

Welcome

2024

LUMA

Puerto Rico Electric Grid Transformation

Supplier Summit



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LUMA Energy



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Agenda

Time		Topic	Speaker
Start	End		
8:00 AM	9:00 AM	Registration and Check-in, and Networking	
9:00 AM	9:10 AM	Opening and Why We're Here	Mike Shaw
9:10 AM	9:15 AM	A word from the Puerto Rico Government	Francisco Berríos Portela, Governor's Office
9:15 AM	9:35 AM	The Puerto Rico Opportunity	Ella Woger, InvestPR
9:35 AM	9:50 AM	Message from DDEC	Carlos Fontán & Jenny Mar Cañón
9:50 AM	10:05 AM	Voice of the Customer	Jessica Laird
10:05 AM	10:20 AM	Insights and Expectations from the CFO	Corey Schneider
10:20 AM	10:45 AM	Break	
10:45 AM	11:30 AM	The Evolution of Progress: Exploring the Past Present and Future	Dr. Shay Bahramirad
11:30 AM	12:00 PM	Operations: Current and Future Planning	Kevin Burgemeister
12:00 PM	1:00 PM	Lunch Break and Networking	
1:00 PM	1:15 PM	Remarks from CEO	Juan Saca
1:15 PM	2:00 PM	Partnering in Success: LUMA's Procurement Process	Mike Shaw / Joe Adamski
2:00 PM	2:15 PM	Message from LUMA's Chief Compliance Officer	Mariano Mier
2:15 PM	2:30 PM	Health, Safety & Environment	Carlos Luján
2:30 PM	3:00 PM	Break and Networking	
3:00 PM	3:15 PM	Message from the P3A	Gerardo Lorán
3:15 PM	3:30 PM	Message from COR3	Gabriel Salgado
3:30 PM	3:45 PM	Cybersecurity: Partners in Defense	Crystal Allen
3:45 PM	4:00 PM	Closing Remarks	Mike Shaw
4:00 PM	6:00 PM	Networking Reception	

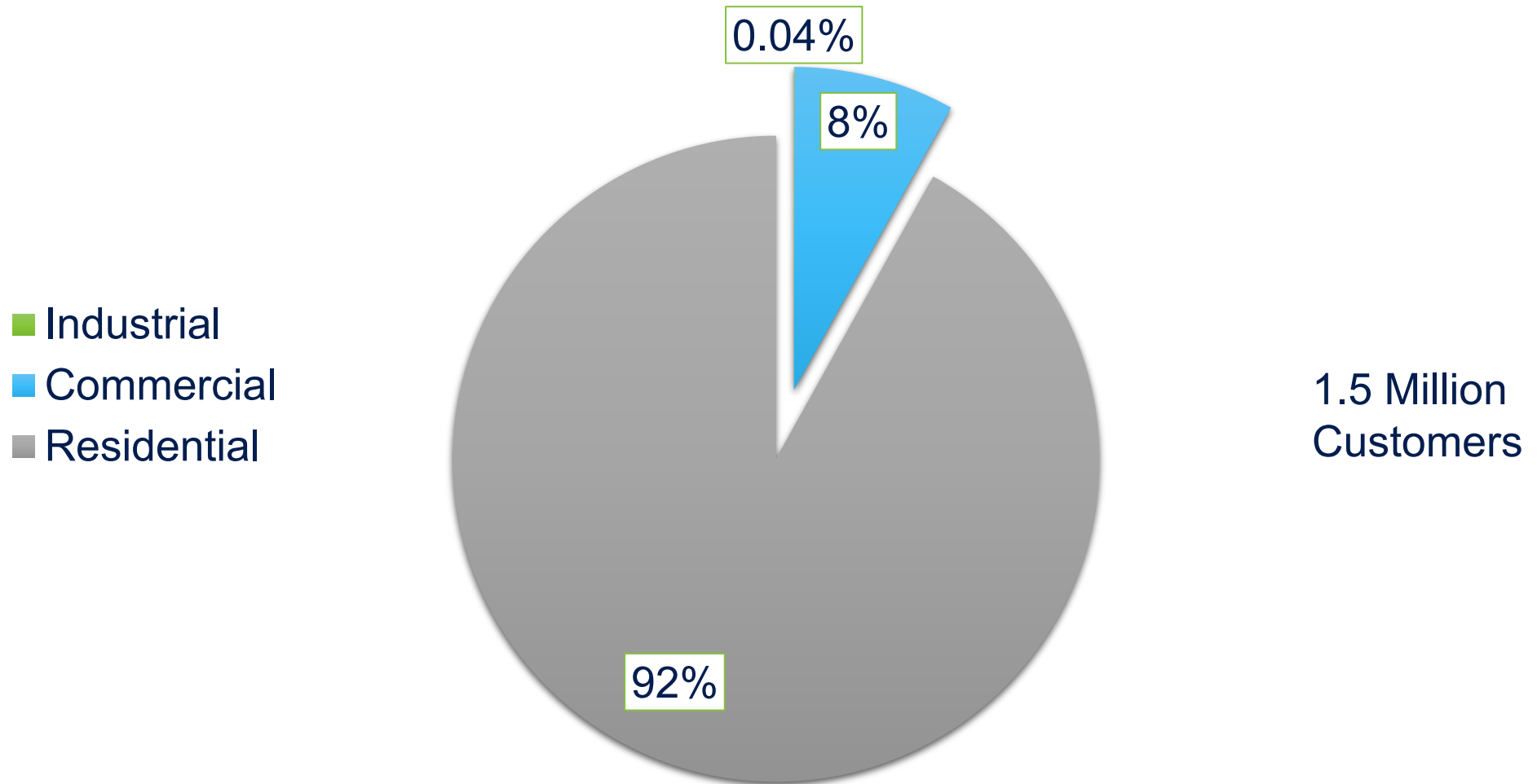


Voice of the Customer

April 2024



Customer Segmentation



Customer Demographics

24% of the population is 65+

58% of the population is 19 – 64 years of age

53% of the population is female

28% of the population hold a bachelor degree (or higher)

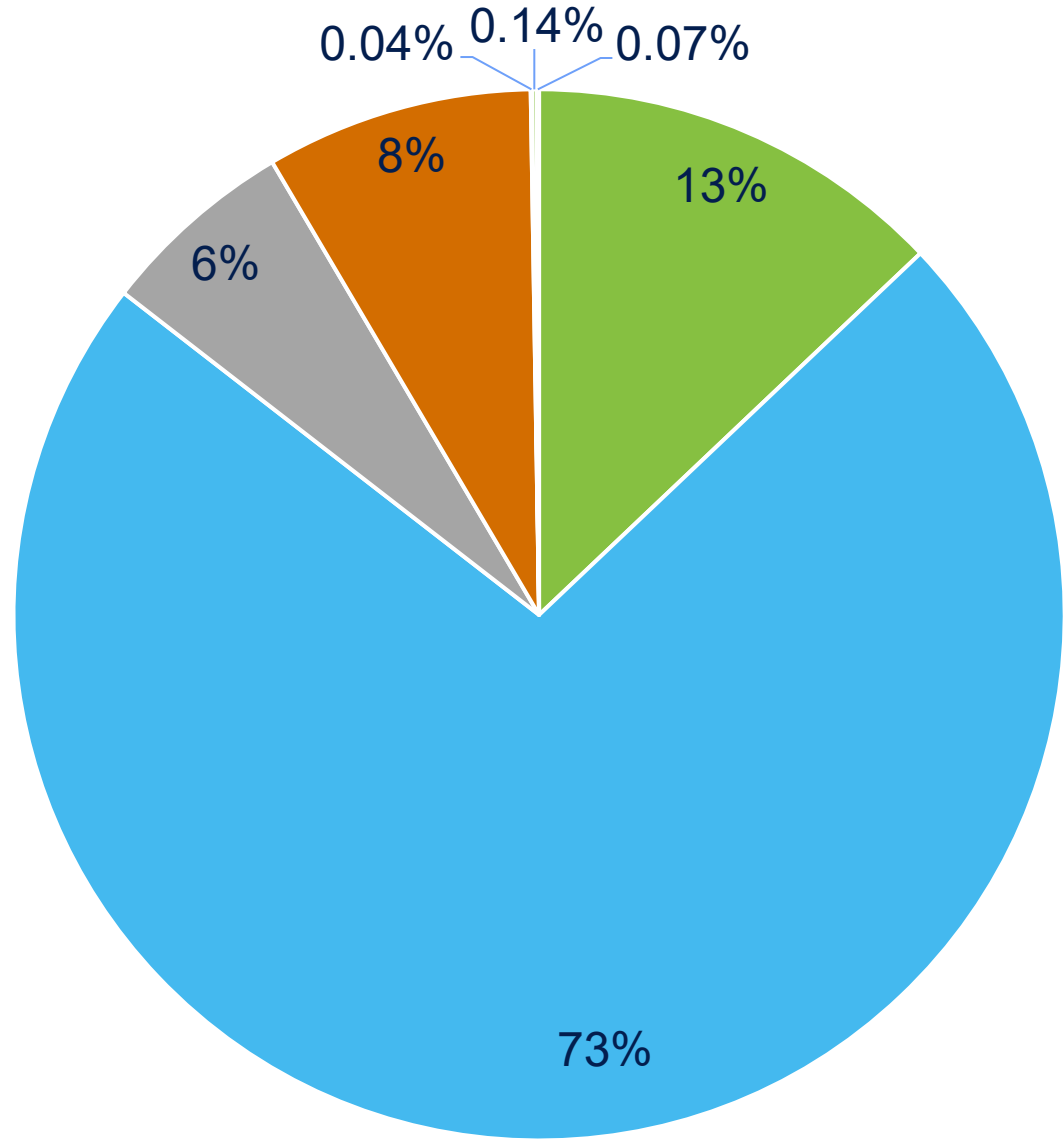
79% of households have a computer

72% of households have internet

42% of the population live below the poverty line

Source: United States Census Bureau

Customer Demographics by Rate



- Subsidized Rate
- General Residential
- Net Metering Rate
- Commercial Rate
- Industrial Rate
- Public Lighting Rate
- Agricultural Rate

Measures of Customer Satisfaction



Communications



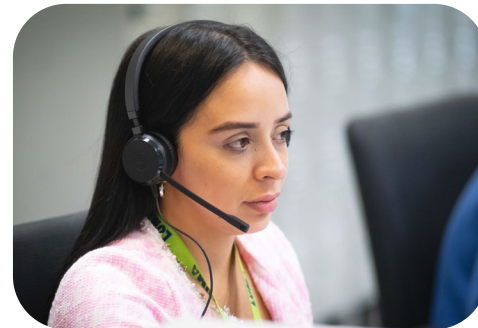
Power Quality & Reliability



Price



Corporate
Citizenship



Customer Care



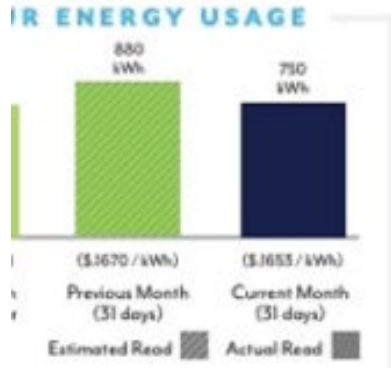
Billing &
Payment

Winning



Energy Saving Tip: *Unplug devices that are not in use, or are infrequently used – speakers or exercise equipment. Electronic devices and equipment consume energy even while turned off.*

TOTAL AMOUNT DUE	DUE DATE
\$156.19	Mar. 1, 2022



COMPARATIVE

This month you used:

- 15.0% less energy** compared to last month
- and
- 10.0% more energy** compared to 1 year ago

Gaining Ground



Needs Improvement



Big Concern

TOTAL AMOUNT DUE

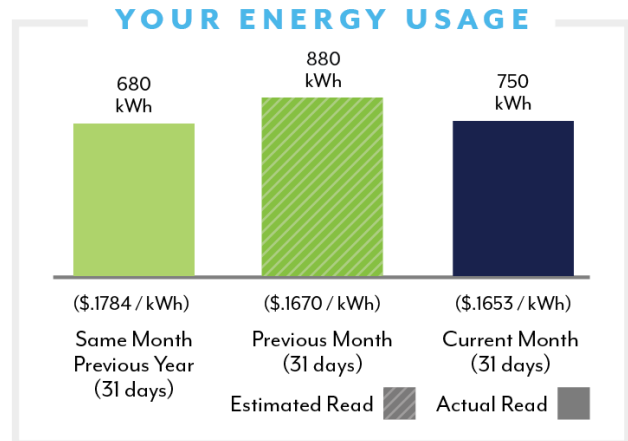
\$156.19

DUE DATE

Mar. 1, 2022

kWh USED

750 kWh



COMPARATIVE

This month you used:

15.0% less energy compared to last month

and

10.0% more energy compared to 1 year ago

AVERAGES

Average Cost Per Day
\$5.04

Average Daily Use
24 kWh

12-Month Average Cost Per kWh
\$0.1719

What's Next (and how you can help)

- Continue to tweak and improve Customer Care and Billing & Payment initiatives
- Continue/Start major FEMA funded capital projects
- Continue renewable, energy efficiency, electrification and demand response programs
- Find efficiencies
- Spread the good news



Insights and Expectations from the CFO

Corey Schneider

LUMA, GENERA & PREPA: Relationship

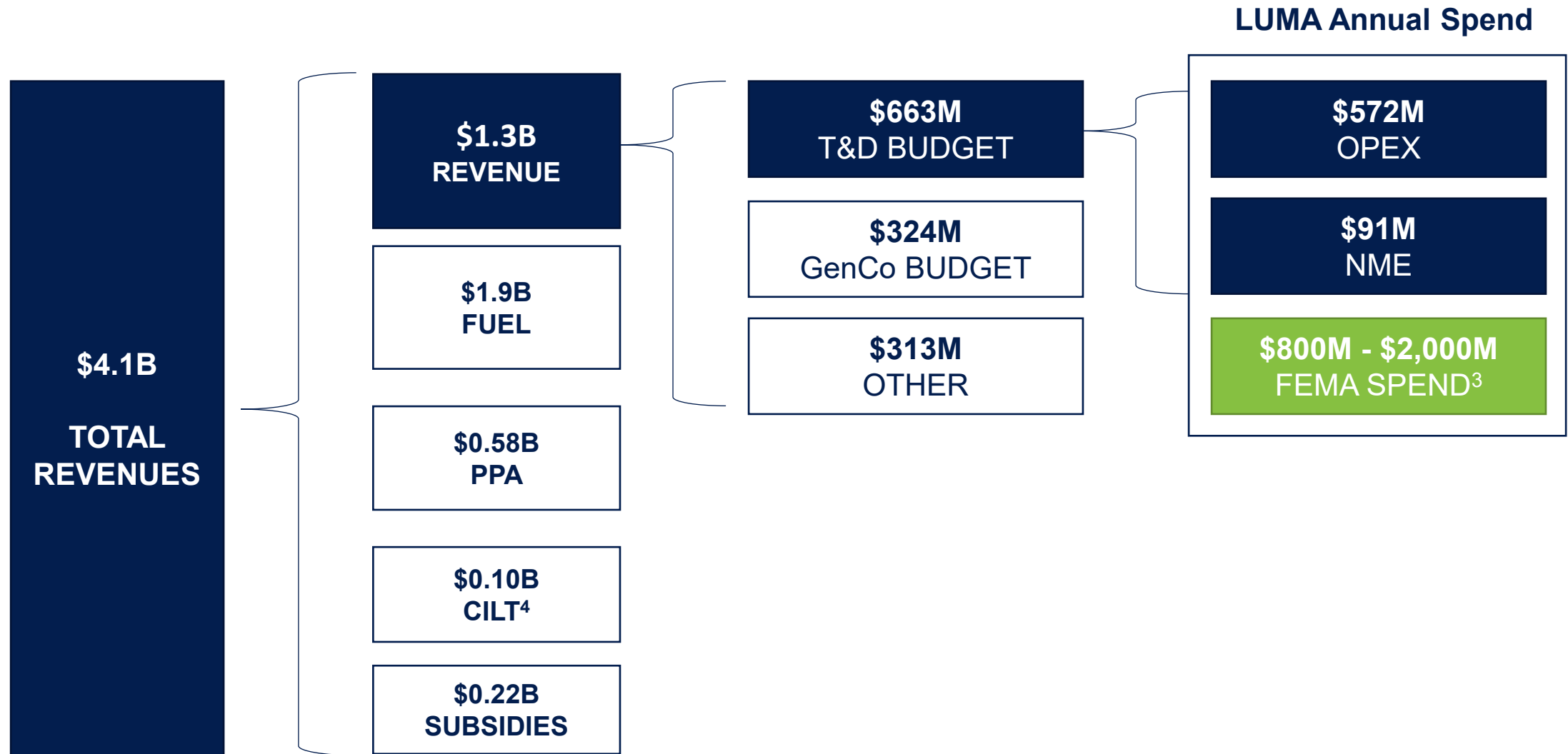
- LUMA and GENERA contracts manage portions of PREPA and operate as agent of PREPA¹

Asset Owner:  Puerto Rico Electric Power Authority



1) LUMA's role as Agent of PREPA includes entering into contracts as Agent of PREPA. LUMA complies with Federal and/or Puerto Rico policies and regulations as applicable in procurement practices.

Annual PREPA cash flow²

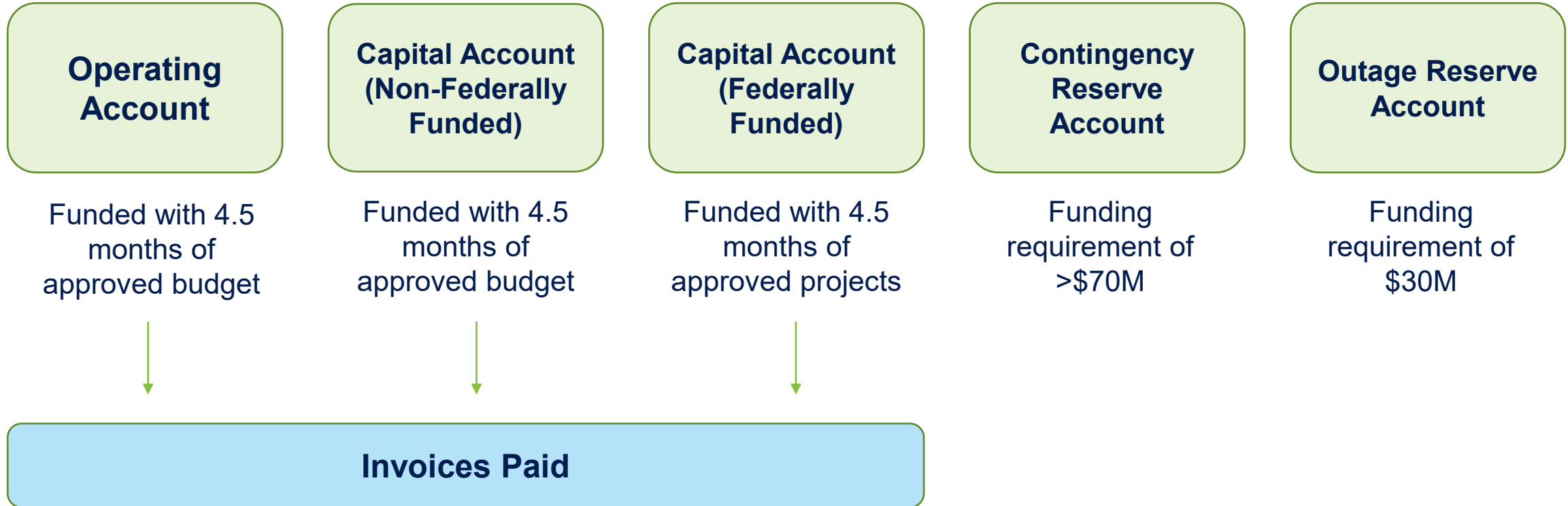


2) Source FY24 Approved Budget

3) Estimated annual spend by LUMA on T&D system over next 10+ years

4) Contribution in Lieu of Taxes ("CILT")

LUMA Service accounts



Vendor Payments: Process & Totals

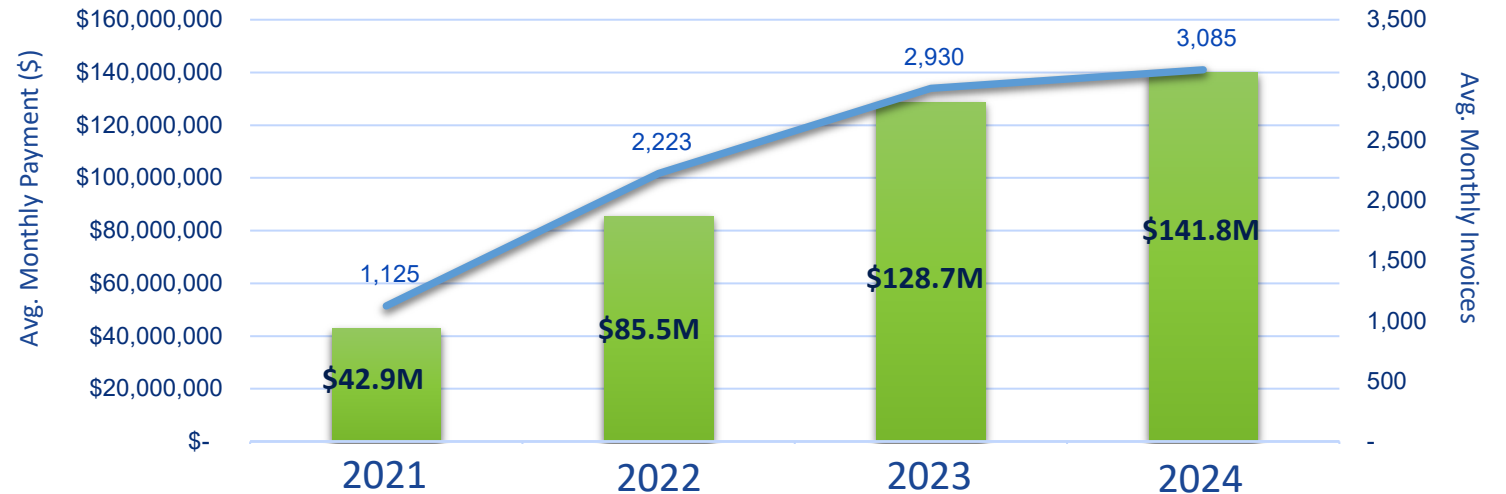
Invoice Process Flow



Payments Processed by LUMA Since June 1, 2021

- \$3.3B**
Total
- 77K**
Total Invoices
- 781**
Vendors Paid

Monthly Average Payments



The information in this presentation is subject to change without notice.

iSUPPLIER PORTAL

For Service Contracts Only



Online Access to Information

- Purchase orders, invoices, and payments
- Other procurement-related documents online



Real-Time Updates

- Track the progress of their transactions and receive immediate notifications
- Receive live notifications of updates
- Better decision making



Streamlined Communication

- Vendor and buyer communication
- Portal available for inquiries or changes requests



Access to Payment Information

- Payment status and access to historical payments
- Remittance advise



Enhanced Compliance

- Review and acknowledge agreements electronically



Self-Service Capabilities

- Empower to manage account information
- Update contact details
- Product catalog maintenance



Improved Relationship with Buyers

- Enhanced communication
- Greater rate of responsiveness
- Foster long term partner relationships

ORACLE SOURCING

For Service Contracts Only



Increased Visibility

- Upcoming events
- Scheduled deadlines
- Increase participation
- Bid monitoring access



Better Access

- Timely access to sourcing events



Efficient Bid Submission

- Paperless bid submittal
- Bid invitations
- Automatic notifications



Improved Efficiency and Accuracy

- Track the progress of vendor transactions and receive immediate notifications

Typical Government contract issues



Supplying services **above max** contract value



Supplying services **before the contract start date**
or **after the end date**



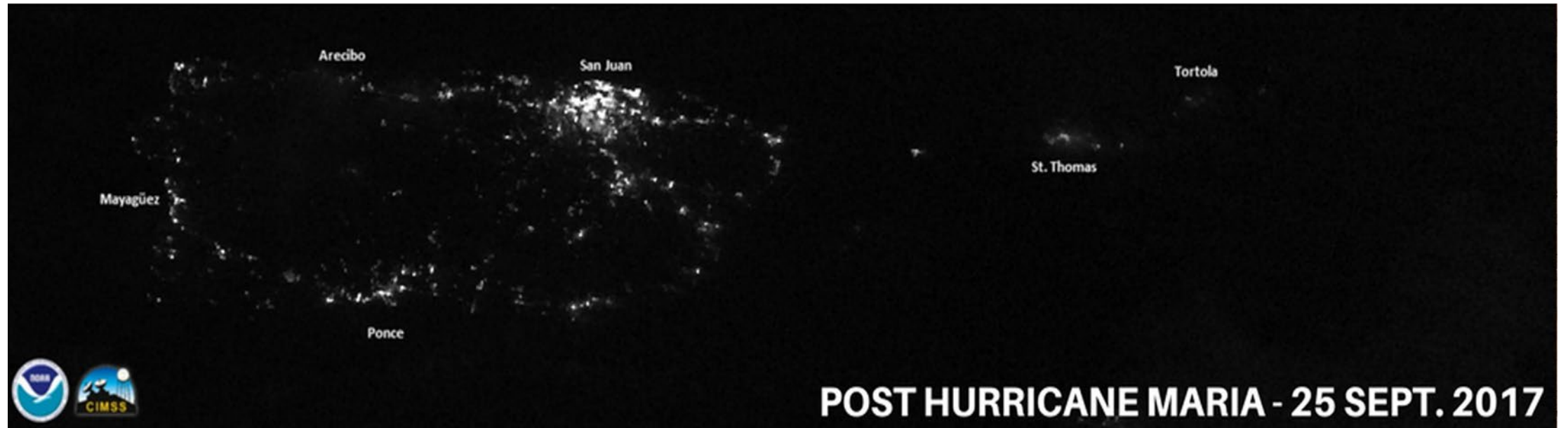
Supplying **services not covered** by the contract



THE EVOLUTION OF PROGRESS: PAST, PRESENT, & FUTURE

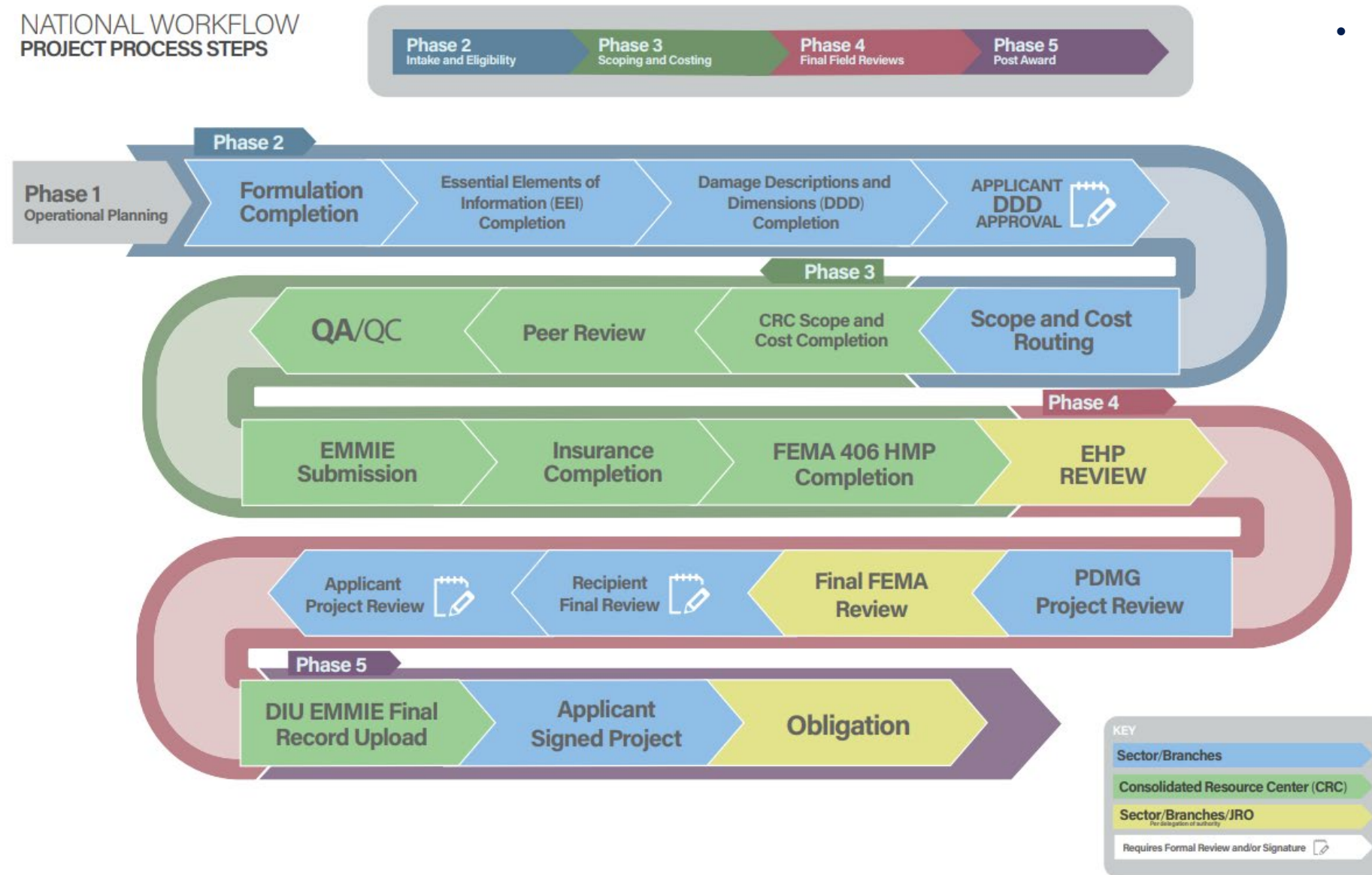
April 10, 2024

LIGHTS OUT AFTER MARIA



FEMA APPROVAL PROCESS

NATIONAL WORKFLOW
PROJECT PROCESS STEPS



- FEMA process includes 20 sequential steps that must be followed in detail.

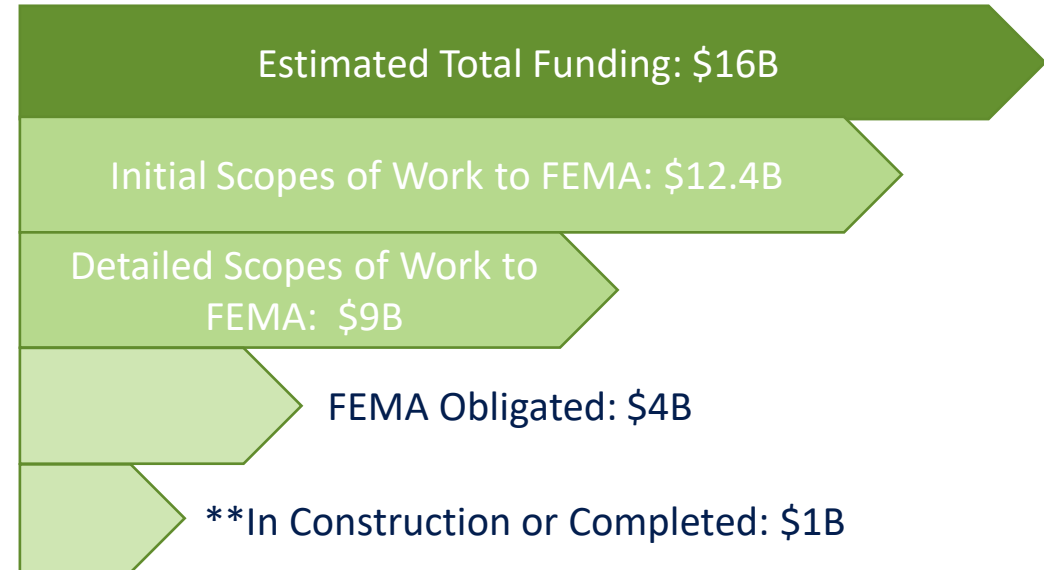
FEMA PROJECT HIGHLIGHTS*

LUMA has received **396** FAASt numbers from ISOW to FEMA representing \$12.4B of investment to transform the grid, from large-scale substation rebuild projects to replacing streetlights and distribution poles across Puerto Rico.

Submitted **339** detailed scopes of work (DSOW) for FEMA review and approval representing \$9B.

FEMA approved **146** projects estimated at \$2.3B of work as well as additional funds for the procurement of long-lead materials and A&E services for a total of \$4B.

123 Projects are under construction or completed.



*As of April 2, 2024

**Includes both Maria and Fiona spend

TRANSMISSION MODERNIZATION

LUMA is increasing resiliency and supporting the integration of clean energy generation by conducting assessments to damaged equipment and upgrading critical transmission infrastructure to across the island.

Scope includes:

- Construction to rebuild key transmission lines ~150 miles in the next 3 years & 800 miles in plan
- Hardening and replacing structures to new standards
 - Replacing damaged and/or highly loaded conductors

Current/upcoming opportunities:

Materials

- Engineered Structures
- Conductors
- Hardware (crossarms, bolts, insulators, etc.)

Services

- Lidar
- Traffic control
- Planning, PMO support, and strategy

Construction

- EPC projects for critical transmission lines
- Installing structures

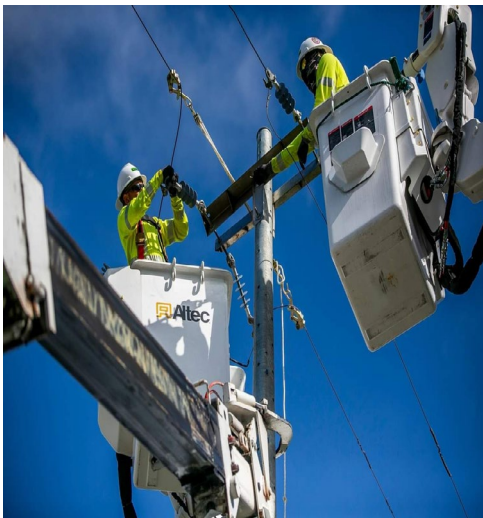


DISTRIBUTION MODERNIZATION

LUMA is enhancing grid reliability and resiliency by rebuilding distribution feeders and assets, and we're supporting sustainability through the integration of Distributed Energy Resources (DER) and the deployment of LED streetlights for safer, brighter communities.

Scope includes:

- Rebuilding distribution lines to current standards. ~450 miles in the next 3 years and 3,000 miles in plan
- New underground feeder sections and underground repairs
- Replacing priority poles, conductors, and associated hardware to new standards
- Replacing 300,000+ high-pressure sodium (HPS) streetlights with LEDs; and associated infrastructure (poles, low voltage UG, and hardware)



Current/upcoming opportunities:

Materials

- Pole mounted and pad mounted transformers
- Capacitor banks
- Hardware

Services

- Testing and commissioning of devices
- Traffic control
- Laydown yard areas
- Equipment disposal/recycling
- Planning, PMO support, and strategy

Construction

- Poles and conductor repair
- Distribution Line construction services
- Streetlight construction

SUBSTATION MODERNIZATION

LUMA is building a more reliable and more resilient energy system by setting the standard for the modernization of all substations across Puerto Rico.

Scope includes:

- Rebuilding or relocating substations based on flood risk, condition, and criticality to meet NERC CIP criteria
- Installation of protection, control, and telecom related equipment, implementing IEC 61850 standards

Current/upcoming opportunities:

Materials

- 230kV, 115kV, 42kV GIS
- Circuit Breakers and metalclad switchgears
- Modular Substations, mobile substations, and mobile generation units
- Substation control building materials (Relay, RTU, Racks, etc.)

Services

- Testing & commissioning of equipment
- Oil handling services, asbestos, lead paint mitigation, geotech assessments, disposal and salvage
- Planning, PMO support, and strategy

Construction

- EPC projects for critical substations
- Foundation, and ground grid evaluations and repair
- Rebuilding or relocation substations to meet NERC CIP



The information in this presentation is subject to change without notice.

TELECOM

LUMA is deploying advanced communications and metering technology and upgrading customer tools to support a smarter, transformed energy grid for Puerto Rico.

Scope includes:

- Installation and assessment/repair of fiber optic underbuilds and OPGW along distribution and transmission lines to support OT network resiliency
- Telecommunication tower assessments, repair/replacement and installation

Current/upcoming opportunities:

Materials

- Transport Network: 48VDC rectifiers, racks, and batteries
- Telecom Infrastructure: Tower Steel
- Field Area Network (FAN) equipment
- Outdoor enclosures/Telecom shelters

Services

- Testing & commissioning of equipment
- Fiber measurements/assessments
- Planning, PMO support, and strategy

Construction

- Install make ready equipment
- Foundations for shelters
- Install/repair towers
- Repair/Install fiber optic



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RENEWABLE ENERGY

LUMA is supporting the integration of renewable energy resources onto the grid to provide customers with greater access to renewables and support a cleaner energy future for Puerto Rico.

Scope includes:

- Deployment of microgrid projects
- Support of 800MW of Solar PV integration by interconnecting and completing network upgrades at our substations
- Engineering studies to support the integration of renewable generation
- Completing steady state and dynamic modeling for DERs and DERMS implementation
- Adopt IEEE 1547 Standard

Current/upcoming opportunities:

Materials

- Battery energy storage systems
- Microgrid controllers
- PMUs

Services

- Testing & commissioning of equipment
- Engineering and planning studies
- Planning, PMO support, and strategy

Construction

- Construction of utility scale solar PV and BESS
- Integration of microgrid assets



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PROJECT CONTROLS | CONTRACT MANAGEMENT



Improvement in Invoicing Process:

- New Processes and procedures are being completed to define management of contracts (i.e. invoice management/validation, change orders/amendments, vendor performance, contract closeout) . The organization and stakeholders will be trained to promote a unified understanding of contract/invoice management
- Staffing levels were increased to meet the needs of our vendors. New skill sets were added (focus on attorneys and financial professionals) to be able to understand and manage complex contracts and invoices



Invoicing Requirement Training

- Organization will be trained as new procedures get created to ensure they have the appropriate skill level to handle contracts and invoices in a consistent manner
- FEMA training will be offered to the organization as it becomes available



Escalation Process

- Scaling plans were created to proactively plan strategic headcount levels, tools needed, and procedures required to manage current as well as upcoming contracts and invoices



Power BI information

- New Power BI executive dashboard was created to provide contract owners and stakeholders on-demand information related to contracts and invoices



LUMA's Actions to Improve Engagement with Vendors

- Regular in-person meetings are being held with key vendors that include Project Management and Contract Administration personnel and leadership to discuss validation and payment of invoices, work progress, change orders, and any other issues of interest to vendors

NIGHT VIEW PRIOR TO MARIA





Operations: Current and Future Planning

Kevin Burgemeister

OPERATIONS

Our Future Plans and Needs

Operational Priorities

- Outage Restoration and Emergency Response
- Improving System Reliability and Power Quality
- Enhancing Our Technology and Tools



OPERATIONS

Our Future Plans and Needs

Outage Restoration and Emergency Response

- Weather Related Impacts
- Incident Management System
- Resources
 - Contractors
 - Materials



OPERATIONS

Our Future Plans and Needs

Improving System Reliability and Power Quality

- Preventing failures from occurring
 - System Maintenance
 - Vegetation Management
 - Wildlife Mitigation
- Locating faults faster and minimizing impacts



OPERATIONS

Our Future Plans and Needs

Enhancing our Technology and Tools

- Software Systems
- Facilities
- Technology Tools



LUMA PROGRESS SINCE COMMENCEMENT



The over 4,500 men and women of LUMA are making infrastructure improvements every day to build the next-generation electric grid Puerto Rico deserves.

ACCELERATED FEMA PROJECTS

396

Projects initiated representing

\$12.4B

in investments

123

Projects completed or in construction



BETTER CUSTOMER SUPPORT

\$129M+

Supported in critical financial assistance to customers

7.5M+

Calls answered with a <1 minute average call wait time last year



CLEARED VEGETATION

3,900+

Miles of transmission and distribution powerlines cleared of vegetation



INCREASED RESILIENCY

100,000+

Streetlights replaced through the Community Streetlight Initiative



22

Substation reconstructions and upgrades started or completed



11,500+

Utility poles replaced



4,800+

Distribution automation devices installed

EXPANDED RENEWABLES

93,000+

Customers connected to rooftop solar



4,100

New solar connections per month

Looking Ahead

In addition to our continued focus on improving reliability for our customers, our top priorities for 2024 include:

- **Launching Major Reliability Projects**
 - Vegetation Safety and Reliability Initiative
 - Advanced Metering Infrastructure
- **Improving Customer Communications** including a new SMS text notification service to provide timely updates about reported service interruptions and service requests.
- **Preparing for Hurricane Season**



Thank you, for your support, as we continue to build a brighter energy future for Puerto Rico.

Emergency Preparedness Efforts

Preparing for hurricanes and other emergencies is a year-round priority for LUMA, with efforts that include:

- **Following and improving our rigorous Emergency Response Plan** deploying industry best practices for emergency response and uses the National Incident Management System as established by FEMA.
- **Conducting mock emergency exercises** to practice response coordination with external partners, including PREMB, FEMA, PREPA and COR3.
- **Maintaining regular outreach to hospitals and critical facilities** and contacting lifeline customers directly and proactively during emergencies.
- **Acquiring more than \$278 million in on-hand transmission and distribution materials** for storm response.
- **Having more than 4,500 dedicated employees and a team of over 1,100 line workers** who are trained and prepared to respond and restore power to customers as quickly and safely as possible.
- **Coordinating with LUMA's parent companies, Quanta Services and ATCO, in the event of an emergency**, including the deployment of additional utility field workers and other resources to support restoration efforts, as needed.
- **Establishing mutual aid agreements for cooperative response support to critical events** if additional resources are needed to assist with our response and restoration efforts.

KEY GOALS





Partnering in Success: LUMA's Procurement Process

Mike Shaw and Joe Adamski

Partnering in Success with LUMA

LUMA's Vision



To provide our customers with reliable electrical energy, and transform the system that illuminates every home, every business, every corner of Puerto Rico.

Procurement's Mission



To acquire the best value goods and services to operate and build a more reliable, resilient, and customer focused energy system, in full compliance with all legal, statutory, ethical and transparency requirements.

Partnership Goals



We work with our suppliers so that Puerto Rico will shine brighter. We believe that this can only be achieved by sharing common goals, and by building a strong business relationship with our suppliers.

LUMA's Procurement Success Factors



2023 Procurement Accomplishments

571

Executed
Contracts

\$1.28B

Contracts
Awarded

368

Issued
RFx's

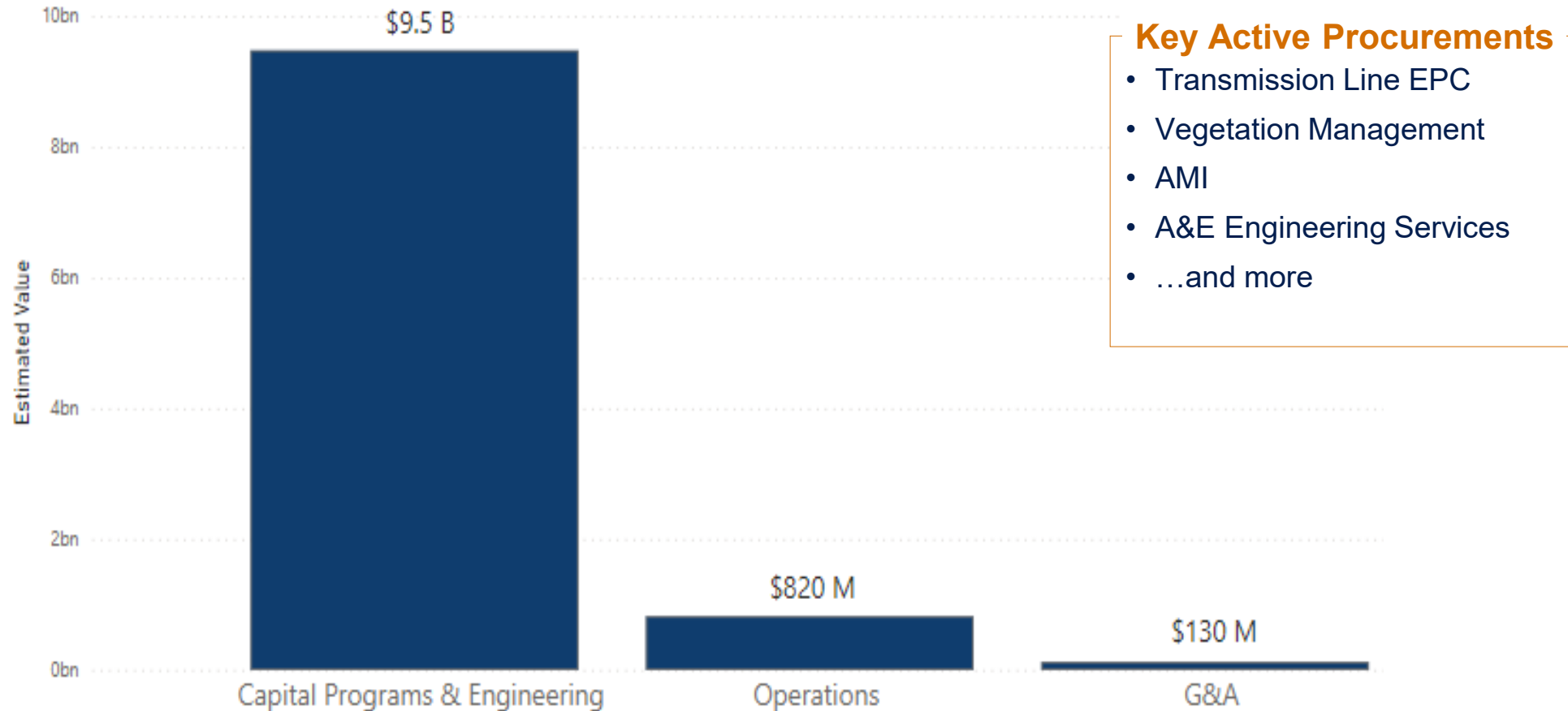
Procurement Spotlight



- 3 MSA contracts executed to supply 170K Galvanized Steel Poles as a key step to enhancing the electrical grid in Puerto Rico
- The poles will be installed island-wide and are capable of withstanding winds up to 160 mph

Active Procurements

Currently there are 234 active procurements with a total value of \$10.5B

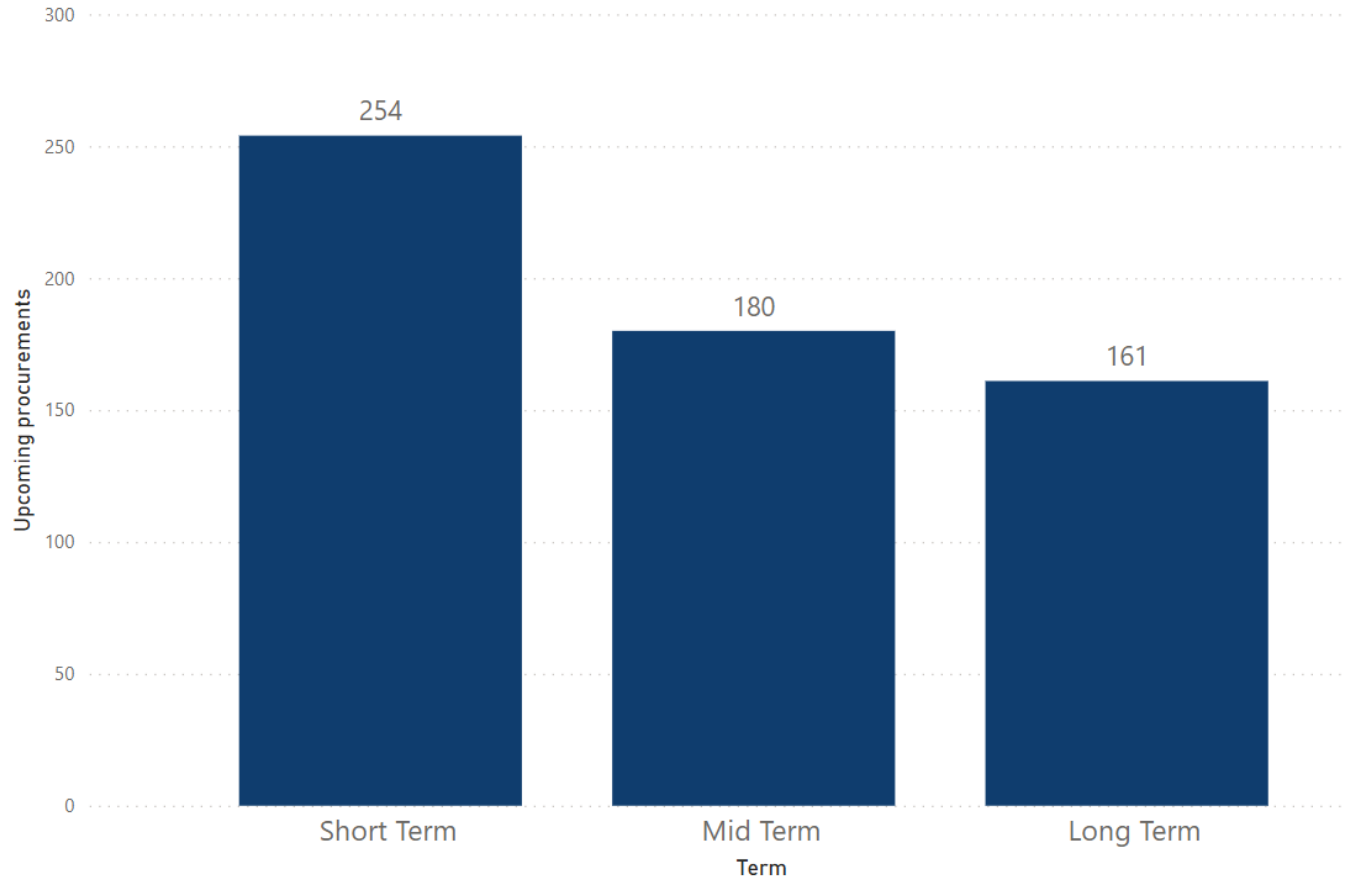


Key Active Procurements

- Transmission Line EPC
- Vegetation Management
- AMI
- A&E Engineering Services
- ...and more

Upcoming Procurement (\$250K+) Pipeline

LUMA anticipates launching over \$5B in new procurements in 2024



Category	# of Procurements	Estimated Spend
Capital	36	\$2.5 bn
Material Management	496	\$2.3 bn
Other	17	\$400 m
Fleet	11	\$100 m
Facilities	21	\$50 m
IT/OT	14	\$40 m
Total	595	\$5.4 bn

 LUMA has a robust pipeline of purchasing needs in 2024 and beyond – We welcome your participation!

The information in this presentation is subject to change without notice.

DOING BUSINESS WITH LUMA

LUMA is an agent of PREPA

1. LUMA is a private entity, and has full authority to serve as an agent of PREPA through a 15-year Public-Private Partnership agreement
2. LUMA must follow all applicable Commonwealth and Federal procurement laws
3. Suppliers need to understand specific requirements, local laws, and regulations to perform work in Puerto Rico
4. Events are executed through a fully open and competitive procurement process available publicly
5. All suppliers must be registered and meet statutory qualifications prior to being awarded a contract with LUMA
6. Proper communication channels and guidelines must be followed by LUMA and suppliers during procurement events
7. Compliance and confidentiality must be upheld through the process

For additional detail, visit LUMA's website via the QR code.

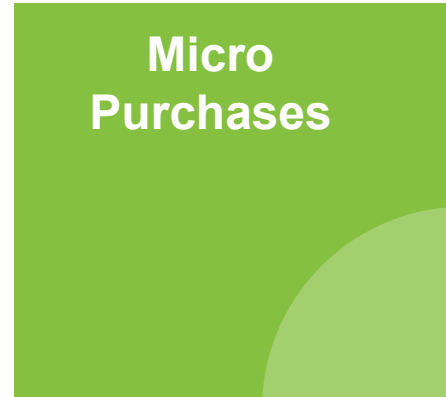


Procurement Methods

LUMA has several types of procurement methods primarily driven by the spend threshold

Purchases less than \$10,000

- Competitive Sealed Bidding or Competitive Proposals not required

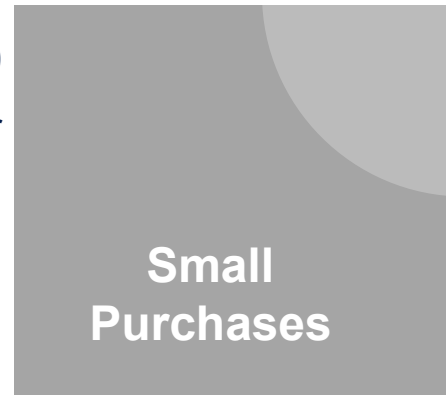


Purchases > \$250,000 involving goods

- Public notice given at least 10 business days prior via LUMA website and other media avenues
- Pricing focused with fixed price proposals

Purchases of \$10,000 to \$250,000

- No Competitive Sealed Bidding or Competitive Proposals required
- Three qualified quotes required



Purchases > \$250,000 involving goods and/or services

- Public notice given at least 10 business days prior via LUMA website and other media avenues
- Decision based on evaluation criteria
- Fixed price, cost reimbursement, or time and material proposal required

We hear you...

Supplier Feedback

“Procurements take too long”

Actions

We’re streamlining the process

“I don’t hear anything after I submit a bid”

Actions

Enhanced Focus on Supplier Engagement

“Technology is confusing”

Actions

Implementing Oracle P2P

“Who is my Point of Contact?”

Actions

Supplier Onboarding & Pre-RFP Engagement Process

Streamlining LUMA's Procurement Process

1. Needs Identification & Requirements Gathering

3. RFP Development

5. Evaluations, Short-Listing & Selections

7. Contract Management & Administration



2. Define Procurement Strategy

4. Publish Sourcing Event

6. Finalize Awards & Execute Contracts

Supplier Engagement

Pre-Event Outreach

- Upcoming event outreach
- Participant contact confirmation

During-Event Notification

- Public award notification
- Non-Award notification & Feedback

Post-Event Notification

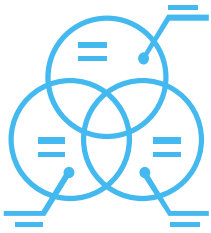
- Public award notification
- Non-Award notification & Feedback

How LUMA Publicizes Procurement Events



LUMA's Website

- Active procurements are listed on LUMA's website for active and upcoming RFX
- For further details, please visit: [List of Competitive Events](#)



Social Media

- LUMA leverages LinkedIn as its primary social media platform for announcing bid events and actively updates
- Please follow us at: [LUMA Energy | LinkedIn](#)



eSourcing Module

- LUMA currently utilizes the PowerAdvocate® electronic platform for RFX management and supplier communication
- LUMA is in the process of migrating to Oracle platforms which may impact future technology solutions



Newspaper

- LUMA shares information of select active procurements with local Puerto Rico newspapers

Supplier Engagement Strategy

Enhanced measures and focus has been on increasing supplier communication and engagement through various methods to build and maintain strong supplier relationships



Overall Strategy

Keeping open communication channels with our suppliers



During Event

Maintaining timely communication of current status



Before Events

Informing suppliers of upcoming procurement events



After Event

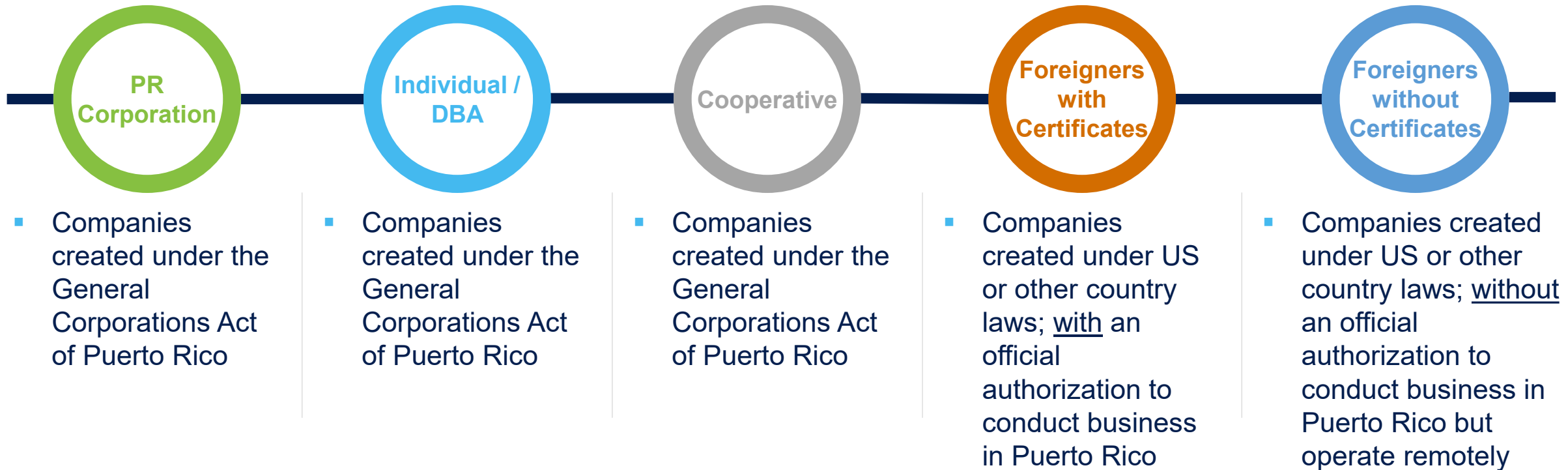
Focus on feedback exchange by conducting debrief sessions



Vendor Registration Process

LUMA conducts a Supplier Pre-Qualification Process to collect and evaluate documentation from suppliers to become a verified LUMA and Puerto Rico supplier; filing of documentation is required by Puerto Rico Law and the Operation & Maintenance Agreement

Documentation requirements vary based on type of vendor:



 If your company is interested in joining the LUMA Supplier Registry, reach out to suppliers@lumapr.com to begin the process

Contracting: Meeting Requirements

As part of LUMA’s contracting process, there are certain clauses that are necessary to comply with LUMA, Puerto Rico, and Federal requirements



Purpose

To expedite the contracting process, LUMA utilizes standardized templates containing clauses such as:

- Regulatory Compliance
- Federal requirements
- Health and safety obligations
- LUMA policies



Exhibits and Clauses Affected

The following Exhibits and Clauses are considered non-negotiable:

- Payment/Invoice - Clause
- Health, Safety and Environmental Obligations
- Operator (LUMA) Policies
- Intellectual Property
- Withholdings (mandated by law) – Taxpayer status
- Government Contracting Requirements
- Federal Contracting Clauses
- Conflict of Interest Policies
- Insurance Requirements



Benefits

Consistent clauses streamline the contracting process, ensuring that contracts meet requirements and focus on mutually beneficial terms



Registration

- Contracts and Amendments must be registered with the OCPR
- Records are updated with the Corporations Registry of the PR Department of State and LUMA’s Vendor Registry

Expectations for Suppliers Participating in LUMA Procurements

To support LUMA and participate in upcoming procurements, there are expectations that all suppliers must follow to support a successful process



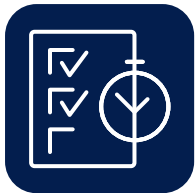
Communication

Maintain all communications with LUMA through Power Advocate and Procurement personnel for active procurements



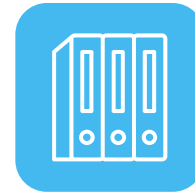
Federal Requirements

Ensure you comply with federal contracting requirements



Meet Timelines

Ensure timely submission of proposals and adhere to Q&A timelines



Submit complete proposal packages

Ensure RFP responses include all required documentation



Confidentiality

Maintain confidentiality throughout the entire procurement process



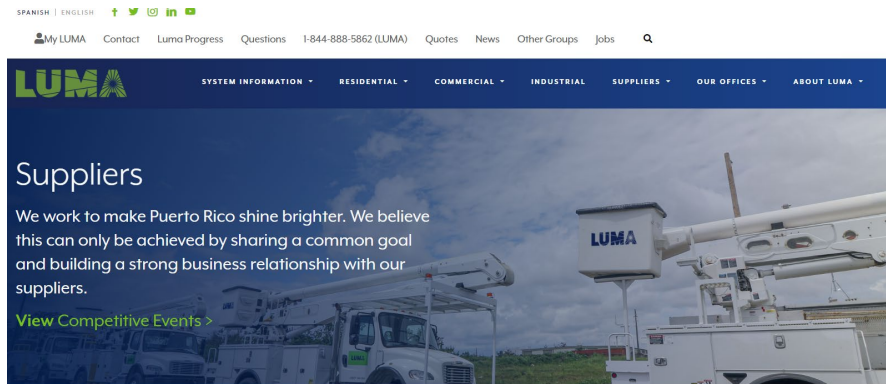
Contract Redlines

Proposed redlines to contractual language may be submitted with your proposal, however LUMA has full discretion to accept or reject proposed redlines

Where to go for more?

If you have any additional questions, please use the following sources to learn more about LUMA and the work we do in Puerto Rico

Visit our Website

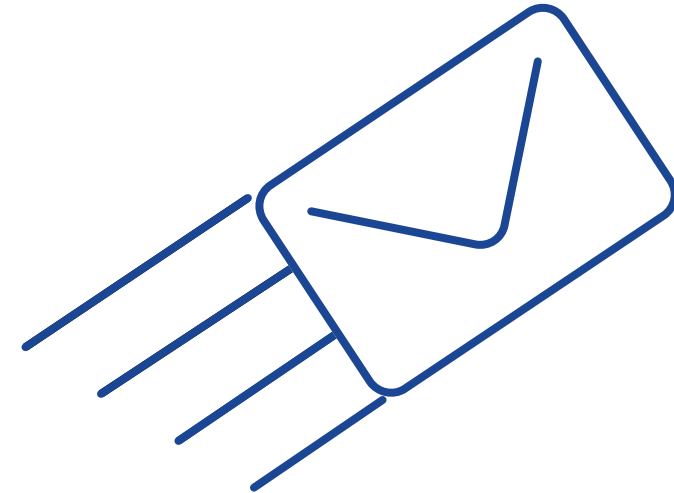


Procurement and Contracts Department

The Procurement and Contracts Division of LUMA Energy ServCo, LLC (LUMA) manages the procurement function of all goods and services necessary to support the transmission and distribution of energy to the residents, businesses and industries of Puerto Rico, as well as which acts as agent of the Puerto Rico Electric Power Authority (PREPA or PREPA), according to the Operation and Maintenance (O&M) Agreement of the Puerto Rico Transmission and Distribution System, dated June 22, between LUMA, LUMA Energy, LLC, PREPA, and the Puerto Rico Public-Private Partnerships Authority. The mission of our division is to acquire the best quality goods and services, while operating according to compliance, ethics and transparency standards.

Please take some time to visit the Suppliers page on LUMA's website for competitive events and registration requirements – <https://lumapr.com/suplidores/>

Email LUMA



Contact us by sending an email to our supplier mailbox.– suppliers@lumapr.com



LUMA Supplier Summit 2024 Compliance & Ethics

Mariano Mier



A Joint Purpose

We aspire to the highest levels of excellence and integrity. We expect the same commitment from everyone we work with.

It's critical that our contractors, subcontractors, and suppliers adhere to our policies.

We must interact and collaborate with a unified purpose.

Compliance promotes ethical conduct, trust, sustainability, and mitigation of risks.

Compliance & Ethics are not just a set of requirements. They are fundamental principles.

Navigating compliance requirements: sometimes complex, but always essential to our joint success.

As a vendor interested in doing business with LUMA...

Maintain Transparency: Communicate openly and transparently to LUMA personnel any compliance-related concerns, issues, or incidents. Timely reporting is crucial.

Commit to Best Practices: Implement best practices within your organization to ensure compliance.

Collaborate Actively: Work closely with us to address and resolve any clarifications or questions you may need answered.

Key Compliance Areas

Main areas involving third party vendors, suppliers, and contractors where compliance is a concern or involved include:

- Due diligence
- Ongoing monitoring
- FEMA
- Anticorruption laws & policy
- Supplier code of conduct
- Procurements
- Contractual performance
- Subcontractors
- Firewalls
- Data privacy/cybersecurity
- Conflicts of interest
 - Personal
 - Organizational
 - Affiliates - 3PPO
 - Non-affiliates
- Interactions between LUMA personnel and suppliers
- Use of confidential or nonpublic information

Collaboration on compliance matters between suppliers and LUMA is **LUMA** essential for several reasons:



Risk Mitigation

Collaboration enables both LUMA and suppliers to identify and address compliance gaps. In this way, we reduce the likelihood of legal or regulatory sanctions, reputational damage, financial loss.



Stakeholder trust

Collaboration on compliance strengthens trust between LUMA, suppliers, and their internal and external stakeholders. It demonstrates a commitment to transparency, accountability, and integrity. It reinforces both LUMA and the supplier's reputation and competitive positioning.



Health, Safety & Environment

Carlos Lujan

Agenda

- Organization's Overview
- Contractors and Suppliers Expectations
- Safety Management Process Overview
- Ways to Engage

Our Mission

LUMA was specifically designed to serve the residents of Puerto Rico by modernizing the island's electrical transmission and distribution infrastructure, with the goal of fostering its economic growth and development.

The **HSE organization's role** and **core beliefs** include:

- Compliance: We comply with all applicable safety laws and regulations.
- Monitor and Measure: We monitor and measure incidents to set objectives, targets and programs that help to prevent injuries and illnesses and minimize property losses.
- No Shortcuts: We believe that no cost saving, time saving, or competitive advantage is worth any injury of any kind.

Our success depends upon maintaining a safe and secure working environment that minimizes harm to those affected by our activities, including our people, contractors and the public.

Organization's Overview – Key Functions



Contractors and Suppliers Expectations

Our processes are focused on safeguarding LUMA and contracted employees, as well as the public.

Contractors and Suppliers

- Adhere to LUMA's contractor safety requirements and standards.
- Adhere to all relevant safety and security laws and regulations, including those at the state and federal levels.
- Develop and maintain its safety program.
- Provide relevant health and safety training to workers.
- Report incidents or near-misses following LUMA's HSE Handbook and Workplace Safety Policy.
- Follow contract terms and conditions, such as document retention, training records, qualified personnel, required certifications, reporting, drug and alcohol testing, hazard mitigation, audits, and other specified requirements.

LUMA

- Demonstrate commitment to supporting the Contractor in achieving a safe, healthy, and productive work site.
- Offer technical orientation as needed.
- Monitor adherence to LUMA's regulations and standards.
- Conduct performance evaluations and offer constructive feedback to improve performance.

For LUMA, ensuring effective Contractor Safety Management is essential for maintaining a safe workplace!

Safety Management Process Overview

LUMA's swift expansion of project portfolios is leading to an unprecedented demand for HSE support services. The illustration below summarizes the overarching safety management process and potential areas where third-party support might be needed.



Current Initiatives: Enhancing Contractor Accessibility

Transmission and Distribution Authorization Orientation

- This initiative is designed to promote the safe interaction between contractors and the electrical system. Through this program, contractors are empowered with the necessary resources and expertise, enabling them to expedite the operation process.
- Expected benefits:
 - Increased operational and personnel safety through a solid control plan.
 - Increased visibility by the Operator in Charge (OIC).
 - Increases the capacity of contractors to safely interact with the system.

Online Contractor Orientation

- A link will be sent to all new Contractor employees, and those that require the annual refresher.



Ways to Engage

- Competitive solicitations will be published in PowerAdvocate
 - Upcoming solicitations under consideration
 - Safety Consulting Services
 - Waste Removal and Disposition Project
- Unsolicited proposals and/or general inquiries
 - Procurement: suppliers@lumapr.com
 - Health, Safety and Environmental: HSE@lumapr.com

"We are excited to embark on this journey of collaboration and partnership with our valued vendor/supplier community, working hand in hand to ensure the utmost standards of Health, Safety, and Environmental (HSE) excellence. Together, we will build a safer, healthier, and more sustainable future for all."



Safeguarding Critical Infrastructure

Cybersecurity & Supply Chain

Crystal Allen, Chief Information Officer



Supply Chain Attacks Continue to Rise

- Supply chain attacks represent a significant menace to the energy sector:
 - The interconnected, damaged and aging state of grid technology and assets are especially vulnerable to Supply Chain Cybersecurity Risk
 - Threat actors exploit vulnerabilities in aging infrastructure by gaining access through third-party vendors (hardware, software, etc.) or suppliers



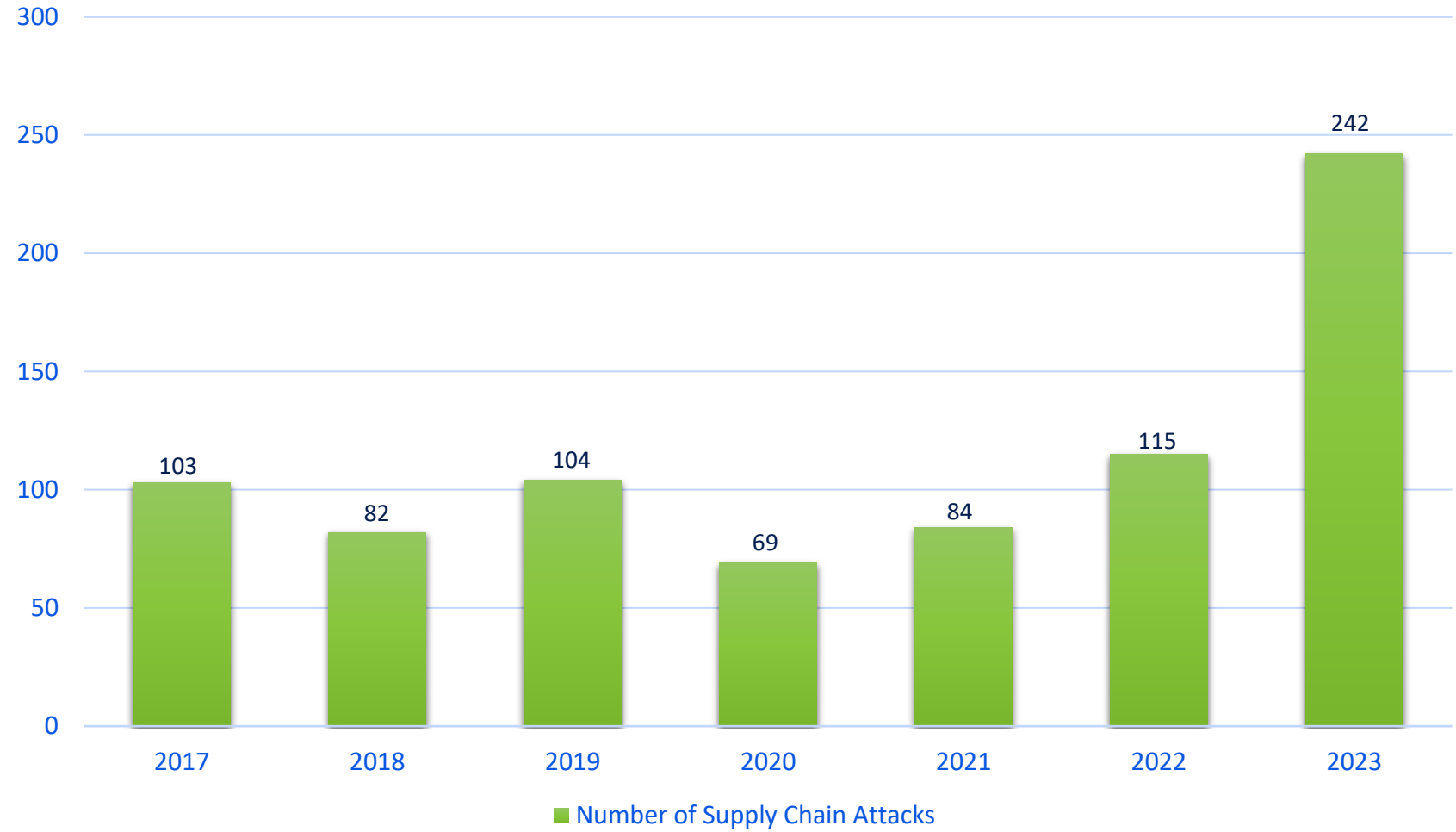
2024's Most Serious Cyber Attack Vectors:

- AI-Powered Attacks
- Deepfake Technology
- Supply Chain Attacks
- Cloud Jacking
- Internet of Things (IoT) Attacks





Supply Chain Attacks in the US from 2017-2023



LUMAPR.COM

Ani Petrosyan, February 7th 2024 for Statista





Notable Supply Chain Attacks in 2023

CYBERCRIME

UCSF Pays Cybercriminals \$1.14 Million to Recover Files After Ransomware Attack

Late last week, the University of California San Francisco (UCSF) revealed that it paid roughly \$1.14 million to cybercriminals to recover data encrypted during a ransomware attack earlier this month. The incident happened on June 1 and UCSF said that it was able to contain it quickly after discovery, though not before certain systems were affected.



By Ionut Arghire
June 29, 2020



Late last week, the University of California San Francisco (UCSF) revealed that it paid roughly \$1.14 million to cybercriminals to recover data encrypted during a ransomware attack earlier this month.

TRENDING

DATA BREACHES

Norton Healthcare Ransomware Hack: 2.5 Million Personal Records Stolen

Compromised data includes names, dates of birth, Social Security numbers, health and insurance information, and driver's license numbers.



By Ionut Arghire
December 11, 2023



Kentucky healthcare organization Norton Healthcare is informing about 2.5 million individuals that their personal information was compromised in a ransomware data extortion hack earlier this year.

TRENDING

1 Broadcom Merges Symantec and Carbon Black Into New Business Unit



NEWS

Data on over 3,000 Airbus suppliers leaked after breach

An emergent threat actor has leaked data on over 3,000 Airbus suppliers after claiming to have accessed the firm's internal systems.

NEWS

Microsoft breached by Russian APT behind SolarWinds attack

Several email accounts belonging to Microsoft senior leadership were accessed as part of the breach, though Microsoft found 'no evidence' of customer environments being accessed.



By Alexander Culafi, Senior News Writer

Published: 22 Jan 2024



Colonial Pipeline Attack

- The notorious Colonial Pipeline attack serves as a stark example:
- Hackers accessed the network through a third-party software vendor, leading to data encryption and a ransom demand, resulting in a major disruption to fuel supplies in the United States

Cyberattack Forces a Shutdown of a Top U.S. Pipeline

The operator, Colonial Pipeline, said it had halted systems for its 5,500 miles of pipeline after being hit by a ransomware attack.

 Share full article  



“As cyber criminals target suppliers, organizations must demand stricter evaluations and implementation of security protocols to prevent further attacks.”

**Cybersecurity Expert
Check Point, 2023**





Recommendations to Mitigate Risk

- **Risk and Vulnerability Assessments**
 - ✓ Perform Supplier Assessments, especially when introducing new assets in Operational Technology environments
 - ✓ Implement risk management frameworks
 - ✓ Conduct security assessments of third-party vendors
- **Access Control and Authentication**
 - ✓ Enforce strong access control measures to restrict unauthorized access to critical infrastructure systems and data
 - ✓ Implement Multi-Factor Authentication and Role-Based Access Control
- **Continuous Monitoring**
 - ✓ Detect cyber threats in real-time
- **Incident Response and Recovery**
 - ✓ Develop robust incident response plans to mitigate the impact of cyber attacks
 - ✓ Establish protocols for rapid isolation and remediation of affected systems to minimize service disruptions
 - ✓ Develop sector-specific incident response plans that include the collaboration of federal agencies





Protecting our Systems

Enhancing the cyber security posture extends beyond adopting technology solutions. It involves:

- **Regulatory Compliance and Collaboration**
 - ✓ Adhere to industry-specific regulations and standards designed to protect critical infrastructure
 - ✓ Engage in public-private partnerships to share threat intelligence and security best practices.
- **Resilience Planning**
 - ✓ Focus on resilience planning to ensure continuity of operations in the event of a cyber-attack, including redundant systems and manual controls.
 - ✓ Test Incident Response and Business Continuity Plans through simulations, drills and tabletops



Mitigating Cyber Risks in the Supply Chain

For critical infrastructure organizations, the stakes of ensuring cybersecurity within the supply chain are uniquely high. The potential for widespread disruption, economic impact, and threats to public safety necessitates a rigorous, proactive approach to managing cyber risks. By prioritizing comprehensive risk assessments, securing third-party connections, and fostering resilience, these organizations can safeguard the essential services they provide against the evolving landscape of cyber threats.





¡Gracias a todos!

**Crystal Allen
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LUMA Energy**

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We look forward to working with you.

The information in this presentation is subject to change without notice.