 6. Provide restoration priorities from a system perspective to the OSC. 7. Provide ETRs as system conditions and status changes.	1. Ensure a proper demobilization of all restoration activities. 2. Initiate a post-emergency review to identify lessons learned. 3. Ensure all documentation is submitted or stored appropriately and provide additional information as requested to aid in the development of the AAR for the event. 4. Ensure the development of an AAR when necessary and the implementation of resulting lessons learned.
Operations Regional Commander	1. As directed, notify SERTs and other personnel of the impending threat and level of response required. 2. Prepare staffing plan and schedules for respective Regional EOC as dictated for the duration level in the response matrix and approved by the Director. 3. Ensures equipment is set up in respective Regional EOC and operational, shift schedules for all SERT resources are developed and the process is operating efficiently.	1. Manages the overall readiness and operation of the assigned SERTs, including coordination. 2. Responsible for ensuring that all communications and restoration processes are being implemented as consistent with the ERP. 3. Ensures equipment is set up and operational, shift schedules for all SERT resources are developed and the process is operating efficiently. 4. Ensure adherence to the restoration priorities with all actions.	1. Ensure a proper demobilization of all restoration activities. 2. Initiate a post-emergency review to identify lessons learned. 3. Ensure all documentation is submitted or stored appropriately and provide additional information as requested to aid in the development of the AAR for the event. 4. Ensure the development of an AAR when necessary and the implementation of resulting lessons learned.

Actions by Incident Command System Position			
Responsibility	**Pre-Event**	**During Event**	**Post-Event**
Priority Restoration Group (PRG) Branch Director	1. Schedule crews according to predetermined shifts. 2. Communicate with the OSC any staffing or restoration-related issues.	1. Disseminate dispatch instructions to crews. 2. Maintain communications with an assigned contact in the LEOC to address unique or emergency situations. 3. Conduct close-out of OMS tickets with crews to receive reports on the nature of the work completed regardless of manner of dispatch. 4. Conduct follow-up phone calls and/or emails when work is completed including notification to the Customer Experience Team as needed, Community Affairs, Regional and Municipal agencies. 5. Ensure adherence to the restoration priorities with all actions.	1. Participate in post-emergency reviews to identify lessons learned, as instructed. 2. Ensure all documentation is submitted or stored appropriately and provide additional information as requested to aid in the development of the AAR for the event.
Area System Emergency Restoration Team (SERT) Chief	1. Ensure safety protocols and procedures are utilized. 2. Obtain briefing and assigned prioritized objectives from the Operations Regional Commander.	1. Ensure safety protocols and procedures are utilized. 2. Brief team on assigned incident objectives and communications expectations. 3. Communicate accomplishments, challenges, objective status and resourcing requirements. 4. Dispatch safety, damage assessment, priority restoration team and restoration crews. 5. Ensure adherence to the restoration priorities with all actions.	1. Ensure a proper demobilization of all restoration activities. 2. Initiate a post-emergency review to identify lessons learned. 3. Ensure all documentation is submitted or stored appropriately and provide additional information as requested to aid in the development of the AAR for the event. 4. Ensure the development of an AAR when necessary and the implementation of resulting lessons learned.

Actions by Incident Command System Position			
Responsibility	**Pre-Event**	**During Event**	**Post-Event**
Planning and Intelligence Section Chief (PSC)	1. Participate in System-wide coordination conference calls and present any planning-related issues. 2. Organize, assign and brief your Planning team. 3. Aid the IC in determining the necessary amounts and types of resources needed for the anticipated event (make formal resource requests to the LSC once approved by the IC). 4. Communicate with the IC any staffing or planning-related issues.	1. Begin maintaining a detailed PSC activity log. 2. Manage and administer the overall effort of collecting, processing, and reporting emergency service restoration information for the event. 3. Compile, analyze and evaluate damage assessment and all other available trouble data to project an estimated number of resources, skills, and equipment required (and alter initial plans if required). 4. Make additional requests for crew resources, materials, and other needs through the LSC.	1. Ensure a proper demobilization of all planning restoration activities once notified. 2. Participate in post-emergency reviews to identify lessons learned, as instructed. 3. Ensure all documentation is submitted or stored appropriately and provide additional information as requested to aid in the development of the AAR for the event.

Actions by Incident Command System Position			
Responsibility	**Pre-Event**	**During Event**	**Post-Event**
Logistics Section Chief (LSC)	1. Ensure outreach to contractors, local vendors, and property owners on availability for resources. 2. Acquire outside resources including line, tree, damage assessment and support prior to a known event, as instructed by the IC and ensure the information is sent to the Regional Logistics Team(s). 3. Ensure stockrooms and equipment are adequately stocked to respond and prepare and pre-stage critical materials including storm kits when necessary. 4. Validate material stock levels against the damage predictive model and event classification 5. Establish contact with the Regional Logistics groups to ensure logistical processes and protocols are clear and there is no redundancy of efforts. Ensure responsibilities and hand-off of information for each group are understood and schedule periodic conference calls.	1. Receive and fulfill resource requests as received by the PSC (once approved by the IC) and ensure all responding resources have adequate lodging, meals, materials, and transportation, as needed. 2. Review current IAP for proposed tactics and track incident expansion/contraction due to restoration progress and changes in conditions. 3. Ensure that all personnel and equipment time records are complete and submitted to the Finance unit under the Administration Section at the end of each operational period.	1. Upon notification by the IC ensure a proper demobilization of the Logistics unit and all logistical-related activities. 2. Consider demobilization early enough during the incident that an adequate demobilization plan is in place prior to the need to release resources (review resource list to ensure accuracy and timely release). 3. Participate in post-emergency reviews to identify lessons learned, as instructed. 4. Ensure all documentation is submitted or stored appropriately and provide additional information as requested to aid in the development of the AAR for the event.

Actions by Incident Command System Position			
Responsibility	**Pre-Event**	**During Event**	**Post-Event**
Finance/Admin Section Chief (FSC)	1. Participate in System-wide coordination conference calls and present any Admin/Finance-related issues. 2. Coordinate procurement card increases and purchase orders prior to a known event and ensure the release of financial policies and work order numbers for use. 3. Coordinate with the LEOC on any facility needs and ensure the delivery and setup of any special equipment or generators at the EOC's, as needed.	1. Ensure that all storm-assigned personnel available are mobilized, the Finance/Admin Section is staffed as appropriate. 2. Ensure that all personnel and equipment time records are complete and submitted to the Finance Section at the end of each operational period. 3. Oversee the receiving and coordination of all claims-related issues regarding the event. 4. Working closely with Logistics, oversee event costs and estimate the total cost of the event prior to completion of the restoration efforts.	1. When appropriate, ensure an orderly demobilization of the Admin/Finance Section and related activities. 2. Participate in post-emergency reviews to identify lessons learned, as instructed. 3. Ensure all documentation is submitted or stored appropriately and provide additional information as requested to aid in the development of the AAR for the event.
Public Information Officer (PIO)	1. As needed, oversee issuance of a Company statement concerning the activation of the LEOC and the necessity to release employees so that they can perform their emergency positions. 2. Oversee proactive communications.	1. Responsible for maintaining the unity of message before, during and after an emergency event to: employees, customers, and media outlets. 2. Responsible for overseeing the collection, development, and dissemination of employee, customer, and public messages and communications. 3. Coordinates with the EOCs to ensure consistent and accurate messaging for all emergency events. 4. Ensure all news releases are reviewed and approved by the IC. 5. Develop accurate and timely information for use during press/media briefings. 6. Develop daily messages and provide to the Planning Section Chief for inclusion in the IAP. 7. Monitor and forward media information that may be useful to the Planning Section.	1. When appropriate, ensure an orderly demobilization of the PIO support staff and related activities. 2. Participate in post-emergency reviews to identify lessons learned, as instructed. 3. Ensure all documentation is submitted or stored appropriately and provide additional information as requested to aid in the development of the AAR for the event.

Actions by Incident Command System Position			
Responsibility	**Pre-Event**	**During Event**	**Post-Event**
Liaison Officer (LNO)	1. Implement pre-event notifications to key stakeholders, including emergency planning officials, municipal officials, local government and non-government organizations, and others as required, in coordination with the PIO. 2. Disseminate information to the Liaison organization. 3. Ensure all required tools and technology are operating and available for use.	1. Notify and activate required Liaison support staff. 2. Ensure Liaisons are briefed on incident conditions and provide overall direction to regarding messaging for key stakeholders. 3. Inform the IC and General Staff of areas of concern and opportunities for coordination. 4. Deployment of LUMA liaison to serve in local municipal EOCs and ensure notifications are made to key stakeholders, including emergency management officials, municipal officials, local government and non-government organizations, and others as required, in coordination with the PIO.	1. When appropriate, ensure an orderly demobilization of the LNO support staff and related activities. 2. Participate in post-emergency reviews to identify lessons learned, as instructed. 3. Ensure all documentation is submitted or stored appropriately and provide additional information as requested to aid in the development of the AAR for the event.
Safety Officer (SOFR)	1. Ensure the staffing rosters for the Safety Officer's staff positions are up to date and ready to be used. 2. Participate in pre-event planning and operational conference calls and meetings. 3. Determine staffing needs based on the predicted or actual. 4. Event Classification Type or Event Level predictions. 5. Deploy Safety staff to various field locations as needed.	1. Provide regular reports and updates to IC. 2. Assign Safety staff as needed and ensure staffing level continues to be sufficient. 3. Ensure safety briefings are completed per the IAP for all personnel. 4. Notify IC about any safety related incidents. 5. Develop safety messages to be used during an event. 6. Facilitate Site Safety Inspections as appropriate. 7. Reiterate responsibility to all LUMA employees to stop unsafe acts if observed. 8. Ensure prompt investigation and documentation following a safety incident.	1. When appropriate, ensure an orderly demobilization of safety related activities. 2. Participate in post-emergency reviews to identify lessons learned, as instructed. 3. Ensure all documentation is submitted or stored appropriately and provide additional information as requested to aid in the development of the AAR for the event.

Table 1: EOC operations unit actions by role

VI. Restoration Strategy

A. Overview

The restoration strategy begins with the prioritized outages identified by the damage assessment teams and the outage management system (OMS). Restoration strategy takes into consideration outage information and identifies and compares that data to restoration protocols. System Emergency Restoration Teams (SERTs) must address emergency and life-threatening conditions such as public safety hazards or downed wires reported by first responders before any restorations begin.

Listed below and shown in Figure 3 is the prioritization of restoring power.

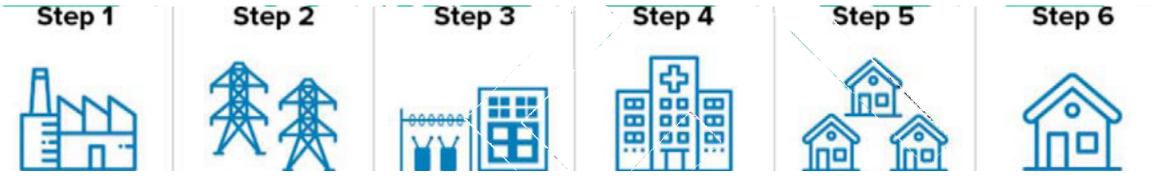


Figure 3: Prioritization of restoring power

1. Restore critical power assets – generation, micro grids and mini grids.
2. Repair key transmission lines – these lines transmit energy from generating stations to key substation.
3. Restore substations – energy can be distributed to the distribution network throughout communities.
4. Restore Community Lifelines – Hospitals, emergency shelters, water Systems, critical communication towers, ports, fire and police stations, and others (see Figure 4).
5. Restore large service areas – return service to the largest number of customers in the least amount of time. Services lines to neighborhoods, industries and businesses are restored systematically.
6. Restore individual homes.

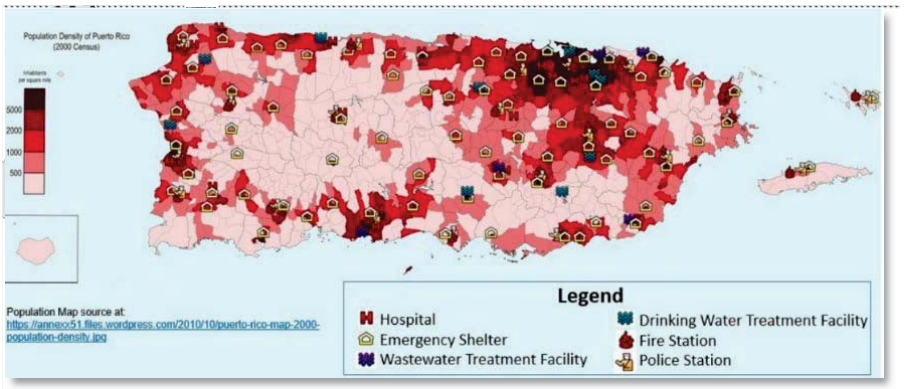


Figure 4: Map of Community Lifeline-related facilities

B. Mitigation Strategy

LUMA understands the importance of pre-planning, and its correlation to a timely and effective restoration response. LUMA undertakes a variety of initiatives to prepare its employees, infrastructure, emergency response partners, and the communities it serves. These initiatives include community awareness, training programs, employee training, drills, exercises, and system hardening projects. These pre-storm actions assist LUMA to respond to outages more effectively, while ensuring that customers, employees, and key stakeholder groups are better informed and prepared when disasters strike.

1. Community Outreach

LUMA's storm preparation initiatives focus on educating the community it serves on the importance of preparedness and safety. Public education is vital to an efficient and safe restoration effort, and LUMA will strive to inform its customers of what to expect before, during, and after large-scale events. Information is shared with the public through multimedia platforms such as LUMA's website, videos, social media, and its participation in community seminars, briefings, and exercises. LUMA believes that customer education is a year-round process.

2. First Responders

First Responders play an important role in an emergency or large-scale outage. These organizations will aid in responding to and protecting the public from unsafe conditions such as downed powerlines or vehicle collisions. LUMA will continue to build a partnership regarding preparedness and planning initiatives and support them when an event occurs.

3. Governmental Organizations

Governments are defined as including government officials, local, city, and state emergency management organizations. LUMA will continue to strengthen relationships with these critical stakeholders through information sharing and collaboration throughout the year.

Members of LUMA's Crisis Management Committee will participate in PREMB and local municipality training programs centered on emergency planning and response protocols (i.e., ICS, NIMS, Homeland Security Exercise and Evaluation Program (HSEEP), etc.) throughout the year. These collaborative initiatives expand upon planning efforts and further promote information sharing between participating organizations.

LUMA will practice their emergency preparedness and response plan through tabletop exercises and other relevant events. Companywide exercises center on planning and response activities during a large-scale restoration event and promotes open communication and collaboration between all affected and participating entities.

This alignment helps to ensure a clear and coordinated response when an emergency occurs and promotes dialogue and continuous improvement between organizations.

VII. Concept of Operations

In the event of a major outage, LUMA will respond and rapidly assess the impacts to the Transmission & Distribution (T&D) infrastructure, and take the necessary actions to mitigate cascading effects from a long-term power outage and restore service, minimizing the impact to the citizens of Puerto Rico. To ensure response integration, the Puerto Rico Emergency Management Bureau's (PREMB) Incident Levels and LUMA's Event Classification Types are utilized and located in the LUMA ERP – Base Plan.

A. Restoration Operations

Restoration Operations conducted in response to an event impacting LUMA's electric system will be the responsibility of the Dispatch and Field Operations Section within the LUMA Emergency Operations Center (LEOC). The directives from the LEOC will follow the LUMA Restoration Strategy identified in Section VI.

Approach

During emergencies, the Operations Section is responsible for safely and efficiently assessing the damage to the T&D infrastructure and restoring electric service. To accomplish this strategy, the East and West Division EOCs will report to the Operations Section Chief within in the LEOC.

The Incident Command System (ICS) is flexible depending on the level of decentralization for the event. Under the direction of the East or West Division Director the field teams will respond to the event as efficiently as possible.

- The System Emergency Restoration Teams (SERTs) are responsible for general restoration, vegetation clearing (tree removal) and repairs to the system.
- The Site Safety Branch is responsible for facilitating the response to downed wires (make safe or guard the site from the public) and other immediate Health, Safety and Environment situations.
- Priority Restoration Group (PRG) is responsible for the priority restoration for critical facilities. The PRG will operate in a centralized or decentralized environment as required.
- The Damage Assessment Teams are responsible for conducting and reporting on damage assessments.
- The Dispatch Center will support all emergency response and restoration requests for field teams and EOCs.

The transition from response operations to restoration operations will be considered the point in time when 1) field personnel are able to be dispatched without unacceptable safety risks from continued dangerous conditions (where

adverse weather conditions are applicable) and 2) when the potential additional damage to the electric system would be low in proportion to the expected level of damage already sustained. The start of the restoration period may be different for specific, local areas where the effect of an emergency limits access to facilities (e.g., severe flooding).

In any emergency, three vital pieces of information must be gathered to enable an effective restoration:

- Number of electric customers out of service.
- Amount of damage to the T&D Electric System.
- Manpower available (along with timing of availability) to repair damage.

Following an outage and activation of the ERP, restoration of electrical services is conducted following four basic steps:

- Make Safe
  - When in a damage state LUMA's T&D infrastructure presents an extreme risk to the public, Safety Teams will rapidly response to protect and correct any identified situation.
- Damage Assessment (Rapid Survey and Detailed Assessment)
  - Damage predictions assist with estimations of time needed to assess and complete restorations.
- Prioritization of restoration
  - SERT priorities are identified and sorted by highest customer count. PRG priorities continue to be sorted by municipality identified Level 2 Critical Facilities (CF2) and Level 3 Critical Facilities (CF3) priorities within the Restoration Priority Matrix.
- Execution of tactical restoration operations
  - LUMA's continually supports the "Safety Always" objective, specific tactical objectives include fire/public-safety priority assistance, timely restoration, and providing useful, timely and accurate information to all stakeholders.
  - To facilitate expedient restoration and to maximize the optimal use of workforce by focusing on making immediate, temporary repairs to restore power and postponing time-consuming permanent repairs until after the ERP activation is concluded and power has been restored.

A variety of factors and circumstances are considered when assigning work and may include, but are not limited to, the following:

- The type and availability of necessary resources to complete the repair.
- The proximity of available resources.
- The specific needs of the response.

- The type and/or number of customers affected by the repair, and the time necessary to complete each specific restoration.

2. Mobilization of Personnel

When an impending threat is known with reasonable certainty, precautionary deployment of personnel can facilitate a rapid response. The most critical component is the ability to be flexible in order to expand and retract to optimum levels as the threat becomes more certain. An anticipated and planned for impending major outage requires an appropriate mobilization of personnel to respond to and recover from an emergency event in an efficient and timely manner.

The Incident Commander has overall responsibility for notifying the Command Staff, which includes the Safety Officer, the Liaison Officer, and the PIO in the activation of the LEOC. The Incident Commander may activate other roles as necessary to serve the response based on incident developments and the Event Classification. These determinations affect the level of mobilization of personnel based on the estimated impact of the emergency event.

Upon notification, the Command and General Staff subsequently notify and mobilize the personnel from their respective sections and direct them to initiate their emergency restoration callouts.

In accordance with the LUMA Performance Metrics for the Mobilization of Personnel, Table 2 identifies LUMA's mobilization timeline.

Mobilization of Personnel	
Time After Damage Prediction	**Percentage of Crews Deployed**
Within 24 hours	50%
Within 48 hours	80%

Table 2: Mobilization of personnel

a) LUMA Resources

The Operations Section Chief makes notification to the T&D Operations Branch Director. The T&D Operations Branch Director has responsibility for making notifications to the T&D Operations Branch staff in their respective geographic region or SERT boundary.

Operational Managers are responsible for notifications to, and mobilization of, division personnel required for operational emergency response, proportionate with the size, scale, and complexity of the emergency. Subsequently, these elements notify and mobilize personnel from their respective branches, regions, and SERT teams, and direct them to initiate their emergency restoration activation protocol. Requested resources will report to their designated staging area(s) or dispatched response locations. Various crews may include:

- Troubleman Triage (One-Person Crews)
- Troubleman Overhead Line Crews (Two Men Crews)
- Troubleman Underground Crews (Two Men Crews)
- Powerline Construction Crew
- Damage Assessment Teams
- Wire Watcher Teams

b) *On-Island Contingency Contract Crews*

The activation and assignment of crews is a vital part of the restoration process. LUMA may activate contingency contract manpower, or contracts that have been pre-negotiated in accordance with LUMA and FEMA procurement policy. These contract crews support the restoration of the T&D System by increasing the capacity of the organization which is dependent on the severity of the emergency event and may include any of the following:

- Troubleman Triage (One-Person Crews)
- Troubleman Overhead Line Crews (Two Men Crews)
- Troubleman Underground Crews (Two Men Crews)
- Underground Splicing Crews
- Powerline Construction Crew
- Tree Crews
- Damage Assessment Teams
- Wire Watcher Teams
- Substation Workers/Techs
- Telecom Workers
- Transmission Line Workers
- Equipment Operators

The T&D Electric Operations West and East Divisions are routinely engaged, on a continual basis, in the type of work necessary to restore electric service. Traditional lines of communication exist between these divisions that facilitate the coordination of the day-to-day contractor work forces in all conditions of readiness to the degree necessary.

c) *Mutual Aid and Off-island Support*

Mutual aid assistance is an essential part of the electric power industry's service restoration process and contingency planning on the island of Puerto Rico where utility qualified resources are limited. As an operating utility in Puerto Rico, LUMA will be an active member in mutual aid agreements and have contingency contracts in place which will enable LUMA to access mainland utility resources more efficiently.

LUMA also has the support of Quanta Services where they have staged pieces of heavy utility equipment on the island. When requested, Quanta will fly in skilled resources from the mainland that will be deployed to

respond with the on-island fleet. This combination of personnel and equipment will greatly decrease LUMA's restoration time.

d) National Guard Assistance

The National Guard Support Program provides for power restoration support from National Guard personnel when a catastrophic event occurs, and the customary sources of supplemental personnel, such as mutual assistance, contractors, or internal staff cannot provide adequate personnel to address needs. In order for the National Guard to be available for deployment, the Governor of the Puerto Rico must declare a "State of Emergency." As warranted and available, the Incident Commander may initiate actions to secure additional support available through the National Guard.

The National Guard is frequently called on to conduct disaster response and domestic emergency missions. These missions are a specific subset of the National Guard Civil Support (NGCS) mission area. Puerto Rico National Guard forces can provide surge logistics, transportation, communication assistance, and general-purpose capability to areas identified by the Puerto Rico Emergency Management Bureau to supplement LUMA emergency response expediting power restoration during the initial response to an incident. If National Guard Domestic Operations (NGDO) resources are deemed necessary, the following is a summary of roles that they could fulfill:

1. Public Safety
   a) Wire guarding for down wires
   b) Flagging for traffic control
2. Logistics Support
   a) Points of Distribution – including transportation and distribution of ice, or water to teams
   b) Fueling – delivery of fuel to vehicles and equipment engaged in power restoration work
   c) Lighting – delivery and operation of portable light towers to support restoration crews (they can operate, transport, and refuel any light towers provided to them by the company, Mutual Assistance Crews, contractors, or equipment rental companies)
3. Emergency Transportation
   a) Short-haul transport of cargo or materials from staging areas to point-of-repair locations
   b) High-axle transport of Damage Assessment Teams or Restoration Crews
   c) Aerial assessments (only as "lift of opportunity," when combined with an existing National Guard mission); should National Guard assets be utilized for aerial

patrols, National Guard pilots will be required to attend LUMA's training to ensure compliance with internal safety requirements

4. Heavy Equipment
   a) Supply dozers and backhoes for clearing right of ways of debris, building road access to powerlines in remote area
   b) Specialize equipment to access mountainous areas
5. Security
   a) Provide temporary security for job sites, critical substations and laydown yard
6. Communications Support
   b) Provide assistance with temporary communications in critical areas to assist with high priority restoration operations

Damage Assessment

A Damage Assessment (DA) is a key component of the restoration operations. The damage assessment process utilizes "two-person" teams, or additional support as needed, to physically inspect and report overhead primary and secondary damage locations associated with each locked out circuit. Assessment personnel are managed through the Regional SERT and provide their report to the Regional Commander. The order of evaluation is based on the restoration priority list.

Post-event, the T&D System Control Center will monitor and develop an initial system status report. This report is used to compare the current level of electric demand on the system to the forecasted demand.

The DA report is disseminated to the Operations Section in the LEOC where resources and equipment requirements to make the repairs and restore service are identified. Additional information on specific Damage Assessment protocols is in development.

a) Major Outage Event (MOE) Preliminary DA

LUMA will begin a preliminary DA of the affected area(s) and/or T&D facilities when it is safe to do so. The preliminary DA will be completed within a "reasonable time" at the beginning of the Operation Response phase. Reasonable times are identified in Table 3 and are in accordance with the MOE Performance Metric. The preliminary damage assessment will be performed primarily by the helicopter patrol with targeted land patrols when additional information is needed.

Preliminary DA Reasonable Time	
Event Categorization	**Response Time**
3 to 5 days	36 hours
5 to 10 days	72 hours
> 10 days	120 hours

Table 3: Reasonable time for preliminary damage assessments

Restoration

LUMA will utilize processes safely and efficiently to repair damage and restore electrical service. These restoration protocols are designed to restore power to the largest number of customers, in the shortest amount of time, and in the safest way possible.

Field damage assessments and repairs may commence when:

- Field personnel can be deployed without unacceptable safety risks from continued dangerous conditions.
- The potential of additional damage to the electric system is low.

a) Prioritization

Outages are prioritized by considerations of safety conditions, type and amount of damages to the system, critical community lifelines, customer type, and the number of affected customers. LUMA will focus restoration efforts to restore service to critical facilities, such as hospitals, police departments, fire departments, and other public health and safety facilities on a priority basis, as warranted. LUMA must make prudent decisions that have the greatest gain for the overall T&D System stability and the greatest benefit for all customers.

Priority restoration cannot be guaranteed, therefore, LUMA will implement specific communication outreach programs to critical facilities, municipal governments, and key account customers to alert them to properly prepare for potential prolonged power outages, and to provide information and updates on LUMA's preparation and restoration activities.

LUMA must address emergency and life-threatening conditions (public safety hazards, downed wires reported by emergency responders) before restoration efforts can commence.

b) Situational Assessment

LUMA will complete a high-level system assessment through the System Operations Center's Supervisory Control and Data Acquisition (SCADA), Outage Management System (OMS) and reported outages from LUMA

customers. When an Event Classification Type has been determined, personnel will be assigned per the LUMA incident command structure.

All activities will be assigned, assessments will be documented, repairs will be performed, and service will be restored in accordance with the following set of general priorities:

- Eliminate Unsafe Conditions: the elimination of hazards to the public and takes precedence during emergencies. Safety Crew personnel are activated and required to:
  - Respond to reports of downed wires.
  - Cut, clear, and/or repair the primary and secondary hazards.
  - Clear wires so that service may be restored up to the location of the break.
  - Prioritize response to emergency calls based on the severity of risk for areas.
  - Additionally, at the initial stages of the restoration process, LUMA may be directly assigned to municipalities to “make safe” downed wires to remove trees and other debris from major roadways.
- Transmission Circuits and Substations: restoration is prioritized by the T&D System Operations Branch Director.
  - Determines the need for the bulk electrical system.
  - Damage assessment and repair of transmission lines and key substations.
  - Request personnel to support restoration of transmission service to substations.
  - Bulk distribution feeder circuits, not directly affecting substations, are assigned a priority, depending on the importance of the circuit and the effect of its loss on the bulk electrical system.
- Substation repairs are directed by the East or West Division Branch Director of the affected area in consultation with the T&D System Operations Branch Director.
- Primary Distribution Circuits and key feeder portions of ‘locked-out’ 3-Phase primary distribution circuits are restored by either cutting faulted sections clear or by opening sectionalizing devices (i.e. switches). Damages are repaired, restoring all 3-Phase primary distribution circuits.
- Secondary Distribution Lines and Services Areas where there is only damage to secondary distribution lines and services are restored simultaneously. Repair crews perform a final assessment of damage in the area and repair any additional damage found.
- Permanent Repairs - after all electric service has been restored, permanent repairs are made to any remaining temporary field

conditions. During restoration of service, if practical, permanent repairs are made to avoid hazardous conditions and eliminate duplication of effort.

B. LUMA Event Classification Type

All potential events, natural, man-made, and technological, with the potential to affect LUMA Operations are assigned a classification by the Incident Commander or designee. The IC is responsible for analyzing the severity and complexity of the incident, with the collaboration and input of the Command and General Staff.

This analysis will assist in identifying resource requirements and positions needed for an EOC activation at all levels of the ERO. This analysis typically begins in the pre-event stage and continues every operational period throughout the service restoration stage for restoration events.

It is during this analysis that the IC determines the Event Classification Type. These classification types are directly tied to the establishment of EOC activation levels. As such, an event classification of Type 1 will also result in the establishment of an EOC Activation Level 1.

The IC may also deem it necessary to escalate or de-escalate the Event Classification Type and EOC Activation Level depending on changes in circumstances or where actual conditions differ from expected conditions. The Event Classification Type will depend upon the analysis of the expected severity and complexity of an event and drawn from the consideration of numerous factors.

Five (5) event types have been established. Types Five (5) and Four (4) are considered Non-Emergency Events and are restoration events managed as normal operations and/or an isolated event that does not necessitate the activation of the EOC unless escalation occurs.

Types One (1), Two (2), and Three (3) are Emergency Events with Type Three (3) being the less severe and Type One (1) representing catastrophic emergency conditions. LUMA's Emergency Event Types (1-5) are described in detail in Tables 4-8.

Type		Anticipated LUMA Operating Conditions
Type 1 – Catastrophic Emergency	Viewpoint	A Type 1 event is a catastrophic event, historically resulting in significant damage to the electrical transmission and distribution system. Type 1 events are rare but are usually forecast in advance of the event. This event calls for the full implementation of ICS and all employees are assigned shifts and are scheduled in relation to their role in the ERP. All Branch Division and Regional Emergency Operations Centers (EOCs) are activated. This type of event is coordinated through daily Incident Command meetings/conference calls to coordinate pre-planning activities in advance of the event, restoration activities during the event and demobilization activities post event. Communication protocols are activated and discussion with local and Government of Puerto Rico officials occurs prior to impact and through the restoration stage.
	Characteristics	• The damage severity impacts the entire system such that restoration activities may require ten (10) days or more once it is safe to begin restoration activities • Typically, > 50% (>700,000) customer interruptions at peak • Typically, > 50,000 Outage Event at Peak • This type of event is anticipated to occur between 1 and 4 times in a ten-year period
	Response Organization	• System-wide Incident Command structure is activated • All Command and General Staff positions are activated • All EOCs are operational • Additional restoration support functions will be established at a Branch and/or Regional EOC level as directed by the PSC and OSC and approved by the IC • Remote Restoration Management Teams are activated in the most severely impacted areas at the discretion of the Operations and Planning Section Chief and approved by the Incident Commander • Liaisons are activated • Staging Areas may be required to support external crews and resources
	Resource Activation	• This response requires outside assistance from contractors and/or mutual assistance from other utilities outside of the region • System Emergency Restoration Teams are activated in the most severely impacted areas at the discretion of the Operations and Planning Section Chief and approved by the Incident Commander • The Liaison Officer in the PREMB EOC may be activated dependent upon the level of State coordination required • LUMA will likely require a large increase in various staffing positions and teams • Additional restoration support functions will be staffed
	Communication / Coordination	• Federal resource coordination will likely be required • A written Incident Action Plan (IAP) is required for each operational period • Pre-Event Reporting is required • Pre-Event outreach to Municipalities, Elected Officials, and Regulators is performed • Restoration Phase Reporting is required • An After-Action Review is required • Post event meetings with the most severely affected communities will be held

Table 4: Type 1 – Catastrophic Event

Type		Anticipated LUMA Energy Operating Conditions
Type 2 – Emergency Conditions Event	Viewpoint	A Type 2 event is a severe event, which has historically resulted in significant damage to the electrical transmission and distribution system in a region(s) or could be moderate damage across the entire territory. Type 2 events are usually forecast in advance. This is a full implementation of ICS and most employees are assigned shifts and scheduled related to their role in ERP. This type of event is coordinated through daily Incident Command meetings/conference calls to coordinate pre-planning activities in advance of the event, restoration activities during the event, and demobilization activities post event. All impacted Branch, Division, and Regional Emergency Operations Centers (EOCs) are activated. Communication protocols are activated and extended discussions with local and Government of Puerto Rico officials occurs prior to impact and through the restoration stage.
	Characteristics	• The damage severity within a specific region or spread across the system is such that restoration activities are generally accomplished within a 7-day period once it is safe to begin restoration activities • Typically, 25% to 50% (350,000 to 700,000) customer interruptions at peak • Typically, >25,000 Outage Events at Peak • This type of event is anticipated to occur between 2 and 4 times in a five-year period
	Response Organization	• The system-wide Incident Command structure is activated • All Command and General Staff positions are activated • All EOCs are operational • Additional restoration support functions will be established at a Branch and Divisional EOC level as directed by the Planning and Operations Section Chiefs and approved by the Incident Commander • System Emergency Restoration Teams are activated in the most severely impacted areas at the discretion of the Operations and Planning Section Chief and approved by the Incident Commander • The Liaison Officer in the PREMB EOC may be activated dependent upon the level of State coordination required • Community Liaisons are activated to EOCs to serve communities as directed by the Liaison Officer and approved by the Incident Commander • Staging Areas may be required to support external crews and resources
	Resource Activation	• This response requires outside assistance from contractors and/or mutual assistance from other utilities outside of the region • LUMA Energy will likely require a large increase in various staffing positions and teams • Additional restoration support functions will be staffed
	Communication / Coordination	• Federal resource coordination will likely be required • A written IAP is required for each operational period • Pre-Event Reporting is required • Pre-Event outreach to Municipalities, Elected Officials, and Regulators is performed • Restoration Phase Reporting is required • An After-Action Review is required • Post event meetings with the most severely affected communities may be held

Table 5: Type 2 – Emergency Conditions Event

Type		Anticipated LUMA Energy Operating Conditions
Type 3 – High Alert Event (Moderate Regional Event)	Viewpoint	A Type 3 event represents the greatest range of uncertainty due to the severity of event being forecasted (Tropical Depression/Storm) but with low to medium confidence levels for the degree of impact and geographical area that is threatened. This type of event historically resulted in significant damage to district(s) or moderate damage to region(s). The approach is to prepare for multiple regions to potentially be impacted by activating the ICS structure and the opening of one or more EOCs. Employees will be assigned shifts and scheduled according to the threat, then moved to the areas with less impact to areas that received greater damage. This type of event is coordinated through daily Incident Command meetings/conference calls to coordinate pre-planning activities in advance of the event, restoration activities during the event and demobilization activities post event. Communication protocols are activated and extended discussions with local and state officials occurs prior to impact and through the restoration stage.
	Event Characteristics	• The damage severity within a specific district or region(s) is such that restoration activities are generally accomplished within a 48-72-hour period • Typically, 10% to 25% (70,000 to 350,000) customer interruptions at peak • Typically, >10,000 Outage Events at peak • This type of event generally occurs between 1 and 5 times per year
	Response Organization	• The Incident Command structure is activated at the System EOC level down to the local level • One or more of the EOCs may be activated to match the complexity of the event • Additional restoration support functions such as Decentralized Dispatching, Downed Wires and Damage Assessment may be established at a branch and/or divisional EOC as directed by the Planning and/or Operations Section Chiefs and approved by the Incident Commander • Community Liaisons are activated to operational EOCs as directed by Liaison Officer and approved by the Incident Commander • The Liaison Officer in the PREMB EOC may be activated dependent upon the level of State coordination required • Staging Areas may be required in an area if it has been severely impacted and requires a concentrated number of crews and resources
	Resource Activation	• This response may require outside assistance from contractors and/or mutual assistance from other utilities outside of the region • LUMA Energy may require a large increase in various staffing positions and teams • Additional restoration support functions may be staffed
	Communication/ Coordination	• A written IAP may be required for each operational period • Pre-Event Reporting is required • Pre-Event outreach to Life Support Customers, Municipalities, Elected Officials, and Regulators is conducted as necessary • Restoration Phase Reporting is required

Table 6: Type 3 – High Alert Event

Type		Anticipated LUMA Energy Operating Conditions
Type 4 – Non-Emergency Restoration Event (Heightened Alert)	Viewpoint	Type 4 events include (but are not limited to): system events that impact one or more district. Type 4 events may be due to thunderstorms, high winds, frequent and/or severe lightning, small to moderate winter storms or unanticipated events. Typically, these events are managed by System Operations with assistance from Field Operations. Control and management of the event typically remains centralized but may decentralize to one or more Emergency Operations Centers depending on the damage. The Incident Command Staff is notified, and specific sections may be activated depending on the impact of the event.
	Event Characteristics	• The damage severity within a specific district is such that restoration activities are generally accomplished within a 12-24-hour period • The incident is usually limited to one or two operational periods in the Event Restoration phase • Typically, 1 to 5% (14,000 to 70,000) customer interruptions at peak • Typically, >7,000 Outage Events at peak • This type of event generally occurs less than 5 to 10 times per year
	Response Organization	• Incident Command Structure may be activated • Command and General Staff positions activated as needed • One or more EOCs may be operational depending on the geographical threat and complexity • Community Liaisons may be staffed at the activated EOCs as directed by the Liaison Officer and approved by the Incident Commander
	Resource Activation	• Internal restoration resources normally available • Restoration is generally accomplished with local assets possibly with assistance from other regional distribution line assets • Typically, 2-50 personnel may be deployed to EOCs that have been activated at the discretion of the Planning and/or Operations Section Chiefs and approved by the Incident Commander to perform other functions
	Communication / Coordination	• No written IAP is required • The operations and maintenance department may have briefings or regional conference calls to ensure the complexity of the event is fully communicated to management and that response staff receive the appropriate level of support required for the event

Type		Anticipated LUMA Energy Operating Conditions
Type 5 – Normal Operations	Viewpoint	Type 5 events represent normal operations and are managed by the System Operations Dispatch Organization which is staffed 24/7/365. For small outages, system Operations will dispatch designated trouble resources to repair the outage. If upon arrival it is determined that additional resources are needed, a supervisor is assigned and will secure additional line crews from the Field Operations organization.
	Event Characteristics	• System activity is normal • Incidents are contained within the first operational period and last for less than 12 hours after resources arrive on scene • Typically, <1 % (14,000) customer interruptions at peak • Typically, <2,500 Outage Events at peak • Normal daily internal crew assignments
	Response Organization	• Incident Command Structure is not activated • Emergency Operations Centers are not activated
	Resource Activation	• Outage response is coordinated with local on-call personnel
	Communication/ Coordination	• No written IAP is required

Table 8: Type 5 – Normal Operations

TABLE NOTES

- Type 1, 2 and 3 events are “Emergency Events”. Types 4 and 5 are restoration events managed as normal operations unless escalation occurs.
- Expected percent of customers without service is based on the peak during the event period.
- “Outage Events” equates to outage events tracked and entered in the OMS. Some reported damage to the electrical infrastructure that requires repair may not cause an outage but may need to be addressed such as a low wire, tree limb on conductor or damaged equipment.
- For all Event Classification Types, evaluation and estimations of needed crews and resources are a result of several factors, including but not limited to:
    - The anticipated circumstances of the emergency condition(s).
    - The anticipated geographic impact of the emergency condition(s).
    - The level of availability of external or mutual aid resources.
    - Travel distance or other logistical considerations that increase or diminish the ability of external or mutual aid resources to assist effectively in the restoration effort.

C. Restoration Priority Matrix Guidelines

LUMA will strive to restore power to all customers in the safest timely manner possible. In support, LUMA Operations will utilize a Restoration Priority Matrix during both normal and emergency operations, which provides for the most efficient approach in restoring electrical outages.

All outages are prioritized using a variety of factors including, but not limited to the following.

- critical community lifelines
- customer type
- number of affected customers
- outages involving safety conditions

1. Downed Wires

The safety of the public is a primary concern of LUMA, and elimination of hazards takes precedence. The objectives of LUMA's Downed Wire Protocols include heightened tracking of downed wire incidents, accurate reporting of the response time to downed wire locations, and full documentation of the actions taken.

Response requires trained and qualified personnel to investigate reports of downed wires and conduct repairs. Incidents are created within the OMS system with one of the following conditions identified:

- downed wires - pole-to-pole or downed wires - pole-to-building
- downed wires and burning
- sparking wires

Response to downed wires for performing the initial investigation and for clearing the hazard is under the direction of the Operations Section. The Planning & Intelligence (P&I) Section will assist Operations with the prioritization and identification of teams for assignment.

Dispatchers will determine the appropriate resources to be assigned to both evaluate and guard downed wires or make the incident safe and will work with the Logistics Section regarding those resources.

When assigning and responding to downed wire reports, the LUMA Downed Wires Priority and Severity levels are utilized as a guideline (Tables 9 and 10). Non-outage emergency jobs during restoration activations include downed wires, burning/sparking wires, pole damage, and miscellaneous emergency calls.

Priority Level	Description of Downed Wires
1	Downed wire reports, where it is indicated that the wire is burning, arcing/sparking, or an immediate hazard, or energized primary or secondary downed wires in heavy pedestrian areas such as communities, schools, etc.
2	Non-service downed wire incidents where fire departments, police departments, or other municipal agencies are standing-by on the downed wire location or has been reported by municipal officials.
3*	Report of electric downed wire from an emergency organization: • Reported to be affecting traffic flow on a major public highway • Reported to be blocking/near a pedestrian walkway or driveway • Reported to be primary conductor • Reported to be secondary conductor
4	Report of electric downed wire from other sources: • Primary conductor is indicated • Secondary conductor is indicated
5	Report of downed wire where type of wire is not indicated, and it appears the wire is not likely an electric conductor.
* Priority 3 includes reports from members of the 911 call center, police, fire, EOC personnel, and emergency managers.	

Table 9: Priority levels of downed wires

Damage assessment and/or repair personnel are then dispatched from the region or district area, through OMS, to assess and/or safeguard downed wire incidents, in priority order. Upon arrival at the location of a downed wire report, and initial assessment of the situation, the severity will be determined. If necessary, the responder will either:

- Make the situation safe, so that wire is not a risk to the general public in the area.
- Standby the location, until relieved, or until the situation is made safe by a qualified crew.

Notification of a downed wire by a 911 agency that involves a hazard, such as a fire or situation where individuals are trapped by a downed wire, will result in the immediate dispatch of an Overhead Line Crew to the incident.

Remaining downed wire reports are then assigned to damage assessment and/or repair personnel, according to the downed wire priority, as referenced below (highest to lowest).

Damage assessment and/or repair personnel that are specifically dispatched to safeguard downed wire situations will respond to the location of the downed wire. After assessing the situation, the severity is determined based on the following guidelines (highest to lowest).

Severity Level	Description of Downed Wires
1	Downed wire conductor that *poses a high risk to public safety*, due to its location on a road or pedestrian-accessible area. These situations will require damage assessment and/or repair personnel to remain on-site and guard the wire until they can be relieved by a Wire Watcher or after a qualified employee or contractor has made the wire safe.
2	Downed wire is a *primary conductor* but is not on a main road or other easily accessible location. These situations will also require damage assessment and/or repair personnel to remain on-site until relieved by a Wire Watcher or the conductor can be verified deenergized by a qualified employee or contractor. Once the wire is known to be de-energized, the damage assessment and/or repair personnel will barricade or tape the area and then can move on to their next location.
3	Downed wire is a *secondary conductor*. Damage assessment and/or repair personnel will attempt to notify nearby customers and will barricade/tape off the area to clearly distinguish the hazardous area. If the wire is either open wire secondary or triplex service cable that has an exposed end (wire is broken), damage assessment and/or repair personnel will remain on-site until relieved by a Wire Watcher or a qualified employee or contractor has verified that the wire is not energized.
4	Downed wire is *not an electric conductor* and is *not in contact with an electrical conductor*, but is instead phone, cable, or other communications property. If the situation is safe, damage assessment and/or repair personnel will inform their coordinator of this and move on to the next order. Their coordinator may then provide this information to the appropriate company or liaison for communication to the responsible company.

Table 10: Severity of downed wires

Once the joint reporting and response process is established, LUMA will respond to all reported downed wires and take appropriate action within a reasonable time in accordance with the Performance Metrics, (per the event categorization, see Table 11) while working in conjunction with local authorities after a Major Outage Event.

Downed Wires Reasonable Time	
Event Categorization	**Response Time**
3 to 5 days	18 hours
5 to 10 days	36 hours
> 10 days	60 hours

Table 11: Reasonable time for response to downed wires

2. Road Closure Priorities

LUMA recognizes the importance of clearing emergency evacuation routes and main thoroughfares and understands the key role they play in helping to make areas safe to

clear by de-energizing and/or removing downed electrical wires that may be blocking roads or entangled in downed trees or roadway debris.

Once it is safe to commence the restoration process, LUMA will often deploy trained personnel comprised of trained high voltage line workers that have the proper skill sets to cut clear, and/or de-energize/ground downed wires. By completing this process transportation corridors become safely passible.

Where possible, a restoration crew will make the location safe. If required, a wire guard representative will be dispatched to the location to await SERTs. Restoration priorities are identified within the Restoration Priority Matrix, Table 12.

Priority Level	Description of Road Closures
1	Local and State roads and emergency service roads.
2	County roads and critical municipal identified locations.
3	Report of electric downed wire from an emergency organization: • Reported to be affecting traffic flow • Reported to be blocking/near a pedestrian walkway or driveway
4	Report of road closure from other sources where a downed wire may be the cause or ancillary to the primary cause of the road closure.
5	Report of road closure where the type of wire is not indicated, and it appears the wire is not likely an electric conductor.

Table 12: Road closures

3. Critical Facilities

Critical facilities identified as a Level 1 facility provide services that are critical to the health and safety of the public and are tied to at least one of the five critical community lifelines.

LUMA, also places additional emphasis on critical community lifeline facilities and other vital service locations. Critical facility customers, first responder organizations, and other vital sites, such as hospitals, evacuation centers, and water treatment plants are assigned the highest level of importance (as shown in Table 13).

Critical Facility Levels	
Critical Facility Level 1	These facilities provide services *critical* to public health and safety **(Critical Community Lifelines**): 1) Hospitals and Emergency Medical Facilities 2) Emergency Shelters and Cooling Centers and Rescue Facilities 3) Emergency Operations Centers (LUMA and Municipal) 4) Water pumping stations and Wastewater treatment plants 5) Fire, Police, Paramedics 6) Critical Utility and Communications Facilities 7) Fuel Transfer and Fuel Loading Facilities (ports) 8) Mass Transit (tunnels, electric drawbridges, ferry terminals, major rail facilities/rectifier stations) 9) Airports 10) Military Bases 11) Critical Flood Control Structures
Critical Facility Level 2	These facilities provide significant public services and may include some of the same type of facilities described in Level 1 depending on the event type, but are considered to some extent less critical by government agencies: 1) Nursing Homes and Dialysis Centers 2) Facilities to support other critical government functions 3) Prisons and Correctional Facilities 4) Communications (radio, TV, etc.)
Critical Facility Level 3	These facilities provide some public services and may include some of the same type of facilities described in Level 2 depending on the event type but are considered to some extent less critical by government agencies: 1) Event Specific Concerns 2) High-Rise Residential Buildings 3) Customers providing key products and services (food warehouse) 4) Managed Accounts, Large Employers, and Other Key Customers 5) Other Government Buildings, Schools, and Colleges

4. Emergency Event Conditions

The Restoration Priority Matrix and Critical Facility Level protocols are consistent in both normal and emergency operations. If the event damage is so severe that all available resources are expended or damaged, LUMA's restoration efforts will focus on the major prioritization objectives listed below until additional operational crews and other mutual aid arrives:

1) Responding with appropriate resources to address emergency and life-threatening conditions.
2) Clearing of downed wires to facilitate prompt clearing of public safety hazards and opening critical transportation corridors.
3) Restoration of LUMA's Transmission Lines and Substation Facilities.
    a. Focusing on restoring crucial Transmission Lines that allows strategic dispatch of energy from key generation assets to load centers.
    b. Emphasis is placed on restoration of service to a LUMA's Transmission Lines feeding substations experiencing a "loss of supply".
4) Restoration of feeder breaker lockouts to restore large numbers of customers.
5) Restoration to Critical Community Lifelines.
    a. Service will be restored to critical facilities as quickly as possible. These circuits and locations are placed at the top of the restoration priority.
6) Communications with Customers and Stakeholders.
    a. It is vital that early and accurate communication of system conditions be made known, and that continuous updating occurs as storm restoration activities continue.
7) Minimum Restoration Time.
    a. Plans will be formulated to complete restoration efforts on all interrupted customers, following a severe storm, as quickly as possible. Restoration efforts will be prioritized in the following manner:
        i. larger area outages
        ii. smaller area outages
        iii. individual house service

5. Make Safe Protocols

LUMA recognizes the importance of clearing emergency evacuation routes and main thoroughfares after a major weather event or other emergency events that may affect transportation corridors. LUMA understands the significant role they play in assisting to provide safe areas by de-energizing and/or removing downed electrical wires that may be blocking roads or entangled in downed trees or roadway debris.

During large-scale weather events, the number of internal resources that are trained and readily available is limited, and the demand could greatly exceed those available. LUMA will anticipate the need for additional personnel to ensure "make safe" actions are taken and acknowledges that, depending on the impact of the emergency event, it

may be necessary to contract for additional qualified resources or reassign other available internal resources to support these activities.

VIII. Estimated Time of Restoration Guidelines

Providing accurate Estimated Time of Restoration (ETRs) is a top priority of LUMA's overall restoration process. LUMA aims to better serve its customers, municipal officials, and emergency support organizations by providing professional ETR administration and timely communication of essential information.

The timing, magnitude, and impact of an event factors into the ETR times, therefore LUMA will establish a baseline of projections to assist when determining operational goals and timelines. An ETR provides an estimate of when service will be restored to a customer, location, and/or work assignment based on the conditions seen on site, in conjunction with supporting historical data. Specific priorities and tactical objectives are guided by the application of available resources weighed against the foregoing priorities to optimize the overall response.

ETRs are a predictor of outage lengths which assist with determining the operational resources and actions required. Due to every event's unique nature, subjective analysis as well as experience during similar events are required to estimate resource, material and equipment requirements based on weather or other known hazard conditions.

ETRs are segregated into three types: Global, Regional, and Local. These classification levels allow LUMA to provide its customers with more accurate restoration estimates, based on the current and anticipated conditions as well as the corresponding restoration efforts. The classifications are naturally interconnected and follow a top-down input methodology based on anticipated operational actions, results, and damage assessments. The ETR information will ultimately become more precise as additional data and information is obtained, on a local level, and as restoration efforts progress.

- Global ETRs – Information is determined at a system-wide level.
- Regional ETRs – Information is determined at a regional level.
- Local ETRs – Information is determined at a municipal or a customer level basis.

Figure 4 provides a high-level overview of the typical ETR process during restoration efforts and includes a summary of targeted efforts and information availability during various stages of restoration.

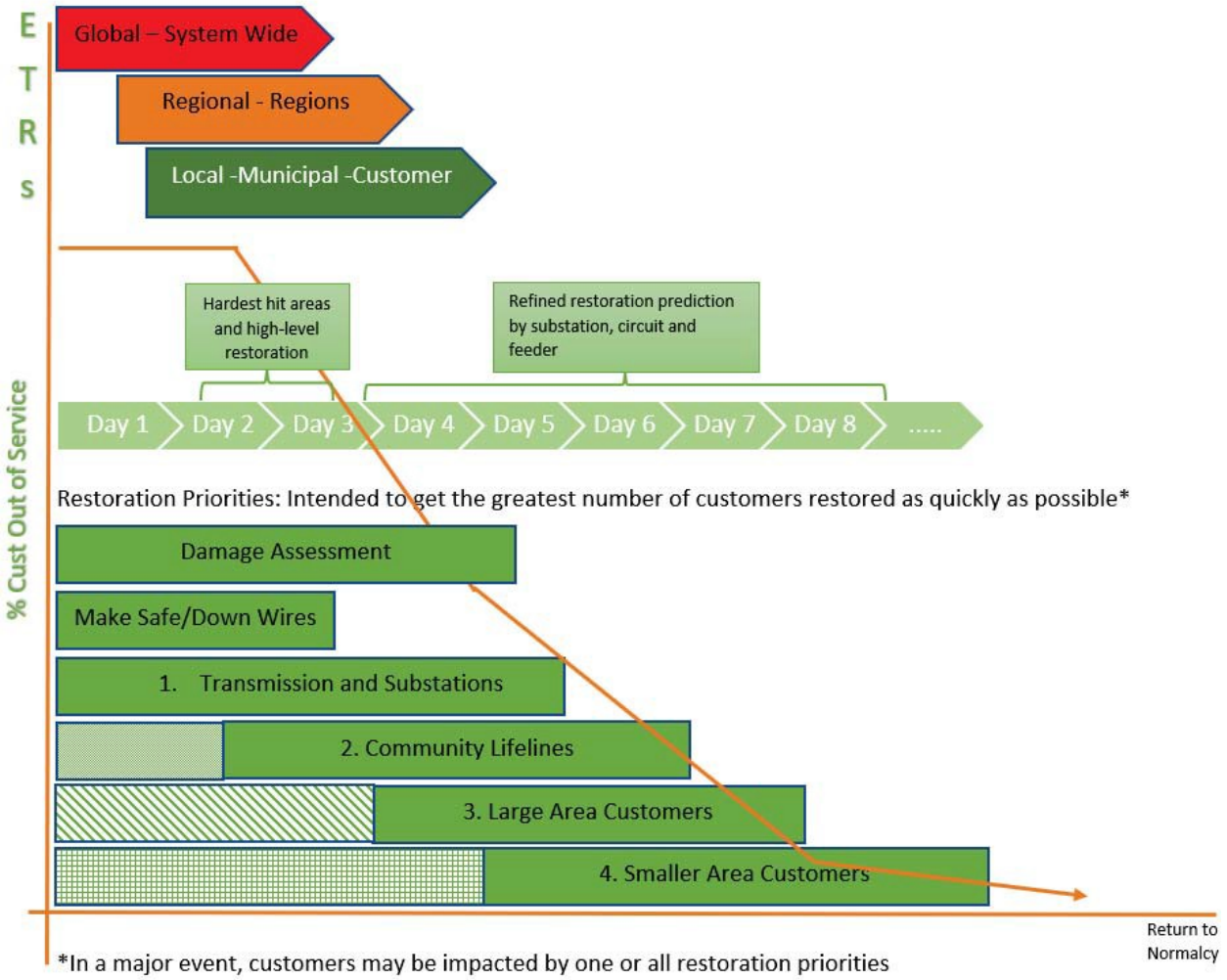


Figure 4: ETRs defined

The protocols are considered minimum requirements necessary to ensure all customers are adequately informed. During restoration, LUMA will continuously refine ETRs and update customer representatives, Interactive Voice Response (IVR) systems, and web sites in a timely manner as the situation changes. LUMA shall provide restoration information (customer outage counts, ETRs, etc.) to media outlets and public officials in affected areas during major outage events. Additionally, LUMA will issue at least one press release daily for all major outage events with an expected restoration period longer than 48 hours. Any additional information available now should be included in this notification even though notification may be required prior to the start of restoration. For widespread events, company-wide outage statistics should also be provided as part of the initial notification.

Estimated Time of Restoration	
Time After Damage Prediction	**Percentage of Service Restoration**
24 hours	90%
All ETRs should be updated every 24 hours	

Table 14: Estimated time of restoration for 90% of service outages

During an emergency event, the ability to reach a representative for non-outage or non-emergency requests may be suspended temporarily, and the automated system may be available for account information. ETR information is readily available and disseminated to LUMA, stakeholders, and associated employees through multimedia platforms and the Interactive Voice Response (IVR). Internal personnel updates on ETRs will be made through the LUMA Dispatch Team. The anticipated actions related to the assessment and identification of ETRs are detailed in Tables 15 and 16.

Type 3 Events expected to last 48 hours or less:

Within the first 6 hours of the restoration period
• Notify regulatory authorities of expectation that the event will last less than 48 hours. The notification to regulatory authorities will state what LUMA has defined as the start of the restoration period. For events expected to last less than 24 hours, notification may be via IVR. • Provide available information to the public via customer representatives, IVR systems, and web sites. • In certain situations (e.g., nighttime event), only limited information may be available within the initial six-hour window. In these situations, the expectation is that the companies will inform Staff of the delay in determining the initial outage duration within six hours and the notification will occur in an expedited manner as information becomes known. Following a nighttime storm, the determination of whether the restoration period will be less than 48 hours (or less) will be communicated as soon as possible, but no later than noon the following day. Any delay in establishing the initial storm expectations will not affect the time requirements below.
Within the first 12 hours of the restoration period
• Provide regulatory authorities with a global ETR and any available regional ETRs. • Prepare a statement for the press that includes known ETRs for the next upcoming news cycle and communicate with affected municipal and governmental officials (may or may not be by way of a municipal conference call).
Within the first 18 hours of the restoration period
• Establish ETRs for each locality affected and make them available to the public via customer representatives, IVR systems, and web sites.
Within the first 24 hours of the restoration period
• Consider issuing a press release for the upcoming news cycle based on conditions.
Reporting requirements during the event
• Provide restoration information updates four times daily to regulatory authorities (7AM, 11 AM, 3 PM and 7 PM). Updates should continue until otherwise directed by Staff. • Notify regulatory authorities when all storm related interruptions have been restored.

Table 15: Restoration activities for events 48 hours or less

Type 1 and 2 Events expected to last greater than 48 hours:

Within the first 6 hours of the restoration period
• The utility shall indicate that it will be a multi-day event (i.e., greater than 48 hours). Notification shall be made to regulatory authorities and will state what the Company has defined as the start of the restoration period. • Provide a public statement indicating the likelihood of extended outages and make this information available via customer representatives, IVR systems, and websites. • In certain situations (e.g., nighttime event), only limited information may be available within the initial six-hour window. In these situations, the expectation is that the companies will inform regulatory authorities of the delay in determining the initial outage duration within six hours and the notification will occur in an expedited manner as information becomes known. Following a nighttime storm, the determination of whether the restoration period will be greater than 48 hours will be communicated as soon as possible, but no later than noon the following day. Any delay in establishing the initial storm expectations will not affect the time requirements below.
Within the first 12 hours of the restoration period
• Prepare a press release for issuance in time for the next upcoming news cycle and communicate with affected municipal and governmental officials (may or may not be by way of a municipal conferencecall).
Within the first 18 hours of the restoration period
• Schedule municipal conference call(s), unless an alternative municipal contact method is more appropriate. The first scheduled municipal conference call itself does not necessarily have to fall within the first 18 hours but shall be within the first 36 hours.
Within the first 24 hours of the restoration period
• Notify regulatory authorities of what areas sustained the most damage to the electric system and ETRs, where known, on a general geographic basis. • Issue a press release(s) for upcoming news cycles with the information described in previous bullet.
Within the first 36 hours of the restoration period
• For storms with expected restoration periods five days or less, provide regulatory authorities a global ETR. • Establish regional/county ETRs for areas expected to be restored in five days, even if the total restoration period is expected to be over five days. • Identify any heavily damaged areas where large numbers of customers are expected to remain without service for more than five days. • The utilities must have completed the first scheduled municipal conference call. • Make ETR information available to the public via customer representatives, IVR systems, and web sites.

Within the first 48 hours of the restoration period
• For storms with expected restoration periods five days or less, provide regulatory authorities with ETRs by municipality. • Provide regulatory authorities with a global ETR (when outages are expected to less than five days, this is required within 36 hours). • Provide regional/county ETRs for heavily damaged areas where large numbers of customers are expected to remain without service for five or more days.
Beyond the first 48 hours of the restoration period
• For storms with expected restoration periods more than five days provide, estimated restoration times for each locality affected and make the information available via customer representatives, IVR systems, and web sites.
Reporting requirements during the event
• Provide restoration information updates four times daily to regulatory authorities (7AM, 11 AM, 3PM, and 7 PM), which shall continue until otherwise directed by Staff.

Table 16: Restoration activities for events greater than 48 hours

IX. Direction, Control, and Coordination

Whenever possible, emergency response procedures will parallel normal operational procedures to minimize the need for specialized training or work practices. This Annex provides the framework for the systematic response of resources when emergencies arise and defines a set of processes and protocols for determining the appropriate level of response during major emergencies for:

- Restoration of electric service.
- Emergency response progress notification of applicable government agencies, customers, public, and employees.
- Response to official requests for specific incidents, events, or actions.
- Response to natural or man-made events that involve LUMA's facilities.

For additional information related to direction, control, and coordination, refer to the ERP – Base Plan, Section VIII.

X. Communications

LUMA will strive to provide timely, accurate and consistent communications prior to and during an incident, as details become available. Emergency communications may include alerts and warnings from the National Weather Service, or other verified emergency notifications of events that may affect electric service. Communications may include information regarding evacuation, curfews, other actions for protective measures, LUMA response and restoration status, available assistance, and other matters that impact LUMA's response and recovery.

The Public Information Officer (PIO), through the LUMA Emergency Operations Center (LEOC), will communicate necessary and critical information. LUMA will communicate information through a variety of methods including:

- LUMA's website and Customer Outage Map
- Media Outlets
- Social Media (i.e. Twitter, Facebook, WhatsApp, etc.)
- Situational Reports to Local, Municipal and Government of Puerto Rico agencies
- Incorporation of Amateur Radio Operators (as needed)
- Joint Information Center (JIC)

A. Public Service Announcements (PSA)

When the PIO or other designee issues emergency PSAs for the purpose of updating customers, the general public, media, local elected officials, local municipal officials and employees, the Incident Commander (IC) must approve the final draft prior to its dissemination.

Public statements may include the following confirmed information:

- Number of customers affected
- Affected regions

- Numbers of crews
- Estimated time of restoration (ETR)
- Cause of the outage/event
- Warnings regarding hazardous conditions and public safety information
- Description of emergency response actions already taken
- Customer Service phone numbers for customers to report outages or damage, a Company website link to report outages and access restoration information, and links to relevant social media platforms

PSAs are distributed to the following stakeholders:

- Customer Service Team
- Employees
- Media outlets
- Elected Officials
- Local Municipal Officials
- Regulatory and State Governmental Agencies

B. Media Communications

Prior to and during an emergency event, a Public Information Officer (PIO) media team member will be available to media outlets for information regarding company activities in addition to regularly scheduled PSAs. In larger, more extensive emergencies, it may be desirable to schedule news media briefings and have an appointed spokesperson available for press conferences.

The PIO team is responsible for communicating with a full range of broadcast, news, and online and print media outlets ensuring timely and clear communication of all vital messaging. The PIO team formulates press releases and coordinates appropriate interviews, and provides periodic status updates, throughout an event and afterward.

In addition, the team maintains focus on storm related threats, including flooding, and shares all available safety and restoration information, recommendations for preparing for flooding or evacuation, safety precautions, and suggested steps to arrange for reenergization (if a home or area has been de-energized due to flooding or other conditions).

The goals are to:

- Provide accurate, timely information to the media, customers, local elected officials, local municipal officials and employees.
- Demonstrate preparedness by proactive and diligent communication.

C. Digital Communications

Prior to a known event, the PIO digital communications team member, will review and update the Company's website content. During the event, the designated member will

ensure that PSAs are posted on the website and that content is current. The website to be used is TBD at this time.

The Outage Map displays outage and restoration information in both geographically and in tabular format and will be provided by region or town including customers served and customers impacted on the tabular side.

Geographically, customers will also see outage information and an estimated outage location which a customer can view to access an estimated time of restoration (ETR) range. For example: ETR 5:15 PM to 7:15 PM.

D. Employee Communications

Internal communications are prepared and distributed before, during, and after an event, by the PIO team, through multimedia platforms, to ensure that all employees have the knowledge of the damages and impacts of the event. Information and updates, expectations for their support, the nature, scope, and status of LUMA's restoration response will be included. Messages include information consistent with that released to the general public, including safety tips regarding specific types of dangers so employees may prepare their families, for possible demanding assignments and extended shifts that come with a severe storm or other emergency.

Daily and overnight message notifications and postings are examples of typical communications and will be sent by the PIO employee communications team. All information released will be approved by the PIO and the IC.

Topics can include:

- Weather updates
- Safety information
- Company preparations and activities
- Restoration status
- PSAs
- Customer feedback
- Link to event photos and videography
- Links to outage center
- Important employee information

E. Regulatory Officials

The PIO will prepare information for the Puerto Rico Energy Bureau (PREB) and the Puerto Rico Public Private Partnerships Authority Liaison Officer (P3LNO) who is responsible for maintaining contact with appropriate regulatory officials. Contacts are initiated at the earliest time feasible. The P3LNO will communicate with regulatory and elected officials prior to and during an emergency event using email, conference calls, and individual phone calls or other means, as necessary.

The East and West Division Branch Directors are responsible to liaise with emergency management agencies during non-emergencies and prior to a known major emergency. Once a predicted emergency event is forecasted, the Regulatory Reporting Specialist will prepare and submit Pre-Event Stage Reports, Event Stage Reports, and Post-event Stage Reports, as required by the MOE Performance Metric, and submit to the appropriate agencies as required until outages occur. For additional information on reporting, refer to the ERP – Base Plan, Section X.A. Government of Puerto Rico and Federal Emergency Management Agency (FEMA) officials will provide contact information for contacting the LNO during an MOE.

F. Municipal Officials

During events where the Division EOC is activated, the Customer Experience Team will provide staffing in the Division EOC to facilitate communications between the LEOC and municipal officials prior to an event and during the restoration effort.

Supporting municipalities severely affected by emergency events aides in prioritizing the restoration of electric facilities and may improve access to company facilities by attaining municipal support services.

A dedicated line of communication will be established in each Division EOC for responding to local municipal inquiries. The Division EOC staff shall prepare and maintain a list of cities, towns, and key contact information.

Each electric distribution division, during an emergency event, shall provide periodic reports to municipal officials including, emergency managers or their designees, that contain detailed information related to emergency conditions and restoration performance for each affected city and town.

The content and format of these periodic reports (Pre-Event Stage Reports and Service Restoration Stage Reports) as required by the PREB and P3A regulatory agencies can be found in Appendix D to the ERP-Base Plan.

The following communications are carried out by the Division EOCs to satisfy the regulatory reporting requirements:

- Scheduled conference calls with municipal officials, including emergency managers.
- Community Liaison communications (telephonic, electronic and/or in person) with municipal officials, including emergency managers.
- Communicate with key account customers. (See Table 2)
- Provision of emergency conditions and restoration information, including but not limited to:
    - outage and restoration information.
    - priority wires-down locations.
    - critical facilities impacted by the emergency event, through a community website portal that may be accessed by municipal emergency managers.

XI. Demobilization

Demobilization is the orderly, safe, and efficient return of an incident resource to its original location and/or status. The Incident Commander is responsible to initiate the De-escalation/De-mobilization process. Demobilization planning for de-escalation/de-mobilization is an on-going process that begins as soon as the response begins to facilitate accountability and ensure efficient resource management.

Tracking resource requirements and releasing those resources that are no longer required to support the response is essential for accountability and managing control. This assists in reducing the misplacement of resources, reduces operating costs and ensuring resources are available for other activities and assignments as needed.

The Planning Section Chief will develop demobilization plans and ensure they are implemented as instructed by the IC.

The ERO may be fully demobilized when:

- All storm-related jobs are assigned.
- Centralized Dispatch is managing event.
- All non-regional crews are released.

XII. Annex Development and Maintenance

This Annex is a living document. Development and maintenance to this Annex will be in conjunction with the LUMA ERP. Proposed changes should be sent to the CMO for approval and inclusion.

Please reference the LUMA ERP – Base Plan, Section XII, Plan Development and Maintenance for additional information.

Attachment 1 – Explanation of Terms

Acronyms

CF	Critical Facilities
CLAL	Claims Unit Leader
CMO	Crisis Management Office
CSL	Corporate Security Unit Leader
DA	Damage Assessment
DOCL	Documentation Unit Leader
DSOC	Distribution System Control Center
DVML	Donations/Volunteer Management Unit Leader
EOC	Emergency Operations Center
ERO	Emergency Response Organization
ERP	Emergency Response Plan
ETR	Estimated Time of Restoration
FAQ	Frequently Asked Questions
FEMA	Federal Emergency Management Agency
FLUL	Food/Lodging Unit Leader
FSC	Finance Section Chief
FUL	Facilities Unit Leader
HAZUS	Hazards U.S.
HES	Hurricane Evacuation Study
HSEEP	Homeland Security Exercise and Evaluation Program
HVX	Hurrevac
IAP	Incident Action Plan
IC	Incident Commander
ICC	Incident Command Center
ICS	Incident Command System
IMT	Incident Management Team
IT	Information Technology Unit Leader
IVR	Interactive Voice Response

JIC	Joint Information Center
LRS	Lifeline Residential Service
LSC	Logistics Section Chief
MAA	Mutual Aid Unit Leader
MMS	Materials Management System
MOU	Memorandum of Understanding
NHC	National Hurricane Center
NIMS	National Incident Management System
NWS	National Weather Service
OMS	Outage Management System
P&I	Planning and Intelligence
P3A	Puerto Rico Public Private Partnerships Authority
PIO	Public Information Officer
PREB	Puerto Rico Energy Bureau
PREMB	Puerto Rico Emergency Management Bureau
PRG	Priority Restoration Group
PROC	Procurement Unit Leader
PSA	Public Service Announcement
PSC	Planning and Intelligence Section Chief
QPF	Quantitative Precipitation Forecast
RC	Road Closure
RESL	Resources Unit Leader
RSR	Restoration Status Report
SCADA	Supervisory Control and Data Acquisition
SERT	System Emergency Restoration Team
SITL	Situation Unit Leader
SMS	Short Message Service
SOG	Standard Operating Guide
SUL	Supply Unit Leader
T&D	Transmission & Distribution
TCUL	Time & Cost Unit Leader

TRUL	Transportation/Fleet Unit Leader
TSOC	Chief Transmission System Control Operator
WFO	Weather Forecast Office
WPC	Weather Prediction Center

Terms

Assumptions – Operationally relevant parameters expected and used as a context, basis, or requirement for the development of response and recovery plans, processes, and procedures.

Critical Facilities – Critical facilities identified as a Level 1,2, or 3 facility provide services that are critical to the health and safety of the public and are tied to at least one of the five critical community lifelines. Examples include hospitals, fire/police stations, restoration staging areas, and communications facilities.

Damage Assessment (DA) – A mechanism utilized to determine the magnitude of damage and impact of disasters.

Demobilization – The ongoing process of disengaging response resources as incident objectives are met and returning them to their normal function.

Disaster – An occurrence of a natural catastrophe, technological accident, or human-caused event that has resulted in severe property damage, deaths, and/or multiple injuries and exceeds the response capability of the local jurisdiction and requires Government of Puerto Rico, and potentially Federal, involvement.

Emergency – Any event, whether natural or manmade, that requires responsive action to protect life, property, and/ or operational capacity.

Emergency Event – An event where widespread outages or Service Interruptions have occurred in the service area of the Company due to storms or other causes beyond the control of the company. An Emergency Event is an event classified at a Type I, II, or III event as described in this ERP.

Emergency Operations Center (EOC) – The physical locations at which coordination of information and resources to support incident management activities occurs.

Emergency Response Organization (ERO) – A structured organization with overall identified responsibilities for initial and ongoing emergency response and mitigation.

Emergency Response Plan (ERP) – A comprehensive plan that provides the concept of operations for response to emergency situations and other extraordinary events consistently and effectively.

Geographic Information Systems (GIS) – A framework that is used to map the distribution system with land base information.

Hurrevac (HVX) - National Hurricane Program's hurricane decision support tool used to assist in decision-making and responding to tropical cyclone threats and evacuations.

Joint Information Center (JIC) – A central point of contact for new media and interest parties to coordinate incident information activities.

Key Account Customers – Large industrial customers who may have their own electrical system that LUMA supplies power to.

Incident Action Plan (IAP) – Includes the overall incident objectives and strategies established by the Incident Commander. The Planning Section is responsible for developing and documenting the IAP.

Incident Commander (IC) – The individual appointed by the Company's executive management to have overall responsibility for LUMA's response during an Emergency Event.

Incident Command System (ICS) - Coordinated and collaborative incident management construct specifically designed and made a part of the National Incident Management System ("NIMS") under the Federal Emergency Management Agency ("FEMA").

Outage Management System (OMS) – System used to identify customer outages, assign trouble crews, and record outage event statistics.

Priority 1 Downed Wires: **Life Threatening/Imminent Danger** – An event in which utility equipment is preventing emergency response from performing rescue efforts and/or administering first-aid treatment to a person or persons who maybe injured or in danger of being injured.

Priority 2 Downed Wires: Hindering Emergency Operation – An event in which utility equipment is preventing emergency response personnel from responding to a situation which is not considered life threatening yet requires the attention of emergency response personnel.

Priority 3 Downed Wires: Non-Threatening Electrical Hazard – An event in which utility equipment creates the need for emergency response personnel and/or apparatus to remain on the scene in order to protect the public from the hazard created by the utility's equipment.

Supervisory Control and Data Acquisition (SCADA) – Electronic monitoring equipment that reports the status of distribution equipment.

Service Interruption – The loss of service to one or more customers connected to the electric distribution system.

Service Restoration Stage – Period of time between when an Emergency Event causes damage to the system (causing Service Interruptions), and the time when service is restored to all customers.

SMART Objectives – The establishment of all objectives should be created using the Specific, Measurable w/Measurement, Achievable, Relevant, Time-Oriented.

System Level ERO – Multi-regional Emergency Response Organization

Attachment 2 – Employee Staffing Roster

[Redacted]

Attachment 3 – Event Classification Types and LEOC Activation Levels

LEOC Activation	Characteristics	LUMA Event Classification	Restoration Defined
Level 5 – Normal Operations	**Normal Day to Day Operations**	**Type 5 – *Non-emergency event**	***Non-Emergency Restoration Event –*** • **Response and Restoration efforts last for less than 12 hours**
Level 4 – Heightened Alert	• No worker injuries • No or low media interest • Corporate reputation not impacted • Spills and releases confined to site/lease • Public / employee health & safety not threatened • Pre-storm preparation activities also occur	Type 4 – *Non-emergency event (LUMA resources and localized Mutual Aid as needed)	*Non-Emergency Restoration Event –* • Response and Restoration efforts last for approx. 12-24-hour period • Locally assigned crews and contractors respond to any isolated incidents
Level 3 – High Alert	After an event occurs, at least 3 of the following are present: • First aid treatment required for worker(s) • Local and possible regional media interest • Public / employee health & safety or environment not threatened – perception of risk present • Spills and releases not contained on lease or potential extend beyond site/lease • Corporate reputation impacted • Pre-storm preparation activities also occur	Type 3 – *Emergency Event (All LUMA resources and multiple Mutual Aid Resources)	• Response and Restoration efforts last for approx. 24-48 hours • 70k to 350k customer interruptions at peak (represents between 10-25 percent of all LUMA customers) • 10k or more outages at peak • May require activation of ICS
Level 2 – Emergency Conditions	**After an event occurs, at least 3 of the following are present:** • **Multiple workers require hospitalization** • **Regional & national media interest** • **Spill or release not contained, extends beyond lease** • **Public / employee health & safety or environment could be jeopardized** • **Local and/or corporate reputation or company impacted**	**Type 2 – *Emergency (All LUMA resources and extensive Mutual Aid Resources)**	• **Response and Restoration efforts are accomplished in a 7-day period or less** • **350k to 700k customer interruptions at peak (represents between 25-50 percent of all LUMA customers)** • **Causes 25k or more outages at peak** • **Restoration is expected to take up to 7 days**
Level 1 – Catastrophic Emergency	**After an event occurs, at least 3 of the following are present:** • **Mass Fatality Incident** • **National & international media interest** • **Spill or release off site / not contained** • **Public / employee health & safety or environment jeopardized** • **Corporate reputation impacted**	**Type 1 – *Emergency (All company and contractor resources; extensive mutual assistance, federal Assistance)**	• **Response and Restoration efforts may require ten (10) days or more** • **700k or more customer interruptions at peak (represents at least half of all LUMA customers)** • **50k or more outages at peak** • **Restoration may take 10 days or longer** • **Will require mutual aid assistance**

Attachment 4 – Major Outage Metric

Table 17: Summary of Major Outage Event Performance Metrics

Description	Metrics	Comments	Location
1. Preparation Phase			
Completion of steps to provide timely and accurate emergency event preparation following an alert from U.S. National Weather Service or the company's private weather service, or the government of Puerto Rico has declared a state of emergency or when an event is known to be imminent or has occurred, in accordance with the Emergency Response Plan, for an event expected to affect the company's service territory.	Completion of each step counts separately: 1.1 Event-level categorization based on weather forecasts, system resiliency assessment and available resources. 1.2 Press releases issued/text messages/emails sent. 1.3 Municipal conference calls held. 1.4 Critical & essential customers alerted — based on established list with current information.[1] 1.5 Point of contact for critical facilities alerted — based on established list with current information. 1.6 Company compliance with training program as specified in the Emergency Response Plan. 1.7 Participation in all pre-event mutual assistance group calls. 1.8 Verify materials/stockpiles level based on forecast. If materials are not on hand, corrective steps taken in shortest reasonable time to correct the situation.		
2. Downed Wires			
Response to downed wires reported by municipal public officials.	Once the joint reporting and response process is established, LUMA will respond to all reported downed wires and take appropriate action within a reasonable time (per the event categorization) working in conjunction with local authorities after a Major Outage Event. Reported means that the situation is tracked in the Customer Information System (CIS) by the official contacting LUMA call centers or reported through the Municipal Emergency Operations Center (EOC) through LUMA's Municipal Emergency Operations Center (MEOC) Liaison. **Reasonable Time** **Event Categorization** — **Response Time** 3 to 5 days — 18 hours 5 to 10 days — 36 hours > 10 days — 60 hours	A reporting and response process on how these are managed needs to be put in place jointly with municipal public officials. Fire and Police training on how to handle downed wires will be provided as requested.	
3. Damage Assessment			
	After the beginning of the Major Outage Event and when it is safe to do so LUMA will begin a preliminary damage assessment of the affected area(s) or T&D facilities. The preliminary damage assessment will be completed within a "reasonable time" at the beginning of the Operation Response phase. The preliminary damage assessment will be		

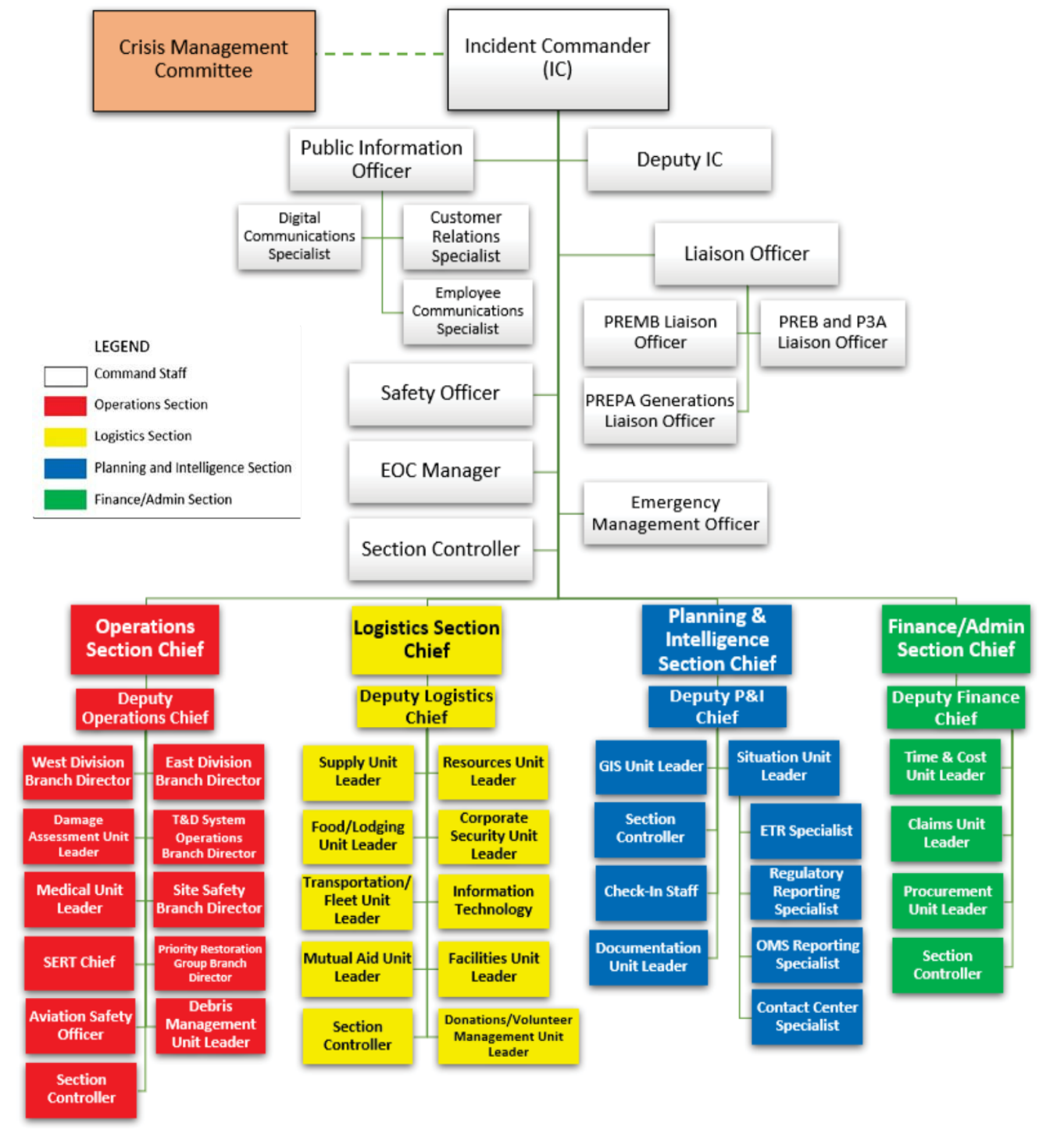
[1] This includes critical care customers (lifeline residential service customers).

	done primarily with helicopter patrol and very limited specific land patrol to address helicopter assessment questions. Concurrent with the start of the preliminary helicopter assessment, LUMA will begin a more thorough damage assessment. **Reasonable Time** **Event Categorization** — **Response Time** 3 to 5 days — 36 hours 5 to 10 days — 72 hours > 10 days — 120 hours		
4. Crewing			
50% of the forecast crewing [from mutual assistance] committed to the utility.	50% of the forecast crewing [from mutual assistance] committed to the utility. Three (3) days prior to a forecasted event occurring (when the event allows that much warning time), LUMA will complete a "damage prediction" to determine crew requirements. Based on this damage prediction, the number of mutual assistance crews will be determined. LUMA will stage materials, equipment and personnel at the required location prior to the weather event striking the area. Within 24 hours of the damage prediction, 50% of indicated internal crews and qualified contract crews will be deployed. Within 48 hours of the damage prediction, 80% of the indicated internal crews and qualified contract crews will be mobilized on island.		
5. Estimated Time of Restoration (ETR) for 90% of Service Outages			
Estimated Time of Restoration for 90% of service outages (made available by utility on web, IVR, to Customer Service Representatives (CSRs), etc.)	Publication of regional ETRs in accordance with guidelines.		
	Publication of municipal ETRs in accordance with guidelines.		
	A preliminary ETR for 90% service restoration will be made available on the Internet 24 hours after the preliminary damage assessment in pdf format.		
	ETRs on 90% service restoration to be made available on IVR and to CSRs by municipality or region.		
	All ETRs to be updated every 24 hours.		
6. ETR Accuracy for 90% Service Restoration			
Regional ETR accuracy Municipal ETR accuracy	Accuracy for 90% of service outage restoration and published in accordance with ETR requirement time. The ETRs used for this metric will be the ETRs posted after the thorough damage assessment is completed and not based on the preliminary damage assessment.		

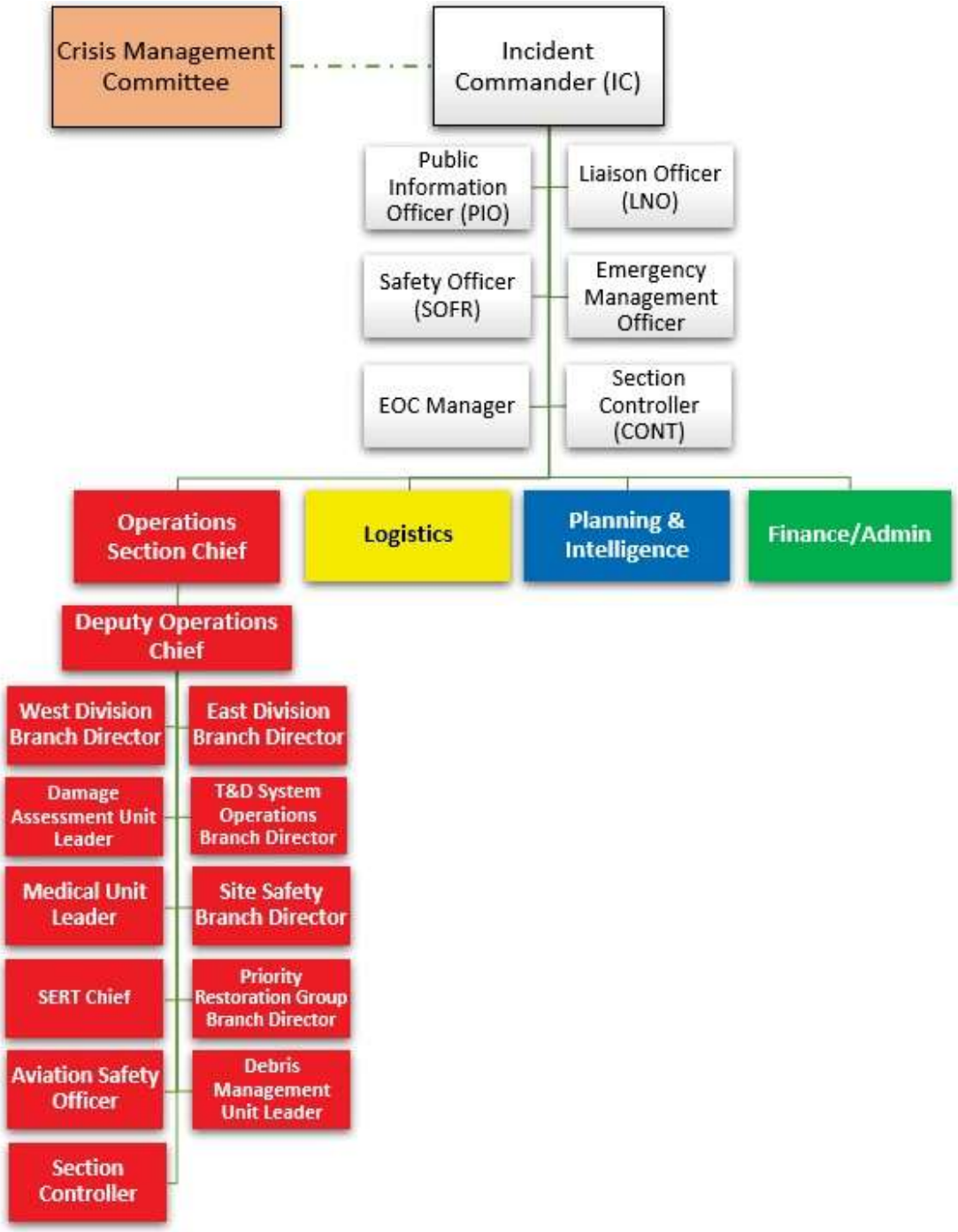
7. Municipality Coordination			
Coordination with municipalities regarding road clearing, downed wires, critical customers, etc.	Through the Municipal EOC the LUMA local Incident Command Center (ICC) Municipal Liaison will attend all scheduled Situation Report (SITREP) meetings. The Liaison will be the conduit for ICC information and requests. To track, the Municipal EOC must be activated so that all requests flow through it. LUMA's ICC Municipal Liaison will attend all scheduled SITREP meetings.		
8. Municipal EOC Coordination Puerto Rico Commonwealth/Federal EOC Coordination			
Coordination with municipal Puerto Rico Commonwealth and Federal EOCs.	Through the Commonwealth and Federal EOCs the LUMA Liaisons will attend all scheduled meetings. The Liaison will be the conduit for ICC information and requests. To track activity, the State and Federal EOCs must be activated and not a request from elected officials.		
9. Utility Coordination			
Coordination with other utilities (communications, water, etc.)	Establish contact points between utilities.		
10. Safety			
Measure of any employee or contractor injured doing hazard work during storm/outage and restoration.	Record safety incidents and include in safety report per LUMA Health Safety Environment & Quality (HSE&Q) standard.		
11. Mutual Assistance			
Crew requests made through all sources of mutual assistance or other pre negotiated contracts with utility service providers.	Three (3) days prior to a forecasted event occurring (when the event allows that much warning time), LUMA will complete a damage prediction to determine the requirements for on and off island mutual aid/pre-negotiated contracts with other utility service providers. LUMA will activate the required resources and place them on standby until the damage assessment is completed. After the initial damage assessment is completed, the requests for mutual assistance or other utility service provider crews will be made as follows: • Within 70 hours, 40% of crews • After 120 hours, 80% of committed mutual aid and other utility service provider crews will be requested		
12. Call Answer Rates			
Customer calls answered by properly staffed call centers (use of IVR and other technology is an acceptable solution).		TBD depending on size of major event.	
13. Web Availability			
Company's website, specifically the section pertaining to outage impact and restoration, must be available around the clock during a major storm event and information must be updated hourly until final restoration. In the event that no new information is available, the website must display the last time and date that information was			

updated. The website and/or section pertaining to outage impact and restoration may be taken offline for a short period during off-peak hours to perform system maintenance			
14. PREB and Administrator (P3A) Reporting			
Provide storm event information to PREB and Administrator in accordance with LUMA's Electric Outage Management System (OMS) guideline requirements to be established in the ERP for LUMA.	Information to be updated every 24 hrs.		
15. Customer Communications			
Availability of press releases, text messaging, email and social media.			
16. Outgoing message on telephone line			
Recorded message providing callers with outage information is updated within two hours of communication of press releases.		Available at Service Commencement Date. IVR will be managed in house	

Appendix A – LUMA ICS Structure

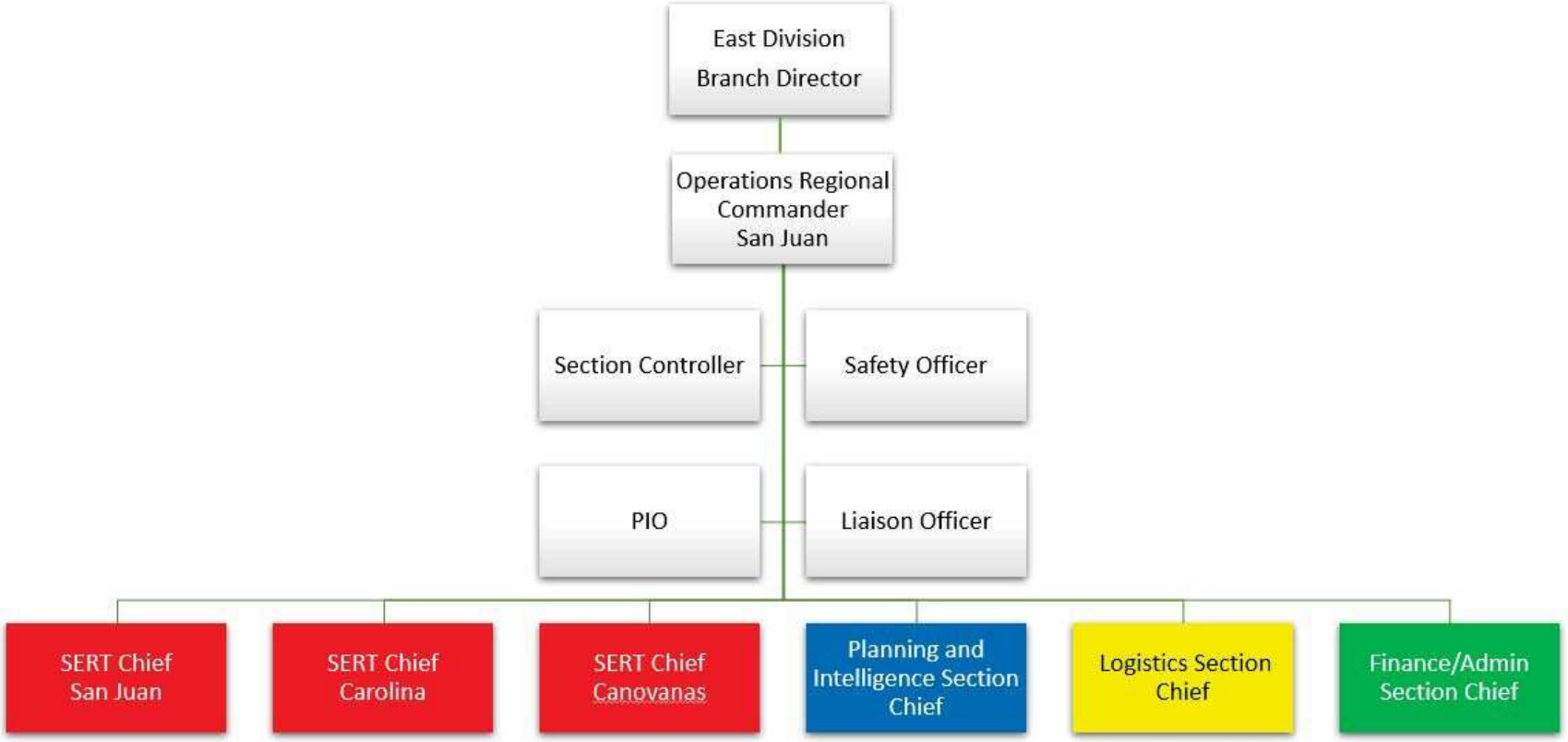


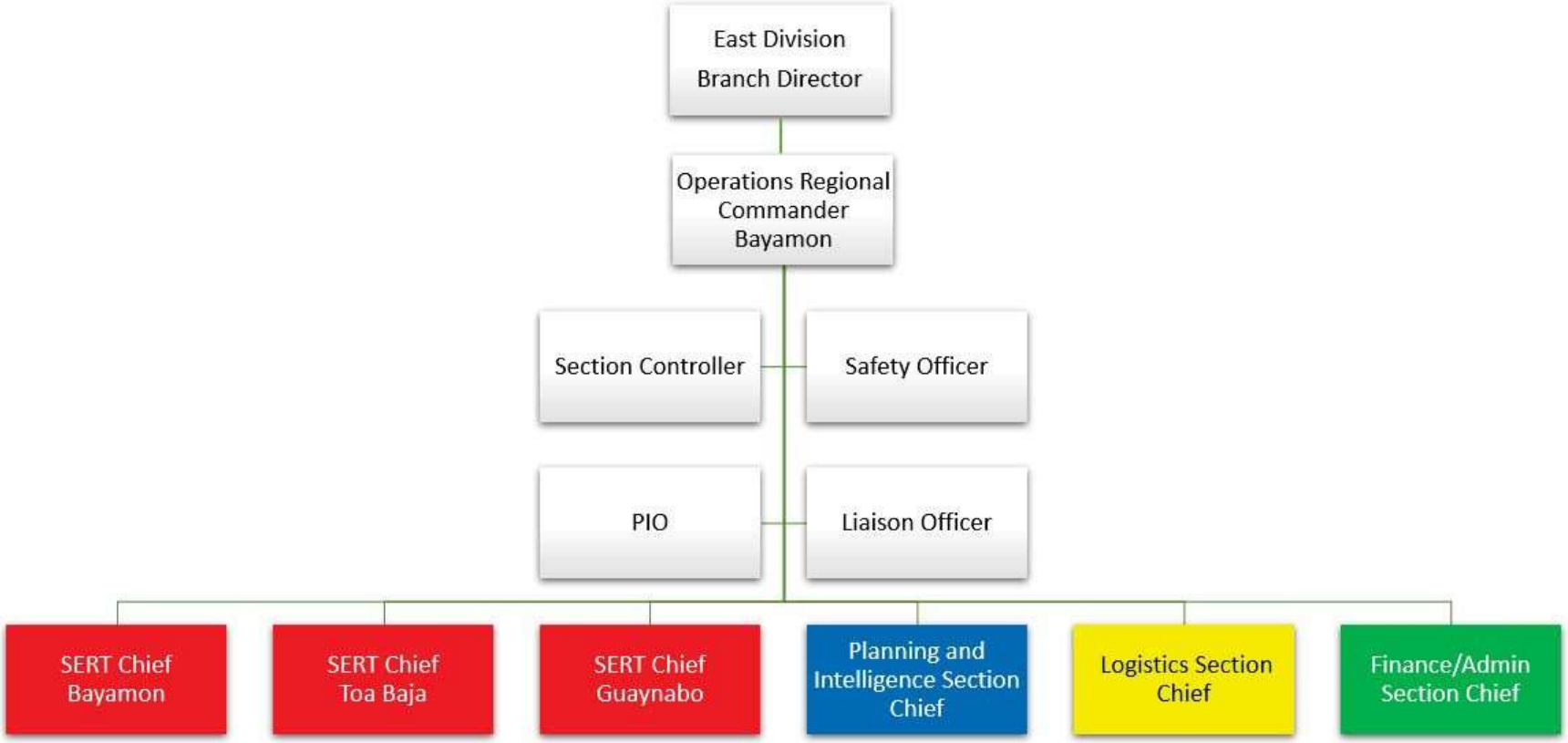
Operations Section

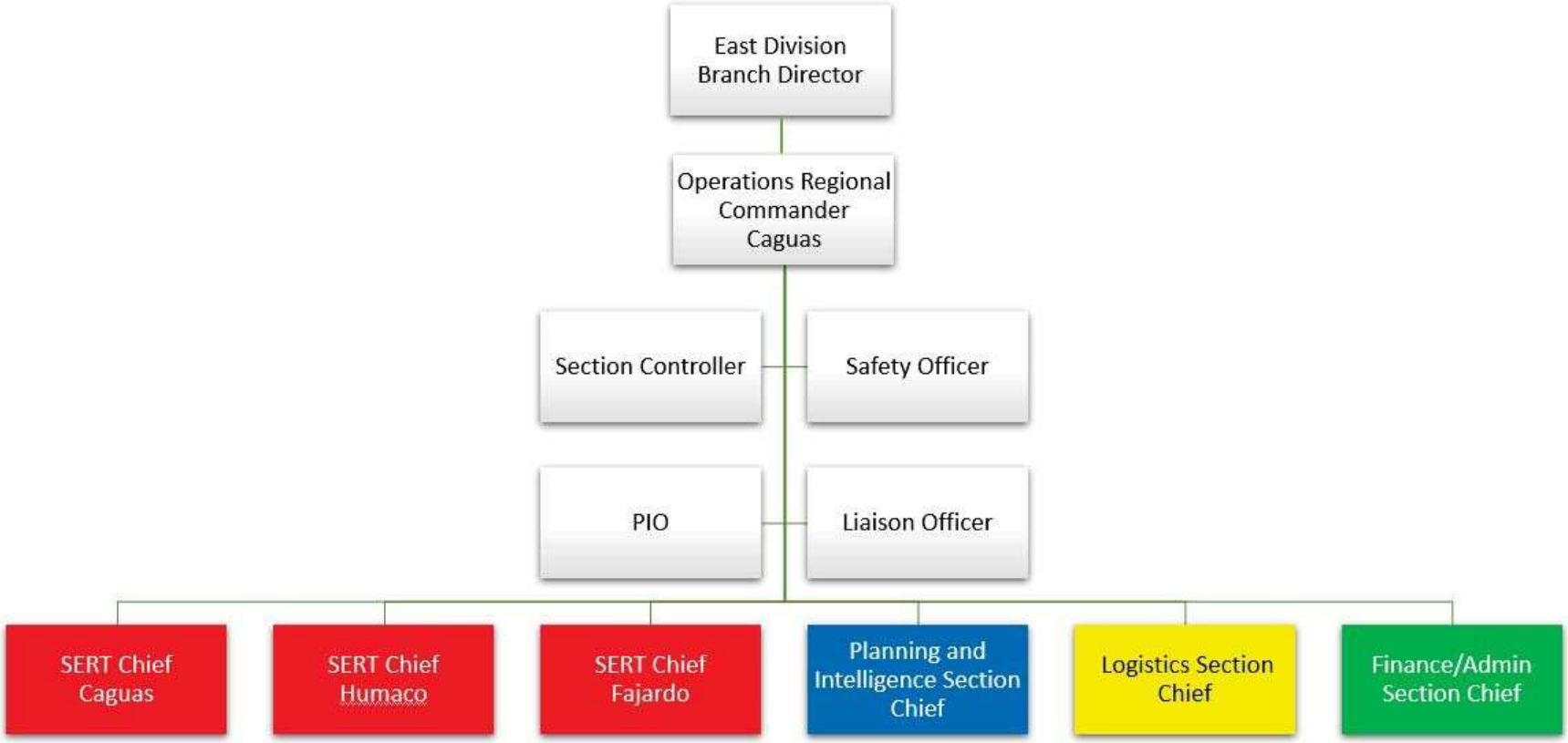


LUMA East Division Structure

East Division Regional Structures

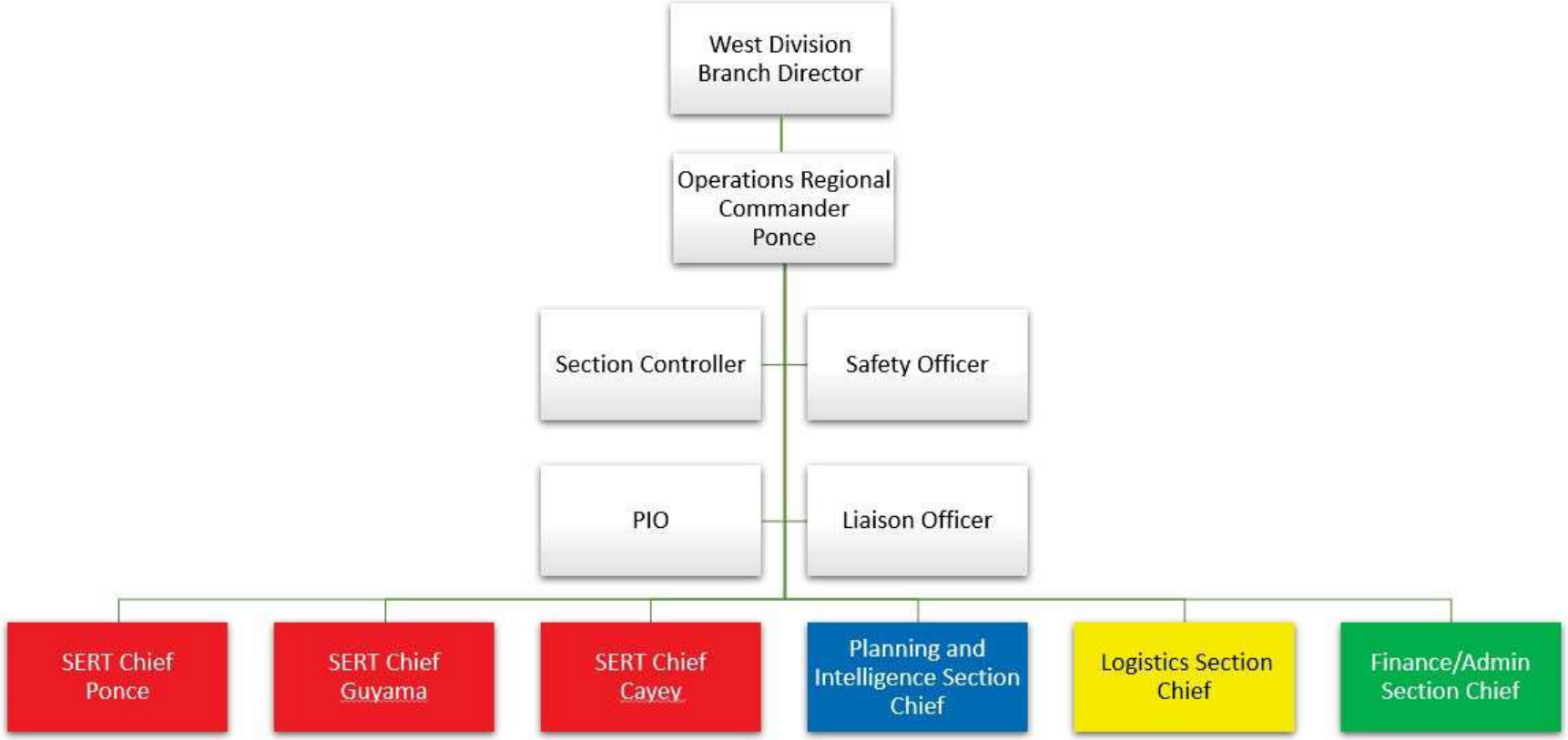



East Division
Branch Director
Operations Regional
Commander
Bayamon
Section Controller
Safety Officer
PIO
Liaison Officer
SERT Chief
Bayamon
SERT Chief
Toa Baja
SERT Chief
Guaynabo
Planning and
Intelligence Section
Chief
Logistics Section
Chief
Finance/Admin
Section Chief

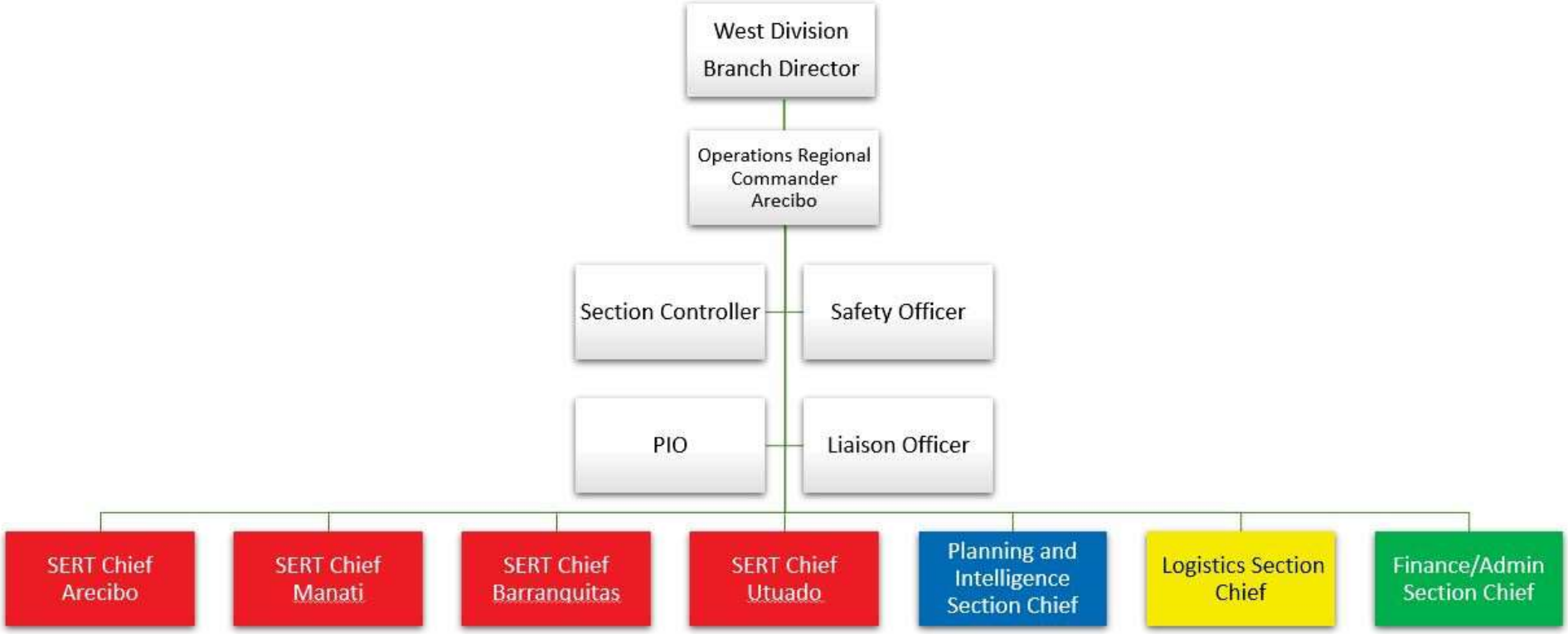

East Division Branch Director
Operations Regional Commander Caguas
Section Controller
Safety Officer
PIO
Liaison Officer
SERT Chief Caguas
SERT Chief Humacao
SERT Chief Fajardo
Planning and Intelligence Section Chief
Logistics Section Chief
Finance/Admin Section Chief

LUMA West Division Structure

West Division Regional Structures




West Division Branch Director
Operations Regional Commander Mayaguez
Section Controller
Safety Officer
PIO
Liaison Officer
SERT Chief Mayaguez
SERT Chief Aguadilla
SERT Chief Yauco
SERT Chief San Sebastion
Planning and Intelligence Section Chief
Logistics Section Chief
Finance/Admin Section Chief


West Division Branch Director
Operations Regional Commander Arecibo
Section Controller
Safety Officer
PIO
Liaison Officer
SERT Chief Arecibo
SERT Chief Manati
SERT Chief Barranquitas
SERT Chief Utuado
Planning and Intelligence Section Chief
Logistics Section Chief
Finance/Admin Section Chief

Appendix B – Area Restoration Prioritization Lists

Arecibo Region

Arecibo District SERT Team

Customer	Redacted		
Substation			
Key Transmission Feeders			
Municipalities:			
Hospitals			
Transmission and Sub-Transmission Critical Facilities			
Critical Facilities Level 1			
Line Number	Description	Customer	
Redacted			
Critical Facilities Level 2			
Line Number	Description	Customer	
Redacted			
Critical Facilities Level 3			
Line Number	Description	Customer	
Redacted			

Redacted

Distribution Critical Facilities		
Critical Facilities Level 1		
Substation	Feeder	Customer

Redacted

Redacted

Critical Facilities Level 2		
Substation	Feeder	Customer

Redacted

Critical Facilities Level 3		
Substation	Feeder	Customer

Redacted

Redacted

Utuado District SERT Team

Customer	Redacted
Substation	
Key Transmission Feeders	
Municipalities:	
Hospitals	

Transmission and Sub-Transmission Critical Facilities			
Critical Facilities Level 1			
	Line Number	Description	Customer
Redacted			
Critical Facilities Level 2			
	Line Number	Description	Customer
Critical Facilities Level 3			
	Line Number	Description	Customer

Distribution Critical Facilities			
Critical Facilities Level 1			
Substation	Feeder	Customer	
Redacted			
Critical Facilities Level 2			
Substation	Feeder	Customer	
Critical Facilities Level 3			
Substation	Feeder	Customer	

Vega Baja District SERT Team

Customer	Redacted		
Substation			
Key Transmission Feeders			
Municipalities:			
Hospitals			
Transmission and Sub-Transmission Critical Facilities			
Critical Facilities Level 1			
	Line Number	Description	Customer
	Redacted		
Critical Facilities Level 2			
	Line Number	Description	Customer
Critical Facilities Level 3			
	Line Number	Description	Customer
Distribution Critical Facilities			
Critical Facilities Level 1			
Substation	Feeder	Customer	

Redacted

Redacted

Vega Baja (Manatí) District SERT Team

Customer	Redacted
Substation	
Key Transmission Feeders	
Municipalities:	
Hospitals	

Transmission and Sub-Transmission Critical Facilities			
Critical Facilities Level 1			
	Line Number	Description	Customer

Critical Facilities Level 2			
	Line Number	Description	Customer
Redacted			
Critical Facilities Level 3			
	Line Number	Description	Customer
Distribution Critical Facilities			
Critical Facilities Level 1			
Substation	Feeder	Customer	
Critical Facilities Level 2			
Substation	Feeder	Customer	
Critical Facilities Level 3			
Substation	Feeder	Customer	

Caguas Region

Cayey/Barranquitas District SERT Team

Customer			
Substation			
Key Transmission Feeders			
Municipalities:			
Hospitals			
Transmission and Sub-Transmission Critical Facilities			
Critical Facilities Level 1			
	Line Number	Description	Customer
Redacted			
Critical Facilities Level 2			
	Line Number	Description	Customer
Redacted			
Critical Facilities Level 3			
	Line Number	Description	Customer
Redacted			
Distribution Critical Facilities			
Critical Facilities Level 1			
Substation	Feeder	Customer	
Redacted			

Redacted

Critical Facilities Level 2		
Substation	Feeder	Customer
Redacted		

Critical Facilities Level 3		
Substation	Feeder	Customer

Redacted

Cayey/Barrenquitas District SERT Team

Customer	Redacted
Substation	
Key Transmission Feeders	
Municipalities:	
Hospitals	

Transmission and Sub-Transmission Critical Facilities			
Critical Facilities Level 1			
	Line Number	Description	Customer
Critical Facilities Level 2			
	Line Number	Description	Customer

Redacted

Caguas District SERT Team

Critical Facilities Level 3			
	Line Number	Description	Customer
		Redacted	
Distribution Critical Facilities			
Critical Facilities Level 1			
Substation	Feeder	Customer	
Redacted			
Critical Facilities Level 2			
Substation	Feeder	Customer	
Redacted			
Critical Facilities Level 3			
Substation	Feeder	Customer	
Redacted			
Customer	Redacted		
Substation			
Key Transmission Feeders			
Municipalities:			
Hospitals			
Transmission and Sub-Transmission Critical Facilities			
Critical Facilities Level 1			

	Line Number	Description	Customer
Redacted			
Critical Facilities Level 2			
	Line Number	Description	Customer
Redacted			
Critical Facilities Level 3			
	Line Number	Description	Customer
Redacted			
Distribution Critical Facilities			
Critical Facilities Level 1			
Substation	Feeder	Customer	
Redacted			

Redacted

Redacted

Critical Facilities Level 2			
Substation	Feeder	Customer	

Redacted

Critical Facilities Level 3			
Substation	Feeder	Customer	

Redacted

Humacao District SERT Team

Customer			
Substation			
Key Transmission Feeders			
Municipalities:			
Hospitals			
Transmission and Sub-Transmission Critical Facilities			
Critical Facilities Level 1			
	Line Number	Description	Customer
Critical Facilities Level 2			
	Line Number	Description	Customer
Critical Facilities Level 3			
	Line Number	Description	Customer
Distribution Critical Facilities			
Critical Facilities Level 1			
Substation	Feeder	Customer	

Redacted

Redacted

Redacted

Redacted

Redacted

Critical Facilities Level 2			
Substation	Feeder	Customer	
Critical Facilities Level 3			
Substation	Feeder	Customer	

Redacted

Fajardo District SERT Team

Customer	Redacted		
Substation			
Key Transmission Feeders			
Municipalities:			
Hospitals			
Transmission and Sub-Transmission Critical Facilities			
Critical Facilities Level 1			
	Line Number	Description	Customer
	Redacted		

Critical Facilities Level 2			
	Line Number	Description	Customer
Critical Facilities Level 3			
	Line Number	Description	Customer
	Redacted		
Distribution Critical Facilities			
Critical Facilities Level 1			
Substation	Feeder	Customer	
Redacted			

Redacted

Redacted

Critical Facilities Level 2		
Substation	Feeder	Customer

Redacted

Redacted

Redacted

Critical Facilities Level 3			
Substation	Feeder	Customer	

Mayaguez Region

Mayaguez District SERT Team

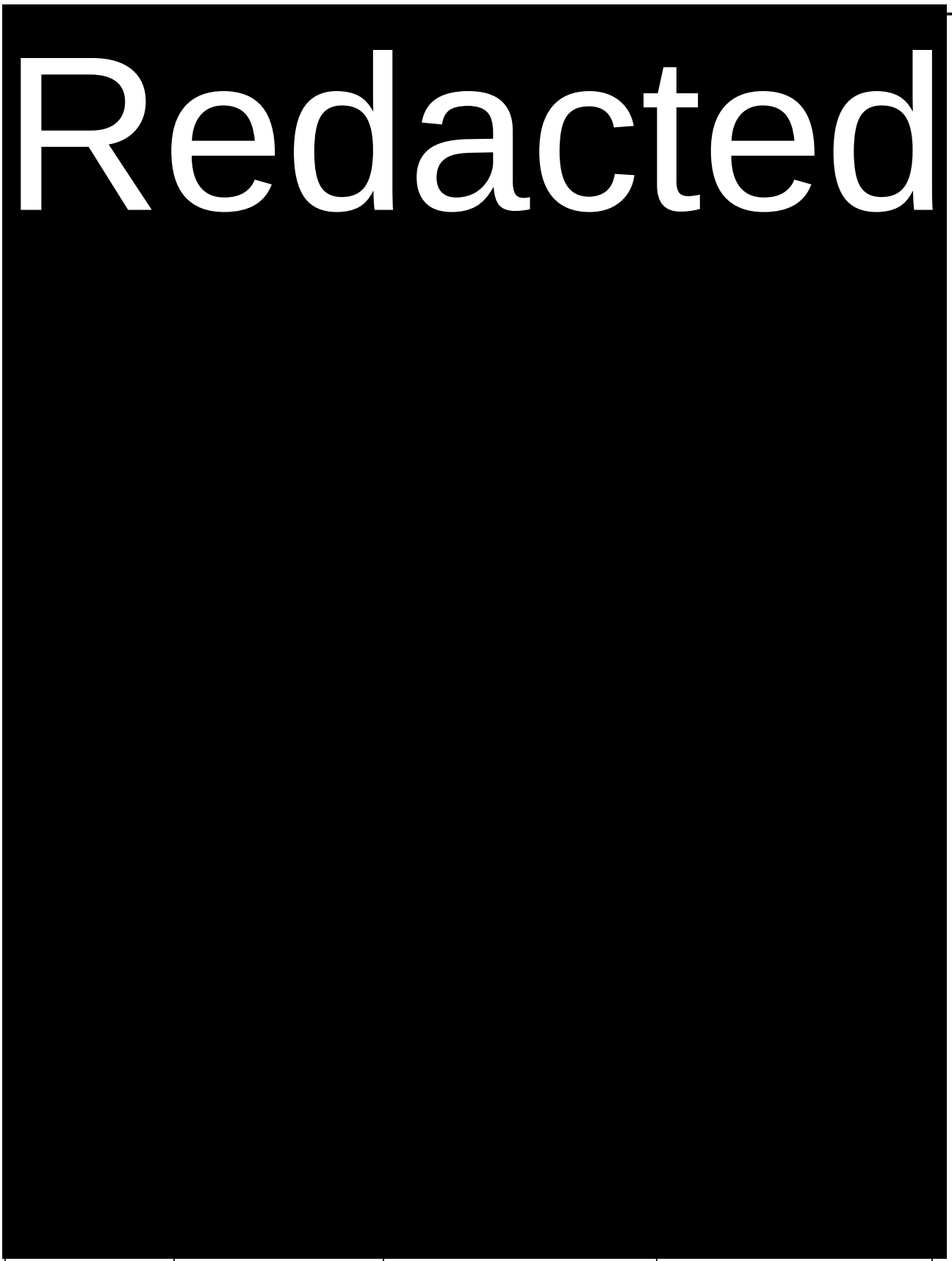
Customer			
Substation			
Key Transmission Feeders			
Municipalities:			
Hospitals			
Transmission and Sub-Transmission Critical Facilities			
Critical Facilities Level 1			
	Line Number	Description	Customer
Critical Facilities Level 2			
	Line Number	Description	Customer
Critical Facilities Level 3			
	Line Number	Description	Customer
Distribution Critical Facilities			
Critical Facilities Level 1			
Substation	Feeder	Customer	

Redacted

Redacted

Redacted

Redacted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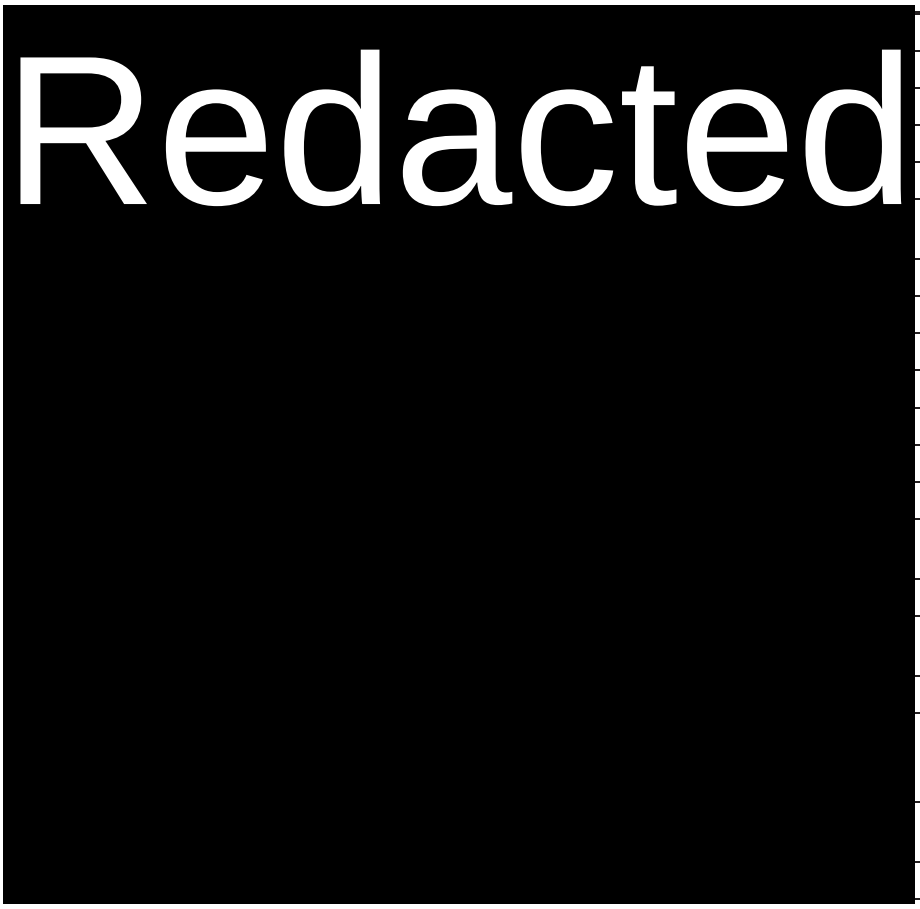
Critical Facilities Level 2		
Substation	Feeder	Customer

Redacted

Critical Facilities Level 3		
Substation	Feeder	Customer
Redacted		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Aguadilla District SERT Team

Customer	Redacted
Substation	
Key Transmission Feeders	
Municipalities:	
Hospitals	

Transmission and Sub-Transmission Critical Facilities			
Critical Facilities Level 1			
	Line Number	Description	Customer
	Redacted		
Critical Facilities Level 2			
	Line Number	Description	Customer
	Redacted		
Critical Facilities Level 3			
	Line Number	Description	Customer
	Redacted		

Distribution Critical Facilities		
Critical Facilities Level 1		
Substation	Feeder	Customer
Redacted		

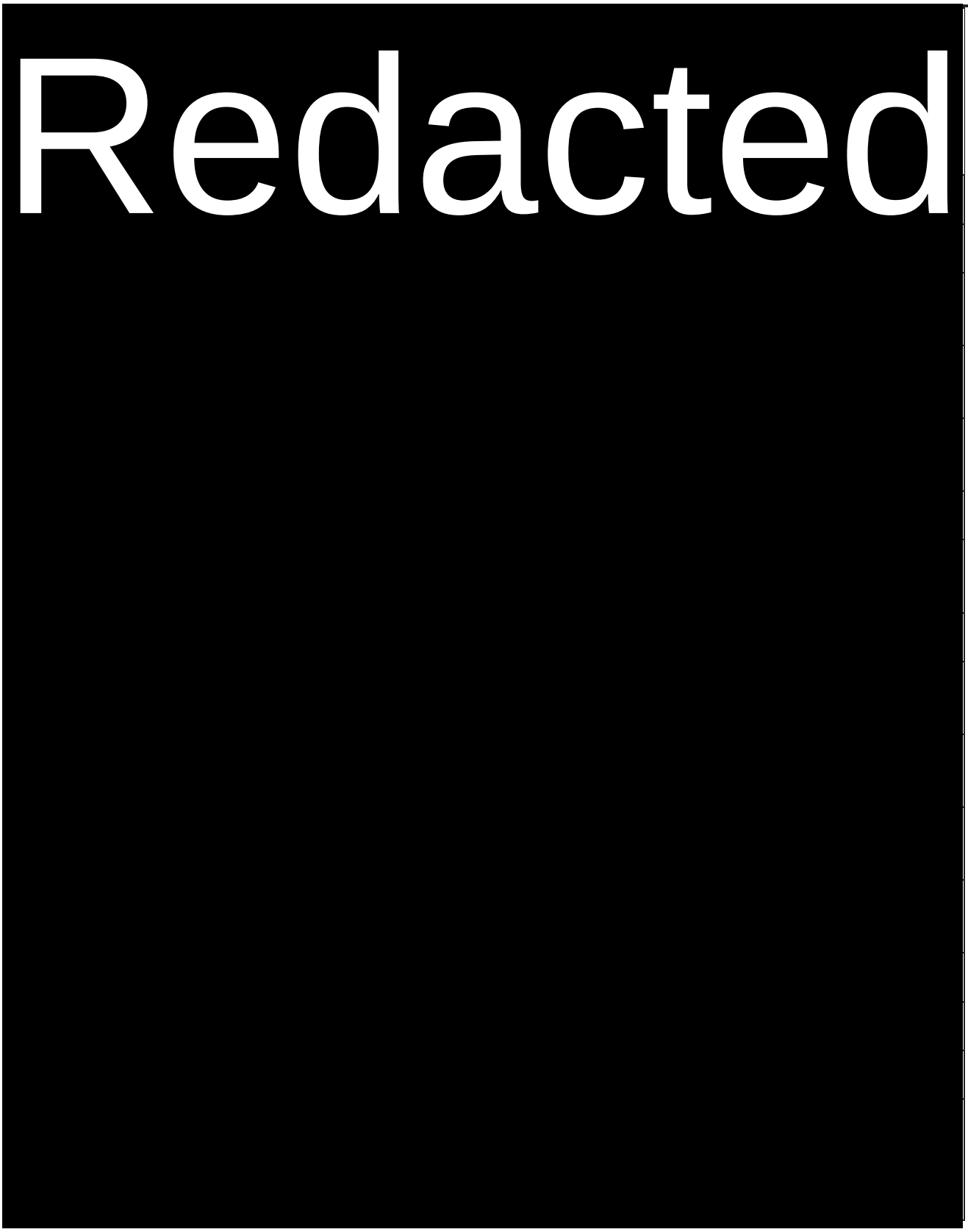
Redacted

Redacted

Critical Facilities Level 2		
Substation	Feeder	Customer

Redacted

Critical Facilities Level 3		
Substation	Feeder	Customer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Ponce Region

Ponce District SERT Team

Customer	
Substation	
Key Transmission Feeders	
Municipalities:	
Hospitals	

Redacted

Transmission and Sub-Transmission Critical Facilities			
Critical Facilities Level 1			
	Line Number	Description	Customer

Redacted

Critical Facilities Level 2			
	Line Number	Description	Customer

Redacted

Critical Facilities Level 3

	Line Number	Description	Customer
Redacted			

Distribution Critical Facilities		
Critical Facilities Level 1		
Substation	Feeder	Customer
Redacted		

Redacted

Redacted

Redacted

Critical Facilities Level 2		
Substation	Feeder	Customer
Redacted		

Critical Facilities Level 3		
Substation	Feeder	Customer
[redacted]	[redacted]	[redacted]

Redacted

Redacted

Yauco District SERT Team

Customer	Redacted
Substation	
Key Transmission Feeders	
Municipalities:	
Hospitals	

Transmission and Sub-Transmission Critical Facilities			
Critical Facilities Level 1			
	Line Number	Description	Customer
Critical Facilities Level 2			
	Line Number	Description	Customer
Critical Facilities Level 3			
	Line Number	Description	Customer

Distribution Critical Facilities			
Critical Facilities Level 1			
Substation	Feeder	Customer	
Redacted			
Critical Facilities Level 2			
Substation	Feeder	Customer	
Critical Facilities Level 3			
Substation	Feeder	Customer	
Redacted			

Guayama District SERT Team

Customer	Redacted
Substation	
Key Transmission Feeders	
Municipalities:	
Hospitals	

Transmission and Sub-Transmission Critical Facilities			
Critical Facilities Level 1			
	Line Number	Description	Customer

Redacted

Redacted

Critical Facilities Level 2			
	Line Number	Description	Customer

Redacted

Redacted

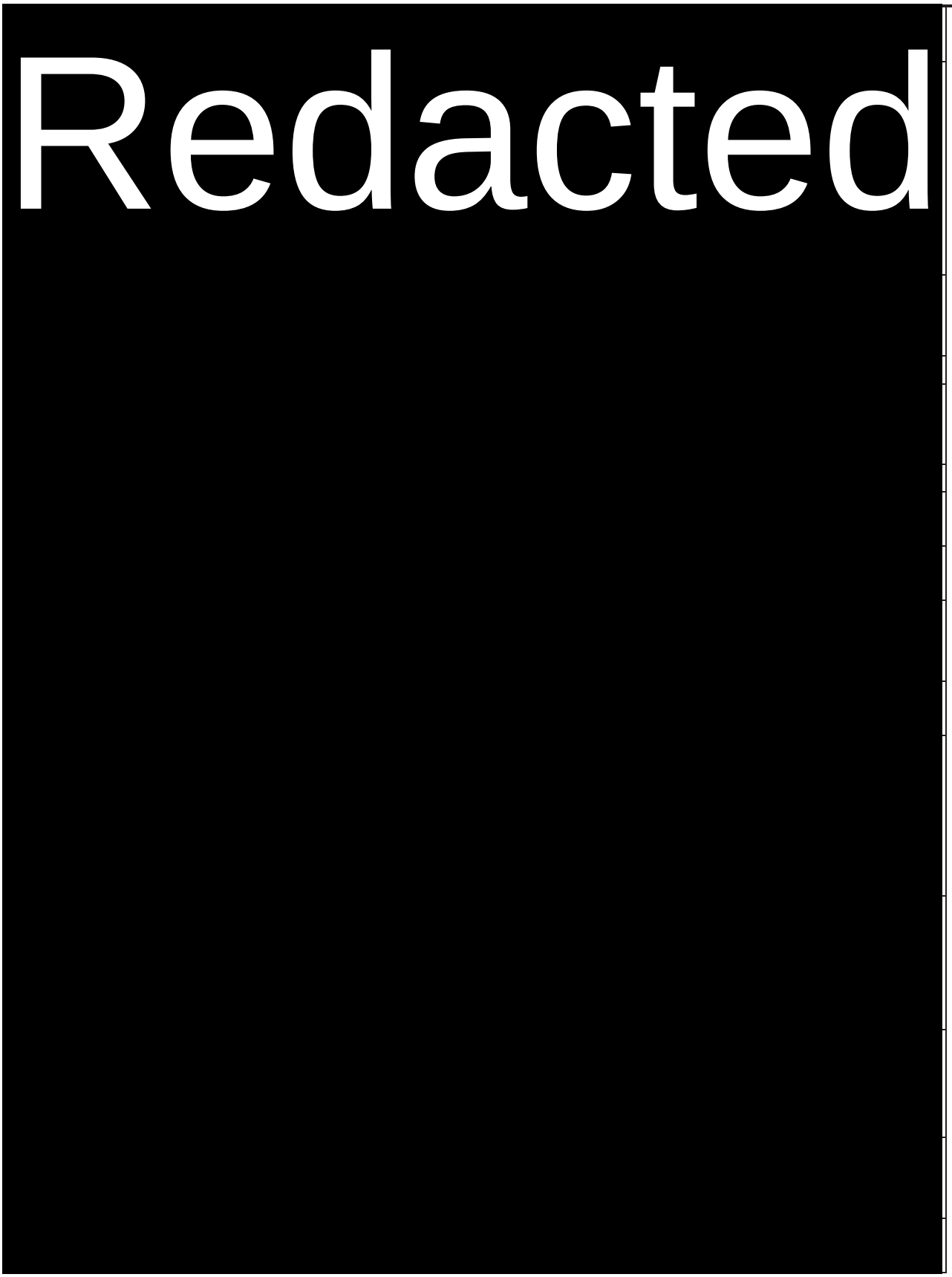
Critical Facilities Level 3			
	Line Number	Description	Customer
Redacted			
Distribution Critical Facilities			
Critical Facilities Level 1			
Substation	Feeder	Customer	

Redacted

Redacted

Critical Facilities Level 2			
Substation	Feeder	Customer	Comments
Redacted			

Critical Facilities Level 3		
Substation	Feeder	Customers
Redacted		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San Juan Region

San Juan (Monacillo & Río Piedras) Districts SERT Team

Customer	Redacted
Substation	
Key Transmission Feeders	
Municipalities:	
Hospitals	

Transmission and Sub-Transmission Critical Facilities			
Critical Facilities Level 1			
	Line Number	Description	Customer
Critical Facilities Level 2			
	Line Number	Description	Customer
Critical Facilities Level 3			
	Line Number	Description	Customer

Distribution Critical Facilities		
Critical Facilities Level 1		
Substation	Feeder	Customer

Redacted

Redacted

Critical Facilities Level 2		
Substation	Feeder	Customer

Redacted

Critical Facilities Level 3		
Substation	Feeder	Customer

Redacted

San Juan (Carolina) District SERT Team

Customer	Redacted
Substation	
Key Transmission Feeders	
Municipalities:	
Hospitals	

Transmission and Sub-Transmission Critical Facilities			
Critical Facilities Level 1			
	Line Number	Description	Customer
			Redacted

Critical Facilities Level 2			
	Line Number	Description	Customer
Critical Facilities Level 3			
	Line Number	Description	Customer

Redacted

Distribution Critical Facilities		
Critical Facilities Level 1		
Substation	Feeder	Customer

Redacted

Redacted

Critical Facilities Level 2		
Substation	Feeder	Customer

Redacted

Critical Facilities Level 3		
Substation	Feeder	Customer

Redacted

Canóvanas District SERT Team

Customer	Redacted
Substation	
Key Transmission Feeders	
Municipalities:	
Hospitals	

Transmission and Sub-Transmission Critical Facilities

Critical Facilities Level 1

	Line Number	Description	Customer

Critical Facilities Level 2

	Line Number	Description	Customer

Critical Facilities Level 3

	Line Number	Description	Customer

Redacted

Distribution Critical Facilities

Critical Facilities Level 1

Substation	Feeder	Customer

Redacted

Redacted

Redacted

[redacted]

Critical Facilities Level 2		
Substation	Feeder	Customer

[redacted]

Critical Facilities Level 3		
Substation	Feeder	Customer

[redacted]

Bayamon Region

Bayamon(Guaynabo)District SERT Team

Customer	Redacted
Substation	
Key Transmission Feeders	
Municipalities:	
Hospitals	

Transmission and Sub-Transmission Critical Facilities			
Critical Facilities Level 1			
	Line Number	Description	Customer
	Redacted		
Critical Facilities Level 2			
	Line Number	Description	Customer
	Redacted		

Redacted

Critical Facilities Level 3			
	Line Number	Description	Customer
	Redacted		
Distribution Critical Facilities			
Critical Facilities Level 1			
Substation	Feeder	Customer	

Redacted

Redacted

Critical Facilities Level 2		
Substation	Feeder	Customer

Redacted

Critical Facilities Level 3		
Substation	Feeder	Customer

Redacted

Redacted

Bayamon (urban)District SERT Team

Customer	Redacted
Substation	
Key Transmission Feeders	
Municipalities:	
Hospitals	

Transmission and Sub-Transmission Critical Facilities			
Critical Facilities Level 1			
	Line Number	Description	Customer
	Redacted		
Critical Facilities Level 2			
	Line Number	Description	Customer
Critical Facilities Level 3			
	Line Number	Description	Customer
	Redacted		

Distribution Critical Facilities		
Critical Facilities Level 1		
Substation	Feeder	Customer

Redacted

Critical Facilities Level 2		
Substation	Feeder	Customer

Redacted

Redacted

Critical Facilities Level 3		
Substation	Feeder	Customer
Redacted		

Bayamon (lower density) Toa Baja (Palo Seco) District SERT Team

Customer	Redacted
Substation	
Key Transmission Feeders	
Municipalities:	
Hospitals	

Transmission and Sub-Transmission Critical Facilities			
Critical Facilities Level 1			
	Line Number	Description	Customer
	Redacted		
		PUMA	
Critical Facilities Level 2			
	Line Number	Description	Customer
	Redacted		
Critical Facilities Level 3			
	Line Number	Description	Customer
	Redacted		

Redacted

Distribution Critical Facilities		
Critical Facilities Level 1		
Substation	Feeder	Customer

Redacted

Redacted

Redacted

Critical Facilities Level 2		
Substation	Feeder	Customer

Redacted

Critical Facilities Level 3		
Substation	Feeder	Customer

Redacted

Redacted			

Appendix C – Supplies

The vendors listed in this appendix are identified by region and the type of service they may provide to LUMA during response and restoration efforts.

Arecibo Region

Name	Number	Municipality	Mark the Type of Service			
Panchos Catering (Food)	(787) 646-2616	Arecibo	Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms
Quality Sea Food (Food)	(787) 638-5897		Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms
La Unión Cafeteria (Food)	(787) 881-6911		Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms
David Coffee Shop (Food)	(787) 639-9331		Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms
Ice Plant Casellas	(787) 878-3135		Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
			X			
Ice Plant Faria	(787) 881-6253		Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
			X			
Riviera (Food)	(787)884-5366	Manatee	Materials	Equipment	Services	Tents
					X	
La Picadera (Food)	(939)238-9278	Manatee	Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms

Name	Number	Municipality	Mark the Type of Service			
FERRETIA RIVERAS	787-869-3260	Naranjito	Materials	Equipment	Services	Tents
			X			
			Ice	Water	Gasoline	Bathrooms
FERRETERIA LA MONTANA	787-869-3135	Naranjito	Materials	Equipment	Services	Tents
			X			
			Ice	Water	Gasoline	Bathrooms
QUALITY CONCRETE	787-869-1387	Naranjito	Materials	Equipment	Services	Tents
			X			
			Ice	Water	Gasoline	Bathrooms
ASTRO INDUSTRIAL	787-721-4041	SAN JUAN	Materials	Equipment	Services	Tents
				X		
			Ice	Water	Gasoline	Bathrooms
MELOLAIKA	787-961-8282	gold	Materials	Equipment	Services	Tents
Rest. Balalaika	787-859-6277	Corozal			X	
THE GREAT COFFEE	787-802-1703	Corozal	Ice	Water	Gasoline	Bathrooms
TOA ALTA (Total)	787-246-4175	QBD CRUZ	Materials	Equipment	Services	Tents
COROZAL (Total)		Palmarejo				
	787-870-4216	Outline	Ice	Water	Gasoline	Bathrooms
					X	
Econo Vega Baja II Supermarket	787-858-0958	Vega Baja	Materials	Equipment	Services	Tents
					X	
Bakery Gardens	787-855-1959	Vega Baja	Ice	Water	Gasoline	Bathrooms

Econo Mendez Class Supermarket	787-883-2340	Vega Alta	Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms
Golden Ice & Water Plant	787-278-2279	Vega Alta	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
			X	X		
St. James Security Services, LLC	787-754-8448	St. John's	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
						X
Total, Golden Total, Vega Alta Total Vega Baja	787-270-0903 787-883-0999 787-855-1069	gold Vega Alta Vega Baja	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
					X	
Grainger Caribe Inc. Astro Industrial	787-275-3555 787-721-4041	Cataño St. John's	Materials	Equipment	Services	Tents
			X	X		
			Ice	Water	Gasoline	Bathrooms
3C Woods Hardware Store	787-474-3333	St. John's	Materials	Equipment	Services	Tents
			X			
			Ice	Water	Gasoline	Bathrooms
Grainger Roger Electric Grekory Equip.	787-275-3500 787-786-3361 787-272-4333	Caguas Bayamón St. John's	Materials	Equipment	Services	Tents
			X	X		
			Ice	Water	Gasoline	Bathrooms

Island Center	787-869-0877	Naranjito				
Santos Bakery	787-857-1916	Orocovis	Materials	Equipment	Services	Tents
Orocovis Ice Plant	787-298-4955					
Hannibal Rios	787-377-7847		Ice	Water	Gasoline	Bathrooms
			X			
Carlos Rodriguez	787-857-7625	Barranquitas	Food	Equipment	Services	Tents
Juan Bonilla	787-991-2964	Aibonito			X	
Carlos I. Pacheco	787-385-1858	Naranjito	Ice	Water	Gasoline	Bathrooms
Junir Gulf		Barranquitas	Materials	Equipment	Services	Tents
Tavín Tire Center		Barranquitas				
		(Barrancas)	Ice	Water	Gasoline	Bathrooms
					X	
Carlos J. Bonilla Esparra		Aibonito	Food	Equipment	Services	Tents
Javielo BBQ			X			
			Ice	Water	Gasoline	Bathrooms
Jacqueline Ríos González	787-735-7200	Aibonito	Food	Equipment	Services	Tents
Chino Criollo			X			
			Ice	Water	Gasoline	Bathrooms
Miguel A. Torres Rivera	787-857-2960	Barranquitas	Food	Equipment	Services	Tents
Kikis Pizza			X			
			Ice	Water	Gasoline	Bathrooms
Luis Collazo	787-867-2248	Orocovis	Food	Equipment	Services	Tents

La Cobacha Restaurant			X			
			Ice	Water	Gasoline	Bathrooms
David Crespo Crespo BBQ Coffee Shop	787-939-325-3267	Comerío	Food	Equipment	Services	Tents
			X			

Mayaguez Region

Name	Number	Municipality	Mark the Type of Service			
Select Supermarket (food)	787-830-7800 787-519-7086	Isabela	Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms
Bakery El Cafetal (food)	787-544-6025 787-370-1454	Camuy, Quebradillas and Hatillo	Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms
Creole Sandwich (food)	787-830-1385	Isabela	Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms
Bakery El Trigal (food)	787-830-3488	Isabela	Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms
Naturagua, Inc.	787-262-8168	Hatillo	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
				X		
Agua Lemarie, Inc.	787-307-2342	The Marys	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
				X		
Popeyes Ice Factory	787-307-2342	The Marys	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
			X			
Ice Factory	787-896-8914	San Sebastian	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
			X			
Bakery and Pastry La Pepiniana	787-833-1648	Mayagüez	Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms

Ricomini Bakery and Pastry	787-832-0565	Mayagüez	Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms
Franco Pastries	787-0070	Mayagüez	Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms
Don Quixote Pizzeria and Restaurant	787-265-1045	Mayagüez	Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms
Nadal Ice	787-834-7400	Mayagüez	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
			X			
HIELERA NAZARIO	787-382-3207	Aguada	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
			X			
SANTOS COMMERCIAL	787-891-1270	Aguadilla	Materials	Equipment	Services	Tents
			X	X		
			Ice	Water	Gasoline	Bathrooms
ALL CONTRACTOR	787-378-4406	Ponce	Materials	Equipment	Services	Tents
				X		
			Ice	Water	Gasoline	Bathrooms
						X
EFRAIN SANTIAGO ELECTRICAL CONTRACTOR	787-877-1817	Moca	Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms

ICE FACTORY	787-896-8914	SAN SEBASTIAN	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
			X			
MOCA CONCRETE POLE	787-818-0720	Moca	Materials	Equipment	Services	Tents
			X			
			Ice	Water	Gasoline	Bathrooms
Toro Commercial	787-851-1570 787-851-1510	Cape Red	Materials	Equipment	Services	Tents
			X			
			Ice	Water	Gasoline	Bathrooms
Roger Electric	787-265-7575	Mayagüez	Materials	Equipment	Services	Tents
			X	X		
			Ice	Water	Gasoline	Bathrooms
			Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
			X			
Lechonera Figueroa	787-873-1080	Sabana Grande	Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms
Mr. Special	787-851-1334	Cape Red	Materials	Equipment	Services	Tents
					X	

			Ice	Water	Gasoline	Bathrooms
			Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms
Rest. The Mariachi	787-280-4187	San Sebastian	Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms
Cucumber Ice		San Sebastian	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
			X			
Docho Garage		San Sebastian	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
					X	
Garage		San Sebastian	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
					X	

Bayamon Region

Name	Number	Municipality	Mark the Type of Service			
Golden Ice & Water Plant	787-605-3256	gold	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
			X	X		
Bakery La Borinqueña	787-779-0707	Bayamón	Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms
OUTEK	787-644-9085	St. John's	Materials	Equipment	Services	Tents
				X		
			Ice	Water	Gasoline	Bathrooms
Grainger	787-692-6347	St. John's	Materials	Equipment	Services	Tents
				X		
			Ice	Water	Gasoline	Bathrooms
MENACO	787-463-2125	St. John's	Materials	Equipment	Services	Tents
				X		
			Ice	Water	Gasoline	Bathrooms
The Ice Maker	787-795-2665	Levittown	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
			X			

Roger Electric Hardware Store	787-786-3360	Bayamón	Materials	Equipment	Services	Tents
			X	X		
			Ice	Water	Gasoline	Bathrooms
El Cable Hardware Store	787-795-7025	Toa Baja	Materials	Equipment	Services	Tents
			X	X		
			Ice	Water	Gasoline	Bathrooms
QUALITY CONCRETE	787-869-1387	Naranjito	Materials	Equipment	Services	Tents
			X			
			Ice	Water	Gasoline	Bathrooms
ASTRO INDUSTRIAL	787-721-4041	SAN JUAN	Materials	Equipment	Services	Tents
				X		
			Ice	Water	Gasoline	Bathrooms
Grainger	(787) 275-3500	Cataño	Materials	Equipment	Services	Tents
			X	X		
			Ice	Water	Gasoline	Bathrooms
3C Woods	(787) 783-8260	St. John's	Materials	Equipment	Services	Tents
			X	X		
			Ice	Water	Gasoline	Bathrooms
By Diego Rental	(787) 781-3320	Guaynabo	Materials	Equipment	Services	Tents
				X		
			Ice	Water	Gasoline	Bathrooms
BBQ sources	(787) 783-4582	Guaynabo	Materials	Equipment	Services	Tents

					X	
			Ice	Water	Gasoline	Bathrooms
Guiken	(787) 961-9292	Guaynabo	Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms
Manchego	(939) 338-3226	Guaynabo	Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms
All Contractors & Serv.	(787) 378-4406		Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms
			X	X		
Econo Rial Supermarkets	(787) 707-0112	Guaynabo	Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms

Caguas Region

Name	Number	Municipality	Mark the Type of Service			
Rest. The Two Mangoes	787-73-98619	Citron	Food	Equipment	Services	Tents
			X			
			Ice	Water	Gasoline	Bathrooms
Victor Barreto	787-642-7094	Cayey	Materials	Equipment	Services	Tents
			X	X	X	
			Ice	Water	Gasoline	Bathrooms
Freddy Ice Planet	787-739-3133	Citron	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
			X	X		
Roger Electric Grainger Electrical Island Commercial Berríos	787-746-7272 787-275-3500 787-761-7355 787-739-2831	Caguas Cataño St. John's Citron	Materials	Equipment	Services	Tents
			X	X	X	
			Ice	Water	Gasoline	Bathrooms
Hacienda el Josco Vic-Mar	787-737-2737 787-743-9124	Gurabo Caguas	Food	Equipment	Services	Tents
			X			
			Ice	Water	Gasoline	Bathrooms
Lord Electric Bermúdez and Longo	787-758-4040 787-999-3030	St. John's St. John's	Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms
José A. Baranda Ismael Rosa	787-746-2699 787-743-6958	Caguas	Materials	Equipment	Services	Tents

José A. Cruz Rafael Beltran	787-746-0282 787-734-2877		Ice	Water	Gasoline	Bathrooms
					X	
My Berjouri	787-243-0940	Humacao	Food	Equipment	Services	Tents
The Ikokal	787-640-9654	Humacao	X			
Delicias Cafe	787-285-3190	Humacao	Ice	Water	Gasoline	Bathrooms
Doredmar's Rest. Cafetería Revival Café	787-893-5189 787-216-2976	Yabucoa Naguabo				
Punta Santiago Recreation Center		Humacao	Lodging	Equipment	Services	Tents
			X			
			Ice	Water	Gasoline	Bathrooms
Plamas del Mar Resort Hotel Playa Lucia and Costa del Mar	787-893-4423					
C Prince	787-640-9524		Materials	Equipment	Services	Tents
Best Work	787-597-3566			X		
Esmo	787-764-4687		Ice	Water	Gasoline	Bathrooms
Electrical Comm.	787-733-0230					
DH Products	787-889-5118	Luquillo	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
				X		
The Ice Plant Flowers	787-887-2450	Rio Grande	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
			X			
Econo Rial II	787-801-8030	Fajardo	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Misc.

						X
Caribbean Point	787-860-3845	Fajardo	Materials	Equipment	Services	Tents
Pan Rico	787-863-0774	Fajardo	Ice	Water	Gasoline	Bathrooms
Pascual Commercial	787 863-1538		Materials	Equipment	Services	Tents
			X			
Grainger	(787) 275-3500		Ice	Water	Gasoline	Bathrooms
Hilti Caribe	787-963-7060		Materials	Equipment	Services	Tents
			X			
Maderera Don Esteves	787-750-2000		Ice	Water	Gasoline	Bathrooms
Rober Electric	787-888-8950		Materials	Equipment	Services	Tents
			X			
Tecno-Lite	787-750-4344		Ice	Water	Gasoline	Bathrooms
National Lumber	787-863-2424		Materials	Equipment	Services	Tents
			X			
			Ice	Water	Gasoline	Bathrooms

San Juan Region

Name	Number	Municipality	Mark the Type of Service			
DH Products	787-889-5118	Luquillo	Materials	Equipment	Services	Tents
Water The Mountain	787-760-5146	Trujillo Alto	Ice	Water	Gasoline	Bathrooms
				X		
The Ice Plant Flowers	787-887-2450		Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
			X			
Econo Rial II	787-701-8030	Canóvanas	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Misc.
						X
The Bakery Family	787-876-9497	Loíza	Materials	Equipment	Services	Tents
Kike Cash & Carry	787-876-3295	Loíza	Ice	Water	Gasoline	Food
						X
Pascual Commercial	787-863-1538		Materials	Equipment	Services	Tents
			X			
			Ice	Water	Gasoline	Bathrooms
Grainger	787-275-3500		Materials	Equipment	Services	Tents
				X		
			Ice	Water	Gasoline	Bathrooms
Hilti Caribe	787-936-7060		Materials	Equipment	Services	Tents
				X		
			Ice	Water	Gasoline	Bathrooms

Lord Electric Bermúdez and Longo	787-758-4040 787-999-3030	Rio Piedras	Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms
Candelaria Electric Services	787-502-4597		Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms
Castellanas Restaurant Cafeteria	787-257-7795	Carolina	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
Chinese Paradise Restaurant	787-257-7950	Carolina	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
ECONO Supermarket	787-768-8379	Carolina	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
Roger Electric Grainger	787-776-0202 787-275-3500	Carolina Carolina	Materials	Equipment	Services	Tents
			X	X		
			Ice	Water	Gasoline	Bathrooms

Supplies Island Lord Electric	787-761-7355 787-758-4040	Trujillo Alto	Materials	Equipment	Services	Tents
			X	X		
			Ice	Water	Gasoline	Bathrooms
Bermúdez and Longo Raul Dominguez	787-999-3030 787-505-6434	Trujillo Alto	Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms
Ricardo Zapata	787-240-5054	Trujillo Alto	Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms
All Contractors	787-407-1620 787-378-4406	SAN JUAN/RP	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
				20th		
Eddie's Water Supply	787-783-6073 787-597-1399	SAN JUAN/RP	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
				20th		
Cristalia	787-680-8888	SAN JUAN/RP	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
				20th		

Blue Fountain, Inc	787-163-3070 787-759-8210	SAN JUAN/RP	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
				20th		
El Señorial Bakery	787-701-4040	SAN JUAN/RP	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
May Flower Bakery	787-768-3995	SAN JUAN/RP	Materials	Equipment	Services	Tents
					Food	
			Ice	Water	Gasoline	Bathrooms
The House of Taste	787-624-6061	SAN JUAN/RP	Materials	Equipment	Services	Tents
					Food	
			Ice	Water	Gasoline	Bathrooms
Borincatering Services	787-697-6110	SAN JUAN/RP	Materials	Equipment	Services	Tents
					Meals	
			Ice	Water	Gasoline	Bathrooms
Micky & Sweet Catering	787-753-1182	SAN JUAN/RP	Materials	Equipment	Services	Tents
					Meals	
			Ice	Water	Gasoline	Bathrooms
Fior Cafe	787-528-2806	SAN JUAN/RP	Materials	Equipment	Services	Tents
					Food	
			Ice	Water	Gasoline	Bathrooms

Faccio Pizza	787-755-5415	SAN JUAN/RP	Materials	Equipment	Services	Tents
					Food	
			Ice	Water	Gasoline	Bathrooms
The Criollo Banana	787-768-8072	SAN JUAN/RP	Materials	Equipment	Services	Tents
					Food	
			Ice	Water	Gasoline	Bathrooms
Angelito's Café	787-725-6766	SAN JUAN/RP	Materials	Equipment	Services	Tents
					Food	
			Ice	Water	Gasoline	Bathrooms
				20th		
Raíces Restaurant	787-705-9333	SAN JUAN/RP	Materials	Equipment	Services	Tents
					Food	
			Ice	Water	Gasoline	Bathrooms
Morales Supermarket	787-720-2990	SAN JUAN/RP	Materials	Equipment	Services	Tents
					Purchase	
			Ice	Water	Gasoline	Bathrooms
Econo Rial Supermarket, Altamira	787-707-0112	SAN JUAN/RP	Materials	Equipment	Services	Tents
					Purchase	
			Ice	Water	Gasoline	Bathrooms
Cupey Alto Ice Plant	787-292-6862 787293-1085	SAN JUAN/RP	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
			20th			

San Juan Ice Plant Inc.	787-728-4045 787-726-5171	SAN JUAN/RP	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
			20th			

Ponce Region

Name	Number	Municipality	Mark the Type of Service			
Ponce ICE		Ponce	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
			X			
Rene BBQ La Barquita De Fiesta	787-612-2792 787-866-8115	Guayama Salinas Guayama	Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms
Septic		Juana Díaz	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
						X
Puma American Petroleum		Guayama	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
					X	
Electric Service	787-864-5035	Guayama	Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms
Coke		Cayey	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
				X		
Environics	787-781-7891	Caguas	Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms
La Hielera	787-938-7528	Ponce	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
			X			
Tropical City	787-842-4251	Ponce	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
			X	X		

JQ Maintenance	787-238-7959	San Germán	Materials	Equipment	Services	Tents
					X	X
			Ice	Water	Gasoline	Bathrooms
Grainger	787-275-3500	Cataño	Materials	Equipment	Services	Tents
			X	X		
			Ice	Water	Gasoline	Bathrooms
Outek	787-644-9085	Guaynabo	Materials	Equipment	Services	Tents
			X	X		
			Ice	Water	Gasoline	Bathrooms
Creole Delights	787-214-7994	Ponce	Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms
Pizza Heaven	787-412-8253	Ponce	Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms
Puma Garage	787-259-1569	Ponce	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
					X	
Septix	787-840-9090	Ponce	Materials	Equipment	Services	Tents

			Ice	Water	Gasoline	Bathrooms
						X
Rentals M. Barrio	787-840-4740	Ponce	Materials	Equipment	Services	Tents
						X
			Ice	Water	Gasoline	Bathrooms
Gulf Garage	787-260-0289	Bo. Jacaguas	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
					X	
General Gases	787-843-0425	Ponce	Materials	Equipment	Services	Tents
			X			
			Ice	Water	Gasoline	Bathrooms
Environics	787-281-7891	St. John's	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
Santos Olivieri Hardware Store	787-845-3940	St. Elizabeth	Materials	Equipment	Services	Tents
			X			
			Ice	Water	Gasoline	Bathrooms
Electric Cowboy	787-825-1792	Coamo	Materials	Equipment	Services	Tents
					X	
			Ice	Water	Gasoline	Bathrooms
La Barquita	787-612-2792	Salinas	Materials	Equipment	Services	Tents

					X	
			Ice	Water	Gasoline	Bathrooms
Pichi's Hotel	787-835-7070	Guayanilla	Materials	Equipment	Meals	Tents
					X	
			Ice	Water	Gasoline	Bathrooms
				X		
AEE Mechanics Workshop	787-521-8540	Yauco	Materials	Equipment	Services	Tents
			Ice	Water	Gasoline	Bathrooms
					X	
AEE Monacillo	787-521-5966	Coordination of the Chief Technical Operations	Materials	Equipment	Services	Tents
						X
			Ice	Water	Gasoline	Bathrooms
						X
Café Bakery	787-856-8269	Yauco	Materials	Equipment	Meals	Tents
					X	
			Ice	Water	Gasoline	Bathrooms