GOVERNMENT OF PUERTO RICO
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: Motion Submitting Florida Secretary of State Certification Completing the Legalization of Pre-filed Testimony of Mr. Pedro Meléndez and Mr. Eduardo Balbis' Errata Sworn Statement

MOTION SUBMITTING FLORIDA SECRETARY OF STATE CERTIFICATION COMPLETING THE LEGALIZATION OF PRE-FILED TESTIMONY OF MR. PEDRO MELÉNDEZ AND MR. EDUARDO BALBIS' ERRATA SWORN STATEMENT

TO THE HONORABLE PUERTO RICO ENERGY BUREAU:

COME now **LUMA Energy, LLC** ("ManagementCo"), and **LUMA Energy ServCo, LLC** ("ServCo"), (jointly referred to as the "Operator" or "LUMA"), and respectfully state and request the following:

1. On July 3, 2025, LUMA filed the *Motion Submitting Rate Review Petition* with this Honorable Puerto Rico Energy Bureau ("Energy Bureau"). Therein, LUMA submitted a series of pre-filed testimonies in support of its rate review petition, amongst which were Exhibits 5.0 and 20.0, subscribed and sworn by witnesses Mr. Pedro Meléndez ("Mr. Meléndez") and Mr. Sam Shannon ("Mr. Shannon"), respectively. In relation to the aforementioned Exhibit 20.0, subscribed and sworn by witness Mr. Shannon, LUMA filed an errata sworn statement subscribed by Mr. Eduardo Balbis ("Mr. Balbis").

2. The pre-filed testimony of Mr. Meléndez, LUMA Exhibit 5.0, and the errata sworn statement subscribed by Mr. Balbis in relation to LUMA Exhibit 20.0, subscribed and sworn by witness Mr. Sam Shannon, were notarized in the State of Florida. At the time, diligences were

underway to obtain the certification of the Florida Secretary of State, to complete the legalization of these documents.

3. LUMA received the certification of the Florida Secretary of State which states that Notary Melissa K. Garner – who notarized the pre-filed testimony of Mr. Meléndez, LUMA Exhibit 5.0, and the errata sworn statement by Mr. Balbis in relation to Exhibit 20.0 – is a Notary Public for the State of Florida and is currently in good standing.

4. The pre-filed testimony of Mr. Meléndez and the errata sworn statement subscribed by Mr. Balbis, with evidence of their legalization by the Florida Secretary of State, are hereby included as *Exhibits 1 and 2* of this Motion, respectively. No changes were made to LUMA Exhibit 5.0, pre-filed testimony of Mr. Meléndez nor to Mr. Balbis' errata statement in relation to LUMA Exhibit 20.0, other than appending the evidence of their legalization by the Florida Secretary of State.

5. LUMA respectfully requests that this Energy Bureau receive and accept the above-described certifications of the Florida Secretary of State and documents, and deem completed the pre-filed testimony of Mr. Meléndez, LUMA Exhibit 5.0, and the errata sworn statement subscribed by Mr. Balbis in relation to LUMA Exhibit 20.0.

WHEREFORE, LUMA respectfully requests that the Energy Bureau **take notice** of the aforementioned; **receive and accept** the pre-filed testimony of Mr. Meléndez, LUMA Exhibit 5.0, and the errata sworn statement subscribed by Mr. Balbis in relation to LUMA Exhibit 20.0 subscribed and sworn by witness Mr. Shannon, with evidence of their legalization by the Florida Secretary of State as *Exhibits 1 and 2* of this Motion, respectively; and **deem** these documents completed as duly notarized and legalized.

RESPECTFULLY SUBMITTED.

In San Juan, Puerto Rico, this 21st day of July of 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; and Juan Martínez, jmartinez@gmlex.net; and to ***Genera PR, LLC***, through: Jorge Fernández-Reboredo, jfr@sbgblaw.com; Gabriela Castrodad, gcastrodad@sbgblaw.com; Jennise Alvarez, jennalvarez@sbgblaw.com; regulatory@genera-pr.com; José J. Díaz Alonso, jdiaz@sbgblaw.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; ***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; ***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; ***Mr. Victor González,*** victorluisgonzalez@yahoo.com; and ***the Energy Bureau's Consultants***, jrinconlopez@guidehouse.com; Josh.Llamas@fticonsulting.com; Anu.Sen@fticonsulting.com; Ellen.Smith@fticonsulting.com; Intisarul.Islam@weil.com; jorge@maxetaenergy.com; rafael@maxetaenergy.com; RSmithLA@aol.com; msdady@gmail.com; mcranston29@gmail.com; dawn.bisdorf@gmail.com; ahopkins@synapse-energy.com; clane@synapse-energy.com; guy@maxetaenergy.com; Julia@londoneconomics.com; Brian@londoneconomics.com; luke@londoneconomics.com; kbailey@acciongroup.com; hjudd@acciongroup.com; zachary.ming@ethree.com; PREBconsultants@acciongroup.com.

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Exhibit 1

LUMA Exhibit 5.00

GOVERNMENT OF PUERTO RICO
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

Direct Testimony of

Pedro A. Meléndez-Meléndez

Chief Capital Programs & Grid Transformation Officer,

LUMA Energy ServCo, LLC

July 1, 2025

Summary of Prepared Direct Testimony of PEDRO A. MELÉNDEZ-MELÉNDEZ ON BEHALF OF LUMA ENERGY LLC AND LUMA ENERGY SERVCO, LLC

Mr. Pedro A. Meléndez-Meléndez ("Mr. Meléndez") is Chief Capital Programs & Grid Transformation Officer at LUMA Energy ServCo, LLC. The purpose of Mr. Meléndez'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 Capital Programs Department ("Capital Programs" or "Department") in the Optimal and Constrained Budgets on behalf of LUMA Energy LLC and LUMA Energy ServCo, LLC (collectively, "LUMA").

Mr. Meléndez's testimony describes the fragile state of the grid and the need for significant investment to reverse the effects of the deteriorating system. His testimony discusses the sources of funding available to LUMA and the risks of underinvestment.

Mr. Meléndez presents the O&M and NFC costs needed to implement capital projects that are part of LUMA's Long-Term Investment Plan and the System Stabilization Plan to stabilize the grid and improve system reliability, service, and affordability. His testimony discusses how the Department prioritized the capital projects based on improvements to system stabilization and reliability, cost effectiveness, executability, and prevention of further slippage of LUMA's System Remediation Plan that occurred because of underinvestment. Mr. Meléndez explains that planned projects include repairing and hardening the transmission and distribution system ("T&D System"); modernizing, repairing, and hardening substations; streetlight installation; repairing of meters, lines, and poles; metering infrastructure; third party attachments; new business service connections; enabling technologies for the T&D System (including SCADA), distribution automation, interconnection facilities and transmission upgrades; and fire mitigation. He states the planned projects under the Optimal Budget could improve reliability metrics, System Average Interruption Duration Index ("SAIDI") and System Average Interruption Frequency Index ("SAIFI"). Specifically, Mr. Meléndez states SAIFI could decline (i.e., improve) to as low as 6.5 events (18% improvement over FY2024 SAIFI of 7.92) and SAIDI could reduce (i.e., improve) to as low as 1,130 minutes (21% improvement over FY2024 SAIDI of 1,431.88), driving growth and employment across Puerto Rico along with the reliability benefits.

Based on the need to stabilize the T&D System and reverse its deteriorated fragile state, Mr. Meléndez recommends for Capital Programs an Optimal Budget of $401.3 million for FY2026, $646.3 million for FY2027, and $790.7 million for FY2028.

Mr. Meléndez's testimony for Capital Programs also includes a Constrained Budget, as ordered by the Energy Bureau. Mr. Meléndez explains the activities and programs that would be deferred, reduced or defunded under the Constrained Budget, and identifies the impacts of deferring or defunding those activities and programs.

Finally, Mr. Meléndez's testimony supports the costs of Capital Programs that are included in LUMA's provisional rate application.

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I. WITNESS AND CASE INTRODUCTION

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

A. My name is Pedro A. Meléndez Meléndez. My business address is LUMA Energy, PO Box 363508, San Juan, Puerto Rico 00936-3508. I am the Chief Capital Programs & Grid Transformation Officer for LUMA Energy ServCo, LLC ("LUMA ServCo").

Q.2 What are your responsibilities?

A. I provide executive leadership to the development and implementation of the grid strategy and deployment of capital programs managed by LUMA. I lead an organization of over 1,500 engineering, project management, and energy professionals who have spear-headed the effort to execute approximately $1 billion of capital projects onto the grid and established a pathway to deploy more than $15 billion of additional capitalized infrastructure, the foundation to providing Puerto Rico the reliable service it requires.

Q.3 On whose behalf are you testifying before the Commonwealth of Puerto Rico Energy Bureau?

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

Q.4 What is your educational background?

A. I completed my Bachelor of Science degree in electrical engineering, majoring in power systems, at the University of Puerto Rico-Mayagüez. I received my Master of Science degree in electrical engineering, majoring in power systems and control systems, from Wayne State University.

Q.5 Please summarize your professional experience prior to joining LUMA.

A. I have more than 20 years of experience in the electric power industry, working across the United States. Prior to joining LUMA, I served as the vice president of planning, engineering, and construction at Jacksonville Electric Authority, the municipal electric, water, and sewer utility for Jacksonville, Florida, where I had executive responsibility for the planning, engineering, and construction of billions of dollars of capital investments to maintain and improve electric, water, and wastewater services. Prior to that, I was the director of transmission and substation operations at NextEra Energy Resources, LLC, the world's leading generator of solar and wind energy. There, I provided leadership for the field and system operations for transmission and substation assets across North America, including 46 states and Canada. Before that, I served in multiple roles of increasing responsibility at ITC Holding Company, which owns and operates high-voltage transmission facilities across the Midwestern United States, including as a director of asset protection and performance. I have also served as an engineer in the system planning and engineering team at DTE Energy, the investor-owned electric utility that serves Detroit and other communities in Michigan.

Q.6 Do you hold any professional licenses, if so, which?

A. Yes. I am a licensed professional engineer in the State of Michigan.

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

A. No.

Q.8 Are you sponsoring any exhibits with your direct testimony?

A. Yes. I am sponsoring the cost information for Capital Programs in LUMA Exhibit 2.03 (Optimal Budget Workpapers) and LUMA Exhibit 2.04 (Constrained Budget Workpapers). I am also sponsoring the following exhibits in this proceeding:

- LUMA Ex. 5.01: Range of Reliability Improvements
- LUMA Ex. 5.02: Program Brief for Compliance & Studies (PBUT1) (2026)
- LUMA Ex. 5.03: CONFIDENTIAL Program Brief for OT Telecom Systems & Networks (PBIT1) (2026)
- LUMA Ex. 5.04: Program Brief for Transmission Priority Pole Replacements (PBUT13) (2026)
- LUMA Ex. 5.05: Program Brief for Transmission Line Rebuild (PBUT33) (2026)
- LUMA Ex. 5.06: Program Brief for Substation Reliability (PBUT7) (2026)
- LUMA Ex. 5.07: Program Brief for Substation Rebuilds (PBUT8) (2026)
- LUMA Ex. 5.08: Program Brief for Distribution Pole & Conductor Repair (PBUT30) (2026)
- LUMA Ex. 5.09: Program Brief for Grid Automation (PBUT4) (2026)
- LUMA Ex. 5.10: Program Brief for Distribution Line Rebuild (PBUT6) (2026)
- LUMA Ex. 5.11: Program Brief for New Business Connections (PBUT38) (2026)
- LUMA Ex. 5.12: Program Brief for Distribution Streetlighting (PBUT5) (2026)
- LUMA Ex. 5.13: Program Brief for Distribution Grid Reliability (PBUT39) (2026)
- LUMA Ex. 5.14: Program Brief for Asset Data Integrity (PBUT27) (2026)
- LUMA Ex. 5.15: NFC Breakdown between Capital Programs and Operations

Q.9 Which documents did you consider for your testimony?

A. The documents I reviewed include:

- The Puerto Rico Transmission and Distribution System Operation and Maintenance Agreement executed by PREPA, the Puerto Rico Public-Private Partnerships Authority (“P3A”), and LUMA, dated as of June 22, 2020 (“T&D OMA”).

- Approved System Remediation Plan ("SRP"), filed with the Energy Bureau on February 23, 2021, and re-filed on May 8, 2021.[1]
- LUMA Annual Budgets, FY2024 to FY2026, dated May 15, 2023,[2] and LUMA Annual Budget, FY2025, dated May 24, 2024[3].
- Quarterly filings summarizing expenditures and major accomplishments for the timeframe being reported on file 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 to the Energy Bureau in Case No. NEPR-MI-2021-0004 on October 29, 2022; October 30, 2023; and October 28, 2024.
- Order Establishing Scope and Procedures for Rate Case, Case No. NEPR-AP-2023-56 0003 (Feb. 12, 2025) ("February 12th Order").[4]
- LUMA's System Improvements Preliminary Plan filed on July 10, 2024.
- Institute of Electrical and Electronics Engineers ("IEEE") Benchmark Report for Year 2024.

Q.10 Did you rely on any other information in the preparation of the proposed Optimal

[1] Case No. NEPR-MI-2020-0019, Resolution and Order (Jun. 23, 2021).

[2] *Available at* https://energia.pr.gov/wp-content/uploads/sites/7/2024/05/20240525-MI20210004-Motion-FY2025-TD-GenCo-and-System.pdf.

[3] *Available at* and https://energia.pr.gov/wp-content/uploads/sites/7/2023/05/20230516-MI20210004-Submission-of-FY2024-System-Annual-Budgets.pdf.

[4] *In re: Puerto Rico Electric Power Authority Rate Review*, Case No. NEPR-AP-2023-0003, Resolution and Order (Feb. 12, 2025).

Budget for Capital Programs?

A. Yes. My extensive professional experience working with electric utility systems and operations.

Q.11 Briefly describe the purpose of your Direct Testimony.

A. My testimony supports the requested funding for LUMA's Capital Programs & Grid Transformation Department (hereinafter referred to as "Capital Programs" or "Department") for fiscal years ("FY") 2026 through 2028.

Q.12 Please provide an overview of how your testimony is organized.

A. In Section II, I provide background on Capital Programs and LUMA's legal obligations as they pertain capital projects; the persistent fragile state of the transmission and distribution system ("T&D System") and the critical need of investment to stabilize and modernize the grid to deliver the level of service Puerto Ricans deserve; and the availability of sources of funding in addition to revenues from base rates. In Section III, I present the proposed O&M and NFC costs for the Department in the Optimal Budget; the types of activities Capital Programs plans to implement using Optimal Budget revenues; the benefits Capital Program activities will have on customers, including improving reliability; and the risks of not investing in the T&D System. In Section IV, I present the proposed O&M and NFC costs for the Department in the Constrained Budget; describe the costs and activities deferred, reduced, or defunded under that budget; and discuss the Department's ability to meet performance objectives established by the Energy Bureau. Lastly, in Section V, I present the Department's costs that are included in LUMA's provisional rate application

II. BACKGROUND

A. Role of Capital Programs

Q.13 Please describe the functions of Capital Programs.

A. Capital Programs designs and completes projects needed to transform Puerto Rico's grid as well as delivers the funding for those projects when LUMA acts as a conduit between the Federal Emergency Management Agency ("FEMA") and LUMA. The Department consists of three functions: Grid Strategy, Engineering, and Project Management and Controls.

Q.14 What is the role of Grid Strategy?

A. Grid Strategy provides strategic direction to the prioritization of investments to effectively rebuild the grid. Key activities include the development of an investment strategy and formulation of projects to submit to FEMA and other federal agencies to access necessary funds.

Q.15 What is the role of Engineering?

A. Engineering through its Distribution, Systems and Quality Standards, Transmission and Substations Groups provides a long-term focus on supporting LUMA's mission to modernize the grid. Key activities include planning the grid, evaluating and analyzing available data to create prioritized asset strategies and plans (e.g., track reliability performance), continually assessing resource adequacy to meet reliability and resiliency performance requirements, developing and maintaining engineering and maintenance standards, providing designs for the T&D System, performing quality assurance functions, and supporting the connection of new customers to the grid.

Q.16 What is the role of Project Management and Controls?

A. Project Management and Controls executes large-scale federal and non-federal capital

programs, such as the rebuilding of distribution and transmission lines and substations, clearing vegetation, and deploying advanced technologies. Project Management and Controls tracks and manages project costs and schedules, administers contracts, provides project performance reports; and supports the Project Management Office ("PMO"), which ensures organizational adherence to the project execution processes. Project managers, as part of the PMO, drive efforts to complete planned capital work within the pre-established schedule and cost constraints.

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

A. Yes. The Department's functions support LUMA's transition to standards of performance stated in Section 4.1(d) of the T&D OMA[5] and the approved System Remediation Plan.[6] The projects the Department intends to complete with the Optimal Budget are key to operating at the standards of performance required under the T&D OMA[7] and the safety standards implemented across the United States, which was not the case with the T&D System at commencement.

Q.18 Are the functions of the Department necessary to comply with public policy goals and requirements?

A. Yes. The functions of the Department are required to support the achievement of the public policy requirements and goals set forth in Section 6.21(a) of Act No. 57-2014, known as the

[5] T&D OMA, Section 4.1(d), at pp. 41-42.

[6] *In re: Review of the Puerto Rico Electric Power Authority's System Remediation Plan*, PREB Case No. NEPR-MI-2020-0019, Determination on LUMA's Proposed System Remediation Plan (Jun. 23, 2021).

[7] The term "Contract Standards" employed in the T&D OMA means "the terms, conditions, methods, techniques, practices, and standards" imposed or required by applicable law, and prudent utility practice. *See* T&D OMA, Section 1.1, at p. 9. "Prudent Utility Practice" is defined in the T&D OMA as those "practices, methods, techniques, conduct and acts that, at the time they are employed, are generally recognized, and accepted by companies operating in the United States electric transmission and distribution business" and "take into account the facts and characteristics of the T&D System and System Power Supply known at the time the decision was made." *See* T&D OMA, Section 1.1, at p. 26.

"Puerto Rico Energy Transformation and RELIEF Act ("Act 57-2014"), and Sections 1.5, 1.6, 1.10, and 1.15 of Act No. 17-2019, known as the Puerto Rico Energy Public Policy Act ("Act 17-2019"). Specifically, Act 57-2014 requires the provision of adequate, reliable, clean, efficient, resilient, and affordable electric power, contributing to the general wellbeing and sustainable development in Puerto Rico.[8] Act 17-2019 requires LUMA to conduct the appropriate planning studies on the T&D System to ensure its reliable operation[9]; maintain the electric power infrastructure in optimal conditions to ensure the reliability, resilience, and safety of the electric power service[10]; ensure the safety and reliability of the electricity infrastructure using modern technology and allow integration and deployment of new energy sources[11]; reconstruct and modernize the electrical system and ensure that improvements to the electrical system are conducted to render it robust, resilient, and stable in accordance with the modernization and reconstruction priorities[12]; facilitate the interconnection of distributed generation to the electric power grid[13]; and ensure that every customer is guaranteed the right to receive safe, reliable, stable, and excellent electric power service.[14]

B. State of the Grid

[8] Act 57-2014, Section 6.21(a), 22 LPRA § 1054t (2025).

[9] Act 17-2019, Section 1.5(9)(d), 22 LPRA § 1141d (2025).

[10] *Id.*, Section 1.5(9)(e).

[11] *Id.*, Section 1.5(9)(a).

[12] *Id.*, Section 1.15, 22 LPRA § 1141n (2025).

[13] *Id.*, Section 1.6(8), 22 LPRA § 1141e (2025).

[14] *Id.*, Section 1.5(10)(a), 22 LPRA § 1141d (2025).

Q.19 What was the state of the grid when LUMA took over as Operator of the T&D System?

A. Based on information provided to me since recently joining LUMA, and as personally witnessed during the Hurricane Maria restoration[15], I understand the T&D System was severely deteriorated.[16] A 2016 report prepared by Synapse Energy Associates and commissioned by the Energy Bureau (hereinafter, "2016 Synapse Report") described the T&D System as "falling apart quite literally."[17]This physical deterioration was accompanied by failing support systems, ranging from inadequate IT capabilities, insufficient engineering and capital program management functions, and facilities in alarming levels of disrepair.[18] Significant quantities of key equipment were out of service or

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[15] As part of the EEI contingent to complete the restoration analysis, I completed helicopter patrol of the damages, drove through areas across the island, reviewed damage reports submitted by various agencies, and actively participated in the Emergency Operations Center / provided onsite support to the PREPA system Control Center.

[16] *See* Expert Report: State of PREPA's System, Load Forecast, Capital Budget, Fuel Budget, Purchased Power Budget, Operations Expense Budget, issued by Synapse Energy Associates on November 21, 2016, in Case No. CEPR-AP-2015-0001, *In re: In Re: Revisión de Tarifas de La Autoridad de Energía Eléctrica de Puerto Rico*, at pp. 65-66. *Available* at https://energia.pr.gov/wp-content/uploads/sites/7/2016/11/Expert-Report-Revenue-Requirements-Fisher-and-Horowitz-Revised-20161123.pdf.

[17] *Id.*, at p. 18. *See also id.*, at pp. 13, 26.

[18] *See, e.g.*, Final Resolution and Order, issued on January 10, 2017 ("2017 Rate Order") in Case No. CEPR-AP-2015-0001, *In re: In Re: Revisión de Tarifas de La Autoridad de Energía Eléctrica de Puerto Rico* (Findings of Fact Nos. 10 through 43, detailing the various shortcomings of PREPA in preparing and managing its budget). *Available* at https://energia.pr.gov/wp-content/uploads/sites/7/2017/01/Final-Resolution-and-Order.pdf. *See also LUMA's Submittal and Request for Approval of System Remediation Plan*, filed on February 24, 2021, in Case No. NEPR-MI-2020-0019, *In Re: Review of the Puerto Rico Electric Power Authority's System Remediation Plan*, at pp. 335-336 ("Based on LUMA's gap analysis and observations, PREPA's plan does not outline a process for planning and prioritizing energy infrastructure investments and is not guided by a comprehensive, long-term strategic approach to power system planning to ensure safe, efficient, and reliable energy infrastructure based on system loading, performance, vulnerabilities, and other requirements. Nor does it appear to provide an overarching strategy for transforming the grid architecture to cost-effectively address Puerto Rico's long-term energy policy and [integrated resource plan] objectives."). *Available* at https://energia.pr.gov/wp-content/uploads/sites/7/2021/02/LUMAS-Submittal-and-Request-for-Approval-

damaged, and there were virtually no spares nor critical equipment on order. It was reported that "the majority of the equipment observed [was] 30 years old."[19]

Foundational preventive maintenance, including testing of critical substation equipment, had not been adequately performed for years. Any proactive planning activities were overwhelmed by daily system outages and emergent restoration activities (e.g., critical repairs to address hazards to safety or restore power to critical customers). It was reported that "PREPA's focus [had] been to address failed or damaged equipment as customers lose power" and "PREPA crews primarily repair[ed] and fix[ed] assets on an as needed approach."[20]

Repairs made during service restoration were often provisional and lacked appropriate documentation, both to guide any follow-up with permanent repairs and to coordinate more proactive asset management or planning prior to the next failure. There were significant amounts of missing or inaccurate data. This not only impaired LUMA's ability to confirm the number of key assets, but also its ability to analyze and review reliability data, facility ratings, and protection settings. Furthermore, planning and design standards did not align with industry norms, creating larger needs for expensive and less reliable one-off solutions to procure material to meet emergent needs. Distributed energy resources ("DER") were connected to the grid with insufficient or zero engineering and planning, resulting in profound, adverse impacts on overall system safety and reliability.

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of-System-Remediation-Plan-NEPR-MI-2020-0019-3.pdf.

[19] Sargent and Lundy Independent Engineering Report of the PREPA Transmission and Distribution System dated June 2019, at 3-25, SL-014468.TD.

[20] *Id.*, at VII, SL-014468.TD and 5-1, SL-014468.TD, respectively.

The Financial Oversight & Management Board of Puerto Rico ("FOMB") found that there was a "historical lack of long-term planning" by PREPA.[21]

Significant quantities of poorly maintained pole attachments and instances of improper grounding in substations were evident, generating safety hazards for the public and LUMA employees as well as presenting reliability risks associated with a weakened T&D system. Also, ever-increasing numbers of out-of-service equipment combined with a shortage of critical spares caused excessive numbers of unplanned outages and suboptimal work arounds to keep the electric system operating. These points are certainly not all-inclusive. I provide them only to illustrate the challenges confronting LUMA and Capital Programs at commencement.

Q.20 What contributed to the deterioration of the T&D System and failing support systems?

A. In the 2017 Rate Order issued in the PREPA Rate Review proceeding (Case No. CEPR-AP-2015-0001), the Energy Bureau attributed the T&D System's deterioration to "years of underspending hav[ing] left it unreliable and in disrepair".[22] The Energy Bureau found "[a]mong the detrimental effects" was PREPA's "focus on reactive maintenance instead of preventive maintenance and new construction,"[23] and attributed the causes of PREPA's outage problems to deferred maintenance and reduced capital spending, amongst others.[24] As I stated earlier in my testimony, the 2016 Synapse Report, commissioned by the Energy

[21] 2024 Fiscal Plan for Commonwealth of Puerto Rico ("FOMB's 2024 Fiscal Plan"), as certified by the FOMB on June 5, 2024, at p. 136. *Available* at https://drive.google.com/file/d/1XBItaK-cYs4cKZv8VvUm2Oi6jP6S25Vc/view.

[22] *See* 2017 Rate Order, at p. 3.

[23] *Id,* at p. 4.

[24] *Id.,* at p. 19.

Bureau, found, among other things, the T&D system was "falling apart quite literally"[25] due, in part, to capital constraints and an inability "to replace and construct many of [PREPA's] transmission lines. . . ."[26] These findings were corroborated by a report prepared by Sargent & Lundy at the request of PREPA and by the FOMB. Sargent & Lundy's report concluded, "[t]he lack of maintenance has contributed to continued reduced system reliability, increased outages, and safety concerns" and recommended, "a re-commitment to the maintenance program and the capital replacement program to address the aging equipment and to provide the system improvements to increase the reliability."[27] Similarly, the FOMB found that PREPA's "failure to make investments . . . and lack of attention to maintenance resulted in PREPA's system being technologically outdated, operationally inefficient, and heavily dependent on an unreliable, high-cost, volatile, and highly polluting oil-fired generation fleet".[28]

In addition, a 2018 report prepared by Kobre & Kim LLP for the FOMB found that PREPA's board, high level positions, and some technical and operational positions were filled by political appointees that were replaced each time a new governor took office, leading to repeated "loss of institutional knowledge, and decision-making that was unresponsive to the market forces".[29]

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[25] *See* 2016 Synapse Report, at p. 18.

[26] *Id.*, at p. 32 (citing statement made by PREPA's then Director of Transmission and Distribution).

[27] Sargent and Lundy Independent Engineering Report of the PREPA Transmission and Distribution System dated June 2019, at VII, SL-014468.TD.

[28] *See* FOMB's 2024 Fiscal Plan, at p. 136.

[29] *See* Kobre & Kim, *The Financial Oversight & Management Board for Puerto Rico Special Investigation Committee Independent Investigator's Final Investigative Report*, Aug. 20, 2018, at p. 113 *Available* at https://bvirtualogp.pr.gov/ogp/Bvirtual/reogGubernamental/PDF/Informes%20y%20Estudios/Kobre-Kim.pdf.

Q.21 Do you know why PREPA underinvested in the T&D System and its support systems?

A. I do not have personal knowledge of why PREPA underinvested in the T&D System. However, the Energy Bureau has reported PREPA's own witness in the 2017 rate review proceeding as having said, "Historically, there has been political pressure to not increase PREPA's rate in response to cost and investment needs and therefore PREPA has had to sacrifice capital expenditures in order to remain solvent and to not run out of cash."[30] Similarly, the 2019 Sargent & Lundy Report stated, "maintenance of the equipment has been minimal due to limited resources and budget."[31]

Q.22 How did Hurricanes Irma and María impact or exacerbate these conditions?

A. In September 2017, the grid suffered the effects of Hurricanes Irma and María. According to the Central Office for Recover, Reconstruction and Resiliency ("COR3"):

> The devastating impact of Hurricanes Irma and María in September 2017 exposed the full extent of the electrical grid's weakness. The hurricanes destroyed 80% of the transmission and distribution network, causing an island-wide blackout and a prolonged state of emergency. Most residents did not have power for months, in some areas, even a year. Hospitals, schools, and businesses stopped operations, crippling the economy and endangering public health. The aftermath was overwhelming and made clear that we urgently needed not only to repair but also to reconstruct and modernize the electrical grid to make it more reliable and resilient.[32]

Over the course of the year following Hurricanes Irma and María, PREPA and its partners, including utilities from across the United States, restored power to much of the island.

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[30] *See* 2017 Rate Order, at p. 4.

[31] Sargent and Lundy Independent Engineering Report of the PREPA Transmission and Distribution System dated June 2019, at VI-VII, SL-014468.TD.

[32] *See* "Examining Puerto Rico's Electrical Grid and the Need for Reliable and Resilient Energy," Hearing before the Subcommittee on Indian and Insular Affairs of the H. Comm. on Nat. Resources,"118th Cong. 2, Written Statement of Executive Director of Puerto Rico's Central Office for Recovery, Reconstruction, and Resiliency, Sep. 26, 2024, at p. 1. *Available at* https://www.congress.gov/118/meeting/house/117665/witnesses/HHRG-118-II24-Wstate-LaboyRiveraM-20240926.pdf

However, while these repairs were well-intentioned and appreciated, they were meant to be temporary and not permanent solutions. Actions were not taken to address these temporary solutions in a timely fashion, and in turn, there are ongoing longer-term issues, including property encroachments without proper easements; a severe lack of project documentation and tracking, including identifying the location of work; and work that demonstrated the inconsistent quality of workmanship associated with solutions intended to be temporary. These problems have worsened over time, leaving the grid increasingly brittle and exposed to further damages from weather events or other stresses.

Q.23 What was the condition of the grid after Hurricanes Irma and María?

A. Investigations conducted after the hurricanes showed a frail, poorly maintained system that relied on damaged and aging equipment. Some equipment dated back to the 1960s and had not been properly maintained. Various reports reflect much of what LUMA reported in its Systems Improvements Preliminary Plan ("Preliminary Plan").[33] Numerous safety hazards were present, and the grid was physically deteriorating, with missing and damaged equipment, leading to incremental impacts that negatively affected reliability. There were out-of-service transformers, damaged in-service transformers, and damaged poles that increased fault current, stressing functional equipment. There were also out-of-service lines and under-sized conductors that resulted in increased load requirements for other in-service lines and, in turn, shortened their useful life due to operating beyond their intended capacities.

[33] *See* LUMA's *Motion in Compliance with Order to Show Cause of July 5, 2024, and Submitting Preliminary Plan Draft Required by the Resolution and Order of June 13, 2024*, as filed on July 10, 2024, in Case No. NEPR-MI-2024-0005, *In re: Plan Prioritario para la Estabilización de la Red Eléctrica*. *Available* at https://energia.pr.gov/wp-content/uploads/sites/7/2024/07/20240710-MI20240005-Motion-in-Compliance-with-Order-to-Show-Cause-of-July-5-2024-and-Submitting-Preliminary-Plan-Final.pdf

Because most systems (*e.g.*, lines, feeders, and substations) were operating with no backups, conducting basic maintenance and critical inspections in accordance with minimal industry standards was often not possible without risking the destabilization of the entire grid. For example, if LUMA took one of the transformers at Caguas Transmission Center out of service, it could cause 180 megawatts ("MW") of load (approximately 5% of customer power needs) to be dropped, which could cause additional cascading outages. As confirmed by the 2016 Synapse Report, there had been no formalized inspection and maintenance program in place for many years, and instead the sole focus was to respond to critical outages. Additionally, little to no routine vegetation management had been done, which allowed enormous amounts of vegetation to impact the system and further exacerbate the issues outlined above.

Q.24 Have subsequent natural disasters impacted the T&D System?

A. The grid has continued to be buffeted by major weather events, including multiple presidentially declared disasters[34] that have exacerbated existing weaknesses in the system and hampered ongoing efforts to revitalize the grid. Beginning in December 2019, an earthquake sequence started in Puerto Rico culminating in a 6.4 magnitude earthquake on January 7, 2020, that significantly damaged infrastructure and led to power outages.[35] In September 2022, Hurricane Fiona struck Puerto Rico, causing an island-wide blackout and significant damage to the T&D System. Specifically, 35% of transmission line segments

[34] Presidential declarations of major disaster were issued on January 16, 2020, for earthquakes that struck Puerto Rico (4473-FEMA-DR); September 9, 2020, for Tropical Storm Isaias (FEMA-4560-DR); September 21, 2022, for Hurricane Fiona; July 23, 2024, for major floods on the island; and November 27, 2024, for Tropical Storm Ernesto (FEMA-4850-DR).

[35] U.S. Energy Information Administration, Puerto Rico Territory Profile and Energy Estimates, https://www.eia.gov/state/analysis.php?sid=RQ#:~:text=The%20earthquake%20caused%20widespread%20power,natural%20gas%20for%20electricity%20generation (last accessed June 10, 2025).

and 56% of distribution feeders sustained damage, and seven substations experienced severe flooding (submerged in water) or were rendered inaccessible.[36] LUMA continues to complete repairs associated with Hurricane Fiona. In August 2024, Tropical Storm Ernesto struck Puerto Rico, leaving 700,000 without power and damaging 42% of the distribution feeders, 17% of the transmission line, 1,642 poles, 1,413 conductors, 90 substations, other critical infrastructure.[37]

Q.25 What has Capital Programs done to overcome the challenges that you have explained?

A. LUMA has made considerable progress toward stabilizing the grid, but more needs to be done. Maximizing the amount of work that could be done with available resources, Capital Programs has prioritized high-priority urgent repairs (including substation equipment, poles, and other work to aimed at improving public safety), deployed advanced technologies (including distribution automation to rapidly improve the reliability and resilience of the grid), collected critical data to fill in gaps in information and prioritize investments, procured key equipment obtaining equipment for necessary repairs, and formulated more than $10 billion of FEMA-funded projects. More specifically, and certainly not all inclusive, since commencement LUMA has replaced or installed over 25,000 distribution poles (primary and secondary), replaced over 370 transmission poles and structures, replaced or installed nine new transformers (two transmission and seven

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[36] *See* LUMA's Reponses to Requirements of Information on LUMA's Response to Hurricane Fiona, exhibit 1, as filed on November 18, 2022, in Case No. NEPR-MI-2022-0003, at p. 2. *Available* at https://energia.pr.gov/wp-content/uploads/sites/7/2023/02/20221118-MI20220003-EXHIBIT-1-LUMA-Response-to-Hurricane-Fiona-RFIs-1-2.pdf.

[37] *See LUMA's Motion to Submit Quarterly Report for the First Quarter of Fiscal Year 2025*, as filed on November 14, 2024, in Case No. NEPR-MI-2021-0004. *Available* at https://energia.pr.gov/wp-content/uploads/sites/7/2024/11/20241114-MI20210004-Motion-to-Submit-Quarterly-Report-for-the-First-Quarter-of-Fiscal-Year-2025.pdf.

distribution), replaced or installed over 110 breakers (78 transmission and 35 distribution), and installed over 280 three-phase reclosers, 600 trip savers, 900 fuse cutouts, 4,800 fuses, and 3,500 fault condition indicators.

Q.26 What progress has LUMA made in Capital Programs within the last year?

A. Since LUMA submitted its System Improvements Preliminary Plan with the Energy Bureau last July, LUMA has made progress on all asset classes. LUMA added approximately 32,000 streetlights to the 106,000 we reported last June, as well as replacing 11 transmission poles, while another seven major transmission lines achieved obligation, with an additional six pending. LUMA has replaced critical components on six substations and conducted high level assessments on another six substations, four of which will now be rebuilt. This progress is happening simultaneously with the installation or replacement of several dozen supervisory control and data acquisition ("SCADA"), remote terminal unit ("RTU"), and distribution automation devices; and hundreds of site visits and permitting processes with the local, state and federal authorities, including the coordination of federal environmental and historical preservation reviews, to reach the execution stage of our projects.

Q.27 What progress has Capital Programs made in transforming the T&D System?

A. Capital Projects has also empowered the energy transformation in Puerto Rico. Capital Programs plays a critical role in facilitating the interconnection of large-scale generation projects by completing studies for projects overseen by the Energy Bureau and has activated net metering for over 150,000 customers and interconnected nearly 1GW of distributed energy. In addition, Capital Programs is working to complete a FEMA-funded Advanced Microgrid Project to integrate DER to proceed with the first networked

microgrid project to leverage undersea cables, increasing our ability to integrate DER and enhancing the resiliency of the grid amidst disruptive events.

Q.28 How are the years of neglect and underinvestment affecting the T&D System today?

A. The T&D System is still physically deteriorating, and reliability is deteriorating for several reasons beyond LUMA's control. LUMA continues to confront the challenges posed by years of neglect and underinvestment, placing the highest priority on addressing critical out-of-service assets. As of this filing, critical assets that are out-of-service include: 24 substation transformers representing a nominal capacity of over 1,900 MVA (seven of which fall under the Stabilization Plan for FY2026), 132 distribution breakers representing approximately 160,000 amps, 50 transmission breakers representing approximately 91,000 amps, 28 overhead transmission line segments (five of which fall under the Stabilization Plan for FY2026), and 35 distribution feeders.

Q.29 Have LUMA's repairs outpaced equipment failures?

A. No. While LUMA makes significant progress to repair and restore out of service critical assets, the continued wave of failures attributable to an aging and fragile T&D infrastructure continues and, in most cases, outpaces LUMA's ability to restore and repair assets. In FY2025, LUMA's repair and restoration rate trailed behind failure rates for every critical asset category except overhead transmission line segments which have been at break even. Specifically, during FY2025, LUMA restored to service 8 transformers while 10 transformers failed during that same period, restored service to 83 distribution breakers while 89 distribution breakers failed during that same period, restored service to 38 transmission breakers while 39 transmission breakers failed during that same period, restored service to 6 transmission overhead line segment while 6 transmission overhead

line segments failed during that same period, and restored to service 15 feeders while 19 feeders failed during that same period. Without significant increases in funding, the system will not improve, and the rate of deterioration will likely worsen. Risks posed by these failures is not limited to a single failure. A single failure can potentially lead to larger cascading outages, such as the recent major outage events on December 31, 2024, and April 16, 2025. Just like with any system, returning a weakened grid to a healthy state is more expensive, time-consuming, and logistically challenging than maintaining an existing baseline for a healthy grid. To arrest and eventually reverse the continued deterioration of the grid, LUMA must increase NFC funding and quicken the pace of federally funded projects to restore grid health and then maintain it. There is no quick fix. This process will extend beyond the period for this rate case.

Q.30 How does the state of the grid impact LUMA's ability to plan for needed maintenance to enhance reliability for customers?

A. With a weakened grid, small events have big impacts: storms or equipment failures that better-maintained systems would ride through with minimal, or no outages frequently lead to thousands of customers losing power. As noted above, like all utilities, LUMA prioritizes restoration of customers over planned work. However, the frequency and severity of failures means that LUMA has fewer resources available to dedicate to planned work, work that is necessary to deliver greater reliability for the system. Relatedly, LUMA must plan for a far broader range of potential failure scenarios than other utilities because even relatively new equipment is frequently so far out of normal operating ranges that early failure is likely. All these conditions lead to scarce resources and dollars being dedicated to

patching up a severely damaged system, instead of being used to effectively maintain and rebuild it.

Q.31 What impact does the poor state of the T&D System have on customers?

A. The poor state of the grid affects both the quality and cost of electricity service for Puerto Ricans. Electrical equipment operates best and throughout its expected useful life when conditions are within a normal range. The variety of stressors affecting the Puerto Rico grid do not allow for normal operating conditions and so accelerate failure rates, resulting in higher O&M and capital costs. O&M costs are also higher when a utility is forced to perform reactive, emergency maintenance because crews must respond at any time, which often results in excessive levels of overtime. Crews must spend time locating the cause, which is time-consuming given the PREPA T&D System's lack of timesaving, modern equipment such as circuit fault indicators, let alone communicating circuit fault indicators. Furthermore, equipment, parts, and materials may not be in stock, which leads to costly emergency purchases or deploying more expensive, and often less reliable, non-standard solutions. Unfortunately, all the associated higher costs of these inefficiencies associated with an aged, deteriorating, and long-neglected T&D System are borne by customers.

Q.32 What is the net effect of the underinvestment?

A. The net effect of the state of the current grid is that less any investment, electric system reliability is projected to deteriorate by 4 to 5% annually, nearly double that experienced by similarly sized North American electric utilities. Exhibit 5.01 to my testimony, and more specifically the columns labelled "SAIDI Baseline" and "SAIFI Baseline," illustrates the effect of this deterioration to the metrics System Average Interruption Frequency Index ("SAIFI") and System Average Interruption Duration Index ("SAIDI"), with reference to

the baseline absent any investment. This is a factor that must be applied to any projection of reliability until LUMA achieves stability.

Q.33 Are there other contributing factors hindering LUMA's ability to stabilize the T&D System?

A. Yes. LUMA is facing supply chain issues. Many of the key pieces of equipment ordered by LUMA several years ago—including over 80 transformers—have not yet arrived in Puerto Rico, due to global supply chain constraints. Last June, the National Infrastructure Advisory reported, "an electric utility . . . may have to wait 2 to 4 years for it to be delivered, compared to a await of just months as recently as 2020."[38] As this equipment is delivered and installed over the next several years, we expect to see improvements in resiliency across the system. However, it will take time and associated work to maximize the benefits of these new transformers. LUMA also faces the challenge of having a limited supply of trained workers. LUMA has struggled to find qualified individuals to do critical work on the T&D System, a situation compounded by other energy transformations across the United States creating competition for resources. The scale of the work envisioned is far beyond existing capabilities to execute and has required the outsourcing of tasks that would otherwise be performed in-house.

Q.34 Is LUMA facing wildfire risks?

A. Like other utilities, LUMA is facing the risk of utility-caused wildfires,[39] which are generally driven by three factors: forest health, clearances between vegetation and utility

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[38] The National Advisory Infrastructure Council, *Addressing the Critical Shortage of Power Transformers to Ensure Reliability of the U.S. Grid*, at 3 (June 2024), https://www.cisa.gov/sites/default/files/2024-09/NIAC_Addressing%20the%20Critical%20Shortage%20of%20Power%20Transformers%20to%20Ensure%20Reliability%20of%20the%20U.S.%20Grid_Report_06112024_508c_pdf_0.pdf.

[39] Since 2012 the number of wildfires has ranged between 2,500 and 4,000 per year (extracted from various reports and articles sponsored from the Forest Service U.S. Department of Agriculture.)

assets, and the condition of utility assets in those areas, particularly transmission and distribution lines concentrated in the southern and western regions of the island. LUMA has limited control over forest health but with sufficient funding should be able to maintain clearances and the condition of utility assets. Working in concert with local municipalities, LUMA's strategy for wildfire risk reduction focuses on identifying the highest-risk areas across Puerto Rico and then making the most impactful investments to circuits in those areas.

Q.35 Are LUMA's planned activities addressing these risks?

A. Yes. Many of the projects proposed within this budget have significant reliability and wildfire risk reduction co-benefits. For example, as I discuss in more detail below, vegetation contact is a top contributor to outages. It is also a common source of wildfires. This means that vegetation maintenance will reduce two critical risks, vegetation-caused outages and wildfire. For example, LUMA feeder 5602-02, north of Guánica, runs through one of the highest-risk wildfire areas of Puerto Rico. It is also one of LUMA's worst-performing feeders. As LUMA develops wildfire risk reduction plans for the circuit—either by installing a covered conductor or undergrounding the line—customers should also see a significant reduction in outages caused by faults on this feeder, with similar benefits on other parts of the T&D System where we perform similar work.

We have seen catastrophic wildfires in utility service areas like those of Puerto Rico, most notably the Maui wildfires in August 2023. Our plan includes actions to reduce similar risks that could threaten the lives and properties of our customers. Embedded in the NFC programs are actions to conduct studies and assessments to determine risk, identify locations to deploy monitoring, and identify wildfire mitigation technologies; implement

Distribution Automation (e.g., reclosers; fault location, isolation, and service restoration ("FLISR") solutions; and expulsion limiting fuses) to enhance wildfire resilience,

improve the distribution infrastructure to increase resilience against wildfires (e.g., rebuilding laterals to covered conductor and underground and installing weather stations to monitor system conditions); enhance substation resilience by upgrading breakers and underground exits, replacing lightning arrestors, and hardening exposed assets; and upgrade the transmission system with covered conductor, and, where practicable, underground susceptible line segments.

B. <u>Use of Federal Funds</u>

Q.36 What types of federal funding has LUMA received because of declared disasters including Hurricanes Irma and María and those that followed?

A. The type of funding provided is in part a function of the federally declared disaster that caused the damage and the type of work for which FEMA approved the funds. As such, I think it best to discuss what is covered by funds received for damage caused by Hurricanes Irma and María and damage for other federally declared disasters, all through the lenses of Section 406 Hazard Mitigation Projects, Section 428 FEMA Accelerated Alternative Procedures, and Section 404 Public Assistance (all three discussed further below).

Q.37 How are federal funds for Hurricanes Irma and María handled?

A. The funds are authorized by the Robert T. Stafford Disaster Relief and Emergency Act ("Stafford Act")[40] for both recovery of infrastructure and hazard mitigation measures. Recovery work is subject to alternative procedures authorized by Section 428 of the Stafford Act and hazard mitigation through Section 406 of the Stafford Act.

[40] Pub. L. No. 93-288 as amended, 88 Stat. 143 (codified as amended at 42 U.S.C. sections 5121 *et. seq.*) (1974).

Q.38 Please explain the application of Section 428 of the Stafford Act.

A. Under Section 428 of the Stafford Act, FEMA is allowed to utilize alternate procedures to more easily facilitate the approval of disaster recovery projects.[41] In the case of these disasters, FEMA has utilized Section 428 to create the FEMA Accelerated Awards Strategy ("FAASt"), which expedited the approval process for projects (1) to repair, restore, or build alternative facilities for damaged portions of the T&D System ("Section 428 Projects") and (2) more easily facilitate the incorporation of hazard mitigation projects—which prevent or reduce future damage to facilities and people.

A critical aspect of the FAASt program is that it caps the funding available for repairs associated with Hurricanes María and Irma. In 2020, FEMA, COR3, and PREPA agreed that $10.7 billion of funds would be made available for Section 428 Projects to complete repairs to damage associated with PREPA assets, including T&D, generation, and water assets. To develop that agreement, the parties identified $9.7 billion of Section 428 funds that would be needed to complete repairs to the T&D System alone. Should these funds not be allocated to complete repairs to the T&D System, then either additional NFC funds would be required, or critical repairs could remain incomplete.

Q.39 What is covered by Section 406 Hazard Mitigation?

A. FEMA provides supplemental funding that is used to mitigate hazards to or associated with disaster-damaged facilities. This funding, known as Section 406 hazard mitigation, can support additional resilience capabilities for Puerto Rico's energy system. FEMA completed an island-wide, cost-benefit analysis in 2023 that estimated the overall value of hazard mitigation investments to Puerto Rico's energy system (i.e., T&D and generation) would be $7.6 billion. This would mean that, as of the study date, $7.6 billion of eligible

[41] *Id.* at section 428.

hazard mitigation investments made on the T&D and generation system could be considered reasonable. Because this funding relies first on projects being approved for Section 428 repairs, should the expected Section 428 resources not be deployed for the T&D System, Puerto Rico might also lose the opportunity to access Section 406 hazard mitigation resources to make the grid more resilient.

Q.40 Are additional avenues to obtain federal funding for hazard mitigation available?

A. Yes. Another type of hazard mitigation funding may also be approved by COR3, through the Puerto Rico government. Such projects are submitted under Section 404 of the Stafford Act and are intended to prevent or reduce future damage to facilities that were not damaged by Hurricanes María and Irma. To date, LUMA does not expect that Section 404 funds associated with Hurricanes Irma and María will be used to harden the electric T&D System as they are being utilized by other agencies to harden other infrastructure.

Q.41 How are federal funds for federally declared disasters after Hurricanes Irma and María handled?

A. The key difference with funding for disasters other than Hurricanes Irma and María is that FAASt does not apply. So, there is no requirement to use Section 428 alternative procedures, unless alternative procedures are elected on a project-by-project basis. Instead, reasonable costs for eligible projects are reimbursed, with disaster recovery projects funded through FEMA's standard Public Assistance program under Section 406 of the Stafford Act. As such, Section 406 projects are separately approved by FEMA, including associated hazard mitigation. It is important to note that these funds are uncapped.

Q.42 Are there federally declared disasters for which LUMA expects to formulate projects using FEMA's standard Section 406 methodology (*i.e.*, the Public Assistance program)?

A. Yes. LUMA is formulating projects to complete repairs associated with disasters such as Hurricane Fiona and Tropical Storm Ernesto using the Public Assistance program.

Q.43 For what purpose has LUMA used federal funds?

A. LUMA has utilized federal funds to repair and restore damages associated with federally declared disasters. The associated hazard mitigation funding has helped allow for restoration of equipment to LUMA standards that provide for increased resilience against future disasters. For example, LUMA has used federal funds to deploy distribution poles and transmission structures in a manner designed to better withstand hurricane-class winds, to install grid automation technology that both protects the grid and reduces the frequency and duration of outages, to implement the advanced metering infrastructure project that will support improved responses to disruptive events and the integration of DER, and to employ a vegetation clearing program that represents the single largest-impact effort to improve reliability and resilience in Puerto Rico (described in more detail below).

Q.44 How do LUMA customers benefit from the more than $10 billion of federal funding set aside for the recovery from Hurricanes María and Irma?

A. FEMA-funded work is just as critical as the work we propose to fund with NFC, and in fact, the two funding streams are mutually reinforcing. For example, LUMA is finalizing plans for a FEMA-funded vegetation reset to clear rights-of-way to industry standard levels. As vegetation contact is a top contributor to outages, and the current funding levels would only allow for annual maintenance of 7% of line miles without a one-time clearing being done,

this FEMA funding will provide a major and near-immediate improvement in system reliability.

However, vegetation grows back, and FEMA funding cannot be used for ongoing, regular vegetation management after that initial clearing. The customer-funded O&M spending on vegetation management, as further elaborated in Mr. Burgemeister's testimony, LUMA Exhibit 6.0, is necessary to maintain the levels of clearance that will initially be accomplished by the FEMA-funded project. With the benefit of this one-time clearing, LUMA will be able to more economically maintain the T&D System. Otherwise, with the passage of time, we will see an increase in vegetation contacts, associated outages, damage to substation and other grid equipment, and quite possibly increased frequency of wildfires in the southern and western parts of the island. Additionally, if ongoing maintenance is not performed, not only will customers lose the reliability benefits associated with that initial FEMA-funded work, but also Puerto Rico will risk not having access to future federal funding in the event of another catastrophic hurricane or other disaster because damage caused by deterioration or from deferred maintenance is not eligible for FEMA funding.

Q.45 Is LUMA seeking other opportunities to secure outside funding for capital improvements?

A. Yes. LUMA is looking proactively for opportunities to do more, including Community Development Block Grants (administered by Vivienda through the Department of Housing and Urban Development), Department of Energy funding, as well as other funding associated with disaster recovery, including Hurricane Fiona and Tropical Storm Ernesto.

But a materially significant immediate increase in NFC is critical to mitigating the future decline of the grid.

III. OPTIMAL BUDGET

Q.46 What is the proposed Optimal Budget for Capital Programs?

A. Capital Programs is requesting a three-year budget (FY2026 to FY2028) of $1.838 billion ($1.552 billion in NFC and $286.3 million in O&M). Looking at FY2026, the proposed budget of $401.3 million ($76.3 million in O&M and $325 million in NFC) represents an increase of $318 million ($46 million in O&M and $272 million in NFC) over the FY2025 approved plan. More explanation is provided later in my testimony, but to put this in perspective, our plan for federally funded capital over this same three-year period (the primary focus of Capital Programs) totals $4.2 billion. Table 1 immediately below provides a summary of Capital Program's Optimal Budget. Table 2 provides a summary of what comprises the line items listed in Table 1. Tables 4 and 5 provide more detailed descriptions of the programs that define the NFC programs and provide a breakout of the costs. Information on O&M and NFC costs is also provided in LUMA Ex. 2.03.

Table 1. Summary of Capital Programs Optimal Budget Request for FY2026 – FY2028 ($MM)

Program/Activity	FY2025 Approved Budget		FY2026 Amount Required		FY2027 Amount Required		FY2028 Amount Required	
	O&M	NFC[1]	O&M	NFC[1]	O&M	NFC[1]	O&M	NFC[1]
Staffing	$21.7	-	$51.2	-	$73.5	-	$84.1	-
Material and Supplies	$1.5	-	$1.8	-	$1.9	-	$1.9	-
Transportation, Per Diem, and Mileage	$1.9	-	$3.2	-	$3.3	-	$3.3	-
Technical and Professional Services[1]	$2.1	-	$10.9	-	$11.3	-	$11.5	-
Other Expense[2]	$3.1	-	$9.2	-	$9.3	-	$9.9	-
CAPITAL PROGRAMS SUBTOTAL	**$30.3**	**$53.0**	**$76.3**	**$325.0**	**$99.3**	**$547**	**$110.7**	**$680.0**
CAPITAL PROGRAMS TOTAL	**$83.3**		**$401.3**		**$646.3**		**$790.7**	

Note 1: Technical and Professional Outsourced Services includes Professional and Technical Outsourced Services, Legal Services, and IT Service

Note 2: Other Expense includes Communications Expenses, Utilities & Rent, and Miscellaneous Expenses

Q.47 Please describe the process undertaken to arrive at this proposed Optimal Budget.

A. Per the approach taken across all LUMA departments, Capital Programs built its O&M and NFC budgets from the bottom up (for O&M costs, starting at the cost center and within that, the Kind of Expense ("KOE") level, and for NFC costs, at the project level, several of which form the programs described in the referenced Program Briefs). Multiple reviews were conducted. The sub-department level initially prepared the budget. The budget was then reviewed and approved by the Department Head. Lastly, and the budget was then submitted for consolidation, review, and approval by LUMA's Executive Leadership Team.

Q.48 Please provide more details regarding the bottom-up approach and its tie to the deteriorated state of the T&D System that you described in the previous sections of your testimony.

A. The bottom-up approach started with defining, in collaboration with the Operations Department, total system needs without considering constraints on the availability of the

funding or resources required to undertake the needed investments. Key system needs included transitioning to an industry standard maintenance program with a comprehensive inspection and testing regimen and a prioritized approach to any resulting corrective maintenance, restoring or replacing, where possible, out-of-service equipment deemed critical to T&D System operations, and improving reliability through various actions and initiatives, including reduce tree-caused outages and improve restoration of service during major storms and "blue sky weather" events), and the PREB-approved System Stabilization Plan.

We then factored in the executability of projects in terms of resource availability and supply chain considerations, which combined with a historical perspective regarding the realities of the reactive and emergent approaches that have characterized our efforts since commencement, resulting in a 10-year projection, starting with FY2026. Looking specifically at FY2026 to FY2028, we then further adjusted these projections based on three factors: first, duration focusing on preventing any further slippage in the period originally contemplated in the System Remediation Plan; second, achievability, accounting for the effect that responding to emergencies and unexpected equipment failures will have on the deployment of our current resources and a reasonable ramping up profile; and third, staff augmentation where shortfalls in critical areas have driven increased levels of overtime and overburden of key resources beyond industry norms. The requested increase optimizes the various trade-offs inherent across these perspectives.

Q.49 What is the System Stabilization Plan?

A. It is a plan that LUMA filed with the Energy Bureau in July 2024 per a requirement of the Energy Bureau. The Plan explains the need for both Federal and customer dollars to perform the most urgent tasks of stabilization. We intend to continue executing this Plan in

the immediate future, contingent on funding availability. The System Stabilization Plan, embedded in the Program Briefs for PBUT6-Distribution Line Rebuilds, PBUT7-Substation Reliability, PBUT13-Transmission Priority Pole Replacements, PBUT30-Distribution Pole Replacement and Conductor Repair, PBUT33-Transmission Line Rebuild, and PBIT1-Telecom Systems and Networks, includes stabilization projects of the highest priority addressing where the most impactful improvements are needed, all with outsized impacts on customer resiliency. These improvements will significantly reduce the likelihood of a catastrophic event leading to cascading outages or even blackouts in blue sky conditions, which are some of the events that are most impactful on the communities we serve. Additionally, these improvements will reduce stress on other parts of the grid, reducing the likelihood of accelerated failures I described earlier in this testimony.

System stabilization will form the backbone of all future grid improvements: without it, more localized projects will be less durable and effective. As explained in the Plan, stabilization is the first step of a long journey. It will not prevent many of the daily outages that customers experience, as the Plan is focused on reducing the risk of catastrophic, region- or island-wide outages, not localized feeder-level outages. Going forward, LUMA will have more work to do to deliver acceptable levels of reliability, but these projects will provide a foundation from which to make these improvements.

Q.50 Does this mean that LUMA must finish all system stabilization projects before other related work begins?

A. No, significant work can occur on parallel paths. For example, major programs like the deployment of advanced metering infrastructure (“AMI”), distribution automation, the deployment of a modern energy management system, federally funded vegetation

clearance work, and critical substation rebuilds will deliver reliability benefits for customers. These projects are ongoing, despite not being in the stabilization portion of the System Stabilization Plan. Further, as presented earlier in my testimony, the deployment of AMI offers additional short-term (replacing heretofore inoperable meters) and longer-term (reducing generation of customer invoices based on estimated usage and providing real-time identification of customer outages) benefits, costs for which are not borne by customers.

Q.51 What then is meant by executability?

A. This step acknowledges the reality of resource and supply chain constraints in ensuring LUMA can deliver per the proposed plan. For example, repairs often require key pieces of equipment to be temporarily de-energized, and challenges in obtaining permits can impact schedules. Particularly in a system as delicate as Puerto Rico's T&D System, certain projects must be executed sequentially to avoid undue negative impacts across the island.

Q.52 And how were the projects that constitute this executable plan prioritized?

A. Project priorities were evaluated at the program level. By focusing on individual project evaluations, we ensured that the proposed portfolio of programs and projects deliver the greatest benefits to our customers, with particular emphasis on reliability and cost-effectiveness. These high-level evaluations will also prove to be directionally helpful in demonstrating LUMA's overall strategy and priorities and providing transparency of the costs and benefits of specific projects.

Q.53 What types of actions will Capital Project implement under the Optimal Budget to improve reliability?

A. With the funding of the Optimal Budget, Capital Programs will accelerate and continue deploying critical substation infrastructure, including transformers and circuit breakers,

and procuring spare transformers for emergency and disaster response. Capital Programs also plans to perform projects that harden the T&D System, including replacing and repairing distribution overhead primary and secondary conductor, distribution and transmission underground cable segments, distribution pad-mounted transformers, and T&D poles and structures. These replacement and repair projects address aging electric T&D infrastructure and, in support of the System Stabilization Plan, increase the grid's likelihood of withstanding hurricane-class winds.

The Department will also re-condition and upgrade lines and circuits for increased resilience and flexibility. These projects include reconditioning portions of select overhead and underground lines, including reconductoring, to add critical grid resilience; performing line upgrades; restoring out of service circuits; completing any necessary unfinished circuit construction that began prior to LUMA's commencement; performing circuit voltage conversions to improve distribution capacity and grid flexibility; and hardening, including through installing underground cable.

In addition, Capital Projects will implement projects that improve the performance of existing feeders and address reliability. Some examples of these projects are installing intelligent reclosers (three- and single-phase) and fault current indicators ("FCI"); optimizing fuse coordination; improving the performance of worst-performing feeders; and installing fuse cutouts for better segmentation.

Other types of projects that Capital Programs will implement are projects that integrate line extensions to connect new customers' load, upgrade capacity, integrate renewables, and support economic development and improve service through advanced technology. Specifically, the Department will implement projects combining advanced

fault detection, strategic capital improvements, and data-driven solutions to strengthen grid resilience and improve service for customers across the network. While it is a federally funded initiative and not part of the Optimal Budget, Capital Programs will deploy AMI, which, in turn, will replace inoperable meters, reduce generation of customer invoices based on estimated usage, and provide real-time identification of customer outages.

Q.54 Are the proposed projects linked to LUMA's focus on major outages?

A. Yes. The System Stabilization Plan focuses on reducing the number of major events, like critical equipment failures, which can lead to regional or island-wide blackouts for many hours or even days. For example, the New Year's Eve blackout on December 31, 2024, affected nearly 90% of LUMA customers and was initiated by a failure of an underground transmission line. Accordingly, if the Optimal Budget is fully implemented, we expect to materially reduce the likelihood of such events occurring in the future, particularly during blue-sky conditions. However, if the Energy Bureau adopts the Constrained Budget, described in Section IV in my testimony, the system could potentially realize less of a reduction in major events, meaning customers could experience more lengthy and widespread outages than they would if the Optimal Budget is adopted. Putting the benefit of the Optimal Budget in perspective, a recent study by the US Department of Energy's Lawrence Berkley National Laboratory estimates that there could be more than $1 billion in value by mitigating a single one-day blackout impacting the whole island.[42] This value is incremental to what is captured in the value of the lost load calculations noted below in Q.71.

[42] Lawrence Berkley National Laboratory, *Estimates of the Economic Impacts of Long-Duration, Widespread power Disruptions in Puerto Rico*, Mar. 2025, at p. xi. *Available* at https://eta-publications.lbl.gov/sites/default/files/2025-03/economic_impacts_outages_pr_final_with_cover.pdf.

Q.55 Are there other types of projects that Capital Project will implement under the Optimal Budget that will improve electric service?

A. Yes. Capital Programs will implement projects that address third-party usage of pole attachments. This includes executing and, where necessary, originating agreements with telecommunication companies, enforcing them, and incorporating any new requirements, codes, and standards with the assumption that any incurred expenses to process application request and evaluations will be covered by application and annual contract fees. Additionally, any cost associated with necessary upgrades to the electric grid to maintain operational reliability and safety, will be borne by the applicant.

Q.56 Are there other projects that Capital Project will implement under the Optimal Budget that will improve electric service?

A. Yes. To complete the types of projects that listed above in Q.55 and Q.56 above, the Department will also need to improve the integrity of asset data, including that maintained in Geographic Information System ("GIS"), to ensure a complete and accurate repository for the grid assets being deployed through both federal and non-federal investments; update the planning processes for transmission, distribution, as well as interconnection studies to support utility-scale and DER; improve and revamp the telecom voice and data systems, including fiber optic, microwave, and transport network systems used to carry all information technology ("IT") and operations technology ("OT") data, with enhancements to facilitate emergency response communication; and ramp up department to support the increasing scale of NFC and federally funded projects including appropriate software to generate project schedules and budgets, driving adherence to quality assurance and quality control requirements, supporting continuous improvement and lessons learned initiatives,

enhancing the contract management process, and improving adherence to project governance (e.g., management of budget and schedule contingencies and tracking of internal project performance metrics and project risk).

A. O&M Costs

Q.57 What type of O&M costs are included in the Optimal Budget?

A. The Department's O&M costs include Staffing; Materials and Supplies; Transportation, Per Diem, and Mileage; Technical and Professional Services; and Miscellaneous Expense. The specific costs included in each line item are described in Table 2 below.

Table 2. Budget Category Summary

Programs / Activities	Description
Staffing	• Labor Cost of salaried and hourly personnel with associated employment benefits • Overtime where necessary
Material and Supplies	• Repair and Maintenance Parts • Inventory • Uniforms • Office Supplies
Transportation, Per Diem and Mileage	• Rental vehicles to support field operations. • Reimbursement for personal use vehicles • Per diem expenses
Technical and Professional Services	• Consulting Services • Project Management Support • Legal Services • IT Services Agreements
Other Expenses	• Utilities and Facilities Rent • Security

Q.58 What are the main drivers of Capital Programs' O&M spending?

A. As an initial matter, it is first worth recognizing that the proposed O&M budget over the three-year period represents less than 5% of Capital Program's total O&M and capital (FEMA and NFC) budget. The O&M budget is largely reflective of the increased workload that is required to support a projected five-fold increase in NFC funding and over $4.2 billion in total capital work managed or performed by the organization. Towards that end, Capital Programs is projecting adding 1,172 Full Time Equivalents ("FTE") over the three-year period. This projected workforce is needed to assure: (1) the safe and efficient

execution of capital programs, (2) the company is optimally staffed with employees and contractors to meet project and program requirements, (3) that any skills and competency gaps to perform the full breadth of work are adequately covered, and (4) that the appropriate supporting activities are in place to provide safe and efficient delivery.

In many cases, the salaries for any new employees or contractors will be federally funded, but there are related O&M costs that LUMA must cover, such as training, on-boarding, and other non-project related costs. The increase in capital work and subsequent increase in FTEs affects all functions within the organization, carrying out O&M activities in the form of labor-related expenses, such as training, tools, equipment and integration of any new hires that may be required to support the projected workload. This increase is also driven by the need to further the foundational elements required to support the planning and execution of projects (e.g., engineering design standards, equipment specifications, design criteria documents, system manuals, and construction standards), and the number of studies and other pre-engineering activities (e.g., risk-based asset management, system planning, and grid modernization) necessary to advance to a brighter energy future.

Q.59 Please explain the FY2026 Staffing costs of $51.2 million and the year-over-year increases over the FY2025 budget.

A. The following table presents the FY2025 headcount as of July 1, 2024, and FTEs required to perform the work in FY2026, FY2027, and FY2028, noting that the increases are primarily driven by the expected ramp up of capital work, the majority of which is federally funded. Except for third-party attachment related work which is predominantly O&M, the O&M-related staffing costs include a small portion of the salaries and benefits for FTEs, including nearly 800 seconded employees in FY2026, increasing to between 920 and 975 in

FY2027 and FY2028 respectively. In determining the O&M staffing budgets, historical data was reviewed to determine by sub-department / function, the percent of labor that has been categorized as O&M costs, percentages that were adjusted to accommodate any O&M activity not budgeted in previous years (for example, the advent of an expanded maintenance program addressed in Kevin Burgemeister's testimony, LUMA Exhibit 6.0, though largely driven by Operations will require additional programmatic support from LUMA's Asset Strategy and Analytics group). And, from an O&M perspective, overtime from both a historical and future perspectives have been or will be minimal.

851 **Table 3. Departmental Staffing Summary**

Sub-Department / Function	FY2025 Headcount and FTE Projections				Comments
	FY2025	FY2026	FY2027	FY2028	
Executive Team	13	14	17	17	• Over 85% dedicated to FEMA and NFC projects. • Executive/Senior Management Oversight
Capital Programs	93	161	193	204	• Over 90% dedicated to FEMA and NFC projects. • Project Controls (Schedule, Cost, and Quality) • Risk and Reporting • Estimating
Capital Vegetation and Quality	12	20	24	25	• Federally funded ROW Clearance projects (90% dedicated to FEMA work)
Construction	28	66	79	84	• Over 85% dedicated to FEMA projects. • Lines, Substations, Streetlights and Telecom planning and construction
Distribution Engineering and Reliability	413	489	587	622	• Over 75% dedicated to FEMA and NFC projects. • Planning and renewable integration • New Customer Connections • Reliability, Standards, and Asset Strategy • Streetlight Program
Grid Strategy	42	121	146	154	• Over 75% dedicated to FEMA and NFC projects. • Investment Strategy • Grid Resilience, Strategy, Execution, Coordination and Compliance
Large Projects	301	484	581	616	• 90% dedicated to FEMA and NFC projects. • Work Management • Transmission, Distribution, Substation, and Telecom construction • AMI
PMO	12	19	23	24	• Over 90% dedicated to FEMA and NFC projects. • Technology Enablement • Document Control • Process and Quality Management
Projects	112	157	189	200	• Over 90% dedicated to FEMA and NFC projects. • Transmission, Substation, Distribution, Telecom and Renewable projects
Systems and Quality Standards	300	338	405	430	• Over 75% dedicated to FEMA and NFC projects. • Standards and Materials • Strategy and Analytics • Quality • Information Systems • Records
Transmission and Substations Engineering	171	225	270	287	• Over 70% dedicated to FEMA and NFC projects. • Outage Investigation • Commissioning Engineering • Substation and Transmission Design and Engineering
Third Party Attachments	9	13	13	15	• Predominantly O&M
TOTAL	**1,506**	**2,107**	**2,527**	**2,678**	

Q.60 What constitutes the Materials and Supplies proposed FY2026 Budget of $1.8 million, and its increase over the FY2025 approved budget?

A. Requirements for Materials and Supplies include repair and maintenance parts, inventories, tools, hard hats, safety glasses and equipment, particularly for those individuals tasked with performing work in the field, costs which track with expected headcount. In estimating these costs, the Department applied the increased headcount factor to historical costs with an adjustment for inflation.

Q.61 Please explain the make-up of the FY2026 Transportation, Mileage, and Per Diem proposed budget of $3.2 million, its increase over the FY2025 approved budget, and the slight year-over-year increases in FY2027 and FY2028.

A. The proposed budget addresses the use of rental vehicles and per diem by seconded personnel, projected to increase by 200 in FY2026 (and then another 175 over the FY2027 and FY2028 timeframe). In estimating these costs, historical costs were used as the baseline, factored by the projected increase in seconded personnel, with these costs split 15% / 85% between O&M and Capital (FEMA and NFC).

Q.62 Please explain the make-up of the FY2026 Technical and Professional Services proposed budget of $10.9 million and the initial $8.8 million increase over the FY2025 approved budget.

A. The primary contributors to this portion of the budget include outside services to support the initiatives around Third-Party Attachments – "TPAs" ($8.7 million in FY2026 vs. $2.0 million in FY2025 for a net increase of $6.7 million) and obtaining legal services to support responses to legal challenges that can be anticipated on an annual basis ($2.0 million in FY2026 vs. no such budgeted costs in FY2025 [43]for a net increase of $2.0 million). In

[43] Actual costs in FY2025 for legal services totaled approximately $2.0 million, expenses that were not

analyzing the TPA costs, this is a budgeted item that will be reduced commensurate to LUMA's success in obtaining payment from these other parties, and as such, are not included in the rate base calculations. Regarding the legal services costs, they are based on historical trends, assuming the same level of challenges that have been experienced in FY2025, costs for which are adjusted for inflation.

Q.63 Please explain the make-up of the Other Expenses proposed budget of $9.3 million and initial increase over the FY2025 budget of $3.1 million.

A. These costs include utilities and rents for over an increase of approximately 200 seconded employees ($7.3 million for FY2026 vs. $1.3 million in FY2025), and other miscellaneous expenses (flat at approximately $2.0 million during the FY2025 through FY2028 timeframe).

Q.64 What are the potential risks if the requested O&M budget is only partially funded in the near term?

A. Failure to fund this requested increase will severely impact project execution. When combined with lower-level funding levels for requisite planning studies and activities, LUMA will be unable to adhere to the accelerated pace called for to repair, restore, and rebuild the electric grid. More specifically, there will be fewer projects executed in FY2026 and LUMA will not be able to effectively manage the increase in large projects nor oversee the execution of major repairs. This could lead to unplanned increases in project scopes, schedule slippages, budget overruns, quality concerns, and a growing backlog of unaddressed emergent repairs. Furthermore, the requirement for continued refinement of, for example, engineering design standards, equipment specifications, design criteria

anticipated or budgeted. Based on our learnings, it was deemed prudent to expect a similar level of activity in subsequent years.

documents, system manuals, and construction standards will not keep pace with engineering and construction workload, calling into question the appropriateness and design of installations. Key planning activities such as risk-based asset management and system planning will not be able to appropriately support optimal decisions regarding prioritization and integration of repairs and replacements with initiatives relating to grid modernization, potentially jeopardizing the pace required to comply with relevant statutes such as the increase in renewable energy on the system.

B. Non-Federal Capital Budget

Q.65 What is included in the NFC funding request of the Optimal Budget?

A. The NFC funding request includes the funds needed for programs, activities, and initiatives to remediate concerns identified during the gap assessments conducted during the key Front-End Transition[44]; perform known infrastructure repairs, replacements, or hardening projects (complementing those currently designated for Federal funding); and meet LUMA's goal of achieving system stabilization.

Capital Program's NFC budget is comprised of 13 programs. Tables 4 and 5 below describe these programs along with a breakout of budget comparisons to FY2025.

[44] Front-End Transition refers to those activities called for under the T&D OMA to facilitate the transition of the operation and maintenance of PREPA's T&D system to LUMA. *See,* T&D OMA article 4.

913 **Table 4. Capital Program's Capital Improvement Programs**

ID	Program Name	Description
		System Portfolio
PBUT1	Compliance & Studies	• T&D System: Collect dynamic data on PR generation facilities and ensure accurate representation in predictive models and tools. • Renewable and DER Interconnections: Respond to interconnection requests for cluster studies (<25 kW) and supplemental studies (>25 kW) to comply with requirements to managing a reliable grid. • T&D System Safety Studies: Study situation regarding deteriorated, broken, or vandalized grounding risers in substations, issue RFP, schedule, and execute repairs. • Wildfire Mitigation: Determine risks and identify locations to deploy monitoring and wildfire mitigation technologies.
		Transmission Portfolio
PBIT1	Telecom Systems & Networks	Telecom investments to improve and revamp the telecom voice and data systems, including fiber optic, microwave, and transport network systems. Improvements include improved first responder and emergency response communication and greater resilience of the internal telecommunications network.
PBUT13	Transmission Priority Pole Replacements	Replacement of damaged transmission poles, towers, and associated hardware and conductors.
PBUT33	Transmission Line Rebuild	Addresses 230 kV, 115 kV and 38 kV projects to strengthen and upgrade the transmission system, including the rebuilding of towers and reinforcement/replacement of anchors and guys.
		Substation Portfolio
PBUT7	Substation Reliability	Reinforce and upgrade the existing and aging system infrastructure to improve system reliability, including the replacement of transformers, oil circuit breakers, distribution circuit breakers, other high voltage equipment, relays, RTUs and auxiliary systems, along with protection and control upgrades and procurement of emergency spares.
PBUT8	Substation Rebuilds	Includes required repair and rebuilding of damaged substations, upgrades to the latest codes, industry standards and practices to improve long term reliability, including installation of switchgear, and replacement of electromechanical and electronic relays.
		Distribution Portfolio
PBUT30	Distribution Pole & Conductor Repair	Repair and replacement of distribution poles and associated hardware and conductors.
PBUT4	Grid Automation	Install intelligent reclosers, single phase reclosers, and fault indicators on select feeders (including main line and feeder ties) to reduce the number of customer interruptions per outage event.
PBUT6	Distribution Line Rebuild	Replace, harden, and/or recondition of damaged or ineffective distribution lines to improve reliability and resiliency and improve distribution capacity.
		Customer Experience Portfolio
PBUT38	New Business Connections	Manages all aspects of the new customer connection process, including evaluating, endorsing, and inspecting connections to ensure alignment with relevant standards.
PBUT5	Distribution Streetlighting	Upgrade and replace distribution streetlights that pose a physical safety hazard or are scheduled for repair or replacement based on their criticality
PBUT39	Distribution Grid Reliability	Includes installing fault current indicators ("FCIs"), optimizing fuse coordination, improving worst-performing feeders, addressing regional reliability needs, installing fuse cutouts for better segmentation, all aimed to strengthen grid resilience and improve service for customers across the network.
		Enabling Portfolio
PBUT27	Asset Data Integrity	Ensure the integrity of key asset data within GIS and Asset Suite, by identifying data requirements, determining processes and templates for storing data and updating asset data systems with data gathered from asset assessments.

914 **Table 5. NFC Funding Request Summary ($MM)**

ID	Description	Proposed NFC Budget ($MM)			FY2025 Amended Budget
		FY2026	FY2027	FY2028	
System Portfolio					
PBUT1	Compliance & Studies	$10	$13	$20	$5
Transmission Portfolio					
PBIT1	OT Telecom Systems & Networks	$4	$4	$4	$1
PBUT13	Transmission Priority Pole Replacements	$14	$43	$67	$0
PBUT33	Transmission Line Rebuild	$40	$38	$51	$1
Substation Portfolio					
PBUT7	Substation Reliability	$101	$101	$114	$24
PBUT8	Substation Rebuilds	$3	$5	$15	$4
Distribution Portfolio					
PBUT30	Distribution Pole & Conductor Repair	$70	$226	$261	$0
PBUT4	Distribution Grid Automation	$2	$4	$9	$6
PBUT6	Distribution Line Rebuild	$37	$57	$72	$1
Customer Experience Portfolio					
PBUT38	New Business Connections	$13	$13	$14	$8
PBUT5	Distribution Streetlighting	$4	$15	$21	$0
PBUT39	Distribution Grid Reliability	$21	$23	$26	$0
Enabling Portfolio					
PBUT27	Asset Data Integrity	$5	$5	$5	$3
	TOTAL	**$325**	**$547**	**$679**	**$53**

915 **NOTE 1: Rounding applied to the totals**

916 The following table summarizes the bases and / or approach taken in developing these estimates:

917 Table 6. Basis for Estimates

ID	Program Name	Bases for Estimate
	System Portfolio	
PBUT1	Compliance & Studies	Conduct of DG Interconnection, Grounding, PSSE Dynamic Data Collection, Wildfire Mitigation, and Area Planning Studies and subsequent scoping and planning activities. Estimates for which are based on industry experience, adjusted to reflect the mobilization of additional expertise, be it through hiring or contracting with outside consultants
	Transmission Portfolio	
PBIT1	OT Telecom Systems & Networks	22 OT Telecom network nodes (Layer 2 switches), known collectively as the IP Control Network, are obsolete and no longer supported by the manufacturer. The estimated costs are based on quotes received from a vendor for replacement nodes that would create a more resilient network. Both design engineering (including network and fiber design and as-built documentation) and implementation/deployment effort were estimated leveraging industry and LUMA experience. Labor costs were estimated based on known rates for in-house staff.
PBUT13	Transmission Priority Pole Replacements	Based on preliminary estimates that 23 transmission poles require critical repairs and 83 transmission structures need to be installed in FY2026, industry rates informed by LUMA subject matter experts and adjusted for the realities of performing work in Puerto Rico were used to arrive at these estimates.
PBUT33	Transmission Line Rebuild	Transmission Upgrades (DER, NB, Capacity Constraints): Driven by DER, new business connections, and capacity constraints. LUMA allowed for the identification of ad-hoc upgrades (i.e., customer requests for new load interconnections) and emerging requirements from DER supplemental studies. Based on historical trends since commencement, estimates assume 3 to 4 new load interconnections per month, and knowledge of lines and transformers that require upgrades to meet N-1 reliability performance criteria. Also factored into the scope is knowledge of out-of-service transmission facilities and / or lines experiencing frequent service interruptions. Estimates are based on industry norms informed by the acquired expertise and experience of LUMA's staff, adjusted to reflect the realities of performing work in Puerto Rico.

918 **Q.66 What is driving the increase in the NFC funding?**

ID	Program Name	Bases for Estimate
	Substation Portfolio	
PBUT7	Substation Reliability	The cost estimates for HV Equipment, Transformer, and Relay replacements were put together using several sources, including data from past projects, up-to-date pricing from RS Means, with an inflation factor to reflect current market prices. The team's experience and knowledge also helped shape the estimate, ensuring practicality reflective of our experience as LUMA.
PBUT8	Substation Rebuilds	As this task calls for necessary point-of-sale metering, requiring design and procurement well in advance of the installation of any metering equipment and other supporting upgrades required across the system, estimates reflect industry perspectives around these issues, adjusted to reflect the realities of performing work in Puerto Rico.
	Distribution Portfolio	
PBUT30	Distribution Pole & Conductor Repair	With quantities defined for Primary Conductor, Pad- and Pole-Mounted Transformers, Primary and Secondary Poles, Non-Structural Repairs, Switches, and UG Cable Segments, rates experienced since commencement were used with appropriate adjustments for inflation and any anticipated supply chain issues.
PBUT4	Grid Automation	With quantities defined for Distribution Automation replacements and Test Equipment, rates experienced since commencement were used with appropriate adjustments for inflation and any anticipated supply chain issues.
PBUT6	Distribution Line Rebuild	**Underground Worst Performing Feeders (UGWPF) Cables and Switches**: Estimates based on performing improvements projects on at least five underground feeders per year, assuming that an average of one percent of the assets will require repairs. Industry unit costs, adjusted for the realities of performing work in Puerto Rico were used. **Provisional OH (UG Primary)**: Based on performing engineering design and repairing 2.5 miles of feeders per year, we assumed an average repair rate of $2 million per mile. **UG Distribution Lines Repair**: Based on performing engineering design and repairing 0.5 miles of feeder, we assumed an average repair rate of $2 million per mile. **Strategic Voltage Conversion**: Estimates based on known areas where there are (1) small pockets served by step-down transformers where there are risks that a single-point-of-failure on the radial distribution systems will occur, (2) voltage drop issues, and (3) opportunities to enable line extensions and feeder ties. Estimates are based on industry norms informed by the acquired expertise and experience of LUMA's staff, adjusted to reflect the realities of performing work in Puerto Rico. **Distribution Upgrades:** Driven by DER, new business connections, and capacity constraints allowed for the identification of ad-hoc upgrades (i.e., customer requests for new load interconnections) and emerging requirements from DER supplemental studies. A budget placeholder has been placed, based on LUMA's expertise and experience since commencement.
	Customer Experience Portfolio	
PBUT38	New Business Connections	The estimate was structured to reflect the anticipated project volume based on historical data (from 2022, 2023 and 2024), design & technical assessments, and inspection activities necessary to ensure compliant service connections.
PBUT5	Distribution Streetlighting	Based on preliminary estimates that 57 poles, 57 poles with TPA, and 2,415 luminaires will be replaced in FY2026, historical rates informed by LUMA subject matter experts and adjusted for the realities of performing work in Puerto Rico were used to arrive at these estimates. The dramatic increase in subsequent years is reflective of projected number of replacements.
PBUT39	Distribution Grid Reliability	**Line Fault Indicators:** The total Long Term Investment Plan (LTIP) budget was based on historical costs along with the goal of installing FCIs on all the distribution feeders and an average amount of devices per feeder. This budget was spread out over the 10 years with a minor ramp-up to account for availability of resources to execute the work, and a ramp-up in per-year budgets to account for conservatism in the early years. The FY 2026 budget was based on dividing the expenditure per year and having the smallest per-year budget due to the ramp-up in growth. **Fuse Coordination**: The total LTIP budget was based on historical costs along with the goal of performing coordination on all fuses in the distribution system. The total LTIP budget was spread out over the 10 years with a minor ramp-up to account for availability of resources to execute the work, and a ramp-up in per-year budget to account for conservatism in the early years. The FY 2026 budget was based on dividing the expenditure per year and having the smallest per-year budget due to the ramp-up in growth. **Cutout Installations**: The total LTIP estimate is based on completed engineered work and applying historical costs as the basis of cost for the work remaining. The number of installations were divided into the next three years equally to levelized the work, applying historical install rates.

ID	Program Name	Bases for Estimate
		Regional Reliability Improvements: Based on performing improvements projects on 18 feeders, an average cost of $165,000 per feeder was chosen as a starting point for this initiative. **Worst Performing Feeders:** Based on performing improvements projects on 38 feeders, an average cost of $210,000 per feeder was chosen as a starting point for this initiative.
Enabling Portfolio		
PBUT27	Asset Data Integrity	**Asset Suite:** Estimate for work was built upon previous few years of program actuals along with the forecasted resourcing required to complete specific phase 4 scope items by the end of FY26 **Asset Tagging:** Estimate needed for the program was projected using existing tagging material costs along with a labor estimate leveraging previous experience with field personnel (HLAs and field assessments) actuals. This was aligned with priority devices needing to be tagged to estimate FY2026 budget requirements. **Engineering Tools:** Estimate utilized historical software costs from similar software applications along with labor to procure and configure software for use at LUMA

Q.66 What is driving the increase in the NFC funding?

A. The increase of NFC funds is driven by the need to reduce the number and duration of unplanned system outages by countering the effects of a "brittle" electric infrastructure, which will continue to be an issue until the results of the Long Term Investment Plan (LTIP) take hold in a meaningful way. LUMA must significantly increase its focus on reliability and resilience programs, including the substation reliability improvements, distribution automation, as well as industry-standard reliability improvement programs (e.g., Worst Performing Feeders, Customers Experiencing Multiple Interruptions, and Longer Duration Outages). These investments will make significant strides in repairing, restoring, and rebuilding the grid and, consequently, improve customer satisfaction. Another driving factor is that Operations' application of a more comprehensive maintenance regimen (presented in the T&D Operations testimony, LUMA Exhibit 6.0, Table 4) will identify critical repairs necessary to prevent outages across the system.

Q.67 Should LUMA rely on federal funds (i.e., Public Assistance funds provided by the Federal Emergency Management Administration ("FEMA")) instead of seeking an increase to the NFC budget?

A. While LUMA anticipates receiving a significant amount of federal funding to help restore Puerto Rico's grid and make it more resilient, as I describe earlier in my testimony, there are restrictions on how these funds can be used. For example, federal funds may not be used for O&M expenses, nor can they be used for capital expenditures not associated with damages caused by federally declared disasters. Nonetheless, LUMA intends for the NFC budget to fund projects that enhance the benefits derived from federally funded projects. As can be seen in Table 7 below, and as discussed further in my testimony, LUMA is committed to the appropriate use of federal funds to both stabilize the grid and make it more resilient.

Table 7 Capital Funding Requirements ($MM)[45]

Category	FY2026	FY2027	FY2028
FEMA	$856	$1,580	$1,804
NFC	$325	$547	$680
TOTAL	**$1,181**	**$2,127**	**$2,483**
FEMA %	**72.5%**	**74.3%**	**72.6%**

[45] Information extracted from Slide 3 of Exhibit No. 5.01.

Q.68 Are projects either funded solely by FEMA or NFC?

A. No. Projects can be funded by both FEMA and NFC.

Q.69 Are there benefits to customers if projects are funded both by FEMA and NFC?

A. Yes. While there are restrictions on how FEMA funds can be used, our customers are well served when projects use diverse funding sources to realize benefits and help minimize total costs. With the level of NFC requested in the Optimal Budget, LUMA can, for example, maintain sufficient liquidity to support the timely completion of projects necessary to restore and repair the grid.

Q.70 How can the NFC budget help provide sufficient liquidity to leverage federal funds to facilitate the timely completion of federally funded projects?

A. As expanded upon in Mr. Smith's testimony, sufficient liquidity is necessary to help ensure that LUMA has the funds necessary to pay its contractors and purchase materials and equipment. FEMA funding is typically provided as reimbursement for allowable expenditures, so LUMA must be able to pay for any part of a project *before* it can request, let alone receive, funds from FEMA and COR3. Due to PREPA's liquidity challenges and inability to access capital markets to create working capital, FEMA provides Working Capital Advances ("WCA") of 25% of project costs, allowing for partial pre-payment for project expenses. While this partially resolves liquidity challenges, LUMA must reconcile actual expenses to the WCA before it can request the next 25% WCA. This reconciliation process delays LUMA's receipt of the funding necessary to move projects forward, as LUMA must not only complete the work, but also provide all the receipts to COR3 before the next WCA can be requested. The process can add weeks to months before projects move forward due to the lag between when work is completed and when the invoice for such work is reviewed and paid. If LUMA has sufficient NFC, projects will be able to move

forward during the ongoing WCA reconciliation process. Due to the fungibility of cash, LUMA can utilize NFC while waiting for the next WCA to be disbursed. If, instead, LUMA lacks funds to purchase equipment, pay contractors, or make payroll without access to WCA, then work could stop on projects necessary to rebuild the grid while LUMA waits for capital infusions. This would be inefficient and costly and needlessly postpone work to stabilize the grid. Speed in execution of the work is negatively impacted due to these liquidity-related challenges and is as critical as the effects of the work itself.

The sooner projects are completed, the sooner the grid reaps the benefits of those projects. There are also potential cost-saving benefits that have a ripple effect on other projects. The sooner projects can be funded, the sooner LUMA will be able to secure its place in line for long-lead items. Utilities generally are experiencing supply chain delays,[46] not to mention uncertainties regarding tariffs being imposed by the U.S. Government. Delays in executing projects also often incur mobilization costs that could otherwise be avoided, and completion of projects at or below budget will maximize LUMA's ability to take on more FEMA-funded projects related to Hurricanes Irma and María.

Q.71 To what extent will these proposed programs improve reliability, as measured by standard industry reporting requirements, and if so, what will be their impact on customers?

A. The proposed programs are anticipated to improve reliability as measured by SAIDI and SAIFI.[47] SAIDI focuses on how long interruptions last and is calculated by dividing the

[46] The National Advisory Infrastructure Council, Addressing the Critical Shortage of Power Transformers to Ensure Reliability of the U.S. Grid, at 3 (June 2024), https://www.cisa.gov/sites/default/files/2024-06/DRAFT_NIAC_Addressing%20the%20Critical%20Shortage%20of%20Power%20Transformers%20to%20Ensure%20Reliability%20of%20the%20U.S.%20Grid_Report_06052024_508c.pdf .

[47] All SAIDI and SAIFI information in this testimony is based on reporting is in accordance with industry standard IEEE 1366, including removing the impacts of major event days to demonstrate the normal day-to-

sum of the duration of all customer interruptions by the total number of customers served. A high SAIDI indicates lower reliability due to customers experiencing longer interruptions on average. SAIFI focuses on how frequently interruptions occur and is calculated by dividing the total number of customer interruptions by the total number of customers served. A high SAIFI indicates that, on average, customers experience interruptions more frequently.

Serving as a point of comparison, SAIDI and SAIFI for FY2024 was 1,431.88 minutes and 7.92 events, respectively. With the investments we propose (including those that will be FEMA funded), SAIDI and SAIFI numbers should decrease to between 288 and 738 minutes and between 1.9 and 4.1 outages, respectively, within the next 10 years, meaning that the average customer could see as much as an approximate 80% decrease in hours of outages and a nearly 75% decrease in frequency of outages (see Table 8).[48] The PREB has developed value of lost load calculations to measure the economic impacts of outages. Using this method, we estimate that these investments will provide economic value with a net present value ("NPV") of $12.1 billion or $15.8 billion from reduced daily outages. Narrowing the focus to the FY2026 to FY2028 timeframe addressed within the proposed budget, SAIFI could decline (i.e., improve) to as low as 6.5 events (18% improvement over FY2024 SAIFI of 7.92) and SAIDI could reduce (i.e., improve) to as low as 1,130 minutes (21% improvement over FY2024 SAIDI of 1,431.88). Additionally, these investments will drive growth and employment across Puerto Rico, as is common with major infrastructure projects.

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day reliability that customers can expect from a utility.

[48] These SAIDI and SAIFI figures assume availability of LUMA's expected FEMA capital spending.

The following Table 8, summarizing information presented in LUMA Exhibit 5.01, presents SAIFI and SAIDI, showing the cumulative three-year and 10-year improvement resulting from Capital Programs' LTIP. The ranges provided herein reflect full implementation of the Optimal Budget (best – MIN and most conservative – MAX cases), noting that any improvement reflects the net of benefits received from the capital investments offset by a projected annual degradation rate of 4 to 5%. Fully funding NFC improvements creates compounding benefits with full FEMA funding, because the resilience of the electrical system improves exponentially, not linearly, with increased investments. This means that the SAIDI and SAIFI results for the proposed budget plus FEMA funding are likely to be on the better (i.e., lower) side of these ranges. My discussion of vegetation clearance investment, in response to Q.45 provides an example of the mutually reinforcing nature of federal and NFC investments.

Table 8. SAIFI and SAIDI projections

Timeframe	SAIFI			SAIDI		
	MIN[2]	MAX[2]	Range of Improvement[1]	MIN[2]	MAX[2]	Range of Improvement[1]
FY2024 Results	7.9			1,432		
End of FY2026	7.8	8.0		1,407	1,436	
End of FY2027	7.3	7.7		1,293	1,371	
End of FY2028	6.5	7.2	8%-18%	1,130	1,268	11%-21%
End of FY2035	1.9	4.1	48%-76%	288	738	48%-80%

NOTES

1. **Focusing on the cumulative 3-year period addressed in the rate case and the overall 10-year plan, the Range of Improvement is relative to FY2024 SAIFI and SAIDI.**
2. **The "MIN" values represent negligible effects of inflation and normal failure rates for major asset classes, whereas "MAX" values presume an annual inflation rate for material and labor of 2% and accelerated failure rates for major asset classes (i.e., increased equipment failure probabilities), thus affecting the amount of work that can be performed within a pre-established budget.**

Q.72 How do the projected SAIDI and SAIFI numbers compares to other midsize utilities?

A. The IEEE Benchmark Report for Year 2024[49] reported that the worst SAIFI among medium level utilities (between 100,000 and one million customers) was 2.58 and the worst SAIDI was 363 minutes. Although significant improvement is projected for the T&D System, much work remains to meet our true aspirations.

Q.73 Would the same reliability benefits be achieved under the Constrained Budget?

A. No, as discussed later in my testimony, a constrained budget would not deliver the same compounding benefits, due to delayed investment and deferred maintenance on federally funded assets.

Q.74 What are the risks if the Optimal NFC budget request is not funded?

A. Failure to fund these initiatives will accelerate the deterioration of the grid, by not repairing equipment that needs to be restored, thus increasing the impact on electrically connected equipment. Continuing to operate such a fragile system will actively damage any newly replaced equipment, including the FEMA-funded equipment, limiting the long-term value

[49] IEEE Benchmark Year 2024 Results for 2023 Data Updated September 16, 2024.

that Puerto Rico gets from these investments. There will also be an increase in wildfire risks due to failure to sufficiently manage vegetation and reduce ignition risks by hardening the system. Failure to fund these initiatives will also adversely affect our ability to even maintain our customers' current levels of reliability, let alone dramatically improve reliability (and thereby customer satisfaction). Puerto Rico will continue to experience island-wide outages even during minor storms. In addition, there will be an increase in risk of non-compliance with the Puerto Rico energy policy mandates and create unsafe conditions with DER additions that cannot be isolated (e.g., rooftop solar in certain areas of the island have created undetected fault conditions which can cause harm to the electric system, equipment, and customers).

Q.75 How will the programs, projects, and activities that comprise the Optimal Budget benefit LUMA's customers?

A. The benefits to customers will be many. First, customers will benefit from improved reliability. Eleven of the thirteen programs implemented by the Department address infrastructure (refer to Tables 4 and 5) and as a more robust maintenance regimen takes hold, the grid will be strengthened, thus reducing the frequency of unplanned outages, and the ability to locate outages more precisely will assist in reducing service restoration times. Fewer and shorter service interruptions will lead directly to a more positive customer experience. Second, customers will benefit from increased hurricane resiliency. The grid will be hardened to better withstand major storm events (fewer unplanned service interruptions) with less damage to the infrastructure, thus improving times for total system restoration. Third, infrastructure will be modernized. Supported by studies and projects to keep pace with the most recent technical developments and the adoption of more stringent

codes and standards, the proposed programs will incorporate elements that define a modern utility. Fourth, customers will benefit from advancements in clean energy. Inherent in the Optimal Budget is the enabling of the energy transformation in compliance with Puerto Rico energy public policy.

Q.76 Do the programs and plans that comprise this budget request align with statutory requirements and industry best practices?

A. Yes. The process described above, outlining the approach taken to develop this budget, comports to industry standards. In fully understanding the needs of the system, it highlights those actions required to achieve system stabilization and then factors for those constraints that determine executability and issues that are uniquely applicable in Puerto Rico. Within this construct the comprehensive maintenance plan reflects manufacturers' recommended inspections and tests (scope and frequencies) and those performed by peer utilities, the reliability improvement programs are consistent with industry practices, and the approach for restoring out-of-service equipment appropriately balances the trade-offs between improving reliability and any supply chain related constraints.

Q.77 Are the proposed costs for Capital Programs both just and reasonable, and consistent with what a prudently performing operator faced with the same circumstances would propose?

A. Yes. The proposed costs are just and reasonable, and consistent with what a prudently performing operator would propose if it were facing the same circumstances. LUMA's proposed costs are tailored to advance LUMA towards achievement of the key reliability metrics and other regulatory, contractual, and public policy requirements outlined earlier in

my testimony. LUMA's careful adherence to cost estimating principles shows that the costs of these projects are reasonable, considering LUMA's unique operating circumstances.

Q.78 Are the costs included in the FY2026 to FY2028 proposed budget avoidable?

A. Costs above those budgeted for FY2025 are avoidable in that the additional positions presented in Table 3 have not been filled. However, LUMA remains committed to optimizing its operations and improving execution, and to the extent actions beyond those budgeted for FY2025 are required to meet this commitment, costs presented in this budget will be incurred.

IV. CONSTRAINED BUDGET

Q.79 Please describe Capital Program's Constrained Budget.

A. Table 9 below summarizes the Constrained Budget. Table 10 below summarizes the Constrained Budget as compared to that submitted as the Optimal Budget.

Table 9. Summary of Capital Programs Constrained Budget Request for FY2026 – FY2028 ($MM)

Program/Activity	FY2025 Approved Budget		FY2026 Amount Required		FY2027 Amount Required		FY2028 Amount Required	
	O&M	NFC[1]	O&M	NFC[1]	O&M	NFC[1]	O&M	NFC[1]
Staffing	$21.7	-	$44.3	-	$46.5	-	$48.9	-
Material and Supplies	$1.5	-	$1.8	-	$1.9	-	$2.0	-
Transportation, Per Diem, and Mileage	$1.9	-	$2.8	-	$2.9	-	$3.1	-
Technical and Professional Services[1]	$2.1	-	$9.8	-	$10.3	-	$10.9	-
Other Expense[2]	$3.1	-	$8.3	-	$8.7	-	$9.2	-
CAPITAL PROGRAMS SUBTOTAL	**$30.3**	**$53.0**	**$67.1**	**$217.2**	**$70.5**	**$369.2**	**$74.0**	**$462.8**
CAPITAL PROGRAMS TOTAL	**$83.3**		**$284.3**		**$439.7**		**$536.8**	

Note 1: Technical and Professional Outsourced Services includes Professional and Technical Outsourced Services, Legal Services, and IT Service

Note 2: Other Expense includes Communications Expenses, Utilities & Rent, and Miscellaneous Expenses

Table 10. Budget Comparisons ($MM)

Budget	FY2026	FY2027	FY2028
O&M Costs ($MM)			
Optimal	$74	$99	$111
Constrained	$67	$70	$74
Reduction	$7	$29	$37
NFC Costs ($MM)			
Optimal	$325	$547	$680
Constrained	$217	$369	$463
Reduction	$108	$178	$217
Total Costs ($MM)			
Optimal	$401	$646	$791
Constrained	$284	$440	$537
Reduction	$117	$206	$254

Q.80 How did the Department prepare its Constrained Budget.

A. The Department approached preparing the Constrained Budget with the understanding of the need to balance affordability concerns with the reality that significant levels of NFC and O&M will be necessary to deliver and maintain the reliability and resilience improvements that our customers deserve and that the PREB expects. The Department prepared the Constrained Budget using two guiding principles: first, projects needed to adhere to achieving T&D System stabilization within the targeted timeframe, and second, projects needed to ensure our customers receive maximum benefit in the form of improved reliability. No one program was removed, but specific projects within the programs were scaled back or eliminated if they did not meet these principles. The net result will be the failure of "weaker" assets during storms with higher service restoration costs and diversion of resources originally assigned to planned maintenance activities to these efforts. Though LUMA will expect to at least keep pace with (possibly improve) the restoration of out-of-service substation assets, we can anticipate an increase in the number of out-of-service distribution assets and, to a lesser extent, transmission assets. There are no easy solutions.

Q.81 What specific activities will not be funded under the Constrained Budget?

A. Table 11 below summarizes the 13 programs that comprise the Constrained Budget and the corresponding reductions to the Optimal Budget over the three-year period.

Table 11. NFC Constrained Budget Summary ($MM)

ID	Description	Constrained NFC Budget			(Reduction)		
		FY2026	FY2027	FY2028	FY2026	FY2027	FY2028
System Portfolio							
PBUT1	Compliance & Studies	$8.4	$11.7	$17.1	($1.3)	($1.8)	($2.6)
Transmission Portfolio							
PBIT1	OT Telecom Systems & Networks	$3.5	$3.5	$3.5	($0.5)	($0.5)	($0.5)
PBUT13	Transmission Priority Pole Replacement	$12.5	$36.9	$57.7	($1.9)	($5.7)	($9.0)
PBUT33	Transmission Line Rebuild	$35.1	$23.8	$30.7	($5.3)	($13.9)	($20.7)
Substation Portfolio							
PBUT7	Substation Reliability	$67.9	$99.3	$108.2	($33.2)	($1.8)	($5.5)
PBUT8	Substation Rebuilds	$2.2	$4.4	$13.3	($0.3)	($0.7)	($2.0)
Distribution Portfolio							
PBUT30	Distribution Pole & Conductor Repair	$20.4	$99.5	$117.9	($50.0)	($126.1)	($143.4)
PBUT4	Distribution Grid Automation	$1.9	$3.2	$7.9	($0.3)	($0.5)	($1.2)
PBUT6	Distribution Line Rebuild	$32.3	$49.4	$62.4	($4.8)	($7.4)	($9.4)
Customer Experience Portfolio							
PBUT38	New Business Connections	$11.5	$11.5	$12.0	($1.7)	($1.7)	($1.8)
PBUT5	Distribution Streetlighting	$0.1	$1.4	$4.5	($4.3)	($13.8)	($16.4)
PBUT39	Distribution Grid Reliability	$18.0	$20.0	$23.0	($2.7)	($3.0)	($3.5)
Enabling Portfolio							
PBUT27	Asset Data Integrity	$3.4	$4.6	$4.6	($1.7)	($0.7)	($0.7)
	TOTAL	**$217.2**	**$369.2**	**$462.8**	**($108.1)**	**($177.7)**	**($216.7)**

Q.82 What programs are most affected by the Constrained Budget and the elimination or deferral of activities?

A. The following six programs stand out as absorbing most of these reductions: Distribution Pole & Conductor Repair (PBUT30), Substation Reliability (PBUT17), Transmission Line Rebuild (PBUT33), Distribution Streetlighting (PBUT5), Distribution Line Rebuild (PBUT6), and Transmission Priority Pole Replacements (PBUT13).

Q.83 What activities are eliminated within the Distribution Pole & Conductor Repair Program (PBUT30) and what are the consequences of deferring those activities?

A. Under the Constrained Budget, this program is reduced by almost 60% percent ($319.5 million), by reducing the number of the deficient poles and non-structural

components that will be replaced. Replacing fewer deficient poles and non-structural components will result in higher levels of more costly reactive maintenance while incurring the risks of negatively impacting reliability (i.e., SAIFI and SAIDI), elevating concerns around public and employee safety, and limiting operational flexibility (e.g., unplanned out-of-service lines often results in suboptimal system configurations and operating regimens).

Q.84 What activities are eliminated within the Substation Reliability Program (PBUT7) and what are the consequences of deferring those activities?

A. Under the Constrained Budget, the Substation Reliability Program is reduced in scope by almost 13% ($40.5 million), by deferring replacement of obsolete and, in some cases, failed equipment (e.g., circuit breakers, transformers, switchgear, disconnect switches, surge arrestors, protection and control systems, and SCADA). Deferral of such replacements will pose significant operational and safety risks. In having to rely on poorly maintained assets operating well beyond their expected service lives, the ability to detect and isolate faults will be degraded, producing an environment ripe for catastrophic and possibly cascading failures. Additional impacts include failure to safely and efficiently keep pace with system-wide load growth and related connection of new customers.

Q.85 What activities are eliminated within the Transmission Line Rebuild Program (PBUT33) and what are the consequences of deferring those activities?

A. Under the Constrained Budget, the Transmission Line Rebuild Program is reduced in scope by 30% (nearly $40 million) by deferring projects intended to mitigate the impacts of wildfires (e.g., sensors, rerouting of transmission lines to avoid hazard areas, using covered conductor to reduce the effects of vegetation contact, and targeted use of underground

lines). Delaying these projects will incur added exposure related to load growth and connection of new customer loads, impacting both economic development (i.e., new housing construction) and increased failures due to thermal overloads. Interconnections of new residential and small commercial DER (e.g., rooftop solar photovoltaic ("PV") and battery energy storage systems ("BESS")) will also be delayed counter to Act 17-2019 and PREPA's interconnection regulation, Regulations 8915 and 8916, that require expedited connection of customer renewables. And the implementation of critical reliability projects will be delayed (e.g. transmission line restorations, rebuilds, and capacity increases), compromising the ability to interconnect loads, achieve operational flexibility to perform planned maintenance and respond to unplanned forced outages, enhance voltage regulation across the grid, and support reactive power and frequency control.

Q.86 What activities are eliminated within the Distribution Streetlighting Program (PBUT5) and what are the consequences of deferring those activities?

A. Under the Constrained Budget, the Distribution Streetlighting Program is reduced by approximately 85% ($34.5 million), by deferring the installation of light-emitting diode ("LED") and streetlight replacements. The deferral of these activities will further delay achieving the targets outlined in Act No. 17-2019, which seeks replacement of all high-pressure sodium ("HPS") lamps with LEDs by 2030, and hinder timely replacements and repairs thereby increasing and prolonging public safety risks. Put simply, these reductions will extend achievement of a remediated state (i.e., total conversion to LED) to FY 2041.

Q.87 What activities are eliminated within the Distribution Line Rebuild Program (PBUT6) and what are the consequences of deferring those activities?

A. Under the Constrained Budget, the Distribution Line Rebuild Program is reduced in scope by nearly 15% ($21.6 million) by deferring deployment of sensors, rerouting of distribution lines, using covered conductor, and underground. Deferring these activities increase risks like those outlined for the Transmission Line Rebuild Program, including risk for wildfires, capacity-related challenges, delayed DER integration, and less overall grid reliability and safety. With respect to wildfire risks, delays involving the deployment of sensors, thus reducing situational awareness; rerouting of distribution lines out of hazard areas; using covered conductor (where warranted) to reduce effects of vegetation contact; and undergrounding will be incurred. For new customers and anticipated load growth, infrastructure improvements will be delayed, raising concerns around the occurrence of thermal overloads and their impact on equipment life. Addressing DER, interconnections of new residential and small commercial DER like rooftop solar PV and BESS in accordance with the requirements of Act 17-2019 and PREPA Regulations 8915 and 8916 will lag. Further, this reduced funding will delay deployment of voltage and reactive power control devices diminishing the level of power quality delivered to customers, increasing system line losses, and reducing grid operators' ability to provide adequate voltage and reactive power control. There will also be delays in implementing critical reliability projects (e.g., distribution circuit line extensions and feeder ties to enable energization of loads during planned maintenance or unplanned forced outages), and remediating provisional overhead line construction, which, as the name suggests, was intended to be a temporary solution when an underground circuit or system experienced a permanent

failure. This latter point is of concern, both operationally and from a public safety perspective, as these lines were not designed to approved standards and are highly susceptible to failure during severe weather.

Q.88 What activities are eliminated within the Transmission Priority Pole Replacement Program (PBUT13) and what are the consequences of deferring those activities?

A. Under the Constrained Budget, the Transmission Priority Pole Replacements Program is reduced in scope by 13% ($16.6 million), deferring the replacement of deficient transmission structures. As presented above for the Distribution Pole & Conductor Repair Program, deferring the replacement of fewer deficient transmission structures will result in higher levels of more costly reactive maintenance.

Q.89 What tradeoffs accompany the implementation of the Constrained Budget?

A. With this Constrained Budget and continuation of the federally funded plan, LUMA may be able to fund the investments needed to contain—but just barely contain—the continued, accelerated degradation of the grid. In other words, we think this amount of capital spend may be able to stop things from getting worse, all other things being equal. Any reduction of funding from this level creates a dynamic where the downward spiral continues unabated. Accounting for the 4 to 5% natural degradation attributed to the age and condition of the T&D System, SAIFI is likely to improve to 7.1 events (as compared to as low as 6.5 events in the Optimal Budget) and SAIDI is likely to improve to 1,302 minutes (as compared to as low as 1,268 minutes in the Optimal Budget).

Like all utilities, LUMA prioritizes restoration of customers over planned work, but unlike many, LUMA must make major, costly, and time-consuming emergency restorations daily to respond to an outage that has already occurred. These daily repairs require LUMA to reallocate capital, time, and other resources away from planned spending,

delaying cost-saving measures (that would prevent the outage from occurring) such as necessary preventative maintenance, needed improvements, and addressing new problems on the system caused by delays in executing the proposed projects (e.g., shortening the expected life of equipment). Either way, added costs will be incurred in restoring the system.

Q.90 Does the Department indirectly support performance metrics? If so, which ones and how will the Department's ability to meet the performance metrics be affected by the Constrained Budget?

A. Yes. Capital Programs supports LUMA's SAIFI and SAIDI metrics, with the objective of achieving sustainable year-over-year improvement. If the PREB approves the Constrained Budget, LUMA's performance, as measured by SAIFI and SAIDI, will not improve as needed**,** and it will take longer for customers to feel the reliability benefits of T&D system investments.

The T&D System is grappling with decades of underinvestment, deferred maintenance, and the compounded effects of extreme weather events. These issues have not only caused immediate damage but have also led to a continued decline in system reliability that can only be reversed through substantial improvements. The T&D System's aging infrastructure is the key driver impacting LUMA's ability to achieve SAIDI and SAIFI reliability metrics. The average age and accelerated deterioration of critical assets is rising at a rate that outpaces LUMA's current ability to invest in necessary replacements and upgrades, given the current budget limitations. As a result, Capital Programs' ability to improve key performance indicators will be constrained, most notably in reliability. LUMA's ability to reduce outage frequency and duration is directly tied to available resources for infrastructure replacement and upgrades. If the Energy Bureau does not approve the requested funding, the funding available to replacement and upgrades will be necessarily reduced and deployed to more reactive maintenance and repair activities. Therefore, it is imperative to recognize that any improvements in metrics like SAIDI and SAIFI will be delayed or diminished unless there is a commitment to sustainable, adequate funding. Absent any investment, LUMA projects an annual degradation in reliability of 4 to 5%, double that experienced by similarly sized utilities in North America, a direct reflection of the points made throughout my testimony regarding the age and condition of the T&D System. And though some progress would be made under the Constrained Budget (i.e., projecting SAIFI of 7.1 events and SAIDI of 1,302 minutes by the end of FY2028), it is notably worse than that presented in the Optimal Budget and even more so when compared to the current performance metrics targets.

Q.91 If the Department's ability to meet the performance metrics will be affected with the Constrained Budget, should the performance metrics be adjusted?

A. To be clear, the current reliability metrics are not attainable even with the Optimal Budget, estimated to be one-fourth of that required to do so within a one-year period. Adjustments to the SAIFI and SAIDI metrics will be necessary regardless of the budget the Energy Bureau approves.

Q.92 Would the Constrained Budget negatively impact LUMA's ability to meet other performance metrics?

A. Although other departments within LUMA more directly affect our ability to meet these other metrics, the Constrained Budget will make it more difficult to meet financial performance and customer service targets.

Q.93 How does the Constrained Budget affect the financial performance metrics?

A. As the capital budget facilitates the construction and improvements necessary to repair, restore, and maintain the T&D System, failure to rapidly address the outdated and degraded assets will translate to an increase in more costly emergent repairs, additional unplanned outages and associated overtime, and compromise LUMA's effectiveness in establishing long-term favorable contracts with contractors and equipment suppliers.

Q.94 How does the Constrained Budget affect the customer service metrics?

A. If the frequency and duration of customer interruptions continue at current levels or only experience a slight decrease, let alone worsen, it stands to reason that customer complaints will increase and will be reflected in J.D. Power Customer Satisfaction Surveys, and call center volume will affect responsiveness to incoming calls.

Q.95 What would be the impact if the Constrained Budget for the Department is further reduced?

A. There are added consequences to reducing funding to levels deemed insufficient to get ahead of the continued degradation of Puerto Rico's grid. The T&D System is weakening daily, and even with federal funding to remediate the catastrophic damages caused by Hurricanes María and Fiona, existing levels of NFC—and even our Constrained Budget – will not be sufficient in abating, let alone reversing the effects of that degradation, or even maintaining the portions of the system improved with federal funding. Thus, in my view, the unprecedented levels of FEMA investment planned over the next 10 years, without the NFC and O&M funding levels proposed in the Optimal Budget, will prove unsuccessful in delivering the safe, reliable, and sustainable benefits that our customers expect.

If NFC funding is denied entirely, the reliability improvements customers experience will be limited. *Even with access to FEMA funding,* over a 10-year period, SAIFI may reduce (i.e., improve) but excluding major events, continue to be as high as 6.7, meaning that customers would experience on average close to seven outages each year, or almost twice as frequently as the second worst utility in the United States.[50] Additionally, SAIDI, excluding major events, could range between 1,120 and 1,243 minutes or as high as 20 hours without power for the average customer (almost three times the duration of the second worst utility in the United States).[51] Moreover, the lack of increased NFC will exacerbate the continuing vulnerability of the T&D System, and reduce the value to customers of integrating new energy resources (e.g. utility scale battery storage or gas

[50] IEEE Benchmark Year 2024, 2024 Distribution Reliability Working Group Meeting dated July 23,2024, for 73 Operating Companies serving over 74 million customers.

[51] These SAIDI and SAIFI figures assume availability of LUMA's expected FEMA capital spending.

plants) and implementation of technology to detect, diagnose, and respond to interruptions, hindering the safe and economical operation of the grid in Puerto Rico.

V. PROVISIONAL RATE BUDGET

Q.96 Is the Capital Programs Department proposing costs to be funded through a provisional rate?

A. Yes.

Q.97 Please describe the costs of the Capital Programs Department that are included in LUMA's provisional rate application.

A. The Capital Programs Department is requesting $138.6 million of NFC funding above the FY2026 Temporary Default Budget to support system stabilization, wildfire mitigation and hardening, and grid modernization initiatives.

Q.98 Please expand upon the scope and rationale for the system stabilization projects.

A. System stabilization runs the full gamut of the T&D System. These investments are high priority and noncontroversial due to their contribution to stabilizing the T&D System and reducing outages:

- **Distribution**: LUMA proposes $44.2 million of incremental funding above the FY2026 Temporary Default Budget to complete immediate and critical pole replacements and non-structural repairs, restore out of service distribution lines (currently numbering 114, a net increase of 16 since the start of FY2025), remediate overloads, thermal and voltage issues, and address situations where overhead primary wire is on unsound and non-standard structures in violation of the National Electric Safety Code ("NESC").

- **Substation**: LUMA proposes $44.4 million in incremental funding above the

FY2026 Temporary Default Budget to continue the completion of critical out of service substation installation and stabilization activities, including (1) replacement of transformers, load tap changers, breakers, protection and control, and batteries, (2) addressing overloads, and (3) making critical repairs to our worst performing substations. These activities form the core of LUMA's system stabilization initiatives and as these items are addressed, represent the first line of defense against cascading outages, whether they are caused by an external storm event or equipment / system malfunction.

- **Transmission**: LUMA proposes $30.8 million in incremental funding above the FY2026 Temporary Default Budget to address the fifty (50) out of service transmission line segments that are core to system stabilization, as they represent essential facilities to reduce the risk of larger transmission-caused outages. Specific activities include restoring the first five of these transmission lines, making critical repairs to storm damaged structures on fifteen (15) lines, completing repairs across the fifty-one (51) line segments originally identified in the stabilization plan, executing on critical findings and thermal overload identified during inspections and studies, and performing transmission wildfire mitigation hardening in response to the PREB ordered study.

- **Telecom**: LUMA proposes $3.5 million in incremental funding above the FY2026 Temporary Default Budget to addresses critical fiber and core microwave repairs and complete the IP network stabilization (Megaplex) and transport network MPLS at the most critical sites. Driving the immediate need is the requirement to have enough fiber in service on two specific links to enable proper

protection of interconnecting renewables projects slated for August 2025, to repair critical primary protection line differential channels thus ensuring proper system reactions and avoiding cascading failures.

Q.99 Please expand upon the scope and rationale for the wildfire mitigation and hardening projects.

A. LUMA proposes $11.7 million in incremental funding above the FY2026 Temporary Default Budget to support the furtherance of wildfire mitigation activities, in accordance with PREB orders on NEPR-MI-2021-0004.20 The wildfire studies have progressed in accordance with the PREB direction, and the initial outcomes of those studies need to be acted upon. The peak wildfire season historically begins in January in Puerto Rico and for actions to be effective in this coming season, they need to be engineered and implemented immediately. These investments are high priority and noncontroversial because they contribute to public safety, and the mitigation of the risk of serious damage to the T&D System.

Q.100 Please expand upon the scope and rationale for the Grid Modernization initiatives.

A. In supporting task 14 of the resolution and order under NEPR-MI 2024-0005, LUMA is actively preparing for the interconnection and enablement of 4 x 25 MW of Battery Energy Storage Systems (“BESS”), to complete within 18 months, thus enhancing system inertia, supporting voltage regulation, and providing quicker frequency response capability. LUMA proposes $4.0 million in urgent and incremental funding above the FY2026 Temporary Default Budget to purchase land for the BESS during Q1 FY2026 (in Barceloneta, Manati, Aguadilla, San Juan). These investments are high priority because the land for these sites has been identified and options to purchase exist but must be

funded timely not to miss the opportunity. Utility scale battery storage is large in size and requires specific conditions to safely store the batteries. These investments are noncontroversial due to the impacts on reliability. These investments are critical in order to meet the timing set out by the project schedule and deliver reliability improvements to customers.

Q.101 How did the Capital Programs Department develop the costs to be included in the provisional rate application?

A. The Department reviewed the work outlined in the optimal budget for FY2026 not funded through rates nor the current budgets and identified that considered urgent and critical (i.e., cannot wait for permanent rates that will not be approved earlier than March 2026), while meeting the criteria outlined in PREB's directives of the April 21st order (i.e., high priority and noncontroversial).

Q.102 Are the costs of the Capital Programs Department just and reasonable?

A. These costs are just and reasonable because: (1) LUMA prioritized the costs considering immediate and high-priority needs, and seeks to recover or fund the actual costs of operating the system to the benefit of its customers, (2) LUMA seeks to recover or fund the actual costs of operating the system to benefit customers, and (3) the costs were calculated using historical costs data, as well as LUMA's expertise and experience.

Q.103 What would be the impact if these costs are not funded through a provisional rate?

A. Each area described in the responses to Q.98 through Q.100 present their own impacts should these costs not be funded through a provisional rate. These impacts highlight why the costs are high priority for the T&D System and to meet customer needs and should be considered noncontroversial:

- **Distribution**: Delays in addressing the issues driving this request will allow

voltage and thermal issues to persist unaddressed on the system creating power quality issues for customers and limiting renewables support for the grid, result in avoidable unplanned interruptions that consume operational resources to respond, particularly with significantly higher volumes in adverse weather, and extend the timeframe for attaining system stabilization and addressing the known portions of the system that are vulnerable to failures and could potentially result in safety hazards for the public as well as LUMA employees.

- **Substation**: Any delay in addressing the issues driving this request places LUMA and its customers at risk of experiencing larger and longer outages than would occur if these actions had been initiated sooner.
- **Transmission**: Delays in addressing the issues driving this request place a pause on system stabilization thereby extending the timeframe for (1) widespread and extended outages during major storm events, and for that matter, (2) situations where seemingly minor weather events / system operability issues lead to larger outage events.
- **Telecom**: Delays in addressing the immediate issues described above could lead to island-wide impacts, whose remediation costs would be substantial.
- **Wildfire Mitigation and Hardening**: With the peak wildfire season beginning in January 2026, delays in acting upon the results of the studies, translates to unnecessary increased wildfire-related risks to the T&D System and LUMA's customers.
- **Grid Modernization**: As I describe earlier in my testimony, there is a real risk of losing the option of purchasing these parcels of land if funding is delayed. This

would cause delays in the project schedule, particularly in the finalization of engineering, thus placing the overall 18-month schedule, and the commensurate benefits to customers, at risk.

Q.104 Does this complete your testimony?

A. Yes.

ATTESTATION

Affiant, Pedro Ángel Meléndez-Meléndez, being first duly sworn, states the following:

The prepared Direct Testimony, the exhibits and the cost information for the Capital Programs Department in LUMA Exhibit. 2.03 and LUMA Exhibit 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, including the exhibits, are my Direct Testimony and to the best of my knowledge are true and correct.

Pedro Meléndez-Meléndez

Affidavit No. _____

State of Florida County of Leon

Acknowledged and subscribed before me by Pedro Ángel Meléndez-Meléndez, in his capacity as Chief Capital Programs and Grid Transformation Officer of LUMA, of legal age, married, and resident of San Juan, Puerto Rico, who has been identified by drivers license.

and having appeared by means of online notarization this 1st day of July, 2025.

MELISSA K. GARNER
Notary Public

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

State of Florida

Department of State

I, Cord Byrd, Secretary of State, do hereby certify that:

Melissa K. Garner

was commissioned as a Notary Public in and for the State of Florida:

Commission number:	**HH356421**
Term beginning:	**March 29, 2023**
Term expiring:	**March 28, 2027**

as shown by the records of this office.

Legal Qualifications and Authority of a Florida Notary Public

A Florida Notary Public is not licensed to practice law in the State of Florida, and may not give legal advice or accept fees for legal advice.

Legal Qualifications of a Florida Notary Public: A Florida Notary Public shall be at least 18 years of age and a legal resident of Florida. A Florida Notary Public must be able to read, write, and understand the English language.

Legal Authority of a Florida Notary Public: A Notary Public may administer an oath and make a certificate thereof when it is necessary for the execution of any writing or document to be published under the seal of a Notary Public. A Notary Public is authorized to take the acknowledgments of deeds and other instruments of writing for record. A Notary Public is authorized to solemnize the rites of matrimony. A Notary Public may supervise the making of a photocopy of an original document and attest to the trueness of the copy.

Given under my hand and the Great Seal of the State of Florida, at Tallahassee, the Capital, this the Ninth day of July, A.D., 2025.

Secretary of State

DSDE 99 (2/12)

LUMA Ex. 5.01
Range of Reliability Improvements

LUMA Ex. 5.02

Program Brief for Compliance & Studies (PBUT1)

LUMA Ex. 5.03
Program Brief for OT Telecom Systems & Networks (PBIT1)

LUMA Ex. 5.04
Program Brief for Transmission Priority Pole Replacements (PBUT13)

LUMA Ex. 5.05
Program Brief for Transmission Line Rebuild (PBUT33)

LUMA Ex. 5.06
Program Brief for Substation Reliability (PBUT7)

LUMA Ex. 5.07
Program Brief for Substation Rebuilds (PBUT8)

LUMA Ex. 5.08
Program Brief for Distribution Pole & Conductor Repair (PBUT30)

LUMA Ex. 5.09
Program Brief for Grid Automation (PBUT4)

LUMA Ex. 5.10
Program Brief for Distribution Line Rebuild (PBUT6)

LUMA Ex. 5.11
Program Brief for New Business Connections (PBUT38)

LUMA Ex. 5.12
Program Brief for Distribution Streetlighting (PBUT5)

LUMA Ex. 5.13
Program Brief for Distribution Grid Reliability (PBUT39)

LUMA Ex. 5.14
Program Brief for Asset Data Integrity (PBUT27)

LUMA Ex. 5.15
NFC Breakdown between Capital Programs and Operations

Optimal Budget

Program	FY2026			FY2027			FY2028			
	Capital Programs	Operations	Total	Capital Programs	Operations	Total	Capital Programs	Operations	Total	
PBUT13	$14.38	$10.00	$24.38	$42.56	$12.05	$54.60	$66.70	$16.24	$82.94	
PBUT30	$70.50	$28.47	$98.96	$225.63	$29.02	$254.65	$261.28	$35.62	$296.90	
PBUT38	$13.21	$2.29	$15.50	$13.21	$2.29	$15.50	$13.84	$2.29	$16.13	
PBUT4	$2.14	$0.90	$3.03	$3.72	-	$3.72	$9.10	-	$9.10	
PBUT6	$37.10	$5.02	$42.12	$56.87	$5.17	$62.03	$71.82	$5.24	$77.06	
PBUT7	$101.12	$10.00	$111.12	$101.10	$15.97	$117.07	$113.74	$21.14	$134.88	
PBUT8	$2.56	$1.20	$3.76	$5.11	$1.50	$6.61	$15.33	-	$15.33	

Constrained Budget

Program	FY2026			FY2027			FY2028		
	Capital Programs	Operations	Total	Capital Programs	Operations	Total	Capital Programs	Operations	Total
PBUT13	$12.50	$10.00	$22.50	$37.00	$12.05	$49.05	$58.00	$16.24	$74.24
PBUT30	$20.38	$23.45	$43.84	$99.20	$7.83	$107.03	$118.20	$14.10	$132.31
PBUT38	$11.49	$2.29	$13.78	$11.49	$2.29	$13.78	$12.04	$2.29	$14.33
PBUT4	$1.86	$0.83	$2.69	$3.23	$0.17	$3.40	$7.92	$0.17	$8.09
PBUT6	$32.26	$5.02	$37.28	$49.45	$5.17	$54.62	$62.45	$5.24	$67.69
PBUT7	$67.93	$10.00	$77.93	$98.91	$15.97	$114.89	$107.09	$21.14	$129.04
PBUT8	$2.22	$1.20	$3.42	$4.44	$1.50	$5.94	$13.33	-	$13.33

Exhibit 2

SWORN STATEMENT

I, Eduardo Balbis, of legal age, married, business executive, and resident of Jupiter, Florida, in my capacity as Partner of Guidehouse, and testifying in support of LUMA Energy, LLC, and LUMA Energy ServCo, LLC, hereby solemnly swear:

1. That my personal and professional circumstances are as expressed herein.

2. That on June 30, 2025, Mr. Sam Shannon, Associate Director of Guidehouse provided a written Direct Testimony on behalf of LUMA Energy, LLC and LUMA Energy ServCo, LLC to present the Utility's preferred cost of service study, revenue allocation, and rate design under case number NEPR-AP-2023-0003, *In Re: Puerto Rico Electric Power Authority Rate Review* before the Puerto Rico Energy Bureau.

3. That on lines 952 and 996 of the aforementioned Direct Testimony, Mr. Sam Shannon stated that the provisional rate requested by the Utility would be $0.077896 per kWh. This is an error because, in the revenue requirement for provisional rates, the *Other* line item contained the Energy Efficiency program, which is not correct because said program is funded by its own rider and does not need to be funded from provisional rates. The difference is minimal: this original testimony states that the provisional rate should be $0.077896, but this adjustment brings it down to $0.073915, a difference of $0.003981.

4. That on June 30, 2025, and pursuant to Florida laws, Mr. Shannon executed, through online notarization, an Attestation before the Notary Public Melissa K. Garner in Florida.

5. That in response to question number 4, line 108 of his Direct Testimony, Mr. Shannon identifies the schedules he is sponsoring. The list of schedules of Mr. Shannon's Direct Testimony should include Schedule C-8 (Billing Determinants (kW and kWh) by Rate Class) and Schedule C-10 (Contributions in Lieu of Taxes).

6. That I execute this sworn statement to clarify that the correct provisional rate requested by the Utility is $0.073915, and not $0.077896 as stated in the aforementioned lines of the Direct Testimony of Mr. Sam Shannon.

7. That I also execute this sworn statement to state that Mr. Shannon is also sponsoring Schedules C-8 and C-10.

8. That I discussed the aforementioned with Mr. Shannon, and he confirmed via email that he is in agreement with the statements included herein. Mr. Shannon will execute a revised Direct Testimony before a Notary in the coming weeks.

9. That everything stated above is true and correct to the best of my knowledge, information, and belief.

Therefore, I hereby sign this Sworn Statement today, July 2, 2025.

Eduardo Balbis

State of Florida
County of Leon

Sworn and subscribed before me by Mr. Eduardo Balbis, whose full name is as described herein, of legal age, married, business executive, and resident of Jupiter, Florida, in his capacity as Partner at Guidehouse, and testifying in support of LUMA Energy, LLC and LUMA Energy ServCo, LLC, and who is personally known to me, having appeared by means of online notarization.

In Jupiter, Florida, today, July 2, 2025.

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

NOTARY PUBLIC MELISSA K. GARNER

State of Florida

Department of State

I, Cord Byrd, Secretary of State, do hereby certify that:

Melissa K. Garner

was commissioned as a Notary Public in and for the State of Florida:

Commission number:	**HH356421**
Term beginning:	**March 29, 2023**
Term expiring:	**March 28, 2027**

as shown by the records of this office.

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Given under my hand and the Great Seal of the State of Florida, at Tallahassee, the Capital, this the Ninth day of July, A.D., 2025.

Secretary of State

DSDE 99 (2/12)