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

IN RE: ELECTRIC SYSTEM PRIORITY STABILIZATION PLAN	**CASE NO.:** NEPR-MI-2024-0005 **SUBJECT:** Establishment of the Electric System Priority Stabilization Two-Year Plan.

RESOLUTION AND ORDER

I. Introduction

On June 13, 2024, the Energy Bureau of the Public Service Regulatory Board ("Energy Bureau") initiated this proceeding in response to recurrent major outages and grid instability events in early June 2024.[1] In the June 13 Resolution, the Energy Bureau ordered LUMA[2], the Puerto Rico Electric Power Authority ("PREPA"), and Genera PR, LLC ("Genera") to each develop within twenty (20) days an *"aggressive preliminary plan of improvements to the electric system"* with a maximum implementation period of two (2) years.

The mandate was clear: identify and mitigate all key factors contributing to the electric system's unreliability – including outdated protection schemes, lack of redundancy, inadequate vegetation management, insufficient reliable generation, frequency and inertia control deficiencies, and persistent load-shedding triggers.[3] Each plan had to detail the proposed corrective actions, expected costs, and funding sources.[4]

All three entities submitted Preliminary Plans in July 2024 in compliance with the June 13 Resolution. Genera filed its preliminary *Electric System Stabilization Plan* on July 8, 2024,[5] LUMA filed its preliminary plan on July 10, 2024[6] (and an Updated Preliminary Plan on July 19, 2024 to provide additional data on metering and system improvements), and PREPA filed its preliminary plan on July 19, 2024.[7]

The Energy Bureau convened a Technical Workshop on September 11, 2024 and a Public Hearing on October 2, 2024 to scrutinize these plans, with stakeholders and the public providing input. Written public comments, including those by non-profit organizations, were also received and considered.

II. Persistent Interruptions, Increased Lack of Resource Adequacy

Puerto Rico's electricity system is facing a critical shortage of generation resources, leading to a worsening state of resource adequacy. The island's electric grid is significantly strained due to growing peak demand—especially in summer evenings—and a declining generation fleet plagued by high forced outage rates.

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[1] *See* Resolution and Order, *In re: Plan Prioritario para la Estabilización de la Red Eléctrica*, Case No. NEPR-MI-2024-0005, June 13, 2024, ("June 13 Resolution").

[2] LUMA Energy, LLC and LUMA Energy ServCo, LLC (collectively, "LUMA").

[3] *See* June 13 Order, p. 1.

[4] *Id.*

[5] *See Id., Motion in Compliance with Order and Submitting Preliminary Electric System Stabilization Plan*, filed by Genera on July 8, 2024. ("Genera's Preliminary Plan).

[6] *See, Id., Motion in Compliance with Order to Show Cause of July 5, 2024 and Submitting Preliminary Plan Draft Required by the Resolution and Order of June 13, 2024*, filed by LUMA on July 10, 2024 ("LUMA's Preliminary Plan")

[7] *See, Motion in Compliance with Order*, filed by PREPA on July 19, 2024.

The failure of the Aguirre 1 unit in February 2025 has further reduced capacity, triggering expectations of a sharp increase in manual load shedding (MLS) events this summer. LUMA forecasts 93 days of MLS between May and October 2025, nearly tripling the average from prior summers – see Figure 1.

The system's inability to meet evening peak demands, exacerbated by insufficient storage to back up rooftop solar PV installations, underscores its fragility and justifies the emergency measures established in the Priority Stabilization Plan.

The operational reliance on load shedding has become a necessary tool for preventing complete system collapse. MLS is expected to occur almost every other day this summer, particularly in July, and primarily during the high-demand evening hours (6:00 - 11:00 PM).

The Energy Bureau credits LUMA for delivering reliable forecasts, noting that the projections in the 2022, 2023, and 2024 Resource Adequacy analyses have proven to be accurate. Notably, even under the "Expected Case" scenario—which assumes no further generation losses beyond Aguirre 1—the cumulative duration of MLS events is projected at 572 hours in 2025. This is nearly a tenfold increase from 2024.

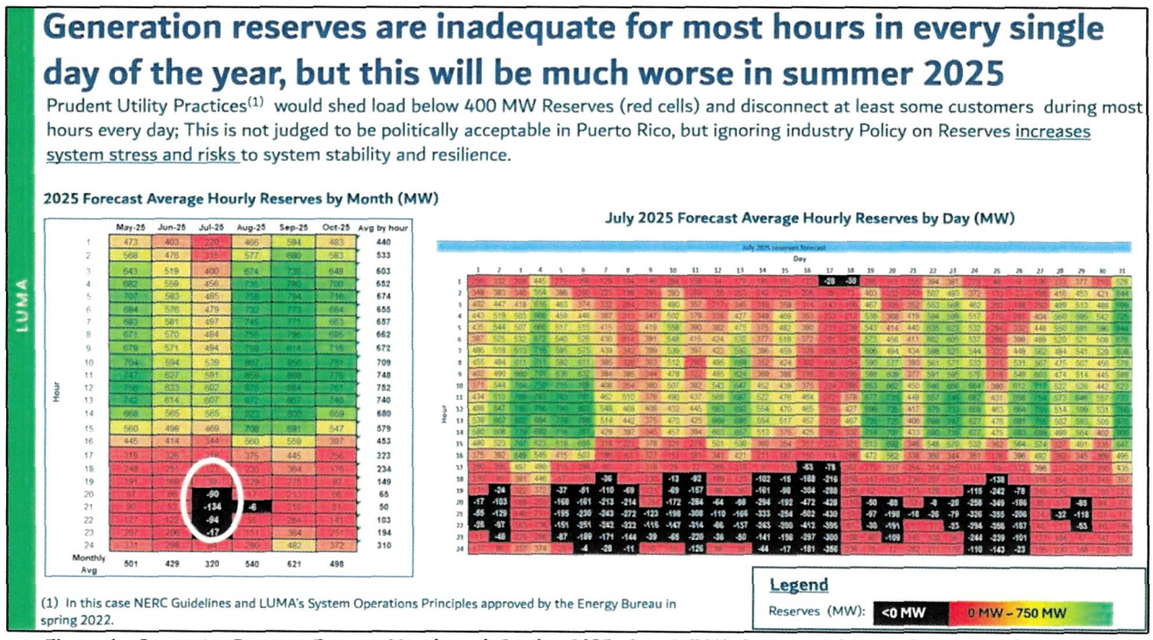

Figure 1 – Generation Reserves Forecast May through October 2025– from LUMA's Resource Adequacy Study – March 24, 2025

If another baseload unit fails, the impact would be catastrophic: up to 135 days and 1,102 hours of load shedding. **Load shedding is no longer a contingency measure but a routine practice for grid management in Puerto Rico.**

The deteriorating situation is driven by systemic issues: outdated thermal generation assets with poor reliability (see Figure 2), limited new capacity additions, and major bluesky outages, *e.g.*, April 6, 2022, June 12 and December 31, 2024 and February 2, 2025.

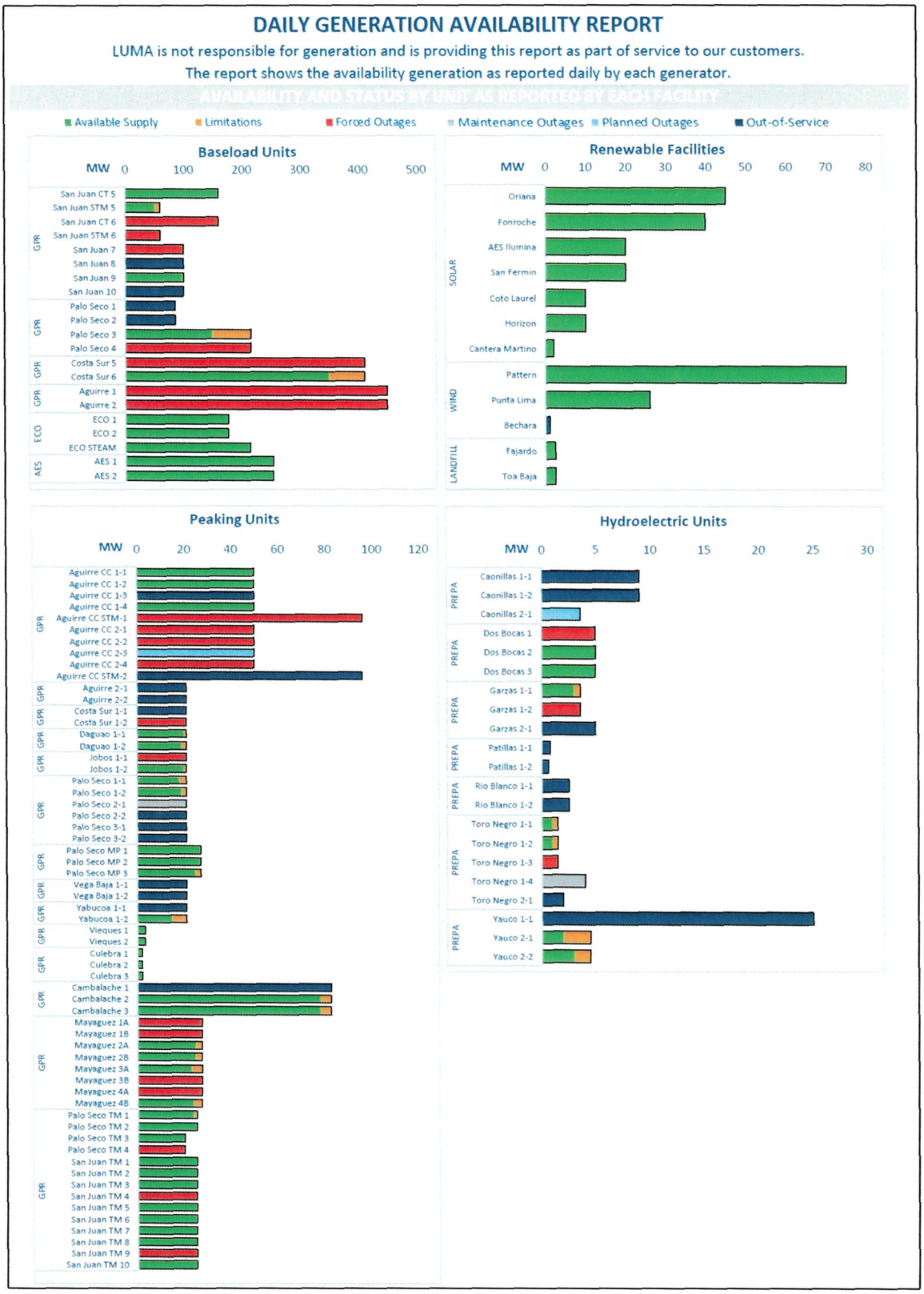

Figure 2 – Daily Generation Availability Report, March 27, 2025

Generation repairs are taking place, but these repairs are not yielding dependable generation capacity. The likelihood that a failure will recur is high.

Until substantial new "firm" resources—such as modern generators or energy storage systems—are added, Puerto Rico will continue to depend heavily on MLS reliability—see Figure 3—that affects all: residents, small business, industry, and those visiting the island. Without decisive and coordinated investment, load shedding will remain entrenched as a central element of grid operations.

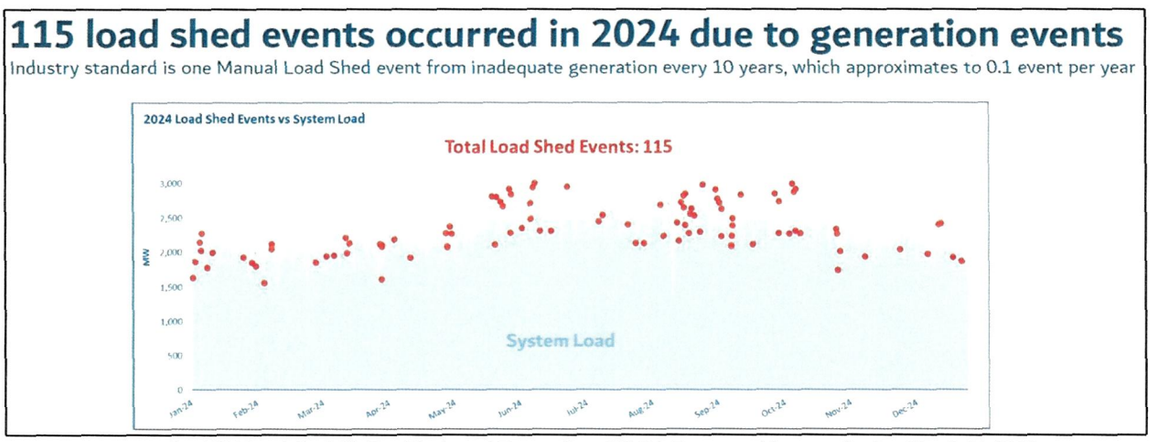

Figure 3 – 2024 Load Shed (Rolling Blackouts) Events from LUMA's Resource Adequacy Study – March 24, 2025

Based on the detailed findings of the *2025 Resource Adequacy Summer Update*,[8] there is a compelling and urgent case that **Puerto Rico is in a state of energy emergency**. The island's electricity grid cannot reliably meet demand under normal operating conditions, let alone in the face of unexpected events such as additional generator failures, heat waves, or hurricanes. This chronic insufficiency of generation capacity, coupled with rapidly increasing peak electricity demand, creates a situation where energy service interruptions are not just likely—they are expected and unavoidable without immediate action.

III. Discussion and Analysis

A. The Proposals

LUMA's stabilization plan centers on addressing Puerto Rico's worsening grid reliability through operational improvements and the strategic deployment of modern grid technologies. As detailed in the 2025 Resource Adequacy Summer Update, LUMA emphasizes the urgent need to add firm, dispatchable generation and energy storage to reduce the island's growing dependence on MLS, which is projected to occur on up to 93 days during the 2025 summer season. LUMA supports initiatives like the Accelerated Storage Addition Program (ASAP), aiming to bring 300–400 MW of battery storage online by summer 2026.

Additionally, LUMA is working to improve system operations by refining demand forecasting, enhancing outage management, and supporting the integration of distributed solar and customer battery systems through programs like Customer Battery Energy Sharing ("CBES").

At the same time, Genera's stabilization strategy focuses primarily on the legacy generation side of the system. Following the catastrophic loss of the 450 MW Aguirre 1 unit in early 2025, LUMA, as the T&D operator, confirmed the need for the procurement and installation of up to 800 MW of new temporary generation capacity. These additions would consist of quick-deploying, firm generation resources—likely modern combustion turbines or reciprocating engines—that can provide dependable output during peak hours and respond flexibly to demand fluctuations. Genera's plan is focused on the maintenance work required to improve the reliability of the generation fleet, which suffers from chronic forced outages due to decades of underinvestment and aging infrastructure.

Together, LUMA's and Genera's plans underscore a shared recognition of the grid's fragility and the need for rapid intervention. While LUMA emphasizes grid operations, storage, and customer-facing technologies, Genera's approach prioritizes stabilizing the supply side through emergency capacity additions. Both plans stress that without the swift deployment

[8] *In re: LUMA Resource Adequacy Study*, Case No. NEPR-MI-2022-0002, *Motion to Submit Interim Update for Summer 2025 of LUMA's Fiscal Year 2025 Resource Adequacy Resource,* filed by LUMA on March 24, 2025.

[8] *Id.*

of new, dependable resources, -especially those capable of supporting evening peak demand- Puerto Rico will continue to experience severe load shedding. Both entities highlight these actions are stopgap measures; long-term resilience and transformation will require sustained investment, grid modernization, and regulatory alignment.

B. Lack of Coordination

The apparent lack of coordination between the LUMA, Genera, and PREPA plans is concerning. For example, PREPA states that the 120MW of hydroelectric generation hazard mitigation proposal was not guided by a need determination made by the system operator (LUMA) and justified by power flow characterization and modeling. As another example, LUMA states it did not have an opportunity to review or assess the schedule or technical challenges of locating and installing the emergency generation capacity solutions proposed by Genera.

The plans under consideration propose significant improvements (e.g., rebuilding transmission substations, new/temporary generation, repairs to existing generation) over a short period and may pose implementation challenges (e.g., considering cost, timeline, supply chain, outage management). To converge on a cohesive priority stabilization plan, LUMA, Genera, and PREPA need to work together to clearly identify which short-term resources are needed and implementable to improve reliability and minimize generation short-fall events.

C. Methodology and Prioritization Criteria

In selecting and prioritizing stabilization activities, the Energy Bureau methodically reviewed all material provided and information shared during the technical conference. This included: (a) the Preliminary Plans and subsequent filings by LUMA, Genera, and PREPA; (b) responses provided during the September 11, 2024 technical workshop; (c) written comments from stakeholders; and (d) pertinent Energy Bureau Orders such as the August 9, 2024 Resolution and Order establishing this proceeding's schedule and the March 19, 2025 Resolution and Order on expedited generation capacity solutions.[9] The following criteria guided the prioritization:

i. Urgency (Immediacy of Reliability Risk): Activities were ranked by how quickly and decisively they address ongoing reliability problems that are causing customer hardships. Top priority was given to actions mitigating the root causes of recent major outages and frequent service interruptions. For instance, rapid deployment of emergency temporary generation was deemed critical after the catastrophic failure of a major plant (Aguirre Unit 1) in early 2025 exacerbated an existing capacity deficit.[10] Similarly, immediate remedial actions on protective relaying and vegetation overgrowth were prioritized given their role in triggering cascading outages.

ii. Impact on Grid Stability and Short-Term Resource Adequacy: The scale of expected improvement in system reliability metrics (such as forced outage rate, reserve margin, frequency excursions, and load shed frequency) was weighed for each measure. Initiatives that produce significant reductions in forced generation outages or that add substantial reserve capacity within months (thereby preventing load-shedding events) received high priority. For example, Genera's proposal to install emergency temporary mobile generation (~800 MW for 18 months) and fast-response battery storage (~430 MW) was prioritized because it directly targets the island's reserve margin shortfall and frequency stability needs.[11]

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[9] *See* Resolution and Order, *In Re: Plan Prioritario para la Estabilización de la Red Eléctrica*, Case No. NEPR-MI-2024-0005, March 19, 2025.

[10] *Id.* at page 1.

[11] *Id.*

iii. Feasibility and Time to Implement: The Energy Bureau considered the practical timeline to execute each action and whether it can yield benefits within the two-year window. Quick "no-regrets" fixes (e.g., targeted equipment repairs, maintenance catch-up, and operational improvements) were scheduled in the Immediate or Short-Term groups. More complex projects (e.g., substation relocations or major unit overhauls) that may span beyond 12–18 months were still included but staged appropriately. Activities relying on readily available funding (especially federal funds already obligated for grid repair) were favored, while those contingent on lengthy new procurements were sequenced later unless vital for system stability. Overhauling the Yauco 1-1 hydroelectric plant was not considered for priority stabilization purposes because it did not fit the imposed time constraints. Replacement of out of service power transformers, e.g., the three 112MVA 115kV/38kV transformers discussed by LUMA during the technical workshop of September 11, 2024, was also not considered for priority stabilization purposes because it did not fit the imposed time constraints, however the Energy Bureau is overseeing these replacements elsewhere.

iv. Interdependency and Coordination Needs: The plan accounts for the interplay between generation and transmission actions. The measures the Energy Bureau prioritized require coordinated execution by LUMA (T&D operator) and Genera (generation operator) to succeed. For instance, improving frequency control requires both Genera to enable plant governor response and LUMA to adjust system protection schemes. Such jointly critical actions were grouped so that prerequisites are addressed first and responsible entities are clearly assigned.

v. Consistency with Industry Standards: Each activity was vetted against best utility practices and recommendations from entities like the Electric Power Research Institute (EPRI). The Bureau's independent consultants' analyses of prior outages (including EPRI's reports on the April 6, 2022 and June 2024 blackout events) heavily informed Energy Bureau decisions. For example, EPRI emphasized the need for sufficient system inertia and fast frequency response to prevent future cascading outages; accordingly, fast-acting reserves (battery systems and quick-start units) feature prominently in this plan. Likewise, maintenance programs were benchmarked to ensure generation forced outage rates and vegetation clearance cycles will move toward industry norms over the next two years.

Using these criteria, the Energy Bureau identified a set of Priority Stabilization Activities covering generation, transmission, and distribution initiatives. The Energy Bureau then assigned each activity to one of four timeframe categories based on the required start date and duration: Immediate (0–3 months), Short-Term (4–12 months), Mid-Term (13–18 months), and Long-Term (19–24 months). Attachment A to this Resolution and Order presents the activities in order of start date (in months from issuance of this Order), along with the primary responsible party (LUMA, Genera, and/or PREPA) and pertinent notes on their urgency, impact, and any dependencies. The table included as **Attachment A** of this Resolution and Order **constitutes** the approved Electric System Priority Stabilization Plan which seeks to achieve the highest reliability impact in the shortest amount of time possible.

D. Priority Stabilization Plan – Implementation

The Energy Bureau ordered LUMA, Genera, and PREPA to each develop and submit an aggressive preliminary plan of improvements to the electric system, with a maximum implementation time of two years, to address the dire state of electric service in Puerto Rico. The Energy Bureau retained EPRI to review the grid stabilization work plans submitted by LUMA, Genera, and PREPA, to provide its expert opinion on the material presented by each to make recommendations for further measures to stabilize the Puerto Rico electric system. The Energy Bureau reviewed the plans submitted by LUMA, Genera, and PREPA, and

ESTABLISHES in **Attachment A** the Electric System Priority Stabilization Plan necessary to reduce customer interruptions soonest.

The most effective and **immediate** way to reduce load shedding in Puerto Rico is to add dependable generation capacity, particularly firm, dispatchable resources that can serve evening peak demand. Immediate activities, included in the Priority Stabilization Plan, that add this capacity are:

i. 800 MW of additional emergency temporary base generation for interconnection between Aguirre and Costa Sur as generation barges and/or land power mobile temporary units;

ii. extend the operation of the seventeen (17) TM2500 temporary generation units sited between the San Juan and Palo Seco power plants through December 31, 2027;

iii. short-term repairs at Aguirre, Costa Sur, San Juan, and Palo Seco power plants; and

iv. the deployment of 244MW of flexible generation, 2 CTG 50MW/each, 18 RICE 18MW/each.

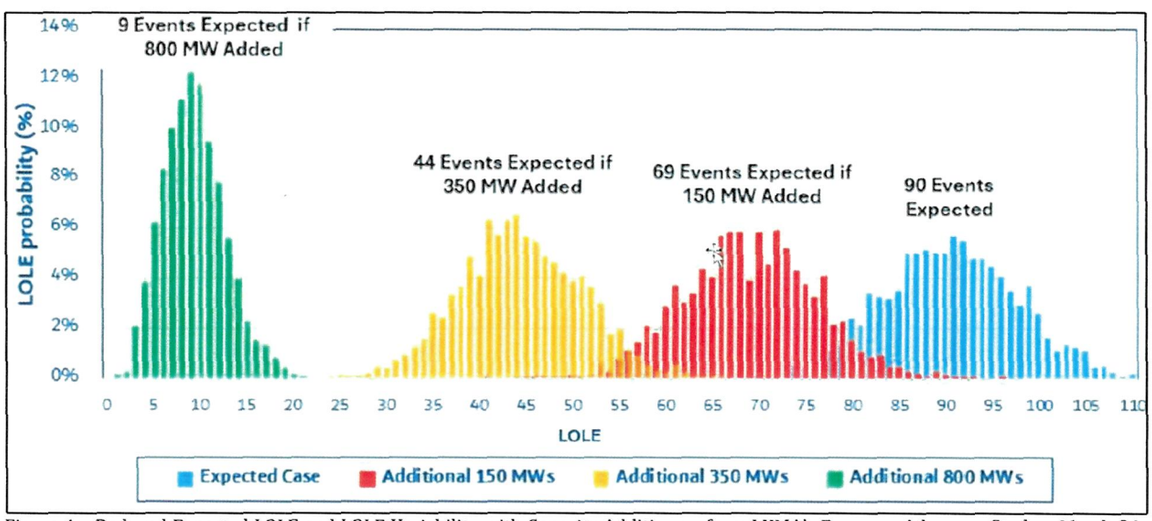


Figure 4 – Reduced Expected LOLE and LOLE Variability with Capacity Additions – from LUMA's Resource Adequacy Study – March 24, 2025

Flexible generation is a critical element of any power system aiming to integrate high levels of renewable energy and meet the statutory goal of 100% renewable generation by 2050. Fast-responding, distributed resources—such as combustion turbine Peaker units—play a key role in managing the inherent variability of renewable generation, especially as longer-duration energy storage solutions are gradually deployed. The capability of a generation unit to quickly ramp output up or down is vital for maintaining grid stability in systems with high renewable penetration. In Puerto Rico, for example, midday renewable output can exceed 1,000 MW (comprising roughly 850MW from distributed generation and 250MW from utility-scale projects), leading to significant downward ramping events, some of which surpass the response capabilities of traditional generators. To classify renewable resources as firm or baseload, longer-duration storage is essential. These storage systems deliver the operational flexibility needed to support greater levels of variable generation by releasing stored energy in a controlled manner, thereby reducing ramping pressure on thermal generators.

Seeking to add dependable capacity to the system, the Energy Bureau has authorized a competitive procurement process to solicit 2,500 to 3,000 MW of new generation capacity, aimed at modernizing the island's energy infrastructure and ensuring reliable service amid

the declining performance of PREPA's aging thermal fleet.[12] This initiative follows the enactment of Act 1-2025, which adjusts Puerto Rico's energy transition timeline while maintaining the long-term goal of 100% renewable energy by 2050. The new generation sources should preferably not exceed 400 MW per unit, be flexible to accommodate increasing renewable integration, and ideally be sited near existing load centers. Importantly, these sources are not limited to natural gas and can include any baseload technologies aligned with public energy policy.

By focusing on baseload-capable, flexible, and modern units, this generation solicitation directly enhances Puerto Rico's dependable capacity—the portion of generation reliably available during peak demand. The new capacity will help mitigate forced outages, support essential maintenance of legacy assets, and reduce reliance on emergency or inefficient backup units. Furthermore, the solicitation process—overseen by the Public-Private Partnerships Authority—ensures that new projects are competitively procured, compliant with energy policy, and strategically located to optimize reliability and grid stability. This approach is crucial for transitioning to a cleaner grid while securing the dependable generation needed to support economic resilience and customer demand today.

In addition, the integration of new renewable energy and battery energy storage projects continues to advance. Across Tranches 1, 2, and 4 of the renewable energy solicitation, along with the Xzerta and Ciro One projects, approximately 860 MW of solar generation and 645 MW of BESS capacity have been secured. Importantly, this phased procurement is not simply focused on increasing renewable capacity indiscriminately. The Energy Bureau has acted decisively to safeguard the public interest by rigorously evaluating proposals and allowing only those that are demonstrably cost-effective to proceed. Locking ratepayers into long-term contracts with unfavorable pricing would undermine Puerto Rico's energy goals and burden consumers unnecessarily—an outcome the Energy Bureau is firmly committed to preventing.

While renewable energy sources like solar and wind are variable, the simultaneous addition of battery storage systems ensures that energy generated during high-production periods can be stored and dispatched when needed. This reduces Puerto Rico's dependence on aging, fossil-fueled thermal plants, many of which are over 40 years old and increasingly unreliable. The renewable tranches, particularly when coupled with storage, bolster grid resilience, improve reliability, and contribute to meeting the required resource adequacy standards, reducing the projected loss of load expectation (LOLE) from current critical levels toward industry benchmarks.

Another stability initiative that is ongoing is the Accelerated Storage Addition Program (ASAP) to rapidly deploy up to 803 MW of battery energy storage systems (BESS) across Puerto Rico. This program, structured through standardized agreements with Independent Power Producers (IPPs), aims to deliver grid stability, reduce reliance on aging fossil fuel infrastructure, and support the island's transition toward clean energy. By leveraging a Standard Offer pricing model, ASAP ensures uniformity and speed in contract execution, with a projected customer savings of nearly $100 million annually over the next two decades. These BESS units significantly enhance dependable capacity by providing dispatchable energy during peak demand hours and grid emergencies. They serve as firm capacity by shifting surplus energy into periods of high need, reducing the need for costly load shedding or emergency generation.

Over 50% of the interruptions associated with T&D and affecting reliability result from vegetation contact and deteriorating transmission facilities. Immediate activities in the Priority Stabilization Plan that address these deficiencies are as follow:

i. Targeted Vegetation Management efforts (operational cycle and reactive maintenance)

[12] *See* Resolution and Order, *In re: Competitive process for new generation sources*, Case No. NEPR-MI-2025-0001, March 19, 2025, ("March 19 Resolution").

ii. Complete Transmission Line Hardening & Maintenance (Phase 1) – urgent repairs and hardening on the 51 targeted transmission line segments (38 kV and 115 kV) that account for the bulk of T&D-related outages

Vegetation management efforts need to increase rapidly and exponentially. Noting the delays related to the federally funded Vegetation Management Clearing program, the Priority Stabilization Plan concentrates on targeted vegetation management that may not be necessarily federally funded but still increases the number of crews.

The current system's instability is largely due to a lack of frequency response. Energy storage can deliver Fast Frequency Response ("FFR"). When there is a sudden imbalance between supply and demand—such as a generator tripping offline or a rapid spike in load—grid frequency can deviate dangerously from its target (e.g., 60 Hz). The thermal units operating in Puerto Rico are slow to respond to such imbalances, which increases the risk of underfrequency events and even cascading blackouts.

Modern energy storage systems (especially battery storage) can respond almost instantaneously (within milliseconds) to frequency deviations. This fast, automated injection or absorption of power stabilizes frequency before traditional generators can react, preventing the need for emergency underfrequency load shedding (UFLS), which LUMA notes occur about three times per month. Immediate activities in the Priority Stabilization Plan that address increases the capacity of energy storage follow.

i. Deployment of 430MW of utility scale BESS at existing power plant sites;
ii. Deployment of ASAP utility scale BESS – 110MW Standard Offer 1, 600MW in Standard Offer 2; and
iii. Deployment of 100MW utility scale BESS across 4 sites.

Since January 1, 2025, the Energy Bureau directed LUMA to require Distributed Energy Resources ("DER) interconnecting to the grid to employ inverters compliant to the IEEE STD 1547 and UL 1751 SB. The functionality provided by these inverters has the potential to increase hosting capacity and increase the number of distributed generators that can interconnect without or with minimal grid modifications. The Energy Burau notes that DER are an integral component of the electric system. During CY 2024, distributed generation produced more renewable energy than utility scale systems. The growth of DER integration requires a smart approach that leverages the functionalities now required for interconnection. Activities included in the Priority Stabilization Plan that support the increase of DER adoption are as follow.

i. Integration of IEEE STD 1547, UL 1741 SB compliant Inverter Based Resources (IBR) functionality to distribution/transmission plans

The Energy Bureau underscores this Priority Stabilization Plan—while identifying the urgent actions to be implemented over the next two years—neither supersedes nor diminishes the need to invest in long-term, strategic measures such as those set forth under the Integrated Resource Plan or broader system modernization initiatives. Rather, it serves as an interim roadmap to shore up immediate reliability, and does not relieve LUMA, PREPA, or Genera from advancing all other Energy Bureau-approved projects or mandates aimed at achieving a resilient, sustainable electric system.

E. Development of Transmission Plan

While much focus has been placed on generation adequacy, the ability to reliably move electricity across the island is equally vital. Without a strong, strategically planned transmission network, even the most well-designed generation additions—whether thermal or renewable—cannot reliably reach load centers, particularly during high-stress events. Puerto Rico's geography makes this even more critical, as renewable resources and newer generation assets may be located far from the urban and industrial areas with the highest demand. A Transmission Plan is needed to identify:

i. Congestion points and bottlenecks that limit power flow;

ii. Areas where grid flexibility and resilience are lacking, especially for hurricane-prone regions;

iii. Strategic interconnections that can unlock low-cost, renewable-rich zones;

iv. Investments in grid hardening and modernization, including smart grid and digital controls; and

v. How to increase transmission system flexibility that allows for interconnection of different types of variable generation, even though the specific generation's characteristics may be unknown. The transmission system will need advanced transmission technologies that accommodate diverse types of generation.

Without such a plan, Puerto Rico's electric system will remain fragmented, reactive, and vulnerable to localized outages and inefficiencies.

In a separate Resolution and Order the Energy Bureau will specify technical requirements for the development of the electric system Transmission Plan.

F. Costs Associated with the Priority Stabilization Plan

1. Working Capital Advances from FEMA Monies

The Energy Bureau strongly encourages the use of federal funding, including **working capital advances from FEMA monies**, to expedite and reduce the direct rate impacts of these high-priority initiatives. Wherever possible, the Parties should leverage FEMA funding to offset or minimize expenditures otherwise passed directly to customers.

At the same time, the Energy Bureau emphasizes that **any circumstances affecting the availability of FEMA funding should not serve as a pretext for failing to proceed** with these urgently needed reliability measures. If FEMA monies do not materialize as anticipated or are delayed, LUMA, Genera, and PREPA remain obligated to identify and pursue alternative funding sources to avoid interruption or postponement of the required work.

The Energy Bureau further reminds all parties that **any proposed costs**—whether covered by FEMA advances, other federal or local sources, or ratepayer dollars—**must be just, reasonable, and** necessary given the system's urgent stabilization needs. The provisional rate request due April 30, 2025 must include comprehensive documentation, cost estimates, and any relevant assumptions to substantiate these investments. As part of the forthcoming rate case proceeding, the Energy Bureau will scrutinize these expenditures under applicable prudency and reasonable standards to ensure that only justified costs are reflected in customer rates.

2. 800 MW of additional emergency temporary base generation

As resolved by the Energy Bureau in the March 19, 2025 Resolution and Order, the costs associated with this procurement will be evaluated for reasonableness.

G. Funding and Cost Recovery Provisions

To ensure the timely and transparent financing of these Priority Stabilization Activities, the Energy Bureau hereby **directs LUMA, Genera, and PREPA** to incorporate the associated funding requirements into their rate request scheduled to be filed in NEPR-AP-2023-0003. This filing should clearly detail projected expenditure for both capital and operational needs arising from the Priority Stabilization activities described in this Order.

The Energy Bureau reminds all parties that **any proposed costs are expected to be just, reasonable, and necessary** to achieve the stated reliability and stability objectives. All supporting documentation, cost estimates, and underlying assumptions related to these activities must be included in the rate case filing to allow thorough examination. As part of the rate proceeding, the Energy Bureau will evaluate these expenditures based on prudent utility practice and applicable regulatory standards to ensure that only justified and reasonable amounts are reflected in customer rates.

H. Reporting Requirements

The Energy Bureau **ORDERS** LUMA, Genera, and PREPA to provide a monthly status report of the activities established in the Electrical System Priority Stabilization Plan starting on **April 27, 2025**. LUMA **SHALL** file these status reports with the Energy Bureau as one (1) **collaborative** report. The status report should include, but is not limited to, a detailed discussion of each activity's progress and any potential implementation issues and proactive solutions to the same. The Energy Bureau **ENCOURAGES** LUMA, Genera, and PREPA to hold regular meetings to further facilitate collaboration and ensure compliance with the established plan. The Energy Bureau may establish, as necessary, an itinerary of compliance hearing.

The Energy Bureau **WARNS** LUMA, Genera, and PREPA that, in accordance Art. 6.36 of Act 57-2014:[13]

(i) noncompliance with this Resolution and Order, regulations and/or applicable laws may carry the imposition of fines and administrative sanctions of up to $125,000 per day; and

(ii) for any recurrence of non-compliance or violation, the established penalty shall increase to a fine of not less than ten thousand dollars ($15,000) nor greater than twenty thousand dollars ($250,000), at the discretion of the Energy Bureau.

Be it notified and published.

Edison Avilés Deliz
Chairman

Lillian Mateo Santos
Associate Commissioner

Ferdinand A. Ramos Soegaard
Associate Commissioner

Sylvia B. Ugarte Araujo
Associate Commissioner

NEGOCIADO DE ENERGÍA DE PUERTO RICO
NEPR
JUNTA REGLAMENTADORA DE SERVICIO PÚBLICO

[13] Known as the *Puerto Rico Energy Transformation and RELIEF Act*, as amended ("Act 57-2014").

CERTIFICATION

I certify that the majority of the members of the Puerto Rico Energy Bureau has so agreed on March 28, 2025. Associate Commissioner Antonio Torres Miranda did not intervene. I also certify that on March 28, 2025 a copy of this Resolution and Order was notified by electronic mail to arivera@gmlex.net; mvalle@gmlex.net; lrn@roman-negron.com; legal@genera-pr.com; regulatory@genera-pr.com; Emmanuel.porrogonzalez@us.dlapiper.com; laura.rozas@us.dlapiper.com; margarita.mercado@us.dlapiper.com. I also certify that today, March 28, 2025, I have proceeded with the filing of the Resolution and Order issued by the Puerto Rico Energy Bureau.

I sign this in San Juan, Puerto Rico, today March 28, 2025.

NEGOCIADO DE ENERGÍA DE PUERTO RICO
NEPR
JUNTA REGLAMENTADORA DE SERVICIO PÚBLICO

Sonia Seda Gaztambide
Clerk

ATTACHMENT A

Electric System Priority Stabilization Plan

#	Task Start Date (months)	Priority Stabilization Activity	Responsible Party	Notes
1	0	Extend the operation of the seventeen (17) TM2500 temporary generation units sited between the San Juan and Palo Seco power plants through **December 31, 2027**.	PREPA	**Resource Adequacy** **Urgency/Impact**: Retaining these TM2500 units provides a near-instant cushion against forced outages, preventing frequent load shedding. Their existing location near major load centers helps stabilize voltage and ensures adequate spinning reserve. **Rationale**: The current generation shortfall and ongoing maintenance/overhauls require bridging solutions; extending these mobile units offsets potential capacity deficits.
2	0	**Targeted Vegetation Management Program** (operational cycle and reactive maintenance) – LUMA Districts to develop plan to manage all distribution feeders by 06/30/27. Clear all 51 115kV and 38kV transmission line segments identified as contributing to 75% of all transmission related customer minute interruptions by October 1, 2026.	LUMA	**SAIFI** **Urgency:** Vegetation contact has triggered major outages (e.g., June 2022 fire and outage) and continues to be a leading outage cause. Clearing overgrowth is an instant-impact measure to prevent avoidable faults, especially before peak hurricane season. **Impact:** Reduces line faults and relay trips, directly cutting frequency of outages island wide. **Rationale:** Industry practice is to maintain aggressive trimming cycles in tropical climates; LUMA acknowledges vegetation management is critical to "address a major cause of outages". **Funding:** Due to delays in the federally funded "reset" initiatives, LUMA must rely on non-federal resources for vegetation management through December 31, 2027, while continuing to pursue all necessary steps to activate the federal funding stream.
3	0-2	Short-term generation repairs: Aguirre Unit 2. **Repair of Aguirre Unit 2** Rotor, replacement of air preheater baskets	Genera	**Resource Adequacy**

#	Task Start Date (months)	Priority Stabilization Activity	Responsible Party	Notes
				Urgency/Impact: Expedites return of a major baseload unit that suffered rotor damage. **Rationale**: The system faces a capacity deficit, so accelerating these repairs (via around the clock labor) aims for a May 2025 online date to alleviate load shedding during peak demand. **Operational Constraint**: The unit will be restricted to half its normal output pending full replacement of the air preheater baskets.
4	0-3	Short-term generation repairs: **San Juan Unit 6**. Repair of the CT generator brush holder system and repair of damage to the steam turbine journal bearings.	Genera	**Resource Adequacy** **Urgency/Impact**: San Juan 6 restoration improves spinning reserve and reduces forced outages. **Rationale**: Unit 6 has experienced repeated downtime due to brush holder and bearing failures. Around-the-clock labor can achieve a June 2025 operational target. **Operational Constraint**: Must verify correct specifications and tolerances for both CT and steam turbine components to avoid re-trips.
5	0-1	Short-term generation repairs: **Costa Sur Unit 5**. Environmental repairs: replacement of air preheater baskets, gas recirculating fan motor, repair of leaks in the high-pressure heaters, repair of one normal service station transformer, replacement of ten (10) furnace tube wall panels.	Genera	**Resource Adequacy** **Urgency/Impact**: Costa Sur 5 is critical for base load. Completing these environmental and mechanical repairs by April 2025 ensures no derating (full capacity available). **Rationale**: Eliminating leaks and fixing major boiler components can substantially reduce forced outages. Getting back to 100% output is essential for reliability and cost-effective operation. **Operational Constraint**: Must coordinate multi-trade tasks (mechanical, electrical, structural) under tight deadlines.

#	Task Start Date (months)	Priority Stabilization Activity	Responsible Party	Notes
				Dependencies: Close contractor monitoring, ensuring compliance with OEM specs and environmental regulations (e.g., air quality controls).
6	0-3	Short-term generation repairs: **Palo Seco Unit 4**. Stator rewinding.	Genera	**Resource Adequacy** **Urgency/Impact**: Stator rewinding is a high-value repair enabling the unit to run reliably at full load. Goal to restore by June 2025 with no output limitations. **Rationale**: Palo Seco is a key plant near the San Juan load center; any capacity improvement helps minimize forced load shedding events. **Operational Constraint**: Requires specialized expertise and materials; must track shipping and workshop schedules closely.
7	0	800 MW of additional **emergency temporary base generation** for interconnection between Aguirre and Costa Sur as generation barges and/or land power mobile temporary units; seek environmental waivers to run these generators on an emergency basis	PREPA	**Resource Adequacy** **Consistent with 3/19/25 Resolution & Order**: The Bureau previously recognized the urgent need for extra capacity to mitigate rolling blackouts and allow scheduled repairs of existing plant. **Urgency/Impact**: Injecting up to 800 MW of dependable supply significantly reduces forced load shedding and stabilizes peak demand periods. Barge or mobile units can be sited strategically to optimize load distribution in southern Puerto Rico (Aguirre/Costa Sur).
8	0	Deployment of 430MW of **utility scale BESS**	Genera	**Bulk Electric System support services** **Urgency/Impact**: A 430 MW fleet of fast-response battery storage significantly bolsters frequency regulation, spinning reserve, and peak-load management, thereby reducing forced load shedding events.

#	Task Start Date (months)	Priority Stabilization Activity	Responsible Party	Notes
				Rationale: The July 17, 2024 Energy Bureau Order in NEPR-MI-2021-0002 authorized these BESS installations to mitigate shortfalls in system inertia and provide critical system support. **Renewable Integration Restriction**: Starting January 1, 2028, these units must not charge overnight (6 p.m.–6 a.m.), ensuring that they primarily absorb excess generation from solar and other renewables, thereby reducing reliance on fossil-based supply.
9	0	Deploy **244 MW of flexible generation,** 2 CTG 50 MW/ea, 18 RICE 18MW/ea	Genera	**Peak Demand, Integration of Renewables** **Urgency/Impact**: Rapidly deploying flexible, quick-start units (CTGs/RICE) can cover peaking needs, support grid frequency, and complement intermittent solar output. Helps avoid rolling blackouts when existing baseload plants go offline for maintenance. **Rationale**: Newer, more efficient units improve reliability, providing contingency reserves and blackstart capability.
10	0-9	**Complete Transmission Line Hardening & Maintenance** – By Month 9, finish the urgent repairs and hardening on the 51 targeted transmission line segments (38 kV and 115 kV) that account for the bulk of T&D-related outages. This includes replacing deteriorated poles/towers, upgrading insulators, and adding redundancy (where feasible, such as looping radial lines). Ensure all identified critical components on these lines have been repaired or replaced.	LUMA	**Urgency:** High – these line segments have historically caused frequent outages; completing their rehab before the next peak hurricane season is vital. **Impact:** Direct and substantial reduction in customer interruptions and improved power quality.
11	0	Seek environmental waivers to run the three FT8® MOBILEPAC® units in **Palo Seco** on an emergency basis	PREPA	**Emergency Generation** **Urgency/Impact**: These FT8 MOBILEPAC units can operate quickly to address unexpected generation shortfalls, thus preventing load shedding. **Rationale**: Environmental waivers permit usage during critical peak or contingency scenarios, ensuring minimal service disruptions.

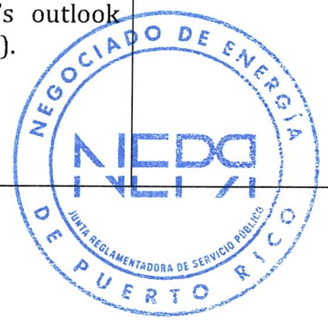
#	Task Start Date (months)	Priority Stabilization Activity	Responsible Party	Notes
12	0-24	**Critical Component Replacement Program**	Genera	**Urgency/Impact**: Replacing worn turbine components, boiler tubes, feed pumps, and other high-failure parts across Genera-operated plants is essential for meeting the mandated improvements in availability and forced outage rates. **Rationale**: Addresses root causes of repetitive breakdowns and generation undependability. Coupled with scheduled short-term/planned maintenance, it forms the backbone of Genera's 2-Year Stabilization Plan. In conjunction with the Short-term and planned maintenance required to **achieve 65% availability and reduce forced outages to 15% by December 31, 2027**.
13	0-9	Finalize 110 MW Standard Offer 1 (SO1) **"ASAP" Utility-Scale BESS** & Initiate Regulatory Approvals for Additional 600 MW Under SO2	LUMA	**Bulk Electric System Support + Renewable Generation Integration** **Urgency/Impact**: Fast-tracking the finalization of 110 MW BESS under the ASAP framework delivers immediate frequency regulation and peak shaving benefits, and an additional 600 MW of storage capacity facilitates future renewables integration. **Rationale**: Consistent with LUMA's ASAP program filings to address near-term system constraints. Early BESS deployments reduce forced load shedding and improve operational flexibility. Implementation as per March 5, 2025 R&O in NEPR-MI-2024-0002.
14	0-18	**Install 4×25 MW Utility-Scale BESS**	LUMA	**Bulk Electric System Support** **Urgency/Impact**: Adding four distributed BESS units (total 100 MW) will enhance system inertia, support voltage regulation, and provide fast frequency response capability. Commission by October 2027.

#	Task Start Date (months)	Priority Stabilization Activity	Responsible Party	Notes
				Rationale: Expands the "portfolio" of utility-scale storage solutions beyond the initial 110 MW ASAP and addresses stability issues.
15	4	**Grid Protection & Control Upgrade Program** – Audit and recalibrate protective relays, breakers, and control systems on critical transmission corridors and at generator switchyards. Implement any "low hanging fruit" relay setting changes to ensure faults are isolated properly (e.g., update under-frequency load shedding settings and zone coordination). Begin replacing faulty or obsolete relay equipment where immediate spare parts are available.	LUMA	**Urgency:** Misoperation of protection devices has exacerbated past blackouts (e.g., a vegetation fault cascaded after breakers failed to isolate it). Correct settings are needed *now* to reduce the likelihood and scope of the next incident. **Impact:** Enhances grid stability by ensuring local faults do not escalate to widespread outages; improves safety of equipment. **Rationale:** The June 13 R&O explicitly flagged the need to *"update protection schemes"* as a priority. **Dependencies:** Coordination with Genera on generator protection and governor controls is required.
16	9	**Dynamic Stability Study and Frequency Control Implementation** – Complete a dynamic simulation study of the Puerto Rico power system under various contingency scenarios (e.g., generation trip, load spike) to identify weaknesses in frequency and voltage control. By Month 18, produce specific recommendations for additional inertia or fast-frequency response needs. Immediately thereafter, implement operational measures to improve frequency stability: e.g., tune all generator governor settings, enforce droop compliance on all units, and activate secondary frequency regulation (AGC) on units with it. Ensure **100% of online units have functioning primary frequency response by July 2026**	LUMA	**Urgency:** High – recent analyses indicate that inadequate frequency response and low system inertia contributed to the severity of past blackouts. A detailed stability study is needed immediately to guide mitigation before another large unit trip occurs. **Impact:** This will pinpoint critical measures (like requiring certain units to stay online for inertia or needing extra fast reserves) to avoid system-wide collapses. Tuning and activating governors will improve the frequency nadir on any generation loss, reducing the likelihood of load-shed triggers. **Dependency:** Study to be conducted with input data from Genera and modeling support from EPRI or a similar expert (prior studies from April 2022 events can be leveraged). Genera must then implement any unit-specific fixes (e.g., governor repairs, AVR tuning), while LUMA adjusts system control schemes.

#	Task Start Date (months)	Priority Stabilization Activity	Responsible Party	Notes
17	0	**Commence Priority Substation Rehabilitation/Rebuild Projects (Phase 1)** – Start work on high-priority substation projects identified in LUMA's "Substation Rebuild Program."	LUMA	**Urgency:** Moderate-High – while not as immediate as stopping outages, substation failures can be catastrophic and lengthy to repair, so proactive rebuilding is needed within this two-year window. **Impact:** Strengthens nodes of the grid, reducing the chance of a major substation outage that could cut off thousands of customers or generation stations. Improves safety and reliability (new equipment less prone to failure). **Rationale:** LUMA's plan identified 87 substations in FEMA flood zones and numerous aged units requiring rehabilitation. Upgrading a subset of these in the short term is critical for storm resilience. **Dependency:** Dependent on availability of equipment (e.g., power transformers, breakers) – many are long-lead items. Projects will leverage federal recovery funds where available. LUMA must coordinate outages for construction with Genera to ensure generation re-dispatch during cutovers. This program will continue in phases through the two-year period.
18	0-21	**Complete interconnection of approved IPP utility scale solar generation and energy storage** in 21 months Xzerta IPP 60 MW Ciro One IPP 90 MW Tranche 1 – ~600 MW, ~550 MW 4HR BESS Tranche 2 – 60 MW, 60 MW 4HR BESS Tranche 4 – 50 MW, 50 MW 6HR BESS	LUMA	**Renewable Capacity Addition** **Urgency/Impact**: Adding approximately 860 MW of solar generation and 645 MW of energy storage improves the renewable energy share and reduces dependence on fossil units and bolsters grid stability, providing frequency regulation, load shifting, and potential Blackstar functions. **Rationale**: Aligned with the IRP's directive to accelerate solar deployment and emphasis on significant BESS deployment to support the ramp-up in renewables and reduce reliance on peaking generators.
19	9-12	**Development of Comprehensive Transmission Plan** - Submit to PREB by April 30, 2026	LUMA	**System Planning & Reliability**

#	Task Start Date (months)	Priority Stabilization Activity	Responsible Party	Notes
				Urgency/Impact: A formal, long-range Transmission Plan is critical to guide expansions, upgrades, and integration of new generation (including IPPs, BESS, and emergency assets). By setting an April 30, 2026 filing deadline, the Bureau ensures strategic alignment for the post-2027 period. **Rationale**: The Plan must meet technical requirements established by the Energy Bureau, address N-1/G contingency reliability, incorporate distributed energy resources, and integrate anticipated renewable/battery capacity additions.
20	12-18	Full rollout of federally funded **Vegetation Clearing Program and reclamation efforts** ($1.2bn)	LUMA	Progress captured in NEPR-MI-2019-0005.
21	19	**Priority Substation Rebuild Program (Phase 2)** – By Month 19 and onward (2026), complete the rehabilitation projects initiated in year 1 and commence remaining high-priority substation overhauls as presented to PREB in Table 1-7 of the Updated Preliminary Plan. This phase will target the next set of critical substations among the 87 identified (particularly those whose failure would cause regional outages or evacuation of power plants). Aim to finish construction/commissioning of at least **10 major substation projects by end of Year 2**.	LUMA	**Urgency:** Medium – these projects are longer-term in nature, but still within the two-year horizon to deliver benefits before the 2026 hurricane season. **Impact:** Rebuilt substations drastically reduce the risk of protracted outages. Each completed project improves overall system reliability indices (SAIDI/SAIFI) for thousands of customers. **Rationale:** LUMA's improvement system plan highlighted substation investments as crucial for both reliability and safety. The Energy Bureau prioritizes a subset that can be finished within 24 months, with remaining sites to follow thereafter under separate long-term programs. **Dependency:** Many of these are funded under FEMA's rebuild obligations – progress will depend on coordination with FEMA and COR3 to release funds and approve designs. LUMA must file quarterly progress updates on substation projects to the Energy Bureau to track adherence to schedule.
22	21	Integration of IEEE STD 1547, UL 1741 SB compliant **Inverter Based Resources (IBR)** functionality to distribution/transmission plans	LUMA	Increased deployment of **Distributed Energy Resources** (DER)

#	Task Start Date (months)	Priority Stabilization Activity	Responsible Party	Notes
				Since 1/1/25 the Energy Bureau requires that all inverters interconnecting to the grid comply with IEEE STD 1547 and UL 1741 SB requirements.
23	21	**Enhanced Frequency Regulation and Reserve Practices** – By Month 21, implement advanced grid control practices utilizing the new resources: e.g., put all BESS units into coordinated operation for frequency regulation and spinning reserve support under LUMA's dispatch control. Achieve a **90% reduction in load-shedding events**, effectively limiting automatic load sheds. Update the Grid Operational Plan to require that a certain level of quick-start or battery reserve is always maintained online.	LUMA	**Urgency:** Medium (ongoing) – this marks the culmination of prior measures into standard operating procedure. **Impact:** Institutionalizing these practices ensures that the gains (fewer outages, stable frequency) are sustained. Customers will experience a dramatically more reliable service, approaching mainland utility performance. **Dependency:** Relies on completion of battery and generation additions earlier in the plan. By this stage, Genera should also have improved operational reliability of plants such that spinning reserve requirements can be met without frequent emergency unit trips.
24	24	**Assessment and Transition to Long-Term Improvements** – At Month 24, comprehensively review the stabilization efforts' outcomes. Identify which temporary measures can be safely phased out (e.g., determine a timetable to demobilize temporary generators as new permanent resources or repaired units come fully online) and which improvements need to be extended or repeated. Use this assessment to transition into the next long-term planning cycle (integrating with the IRP and Grid Modernization plans). For example, if some rented units are still needed due to delays in new plant projects, plan for extensions or replacements. Similarly, incorporate the success of BESS into the IRP's outlook (possibly reducing the need for some peaking units).	All (joint report to Energy Bureau filed by LUMA)	**Urgency:** Medium – a planned pivot point at the end of the two-year horizon to ensure continuity and avoid any "cliff effect" as temporary solutions end. **Impact:** Provides a smooth hand-off from emergency stabilization to sustainable, long-term system development. It will prevent the grid from backsliding by proactively addressing the expiration of interim measures. **Rationale:** The Energy Bureau requires a formal assessment to be filed at the 24-month mark, documenting improvements (e.g., % forced outage reduction, frequency of load shed, generation availability.) and making any course corrections. **Dependency:** By this time, PREPA's legacy system transformation (e.g., via IRP implementations, new renewables, new NG units) should be underway, so coordination with those project schedules



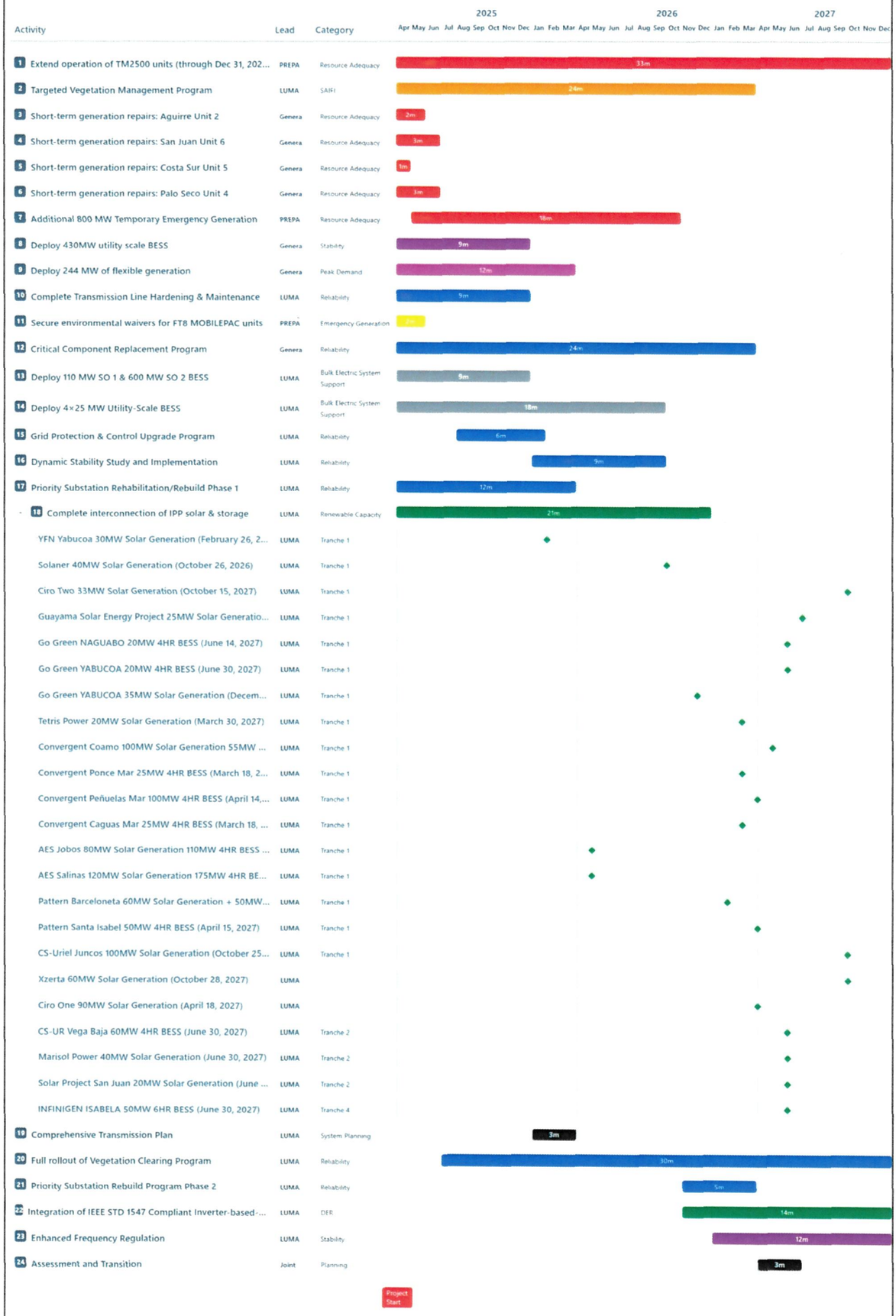
#	Task Start Date (months)	Priority Stabilization Activity	Responsible Party	Notes
				is needed. The Energy Bureau will use this report to decide on next steps and whether to continue any oversight through an extended or new mechanism.

ATTACHMENT B

Puerto Rico Electric System Priority Stabilization Plan

Implementation Timeline

	Activity	Lead	Category
1	Extend operation of TM2500 units (through Dec 31, 202...	PREPA	Resource Adequacy
2	Targeted Vegetation Management Program	LUMA	SAIFI
3	Short-term generation repairs: Aguirre Unit 2	Genera	Resource Adequacy
4	Short-term generation repairs: San Juan Unit 6	Genera	Resource Adequacy
5	Short-term generation repairs: Costa Sur Unit 5	Genera	Resource Adequacy
6	Short-term generation repairs: Palo Seco Unit 4	Genera	Resource Adequacy
7	Additional 800 MW Temporary Emergency Generation	PREPA	Resource Adequacy
8	Deploy 430MW utility scale BESS	Genera	Stability
9	Deploy 244 MW of flexible generation	Genera	Peak Demand
10	Complete Transmission Line Hardening & Maintenance	LUMA	Reliability
11	Secure environmental waivers for FT8 MOBILEPAC units	PREPA	Emergency Generation
12	Critical Component Replacement Program	Genera	Reliability
13	Deploy 110 MW SO 1 & 600 MW SO 2 BESS	LUMA	Bulk Electric System Support
14	Deploy 4×25 MW Utility-Scale BESS	LUMA	Bulk Electric System Support
15	Grid Protection & Control Upgrade Program	LUMA	Reliability
16	Dynamic Stability Study and Implementation	LUMA	Reliability
17	Priority Substation Rehabilitation/Rebuild Phase 1	LUMA	Reliability
18	Complete interconnection of IPP solar & storage	LUMA	Renewable Capacity
	YFN Yabucoa 30MW Solar Generation (February 26, 2...	LUMA	Tranche 1
	Solaner 40MW Solar Generation (October 26, 2026)	LUMA	Tranche 1
	Ciro Two 33MW Solar Generation (October 15, 2027)	LUMA	Tranche 1
	Guayama Solar Energy Project 25MW Solar Generatio...	LUMA	Tranche 1
	Go Green NAGUABO 20MW 4HR BESS (June 14, 2027)	LUMA	Tranche 1
	Go Green YABUCOA 20MW 4HR BESS (June 30, 2027)	LUMA	Tranche 1
	Go Green YABUCOA 35MW Solar Generation (Decem...	LUMA	Tranche 1
	Tetris Power 20MW Solar Generation (March 30, 2027)	LUMA	Tranche 1
	Convergent Coamo 100MW Solar Generation 55MW ...	LUMA	Tranche 1
	Convergent Ponce Mar 25MW 4HR BESS (March 18, 2...	LUMA	Tranche 1
	Convergent Peñuelas Mar 100MW 4HR BESS (April 14,...	LUMA	Tranche 1
	Convergent Caguas Mar 25MW 4HR BESS (March 18, ...	LUMA	Tranche 1
	AES Jobos 80MW Solar Generation 110MW 4HR BESS ...	LUMA	Tranche 1
	AES Salinas 120MW Solar Generation 175MW 4HR BE...	LUMA	Tranche 1
	Pattern Barceloneta 60MW Solar Generation + 50MW...	LUMA	Tranche 1
	Pattern Santa Isabel 50MW 4HR BESS (April 15, 2027)	LUMA	Tranche 1
	CS-Uriel Juncos 100MW Solar Generation (October 25...	LUMA	Tranche 1
	Xzerta 60MW Solar Generation (October 28, 2027)	LUMA	
	Ciro One 90MW Solar Generation (April 18, 2027)	LUMA	
	CS-UR Vega Baja 60MW 4HR BESS (June 30, 2027)	LUMA	Tranche 2
	Marisol Power 40MW Solar Generation (June 30, 2027)	LUMA	Tranche 2
	Solar Project San Juan 20MW Solar Generation (June ...	LUMA	Tranche 2
	INFINIGEN ISABELA 50MW 6HR BESS (June 30, 2027)	LUMA	Tranche 4
19	Comprehensive Transmission Plan	LUMA	System Planning
20	Full rollout of Vegetation Clearing Program	LUMA	Reliability
21	Priority Substation Rebuild Program Phase 2	LUMA	Reliability
22	Integration of IEEE STD 1547 Compliant Inverter-based-...	LUMA	DER
23	Enhanced Frequency Regulation	LUMA	Stability
24	Assessment and Transition	Joint	Planning



Symbols

◆ Target Completion Date

Notes:

- Timeline spans from April 2025 through December 2027.
- Activity #18 (Complete interconnection of IPP solar & storage) includes multiple Tranche 1, Tranche 2, and Tranche 4 projects.
- Diamond markers indicate specific completion target dates for subtasks.
- Target dates are included in the activity descriptions for Tranche 1 projects.
- Many critical activities start immediately (Month 0) due to urgency of the stabilization plan.
- The final assessment (Month 24) transitions from emergency measures to long-term planning.