EXAMINING PUERTO RICO'S ELECTRICAL GRID AND THE NEED FOR RELIABLE AND RESILIENT ENERGY

OVERSIGHT HEARING

BEFORE THE

SUBCOMMITTEE ON INDIAN AND INSULAR AFFAIRS

OF THE

COMMITTEE ON NATURAL RESOURCES
U.S. HOUSE OF REPRESENTATIVES

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CONTENTS

HOUSE COMMITTEE ON

NATURAL RESOURCES

CHAIRMAN BRUCE WESTERMAN

To: House Committee on Natural Resources Republican Members

From: Indian and Insular Affairs Subcommittee staff: Ken Degenfelder (Ken.Degenfelder@mail.house.gov), and Justin Rhee (Justin.Rhee@mail.house.gov), x6-9725

Date: Thursday, September 26, 2024

Subject: Oversight Hearing: *"Examining Puerto Rico's Electrical Grid and the Need for Reliable and Resilient Energy"*

The Subcommittee on Indian and Insular Affairs will hold an oversight hearing titled *"Examining Puerto Rico's Electrical Grid and the Need for Reliable and Resilient Energy"* on **Thursday, September 26, 2024, at 10 a.m. in 1324 Longworth House Office Building**.

Member offices are requested to notify Haig Kadian (Haig.Kadian@mail.house.gov) by 4:30 p.m. (EDT) on Wednesday, September 25, 2024, if their member intends to participate in the hearing.

I. KEY MESSAGES

- Puerto Rico's residents deserve access to affordable, reliable, and resilient energy, particularly as the island's residents pay among the highest utility costs in the U.S. The continued instability of the electrical grid is a barrier to short and long-term economic growth.
- The transfer of management of Puerto Rico's electrical grid from the Puerto Rico government-controlled entity, the Puerto Rico Electricity Power Authority (PREPA), to private utility firms LUMA Energy (LUMA) and Genera PR (Genera) was a step in the right direction. However, LUMA and Genera are responsible for explaining recent blackouts and must do better to increase transparency and communication.
- The Biden-Harris administration's priority of renewables such as solar and wind over reliable sources of base load power is unsustainable for Puerto Rico. The administration is placing its political agenda over the island's practical realities and is putting the livelihood of the 3.2 million residents at risk.
- It is alarming that the U.S. Department of Energy (DOE), the Federal Emergency Management Agency (FEMA), and the U.S. Housing and Urban Development Agency (HUD), the primary U.S. agencies charged with assisting Puerto Rico in rebuilding their electrical grid, have elected to ignore the practical realities on the island and instead have prioritized renewable energy projects. Furthermore, despite providing ample notice, these agencies have declined to testify before the Committee.

II. WITNESSES

PANEL I:

- **The Hon. Deanne Criswell**, Administrator, Federal Emergency Management Agency, U.S. Department of Homeland Security, Washington, D.C. [*Declined to testify*]
- **The Hon. Jennifer M. Granholm**, Secretary, U.S. Department of Energy, Washington, D.C. [*Declined to testify*]
- **The Hon. Adrianne Todman**, Acting Secretary, U.S. Department of Housing and Urban Development, Washington, D.C. [*Declined to testify*]

PANEL II:

- **Mr. Manuel Laboy Rivera**, Executive Director, Central Office for Recovery, Reconstruction, and Resiliency, San Juan, Puerto Rico
- **Mr. Antonio Torres Miranda**, Associate Commissioner, Puerto Rico Energy Bureau, San Juan, Puerto Rico
- **Mr. Juan Saca**, Chief Executive Officer, LUMA Energy, San Juan, Puerto Rico
- **Mr. Brannen McElmurray**, Chief Executive Officer, Genera PR LLC, San Juan, Puerto Rico

III. BACKGROUND

This hearing will examine Puerto Rico's electrical grid and the need for reliable and resilient energy on the island. Puerto Rico's electrical grid is undergoing major rebuilding following its collapse from natural disasters in 2017 and 2022 and, most recently, hurricane Ernesto in 2024. The government of Puerto Rico is also continuing to undergo an extensive debt restructuring process established under the Puerto Rico Oversight, Management, and Economic Stability Act (PROMESA).[1]

As part of the debt restructuring process, the Puerto Rico Electric Power Authority (PREPA), Puerto Rico's original electrical utility and a public corporation of the Government of Puerto Rico, has undergone and continues to undergo a significant overhaul of its management, operations, and finances. This overhaul includes entering into public-private partnerships that privatize the management of a majority of PREPA's assets. PREPA's control over electrical transmission and distribution (T&D) in Puerto Rico and its customer-facing service offices were contracted to LUMA in 2021.[2] PREPA's operation and maintenance of its thermal generation assets was contracted with Genera in 2023.[3]

Over the past three years, there has been broad dissatisfaction and protests against LUMA related to many power outages, rising electricity rates, and a perceived lack of customer service.[4] The power outages have been significant in both frequency and duration.[5] While LUMA bears responsibility for addressing customer concerns and the seeming lack of improvement to the electrical grid, placing sole blame on LUMA for the island's energy woes ignores the legacy issues of PREPA's mismanagement of finances, past underinvestment in infrastructure across system, the fragility of Puerto Rico's aging power generation fleet, and the role of federal agencies in supporting the island's electrical grid.

Federal agencies have obligated over $21 billion in assistance for energy reconstruction projects on the island, but much of this funding has yet to be disbursed due to delays in the grant awarding process and project execution.[6]

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[1] P.L. 114-187. For more information on PROMESA and Puerto Rico's debt restructuring process, see: "Puerto Rico's Public Debts: Accumulation and Restructuring." Congressional Research Service, https://crsreports.congress.gov/product/pdf/R/R46788/5.

[2] Coto, Danica. "Private Company Takes over Puerto Rico Power Utility Service." AP News, June 1, 2021. https://apnews.com/article/caribbean-puerto-rico-business-135b9ec52e130f3716f8862021a524d4.

[3] Acevedo, Nicole. "Puerto Rico officially privatizes power generation amid protests, doubts." NBC News, January 25, 2023. https://www.nbcnews.com/news/latino/puerto-rico-officially-privatizes-power-generation-genera-pr-rcna67284.

[4] New Lines Magazine. A Private Company Provokes an Energy Crisis in Puerto Rico. https://newlinesmag.com/reportage/a-private-company-provokes-an-energy-crisis-in-puerto-rico/.

[5] Id.

[6] Information provided by the Congressional Research Service upon request by House Committee on Natural Resources GOP staff.

As Puerto Rico is particularly prone to natural disasters, recent power outages have amplified concerns of a major collapse in the electrical grid and rippling effects on water supply and critical infrastructure.[7] These concerns have been exacerbated amid the annual hurricane season. In light of these concerns, this hearing will assess the progress made by LUMA and Genera, the role of federal agencies, and the policy recommendations for ensuring Puerto Rico has access to reliable and resilient energy.

Overview of Puerto Rico and Recent Natural Disasters

The Commonwealth of Puerto Rico is a self-governing, unincorporated island territory of the United States located on the easternmost island of the Greater Antilles chain.[8] San Juan, the capital, is located on the island's northern coast.[9]

The island is less than 100 miles south of the Puerto Rico Trench, which descends to more than 5 miles below sea level and is the deepest point of the Atlantic.[10] This feature leads to continuing tectonic movement and earthquakes that affect Puerto Rico, including earthquakes that occurred in late 2019 through the beginning of 2020.[11]

In addition to earthquakes, Puerto Rico is particularly prone to hurricanes. The September 2017 hurricanes, Irma and Maria, passed over Puerto Rico and left massive damage in their wake.[12] The hurricanes knocked out 80% of Puerto Rico's power grid,[13] taking 11 months for power to be fully restored, the longest blackout in U.S. history.[14] It is estimated that 3.4 million Puerto Rican residents were left without power for months,[15] and over a million homes were damaged.[16] In addition to the electricity grid, Puerto Rico's roads, hospitals, schools, businesses, water systems, and other critical systems were severely affected.[17] Seven years later, Puerto Rico is still recovering from the effects of these hurricanes.[18]

On September 18, 2022, Tropical Storm Fiona strengthened into a category one hurricane as it made landfall on the southern part of Puerto Rico.[19] The effects of winds and rain on key electric transmission and distribution lines caused the electrical grid to go down and generation to go offline as a safeguard, with all 3.2 million residents losing power. On October 14, 2022, LUMA announced restoration of power to the 1.46 million customers who lost power, and that it was demobilizing their emergency posture put in place after Hurricane Fiona hit the island.[20] It took LUMA 26 days to return electrical service to Puerto Rico.[21] For comparison, after Hurricane Maria, some parts of the island were without power for over a year under PREPA control.[22]

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[7] Simpkins, Kelsey. "Puerto Rico's precarious relationship between power and water." University of Colorado Boulder. https://www.colorado.edu/today/2022/09/30/puerto-ricos-precarious-relationship-between-power-and-water.

[8] Puerto Rico, *Britannica*. https://www.britannica.com/place/Puerto-Rico.

[9] San Juan Puerto Rico, *Britannica*. https://www.britannica.com/place/San-Juan-Puerto-Rico.

[10] Id.

[11] Grace Hauck, "Magnitude 5.9 earthquake rocks Puerto Rico and causes landslide in Peñuelas" *USA Today*. Jan 23 2020 https://www.usatoday.com/story/news/world/2020/01/11/puerto-rico-earthquake-6-0-magnitude-quake-causes-damage-ponce/4441511002/.

[12] Hurricanes Irma and Maria, *Official Portal of the Government of Puerto Rico*, https://recovery.pr.gov/en/hurricanes.

[13] Murali Baggu, *Puerto Rico Grid and Recovery Post Hurricane Maria*, Institute of Electrical and Electronics Engineers, https://www.nrel.gov/docs/fy22osti/82860.pdf, p. 2.

[14] GAO Watch Blog, "Hurricane Recovery Can Take Years—But For Puerto Rico, 5 Years Show Its Unique Challenges." Nov 14, 2022. https://www.gao.gov/blog/hurricane-recovery-can-take-years-puerto-rico-5-years-show-its-unique-challenges.

[15] Peter Anagnostakos et al., *Banks versus Hurricanes: A Case Study of Puerto Rico after Hurricanes Irma and Maria*, Federal Reserve Bank of New York, No. 1078 Nov 2023, https://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr1078.pdf , p. 1.

[16] Hurricanes Irma and Maria, *Official Portal of the Government of Puerto Rico*, https://recovery.pr.gov/en/hurricanes.

[17] Government Accountability Office, "Puerto Rico Disasters: Progress Made, but the Recovery Continues to Face Challenges." Feb 13, 2024. https://www.gao.gov/products/gao-24-105557.

[18] Id.

[19] Matthew Cappucci, et. al. "All of Puerto Rico without power as Hurricane Fiona slams island." *Washington Post*. Sept. 18, 2022. https://www.washingtonpost.com/climate-environment/2022/09/18/fiona-puerto-rico-hurricane-outages/.

[20] Press Release. "LUMA Restores Power to 1.46 million customers & begins process of demobilizing emergency posture" LUMA. Oct. 14, 2022. https://lumapr.com/news/luma-restores-power-to-1-46-million-customers-begins-process-of-demobilizing-emergency-posture/?lang=en.

[21] Id.

[22] Sullivan, Emily. "Nearly a Year After Maria, Puerto Rico Officials Claim Power Is Totally Restored." NPR. https://www.npr.org/2018/08/15/638739819/nearly-a-year-after-maria-puerto-rico-officials-claim-power-totally-restored.

Primary Stakeholders of Puerto Rico's Energy Reconstruction

PREPA

Formed in 1941, PREPA was a public corporation owned by the Commonwealth of Puerto Rico.[23] As a government-controlled entity, the impression of many was that leadership posts at PREPA were coveted patronage jobs believed to be held by individuals who were unqualified to hold these positions, contributing to the inefficiency of operations.[24] For decades, PREPA was plagued by mismanagement, inefficiency, political cronyism, and a lack of transparency.[25] The utility has a record of unacceptable rates of electricity theft, failure to collect accounts from government and municipal users, and a history of continually foregoing critical maintenance of the island's electrical infrastructure.[26]

For further information on PREPA's history, ongoing reforms, and debt restructuring, see the November 17, 2022, House Committee on Natural Resources Republicans full committee oversight hearing memo.[27]

LUMA

In June 2020, LUMA was awarded the contract to operate PREPA's electricity T&D system through a competitive awards process.[28] On June 1, 2021, LUMA took control of Puerto Rico's electrical grid.[29] LUMA is a joint venture between Houston-based Quanta Energy and Calgary-based ATCO/Canadian Utilities Ltd. Their scope of work is defined by the Puerto Rico Transmission and Distribution System Operation and Maintenance Agreement with PREPA and the government of Puerto Rico's Public-Private Partnership Authority (P3).[30]

The LUMA energy contract has been a political issue with opposition from many partisan, labor, academic, and non-profit sectors.[31,32] Rate increases, significant power outages in frequency and duration, and a perceived lack of customer service have also eroded support for LUMA on the island.[33] Recent rate increases can be attributable to the increase in fuel prices, supply chain issues, and the fact that PREPA is unable to negotiate long-term contracts for fuel while they are in bankruptcy proceedings. To that regard, there is little LUMA can influence with respect to rate increases resulting from fuel price increases. Furthermore, the impact of PREPA's debt on its credit rating and revenue generation has severely limited LUMA's capacity to make capital investments.[34]

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[23] GAO-21-264. Puerto Rico Recovery. https://www.gao.gov/assets/gao-21-264.pdf and "About PREPA—History", PREPA. https://aeepr.com/en-us/QuienesSomos/Pages/History.aspx.

[24] January 11, 2016 House Committee on Natural Resources Subcommittee on Energy and Mineral Resources Oversight Hearing: "*Exploring Energy Challenges and Opportunities Facing Puerto Rico*." http://naturalresources.house.gov/uploadedfiles/emr_hearing_memo_1_12_16.pdf.

[25] Id.

[26] September 26, 2022 House Committee on Natural Resources Full Committee Oversight Hearing: "Puerto Rico's Post-Disaster Reconstruction and Power Grid Development."

[27] November 14, 2022 House Committee on Natural Resources Full Committee Oversight Hearing: "Puerto Rico's Post-Disaster Reconstruction & Power Grid Development". https://naturalresources.house.gov/UploadedFiles/FC_Oversight_Hearing_Memo_Hurricane_Recovery_and_Elec_Grid_11.17.22.pdf.

[28] Puerto Rico Public-Private Partnership Authority, Press Release, "Government of Puerto Rico Selects LUMA Energy to Operate and Transform Electric Power Transmission and Distribution System" Jun. 22, 2020. https://www.p3.pr.gov/wp-content/uploads/2020/07/govpr-selects-luma-energy-ope-trans-electric-power-transmi-dist-sis.pdf.

[29] "In Puerto Rico, private company takes over power utility service." *Associated Press* Jun. 2, 2021. https://www.nbcnews.com/news/latino/puerto-rico-private-company-takes-power-utility-service-rcna1091.

[30] The Puerto Rico Public-Private Partnership Authority (P3) is a government-owned corporation of Puerto Rico created to regulate public-private partnerships.

[31] Stephanie Gómez Aólvaraz, "Luógaro, Dalmau Would Cancel Contract with LUMA Energy" *The Weekly Journal*. Sept. 17, 2020. https://www.theweeklyjournal.com/politics/l-garo-dalmau-would-cancel-contract-with-luma-energy/article_3c5ca040-f8ec-11ea-a2da-b7cfab428ed1.html.

[32] Nelson Reyes Faria, "Multiple Sectors Join Protests Against LUMA" *The Weekly Journal*. May 31, 2021. https://www.theweeklyjournal.com/online_features/multiple-sectors-join-protests-against-luma/article_e67a784e-c223-11eb-9991-2b97ae45d62d.html.

[33] Alejandra O'Connell-Domenech "Why are some Puerto Ricans demanding the island cancel its contract with power company LUMA Energy" *The Hill*. Sept. 10, 2022. https://thehill.com/changing-america/sustainability/energy/3636534-why-are-some-puerto-ricans-demanding-the-island-cancel-its-contract-with-power-company-luma-energy/.

[34] Information provided by LUMA upon request by House Committee on Natural Resources GOP Staff.

Genera

Following a competitive bidding process, Genera PR LLC, a subsidiary of New Fortress Energy,[35] entered into a ten-year agreement with the P3 for Genera to be the sole generator of PREPA's thermal generation system beginning July 1, 2023.[36] Genera also handles contracts related to fuel purchases for the island's power facilities.[37] Electricity rates are determined by a regulatory process run by the Puerto Rico Energy Bureau (PREB).[38] While Genera does not control electricity rates, the firm claims to be committed to reducing the cost of electricity generation in Puerto Rico through better maintenance and operation of the existing fleet, investment in new technologies and more efficient systems, and fuel optimization.[39]

PREPA maintains control over the management and operations of hydropower generation and land-flow gas generation assets.[40]

Regulatory Agencies in Puerto Rico

Within the Government of Puerto Rico, P3 is responsible for regulating public-private partnerships in Puerto Rico and securing private capital for public projects.[41]

The Central Office for Recovery, Reconstruction, and Resiliency (COR3) is a Puerto Rico government agency responsible for ensuring that FEMA funds are used for their intended purpose.[42] In effect, COR3 is the recipient and pass-through entity for the disbursement of FEMA funds for PREPA and projects performed by LUMA and Genera as PREPA's contract partners. COR3 is tasked with assuring the compliance and transparency of disbursed funds.

An independent regulatory agency established under Puerto Rico's local laws, PREB regulates, monitors, and enforces the government of Puerto Rico's energy public policy.[43] One of PREB's additional functions is to oversee the island's solar renewable process for permitting approval onto the grid. Any energy plan and policy within Puerto Rico must be reviewed and approved by PREB. PREB also establishes standards for energy power plants and facilities.[44]

A notable use of PREB's authority was the rejection of PREPA's proposal to gasify the electrical grid through a new liquefied natural gas (LNG) terminal and gas-fired generation in its August 2020 Integrated Resource Plan. PREPA had proposed shutting down old fuel plants and replacing them with new natural gas plants, but PREB denied that proposal in favor of renewable energy and solar grid projects.[45]

Federal Agencies

The reconstruction of Puerto Rico's electrical grid is primarily supported, whether directly or indirectly, by federal assistance. According to the Congressional Research Service, the federal government has obligated over $21 billion in assistance to help restore and rebuild the electrical grid for Puerto Rico post-hurricanes.[46]

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[35] "Genera PR tapped to run Puerto Rico's energy generation" *Puerto Rico Fiscal Agency and Financial Advisory Authority* https://aafaf.pr.gov/press-room-articles/genera-pr-tapped-to-run-puerto-ricos-energy-generation/.

[36] "Se materializa la transición a Genera PR como operador de la flota generatriz de la AEE" *El Nuevo Día*. June 30 2023 https://www.elnuevodia.com/noticias/noticias/notas/se-materializa-la-transicion-a-genera-pr-como-operador-de-la-flota-generatriz-de-la-aee/.

[37] Dánica Coto, "Puerto Rico selects company to privatize power generation" *AP News*. Jan 25, 2023, https://apnews.com/article/united-states-government-caribbean-puerto-rico-climate-and-environment-business-12587fe080ed71f545ddd1e520db50e4.

[38] "*Operaciones*." *Genera PR*. https://genera-pr.com/operaciones.

[39] "Nosotros." Genera PR. https://genera-pr.com/sobre-nosotros.

[40] Information provided during a briefing by PREPA for House Committee on Natural Resources GOP staff.

[41] "P3" Puerto Rico Public-Private Partnerships Authority. https://www.p3.pr.gov/p3.

[42] 'Fraud, Waste, and Abuse" COR3. https://recovery.pr.gov/en/fraud-waste-and-abuse.

[43] "About the Puerto Rico Energy Bureau." PREB. https://energia.pr.gov/en/about-the-commission/#:~:text=Specifically%2C%20the%20PREB %20has%20the,the%20Government%20of%20Puerto%20Rico.&text=To%20achieve%20a%20reliable%2C%20efficient,power%20services%20at%20reasonable%20prices.

[44] "About the Puerto Rico Energy Bureau" *Negociado De Energia De Puerto Rico*. https://energia.pr.gov/en/about-the-commission/.

[45] Id.

[46] Analysis provided by the Congressional Research Service at the request of the U.S. House Committee on Natural Resources Republican staff.

Of the $21 billion, $9.5 billion is public assistance funds, $7.8 billion is hazard mitigation from FEMA, over $1 billion is community development block grants from HUD, and $1 billion is energy resilience funds from DOE.[47] The scale of federal assistance in supporting Puerto Rico's electrical grid is unprecedented, even compared to the continental U.S.[48]

The DOE provides technical assistance to Puerto Rico energy stakeholders through training, tools, and modeling support to enable "planning and operation of the electric system with greater resilience against further disruptions."[49] The DOE's $1 billion Puerto Rico Energy Resilience Fund has primarily been used to support residential rooftop solar projects and battery storage installations.[50]

Federal assistance supporting the reconstruction of Puerto Rico's electrical grid is primarily derived from FEMA funding. Within Puerto Rico, two primary types of FEMA funding are used to support the reconstruction of its electrical grid: Public Assistance (PA) and Hazard Mitigation Assistance (HMA).[51] FEMA has obligated approximately $9.5 billion in PA funding for Puerto Rico's electrical grid reconstruction.[52]

FEMA's PA grant review and awarding process within Puerto Rico is unique to the island as this complex process is different from FEMA processes in other states and territories.[53] According to COR3, Puerto Rico has a unique process due to the unprecedented challenge of rebuilding Puerto Rico's electrical grid. The FEMA PA grant review process can take 15 to fifty days which creates an additional process challenge.[54]

FEMA's HMA grants provide funding for eligible mitigation measures that reduce disaster losses. These funds are meant to reduce long-term risk from future disasters, and thus, PA funds are the primary funding mechanism for immediate recovery. Puerto Rico has received approximately $7.8 billion in HMA funds, also managed by COR3.[55]

While tens of billions of dollars in FEMA funds for Puerto Rico have been obligated, most of these funds have yet to be disbursed.[56] The Government Accountability Office found that FEMA has obligated approximately $23.4 billion in PA for Puerto Rico's reconstruction, which includes other sectors beyond energy.[57] Of this amount, only $1.8 billion has been expended. Projects have either been delayed or not yet started. This has led to increasing questions about why these funds have yet to be used and what must be done to expedite the grant process.

While FEMA funding represents the majority of federal assistance to Puerto Rico, HUD provides approximately $1.93 billion in funds for improving the island's electrical grid including climate resilience and green energy initiatives in Puerto Rico.[58]

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[47] Id.

[48] Information provided by COR3 during a briefing for House Committee on Natural Resources GOP staff.

[49] "Puerto Rico Grid Recovery and Modernization." U.S. Department of Energy. https://www.energy.gov/gdo/puerto-rico-grid-recovery-and-modernization.

[50] "Puerto Rico Energy Resilience Fund." U.S. Department of Energy. https://www.energy.gov/gdo/puerto-rico-energy-resilience-fund.

[51] Information provided by COR3 during a briefing for House Committee on Natural Resources GOP staff.

[52] Id.

[53] Id.

[54] Information provided by FEMA during a briefing for House Committee on Natural Resources GOP staff.

[55] "Hazard Mitigation Assistance." COR3. https://recovery.pr.gov/en/recovery-programs/hazard-mitigation-assistance.

[56] Government Accountability Office, "Puerto Rico Disasters: Progress Made, but the Recovery Continues to Face Challenges." Feb 13, 2024. https://www.gao.gov/products/gao-24-105557.

[57] Id.

[58] "HUD Officials Highlight Climate Resilience Funding Opportunities in Puerto Rico and US Virgin Islands. "HUD. April 19, 2024. https://www.hud.gov/press/press_releases_media_advisories/hud_no_24_083.

June 2024 Outages

From June 2 to June 9, 2024, blackouts occurred in the Puerto Rico municipalities of Santa Isabel, Aibonito, and Coamo[59] due to a broken electrical transformer at the Santa Isabel substation.[60] LUMA increased the capacity of the transmission line and installed temporary generators to restore service to the substation.[61] LUMA is replacing the broken Santa Isabel transformer with a mega transformer[62] which is currently being installed,[63] as well as rebuilding affected lines to remedy this issue.[64]

On the eve of Wednesday, June 12, 2024, a widespread power outage hit Puerto Rico, leaving 350,000[65] customers without electricity after two power plants shut down.[66] LUMA's chief executive officer stated that overgrown vegetation caused the outages and that LUMA has launched an initiative to clear vegetation across 16,000 miles of powerlines.[67] While power was restored the following day, this series of blackouts sparked uproar and frustrations among Puerto Rico's residents over managing the island's electrical grid. The governor of Puerto Rico, Pedro Pierluisi, ordered an investigation into the June 12 blackout and stated that "if negligence is found," then LUMA will not be reimbursed with public funds for repairs or restoration of service.[68]

Further adding to public frustrations, LUMA announced that a transformer the company transported to the Santa Isabel substation had internal problems and was not operational.[69] The transportation of these transformers costs $4 million.[70] LUMA has since announced that it is moving a replacement transformer from the Maunabo substation. Still, it appears the mayor of Maunabo has blocked access to the facility over fears of potential blackouts from no longer having a backup transformer.[71]

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[59] Manuel Guillama Capella, "LUMA accepts that the transformer that caused the breakdown in Santa Isabel had doubled its utility", *El Nuevo Dia* June 7 2024, https://www.elnuevodia.com/english/news/story/luma-accepts-that-the-transformer-that-caused-the-breakdown-in-santa-isabel-had-doubled-its-utility.

[60] LUMA Progress Update June 2024 provided to U.S. House Committee on Natural Resources Republican staff.

[61] Id.

[62] Adriana Diaz Tirado, "The transfer of the mega transformer to Santa Isabel is completed", *El Nuevo Dia* June 22 2024, https://www.elnuevodia.com/english/news/story/the-transfer-of-the-megatransformer-to-santa-isabel-is-completed/.

[63] "LUMA Initiates Second Phase of Transformer Transfer to Santa Isabel," *LUMA* June 20 2024, https://lumapr.com/news/luma-initiates-second-phase-of-transformer-transfer-to-santa-isabel/?lang=en.

[64] Id.

[65] John Yoon, "Outage Leaves About 350,000 Customers in Puerto Rico Without Power," *New York Times* June 13 2024, https://www.nytimes.com/2024/06/13/us/puerto-rico-outage.html?searchResultPosition=1.

[66] "Widespread outage hits Puerto Rico as customers demand ouster of private electric company" *AP News* June 12 2024, https://apnews.com/article/puerto-rico-power-outage-luma-0253fa691daa472b41ec44b28ecfda91.

[67] Id.

[68] Gloria Ruiz Kuilan, "Pedro Pierluisi ordena investigar el apagón del miércoles y activa la Guardia Nacional: 'Esto no se debe repetir'" El Nuevo Dia June 13 2024 https://www.elnuevodia.com/noticias/gobierno/notas/pedro-pierluisi-ordena-investigar-el-apagon-del-miercoles-y-activa-la-guardia-nacional-esto-no-se-debe-repetir/.

[69] Manuel Guillama Capella, "The transformer that LUMA transported to Santa Isabel substation at a cost of $4 million is out of order." El Nuevo Dia. July 11, 2024. https://www.elnuevodia.com/english/news/story/the-transformer-that-luma-transported-to-santa-isabel-substation-at-a-cost-of-4-million-is-out-of-order/.

[70] Id.

[71] "LUMA insists transformer removal will not impact Maunabo" The San Juan Daily Star. https://www.sanjuandailystar.com/post/luma-insists-transformer-removal-will-not-impact-maunabo.

Tropical Storm Ernesto and August 2024 Load Sheds

On August 13 and 14, 2024, Tropical Storm Ernesto passed just above the northern tip of Puerto Rico, bringing tropical storm-force winds, heavy flooding, and landslides[72] to the island.[73] On August 14, torrential downpours of up to 10 inches of rain from Ernesto blanketed parts of Puerto Rico.[74] Approximately 750,000 LUMA customers lost service during the peak of the outage.[75]

On August 23, LUMA stated they restored power to 729,000 customers who lost service due to Ernesto.[76] While it is positive to see that power has largely been restored, the storm has once again raised concerns over the fragility of the electrical grid. There are speculations that the grid could have collapsed completely if the storm had strengthened into a hurricane.

Policy Considerations

As policymakers assess Puerto Rico's electrical grid and seek solutions to improve the island's access to reliable energy, several factors must be considered.

Recovery from PREPA's Mismanagement of the Electrical Grid

When LUMA and Genera took over managing T&D and power generation from PREPA, they took on a highly fragile and mismanaged system. Decades of neglect and lack of investment have resulted in the island's outdated and failing transmission and generation fleet.[77] Much of PREPA's assets acquired by LUMA and Genera were either non-operational or required significant repair. Since beginning operations, LUMA and Genera have worked to bring the power fleet up to industry standards.[78] As most of the equipment and generators are decades beyond their recommended service life, this will require a significant amount of time and investment.[79]

Impact of Renewable Prioritization on Supply Chain and Capacity

Further exacerbating the challenge, the push for the Biden-Harris administration's purchase and use of electric vehicles (EVs) has severely impacted the supply chain for transformers. The increasing demand for EVs has led to a surge in electrification in the U.S. This increased demand has placed further strain on the supply of transformers, which is already taxed from ongoing efforts to replace outdated transformers across the country.[80] Moreover, the batteries and chargers used for EVs require materials and precious metals similar to those used in power plants. This double effect by prioritizing EVs has led to significantly longer lead times for LUMA to receive new transformers, often taking 1–3 years for an order to be fulfilled and transported.[81]

The use of EVs in Puerto Rico has also affected the island's electrical generation capacity.

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[72] Jan Wesner Childs, "Ernesto Slams Puerto Rico: Half Of The Island Loses Power". *The Weather Chanel*. Aug. 15, 2024. https://weather.com/storms/hurricane/news/2024-08-13-ernesto-puerto-rico-tropical-storm.

[73] U.S. Department of Energy Situation Report #8/Tropical Storm Ernesto. Aug. 20, 2024 (p. 1).

[74] Id.

[75] NOAA, "Ernesto Brings Dangerous Seas to North America's Atlantic Coast." https://www.nesdis.noaa.gov/news/ernesto-brings-dangerous-seas-north-americas-atlantic-coast.

[76] LUMA—Tropical Storm Ernesto Update #10. Aug 23. 2024.

[77] Gianpaolo Pietri, "Neglect, Corruption Left Puerto Rico's Power Grid Ripe for Failure, Observers Say." *Voice of America News*. Nov. 30, 2017. https://www.voanews.com/a/experts-say-neglect-corruption-left-puerto-rico-power-grid-ripe-for-failure/4144129.html.

[78] Information provided by Genera PR to the U.S. House Committee on Natural Resources Republican staff in July 2024.

[79] Id.

[80] "The U.S. is facing an "unprecedented" shortage of electric transformers, NREL says" EUCI. March 27, 2024. https://www.euci.com/the-u-s-is-facing-an-unprecedented-shortage-of-electric-transformers-nrel-says/.

[81] Information provided by LUMA during a briefing for House Committee on Natural Resources GOP staff.

According to Genera representatives, the increase in the number of EVs on the island has led to an increase in electrical usage used for recharging vehicles.[82] EV recharging often takes place when electricity is already in peak demand, as residents are at home in the evening. Solar power is insufficient to mitigate this issue as it takes place during sunset, and most residents do not have batteries for reserving solar power. As such, this has forced Genera to seek ways to increase power generation capacity.

Federal regulations against non-renewable sources have further jeopardized attempts to revitalize Puerto Rico's electrical grid. In addition to severely slowing the PA grant process, Puerto Rico nearly lost access to two critical temporary LNG-based generators installed in San Juan and Palo Seco power plants due to emissions concerns. These generators were initially operated by FEMA and were scheduled to end operations by March 15, 2024.[83] Following outcry over the negative impact of removing the generators before hurricane season and the installation of permanent generators, FEMA agreed to hand over operational control of these generators to the government of Puerto Rico.[84] However, the Puerto Rico government had to receive a permit from the U.S. Environmental Protection Agency (EPA) to allow Genera to operate the generators.[85] The permit application was at risk of being rejected over EPA's concerns about the impact of the generators on greenhouse gas emissions, but the EPA agreed to conditionally approve the permits based on terms to be set between the agency and Genera.[86]

The practical reality is that the Biden-Harris administration's prioritization of solar projects is neither feasible nor sustainable, as approximately 43 percent of Puerto Rico's residents live in poverty.[87] The upfront cost of solar panel installation is $28,500 in cash.[88] For context, the median household income in Puerto Rico in 2023 was $24,002.[89] In addition to their high costs, solar panels are highly ineffective against severe weather, as storms can damage and strip away residential and in some cases, large-scale solar panels.[90]

The Biden-Harris administration has ignored this reality as it continues to champion rooftop solar projects as its solution for stabilizing power on the island. Following the mid-June 2024 outages, the DOE announced in early July 2024 a project to install 3,000 residential solar panels and storage by the end of the year.[91] This announcement disregards the fact that more than 300,000 residents were affected by the mid-June outages and over 1.5 million electricity consumers in Puerto Rico.

The Responsibilities of LUMA and Genera

While LUMA and Genera face a monumental task in attempting to restructure Puerto Rico's fragile electrical grid, these firms also have the responsibility of ensuring transparency in their processes. Privatizing PREPA was a step in the right direction, but LUMA and Genera must work carefully to earn the public's trust and clearly explain the challenges they face and their plans to rebuild the grid.

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[82] Information provided by Genera PR during a briefing for House Committee on Natural Resources GOP staff.

[83] Bernal, Rafael, "Puerto Rico raises alarms as FEMA ends power generation mission." November 17, 2023.

[84] Id.

[85] Bernal, Rafael, "Puerto Rico waits anxiously for EPA power plant approval." March 6, 2024. https://thehill.com/latino/4513548-puerto-rico-epa-power-plant-approval-fema/.

[86] Information provided to House Committee on Natural Resources Republican staff by Genera.

[87] "Pervasive Poverty in Puerto Rico: a Closer Look." CENTRO PR. September 22. 2023. https://centropr.hunter.cuny.edu/reports/pervasive-poverty-in-puerto-rico/.

[88] Tom Sanzillo & Cathy Kunkel, *Solar at a Crossroads in Puerto Rico, Institute for Energy Economics and Financial Analysis*, p. 10.

[89] "QuickFacts Puerto Rico" *United States Census Bureau* July 1, 2023. https://www.census.gov/quickfacts/fact/table/PR/PST045223.

[90] April 11, 2024 House Committee on Natural Resources Subcommittee on Indian and Insular Affairs Oversight Hearing: "Promoting Affordable and Reliable Energy Sources for the U.S. Insular Areas/Indian and Insular Affairs Subcommittee." https://naturalresources.house.gov/calendar/eventsingle.aspx?EventID=415818.

[91] Walton, Robert. "DOE to deploy over 3,000 solar + storage home systems in 2024 for most vulnerable Puerto Ricans." July 16. 2024. https://www.utilitydive.com/news/doe-solar-storage-home-systems-puerto-rico/721429/.

There have been concerns regarding LUMA's lack of transparency and bureaucratic processes regarding customer engagement.[92] With a lack of or insufficient explanations as to why outages occur and multiple-stage processes for requesting service repair, customers have expressed frustrations over LUMA's management. Greater transparency and communication would allow customers to better understand why outages happen, the challenges to energy stabilization, and how LUMA is addressing these challenges. While Genera has received less criticism than LUMA over the recent blackouts, perhaps due to the infancy of its contract, the firm still bears the responsibility of improving transparency and keeping its customers informed on the status of operations and the impact of future projects. A long-term challenge for LUMA and Genera will be to decrease their reliance on federal funds.

Potential Solutions

The negative impact of the blackouts on Puerto Rico's residents' livelihoods and the island's economy cannot be overstated. Small business owners constantly deal with electricity losses that impede revenue and productivity.[93] When blackouts occur, consumers incur damages to their appliances, and the spoiling of their foods and medicines adds additional costs.[94] The most recent blackout cost Puerto Rico's economy approximately $1.8 million per hour, not accounting for damaged equipment costs.[95]

Policy solutions will need to consider the immediate and long-term needs of Puerto Rico. In the short term, Puerto Rico needs practical solutions that will provide reliable energy without the need to overhaul its infrastructure. In the long term, Puerto Rico will need cost-effective energy options that increase the electrical grid's resilience to natural disasters.

House Republicans continue to support an all-of-the-above energy approach that allows for diversification of Puerto Rico's energy sources and increases access to secure, reliable and affordable energy.

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[92] Information during a meeting between House Committee on Natural Resources GOP staff and Puerto Rican companies and organizations affected by the recurring outages in Puerto Rico.

[93] Marian Diaz, "Merchants on Ponce de Leon Avenue have been without electricity for more than a week", *El Nuevo Dia* June 5 2024 https://www.elnuevodia.com/english/business/notas/merchants-on-ponce-de-leon-avenue-have-been-without-electricity-for-more-than-a-week/.

[94] Nicole Acevedo, "Puerto Ricans struggle to grasp economic impact of recurrent power outages" *NBC News* June 14 2024 https://www.aol.com/puerto-ricans-struggle-grasp-economic_161535619.html?guccounter=1.

[95] Maricarmen Rivera Sánchez et al. "'Esto ha sido una historia de terror': pequeños comercios temen irse a pique por la falta de electricidad" *El Nuevo Dia* June 13 2024 https://www.elnuevodia.com/negocios/economia/notas/esto-ha-sido-una-historia-de-terror-pequenos-comercios-temen-irse-a-pique-por-la-falta-de-electricidad/.

OVERSIGHT HEARING ON EXAMINING PUERTO RICO'S ELECTRICAL GRID AND THE NEED FOR RELIABLE AND RESILIENT ENERGY

Thursday, September 26, 2024
U.S. House of Representatives
Subcommittee on Indian and Insular Affairs
Committee on Natural Resources
Washington, DC

The Subcommittee met, pursuant to notice, at 10:02 a.m., in Room 1324, Longworth House Office Building, Hon. Harriet M. Hageman [Chair of the Subcommittee] presiding.

Present: Representatives Hageman, Radewagen, LaMalfa, González-Colón, Moylan, Westerman; and Velázquez.

Also present: Representatives Stauber, Valadao, Gimenez; Ocasio-Cortez, and Torres.

Ms. HAGEMAN. The Subcommittee on Indian and Insular Affairs will come to order.

Without objection, the Chair is authorized to declare a recess of the Subcommittee at any time.

The Subcommittee is meeting today to hear testimony on "Examining Puerto Rico's Electrical Grid and the Need for Reliable and Resilient Energy."

Under Committee Rule 4(f), any oral opening statements at hearings are limited to the Chairman and the Ranking Minority Member. I therefore ask unanimous consent that all Members' opening statements be made part of the hearing record if they are submitted in accordance with Committee Rule 3(o). Without objection, so ordered.

I ask unanimous consent that the gentleman from Minnesota, Mr. Stauber; the gentlewoman from New York, Ms. Ocasio-Cortez; the gentleman from New York, Mr. Torres; the gentleman from California, Mr. Valadao; the gentleman from New York, Mr. Garbarino; and that the gentleman from Florida, Mr. Gimenez be allowed to sit and participate in today's hearing. Without objection, so ordered.

I will now recognize myself for an opening statement.

STATEMENT OF THE HON. HARRIET M. HAGEMAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WYOMING

When Hurricanes Irma and Maria made landfall in Puerto Rico in September 2017, they left massive damage in their wake. The storms knocked out 80 percent of Puerto Rico's electrical grid, causing an 11-month blackout, the longest in U.S. history. These hurricanes revealed the fragility and dire strait of Puerto Rico's electrical grid, which had been suffering from years of mismanagement and deferred maintenance by the Puerto Rico

Electric Power Authority, or PREPA, the island's public electrical utility.

Since then, PREPA has undergone a major overhaul of its management, operations, and finances. This overhaul included entering into private-public partnerships that privatized the management of most of PREPA's assets. In 2021, the management of PREPA's electrical transmission and distribution infrastructure was awarded to LUMA Energy. And in 2023, operations of PREPA's thermal generation assets were awarded to Genera.

At the Federal level, the DOE, FEMA and HUD are all engaged in efforts aimed at rebuilding Puerto Rico's electrical grid. Of the three Federal agencies, FEMA, or the Federal Emergency Management Agency, provides the lion's share of Federal funding. Of the $21 billion of Federal funds obligated for Puerto Rico, approximately $16.8 billion are FEMA funds.

It has been 7 years since Hurricanes Irma and Maria. Yet, Puerto Rico continues to suffer major power outage incidents with no clear end in sight. To that end, I am deeply disappointed that our witnesses from the Biden-Harris administration have declined to testify today. As you all can see, our first panel today has empty chairs, as the Administration witnesses refused to show up to address this incredibly important issue.

We had hoped that their testimony would help us better understand the Federal Government's efforts in Puerto Rico and how the over $20 billion in obligated taxpayer dollars are being spent on the island. Troublingly, the Biden-Harris administration has pushed an energy agenda on the island focused on building unreliable energy resources such as wind and solar, while ignoring the need for reliable and affordable baseload energy sources to meet the island's basic needs. Their radical approach is neither feasible nor sustainable and disregards the basic needs of the island's more than 3 million residents.

I am particularly disappointed in the lack of participation from FEMA and the DOE. When declining the invitation to testify, the DOE stated that their "senior leaders on Puerto Rico matters remain at a critical juncture with starting installations of solar panels and batteries in Puerto Rico." It is hard to believe that not a single person is available to testify across an entire Federal department.

FEMA responded to this Committee by stating that they are not willing to testify if the DOE is not. Quite mature in their response. Given the fact that nearly 80 percent of the Federal funds obligated for Puerto Rico come from FEMA, it is troubling that FEMA believes that they can sideline themselves on this issue. It is unacceptable that our invited witnesses from Washington, DC are unwilling to testify when all of our witnesses from Puerto Rico have traveled to be here with us today.

The Biden-Harris administration's lack of participation in this hearing is yet another sign that, while they may talk the talk, they are unwilling to walk the walk when it comes to helping the American people. Our fellow Americans in Puerto Rico and across the nation deserve better. Needless to say, we will be submitting questions for the record to the Administration witnesses after this hearing.

I want to thank the witnesses who have come before us today for traveling many miles to be here. I look forward to hearing from them on their ongoing work to rebuild Puerto Rico's electrical grid and the challenges that they have been facing. And I want to thank those of you who came to my office yesterday to provide me with additional information about the challenges that you have. I learned so much and I am extremely appreciative that you are all here today to address this important issue.

All the stakeholders involved in rebuilding Puerto Rico's electrical grid must understand the importance of committing to addressing the issues that are raised here today. The residents of Puerto Rico deserve access to reliable, affordable, and resilient energy.

Once again, I would like to thank our witnesses who are with us today, and I look forward to their testimony.

The Chair now recognizes the Ranking Minority Member for any statements.

STATEMENT OF THE HON. NYDIA M. VELÁZQUEZ, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Ms. VELÁZQUEZ. Thank you, Madam Chair.

October 6, 2021. That day marks the first and only time to this date that the House Committee on Natural Resources held a hearing on the LUMA contract at the request of Ranking Member Grijalva and myself. It took this Committee 2 long years to finally examine Puerto Rico's energy crisis. And in that time, the situation has only worsened.

Puerto Rico endured the devastation of Hurricane Fiona and Tropical Storm Ernesto, the latter striking just last month. As a result, half of the island's energy consumers, all 750,000 households, were left in darkness. A full week after the storm, 40,000 people were still without power. The reliable, resilient, and clean energy future that LUMA promised Puerto Ricans has yet to materialize.

It is shameful that this Committee has chosen the last day on September's calendar, when many Members are already flying back to their district, to hold this critical hearing. And it is very nice to come and criticize the Administration, but why didn't we have this hearing 6 weeks, 6 months ago, a year ago, and use every tool at our disposal to compel the Federal agencies to come before us?

This is a convenient platform for certain Members to feign interest in Puerto Rico's energy future. But let's be clear. Congress had ample time to question LUMA, Genera, COR3, and all other key players about what has happened with the over $21 billion allocated to repair and modernize the grid.

Republicans are only addressing this now as the current Congress nears its end and are pushing a proposal to diversify Puerto Rico's energy sources. This so-called diversification plan could be construed as a path to keep Puerto Rico reliant only on fossil fuels and natural gas, ensuring that residents continue to pay 41 percent more for energy than the average U.S. consumer. Since these energy sources must be imported, their ability to lower kilowatt hour prices is minimal.

Moreover, this hearing is incomplete. Key agencies responsible for managing the grid's reconstruction, FEMA, the Department of Energy, and notably the Puerto Rico Public-Private Partnership Authority, P3A, one of the few entities with oversight of LUMA, are not present.

Despite these significant limitations, I hope today's hearing can still be productive. We need to understand how Congress can better support the restoration of Puerto Rico's grid moving forward. Above all, we must commit to achieving energy justice and reliability for the island. Puerto Ricans have suffered from long-standing government neglect, and it is time to break this cycle.

I yield back.

Ms. HAGEMAN. Thank you. The Chair now recognizes Chairman Westerman for an opening statement.

STATEMENT OF THE HON. BRUCE WESTERMAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ARKANSAS

Mr. WESTERMAN. Thank you, Chair Hageman, for holding this hearing today. Even though it has been scheduled and we were supposed to be here today, a lot of people headed home. But it is great to see so many people have stuck around for the hearing because it is so important. It is of utmost importance for Puerto Rico, as blackouts continue to affect the island's residents.

I want to take a moment to recognize my colleague, Representative Jenniffer González-Colón, for requesting the hearing, and for her tireless efforts representing the people of Puerto Rico in this Committee and all throughout the halls of Congress.

I also want to thank you, Chair Hageman, and my colleagues again for being here, even with the change in schedule.

Puerto Rico is still recovering from multiple disasters that have devastated the island. Hurricanes, tropical storms, and earthquakes have left long lasting impacts on Puerto Rico, particularly its electrical grid. The fragility of the electrical grid and continued blackouts have affected the livelihoods of Puerto Rico's residents and the island's economy. And today's hearing is particularly salient, as it is hurricane season. With the growing risk of powerful storms making landfall on the island, there are increasing concerns that a hurricane could collapse the island's electrical grid. In fact, last month, outages caused by Tropical Storm Ernesto resulted in approximately 750,000 customers losing power in Puerto Rico during the outage's peak. Fortunately, this storm did not become a severe hurricane when passing over the island. However, the incident, along with other significant blackouts, has made it clear that ensuring the resiliency of Puerto Rico's electrical grid is not an issue to be put off for tomorrow, but a challenge that needs to be addressed today that should have been addressed long ago.

Today, as we discuss the current state of Puerto Rico's electrical grid, I encourage our witnesses to promptly address the challenges and concerns raised not only in this hearing, but also by the residents of Puerto Rico. Residents' concerns regarding the underwhelming progress in modernizing the island's energy infrastructure should not be ignored. At the same time, I urge us all to

look at this issue with an understanding that it is complex and cannot really be traced back to a single problem.

We also must consider the practical realities on the island. It is abundantly clear to us that the Biden-Harris administration's prioritization of renewable energy over less costly, more reliable, and actually cleaner alternatives is not sustainable in Puerto Rico. Solar and wind have been proven to be less reliable, less resilient, and more costly than baseload sources such as natural gas.

I want to take a moment to really express a sincere disappointment in the Biden administration's decision not to participate in this important hearing, even after all three of the invited departments were given a month's notice. The lack of participation by the DOE, FEMA, and HUD cast serious doubt over the Biden-Harris administration's commitment to Puerto Rico and the millions of American citizens living on the island.

Considering that much of the $21 billion obligated for Federal assistance in Puerto Rico's energy reconstruction has not yet been disbursed, it is not surprising that the Administration would want to avoid appearing before Congress. But to be clear, their absence today will not spare them from the oversight efforts of this Committee. We will not allow the Administration to run away from providing the information Congress needs to address the dire issue, and we will be sending the Administration witnesses written questions for them to answer on the record following the hearing.

You know, I was in Puerto Rico in a helicopter a few years ago. And as we were flying over, I kept seeing these transmission lines that it looked like there had never been a right-of-way because the trees were grown up right up under the lines. And I found out that FEMA has authorized $1.2 billion to clear 16,000 miles of transmission lines, clear the right-of-ways that should have been cleared and kept clean all along. Which shows the utter disarray of the electrical grid when we cannot even keep the right-of-ways clean.

But 16,000 miles sounds like a lot. It is 100,000 acres, when you look at an average 50-foot right-of-way. Some are wider, some are narrower. But $12,000 an acre is what FEMA is proposing to be spent to clear the right-of-ways. It is shocking. And if I was them, I would not come here either, because I do not think there is any way they can defend that. I think it shows the absurdity of FEMA and the amount of money they are pouring into places and not getting the results out of it.

I had a meeting with some tribal forestry leaders. And I said, do you do right-of-way work? They said, yes, we do that. I said, what does it cost? They said, it is expensive because you have to masticate the wood. And I said, well, what does that cost. They said, it could get up to $1,000 to $1,200 an acre. I said, really? And they said, if it is really steep, it can be more than that. I said, well, what is the absolute most it should ever cost to do that? They said, around $2,000 an acre. So, that is high.

I said, well, what if FEMA were involved? And they just laughed and said, oh, multiply that by five or six.

Five or six times the cost to do something, just because we get one of these Federal agencies involved. Something has to change.

The people of Puerto Rico deserve to have reliable electrical power. And the bureaucracy and the waste of money has to stop. And I hope this hearing sheds light on that.

I yield back.

Ms. HAGEMAN. Thank you, Chairman Westerman.

As the invited witnesses from the Biden-Harris administration chose not to appear before us today, we will move on to the second panel. And I invite the witnesses for our second panel to be seated at the witness table.

While the Clerk is resetting the table, I will introduce each of the witnesses who will be testifying today.

Mr. Manuel Laboy Rivera, Executive Director for the Central Office for Recovery, Reconstruction, and Resiliency, from San Juan, Puerto Rico; Mr. Antonio Torres Miranda, the Associate Commissioner with the Puerto Rico Energy Bureau, from San Juan, Puerto Rico; Mr. Juan Saca, the Chief Executive Officer for LUMA Energy from San Juan, Puerto Rico; and Mr. Brannen McElmurray, the Chief Executive Officer for Genera PR LLC, from San Juan, Puerto Rico.

If you would all join us at the table, that would be wonderful.

Let me remind the witnesses that under Committee Rules, they must limit their oral statements to 5 minutes, but their entire statement will appear in the hearing record. To begin your testimony, please press the "talk" button on the microphone. And we use timing lights. When you begin, the light will turn green. When you have 1 minute left, the light will turn yellow. And at the end of 5 minutes, the light will turn red, and I will ask you to please complete your statement.

I will also allow all witnesses on the panel to testify before the Members begin their questioning.

The Chair now recognizes Mr. Laboy Rivera for 5 minutes.

STATEMENT OF MANUEL LABOY RIVERA, EXECUTIVE DIRECTOR, CENTRAL OFFICE FOR RECOVERY, RECONSTRUCTION, AND RESILIENCY, SAN JUAN, PUERTO RICO

Mr. LABOY RIVERA. Thank you. Chairwoman Harriet Hageman, Vice Chair Jenniffer González-Colón, and members of the Subcommittee, good morning. Thank you for the opportunity to testify on Puerto Rico's recovery and the critical efforts to rebuild our electrical grid.

I am Manuel Laboy, Executive Director of the Central Office for Recovery, Reconstruction, and Resiliency, and the authorized representative of the Governor of Puerto Rico.

As you are aware, the U.S. Government Accountability Office has determined that the recovery from Hurricanes Irma and Maria has been the largest and most complex in our nation's history. After these storms struck in 2017, it took almost a year and $1.9 billion of FEMA emergency funding to power and fully restore electric service in Puerto Rico. That was just the beginning of a unique and unprecedented long-term recovery.

In 2019, FEMA implemented for the first time an accelerated award strategy known as FAASt, resulting in a $9.5 billion obligation in September 2020 to build back better and more resilient our electrical infrastructure. However, this obligation effectively acted

as a master recovery budget, since FAASt did not authorize any construction activity or disbursement of funds. In order to do that, scopes of work must be submitted to FEMA to conduct an environmental and historic preservation review and approve additional funding to finance hazard mitigation measures. Once the scope of work is obligated, the project is then authorized for construction and allows COR3 to process requests for disbursements.

Furthermore, FEMA operates on a reimbursement model. To address liquidity issues, COR3, with FEMA's approval, launched the Working Capital Advance Program in June 2022. This program provides a 25 percent cash advance for approved permanent work, up to 75 percent of the Federal share, expediting the pace of recovery. This has been highlighted by FEMA as an example of innovation in the field.

Up to 2021, there were zero projects approved for the electrical grid. Zero. Since then, there have been 189 projects duly approved for construction and disbursements worth $5.8 billion. Thanks to the Working Capital Advance, about $1.3 billion has been disbursed. This represents 26 percent of the $5.8 billion that FEMA has authorized to do the reconstruction of the electrical grid.

In January 2023, FEMA implemented the island-wide benefit cost analysis allocating $6.8 billion of hazard mitigation funds, increasing the total estimated funding to $16.3 billion. In March 2023, FEMA notified COR3 that vegetation clearance around critical infrastructure is an eligible hazard mitigation activity.

In parallel, COR3 has been actively engaging with LUMA, Genera, FEMA, DOE, among other key stakeholders to accelerate the execution of those critical projects. Consequently, as indicated by the GAO and FEMA, we have made real progress.

Nevertheless, certain challenges persist, and further steps are needed to sustain the momentum of our recovery. We urge Congress to take a deeper view and consider statutory and regulatory changes to remove unnecessary red tape at the Federal level related to environmental and historic preservation requirements that will expedite the review and approval process. Also to rationalize and simplify the administrative framework to manage multiple simultaneous declared disasters in a more efficient manner. To also retroactively apply policies that will benefit the recovery process, and to allow FEMA to increased fixed cost estimates on obligated funding on their Section 428, due to severe inflation, construction material cost increases, and labor shortages.

In conclusion, while we have made meaningful progress, certainly much more needs to be done. COR3 is committed to ensuring compliance, transparency, and efficiency in managing Federal funds, and we look forward to continuing our collaboration with FEMA and Congress to rebuild our electrical system in order to provide reliable, affordable baseload resilient energy to the people of Puerto Rico.

Thank you for your time and attention, and I am happy to answer any questions you may have.

[The prepared statement of Mr. Laboy Rivera follows:]

PREPARED STATEMENT OF HON. MANUEL A. LABOY, AUTHORIZED REPRESENTATIVE OF THE GOVERNOR OF PUERTO RICO, CENTRAL OFFICE FOR RECOVERY, RECONSTRUCTION AND RESILIENCY

Chairman Westerman and Members of the Committee:

On behalf of the Governor and the Citizens of Puerto Rico, I thank you for once again giving me the opportunity to discuss Puerto Rico's electrical grid and the need for reliable and resilient energy. In addition to serving as the Executive Director of Puerto Rico's Central Office for Recovery, Reconstruction and Resiliency (COR3) I am also the Authorized Representative of the Governor of Puerto Rico and as such have worked directly in the recovery efforts due to the aftermath of various disasters, including hurricanes Irma and Maria. As you are aware, the US Government Accountability Office (GAO) has determined that "*the recovery from Hurricanes Irma and Maria has been the* ***largest*** *and* ***most complicated*** *in our nation's history*". I am pleased to appear today to share with you the significant progress that has been made on our energy recovery efforts over the last two years.

Background

It is not a secret that Puerto Rico's infrastructure had been in decline for decades due to a lack of maintenance and critical capital improvements, leaving the island vulnerable to natural disasters and other shocks and stressors. Our electrical grid was particularly susceptible. The Puerto Rico Electric Power Authority (PREPA)—the vertically integrated public utility that owned and operated the island's power system—had long relied on infrastructure that dates back to the 1960s. PREPA had also long depended on imported oil, resulting in vulnerability to supply disruptions and price volatility. The devastating impact of Hurricanes Irma and Maria 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.

It is undeniable that emergency work on the electrical grid began immediately following the hurricanes, which allowed the Island to recover 100% electric power service by mid-2018 after a $1.9 billion investment by FEMA. On September 10 and September 20, 2017, President Donald Trump issued two major disaster declarations for Puerto Rico (DR-4336 and DR-4339) that unlocked federal assistance for the response and recovery efforts, including funds from the Federal Emergency Management Agency's (FEMA) Public Assistance Program. Later that year, then Governor of Puerto Rico, Ricardo Rosselló created the Central Office of Recovery, Reconstruction and Resiliency (COR3) to lead the response and recovery efforts, manage the federal funds, and ensure their proper use.[1] Since then, COR3 has managed the Public Assistance and Hazard Mitigation Grants programs at the local level, and thus has been responsible for disbursing funds that FEMA has obligated to subrecipients the Public Assistance program.

On February 9, 2018, Congress passed the Bipartisan Budget Act (BBA), instituting a variety of changes to how FEMA can implement disaster assistance. One provision of the law gives FEMA the authority in Puerto Rico and the U.S. Virgin Islands (specific to impacts related to Hurricanes Irma and Maria) to provide assistance to restore disaster-damaged facilities or systems to industry standard and to restore functionality of the disaster-damaged facility or system without regard to pre-disaster condition. This provision is applicable to critical services, specifically, electrical grid, aqueduct and sewer, education and healthcare.

Furthermore, to address PREPA's longstanding inefficiencies and reform the island's outdated and dilapidated energy system, in June 2018, the island's legislature enacted the Puerto Rico Electric Power System Transformation Act.[2] This Act, later amended by the Puerto Rico Energy Public Policy Act of 2019,[3] established a framework for restructuring PREPA's operations by (1) unbundling generation, transmission, and distribution, and (2) introducing private operators. Following its enactment, the Puerto Rico Public-Private Partnerships Authority (P3A) and PREPA entered into public-private partnership agreements with two private entities

[1] P.R. Exec. Order No. 2017-65 (2017); P.R. Exec. Order No. 2017-69 (2017) (amending Exec. Order No. 2017-65).

[2] Puerto Rico Electric Power System Transformation Act, Act No. 120 of June 21, 2018.

[3] Puerto Rico Energy Public Policy Act, Act No. 17 of April 11, 2019.

to transfer PREPA's transmission and distribution responsibilities to LUMA Energy in 2020 and its generation responsibilities to Genera-PR in 2023. These private operators are now responsible for reconstructing and modernizing the electrical grid, aligning it with best practices and standards.

Moreover, due to the unprecedented devastation and the limitations of recovery programs at the time of the disasters, the permanent and resilient reconstruction phase was not able to proceed with earnest for three years. The magnitude of the damage caused by the hurricanes, coupled with safety challenges caused by widespread non-compliance with building codes in Puerto Rico (many homes and roads in Puerto Rico had been built without permits, often in flood-prone or landslide areas), the earthquakes and the COVID-19 pandemic, extended the response period from 2017 to 2020. As a matter of fact, the Washington Post published in January 2020 that, "*Puerto Ricans* ***still waiting on disaster funds as Hurricane Maria's aftermath, earthquakes continue to affect life on the island***." The Center for a New Economy, a local think tank, published on September 2021 that, "*The COVID-19 pandemic may* ***delay*** *Hurricane Maria's reconstruction efforts*."

During that time, PREPA, FEMA, and COR3 worked together to approve and fund emergency (Category A and B) work such as debris removal, replacement of utility poles and transmission centers and substations repairs. The agencies could not initiate permanent (Category C to G) work, including the reconstruction and modernization of the electrical grid, until 2021.

Then, as we entered the long-term recovery phase, further challenges arose. As has been noted, FEMA operates on a **reimbursement model**, meaning that Public Assistance subrecipients have to cover the costs of large infrastructure projects which required significant upfront investment. However, Puerto Rico's economic resources have historically been scarce, so subrecipients struggled to secure capital to finance the necessary work. Additionally, in 2019, FEMA established a manual drawdown process for Puerto Rico as a means of fiscal control. Under this process, COR3 had to submit detailed funding requests with supporting documentation for FEMA's approval before drawing down grant funds for recovery projects. The manual drawdown process further hindered the recovery phase.

Also, in 2019, in an effort to expedite the process to obligate permanent work funds for Puerto Rico's electrical grid, FEMA implemented—**for the first time**—its FEMA Accelerated Award Strategy (FAASt). Under FAASt, FEMA uses statistical sampling to calculate fixed cost estimates for a group of critical infrastructure projects instead of requiring inspections and cost estimates for each individual project. Thus, FAASt allowed FEMA to expedite fund obligations in September 2020 ($9.5 billion—federal share) that effectively act as a master recovery budget for each subrecipient. However, **FAASt does not authorize any related construction or funds disbursements**. All projects still must go through the traditional obligation steps of FEMA's National Delivery Model. This includes the submission of Scopes of Work with required engineering and design data to allow FEMA to conduct an Environmental and Historic Preservation (EHP) review and potentially approve additional funding to finance hazard mitigation measures under Section 406 of the Stafford Act. Once the Scope of Work is obligated by FEMA, the project is authorized for construction and allows COR3 to process requests for disbursements petitioned by the Applicant (PREPA). **By December 2020, no Scopes of Work had been submitted to or approved by FEMA for the electrical grid long-term reconstruction**.

Adding another layer of required administrative hurdles to commence work, on March 26, 2021, the Puerto Rico Energy Bureau issued a Resolution and Order requiring that all projects to be executed with federal funds shall be submitted for Energy Bureau's approval. The Energy Bureau, as Puerto Rico's electric system regulator for all energy-related matters, has been deeply involved in the reconstruction process. Before formally submitting a project for the consideration of FEMA and COR3, LUMA, Genera and PREPA must obtain regulatory approval from the Energy Bureau to ensure consistency with applicable laws and regulations (refer to Diagram 1).

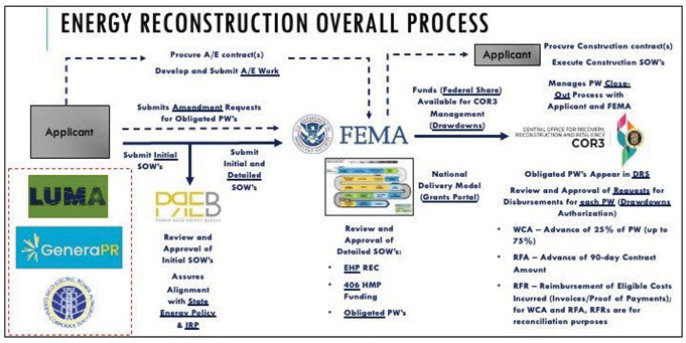

Diagram 1—Simplified Process for Scopes of Work Review, Approval and Execution

However, by April 2021—when Puerto Rico had complied with the manual drawdown process for two consecutive years—COR3 formally requested that the special oversight be lifted, allowing the island to be treated like other U.S. jurisdictions. On September 22, 2021, FEMA approved the request. As a result, COR3 was able to streamline the reimbursement process and accelerate the distribution of federal funds to subrecipients.

Then, to address the liquidity issue, COR3, with FEMA's approval, developed and launched the Working Capital Advance (WCA) pilot program in June 2022. The program provides cash advances to subrecipients for approved permanent work, up to 75% of the federal share of the project disbursed in installments of 25%. These cash advances ensure that projects can move forward before reimbursement funds are made available, addressing cash flow issues upfront. Through the WCA, we have been able to expedite the pace of recovery across the island. This has been highlighted by FEMA in a 2024 report, stating that, "Innovation in the Field: Working with the Government of Puerto Rico to identify and remove recovery barriers, FEMA is actively supporting the government's Working Capital Advance program, which began in 2022."

In September 2022, shortly after the permanent and resilient reconstruction of the electrical system finally kicked-started, hurricane Fiona Hurricane Fiona hit Puerto Rico as a Category 1 storm, almost exactly five years after Hurricane Maria, dropping record rainfall, unleashing landslides and mudslides, flooding neighborhoods and leaving most of the island without power or water. Hurricane Fiona exacerbated the vulnerability of Puerto Rico's electrical infrastructure.

Further, on January 2023, FEMA, with the support from COR3, implemented the Island-Wide Benefit Cost-Analysis (IWBCA), a methodology to evaluate the cost-effectiveness of Hazard Mitigation projects for the electrical infrastructure based on an integrated system (generation, transmission and distribution). FEMA estimated the projects' maximum aggregated benefit at $6.8 billion (federal share) by treating PREPA's infrastructure as a single, interconnected system across the island. The approach allowed multiple projects to be evaluated simultaneously, expediting the funding process and reducing double counting and project duplication. FEMA awarded the IWBCA an Administrator's Award for Innovation for promoting efficiency and innovation in public service. In March 2024, FEMA notified COR3 that vegetation clearance around critical infrastructure, such as the transmission and distribution (T&D) system, is an eligible hazard mitigation activity.

Clearly, we have faced and still face numerous challenges throughout this process but, at every step, we have developed innovative strategies to overcome them. Thanks to these efforts, all emergency work has now been completed and we have successfully transitioned to the long-term recovery phase, focusing on permanent work and hazard mitigation to reduce the grid's vulnerability and enhance its resilience. There has been significant progress in approving and commencing permanent work, but many challenges still lie ahead.

Significant Progress for Permanent Work

FEMA's Puerto Rico Region 2 Interim Report

We have made significant progress toward Puerto Rico's recovery. Indeed, in the April 2024 *Puerto Rico Region 2 Interim Progress Report*—which highlights recovery milestones and the ongoing efforts to rebuild stronger—FEMA noted that "efforts to help rebuild [Maria, Fiona, Earthquakes] are paving the way for **an unprece-**

dented recovery and, in coordination with the Government of Puerto Rico, the **pace of the recovery has gained momentum in the last several years** as new infrastructure, permanent repairs and reconstruction can be seen across the island." Moreover, the report also established that "**Puerto Rico should serve as an example for other states and territories in terms of innovation and leading an unpresented recovery**."

Allocation, Obligation, and Disbursement of Funds

To date, FEMA has allocated approximately $16.3 billion in funds for permanent work through its Public Assistance Program. The permanent work allocation includes approximately $9.5 billion in funds under Section 428 (FAASt September Master Recovery Budget)) and $6.8 billion in mitigation funds (FEMA January 2023 Letter to COR3) under Sections 406 and 404 of the Robert T. Stafford Disaster Relief Act.[4] Of the $16.3 billion allocation, FEMA has obligated $4.835 billion for 188 Project Worksheets (PW's), based on detailed Scopes of Work submitted by LUMA, Genera and PREPA (refer to Table 1). The obligations include $3.55 billion for LUMA ($2.95 billion under Section 428 and $596.6 million under Section 406), $1 billion for Genera (all under Section 428), and $271 million for PREPA (all under Section 428). The PW's with the largest obligations of funds are: Global Engineering/Architectural Services, Global Equipment & Materials (for long-lead items), and for Advanced Metering Infrastructure (AMI). Additionally, FEMA has obligated $620 million to cover eligible administrative costs for LUMA, Genera and PREPA.

Of the $4.9 billion in obligated funds, COR3 has disbursed approximately $1.3 billion: $490 million to LUMA, $255 million to Genera, and $528 million to PREPA. Disbursements made by COR3 can only occur when FEMA obligates a detailed Scopes of Work (sub-FAASt Project PW's), and when LUMA, Genera or PREPA submits to COR3 a request for reimbursement or request for advance (i.e. Working Capital Advance). As a result, COR3 has disbursed 26% of the $4.9 billion obligated by FEMA, directly corresponding to the disbursements under the Working Capital Advance (WCA) pilot program. The vast majority of PW's have been processed through WCA, following requests from LUMA and Genera.

	Allocated Funds		Obligated Funds		Disbursed Funds	
	Section 428	Section 406	Section 428	Section 406	Section 428	Section 406
LUMA			$2,951,733,292.00	$596,632,105.98	$489,991,384.64	$0
Genera			$1,015,039,888.71	$0	$254,567,069.97	$0
PREPA			$271,307,043.00	$0	$498,919,976.82	$28,968,209.27
Total	$9,459,885,412.39	$6,840,000,000.00	$4,238,080,223.71	$596,632,105.98	$1,243,478,431.43	$28,968,209.27
Combined total	$16,299,885,412.39		$4,834,712,329.69		$1,272,446,640.70	

Table 1—Summary of FEMA FAASt Obligation and Disbursements of funds

Collaborative Efforts to Modernize Puerto Rico's Electrical Grid

LUMA, Genera, and PREPA are working collaboratively to rebuild and modernize the island's electrical infrastructure. Every fiscal year, they develop a consolidated budget to ensure that each entity has the necessary funding to meet its regulatory, operational, and capital needs. Further, the consolidated budget aims to maximize federal funding—especially Public Assistance and Hazard Mitigation funding—while maintaining compliance with federal, state and local energy requirements. Additionally, LUMA, Genera and PREPA, with the support from COR3, developed a joint Five-Year Infrastructure Investment Plan that lays out their infrastructure investment strategy for the generation, transmission and distribution components of the electrical grid. Through the joint plan, the three entities can best align on critical infrastructure projects and leverage their expertise and resources to ensure that all work meets the most advanced standards of reliability, sustainability, and resilience. Equally important, at the request from FEMA, LUMA, Genera and PREPA, with the support of COR3, also developed a joint Integrated Resilience Plan. Both

[4] Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. §§ 5121-5207 (2018). Under Section 428, the Act provides for alternative procedures for the Public Assistance Program, allowing for more flexibility in funding disaster recovery projects by permitting the use of fixed estimates for project costs and simplifying the administrative process. Under Sections 404 and 406, the HGMP aims to reduce the risk of future disasters by funding projects that minimize hazard impacts, enhance resilience, and protect public infrastructure following a disaster and in the future.

the Five-Year Plan and the Integrated Resilience Plan were submitted to FEMA for the proper review process (refer to Diagram 2).

Diagram 2—Short, Medium and Long-Term SOW's (Five-Year and Integrated Resilience Plans)

Permanent Work and Hazard Mitigation Projects Pipeline

Up to 2021 there were zero PW's approved for energy projects. Since then, there have been 189 approved projects worth $5.8 billion, including administrative costs. These projects include legacy power plant repairs, substation rebuild, vegetation clearance and mitigation, implementation of Advanced Metering Infrastructure (AMI), and streetlight, utility pole, and conductor repairs and replacement (refer to Diagrams 3 and 4).

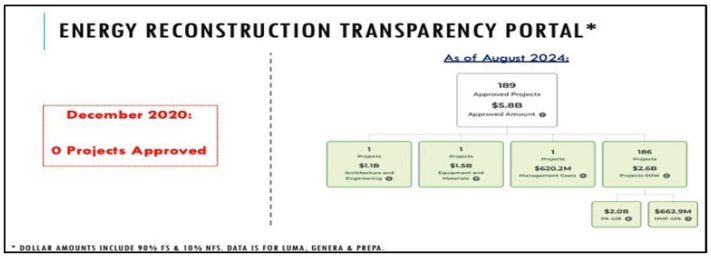

Diagram 3—Summary of FAASt Scopes of Work Obligated by FEMA

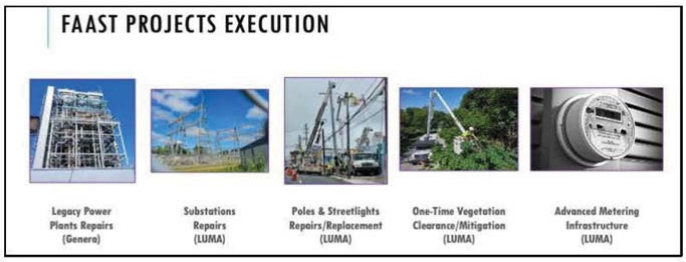

Diagram 4—Example of Scopes of Work currently in Construction Stage

LUMA ENERGY

Currently, LUMA is focusing on obtaining approval for approximately $10 billion in funding for its permanent projects. The vegetation clearance, distribution automation, substations repairs and AMI programs are particularly noteworthy given the impact they will have on grid reliability, customer experience and project execution complexity.

According to data provided by LUMA, unmaintained vegetation is the leading cause of service interruptions (approximately 50% of power outages). With vegeta-

tion clearance and mitigation work, LUMA aims to significantly improve reliability and overall customer experience over the next three years. The goal is to clear over 16,000 miles of transmission and distribution lines, manage debris, and apply targeted herbicides in critical areas, including more than 300 substations and telecommunication sites. The program consists of 31 projects organized by region and asset type.

Furthermore, these projects will address immediate vegetation risks (with rapid responses to high-risk sites that frequently disrupt service or pose safety hazards) and will reestablish rights of way (ROWs) to standard widths. However, the vegetation clearance program will be complicated by the need to navigate the FEMA EHP process. FEMA EHP reviews are mandated to ensure that projects comply with federal regulations aimed at protecting cultural and natural resources. This often involves assessing the potential impacts on historical sites, endangered species, and other environmental factors, which can significantly lengthen the project approval timeline. Delays in obtaining the necessary permits can impede progress, complicating the urgency of addressing vegetation-related outages. Additionally, the requirement for public consultation and the evaluation of alternative actions can further prolong the process, creating challenges in balancing immediate infrastructure needs with regulatory compliance.

The AMI program involves the replacement of approximately 1.5 million electric meters and the establishment of a communication network to support real-time monitoring and system management. The program aims to integrate AMI with existing utility systems for billing and outage management. Thus, AMI will enhance system reliability, resiliency, and cost-efficiency by providing detailed real-time data on outages, voltage, theft, and load, allowing operators to detect and address issues proactively. AMI will also support broader goals, such as fault location, load forecasting, and sustainability, while aligning with FEMA and COR3 in an $877 million project to deploy the system. This effort is one of the largest FEMA-funded initiatives in Puerto Rico.

GENERA PR

Genera's efforts will concentrate on improving legacy generation assets through plant repairs, critical component repairs, and baseload projects. Significant projects include the installation of Battery Energy Storage Systems (BESS) and Peaking Units in seven assets: Cambalache, Vega Baja, Palo Seco, San Juan, Yabucoa, Aguirre, and Costa Sur. The BESS system is crucial for improving grid reliability. BESS can store excess energy generated during periods of low demand and release it when needed, helping to balance supply and demand fluctuations. BESS can also provide backup power during outages, reduce reliance on fossil fuel generators, and stabilize grid frequency and voltage. By integrating BESS with new Peaking Units, Genera will be able to enhance efficiency, reliability and stability. This can support a smoother transition to renewable energy sources. We are extremely pleased that FEMA recently approved this effort and obligated $235 million for its implementation and $510 million for equipment purchase.

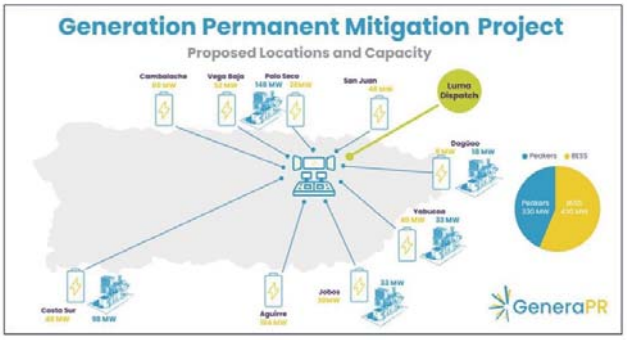

Diagram 5—Genera PR Plan for Grid Stabilization Centers

PREPA

These projects are categorized into dredgings, dam and hydroelectric plant repairs, irrigation channels, and others, including minor repairs to the Nuclear Power Plant and system upgrades for the dam communications. Recently, PREPA

submitted five major FEMA FAASt projects, including the Hydroelectric System, multiple Dams and Irrigation channels repair that represents $475 million. Of these three have advanced to FEMA's Atlantic Consolidated Resource Center for cost and scope validation. Additionally, PREPA is preparing to submit or revise detailed SOWs for other irrigation and hydroelectric projects that totals $30 million.

Leadership teams from LUMA, Genera, and PREPA meet weekly with COR3 and FEMA to closely monitor project developments, resolve shared concerns, and manage risks that may impact the integration of these entities. The goal of these meetings is to ensure that federal and local objectives are aligned for the smooth execution of electrical grid projects. The collaboration also supports LUMA's and Genera's operation under their respective public-private partnership agreements.

Challenges to Long-Term Recovery

In its February 2024 report about Puerto Rico Disasters Recovery, GAO highlighted that "Progress made, but the Recovery continues to face challenges." Indeed, COR3 and the Government of Puerto Rico has communicated to FEMA, as well as to Members of Congress various existing and emerging challenges that must be addressed to avoid losing momentum. First, we are experiencing a convergence of multiple, interconnected shocks that amplify the severity of each other. This is known by emergency management scholars as a poly-crisis.[5] Puerto Rico's recovery efforts are not only responsive to Hurricanes Irma and Maria, but also to subsequent disasters and broader issues that create a complex and unpredictable environment (e.g. PREPA's bankruptcy). The recovery challenges have been compounded by a series of events that occurred following the hurricanes, including a swarm of earthquakes in 2020, a world-wide pandemic, Hurricane Fiona in 2022, and more recently, severe floods and Tropical Storm Ernesto. These compound events have significantly impacted the long-term recovery process and continue to impact the daily lives of Puerto Rican citizens.[6]

Second, cost inflation has posed as another significant challenge for the present and future. As you are well aware, under Section 428 of the Stafford Act, subrecipient awards are fixed, so increased expenses that result in a budget overrun can jeopardize successful project completion. This is very worrisome since all of the FEMA funding for the long-term reconstruction of the electrical system is tied to Section 428. As the GAO noted in its February 2024 report, "**cost increases are of concern because a subrecipient's award acts as a fixed budget to complete projects across its various facilities. Therefore, increased costs for one project could excessively reduce the established budget to complete later projects**."[7] COR3 has prepared and submitted to FEMA various reports documenting the impact of unanticipated inflation, for example, for the electrical system reconstruction, which its fixed-cost estimates were conducted between 2019 and 2020. COR3 has proposed FEMA to agree on a one-time adjustment to successfully address the expected long-term gap of funding. COR3 believes that FEMA has the authority to reach an agreement to bring back the risk to acceptable levels for both the federal government and the Government of Puerto Rico.

Third, due to the instability caused by Hurricane Fiona, FEMA established a Power Stabilization Task Force, with a main focus to provide temporary generation. Missions led by FEMA and USACE resulted in the deployment of 350 MW of temporary power between June and September 2023, by installing 17 generating units at the San Juan and Palo Seco sites. To ensure this critical temporary power generation capacity remain in Puerto Rico beyond the FEMA missions, COR3 and the Government of Puerto Rico crafted a deal with FEMA in March 2024 to obligate a new PW for the acquisition of 14 temporary units. The 14 units were purchased by PREPA with FEMA funds, allowing Puerto Rico to produce temporary power until December 2025. COR3 is working with FEMA to request additional funding to cover federal environmental compliance requirements, as well as to extend the December 2025 deadline to ensure this vital temporary generation is available to fully support the long-term reconstruction of the electrical infrastructure, as well as the effective integration of renewable energy technologies.

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[5] *Navigating Poly-crisis: The New Reality for Crisis Management in the United States* from Belfer Center for Science and International Affairs, Harvard Kennedy School by Mark Swilling

[6] *See* U.S. Gov't Accountability Office, *Hurricane Recovery Can Take Years: Puerto Rico, 5 Years On, Shows Its Unique Challenges*, GAO WatchBlog (Sept. 15, 2022), https://www.gao.gov/blog/hurricane-recovery-can-take-years-puerto-rico-5-years-show-its-unique-challenges.

[7] U.S. Gov't Accountability Office, *Puerto Rico Disasters: Progress Made, but the Recovery Continues to Face Challenges*, GAO-24-105557 at 2 (Feb. 2024), https://www.gao.gov/assets/gao-24-105557.pdf.

Fourth, as indicated previously, all FEMA SOW must comply with EHP federal requirements prior to obligating funds and beginning construction work. Even though the collaboration with FEMA has been outstanding, and they have committed to expedite the review process, the reality is that complex projects (such sensitive-scope vegetation or cross-island transmission centers) take months (or years), since the process mandate that federal partners such as Fish & Wildlife are consulted, and some of the projects most likely will require Environmental Assessments (EA) or more stringent Environmental Impact Statements (EIS). Hence, COR3 recommends to Congress to take a deeper view of statutory and regulatory requirements related to EHP, in order to expedite the review process.

Fifth, COR3 has argued to FEMA the necessity to apply retroactively certain policy decisions that will positively impact the Hurricane Maria long-term recovery and resilience. One example is the small projects threshold. For disasters declared after 2022, this threshold is $1 million, compared to Hurricane Maria which is $123,100 thousand. Another example is FEMA's announcement in January 2024 that the agency will expand funding to tackle the climate crisis, improve resilience and cut energy costs through net-zero projects. For the first time, FEMA will fund net-zero energy projects, including solar, heat pumps, and efficient appliances, through its largest grant program—Public Assistance, which covers the rebuilding of schools, hospitals, fire stations, and other community infrastructure investments post-disasters. FEMA is also funding net-zero energy projects for its Hazard Mitigation Grant Program (HMGP) and now offers incentives through its Building Resilient Infrastructure and Communities (BRIC) annual grant program to encourage more communities to use net-zero projects that increase community resilience. Nevertheless, this new action is applicable for any federal disaster declared after August 16, 2022, hence, funds under Hurricane Maria cannot benefit from it. Additionally, COR3 requests congress to assess potential statutory and regulatory changes that will provide FEMA with the authority to retroactively implement such beneficial measures such as small projects thresholds and climate resilience actions. Furthermore, such statutory and regulatory revisions must include new authority for FEMA to include renewable energy technologies such as offshore wind, ocean thermal energy conversion and hydro power, to be funded under Public Assistance and/or Hazard Mitigation programs.

Finally, Public Assistance (and Hazard Mitigation) processes can be administratively burdensome, particularly when managing processes for multiple disasters. As mentioned above, recovery in Puerto Rico must overcome the overlapping and complex layers of bureaucracy that delay both the obligation and disbursement of critical funds, hindering timely recovery and resilience-building efforts.

Closing Remarks

We hope this statement has provided you with a clearer understanding of our significant progress in the last two years and our current challenges. We are committed to ensuring compliance and transparency in managing the federal funds allocated to Puerto Rico and welcome any assistance in addressing the existing and emerging challenges we identified.

On behalf of the entire COR3 team, we extend our gratitude to Congress and the U.S. Government for their ongoing support in improving the quality of life for all Puerto Ricans. We appreciate Congress's attention to these critical issues and look forward to continuing our collaboration to assess and address the lessons learned from these unprecedented challenges.

QUESTIONS SUBMITTED FOR THE RECORD TO MANUEL LABOY RIVERA, EXECUTIVE DIRECTOR, CENTRAL OFFICE FOR RECOVERY, RECONSTRUCTION, AND RESILIENCY, SAN JUAN, PUERTO RICO

Mr. Laboy Rivera did not submit responses to the Committee by the appropriate deadline for inclusion in the printed record.

Questions Submitted by Representative Westerman

Question 1. From your perspective, what are the key reasons for the continued blackouts in Puerto Rico and what is your recommendation for addressing these challenges and for ensuring that Puerto Rico has access to reliable and resilient energy?

Question 2. There have been growing concerns about LUMA and Genera's capacity to carry out the responsibilities they took on when receiving their respective contracts. However, it must be made clear that the challenges to rebuilding Puerto Rico's electrical grid will not be resolved by simply finding alternative utility firms to carry out these responsibilities. This would inevitably result in further delays in ensuring Puerto Rico has access to reliable and resilient energy. A productive way forward is to find ways to address the challenges and concerns together.

2a) Does COR3 and the Government of Puerto Rico agree that the best way forward is not to start from scratch but to get all stakeholders to address this issue and work on substantively addressing the challenges facing Puerto Rico's electrical grid?

Question 3. How much of the obligated FEMA funds have been disbursed? If not all funds have been disbursed, why not? What barriers exist that slow down the process from obligation to disbursement? How has the fact that FEMA funds have not been fully disbursed affected the rebuilding process for Puerto Rico's electrical grid?

Questions Submitted by Representative Grijalva

Question 1. What is the status of the FEMA "Integrated Resiliency Plan" (IRP) to budget the $20 billion in recovery and repair funds provided by Congress? Does the IRP include enough funding to enhance the resilience and reliability of the electric grid? What is the allocation included in the IRP to future-proof the island's distribution grid to enable the high integration of renewables as required by Puerto Rico Law 17 of 2019?

Questions Submitted by Representative González-Colón

Question 1. Background: The P.R. Electric Power Authority remains as the titled owner of the fixed assets so it is the recipient of Public Assistance funds from FEMA.

However, since FEMA pays by reimbursement, PREPA and the COR3 find themselves having to make advances to LUMA and Genera from their limited reserves.

1a) Are LUMA's submissions consistently compliant with federal requirements so that COR3 and FEMA can accelerate reimbursements, minimize additional Requests For Information, and obtain the 10% local share funding?

Question 2. LUMA has expended nearly $1.3 billion in FEMA-eligible capital project expenses but in the hearing states they only have obtained $173 million in reimbursements. A large part of Luma's expenditures are covered by transfers from PREPA up front, to then await recovery from the reimbursements

2a) Is this a drain on PREPA's standing accounts?

2b) How does this affect PREPA's ability to continue with its reassigned functions and deal with its fiscal restructuring and its own emergency recovery and mitigation work?

Ms. HAGEMAN. Thank you, Mr. Rivera. The Chair now recognizes Mr. Torres Miranda for 5 minutes.

STATEMENT OF ANTONIO TORRES MIRANDA, ASSOCIATE COMMISSIONER, PUERTO RICO ENERGY BUREAU, SAN JUAN, PUERTO RICO

Mr. TORRES MIRANDA. Good morning, Chair Hageman, Ranking Member Velázquez, and distinguished members of the Committee. My name is Antonio Torres Miranda, and I am an associate commissioner of the Puerto Rico Energy Bureau.

On behalf of the Energy Bureau, I appreciate the opportunity to present our review regarding the challenges facing Puerto Rico's electrical system, and the steps the Energy Bureau has taken to address these challenges.

The Energy Bureau is an independent and specialized body that regulates, monitors, and enforces the Puerto Rico energy public policy. This is a responsibility that is not filled by any other entity in Puerto Rico.

Recent events highlight our ongoing challenges, such as the outages that occurred in June of this year. These events highlight the fragility of our electrical infrastructure and the urgent need for the comprehensive improvements.

In early June of this year, a major outage occurred at the Santa Isabel transmission substation, affecting customers in the municipalities of Santa Isabel, Coamo and Aibonito. On June 12, Puerto Rico experienced another large-scale outage affecting over 300,000 customers. The Energy Bureau immediately launched formal investigations into each of these events.

We engaged the Electric Power Research Institute to serve as the independent technical lead in these investigations, ensuring our analysis is based on current industry codes and standards and best practices. We are committed to thoroughly addressing the root causes of these outages and preventing them from reoccurring.

The Energy Bureau is also addressing the lack of available generation, which is another significant cause of the rolling blackouts Puerto Rico is experiencing. The Energy Bureau initiated a docket through which it ordered LUMA, PREPA, and Genera to develop priority stabilization plans. Such plans are to be incorporated improvements to the electrical system within a period of the next 2 years. The review process for these plans includes technical conferences and public hearings. The objectives are to mitigate rolling blackouts and for utility consumers to receive adequate electrical services.

Despite ongoing efforts to reform Puerto Rico's electrical system, including the transition to private operators such as LUMA and Genera, we face several persistent issues. Vegetation management remains a critical concern. More than half of our outages are vegetation related. We are requiring frequent updates from LUMA regarding the federally funded $1.2 billion island-wide vegetation management reset initiative that is currently under way.

Repairing baseload generators and increasing resource adequacy of the bulk power system to meet industry reliability standards are short-term solutions to ensure customer service availability.

Federal funding is essential to advance any other temporary generation required to ensure customer service availability when the electrical system is brought to an acceptable level of reliability.

PREPA's ongoing bankruptcy, in place since 2017, complicates long-term planning and investments. Its resolution is crucial for restoring access to capital markets and focusing on operational improvements.

Puerto Rico's goal is an electrical system that is reliable, resilient, sustainable, and affordable for all its citizens. This includes integrated resources of renewable and nonrenewable energy sources to meet the immediate need for improving resource adequacy and diminishing rolling blackouts. It also includes the targeted repair of generating plants in conjunction with a critical replacement program that seeks to reduce the likelihood that when a failure is repaired, this failure will reoccur.

The Energy Bureau recognizes that achieving this vision requires more than technical solutions. It demands a holistic approach that considers Puerto Rico's social and economic realities. This will ensure a just and equitable transition that creates opportunities for local workforce development and economic growth.

In conclusion, the Energy Bureau will ensure completion of an ongoing transformation of the Puerto Rico electric system with continued support from Congress and our Federal partners.

Thank you for your concern and attention to this critical manner affecting more than 3 million American citizens. I stand ready to answer any questions you might have. Thank you.

[The prepared statement of Mr. Torres Miranda follows:]

PREPARED STATEMENT OF ANTONIO TORRES MIRANDA, E.I.T., ESQ., ASSOCIATE COMMISSIONER, PUERTO RICO ENERGY BUREAU

I. INTRODUCTION

Chair Hageman, Ranking Member Grijalva, Congresswoman González-Colón, and distinguished Members of the Committee, thank you for the opportunity to appear before you today to discuss the critical issues surrounding Puerto Rico's electric system.

My name is Antonio Torres Miranda, and I serve as the Associate Commissioner of the Energy Bureau of the Puerto Rico Public Service Regulatory Board ("Energy Bureau").[1] The Energy Bureau is an independent, regulatory body consisting of five (5) commissioners that regulate the electric utility serving the island and functions similarly to the Public Utilities Commissions ("PUC") found across the mainland. The Commissioners have equal voting powers. The Energy Bureau has a mandate to implement and enforce the energy public policy enacted in Puerto Rico, as well as to adopt the regulations necessary for such implementation.

Having an effective regulator is crucial to the development of a stable and robust electric delivery system and the transformation of the Puerto Rico electric system. The Energy Bureau, by law is an independent regulator that is subject to judicial review. This stability fosters an environment where long-term plans and strategies can succeed. In the intervening period since our last appearance before this esteemed Committee,[2] the landscape of Puerto Rico's energy sector has undergone significant changes. The Energy Bureau has diligently exercised its regulatory authority to scrutinize and evaluate the comprehensive plans put forth by both LUMA,[3] the private Transmission and Distribution System operator, and Genera, the newly instated Legacy Generation Assets operator, to ensure that these plans are conducive to improving the delivery of electric service and increasing the resilience of the electric infrastructure against future weather events by making smart use of the federal reconstruction dollars available to the island, and ensuring that the shift toward 100% renewable generation is aligned with the targets imposed by our energy public policy.

The Energy Bureau's expanded purview now encompasses the oversight of both the T&D system, as well as legacy generation asset planning and operations as well as the future generation market. This comprehensive regulatory approach allows for a holistic evaluation of the entire electricity value chain, ensuring that improvements and investments are coordinated and mutually reinforcing across all segments of the power system. Both the T&D and the LGAs in Puerto Rico are now operated and maintained by LUMA and Genera, respectively, with oversight from the Puerto Rico Energy Bureau.[4]

The electric system in Puerto Rico, despite ongoing efforts and investments, continues to face formidable challenges. The recent outage events of June 2024, which

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[1] Formerly known as the Puerto Rico Energy Commission.

[2] Committee on Natural Resources/Office of Insular Affairs, October 6, 2021, Oversight hearing on "*Puerto Rico Electric Power Authority (PREPA) Post-Implementation of the LUMA Transmission and Distribution Contract*.

[3] LUMA Energy, LLC and LUMA Energy ServCo, LLC (jointly "LUMA").

[4] LUMA Energy, LLC and LUMA Energy ServCo, LLC are certified electric service companies that operate under the jurisdiction of the PREB, Certification Number: NEPR-CT-2020-0008 and Certification Number: NEPR-CT-2020-0007, respectively. Genera PR, LLC is a certified electric service company that operates under the jurisdiction of the PREB, Certification Number: NEPR-CT-2023-0001.

affected over 300,000 customers, serve as a stark reminder of the fragility of our infrastructure and the urgent need for comprehensive improvements. These incidents highlight the complex interplay of aging assets, deferred maintenance, and the increasing impacts of climate change on our island's power grid.

However, it is crucial to contextualize these challenges within the broader narrative of Puerto Rico's energy transformation. Puerto Rico stands at a pivotal juncture, where the transition to private operators for both transmission and distribution, as well as legacy generation assets, offers new opportunities for innovation and efficiency. Concurrently, we are witnessing an unprecedented infusion of federal funding aimed at rebuilding and modernizing our electric system within the parameters of current industry safety and reliability codes and standards.

The path forward is not without its obstacles. Federal fund utilization, the ongoing bankruptcy proceedings of the Puerto Rico Electric Power Authority, and the intricate process of transitioning from a monopoly to a generation market, all contribute to the multifaceted nature of our challenges. Yet, these very challenges also present opportunities for transformative change.

As we delve into the specifics of recent events and our strategic response, The Energy Bureau ask the Committee to consider the broader context of Puerto Rico's energy landscape—a landscape marked by both significant hurdles and promising horizons. Today's discussion is not merely about addressing immediate crises, but about charting a course toward a resilient, sustainable, and equitable energy future for all our citizens as required by local law.

II. THE ENERGY BUREAU—OVERVIEW

The Energy Bureau was created in 2014 by the *Puerto Rico Energy Transformation and RELIEF Act*[5] serving as a key component for the full and transparent implementation of the Act's energy reform goals. Specifically, the Energy Bureau has the responsibility to regulate, monitor and enforce the energy public policy of the Government of Puerto Rico. The Energy Bureau has a mandate to ensure electric service is safe, reliable, and affordable.

A. Expertise

1. Commissioners

By statute,[6] The Energy Bureau Commissioners have diverse professional backgrounds. Currently, three commissioners hold dual degrees in engineering and law, one commissioner is a seasoned energy, land use, and environmental attorney who serves in the National Association of Regulatory Utility Commissioners ("NARUC") Board of Directors, and one commissioner is a licensed engineer specialized in the design of electrical power systems.

2. The Energy Bureau is supported by Nationally Recognized Technical Resources

The Energy relies on recognized experts in the utility regulatory field to assist its informed and grounded regulatory development. These resources include former commissioners and staff from multiple U.S. Public Utility Commissions ("PUCs"), some with first-hand experience dealing with the current arrangement found in Puerto Rico: a private operator running the T&D system for the public electric utility. The Energy Bureau is also advised by experts in the areas of energy regulatory affairs, economics, engineering, energy efficiency and resource/system/operations planning, among others. These experts also provide consulting services throughout the USA and other international jurisdictions.

III. RECENT OUTAGE EVENTS OF JUNE 2024

In regard to the deeply concerning outage events that occurred in mid-June of this year. On June 12, 2024, Puerto Rico experienced two significant power outages that affected hundreds of thousands of our citizens.

The first incident occurred at approximately 3 p.m., which impacted Units of the San Juan Power Plant, as well as the temporary emergency units at that site. This event left more than 100,000 customers without power.

At about 9 p.m. on the same day, a second event plunged approximately 350,000 customers into darkness, primarily affecting the regions of Bayamón, San Juan, and Carolina.

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[5] Act 57-2014, as amended.

[6] Section 6.6 of Act 57-2014, as amended.

Also, on June 2, 2024, a major outage occurred at the Santa Isabel transmission substation. As a result of the outage, customers in the municipalities of Santa Isabel, Coamo and Aibonito suffered service interruptions, some of which persisted for more than a week.

These outages represented a significant disruption to daily life, compromised public safety, and are clear examples of the persistent fragility of our electric system. Hospitals were forced to rely on backup generators, businesses had to close, and families were left in the dark during periods of peak demand.

A. The Energy Bureau's immediate response and investigations

Upon learning of these outages, the Energy Bureau, on June 14, 2024, issued Resolutions and Orders initiating formal investigations into the causes of these incidents and the investigative and corrective actions taken by LUMA in response.[7]

The Energy Bureau demanded immediate Incident Reports from both LUMA and Genera, requiring detailed explanations of the events, their causes, and the steps taken to prevent such occurrences in the future. The Energy Bureau's investigations are ongoing, and committed to a thorough and transparent process to uncover the root causes of these failures.

Furthermore, the Energy Bureau have engaged the services of the Electric Power Research Institute (EPRI) to serve as the independent technical lead for the Energy Bureau in these investigations. EPRI's involvement ensures that the analysis will be based on the most current industry knowledge and best practices. The Energy Bureau will, in the near future, review and act upon the findings and recommendations made by EPRI.

IV. PERSISTENT ROLLING BLACKOUTS

Besides large scale outages such as the events that occurred this past June, Puerto Rico experiences an unacceptably large number of frequently occurring rolling blackouts.

In response, the Energy Bureau initiated a docket, through which, it ordered LUMA and Genera to develop priority stabilization plans which were to be aggressive preliminary plans of improvement to the electric system with a maximum implementation period of two years.

The Energy Bureau established a robust review process for the plans, including a technical conference and a public hearing. Through this proceeding, the Energy Bureau will mitigate the rolling blackouts for the people of Puerto Rico to receive the level of electric service that adheres to industry reliability standards.

Also, the Energy Bureau worked closely with the utilities to secure from FEMA and fund the 14 TM2500 temporary generators which total 350MW, which could be used to supplement generation, when necessary, but also enable Genera to perform necessary maintenance on the legacy generators which provide most of the electricity for Puerto Rico. Without the availability of these temporary generators, the system operator would have had to resort to more frequent load sheds in times of high electric demand, resulting in increased rolling blackouts.

A. PREB's directives

More specifically, on June 13, 2024, the Energy Bureau ordered PREPA, LUMA and Genera, to each develop within 20 days, an "aggressive preliminary plan of improvements to the electric system" with a maximum implementation period of two years. Each of the parties filed their plans and the Energy Bureau established a schedule for their comprehensive review. As of this date, the virtual technical workshop has concluded. The general public will have the opportunity to present its comments and suggestions regarding the Preliminary Plans during the Virtual Public Hearing scheduled for October 2, 2024 and may also submit written comments and suggestions.

Along with implementing these plans the TM2500 temporary generators that were obtained through FEMA are fundamental in alleviating the need for load shed in times of increased electric demand or unexpected outages and have enabled Genera to facilitate planned outage scheduling for maintenance at the legacy generation plants. In the recent budget review, the Energy Bureau approved funding to operate the 14 temporary generators requested by Genera. These temporary generators are essential to facilitate the repairs of the legacy generation. The Energy Bureau is grateful for the financial assistance that has already been afforded to

[7] See, Resolutions and Orders, In re: *Initiation of Investigation; Initial Reporting and Incident Report*, Case No. NEPR-IN-2024-0003, June 14, 2024 and In re: *Initiation of Investigation; Initial Reporting and Incident Report*, Case No. NEPR-IN-2024–0002, June 14, 2024.

Puerto Rico, without which, due to the extent of the damage inflicted by past hurricanes and earthquakes, Puerto Rico would not be on the path to recovery.

V. VEGETATION MANAGEMENT INITIATIVES

The Energy Bureau emphasizes that vegetation management is a critical factor that is a persistent threat to our system's reliability.

It is well known that overgrown vegetation continues to be a leading cause of outages across Puerto Rico. Despite repeated directives from the Energy Bureau and significant federal funding allocated for this purpose, the pace of vegetation management has to be accelerated.

In fact, data shows that vegetation-related issues contribute to more than half of the outages experienced in Puerto Rico.[8] This is not a new problem, but rather a longstanding issue that has been exacerbated by years of deferred maintenance and the challenges of Puerto Rico's tropical climate.

The events of June 2024 have only heightened the urgent need for a comprehensive, island-wide vegetation management program. It is clear that without addressing this fundamental issue, Puerto Rico cannot hope to achieve the reliable and resilient electric system that it deserves.

The Energy Bureau is fully committed to continue its regulatory power to increase the pace of vegetation management. The Energy Bureau will continue to push for accelerated implementation of these critical efforts.

The recent outages serve as a stark reminder of the work that still lies ahead. But they also strengthen the Energy Bureau's resolve to transform Puerto Rico's electric system into one that is reliable, resilient, and worthy of the trust of our citizens.

The Energy Bureau has long identified vegetation-related outages as a leading cause of power interruptions in Puerto Rico. The Energy Bureau have directed LUMA to prioritize comprehensive vegetation management as a cornerstone of efforts to improve system reliability and resilience.

This program, unprecedented in its scale and impact, aims to clear and maintain over 16,000 miles of transmission and distribution lines across our island.

Based on information submitted by LUMA to the Energy Bureau, as of June 2024:

- Cleared vegetation from over 4,800 miles of powerlines and electric infrastructure
- All 230kV transmission lines have been cleared of hazardous vegetation
- All 300 of Puerto Rico's electric substations are now free from vegetation-related risks

The Energy Bureau has established oversight mechanisms for this program. The Energy Bureau requires quarterly progress reports, review on-site inspection data, and have established performance metrics to ensure accountability. Where necessary, the Energy Bureau have issued directives to accelerate progress. For example, to address major cause of outages on transmission lines that carry most of the baseload generation, the Energy Bureau directed the acceleration of the vegetation clearing for all 230kV transmission lines.

The Energy Bureau emphasizes that the pace of implementation remains a concern. The magnitude of the challenge is substantial, and it will take time to fully address vegetation issues across the entire system.

The Energy Bureau's regulatory goal is to establish a proactive, environmentally sensitive vegetation management system that will serve Puerto Rico for generations to come.

The Energy Bureau is committed to the oversight of effective vegetation management as a critical step toward a more reliable, resilient, and sustainable electric grid for Puerto Rico.

VI. PROGRESS AND CHALLENGES IN ELECTRIC SYSTEM IMPROVEMENT

LUMA has reported clearing vegetation from over 4,500 miles of power lines and 100% of Puerto Rico's approximately 300 electric substation sites. LUMA have also

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[8] LUMA Energy, LLC, "Motion Submitting LUMA's Updated Vegetation Management Plan," In Re: Review of the Puerto Rico Electric Power Authority's Comprehensive Vegetation Management Plan, Case No. NEPR-MI-2019-0005, June 14, 2024, Exhibit 1: Vegetation Management Plan, p. 31, Section 4.3.1 Reliable Electric Service, https://energia.pr.gov/wp-content/uploads/sites/7/2024/06/20240614-MI20190005-Motion-Submitting-LUMAs-Updated-Vegetation-Management-Plan.pdf (accessed June 17, 2024).

installed over 8,400 automated and protection devices to help detect and reduce service interruptions. Additionally, more than 11,500 poles have been repaired or replaced with infrastructure designed to withstand wind gusts of up to 160 mile-per-hour.

Despite these improvements, the current state of our electric system is far from the remediated condition Puerto Rico aspire to achieve. The Energy Bureau has consistently pushed for accelerated improvements including addressing the following:

- The sheer scale of the necessary improvements after years of neglect and the impact of natural disasters.
- Challenges in efficiently utilizing available federal funding.
- The ongoing bankruptcy proceedings of the Puerto Rico Electric Power Authority (PREPA), which complicate long-term planning and investments.

The Energy Bureau's role in this context has been to continually push for accelerated improvements while maintaining rigorous oversight. The Energy Bureau have issued numerous orders and resolutions to address critical issues, such as vegetation management, reliability improvements, and federal funding utilization.

For instance, in Resolution and Orders of June 14, 2024, the Energy Bureau directed LUMA, Genera and PREPA to develop a priority plan for system improvements in response to the June outage events.

The Energy Bureau is committed to its vision of a reliable, resilient, and sustainable electric system for Puerto Rico. The Energy Bureau continues to work diligently to balance the need for immediate reliability improvements with the long-term goals of system transformation and renewable energy integration.

The Energy Bureau acknowledge the progress made by all the parties and recognizes the substantial work that lies ahead. The Energy Bureau will continue to leverage its regulatory authority to drive the necessary improvements and ensure that the people of Puerto Rico receive the reliable and affordable electric service they deserve.

VII. FEDERAL FUNDING AND RESOURCE UTILIZATION

The Energy Bureau has taken an active role that the federal funds are designated for projects that comply with the approved Integrated Resource Plan. The Energy Bureau's oversight includes:

- Review and approval processes for proposed projects: The Energy Bureau have established a comprehensive framework to evaluate projects based on their alignment with Puerto Rico's energy policies (specially the IRP), cost-effectiveness, and potential to improve system reliability and resilience.
- Regular monitoring and reporting requirements: The Energy Bureau requires detailed, periodic reports on the progress of federally funded projects. This reporting has been shared with local Legislation.
- Emphasis on transparency: The Energy Bureau decisions and orders related to federal funding are made publicly available, fostering accountability and public trust.

During a June 21, 2024 Technical Conference, part of the evaluation proceeding of the electric utility budget for fiscal year 2025, LUMA reported that $18.1 million had been obligated by FEMA for one vegetation management project in the San Juan region, out of the 31 projects submitted for the island-wide vegetation clearance reset estimated at $1.2 billion.

The Energy Bureau understands that the efficient and effective use of these federal resources is absolutely critical to achieving the transformation of Puerto Rico's electric system. The Energy Bureau is committed that these funds are deployed rapidly, responsibly, and in the best interest of the people of Puerto Rico.

The Energy Bureau emphasizes that while the challenges are significant, the opportunity in benefit to Puerto Rico is immense. With continued support from Congress and federal agencies, Puerto Rico will build the modern, resilient, and sustainable electric system that Puerto Rico needs and deserves.

VIII. PREPA'S BANKRUPTCY AND ITS IMPACT

The PREPA has been operating under Title III of PROMESA since July 2017, making it one of the largest public power utility bankruptcies in U.S. history. This prolonged bankruptcy process has had significant implications for Puerto Rico's electric system and its ability to modernize and improve reliability.

As of today, PREPA remains in bankruptcy, with ongoing negotiations between the Financial Oversight and Management Board, bondholders, and other stakeholders.

The resolution of PREPA's bankruptcy is critical to the future of Puerto Rico's electric system. A successful exit from bankruptcy would provide PREPA with a more stable financial footing, potentially improving its ability to invest in much-needed infrastructure improvements and maintenance. It could also restore PREPA's access to traditional capital markets, enabling it to finance long-term projects more efficiently.

The conclusion of the bankruptcy process would allow PREPA, LUMA, and Genera to focus more fully on operational improvements rather than complex financial restructuring. However, the terms of any bankruptcy resolution will likely have implications for future electricity rates, which in turn affects the affordability of power for Puerto Rico's residents and businesses.

A clearer financial picture post-bankruptcy would provide greater certainty about PREPA's long-term financial structure. The Energy Bureau remains committed to ensuring that any resolution to PREPA's bankruptcy aligns with a reliable, resilient, and affordable electric system for Puerto Rico.

A sustainable resolution to PREPA's bankruptcy can be reached soon, as it would remove a significant obstacle to the comprehensive transformation of Puerto Rico's electric system that we all seek to achieve.

IX. CONCLUSION

Chair Hageman, Ranking Member Grijalva, esteemed members of the Committee, the Energy Bureau appreciates your attention to this critical matter affecting the lives of over 3 million American citizens in Puerto Rico. The Energy Bureau stands ready to answer any questions you may have regarding our oversight role and the current state of Puerto Rico's electric system.

The Energy Bureau welcomes the opportunity to provide further clarity on any aspect of this testimony.

The Energy Bureau is eager to hear your perspectives and concerns. Your insights are invaluable as we navigate this critical period in Puerto Rico's energy transformation.

Once again, the Energy Bureau thanks the Committee for this opportunity to testify and for your ongoing commitment to addressing Puerto Rico's energy challenges. On behalf of the Energy Bureau I now stand ready to answer your questions.

QUESTIONS SUBMITTED FOR THE RECORD TO ANTONIO TORRES MIRANDA, ASSOCIATE COMMISSIONER, PUERTO RICO ENERGY BUREAU, SAN JUAN, PUERTO RICO

Mr. Torres Miranda did not submit responses to the Committee by the appropriate deadline for inclusion in the printed record.

Questions Submitted by Representative Westerman

Question 1. From your perspective, what are the key reasons for the continued blackouts in Puerto Rico and what is your recommendation for addressing these challenges and for ensuring that Puerto Rico has access to reliable and resilient energy?

Question 2. In August 2020, PREPA proposed replacing old fuel plants with a new liquefied natural gas terminal. PREB rejected this proposal in favor of solar grid projects. This is concerning as baseload sources such as LNG and coal are proven to be more reliable and resilient than renewable sources such as solar and wind.

2a) I am assuming that PREB agrees with me that Puerto Rico deserves to have access to reliable and resilient energy. If that is the case, why did PREB decide to reject a plan that would have utilized resilient and reliable baseload energy sources?

Questions Submitted by Representative Grijalva

Question 1. Genera is asking for 560 MW of new liquified natural gas (LNG) generation capacity. Is it true that the FOMB unilaterally canceled 593 MW of utility-scale solar projects that the Energy Bureau had already approved in 2021, and that had the FOMB not canceled them, those projects would likely be built or

under construction today at a time when that extra capacity would prevent blackouts?

Question 2. Puerto Rico has a plan for six tranches of utility-scale solar projects to provide a total of 3750 MW of solar PV generation and 1,500 MW of battery storage. The proposals for the final tranche of projects were supposed to be done in June 2023, according to the original timelines outlined by PREB, but now we are seven years post Hurricane Maria and not a single project from the FIRST tranche is operational yet.

2a) What needs to be done to get these projects online as soon as possible? What are the projected timelines for Tranches 1–3?

2b) Do you believe the Puerto Rico's generation shortfall can be met with renewables on a reasonable timeline?

Question 3. As you know, the people of Puerto Rico are buying up solar and batteries for their homes because they know it will keep the lights on better than the grid will, both after and between hurricanes. These systems are particularly important for people with energy-dependent disabilities, like those on dialysis. Solar and batteries also make disaster recovery easier on first responders after a hurricane because it keeps fridges working, keeps people away from the hospital, and allows the utility to prioritize other households with urgent energy needs. Further, each new home with solar and batteries means that less fuel has to be shipped to the island at extra cost. Do you think that a decision about whether to peel pack financial incentives that make solar and batteries accessible to low-income families should consider those wider social benefits, or do you think it's better to just do a narrow cost benefit analysis from the perspective of the utility, which excludes those broader considerations?

Question 4. Has PREB had any written or verbal communications with the FOMB regarding net metering before, during or after the enactments of both Act 17-2019 and Act 10-2024? If so, when was the first such communication? When was the most recent?

Question 5. Genera's parent company, New Fortress Energy, supplies Puerto Rico with most of its natural gas. It seems then that Genera stands to benefit from the delay of renewables implementation because more natural gas would be purchased from its parent company. Would you agree there is a financial incentive for Genera to slow-walk renewables implementation? What tools does PREB have at its disposal to counter Genera's incentive to slow walk renewables growth?

Question 6. Republicans like to say that solar can't be relied on because the sun doesn't always shine, and we know that argument doesn't work because that's what the batteries are for. But now they claim the benefits of large fossil fuel plants can't be replaced. Can solar and batteries provide frequency regulation services for the grid? Can large battery banks start from a dead stop faster than oil or even methane plants? Can solar and batteries provide ramping or spinning reserve, which allows generators to respond quickly to outages and surges in demand for energy? What about arbitrage—can battery banks do that?

Question 7. Democrat committee staff recently met with several stakeholders in the process of implementing utility scale solar and storage in Puerto Rico. Acción, the contractor PREB hired to implement the tranches of solar and storage to do a better job than PREPA did, was roundly criticized for failing to improve the process. There seems to have been very little movement on the second and third tranches of utility-scale solar projects. What oversight of Acción is PREB doing to ensure the utility scale solar projects are getting done and that the massive delays, which are contributing to blackouts, come to an end? Also, why is it not a conflict of interest to have the regulator engage in a regulated activity?

Question 8. In previous Committee hearings on energy in Puerto Rico, witnesses have testified that the single biggest reason that energy costs are so high in Puerto Rico compared to the rest of the U.S. is because the fossil fuel must be imported. Is that still true?

Questions Submitted by Representative González-Colón

Question 1. Background: As discussed, Puerto Rico may face 18 to 24 months of being short of peak capacity reserves until new installations are completed. Therefore, the Island needs fast deployment of reliable generation capacity to meet full demand now.

Additional mobile LNG units would be fastest for the short-term. However, it is true they would have lesser economy of scale. So this alternative should also include fast-tracking the removal of one or more existing obsolete or unusable unit or units, and installing new technology units integrated with batteries for stabilization and backup, in the same footprint of the old units. Puerto Rico can fast-track its own permitting, but this would require a federal champion to clear hurdles from federal regulators.

Genera PR brought up in the hearing a proposal for meeting the short/medium term need:

- *Fast conversion of the Palo Seco, Cambalache and Mayaguez oil-fired units to LNG*
- *Deployment of 550MW of supplementary energy through Corps of Engineers support generators for the short/medium term need until the more permanent development happens energy.*

1a) Does anything prevent fast approval and implementation of all or parts of such a strategy?

1b) Would these actions come under the aegis of the recovery plans already approved for Puerto Rico or would they require substantial modifications to it?

1c) Genera is a wholly-owned subsidiary of NFE, a LNG fuel supplier. Genera is motivated to reduce costs and receives a share of the costs savings per their contract. What safeguards are in place to ensure potential conflicts of interest between Genera and NFE are properly addressed and mitigated?

1d) What is the timeline for allowing industrial customers to sell surplus power back to the grid to help stabilize the island's electrical infrastructure and what is the plan for permitting and rate setting?

Question 2. Background: The Puerto Rico Energy Policy requires that by 2025 there be 40% of electricity from renewable resources, going up to 100% by 2050. In the Hearing, Genera PR indicated the first number was not going to be reached and expressed doubts of the reaching of the end goal.

2a) Does PREB expect the 40% by 2025, 50% by 2030 goals to be reached in view of current trends and progress of work?

2b) What would be required to be at pace to achieve the 100% by 2050 goal?

2c) Until the full renewables portfolio can be deployed does anything prevent PREB from approving other energy sources if they can be demonstrated to be economically viable?

Question 3. One program that Luma has often quoted has been that of the use of a Virtual Power Plant (VPP) model by which users with their own distributed power or storage are available for dispatch through the grid operator.

3a) Is the Virtual Power Plant seen as a model for the deployment of renewables? Is this available reserve counted toward the Puerto Rico Law 17 of 2019 renewables percentage?

Question 4. What is the status of LUMA/PREB interconnection requirements for community and critical microgrids to expedite their interconnection to the grid? Does PREB believe LUMA is cooperating adequately with microgrid developers?

Question 5. Puerto Rico's cheapest fuel-using power source, the AES power plant in Guayama, provides up to 454 MW of generation when running at capacity and is by law required to stop burning coal after 2027. That has been known since 2019.

5a) Have any specific plans been presented for replacement of this base load?

5b) How critical is this power unit to the stability of the grid?

Question 6. There has been a steady march through our doors of proponents of other ideas about how to address the Puerto Rico Energy Recovery that are not incorporated into the existing action plans but that they want the authorities to adopt, including proposals for inter-island submarine power cables around the Caribbean, from both American-Based (starting with PR-USVI—Bob Garcia Interconnection) and Dominican Republic-Based (starting with PR-DR—Hostos project) proponents—that requires the governments of other jurisdictions, including foreign, to be aboard.

6a) Have these proposals been presented to you, and how viable and suitable for addition have you seen them?

Questions Submitted by Representative Velázquez

Question 1. Why has LUMA not fulfilled its mandate to reduce energy rates and instead proposed multiple increases? Has the Energy Bureau considered imposing penalties for LUMA's failure to meet its obligation to reduce rates?

Question 2. Do you consider LUMA has made the necessary grid investments to accommodate the growing number of households with solar and battery systems?

Question 3. LUMA has failed to complete an Integrated Resource Plan for the island. What explanation has LUMA provided to the Bureau for this delay? Is the lack of this plan hindering Puerto Rico's progress toward renewable energy goals?

Question 4. In July 2024, Genera PR submitted a "Stabilization Plan for the Electricity System" to the Puerto Rico Energy Bureau, which included a project to install supplementary generating units that would add 565 megawatts (MW) to the fleet. How has this project progressed? Has the Bureau noted any obstacles to its completion?

Question 5. Is it true that last month LUMA requested the PREB an additional $200 million per year? What were the reasons for this request? What impact would a budget increase of this size have on electricity rates?

Question 6. Does the Energy Bureau have the authority to impose penalties on LUMA for underperformance in key reliability metrics? Has the Bureau imposed any penalties to date?

Ms. HAGEMAN. Thank you, Mr. Torres Miranda. And I now recognize Mr. Saca for 5 minutes of testimony.

STATEMENT OF JUAN SACA, CHIEF EXECUTIVE OFFICER, LUMA ENERGY, SAN JUAN, PUERTO RICO

Mr. SACA. Good morning. My name is Juan Saca. I am the CEO at LUMA. With me today is Mario Hurtado, LUMA's chief regulatory officer, and Juan Rodriguez, who is our transformation lead for the Puerto Rico grid.

I would like to thank Chairman Westerman and Subcommittee Chair Hageman, Ranking Member Velázquez, and members of the Subcommittee for the invitation to appear before you today and discuss our progress in building a more reliable and resilient energy system for Puerto Rico, as well as the challenges LUMA continues to face as a result of decades of neglect by the previous utility operator, as has been stated, combined with damages from Hurricane Maria and frequent powerful storms due to the effects of more extreme weather.

As many of you know, LUMA took over as the transmission and distribution operator of Puerto Rico's electric grid in June 2021, only 4 years following the devastating impacts of Hurricane Maria, a storm that took the island's entire energy grid offline and left customers in the dark for 11 months.

Even before Hurricane Maria, Puerto Rico's electric grid was well below utility reliability standards. The entire system was also allowed to deteriorate due to the financial mismanagement, eventually resulting in a $10 billion bankruptcy in 2017, which today remains unresolved.

While the over 4,000 LUMA team members, of whom I am very proud for the work that they are doing, continue to make progress across multiple areas to build a better energy future for our 1.5 million customers, the impact of FAASt failures which predate

LUMA remain an enduring challenge to process, which we are working incredibly hard to overcome.

Reflecting that determination that we have to improve, our team works every day to replace aging and failing infrastructure that was neglected for decades with new, reliable equipment. These are long-term reliability investments, not quick fixes, and making the necessary structural changes is a monumental and time-consuming task. But we are making significant progress.

To date, we have replaced over 17,850 utility poles, which on the average take about 6 to 8 hours to replace per pole, with new poles able to withstand 160 mile per hour winds and installed over 9,000 automated devices to reduce the duration and impact of outages, which have already prevented over 140 million interruptions minutes. That number has been updated to 170 million minutes, thankfully.

The impact of this has been real. Over the last year, more than 95 percent of customers had concurrent service more than 98 percent of the time, this is in the last year, when generation was available.

In addition to our day-to-day improvement efforts, LUMA has also initiated 460 critical projects to FEMA representing $12.3 billion in Federal funding, with 171 approved and 87 percent of those, or 149 projects, already in construction or completed. Progress is being made.

A significant achievement of its own, considering PREPA did not move one capital project to construction, as Mr. Laboy mentioned earlier today. LUMA is utilizing all available Federal programs to fund capital projects across Puerto Rico, but securing effective FEMA funding takes time. We will continue to work together with our partners at FEMA, DOE, COR3 and others who are committed to providing these critical resources for the Puerto Rico energy grid.

Thanks to their support, LUMA has recently launched two major federally funded initiatives, which when complete, will significantly improve service for our customers. The first initiative is an historic multi-year island-wide vegetation safety and reliability initiative, which will clear, and I repeat, clear, vegetation from over 16,000 miles of power lines and reduce outages by up to 45 percent once complete. Our vegetation management team continues to remove hazardous trees and brush as part of our daily operations, and to date have cleared more than 5,000 miles of power lines.

The second initiative is the smart meter initiative to replace 1.5 million smart meters across Puerto Rico, and new technology that will help detect outages faster, enable a more timely response when they occur, and improve customer service.

Even as historic progress is being made by LUMA, we want to be very clear about challenges that remain. Enduring issues around generation persist for the island's energy producers, in large part, and I repeat, in large part, because of a legacy of failures. The infrastructure will take time to modernize. This is and will be a multi-year transformation that will require even greater cooperation with local Federal partners, including members of this Committee who we hope will work with us to address these legacy challenges to help advance critical FEMA funding. We have specific requests for you that I will make during our conversation.

In closing, LUMA is committed to Puerto Rico. Our team is committed to Puerto Rico. I am very proud of them. We will complete this transformation. We will get the job done. Thank you very much.

[The prepared statement of Mr. Saca follows:]

PREPARED STATEMENT OF JUAN SACA, PRESIDENT AND CHIEF EXECUTIVE OFFICER AT LUMA

I. INTRODUCTION

Subcommittee Chair Hageman, Ranking Member Fernandez, and members of the Subcommittee:

Thank you for the invitation to appear before you today to discuss our progress toward building a more reliable and resilient energy system for Puerto Rico, as well as the challenges LUMA continues to face due to decades of neglect by the utility operator that preceded LUMA, combined with damages from Hurricane Maria and frequent powerful storms due to the effects of more extreme weather.

As many of you know, LUMA took over as the transmission and distribution operator of Puerto Rico's electric grid in June 2021, only four years following the devastating impacts of Hurricane Maria—a storm that took the island's entire energy grid offline, and left customers in the dark for months.

Even before Hurricane Maria, Puerto Rico's electric grid was well below utility reliability standards. The entire system was also allowed to deteriorate due to financial mismanagement, eventually resulting in a 10-billion-dollar bankruptcy in 2017, which today remains unresolved in arbitration and remains a serious obstacle to achieving the widespread progress that is critical for Puerto Rico's energy future.

While the over 4,000 LUMA team members continue to make progress across multiple areas to build a better energy future for our 1.5 million customers, the impact of past failures, which pre-date LUMA, remain an enduring challenge to progress which we are working incredibly hard to overcome.

II. TROPICAL STORM ERNESTO RESPONSE AND DAILY EMERGENCY PREPAREDNESS

One of our most important responsibilities is emergency response, and I would like to first brief you on LUMA's response to Tropical Storm Ernesto just over a month ago.

On August 14, Ernesto brought more than 10 inches of rain and over 70 mile-per-hour winds, leading to flooding and widespread damage to the grid, primarily in the eastern and mountainous areas of the island, as well as the neighboring islands of Vieques and Culebra.

Thanks to the hard work and dedication of our entire LUMA team, including more than 1,700 trained field workers, in just 54 hours, power was restored to more than 90% of customers impacted by the storm.

With two months left in this hurricane season, emergency preparedness continues to be our top priority. Our team is taking actions to prepare our response to storm-related outages and has over $282 million in on-hand materials to use in an emergency and over 1,100 field workers ready to respond quickly to any outage.

Both in our response to Tropical Storm Ernesto as well as Hurricane Fiona in 2022, our LUMA team has shown how determined we are to overcome the terrible legacy of Hurricane Maria.

III. RELIABILITY PROGRESS

Reflecting that determination to improve, our team works every day to replace aging and failing infrastructure with new, reliable equipment.

These are long-term reliability investments, not quick fixes, and making the necessary structural changes is a monumental and time-consuming task, but we are making significant progress.

To date, we have replaced over 17,850 utility poles with new poles able to withstand 160 mile-per-hour winds and installed over 9,000 automation devices to reduce the duration and impact of outages, which have already prevented over 140 million service interruption minutes.

The impact of this has been real—over the last year, more than 95% of customers had concurrent service more than 98% of the time when generation was available.

IV. FEMA-FUNDED CAPITAL PROJECT PROGRESS

In addition to our day-to-day improvement efforts, LUMA has also initiated 460 critical projects to FEMA representing $12.3 billion in federal funding, with 171 approved and 87% of those, or 149 projects, already in construction or completed.

A significant achievement on its own, considering PREPA did not move one capital project to construction.

LUMA is utilizing all available federal programs to fund capital projects across Puerto Rico but securing effective FEMA funding takes time.

We will continue to work together with our partners at FEMA, DOE, COR3 and others who are committed to providing these critical resources for the Puerto Rico energy grid.

Thanks to their support, LUMA has recently launched two major federally-funded initiatives, which when complete, will significantly improve service for our customers.

The first initiative is the historic multi-year, island-wide Vegetation Safety and Reliability Initiative, which will clear vegetation from over 16,000 miles of powerlines and reduce outages by up to 45% once complete.

Additionally, our vegetation management teams continue to remove hazardous vegetation as part of our daily operations, and to date, have cleared more than 5,000 miles of powerlines.

The second initiative is the Smart Meter Initiative to replace all 1.5 million electric meters across Puerto Rico with new technology that will help detect outages faster, enable a more timely response when they occur and improve customer service.

To keep our customers and stakeholders informed of these important initiatives, and more, we created a Progress for Puerto Rico Dashboard, a public website that provides monthly updates on our work to improve service, highlighting what real progress looks like and reflecting our determination to achieve this important goal—a goal we are determined to achieve for Puerto Rico.

V. BUILDING A CLEANER, MORE CUSTOMER-FOCUSED ENERGY GRID

To further advance the resilience of the grid and improve Puerto Rico's ability to generate renewable energy, LUMA has connected over 100,000 rooftop solar customers to the grid, representing 650 MW of clean energy, the most in Puerto Rico's history.

LUMA is also dedicated to building a customer-focused energy system that best serves the needs of our customers. We improved our response time to service requests by 36% in fiscal year 2024 over 2023, and reduced average call wait times by 40% to nearly one minute—the shortest wait time on record for Puerto Rico.

Throughout all our work, LUMA remains committed to transparency in our operations as we continue our mission to build an energy system founded on operational excellence for all our customers.

VI. CONCLUSION

Even as historic progress is being made by LUMA, we want to be very clear about the challenges that remain.

Enduring issues around generation persist for the island's energy producers, in large part because of a legacy of failures.

The infrastructure will take time to modernize—this is and will be a multi-year transformation that will require even greater cooperation with local and federal partners, including members of this subcommittee who we hope will work with us to address these legacy challenges and help advance critical FEMA funding.

However, the repeated attacks on LUMA personnel and leadership serve to thwart progress.

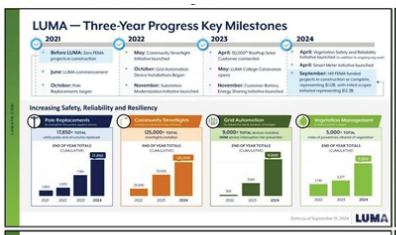
They not only ignore the lasting impacts of past failures, but also the efforts of our partners and the thousands of dedicated LUMA personnel who remain focused on building a reliable energy system that the previous operator failed to deliver.

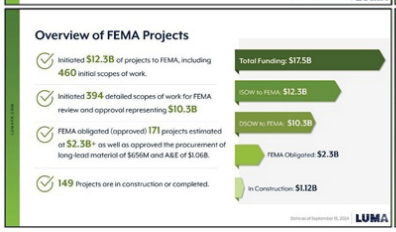
In closing, LUMA is committed to Puerto Rico. Our team is committed to Puerto Rico. We will complete this transformation.

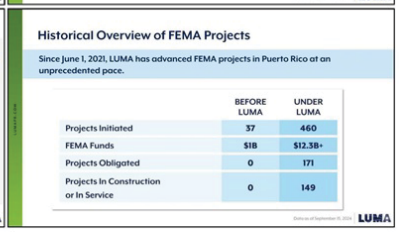
And working together with our partners, LUMA will build a more reliable, safer, resilient, and cleaner energy future for the island we are proud to call home.

VII. LUMA'S PROGRESS UPDATE

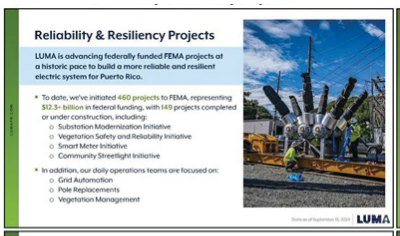
C. Three-Year Progress

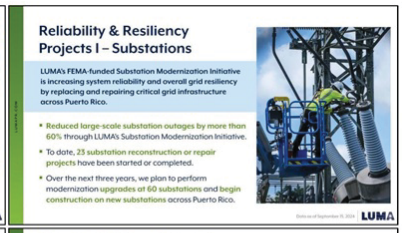


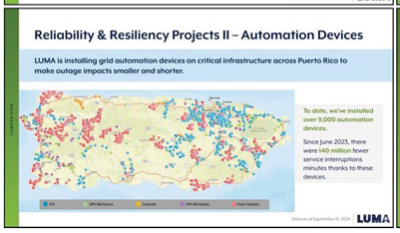


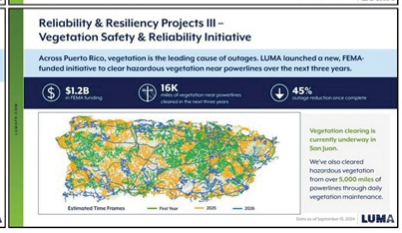


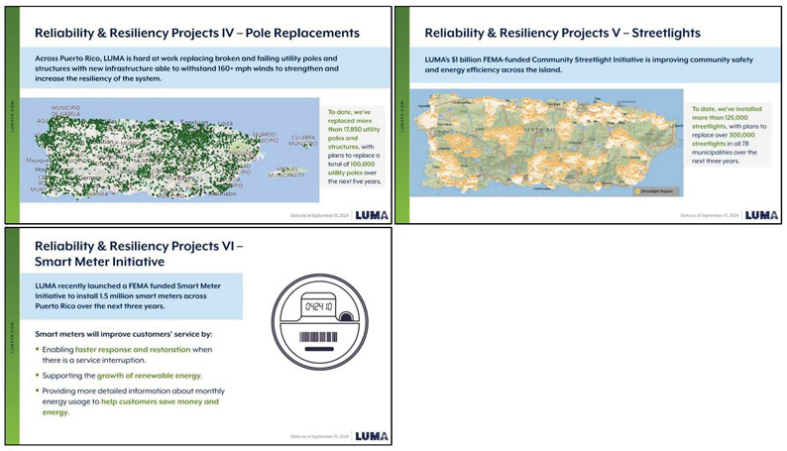
B. Reliability & Resiliency Projects



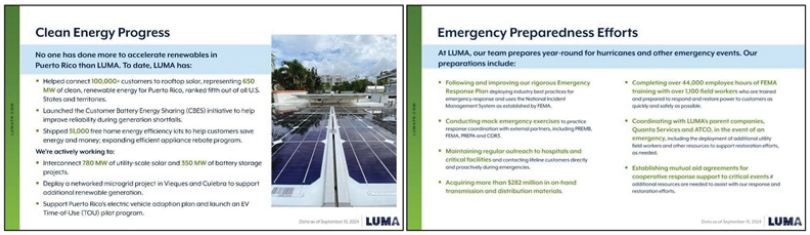




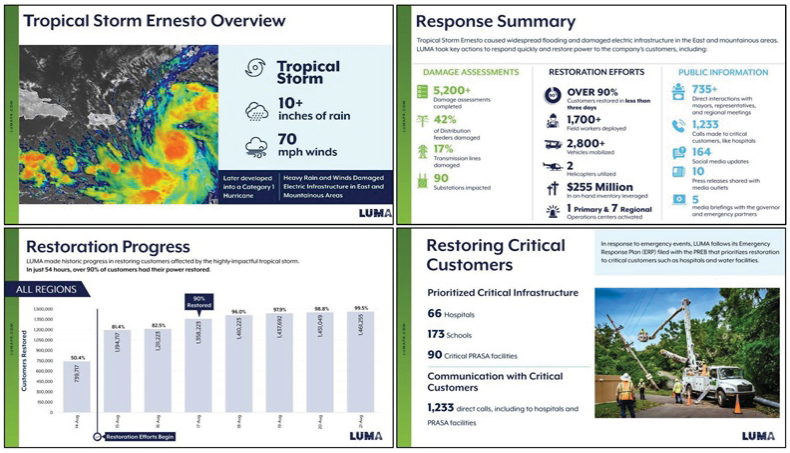




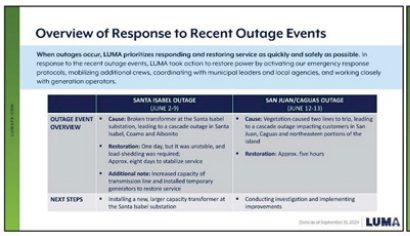
D. Clean Energy & Emergency Preparedness



E. Tropical Storm Ernesto Response



F. Outage Response to Recent Events



G. Looking Ahead

H. Appendix

QUESTIONS SUBMITTED FOR THE RECORD TO MR. JUAN SACA, CHIEF EXECUTIVE OFFICER, LUMA ENERGY, SAN JUAN, PUERTO RICO

Mr. Saca did not submit responses to the Committee by the appropriate deadline for inclusion in the printed record.

Questions Submitted by Representative Westerman

Question 1. From your perspective, what are the key reasons for the continued blackouts in Puerto Rico and what is your recommendation for addressing these challenges and for ensuring that Puerto Rico has access to reliable and resilient energy?

Question 2. Of the $1.4 billion capital budget spent by LUMA in 2021, $1.1 billion was federal funding while only $300 million was from non-federal funding. While the federal government has made commitments to assist with the recovery of Puerto Rico's infrastructure after it experienced a devastating series of hurricanes, we can all agree that the ultimate goal is to have a reliable and resilient electrical grid operated by private utilities for the long-term.

2a) How does LUMA plan to decrease their reliance on federal funds to operate and maintain Puerto Rico's electrical grid? Do you see a day when LUMA can perform their operations without injections of taxpayer dollars, and what needs to be done to achieve that goal?

Question 3. For the areas where you have already cleared vegetation, have you seen an increase in the reliability of the systems or a decrease in outages? If so, can you quantify that benefit and its economic impacts?

Question 4. Federal environmental regulations have clearly delayed LUMA's vegetation clearing project plans.

4a) Are there local environmental regulations contributing to these delays? If so, have you raised these concerns with the Government of Puerto Rico? What has the response been?

Question 5. How does LUMA select vendors for contracting out projects such as vegetation clearing projects or substation upgrades? Are there any issues with finding and hiring the workforce LUMA needs to complete its maintenance projects ahead of it and maintain the grid for the long term? If there are, how does this impact LUMA's operations and capacity to rebuild Puerto Rico's electrical grid?

Questions Submitted by Representative Grijalva

Question 1. The solar market in Puerto Rico is growing rapidly, helping thousands of families avoid blackouts. LUMA is approving thousands of new rooftop solar installations a month. How is LUMA making the necessary upgrades to facilitate this growth? For example, how much federal funding is LUMA planning to spend on feeder upgrades to accommodate the widespread use of distributed generation?

Question 2. We know that rooftop solar has averted blackouts in Puerto Rico. There are about 900 megawatts of distributed solar ("rooftop solar") capacity on the island installed across 130,000 homes. Without these systems, overall power demand would exceed available generation capacity. Do you agree that these systems help avoid blackouts, either by contributing to the grid via net metering or by reducing demand? How is Puerto Rico prioritizing rooftop solar as a resiliency measure?

Question 3. You testified that unmaintained vegetation is responsible for about 50% of service interruptions in Puerto Rico. LUMA is rolling out an initiative to clear vegetation from 16,000 miles of powerlines using federal funds. How is LUMA working with FEMA, U.S. Fish and Wildlife Service, and other agencies to ensure this initiative complies with review process requirements without delay? How will LUMA maintain the vegetation when this lump sum of funding runs out? Can LUMA promise that it will not come to the federal government or the ratepayers to ask for more vegetation management funds?

Question 4. LUMA's aims to enroll over 6,000 customers with solar and batteries in its Customer Battery Energy Sharing pilot program to help prevent blackouts in the evenings. There are over 100,000 customers with batteries that could theoretically enroll in this program. How many customers with solar and batteries are currently enrolled in the program? How are you encouraging greater enrollment in this "Virtual Power Plant"? Has additional funding been identified to grow this program beyond its initial pilot?

Questions Submitted by Representative González-Colón

Question 1. Mr. Saca, as discussed in the hearing, LUMA needs to source the power from multiple providers. Besides Genera there are private fossil-fueled plants like AES and EcoElectrica, utility-scale renewables under power purchase agreements; PREPA's limited hydro plants, distributed renewables—all also contribute to the grid.

1a) Please provide the subcommittee with the breakdown of how much capacity is provided from the different suppliers and what share of demand does it represent?

1b) We have seen news reports of failures or defects in the private power plants—what has been the reliability of the private generators?

1c) Is it true that one of our problems with not meeting demand is that at sunset every day we lose much solar capacity that is not backed by storage? How much is the relative loss?

1d) Does LUMA operate a model of Virtual Power Plant to draw reserve from private storage sources through the net metering system? How many customers participate and how large could this become? Is there a plan to expand it?

Question 2. What is the status of establishing regional microgrids to power communities and critical loads such as hospitals, seaports, airports, and industrial parks? What is the status of LUMA/PREB interconnection requirements for community and critical microgrids to expedite their interconnection to the grid? Has LUMA not cooperated with microgrid developers?

Question 3. The Puerto Rico Financial Oversight Board's Executive Director recently stated, in a 45th public meeting, that the pace of grid reconstruction was unacceptably slow. He further indicated that the FOMB would be getting involved more directly in reconstruction matters and federal funds, along with LUMA and Genera.

3a) Four years and 3 months after taking over the system, why does LUMA need FOMB's assistance, when it was selected based on representations from its Partners (ATCO Ltd., and QUANTA Services) that it had the experience and know-how to operate, maintain and reconstruct the grid, maximizing federal taxpayer funds?

Question 4. Puerto Rico's cheapest fuel-using power source, the AES power plant in Guayama, provides up to 454 MW of generation when running at capacity and is by law required to stop burning coal after 2027. That has been known since 2019.

4a) Have any specific plans been presented for replacement of this base load?

4b) How critical is this power unit to the stability of the grid?

Question 5. There has been a steady march through our doors of proponents of other ideas about how to address the Puerto Rico Energy Recovery that are not incorporated into the existing action plans but that they want the authorities to adopt, including proposals for inter-island submarine power cables around the Caribbean, from both American-Based (starting with PR-USVI—Bob Garcia Interconnection) and Dominican Republic-Based (starting with PR-DR—Hostos project) proponents—that requires the governments of other jurisdictions, including foreign, to be aboard.

5a) Have these proposals been presented to you, and how viable and suitable for addition have you seen them?

Questions Submitted by Representative Velázquez

Question 1. What are LUMA's plans to decrease reliance on federal funding?

Question 2. What types of projects are being prioritized by LUMA, and what general obstacles are you facing in advancing these projects?

Question 3. According to LUMA's website, the consortium expects to clear 680 miles of vegetation by December 2024. As of October 2024, LUMA has cleared 15 miles of vegetation, or 2% of the stated goal. How does LUMA plan to meet its own timeline by the end of the year?

Question 4. LUMA has failed to complete an Integrated Resource Plan for the island. Why has LUMA been unable to finish this analysis? Do you consider the absence of this plan a barrier to Puerto Rico's renewable energy goals?

Question 5. It is estimated that over the next 10 years, more than 5 Gigawatts of solar capacity will be installed in Puerto Rico, with only 8.8% coming from the utility-scale segment. Does LUMA consider the grid equipped to absorb the growing number of households with solar and battery systems? Could you share details of the infrastructure investments LUMA is planning to make to adapt to this new reality?

Question 6. LUMA has expressed a commitment to support transparency efforts. Why, to date, has LUMA not shared power outage data with the Outage Data Initiative Nationwide (ODIN)? Are you willing to commit to sharing this data going forward?

Ms. HAGEMAN. Thank you, Mr. Saca. And I now recognize Mr. McElmurray for 5 minutes.

STATEMENT OF BRANNEN MCELMURRAY, CHIEF EXECUTIVE OFFICER, GENERA PR LLC, SAN JUAN, PUERTO RICO

Mr. MCELMURRAY. Thank you for the opportunity to speak before this Committee on behalf of Genera PR. My name is Brannen McElmurray, and I have the pleasure as serving as the CEO and President of Genera.

First, I want to emphasize that the entire Genera team understands the significant responsibility we undertake every day, which is to generate reliable, affordable energy for the people of Puerto Rico. We take this responsibility seriously.

Electricity is an essential service without which modern life does not work, economies do not grow, and real people are not able to realize their God-given potential. We appreciate the opportunity to share our objectives and to provide an update on our progress to this honorable Committee.

Genera's mission is to generate reliable, affordable energy to Puerto Rico. We understand that this is critical for both economic development and quality of life on the island. Genera was founded in the wake of Hurricanes Maria and Fiona, two of the deadliest storms to hit Puerto Rico in recent memory.

After learning firsthand of Puerto Rico's energy needs and the damage that these storms wrought to Puerto Rico's electric grid, Genera took over the operation and management of PREPA's existing generation assets to improve their capacity and resilience. This means that Genera manages electricity generation, which is the process of creating energy, whether that be by fossil generation, solar power, or wind turbines. Energy transmission is distinct from generation. Transmission is the process of transporting energy from these generation sites to where it is needed most.

Genera is made up of a team of seasoned executives and partners with extensive global and local power, fuel, and operation experience. I am proud to say that our management team, most of them were born in Puerto Rico, raised, educated, and are deeply committed to the communities that we serve. Collectively, we have direct experience with every single type of power plant technology that PREPA owns across the fleet.

If I can speak personally, my background is in engineering. I am a proud engineering graduate of the U.S. Naval Academy, and I have spent over two decades working in the energy sector as both an engineer and an executive. I have expertise in leading companies in the energy transmission space. I bring that expertise to Genera. And my team and I are deeply committed to stabilizing Puerto Rico's energy grid and delivering reliable, affordable energy to the people of Puerto Rico.

At Genera, we started operating PREPA's legacy thermal generation fleet on July 1, 2023, just over a year ago. This fleet is made up of approximately 60 percent of generating capacity connected to the Puerto Rican grid. Independent thermal power producers, renewable energy providers, and publicly-owned hydroelectric resources provide roughly 40 percent of that capacity.

When Genera inherited administration of the PREPA fleet, we took over a set of generation assets that were roughly 30 years older than the electricity power average in the United States. And issues related to age and general obsolescence of the fleet continue

to persist today. Over the last year, we have worked tirelessly to provide electric generation service with fewer interruptions, which we know is necessary to ensure that every family on the island has access to reliable power. But let me say this. The work that we have done is not enough and can be improved, and every Puerto Rican deserves access to power.

When structuring our operation and maintenance contract, we built it around four key priorities that we believe will improve and stabilize the electric generation system for all of Puerto Rico. First, we aim to improve reliability of power availability throughout the island through continuous upgrades to the current fleet. Ensuring reliable power is fundamental to the success of Genera and we understand the importance of improving generation system reliability.

Our team at Genera has developed and implemented an electric system stabilization plan to ensure the continuous, reliable generation of energy in tandem with the integration of renewable energy resources. Since we have inherited the fleet, we have increased availability of generation capacity, and we are working steadily to deliver our plans to further increase capacity and improve reliability.

Genera also hopes to utilize Federal funds to expand the island's temporary supplemental generation reserves in coordination with FEMA, DOE, and the Army Corps of Engineers. This step will provide additional capacity to the system.

One possible way to help Puerto Rico immediately is to access the current $5 billion MATOC contract that U.S. Army Corps has in place to serve Puerto Rico and provide electrical power. As this Committee is aware, after Hurricane Fiona, the U.S. Army Corps of Engineers installed 17 generators at Palo Seco in San Juan. Collectively, those generators produce 350 megawatts of power, providing enough power to meet the needs of 100,000 homes. Without these generators today, there would be Puerto Ricans that had no power. These generators were installed in 120 days and provide an example of what can be done when we work in concert.

Second, Genera's contract ensures that our priorities are aligned with Puerto Rico's. Our fee structure largely relies on a 50/50 share with the government of Puerto Rico in savings and cost efficiencies generated. We agreed to this because we are confident that our contract is primarily based on the performance that we execute every day. And I am happy to say that in Fiscal Year 2024, we have generated over $100 million in savings for the ratepayers of Puerto Rico.

Third, Genera appreciates and supports Puerto Rico's transition to renewable energy and the projected influx of Federal funding and aligned public policy, and the commitment of engaged public and private stakeholders. In support of this essential transition, we treat the task of retiring and decommissioning antiquated power plants as they are replaced by renewables as a key component of our strategy, adhering to the approvals in the integrated resource plan. We look forward to working closely with PREB to ensure that there are adequate generation sources available and that plants are retired responsibly.

Supporting and being part of Puerto Rico's transition to renewables is one of the main reasons why we founded Genera. We look forward to closely working with all stakeholders involved to ensure this transition is done efficiently and effectively.

Last but certainly not least, having an energy business in Puerto Rico and working closely with PREPA plant employees over the last several years, we have come to recognize the invaluable talent and dedication of PREPA's plant operators. They work incredibly hard and ensure that Puerto Rico's legacy power plants continue to operate. And let me emphasize, these plants and the service that we provide could not be possible without the 733 employees that we have every day and the folks that come in 24/7, 365 days a year to make these assets work.

Finally, I want to reiterate that we understand just how important this undertaking is to provide an essential service to the Puerto Rican people. And Genera is committed to continually improving the limited set of assets under its control. But this alone will not be enough to achieve the broader system results that the island needs and customers deserve.

With the assistance of FEMA and the U.S. Army Corps of Engineers on temporary supplemental generation projects, we can quickly improve the resiliency and redundancy of Puerto Rico's electric grid to ensure we can bridge the gap between the current fleet and the future of a reliable, affordable, clean energy generation that Genera is working towards.

We look forward to building a meaningful relationship with you and a brighter future for the Puerto Rican people. We are here to cooperate and provide the Committee all the information that it needs so that we can work together to resolve issues which are extremely important to the daily lives of Puerto Ricans. We are confident that we can work together to ensure that this is a successful energy system transformation that we can all be proud of the role we played in. Thank you.

[The prepared statement of Mr. McElmurray follows:]

PREPARED STATEMENT OF BRANNEN MCELMURRAY, PRESIDENT & CEO OF GENERA PR

Thank you for the opportunity to speak before the U.S. House Committee on Natural Resources on behalf of Genera PR ("Genera"). My name is Brannen McElmurray, and I have the pleasure of serving as the CEO and President of Genera. First, I want to emphasize that the entire Genera team understands the significant responsibility we undertake every day, which is to generate reliable energy for the people of Puerto Rico. We take this responsibility seriously. We appreciate the opportunity to share our objectives and to provide an update on our progress to this Honorable Committee.

Genera's mission is to generate reliable, affordable, and clean energy to all of Puerto Rico. We understand that this is critical for both economic development and quality of life on the Island. Genera was founded in the wake of Hurricanes Maria and Fiona, two of the deadliest storms to hit Puerto Rico in recent memory.

After learning firsthand of Puerto Rico's energy needs and the damage that these storms wrought to Puerto Rico's electric grid, Genera took over the operation and management of the Puerto Rico Electric Power Authority's ("PREPA") existing generation assets to improve their capacity and resiliency. This means that Genera manages electricity generation, which is the process of creating energy whether it be from fossil fuels, solar power, or wind turbines. Energy transmission is distinct from generation. Transmission is the process of transporting electricity from these generation sites to where it is needed on the Island.

Genera is made up of a seasoned team of executives and partners with extensive global and local power, fuel and operational experience. Collectively, we have direct experience with every single type of power plant technology that PREPA owns across the fleet.

If I can speak personally, my background is in engineering. I am a proud engineering graduate of the U.S. Naval Academy, and I have spent over two decades working in the energy sector. As both an engineer and an executive, I have expertise in leading companies through the energy transition space. I bring that expertise to Genera, and my team and I are deeply committed to stabilizing Puerto Rico's electric grid and delivering reliable, affordable, clean energy to the people of Puerto Rico.

At Genera, we started operating PREPA's legacy thermal generation fleet on July 1, 2023, just over a year ago. This fleet makes up approximately 60% of the generating capacity connected to the Puerto Rico grid. Independent thermal power producers, renewable energy providers, and publicly owned hydroelectric resources provide roughly 40 percent of that capacity. When Genera inherited administration of the PREPA fleet, we took over a set of generation assets that were roughly 30 years older than the electric power industry average in the United States, and issues related to the age and general obsolescence of the fleet continue to persist today. Over the last year, we have worked tirelessly to provide electric generation service with fewer interruptions, which we know is necessary to ensure that every family on the island has access to reliable power.

When structuring our operation and maintenance contract, we built it around four key priorities that we believe will improve and stabilize the electric generation system for all of Puerto Rico:

First, we aim to improve the reliability of power availability throughout the Island through continuous upgrades to the current fleet. Ensuring reliable power is fundamental to the success of Genera and we understand the importance of improving generation system reliability. Our team at Genera has developed and implemented a two-year Electric System Stabilization Plan to ensure the continuous, reliable generation of energy in tandem with the integration of renewable energy sources. Since we inherited the fleet, we have increased the availability of generation capacity from 46% to over 60%, and we are working steadily to deliver on our plans to further increase available capacity and improve reliability.

Genera also hopes to utilize federal funds to expand the island's temporary supplemental generation reserves in coordination with the Federal Emergency Management Agency ("FEMA"), U.S. Department of Energy ("DOE"), and the U.S. Army Corps of Engineers. This key step will provide additional capacity to the system. One possible way to help Puerto Rico immediately is to give the U.S. Army Corps of Engineers the authority to provide States and territories with temporary assistance to stabilize their electrical grids, including assistance through the provision of temporary electricity generation and assistance with equipment. As this Committee is aware, after Hurricane Fiona, the U.S. Army Corps of Engineers installed 17 generators in Palo Seco and San Juan and those generators collectively produced 350 megawatts of power on the island, providing enough power to meet the needs of 100,000 homes.

Second, Genera's contract ensures that our priorities are aligned with Puerto Rico's. Our fee structure largely relies on a 50/50 share with the Government of Puerto Rico in savings and cost efficiencies generated. We agreed to this because we are comfortable with a contract that is predominantly based on performance.

Third, Genera appreciates and supports Puerto Rico's transition to renewable energy with the projected influx of federal funding, an aligned public policy, and the commitment of engaged public and private stakeholders. In support of this essential transition, we treat the task of retiring and decommissioning antiquated power plants as they are replaced by renewables as a key component of our responsibility, adhering to the approved Integrated Resource Plan. We look forward to working closely with the Puerto Rico Energy Bureau to ensure that there are adequate generation resources available and that plants are retired responsibly.

Supporting, and being part of, Puerto Rico's transition to renewables, is one of the main reasons why we founded Genera. We look forward to working closely with all the stakeholders involved to ensure this transition is done efficiently and effectively.

Last, but certainly not least, having an energy business in Puerto Rico and working closely with PREPA plant employees over the last several years, we have come to recognize the invaluable talent and dedication of PREPA's plant operators. They work incredibly hard and ensure that Puerto Rico's legacy power plants continue to operate.

Finally, I want to reiterate that we understand just how important this undertaking is, to provide an essential service to the Puerto Rican people, and Genera

is committed to continually improving the limited set of assets under its control. But this alone will not be enough to achieve the broader system results that the Island needs and consumers deserve. With assistance from FEMA and the U.S. Army Corps of Engineers on temporary supplemental generation projects, we can quickly improve the resiliency and redundancy of Puerto Rico's electric grid, to ensure that we can bridge the gap between the current fleet and the future of reliable, affordable, and clean energy generation resources that Genera is working towards.

We look forward to building a meaningful relationship with you and a brighter future for the People of Puerto Rico. We are confident we can work together to ensure that this is a successful energy system transformation we can all be proud of playing a role in.

QUESTIONS SUBMITTED FOR THE RECORD TO MR. BRANNEN MCELMURRAY, CHIEF EXECUTIVE OFFICER, GENERA PR LLC, SAN JUAN, PUERTO RICO

Mr. McElmurray did not submit responses to the Committee by the appropriate deadline for inclusion in the printed record.

Questions Submitted by Representative Westerman

Question 1. From your perspective, what are the key reasons for the continued blackouts in Puerto Rico and what is your recommendation for addressing these challenges and for ensuring that Puerto Rico has access to reliable and resilient energy?

Question 2. Of the $1.4 billion capital budget spent by LUMA in 2021, $1.1 billion was federal funding while only $300 million was from non-federal funding. While the federal government has made commitments to assist with the recovery of Puerto Rico's infrastructure after it experienced a devastating series of hurricanes, we can all agree that the ultimate goal is to have a reliable and resilient electrical grid operated by private utilities for the long-term.

2a) How does Genera PR plan to decrease their reliance on federal funds to operate and maintain Puerto Rico's electrical grid? Do you see a day when Genera PR can perform their operations without injections of taxpayer dollars, and what needs to be done to achieve that goal?

Question 3. Puerto Rico currently pays among the highest electricity rates in the nation. Genera says it is committed to reducing electricity generation costs in Puerto Rico. What is Genera currently doing, and what actions is it planning to take in the future, to lower generation costs in Puerto Rico?

Question 4. Electrical generation redundancy ensures that if own power source fails, then there will be a backup to ensure that there are no disruptions in power. It is therefore important for an electric utility to create redundancies in order to reduce the risk of outages.

4a) How redundant is Puerto Rico's electrical generation system? And is it up to industry standard?

4b) What is Genera doing to increase redundancy for the short and long term? And how will it impact the frequency of outages?

Questions Submitted by Representative Grijalva

Question 1. At an investors meeting held earlier this year, you stated that Puerto Rico's energy future will be "powered by natural gas supplemented by solar and batteries." This is in direct opposition to Puerto Rico's policy to rapidly phase out fossil fuels and reach 100% generation from renewables by 2050. Why would Genera tell its investors one thing and its customers the opposite?

Question 2. In the hearing you indicated you do not think Puerto Rico will be able to meet its next interim renewable energy goal of 60% by 2040. Please explain why in detail, including why you think the Department of Energy PR100 study, which concluded that Puerto Rico can reach its renewable energy goals with appropriate investments and system upgrades, is wrong.

Question 3. According to generation indicators from June 2024, a quarter of the Puerto Rico's generation fleet is offline. Timelines provided to the Committee last year projected repairs to units at the Palo Seco, Aguirre, Costa Sur, and San Juan plants would be completed by May of this year. This maintenance plan was expected to increase generation capacity to over 2800 MW. The Aguirre plant alone should be 900 MW of power at a time, which would be enough to cover the generation shortfall. What is the status of these repairs? Why is Genera asking taxpayers or ratepayers to pay for new temporary fossil fuel infrastructure instead of completing its contractual obligations to repair these facilities?

Question 4. FEMA has obligated $745 million for Genera to install Battery Energy Storage Systems (BESS) and Peaking Units in Cambalache, Vega Baja, Palo Seco, San Juan, Yabucoa, Aguirre, and Costa Sur. When will these systems be fully implemented?

Question 5. New Fortress Energy, Genera's parent company, provides Puerto Rico with most of its natural gas. The New Fortress LNG import terminal, which is in the heavily populated San Juan Bay, was built without FERC's prior environmental, safety, and Environmental Justice evaluation and without a FERC-approved Emergency Response Plan (ERP). This spring, the Army Corps also began a dredging project to open the San Juan Bay for larger tankers to reach the LNG terminal, despite concerns about the potential harm to wildlife and humans. Democratic Members wrote to FERC and the Army Corps to highlight these concerns and uplift requests from local stakeholders for more transparency and public engagement.

5a) What is the status of New Fortress's compliance with FERC's requirements for the San Juan Bay terminal?

5b) Will you commit to working with New Fortress to ensure requirements for public engagement and emergency planning are met?

Question 6. The dredging of San Juan Bay to make room for larger LNG tankers, which is funded by the Army Corp of Engineers, will presumably save money on LNG shipping. When will ratepayers see that savings reflected on their bill and how much will their bill go down, on average?

Question 7. The new LNG terminal on San Juan Bay will presumably save money on LNG shipping and processing. When will ratepayers see that savings reflected on their bill and how much will their bill go down, on average?

Questions Submitted by Representative Velázquez

Question 1. According to data published on LUMA's website, as of September 26th, the Aguirre Combined Cycle Power Plant was out of service. How long has this been the case? What is the schedule for providing adequate maintenance to this plant, and have there been any issues in performing such maintenance?

Question 2. When asked about Aguirre's status, you mentioned that Genera's Projects to Replace Critical Components and Improve Fuel Efficiency would address the issue. Can you provide information on the progress of these projects, and how do you plan to keep Congress and the public informed?

Question 3. In an environment with a significant generation deficiency, how do you plan to responsibly decommission power plants? How are you balancing the legal requirement to decommission plants with the current need for generation?

Question 4. In July 2024, Genera PR delivered a "Stabilization Plan for the Electricity System" to the Puerto Rico Energy Bureau (NEPR), which included a project to install supplementary generating units adding 565 megawatts (MW) to the fleet. How has this project progressed, and how does it represent savings for the people of Puerto Rico?

Ms. HAGEMAN. Thank you.

The Chair will now recognize Members for 5 minutes of questioning.

My questions are first going to be directed to Mr. Saca and Mr. McElmurray. LUMA took over operations and maintenance of PREPA's transmission and distribution system in 2021. And

Genera took over the operation and maintenance of PREPA's thermal generation assets in 2023.

Starting with you, Mr. Saca, would you please describe the challenges your respective companies inherited from PREPA?

Mr. SACA. The challenges are many. First of all, it is an aging system that is on the average 32 years older than the average system. That means that replacing that equipment on a yearly basis, on a daily basis, is a very important matter, and it is actually still the cause of many of the outages that we have today which is, you know, failing equipment. That is one.

Another one is vegetation. Vegetation is, in the short term, the No. 1 problem that we have to reduce outages. That is, more than 50 percent of outages come from vegetation. The challenge with that is that we have 16,000 miles of vegetation that has to be cleared, 16,000 miles. I think you can go around the Earth about two thirds. I mean, it is just a massive undertaking.

The interesting part of this is that the rights-of-way are owned by PREPA. And we estimate that this will take 3 years to do, in other words the clearing. And I want to make sure that we understand clearing. We are talking about having the clearing of all of the vegetation under the lines. And that is so important, so that when there is wind and when there is rain, it will not get impacted. And 3 years is a long time.

I was there for Maria. The people of Puerto Rico lost patience after Maria. The people of Puerto Rico now have lost tolerance for what is going on for so many years.

So, vegetation clearing is most important. And we can have a more deep discussion——

Ms. HAGEMAN. I am going to follow up with you on that particular issue. But Mr. McElmurray, if you would just please very briefly describe some of the challenges that you inherited from PREPA?

Mr. MCELMURRAY. Yes, ma'am. First of all, thank you, Congresswoman, for your question. And first, I want to acknowledge how difficult it is to be without electricity. The practical aspect of this cannot be overlooked. Food spoils, medicine goes bad, kids cannot go to school, businesses do not work. It is an intolerable situation. And I think in modern life, it is one of the worst things that can happen.

With respect to your question, I would say there are three things. First of all is age. Just for context, the Puerto Rico electrical system today relies on power plants that were built before this country put a man on the moon. So, we are relying on a set of equipment that is far beyond its useful life.

The age of the generation fleet is over 40 years, which means essentially it was built in the first term of Ronald Reagan, given the forum we are in today. And you see degradation, fatigue, cracks, corrosion, and obsolete tech that are all the contributors to lack of availability.

The second thing is lack of capital investment. It is one thing to have old stuff. It is a second thing not to maintain it. Because of the financial issues and the choices that have been made over the last 20 to 25 years, there has been a lack of maintenance into these old facilities, which contributes just to the accelerated decline. And

then the third is the effects of renewables. Renewables are an amazing technology. I have three children. I hope one day——

Ms. HAGEMAN. Terribly expensive and terribly inefficient as well.

Mr. MCELMURRAY. And hopefully one day, given the public policy of Puerto Rico, that is where the grid goes.

But I would say that, given the technology that exists, those renewables put an incredible amount of stress on the type of technology that is installed. So, not only is it old, but it is the wrong type of technology, and it has not been maintained.

So, those are the three contributing factors that really get to the point, which is the availability of reliable generation is not where it needs to be. And the only way to really address the problem is to create additional reliable generation.

Ms. HAGEMAN. One of the things that I heard yesterday from everyone that I visited within my office are the challenges associated with red tape. For example, NEPA and having to comply with NEPA and some of the historical preservation requirements that you have. Would every one of you agree that NEPA and the historical preservation obligations that you have, have been one of the primary challenges associated with providing reliable and affordable electricity to the Puerto Rican citizens? Yes?

Mr. LABOY RIVERA. Yes.

Ms. HAGEMAN. You would all agree with that?

Mr. TORRES MIRANDA. An absolute yes.

Ms. HAGEMAN. OK. So, one of the things we need to look at is whether we need to make some fundamental changes to NEPA and the historical preservation, or we are going to continue being unable to provide electricity to the citizens of Puerto Rico; is that correct?

Mr. LABOY RIVERA. Yes.

Ms. HAGEMAN. OK, thank you.

With that, I am going to call on Mr. Torres for 5 minutes of questioning. Thank you.

Mr. TORRES MIRANDA. Thank you. The people of Puerto Rico have been deprived of affordable and reliable energy to an extent on a scale and at a length that would be tolerated nowhere else in the United States, nowhere else. Puerto Rico is in a state of emergency.

My first question for Genera is what can be done immediately to generate more power for Puerto Rico and to prevent more outages?

Mr. MCELMURRAY. Thank you, Congressman, for your question. To your point, the people in Washington, DC can expect to be without power for 1 day in 10 years. The people in Puerto Rico can expect to be without power for 2 days every month.

Mr. TORRES MIRANDA. We know the problem. What can be done immediately to solve the problem?

Mr. MCELMURRAY. From Genera's perspective, we believe that what can be done now is we need to install 560 megawatts of temporary generation that is the same type of project that was done by FEMA to install the 350 megawatts. With 560 megawatts of additional generation, we believe that provides enough capacity to get the load loss day down to acceptable standards.

Mr. TORRES MIRANDA. And how long would that take?

Mr. MCELMURRAY. The Army Corps has just done this project and took them 120 days to install those power plants. There is an Army Corps contract available today that can be activated. So, I think it is fair to say that in 120 days from the word go, you could implement such a solution.

Mr. TORRES MIRANDA. OK, is there anything else?

Mr. MCELMURRAY. That is it.

Mr. TORRES MIRANDA. OK. Most of the outages in Puerto Rico may be attributable to vegetation. LUMA, how long will it take to clear the vegetation?

Mr. SACA. At this point, we are estimating 3 years and possibly more. Unfortunately.

Mr. TORRES MIRANDA. And of the 3 years, how much of the 3 years is the physical process of vegetation clearance and how much is the process of regulatory approval?

Mr. SACA. The regulatory approval and especially on the environmental side is at least 1 year of that.

Mr. TORRES MIRANDA. So, of the 3 years, one relates to regulatory approval?

Mr. SACA. At least.

Mr. TORRES MIRANDA. The regulatory approval slows down the process of vegetation clearance by 50 percent.

Mr. SACA. Yes.

Mr. TORRES MIRANDA. And I just feel like the fact that we are allowing red tape to be prioritized over the energy needs of the people on the island to be an absurdity. And it would be comical if it were not so serious and not so dangerous.

And the vegetation clearance could be delayed not only by regulatory approvals but also by environmental review?

Mr. SACA. That is correct. If I may be blunt with this Committee, the No. 1 thing that you can do is provide a waiver on very few things. Because it is just what the priorities are. One of them is vegetation.

Mr. TORRES MIRANDA. I am asking about environmental review. So, there is an environmental impact statement and an environmental assessment. How much longer would the process be with an environmental assessment?

Mr. SACA. An environmental assessment can take 8 months to a year and more.

Mr. TORRES MIRANDA. And what about an environmental impact statement?

Mr. SACA. That could take up to 5 years.

Mr. TORRES MIRANDA. So, 3 plus 5 years. It could take 8 years to clear vegetation, which is central to preventing outages. Is that what you are telling me?

Mr. SACA. I know of cases where it could take 10 years. And in other case 20 years, from some people who have been in this for a while, in the industry.

Mr. TORRES MIRANDA. Again, I think that is outrageous. Removing vegetation should not be rocket science. Like if we know that vegetation is a disproportionate driver of outages, we should be creating an expedited process by which to remove it. I just think that is common sense.

What matters obviously is not only the quantity but also the quality of energy, the reliability of energy. One measure of reliability is the rate of forced outages.

Genera, what is the forced outage rate for Puerto Rico?

Mr. MCELMURRAY. Today, the forced outage rate on the existing assets is approximately 30 percent, which means a third of the time they are unexpectedly unavailable.

Mr. TORRES MIRANDA. And how does Puerto Rico's forced outage rate compare to forced outage rates elsewhere in the United States?

Mr. MCELMURRAY. Comparable to, let's say for example, it would be 3 percent. So, it is 10 times as severe.

Mr. TORRES MIRANDA. And much has been said about unreliable energy. I think the most unreliable energy is oil. What percentage of Puerto Rico's energy is coming from oil?

Mr. MCELMURRAY. Thank you, Congressman, for your question. Of the fleet that we manage, approximately 50 percent of the electricity is derived from oil.

Mr. TORRES MIRANDA. Whereas, Florida is?

Mr. MCELMURRAY. Probably less than 3 percent.

Mr. TORRES MIRANDA. Right. So, I think there is obviously a connection between Puerto Rico's dependency on oil and the high rate of forced outages.

Mr. MCELMURRAY. Absolutely. As well as the high rate of power prices, generally.

Ms. HAGEMAN. The Chair now recognizes Mr. LaMalfa for 5 minutes of questioning.

Mr. LAMALFA. Thank you, Madam Chair. I am pleased to see this hearing today. I did have a visit to Puerto Rico a while back and saw the facilities and we keep hearing the stories on the power shortages. In my area, we call them shutoffs. We frequent them a lot up in Northern California due to part of its forestry. So, I was very pleased that we were able to include in Chairman Westerman's Fix Our Forests bill an advancement on clearing around power lines, which you desperately need there, trying to streamline and make those projects simpler to do and help with what should be a simple thing and not be caught up in so much red tape.

So, I am very excited to see, having seen the generation facilities that PREPA has let go and is letting Genera and LUMA do the good work you are trying to do. So, I appreciate that and stand ready to help however I can as part of this Committee.

I would like to yield my time to my good friend and colleague, Mrs. González-Colón.

Mrs. GONZÁLEZ-COLÓN. Thank you, Congressman LaMalfa. And I want to say thank you, Chair Hageman, and Chairman Westerman, for holding this critical hearing regarding Puerto Rico.

And I will say critical, because the continuing instability of the electrical grid is a roadblock to our economic development on the island. And it is a threat to the public safety and to the mental and physical health of my constituents as well.

Even though the House has canceled votes today and Members have left for their districts, Mr. Chairman, you have demonstrated your commitment to the island and our residents by keeping this

hearing as scheduled, all while others are more interested in photo ops and a good headline.

I also want to thank Chair Hageman and my colleagues who are here today, even when votes are not called.

The Committee on Natural Resources is the Committee with jurisdiction over Puerto Rico and the rest of the U.S. territories. Refusing to testify at this hearing is a clear disregard not just to the Committee or to me as the only Member elected from the island in U.S. Congress, but also more important to my constituents.

We would have preferred to have Secretary Granholm here, who was repeatedly invited to this hearing, to have made herself available to provide testimony at this hearing, whose intent is to oversee the Federal funding that we in Congress have approved to several Federal agencies that are legally led by the Department of Energy, as the principal agency tasked with our nation's energy production and policies to execute an action plan that guarantees reliable, safe, and affordable electricity on the island.

And I am not the only one saying this. The President tasked Secretary Granholm as the lead, personally, in Puerto Rico a few months ago in Ponce. And I was there as well. Subsequently, I must think that her willful and misguided decision to be absent from this hearing has also caused the absences from the U.S. Department of Housing and the Urban Development and the Federal Emergency Management Agency, FEMA.

This is an issue that must be treated with all the seriousness and urgency that it deserves from all public officials tasked with this matter. And all the energy sector stakeholders as well.

I wish I could sit here and tell you it was an issue of the past, but it is not. I would be lying to you. Hurricane Maria in 2017 revealed the weak condition of the Puerto Rican energy infrastructure. That is the reality. We suffered months of power outages in rural areas for almost a year. The earthquakes in the southwest in 2020 reminded us of this tragic reality, as well as the daily outages my constituents continue to suffer.

The reality is that 7 years later, blackouts and brownouts still affect our everyday life. That is a reality on the island. The system can barely meet demand. And any spike brings it down.

This past month alone, we saw numerous outages affecting hundreds of thousands of customers for long hours and days on end. You cannot run a business like this. You cannot have a stable and safe home like this. Schools, hospitals, every sector on the island is effected by the instability of our electricity system.

Our legacy plants are still being run to their limits, and deferring maintenance, increasing the risk of failing before they can be replaced. The transmission and distribution system are still overloaded and missing basic redundancies in power lines. All that despite total obligations for recovery for almost $17 billion from different sources, including over $11 billion between FEMA and HUD for permanent rebuilding announced at the end of 2020.

However, almost 4 years later, the most optimistic estimate from the government of Puerto Rico shows the specific projects approved, construction staged barely add up to 10 percent of the permanent work under the obligations.

My time has expired this time, but I will continue to raise the voice of the people of Puerto Rico in this Committee. Chair, I yield back.

Ms. HAGEMAN. Thank you for your perspective as well. It is very important for this Committee.

The Chair now recognizes Representative Ocasio-Cortez for 5 minutes.

Ms. OCASIO-CORTEZ. Thank you very much, Chairman.

I found a lot of the opening statements today quite interesting. But there are also some claims as well that I think are important to clear up.

But before I go there, Mr. McElmurray, at an investors' meeting held earlier this year, you stated that Puerto Rico's energy future will be, "powered by natural gas, supplemented by solar and batteries." But that statement in and of itself is in direct opposition to standing Puerto Rican law, which has policy to phase out fossil fuels and reach 100 percent generation from renewables by 2050.

Why would Genera tell its investors something that is so in contradiction with Puerto Rican standing law?

Mr. MCELMURRAY. Well, first, Congresswoman, thank you very much for your question. Genera's mandate is very clear. We operate on an operation and maintenance agreement that has very prescribed responsibilities. The public policy and the rules, whether it be the IRP or other legislation in Puerto Rico is crystal clear about what the future will be.

From our perspective in Genera, one of our mandates is to reduce the cost of electricity. Today, with respect to the fleet that we operate, 50 percent of the electricity is generated by oil and 50 percent by gas. Of the dollars that it takes for us to operate the system——

Ms. OCASIO-CORTEZ. I apologize. I just have very limited time. Are you getting to a point where basically you are trying to drive at reducing costs as your rationale here?

Mr. MCELMURRAY. Thank you for your question. What I was attempting to point out is, from Genera's perspective, to reduce costs to ratepayers, we believe that we would like to see the oil go to zero and for controllable resources, we believe that those should be run on gas or, quite frankly, hydrogen in the future, should the infrastructure be there.

Ms. OCASIO-CORTEZ. Reclaiming my time, thank you. Would that be blue hydrogen or green hydrogen?

Mr. MCELMURRAY. I think what you would love to see is green hydrogen. To the extent that possibly the renewables may be available to produce it.

Ms. OCASIO-CORTEZ. I would like to reclaim my time. Apologies. I just have very limited allocation here.

I would like to make sure that we clarify something for the record. One of the things that we heard in our opening statements is this claim that solar panels are "highly ineffective against severe weather." I would like to submit to the record reporting from the *Washington Post* that actually outlines that against severe weather, solar panels actually do well in storms and, in fact, they outperform the existing T&D system associated with Puerto Rico's fossil fuel grid.

Ms. HAGEMAN. Without objection.

[The information follows:]

Can rooftop solar panels survive hurricanes?

Rooftop solar panels are surprisingly resilient to extreme weather, but wind and hail damage may not be covered under your home insurance policy.

The Washington Post, August 17, 2024 by Nicolas Rivero

https://www.washingtonpost.com/climate-solutions/2024/08/17/solar-panel-hurricane-hail-snow/

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Rooftop solar panels aren't cheap—so in an especially active hurricane season, they can create anxiety for homeowners who have a $20,000 investment strapped to their roofs.

Luckily, today's solar panels are surprisingly resilient in the face of almost all forms of extreme weather, according to Ben Delman, a spokesperson for Solar United Neighbors, a D.C.-based nonprofit that helps homeowners nationwide band together to bargain down the price of installing rooftop solar panels.

"Panels are made to withstand those elements," he said.

Here's what you should know about how solar panels hold up to hurricane winds, hail and snow.

Wind

Most solar panels are certified to withstand winds up to 140 mph, which is what you might encounter in a Category 4 hurricane or an EF-3 tornado. In Florida, the most hurricane-prone state in the country, many local building codes have even higher wind-speed standards of 160 mph or more.

But the strength of your rooftop solar panels depends on how well they have been installed. Contractors generally bolt metal racks onto a roof and attach panels to them using clips certified to hold on in high winds. A 2022 analysis of solar panel damage in the Caribbean during recent hurricanes found that racks, clips and bolts often failed to live up to their wind-speed certifications because of shoddy installations. The solution, according to the authors from Princeton and New York University, is better installations and closer inspections.

Still, Delman says panels can weather most storms and usually take damage only in catastrophic conditions. "Any storm that damages panels is already probably going to take your roof off," he said.

Hail

Most solar panels are protected by a layer of tempered glass, which is strong enough to fend off light hail. But hailstones bigger than an inch could damage internal components or crack the glass and let in dust and moisture, which make a solar panel produce less electricity.

In parts of the country that are prone to heavy hailstorms, especially northern Texas, Oklahoma and Kansas, it makes sense to look for hail-resistant solar panels with a UL 61730 rating from Underwriters Laboratories, a company that does product tests and gives safety ratings. To test solar panels for hail resistance, the company drops steel balls on them and shoots ice chunks at them out of a cannon. The panels that survive the barrage are certified to withstand hailstones as big as three inches.

Homeowners worried about hail can also buy covers for their solar panels and put them on the roof ahead of storms. On the bright side, Delman said, a tough solar panel can protect the roof below from hail damage.

Snow

Snow generally won't damage solar panels, but a blanket of snow will block sunlight and stop panels from producing electricity. Usually, the panels will shed snow faster than the rest of your roof, because they are installed at an angle, have smooth, glass surfaces and tend to stay warm.

"Most of the time, the panels will melt the snow right off," Delman said.

Homeowners should be careful about falling snow, Delman added. When it slides off in big chunks, it can damage your gutters, car or outdoor furniture, or injure

people walking below. To keep that from happening, he recommends installing a snow guard—basically, a railing that catches snow at the edge of your roof, where it will gradually melt.

Blizzards that dump multiple feet of snow could put enough weight onto rooftop panels to create small cracks in the glass or warp the metal racks that hold them in place, according to the U.S. Energy Department. But experts say that even in those conditions, you should just let the snow melt off, because climbing on the roof to try to clear the snow yourself could be dangerous.

Are solar panels covered by home insurance?

In most cases, if a set of solar panels is attached to your roof, it will be covered by your home insurance policy. If your panels are mounted to the ground, a carport or another structure on your property, they may fall under your policy's "other structures" coverage. Some policies won't cover solar panels damaged by wind or hail.

You should call your insurer before disaster strikes to ask whether your panels are covered.

Since solar panels raise your property value, you may have to raise your coverage limit, which could mean higher monthly premiums. Delman said the premium hikes shouldn't be huge—maybe a few percentage points higher than your existing bill.

Ms. OCASIO-CORTEZ. Thank you very much.

I think it is also important to note here that we have an existing contract with LUMA in Puerto Rico. As we move on here, Mr. Saca, LUMA's contract began in 2020; is that correct? Negotiations began in 2020?

Mr. SACA. LUMA started operations in June 2021.

Ms. OCASIO-CORTEZ. 2021. Negotiations started in 2020 and it was signed in 2021?

Mr. SACA. The operations started in June 2021, that is correct.

Ms. OCASIO-CORTEZ. That was under then Governor Rossello?

Mr. SACA. I believe so, yes.

Ms. OCASIO-CORTEZ. The contract was extended in 2022?

Mr. SACA. What has happened is that one of the important items which hurts Puerto Rico in a major way today, and especially the consumer, is that PREPA is still not out of bankruptcy. So, it was agreed that the contract would not officially start until PREPA exits bankruptcy, which was scheduled to have happened by today. So, there is a temporary contract. I do not know the exact details of how that was done because I was not there yet. But the contract actually begins when PREPA exits bankruptcy.

Ms. OCASIO-CORTEZ. And to your estimation, is that an indefinite period at this point?

Mr. SACA. My understanding is that it will be at least one more year before that happens. And one of the things this Committee really needs to understand and for all of us to be on the same page, as the system requires more investment, PREPA is limited in going out to get financing, so the customers' bill will not go up. Because a lot of the investment that should be taking place right now on the operations side, let's leave on the side FEMA funding, the utility is not able to do it because it has not exited bankruptcy, and that has a huge impact on our ability to execute and on our ability to go out and get financing so that the ratepayers' money is not——

Ms. OCASIO-CORTEZ. I apologize. Just as a detail clarification, so your assertion here is that the LUMA contract has not functionally began because PREPA has not yet exited bankruptcy?

Mr. SACA. It is one of the requirements in this temporary contract that the actual agreement does not begin until they exit bankruptcy, that is correct.

Ms. OCASIO-CORTEZ. I yield back to the Chair.

Ms. HAGEMAN. Thank you. The Chair now recognizes Chairman Westerman for 5 minutes of questioning.

Mr. WESTERMAN. Thank you, Chair Hageman, and thank you to the witnesses.

Mr. Miranda, I believe you mentioned that one half of the power outages are caused by vegetation. I would associate myself with many of the questions from Mr. Torres.

Mr. Saca, how many acres of right-of-ways have been cleared in the past 5 years?

Mr. SACA. Since LUMA started in June 2021, we had cleared 5,000 miles of vegetation with the operating budget for the transmission and distribution system. I make the distinction because this has nothing to do with the clearing project that FEMA has approved, which is critical for the immediate reduction of outages in Puerto Rico.

We, LUMA, on a daily basis, are continuing to be as efficient and as effective as we can in clearing vegetation. So, the answer to your question is 5,000 miles.

Mr. WESTERMAN. And you have 16,000 miles to go?

Mr. SACA. Yes, sir.

Mr. WESTERMAN. Does anybody on the panel disagree with the statement that maybe the low-hanging fruit, the most expedient thing we could do is clear that vegetation as quickly as possible? Does anybody see a problem with that?

Mr. SACA. Absolutely. It is the No. 1 ask, sir.

Mr. WESTERMAN. But you also testified that it could take up to 10 years with environmental reviews, if it ends up in an environmental impact statement. It seems to me that one of the most expedient things we could do would be to clear the way so that these power lines could be cleared very quickly and that vegetation removed.

Mr. McElmurray, you said 50 percent of the energy comes from oil. If that 50 percent of energy were replaced with natural gas, what would the reduction in carbon emissions be?

Mr. MCELMURRAY. Thank you, Congressman, for your question. From a carbon standpoint, you would cut it in half, which is critical. But I think from an economic standpoint, you would save a billion dollars.

Mr. WESTERMAN. So, we would save a billion dollars for ratepayers, and we reduce Puerto Rico's carbon footprint from oil generation by 50 percent. That sounds like a pretty good scenario to me.

Actually, in 2020, PREPA proposed replacing old fuel plants with new liquified natural gas terminals and more glass plants, but PREB rejected this proposal in favor of solar and grid projects.

Mr. Miranda, can you explain that?

Mr. TORRES MIRANDA. The IRP process, it is done by law, and it requires a process that has public participation and intervenors. And besides the modeling that was done, those were the modifications that came out and were approved. And no party actually

requested judicial or administrative reconsideration for that. So, that is why it has been maintained as is.

But besides the renewable project, the approved present IRP also allows a 300 megawatt natural gas project that would be a transition as the renewables would kick in. So, we do have a natural gas project for that.

Mr. WESTERMAN. You mentioned a 300 megawatt natural gas project. How large a slot would that take, Mr. McElmurray, to build a 300 megawatt natural gas facility?

Mr. MCELMURRAY. Thank you, Congressman. I apologize, I did not hear the question.

Mr. WESTERMAN. How many acres would it take approximately to build a 300 megawatt natural gas facility?

Mr. MCELMURRAY. Thank you for the question. From an acreage standpoint, probably a little under 30.

Mr. WESTERMAN. Thirty acres. So, you can put 300 megawatts in 30 acres. How many acres does it take to produce 1 megawatt of solar power? It is 10, I will help you out. So, if you wanted to get 300 megawatts of solar power, it takes 3,000 acres, versus 30 acres for a natural gas plant to produce the same amount.

Is constructable real estate easy to find on the island of Puerto Rico?

Mr. MCELMURRAY. Thank you for your question. With respect to the project that is being mentioned on this panel, the acreage has been identified. So, there would be a viable site to do that.

I think the issue, if I could just highlight it, would be one of time. To build a new combined cycle from the word go is probably a 36-month process in the U.S. mainland. Puerto Rico would probably be similar. In addition to that, you need time for financing as well as permit approvals. So, you are talking about potentially a process that could take up to 7 years.

So, once you decide that you want the infrastructure, the issue is not technological or capacity or in some ways financing, because you can figure that out. The issue is time. These resources take an incredibly long time to get online.

Mr. WESTERMAN. So, 3,000 acres for 300 megawatts of solar power, 30 acres for 300 megawatts of natural gas. And we are not going to see any trees or vegetation growing where those solar panels are installed. It seems like common sense has left the discussion when it comes to clearing right-of-ways, the type of energy generation. And $21 billion for the electric system in Puerto Rico, that seems outrageous compared to what states spend on their electric grids.

We have to find a better way to do this. And this hearing, I think, is an important step in that.

I yield back.

Ms. HAGEMAN. Thank you, Chairman Westerman, and I agree with you.

The Chair now recognizes the Ranking Member for 5 minutes of questioning.

Ms. VELÁZQUEZ. Thank you, Madam Chair, and thank you for holding this hearing.

Mr. Saca, is it true that Puerto Ricans experienced 4 additional hours of outages during Fiscal Year 2024, reflecting a 19 percent increase compared to the previous year?

Mr. SACA. I do not have the exact number, but certainly the outages are real, correct.

Ms. VELÁZQUEZ. OK. I guess that you have not checked the Puerto Rico Energy Bureau's resolution. Because that information is contained in the report.

Is it also true that for the same Fiscal Year, LUMA saw a 17 percent increase in profit compared to Fiscal Year 2021?

Mr. SACA. An increase in what? Sorry, I could not hear you.

Ms. VELÁZQUEZ. A 17 percent increase in profit compared to Fiscal Year 2021.

Mr. SACA. In profit?

Ms. VELÁZQUEZ. Yes.

Mr. SACA. We are the systems operator. It is important for everyone to understand that there is a fee that is paid. And as the systems operator, if we save a million dollars, this is not something that goes to the pocket of the owners of the grid.

Ms. VELÁZQUEZ. I guess we should have a conversation with Mr. Torres Miranda, Associate Commissioner, who can clarify on this information that has been made public by the Bureau.

Mr. Saca, is LUMA working with FEMA and Fish and Wildlife proactively to ensure vegetation clearing progresses quickly?

Mr. SACA. Not fast enough.

Ms. VELÁZQUEZ. We know that delays for environmental assessment and permits are often because agencies lack staff and resources. Would it be beneficial if Congress gave more resources?

Mr. SACA. A hundred percent. And I will go further than that. This is a huge emergency in Puerto Rico. And the No. 1 thing that the Federal Government could do is to provide some type of waiver responsibly so that we can do a safe job at accelerating. This is the No. 1 short-term action that could be taken. Because at this point, and I will be happy to read to you the time——

Ms. VELÁZQUEZ. Reclaiming my time, what I am trying to say is we cannot expect for the Federal agencies to do the work at the speed that the people in Puerto Rico deserve when their budget has been cut dramatically. So, we cannot expect more with less. That is the point that I am trying to make here.

Mr. Saca, I have surveys that your company spends over $200 million a year on employees seconded from companies that are part from LUMA's consortium. Twenty percent of these funds are used for lavish hotel stays, allocation for themselves and their spouses. How can LUMA justify this exorbitant dollar amount while everyday Puerto Ricans have to almost weekly throw away their food from the fridge due to the constant outages?

Mr. SACA. In order to address the complex and massive challenge that LUMA faces as a result of everything that we have just discussed, we have personnel from inside of Puerto Rico and from outside of Puerto Rico that are necessary for the transformation. It is important to understand——

Ms. VELÁZQUEZ. OK, you are not going to answer my question. Madam Chair, I would like to ask unanimous consent to enter a letter from PREPA into the record.

Ms. HAGEMAN. Without objection.
[The information follows:]

GOVERNMENT OF PUERTO RICO
Puerto Rico Electric Power Authority

June 27, 2024

Mr. Robert F. Mujica Jr., Executive Director
Financial Oversight and Management Board for Puerto Rico
PO Box 192018
San Juan, Puerto Rico 00919-2018

Re: PREPA's proposed alternatives to cover the difference between PREPA's FY24 certified budgets and PREPA's FY25 proposed budgets

Dear Mr. Mujica:

On June 13th, 2024, the Puerto Rico Electric Power Authority ("PREPA") notified its budget proposals to the Financial Oversight and Management Board for Puerto Rico ("Oversight Board") pertaining to the fiscal year 2025 ("FY25") for its holding company, and subsidiary PREPA Property Co, LLC (jointly, for budgetary purposes, "HoldCo"), and its other subsidiary PREPA HydroCo LLC ("HydroCo"). In summary, PREPA proposes a budget of $62.634M for HoldCo and a budget of $26.175M for HydroCo (jointly, the "FY25 Proposed Budgets"). PREPA emphasized that no rate increase will be necessary to fund either its proposed budgets, or the budget proposals of the private operators, as all necessary expenses can be covered through an efficient and fair redistribution of the budget allocation made by the Puerto Rico Public-Private Partnerships Authority ("P3A").

On June 24th, 2024, the Oversight Board notified the Governor of Puerto Rico, Honorable Pedro R. Pierluisi Urrutia, and PREPA a Notice of Violation pursuant to Section 202(c)(1)(B) of the Puerto Rico Oversight, Management, and Economic Stability Act ("PROMESA"). On behalf of the Governor of Puerto Rico, PREPA notified the Oversight Board with its response to the Notice of Violation on June 26th, 2024, whereby it reaffirmed its budget proposals of $62.634M for HoldCo and $26.175M for HydroCo. PREPA explained that: (a) its budget proposals had been meticulously prepared using the "bottom-up" methodology; (b) all budgetary requests are substantiated and correspond to each department's essential needs; (c) the amounts sought are the minimum necessary for PREPA to perform its basic functions and obligations; and (d) any reductions will jeopardize PREPA's basic operations and compliance with its legal obligations.

As the Oversight Board is aware, the difference between the FY24 HoldCo and HydroCo budgets certified by the Oversight Board and PREPA's FY25 Proposed Budgets for HoldCo and HydroCo is $36.4M. PREPA reaffirms that no rate increase will be necessary to fund either its FY25 Proposed budgets. In support of its position, PREPA hereby identifies areas where LUMA expends exorbitant amounts of money without any "demonstrated need" or demonstrated benefit for the people of Puerto Rico. Budgetary cuts in these areas will not only make available sufficient funds to cover the difference between PREPA's FY24 certified budgets and PREPA's FY25 Proposed Budgets, but will also reduce unnecessary spending of rate-payers dollars.

A. LUMA's Seconded Employees Program

Despite LUMA's resistance to disclose any information to PREPA on this matter, PREPA ha discovered that LUMA spends over $200M on employees seconded from the companies that comprise the LUMA consortium: the Canada firm ATCO and the U.S. based companies Quanta Services Inc. and IEM ("Seconded Employees Program" or "Seconded Employees"). The Seconded Program, funded by rate-payers, does not create jobs for the people of Puerto Rico, who are equally or more skilled in maintaining and operating the T&D Systems. The salaries, wages, and benefits paid to the Seconded Employees far exceed those of local employees. Moreover, 20% of the total allocation for the Seconded Program is used to cover miscellaneous expenses such as plane tickets, hotel stays, and car rentals for the Seconded Employees and their spouses. These lavish expenses are unjustified and unnecessary, benefiting only the LUMA consortium rather than the people of Puerto Rico. Additionally, PREPA has identified that LUMA spends exorbitant amounts of money on publicity and marketing, without any proven benefit for rate-payers.

PREPA submits that the $36.4M variance between the FY24 and FY25 budgets for HoldCo and HydroCo can be covered by reducing the amounts authorized in the P3A's Budget Allocation for LUMA's Seconded Employees Program, as well as for its marketing and publicity programs. PREPA further requests the Oversight Board to investigate LUMA's Seconded Employees Program to determine whether said program is necessary, and whether the salaries, wages, and benefits paid to the Seconded Employees are reasonable.

B. The P3A's Budget Allocation should be redistributed, as the severe liquidity shortfall is driven solely by LUMA's mismanagement and resulting backlog of over $550M in delayed reimbursements and working capital advances

The Budget Allocation concluded that the proper allocation of the Projected Net Available Funds Allocation Rates would be as follows: GridCo 65.2%, Generation 31.8% and HoldCo 3.0%. With regards to the Generation Budget, P3A determined that a 95.4%–4.6%, Genco-HydroCo allocation was reasonable and appropriate for FY2025. For the $89.655M of total projected Other Income for FY2025, the P3A adopted LUMA's recommendation and allocated it as follows: (i) $35.948M attributable to all entities (i.e., GridCo, Generation and HoldCo); (ii) $53.011M attributable to GridCo; and (iii) $0.697M attributable to Generation (i.e., Genco and HydroCo).

Additionally, the P3A identified $74.741M in additional funds for the FY2025 Budget, allocated as follows: $67.655M allocated to all entities using the approved Allocation Factors; $3.421M allocated directly to GenCo/GeneraPR; $165K allocated directly to HydroCo/PREPA; and $3.5M allocated directly to HoldCo/PREPA for its FY2024 audited financial statements. Based on the foregoing, the P3A approved a total budget allocation for HoldCo in the amount of $33.038M and a total budget allocation for HydroCo in the amount of $14.527M.

The P3A determination on Other Income is either internally inconsistent or poorly reasoned and explained. On page 3 of the letter, P3A states:

> It is a rate review principle to align costs with cost causation. Some of the revenue collected through sources other than base rates corresponds to activities attributable to specific entities (e.g., late payment charges, which is a customer service activity). As such, these entities should benefit from the revenue these activities bring. **On the other hand, in those instances in which a non-base rate revenue cannot be attributable to a specific entity, such revenue should be allocated to all entitles (e.g., interest from the Operating, Construction and Sinking Funds)**. (Emphasis added).

Despite P3A's clear statement that Interest Income from Operating, Construction, and Sinking Funds ("Interest Income") should not be attributable to a specific entity, the result of P3A's determination allocates more than half of PREPA's Interest Income to LUMA. Given that the $40.1M of interest income comes from the accounts of PREPA, the Owner, it should be attributable to PREPA's operating entity budgets and used to address the severe and growing shortfall in PREPA's liquidity resulting from LUMA's backlog of over $550M in delayed reimbursements and working capital advances for federally funded projects.

Specifically, between LUMA's Interim Period Service Commencement Date through June 2024, LUMA has expended more than $950M of federally funded CapEx but obtained only $451M in Federal Emergency Management Agency ("FEMA") reimbursements and Working Capital Advances ("WCA"), resulting in a net negative liquidity Impact to PREPA of over $550M through Q3 2024. Unconscionably, LUMA has not been required to correct its glaring inefficiencies. Instead, PREPA has been forced to transfer over $445.4M from its restricted federal funds account to compensate for LUMA's Inefficiencies. See Annex A—Status Update on LUMA Federal Funding and Liquidity Overview and Analysis of Service Account Funding. LUMA's unjustified overspending, along with its inability to generate sufficient revenues either from its collection efforts for power services or its endeavors to obtain reimbursements from the federally funded T&D projects it oversees is simply unsustainable.[1] Despite PREPA's repeated warnings on the unfeasibility of LUMA's *modus operandis* and invitations to discuss solutions, LUMA has taken no action whatsoever to address this dire problem. Conversely,

[1] The P3A has also concluded that LUMA's unjustified overspending, along with its inability to generate sufficient revenues either from its collection efforts for power services or its endeavors to obtain reimbursements from the federally funded T&D projects it oversees, is unsustainable. See Annex B.

with drastically less economic and human resources, PREPA has outshined LUMA In each reimbursement category. Between January 2021 and May 2024, LUMA only obtained $130.5M in reimbursements for Category B—Emergency Measures, Category F—Permanent Work, and Category Z—Management Cost. In contrast, PREPA, with substantially much less resources, obtained a total of $1.2B in reimbursements. The table below compares reimbursements received by PREPA vis-à-vis reimbursements received by LUMA for disaster declarations applicable to LUMA under each of the above-mentioned categories during the period of January 2021 to May 2024.

Emergency Measures – Category B	PREPA	LUMA
Public Assistance 4671 – Hurricane Fiona	$ 68,981,525.07	$0
Permanent Work – Category F		
Public Assistance 4339 – Hurricane María	$460,620,540.00	$117,941,110.40
Hazard Mitigation Grant Program 4339 – Hurricane María	$5,319,641.87	$0
Management Cost – Category Z		
Public Assistance 4339 – Hurricane María	$49,012,020.50	$12,572,188.02
Public Assistance 4671 – Hurricane Fiona	$152,283.41	$0

It is important to note that LUMA's failure to generate sufficient revenues either from its collection efforts for power services or its endeavors to obtain reimbursements from the federally funded T&D projects it oversees has also hindered LUMA's capacity to perform the necessary repairments and maintenance of the T&D systems. Shockingly, LUMA has not made any attempt to solve this dire problem. Instead, it attempts to transfer the burden of its egregious inefficiency to the ratepayers by demanding a budgetary increase. The Oversight Board must categorically reject LUMA's request.

Considering the foregoing, PREPA moves the Oversight Board to revise the P3A's Budget Allocation and fully allocate the Interest Income to PREPA's operating entity budgets to address the severe and growing shortfall in PREPA's liquidity which, as explained, has been unilaterally caused by LUMA's inefficiency in obtaining federal reimbursements and WCA.

C. Conclusion

For the reasons set forth herein, PREPA moves the Oversight Board to revise and redistribute the P3A's Budget Allocation in an efficient and fair manner, so as to fully cover PREPA's budgetary needs for FY25 without having to resort to rate increases.

PREPA respectfully submits that both, the Energy Bureau of the Puerto Rico Public Service Regulatory Board ("Energy Bureau") and the Oversight Board have incorrectly minimized PREPA's responsibilities and role, following the commencement of the private operators. PREPA, particularly HoldCo, continues to have significant legal and regulatory obligations pursuant both to federal and state law. Further, the Operation and Maintenance Agreements with the private operators, along with recent mandates issued by both the Governor of Puerto Rico and the Energy Bureau in connection with the outage events reported during June 2024, confirm that PREPA plays a pivotal oversight role in its relationship with the private operators. Further, reducing PREPA's budgets and headcount would jeopardize PREPA's ability to properly oversee the private contractors when needed, leaving the Energy Bureau, the P3A and, ultimately, the people of Puerto Rico without its expert knowledge and insight.

PREPA remains available to discuss and provide further context in connection with its FY25 proposed budgets for HoldCo and HydroCo. PREPA remains steadfast in its commitment to continue leading the effort to provide better, cost-efficient, and reliable energy to the people of Puerto Rico. It is imperative that the Oversight Board recognizes the critical role PREPA plays and ensures that the budget allocations reflect the true operational needs of the organization. Failure to do so not only undermine PREPA's ability to fulfill its mandate, but also threatens the stability and reliability of Puerto Rico's entire electric infrastructure.

Cordially,

JOSUÉ A. COLÓN-ORTIZ,
Executive Director

Ms. VELÁZQUEZ. Mr. Saca, it is estimated that more than 5 gigawatts of solar capacity will be installed in Puerto Rico over the next 10 years, with only 8.8 percent coming from the utility scale segment. Do you consider the grid is equipped to absorb the growing number of households that will have solar and battery systems?

Mr. SACA. The answer is that it depends at the rate at which we are able to make progress in upgrading the grid.

Ms. VELÁZQUEZ. So, it is a yes or no?

Mr. SACA. With all due respect, ma'am, it is really not a yes or no answer. This is related specifically to how quickly we are able to upgrade the equipment, how quickly we are able to get reliability up.

Ms. VELÁZQUEZ. Thank you. Reclaiming my time, Mr. McElmurray, you answered a question to Mr. Torres saying that you need to install more temporary power plants in Puerto Rico to achieve more capacity. So, what is happening with this Aguirre plant? I checked today, and it is out of service.

Ms. HAGEMAN. You may go ahead and answer.

Mr. MCELMURRAY. Thank you, Congresswoman for your question. First let me say, Puerto Rican ratepayers and residents deserve better in terms of the reliability of the equipment. As to Aguirre, when I checked this morning coming into this hearing kind of on our operational system, I did see that they had an issue with one of the units. I would have to follow up to see exactly what happened after we walked out of here.

Ms. VELÁZQUEZ. It is out, right. Two hundred thousand people could get service out of that plant. Do you have any plan to have it functionally working? Is that part of your energy resiliency plans?

Mr. MCELMURRAY. Thank you for your question. One of the key strategies of Genera in the short term, which is something that can make an impact to Puerto Ricans today, not 10 years from now, is a critical component replacement program, which I think was mentioned on this panel, $126 million that is being invested in motors, pumps, boiler tubes and other items that routinely break.

The availability of Aguirre in 2022 was essentially zero. One of the big reasons that FEMA put in the program, it is a notoriously unreliable plant because of its age. But in terms of strategy, the most near-term strategy is to provide critical components and repairs to try to get the availability up.

Ms. VELÁZQUEZ. Will you submit to this Committee——

Ms. HAGEMAN. I am going to call on Representative Radewagen for 5 minutes of questioning.

Mrs. RADEWAGEN. Thank you, Madam Chairwoman, Ranking Member, and Vice Chairman González-Colón, for holding this hearing today. I wish to yield all of my time to Representative González-Colón.

Mrs. GONZÁLEZ-COLÓN. Thank you, my friend.

I have been hearing the questions of members of this Committee. I believe everybody here is on the same page in terms of the contract of LUMA has not been serving the people of Puerto Rico. You have 1 year of a transitional contract, and then it went into effect.

And meanwhile, the utility operators need to remember that you were contracted to provide better services and not excuses.

And what I see here is that the people of Puerto Rico already have it with LUMA. It has been a long time, and we have not seen any change. Actually worse.

Mr. Saca, you mentioned that waivers will speed up LUMA's work. To this date, what waivers have you already requested?

Mr. SACA. Specifically, as it relates to environmental. As you know——

Mrs. GONZÁLEZ-COLÓN. When did you submit those waivers?

Mr. SACA. We have not submitted——

Mrs. GONZÁLEZ-COLÓN. You have not submitted any waivers to any Federal or State agency?

Mr. SACA. Federal.

Mrs. GONZÁLEZ-COLÓN. But you did not?

Mr. SACA. We have not submitted a request for a waiver.

Mrs. GONZÁLEZ-COLÓN. You have not. So, you are asking for waivers here, but you have not submitted or requested any official waiver. And that is your answer.

What permits have LUMA requested from Federal agencies that are currently pending and when did LUMA request it?

Mr. SACA. At this point, we have submitted for pending obligation 217 projects. And LUMA continues on a daily basis to work with the different agencies——

Mrs. GONZÁLEZ-COLÓN. Which permits have you submitted already?

Mr. SACA. We have submitted multiple permits that are associated with each project.

Mrs. GONZÁLEZ-COLÓN. Madam Chair, I will ask the witness to submit to the Committee a list of the permits that LUMA has requested or filed during the term.

You have had 3 years, correct?

Mr. SACA. LUMA started June 2021.

Mrs. GONZÁLEZ-COLÓN. And it is 2024, so you do the math. You have been 3 years, correct?

Mr. SACA. Correct.

Mrs. GONZÁLEZ-COLÓN. And you told us here in 2021 that you were already ready on Day 1. But you were not. And I do not think you are going to be ready in a thousand years.

The reality here is that you have never begun your process in the island. I think just last month, you went to PREB to ask to have customers pay a rate increase to cover an upward revision on capital expenditures to $200 million from $110 million that the PREB had already approved. And I would ask you, Mr. Saca, exactly why should the customers give more money to an operator who is not delivering on what the people of Puerto Rico contracted you for?

Mr. SACA. The first obligation that LUMA received was in May 2022. Progress has been made since then. I have seven very specific items that I can mention. One is the——

Mrs. GONZÁLEZ-COLÓN. Why should the customers give you more money if you have not delivered?

Mr. SACA. I believe that as mentioned earlier, there is a need for investment on the operational side to keep up with reliability. That is a fact from an industry perspective. The fact that PREPA has

not exited bankruptcy is a huge problem because the people of Puerto Rico should not be paying for an increase, as it should be financed by going to the markets.

Mrs. GONZÁLEZ-COLÓN. Mr. Saca, to the questions of Ms. Ocasio-Cortez, you were saying that because PREPA is not out of the bankruptcy situation, you technically can do whatever you want. That was my impression of your answer.

So, how come LUMA is constantly going to PREB to ask for more? When you enter a contract not knowing what you really needed to operate? You knew the condition of the system; you knew the situation of PREPA. You knew the situation after the hurricanes. Do you misrepresent information you gave to the government of Puerto Rico about your liquidity and cash-flow to get the contract awarded?

Mr. SACA. I think it is very important for the people of Puerto Rico to understand one very specific simple fact. LUMA has not asked for a raise. This happens constantly that people are saying that LUMA has raised rates. Since LUMA started, it stayed with its commitment of not raising rates.

What happens is fuel costs change. LUMA has nothing to do with fuel costs, does not purchase fuel, does not benefit from that process.

LUMA has not raised rates one time. And as a matter of fact, the rates that you are talking about have also gone down seven times since LUMA has been there. Again, has nothing to do with LUMA. It has to do with the cost of fuel.

Mrs. GONZÁLEZ-COLÓN. Mr. Saca, do you misrepresent information you gave the government of Puerto Rico about your liquidity and cash-flow to get the contract awarded? Yes or no.

Mr. SACA. LUMA has not misrepresented any information provided to the government of Puerto Rico.

Mrs. GONZÁLEZ-COLÓN. My time expires, Madam Chair.

Ms. HAGEMAN. I am going to call on Mr. Stauber for 5 minutes of questions.

Mr. STAUBER. Thank you very much, Chairwoman Hageman.

Access to affordable and reliable electricity is something all Americans need, and something all Americans deserve. The increasing challenges that the people of Puerto Rico have faced in recent years are the result of mismanagement and lack of investing, spanning several decades, which has only been exacerbated by natural disasters of recent years.

I want to thank the Chairwoman for calling this hearing, as well as commend the leadership of my friend and colleague Representative González-Colón for her steadfast commitment to addressing these challenges on behalf of her constituents.

Accordingly, I want to yield the rest of my time to Representative González-Colón. Thank you.

Mrs. GONZÁLEZ-COLÓN. Thank you, Mr. Stauber.

One of my questions PREB. We know that on prior occasions, PREB has refused adjustments submitted by LUMA. Does the PREB reaffirm that the capital expenditure budget should be $110 million instead of the $200 million?

No, I am talking to PREB.

Mr. TORRES MIRANDA. Yes, can you repeat the question, please?

Mrs. GONZÁLEZ-COLÓN. Yes, you refused adjustments submitted by LUMA on prior occasions. And do you reaffirm that the capital expenditure budget should be $110 million instead of $200 million?

Mr. TORRES MIRANDA. Yes, we approved the budgets for all of the three entities, PREPA, Genera, and LUMA. And we make an evaluation of the projects and the line items and that is how we approve those projects.

Mrs. GONZÁLEZ-COLÓN. So, you believe it is $110 million instead of $200 million?

Mr. TORRES MIRANDA. Yes.

Mrs. GONZÁLEZ-COLÓN. OK. Do you believe it is appropriate that an operator who is not delivering on their end of the deal should continue to ask for rate increases?

Mr. TORRES MIRANDA. LUMA has not requested a rate increase. What they have requested is reconciliation of the fuel cost adjustment and the power purchase adjustment. That comes from Genera, the request of the fuel cost. And what we do is we analyze those requests and those documents and then we make a determination if they apply or do not apply.

Mrs. GONZÁLEZ-COLÓN. Do you or does your agency keep track of a timeline of LUMA's compliance or lack thereof with the Puerto Rico energy policy?

Mr. TORRES MIRANDA. Yes, we do keep track of what their compliance is with our orders that we issue.

Mrs. GONZÁLEZ-COLÓN. In the case of Puerto Rico, just to make the record clear, the Energy Information Agency statistics show that the Puerto Rico system average interruption duration index in 2020, under PREPA, because everybody is talking about PREPA, 3 years after Maria, was 1,243 minutes, the average interruption. And in 2023, under LUMA, another 3 years later, it was 1,448 minutes. It is over four times the national index, even for years with major disasters, and more than that before you took the administration of the grid. The same study shows that the system average interruption frequency index is about 7.8 minutes per customer per year, seven times the U.S. median.

Anybody in Puerto Rico will tell you their experience just in August.

And this is a question to you, Mr. Saca. Do you really believe that you are delivering the service that you were contracted to deliver? Yes or no?

Mr. SACA. I think it is important to put into context that——

Mrs. GONZÁLEZ-COLÓN. The context is, do you believe that you are delivering the service you were contracted for? Yes or no?

Mr. SACA. Progress is being made every day. We continue to address vegetation. We have installed automated devices.

Mrs. GONZÁLEZ-COLÓN. I will take that as a no. Because at least you are not meeting the consumers' expectation.

The question will be who are you accountable to? Who is supposed to keep and follow the metrics of your contract compliance?

Mr. SACA. LUMA is the most regulated utility that I know of in the entire United States. We have a contract obligation with——

Mrs. GONZÁLEZ-COLÓN. Who are you accountable to?

Mr. SACA. With P3A for the contract obligation, with the regulator, the PREB for any of the regulatory matters. In addition to

that, of course, there is the FOMB that is part of that process, and——

Mrs. GONZÁLEZ-COLÓN. So, those three are your bosses. They are supposed to be the ones with the power to make you comply. P3A, PREB, and FOMB.

Mr. SACA. Correct.

Mrs. GONZÁLEZ-COLÓN. And I think my time has expired, Madam Chair.

Ms. HAGEMAN. Well, I am going to call on Ms. González-Colón for her 5 minutes of questioning.

Mrs. GONZÁLEZ-COLÓN. Thank you.

Mr. Saca, the firm award price under FEMA or CDB that your company has submitted for approval, what total amount do they represent?

Mr. SACA. What we have submitted for approval?

Mrs. GONZÁLEZ-COLÓN. Yes.

Mr. SACA. We have submitted $12.3 billion in projects. Out of those, in execution or already completed is $2.3 billion, or about 18 percent of the $12.3 billion.

Mrs. GONZÁLEZ-COLÓN. How much has been approved by FEMA?

Mr. SACA. We have been reimbursed $173 million. We also have received $418 million of working capital advances.

Mrs. GONZÁLEZ-COLÓN. Yes, but that is another thing. So, you just received $173 million?

Mr. SACA. Yes, $173 million have been reimbursed.

Mrs. GONZÁLEZ-COLÓN. Reimbursed. And how much has been approved?

Mr. SACA. We have in obligations of about 171 projects obligated and approved.

Mrs. GONZÁLEZ-COLÓN. How much money have you been approved? If you do not have the data, please submit it——

Mr. SACA. $1.1 billion.

Mrs. GONZÁLEZ-COLÓN. $1.1 billion?

Mr. SACA. $1.1 billion, correct.

Mrs. GONZÁLEZ-COLÓN. So, you submitted $12.3 billion in projects, and you have only been approved $1.1 billion. How much has your company spent out of pocket?

Mr. SACA. We have spent $1.3 billion. We have $552 million spent pending obligation, another $352 million submitted in RFRs.

Mrs. GONZÁLEZ-COLÓN. How much actual expenditure has your company billed for you to obtain reimbursement?

Mr. SACA. We have incurred in costs $1.3 billion.

Mrs. GONZÁLEZ-COLÓN. So, you have not billed for the rest of the $11 billion that you asked for projects. How much has been actually paid out, the $173 million and the $100 million for capital expenditures?

Mr. SACA. I am sorry, what was the question?

Mrs. GONZÁLEZ-COLÓN. How much has actually been paid out?

Mr. SACA. OK. Out of the $1.3 billion of costs incurred, we have paid out to suppliers around a billion dollars.

Mrs. GONZÁLEZ-COLÓN. Mr. Laboy from COR3, do your numbers concede with their numbers?

Mr. LABOY RIVERA. No, some of the numbers are not necessarily the ones that we have.

Mrs. GONZÁLEZ-COLÓN. Can you clarify?

Mr. LABOY RIVERA. Yes. First, I need to recognize that there have been some improvements on the——

Mrs. GONZÁLEZ-COLÓN. That is not the question. I am asking you about the numbers.

Mr. LABOY RIVERA. Yes. So, far, FEMA has allocated $5.8 billion, total, for the electrical grid. Of those, the majority are for transmission and distribution, for engineering and architectural services, and also to purchase equipment in advance. Of that, like Mr. Saca said, 171 are related to LUMA, of which the majority have requested an advance of money related to the working capital advance.

Of the $300-plus million that LUMA has mentioned about requests for reimbursements, the vast majority are related to reconcile advances. So, it is only about $10 million actual numbers for new money to be reimbursed.

Mrs. GONZÁLEZ-COLÓN. Thank you.

Mr. Saca, we keep talking about vegetation clearing and we have had these discussions before. And LUMA repeatedly speaks about their $1.2 billion set aside for that from FEMA. But the reality is only $18 million has been approved, has it not?

Mr. SACA. We have one project obligated, which is around $18 million. There should be another five projects that will be obligated between now and the end of the year.

Mrs. GONZÁLEZ-COLÓN. But right now, today, just $18 million has been approved, has it not?

Mr. SACA. That is correct, for the first project, which is San Juan.

Mrs. GONZÁLEZ-COLÓN. So, from $1.2 billion that you are claiming FEMA approved, just $18 million has been approved.

Has LUMA obligated the $1.2 billion for clearing vegetation?

Mr. SACA. We only have one project obligated. We estimate that the total cost will be $1.2 billion. And just to remind everyone that the way it works is nothing is really approved by FEMA until you submit the documentation in order to be reimbursed.

Mrs. GONZÁLEZ-COLÓN. Before my time expires, when you contracted with Puerto Rico, you knew that we are a tropical island, I assume, and that on a tropical island, it rains almost every day. So, the vegetation will grow. And when you are saying you are going to be doing a clearing of the vegetation for 3 years, we are not taking into account the maintenance the system and the lines need to have in order not to have vegetation crossing the lines. $1.2 billion clearing vegetation, it is like once you cut the tree it is not going to grow again in a few weeks? On the island, that is not real.

So, again, I think the people of Puerto Rico have had it with you, your company. I have had it, too. I think LUMA should go.

Madam Chair.

Ms. HAGEMAN. Thank you. And the Chair now calls on Mr. Valadao for 5 minutes of questioning.

Mr. VALADAO. I would like to yield my time to Representative González-Colón to continue her line of questioning. Thank you.

Mrs. GONZÁLEZ-COLÓN. Thank you, Mr. Valadao.

A few minutes ago, my interpretation was that people from Genera were saying that we are having 50 percent oil and 50 percent LNG as production, and I need to correct the record. The

Energy Information Agency for 2022 said that 63 percent of the island generation is oil, 23 percent is gas, 8 percent is coal, and 6 percent renewables. That is the data of 2022. So, I just need to correct the record in terms of it is not 50 percent LNG and not 50 percent oil. Is that correct?

Mr. MCELMURRAY. Thank you for your question. I am very familiar with the stats that you are giving, so let's go with that. Just to clarify what I was speaking about was as to the 60 percent——

Mrs. GONZÁLEZ-COLÓN. Are those the numbers of 2022? The ones that I gave.

Mr. MCELMURRAY. Yes, that is correct.

Mrs. GONZÁLEZ-COLÓN. And in that, renewables 6 percent of the time, I believe 7 percent at this time, 2.8 percent are from photovoltaic power, 2.1 percent for hydro, and 1.75 percent wind. Is that correct? That is the composition of the renewables right now?

Mr. MCELMURRAY. Yes.

Mrs. GONZÁLEZ-COLÓN. OK. And you understand as well that the law in Puerto Rico, the 1919 Act, places some percentage of energy renewables goals for the year 2025, 2040, and 2050. For 2025, it says renewables should be 40 percent.

My question will be, with the current statistics on renewables, with 7 percent, is Puerto Rico going to meet the 40 percent goal for the next year, yes or no?

Mr. MCELMURRAY. Thank you for your question. I do not believe it will.

Mrs. GONZÁLEZ-COLÓN. OK. The law says as well that 60 percent of renewables should be reached to 2040. At the current percentage of 7 percent of renewables, do you believe that we are going to achieve the goal in 2040 of having 60 percent of renewables?

Mr. MCELMURRAY. I do not believe you will.

Mrs. GONZÁLEZ-COLÓN. My same question will be in the 2050, 100 percent of renewables, no. The answer is no.

I believe everybody here wants renewables. I want renewables as well. Everybody should move to cleaner energy for the sake of the island.

Most of the people who actually go to that goal of renewables transition with LNG to get there; is that correct?

Mr. MCELMURRAY. That is correct.

Mrs. GONZÁLEZ-COLÓN. How much can the people of Puerto Rico and Genera move to LNG in the next 3 to 4 years to get the maximum capacity of generation going from oil, from burning bunker sea oil to LNG? How much is really achievable in your perspective?

Mr. MCELMURRAY. Thank you for your question. I think in a situation where people are aligned and working together on sort of a common plan, in a 4-year period I believe that you can get rid of the diesel and the HFO that is being burned currently and that you will move to a situation where you can power the dispatchable generation on natural gas.

Mrs. GONZÁLEZ-COLÓN. How much will it take to construct a new plant, a new LNG plant in Puerto Rico? How long would it take, getting all the permitting, the filing? Let me rephrase my question. Have you submitted any permitting requests to any Federal or local agency for the construction of a new plant in Puerto Rico?

Mr. MCELMURRAY. Thank you for your question. We have submitted permit requests for the conversion of existing——

Mrs. GONZÁLEZ-COLÓN. Which one?

Mr. MCELMURRAY. Absolutely. What people would refer to as the megagens in Palo Seco, Mayaguez, and then Cambalache as well.

Mrs. GONZÁLEZ-COLÓN. Three. So, you submitted three: Cambalache, Mayaguez, and Palo Seco?

Mr. MCELMURRAY. That is correct. To the various authorities, PREB included, as well as the local permitting agencies.

Mrs. GONZÁLEZ-COLÓN. And the Federal agencies as well. When did you submit those requests?

Mr. MCELMURRAY. I do not have the exact dates in front of me, but I can get them to you. But in the past 4 months.

Mrs. GONZÁLEZ-COLÓN. In the past 4 months?

Mr. MCELMURRAY. That is correct.

Mrs. GONZÁLEZ-COLÓN. And how much is the average of construction, saying those permits were granted and approved, how much will it take the actual construction or conversion of those plants from burning sea oil to LNG?

Mr. MCELMURRAY. Thank you for your question.

With respect to the megagens, zero. So, if there were a piece of paper today from the regulatory authorities saying that it was OK to operate on natural gas, then tomorrow, you could have the megagens operate on natural gas and no longer burn diesel at approximately a $17 million savings per year.

Mrs. GONZÁLEZ-COLÓN. You are talking about the three plants, Cambalache, Mayaguez, and Palo Seco. So, if you are approved tomorrow, tomorrow those plants can be converted?

Mr. MCELMURRAY. Specifically, I was referring to the one at Palo Seco. With respect to Mayaguez and Cambalache, between the two, it is a 6-month process. For example, if you received the paper that you needed today, then in a 6-month period, all three would be done and the annual savings for that would be approximately $72 million a year to the ratepayers of Puerto Rico forever.

Ms. HAGEMAN. The Chair now recognizes Mr. Moylan for 5 minutes of questioning.

Mrs. GONZÁLEZ-COLÓN. Thank you, Madam Chair.

Mr. MOYLAN. Thank you, Madam Chair, Ranking Member. And I would also like to thank the Subcommittee for holding this important hearing. It is obvious and imperative that reliable, affordable energy is delivered to residents and territories.

The territories, as I have heard many times now today, often have a high cost of fuel, right? And the territories often face high cost and low reliability. And load shedding is an all-too-common experience both in Puerto Rico and in Guam as a territory. I want to also thank the panel for their questions that were answered for us.

But I think it is clear that, first off, we have to get rid of this red tape. Cut down the vegetation right away. Second, we have to go back to increasing the generation as soon as possible. And it is obvious we have to gasify as part of that of the electric grid through new LNG terminals and gas-fired generations, get that done as quickly as possible. And why? Because we are praying that

the next storm does not come. And unless we get this done right away, I do not know what is going to happen.

But I think it is important that we continue this conversation. And I would like to yield the balance of my time——

Ms. HAGEMAN. Would you yield just a minute or so to me?

Mr. MOYLAN. Yes, Madam Chair.

Ms. HAGEMAN. Thank you, Mr. Moylan.

I just have a question. Has the Biden-Harris moratorium on LNG exports had an impact on Puerto Rico? Were you aware that the Biden-Harris administration has imposed a moratorium on LNG exports from the United States? Were you aware of that?

Mrs. GONZÁLEZ-COLÓN. Madam Chair, if I may, Puerto Rico does not export LNG. We import.

Ms. HAGEMAN. We have talked about that. I am just asking if that moratorium has had an impact on Puerto Rico? No?

Mr. MCELMURRAY. Thank you for your question. I am happy to field that.

I think two important distinctions. One, I think any restriction of LNG exports from the United States, sort of by definition, increases the price of LNG in the market because there is less supply. So, in that respect, I think there is a negative impact.

I think the other impact that is sort of worth calling out is the Jones Act restriction that prevents U.S. LNG from ending up in Puerto Rico. At the current moment, there is no U.S. LNG that ends up in Puerto Rico, which I think also has a negative price impact to the ratepayers of Puerto Rico.

Ms. HAGEMAN. OK. But the price of LNG has gone up with this moratorium?

Mr. MCELMURRAY. I think it is fair to say that with less supply in the market, that the worldwide prices would be higher otherwise.

Ms. HAGEMAN. Thank you. I yield back to Mr. Moylan.

Mr. MOYLAN. And I yield to my colleague, Mrs. González-Colón.

Mrs. GONZÁLEZ-COLÓN. Thank you, Mr. Moylan.

We have been talking here, PREB and Genera, about the capacity of the generation on the island. Puerto Rico may face 18 to 24 months of being short of peak capacity reserve until the new installations are completed. Therefore, the island needs fast development of reliable generation capacity to meet the full demand now.

I know that additional mobile LNG units would be the fastest for short term. However, it is true they will have a lesser economy of scale. And this alternative also means to fast track the removal of one or more existing obsolete units and installing new technology units, integrated with batteries for stabilization and backup in the same footprint of the old units. And even when Puerto Rico may fast track its own permitting, this will require a Federal champion to clear hurdles from Federal regulations.

There are other options that are being explored. The P3A's authorities are evaluating a 300 megawatt project for LNG and hydrogen and flex fuel plant. And the Department of Energy's loan projects office has also supported an initiative for private sector utility scale storage and renewables for one of the 16 private generator sites.

How is this need being addressed and how do we not make the people of Puerto Rico wait for 2 years to have stable electricity? And this question is for Genera. Are there any plans that can be put into motion now, so we do not lack generation in the next months?

Mr. MCELMURRAY. Thank you for your question. I will start by saying the No. 1 issue that we talk about in Genera every day is how to increase reliable generation today. I think it is very clear how to do it long term, but how do you do it today?

So, I would say specifically, there is a tool available. The Army Corps has a $5 billion contract that they put in place specifically targeted at Puerto Rico, under which they are able to deploy fast power. The Army Corps also successfully did it in 2022 and 2023, 350 megawatts in a 120-day period.

I would note that one of the biggest reasons that it was so fast is because there was a high degree of coordination with the Federal agencies, in particular EPA and some of the other issues that we have been talking about today, to have a very streamlined process.

So, as a strategy matter, you can replicate the exact project that was done earlier, using an existing vehicle and existing mechanism with the same team, and you can potentially deploy 565 megawatts, which would cover the gap in capacity for a 24-month period until new resources were available.

Ms. HAGEMAN. The Chair now recognizes Representative Gimenez for 5 minutes of questioning.

Mr. GIMENEZ. Thank you, Madam Chair. My name is Carlos Gimenez. I represent Florida's 28th Congressional District, which is part of Miami and the Keys. And it is the closest congressional district on the continental United States to the island of Puerto Rico. I also represent about 70 percent Hispanics in my district, many of which come from the island. And I am here to support my dear friend Jenniffer González-Colón of Puerto Rico.

Puerto Rico is an essential part of the United States of America, and we are so proud of the countless contributions of the Puerto Rican people to our nation, and the island's strategic role as a gateway to the Caribbean and the region. The over 3 million U.S. citizens in Puerto Rico deserve reliable energy. It is why I support Congresswoman González-Colón's push for more Federal support and oversight of the island's electrical grid.

Disruptions in service cause harm to businesses, increase operating costs, and are costly for the thousands of families who have to rely on generators as a source of power.

We have allocated hundreds of millions of dollars to modernize and rebuild Puerto Rico's power grid in the aftermath of hurricanes, earthquakes, and natural disasters that have devastated the island in recent years.

The people of Puerto Rico are proud Americans, and America must be fully invested and committed to the successful economic development of the island. A reliable, modern, and sustainable power grid is a crucial part of it.

[Speaking Spanish.]

Thank you. And I yield the balance of my time to Mrs. González-Colón.

Mrs. GONZÁLEZ-COLÓN. Thank you, Mr. Gimenez, and thank you for always supporting Puerto Rico in all legislations.

I have a question for Mr. Saca. LUMA as a transmission and distribution operator must be a lead in developing any updates to the Integrated Resources Plan, which must be revised every 3 years. And this was due on June 28 of this year. But your company requested an extension to May 2025, and PREB conceded that extension to November 28, 2024 for the preliminary submission and February 28 of next year to complete the IRP.

My question, Mr. Saca, will be, when the last IRP was approved in 2021, it was known that it needed to be renewed in 2024. What is the excuse not to be ready for it?

Mr. SACA. Thank you for your question. The IRP is a process that requires quite a bit of data gathering, quite a bit of interaction with multiple stakeholders. And quite a bit of technology in order to be able to address a very complex situation, whether it is the generation aspect of it, the transmission and distribution system and how to make it more effective.

Along the way, we have found that it has been quite difficult to get all of the data to make sense and requires a bit more study.

Mrs. GONZÁLEZ-COLÓN. Even with the billions of dollars in contract to the PREB. So, what will be the consequences to LUMA if the deadline is not met?

Mr. TORRES MIRANDA. Last week, we had a technical conference to discuss the reasons why they cannot comply with that November 29 deadline. I cannot answer that question because right now we are deliberating our response to that.

Mrs. GONZÁLEZ-COLÓN. But what are the consequences of not complying with the deadline?

Mr. TORRES MIRANDA. It could be either fines for not complying with our order, and that would be the main consequence. And delaying, of course, the IRP process.

Mrs. GONZÁLEZ-COLÓN. Mr. Laboy, how much has PREPA and COR3 fronted from LUMA prior that must be recovered by FEMA?

Mr. LABOY RIVERA. So, far, we have disbursed about $1.3 billion of authorized money based on FEMA obligations.

Mrs. GONZÁLEZ-COLÓN. How much more is still pending to be recovered?

Mr. LABOY RIVERA. We can disburse based on two things. No. 1, FEMA obligating scopes of work that are submitted by LUMA and Genera. Once that happens, we have authorization to actually disburse.

Mrs. GONZÁLEZ-COLÓN. How much is still pending? You do not have numbers here? You can submit it to the Committee.

How much is left in terms of reserves?

Ms. HAGEMAN. I will allow the witness to answer, but then we need to wrap up.

Mr. LABOY RIVERA. OK, so for the things that we manage, we manage the Federal funds, right? FEMA has obligated $9.5 billion but duly authorized for construction and disbursements is $5.8 billion. Of that, we have advanced pretty much 26 percent, based on the requests from LUMA and Genera.

Mrs. GONZÁLEZ-COLÓN. Thank you.

Madam Chair, I will submit questions for the record.

Ms. VELÁZQUEZ. Madam Chair, a unanimous consent request, please, to submit for the record the Department of Energy's Puerto Rico 100 Study that found that Puerto Rico can reach 100 percent renewable by 2050.

Ms. HAGEMAN. Without objection.

[The information follows:]

PR100

Puerto Rico Grid Resilience and Transitions to 100% Renewable Energy Study (PR100)

Summary Report

February 2024

The full document is available for viewing at:

https://docs.house.gov/meetings/II/II24/20240926/117665/HHRG-118-II24-20240926-SD006.pdf

Ms. HAGEMAN. I want to thank the witnesses for the valuable testimony and also to all of the Members for their questions today.

The members of the Committee may have some additional questions for the witnesses, and we will ask for you to respond to those in writing. Under Committee Rule 3, members of the Committee must submit those questions to the Subcommittee Clerk by 5 p.m. on Tuesday, October 1, 2024. The hearing record will be held open for 10 business days for these responses.

If there is no further business, without objection, the Committee stands adjourned.

[Whereupon, at 11:59 a.m., the Subcommittee was adjourned.]

[ADDITIONAL MATERIALS SUBMITTED FOR THE RECORD]

QUESTIONS SUBMITTED FOR THE RECORD TO HON. DEANNE CRISWELL, ADMINISTRATOR, FEDERAL EMERGENCY MANAGEMENT AGENCY

The Honorable Deanne Criswell did not submit responses to the Committee by the appropriate deadline for inclusion in the printed record.

Questions Submitted by Representative Westerman

Question 1. The U.S. federal government has obligated over $21 billion in assistance to help restore and rebuild the electrical grid for Puerto Rico post-hurricanes. Of the $21 billion, there are $9.5 billion in public assistance funds and $7.8 billion in hazard mitigation from FEMA. This totals to approximately $16.3 billion in FEMA funds obligated for rebuilding Puerto Rico's electrical grid. However, it has become clear that much of the obligated FEMA funds have yet to be disbursed.

1a) How much of the approximately $16.3 billion in FEMA funds obligated for rebuilding Puerto Rico's electrical grid have been disbursed?

1b) Why have these funds not been fully disbursed despite the fact that it has been seven years since Hurricane Irma and Hurricane Maria?

1c) What will FEMA do to expedite the disbursement of these funds?

1d) Can you commit to us today that you will ensure that these funds will be disbursed in a timely manner?

1e) Can you commit to us today that you will ensure to clear out federal red tape, particularly when it comes to environmental regulation compliance, for processes relating to or affecting the rebuilding of Puerto Rico's electrical grid? And can you commit to ensuring that your counterparts across the other federal agencies will do the same?

Question 2. LUMA Energy is undergoing vegetation overgrowth clearing projects, particularly for right of way areas. LUMA Energy has stated that completion of these projects will help reduce the frequency of outages. During the hearing, the LUMA witness stated that there have been significant delays from the FEMA review process, particularly environmental regulation compliance reviews, such as NEPA compliance. These reviews can often take one to five years. Furthermore, LUMA has pointed out that FEMA does not provide LUMA with a timeline on when the projects can be expected to finish FEMA review. This has thus led to even further delays to rebuilding Puerto Rico's energy grid and ensuring Puerto Rico has access to reliable and resilient energy. It has become clear that cumbersome environmental regulation by the federal government is a major barrier to substantive progress in rebuilding Puerto Rico's electrical grid. In fact, these regulations are further risking the likelihood of blackouts and are creating dangerous conditions in high voltage areas. The priority should be to ensure that vegetation is cleared in the right of the way areas, per industry safety standards.

2a) Do you and your agency agree that our fellow Americans in Puerto Rico deserves to have access to reliable and resilient energy?

2b) If you agree that our fellow Americans in Puerto Rico deserves to have access to reliable and resilient energy, then can you commit to us today that you will work to ensure that the FEMA review process is expedited, and that FEMA will prioritize the safety and livelihood of Puerto Rico's communities?

Question 3. When declining the invitation to testify, FEMA representatives responded to this Committee by saying that FEMA will not participate in the hearing if the Department of Energy is not participating as well. FEMA representatives expressed the view that the Department of Energy holds a more primary role in this topic. This assessment comes at add with that fact that approximately $16.3 billion of the $21 billion in obligated funds for rebuilding Puerto Rico's electrical grid are FEMA funds. This hearing has made clear that FEMA has a more active role in the rebuilding process as the funding for LUMA Energy and Genera PR projects are primarily funded through FEMA funds. The role of the Central Office for Recovery, Reconstruction, and Resiliency (COR3) in Puerto Rico is to ensure that FEMA funds are used for their intended purpose.

3a) Why do you and the agency believe that it is appropriate for FEMA to sideline themselves from this hearing topic?

3b) Do you agree that FEMA plays an integral role in rebuilding Puerto Rico's electrical grid?

3c) Do you agree that FEMA, as a federal agency, has the obligation to provide Congress with the information it needs to exercise its oversight responsibilities and that it has a duty to explain to the American people how their hard-earned taxpayer dollars are being spent?

3d) Do you agree that it is not in the best interest for FEMA and the Administration to convey a lack of interest or commitment to our fellow Americans in Puerto Rico by refusing to testify on this important hearing topic?

3e) Can you commit that you will do everything in your power as the FEMA Administrator to ensure that Congress has all the information it needs from FEMA for carrying out its oversight responsibilities on this hearing topic and all matters relating to Puerto Rico?

Question 4. The current cost for the vegetation clearing projects from LUMA Energy is approximately $12,000 per acre. This is outrageously expensive, especially when compared to average costs for carrying out similar projects in the continental U.S. According to LUMA, FEMA makes the decision on the overall price. LUMA sends out request for projects (RFPs) and sends bids to FEMA.

4a) How does FEMA make its decision on the overall price for these vegetation clearing projects?

4b) Does FEMA agree that these exorbitant costs are a barrier to ensuring that Puerto Rico's electrical grid is rebuilt in a timely manner?

4c) Will FEMA commit to working with the private utility operators in reducing these costs to a fairer market price?

Questions Submitted by Representative Grijalva

Question 1. Since Hurricanes Irma and Maria in 2017, Congress has provided tens of billions of dollars to Puerto Rico to assist with reconstruction and resiliency building. However, only a fraction of these funds has been accessed and assigned to long-term recovery projects thus far. Please explain FEMA's assessment of why most federal recovery funds have yet to be obligated and the adjustments FEMA has made and plans to make to facilitate greater access to these funds for Puerto Rico.

Question 2. During the hearing, Mr. Juan Saca, CEO of LUMA Energy, LLC, testified that the project to eliminate a major cause of Puerto Rico's current outages by clearing up vegetation around 16,000 miles of powerlines could take three years or more. How is FEMA working with LUMA and other agencies to ensure compliance requirements are met without delay and that this important work is completed as soon as possible?

Question 3. FEMA recently announced it will fund net-zero energy projects, including solar, heat pumps, and efficient appliances, through its Public Assistance program, in addition to its Hazard Mitigation Grant Program and Building Resilient Infrastructure and Communities (BRIC) annual grant program. However, Mr. Manuel Laboy from Puerto Rico's Central Office for Recovery, Reconstruction and Resiliency (COR3) testified that this funding only applies to disasters declared after August 16, 2022, and requested that Congress look into FEMA's authority to retroactively apply this funding to earlier disasters like Hurricane Maria and to renewable energy technologies like offshore wind, ocean thermal energy conversion and hydro power. What is FEMA's assessment of its current authorities to meet this request? Would additional funding be needed to accommodate this request?

Questions Submitted by Representative González-Colón

Question 1. Background: We keep repeatedly hearing from LUMA of the project for vegetation clearing and how that will reduce outages. And repeatedly LUMA speaks about how there are $1.2 Billion set aside for that.

1a) But the reality is only $18 million have really been submitted approved for just one project, hasn't it?

1b) Has FEMA actually obligated $1.2 Billion for vegetation clearing?

Question 2. LUMA has stated they have expended nearly $1.3 billion in federally funded capital expenditures, and the total disbursements obtained are only $588 million of which in turn only $173 million are actual reimbursement and $425 million are capital advances.

2a) What requests for reimbursement or invoices has LUMA presented before FEMA (how many and for how much)?

2b) Has LUMA documented fully and correctly everything it has to present to FEMA and COR3 to secure such reimbursement?

2c) Does FEMA believe LUMA has provided the necessary given the nature of these funds being federal and local public funds?

Question 3. Background: As discussed, Puerto Rico may face 18 to 24 months of being short of peak capacity reserves until new installations are completed. Therefore, the Island needs fast deployment of reliable generation capacity to meet full demand now.

Additional mobile LNG units would be fastest for the short-term. However, it is true they would have lesser economy of scale. So this alternative should also include fast-tracking the removal of one or more existing obsolete or unusable unit or units, and installing new technology units integrated with batteries for stabilization and backup, in the same footprint of the old units. Puerto Rico can fast-track its own permitting, but this would require a federal champion to clear hurdles from federal regulators.

Genera PR brought up in the hearing a proposal for meeting the short/medium term need:

- *Fast conversion of the Palo Seco, Cambalache and Mayaguez oil-fired units to LNG*
- *Deployment of 550MW of supplementary energy through Corps of Engineers support generators for the short/medium term need until the more permanent development happens energy.*

3a) Does anything prevent fast approval and implementation of all or parts of such a strategy?

3b) To your knowledge does the Corps of Engineers deployment require a FEMA tasking or a declaration of federal emergency?

3c) Would these actions come under the aegis of the recovery plans already approved for Puerto Rico or would they require substantial modifications to it?

3d) Is the electricity situation in Puerto Rico an Emergency?

Question 4. It is understood that regulatory agencies will not just say that LUMA or Genera can go ahead and act without regard to environmental or other requirements. However, a repeated complaint has been about the agencies taking the full length of allowed time to respond (say, a term is 60 days and agencies take 58). Another issue raised is how different agencies insist on de-novo reviews of regulatory requirements when work is performed in an area already impacted or where a permit should have already existed, for instance with land under the right-of-way of a transmission line which should just be authorized one time to be kept clear, and the permit should stay standing as long as the line exists, regardless of who operates it.

4a) Does FEMA in its Environmental and Historic Review process take this into consideration in order to speed up approvals?

In the case of new generation plants, the NEPA Environmental Impact Process can take at least 3 years to only then be able to obtain the NPDS Water Permit and the Clean Air Act Title V Operating permits.

4b) However if the replacement happens in the same footprint as the existing power plant or in brownfield space adjacent to it, is that necessary? Would FEMA support streamlining federal permits for this purpose?

QUESTIONS SUBMITTED FOR THE RECORD TO HON. JENNIFER GRANHOLM, SECRETARY, U.S. DEPARTMENT OF ENERGY

The Honorable Jennifer Granholm did not submit responses to the Committee by the appropriate deadline for inclusion in the printed record.

Questions Submitted by Representative Westerman

Question 1. The Department of Energy has been obligated $1 billion in Energy Resilience Funds to help reconstruct Puerto Rico's electrical grid.

1a) Of the obligated funds, how much has been disbursed?

1b) What projects/activities has the spent funds gone towards?

1c) Given that energy costs in Puerto Rico are higher than most of the United States, will you commit to broadening your project scope toward an all-of-the-above energy approach given the unique situation of the island? Specifically, explain how you will do so?

Question 2. Puerto Rican residents pay among the highest in utility costs in the United States, and the average median income of Puerto Ricans on the island is the lowest in the United States. The Department of Energy has a Grid Resilience Formula Grant (GRFG), which is a grant program that looks to "help modernize Puerto Rico's energy grid".

2a) List the grant projects the GRFG has accepted.

2b) Given that the cost of energy in Puerto Rico is higher than most of the United States, will you commit to broadening this grant to encompass an-all-of-the-above approach to truly give Puerto Rico resilient energy?

2c) Considering that the upfront cost of solar panel installation is greater than the median household income of Puerto Ricans on the island, how will The Department of Energy ensure that Puerto Ricans have access to LNG and Coal as energy sources as well?

Question 3. The Department of Energy is focusing most of their efforts on solar energy projects in Puerto Rico. This is counterintuitive to supplying the island with reliable and affordable energy. This is especially so considering that the upfront cost of installing a solar panel is more than the median household income in Puerto Rico.

3a) Considering the lack of reliability residential solar energy provides during severe weather incidents, how is the Department of Energy's strategy of focusing mostly on solar panels providing disadvantaged Puerto Ricans on the island secure energy?

3b) Considering the economic situation mentioned above, how is the Department of Energy's strategy of focusing mostly on solar panels providing disadvantaged Puerto Ricans on the island affordable energy?

3c) Will you commit to shifting your guiding principle to be that of an all-of-the-above energy approach to ensure all of Puerto Rico has access to reliable and affordable energy?

Question 4. The Department of Energy is responsible for national energy policy in the United States. The Environmental Protection Agency (EPA) held up two critical temporary LNG-operators for Genera to use, even though FEMA used them prior. These operators are crucial for providing energy resiliency in Puerto Rico during hurricane season.

4a) Given that The Department of Energy holds responsibility for federal policy in Puerto Rico, which includes ensuring that Puerto Rico has rebuilt its' electrical grid, can you commit to working with the EPA to remove any delays they impose on new LNG generators being operated on the island?

Questions Submitted by Representative Grijalva

Question 1. Genera PR, the company responsible for generating power in Puerto Rico, is a subsidiary of the company that supplies Puerto Rico with most of its natural gas. It therefore seems that Genera stands to make more money from less renewables in Puerto Rico. Mr. Brannen McElmurray, the CEO of Genera, testified that he does not think that Puerto Rico will be able to meet its renewable energy

goals established by Act 17-2019. There is concern that this unevidenced assertion, if believed by the people of Puerto Rico, could deter the growth of renewables in Puerto Rico and that this delay will become an excuse for encouraging additional investments in fossil fuels. However, DOE's PR100 study, which spanned two years and included extensive input from local and federal stakeholders and six national laboratories, found that Puerto Rico can reach its goal of 100% renewables generation by 2050 with quick action and significant investments. Please explain how PR100 came to this conclusion and how Congress can support Puerto Rico's energy goals.

Question 2. House Republicans claim that the Biden-Harris administration has "pushed an energy agenda" focused on renewables on Puerto Rico. Is any of the work that DOE is conducting in Puerto Rico contrary to the territory's self-established energy goals? Why is it important for the federal government to invest in the modernization of Puerto Rico's energy system toward renewables?

Question 3. In 2022, Congress provided DOE $1 billion to create the "Puerto Rico Energy Resilience Fund" (PR-ERF) to invest in renewables and improve the resilience of Puerto Rico's energy infrastructure. In February 2023, DOE announced its Programa Acceso Solar through the PR-ERF to connect residents who are low-income or who have an energy-dependent disability with residential rooftop solar and battery storage systems with zero upfront costs. In August 2024, DOE announced its Programa de Comunidades Resilientes to provide solar and battery storage installations for community centers, community healthcare facilities, and common areas within subsidized multi-family housing properties. How did the systems installed through the PR-ERF help residents during recent blackouts due to grid failures and natural disasters like Tropical Storm Ernesto? How are these programs helping Puerto Rico achieve energy justice and resilience?

Question 4. If net metering were to become unavailable in Puerto Rico, how would it affect the total amount of homes that could receive solar and battery systems through the Puerto Rico Energy Resilience Fund programs?

Question 5. Is it true that the single biggest reason for high energy costs in Puerto Rico is because the fossil fuels must be imported?

Questions Submitted by Representative González-Colón

Question 1. Background: Madam Secretary, as discussed, Puerto Rico may face 18 to 24 months of being short of peak capacity reserves until new installations are completed. Therefore, the Island needs fast deployment of reliable generation capacity to meet full demand now.

Additional mobile LNG units would be fastest for the short-term. However, it is true they would have lesser economy of scale. So this alternative should also include fast-tracking the removal of one or more existing obsolete or unusable unit or units, and installing new technology units integrated with batteries for stabilization and backup, in the same footprint of the old units. Puerto Rico can fast-track its own permitting, but this would require a federal champion to clear hurdles from federal regulators.

Other options are being explored:

- *The Puerto Rico Public-Private Partnerships Authority is evaluating a 300MW project for a LNG/Hydrogen flex-fuel plant.*
- *The Department of Energy Loan Projects Office has also supported private central-utility-scale storage and renewables for one of the existing private generators (AES)*

Genera PR brought up in the hearing a proposal for meeting the short/medium term need:

- *Fast conversion of the Palo Seco, Cambalache and Mayaguez oil-fired units to LNG*
- *Deployment of 550MW of supplementary energy through Corps of Engineers support generators for the short/medium term need until the more permanent development happens energy.*

1a) Does anything prevent fast approval and implementation of all or parts of such a strategy?

1b) To your knowledge does the Corps of Engineers deployment require a FEMA or DOE tasking or a declaration of federal emergency?

1c) Is the electricity situation in Puerto Rico an Emergency?

1d) In the case of new generation plants, the NEPA Environmental Impact Process can take at least 3 years to only then be able to obtain the NPDS Water Permit and the Clean Air Act Title V Operating permits. However if the replacement happens in the same footprint as the existing power plant or in brownfield space adjacent to it, is that necessary? Would DOE support streamlining federal permits for this purpose and taking lead in creating an expedited process?

1e) Does DOE as a matter of policy discourage use of LNG fuels as a short-medium term way to address the crisis?

1f) Does DOE as a matter of policy intend to continue primary focus on community renewables announcements?

Question 2. Puerto Rico's cheapest fuel-using power source, the AES power plant in Guayama, provides up to 454 MW of generation when running at capacity and is by law required to stop burning coal after 2027. That has been known since 2019.

2a) Have any plans been presented to DOE for replacement of this base load?

Question 3. Background: There has been a steady march through our doors of proponents of other ideas about how to address the Puerto Rico Energy Recovery that are not incorporated into the existing action plans, including proposals for inter-island submarine power cables around the Caribbean, from both American-Based (starting with PR-USVI—Bob Garcia Interconnection) and Dominican Republic-Based (starting with PR-DR—Hostos project) proponents—that requires FERC and the governments of other jurisdictions, including foreign, to be aboard.

3a) Have these proposals been presented to the Department, and how viable and suitable for addition have you seen them?

QUESTIONS SUBMITTED FOR THE RECORD TO HON. ADRIANNE TODMAN, ACTING SECRETARY, U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

The Honorable Adrianne Todman did not submit responses to the Committee by the appropriate deadline for inclusion in the printed record.

Questions Submitted by Representative Westerman

Question 1. Why did the Department of Housing and Urban Development not send a witness to this hearing? Given your role, the advanced heads up you received, and the gravitas of Puerto Rico's electricity situation, the committee is profoundly disappointed with your decision to decline our invitation.

Question 2. What is the Department of Housing and Urban Development's specific role in helping Puerto Rico rebuild its electrical grid?

Question 3. The Department of Housing and Urban Development has been obligated $1 billion in Community Development Block Grants to help reconstruct Puerto Rico's electrical grid.

3a) Of the obligated funds, how much has been spent?

3b) Describe the projects/activities the spent funds have gone towards?

3c) Given that energy costs in Puerto Rico are higher than most of the United States, will you commit to broadening your project scope to include an all-of-the-above energy approach given the unique situation of the island? Specifically, explain how you will do so?

Question 4. The Department of Housing and Urban Development provides approximately $1.93 billion in funds for improving Puerto Rico's electrical grid through climate resilience and green energy initiatives in Puerto Rico.

4a) How much of these funds has been spent?

4b) List in detail what these green energy initiatives and climate resilience initiatives are.

4c) Given that the cost of energy in Puerto Rico is higher than most of the United States, will you commit to broadening this initiative to encompass an-all-of-the-above approach to truly give Puerto Rico resilient energy?

4d) Considering that the upfront cost of solar panel installation is greater than the median household income of Puerto Ricans on the island, how will the Department of Housing and Urban Development ensure that Puerto Ricans have access to LNG and Coal as energy sources as well?

Question 5. The Department of Housing and Urban Development is focusing most of their efforts on solar energy projects in Puerto Rico. This is counterintuitive to supplying the island with reliable and affordable energy. This is especially so considering that the upfront cost of installing a solar panel is more than the median household income in Puerto Rico.

5a) Considering the lack of reliability residential solar energy provides during severe weather incidents, how is the Department of Housing and Urban Development's strategy of focusing mostly on solar panels providing disadvantaged Puerto Ricans on the island secure energy?

5b) Considering the economic situation mentioned above, how is the Department of Housing and Urban Development's strategy of focusing mostly on solar panels providing disadvantaged Puerto Ricans on the island affordable energy?

5c) Will you commit to shifting your guiding principle to be that of an all-of-the-above energy approach to ensure all of Puerto Rico has access to reliable and affordable energy?

Submissions for the Record by Rep. Westerman

Statement for the Record

Luis E. Pizarro-Otero
President & Chairman of the Board
Puerto Rico Chamber of Commerce

In response to the US House of Representatives Committee on Natural Resources Subcommittee on Indian and Insular Affairs hearing on "Examining Puerto Rico's Electrical Grid and the Need for Reliable and Resilient Energy", on September 26, 2024, I am pleased to offer the following testimony.

Thank you, Chairwoman Radewagen, Vice Chairwoman González Colón, Ranking Member Raúl M. Grijalva, and the other members of the Committee for inviting the Puerto Rico Chamber of Commerce (PRCC) to discuss the energy challenges affecting Puerto Rico's electric grid and the need for reliable and resilient energy.

We note the Resident Commissioner's leadership in convening this important hearing, and we appreciate her efforts and those of the Committee's leadership in working on behalf of the 3.2 million U.S. citizens in Puerto Rico.

Founded 111 years ago, the PRCC is the leading private sector organization on our island, with members representing every sector of our local economy. As Puerto Rican consumers and business owners, we depend on affordable and reliable energy to operate and grow, creating jobs and opportunities for the people of the island.

Seven years after Hurricane Maria, Puerto Rico is facing an energy and recovery crisis. This crisis is not just the result of technical failures or external challenges but is fundamentally a crisis of management and accountability.

Despite the significant allocation of billions of dollars in federal funds by both the Biden and Trump administrations, as authorized by Congress, and then followed by a series of plans and initiatives; unfortunately, we have little to show in terms of results. There has been a lack of full ownership, coordination, and decisiveness in the energy transformation, rebuilding efforts, and process. Frankly, there is only one word that can be used to describe these efforts, and that word is "failure".

All stakeholders have been making excuses and "passing the buck", pointing fingers at others for failing to meet their obligations and responsibilities to restore Puerto Rico's electric grid and provide affordable and reliable energy. The consequences of this failure are being borne by the people of Puerto Rico. They continue to suffer from unreliable power service, prolonged blackouts, and escalating electricity costs.

Businesses, schools, hospitals, and homes have all been affected. This has stifled economic growth and affected the quality of life for all residents. It is inexcusable that seven years after Hurricane Maria, and with substantial federal aid and funding, we are still facing the same problems of a fragile power grid and inadequate recovery. All while those responsible point fingers.

The PRCC and other key business associations strongly believe that this status quo cannot continue and that our federal government must take a more aggressive role to ensure accountability from all key local and federal stakeholders.

We will soon elect a new POTUS, and we strongly urge the next POTUS to issue an executive order creating a cabinet-level federal task force to lead the energy transition and recovery for Puerto Rico. This task force should be modeled after the successful Hurricane Sandy initiative led by the White House, which helped streamline and prioritize recovery efforts to deliver results in impacted areas.

This proposed task force must have the following key components:

1. **Federal Cabinet Leadership:** A senior, empowered Cabinet member must be appointed to lead the Task Force, ensuring the authority, sense of urgency, and resources necessary to cut through bureaucratic inertia and deliver results that work directly with the Governor-elect of Puerto Rico, beyond the existing Department of Energy Task Force on Puerto Rico Energy.
2. **Executive Director and Staff:** The Task Force should include an Executive Director and a dedicated staff with the expertise and mandate to enforce deadlines, coordinate actions across federal agencies, and hold all stakeholders accountable, with delegated powers and authority as well as direct support from the Office of the President and the Governor.

3. **Strong Private Sector Participation:** To achieve tangible and timely results, the Task Force must include significant private sector participation. Puerto Rico's business community has both the expertise and the commitment to contribute to the successful transformation of our energy system and recovery efforts.
4. **Accountability and Transparency:** Time-driven clear performance metrics, regular reporting, and transparency are essential to regain the trust of the Puerto Rican people and ensure that every dollar spent directly contributes to sustainable improvements.

Puerto Rico is at a tipping point, and our local and federal leaders have a choice to make. We can either take bold and decisive action to address the systemic issues that have plagued our recovery and energy transition, or we can continue down the current path of fragmented and ineffective efforts that have created a humanitarian and economic crisis. The PRCC, with the support of our member business organizations that represent the interests of the private sector and the economic well-being of our people, strongly advocates for the latter.

We ask this Committee and Congressional leadership to support our request for the creation of a Puerto Rico Energy Revitalization Cabinet Working Group. Immediately upon taking office, we urge the next President to prioritize this request with the urgency it deserves. It is time to move forward with determination and purpose to deliver the future the people of Puerto Rico deserve.

Thank you again for your time and consideration. We look forward to providing feedback and working together to build a strong and resilient Puerto Rico through affordable and reliable energy.

Submissions for the Record by Rep. Velázquez

Statement for the Record

Assured Guaranty, GoldenTree Asset Management, National Public Finance Guarantee Corp. and Syncora Guarantee as Holders and Insurers of PREPA Revenue Bonds

Madam Chairman, Ranking Member and other members of the Subcommittee, thank you for hosting this hearing today and for letting us make a statement regarding PREPA's operational deficiencies, which continue to plague the people of Puerto Rico, disrupting their lives, families and businesses, and undermine growth island wide.

We believe that the mismanagement of PREPA's now-prolonged Title III bankruptcy case by the Financial Oversight & Management Board ("FOMB") is a significant contributor to PREPA's plight.

PREPA revenue bondholders stand ready to do their part to bring PREPA's Title III bankruptcy case to a prompt end, to conclude FOMB oversight and put PREPA back under local control, and to provide fresh capital to jump-start the process of doing what needs to be done to improve PREPA's operations and bring reliable electricity to the people of Puerto Rico.

We believe that this can be achieved using electricity rates that are below the FOMB's target affordability metrics for the people of Puerto Rico and provide them with 50 years of rate protection.

1. PREPA's well-documented failure to reliably deliver electricity to the people of Puerto Rico is a direct consequence of the inability or unwillingness of the FOMB to bring PREPA's Title III bankruptcy case, which now stands at seven years and counting, to a reasonable consensual conclusion, as intended by Congress when it passed PROMESA.

- Rather than focusing on what needs to be done to reliably provide electricity to the people of Puerto Rico, the FOMB has instead caused PREPA to waste hundreds of millions of dollars on lawyer and advisor fees fighting an ill-conceived and unsuccessful war of attrition against the very lenders who have already invested over $8 billion of capital into PREPA and who are the most likely source of essential future funding.
- Unable to access the capital markets because of PREPA's prolonged bankruptcy or the billions of allocated FEMA and HUD funding, the FOMB recently announced that PREPA must now embark on an unprecedented search for alternative sources of financing to fund its pressing, immediate capital requirements.
- However, like all other utilities in the United States, access to the capital markets is vital to PREPA's ability to operate reliably and to fulfill consumer needs. We are convinced that, without such access, PREPA's performance will only continue to deteriorate, endangering Puerto Rico's economic recovery. Recent history supports this view.
- The longer this bankruptcy drags on and PREPA cannot access capital markets, the more the people of Puerto Rico will suffer from blackouts and unreliable electricity service.
- The FOMB seems impervious to this reality, focusing instead on extending its own existence and trying to punish the very investors who have already contributed more than $8 billion of capital to PREPA.
- The sad truth is that the people most harmed by the FOMB's actions are the residents of Puerto Rico.
- Refusing to bring the PREPA bankruptcy to a reasonable conclusion by agreeing to pay existing investors amounts that PREPA can reasonably afford (not more and not less), is a sure-fire way for the FOMB to prevent PREPA from being able to attract the new capital necessary for a turnaround. It will also jeopardize the future prosperity of Puerto Rico and its people.
- The FOMB's actions are at odds with the objectives of PROMESA, and are needlessly delaying the day when—
  - — PREPA will be able to provide more reliable and resilient electricity to the people of Puerto Rico,

— PREPA's access to capital markets can be fully restored, and

— Puerto Rico can be freed of FOMB oversight.

2. PREPA's Title III bankruptcy case has dragged on due to the FOMB's insistence on relying on stale financial projections that paint an unrealistically bleak picture of Puerto Rico's future.

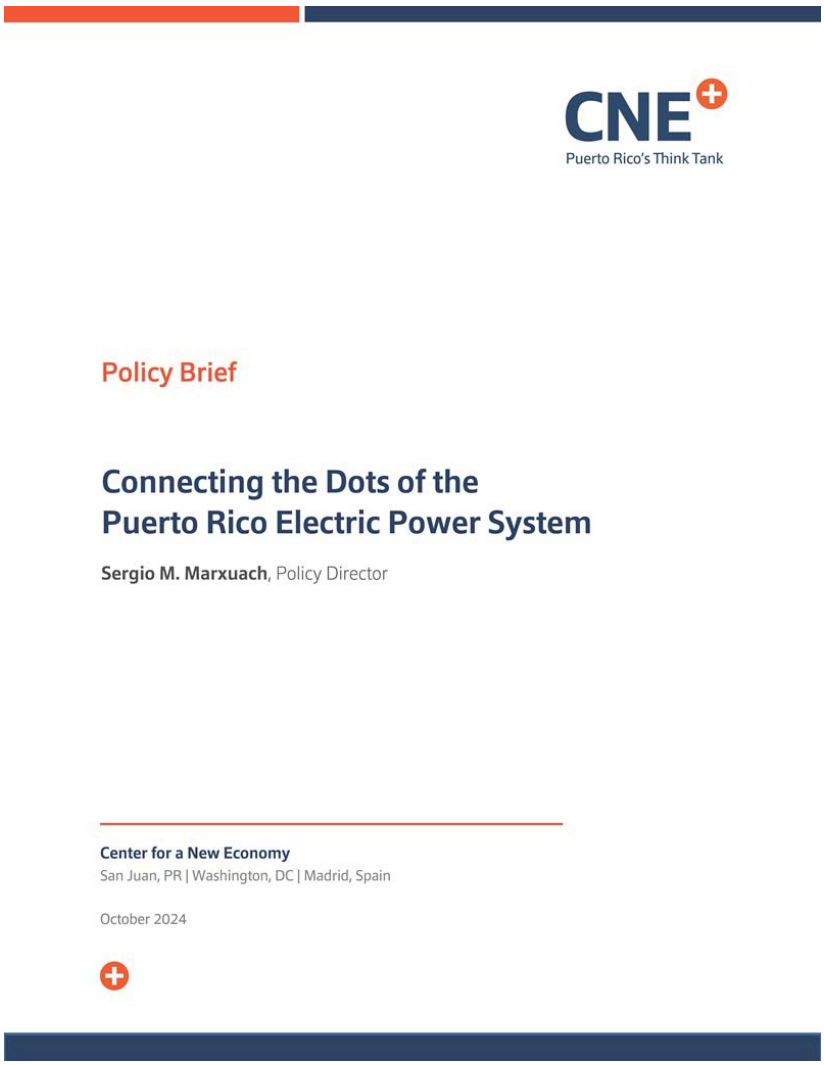
- Over the past eight years, the FOMB has consistently produced fiscal projections that understated the economic reality in Puerto Rico. In doing so, the FOMB has undermined its own credibility with PREPA's stakeholders, crippling its efforts to end the bankruptcy.
- Perhaps that is why, as of today, the FOMB has refused to authorize the release of a 2024 fiscal plan for PREPA; one which everyone knows should reflect the material improvements that have continued to occur in the Puerto Rican economy overall and in electricity consumption over the outdated 2023 fiscal plan that lacked credibility.
- By simply updating the FOMB's financial projections, and working cooperatively with the PREPA revenue bondholders, PROMESA's goals for PREPA can be achieved without burdening ratepayers.

3. There is a better path forward.

- Certain PREPA revenue bondholders are prepared to lead a significant investment of new capital into PREPA to assist it in taking immediate measures to create a more reliable and durable power grid for the people of Puerto Rico.
- Such PREPA revenue bondholder funding would be used to bring about an immediate end to PREPA's Title III bankruptcy case, to fund urgent capital projects required to improve grid reliability and to accelerate PREPA's use of already allocated FEMA and HUD funds.
- To facilitate this outcome, PREPA would only make payments in respect of its existing $8.5 billion of bonds at a level that PREPA can reasonably afford—not more and not less—and would have virtually no risk of default for at least 50 years.
- In other words, certain PREPA revenue bondholders are prepared to invest significant amounts of fresh capital in PREPA on terms that will ensure that PREPA never again defaults on its obligations to its creditors or, more importantly, to its customers, the residents of Puerto Rico.
- And these PREPA revenue bondholders are committed to getting this done on an affordable basis for the people of Puerto Rico, using electricity rates that are below the FOMB's own targets and providing 50 years of rate protection.
- What is the FOMB waiting for?

Thank you. We stand ready to answer any questions the committee may have.

Submissions for the Record by Rep. Grijalva



The full document is available for viewing at:

https://docs.house.gov/meetings/II/II24/20240926/117665/HHRG-118-II24-20240926-SD008.pdf

Submissions for the Record by Rep. Ocasio-Cortez

Key Findings

- Under all scenarios (Scenarios 1, 2, 3) and variations, the amount of rooftop PV capacity and storage capacity deployed in Puerto Rico by 2050 will be significant both in aggregate (2,500 to 6,100 MW) and in the instantaneous power supplied back to the grid during the day.
- Model results indicate that rooftop PV and storage deployment will continue even as the grid becomes more resilient because of economics and the ongoing desire for local generation and backup power. As battery and PV costs continue to decrease, the deployment of rooftop PV and batteries might result in extra capacity toward 2050 if significant utility-scale renewables are built in the near term.

Integrated Capacity Investment

We conducted capacity expansion modeling to find the lowest-cost system[14] for each scenario while meeting load, Act 17, and scheduled plans for resource procurement and retirement. We began by establishing the levelized cost of electricity (LCOE) for existing and new technologies. LCOE of technologies included in modeling results for 2035 are shown in Figure 20.

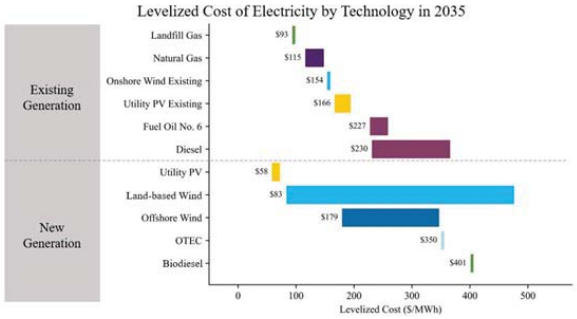


Figure 20. Levelized cost of electricity by technology in 2035 (costs in 2021 real dollars)

[14] By "lowest cost," or "least-cost" we mean the lowest-cost combination of resources (generators, wires, etc.) that together have the energy production capacities to meet system electricity demand at all times. Some stakeholders pushed back against this approach because it does not account for complexities such as social or environmental costs.

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