Docket Number: NEPR-MI-2022-0005
In Re: PLAN PRIORITARIO PARA LA ESTABILIZACIÓN DE LA RED ELÉCTRICA
Re: Requirement of Information

GPR–PREB–NEPRMI20220005–20241205-#1

1. Given the known problems of Costa Sur's Units 5 and 6, regarding the Air Heaters Baskets conditions that need replacement and impose unit limitations, why were Costa Sur's Units 5 and 6 projects not included in Phase I or II of Short-Term repairs that could increase by over 300 MW the generation capacity?

Response:

Costa Sur 5 will have a short-term outage to change the trunnion of the AH 5-2 and the baskets next January for six weeks.

GPR–PREB–NEPRMI20220005–20241205-#2

2. Why Aguirre's Outfall 001 Final Basin (jacuzzi) Repairment Project was not included in Phase I or II of Short-Term repairs? This project needs immediate attention to repair the concrete structure of the Discharge 001 final basin (jacuzzi). Despite the temporary steel bracing already installed to avoid a collapse of the concrete walls as a temporary mitigation measure taken, its current condition represents an imminent risk of NPDES permit violations that also would result in catastrophic damage against the Jobos Bay shoreline and the sudden shutdown of the generating complex units.

Response:

This project has been assigned to the PMO. A design firm, Integra, was hired to perform a concrete-test, and Genera is currently awaiting their recommendations to prepare a contract for its repair.

GPR–PREB–NEPRMI20220005–20241205-#3

3. Considering the current state of the LGA fleet, the peaking units' construction and operation permit applications should consider the maximum operating hours per year for compliance with state and federal environmental agencies' requirements (emissions control equipment). Describe if this approach is being pursued.

Response:

All construction and operational air permits for the Peaker units require a PSD (Prevention of Significant Deterioration) analysis, which takes into account the emissions calculations for each unit per site. This analysis determines the allowable operating hours per unit per year to comply with state and federal regulations and identifies any necessary emission control equipment to achieve compliance.

GPR–PREB–NEPRMI20220005–20241205-#4

4. What is the purpose of the proposed blackstart system for Jobos? What is the proposed capacity of Jobos's blackstart system?

Response:

During hurricane season, a 1MW emergency generator is necessary and is rented from July to December 2025. This year's rented generator remains in use until December 31, 2024.

GPR–PREB–NEPRMI20220005–20241205-#5

5. What is the blackstart option for the Aguirre Power Plant that can directly start the larger boiler units in an independent and isolated mode?

Response:

Genera has two options. The Aguirre Combined Cycle has purchased a 2MW blackstart generator, which is expected to be installed at the beginning of January 2025. With this, the Aguirre Combined Cycle can serve as a blackstart for the Aguirre Steam Plant.

The second option is the Aguirre Gas Combustion Turbine 2-2, expected to be available by May 2025, which would serve as blackstart for the Aguirre Plant.

GPR–PREB–NEPRMI20220005–20241205-#6

6. Genera is considering the repair of Gas Turbine 2-2 as part of the blackstart system for Aguirre Power Plant's boiler units. What additional option(s) could Genera consider for the blackstart for Aguirre Power Plant's boiler units?

Response:

For this unit, batteries are currently being procured to provide DC voltage, along with electronic cards. Testing is expected to begin by February or March 2025, ensuring the unit's availability for the hurricane season as a blackstart resource.

GPR–PREB–NEPRMI20220005–20241205-#7

7. Why is Genera considering blackstart capability for the San Juan Power Plant? Can the temporary generation units (TM2500 units) provide blackstart capability for the San Juan Power Plant?

Response:

An upgrade was completed on the two 2.2 MW generators used as blackstart for Units 5 and 6 in San Juan. Additionally, the GE TM2500 can also serve as a black start resource.

Status of the New Resources

GPR–PREB–NEPRMI20220005–20241205-#9

9. What is the status of the federal funding requested for the peaking units and energy storage (BESS) projects?

Response:

The BESS project is fully funded with $767M allocated by FEMA for both equipment and system installation.

The Peakers project has secured $458M in FEMA funding for equipment, but funding approval for installation is still pending FEMA project formulation.

Budgets

GPR–PREB–NEPRMI20220005–20241205-#10

10. Describe how the approved budgets for FY 2025 will be affected by the inclusion of the initiatives described in the Priority Stabilization Plan and how the budgets for FY 2026 and FY 2027 are projected to accommodate these expenses.

Response:

PREB has initiated a new rate case. At the same time, Genera is in the process of developing the Fiscal Year 2026 (FY2026) and Fiscal Year 2027 (FY2027) budgets. Currently, Genera is unable to determine how the initiatives outlined in the Grid Stabilization Plan will impact these budgets or how to appropriately allocate funds to accommodate the associated expenses.

GPR–PREB–NEPRMI20220005–20241205-#11

11. Provide the Generation Fleet Outage Schedule for Planned Maintenance and Critical Component Replacement Program that takes into consideration the initiatives proposed in the Priority Stabilization Plan

Response:

The Generation Fleet Outage Schedule will be provided on January 8, 2025. For details on the Critical Component Replacement Program, which is subject to change pending the updated Fleet Outage Schedule, please refer to attachment GPR–PREB–NEPRMI20220005–20241205-#11 & 16.

Integrated Resource Plan

GPR–PREB–NEPRMI20220005–20241205-#13(a)

13. Document Attachment 1, Electric System Stabilization Plan, Version July 8, 2024. Section VIII. Generation System Status, subsection B. Post-Genera Generation System Metrics and Performance, including Figures 4 and 5 (pages 32-33).

> (a). Provide the underlying data in Excel file format with formulas intact and including any unit-specific detail for the two Figure 4 graphs of "Capacity (MW) On June 30, 2023" and "Actual Capacity (MW) 2024".

Response:

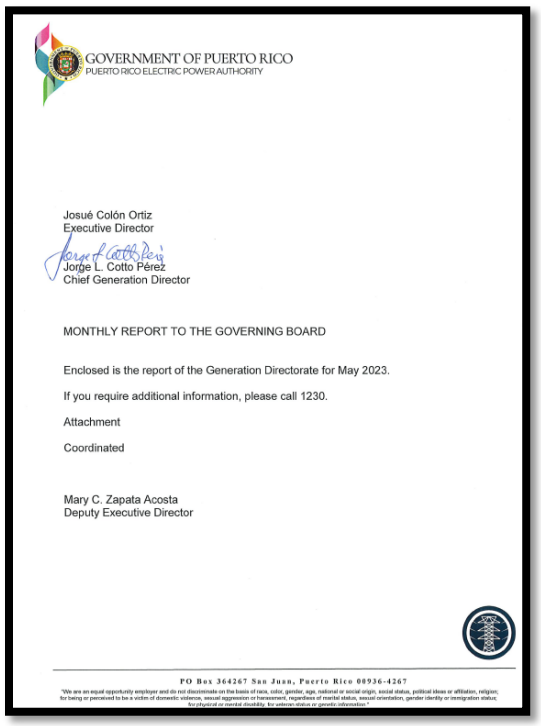
Please refer to attachments GPR–PREB–NEPRMI20220005–20241205-#13(a).

GPR–PREB–NEPRMI20220005–20241205-#13(b)

b. Provide the underlying data in Excel file format with formulas intact and including any unit-specific detail for the Figure 5 graph of "Generation System Data as of June 30, 2023 -Performance Indicators (%)".

Response:

The performance chart in Figure 5 corresponds to the Monthly Generation Report prepared by the Puerto Rico Electric Power Authority (PREPA) for the Board of Governors meeting in May 2023. As of this date, Genera does not have access to the Excel file used by PREPA.



GOVERNMENT OF PUERTO RICO
PUERTO RICO ELECTRIC POWER AUTHORITY

Josué Colón Ortiz
Executive Director

Jorge L. Cotto Pérez
Chief Generation Director

MONTHLY REPORT TO THE GOVERNING BOARD

Enclosed is the report of the Generation Directorate for May 2023.

If you require additional information, please call 1230.

Attachment

Coordinated

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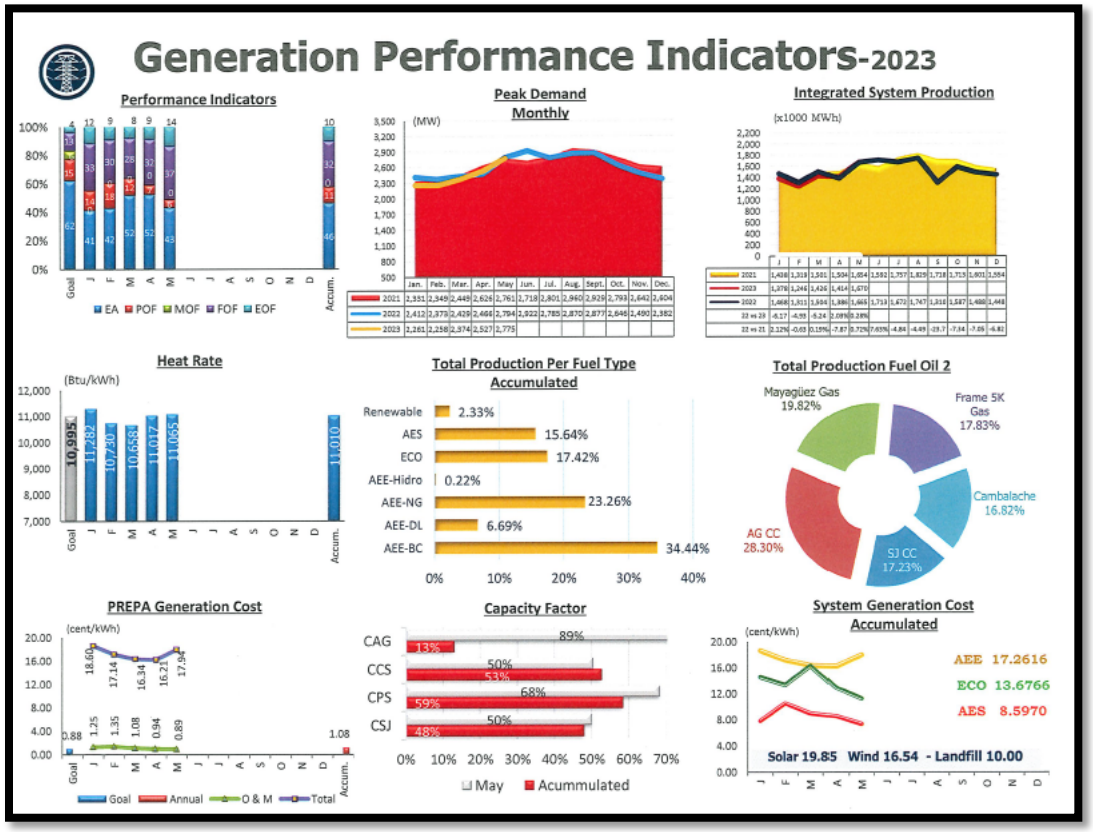
Generation Performance Indicators-2023
Performance Indicators
Peak Demand Monthly
Integrated System Production
Heat Rate
Total Production Per Fuel Type Accumulated
Total Production Fuel Oil 2
PREPA Generation Cost
Capacity Factor
System Generation Cost Accumulated
Renewable 2.33%
AES 15.64%
ECO 17.42%
AEE-Hidro 0.22%
AEE-NG 23.26%
AEE-DL 6.69%
AEE-BC 34.44%
Mayagüez Gas 19.82%
Frame 5K Gas 17.83%
Cambalache 16.82%
AG CC 28.30%
SJ CC 17.23%
CAG 13% 89%
CCS 50% 53%
CPS 59% 68%
CSJ 48% 50%
AEE 17.2616
ECO 13.6766
AES 8.5970
Solar 19.85 Wind 16.54 - Landfill 10.00

GPR–PREB–NEPRMI20220005–20241205-#14 (b)

b. Confirm or explain otherwise that the "short-term repairs" noted above at page 35 are those listed in Table 4 at pages 45-46.

Response:

Genera confirms that the short-term repairs noted above at page 35 are those listed in Table 4 at pages 45-46.

GPR–PREB–NEPRMI20220005–20241205-#14 (c)

c. For the repairs listed in Table 4, Phase I, II and III, describe with specificity the repairs underway for each unit and the estimated month in which they will be complete.

Response:

2024 Phase I Repairs in Progress			
Units Under Repair or Maintenance	**Capacity (MW)**	**Reason Planned or Unplanned**	**Update**
SJ 7	90	FO Repair	Completed
PS 3	180	Maintenance	Completed
AG 1	60	Limitation	Completed
Total	**330 MW**		

2024 – 2025 Phase II & III Short-Term Repairs			
Units Under Repair or Maintenance	**Capacity (MW)**	**Reason Planned or Unplanned**	**Update**
SJ STG 5	55	FO Repair	Completed
SJ STG 6	55	FO Repair	April 2025
AG CC 2-1, 2-2	96	Transformer replacement	Completed
Mayagüez 3B	25	PT repair	Completed
AG 2	75	Air heater replacement Turbine LP seals	3Q 2025
AG 1	75	Air heater replacement Hydrogen leakage repair	2Q 2025
PS 4	185	Generator Repair	4Q 2025
Total	**566 MW**		

GPR–PREB–NEPRMI20220005–20241205-#14 (d)

d. The total of 516 MW in the Phase II and Phase III short-term repairs table is not equal to the sum of the individual plant values (which total 566 MW). Reconcile this difference and explain what actual increases in availability will be achieved when the repairs are completed.

Response:

The total correct individual plant values in the Phase II and Phase III short-term repairs tableshould be 566 MW, and not 516 MW as mistakenly stated.

GPR–PREB–NEPRMI20220005–20241205-#14 (e)

e. What are the specific components that "are the most common cause of forced outages" at each unit or station?

Response:

Boiler failure, boiler feed water system, and condenser circulating water system are the most common cause of forced outages.

GPR–PREB–NEPRMI20220005–20241205-#15 (a)

15. Document Attachment 1, Electric System Stabilization Plan, Version July 8, 2024. Section X. Challenges and Contingencies. Genera states "In June 2024, the electric system experienced 6 load shed events due to generation shortfall and 11 generation events that caused underfrequency load shed to prevent frequency decay" (page 89).

a. Provide monthly Genera data on load shed events beginning July 2023 through the end of July 2024.

Response:

The load shed events official data is controlled, handled and shall be provided by LUMA.

GPR–PREB–NEPRMI20220005–20241205-#15 (b)

b. List the specific causes of load shed events due to generation shortfall or other generation events at Genera operated plants for each month from July 2023 through July 2024.

Response:

The load shed events official data is controlled, handled and shall be provided by LUMA.

Federal Funding

GPR–PREB–NEPRMI20220005–20241205-#16 (a)

16. The plan starts with the presentation of the same Capital Projects presented in the 10 Year Plan Federally Funded Competitive Process (NEPR-MI-2022-0005). These projects are discussed in many subjects related to the Long-Term configuration of the Electric System for Puerto Rico, and most are already approved FEMA projects. These would be implemented in over 3 to 5 years. For priority stabilization other actions are required.

The plan includes the Replacement of Critical Components as a second element. The status of this Plan was briefly described with 60% of RFPs published and 10% to be published in the coming weeks. The other 30% are under development. It is stated that the objective of this Critical Components Program was developed by taking in consideration the historical trends of maintenance repairs in all the units and their supporting equipment. The replacement of critical components can be viewed as a proactive initiative aligned with the purpose of system stabilization in a period of less than two years.

a. Provide the complete list of the Critical Components with their associated unit or equipment, the timeline for them to be available, and the criteria used to classify them as Critical.

Response:

Please see attachment GPR–PREB–NEPRMI20220005–20241205-#11 & 16.