RAÚL M. GRIJALVA OF ARIZONA
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VIVIAN MOEGLEIN
REPUBLICAN STAFF DIRECTOR

U.S. House of Representatives
Committee on Natural Resources
Washington, DC 20515

December 5, 2022

Mr. Josué Colón
Executive Director, Puerto Rico Electric Power Authority
P.O. Box 364267
San Juan, PR 00936-4267

Dear Mr. Colón,

On November 17, 2022, the U.S. House Committee on Natural Resources held a full committee oversight hearing on "Puerto Rico's Post-Disaster Reconstruction and Power Grid Development." During the hearing, Committee Members received testimony from key stakeholders regarding federal and local post-disaster reconstruction efforts in Puerto Rico following recent natural disasters, such as Hurricanes Irma, Maria, and Fiona, and the 2020 earthquakes, as well as the progress of the restoration and modernization of Puerto Rico's power grid.

During the hearing, Resident Commissioner Jenniffer González-Colón (PR) raised a request for information from the Puerto Rico Electric Power Authority (PREPA) in the form of a written statement regarding the status and development of Puerto Rico's electric system. I concurred with the request and ordered it without objection.

As the entity responsible for generating electrical energy for the people of Puerto Rico, PREPA's perspective on the status of Puerto Rico's electrical infrastructure and plans for repairing and upgrading the generation system are of great interest to the Committee. Therefore, I respectfully request that you submit to the Committee a statement detailing the status of PREPA's generation system, including:

- The status and outlook of the generation fleet.
- A summary of the plan for rebuilding and replacing the generation system, including timelines and estimated years in which each milestone is to be achieved.
- The parts of the generation fleet that are priorities for repair, upgrade, or replacement.
- The status and estimated costs of all projects that are planned or underway using federal recovery funds, including a breakdown of which projects have been submitted, approved, or started and what amounts have been disbursed.

Please provide the requested information electronically to Ivan Robles with the Committee's Office of Insular Affairs at Ivan.Robles@mail.house.gov by **December 12, 2022**.

Thank you in advance for your cooperation and I look forward to engaging with you further to ensure the people of Puerto Rico have access to a safe and reliable electrical energy system.

Sincerely,

Raúl M. Grijalva
Chair
House Committee on Natural Resources

GOVERNMENT OF PUERTO RICO
PUERTO RICO ELECTRIC POWER AUTHORITY
Executive Director I Josué A. Colón Ortiz I director_ejecutivo@prepa.com

December 12, 2022

ELECTRONIC MAIL
Ivan.robles@mail.house.gov

Mr. Raúl M. Grijalva
Chairman
US House of Representatives
Committee on Natural Resources
Washington, DC 20515

Dear Chairman Grijalva:

We are in receipt of your letter of December 5, 2022, related to the November 17, 2022, oversight hearing on "*Puerto Rico's Post-Disaster Reconstruction and Power Grid Development*". In your letter, you indicated that during the hearing there were some requests for information related to PREPA, in the form of a written statement regarding the status and development of Puerto Rico's electric system, including:

- The status and outlook of the generation fleet.
- A summary of the plan for rebuilding and replacing the generation system, including timelines and estimated years in which each milestone is to be achieved.
- The parts of the generation fleet that are priorities for repair, upgrade, or replacement.
- The status and estimated costs of all projects that are planned or underway using federal recovery funds, including a breakdown of which projects have been submitted, approved, or started and what amounts have been disbursed.

Attached you will find PREPA's response to the request for information and supporting attachments. As you and the full Committee on Natural Resources will see from the response, PREPA has provided the details requested on PREPA's generation system. We also took the opportunity to provide the Committee on Natural Resources with additional context and information relevant to the November 17 hearing, erring on the side of submitting additional background and summaries of PREPA's many efforts (operational

and financial) to keep the lights on during bankruptcy, tightening budgets, transition to renewable energy projects, limitations by the island's energy regulator, and ongoing efforts to expedite project approvals and permitting, among others.

We also include a summary of milestones achieved by PREPA management and its dedicated, though reduced, labor force – notwithstanding the historic and sequence of challenges posed by the impacts of hurricanes Irma (2017), Maria (2017), the earthquakes of 2020, the pandemic period (2020-2021) and most recently, hurricane Fiona (2022).

Thank you for the opportunity to present this information to the Committee on Natural Resources. We remain available to address any questions or comments you or the Committee may have now or in the future.

Cordially,

Josué A. Colón-Ortiz
Executive Director

c Hon. Jennifer González-Colón, Resident Commissioner
Hon. Bruce Westerman, Ranking Republican
Mr. David Watkins, Staff Director
Ms. Vivian Moeglein, Republican Staff Director

Annexes

U.S. House of Representatives – Committee on Natural Resources

Full Committee Hearing: Puerto Rico's Post-Disaster Reconstruction & Power Grid Development
November 17, 2022

PREPA's Response and Supplemental Filing to Committee Questions and Issues
December 9, 2022

I. Response to Requests in Committee Letter, dated as of December 5, 2022

1. The status and outlook of the generation fleet

Electricity is supplied to PREPA customers primarily by old and inefficient PREPA-owned generation plants and secondarily from independent power producers (IPPs) under power purchase and operating agreements (PPOAs). PREPA-owned power plants have 4,961 MW of installed generation capacity, IPPs consists of 984 MW from two conventional power plants and 254 MW from various renewable energy providers. PREPA-owned generation units have well-above industry average forced outage rates such that between 30% and approximately 40% of this capacity is typically out of service, including units that are indefinitely out of service and in need of significant overhaul. As a result, on average, only around 60 to 70% (3,000 to 3,500 MW) of PREPA-owned generation capacity is available for dispatch. Given the frequency of outages (whether caused by Generation or Transmission-Distribution incidents), it is often necessary to dispatch generation units with higher cost fuel. For example, the April 2019 maintenance-related transformer explosion and resulting loss of Aguirre Unit 2 for approximately 12 months (with average fuel cost of ~$130/MWh) was compensated by increasing generation from low efficiency diesel peaking units (with average fuel cost of ~$200/MWh).

PREPA generation units began experiencing even more frequent forced outage events during the summer months of 2021, July, August, and September. These outage events were due to various factors, including a combination of high peak demand and energy use, with unanticipated generator forced outages that resulted in very tight reserve margins, and at times, generation shortfalls that resulted in brown-out conditions as well as long load shedding events.

The availability of the system's generating units dropped by 17% from 2015 to 2020 and has consistently performed below peers. Forced outages of generating units have also seen an increase of 15% over the same period and underperformed peer units, exemplifying the unreliability of PREPA's legacy generating fleet. The net heat rate of generating units has also seen an increase of 377 Btu/kWh from 2016 to 2020. Today, PREPA's aging plants continue to deteriorate with worsening levels of performance. PREPA expects these trends to continue with growing inefficiencies and unreliability as these units continue to age until the completion of new generation system investments and major maintenance projects.

2. A summary of the plan for rebuilding and replacing the generation system, including timelines and estimated years in which each milestone is to be achieved.

a. 5-year plan for rebuilding the energy system

PREPA's 5-Year Infrastructure Projection includes approximately $2.78 billion in investment needed for PREPA to rebuild Puerto Rico's Generation system, most of which qualify for

FEMA funding under its 428 programs. This estimate includes only the cost associated with FEMA 428 funds, FEMA § 404 funds. It, therefore, excludes infrastructure hardening work that is eligible for funding through FEMA's 406 Public Assistance Mitigation (406) program. Please refer to the "PREPA 5-Year Infrastructure Projection May 2022" document attached for further details.

b. 10-year plan for rebuilding the energy system

The June 2021 version of the 10-Year Infrastructure Plan includes approximately $3.14 billion in investment that is needed to rebuild and transform Puerto Rico's electric generation portfolio and repair and restore its dams and hydro-electric generation and irrigation assets, most of which qualifies for FEMA funding under its 428 and 404 mitigation programs. The $3.14 billion includes funds to be requested from these programs, plus supplemental funding from PREPA's NME program. There are approximately 55 projects that are categorized as "near-term priority." These projects either have already begun preliminary architectural and engineering (A&E) design or are expected to do so in years 2021, 2022, and 2023. The in-scope estimated cost of projects expected to begin within this time horizon is $2.43 billion. The mid-term priority category is composed of 15 projects that are expected to begin preliminary A&E design in the years 2024, 2025, 2026, and 2027. The in-scope estimated cost of projects expected to begin within this time horizon is $707 million. The long-term priority category comprises 12 projects that are expected to begin preliminary A&E design in 2028 and beyond. The in-scope estimated cost of projects expected to begin within this time horizon is $0.90 billion. Please refer to the "PREPA 10-Year Infrastructure Plan Update Final" document attached for further details.

3. The parts of the generation fleet that are priorities for repair, upgrade, or replacement.

a. Black start Units

PREPA would like to clarify the congressional record about the need for more and better black start units – and to provide context on the RFP process that is currently being developed with FEMA support. Please refer to the PREB docket number: NEPR-MI-2022-0005 for further information on the regulatory proceeding on the RFP Process for New Black-Start Systems at Costa Sur and Yabucoa.

A black-start process entails restoring a power station to operation without relying on the external electric power transmission network. These processes are done to recover from a total or partial blackout which may occur due to several unforeseen factors, including natural disasters, weather events like storms and hurricanes, technical failures and more. In general, all power stations need an electrical supply to start up: under regular operation, this supply would come from the transmission or distribution system; under emergency conditions, black-start stations receive this electrical supply from a small auxiliary generating plant located on-site. Once running, a large generating unit can be utilized to energize part of the local network and provide an energy supply for other units within its area. With this capability at several sites, electrical supplies can be efficiently re-established around the island. The need to restore the system after a blackout event makes the availability of small auxiliary generating plants all the more important for system reliability and restoration. Further, the Small Generating Units are needed to make available to PREPA a more diverse and readily available portfolio of

generation units available in case a peak load needs to be met and PREPA's fleet is insufficient to serve it.

An initial SOW has been submitted to FEMA for the preparation of preliminary design and technical documents, required by PREPA to submit a funding application for preliminary and detailed engineering for the Engineering, Procurement and Construction (EPC) of 36 to 60MW of power per site at the existing Yabucoa Gas Plant and the Costa Sur Gas.

b. Summary of applicable Integrated Resource Plan approved by the PREB.

PREPA filed its first IRP in 2015, which PREB approved in September 2016. As a result of Hurricanes Irma and Maria in 2017, Puerto Rico not only faced the unprecedented challenge of rebuilding the electric power system, but also had to rethink how to harden and modernize the grid to better equip Puerto Rico against future natural catastrophes, while diversifying fuel sources and increasing the grid's reliance on renewable energy resources.

On February 13, 2019, PREPA filed its initial proposed IRP for PREB's approval (Initial IRP). After reviewing the Initial IRP, PREB issued a motion with findings and requested PREPA to refile the Initial IRP after addressing certain items. On June 7, 2019, PREPA refiled its proposed IRP after making revisions required by PREB (Proposed IRP). PREB issued its Final Resolution and Order on PREPA's Proposed IRP on August 24, 2020.

PREB's Final Resolution and Order (Final Order) approved in part and rejected in part the Proposed IRP and ordered the adoption and implementation of a Modified Action Plan and Modified Preferred Resource Plan in lieu of PREPA's proposed Action Plan and Preferred Resource Plan (Approved IRP). The following three notable modifications to the grid were approved by PREB, which form the core elements of the Modified Action Plan and Modified Preferred Resource Plan for PREPA:

1. Increasing share of renewable generation and storage while retiring or converting existing coal and heavy fuel oil generation;
2. Enhancing grid resilience through hardening capital projects, including potential mini-grids and microgrids; and
3. Enabling customer choice through DG, EE, and DR programs.

Additional information on IRP core elements is provided in Appendix 1

c. Renewable Energy and BESS Procurement - Tranche 1

PREPA launched the first tranche (Tranche 1) of several renewable energy generation and battery energy storage system (BESS) RFPs on February 22, 2021. This was done in compliance with legislative and regulatory mandates under Puerto Rico energy public policy to increase renewable energy generation in Puerto Rico.

In December 2021, PREPA submitted eighteen (18) solar PV projects (totaling 845 MW) and three (3) battery storage projects (4-hr) (totaling 220 MW) to PREB for evaluation and approval. On February 2, 2022, the PREB authorized the eighteen (18) PV project power purchase operating agreements (PPOAs) and instructed PREPA to finalize negotiations with those proponents. After LUMA completed the technical studies for the Tranche 1 projects, PREPA submitted executed PPOAs during June, July, and August 2022.

On September 1, 2022, the PREB published the independently computed portfolio of weighted average LCOE of $108.1/MWh for the eighteen (18) Tranche 1 solar PV projects, along with the real levelized cost of $85.4/MWh, in 2021 dollars.

d. Renewable Energy and BESS Procurement - Tranche 2 through 6

Following the receipt of bids during 2021 for Tranche 1 of the renewable energy and BESS procurement by PREPA (for 845MW of solar and 220MW of BESS), PREB issued a Resolution indicating that the remaining Tranches 2 through 6, would be led by PREB and a selected contractor (Independent Coordinator) to manage the remaining procurement processes.

The Tranche 2 procurement process, which was originally set to begin in June 2021, was launched on September 28, 2022 and published by the PREB's Independent Coordinator. The original deadline for filing responses was November 14, 2022. PREB recently announced an extension until December 5, 2022, for proponents to submit proposals. Tranche 2 seeks up to 1,000MW of renewable energy and 500MW of BESS projects.

Tranches 3 and 4 were supposed to be opened to receive proposals in December 2021 and June 2022, respectively. Both tranches are now delayed and PREB has not informed of any updates on the target release dates.

4. ***The status and estimated costs of all projects that are planned or underway using federal recovery funds, including a breakdown of which projects have been submitted, approved, or started and what amounts have been disbursed.***

a. Background and Responsibilities

In September 2017, Puerto Rico's electric system was completely devasted by the landfall of Hurricanes Irma and María, resulting in the most prolonged electrical blackout in modern U.S. history. This paved the way for a historic obligation of federal funds from the Public Assistance program to Puerto Rico under the Federal Emergency Management Agency's (FEMA) Stafford Act § 428. Of these funds, over $9.5 billion are destined for the reconstruction of the Puerto Rico Electric Power Authority's (PREPA) electrical and water infrastructure. The $9.5 billion amount represents 90% of the total estimated cost of the permanent work to be executed and is complemented by a local cost share of 10%, which amounts to approximately $1 billion that will be funded by the Government of Puerto Rico, with up to $500 million in Community Development Block Grant Disaster Recovery (CDBG-DR) funds. Specifically, this funding will be utilized to design and build a more resilient and modern electrical infrastructure to provide sustainable and reliable power for the long-term future of Puerto Rico. Most of these funds are destined for transmission and distribution (T&D) infrastructure work.

In addition to the FEMA § 428 Funds, FEMA obligated approximately $1.5 billion under the Hazard Mitigation Grant Program (HMGP) authorized by the Stafford Act § 404 for PREPA's electrical generation and water infrastructure. These funds may be used to provide protection to undamaged parts of a facility and/or to prevent and reduce damages that future disasters could cause. Approximately $12.2 billion is currently assigned to reconstruct PREPA's electrical system and water infrastructure. This consists of FEMA § 428 and § 404 funds, insurance proceeds, and local funds. LUMA Energy is responsible for permanent reconstruction work related to the T&D infrastructure and PREPA is responsible for permanent

reconstruction work related to its generation plants, including hydroelectric facilities, dams, and irrigation infrastructure.

b. Generation / Hydropower plants - federally funded projects, status, timelines, milestones. Federal Stabilization Plan

Please refer to the "Permanent Projects Tracker" attached.

c. Other related FEMA/COR3/HUD accomplishments by PREPA

The funding allocation described above underscores the need to repair Puerto Rico's generation system urgently. Puerto Rico currently lacks dependable power generation to supply the energy demand and requires temporary emergency generation, including peaking units and three new mobile generators at PREPA's Palo Seco power plant to meet the load. These three power units at Palo Seco were purchased after Hurricanes Irma and Maria, and FEMA reimbursed the amount related to diesel to operate the units.

In addition to the FEMA § 428 and § 404 funds assigned to the PREPA generation system and water infrastructure assets, PREPA requested approximately $300 million from the Puerto Rico Department of Housing for CDBG-DR funds for the retrofit of PREPA's hydroelectric generating units under "*Electrical Power Reliability and Resilience Program (ER2)*" of the CDBG Electrical System Optimization Action Plan. Please refer to the "Electrical Power Reliability and Resilience Program (ER2)" document attached for further information.

Under the Public Assistance program, FEMA approved 11 PREPA generation-related projects and obligated approximately $182 million through the FAASt process as of this date. The 11 projects submitted by PREPA and approved by FEMA include projects at the following power plants:

- Aguirre Power Complex
- Costa Sur Power Complex
- Palo Seco Power Plant
- San Juan Power Plant
- Mayagüez Power Plant and
- Cambalache Power Plant.

Further, the 11 projects, in turn, cover 65 scopes of work (SOWs) approved by the Puerto Rico Energy Bureau of the Public Service Regulatory Board (PREB), Puerto Rico's energy sector regulator, for repairs of PREPA's legacy generation units.

d. Peakers RFPs; overall status; project timelines for 1st RFP (4 units); 2nd RFP (7 units)

FEMA has obligated $853 million of FEMA § 404 funds that will be allocated to cover the cost of new turbines. PREPA is following its procedures and state regulatory regulations to acquire new-generation equipment. In November 2022, PREPA submitted to PREB a draft RFP to acquire four turbines with black-start capabilities. Following PREB's evaluation and approval, PREPA expects the RFP to be published in December 2022. A separate RFP to acquire seven new simple cycle gas turbines PREPA will be submitted to PREB in December 2022. PREPA estimates that PREB may complete its evaluation and grant approval by early-January 2023. PREPA will publish it as soon as PREB grants leave to do so.

II. Supplemental Information and Responses Arising from the November 17, 2022's Hearing

5. *Summary of Permitting Issues for New Renewable Generation Projects*

a. *Title V Critical Project under PROMESA*

PREPA has urged all approved renewable energy and BESS Project Sponsors in Tranche 1 to evaluate and seek, as appropriate, designation as a Title V Critical Project by the Fiscal Oversight and Management Board for Puerto Rico (FOMB).

Title V of the Puerto Rico Oversight, Management, and Economic Stability Act (PROMESA) adopts key provisions of Act 76-2000, the Puerto Rico Procedures for Emergency Situations or Events Act, and defines what a Critical Project means. The term ''Critical Project'' means a project identified under the provisions of Title V and intimately related to addressing an emergency whose approval, consideration, permitting, and implementation shall be expedited and streamlined according to the statutory process provided by Act 76-2000, or otherwise adopted pursuant to Title V. Governor Pierluisi has declared an energy infrastructure emergency under Act 76-2000 for purposes of expedited permitting, which is a process that applies to Puerto Rico permitting agencies.

Title V establishes project submission requirements for Project Sponsors, and in the case of energy-specific projects, has additional criteria related to fuel mix diversification, privatized generation, renewable energy, improved reliance, and performance. This language was specifically added by Congress knowing that the island's grid and generation assets were and continue to be in dire need of transformation and modernization.

As a Critical Project, the FOMB's Revitalization Coordinator has the authority (and mandate) to identify Points of Contact at each relevant federal permitting agency, to help prioritize the evaluation and permitting process for such projects.

Support from the FOMB/Title V designation and efforts to expedite permitting of energy projects can be enhanced with U.S. Department of Energy (DOE) Secretary Jennifer Granholm's Puerto Rico Grid Recovery Modernization Team, for support across federal resources, technical assistance, and additional help to repair and reconstruct the island's grid and to drive decisive progress on Puerto Rico's clean energy transformation.

b. *Expedited permitting for energy projects under Puerto Rico Law*

The governor of Puerto Rico has broad and specific authority, under Act 76-2000 to declare an emergency via executive order for the specific purpose and objective of addressing the declared emergency, expediting critical permitting for projects designed to address the emergency. Act 76-2000 was legislated precisely for the type of situation Puerto Rico is experiencing today with its energy grid and the obvious urgency, risk factors, overall sector transformation required under Puerto Rico's energy public policy, PREPA's fiscal plan, and safety and security concerns given the highly fragile T&D and energy generation infrastructure.

The governor activated the emergency procedures under Act 76-2000 on March 25, 2021 (EO-2021-024) for purposes of all infrastructure (including energy infrastructure) impacted by hurricanes Irma, Maria, and the earthquakes. This Executive Order was most recently renewed/extended via EO-2022-050 on October 5, 2022.

The legal effect of an executive order pursuant to Act 76-2000 for these strategic emergency projects is immediate and helps jumpstart and accelerate local permitting, and thus financing and related funding and pre-construction (design, modeling, procurement) work.

6. ***PREPA's efforts before the PREB regarding gasification and strategies to stabilize generation***

   a. ***Conversion of the San Juan Steam Units to Operate with Natural Gas***

PREPA has submitted multiple requests (attached document with links to the "Conversion Motions" filed) to PREB to allow a limited update or amendment to the operative IRP to enable PREPA to convert the San Juan steam units 7, 8, 9 and 10 (San Juan Steam Units) to operate with natural gas as a primary fuel and be able to continue using no. 6 fuel oil as backup fuel. This amendment would help PREPA achieve compliance with the State Implementation Plan and convert 400 MW to become more economical and cleaner generation (two of these units are on long-term outage, and thus, not currently generating any power). However, PREB has given priority to procedural considerations, denying the request, and determining that LUMA is the only party that may request an amendment to the IRP (even for a generation matter, which is owned and operated by PREPA). The proposed conversions are a short to mid-term measure to increase environmentally compliant generation in the north, close to Puerto Rico's largest load centers – while new renewable energy and BESS projects and financed, developed, and become operational.

   b. ***Efforts to provide adequate maintenance to the generation fleet***

To maintain PREPA's generation units in operation and, more importantly, in reliable operation and service, these must receive their appropriate repairs and maintenance, as recommended by their manufacturers. On November 2021, PREPA asked PREB for leave to commence 104 projects to provide maintenance and repair the generation fleet and proceed with the corresponding applications and submissions to FEMA and COR3 for the reimbursement of *all* associated costs. However, after several procedural events and several motions filed by PREPA (attached document with links to the "Maintenance Motions" filed), PREB has not approved several projects that target the need to provide adequate maintenance to the San Juan units 8 and 10 and the Cambalache Unit 1. To date, four (4) SOWs for the funding necessary to conduct these works remain denied before PREB.

Additional detail on the foregoing can be found in Appendix 2.

   c. ***Temporary Generation Initiative: summarize how PREPA had suggested this before the current instability period and explain why temporary generation is needed, to supplement maintenance schedules, etc. (General Requisition Form RF 113)***

After Hurricanes Irma and María, part of the funds assigned to Puerto Rico was provided under the 404 Hazard Mitigation Grant Program (HMGP or FEMA 404). PREPA, as the sub-recipient of the federal funds, identified hazard mitigation projects that would be eligible under the HMGP requirements and purpose and, accordingly, proposed two (2) new generation resources that PREPA had included in its proposed 2019 Integrated Resource Plan (Proposed IRP) as infrastructure projects that could deliver hazard mitigation results. These projects were: a new combined cycle (CC) in the San Juan area, which would replace old thermal generation capacity, and the wholesale replacement of the entire PREPA peaking unit fleet ("Peaking Units"). The principle that supported PREPA's proposal for these projects as hazard mitigation projects was very targeted and came from lessons learned from hurricanes Irma and María,

which were later confirmed by the most recent experience with Hurricane Fiona. More specifically, the formulation of these projects was driven by the understanding of what the hurricanes affected the most and the resources that, if available to PREPA when the hurricanes passed, would have mitigated damages and accelerated the restoration of power to Puerto Rico.

Usually, a major event leaves Puerto Rico without electric service, which requires having enough available generation capacity to restart the system. Puerto Rico electric system operates as an isolated system, which means it is not interconnected to other electric systems, so it greatly depends on the black start and peaking units to restart the system. These units are the first resources used to begin the system restoration. The black start and peaking units, combined with the base load units in the north and south, form electric islands through Puerto Rico, such as mini-grids, to provide reliable power in a continuous manner to utility's customers. When the major 230 kV and 115 kV lines are restored and operational, these electric islands are synchronized with each other until the entire system in connected. This restoration process is followed to preserve life, continue the restoration of the electrical service, and begin the economic activity after the passage of a major atmospheric event, like hurricanes and tropical storms.

The new CC project together with the wholesale replacement of the Peaking Units were proposed as the main sources of generation to supply the critical and priority loads of the mini-grids formulated in the Proposed IRP to operate in a resilient way after the passage of a major atmospheric event. By supplying the critical and priority loads only days after the passage of the major event, we can save lives and be effective and agile in the restoration of the electrical system. The main focus in this process is to preserve the lives of the residents of Puerto Rico. Regarding the project for the wholesale replacement of the Peaking Units, having new peaking units would allow PREPA to replicate what the U.S. Corps of Engineers (USACE) did in the aftermath of the hurricanes of 2017, placing emergency generators in different parts of the Island to create mini-grids and serve critical loads.

Furthermore, in the aftermath of Hurricane Fiona, PREPA's baseload generating units and peaking units suffered damages mainly due to the heavy and sustained rains during the passage of the hurricane. This event occurred in the middle of PREPA's repairs works on its generating units that started in November 2021. Hurricane Fiona had the main effect of significantly reducing the available dependable generating capacity, which was already limited before the event. Hence, to stabilize Puerto Rico's power system, on September 27, 2022, PREPA submitted a request (Form RF 113) to the Federal Emergency Management Agency (FEMA) for the installation of temporary generation, which would allow PREPA to continue repairing its generating units and, simultaneously, maintain enough dependable generating capacity to supply the electrical demand in a reliable and safe manner. Attached, copy of the Form RF 113 submitted by PREPA.

On October 12, 2022, the Governor of Puerto Rico submitted a formal request to the DR-4671-DR-PR Hurricane Fiona Federal Coordinating Officer requesting Direct Federal Assistance to stabilize the electrical grid, in accordance with recommendations that the Department of Energy and United States Army Corps of Engineers will be providing and the federal government appointed the Puerto Rico Power System Stabilization Task Force (Task Force) to plan, coordinate, and integrate efforts to execute power system stabilization in Puerto Rico due to impacts caused by Hurricane Fiona. The Task Force includes representatives from

FEMA, the Department of Energy (DOE), the Environmental Protection Agency (EPA), and the USACE. Since the establishment of the Task Force, its members have conducted regular meetings with PREPA, LUMA Energy, LLC (LUMA), COR3, PREB, and other local stakeholders. In addition, the Task Force members have visited and assessed all PREPA's power plants to determine their actual conditions and operational constraints. As a result of this assessment, the Task Force determined that the recommended course of action is to provide temporary generation to augment system capacity to complete priority emergency repairs to stabilize the system without significant interruption in service.

7. ***Responsibility for electric rate increases***

PREPA would like to clarify for the congressional record, statements made by LUMA at the hearing indicating that it was not and is not responsible for electric customer rate changes.

Starting on June 1, 2021, LUMA began the Interim Service Period under the Supplemental Agreement to the T&D OMA, providing for LUMA to assume T&D operations while PREPA remains in Title III. These services and responsibilities include day-to-day operations and maintenance of the T&D system, long-term systems and resource planning, generation dispatch, asset management, operation and maintenance, community and media relations, reporting and record keeping, finance and accounting, and oversight and implementation of federally funded projects, among others specified in the T&D OMA Scope of Services.

Notably under LUMA's responsibilities is the filing of all rate rider update requests to PREB, including fuel and purchased power rate riders on a quarterly basis. These rate filings combine (a) forecast inputs from PREPA on fuel costs - which are based on market prices, and (b) LUMA's projection of the generation system dispatch. LUMA is responsible for both real-time generation system dispatch and forecasting of generation system dispatch and costs, both in the near term for rate adjustment requests and long-term projection for the IRP, which is also now the responsibility of LUMA before the PREB.

LUMA's response regarding its responsibilities about rate increases, may have left some room to interpret that it is not responsible for electric rate impacts or changes. While it is true that LUMA, like PREPA, has no control over global fuel market prices, LUMA does play an important and significant role as the party solely responsible for requesting and implementing rate and adjustment clauses changes approved by PREB. This is part of a crucial and entirely normal utility function of cost recovery and is performed by all mainland utilities. Further, generation dispatch, which is managed entirely by LUMA, does have an impact on fuel costs. Even though PREPA purchases fuels, and thus a PREPA expense, PREPA pays for the fuel that is consumed by the power plants that LUMA determines how to dispatch. Thus, PREPA doesn't have control over which fuels, the least or the more expensive, are used first.

8. *Status of PREPA Vendor Payables and Debts*

a. Summary of PREPA's status of debts with APPA utilities

i. NYPA

The total validated New York Power Authority (NYPA) invoiced amount for $2,204,995.90 is in accordance with the MOU. This payment authorization has been processed and sent to accounts payable for the corresponding disbursement. Additionally, there is an invoiced balance of $1,025,584.60 that is outside of the agreement. PREPA is unable to pay the balance if the project was carried outside of a period covered by a duly formalized agreement. In response to NYPA's arguments, a legal assessment was performed to see if it is possible to pay while maintaining compliance with the laws and regulations applicable to PREPA. The remaining approved balance of $1,638,405.62 must be paid in December.

ii. APPA MOUs

The total balance for the 32 companies that provided services to PREPA is $325.8 million per FEMA. The payment disbursed is approximately $303 million to 20 companies, and there is an outstanding balance of approximately $23.5 million to 12 companies. PREPA expects $23.0 million in reimbursement from FEMA, after which PREPA will reimburse the relevant 12 companies.

These invoices are validated and certified, but the outstanding balance claimed by the companies remains to be reconciled. LUMA's Accounts Payable department will perform the reconciliation. The following payments were made to companies in the last fiscal year:

i. Duke – $7,661,916 on 7/2/2021
ii. Southern California – $635,291.49 on 10/15/2021
iii. PG&E – $910,960.94 on 8/12/2022
iv. AES – $47,884.90 on 8/18/2022

b. Summary of Work between PREPA, LUMA and APPA for Fiona; schedule of meetings held; PREPA's outreach to APPA (explaining that LUMA cannot reach out to APPA)

On September 14, 2022, APPA's Operations Services Manager, Mr. Giacomo Wray, contacted Maite Soto and Astrid Rodríguez from PREPA via email informing that they were monitoring the Tropical Depression Seven that was moving westward toward the Antilles at the time. APPA wanted to check in with PREPA to see if it had any concerns or any future needs for assistance or resources. In addition, APPA offered to schedule a call to discuss this matter.

PREPA and APPA agreed on having daily meetings starting on September 16, 2022, to discuss the possible activation of APPA's Mutual Aid, leaving one day for PREPA to reach out to LUMA and agree on a process for this activation. Discussing this process was needed because LUMA, as a private entity and contractor, is not a member of the APPA and, hence, cannot reach out directly to APPA for the activation of the Mutual Aid. The tropical depression converted to Tropical Storm Fiona on September 15, 2022, date when PREPA contacted LUMA via email requesting LUMA to inform if they need some assistance or resources from APPA, so PREPA can coordinate such assistance. LUMA answered the same date informing that they were in the process of evaluating resourcing needs and availability, including the

potential need for Mutual Aid and asked to schedule a call to discuss and coordinate potential APPA support with their points of contact, Ángel Silverio and Mervet Rodríguez.

PREPA and LUMA met the September 15, 2022's afternoon and discussed the need to activate Mutual Aid. LUMA informed that they were still evaluating resourcing needs and availability and, once they finish this evaluation, they will know if LUMA will need APPA support. On the morning of September 16, 2022, PREPA met with APPA and informed LUMA's response. APPA and PREPA agreed to include LUMA in the following daily meetings. During the afternoon of September 16, 2022, PREPA met with LUMA, who informed that, at the moment, LUMA foresaw that they could manage the Tropical Storm Fiona event with internal resources, but that were going to meet with PREPA and APPA the next day.

On September 17, 2022, the Governor of Puerto Rico declared an emergency due to the storm warning issued to Puerto Rico. During the afternoon of this date, PREPA, APPA, and LUMA had their first meeting together to discuss the possible activation of Mutual Aid. APPA's representatives explained the process of requesting Mutual Aid and answered LUMA's questions related to such process. It was explained that if LUMA needed to activate the Mutual Aid, it had to request such aid to PREPA, who in turn will request the aid to APPA. However, it was agreed to conduct daily meetings between APPA, PREPA, and LUMA to discuss the current needs of LUMA, so APPA and PREPA can respond on a timely manner to such needs. In addition, during the meeting, LUMA informed that they still foresaw that they could manage the Tropical Storm Fiona event with internal resources and local contractors. For reference, please see attached letters between APPA and PREPA.

Early on September 18, 2022, Tropical Storm Fiona converted to Category 1 hurricane and a hurricane warning was issued to Puerto Rico. APPA, PREPA, and LUMA attended their daily meeting and LUMA informed that they still foresaw that they could manage the Hurricane Fiona event with internal resources and local contractors. APPA stressed that the decision to activate their support should be done as soon as possible, because the coordination of moving resources to Puerto Rico take significant time. However, LUMA's representatives sent an email with a list of possible needs of materials, resources, and equipment (vehicles) that LUMA estimated to effectively address the restoration of electrical system. In its email, LUMA clearly stated that the communication sent was not a request, as its purpose was to advance the availability analysis process to be effective in the case of activating a request officially. PREPA forwarded this email to APPA the same date. During the afternoon and evening of September 18, 2022, Hurricane Fiona made landfall in Puerto Rico.

On September 19, 2022, APPA, PREPA, and LUMA attended their daily meeting and LUMA informed that they were conducting assessments of the damages caused by the passage of Hurricane Fiona. LUMA informed that they will notify if they need the activation of the Mutual Aid once they completed the assessment of the damages. APPA reiterated that the decision to activate their support should be done as soon as possible, because the coordination of moving resources to Puerto Rico take significant time.

On September 20, 2022, PREPA sent an email to LUMA summarizing their daily calls, in particular that LUMA has informed that, so far, they have not had the need to activate Mutual Aid and that PREPA encouraged LUMA use APPA's resources, as they were less expensive than private contractors. That same date APPA, PREPA, and LUMA attended their daily

meeting and LUMA informed that they were still conducting assessments of the damages caused by the passage of Hurricane Fiona, after which they will notify if they need the activation of the Mutual Aid. During the daily meeting on September 21, 2022, LUMA informed that the status was the same as the day before.

During the daily meeting on September 22, 2022, PREPA's representatives asked LUMA to clarify if they needed the APPA support, as it was not clear at that moment. During a meeting conducted later that same date, LUMA clarified that they were still assessing the damages caused by Hurricane Fiona and that they will notify PREPA if they need the activation of Mutual Aid.

On September 23, 2022, APPA, PREPA, and LUMA attended their daily meeting and LUMA informed that they will notify their decision on the activation of Mutual Aid the next day. In addition, LUMA informed that, if they requested APPA's support, the technical staff to be sent to Puerto Rico shall be members of the International Brotherhood of Electrical Workers (IBEW). APPA's representatives explained that this LUMA's requirement significantly limited the available resources to be sent to Puerto Rico for the restoration works. PREPA's representatives requested LUMA to evaluate an exception to that requirement, considering that current situation was an emergency and that APPA's workers have come in the past to help restore Puerto Rico's electrical system without any adverse result or violations to American codes and standards.

On September 24, 2022, APPA, PREPA, and LUMA attended their daily meeting and LUMA informed that they did not need the activation of Mutual Aid. PREPA confirmed this notification via email to LUMA. APPA and PREPA agreed to suspend their daily meetings from that day on.

c. Summary of Cobra debt

On October 19, 2017, after Hurricanes Irma and Maria impacted Puerto Rico, PREPA and Cobra Acquisitions LLC ("Cobra") entered into the Emergency Master Service Agreement for PREPA's Electrical Grid Repairs – Hurricane Maria, dated October 2017 (the "First Contract") for Cobra to perform emergency "storm restoration services" for $200 million. Through five subsequent amendments, the contract amount for the First Contract was increased to $945 million.

On May 26, 2018, PREPA and Cobra entered the Master Services Contract for PREPA's Electrical Grid Repairs - Hurricane Maria, dated May 26, 2018 (the "Second Contract," and with the First Contract, the "Cobra Contracts"), for Cobra to perform restoration and reconstruction services in addition to its emergency storm repair services under the First Contract, in the amount of up to an additional $900 million.

On September 30, 2019, Cobra filed a motion seeking (i) allowance of an approximately $216 million post-petition administrative expense claim, arising from various services provided by Cobra in connection with the Cobra Contracts, with interest accruing, and (ii) immediate payment of that asserted administrative expense claim. As of June 21, 2022, Cobra alleges approximately $123 million of interest has accrued in connection with non-payment of amounts due pursuant to the Cobra Contracts.

9. ***Other PREPA accomplishments and advances following Hurricanes Irma and Maria and during Title III bankruptcy proceedings***

a. 2022 PREPA Fiscal Plan Key Accomplishments

- Successfully supported the 11-month Front-End Transition to the selected T&D OMA[1] Operator – LUMA Energy, LLC – for the privatization of the operation and maintenance of PREPA's T&D system.
- Completed the return-to-service repairs to Costa Sur power units 5 & 6 (~440MW), and necessary upgrades to the San Juan Power Plant units 5 and 6 for air quality control.
- Reduced customer call wait-times through call center outsourcing and increasing customer accessibility to e-billing platforms ahead of LUMA's onboarding.
- Secured a historic Global Settlement of $10.7 billion in funding from FEMA § 428, through the Central Office of Recovery, and Reconstruction and Resiliency (COR3) with FEMA, along with cost matching and other funds from insurance, FEMA § 404 and CDBG-DR, also ahead of LUMA's onboarding.
- Developed and worked towards implementation of the 10-year Infrastructure Plan for federally funded grid capital investments required by FEMA, and the implementation of the PREB-approved Modified Action Plan for PREPA's Integrated Resource Plan (IRP).
- Supported P3A, the Puerto Rico Fiscal Agency and Financial Advisory Authority (AAFAF, for its Spanish acronym) and FOMB in launching the PREPA Legacy Generation Asset procurement process for the selection of one or more private operator(s) to operate and maintain PREPA's legacy generation power plants.
- Fuel Procurement: At the beginning of FY 2022, PREPA issued RFPs for both diesel and bunker-C and completed the evaluation and selection process by the end of September and October, respectively. Both RFPs attracted considerable market interest and resulted in improved terms to PREPA when compared to prior agreements:
    - On October 29, 2021, PREPA executed a $606 million fuel contract with Puma Energy Caribe LLC for bunker-C fuel. The contract price adder in the competitively procured agreement represented a ~33% price reduction compared to the previous bunker-C fuel supply contract.
    - On November 18, 2021, PREPA executed a $265.5 million diesel fuel supply contract with Novum Energy Trading Inc. The contract price adder in the competitively procured agreements represented a 19% savings when compared to the terms provided by the previous diesel supplier, Puma Energy Caribe LLC, which was PREPA's sole provider of diesel fuel since 2014.

Additional detail on prior fiscal year accomplishments is provided in Appendix 3.

b. Budgetary/financial achievements based on approved budgets

PREPA is required under PROMESA to submit compliant budgets and abide by FOMB's financial and reporting requirements. FY2023 represents the sixth budget year for which PREPA achieved a certified budget. In coordination with FOMB, PREPA developed and

[1] Transmission and Distribution Operating and Maintenance Agreement (T&D OMA) executed on June 22, 2020 amongst PREPA, the Puerto Rico Public-Private Partnerships Authority (P3A) and LUMA Energy, LLC and LUMA Energy ServCo, LLC (collectively, LUMA).

implemented a budget to actual reporting process that has continued during and after the LUMA onboarding. Throughout the Title III process, PREPA has consistently proposed balanced budgets in which expenses are equal to or less than expected revenues.

For Fiscal Year 2021, FOMB modified PREPA's proposal and certified a budget that included a $126 million deficit based on the expected LUMA Front-End Transition costs of $135 million, which ultimately exceeded $180 million. This was the first and only year in which PREPA did not have a balanced budget, and budgets certified by FOMB for FY2022 and FY2023 were balanced.

c. Status of PREPA audited financial statements

At the outset of the Title III proceeding, PREPA audited financial statements were delayed due to going concern issues raised by auditors. During the pendency of Title III (between 2017 and today), PREPA has completed the following audits and is working to complete the FY2021 and FY2022 statements.

- FY2015 audited financial statements issued on April 20, 2018
- FY2016 audited financial statements issued on December 12, 2018
- FY2017 audited financial statements issued on June 28, 2019
- FY2018 audited financial statements issued on October 6, 2021
- FY2019 audited financial statements issued on February 24, 2022
- FY2020 audited financial statements issued on September 30, 2022

d. Governor Briefs

Attached to this document, please find copy of the latest PREPA's report to the Governor of Puerto Rico regarding the status of PREPA's works.

END

Appendix 1: Additional information on the Approved IRP

Increasing Share of Renewable Generation and Storage

In the Final Order, PREB ordered PREPA to develop a plan to procure 3,750 MW of renewable energy and 1,500 MW of battery storage by 2025. In addition, PREB approved the installation of up to 81 MW of local peaking capacity procured through a technology-agnostic, competitive bid Request for Proposal (RFP) process that is open to all single or aggregate sources of demand and supply-side options. PREB also approved the conversion of eight (8) retired steam plants to synchronous condensers to enable voltage stability following the installation of inverter-based renewable generation and battery storage. The Final Order clarified that the conversion plan w be subject to additional studies and coordinated with retirement schedules.

PREB rejected the development and construction of most proposed new fossil fuel generation resources, including the retirement and wholesale replacement of all eighteen (18) existing gas turbine peaking units, any new liquified natural gas infrastructure, and large-scale development efforts on a new combined cycle gas turbine unit at Palo Seco. PREB did authorize up to $5 million for preliminary economic, siting, permitting, and feasibility analysis at the Palo Seco site for a new fossil fuel-powered unit and fuel infrastructure, so long as it does not interfere with or delay the procurement of renewable energy or battery storage. Regarding fossil fuel-powered power purchase and operating agreements (PPOAs), PREB approved both the extension of the EcoEléctrica contract through 2032 and the cessation of the agreement for coal-fired AES units by the end of 2027, pursuant to Act 17-2019.

Finally, PREB approved the retirement of approximately 2.4 GW of existing fossil fuel units subject to the EPA's Mercury and Air Toxics Standards (MATS) rule.

Enhancing Grid Resilience

The Final Order found the Proposed IRP adequately established the need for (1) transmission system upgrades; (2) the expenditure of up to $2 billion for hardening of transmission infrastructure; and (3) the investment of $911 million in distribution system upgrades to enhance resiliency and support distributed generation. However, PREB ordered PREPA to seek PREB approval for specific T&D expenditures prior to making any final planning or investments. PREB also announced the opening of an optimization proceeding that will determine the optimal transmission investments for ensuring a more resilient electric power system, including assessing the ability for small-scale distributed resources—such as mini-grids—to contribute to resiliency.

As PREPA's successor in operating and maintaining the transmission & distribution grid, LUMA will be responsible for planning and implementing any grid resiliency measures, including seeking and acquiring the necessary approvals from PREB for future capital projects and expenditures.

Enabling Customer Choice

The IRP's Modified Action Plan enables further customer choice through various programs, including DG, EE, and DR. PREB ordered PREPA to further enable DG by ensuring all distribution system planning and expenditures support DG. With regard to DR, the Modified Action Plan requires PREPA to develop internal systems and external programs and offerings

available to all customer classes to engage aggregators of DR resources to offer, dispatch, and be compensated for cost-effective DR resources. For EE, PREB ordered PREPA to take all necessary steps to support PREB's forthcoming EE Regulation and underlying objective of 30% EE savings by 2040 (compared to FY2019 net utility sales) as mandated in Act 17-2019, including providing support for program implementation, analysis, funding, and financing.

Appendix 2: Additional information on PREPA's efforts before the PREB (w links of motions filed) regarding gasification and strategies to stabilize the generation grid

i. Conversion of the San Juan Steam Units to Operate with Natural Gas

1. Environmental considerations and the State Implementation Plan

As an electric utility, PREPA must comply with different environmental laws and regulations, including the Clean Air Act (CAA)[2] and the comprehensive federal law regulating air emissions from stationary and mobile sources. This law authorizes the EPA to establish National Ambient Air Quality Standards (NAAQS) to protect public health and welfare and regulate air pollutants, including hazardous ones.

Under Section 107(a) of the CAA, each state, territory, or local air district is responsible for submitting a SIP to specify how NAAQS will be achieved and maintained within each air quality control region. 42 U.S.C. § 7407(a). The CAA also requires that the U.S. Environmental Protection Agency (EPA) review and approve SIP that meet the requirements of the Act. In the case of Puerto Rico, compliance with the CAA requires the Department of Natural and Environmental Resources (DNER) to submit a SIP for EPA's approval concerning the 2010 1-Hour Sulfur Dioxide (SO2) NAAQS. [3]

The EPA designated the Guayama-Salinas and San Juan air districts as nonattainment areas for the SO2 NAAQS, effective April 9, 2018. EPA's nonattainment designation was based on SO2 modeling results from modeling performed on these air districts. On May 2016, the Government of Puerto Rico decided to use the EPA's approved air dispersion model as the strategy to demonstrate compliance with the SO2 NAAQS.

The air district of Guayama-Salinas includes part of the municipalities of Guayama and Salinas. In the case of the San Juan air district, it consists of the municipality of Cataño and part of the municipalities of San Juan, Guaynabo, Bayamón, and Toa Baja. These air districts cover the area where PREPA's Aguirre, San Juan, and Palo Seco steam plants are located.

Given the nonattainment designation by EPA under the CAA, the DNER must submit a final SIP for EPA approval, which shall provide for attainment of the 2010 1-Hour SO2 NAAQS in the Guayama-Salinas and San Juan nonattainment areas by April 9, 2023. The SIP was due to EPA by October 9, 2019. Because the DNER missed the October 9, 2019, deadline EPA issued the Findings of Failure to Submit (FFS) SIP Required for Attainment of the 2010 1-Hour Primary Sulfur Dioxide (SO2) NAAQS, with an effective date of December 3, 2020. 85 Fed. Reg. 69,504 (Nov. 3, 2020). The FFS triggers CAA deadlines for EPA to impose mandatory sanctions if EPA has not determined that Puerto Rico made a complete SIP submittal and starts a 2-year clock for EPA to issue a Federal Implementation Plan.

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[2] *Clean Air Act*, Public Law 95-95—August 7, 1977.

[3] On March 10, 2022, DNER opened a proceeding to evaluate the SIP and the amendments to the RCAP by publishing notices of public hearing regarding its intent to adopt a SIP and amendments to RCAP. On April 9, 2022, PREPA submitted written comments on this prior version of the proposed SIP, and on April 11, 2022, PREPA submitted additional comments during the public hearing. On August 26, 2022, DNER published notices of public hearing regarding (i) its intent to adopt the SIP and (ii) amendments to RCAP. On October 7, 2022, PREPA submitted comments to these documents.

According to the current Puerto Rico SIP process, EPA should have determined that the DNER's final SIP submission was complete by June 3, 2022, to avoid the imposition of 2-to-1 offset sanctions in the nonattainment areas. Since DNER did not meet the SIP submission on that date, each new ton of SO2 emitted from any new or modified source in the nonattainment areas must be offset by a two-ton reduction. In addition to PREPA's power plants, the 2-to-1 offset sanction applies to all facilities considered emissions sources in the nonattainment areas. To achieve compliance with EPA's regulations, the 2-to-1 offset sanction would have required all the owners and operators of emissions sources in the nonattainment areas to implement emissions control measures for twice the emissions in comparison with their actual emissions. This sanction would have increased the operational and maintenance costs of operating industrial and commercial facilities in the nonattainment areas, affecting the economic development in these areas. Puerto Rico did not meet the initial October 9, 2019, deadline for filing its SIP and filed its final SIP on November 22, 2022. EPA deemed the submission complete on December 3, 2022. Puerto Rico now awaits EPA's determination on the November SIP submittal.

As part of the development of the SIP, the DNER has modeled the SO2 emissions in the Guayama-Salinas and San Juan air districts and found that these areas cannot achieve attainment if PREPA continues using fuel oil no. 6 (Bunker C) and regular diesel fuels in the generating units of Aguirre, San Juan, and Palo Seco power plants, absent generating unit retirements. When modeling combustion turbines using ultra-low sulfur diesel (ULSD), the emissions are reduced but not enough for achieving attainment because of the emissions that are produced in the units that continue using fuel oil no. 6. In the absence of generation retirements, various modeling runs indicated that achieving attainment in the relevant air districts would require burning natural gas in existing steam units of Aguirre, San Juan, and Palo Seco power plants.

Looking for an environmental compliance strategy that allows PREPA's thermal units to remain operational while the reliable transition to new renewable energy resources is achieved, PREPA held several meetings with DNER and EPA staff during the first months of 2022. During these meetings, the DNER and PREPA agreed on the dual priorities of providing reliable electricity to the residents of Puerto Rico and meeting the NAAQS requirements for the benefit of the people's health and welfare.

Considering the priorities of providing reliable electricity and meeting the SO2 NAAQS, the DNER and PREPA identified the following action items as feasible strategies for achieving attainment:

- Integration of renewable energy as mandated by the operative IRP and Modified Action Plan.
- Substituting fuels used in existing thermal generating units.
- Development of an SO2 monitoring network within the designated nonattainment areas for demonstrating attainment with the NAAQS.

Consistent with these actions, in the short-term, PREPA will:

- Continue participating in the renewable energy and storage RFP tranches mandated in the Modified Action Plan.

- Substitute regular diesel with ULSD fuel at combined cycle units, combustion turbines, and the aero-derivative machines located at the San Juan, Palo Seco, and Aguirre Power Plants.
- Comply with the DNER's requirements for developing an SO2 monitoring network.

Regarding this short-term strategy, PREPA has already completed the Tranche 1 RFP process, is supporting the Tranche 2 RFP process (to the extent requested by the PREB), is taking steps for substituting regular diesel with ULSD fuel and is following the DNER's requirements to implement the SO2 monitoring network.

Given the renewable resources interconnection conditions, achieving Act 82-2010's[4] renewable portfolio standard's (RPS) goals safely and reliably are a long-term effort, given the renewable projects' completion date is not contemplated in the following year. Accordingly, the SO2 NAAQS SIP can't rely solely on implementing the new resources' integration mandated by the operative IRP and Modified Action Plan to attain the NAAQS. To adequately maintain a safe and reliable electric service for the people of Puerto Rico, PREPA will need to execute the necessary actions to keep its steam units operational and in compliance with environmental regulations. As explained, modeling results indicate that attaining the SO2 NAAQS would require burning natural gas at existing steam units. Thus, in the short- and medium-term, pursuing the substitution of fuel oil no. 6 with natural gas in the San Juan, Palo Seco, and Aguirre power plants would be an appropriate course of action.

This course of action will allow PREPA to keep the northern and southern base units online to guarantee the continuity and reliability of the electric service, operate with the reserve margins required by being an isolated electrical system and simultaneously comply with environmental regulations. However, on November 22, 2022, the DNER approved a SIP with a compliance strategy based on the retirement of base generating units during the next six years. PREPA is currently evaluating its next steps on this matter, as the proposed base units' retirement is not feasible nor practical. PREPA stresses that the short- and medium-term SO2 compliance of fuel oil no. 6 burning units can only be achieved by switching them to natural gas, because these units shall remain online until the new resources are fully operational.

Currently, there is no natural gas infrastructure on the premises of the Palo Seco and Aguirre power plants. This constraint, together with the delayed schedule for the integration of renewable resources, does not allow PREPA to establish an SO2 compliance strategy relying solely on the integration of renewables or natural gas fuel switching for the steam units at the Palo Seco and Aguirre Power Plants. PREPA will continue focusing on finalizing the construction of the Tranche 1 renewables and energy storage projects mandated by the operative IRP and Modified Action Plan. The SO2 limitations in the SIP cannot be met solely with the new resources' integration required by the operative IRP and Modified Action Plan. At the same time, PREPA needs to maintain a safe and reliable electric service for the people of Puerto Rico. To meet the limitations imposed, PREPA will execute the necessary actions to keep Palo Seco and Aguirre steam units operational and comply with environmental regulations. This would be done in consultation with the relevant regulatory entities, such as EPA, DNER, and PREB.

In the case of the San Juan power plant, there is natural gas infrastructure in place which is currently supplying the San Juan Combined Cycle units 5 and 6. This existing infrastructure

[4] *Public Policy on Energy Diversification through Sustainable and Alternative Renewable Energy in Puerto Rico*, Act. No. 82 of July 19, 2020, as amended, 22 LPRA §§ 8121 – 8136 (Act 82-2010).

can be used to provide natural gas to the San Juan Steam Units to achieve attainment with SO2 in the San Juan air district. Converting the San Juan Steam Units to generate energy with natural gas will allow them to remain in operation while in compliance with environmental regulations. At the same time, renewable resources must be safely integrated into the electrical system. Considering the above, PREPA has determined to pursue the conversion of San Juan Steam Units to combust natural gas to achieve attainment with the 2010 1-Hour SO2 NAAQS mandated in the CAA.

Since February 2022, PREPA has formally asked PREB to grant leave to commence the works directed to convert the San Juan Steam Units on more than four (4) occasions. This project, which is of paramount importance, will benefit the people of Puerto Rico in the following ways:

1. It is an essential step to achieving attainment with the 2010 1-Hour SO2 NAAQS in the San Juan air district and, consequently, helping the Government of Puerto Rico to avoid costly sanctions, especially those that represent losing federal funds for road and highway improvements.

2. Burning natural gas in the San Juan Steam Units will significantly reduce emissions of SO2 as well as other pollutants, which has a direct effect on the environment and health of the People of Puerto Rico, particularly those that live and work in the municipalities of San Juan, Guaynabo, Bayamón, and Toa Baja.

3. Converting the San Juan Steam Units to operate with natural gas as a primary fuel source will also achieve compliance of these units with the MATS required by EPA, 40 CFR Part 63 Subpart UUUUU - National Emission Standards for Hazardous Air Pollutants, which became effective on April 16, 2012. As such, several PREPA units were subject to the regulation on the Non-Continental Liquid Oil Fired Electric utility steam-generating unit. As an environmental and regulatory compliance strategy, PREPA effectively committed and completed the dual-fuel conversion of its Costa Sur units5 and 6, adding natural gas to the operation and reducing the use of fuel oil no. 6. Similarly, PREPA is adopting this compliance strategy with the regulation by achieving the dual-fuel conversion project for the San Juan Steam Units.

4. Because natural gas is a much cleaner fuel than fuel oil no. 6 (Bunker C), the operations and maintenance costs of burning natural gas in the San Juan Steam Units would be lower than those of burning No. 6. This reduction in operations and maintenance costs results in savings that would be passed over to the customers.

5. Natural gas fuel market prices do not fluctuate much as those of petroleum derivatives, like diesel and no. 6 fuels. In addition, natural gas prices tend to be lower than diesel and no. 6 fuel prices. These economic aspects result in a more stable and lower fuel cost for the customers.

2. The conversion is feasible

The San Juan Steam Units' conversion to combust natural gas as primary fuel is feasible. This conversion was assessed in 2011 when PREPA conducted evaluations to convert Costa Sur steam units 5 and 6 to operate mainly on natural gas fuel. At that time, PREPA conducted evaluations, with the support of generating units' original manufacturers, for the conversion to operate with natural gas fuel in the steam units at Costa Sur, Aguirre, Palo Seco, and San Juan. This resulted in a plan to convert these power plants' steam units to dual-fuel capability and

operate mainly with natural gas. One of the primary purposes of this fuel conversion plan was to comply with MATS environmental rules.

In addition, the natural gas supply to the San Juan Steam Units is possible without building significant additional infrastructure. A natural gas supply station is located adjacent to the North side of the San Juan power plant, which already supplies natural gas to units 5 and 6. Further, PREPA has confirmed that there is availability to provide the natural gas volume needed for all the San Juan steam units once they are converted.

a. **Added capacity and reliability**

The conversion of the San Juan Steam Units would provide an added capacity of 400 MW, which will not be modified after the conversion works are finalized. Nevertheless, due to pending environmental restrictions and repairs, the available capacity of the San Juan Steam Units, units 7 and 9, is limited to 163 MW. Therefore, once the San Juan Steam Units are repaired and converted to burn mainly natural gas, the electric system will have an additional 237 MW to serve as baseload generation and will, in turn, be reliable generation compliant with the 1-Hour SO2 NAAQS and MATS. This added dependable generation capacity is essential for renewable energy's reliable and safe integration into the power system.

Given that the highest concentration of load in the north and the metropolitan area, the contribution of 237 MW from San Juan Steam Units and 440 MW from San Juan CC, will contribute significantly to the restoration of the electric system and the control of the northern voltage profile.

Operating with reduced or limited generation in the northern base units (San Juan and Palo Seco), where the highest concentration of load is located, may cause the operating margins of safety in a stationary regime to be reduced, and the electrical system is predisposed to voltage instability problems. The increase in the levels of real and reactive power transfer in the 230 kV and 115 kV circuits in the transmission system (especially in the main south-north links), due to the reduced or limited generation in the north, reduces the margins of transfer capacity to handle situations of outages, contingencies, and clearances.

Following PREB's reasoning when it approved the San Juan 5 and 6 steam units' conversion to operate with natural gas in January 2019,[5] and as the situation remains today, Puerto Rico needs reliable base load generation to provide much-needed stability for the system. In the case of Puerto Rico, given the lack of baseload from hydro or nuclear, and the projected retirement of coal-fired generation in 2027, the best option for environmentally compliant base load during the integration of renewable sources of generation would be natural gas-fired generating units. As with the San Juan 5 and 6 conversions, the conversion of the San Juan Steam Units will make available to PREPA necessary base load generation in a relatively short timeframe.

3. Schedule to complete the conversions

PREPA projects that the execution of the engineering, procurement, and construction (EPC) of the San Juan Steam Units conversion project and the completion of the environmental permits of all these units would take from five (5) to ten (10) years. It is estimated that the completion of each unit's environmental permits could take eighteen (18) to twenty-four (24) months. For

[5] See Resolution and Order approving the conversion of San Juan 5 and 6 steam units to dual-fuel units, In Re: Request for Proposals for Conversion of San Juan Units 5 & 6 to Natural Gas, case no. CEPR-AP-2018-0001.

illustration purposes only, assuming January 2023 as the effective date of the EPC contract, what follows is a hypothetical project schedule:

Unit	Project Start[5]	Project Completion
San Juan 8	January 2023	December 2024
San Juan 10	January 2025	December 2026
San Juan 7	January 2027	December 2028
San Juan 9	January 2029	December 2030

This schedule shows a period of eight (8) years for converting all SJ 7-10. However, a reasonable contingency period of two (2) years should be added to this schedule, considering that the conversion project could be affected by unforeseen and extraordinary events such as atmospheric disturbances or earthquakes, among others. Therefore, the San Juan Steam Units conversion project could take ten (10) years.

Nevertheless, PREPA has recommended that PREB approve that the conversions are done in a phased approach. First, PREPA would complete the conversion of units 8 and 10. These units are not currently in service; therefore, these would not have to be taken offline to perform the conversion works and, thus, will not affect the near-term forecasted available generation. Then, after units 8 and 10 are converted, and in service, PREPA would take units 7 and 9 offline to commence the conversion works. This phased approach strives to maintain the current generation available to the operator while the conversion works are performed.

4. Cost estimate of the conversion

PREPA can allocate $138.5M of 404 HMGP funds for this project. This cost-estimated is based on a previous fuel conversion study conducted for the San Juan Steam Units.

ii. Efforts to provide adequate maintenance to the generation fleet

The following chart shows the description of the project presented to PREB, and the cost that, should PREB grant leave to continue with the projects, would be funded by FEMA, not PREPA's customers.

FACILITY	PROJECT NAME	SCOPE OF WORK	PRESENTED ESTIMATE[6]
San Juan Power Plant	Unit 10 Rehabilitation	Provide parts and service for the open inspection and close of the steam turbine and generator. Also, in-shop repairs for due repairs and maintenance rotor and oil flush of the turbine.	$15.9

[6] Presented in millions of dollars.

FACILITY	PROJECT NAME	SCOPE OF WORK	PRESENTED ESTIMATE[6]
San Juan Power Plant	Unit 8 Rehabilitation (Turbine)	Inspect and replace the high-pressure, intermediate pressure and low-pressure rotors of the turbine and perform all the testing and commissioning of the equipment.	$10
San Juan Power Plant	Unit 8 - Major Outage - Boiler Sections Replacement and Repairs & Auxiliary Equipment Repairs	Necessary repairs of deteriorated boiler tubes and assemblies and auxiliary equipment.	$8
Cambalache Power Plant	Unit 1 Rehabilitation	Perform the required inspections, repair the exhaust gas housing and GT enclosure and filter house, and replacement of all of the hot gas path components, turbo compressor and blades, and inspect and replace gas turbine no. 1. Also, conversion of the control system to blue- line similar to gas turbines 2 and 3, upgrade the combustor pulsation monitoring system, upgrade the automatic voltage regulator, and upgrade the opacity monitoring system.	$18

Unfortunately, the PREB repeatedly denies PREPA's request to move forward with these critical projects.

PREPA has repeatedly asked PREB for technical conferences to discuss these projects' benefits and further explain each's technical considerations. However, this conference has been constantly denied. Moreover, PREB insists that the operative IRP must be amended to consider these projects. Nevertheless, when PREPA requested the amendment on October 11, 2022, it was outright denied in less than twenty-four hours. PREB stated that LUMA was the only party with authority to make the request and denied the petition without analyzing the petition of the merits.

When the current and operative IRP was presented and evaluated, it was forecasted that the load served by PREPA was expected to significantly decline due to a combination of expected base load reduction (driven by population and economic changes), energy efficiency gains and demand-side resources. These conditions of declining load forecast have not been met in the last three years, as the load demand has increased, and the projection is that the demand could increase near 3,000 MW in the following years, according to PREPA's certified 2022 Fiscal Plan approved by the Financial Oversight and Management Board.[7] Therefore, the generation

[7] Available for review at https://oversightboard.pr.gov/fiscal-plans-2/

system must have enough dependable capacity to supply the demand safely and reliably and, thus, avoid massive and frequent load-shedding events.

The reality mentioned above directly affects the feasible retirement schedule of PREPA's thermal units. PREPA fully supports the current public policy regarding renewable energy integration and transition. Notwithstanding, and especially considering that sufficient capacity of new renewable resources is not expected to be reliably interconnected with the power system at least during the following three to five years, it is imperative that PREB act following the **undeniable reality** and allow Puerto Rico's energy system to provide reliable energy to the People of Puerto Rico. For this purpose, PREPA's priority repeated request to PREB is that repairs are performed to maintain the generating units online with the primary purpose of providing the necessary resources to serve the growing demand projections and to provide continuity and reliability in the electrical service.

Appendix 3: Further Detail on PREPA Accomplishments and Achievements

2021 PREPA Key Accomplishments

- T&D Operator Front-End Transition: To advance and support the Puerto Rico energy system transformation, PREPA coordinated with and supported Lum during its Front-End Transition period to achieve milestones and requirements contemplated by the T&D OMA. This included the formation of teams and development of plans to prepare the organization for financial, operational, and legal transition (e.g., radio licenses for telecommunications, setup access to PREPA offices, Governmental Approvals, etc.) Front-End Transition teams performed a significant number of deep dive assessments on PREPA's organization and assets to guide and develop transition plans and take over T&D operations and maintenance by June 1, 2021.
- Procurement Process for Legacy Generation Public-Private Partnership (P3): PREPA management and its advisory teams developed materials for and supporting the administration of the Request for Proposal (RFP) and bidder due diligence process for the Legacy Generation P3, which the Puerto Rico Public Private Partnerships Authority formally launched on November 10, 2020. The RFP was released to eight (8) highly qualified bidders with a target completion date for the second half of calendar year 2021. The goal of this project is to comply with Puerto Rico's energy policy as set forth by Act 17-2019 and the requirements of PREPA's certified fiscal plans, to transfer operation of the generation assets of PREPA to a private operator to significantly improve the operations of the legacy generation assets and achieve cost efficiencies.
- EcoEléctrica Power Purchase and Operating Agreement (PPOA) Renegotiation: The Title III Court authorized PREPA to assume the amended contracts for the renegotiated EcoEléctrica PPOA and long-term natural gas supply agreement for Costa Sur (Naturgy), which combined represent annual savings of up to $10-20 million over the next five (5) years. The PREPA Governing Board signed and ratified the new contract, which went into effect on October 22, 2020.
- Renewable PPOA renegotiation: PREPA renegotiated non-operating, shovel-ready, renewable PPOA contracts after obtaining approval from PREB and the FOMB for a total of 150MW of new renewable power generation. The proponents selected by PREPA, Xzerta Tec Solar 1, LLC – approved by PREB – and Ciro-One Salinas, LLC – would provide 60 MW and 90 MW of solar renewable generation capacity, respectively.
- Costa Sur Remediation: Damage from the January 2020 earthquakes necessitated substantial repair work on Units 5 and 6 of the Costa Sur power plant to improve grid reliability and regain a major capacity resource utilizing low-cost and emissions compliant LNG fuel. PREPA completed Unit 5 repairs by August 2020 and Unit 6 repairs by January 2021, under budget. The successful repairs of Costa Sur Units 5 and 6 put a total capacity of approximately 820MW back into service. The goal and benefit of this project was to reestablish the operations of PREPA's lowest cost generation units, increase system reliability, and reduce fuel purchase expenses.

2020 PREPA Key Accomplishments

- P3A Process for T&D operator: The most critical milestone for PREPA's energy system transformation is the transition to a world-class private O&M operator, selected

through a competitive procurement process. During the last two fiscal years, PREPA's management and advisory teams played significant roles in developing materials for and supporting administration of the RFP and bidder due diligence process. On June 22, the P3A announced its approval of contract for a private T&D operator, along with approvals from the Oversight Board, PREPA governing board and PREB. Progress reporting on implementation of this P3 will be covered by Front-End Transition Initiative during FY2021.

- Expanded and fortified project management office (PMO): During FY2020, the PREPA PMO undertook a substantial reorganization that included significant improvements in contract procurement and management processes and capabilities. Findings and recommendations from this reorganization, as well as recommendations from the prior Contract Management Improvement Study will be incorporated into the Front-End Transition measure with the new T&D system operator and will also be expanded to all applicable PREPA Directorates as part of the new Procurement Modernization project in FY2021.
- Natural gas conversion at San Juan Combined Cycle (SJCC) Power Plant: In FY2020, PREPA successfully completed the land-based LNG import terminal and pipeline infrastructure in San Juan Harbor and conversion of the SJCC power plant to dual-fuel capability, after several delays. FOMB's expects that the project has the potential to save PREPA and its customers between $180 to $280 million during the 5-year term of the contract.
- Customer service improvements: In FY2020, PREPA successfully outsourced call centers under a competitive process to handle the overflow from PREPA's internal operations, reducing average call wait times from a 20–30-minute average to 3-5 minutes. It also achieved over 20% of customer penetration on the e-billing platform and has invested a concerted effort to encourage its customers to convert to e-billing since mid-March. This effort, which must continue, also helps mitigate the impact on collections from COVID-19 mobility restrictions.

2019 Key Accomplishments

- San Juan 5 & 6: Execution of San Juan 5 & 6 (conversion from diesel to natural gas) contracts after review and analysis of potential expense savings; construction commenced.
- Launch of P3 for T&D Privatization: T&D RFQ was issued in October 2018; qualified proponents were announced in January 2019; RFP was issued in early February 2019, together with a proposed term sheet and a due diligence data room; management meetings, site visits, and due diligence are underway.
- Debt Restructuring: AAFAF and FOMB announced and published definitive PREPA RSA with Ad Hoc Group of PREPA bondholders and Assured Guaranty on May 3, 2019, with an exchange rate of 67.5% for new Tranche A and 10% for new Tranche B bonds.
- Operational Initiatives: $54M in additional operational savings during FY2019 YTD
- Regulatory Framework: Successful enactment of Act 17-2019 setting forth a regulatory structure based on mainland structures and providing for private investment in the energy system.

- Liquidity: PREPA's cash flow remained stable during FY 2019 as cash receipts met operating cash expenditures. The $300M Super priority Post-Petition revolving Credit Loan from the Commonwealth of Puerto Rico was repaid in March 2019.
- Budget to Actuals: Reporting on FY2019 Budget to Actual and variances prepared on a quarterly basis.
- FY2019 second quarter Budget to Actual report showed revenue targets were achieved.
- Restoration Work: Established dedicated Disaster Funding Management Office in March 2019.
- Received an estimated $451M emergency work in reimbursements from Federal Emergency Management Agency in FY2019.
- IRP: Submissions of the Integrated Resource Plan submitted to PREB in February and June 2019; regulatory approval underway and IRP still under revision.
- Independent Engineer Report: Draft of Independent Engineer Report providing an updated assessment of PREPA's infrastructure submitted to PREPA management for review on April 5, 2019; final version pending publication.
- Medical Benefit Reform: Prepared and executed a contract for employee healthcare plans, effective January 1, 2019. New plan for active employees and retirees met planned savings targets for FY2019.