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

IN RE: PUERTO RICO ELECTRIC POWER AUTHORITY RATE REVIEW	**CASE NO.:** NEPR-AP-2023-0003 **SUBJECT:** Informative Motion Regarding LUMA Exhibit 11

INFORMATIVE MOTION REGARDING LUMA EXHIBIT 11

TO THE HONORABLE PUERTO RICO ENERGY BUREAU, AND ITS HEARING EXAMINER, SCOTT HEMPLING:

COME NOW LUMA Energy, LLC and **LUMA Energy ServCo, LLC** (jointly, "LUMA"), and respectfully state and request the following:

1. On July 3, 2025, LUMA filed on behalf of itself, Genera PR LLC ("Genera"), and the Puerto Rico Electric Power Authority ("PREPA"), its *Motion Submitting Rate Review Petition,* an application for permanent rates and provisional rates. Therein, LUMA submitted a series of pre-filed testimonies in support of its rate review petition, amongst which was LUMA Exhibit 11, subscribed and sworn by witness Ms. Crystal Allen.

2. On December 19, 2025, Ms. Allen testified that certain aspects of her testimony, including the proposed budget for the IT/OT Department, needed to be revised and would be resubmitted in accordance with a revision made to the costs associated with professional and technical services to reflect a reduction in those costs for Fiscal Years 2026-2028.

3. In light of the above, LUMA is hereby submitting an updated redacted version of LUMA Exhibit 11, *see* Exhibit 1 of this Motion, and respectfully requests that the revised testimony be included in the evidentiary record.[1]

[1] LUMA will work with the Accion Support Team to upload the revised version of Ms. Allen's Direct Testimony onto the Accion Evidentiary Platform.

4. Moreover, and for the benefit of all stakeholders, LUMA also includes a redline reflecting the withdrawn portions of Ms. Allen's Direct Testimony. *See* Exhibit 2.

WHEREFORE, LUMA respectfully requests that the Energy Bureau **take notice** of the aforementioned and deem the resubmitted version of Ms. Crystal Allen's Direct Testimony as final.

RESPECTFULLY SUBMITTED.

In San Juan, Puerto Rico, this 23rd day of December 2025.

WE HEREBY CERTIFY that this Motion was filed using the electronic filing system of this Energy Bureau and that electronic copies of this Motion will be notified to Hearing Examiner, Scott Hempling, shempling@scotthemplinglaw.com; and to the attorneys of the parties of record. To wit, to the ***Puerto Rico Electric Power Authority***, through: Mirelis Valle-Cancel, mvalle@gmlex.net; Juan González, jgonzalez@gmlex.net; Alexis G. Rivera Medina, arivera@gmlex.net; Juan Martínez, jmartinez@gmlex.net; and Natalia Zayas Godoy, nzayas@gmlex.net; and to ***Genera PR, LLC***, through: Jorge Fernández-Reboredo, jfr@sbgblaw.com; Giuliano Vilanova-Feliberti, gvilanova@vvlawpr.com; Maraliz Vázquez-Marrero, mvazquez@vvlawpr.com; ratecase@genera-pr.com; regulatory@genera-pr.com; and legal@genera-pr.com; ***Co-counsel for Oficina Independiente de Protección al Consumidor***, hrivera@jrsp.pr.gov; contratistas@jrsp.pr.gov; pvazquez.oipc@avlawpr.com; ***Co-counsel for Instituto de Competitividad y Sustentabilidad Económica***, jpouroman@outlook.com; agraitfe@agraitlawpr.com; ***Co-counsel for National Public Finance Guarantee Corporation***, epo@amgprlaw.com; loliver@amgprlaw.com; acasellas@amgprlaw.com; matt.barr@weil.com; robert.berezin@weil.com; Gabriel.morgan@weil.com; Corey.Brady@weil.com; alexis.ramsey@weil.com; ***Co-counsel for GoldenTree Asset Management LP***, lramos@ramoscruzlegal.com; tlauria@whitecase.com; gkurtz@whitecase.com; ccolumbres@whitecase.com; iglassman@whitecase.com; tmacwright@whitecase.com; jcunningham@whitecase.com; mshepherd@whitecase.com; jgreen@whitecase.com; ***Co-counsel for Assured Guaranty, Inc.***, hburgos@cabprlaw.com; dperez@cabprlaw.com; mmcgill@gibsondunn.com; lshelfer@gibsondunn.com; howard.hawkins@cwt.com; mark.ellenberg@cwt.com; casey.servais@cwt.com; bill.natbony@cwt.com; thomas.curtin@cwt.com; ***Co-counsel for Syncora Guarantee, Inc.***, escalera@reichardescalera.com; arizmendis@reichardescalera.com; riverac@reichardescalera.com; susheelkirpalani@quinnemanuel.com; erickay@quinnemanuel.com; ***Co-counsel for the PREPA Ad Hoc Group***, dmonserrate@msglawpr.com; fgierbolini@msglawpr.com; rschell@msglawpr.com; eric.brunstad@dechert.com; Stephen.zide@dechert.com; david.herman@dechert.com; michael.doluisio@dechert.com; stuart.steinberg@dechert.com; ***Sistema de Retiro de los Empleados de la Autoridad de Energía Eléctrica,*** nancy@emmanuelli.law; rafael.ortiz.mendoza@gmail.com; rolando@emmanuelli.law; monica@emmanuelli.law; cristian@emmanuelli.law; lgnq2021@gmail.com; ***Official Committee of Unsecured Creditors of PREPA***, jcasillas@cstlawpr.com; jnieves@cstlawpr.com; ***Solar and Energy Storage Association of Puerto Rico,*** Cfl@mcvpr.com; apc@mcvpr.com; javrua@sesapr.org; mrios@arroyorioslaw.com; ccordero@arroyorioslaw.com; ***Wal-Mart Puerto Rico, Inc.,*** Cfl@mcvpr.com; apc@mcvpr.com***; Solar United Neighbors***, ramonluisnieves@rlnlegal.com; ***Mr. Victor González,*** victorluisgonzalez@yahoo.com; and kbailey@acciongroup.com.

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Exhibit 1

LUMA Ex. 11.00

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

IN RE:	**CASE NO.:** NEPR-AP-2023-0003
PUERTO RICO ELECTRIC POWER AUTHORITY RATE REVIEW	

Direct Testimony of

Crystal Allen

Chief Information Officer, LUMA Energy ServCo, LLC

December 23, 2025

Summary of Prepared Direct Testimony of
CRYSTAL ALLEN
ON BEHALF OF
LUMA ENERGY LLC AND LUMA ENERGY SERVCO, LLC

Ms. Crystal Allen is Chief Information Officer at LUMA Energy ServCo, LLC. The purpose of Ms. Allen's prepared direct testimony in this proceeding is to provide the operations and maintenance ("O&M") costs and Non-Federal Capital ("NFC") costs for the IT OT and Cybersecurity Department ("IT/OT Department") in the Optimal and Constrained Budgets on behalf of LUMA Energy LLC and LUMA Energy ServCo, LLC (collectively, "LUMA").

Ms. Allen's testimony addresses the IT/OT Department's existing and projected costs for staffing, technical and professional services, materials and supplies, transportation and other miscellaneous costs to support informational technology ("IT"), operational technology ("OT") and cybersecurity services. Ms. Allen's testimony also addresses IT systems capital expenditures (including but not limited to customer information systems, accounting systems, enterprise resource management systems, workflow processes and tracking, and workforce management systems) and cybersecurity expenditures by category and justification for those expenditures.

Based on existing and projected company needs, Ms. Allen recommends for the IT/OT Department an Optimal Budget of $105.03 million for Fiscal Year ("FY") 2026, $120.87 million for FY2027, and $128.68 million for FY2028. Ms. Allen's testimony for the IT/OT Department also includes a Constrained Budget, as ordered by the Energy Bureau. Ms. Allen explains the activities and projects that would be deferred, reduced or defunded under the Constrained Budget, and identifies the impacts of deferring or delaying those activities and projects.

Finally, Ms. Allen's testimony supports the costs of the IT/OT Department that are included in LUMA's provisional rate application.

Table of Contents

I. WITNESS AND CASE INTRODUCTION

Q.1 Please state your name, business address, title and employer.

A. My name is Crystal Allen. My business address is PO Box 363508, San Juan, Puerto Rico 00936-3508. I am Chief Information Officer for LUMA Energy ServCo, LLC.

Q.2 On whose behalf are you testifying in this proceeding?

A. My testimony is on behalf of LUMA Energy LLC and LUMA Energy ServCo, LLC (hereinafter referred to as "LUMA") as part of the Puerto Rico Energy Bureau of the Public Service Regulatory Board's ("Energy Bureau") proceeding NEPR-AP-2023-0003, the Puerto Rico Electric Power Authority ("PREPA") Rate Review.

Q.3 What is your educational background?

A. I have a Bachelor of Science in computer science with a minor in criminal justice from Troy University. I completed the U.S. Army Information Assurance Security Training and U.S. Army Signal Intelligence Advanced Individual Training while serving in the U.S. Army as a Sergeant. I also attended the Yale School of Management Executive Education Women's Leadership Program, the Syracuse University Whitman School of Management's Veteran Women Igniting the Spirit of Entrepreneurship Program, and the George Washington University IT Project Management program.

Q.4 Please briefly state your professional experience and qualifications.

A. Prior to joining LUMA, I held the position of Innovation, Emerging Technology, New Business Development Lead, reporting to the Chief Zero Carbon Officer and Chief Information Officer at the Sacramento Municipal Utility District ("SMUD"), a non-profit, transmission, distribution, and generation energy utility serving two million customers in the Sacramento Valley in California. Prior to SMUD, I served as the Director of IT for the national hospitality company Firebirds, LLC, the Application Portfolio Manager for

Lowe's Home Improvement, and a Program/Business Relationship Manager for Extended Stay America. In my existing and prior roles, my responsibilities have included identifying activities necessary to implement departmental objectives and budgeting to implement those activities. Before the private sector, my technical career evolved through Military and U.S. Government Agency service.

Q.5 Are you sponsoring any exhibits with your direct testimony?

A. Along with this testimony, I am sponsoring the cost information for the IT OT and Cybersecurity Department ("IT/OT Department" or "Department") in LUMA Ex. 2.03 (Optimal Budget Workpapers) and LUMA Ex. 2.04 (Constrained Budget Workpapers). In addition, I am sponsoring the following exhibits:

- LUMA Ex. 11.01: Excerpts from the Puerto Rico Transmission and Distribution System Operation and Maintenance Agreement ("T&D OMA") executed by PREPA, the Puerto Rico Public-Private Partnerships Authority ("P3A"), and LUMA, dated as of June 22, 2020, applicable to the IT/OT Department
- LUMA Ex. 11.02: CONFIDENTIAL AND PRIVILEGED Program Brief for IT OT Cybersecurity Program (PBIT2) (FY2026)
- LUMA Ex. 11.03: Program Brief for IT OT Enablement Program (PBIT3) (FY2026)
- LUMA Ex. 11.04: Program Brief for IT OT Asset Management (PBIT4) (FY2026)
- LUMA Ex. 11.05: Program Brief for IT OT Collaboration and Analytics (PBIT5) (FY2026)

Q.6 Which documents did you review for your testimony?

A. In preparation for this testimony, I reviewed the following documents:

- T&D OMA
- Order Establishing Scope and Procedures for Rate Case, Case No. NEPR-AP-2023-0003 (Feb. 12, 2025) ("February 12th Order")
- Hearing Examiner's Order Requiring Certain Information in the Rate Case Application or Accompanying Prefiled Testimony, Case No. NEPR-AP-2023-0003 (Mar. 24, 2025)
- Approved System Remediation Plan ("SRP"), filed with the Energy Bureau on February 23, 2021, and re-filed on May 8, 2021
- LUMA Annual Budgets, Fiscal Year ("FY") 2024 to FY2026, dated May 15, 2023, and LUMA Annual Budgets, FY2025, dated May 24, 2024
- Quarterly filings summarizing expenditures and major accomplishments for the timeframe being reported on filed with the Energy Bureau in Case No. NEPR-MI-2021-0004 on November 15, 2021; February 15, 2022; May 16, 2022; September 8, 2022; November 30, 2022; February 14, 2023; May 22, 2023; August 14, 2023; November 14, 2023, February 15, 2024, May 15, 2024, August 14, 2024, November 14, 2024, and February 14, 2025, and annual filings on expenditures and major accomplishments for the timeframe being reported on filed with the Energy Bureau in Case No. NEPR-MI-2021-0004 on October 29, 2022, October 30, 2023, and October 28, 2024
- Final Resolution and Order on Performance Targets, Case No. NEPR-AP-2020-0025 (Jan. 26, 2024)

- CONFIDENTIAL AND PRIVILEGED Program Brief for IT OT Cybersecurity Program (PBIT2) (FY2026)
- Program Brief for IT OT Asset Management Program (PBIT3) (FY2026)
- Program Brief for IT OT Enablement Program (PBIT4) (FY2026)
- Program Brief for IT OT Collaboration and Analytics Program (PBIT5) (FY2026)

Q.7 Have you previously testified or made presentations before the Energy Bureau?

A. Yes. I have provided testimony under oath in support of LUMA's Initial Budgets and Related Terms of Service in Case No. NEPR-MI-2021-0004 and in a technical conference for the Data Security Plan in the matter of In Re: Review of the Puerto Rico Electric Power Authority's Data Security Plan in Case No. NEPR-MI-2020-0017.

Q.8 Briefly describe the purpose of your Direct Testimony.

A. My testimony presents the operations and maintenance ("O&M") costs and non-federal capital ("NFC") costs for LUMA's IT/OT Department in the Optimal and Constrained Budgets for FY2026 to FY2028.

Q.9 Please provide an overview of how your testimony is organized.

A. In Section II, I provide background on the IT/OT Department, LUMA's legal obligations as they pertain to information technology ("IT"), operational technology ("OT"), and cybersecurity, the programs that the IT/OT Department implements, and the current state of the IT and OT systems. In Section III, I present the proposed O&M and NFC costs for the Department in the Optimal Budget. Lastly, in Section IV, I present the proposed

O&M and NFC costs for the Department in the Constrained Budget and describe the costs and activities deferred, reduced, or defunded under that budget.

II. BACKGROUND

Q.10 Describe the functions of the IT/OT Department.

A. The IT/OT Department provides the technology foundation that powers everything LUMA does — from operating the electric grid and running the business to serving customers and protecting the public utility assets and private customer information from ever evolving cyber threats. The functions of the IT/OT Department include IT (applications and end user), OT, and cybersecurity.

IT refers to the implementation, support, and maintenance of LUMA's applications and end user technology, supporting all systems and end user devices that LUMA employees use to serve customers and deliver safe, reliable electricity. This includes solutions that manage incoming revenue and customer billing, geospatial information systems, asset management, financials, workforce management, and web and mobile communications, among others. This also includes ensuring that every LUMA employee has the end-user technology they need to do their job, including everything from the laptops used by our office workers to satellite phones used by our field crews. This area also manages LUMA's contracts and support agreements related specifically to technology services and systems, administering more than 120 technical services contracts.

OT refers to the systems and processes that directly manage the physical infrastructure of the Transmission and Distribution System ("T&D System"). As reflected in the most recent asset inventory, LUMA operates a distributed environment

with 552 network devices across six operational regions, including 103 core switches and 448 edge switches.

Cybersecurity is responsible for protecting LUMA's IT and OT ecosystem from ever increasing and evolving cyber threats. LUMA manages a significant portfolio of public utility assets, as well as the private and financial information of its nearly 1.5 million customers on the Island of Puerto Rico. Protecting the confidentiality, integrity, and availability of the company's digital and operational assets, Cybersecurity is critical to ensure the safe, secure, and reliable delivery of energy to customers.

Q.11 What are the IT/OT Department's primary areas of work?

A. The Department has four primary areas of work across its IT, OT, and cybersecurity functions: (1) grid control and operation, (2) enabling customer services, (3) supporting business operations, and (4) cybersecurity. The work that the IT/OT Department does enables the day-to-day activities of every employee at LUMA. Together, these four areas form the backbone of LUMA's ability to operate, innovate, and serve Puerto Rico safely, reliably, and securely.

Q.12 Please describe the grid control and operation area of work.

A. This area of work refers to the support and maintenance of the systems that control and monitor the electric grid in real time. This includes systems such as the Energy Management System ("EMS"), which monitors and controls generation, transmission, and distribution assets, and plays a critical role in system reliability. Also included in this area is the Outage Management System ("OMS"), which manages the dispatch of crews, load, and distribution automation devices that isolate issues and help reduce outages and system damage. Further, this work area includes telecom and network infrastructure to connect systems and field crews across Puerto Rico and supports the implementation and

operation of Automated Metering Infrastructure ("AMI") as it is rolled out across Puerto Rico. The OMS, EMS and AMI tools, among others, are mission critical to allow LUMA to deliver safe and reliable electric service at a reasonable cost.

Q.13 Please describe the enabling customer services area of work.

A. This area of work supports the technology that customers use to interact with LUMA, both for their service needs, as well as paying their bills and keeping their accounts current. This technology includes systems such as LUMA's customer website and the MiLUMA application, and workflows to report on outage tracking. This area also includes the maintenance and support of the billing system, and customer service platforms that provide representatives with tools to support customers quickly and accurately. These capabilities improve transparency, speed, and satisfaction, and support LUMA's ability to collect revenue from its customers.

Q.14 Please describe the cybersecurity area of work.

Q.15 Please describe the supporting business operations area of work.

A. This area of work supports the day-to-day activities across all business operations and departments, providing and maintaining the tools that allow LUMA employees to work effectively. This includes the Workday system, which supports employee management and payroll. It also includes the enterprise resource planning ("ERP") system that enables the Finance Department and the Procurement and Supply Chain Department to manage financial transactions, procurement processes, and inventory tracking. In addition, this area supports enterprise-wide services such as Email, SharePoint, and Teams for communication and collaboration, as well as mobile devices, printers, and Wi-Fi across all LUMA locations.

Q.16 Describe the Department's process for delivering and managing systems for LUMA's business operations?

A. The IT/OT Department delivers and manages LUMA's core systems by overseeing the full technology lifecycle – from planning and implementation to security, support, and continuous improvement. The Department oversees the full technology lifecycle in seven phases: (i) plan and align, (ii) design and architect, (iii) procure and contract (led by the Procurement and Supply Chain Department with the IT/OT Department acting as

subject matter experts), (iv) implement and integrate, (v) secure and control access, (vi) support users, and (vii) operate and improve.

Q.17 Are the functions of the Department required by the T&D OMA?

A. Yes, the functions of the Department are required by several provisions of the T&D OMA and support LUMA's role of managing and maintaining all assets of the T&D System.[1] LUMA Ex. 11.01 identifies the T&D OMA provisions applicable to the Department, including Section 4.2(h) requiring LUMA to develop and maintain a Data Security Plan,[2] and Section 13.3 requiring LUMA, subject to the SRP, to comply with the Data Security Plan and all requirements of Applicable Law regarding data security, cybersecurity and information security, as well as requiring LUMA to establish and maintain backup and limit the risk of any virus or other harmful code.[3] Also relevant are the T&D OMA requirements that LUMA update the Data Security Plan to be consistent with industry standards and that the Data Security Plan incorporate reasonable and appropriate organizational, administrative, physical and technical measures to maintain the security of and protect the internal and external integrity of the System Information and related Information Systems against any unlawful or unauthorized use, processing, destruction, loss, alteration, disclosure, theft or access.[4] In addition, Annex I of the T&D OMA states that LUMA is responsible for "maintaining and improving information

[1] T&D OMA, Section 5.1, at 62; Annex I, Section II(A), at I-4.

[2] T&D OMA, Section 4.2(h), at 46-47.

[3] T&D OMA, Section 13.3, at 119-120.

[4] *Id.,* Section 13.3(b), at 120.

technology systems"[5] and "providing information technology systems maintenance support and improvements."[6] The Department also supports LUMA's duties to maintain the T&D System with due regard for safety.[7]

Q.18 Are the functions of the Department related to public policy or legal requirements?

A. Yes. The Department's functions further policy objectives and requirements of Act 17-2019. For example, Section 1.5 of the Act 17 declares that public policy of the Government of Puerto Rico requires "that every electric power service company design mitigation options adapted to their information technology networks and operations, which shall include the adoption of specific cyber security measures to effectively prevent and manage cyberattacks"[8] and "[t]o ensure the security and reliability of our electric power infrastructure by using modern technologies that promote inexpensive and efficient operations and allow for the integration and dissemination of renewable sources."[9] Similarly Section 1.6 of Act 17-2019 "require[s] electric power service companies to adopt cybersecurity measures to effectively prevent and manage cyberattacks that may affect information technology networks and operations."[10] Also, Section 1.10 of Act 17 provides that "[e]lectric power service companies that render any service in Puerto Rico shall . . . provide and allow for the provision of reliable, clean,

[5] T&D OMA, Annex I, Section I(B), at I-2.

[6] *Id.*, Section II(E), at I-5.

[7] *Id.*, Section VIII(C), at I-12-I-13.

[8] Act-17, 2019, Section 1.5(8)(d), 22 LPRA § 1141d (2025).

[9] *Id.*, Section 1.5(9)(a), 22 LPRA § 1141d (2025).

[10] *Id.*, Section 1.6(6) 22 LPRA § 1141e (2025).

efficient, resilient, and affordable electric power contributing to the wellbeing and sustainable development of the people of Puerto Rico."[11]

Q.19 Is the Department responsible for implementing any programs?

A. Yes. The Department implements the IT OT Cybersecurity Program, IT OT Enablement Program, IT OT Asset Management Program, and IT OT Collaboration and Analytics Program.

Q.20 Briefly describe the IT OT Cybersecurity Program.

A. The IT OT Cybersecurity Program is designed to ensure the protection of IT and OT assets from both internal and external threats. This program is essential for maintaining a safe, secure, reliable, and resilient power distribution system. [redacted]

[11] *Id.,* Section 1.10(a), 22 LPRA § 1141i (2025).

More detail on this program is provided in the Program Brief for IT OT Cybersecurity Program (PBIT2) (FY2026) in LUMA Ex. 11.02.

Q.21 Briefly describe the IT OT Enablement Program.

A. The IT OT Enablement Program strengthens LUMA's ability to manage and deliver technology services by implementing industry-standard processes, tools, and practices. The program focuses on improving end-user device management, service management, project management, enterprise architecture, and data governance. More detail on this program is provided in the Program Brief for IT OT Enablement Program (PBIT4) (FY2026) in LUMA Ex. 11.03.

Q.22 Briefly describe the IT OT Asset Management Program.

A. The IT OT Asset Management Program addresses critical gaps in LUMA's technology infrastructure by replacing end-of-life hardware, software, and databases, and establishing formal asset management practices aligned with industry standards. This program ensures that mission-critical systems remain secure, vendor-supported, and resilient, helping LUMA deliver reliable service while reducing operational,

cybersecurity, and safety risks. In addition, this program introduces cloud-based technologies. More detail on this program is provided in the Program Brief for IT OT Asset Management Program (PBIT3) (FY2026) in LUMA Ex. 11.04.

Q.23 Briefly describe the IT OT Collaboration and Analytics Program.

A. The IT OT Collaboration and Analytics Program focuses on improving how LUMA manages enterprise data, automates business processes, and enables cross-functional collaboration and decision-making through modern analytics and information management tools. The program addresses critical gaps in enterprise content management, business process modeling, performance metric reporting, and data governance. It includes the upgrade or replacement of outdated collaboration systems, implementation of a centralized document repository, Data Lake expansion, and establishment of IT/OT performance metrics aligned with regulatory and operational needs. This program also implements tools to standardize workflows, support internal communications, and enhance access to knowledge across departments—empowering employees with the real-time information needed to work safely, efficiently, and systematically. Once completed, the program will provide a centralized analytics environment, integrated reporting systems, and a sustainable foundation for regulatory reporting, project oversight, and customer service enhancement. These improvements will directly support LUMA's strategic goals, including operational excellence, customer satisfaction, and the safe execution of utility services. More detail on this program is provided in the Program Brief for IT OT Collaboration and Analytics Program (PBIT5) (FY2026) in LUMA Ex. 11.05.

Q.24 What challenges does the Department anticipate in FY2026 to FY2028?

A. The IT/OT Department anticipates several key challenges over the next three fiscal years. As shown in Table 1 below, [redacted]

[redacted]

[redacted]. In addition, as LUMA continues to modernize the T&D System and improve Operations and Maintenance Services ("O&M Services"), the adoption of digital tools has increased. This digital transformation, while beneficial, has also expanded LUMA's exposure to cyber threats. [redacted]

[redacted]

[redacted] Addressing these challenges requires not only technological upgrades but also ensuring the Department has the workforce and talent to manage technology projects across more than 200 anticipated initiatives.

Table 1. Equipment Considered End of Life	
Equipment	**% of End of Life**
IT Equipment	
[redacted]station	[redacted]
[redacted]	[redacted]
OT Equipment	
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
Network Equipment	
[redacted]	[redacted]
IT Systems/Infrastructure/Servers	
[redacted]	[redacted]
[redacted]	[redacted]

Q.25 Does the IT/OT Department have a long-term plan to meet these challenges?

A. Yes. While technologies are rapidly changing and advancing, the IT/OT Department maintains a long-term plan. As part of LUMA's budgeting process, the organization develops a Long-Term Investment Plan ("LTIP"), which is a long-term 10-year outlook. The IT/OT Department's contributions to this plan include planned activities to account for resource availability, supply chain constraints, infrastructure aging, and systematic underfunding. In part, the Department's planned activities in the LTIP are intended to manage IT equipment and reinvestment needs to avoid repeating large-scale emergency spending in future periods.

III. OPTIMAL BUDGET

Q.26 Describe the IT/OT Department's Optimal Budget for FY2026 to FY2028.

A. The IT/OT Department requests a total Optimal Budget of $105.03 million for FY2026, representing a $59.13 million increase over the FY2025 budget. The Department also projects a budget increase to $120.87 million in FY2027 and $128.68 million in FY2028. This Optimal Budget is not aspirational. The Optimal Budget is a strategically defined, operationally necessary funding level required to address critical infrastructure and system deficiencies, deliver on customer-facing and safety-related priorities that have been delayed due to systematic underinvestment, and meet regulatory and contractual obligations, including in the T&D OMA, industry best practices for service management and asset lifecycle, Act 17 and Act 57 public policy requirements, and LUMA's internal commitments to grid reliability, disaster recovery, and customer service. The Optimal Budget enables LUMA to modernize outdated systems, reduce operational risk, improve cybersecurity to protect critical utility infrastructure and the personal and financial information of our customers, and support more than 200 initiatives that directly or indirectly impact grid performance, workforce enablement, and customer experience. **Error! Reference source not found.** provides a detailed breakdown of the Department's FY2025 budget and requested budgets for FY2026 to FY2028. This cost information is also included in LUMA Ex. 2.03, in the tab titled, "Support Services," and in the columns titled, "ITOT."

Table 2. Summary of IT OT and Cyber Department Business Plan FY2026 to FY2028								
	FY2025 Approved Amount ($MM)		FY2026 Amount Required ($MM)		FY2027 Amount Required ($MM)		FY2028 Amount Required ($MM)	
Program/Activity	**O&M**	**NFC***	**O&M**	**NFC***	**O&M**	**NFC***	**O&M**	**NFC***
Staffing	$9.1	-	$15.71	-	$16.71	-	$17.93	-
Materials and Supplies	$0.2	-	$0.20	-	$0.21	-	$0.22	-
Transportation, Per Diem, and Mileage	-	-	$0.14	-	$0.14	-	$0.14	-
Technical and Professional Services **	$30.5	-	$53.55	-	$71.53	-	$84.43	-
Utilities & Rent	$0.1		$0.14		$0.14		$0.14	
Miscellaneous Expense	($0.9)	-	$0.16	-	$0.17	-	$0.17	-
IT OT AND CYBER SUBTOTAL	**$39.0**	**$6.9**	**$69.90**	**$35.13**	**$88.90**	**$31.97**	**$103.04**	**$25.64**
IT OT AND CYBER TOTAL	**$45.9**		**$105.03**		**$120.87**		**$128.68**	
***Note 1: Detailed breakout of NFC budget by individual project is presented in Table 6. ** Note 2: "Technical and Professional Services" includes IT Services and Professional & Technical Outsourced Services.**								

Q.27 How did the IT/OT Department develop its Optimal Budget?

A. Consistent with the methodology used across all other LUMA departments, the IT/OT Department followed a disciplined, bottom-up budget development process for the O&M and NFC budgets for FY2026 through FY2028. The Department developed the budget at the cost center and expense type level for O&M and at the project level for NFC, ensuring every cost item being proposed was grounded in operational need. Each IT/OT Department function identified initial system needs without funding constraints to capture the full scope of technical, security, and operational requirements. Then, each IT/OT Department function prioritized system needs that eliminate technology related reliability risks, addressed T&D System equipment deficiencies, supported emergency response readiness, and corrected legacy underinvestment. Each IT/OT Department function also ensured O&M and NFC requests were consistent with the LTIP and accounted for staffing shortages and historical overtime challenges.

Q.28 Did the IT/OT Department Optimal Budget undergo review?

A. Yes, the IT/OT Department Optimal Budget underwent multiple rounds of review by team leads, department heads, and LUMA's Executive Leadership Team to validate assumptions, align with business priorities, ensure projects do not expand beyond intended plan, and defer non-critical expenses where possible while maintaining compliance and continuity of operations.

A. Proposed O&M Costs and Activities

Q.29 Describe the O&M costs proposed in the Optimal Budget.

A. The IT/OT Department proposes O&M costs of $69.90 million in FY2026, increasing to $88.90 million in FY2027 and $103.04 million in FY2028. Technical and Professional Services and Staffing costs are the primary components of the Department's O&M costs.

Q.30 What types of costs are included in Technical and Professional Services?

A. Technical and Professional Services includes the technical and professional service agreements that the Department relies on to ensure the continuity, reliability, security, and efficiency of technology systems that directly support customer service, grid operations, and regulatory compliance. These services fall within one of two contract types: long-term service agreements and short-term specialized contracts for technical and professional services. Table 3 below provides a summary of the Technical and Professional Services by category.

Table 3. Breakdown of IT OT and Cyber Technical and Professional Services				
Type of Service by Function	**FY2025**	**FY2026**	**FY2027**	**FY2028**
IT OT Long-Term Service Agreements Count / Value	[redacted]	[redacted]	[redacted]	[redacted]
Cyber Long-Term Service Agreements Count / Value	[redacted]	[redacted]	[redacted]	[redacted]
IT OT Short Term Specialized Contracts for Professional and Technical Services Count / Value	[redacted]	[redacted]	[redacted]	[redacted]
Cyber Short Term Specialized Contracts for Professional and Technical Services Count / Value	[redacted]	[redacted]	[redacted]	[redacted]
Total	**167 / $33,762,836**	**242 / $53,551,230**	**220 / $71,556,984**	**225 / $84,473,660**

Q.31 What types of long-term service agreements are in the IT/OT Department Technical and Professional Services costs?

A. Long-term service agreements include system licenses, software maintenance, hardware support, managed services, platform expertise, and ongoing system health monitoring. [redacted]

[redacted]

Q.32 How did the IT/OT Department project the cost for the long-term service agreements?

A. The IT/OT Department projected the cost for long-term service agreements by using a bottom-up forecasting approach based on existing service agreement costs, renewal schedules, and historical utilization rates; vendor quotes and industry benchmarks (such as, Gartner pricing data); and anticipated adjustments to the service scope to reflect changes in new systems, user growth, and reductions in professional services as internal delivery teams mature. Each contract manager conducted a contract-by-contract evaluation of current and anticipated needs to support LUMA operations and grid modernization. In addition, the prices used for the projections are subject to competitive procurement processes. All applicable services and vendor engagements are subject to competitive

procurement processes in accordance with LUMA's procurement policies and regulatory requirements.

Q.33 What types of short-term specialized contracts are in the IT/OT Department Technical and Professional Services costs?

A. Short-term specialized contracts for Technical and Professional Services support time-sensitive milestone-based projects, such as three (3) to six (6) month sprints or design-build engagements. These include those contracts that support implementation, system integration, data migration, architecture design, cybersecurity audits, and workforce training. Short-term specialized services are essential to safely deploy new technologies, enhance existing tools, and support modernization efforts like the Advanced Distribution Management System ("ADMS"), EMS, and AMI initiatives.

Q.34 How did the IT/OT Department project the cost for the short-term specialized technical and professional services?

A. The IT/OT Department projected short-term specialized technical and professional services costs using a bottom-up approach informed by evaluating actual costs and utilization patterns for comparable services over the last 24 months; mapping specialized skills (such as, cybersecurity, enterprise architecture, system integration) to the scope of upcoming initiatives in the FY2026 to FY2028 portfolio; applying current market rates based on vendor quotes, past RFP responses, and pricing data from sources such as Gartner and Federal Emergency Management Agency ("FEMA") documentation. In addition, as I explained earlier in my testimony, the prices used for the projections are subject to competitive procurement processes.

Q.35 Why are the costs for Technical and Professional Services increasing?

A. Technical and Professional Services costs are primarily increasing because LUMA is adding business-critical applications or systems that are required to maintain core business

operations and grid reliability including systems for outage management, grid control, and real-time restoration updates; Customer Care and Billing platforms; Workforce Management System; emergency response; and AMI deployments. As shown in Table 3 earlier in my testimony, LUMA will have approximately 225 business-critical applications in FY2028. Each of these applications requires additional service agreements to ensure proper licensing, maintenance, and vendor support. Technical and Professional Services costs are also increasing as the team is negotiating multi-year contracts to reduce costly one-year renewals and maintain a more stable multi-year renewal model.

Q.36 How are technology projects allocated to the IT/OT Department?

A. Technology projects are typically driven by business needs and are funded by business department budget allocations (i.e., the cost of implementing business technology projects is absorbed by the relevant LUMA department). Once projects are final, usually in year two, following their implementation, all support, maintenance, and licensing costs shift ownership to the IT/OT Department budget.

Q.37 What are the potential risks of not funding these Technical and Professional Services?

A. The risks of not funding existing and planned Technical and Professional Services include compromising core operations including outage management, billing, cybersecurity protection, customer communication, and renewable energy integration. If IT systems do not have support, there could be longer outages, delayed service restoration, degraded cybersecurity posture, and slower response to regulatory and customer needs. As systems become obsolete, they no longer receive patches and updates to keep secure. This will continue to degrade our cybersecurity posture and could expose the T&D System to

cyberattacks, including but not limited to data breaches of confidential utility and customer information.

Q.38 What costs are included in Staffing?

A. Staffing costs include compensation for the Department's 119 current employees and an anticipated workforce expansion of 166 individuals, which includes the costs for 112 individuals to lead our sixteen (16) Enterprise Delivery Teams as well as the wages for the Department's internship program.

Q.39 What is the current staff makeup of the IT/OT Department?

A. Of the Department's current 119 employees, 108 employees support the IT/OT functions and [redacted] support the Cybersecurity function. Table 4 below summarizes the Department's current headcount. This current staffing level reflects the minimal structure required to sustain day-to-day operations, application support, infrastructure management, and essential cybersecurity monitoring for a rapidly growing portfolio of more than 200 business-critical systems. The Department has absorbed significant operational and delivery responsibilities with this lean headcount, relying heavily on external professional services to meet business demand.

Table 4. Current Department Employee Summary

Department Function	FY2025 Employee
IT	[redacted]
OT	[redacted]
Cyber	[redacted]
Total	**119**

Q.40 When does the IT/OT Department intend to add 166 new hires, and for what Department function?

A. Table 5 below provides a breakdown of proposed new hires by department function and by fiscal year. The IT/OT Department plans to hire 166 employees over the three fiscal years with 158 employees added in FY2026, three (3) employees added in FY2027, and five (5)

employees added in FY2028. Of the 158 planned new hires in FY2026, 112 will make up the enterprise delivery teams, [redacted] new hires will support IT and OT functions, and [redacted] interns will support both IT OT and Cybersecurity. The three (3) employees and [redacted] employees added in FY2027 and FY2028, respectively, will support the IT and OT functions. These hires are critical to correcting systematic underfunding, reducing reliance on external consultants, and building internal capacity to deliver active critical and business technology initiatives that will support grid modernization, operational efficiency, cybersecurity readiness, and enhanced customer service for Puerto Rico.

Table 5. Proposed New Hires

Department Function	FY2026 Proposed New Hires and Resources	FY2027 Proposed New Hires	FY2028 Proposed New Hires
IT OT			
Operational Support of IT Systems	[redacted]	-	-
Service Management & Infrastructure	[redacted]	-	-
OT Systems	[redacted]	[redacted]	[redacted]
Network Operations	[redacted]	-	-
IT/OT Business Operations	[redacted]	-	-
Subtotal IT/OT	[redacted]	[redacted]	[redacted]
Cyber	[redacted]	-	-
IT/OT Cyber Interns	[redacted]	-	-
Subtotal Cyber	[redacted]	-	-
Enterprise Delivery Team	[redacted]	-	-
Total	**158**	**3**	**5**

Q.41 Why is the IT/OT Department hiring [redacted] new employees to support Operational Support of IT Systems in FY2026?

A. [redacted] of the new employees will provide operational support for IT Systems. The Department supports over 200 critical applications, including Customer Care & Billing, MiLUMA Portals, AMI, Emergency Response Tools, and Asset Management Systems. We determined the need for these hires by performing a capacity analysis based on current

demand and predicted demand to support incoming services. We are strategically building this team to acquire knowledge and start transitioning support from vendors to our internal resources for key systems. This move will significantly reduce our dependency on vendors in the future, ensuring greater control and efficiency within our operations.

Q.42 Why is the IT/OT Department hiring [redacted] new employees to support Service Management Infrastructure in FY2026?

A. [redacted] of the new hires will be added to the Service Management Infrastructure support team, supporting contract governance for hundreds of vendors and value-added reseller agreements, ensuring timely renewals and regulatory compliance. Specifically, these individuals will be responsible for ensuring that contracts are renewed on time and that renewal goes through the necessary legal, compliance, and insurance reviews to support that renewal. We determined the need for these hires by performing a capacity analysis based on current demand and predicted demand to support incoming services.

Q.43 Why is the IT/OT Department hiring [redacted] new employees to support OT systems in FY2026?

A. OT Systems requires [redacted] new hires to provide critical operational support for growing field technology systems, including Distribution Automation, Feeder Management, and AMI. We determined the need for these hires by performing a capacity analysis based on current demand and predicted demand to support incoming services.

Q.44 Why is the IT/OT Department hiring [redacted] new employees to support Network Operations in FY2026?

A. Network Operations requires [redacted] new hires to support growing business needs. As LUMA grows there is a need to build out the Network Operations team to support the

continuous monitoring, management, and maintenance of LUMA's network infrastructure to ensure its reliability, security and optimal performance.

Q.45 Why is the IT/OT Department hiring [redacted] new employees to support IT OT Business Operations in FY2026?

A. IT/OT Business Operations requires [redacted] new hires to manage the intake, prioritization, and alignment of new technology requests from business units. We determined the need for these hires by performing a capacity analysis based on current demand and predicted demand to support incoming services.

Q.46 Why is [redacted] hire needed to support Cybersecurity in FY2026?

A. [redacted]

Q.47 What are Enterprise Delivery Teams and why is the IT/OT Department hiring 112 individuals to support those teams in FY2026?

A. Enterprise Delivery Teams are sixteen (16) teams that will execute active business-driven technology initiatives across 84 projects. LUMA intends to try and hire local resources for these teams but understands this may require the department to source contractors. If this is the case, then a budget amendment will be done to reallocate the funds for Technical and Professional Services. These initiatives are critical to enabling clean energy adoption, improving grid reliability, and modernizing customer-facing systems in alignment with Act 17-2019 and LUMA's strategic goals. These teams will build internal execution capability for large, complex, and cross-functional technology programs; reduce

dependency on higher-cost, ad hoc professional services; improve delivery speed, accountability, and stakeholder alignment; and ensure LUMA can meet regulatory and customer commitments without increasing permanent headcount. This delivery model enables LUMA to respond to evolving energy, regulatory, and operational demands while maintaining flexibility and fiscal discipline. Without these teams, critical projects would be delayed or canceled, putting grid resiliency, customer service improvements, and public policy objectives at risk.

Q.48 Is LUMA capable of onboarding 112 individuals in FY2026?

A. Yes. As part of our bottom-up budgeting process, the Human Resources Department conducted an analysis to confirm LUMA would have the capability of onboarding the 112 individuals supporting the Department's Enterprise Delivery Teams.

Q.49 How many interns will the Department hire?

A. LUMA also proposes an annual paid internship program [redacted] interns will support the IT and OT functions, and [redacted] will support the Cybersecurity function. Through the internship program, LUMA will develop local talent and reduce dependence on seconded labor, ensuring LUMA's workforce is equipped to sustain critical utility operations.

Q.50 How will the new hires benefit customers?

A. Internal hires are cost effective. Without internal support, LUMA would have to rely on more costly technical and professional services or seconded employees. Over time, these hires will reduce costly dependence on professional services contracts, resulting in significant savings and efficiency gains for LUMA and long-term financial benefits for the people of Puerto Rico. By growing the department, LUMA enhances service reliability, customer data protection, and operational efficiency. OT experts ensure safe and efficient

power systems, resulting in fewer outages and a more dependable grid. IT teams maintain digital tools for outage management and customer communications, while cybersecurity professionals protect against data breaches with robust security measures.

Q.51 If internal hires are more cost effective, will there be a cost reduction in Technical and Professional Services?

A. The Department's goal is to develop its internal staff to reduce the need to outsource certain tasks or augment staff, and in turn, reduce spending on Technical and Professional Services that do not require specialized expertise. Achieving this goal, however, is not immediate.

Q.52 What types of costs are included in Materials and Supplies?

A. Materials and Supplies includes general maintenance materials tools for the Department such as cabling fiber, racks for security, IT infrastructure tapes and other general office supplies. Projections were developed by each manager based on historical analysis in FY2025 with a Consumer Price Index increase of 3%.

Q.53 What types of costs are included in Utilities & Rent?

A. Utilities & Rent includes rent expenses for the Department's one seconded employee which was project using historical information.

Q.54 What types of costs are included in Miscellaneous Expense?

A. Miscellaneous Expense includes costs for the Department's professional and trade conventions as well as internal training. These were projected using historical information.

B. <u>Proposed NFC Costs and Activities</u>

Q.55 Describe the NFC costs proposed in the Optimal Budget.

A. As shown in Table 6 below, the IT/OT Department proposes NFC costs of $35.13 million in FY2026, $31.97 million in FY2027, and $25.63 million in FY2028. The NFC funds support the IT/OT Department's implementation of the IT OT Cybersecurity, IT OT

Enablement, IT OT Asset Management, and IT OT Collaboration and Analytics Programs that I describe earlier to satisfy LUMA's obligations under the T&D OMA and Act 17-2019 and to align with industry best practices. These investments are essential to protect grid reliability and security, enable faster, more efficient delivery of customer-facing initiatives, reduce long-term operational costs by decreasing dependence on professional services, and strengthen Puerto Rico's energy transformation and resilience efforts for the long-term benefit of all customers.

Table 6. Summary of IT OT and Cybersecurity Department NFC Funding Request for FY2026 to FY2028

ID	Program Name	Proposed NFC Budget			FY2025 NFC Budget
		FY2026	FY2027	FY2028	
PBIT2	IT OT Cybersecurity	[redacted]	[redacted]	[redacted]	[redacted]
PBIT3	IT OT Enablement	[redacted]	[redacted]	[redacted]	[redacted]
PBIT4	IT OT Asset Management	[redacted]	[redacted]	[redacted]	[redacted]
PBIT5	IT OT Collaboration and Analytics	[redacted]	[redacted]	[redacted]	[redacted]
TOTAL		$35.13	$31.97	$25.64	$6.9

Q.56 How did the Department project and verify NFC costs?

A. Similar to O&M, NFC forecasts were built on pricing assumptions reflecting FY2024 actual spending; current vendor proposals, known pricing models, and industry norms; FY2025 run rates; and forecasted needs by initiative. These were aligned to enterprise transformation goals and system remediation priorities. Internal subject matter experts assessed scope, complexity, and timing of major initiatives such as endpoint modernization, software replacements, and cloud enablement. Procurement controls and contract team reviews were performed, including competitive procurement processes as well as documentation of proper justifications for procurement and review by governance bodies.

Q.57 Please generally describe the NFC investment the Department is proposing for the IT OT Cybersecurity Program for FY2026.

A. [redacted]

[redacted]

Q.64 What IT OT Cybersecurity Program projects does the Department propose to fund in FY2027 and FY2028?

[redacted]

[redacted].

Q.65 What are the risks of not funding the planned IT OT Cybersecurity Program projects?

A. [redacted]

Q.66 Please generally describe the NFC investment the Department is proposing for the IT OT Enablement Program for FY2026, FY2027, and FY2028.

A. The IT/OT Department proposes to invest NFC funds in the End User Devices Management project within the Enablement Program. The End User Devices Management project is a critical investment in the tools LUMA's workforce relies on to perform outage response, customer service, grid monitoring, and daily operations.

Q.67 Why are NFC funds needed for the End User Device Management project?

A. NFC funds are needed because the project has been significantly underfunded in previous years and, as I demonstrate in Table 1 above, [redacted]. The proposed investment allows LUMA to address backlog, stabilize equipment availability, and transition to a predictable, planned replacement cycle of [redacted]

Q.68 For what Enablement Program activities will NFC funds be invested in FY2026?

A. The Department proposes to invest $6.09 million in NFC funds for the IT OT Enablement Program in FY2026. The NFC funds will be used to implement a large-scale replacement

of end-of-life laptops, docking stations, and monitors across all operational and corporate teams, including field operations, customer care, engineering, and outage restoration teams who rely on reliable equipment for critical, time-sensitive work. The large-scale replacement will be to address urgent gaps caused by systematic underfunding and ensure employees are equipped to respond rapidly to outages, manage customer service requests, and perform key business functions without disruption.

Q.69 For what Enablement Program activities will NFC funds be invested in FY2027?

A. The Department proposes investing $4.03 million in NFC funds in FY2027 to continue the equipment refresh cycle to maintain a reliable inventory of laptops and monitors and to support growth and technology expansion initiatives. This funding will help stabilize device replacement needs, reducing the risk of mass failures or unplanned emergency purchases that could impact cost and service continuity.

Q.70 For what Enablement Program activities will NFC funds be invested in FY2028?

A. The Department proposes investing $1.90 million in NFC funds in FY2028. This funding will complete the refresh cycle, allowing LUMA to enter a predictable, planned replacement rhythm aligned with lifecycle best practices. [redacted]

[redacted]

Without this funding, there is a risk of system outages, increased costs, and loss of public

trust. [redacted]

[redacted]

Q.71 How will customers benefit from replacement of end-user devices and the implementation of lifecycle replacement process?

A. Customers will benefit from the workforce productivity that will result from replacing end-user devices that have passed their lifecycle. If end-user devices are replaced on a predictable and planned cycle, LUMA's workforce will have the tools needed to reliably and expeditiously manage field operations, outage response, and customer service. Outage response and restoration as well as customer issue resolution will be faster. In addition, updated end-user equipment will be able to support new tools, applications, and cybersecurity standards essential to grid modernization and customer service excellence.

Q.72 Please generally describe the NFC investment that the Department is proposing for the IT OT Asset Management Program for FY2026, FY2027, and FY2028.

A. The IT OT Asset Management program focuses on replacing aging infrastructure, scaling systems to meet growing operational demands, and enabling modernization efforts that directly impact LUMA's ability to deliver safe, reliable, and efficient service to customers.

[redacted]

[redacted] These investments are necessary to maintain grid reliability, system performance, and cybersecurity posture.

Q.73 Will the IT/OT Department implement a lifecycle replacement program as part of the IT OT Asset Management Program?

A. Yes. The IT/OT Department will implement an investment lifecycle to correct critical underinvestment that has left key infrastructure at risk. By making large, targeted investments now, LUMA will stabilize its IT/OT infrastructure and transition to a predictable asset lifecycle model, reducing future spikes in investment needs and avoiding operational disruptions. [redacted]

[redacted]

Q.74 Please describe the proposed investments for the IT OT Asset Management Program in FY2026.

A. In FY2026, the Department is proposing to invest $18.10 million in NFC funds under the IT OT Asset Management Program. These investments fall into three strategic categories: Infrastructure Replacement and Stability; Technology Modernization; and Security and Site Improvement. Replacing unsupported technology reduces the risk of prolonged system outages, improves field operations, and ensures continued vendor support and compliance.

Q.75 What types of projects fall within Infrastructure Replacement and Stability?

A. The Infrastructure Replacement and Stability category include projects that address the urgent need to replace aging and unsupported systems that pose operational and cybersecurity risks. Specifically, these projects include [redacted]

[redacted]

Q.76 Please describe the proposed investments for Infrastructure Replacement and Stability.

A. Under Infrastructure Replacement and Stability, among other investments, the Department is proposing to invest [redacted]

[redacted]

Q.77 What types of projects fall within Technology Modernization?

A. The Technology Modernization category includes initiatives to introduce cloud-based, scalable systems and platforms to improve performance, workforce productivity, and long-term maintainability. Those projects specifically are the [redacted],

[redacted]

[redacted]

[redacted]

Q.78 Please describe the proposed investments for Technology Modernization.

A. Under Technology Modernization, among other investments, the Department is proposing to invest [redacted]

[redacted]

Q.79 What types of projects fall within Security and Site Improvement?

A. The Security and Site Improvement category includes projects that support risk mitigation, improved visibility, and physical/cybersecurity posture. Specifically, these projects are [redacted]

[redacted]

Q.80 Please describe the proposed investments for Security and Site Improvement.

A. Under Security and Site Improvement, among other investments, the Department is proposing to invest [redacted]

[redacted]

[redacted]

[redacted]

Q.81 Please describe the proposed investments for the IT OT Asset Management Program in FY2027.

A. In FY2027, the Department is proposing to invest $20.9 million in NFC funds in three types of categories for the Asset Management Program: Continued Infrastructure Modernization, Operational Enablement, and Cybersecurity and Compliance. I will highlight some of the more significant investments for each category. Under Continued Infrastructure Modernization, [redacted] Under Operational Enablement, the Department proposes investing $10.1 million to scale the Workforce Management System investment to optimize field crew allocation, improve service delivery, and reduce restoration times, and proposes investing $2.6 million in the Contract Management System expansion to improve vendor oversight, ensure timely project delivery, and control costs. Under Cybersecurity and Compliance, [redacted].

Q.82 Please describe the proposed investments for the IT OT Asset Management Program for FY2028.

A. In FY2028, the Department is proposing to invest $18.66 million in NFC funds in two types of categories for the IT OT Asset Management Program: Sustaining Infrastructure Investments and System Enhancements and Final Developments. I will highlight some of the more significant investments within these categories. Under Sustaining Infrastructure Investments, the Department proposes to invest [redacted]

[redacted]. Under System Enhancements and Final Deployments, the Department proposes investing $5.1 million to complete the phases for the Workforce Management System to enable optimized dispatching and customer project management, $123,000 to complete implementation of the Contract Management System, and $323,000 in compliance software to close gaps in vendor oversight and regulatory readiness.

Q.83 What are the risks to the T&D System if the IT OT Asset Management Program projects are not funded?

A. If the IT OT Asset Management Program is not funded, LUMA may not have the funding to replace obsolete IT/OT infrastructure which increases the risk that there will be a failure of critical systems that manage and control the grid. This could result in complete grid inoperability during outages or emergencies, leaving entire regions without timely restoration capabilities, or grid instability due to outdated systems and unsupported hardware, increasing the likelihood of unplanned outages and prolonged service interruptions. Both risks would directly affect the reliability metrics System Average Interruption Frequency Index ("SAIFI"), System Average Interruption Duration Index ("SAIDI"), and Customer Average Interruption Duration Index ("CAIDI"). In addition, there is a risk that critical projects to modernize IT and OT systems will be delayed, including the telecommunications backbone rebuild as well as upgrades to and replacement of the feeder management systems, SCADA system, AMI, Distribution Automation, ADMS, OMS, and service suite enhancements — all of which directly improve outage management, restoration times, and customer communications.

Q.84 Please generally describe the NFC investment the Department is proposing for the IT OT Collaboration and Analytics Program for FY2026, FY2027, and FY2028.

A. As I describe above, the IT OT Collaboration and Analytics Program focuses on improving how LUMA manages enterprise data, automates processes, and enables decision-making across the organization. The IT OT Collaboration and Analytics Program has been significantly underfunded, mostly recently receiving only $57,000 of NFC funds in FY2025. Underinvestment in the IT OT Collaboration and Analytics Program has resulted in inefficiencies, manual processes, and risks of data inconsistency. The proposed NFC funding corrects these gaps and establishes a sustainable model for future data management, automation, and collaboration. Specifically, the IT/OT Department is proposing to invest NFC funds in seven (7) projects: Enterprise Document Management System, Record Retention/Data Management, Data Strategy and Governance, Data Lake Expansion,[12] [redacted], and Processing Mining and Automation Tools Implementation. The IT/OT Department proposes to invest $7.75 million in FY2026, $6.67 million in FY2027, and $4.71 million in FY2028. While these front-loaded investments are necessary to catch up, future years will benefit from lower, more stable investments that support sustainable operations and regulatory compliance. The initiative focuses on centralizing and securing critical documentation for FEMA and regulatory compliance, streamlining workflows to minimize delays and errors, and tracking performance metrics across various operations.

[12] A data lake is a centralized repository designed to store, process, and secure large amounts of data.

Q.85 What NFC investments would be made in FY2026 for the IT OT Collaboration and Analytics Program?

A. In FY2026, the Department would invest $7.75 million in NFC funds for the IT OT Collaboration and Analytics Program projects. For the Enterprise Document Management System, the Department would invest $2.11 million to establish a centralized, secure document repository to manage critical regulatory, operational, and customer-facing documents, enabling faster access and better control. For the Record Retention/Data Management program, the Department would invest $266,800 to standardize and automate record retention processes to comply with legal and regulatory reporting requirements and protect sensitive customer and operational data. For the Data Strategy and Governance, the Department would invest $863,800 to develop governance frameworks to ensure that data used in reporting, customer billing, outage tracking, and decision-making is accurate, reliable, and timely. For Data Lake Expansion, the Department would invest $3.11 million to expand LUMA's centralized data storage and analytics environment to support real-time reporting for customer service, outage management, asset monitoring, and financial oversight. For the Process Mining and Automation Tools Implementation project, the Department would invest $400,000 to develop tools to identify inefficiencies in customer processes, outage response workflows, and internal operations, enabling automated, faster service delivery. Lastly, the Department would invest [redacted] This investment supports compliance with key regulatory reporting obligations under the T&D OMA, including performance metrics such as SAIDI, SAIFI, and CAIDI, as well as customer complaint tracking and other data reporting required by Act 17-2019.

Q.86 What NFC investments would be made in FY2027 for the IT OT Collaboration and Analytics Program?

A. In FY2027, the Department would invest $6.67 million in NFC funds for the IT OT Collaboration and Analytics Program projects. For the Enterprise Document Management System project, the Department would invest $2.12 million to scale deployment across additional departments, ensuring complete coverage of critical records. For the Record Retention/Data Management and the Data Strategy and Governance projects, the Department would invest $830,800 and $118.300, respectively, to continue to refine governance processes, ensuring ongoing accuracy in customer and operational data reporting. For Data Lake Expansion, the Department would invest $2.12 million to support additional data sources and business units such as data supporting Distributed Energy Resources and Battery Energy Storage Systems, new applications and [redacted] enabling advanced analytics that inform capital project prioritization and customer service enhancements. For the Process Mining and Automation Tools Implementation project, the Department would invest $700,000 to expand use of automation to streamline regulatory filings, project tracking, and outage management reporting. Lastly, the Department would invest [redacted]

Q.87 What NFC investments would be made in FY2028 for the IT OT Collaboration and Analytics Program?

A. In FY2028, the Department would invest $4.71 million in NFC funds for the IT OT Collaboration and Analytics Program projects. For the Enterprise Document Management System project, the Department would invest $2.12 million to implement the final stage of the deployment and optimization of document management tools. For the Record

Retention/Data Management and the Data Strategy and Governance projects, the Department would invest $123,000 and $835,500, respectively, to sustain and enforce standards across business units, ensuring data integrity and compliance. For Data Lake Expansion, the Department will invest $123,000 to support final infrastructure scaling to support new regulatory reporting requirements and customer-facing analytics. For the Process Mining and Automation Tools Implementation project, the Department would invest $500,000 to support ongoing investment to automate more complex processes, reducing turnaround times for internal requests and external customer services and expanding the use of automation to streamline regulatory filings, project tracking, and outage management reporting. Lastly, the Department would invest [redacted]

Q.88 How will customers benefit from these investments in the IT OT Collaboration and Analytics program?

A. Customers will benefit from these investments because improved data integration and automation will reduce manual errors in outage and other required regulatory reporting, billing, and customer requests, and in turn, provide for faster service delivery and improved customer communication. Customers will also benefit from better decision making in capital and operational planning that will occur through stronger data governance. On top of these customer benefits, investments in the IT OT Collaboration and Analytics program will improve the accuracy and efficiency of LUMA' reporting to the Energy Bureau.

Q.89 Are the IT/OT Department's O&M and NFC costs and activities in the Optimal Budget consistent with just and reasonable performance? Please explain.

A. Yes. The programs and plans included in LUMA's business plan are designed to fully align with statutory obligations, contractual requirements under the T&D OMA, and recognized industry best practices.

Q.90 Are the IT/OT Department's O&M and NFC costs and activities in the Optimal Budget consistent with that of a prudently performing operator? Please explain.

A. Yes. All IT/OT and cybersecurity initiatives are benchmarked against NERC CIP standards, leading utility cybersecurity frameworks, and global best practices for data management, asset lifecycle governance, and technology deployment. LUMA's strategic focus on cloud migration, modern workforce management, delivery team establishment, infrastructure lifecycle management, and advanced analytics reflects industry-recognized practices and ensures operational resilience, efficiency, and transparency. Initiatives are benchmarked through external advisory support (such as Gartner and FEMA-based cost estimators), participation in utility peer groups, alignment with NERC and NIST standards, and internal assessments mapped to maturity models that compare LUMA's current state to established industry norms.

Q.91 Are the IT/OT Department's O&M and NFC costs avoidable?

A. The February 12th Order defines avoidable costs as costs that are "to-be-incurred."[13] The majority of the added costs in the IT/OT Department's budget have not yet been incurred. These include planned hires, service contracts not yet executed, and system investments that are pending funding approval. Nevertheless, the majority of the Department's O&M and NFC costs are unavoidable in order for LUMA to prudently operate the T&D System.

[13] Order Establishing Scope and Procedures for Rate Case, Case No. NEPR-AP-2023-0003, at 10 (Feb. 12, 2025).

These costs are essential to maintaining the stability, security, and functionality of the systems that support LUMA's daily operations and long-term regulatory obligations. Many of the O&M costs pertain to mission-critical software, platforms, and infrastructure that are already deployed and require ongoing licensing, vendor support, and maintenance—including systems for outage management, customer billing, workforce management, cybersecurity, and asset tracking. Interrupting support for these systems would risk compliance violations, service degradation, and customer dissatisfaction. Similarly, many staffing and professional services costs are tied to in-progress contracts. These roles are necessary to meet time-sensitive performance and public policy objectives, and reductions would lead to project delays, cost overruns, and missed regulatory milestones. While LUMA continuously seeks to optimize costs, the majority of planned IT/OT investments represent sustaining or committed expenditures required to maintain reliable operations and meet the standards of a prudently performing operator.

IV. CONSTRAINED BUDGET

Q.92 Please describe the IT/OT Department's Constrained Budget.

A. The Constrained Budget reduces the IT/OT Department's projected Optimal Budget funding by approximately $15.08 million in FY2026, $22.47 million in FY2027, and $36.32 million in FY2028, as detailed in Table 7 and LUMA Ex. 2.04 ("Support Services" tab, "ITOT" columns). In alignment with the Energy Bureau's directive, LUMA structured the Constrained Budget to preserve core system operations and safety. However, the Constrained Budget defers or scales down key initiatives i[redacted]. These delays increase reliance on aging systems, extend manual processes, and limit LUMA's ability to reduce risk and improve service. While the budget maintains minimum safe operations, it slows

critical progress on grid resilience, customer experience, and regulatory alignment. Sustained underinvestment will elevate enterprise risk and hinder long-term system reliability. LUMA urges stakeholders to consider that resilience requires consistent investment to meet Puerto Rico's energy needs today and in the future.

Table 7. Summary of Constrained IT/OT and Cybersecurity Department Business Plan for FY2026 to FY2028

	FY2025 Approved Amount ($MM)		FY2026 Amount Required ($MM)		FY2027 Amount Required ($MM)		FY2028 Amoun Required ($MM)	
Program/Activity	**O&M**	**NFC**	**O&M**	**NFC**	**O&M**	**NFC**	**O&M**	**NFC**
Staffing	$9.1	-	$14.24	-	$15.01	-	$16.05	-
Materials and Supplies	$0.2	-	$0.20	-	$0.21	-	$0.22	-
Transportation, Per Diem, & Mileage	-	-	$0.14	-	$0.14	-	$0.14	-
Technical and Professional Services	$30.5	-	$47.43	-	$67.02	-	$78.82	-
Utilities &Rent	$0.1	-	$0.07	-	$0.07	-	$0.07	-
Miscellaneous Expense	($0.9)	-	-	-	-	-	-	-
IT/OT AND CYBER SUBTOTAL	**$39.0**	**$6.9**	**$62.08**	**$27.87**	**$82.45**	**$27.93**	**$96.29**	**$13.15**
IT/OT AND CYBER TOTAL	**$45.9**		**$89.95**		**$110.38**		**$109.44**	
Note 1: "Technical and Professional Services" includes IT Services, and Professional & Technical Outsourced Services.								

Q.93 How did the Department develop the Constrained Budget?

A. The IT/OT Department followed a structured, bottom-up approach to prepare the FY2026 Constrained Budget. Each function reviewed their planned initiatives and identified opportunities to defer, reduce, or consolidate both O&M and NFC costs and activities while ensuring continued support for critical operations. Initiatives directly tied to compliance, grid resilience, and risk reduction were preserved. Others were deferred. Projects or services with low short-term deliverability (due to resource or vendor constraints) were deprioritized. Costs that could be paused, renegotiated, or shifted to capital budgets were evaluated for short-term relief. Lastly, each potential cut was assessed for operational and risk impacts. For example, delays to system replacements were weighed against outage

response time, cybersecurity posture, or compliance penalties. The resulting Constrained Budget prioritizes risk-informed execution and regulatory compliance, focusing resources on initiatives with the highest impact on reliability, security, and performance. For the projection years the Department applied a percentage increase that was standard for all LUMA departments.

Q.94 What costs and activities are reduced, deferred, or defunded in the Department's O&M for the Constrained Budget?

A. Under the Constrained Budget, the Department reduces staffing costs by making an internal hire for the Director for IT Infrastructure and Service Management instead of hiring a seconded employee to serve in this role and defunds the related rent expense for the seconded employee. The Constrained Budget also reduces the budget by reducing the number of contract hours for General Maintenance ("GM") support, cutting planned hours in half—from approximately 2,000 to 1,000 hours—with minimal anticipated impact to service delivery. These services include technical support for infrastructure maintenance, application health monitoring, patching, and non-project incident response. GM services help sustain day-to-day operational readiness, especially during peak support periods or when LUMA staff are at capacity. These reductions were selected to minimize operational risk while supporting LUMA's commitment to reliability and performance under the constrained funding scenario.

Q.95 What are the potential risks of reducing, deferring, or defunding these activities?

A. Reducing, deferring, or defunding planned O&M activities introduces multiple risks to LUMA's operations. Deferring infrastructure maintenance or reducing professional support hours may delay incident resolution, increase system downtime, and reduce responsiveness during outages or cybersecurity events. [redacted]

[redacted]s. Reducing roles, such as seconded leadership or support contractors, can create knowledge gaps, reduce oversight capacity, and disrupt the continuity of ongoing programs. While the Department prioritized reductions to minimize direct customer impact, the Constrained Budget introduces risk to LUMA's ability to sustain performance, reliability, and operational resilience over time.

Q.96 What NFC costs and activities are reduced, deferred, or defunded in the Department's Constrained Budget?

A. The Constrained Budget reduces, defers, and defunds certain NFC costs and activities that would implement the IT OT Collaboration and Analytics Program, IT OT Asset Management Program and IT OT Cybersecurity Program. Within the IT OT Collaboration and Analytics Program, LUMA will defer the full implementation of the Enterprise Document Management System, prioritizing core components and postponing advanced features to later years; reduce investment in Process Mining and Automation Tools, limiting the scope of process optimization efforts; stagger the expansion of the Data Lake, pushing integration of lower-priority data domains to future years. In addition, the Department reduces the budget for the [redacted]. Within the IT OT Assessment Management Program, the Department will defer the IoT Platform and Site Monitoring Solution. This project was intended to deploy IoT and IIoT devices at critical substations and operational sites to monitor equipment health and support real-time situational awareness during large-scale outages. Additionally, the Department will defer fire suppression and network switches in the Constrained Budget. Within the IT OT

Cybersecurity Program, [redacted]

[redacted]

[redacted]

Q.97 What are the potential risks of reducing, deferring, or defunding activities within the Collaboration and Analytics Program?

A. Reducing the budget for software upgrades will slightly increase exposure to known security vulnerabilities and increase performance degradation risk in data-related systems. The security risk is considered slight because the affected systems are currently protected by perimeter controls, segmented environments, and endpoint detection tools. While upgrading to the latest versions would eliminate known vulnerabilities, existing controls mitigate the immediate risk of exploitation in the short term. By performance degradation, I mean the gradual loss of system efficiency, including slower data queries, delayed reporting, and increased maintenance workload. Over time, older database and operating system versions become less compatible with modern applications and may struggle to scale with growing data volumes—particularly as LUMA expands analytics, customer platforms, and outage response tools. While the immediate impact of these deferrals is manageable, continued postponement beyond FY2028 would increase operational risk and may eventually affect reporting accuracy, cybersecurity posture, and user experience.

Q.98 What are the potential risks of reducing, deferring, or defunding activities within the IT OT Asset Management Program?

A. Deferring the IT and OT Asset Management Program activities, which I discuss above, introduces several significant risks that could impact operational efficiency and safety. First, deferral of these activities hampers the ability to monitor the status of remote sites and grid assets in real-time during major outages or emergencies, which is crucial for timely response and management. This delay increases reliance on the manual dispatch of

field crews to assess site health, thereby slowing down restoration efforts and potentially prolonging power outages due to delayed detection of issues or degraded equipment. Moreover, deferral raises safety concerns for field crews who may operate without reliable site condition data, putting them at risk. The reduced ability to proactively respond to events also affects the ability to meet customer and regulatory expectations for outage response. Overall, delaying this project will impact progress toward operational excellence, resiliency, and safety goals. Specifically, it will postpone LUMA's ability to modernize grid visibility and outage response capabilities by an estimated 12 to 18 months, potentially leading to continued inefficiencies in large-scale restoration scenarios.

Q.99 What are the potential risks of reducing, deferring, or defunding activities within the IT OT Cybersecurity Program?

A. [redacted]

Q.100 If the Constrained Budget is approved, will the Department meet its contractual and legal duties?

A. Yes.

Q.101 Please explain.

A. The Department developed its Constrained Budget to ensure that the IT/OT Department had funding for continued support of critical operations and the implementation of over 200 initiatives to support the restoration and transition of the T&D System. However, approving a budget below the Constrained Budget will hinder the Department's ability to fulfill its contractual and legal obligations.

Q.102 Does the work performed by the IT/OT Department affect the performance metrics established by the T&D OMA and approved by the Energy Bureau?

A. Yes, the work performed by the IT/OT Department directly affects the performance metrics established by the T&D OMA and approved by the Energy Bureau. Specifically, the Department's work to maintain and modernize critical IT and OT systems, including OMS, SCADA, ADMS, and communications infrastructure, supports the improvement of SAIDI by enabling faster outage detection, response coordination, and service restoration. Additionally, investments in AMI, field automation, and mobile workforce tools contribute to improvements in SAIFI and CAIDI by reducing the number and duration of customer interruptions. These efforts enhance grid visibility, increase restoration efficiency, and ensure compliance with performance metrics required under the T&D OMA.

Q.103 Will the Department's ability to meet the performance metrics be affected by the Constrained Budget?

A. The Constrained Budget reduces the Department's total funding by approximately $15.08 million in FY2026, $22.47 million in FY2027, and $36.32 million in FY2028.

While LUMA has prioritized reliability and preserved the most essential initiatives, these reductions require the deferral or scaling back of certain projects and activities intended to strengthen outage response, operational visibility, and system performance. Specifically, under the Constrained Budget, activities such as replacing aging PoE network switches, upgrading analytics platforms, and accelerating cloud migration have been delayed or limited in scope. These adjustments may affect the Department's ability to enhance real-time monitoring, streamline restoration workflows, and deliver improvements in system performance indicators over time. While LUMA does not expect these constraints to prevent safe system operation, they may limit the pace of progress toward performance improvements tied to SAIDI, SAIFI, and CAIDI. The ability to respond flexibly to emerging issues or accelerated regulatory requirements may also be reduced. Continued investment will be necessary to maintain long-term reliability, responsiveness, and customer trust.

Q.104 What would be the impact if the Constrained Budget for the Department is reduced?

A. If the Energy Bureau approves a rate below the Constrained Budget, the IT/OT Department and the programs it supports will continue to face underfunding. LUMA's technology environment has endured years of constrained investment, and the infrastructure inherited at transition includes outdated systems, unsupported platforms, and components sourced from secondary markets due to vendor obsolescence. A further reduction below the constrained level would delay or scale back planned improvements designed to modernize operations, enhance cybersecurity, and increase system resilience. While LUMA is committed to prioritizing safety and reliability within available resources, sustained underinvestment limits operational flexibility and may reduce the

pace of progress toward critical performance and policy goals. If the current rate of system degradation continues to outpace reinvestment, LUMA's ability to maintain service quality, meet modernization targets, and support enterprise efficiency could be materially impacted over time. Continued alignment between funding and need is essential to preserve system reliability and fulfill long-term obligations under the T&D OMA and Act 17-2019.

V. PROVISIONAL RATE

Q.105 Is the IT/OT Department proposing costs to be funded through a provisional rate?

A. Yes.

Q.106 What specific O&M activities is the Department proposing to be funded by the Provisional Rate?

A. The IT/OT Department is requesting an additional $4.2 million in funding to cover the fixed cost absorption from the termination of Genera shared services. The Department is also requesting $7.2 million to support critical initiatives.

Q.107 Does the Department view the cost absorption from the termination of Genera shared services as a high priority and noncontroversial? Please explain.

A. Yes. LUMA inherited many of PREPA's legacy IT systems, such as the procurement software and financial system, both of which had processed and stored massive data volumes on behalf of PREPA as an integrated utility. From Genera's commencement until the termination of the Shared Services agreement on February 28, 2025, the IT/OT Department provided shared services to Genera, which included the joint use of these applications, and many others. The termination of the Shared Services agreement with Genera eliminated cost-sharing for essential IT infrastructure originally designed to support an integrated utility. Fixed costs such as server maintenance, security, and core application support now fall solely on LUMA as these used to be invoiced to Genera. The

costs associated with shared services are unavoidable and no longer offset by a cost-sharing agreement that previously existed with Genera therefore making them a high priority. These services are critical to ongoing operations and now fall solely under LUMA's responsibility so they should be viewed as noncontroversial. This funding cannot be reallocated from Genera, as they have since transitioned to using their own services and are utilizing their budget accordingly. The budget includes $3 million for non-labor IT/OT systems and infrastructure to operate and maintain core systems like procurement, finance, and data storage, which were originally used by both entities; $1.1 million for labor allocation, covering IT/OT Department staff time historically dedicated to supporting systems and services still co-located with Genera infrastructure; and $0.1 million for other costs and inflation, encompassing ancillary expenses such as licenses, support contracts, and shared IT services.

Q.108 Does the Department view funding for support of critical initiatives as high priority and noncontroversial? Please explain.

A. There are several critical initiatives in which the O&M budget for the IT/OT Department is necessary in the Provisional Rate funding. Other LUMA departments are requesting funding to begin or continue activities within their programs. Those activities require IT/OT Department support, which in turn requires additional funding for the IT/OT Department. This additional cost is high priority and non-controversial since these costs will be unavoidable. Without this funding, execution of prioritized program briefs and emergency IT/OT projects will be delayed.

Q.109 What specific NFC activities is the Department proposing to be funded by the Provisional Rate?

A. The Department is requesting [redacted] for the IT OT Cybersecurity Program, $3.3 million for the IT OT Enablement Program, $2.08 for the IT OT Asset Management Program, and $1.1 million for the IT OT Collaboration and Analytics Program.

Q.110 Does the Department view funding for the IT OT Cybersecurity Program as high priority and noncontroversial? Please explain.

A. Funding for the IT OT Cybersecurity Program is a high priority and non-controversial because [redacted], meaning cybersecurity initiatives have become even more imperative to protect our critical infrastructure. These threats include a rise in phishing and credential theft attempts targeting OT environments, vulnerabilities in remote access security stemming from outdated firewall configurations, and heightened activity from nation-state actors and ransomware groups targeting energy infrastructure. This funding will enhance defense capabilities, protect infrastructure from disruptions, safeguard customer data, and ensure compliance with industry standards. [redacted] Without having the funding to complete these activities, LUMA risks ransomware attacks, unauthorized access, data breaches, and potential grid failures making this a high priority for the business. [redacted]

[redacted]

[redacted]

Q.111 Does the Department view funding for the IT OT Enablement Program as high priority and noncontroversial? Please explain.

A. Incremental funding is required for the IT OT Enablement Program through the Provisional Rate to ensure the reliability of essential tools for outage response, customer service, grid monitoring, and daily operations. [redacted]

[redacted]

[redacted]. The funding will replace equipment that is beyond end-of-life, including laptops, field tablets, and devices for front-line teams; update communication equipment like radios and hotspots; and enhance device management and cybersecurity. Frontline staff rely on functioning, secure devices to receive, process, and execute outage restoration instructions. Failing or unsupported devices slow down field response and increase outage durations. [redacted]

[redacted]

[redacted]. These measures are non-controversial as they are critical for maintaining operations and aligning with NIST and NERC-CIP standards. Without this funding, there is a risk of system outages, increased costs, and loss of public trust. These investments are not enhancements but foundational risk mitigation measures that are urgent and necessary for grid modernization efforts.

Q.112 Does the Department view funding for the IT OT Asset Management Program as high priority and noncontroversial.

A. Funding for the IT OT Asset Management Program will support [redacted] LUMA plans to replace end-of-life servers, switches, and backup systems. [redacted]. Without replacement, LUMA anticipates increased service interruptions, worsened mean time to recovery due to lack of vendor support, and an inability to scale recovery systems during hurricane season making this non-controversial. With this funding LUMA will also renew [redacted] to support application deployment to LUMA employees and field users. This is essential for analytics and asset tracking, which prevents disruptions in asset visibility, maintenance planning, and reporting needed for compliance with FEMA and the Energy Bureau. Additionally, these funds will be used to expand backup capacity and power redundancy to maintain up time during major events.

Q.113 Does the Department view funding for the IT OT Collaboration and Analytics Program as high priority and noncontroversial.

A. Funding the IT OT Collaboration and Analytics Program is a high priority because delaying these investments would reduce visibility into program performance, hinder compliance efforts, and force continued reliance on manual, error-prone processes that increase operating costs and slow value delivery. As LUMA scales federal programs and regulatory commitments, modern collaboration and analytics tools are no longer

optional—they are essential and high priority. The initiatives are non-controversial as they focus on centralizing and securing critical documentation for FEMA and regulatory compliance, streamlining workflows to minimize delays and errors, and tracking performance metrics across various operations.

Q.114 Are the costs included in the provisional rates request incremental to the FY2026 Optimal or Constrained budgets presented by LUMA?

A. No. The costs included in the provisional rates request are not incremental to the optimal or constrained budgets. These costs are already part of LUMA's overall revenue requirement. The provisional rates simply reflect the timing of cost recovery, with a portion of these costs allocated to FY2026 while the permanent rate request is under adjudication. This approach ensures continuity of operations and funding during the regulatory review period, without increasing the total budget request.

Q.115 Does this conclude your testimony?

A. Yes.

ATTESTATION

Affiant, Crystal Allen, being first duly sworn, states the following:

The prepared Direct Testimony, the exhibits and the cost information for the IT OT Cybersecurity Department in LUMA Ex. 2.03 and LUMA Ex. 2.04, constitute my Direct Testimony in the above-styled case before the Puerto Rico Energy Bureau. I would give the answers set forth in the Direct Testimony if asked the questions that are included in the Direct Testimony. I further state that the facts and statements provided herein are my Direct Testimony and to the best of my knowledge are true and correct. In Finksburg, MA, this 23rd day of December 2025.

Crystal Allen

State of Florida
County of Leon

Crystal Allen

Acknowledged and subscribed before me by Crystal Allen, in her capacity as Chief Information Officer of LUMA, who has appeared by means of online notarization and provided a passport with number 559081261 as means of identification. having appeared this 23rd day of December, 2025.

Notary Public MELISSA K. GARNER

MELISSA K. GARNER
Notary Public - State of Florida
Commission # HH 356421
My Comm. Expires Mar 28, 2027

Completed Via Remote Online Notarization Using 2-way Audio / Video Technology

LUMA Ex. 11.01

Excerpts from the Puerto Rico Transmission and Distribution System Operation and Maintenance Agreement ("T&D OMA"), executed by PREPA, the Puerto Rico Public-Private Partnerships Authority (P3A), and LUMA, dated as of June 22, 2020, applicable to IT OT and Cybersecurity Department

Section 4.2 ManagementCo Responsibilities

(h) Physical Security Plan, Data Security Plan and Vegetation Management Plan. ManagementCo shall develop and provide Administrator and PREB, for their information, with plans of action meeting Contract Standards that outline the procedures and actions necessary for maintaining (i) the physical security of the T&D System after the Service Commencement Date (the "Physical Security Plan"); (ii) data security, cyber security and information security relating to the T&D System (the "Data Security Plan"); and (iii) a comprehensive vegetation management program (the "Vegetation Management Plan"), each of which shall become effective on the Service Commencement Date; provided that as long as each of the Physical Security Plan, Data Security Plan, and Vegetation Management Plan are substantially complete on the Service Commencement Date, their finalization shall not delay the Service Commencement Date from occurring if all other Service Commencement Date Conditions have been satisfied or waived. For the avoidance of doubt, the Data Security Plan shall be subject to the System Remediation Plan, including the approach for implementation outlined in Section 4.1(d) (*Front-End Transition Period Generally – Transition to Standard of Performance).*

Section 5.7 Safety and Security.

***

(c) Security. Operator shall implement the Physical Security Plan in accordance with such plan. In accordance with the Physical Security Plan, Operator shall guard against and be responsible for all physical damage to the T&D System caused by trespass, theft, negligence, vandalism, malicious mischief or cyber-attacks of third-parties. For the avoidance of doubt, Operator's responsibility for physical damage to the T&D System caused by cyber-attacks shall be subject to the System Remediation Plan, including the process for implementation outlined in Section 4.1(d) (*Front-End Transition Period Generally – Transition to Standard of Performance).* Operator shall guard against and be responsible for, in each case to the extent of Operator's negligence, all physical damage to the T&D System caused by trespass, theft, vandalism or malicious mischief of third-parties. Any cost arising therefrom shall be treated as T&D Pass-Through Expenditures hereunder, except to the extent such costs are costs are Disallowed Costs. The Physical Security Plan shall be updated by Operator from time to time as necessary or appropriate.

Section 13.3 Data Security.

(a) Cybersecurity Breaches. Subject to Section 4.1(c) (*Front-End Transition Period Generally – Transition to Standard of Performance)* and the System Remediation Plan, Operator shall comply with, and shall use commercially reasonable efforts to ensure that all Operator Related Parties and all Contractors and Subcontractors comply with the Data Security Plan, any other Contract Standards and all requirements of Applicable Law regarding data security, cyber security and information security in respect of the System Information and related Information Systems. Operator shall promptly notify, and shall use commercially reasonable measures to ensure that all Operator Related Parties, Contractors and Subcontractors promptly notify, Administrator and PREB (if possible, in writing) of any material Cybersecurity Breaches or any other material losses or theft of any data of which it has knowledge. Administrator's direction, Operator shall (i) perform an analysis of the cause, (ii) remedy any Cybersecurity Breach including notification of consumers or government entities when required by Applicable Law, and (iii) cooperate fully with any civil or criminal authority in any investigation or action relating to such breach or attempted breach.

(b) Cybersecurity Program. Without limiting the foregoing and subject to Section 4.1(c) (*Front-End Transition Period Generally – Transition to Standard of Performance)* and the System Remediation Plan, Operator shall update the Data Security Plan from time to time to be consistent with industry standards and such that the Data Security Plan: (A) incorporates reasonable and appropriate organizational, administrative, physical and technical measures in place to maintain the security of and to protect the internal and external integrity of the System Information and related Information Systems against any unlawful or unauthorized use, processing, destruction, loss, alteration, disclosure, theft or access (including to any data or information contained in or stored on such systems); (B) establishes and maintains backup, security and disaster recovery measures to safeguard the System Information and related Information Systems; (C) limits the risk of introducing or knowingly permitting the introduction of any virus, worm, bomb, Trojan horse, trap door, stop code or other harmful code, timer, clock, counter or other limiting design, instruction or routine, device, feature or function into the System Information and related Information Systems; and (D) requires security audits, at a frequency consistent with industry standards, to assess and confirm compliance with Section 13.3 (*Data Security),* (including using reputable third-party vendors to perform, penetration testing, cybersecurity audits and vulnerability assessments) and requires taking prompt measures to remedy any gaps that may be identified. Operator shall provide a summary of the security program as well as a copy of any written audit reports and remedial measures to Administrator. Any security audit information is Confidential Information of Owner, and neither Party shall disclose such security audit information without the consent of the other Party.

Annex I – Scope of Obligations

I. T&D System Operation Services

***

B. Day-to-Day Operation. Operator shall be responsible for the day-to-day operation

of the T&D System, including: . . . (5) maintenance of applicable communications equipment and protocols with generating units and contracted power plants as needed; . . . and (9) maintaining and improving information technology systems that satisfies the needs of the business in accordance with the requirements of the Agreement.

***

II. Asset Management and Maintenance Services.

A. General. Operator shall be responsible for managing and maintaining all assets of the T&D System, including machinery, equipment, structures, improvements and condition assessment of the electrical system components, in accordance with the Contract Standards, including the following: (1) development and implementation of asset management strategies and risk optimization for combined technical performance, life cycle cost, safety, customer satisfaction and regulatory compliance; (2) real estate management, Easements, leases and agreements, pole attachments (including billing and collection for pole attachment fees, as well as maintaining a complete inventory of type and location of each attachment and plans for revenue optimization), joint use agreements and telecommunications for the provision of electric service, including cybersecurity in the manner specified and subject to the provisions set forth in the main body of the Agreement; (3) meter strategy development, maintenance or replacement; (4) fleet management, including evaluation of potential outsourcing; (5) materials and services procurement and inventory management; (6) T&D System security in accordance with Applicable Law and to protect the T&D System from vandalism, terrorism or other acts; (7) emergency preparedness and planning; (8) warehousing; (9) maintenance of the PREPA fiber optic infrastructure; (10) vegetation management in accordance with Prudent Utility Practice and Applicable Law; and (11) preparation of T&D condition assessment report.

***

E. Information Technology. Operator shall, consistent with the Contract Standards, the Agreement and this Annex I (*Scope of Services),* be responsible for providing information technology systems maintenance support and improvements in accordance with (1) strategic goals of achieving interoperability and flexibility of open design and standard-based data architecture and in compliance with requirements for applicable technical architecture, data modeling and software development life cycle; and safeguarding the system software and data; (2) cybersecurity requirements that support network and day-to-day activities; and (3) developing and maintaining a business continuity plan in the event of natural, man-made or cyber-attack incidents. Operator shall periodically provide Administrator (with copy to PREB) the most current versions of the business continuity plan.

VIII. Maintenance.

***

C. Safety and Security. Operator shall maintain the T&D System with due regard for public health and safety and at a safe level at least consistent with Contract Standards, including the following:

***

6. designing and implementing cybersecurity measures in accordance with Contract Standards and in the manner specified and subject to the provisions set forth in the main body of the Agreement;

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LUMA Ex. 11.02
CONFIDENTIAL AND PRIVILEGED
Program Brief for IT OT Cybersecurity Program (PBIT2)

SUPPORT SERVICES PORTFOLIO

IT OT Cybersecurity Program

Type of Program	☐ SRP ☒ Non-SRP
Remediation Date[1]	Achieved FY2024
FY2026-FY2028 Budget	*Refer to Rate Review Filing Schedules D-1*

[redacted]

Brief Program Description

This cybersecurity program is designed to protect key organizational assets—people, technology, and infrastructure—by identifying and mitigating cyber risks, threats, and vulnerabilities. It focuses on strengthening the Transmission and Distribution (T&D) system and supporting PREPA's ongoing operations. The program will implement essential people, processes, and technologies to enhance governance, threat detection, incident response, cloud security, and overall resilience. By addressing potential impacts such as data breaches, system failures, ransomware, and unauthorized access, the program aims to ensure the confidentiality, integrity, and availability of critical assets. Aligned with Section 13 of the Puerto Rico T&D OMA, this initiative will enable secure business continuity by proactively reducing the likelihood and severity of cyber incidents.

Fiscal Year 2026 - 2028 Focus[1]

[redacted]

Program Status

Note: Recurring activities are ongoing tasks for program completion or remediation, while in-progress activities began post-planning.

Activity	Stage
[redacted]	

FY2026

[1] The information under this section was developed based on the optimal budget petition as part of the Rate Case proceeding under docket NEPR-AP-2023-0003.

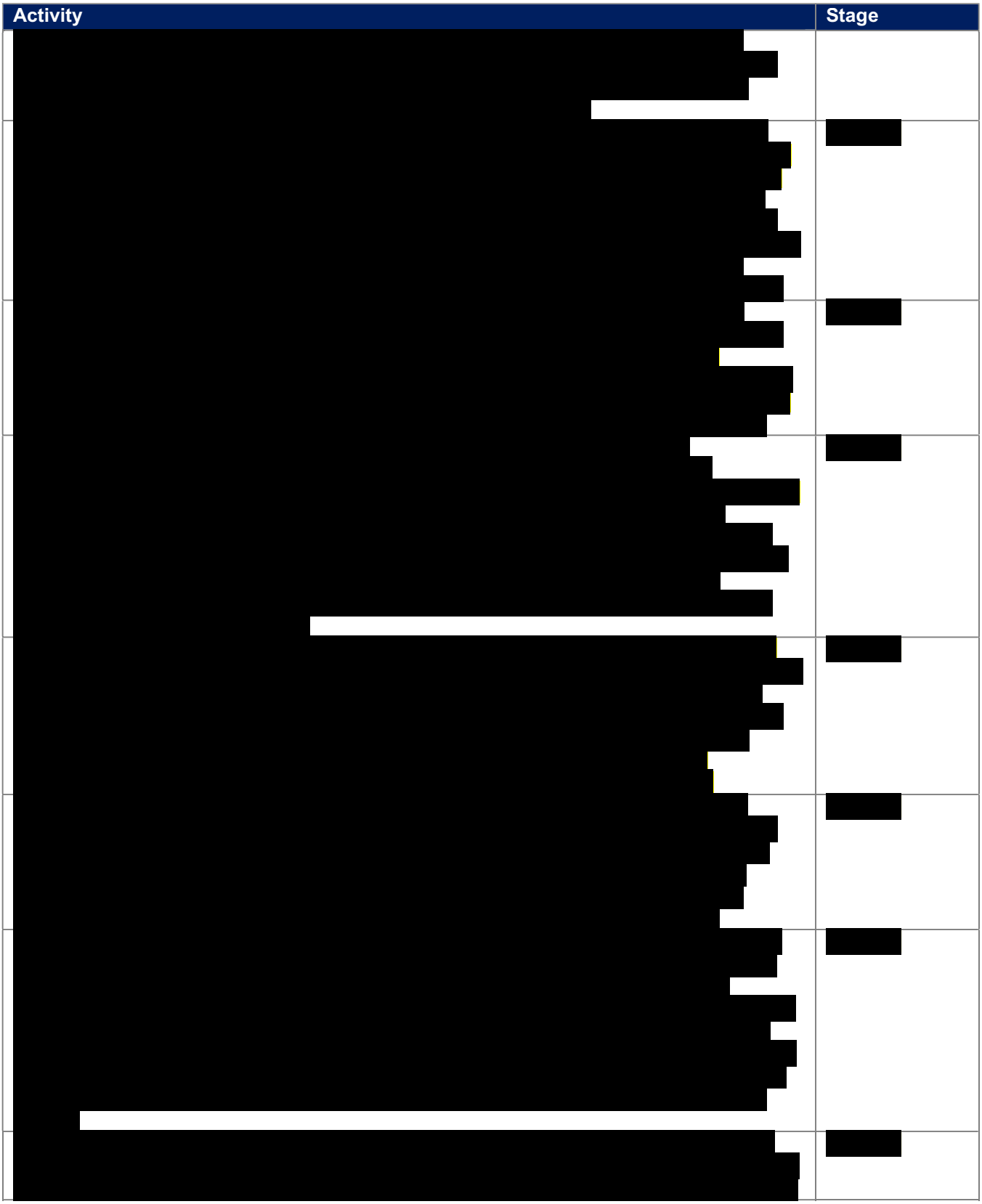
LUMA

SUPPORT SERVICES PORTFOLIO

IT OT Cybersecurity Program

SUPPORT SERVICES PORTFOLIO

IT OT Cybersecurity Program



SUPPORT SERVICES PORTFOLIO

IT OT Cybersecurity Program

Activity	Stage
[redacted]	

Active Gaps

Note: The green color below represents closed gaps.

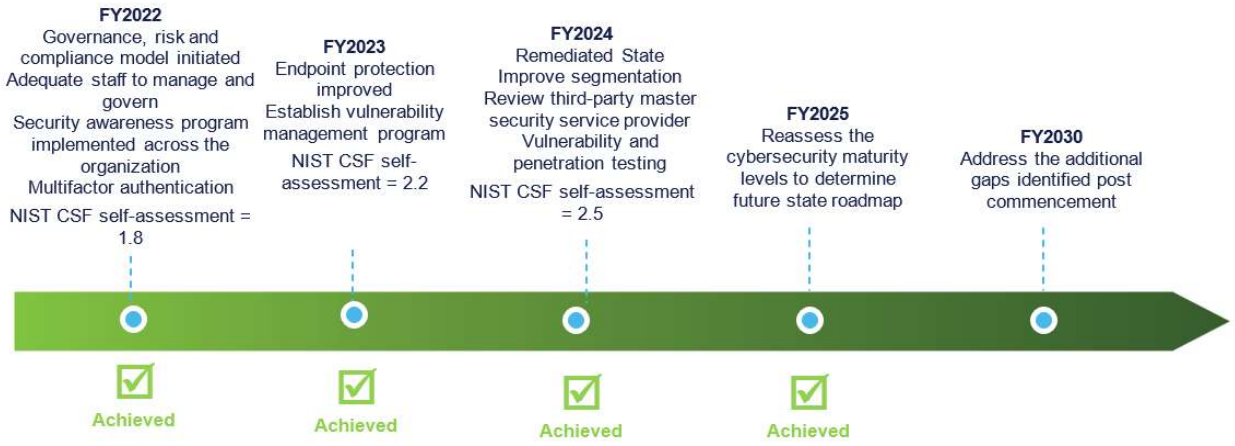
Gap	Timeframe Identified
[redacted]	[redacted]

LUMA

IT OT Cybersecurity Program

Gap	Timeframe Identified
[redacted]	[redacted]

Timeline and Milestones[1]



Alignment to LUMA's Key Goals

Note: The gray color icon represents an indirect impact on the goal, and the colored icon represents an impact of the LUMA key goals.

PRIORITIZE SAFETY

IMPROVE CUSTOMER SATISFACTION

SYSTEM REBUILD & RESILIENCY

OPERATIONAL EXCELLENCE

SUSTAINABLE ENERGY TRANSFORMATION

Impact of Constrained Budget

In response to the Puerto Rico Energy Bureau's (PREB) directive to develop a constrained budget, LUMA has been required to scale back several key initiatives within its cybersecurity improvement program. This section outlines the specific activities that will be deferred, along with the associated risks and expected delays. To align with the constrained budget, LUMA will defer critical cybersecurity initiatives including :

- Patch management
- Cloud security enhancements
- Endpoint hardening,
- Security Orchestration, Automation, and Response (SOAR) integration
- Operational Technology (OT) protections

These initiatives were strategically developed to improve LUMA's resilience against advanced persistent threats (APTs), malicious actors, and emerging vulnerabilities across IT and OT environments. Their deferral introduces significant risks to the organization such as:

IT OT Cybersecurity Program

- A fragmented and reactive security architecture, reducing the ability to detect, contain, and respond to sophisticated threats in a timely manner
- Increased risk of service disruption, data breaches, and prolonged outage recovery due to weakened cyber defenses
- Delays in closing critical security gaps, particularly those identified post-program commencement

As a result, key cybersecurity program milestones will be delayed by at least one year, undermining progress on foundational security improvements. The constrained budget challenges the fundamental objective of cybersecurity: to anticipate and stay ahead of the threat landscape, not lag behind it. Without these defenses in place, LUMA's ability to safeguard Puerto Rico's energy infrastructure against growing cyber threats remains at risk.

LUMA Ex. 11.03
Program Brief for IT OT Enablement Program (PBIT3)

Type of Program	☐ SRP ☒ Non-SRP
Remediation Date[1]	Achieved FY2025
FY2026-FY2028 Budget	*Refer to Rate Review Filing Schedules D-1*

SUPPORT SERVICES PORTFOLIO

IT OT Enablement Program

Brief Program Description

The IT/OT Enablement Program will establish foundational capabilities that allow LUMA to deliver and sustain high-quality IT and OT services using industry best practices. This includes standardizing processes, upgrading outdated tools and infrastructure, and supporting secure, scalable service delivery across the enterprise.

Fiscal Year 2026-2028 Focus[1]

The focus for FY2026–FY2028 is to establish the foundational capabilities required to modernize IT/OT delivery, strengthen asset and vendor management, and enable long-term operational resilience. Key priorities focus on addressing cybersecurity and performance risks caused by end-of-life equipment, enhancing field and back-office productivity, and supporting modern software requirements essential to delivering a safe, reliable, and customer-focused utility experience. One major initiative is the implementation of IT Asset and Configuration Management through the deployment of a centralized configuration management database (CMDB) within ServiceNow. This system will manage and track IT/OT assets throughout their lifecycle, enabling better service delivery and risk mitigation. Another priority is initiating a DevOps transformation by developing a standardized “Building Code” for software development, establishing continuous integration and continuous deployment (CI/CD) pipelines, and piloting agile-aligned practices across value streams to improve delivery efficiency.

Additionally, LUMA plans to formalize a Device Lifecycle Management strategy with a multi-year program to replace aging laptops, desktops, monitors, and accessories. This will reduce cybersecurity and operational risks, enhance employee productivity, and support modern software capabilities. The completion of an enterprise data strategy is also a key goal, aimed at supporting real-time insights, data governance, and cross-system integration to enable smarter decision-making and greater operational agility.

Establishing an enterprise architecture structure and governance framework is another critical effort, designed to formalize roles, processes, and standards that ensure system design, integration, and modernization efforts align with business priorities and technology roadmaps. In parallel, LUMA will launch vendor and contract optimization practices by operationalizing structured contract review and renewal processes to cut costs, remove redundancies, and align third-party agreements with long-term IT/OT strategies. Finally, the organization will phase in agile program management capabilities by introducing roles such as Scrum Masters, Program Owners, and Value Stream Owners (VSOs), refining portfolio governance, and embedding OKR tracking to enhance value realization and accountability.

Program Status

Note: Recurring activities are ongoing tasks for program completion or remediation, while in-progress activities began post-planning.

Activity	Status
The largest project is for the capital acquisition of new end-user devices to replace those that are end-of-life and unsecured. This includes approximately 2,000 laptops, 550 desktops, 1,200 ruggedized tablets, and 2,300 mobile devices that need to be replaced. This project aims for device refresh to occur during 2022 and early 2023. We estimate that $4.3 million over the two years is needed to refresh devices	Achieved
The other major expenditure addresses the requirement to implement an industry-standard IT OT service management toolset to manage all service requests, including user access, software, end user device, hardware and peripherals, information architecture and architectural strengthening	Planning
Additionally, the IT OT service management toolset will record and manage incidents, problems, and performance across these areas	Planning

[1] The information under this section was developed based on the optimal budget petition as part of the Rate Case proceeding under docket NEPR-AP-2023-0003.

SUPPORT SERVICES PORTFOLIO

IT OT Enablement Program

Activity	Status
The resulting program will encompass the people, processes, and technology required to ensure the success of the comprehensive program	Achieved
Design the IT OT Service Management group based on leading industry service management standards	Achieved
Develop an ITIL training and certification program for resources	Achieved
Design an Enterprise Architecture strategy that formalizes leading technology resource interactions	Planning
Establish a Business Relationship Management team	Achieved
Develop IT OT service management catalog and associated service levels based on leading industry IT service management standards	Achieved
Develop level three business process models and standard operating procedures for request fulfillment, incident management, problem management, and performance management	Achieved
Develop end-user device asset management strategy, including refresh period and patch management process	Achieved
Develops and operationalizes a critical IT capability concerned with strategic leadership of technology	Achieved
Develop standardized project management processes, including project deliverable set based on the project type and project phase	Achieved
Establish a data management strategy	Planning
Define LUMA end-user-managed device standards (including provisioning, securing, and imaging) and user profiles	Achieved
Evaluate and implement recommended service management toolset with core configuration service management toolset based on the IT OT Service Management Catalogue and service levels enabling service level reporting and data-driven decision making	Achieved
Extend the service management toolset to manage LUMA end-user devices in accordance with the end-user device asset management strategy	Achieved
Establishes the Building Code as the basis by which technology work will be conducted	Planning
Establish project deliverable templates	Achieved
Accelerate Agile Delivery Enablement: establish agile delivery frameworks, including role definition (e.g., Scrum Masters, Program Owners), training, and orchestration tools to reduce time-to-value and align delivery velocity with business expectations	Planning
Implement CI/CD Foundations: introduce the processes, platforms, and governance needed to support continuous integration and continuous delivery (CI/CD), improving software deployment frequency, quality, and responsiveness	Planning
Formalize Device Lifecycle Management Strategy: develop a sustainable, lifecycle-based refresh model for end-user and field devices, tied to annual funding cycles. This will help mitigate the risk associated with outdated equipment and improve workforce efficiency	Planning
Enhance Portfolio Governance & Prioritization Practices: incorporate value-tracking metrics and OKR alignment into project evaluation and reporting to increase visibility into impact, accelerate business outcomes, and guide investment decisions more effectively	Planning

Active Gaps **Note: The green color below represents closed gaps.**

Gap	Timeframe Identified
There are no formal documented service management processes aligned to an industry framework for the management of incidents, problems, request fulfillment, and performance	Front-End Transition
There are no certified service management professionals within the PREPA organization, nor is there a training and development plan in place to achieve certification	Front-End Transition

FY2026

LUMA

SUPPORT SERVICES PORTFOLIO

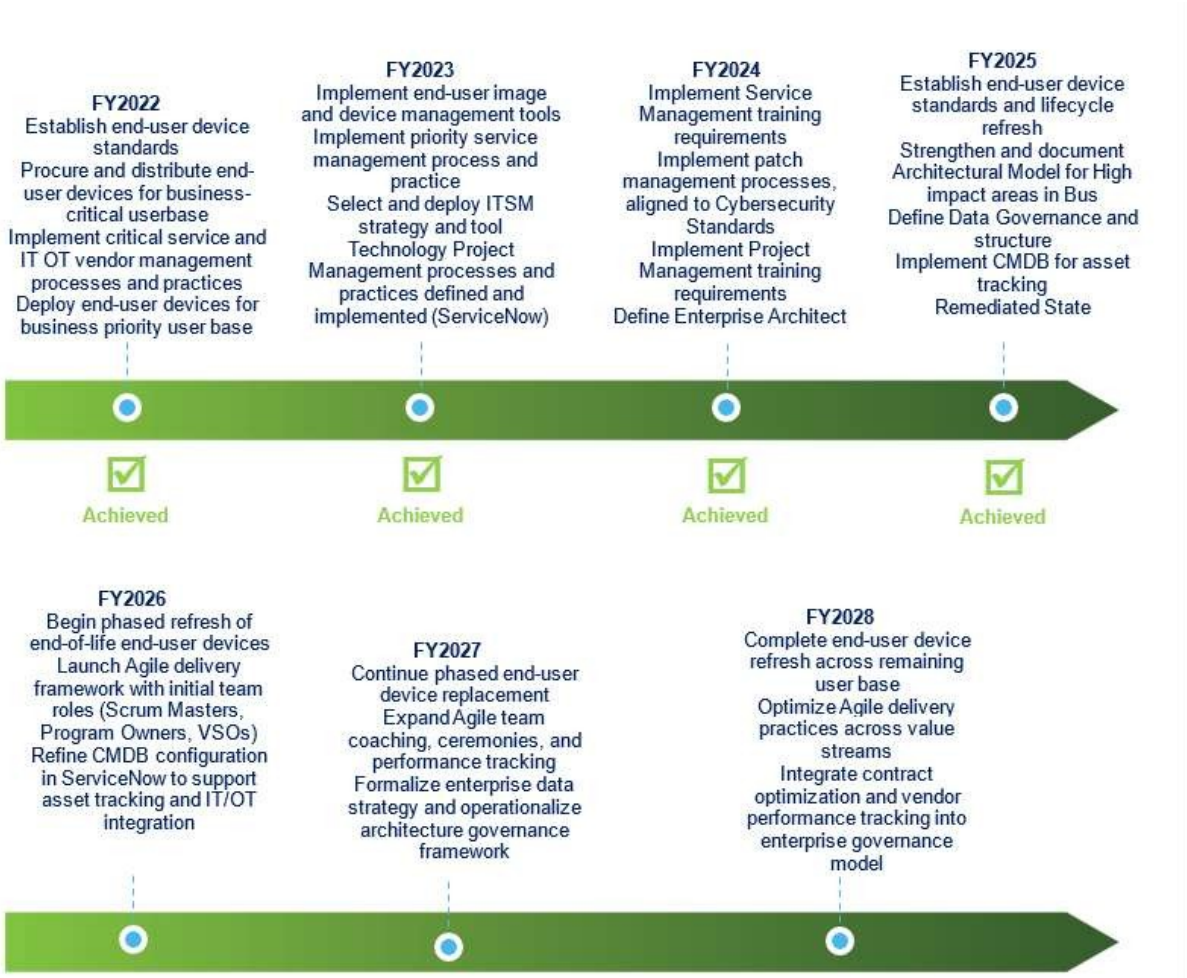
IT OT Enablement Program

Gap	Timeframe Identified
There is no established IT OT service catalog, associated service levels, services, prioritization, or escalation mechanism for IT OT services. Incidents are responded to on a "first come, first served" basis without analysis of the risk level to the organization	Front-End Transition
PREPA uses a project defect management tool to manage the core capabilities of ITSM, which are request fulfillment and incident, problem, and performance management processes. The capabilities are limited since this is not the vendor's intended use of the tool. The tracking of requests, incidents, and problems is simply through lists with no workflow or analytics	Front-End Transition
There is no centralized repository for tracking and managing end-user devices, software, and infrastructure	Front-End Transition
Resource constraints within the IT OT team have resulted in a lack of capacity to conduct analyses on incidents or to develop improvement plans	Front-End Transition
Current PREPA systems do not comply with an end-user device refresh practice resulting in end-of-life devices with a clear cybersecurity risk. The use of such devices would negatively affect LUMA's operations, regulatory compliance, employee safety, and customer satisfaction	Front-End Transition
End user device security patching processes and practices require significant improvement	Front-End Transition
PREPA has an immature data management strategy — a Proof of Concept (PoC) is underway on data lake and analytics (which are covered in other initiatives), but there are no actions underway or planned with respect to operational data. This initiative is intended to address that shortfall, articulating a first set of policies/principles concerned with critical data subjects, defining: critical data subjects' ownership/custodianship, definitive persistent stores (Books-of-Record) rules of consumption, replication, persistence data sensitivity, protection, integrity and availability rules/standards	Front-End Transition
PREPA has very limited architectural capability — this initiative will introduce foundational artifacts/capabilities: enterprise architectural mandate operating model (governance, interactions), foundational models (e.g., Component Business Model [CBM]), and foundational building code for the implementation of a tool)	Front-End Transition
There is no integrated software development or implementation lifecycle methodology, nor is there a project initiation, prioritization, approval, and funding process. There are also limited project planning, scheduling, execution, and closeout processes or standardized tools and templates for each project phase. The gap assessment also indicated a lack of standards for project document storage, folder organization, naming convention, or defined lessons learned process nor integration of lessons learned into future project planning	Front-End Transition
Project management methodologies are not integrated with business relationship management, enterprise architecture, and technology	Front-End Transition
Delayed Value Realization: Current delivery timelines are misaligned with business expectations. The absence of scalable, modern delivery practices results in slower time-to-value and reduced responsiveness to evolving operational needs	Post-Commencement
Unsustainable Funding Model for Devices: Inconsistent or cyclical funding prevents the establishment of a sustainable, lifecycle-based refresh strategy for end-user and field devices. This increases operational risk, reduces productivity, and contributes to technical debt	Post-Commencement

SUPPORT SERVICES PORTFOLIO

IT OT Enablement Program

Timeline and Milestones[1]



Alignment to LUMA's Key Goals

Note: The gray color icon represents an indirect impact on the goal, and the colored icon represents an impact of the LUMA key goals.

PRIORITIZE SAFETY

IMPROVE CUSTOMER SATISFACTION

SYSTEM REBUILD & RESILIENCY

OPERATIONAL EXCELLENCE

SUSTAINABLE ENERGY TRANSFORMATION

FY2026

LUMA Ex. 11.04
Program Brief for IT OT Asset Management Program (PBIT4)

Type of Program	☒ SRP ☐ Non-SRP
Remediation Date[1]	FY2028
FY2026-FY2028 Budget	*Refer to Rate Review Filing Schedules D-1*

SUPPORT SERVICES PORTFOLIO

IT OT Asset Management

Brief Program Description

LUMA will implement industry-standard Information Technology and Operational Technology (IT/OT) asset management practices and modernize its technology portfolio to ensure secure, resilient, and high-performing operations. This program addresses critical infrastructure gaps by replacing end-of-life systems, introducing cloud-based technologies, and establishing a sustainable lifecycle management approach across the enterprise. This program will assess PREPA's inherited infrastructure and software assets to guide a comprehensive modernization effort. This includes transitioning legacy systems to modern platforms—on-premises and in the cloud—to improve service reliability, cybersecurity posture, disaster recovery readiness, and workforce productivity. A key pillar of this program is establishing a new backup data center to enhance business continuity, along with infrastructure enhancements across all mission-critical sites. Additionally, the program includes implementation of tools and systems to manage, monitor, and optimize both workforce and asset performance.

Fiscal Year 2026-2028 Focus[1]

The program activities for FY2026 through FY2028 reflect a phased implementation strategy aimed at modernizing LUMA's IT/OT infrastructure, enhancing workforce capabilities, and improving system resilience. These efforts have been carefully aligned with budgeted projects to ensure coordinated progress.

In FY2026, the focus will be on commissioning the Workforce Management System to improve field operations and dispatch efficiency, configuring GIS tools for offline access to boost situational awareness, and preparing and submitting RFPs and Capital Request Forms (CRFs) for infrastructure replacement projects. The temporary backup data center will be leveraged for disaster recovery support until the permanent site is operational. Infrastructure replacement efforts will begin, including the installation of new UPS systems, network switches, and secure equipment racks, as well as the deployment of virtual desktop infrastructure (VDI) through Azure. Additionally, there will be a migration of production and test environments to the cloud, the deployment of cybersecurity tools for OT network monitoring, and the launch of the Contract Management System along with Kronos/UKG cloud migration and asset compliance tools. The phased replacement of legacy hardware and storage systems will also begin, complemented by the installation of field communications and diagnostic tools such as Ekahau, Starlink, and radios.

In FY2027, LUMA will continue the phased replacement of hardware including CAT6A wiring, FM200 systems, and UPS units. The year will also see the beginning of mass storage system implementations to accommodate increasing data demands, along with lifecycle replacements for SCADA/EMS, PI systems, and AVEVA tag point upgrades. Compliance software and improved network fiber installations will be introduced, and there will be an expansion in the use of Workforce Management System tools and capabilities. Progress will also be made in contract management, IoT monitoring, and field communication technologies, as well as in the design and initial stages of transitioning to the permanent backup data center.

By FY2028, the remaining infrastructure upgrades and replacements will be completed, along with the full migration to the permanent backup data center. The final deployment phases will include the full functionality of the Workforce Management System, SCADA upgrades, compliance systems, and comprehensive field workforce tools such as radios, mobile devices, and GPS systems. The IT cloud transitions will be finalized, with continued efforts in storage optimization and full integration of contract management systems.

[1] The information under this section was developed based on the optimal budget petition as part of the Rate Case proceeding under docket NEPR-AP-2023-0003.

SUPPORT SERVICES PORTFOLIO

IT OT Asset Management

Program Status

Note: Recurring activities are ongoing tasks for program completion or remediation, while in-progress activities began post-planning.

Activity	Status
Designed the structure of IT and OT support teams based on best practices	Achieved
Identified the most critical business systems	Achieved
Hired and trained staff to operate and support critical business systems	Achieved
Created a roadmap for upgrading outdated software and equipment	Achieved
Executed system upgrades for critical business and substation operations	Planning
Selected a location and began establishing a new backup IT data center	Planning
Began relocating essential infrastructure to the new site	Planning
Completed initial critical training and certification programs for technical staff	Achieved
Evaluated current systems to determine what should be replaced, upgraded, or moved to the cloud	Achieved
Defined a logical sequence of upgrades to reduce risks and increase business value	Achieved
Set up dedicated environments for development, testing, training, and recovery	Achieved
Established collaboration processes with field teams	Achieved
Ensured help desk and IT support teams are properly trained	Achieved
Defined company-wide technology and infrastructure standards	Planning
Applied standard practices to replace outdated substation hardware	Achieved
Expanded service management tools to improve OT asset tracking, disaster recovery, and system planning	Planning
Built a modern IT backup data center and migrated critical systems	Planning
Integrated previously disconnected telecom systems	Planning
Equipped field workers with communication tools (e.g., mobile phones, radios, satellite phones, laptops, GPS devices)	Achieved
Enhanced work scheduling and dispatch systems (via upgrades or new software acquisition)	Achieved
Delivered training on new workforce tools and workflows	Planning
Assessed and selected software solutions that solve commencement gaps aligned with best match business and technical needs	Achieved
Launched the workforce management system (initial 18-month rollout) to support field productivity across transmission, distribution, and substations	Planning
Defined work priorities and mapped them to job roles and technical competencies	Planning
Implementation of new IT backup data center: Phase 1: Temporary Backup Data Center Transition – A temporary solution was successfully implemented to ensure continued system resilience and disaster recovery capabilities while work on the permanent site progresses.	Achieved
Implementation of new IT backup data center: Phase 2: Permanent Backup Data Center Deployment – The program will now focus on completing the design, build-out, and migration to a permanent backup data center to meet long-term business continuity and reliability goals.	Planning

Active Gaps **Note: The green color below represents closed gaps.**

Gap	Timeframe Identified
Another significant gap and safety concern is the absence of a fully functional voice radio system for workforce management.	Front-End Transition
The current state of the IT OT Asset Management processes and the maintenance of technology assets corresponds to a low maturity score in the gap assessment.	Front-End Transition
There is no formal documented IT OT asset management strategy, nor are there processes or tools aligned to an industry best practice	Front-End Transition

FY2026

SUPPORT SERVICES PORTFOLIO

IT OT Asset Management

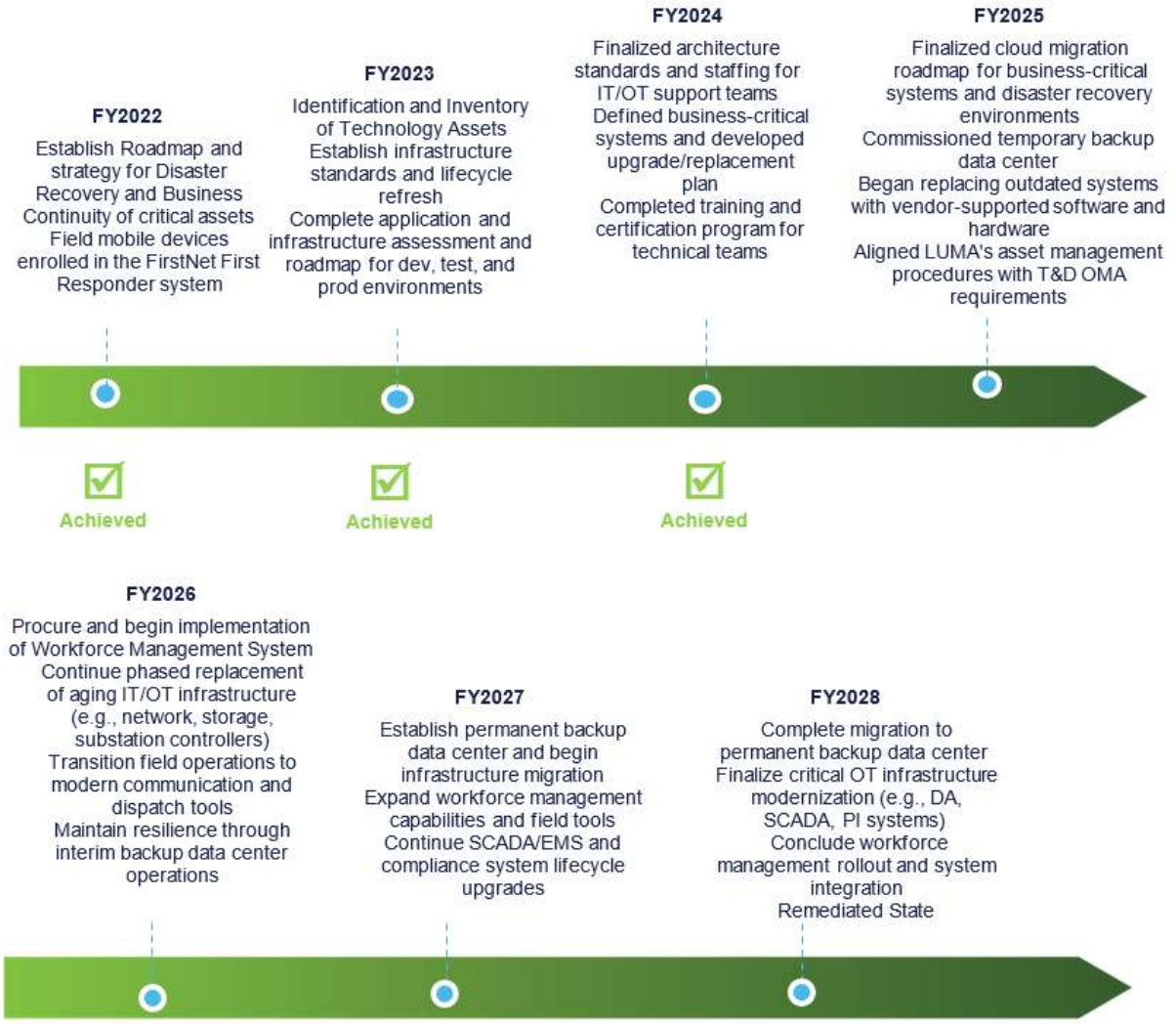
Gap	Timeframe Identified
There is no centralized repository for tracking and managing ITOT software solutions and infrastructure, resulting in end-of-life assets and increased risk of security breaches. Additionally, IT principles are absent (infrastructure refresh cycles, license policies, environment management, etc.)	Front-End Transition
Mission critical systems are dated and not vendor-supported (e.g., SCADA, Energy Management System [EMS], work management [STORMS], fleet management [Fleetfocus])	Front-End Transition
The connectivity model is outdated and not synchronized between the steady state and the operational state in the outage management system (OMS) and poses a liability and safety risk	Front-End Transition
Current processes do not utilize the capability of the OMS to capture estimated times of restoration because the outdated connectivity model and lack of accurate geographic information system (GIS) data limit the accuracy of the estimated time of restoration output	Front-End Transition
The capabilities provided by technology solutions are not fully leveraged or integrated (e.g., no integration between the automated meter reading system and outage management system to support the prediction of outage locations)	Front-End Transition
The network infrastructure is dated and not supported. There is little telecom equipment integration present, which results in extended outages, possible equipment damage, and risk to employees and the public	Front-End Transition
The controls in place to ensure identities and credentials are managed for authorized devices, users, and processes across assets/locations are inconsistent	Front-End Transition
The disaster recovery site at Aguirre and the backup control center (Ponce) do not support critical functions due to environmental and security risks	Front-End Transition
Current on-premises hardware is out of date	Front-End Transition
Compliance and governance software to adhere to North American Electric Reliability Corporation - Critical Infrastructure Protection (NERC-CIP) requirements[2]	Front-End Transition
The IT OT department's ability to ensure secure business operations and deal with potential issues pre-emptively is severely limited due to: end-of-life and non-maintained software and infrastructure assets, immature IT OT asset management processes, and a lack of IT OT asset management performance	Front-End Transition
An antiquated work management system (no longer vendor-supported) creates the need for workarounds and provides partial automation in generating work orders and performance reporting	Front-End Transition
Current systems cannot address the requirements of an effective work management program	Front-End Transition
There is an inability to accurately measure/implement initiatives to improve worker productivity	Front-End Transition
There is a general lack of technology, both at the system level, to restore service more rapidly to large pockets of customers and at the administrative/managerial level to expedite the processing of damage assessments from initial review to final closeout of repairs	Front-End Transition
Missing Enterprise Contract Management System	Post-Commencement

[2] Though Puerto Rico does not fall under the jurisdiction of NERC, LUMA opts to apply the appropriate sections of NERC to the extent they are reflective of industry best practices.

SUPPORT SERVICES PORTFOLIO

IT OT Asset Management

Timeline and Milestones[1]



SUPPORT SERVICES PORTFOLIO

IT OT Asset Management

Alignment to LUMA's Key Goals

Note: The gray color icon represents an indirect impact on the goal, and the colored icon represents an impact of the LUMA key goals.


PRIORITIZE SAFETY


IMPROVE CUSTOMER SATISFACTION


SYSTEM REBUILD & RESILIENCY


OPERATIONAL EXCELLENCE


SUSTAINABLE ENERGY TRANSFORMATION

Impact of Constrained Budget

The Puerto Rico Energy Bureau (PREB) has ordered LUMA to operate under a constrained budget, which directly impacts its ability to execute planned infrastructure and technology improvements. This section outlines the activities that have been deferred, along with the associated risks and delays resulting from the reduced funding level for this program. To align with this constrained budget, the program owner will defer the IoT Platform and Site Monitoring Solution. This project was intended to deploy IoT and IIoT devices at critical substations and operational sites to monitor equipment health and support real-time situational awareness during large-scale outages.

Deferring this activity introduces the following risks:

- Inability to monitor the status of remote sites and grid assets in real time during major outages or emergencies
- Increased reliance on manual dispatch of field crews to assess site health, which slows down restoration efforts
- Greater risk of extended power outages due to delayed detection of issues or degraded equipment
- Safety concerns for field crews operating without reliable site condition data
- Reduced ability to proactively respond to events and meet customer and regulatory expectations for outage response

Delaying this project will impact progress toward Operational Excellence, Resiliency, and Safety goals. Specifically, it will postpone LUMA's ability to modernize grid visibility and outage response capabilities by an estimated 12 to 18 months and may lead to continued inefficiencies in large-scale restoration scenarios.

LUMA Ex. 11.05
Program Brief for IT OT Collaboration and Analytics Program (PBIT5)

Type of Program	☐ SRP ☒ Non-SRP
FY2026-FY2028 Budget	*Refer to Rate Review Filing Schedules D-1*

SUPPORT SERVICES PORTFOLIO

IT OT Collaboration & Analytics

Brief Program Description

This program is designed to enhance organizational collaboration and support data-driven decision-making in IT and Operational Technology (OT) environments through the implementation and consolidation of advanced technology solutions. Key components of the program include standardizing and securing document handling, establishing policies for data lifecycle management, ensuring compliance and optimizing retrieval, creating a comprehensive governance framework focused on quality, security, and accessibility of data across business units, promoting data quality and accessibility, integrating more data sources for better analytics, upgrading to Linux 8 and modern Oracle databases for security and performance, and implementing tools to optimize and automate business processes for increased efficiency and transparency. The program will establish a centralized performance metrics repository, enhancing accountability and transparency, and develop a target architecture roadmap for sustainable improvements. Overall, these initiatives will facilitate strategic decision-making, operational excellence, and compliance with industry standards.

Fiscal Year 2026-2028 Focus[1]

In the upcoming fiscal years, the focus will be on developing a strategy and implementation plan to rationalize analytics tools, establish performance metrics for IT and OT services, and evaluate and implement recommended risk and compliance management tools. Key initiatives will include executing a Linux 8 upgrade across critical systems to mitigate security vulnerabilities and enhance stability, upgrading Oracle database systems to supported versions to ensure ongoing vendor support, security compliance, and performance improvements, implementing process mining software for comprehensive analysis and optimization of business processes, and deploying automation tools designed to streamline routine tasks, reduce manual workloads, and improve overall operational efficiency.

Program Status

Note: Recurring activities are ongoing tasks for program completion or remediation, while in-progress activities began post-planning.

Activity	Status
Establishing a corporate standard for email accounts	Achieved
Establishing document standards and centralized repositories to ensure employees have access to content that is essential to perform their duties safely and securely	Achieved
Establishing internal collaboration channels (intranet)	Planning
Upgrading/replacing end-of-life software solutions supporting content management	Planning
Rationalizing analytics tools through strategy and implementation plan	Planning
Establishing performance metrics for IT OT services	Planning
Designing the LUMA internet SharePoint site based on leading industry library science standards and optimizing how teams work and collaborate through enhancements in the secured internal communication channels	Achieved
Defining role-based content management needs based on ensuring employees have access to the relevant information to complete the work	Planning
Designing the data schema for the data lake expansion based on business-critical data, ensuring the integrity of the data	Planning
Designing LUMA's process model hierarchy and standards	Planning
Defining and implementing IT OT performance metrics and processes for capturing source data	Planning

[1] The information under this section was developed based on the optimal budget petition as part of the Rate Case proceeding under docket NEPR-AP-2023-0003.

SUPPORT SERVICES PORTFOLIO

IT OT Collaboration & Analytics

Activity	Status
Defining workflows to load source data, maintaining the history of data, constructing the metrics, and providing for review and approvals of performance metrics for internal and external reporting	Planning
Defining processes for loading source data to the data lake	Planning
Developing and implementing LUMA process for publishing content	Planning
Upgrading/replacing existing content management solution	Planning
Evaluating and implementing recommended business process modeling tools providing a central repository of business process models	Planning
Evaluating and implementing recommended enterprise architecture tools providing a central repository of business, information, application, and infrastructure architectural artifacts	Planning
Evaluating and implementing recommended risk and compliance management tool	Planning
Extending the capabilities of the existing data lake through the integration of additional data sources	Planning

Active Gaps Note: The green color below represents closed gaps.

Gap	Timeframe Identified
There was no unified strategy and governance, and no organizational goals were defined	Front-End Transition
While PREPA implemented an enterprise content management/document management solution, that solution was not maintained and is now out of vendor support	Front-End Transition
The existing content management/document management solution was not implemented from a corporate view; therefore, document management practices, standards, and tools vary across the organization	Front-End Transition
Document classification, retention, and disposal practices were limited	Front-End Transition
Standardization across the organization for document management was non-existent	Front-End Transition
There was a lack of a central repository of information for all projects to enable central management oversight of project progress and resource assignment, provide the ability to track consistent project information and use standard processes to expand capabilities to all project types	Front-End Transition
Corporate policies and procedures were managed in file folders with limited employee access	Front-End Transition
The lack of a standard for corporate email accounts resulted in poor circulation of critical communications among employees	Front-End Transition
The lack of a centralized business process model repository or toolset for business processes made onboarding new resources difficult and did not support maintenance and redesign of processes.	Front-End Transition
There were no formal documented Information Technology/ Operational Technology (IT OT) business processes aligned to an industry framework for the management of incidents, problems, request fulfillment, and performance	Front-End Transition
There was no shared collaboration space across the organization, with SharePoint only used in a limited capacity	Front-End Transition
The lack of standardized process flow made it difficult to track efficiency	Front-End Transition
The process for reporting on electrical network performance metrics did not leverage the capabilities within the outage management system but instead extracted the raw data to a custom-built application where the data was manually manipulated in a non-auditable manner and reported	Front-End Transition

FY2026

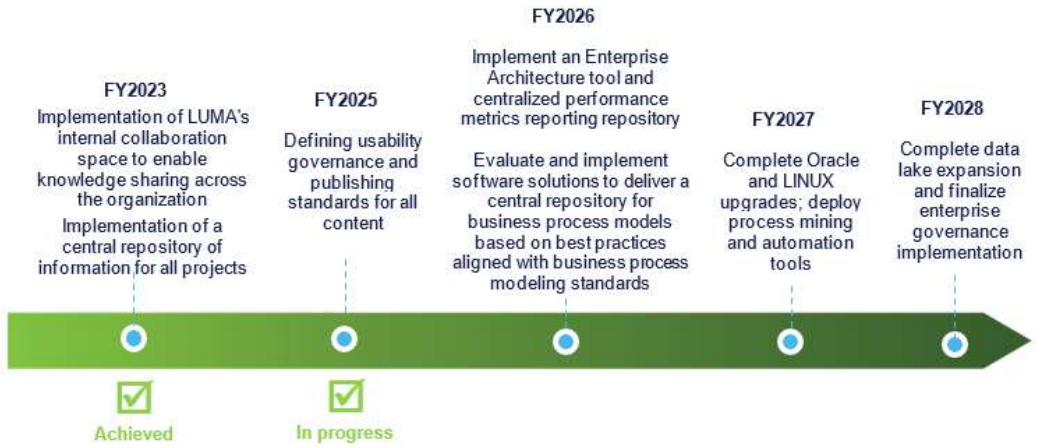
LUMA

SUPPORT SERVICES PORTFOLIO

IT OT Collaboration & Analytics

Gap	Timeframe Identified
There were no established KPIs and other performance metrics within the IT OT department, although service desk tickets were starting to be tracked within the Jira tool (closed)	Front-End Transition
PREPA had seven reporting and analytics tools, each implemented in isolation with the intent of only reporting/analyzing data from a single source. Many of these reporting and analytic tools are now out of date and not vendor-supported	Front-End Transition
PREPA had implemented a data lake on Azure, with the initial data source being limited to customer care and billing data	Front-End Transition
Historical data did not exist, which hinders the establishment of data-driven targets	Front-End Transition
Outdated LINUX operating system versions pose significant cybersecurity risks and operational vulnerabilities.	Post-Commencement
Current Oracle database versions are unsupported, increasing the risk of security vulnerabilities and operational downtime.	Post-Commencement
Absence of structured process mining capabilities prevents detailed visibility into business process inefficiencies and opportunities for automation.	Post-Commencement
Lack of comprehensive automation tools results in manual, repetitive tasks consuming significant employee resources, reducing operational efficiency.	Post-Commencement

Timeline and Milestones[1]



Alignment to LUMA's Key Goals

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PRIORITIZE SAFETY

IMPROVE CUSTOMER SATISFACTION

SYSTEM REBUILD & RESILIENCY

OPERATIONAL EXCELLENCE

SUSTAINABLE ENERGY TRANSFORMATION

FY2026

SUPPORT SERVICES PORTFOLIO

IT OT Collaboration & Analytics

Impact of Constrained Budget

PREB ordered LUMA to develop a constrained budget, which will impact its improvement programs. This section outlines the activities that have been deferred and the associated risks and delays resulting from a constrained budget for this program. To align with this budget, LUMA will defer the full implementation of the Enterprise Document Management System, prioritizing core components and postponing advanced features to later years. Reduce investment in Process Mining and Automation Tools, limiting the scope of process optimization efforts. Staggered expansion of the Data Lake, pushing integration of lower-priority data domains to future years. In addition to scaled-down upgrades to Oracle Database and LINUX environments, with phased execution to fit within budget constraints. Deferring these activities introduces the following risks: continued inefficiencies in document retrieval and collaboration due to delays in system enhancements, missed opportunities to streamline operations and reduce manual tasks without full deployment of automation tools, incomplete data visibility in early years due to slower data lake expansion, limiting effectiveness of analytics, and increased cybersecurity and operational risks due to phased implementation of critical platform upgrades; which will impact overall program execution and will delay key milestones such as full analytics enablement, operational automation, and centralized data governance by approximately 12 to 18 months, affecting the program's timeline and the realization of its strategic objectives.

Exhibit 2

LUMA Ex. 11.00

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

IN RE:	**CASE NO.:** NEPR-AP-2023-0003
PUERTO RICO ELECTRIC POWER AUTHORITY RATE REVIEW	

Direct Testimony of

Crystal Allen

Chief Information Officer, LUMA Energy ServCo, LLC

July 2, 2025

Summary of Prepared Direct Testimony of
CRYSTAL ALLEN
ON BEHALF OF
LUMA ENERGY LLC AND LUMA ENERGY SERVCO, LLC

Ms. Crystal Allen is Chief Information Officer at LUMA Energy ServCo, LLC. The purpose of Ms. Allen's prepared direct testimony in this proceeding is to provide the operations and maintenance ("O&M") costs and Non-Federal Capital ("NFC") costs for the IT OT and Cybersecurity Department ("IT/OT Department") in the Optimal and Constrained Budgets on behalf of LUMA Energy LLC and LUMA Energy ServCo, LLC (collectively, "LUMA").

Ms. Allen's testimony addresses the IT/OT Department's existing and projected costs for staffing, technical and professional services, materials and supplies, transportation and other miscellaneous costs to support informational technology ("IT"), operational technology ("OT") and cybersecurity services. Ms. Allen's testimony also addresses IT systems capital expenditures (including but not limited to customer information systems, accounting systems, enterprise resource management systems, workflow processes and tracking, and workforce management systems) and cybersecurity expenditures by category and justification for those expenditures.

Based on existing and projected company needs, Ms. Allen recommends for the IT/OT Department an Optimal Budget of $105.03 million for Fiscal Year ("FY") 2026, $120.87~~132.90~~ million for FY2027, and $128.68~~145.67~~ million for FY2028. Ms. Allen's testimony for the IT/OT Department also includes a Constrained Budget, as ordered by the Energy Bureau. Ms. Allen explains the activities and projects that would be deferred, reduced or defunded under the Constrained Budget, and identifies the impacts of deferring or delaying those activities and projects.

Finally, Ms. Allen's testimony supports the costs of the IT/OT Department that are included in LUMA's provisional rate application.

Table of Contents

I. WITNESS AND CASE INTRODUCTION

Q.1 Please state your name, business address, title and employer.

A. My name is Crystal Allen. My business address is PO Box 363508, San Juan, Puerto Rico 00936-3508. I am Chief Information Officer for LUMA Energy ServCo, LLC.

Q.2 On whose behalf are you testifying in this proceeding?

A. My testimony is on behalf of LUMA Energy LLC and LUMA Energy ServCo, LLC (hereinafter referred to as "LUMA") as part of the Puerto Rico Energy Bureau of the Public Service Regulatory Board's ("Energy Bureau") proceeding NEPR-AP-2023-0003, the Puerto Rico Electric Power Authority ("PREPA") Rate Review.

Q.3 What is your educational background?

A. I have a Bachelor of Science in computer science with a minor in criminal justice from Troy University. I completed the U.S. Army Information Assurance Security Training and U.S. Army Signal Intelligence Advanced Individual Training while serving in the U.S. Army as a Sergeant. I also attended the Yale School of Management Executive Education Women's Leadership Program, the Syracuse University Whitman School of Management's Veteran Women Igniting the Spirit of Entrepreneurship Program, and the George Washington University IT Project Management program.

Q.4 Please briefly state your professional experience and qualifications.

A. Prior to joining LUMA, I held the position of Innovation, Emerging Technology, New Business Development Lead, reporting to the Chief Zero Carbon Officer and Chief Information Officer at the Sacramento Municipal Utility District ("SMUD"), a non-profit, transmission, distribution, and generation energy utility serving two million customers in the Sacramento Valley in California. Prior to SMUD, I served as the Director of IT for the national hospitality company Firebirds, LLC, the Application Portfolio Manager for

Lowe's Home Improvement, and a Program/Business Relationship Manager for Extended Stay America. In my existing and prior roles, my responsibilities have included identifying activities necessary to implement departmental objectives and budgeting to implement those activities. Before the private sector, my technical career evolved through Military and U.S. Government Agency service.

Q.5 Are you sponsoring any exhibits with your direct testimony?

A. Along with this testimony, I am sponsoring the cost information for the IT OT and Cybersecurity Department ("IT/OT Department" or "Department") in LUMA Ex. 2.03 (Optimal Budget Workpapers) and LUMA Ex. 2.04 (Constrained Budget Workpapers). In addition, I am sponsoring the following exhibits:

- LUMA Ex. 11.01: Excerpts from the Puerto Rico Transmission and Distribution System Operation and Maintenance Agreement ("T&D OMA") executed by PREPA, the Puerto Rico Public-Private Partnerships Authority ("P3A"), and LUMA, dated as of June 22, 2020, applicable to the IT/OT Department
- LUMA Ex. 11.02: CONFIDENTIAL AND PRIVILEGED Program Brief for IT OT Cybersecurity Program (PBIT2) (FY2026)
- LUMA Ex. 11.03: Program Brief for IT OT Enablement Program (PBIT3) (FY2026)
- LUMA Ex. 11.04: Program Brief for IT OT Asset Management (PBIT4) (FY2026)
- LUMA Ex. 11.05: Program Brief for IT OT Collaboration and Analytics (PBIT5) (FY2026)

Q.6 Which documents did you review for your testimony?

A. In preparation for this testimony, I reviewed the following documents:

- T&D OMA
- Order Establishing Scope and Procedures for Rate Case, Case No. NEPR-AP-2023-0003 (Feb. 12, 2025) ("February 12th Order")
- Hearing Examiner's Order Requiring Certain Information in the Rate Case Application or Accompanying Prefiled Testimony, Case No. NEPR-AP-2023-0003 (Mar. 24, 2025)
- Approved System Remediation Plan ("SRP"), filed with the Energy Bureau on February 23, 2021, and re-filed on May 8, 2021
- LUMA Annual Budgets, Fiscal Year ("FY") 2024 to FY2026, dated May 15, 2023, and LUMA Annual Budgets, FY2025, dated May 24, 2024
- Quarterly filings summarizing expenditures and major accomplishments for the timeframe being reported on filed with the Energy Bureau in Case No. NEPR-MI-2021-0004 on November 15, 2021; February 15, 2022; May 16, 2022; September 8, 2022; November 30, 2022; February 14, 2023; May 22, 2023; August 14, 2023; November 14, 2023, February 15, 2024, May 15, 2024, August 14, 2024, November 14, 2024, and February 14, 2025, and annual filings on expenditures and major accomplishments for the timeframe being reported on filed with the Energy Bureau in Case No. NEPR-MI-2021-0004 on October 29, 2022, October 30, 2023, and October 28, 2024
- Final Resolution and Order on Performance Targets, Case No. NEPR-AP-2020-0025 (Jan. 26, 2024)

- CONFIDENTIAL AND PRIVILEGED Program Brief for IT OT Cybersecurity Program (PBIT2) (FY2026)
- Program Brief for IT OT Asset Management Program (PBIT3) (FY2026)
- Program Brief for IT OT Enablement Program (PBIT4) (FY2026)
- Program Brief for IT OT Collaboration and Analytics Program (PBIT5) (FY2026)

Q.7 Have you previously testified or made presentations before the Energy Bureau?

A. Yes. I have provided testimony under oath in support of LUMA's Initial Budgets and Related Terms of Service in Case No. NEPR-MI-2021-0004 and in a technical conference for the Data Security Plan in the matter of In Re: Review of the Puerto Rico Electric Power Authority's Data Security Plan in Case No. NEPR-MI-2020-0017.

Q.8 Briefly describe the purpose of your Direct Testimony.

A. My testimony presents the operations and maintenance ("O&M") costs and non-federal capital ("NFC") costs for LUMA's IT/OT Department in the Optimal and Constrained Budgets for FY2026 to FY2028.

Q.9 Please provide an overview of how your testimony is organized.

A. In Section II, I provide background on the IT/OT Department, LUMA's legal obligations as they pertain to information technology ("IT"), operational technology ("OT"), and cybersecurity, the programs that the IT/OT Department implements, and the current state of the IT and OT systems. In Section III, I present the proposed O&M and NFC costs for the Department in the Optimal Budget. Lastly, in Section IV, I present the proposed

O&M and NFC costs for the Department in the Constrained Budget and describe the costs and activities deferred, reduced, or defunded under that budget.

II. BACKGROUND

Q.10 Describe the functions of the IT/OT Department.

A. The IT/OT Department provides the technology foundation that powers everything LUMA does — from operating the electric grid and running the business to serving customers and protecting the public utility assets and private customer information from ever evolving cyber threats. The functions of the IT/OT Department include IT (applications and end user), OT, and cybersecurity.

IT refers to the implementation, support, and maintenance of LUMA's applications and end user technology, supporting all systems and end user devices that LUMA employees use to serve customers and deliver safe, reliable electricity. This includes solutions that manage incoming revenue and customer billing, geospatial information systems, asset management, financials, workforce management, and web and mobile communications, among others. This also includes ensuring that every LUMA employee has the end-user technology they need to do their job, including everything from the laptops used by our office workers to satellite phones used by our field crews. This area also manages LUMA's contracts and support agreements related specifically to technology services and systems, administering more than 120 technical services contracts.

OT refers to the systems and processes that directly manage the physical infrastructure of the Transmission and Distribution System ("T&D System"). As reflected in the most recent asset inventory, LUMA operates a distributed environment

with 552 network devices across six operational regions, including 103 core switches and 448 edge switches.

Cybersecurity is responsible for protecting LUMA's IT and OT ecosystem from ever increasing and evolving cyber threats. LUMA manages a significant portfolio of public utility assets, as well as the private and financial information of its nearly 1.5 million customers on the Island of Puerto Rico. Protecting the confidentiality, integrity, and availability of the company's digital and operational assets, Cybersecurity is critical to ensure the safe, secure, and reliable delivery of energy to customers.

Q.11 What are the IT/OT Department's primary areas of work?

A. The Department has four primary areas of work across its IT, OT, and cybersecurity functions: (1) grid control and operation, (2) enabling customer services, (3) supporting business operations, and (4) cybersecurity. The work that the IT/OT Department does enables the day-to-day activities of every employee at LUMA. Together, these four areas form the backbone of LUMA's ability to operate, innovate, and serve Puerto Rico safely, reliably, and securely.

Q.12 Please describe the grid control and operation area of work.

A. This area of work refers to the support and maintenance of the systems that control and monitor the electric grid in real time. This includes systems such as the Energy Management System ("EMS"), which monitors and controls generation, transmission, and distribution assets, and plays a critical role in system reliability. Also included in this area is the Outage Management System ("OMS"), which manages the dispatch of crews, load, and distribution automation devices that isolate issues and help reduce outages and system damage. Further, this work area includes telecom and network infrastructure to connect systems and field crews across Puerto Rico and supports the implementation and

operation of Automated Metering Infrastructure ("AMI") as it is rolled out across Puerto Rico. The OMS, EMS and AMI tools, among others, are mission critical to allow LUMA to deliver safe and reliable electric service at a reasonable cost.

Q.13 Please describe the enabling customer services area of work.

A. This area of work supports the technology that customers use to interact with LUMA, both for their service needs, as well as paying their bills and keeping their accounts current. This technology includes systems such as LUMA's customer website and the MiLUMA application, and workflows to report on outage tracking. This area also includes the maintenance and support of the billing system, and customer service platforms that provide representatives with tools to support customers quickly and accurately. These capabilities improve transparency, speed, and satisfaction, and support LUMA's ability to collect revenue from its customers.

Q.14 Please describe the cybersecurity area of work.

A. [redacted]

Q.15 Please describe the supporting business operations area of work.

A. This area of work supports the day-to-day activities across all business operations and departments, providing and maintaining the tools that allow LUMA employees to work effectively. This includes the Workday system, which supports employee management and payroll. It also includes the enterprise resource planning ("ERP") system that enables the Finance Department and the Procurement and Supply Chain Department to manage financial transactions, procurement processes, and inventory tracking. In addition, this area supports enterprise-wide services such as Email, SharePoint, and Teams for communication and collaboration, as well as mobile devices, printers, and Wi-Fi across all LUMA locations.

Q.16 Describe the Department's process for delivering and managing systems for LUMA's business operations?

A. The IT/OT Department delivers and manages LUMA's core systems by overseeing the full technology lifecycle – from planning and implementation to security, support, and continuous improvement. The Department oversees the full technology lifecycle in seven phases: (i) plan and align, (ii) design and architect, (iii) procure and contract (led by the Procurement and Supply Chain Department with the IT/OT Department acting as

subject matter experts), (iv) implement and integrate, (v) secure and control access, (vi) support users, and (vii) operate and improve.

Q.17 Are the functions of the Department required by the T&D OMA?

A. Yes, the functions of the Department are required by several provisions of the T&D OMA and support LUMA's role of managing and maintaining all assets of the T&D System.[1] LUMA Ex. 11.01 identifies the T&D OMA provisions applicable to the Department, including Section 4.2(h) requiring LUMA to develop and maintain a Data Security Plan,[2] and Section 13.3 requiring LUMA, subject to the SRP, to comply with the Data Security Plan and all requirements of Applicable Law regarding data security, cybersecurity and information security, as well as requiring LUMA to establish and maintain backup and limit the risk of any virus or other harmful code.[3] Also relevant are the T&D OMA requirements that LUMA update the Data Security Plan to be consistent with industry standards and that the Data Security Plan incorporate reasonable and appropriate organizational, administrative, physical and technical measures to maintain the security of and protect the internal and external integrity of the System Information and related Information Systems against any unlawful or unauthorized use, processing, destruction, loss, alteration, disclosure, theft or access.[4] In addition, Annex I of the T&D OMA states that LUMA is responsible for "maintaining and improving information

[1] T&D OMA, Section 5.1, at 62; Annex I, Section II(A), at I-4.

[2] T&D OMA, Section 4.2(h), at 46-47.

[3] T&D OMA, Section 13.3, at 119-120.

[4] *Id.,* Section 13.3(b), at 120.

technology systems"[5] and "providing information technology systems maintenance support and improvements."[6] The Department also supports LUMA's duties to maintain the T&D System with due regard for safety.[7]

Q.18 Are the functions of the Department related to public policy or legal requirements?

A. Yes. The Department's functions further policy objectives and requirements of Act 17-2019. For example, Section 1.5 of the Act 17 declares that public policy of the Government of Puerto Rico requires "that every electric power service company design mitigation options adapted to their information technology networks and operations, which shall include the adoption of specific cyber security measures to effectively prevent and manage cyberattacks"[8] and "[t]o ensure the security and reliability of our electric power infrastructure by using modern technologies that promote inexpensive and efficient operations and allow for the integration and dissemination of renewable sources."[9] Similarly Section 1.6 of Act 17-2019 "require[s] electric power service companies to adopt cybersecurity measures to effectively prevent and manage cyberattacks that may affect information technology networks and operations."[10] Also, Section 1.10 of Act 17 provides that "[e]lectric power service companies that render any service in Puerto Rico shall . . . provide and allow for the provision of reliable, clean,

[5] T&D OMA, Annex I, Section I(B), at I-2.

[6] *Id*., Section II(E), at I-5.

[7] *Id.*, Section VIII(C), at I-12-I-13.

[8] Act-17, 2019, Section 1.5(8)(d), 22 LPRA § 1141d (2025).

[9] *Id.*, Section 1.5(9)(a), 22 LPRA § 1141d (2025).

[10] *Id.*, Section 1.6(6) 22 LPRA § 1141e (2025).

efficient, resilient, and affordable electric power contributing to the wellbeing and sustainable development of the people of Puerto Rico."[11]

Q.19 Is the Department responsible for implementing any programs?

A. Yes. The Department implements the IT OT Cybersecurity Program, IT OT Enablement Program, IT OT Asset Management Program, and IT OT Collaboration and Analytics Program.

Q.20 Briefly describe the IT OT Cybersecurity Program.

A. The IT OT Cybersecurity Program is designed to ensure the protection of IT and OT assets from both internal and external threats. This program is essential for maintaining a safe, secure, reliable, and resilient power distribution system. [redacted]

[redacted]

[11] *Id.,* Section 1.10(a), 22 LPRA § 1141i (2025).

More detail on this program is provided in the Program Brief for IT OT Cybersecurity Program (PBIT2) (FY2026) in LUMA Ex. 11.02.

Q.21 Briefly describe the IT OT Enablement Program.

A. The IT OT Enablement Program strengthens LUMA's ability to manage and deliver technology services by implementing industry-standard processes, tools, and practices. The program focuses on improving end-user device management, service management, project management, enterprise architecture, and data governance. More detail on this program is provided in the Program Brief for IT OT Enablement Program (PBIT4) (FY2026) in LUMA Ex. 11.03.

Q.22 Briefly describe the IT OT Asset Management Program.

A. The IT OT Asset Management Program addresses critical gaps in LUMA's technology infrastructure by replacing end-of-life hardware, software, and databases, and establishing formal asset management practices aligned with industry standards. This program ensures that mission-critical systems remain secure, vendor-supported, and resilient, helping LUMA deliver reliable service while reducing operational,

cybersecurity, and safety risks. In addition, this program introduces cloud-based technologies. More detail on this program is provided in the Program Brief for IT OT Asset Management Program (PBIT3) (FY2026) in LUMA Ex. 11.04.

Q.23 Briefly describe the IT OT Collaboration and Analytics Program.

A. The IT OT Collaboration and Analytics Program focuses on improving how LUMA manages enterprise data, automates business processes, and enables cross-functional collaboration and decision-making through modern analytics and information management tools. The program addresses critical gaps in enterprise content management, business process modeling, performance metric reporting, and data governance. It includes the upgrade or replacement of outdated collaboration systems, implementation of a centralized document repository, Data Lake expansion, and establishment of IT/OT performance metrics aligned with regulatory and operational needs. This program also implements tools to standardize workflows, support internal communications, and enhance access to knowledge across departments—empowering employees with the real-time information needed to work safely, efficiently, and systematically. Once completed, the program will provide a centralized analytics environment, integrated reporting systems, and a sustainable foundation for regulatory reporting, project oversight, and customer service enhancement. These improvements will directly support LUMA's strategic goals, including operational excellence, customer satisfaction, and the safe execution of utility services. More detail on this program is provided in the Program Brief for IT OT Collaboration and Analytics Program (PBIT5) (FY2026) in LUMA Ex. 11.05.

Q.24 What challenges does the Department anticipate in FY2026 to FY2028?

A. The IT/OT Department anticipates several key challenges over the next three fiscal years. As shown in Table 1 below, [redacted]

[redacted]

System and improve Operations and Maintenance Services ("O&M Services"), the adoption of digital tools has increased. This digital transformation, while beneficial, has also expanded LUMA's exposure to cyber threats. [redacted]

[redacted]

[redacted] Addressing these challenges requires not only technological upgrades but also ensuring the Department has the workforce and talent to manage technology projects across more than 200 anticipated initiatives.

Table 1. Equipment Considered End of Life	
Equipment	**% of End of Life**
IT Equipment	
[redacted]	[redacted]
[redacted]	[redacted]
OT Equipment	
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
Network Equipment	
[redacted]	[redacted]
IT Systems/Infrastructure/Servers	
[redacted]	[redacted]
[redacted]	[redacted]

Q.25 Does the IT/OT Department have a long-term plan to meet these challenges?

A. Yes. While technologies are rapidly changing and advancing, the IT/OT Department maintains a long-term plan. As part of LUMA's budgeting process, the organization develops a Long-Term Investment Plan ("LTIP"), which is a long-term 10-year outlook. The IT/OT Department's contributions to this plan include planned activities to account for resource availability, supply chain constraints, infrastructure aging, and systematic underfunding. In part, the Department's planned activities in the LTIP are intended to manage IT equipment and reinvestment needs to avoid repeating large-scale emergency spending in future periods.

III. OPTIMAL BUDGET

Q.26 Describe the IT/OT Department's Optimal Budget for FY2026 to FY2028.

A. The IT/OT Department requests a total Optimal Budget of $105.03 million for FY2026, representing a $59.13 million increase over the FY2025 budget. The Department also

projects a budget increase to $120~~32~~.87 million in FY2027 and $128.68~~145.66~~ million in FY2028.

This Optimal Budget is not aspirational. The Optimal Budget is a strategically defined, operationally necessary funding level required to address critical infrastructure and system deficiencies, deliver on customer-facing and safety-related priorities that have been delayed due to systematic underinvestment, and meet regulatory and contractual obligations, including in the T&D OMA, industry best practices for service management and asset lifecycle, Act 17 and Act 57 public policy requirements, and LUMA's internal commitments to grid reliability, disaster recovery, and customer service. The Optimal Budget enables LUMA to modernize outdated systems, reduce operational risk, improve cybersecurity to protect critical utility infrastructure and the personal and financial information of our customers, and support more than 200 initiatives that directly or indirectly impact grid performance, workforce enablement, and customer experience.

Error! Reference source not found.~~Table 2~~ provides a detailed breakdown of the Department's FY2025 budget and requested budgets for FY2026 to FY2028. This cost information is also included in LUMA Ex. 2.03, in the tab titled, "Support Services," and in the columns titled, "ITOT."

Table 2. Summary of IT OT and Cyber Department Business Plan FY2026 to FY2028								
	FY2025 Approved Amount ($MM)		FY2026 Amount Required ($MM)		FY2027 Amount Required ($MM)		FY2028 Amount Required ($MM)	
Program/Activity	**O&M**	**NFC***	**O&M**	**NFC***	**O&M**	**NFC***	**O&M**	**NFC***
Staffing	$9.1	-	$15.71	-	$16.71	-	$17.93	-
Materials and Supplies	$0.2	-	$0.20	-	$0.21	-	$0.22	-
Transportation, Per Diem, and Mileage	-	-	$0.14	-	$0.14	-	$0.14	-
Technical and Professional Services **	$30.5	-	$53.55	-	$71.53~~83.53~~	-	$84.43~~101.43~~	-
Utilities & Rent	$0.1		$0.14		$0.14		$0.14	
Miscellaneous Expense	($0.9)	-	$0.16	-	$0.17	-	$0.17	-
IT OT AND CYBER SUBTOTAL	**$39.0**	**$6.9**	**$69.90**	**$35.13**	**$~~100.90~~88.90**	**$31.97**	**$103.04~~120.04~~**	**$25.64**
IT OT AND CYBER TOTAL	**$45.9**		**$105.03**		**$120.87~~132.87~~**		**$~~145.66~~128.68**	
***Note 1: Detailed breakout of NFC budget by individual project is presented in Table 6. ** Note 2: "Technical and Professional Services" includes IT Services and Professional & Technical Outsourced Services.**								

Q.27 How did the IT/OT Department develop its Optimal Budget?

A. Consistent with the methodology used across all other LUMA departments, the IT/OT Department followed a disciplined, bottom-up budget development process for the O&M and NFC budgets for FY2026 through FY2028. The Department developed the budget at the cost center and expense type level for O&M and at the project level for NFC, ensuring every cost item being proposed was grounded in operational need. Each IT/OT Department function identified initial system needs without funding constraints to capture the full scope of technical, security, and operational requirements. Then, each IT/OT Department function prioritized system needs that eliminate technology related reliability risks, addressed T&D System equipment deficiencies, supported emergency response readiness, and corrected legacy underinvestment. Each IT/OT Department function also ensured O&M and NFC requests were consistent with the LTIP and accounted for staffing shortages and historical overtime challenges.

Q.28 Did the IT/OT Department Optimal Budget undergo review?

A. Yes, the IT/OT Department Optimal Budget underwent multiple rounds of review by team leads, department heads, and LUMA's Executive Leadership Team to validate assumptions, align with business priorities, ensure projects do not expand beyond intended plan, and defer non-critical expenses where possible while maintaining compliance and continuity of operations.

A. Proposed O&M Costs and Activities

Q.29 Describe the O&M costs proposed in the Optimal Budget.

A. The IT/OT Department proposes O&M costs of $69.90 million in FY2026, increasing to $88.90~~100.90~~ million in FY2027 and $103.04~~120.04~~ million in FY2028. Technical and Professional Services and Staffing costs are the primary components of the Department's O&M costs.

Q.30 What types of costs are included in Technical and Professional Services?

A. Technical and Professional Services includes the technical and professional service agreements that the Department relies on to ensure the continuity, reliability, security, and efficiency of technology systems that directly support customer service, grid operations, and regulatory compliance. These services fall within one of two contract types: long-term service agreements and short-term specialized contracts for technical and professional services. Table 3 below provides a summary of the Technical and Professional Services by category.

Table 3. Breakdown of IT OT and Cyber Technical and Professional Services				
Type of Service by Function	**FY2025**	**FY2026**	**FY2027**	**FY2028**
IT OT Long-Term Service Agreements Count / Value	[redacted]	[redacted]	[redacted]	[redacted]
Cyber Long-Term Service Agreements Count / Value	[redacted]	[redacted]	[redacted]	[redacted]
IT OT Short Term Specialized Contracts for Professional and Technical Services Count / Value	[redacted]	[redacted]	[redacted]	[redacted]
Cyber Short Term Specialized Contracts for Professional and Technical Services Count / Value	[redacted]	[redacted]	[redacted]	[redacted]
Total	**167 / $33,762,836**	**242 / $53,551,230**	**220 / ~~$83,527,680~~$71,556,984**	**225 / ~~$101,433,254~~$84,473,660**

Q.31 What types of long-term service agreements are in the IT/OT Department Technical and Professional Services costs?

A. Long-term service agreements include system licenses, software maintenance, hardware support, managed services, platform expertise, and ongoing system health monitoring. [redacted]

[redacted]

Q.32 How did the IT/OT Department project the cost for the long-term service agreements?

A. The IT/OT Department projected the cost for long-term service agreements by using a bottom-up forecasting approach based on existing service agreement costs, renewal schedules, and historical utilization rates; vendor quotes and industry benchmarks (such as, Gartner pricing data); and anticipated adjustments to the service scope to reflect changes in new systems, user growth, and reductions in professional services as internal delivery teams mature. Each contract manager conducted a contract-by-contract evaluation of current and anticipated needs to support LUMA operations and grid modernization. In addition, the prices used for the projections are subject to competitive procurement processes. All applicable services and vendor engagements are subject to competitive

procurement processes in accordance with LUMA's procurement policies and regulatory requirements.

Q.33 What types of short-term specialized contracts are in the IT/OT Department Technical and Professional Services costs?

A. Short-term specialized contracts for Technical and Professional Services support time-sensitive milestone-based projects, such as three (3) to six (6) month sprints or design-build engagements. These include those contracts that support implementation, system integration, data migration, architecture design, cybersecurity audits, and workforce training. Short-term specialized services are essential to safely deploy new technologies, enhance existing tools, and support modernization efforts like the Advanced Distribution Management System ("ADMS"), EMS, and AMI initiatives.

Q.34 How did the IT/OT Department project the cost for the short-term specialized technical and professional services?

A. The IT/OT Department projected short-term specialized technical and professional services costs using a bottom-up approach informed by evaluating actual costs and utilization patterns for comparable services over the last 24 months; mapping specialized skills (such as, cybersecurity, enterprise architecture, system integration) to the scope of upcoming initiatives in the FY2026 to FY2028 portfolio; applying current market rates based on vendor quotes, past RFP responses, and pricing data from sources such as Gartner and Federal Emergency Management Agency ("FEMA") documentation. In addition, as I explained earlier in my testimony, the prices used for the projections are subject to competitive procurement processes.

Q.35 Why are the costs for Technical and Professional Services increasing?

A. Technical and Professional Services costs are primarily increasing because LUMA is adding business-critical applications or systems that are required to maintain core business

operations and grid reliability including systems for outage management, grid control, and real-time restoration updates; Customer Care and Billing platforms; Workforce Management System; emergency response; and AMI deployments. As shown in Table 3 earlier in my testimony, LUMA will have approximately 225 business-critical applications in FY2028. Each of these applications requires additional service agreements to ensure proper licensing, maintenance, and vendor support. Technical and Professional Services costs are also increasing as the team is negotiating multi-year contracts to reduce costly one-year renewals and maintain a more stable multi-year renewal model.

Q.36 How are technology projects allocated to the IT/OT Department?

A. Technology projects are typically driven by business needs and are funded by business department budget allocations (i.e., the cost of implementing business technology projects is absorbed by the relevant LUMA department). Once projects are final, usually in year two, following their implementation, all support, maintenance, and licensing costs shift ownership to the IT/OT Department budget.

Q.37 What are the potential risks of not funding these Technical and Professional Services?

A. The risks of not funding existing and planned Technical and Professional Services include compromising core operations including outage management, billing, cybersecurity protection, customer communication, and renewable energy integration. If IT systems do not have support, there could be longer outages, delayed service restoration, degraded cybersecurity posture, and slower response to regulatory and customer needs. As systems become obsolete, they no longer receive patches and updates to keep secure. This will continue to degrade our cybersecurity posture and could expose the T&D System to

cyberattacks, including but not limited to data breaches of confidential utility and customer information.

Q.38 What costs are included in Staffing?

A. Staffing costs include compensation for the Department's 119 current employees and an anticipated workforce expansion of 166 individuals, which includes the costs for 112 individuals to lead our sixteen (16) Enterprise Delivery Teams as well as the wages for the Department's internship program.

Q.39 What is the current staff makeup of the IT/OT Department?

A. Of the Department's current 119 employees, 108 employees support the IT/OT functions and [redacted] support the Cybersecurity function. Table 4 below summarizes the Department's current headcount. This current staffing level reflects the minimal structure required to sustain day-to-day operations, application support, infrastructure management, and essential cybersecurity monitoring for a rapidly growing portfolio of more than 200 business-critical systems. The Department has absorbed significant operational and delivery responsibilities with this lean headcount, relying heavily on external professional services to meet business demand.

Table 4. Current Department Employee Summary

Department Function	FY2025 Employee
IT	[redacted]
OT	[redacted]
Cyber	[redacted]
Total	**119**

Q.40 When does the IT/OT Department intend to add 166 new hires, and for what Department function?

A. Table 5 below provides a breakdown of proposed new hires by department function and by fiscal year. The IT/OT Department plans to hire 166 employees over the three fiscal years with 158 employees added in FY2026, three (3) employees added in FY2027, and five (5)

employees added in FY2028. Of the 158 planned new hires in FY2026, 112 will make up the enterprise delivery teams, [redacted] new hires will support IT and OT functions, and [redacted] interns will support both IT OT and Cybersecurity. The three (3) employees and [redacted] employees added in FY2027 and FY2028, respectively, will support the IT and OT functions. These hires are critical to correcting systematic underfunding, reducing reliance on external consultants, and building internal capacity to deliver active critical and business technology initiatives that will support grid modernization, operational efficiency, cybersecurity readiness, and enhanced customer service for Puerto Rico.

Table 5. Proposed New Hires

Department Function	FY2026 Proposed New Hires and Resources	FY2027 Proposed New Hires	FY2028 Proposed New Hires
IT OT			
Operational Support of IT Systems	[redacted]	-	-
Service Management & Infrastructure	[redacted]	-	-
OT Systems	[redacted]	[redacted]	[redacted]
Network Operations	[redacted]	-	-
IT/OT Business Operations	[redacted]	-	-
Subtotal IT/OT	[redacted]	[redacted]	[redacted]
Cyber	[redacted]	-	-
IT/OT Cyber Interns	[redacted]	-	-
Subtotal Cyber	[redacted]	-	-
Enterprise Delivery Team	[redacted]	-	-
Total	**158**	**3**	**5**

Q.41 Why is the IT/OT Department hiring [redacted] employees to support Operational Support of IT Systems in FY2026?

A. [redacted] of the new employees will provide operational support for IT Systems. The Department supports over 200 critical applications, including Customer Care & Billing, MiLUMA Portals, AMI, Emergency Response Tools, and Asset Management Systems. We determined the need for these hires by performing a capacity analysis based on current

demand and predicted demand to support incoming services. We are strategically building this team to acquire knowledge and start transitioning support from vendors to our internal resources for key systems. This move will significantly reduce our dependency on vendors in the future, ensuring greater control and efficiency within our operations.

Q.42 Why is the IT/OT Department hiring [redacted] new employees to support Service Management Infrastructure in FY2026?

A. [redacted] of the new hires will be added to the Service Management Infrastructure support team, supporting contract governance for hundreds of vendors and value-added reseller agreements, ensuring timely renewals and regulatory compliance. Specifically, these individuals will be responsible for ensuring that contracts are renewed on time and that renewal goes through the necessary legal, compliance, and insurance reviews to support that renewal. We determined the need for these hires by performing a capacity analysis based on current demand and predicted demand to support incoming services.

Q.43 Why is the IT/OT Department hiring [redacted] new employees to support OT systems in FY2026?

A. OT Systems requires [redacted] new hires to provide critical operational support for growing field technology systems, including Distribution Automation, Feeder Management, and AMI. We determined the need for these hires by performing a capacity analysis based on current demand and predicted demand to support incoming services.

Q.44 Why is the IT/OT Department hiring [redacted] new employees to support Network Operations in FY2026?

A. Network Operations requires [redacted] new hires to support growing business needs. As LUMA grows there is a need to build out the Network Operations team to support the

continuous monitoring, management, and maintenance of LUMA's network infrastructure to ensure its reliability, security and optimal performance.

Q.45 Why is the IT/OT Department hiring [redacted] new employees to support IT OT Business Operations in FY2026?

A. IT/OT Business Operations requires [redacted] new hires to manage the intake, prioritization, and alignment of new technology requests from business units. We determined the need for these hires by performing a capacity analysis based on current demand and predicted demand to support incoming services.

Q.46 Why is [redacted] new hire needed to support Cybersecurity in FY2026?

A. [redacted]

Q.47 What are Enterprise Delivery Teams and why is the IT/OT Department hiring 112 individuals to support those teams in FY2026?

A. Enterprise Delivery Teams are sixteen (16) teams that will execute active business-driven technology initiatives across 84 projects. LUMA intends to try and hire local resources for these teams but understands this may require the department to source contractors. If this is the case, then a budget amendment will be done to reallocate the funds for Technical and Professional Services. These initiatives are critical to enabling clean energy adoption, improving grid reliability, and modernizing customer-facing systems in alignment with Act 17-2019 and LUMA's strategic goals. These teams will build internal execution capability for large, complex, and cross-functional technology programs; reduce

dependency on higher-cost, ad hoc professional services; improve delivery speed, accountability, and stakeholder alignment; and ensure LUMA can meet regulatory and customer commitments without increasing permanent headcount. This delivery model enables LUMA to respond to evolving energy, regulatory, and operational demands while maintaining flexibility and fiscal discipline. Without these teams, critical projects would be delayed or canceled, putting grid resiliency, customer service improvements, and public policy objectives at risk.

Q.48 Is LUMA capable of onboarding 112 individuals in FY2026?

A. Yes. As part of our bottom-up budgeting process, the Human Resources Department conducted an analysis to confirm LUMA would have the capability of onboarding the 112 individuals supporting the Department's Enterprise Delivery Teams.

Q.49 How many interns will the Department hire?

A. LUMA also proposes an annual paid internship program [redacted] interns will support the IT and OT functions, and [redacted] will support the Cybersecurity function. Through the internship program, LUMA will develop local talent and reduce dependence on seconded labor, ensuring LUMA's workforce is equipped to sustain critical utility operations.

Q.50 How will the new hires benefit customers?

A. Internal hires are cost effective. Without internal support, LUMA would have to rely on more costly technical and professional services or seconded employees. Over time, these hires will reduce costly dependence on professional services contracts, resulting in significant savings and efficiency gains for LUMA and long-term financial benefits for the people of Puerto Rico. By growing the department, LUMA enhances service reliability, customer data protection, and operational efficiency. OT experts ensure safe and efficient

power systems, resulting in fewer outages and a more dependable grid. IT teams maintain digital tools for outage management and customer communications, while cybersecurity professionals protect against data breaches with robust security measures.

Q.51 If internal hires are more cost effective, will there be a cost reduction in Technical and Professional Services?

A. The Department's goal is to develop its internal staff to reduce the need to outsource certain tasks or augment staff, and in turn, reduce spending on Technical and Professional Services that do not require specialized expertise. Achieving this goal, however, is not immediate.

Q.52 What types of costs are included in Materials and Supplies?

A. Materials and Supplies includes general maintenance materials tools for the Department such as cabling fiber, racks for security, IT infrastructure tapes and other general office supplies. Projections were developed by each manager based on historical analysis in FY2025 with a Consumer Price Index increase of 3%.

Q.53 What types of costs are included in Utilities & Rent?

A. Utilities & Rent includes rent expenses for the Department's one seconded employee which was project using historical information.

Q.54 What types of costs are included in Miscellaneous Expense?

A. Miscellaneous Expense includes costs for the Department's professional and trade conventions as well as internal training. These were projected using historical information.

B. <u>Proposed NFC Costs and Activities</u>

Q.55 Describe the NFC costs proposed in the Optimal Budget.

A. As shown in Table 6 below, the IT/OT Department proposes NFC costs of $35.13 million in FY2026, $31.97 million in FY2027, and $25.63 million in FY2028. The NFC funds support the IT/OT Department's implementation of the IT OT Cybersecurity, IT OT

Enablement, IT OT Asset Management, and IT OT Collaboration and Analytics Programs that I describe earlier to satisfy LUMA's obligations under the T&D OMA and Act 17-2019 and to align with industry best practices. These investments are essential to protect grid reliability and security, enable faster, more efficient delivery of customer-facing initiatives, reduce long-term operational costs by decreasing dependence on professional services, and strengthen Puerto Rico's energy transformation and resilience efforts for the long-term benefit of all customers.

Table 6. Summary of IT OT and Cybersecurity Department NFC Funding Request for FY2026 to FY2028

ID	Program Name	Proposed NFC Budget			FY2025 NFC Budget
		FY2026	FY2027	FY2028	
PBIT2	IT OT Cybersecurity	[redacted]	[redacted]	[redacted]	[redacted]1
PBIT3	IT OT Enablement	[redacted]	[redacted]	[redacted]	[redacted]
PBIT4	IT OT Asset Management	[redacted]	[redacted]	[redacted]	[redacted]
PBIT5	IT OT Collaboration and Analytics	[redacted]	[redacted]	[redacted]	[redacted]
TOTAL		**$35.13**	**$31.97**	**$25.64**	**$6.9**

Q.56 How did the Department project and verify NFC costs?

A. Similar to O&M, NFC forecasts were built on pricing assumptions reflecting FY2024 actual spending; current vendor proposals, known pricing models, and industry norms; FY2025 run rates; and forecasted needs by initiative. These were aligned to enterprise transformation goals and system remediation priorities. Internal subject matter experts assessed scope, complexity, and timing of major initiatives such as endpoint modernization, software replacements, and cloud enablement. Procurement controls and contract team reviews were performed, including competitive procurement processes as well as documentation of proper justifications for procurement and review by governance bodies.

Q.57 Please generally describe the NFC investment the Department is proposing for the IT OT Cybersecurity Program for FY2026.

A. [redacted]

[redacted]

Q.64 What IT OT Cybersecurity Program projects does the Department propose to fund in FY2027 and FY2028?

[redacted]

[redacted]

Q.65 What are the risks of not funding the planned IT OT Cybersecurity Program projects?

A. If these cybersecurity projects are not funded, or underfunded, there is a significant risk of ransomware attacks and system lockouts, unauthorized access and data breaches, exposure of sensitive customer and operational data, and widespread T&D System disruptions, with the potential for catastrophic grid failure. In addition, LUMA would risk being out of alignment with NIST cybersecurity frameworks and NERC CIP minimum standards.

Q.66 Please generally describe the NFC investment the Department is proposing for the IT OT Enablement Program for FY2026, FY2027, and FY2028.

A. The IT/OT Department proposes to invest NFC funds in the End User Devices Management project within the Enablement Program. The End User Devices Management project is a critical investment in the tools LUMA's workforce relies on to perform outage response, customer service, grid monitoring, and daily operations.

Q.67 Why are NFC funds needed for the End User Device Management project?

A. NFC funds are needed because the project has been significantly underfunded in previous years and, as I demonstrate in Table 1 above, [redacted] The proposed investment allows LUMA to address backlog, stabilize equipment availability, and transition to a predictable, planned replacement cycle of [redacted].

Q.68 For what Enablement Program activities will NFC funds be invested in FY2026?

A. The Department proposes to invest $6.09 million in NFC funds for the IT OT Enablement Program in FY2026. The NFC funds will be used to implement a large-scale replacement

of end-of-life laptops, docking stations, and monitors across all operational and corporate teams, including field operations, customer care, engineering, and outage restoration teams who rely on reliable equipment for critical, time-sensitive work. The large-scale replacement will be to address urgent gaps caused by systematic underfunding and ensure employees are equipped to respond rapidly to outages, manage customer service requests, and perform key business functions without disruption.

Q.69 For what Enablement Program activities will NFC funds be invested in FY2027?

A. The Department proposes investing $4.03 million in NFC funds in FY2027 to continue the equipment refresh cycle to maintain a reliable inventory of laptops and monitors and to support growth and technology expansion initiatives. This funding will help stabilize device replacement needs, reducing the risk of mass failures or unplanned emergency purchases that could impact cost and service continuity.

Q.70 For what Enablement Program activities will NFC funds be invested in FY2028?

A. The Department proposes investing $1.90 million in NFC funds in FY2028. This funding will complete the refresh cycle, allowing LUMA to enter a predictable, planned replacement rhythm aligned with lifecycle best practices. [redacted]

Without this funding, there is a risk of system outages, increased costs, and loss of public

trust. [redacted]

[redacted]

Q.71 How will customers benefit from replacement of end-user devices and the implementation of lifecycle replacement process?

A. Customers will benefit from the workforce productivity that will result from replacing end-user devices that have passed their lifecycle. If end-user devices are replaced on a predictable and planned cycle, LUMA's workforce will have the tools needed to reliably and expeditiously manage field operations, outage response, and customer service. Outage response and restoration as well as customer issue resolution will be faster. In addition, updated end-user equipment will be able to support new tools, applications, and cybersecurity standards essential to grid modernization and customer service excellence.

Q.72 Please generally describe the NFC investment that the Department is proposing for the IT OT Asset Management Program for FY2026, FY2027, and FY2028.

A. The IT OT Asset Management program focuses on replacing aging infrastructure, scaling systems to meet growing operational demands, and enabling modernization efforts that directly impact LUMA's ability to deliver safe, reliable, and efficient service to customers.

[redacted]

[redacted] These investments are necessary to maintain grid reliability, system performance, and cybersecurity posture.

Q.73 Will the IT/OT Department implement a lifecycle replacement program as part of the IT OT Asset Management Program?

A. Yes. The IT/OT Department will implement an investment lifecycle to correct critical underinvestment that has left key infrastructure at risk. By making large, targeted investments now, LUMA will stabilize its IT/OT infrastructure and transition to a predictable asset lifecycle model, reducing future spikes in investment needs and avoiding operational disruptions. [redacted]

[redacted]

Q.74 Please describe the proposed investments for the IT OT Asset Management Program in FY2026.

A. In FY2026, the Department is proposing to invest $18.10 million in NFC funds under the IT OT Asset Management Program. These investments fall into three strategic categories: Infrastructure Replacement and Stability; Technology Modernization; and Security and Site Improvement. Replacing unsupported technology reduces the risk of prolonged system outages, improves field operations, and ensures continued vendor support and compliance.

Q.75 What types of projects fall within Infrastructure Replacement and Stability?

A. The Infrastructure Replacement and Stability category include projects that address the urgent need to replace aging and unsupported systems that pose operational and cybersecurity risks. Specifically, these projects include [redacted]

Q.76 Please describe the proposed investments for Infrastructure Replacement and Stability.

A. Under Infrastructure Replacement and Stability, among other investments, the Department is proposing to invest [redacted]

Q.77 What types of projects fall within Technology Modernization?

A. The Technology Modernization category includes initiatives to introduce cloud-based, scalable systems and platforms to improve performance, workforce productivity, and long-term maintainability. Those projects specifically are the [redacted]

[redacted]

[redacted]

Q.78 Please describe the proposed investments for Technology Modernization.

A. Under Technology Modernization, among other investments, the Department is proposing to invest [redacted]

[redacted]

Q.79 What types of projects fall within Security and Site Improvement?

A. The Security and Site Improvement category includes projects that support risk mitigation, improved visibility, and physical/cybersecurity posture. Specifically, these projects are [redacted]

[redacted]

Q.80 Please describe the proposed investments for Security and Site Improvement.

A. Under Security and Site Improvement, among other investments, the Department is proposing to invest [redacted]

[redacted]

Q.81 Please describe the proposed investments for the IT OT Asset Management Program in FY2027.

A. In FY2027, the Department is proposing to invest $20.9 million in NFC funds in three types of categories for the Asset Management Program: Continued Infrastructure Modernization, Operational Enablement, and Cybersecurity and Compliance. I will highlight some of the more significant investments for each category. Under Continued Infrastructure Modernization, [redacted] Under Operational Enablement, the Department proposes investing $10.1 million to scale the Workforce Management System investment to optimize field crew allocation, improve service delivery, and reduce restoration times, and proposes investing $2.6 million in the Contract Management System expansion to improve vendor oversight, ensure timely project delivery, and control costs. Under Cybersecurity and Compliance, [redacted]

Q.82 Please describe the proposed investments for the IT OT Asset Management Program for FY2028.

A. In FY2028, the Department is proposing to invest $18.66 million in NFC funds in two types of categories for the IT OT Asset Management Program: Sustaining Infrastructure Investments and System Enhancements and Final Developments. I will highlight some of the more significant investments within these categories. Under Sustaining Infrastructure Investments, the Department proposes to invest [redacted]

[redacted]. Under System Enhancements and Final Deployments, the Department proposes investing $5.1 million to complete the phases for the Workforce Management System to enable optimized dispatching and customer project management, $123,000 to complete implementation of the Contract Management System, and $323,000 in compliance software to close gaps in vendor oversight and regulatory readiness.

Q.83 What are the risks to the T&D System if the IT OT Asset Management Program projects are not funded?

A. If the IT OT Asset Management Program is not funded, LUMA may not have the funding to replace obsolete IT/OT infrastructure which increases the risk that there will be a failure of critical systems that manage and control the grid. This could result in complete grid inoperability during outages or emergencies, leaving entire regions without timely restoration capabilities, or grid instability due to outdated systems and unsupported hardware, increasing the likelihood of unplanned outages and prolonged service interruptions. Both risks would directly affect the reliability metrics System Average Interruption Frequency Index ("SAIFI"), System Average Interruption Duration Index ("SAIDI"), and Customer Average Interruption Duration Index ("CAIDI"). In addition, there is a risk that critical projects to modernize IT and OT systems will be delayed, including the telecommunications backbone rebuild as well as upgrades to and replacement of the feeder management systems, SCADA system, AMI, Distribution Automation, ADMS, OMS, and service suite enhancements — all of which directly improve outage management, restoration times, and customer communications.

Q.84 Please generally describe the NFC investment the Department is proposing for the IT OT Collaboration and Analytics Program for FY2026, FY2027, and FY2028.

A. As I describe above, the IT OT Collaboration and Analytics Program focuses on improving how LUMA manages enterprise data, automates processes, and enables decision-making across the organization. The IT OT Collaboration and Analytics Program has been significantly underfunded, mostly recently receiving only $57,000 of NFC funds in FY2025. Underinvestment in the IT OT Collaboration and Analytics Program has resulted in inefficiencies, manual processes, and risks of data inconsistency. The proposed NFC funding corrects these gaps and establishes a sustainable model for future data management, automation, and collaboration. Specifically, the IT/OT Department is proposing to invest NFC funds in seven (7) projects: Enterprise Document Management System, Record Retention/Data Management, Data Strategy and Governance, Data Lake Expansion,[12] [redacted] and Processing Mining and Automation Tools Implementation. The IT/OT Department proposes to invest $7.75 million in FY2026, $6.67 million in FY2027, and $4.71 million in FY2028. While these front-loaded investments are necessary to catch up, future years will benefit from lower, more stable investments that support sustainable operations and regulatory compliance. The initiative focuses on centralizing and securing critical documentation for FEMA and regulatory compliance, streamlining workflows to minimize delays and errors, and tracking performance metrics across various operations.

[12] A data lake is a centralized repository designed to store, process, and secure large amounts of data.

Q.85 What NFC investments would be made in FY2026 for the IT OT Collaboration and Analytics Program?

A. In FY2026, the Department would invest $7.75 million in NFC funds for the IT OT Collaboration and Analytics Program projects. For the Enterprise Document Management System, the Department would invest $2.11 million to establish a centralized, secure document repository to manage critical regulatory, operational, and customer-facing documents, enabling faster access and better control. For the Record Retention/Data Management program, the Department would invest $266,800 to standardize and automate record retention processes to comply with legal and regulatory reporting requirements and protect sensitive customer and operational data. For the Data Strategy and Governance, the Department would invest $863,800 to develop governance frameworks to ensure that data used in reporting, customer billing, outage tracking, and decision-making is accurate, reliable, and timely. For Data Lake Expansion, the Department would invest $3.11 million to expand LUMA's centralized data storage and analytics environment to support real-time reporting for customer service, outage management, asset monitoring, and financial oversight. For the Process Mining and Automation Tools Implementation project, the Department would invest $400,000 to develop tools to identify inefficiencies in customer processes, outage response workflows, and internal operations, enabling automated, faster service delivery. Lastly, the Department would invest [redacted] s[redacted] This investment supports compliance with key regulatory reporting obligations under the T&D OMA, including performance metrics such as SAIDI, SAIFI, and CAIDI, as well as customer complaint tracking and other data reporting required by Act 17-2019.

Q.86 What NFC investments would be made in FY2027 for the IT OT Collaboration and Analytics Program?

A. In FY2027, the Department would invest $6.67 million in NFC funds for the IT OT Collaboration and Analytics Program projects. For the Enterprise Document Management System project, the Department would invest $2.12 million to scale deployment across additional departments, ensuring complete coverage of critical records. For the Record Retention/Data Management and the Data Strategy and Governance projects, the Department would invest $830,800 and $118.300, respectively, to continue to refine governance processes, ensuring ongoing accuracy in customer and operational data reporting. For Data Lake Expansion, the Department would invest $2.12 million to support additional data sources and business units such as data supporting Distributed Energy Resources and Battery Energy Storage Systems, new applications and [redacted] enabling advanced analytics that inform capital project prioritization and customer service enhancements. For the Process Mining and Automation Tools Implementation project, the Department would invest $700,000 to expand use of automation to streamline regulatory filings, project tracking, and outage management reporting. Lastly, the Department would invest [redacted]

Q.87 What NFC investments would be made in FY2028 for the IT OT Collaboration and Analytics Program?

A. In FY2028, the Department would invest $4.71 million in NFC funds for the IT OT Collaboration and Analytics Program projects. For the Enterprise Document Management System project, the Department would invest $2.12 million to implement the final stage of the deployment and optimization of document management tools. For the Record

Retention/Data Management and the Data Strategy and Governance projects, the Department would invest $123,000 and $835,500, respectively, to sustain and enforce standards across business units, ensuring data integrity and compliance. For Data Lake Expansion, the Department will invest $123,000 to support final infrastructure scaling to support new regulatory reporting requirements and customer-facing analytics. For the Process Mining and Automation Tools Implementation project, the Department would invest $500,000 to support ongoing investment to automate more complex processes, reducing turnaround times for internal requests and external customer services and expanding the use of automation to streamline regulatory filings, project tracking, and outage management reporting. Lastly, the Department would invest [redacted]

Q.88 How will customers benefit from these investments in the IT OT Collaboration and Analytics program?

A. Customers will benefit from these investments because improved data integration and automation will reduce manual errors in outage and other required regulatory reporting, billing, and customer requests, and in turn, provide for faster service delivery and improved customer communication. Customers will also benefit from better decision making in capital and operational planning that will occur through stronger data governance. On top of these customer benefits, investments in the IT OT Collaboration and Analytics program will improve the accuracy and efficiency of LUMA' reporting to the Energy Bureau.

Q.89 Are the IT/OT Department's O&M and NFC costs and activities in the Optimal Budget consistent with just and reasonable performance? Please explain.

A. Yes. The programs and plans included in LUMA's business plan are designed to fully align with statutory obligations, contractual requirements under the T&D OMA, and recognized industry best practices.

Q.90 Are the IT/OT Department's O&M and NFC costs and activities in the Optimal Budget consistent with that of a prudently performing operator? Please explain.

A. Yes. All IT/OT and cybersecurity initiatives are benchmarked against NERC CIP standards, leading utility cybersecurity frameworks, and global best practices for data management, asset lifecycle governance, and technology deployment. LUMA's strategic focus on cloud migration, modern workforce management, delivery team establishment, infrastructure lifecycle management, and advanced analytics reflects industry-recognized practices and ensures operational resilience, efficiency, and transparency. Initiatives are benchmarked through external advisory support (such as Gartner and FEMA-based cost estimators), participation in utility peer groups, alignment with NERC and NIST standards, and internal assessments mapped to maturity models that compare LUMA's current state to established industry norms.

Q.91 Are the IT/OT Department's O&M and NFC costs avoidable?

A. The February 12th Order defines avoidable costs as costs that are "to-be-incurred."[13] The majority of the added costs in the IT/OT Department's budget have not yet been incurred. These include planned hires, service contracts not yet executed, and system investments that are pending funding approval. Nevertheless, the majority of the Department's O&M and NFC costs are unavoidable in order for LUMA to prudently operate the T&D System.

[13] Order Establishing Scope and Procedures for Rate Case, Case No. NEPR-AP-2023-0003, at 10 (Feb. 12, 2025).

These costs are essential to maintaining the stability, security, and functionality of the systems that support LUMA's daily operations and long-term regulatory obligations. Many of the O&M costs pertain to mission-critical software, platforms, and infrastructure that are already deployed and require ongoing licensing, vendor support, and maintenance—including systems for outage management, customer billing, workforce management, cybersecurity, and asset tracking. Interrupting support for these systems would risk compliance violations, service degradation, and customer dissatisfaction. Similarly, many staffing and professional services costs are tied to in-progress contracts. These roles are necessary to meet time-sensitive performance and public policy objectives, and reductions would lead to project delays, cost overruns, and missed regulatory milestones. While LUMA continuously seeks to optimize costs, the majority of planned IT/OT investments represent sustaining or committed expenditures required to maintain reliable operations and meet the standards of a prudently performing operator.

IV. CONSTRAINED BUDGET

Q.92 Please describe the IT/OT Department's Constrained Budget.

A. The Constrained Budget reduces the IT/OT Department's projected Optimal Budget funding by approximately $15.08 million in FY2026, $22.47~~10.47~~ million in FY2027, and $36.32~~19.32~~ million in FY2028, as detailed in Table 7 and LUMA Ex. 2.04 ("Support Services" tab, "ITOT" columns). In alignment with the Energy Bureau's directive, LUMA structured the Constrained Budget to preserve core system operations and safety. However, the Constrained Budget defers or scales down key initiatives [redacted]. These delays increase reliance on aging systems, extend manual processes, and limit LUMA's ability to reduce risk and improve service. While the budget maintains minimum safe

operations, it slows critical progress on grid resilience, customer experience, and regulatory alignment. Sustained underinvestment will elevate enterprise risk and hinder long-term system reliability. LUMA urges stakeholders to consider that resilience requires consistent investment to meet Puerto Rico's energy needs today and in the future.

Table 7. Summary of Constrained IT/OT and Cybersecurity Department Business Plan for FY2026 to FY2028

	FY2025 Approved Amount ($MM)		FY2026 Amount Required ($MM)		FY2027 Amount Required ($MM)		FY2028 Amoun Required ($MM)	
Program/Activity	**O&M**	**NFC**	**O&M**	**NFC**	**O&M**	**NFC**	**O&M**	**NFC**
Staffing	$9.1	-	$14.24	-	$15.01	-	$16.05	-
Materials and Supplies	$0.2	-	$0.20	-	$0.21	-	$0.22	-
Transportation, Per Diem, & Mileage	-	-	$0.14	-	$0.14	-	$0.14	-
Technical and Professional Services	$30.5	-	$47.43	-	$79.0467.02	-	$78.8296.72	-
Utilities &Rent	$0.1	-	$0.07	-	$0.07	-	$0.07	-
Miscellaneous Expense	($0.9)	-	-	-	-	-	-	-
IT/OT AND CYBER SUBTOTAL	**$39.0**	**$6.9**	**$62.08**	**$27.87**	**$82.4594.47**	**$27.93**	**$96.29113.19**	**$13.15**
IT/OT AND CYBER TOTAL	**$45.9**		**$89.95**		**$110.38122.40**		**$109.44126.34**	
Note 1: "Technical and Professional Services" includes IT Services, and Professional & Technical Outsourced Services.								

Q.93 How did the Department develop the Constrained Budget?

A. The IT/OT Department followed a structured, bottom-up approach to prepare the FY2026 Constrained Budget. Each function reviewed their planned initiatives and identified opportunities to defer, reduce, or consolidate both O&M and NFC costs and activities while ensuring continued support for critical operations. Initiatives directly tied to compliance, grid resilience, and risk reduction were preserved. Others were deferred. Projects or services with low short-term deliverability (due to resource or vendor constraints) were deprioritized. Costs that could be paused, renegotiated, or shifted to capital budgets were evaluated for short-term relief. Lastly, each potential cut was assessed for operational and risk impacts. For example, delays to system replacements were weighed against outage

response time, cybersecurity posture, or compliance penalties. The resulting Constrained Budget prioritizes risk-informed execution and regulatory compliance, focusing resources on initiatives with the highest impact on reliability, security, and performance. For the projection years the Department applied a percentage increase that was standard for all LUMA departments.

Q.94 What costs and activities are reduced, deferred, or defunded in the Department's O&M for the Constrained Budget?

A. Under the Constrained Budget, the Department reduces staffing costs by making an internal hire for the Director for IT Infrastructure and Service Management instead of hiring a seconded employee to serve in this role and defunds the related rent expense for the seconded employee. The Constrained Budget also reduces the budget by reducing the number of contract hours for General Maintenance ("GM") support, cutting planned hours in half—from approximately 2,000 to 1,000 hours—with minimal anticipated impact to service delivery. These services include technical support for infrastructure maintenance, application health monitoring, patching, and non-project incident response. GM services help sustain day-to-day operational readiness, especially during peak support periods or when LUMA staff are at capacity. These reductions were selected to minimize operational risk while supporting LUMA's commitment to reliability and performance under the constrained funding scenario.

Q.95 What are the potential risks of reducing, deferring, or defunding these activities?

A. Reducing, deferring, or defunding planned O&M activities introduces multiple risks to LUMA's operations. Deferring infrastructure maintenance or reducing professional support hours may delay incident resolution, increase system downtime, and reduce responsiveness during outages or cybersecurity events. [redacted]

[redacted] Reducing roles, such as seconded leadership or support contractors, can create knowledge gaps, reduce oversight capacity, and disrupt the continuity of ongoing programs. While the Department prioritized reductions to minimize direct customer impact, the Constrained Budget introduces risk to LUMA's ability to sustain performance, reliability, and operational resilience over time.

Q.96 What NFC costs and activities are reduced, deferred, or defunded in the Department's Constrained Budget?

A. The Constrained Budget reduces, defers, and defunds certain NFC costs and activities that would implement the IT OT Collaboration and Analytics Program, IT OT Asset Management Program and IT OT Cybersecurity Program. Within the IT OT Collaboration and Analytics Program, LUMA will defer the full implementation of the Enterprise Document Management System, prioritizing core components and postponing advanced features to later years; reduce investment in Process Mining and Automation Tools, limiting the scope of process optimization efforts; stagger the expansion of the Data Lake, pushing integration of lower-priority data domains to future years. In addition, the Department reduces the budget for the [redacted]. Within the IT OT Assessment Management Program, the Department will defer the IoT Platform and Site Monitoring Solution. This project was intended to deploy IoT and IIoT devices at critical substations and operational sites to monitor equipment health and support real-time situational awareness during large-scale outages. Additionally, the Department will defer fire suppression and network switches in the Constrained Budget. Within the IT OT

Cybersecurity Program, [redacted].

Q.97 What are the potential risks of reducing, deferring, or defunding activities within the Collaboration and Analytics Program?

A. Reducing the budget for software upgrades will slightly increase exposure to known security vulnerabilities and increase performance degradation risk in data-related systems. The security risk is considered slight because the affected systems are currently protected by perimeter controls, segmented environments, and endpoint detection tools. While upgrading to the latest versions would eliminate known vulnerabilities, existing controls mitigate the immediate risk of exploitation in the short term. By performance degradation, I mean the gradual loss of system efficiency, including slower data queries, delayed reporting, and increased maintenance workload. Over time, older database and operating system versions become less compatible with modern applications and may struggle to scale with growing data volumes—particularly as LUMA expands analytics, customer platforms, and outage response tools. While the immediate impact of these deferrals is manageable, continued postponement beyond FY2028 would increase operational risk and may eventually affect reporting accuracy, cybersecurity posture, and user experience.

Q.98 What are the potential risks of reducing, deferring, or defunding activities within the IT OT Asset Management Program?

A. Deferring the IT and OT Asset Management Program activities, which I discuss above, introduces several significant risks that could impact operational efficiency and safety. First, deferral of these activities hampers the ability to monitor the status of remote sites and grid assets in real-time during major outages or emergencies, which is crucial for timely response and management. This delay increases reliance on the manual dispatch of

field crews to assess site health, thereby slowing down restoration efforts and potentially prolonging power outages due to delayed detection of issues or degraded equipment. Moreover, deferral raises safety concerns for field crews who may operate without reliable site condition data, putting them at risk. The reduced ability to proactively respond to events also affects the ability to meet customer and regulatory expectations for outage response. Overall, delaying this project will impact progress toward operational excellence, resiliency, and safety goals. Specifically, it will postpone LUMA's ability to modernize grid visibility and outage response capabilities by an estimated 12 to 18 months, potentially leading to continued inefficiencies in large-scale restoration scenarios.

Q.99 What are the potential risks of reducing, deferring, or defunding activities within the IT OT Cybersecurity Program?

A. [redacted]

Q.100 If the Constrained Budget is approved, will the Department meet its contractual and legal duties?

A. Yes.

Q.101 Please explain.

A. The Department developed its Constrained Budget to ensure that the IT/OT Department had funding for continued support of critical operations and the implementation of over 200 initiatives to support the restoration and transition of the T&D System. However, approving a budget below the Constrained Budget will hinder the Department's ability to fulfill its contractual and legal obligations.

Q.102 Does the work performed by the IT/OT Department affect the performance metrics established by the T&D OMA and approved by the Energy Bureau?

A. Yes, the work performed by the IT/OT Department directly affects the performance metrics established by the T&D OMA and approved by the Energy Bureau. Specifically, the Department's work to maintain and modernize critical IT and OT systems, including OMS, SCADA, ADMS, and communications infrastructure, supports the improvement of SAIDI by enabling faster outage detection, response coordination, and service restoration. Additionally, investments in AMI, field automation, and mobile workforce tools contribute to improvements in SAIFI and CAIDI by reducing the number and duration of customer interruptions. These efforts enhance grid visibility, increase restoration efficiency, and ensure compliance with performance metrics required under the T&D OMA.

Q.103 Will the Department's ability to meet the performance metrics be affected by the Constrained Budget?

A. The Constrained Budget reduces the Department's total funding by approximately $15.08 million in FY2026, $22.47~~10.47~~ million in FY2027, and $36.32~~19.32~~ million in

FY2028. While LUMA has prioritized reliability and preserved the most essential initiatives, these reductions require the deferral or scaling back of certain projects and activities intended to strengthen outage response, operational visibility, and system performance. Specifically, under the Constrained Budget, activities such as replacing aging PoE network switches, upgrading analytics platforms, and accelerating cloud migration have been delayed or limited in scope. These adjustments may affect the Department's ability to enhance real-time monitoring, streamline restoration workflows, and deliver improvements in system performance indicators over time. While LUMA does not expect these constraints to prevent safe system operation, they may limit the pace of progress toward performance improvements tied to SAIDI, SAIFI, and CAIDI. The ability to respond flexibly to emerging issues or accelerated regulatory requirements may also be reduced. Continued investment will be necessary to maintain long-term reliability, responsiveness, and customer trust.

Q.104 What would be the impact if the Constrained Budget for the Department is reduced?

A. If the Energy Bureau approves a rate below the Constrained Budget, the IT/OT Department and the programs it supports will continue to face underfunding. LUMA's technology environment has endured years of constrained investment, and the infrastructure inherited at transition includes outdated systems, unsupported platforms, and components sourced from secondary markets due to vendor obsolescence. A further reduction below the constrained level would delay or scale back planned improvements designed to modernize operations, enhance cybersecurity, and increase system resilience. While LUMA is committed to prioritizing safety and reliability within available resources, sustained underinvestment limits operational flexibility and may reduce the

pace of progress toward critical performance and policy goals. If the current rate of system degradation continues to outpace reinvestment, LUMA's ability to maintain service quality, meet modernization targets, and support enterprise efficiency could be materially impacted over time. Continued alignment between funding and need is essential to preserve system reliability and fulfill long-term obligations under the T&D OMA and Act 17-2019.

V. PROVISIONAL RATE

Q.105 Is the IT/OT Department proposing costs to be funded through a provisional rate?

A. Yes.

Q.106 What specific O&M activities is the Department proposing to be funded by the Provisional Rate?

A. The IT/OT Department is requesting an additional $4.2 million in funding to cover the fixed cost absorption from the termination of Genera shared services. The Department is also requesting $7.2 million to support critical initiatives.

Q.107 Does the Department view the cost absorption from the termination of Genera shared services as a high priority and noncontroversial? Please explain.

A. Yes. LUMA inherited many of PREPA's legacy IT systems, such as the procurement software and financial system, both of which had processed and stored massive data volumes on behalf of PREPA as an integrated utility. From Genera's commencement until the termination of the Shared Services agreement on February 28, 2025, the IT/OT Department provided shared services to Genera, which included the joint use of these applications, and many others. The termination of the Shared Services agreement with Genera eliminated cost-sharing for essential IT infrastructure originally designed to support an integrated utility. Fixed costs such as server maintenance, security, and core application support now fall solely on LUMA as these used to be invoiced to Genera. The

costs associated with shared services are unavoidable and no longer offset by a cost-sharing agreement that previously existed with Genera therefore making them a high priority. These services are critical to ongoing operations and now fall solely under LUMA's responsibility so they should be viewed as noncontroversial. This funding cannot be reallocated from Genera, as they have since transitioned to using their own services and are utilizing their budget accordingly. The budget includes $3 million for non-labor IT/OT systems and infrastructure to operate and maintain core systems like procurement, finance, and data storage, which were originally used by both entities; $1.1 million for labor allocation, covering IT/OT Department staff time historically dedicated to supporting systems and services still co-located with Genera infrastructure; and $0.1 million for other costs and inflation, encompassing ancillary expenses such as licenses, support contracts, and shared IT services.

Q.108 Does the Department view funding for support of critical initiatives as high priority and noncontroversial? Please explain.

A. There are several critical initiatives in which the O&M budget for the IT/OT Department is necessary in the Provisional Rate funding. Other LUMA departments are requesting funding to begin or continue activities within their programs. Those activities require IT/OT Department support, which in turn requires additional funding for the IT/OT Department. This additional cost is high priority and non-controversial since these costs will be unavoidable. Without this funding, execution of prioritized program briefs and emergency IT/OT projects will be delayed.

Q.109 What specific NFC activities is the Department proposing to be funded by the Provisional Rate?

A. The Department is requesting [redacted] for the IT OT Cybersecurity Program, $3.3 million for the IT OT Enablement Program, $2.08 for the IT OT Asset Management Program, and $1.1 million for the IT OT Collaboration and Analytics Program.

Q.110 Does the Department view funding for the IT OT Cybersecurity Program as high priority and noncontroversial? Please explain.

A. Funding for the IT OT Cybersecurity Program is a high priority and non-controversial because [redacted] meaning cybersecurity initiatives have become even more imperative to protect our critical infrastructure. These threats include a rise in phishing and credential theft attempts targeting OT environments, vulnerabilities in remote access security stemming from outdated firewall configurations, and heightened activity from nation-state actors and ransomware groups targeting energy infrastructure. This funding will enhance defense capabilities, protect infrastructure from disruptions, safeguard customer data, and ensure compliance with industry standards [redacted]. Without having the funding to complete these activities, LUMA risks ransomware attacks, unauthorized access, data breaches, and potential grid failures making this a high priority for the business. [redacted]

[redacted]

[redacted]

Q.111 Does the Department view funding for the IT OT Enablement Program as high priority and noncontroversial? Please explain.

A. Incremental funding is required for the IT OT Enablement Program through the Provisional Rate to ensure the reliability of essential tools for outage response, customer service, grid monitoring, and daily operations. [redacted] The funding will replace equipment that is beyond end-of-life, including laptops, field tablets, and devices for front-line teams; update communication equipment like radios and hotspots; and enhance device management and cybersecurity. Frontline staff rely on functioning, secure devices to receive, process, and execute outage restoration instructions. Failing or unsupported devices slow down field response and increase outage durations. [redacted] [redacted]. These measures are non-controversial as they are critical for maintaining operations and aligning with NIST and NERC-CIP standards. Without this funding, there is a risk of system outages, increased costs, and loss of public trust. These investments are not enhancements but foundational risk mitigation measures that are urgent and necessary for grid modernization efforts.

Q.112 Does the Department view funding for the IT OT Asset Management Program as high priority and noncontroversial.

A. Funding for the IT OT Asset Management Program will support [redacted]. LUMA plans to replace end-of-life servers, switches, and backup systems. [redacted] Without replacement, LUMA anticipates increased service interruptions, worsened mean time to recovery due to lack of vendor support, and an inability to scale recovery systems during hurricane season making this non-controversial. With this funding LUMA will also renew [redacted] to support application deployment to LUMA employees and field users. This is essential for analytics and asset tracking, which prevents disruptions in asset visibility, maintenance planning, and reporting needed for compliance with FEMA and the Energy Bureau. Additionally, these funds will be used to expand backup capacity and power redundancy to maintain up time during major events.

Q.113 Does the Department view funding for the IT OT Collaboration and Analytics Program as high priority and noncontroversial.

A. Funding the IT OT Collaboration and Analytics Program is a high priority because delaying these investments would reduce visibility into program performance, hinder compliance efforts, and force continued reliance on manual, error-prone processes that increase operating costs and slow value delivery. As LUMA scales federal programs and regulatory commitments, modern collaboration and analytics tools are no longer

optional—they are essential and high priority. The initiatives are non-controversial as they focus on centralizing and securing critical documentation for FEMA and regulatory compliance, streamlining workflows to minimize delays and errors, and tracking performance metrics across various operations.

Q.114 Are the costs included in the provisional rates request incremental to the FY2026 Optimal or Constrained budgets presented by LUMA?

A. No. The costs included in the provisional rates request are not incremental to the optimal or constrained budgets. These costs are already part of LUMA's overall revenue requirement. The provisional rates simply reflect the timing of cost recovery, with a portion of these costs allocated to FY2026 while the permanent rate request is under adjudication. This approach ensures continuity of operations and funding during the regulatory review period, without increasing the total budget request.

Q.115 Does this conclude your testimony?

A. Yes.

ATTESTATION

Affiant, Crystal Allen, being first duly sworn, states the following:

The prepared Direct Testimony, the exhibits and the cost information for the IT OT Cybersecurity Department in LUMA Ex. 2.03 and LUMA Ex. 2.04, constitute my Direct Testimony in the above-styled case before the Puerto Rico Energy Bureau. I would give the answers set forth in the Direct Testimony if asked the questions that are included in the Direct Testimony. I further state that the facts and statements provided herein are my Direct Testimony and to the best of my knowledge are true and correct.

_____

Crystal Allen

Affidavit No. _____

Acknowledged and subscribed before me by Crystal Allen, in her capacity as Chief Information Officer of LUMA, of legal age, single, and resident of San Juan, Puerto Rico, who has been identified by means of her driver's license/ U.S. Passport with registration number _____.

In San Juan, Puerto Rico, this 2nd day of July 2025.

_____

Notary Public

LUMA Ex. 11.01

Excerpts from the Puerto Rico Transmission and Distribution System Operation and Maintenance Agreement ("T&D OMA"), executed by PREPA, the Puerto Rico Public-Private Partnerships Authority (P3A), and LUMA, dated as of June 22, 2020, applicable to IT OT and Cybersecurity Department

Section 4.2 ManagementCo Responsibilities

(h) Physical Security Plan, Data Security Plan and Vegetation Management Plan. ManagementCo shall develop and provide Administrator and PREB, for their information, with plans of action meeting Contract Standards that outline the procedures and actions necessary for maintaining (i) the physical security of the T&D System after the Service Commencement Date (the "Physical Security Plan"); (ii) data security, cyber security and information security relating to the T&D System (the "Data Security Plan"); and (iii) a comprehensive vegetation management program (the "Vegetation Management Plan"), each of which shall become effective on the Service Commencement Date; provided that as long as each of the Physical Security Plan, Data Security Plan, and Vegetation Management Plan are substantially complete on the Service Commencement Date, their finalization shall not delay the Service Commencement Date from occurring if all other Service Commencement Date Conditions have been satisfied or waived. For the avoidance of doubt, the Data Security Plan shall be subject to the System Remediation Plan, including the approach for implementation outlined in Section 4.1(d) (*Front-End Transition Period Generally – Transition to Standard of Performance).*

Section 5.7 Safety and Security.

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(c) Security. Operator shall implement the Physical Security Plan in accordance with such plan. In accordance with the Physical Security Plan, Operator shall guard against and be responsible for all physical damage to the T&D System caused by trespass, theft, negligence, vandalism, malicious mischief or cyber-attacks of third-parties. For the avoidance of doubt, Operator's responsibility for physical damage to the T&D System caused by cyber-attacks shall be subject to the System Remediation Plan, including the process for implementation outlined in Section 4.1(d) (*Front-End Transition Period Generally – Transition to Standard of Performance).* Operator shall guard against and be responsible for, in each case to the extent of Operator's negligence, all physical damage to the T&D System caused by trespass, theft, vandalism or malicious mischief of third-parties. Any cost arising therefrom shall be treated as T&D Pass-Through Expenditures hereunder, except to the extent such costs are costs are Disallowed Costs. The Physical Security Plan shall be updated by Operator from time to time as necessary or appropriate.

Section 13.3 Data Security.

(a) Cybersecurity Breaches. Subject to Section 4.1(c) (*Front-End Transition Period Generally – Transition to Standard of Performance)* and the System Remediation Plan, Operator shall comply with, and shall use commercially reasonable efforts to ensure that all Operator Related Parties and all Contractors and Subcontractors comply with the Data Security Plan, any other Contract Standards and all requirements of Applicable Law regarding data security, cyber security and information security in respect of the System Information and related Information Systems. Operator shall promptly notify, and shall use commercially reasonable measures to ensure that all Operator Related Parties, Contractors and Subcontractors promptly notify, Administrator and PREB (if possible, in writing) of any material Cybersecurity Breaches or any other material losses or theft of any data of which it has knowledge. Administrator's direction, Operator shall (i) perform an analysis of the cause, (ii) remedy any Cybersecurity Breach including notification of consumers or government entities when required by Applicable Law, and (iii) cooperate fully with any civil or criminal authority in any investigation or action relating to such breach or attempted breach.

(b) Cybersecurity Program. Without limiting the foregoing and subject to Section 4.1(c) (*Front-End Transition Period Generally – Transition to Standard of Performance)* and the System Remediation Plan, Operator shall update the Data Security Plan from time to time to be consistent with industry standards and such that the Data Security Plan: (A) incorporates reasonable and appropriate organizational, administrative, physical and technical measures in place to maintain the security of and to protect the internal and external integrity of the System Information and related Information Systems against any unlawful or unauthorized use, processing, destruction, loss, alteration, disclosure, theft or access (including to any data or information contained in or stored on such systems); (B) establishes and maintains backup, security and disaster recovery measures to safeguard the System Information and related Information Systems; (C) limits the risk of introducing or knowingly permitting the introduction of any virus, worm, bomb, Trojan horse, trap door, stop code or other harmful code, timer, clock, counter or other limiting design, instruction or routine, device, feature or function into the System Information and related Information Systems; and (D) requires security audits, at a frequency consistent with industry standards, to assess and confirm compliance with Section 13.3 (*Data Security),* (including using reputable third-party vendors to perform, penetration testing, cybersecurity audits and vulnerability assessments) and requires taking prompt measures to remedy any gaps that may be identified. Operator shall provide a summary of the security program as well as a copy of any written audit reports and remedial measures to Administrator. Any security audit information is Confidential Information of Owner, and neither Party shall disclose such security audit information without the consent of the other Party.

Annex I – Scope of Obligations

I. T&D System Operation Services

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B. Day-to-Day Operation. Operator shall be responsible for the day-to-day operation

of the T&D System, including: . . . (5) maintenance of applicable communications equipment and protocols with generating units and contracted power plants as needed; . . . and (9) maintaining and improving information technology systems that satisfies the needs of the business in accordance with the requirements of the Agreement.

***

II. Asset Management and Maintenance Services.

A. General. Operator shall be responsible for managing and maintaining all assets of the T&D System, including machinery, equipment, structures, improvements and condition assessment of the electrical system components, in accordance with the Contract Standards, including the following: (1) development and implementation of asset management strategies and risk optimization for combined technical performance, life cycle cost, safety, customer satisfaction and regulatory compliance; (2) real estate management, Easements, leases and agreements, pole attachments (including billing and collection for pole attachment fees, as well as maintaining a complete inventory of type and location of each attachment and plans for revenue optimization), joint use agreements and telecommunications for the provision of electric service, including cybersecurity in the manner specified and subject to the provisions set forth in the main body of the Agreement; (3) meter strategy development, maintenance or replacement; (4) fleet management, including evaluation of potential outsourcing; (5) materials and services procurement and inventory management; (6) T&D System security in accordance with Applicable Law and to protect the T&D System from vandalism, terrorism or other acts; (7) emergency preparedness and planning; (8) warehousing; (9) maintenance of the PREPA fiber optic infrastructure; (10) vegetation management in accordance with Prudent Utility Practice and Applicable Law; and (11) preparation of T&D condition assessment report.

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E. Information Technology. Operator shall, consistent with the Contract Standards, the Agreement and this Annex I (*Scope of Services),* be responsible for providing information technology systems maintenance support and improvements in accordance with (1) strategic goals of achieving interoperability and flexibility of open design and standard-based data architecture and in compliance with requirements for applicable technical architecture, data modeling and software development life cycle; and safeguarding the system software and data; (2) cybersecurity requirements that support network and day-to-day activities; and (3) developing and maintaining a business continuity plan in the event of natural, man-made or cyber-attack incidents. Operator shall periodically provide Administrator (with copy to PREB) the most current versions of the business continuity plan.

VIII. Maintenance.

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C. Safety and Security. Operator shall maintain the T&D System with due regard for public health and safety and at a safe level at least consistent with Contract Standards, including the following:

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6. designing and implementing cybersecurity measures in accordance with Contract Standards and in the manner specified and subject to the provisions set forth in the main body of the Agreement;

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LUMA Ex. 11.02
CONFIDENTIAL AND PRIVILEGED
Program Brief for IT OT Cybersecurity Program (PBIT2)

LUMA Ex. 11.03
Program Brief for IT OT Enablement Program (PBIT3)

LUMA Ex. 11.04
Program Brief for IT OT Asset Management Program (PBIT4)

LUMA Ex. 11.05
Program Brief for IT OT Collaboration and Analytics Program (PBIT5)