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

IN RE: LUMA'S RESPONSE TO HURRICANE FIONA	**CASE NO. NEPR-MI-2022-0003** **SUBJECT: Updated Version of Second Report on Demobilization of FEMA Generation**

MOTION SUBMITTING UPDATED VERSION OF THE SECOND REPORT ON DEMOBILIZATION OF FEMA GENERATION, IN COMPLIANCE WITH RESOLUTION AND ORDER DATED JANUARY 19, 2024

TO THE HONORABLE PUERTO RICO ENERGY BUREAU:

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

1. In a Resolution and Order of October 7, 2022 ("October 7th Order") with the subject "Baseload Generation Dispatch Status-Post Hurricane Fiona," this Honorable Puerto Rico Energy Bureau ("Energy Bureau") convened a Technical Conference to discuss concerns raised by LUMA in a letter dated October 6, 2022, regarding Resource Adequacy and potential Generation resource deficiencies following Hurricane Fiona.[1]

2. On October 12, 2022, the Energy Bureau entered a Resolution and Order whereby it ordered LUMA to develop a stabilization plan as a direct response to Hurricane Fiona, in coordination with the Federal Emergency Management Agency ("FEMA") and the Puerto Rico Electric Power Authority ("PREPA") "to address any baseload generation inadequacy or shortfall that affects the dispatch availability and has the potential to cause load shedding or a blackout event of the electric system ("Stabilization Plan")" ("October 12th Order").

[1] The Technical Conference was held as scheduled on October 11, 2022. During the Technical Conference, the Energy Bureau and consultants for the Energy Bureau posed questions to LUMA's representatives.

3. Per the October 12th Order, LUMA was directed to submit the 1st and the 15th day of each month from the notice of the Order, an updated report addressing the efforts conducted by LUMA to assure the completion of the Stabilization Plan.

4. On October 31st, 2022, LUMA submitted the First Update on the Stabilization Plan.

5. On November 1, 2022, this Energy Bureau held a technical conference for November 1, 2022 ("October 27th Order) in connection with the first update on the Stabilization Plan. LUMA representatives appeared to discuss the Stabilization Plan and answered questions from this Energy Bureau.

6. On November 15, 2022, LUMA submitted a Second Update on the Stabilization Plan ("Second Update"). In addition, LUMA submitted supplemental information to the Second Update arising from a joint press conference of November 15th, 2022, where the Governor of Puerto Rico, the Hon. Pedro Pierluisi, and the Federal Coordinator for the Federal Emergency Management Agency ("FEMA"), Nancy Casper, announced that FEMA's power stabilization initiative aims to install between 600 to 700 MW of temporary emergency generation capacity through the mobilization of power generation maritime barges and temporary land-based generators. *See Supplemental Submission to Second Update on Stabilization Plan to Inform of Announcement by the Puerto Rico Government and FEMA on Temporary Emergency Generation Capacity,* filed on November 15, 2022.

7. LUMA thereafter submitted bi-weekly updates on the progress of the Generation Stabilization Plan. The most recent of these updates was submitted on November 1st, 2023, and constituted the final update in compliance with the Energy Bureau's October 12th Order. Specifically, updates to the Stabilization Plan were filed on December 1st, 2022 (Third Update), December 15, 2022 (Fourth Update), January 17,2023 (Fifth Update); January 31, 2023 (Sixth

Update); February 15, 2023 (Seventh Update); March 1, 2023 (Eight Update); March 15th (Ninth Update); April 3rd (Tenth Update); April 17th (Eleventh Update); May 1, 2023 (Twelfth Update); May 15, 2023 (Thirteenth Update); June 1st, 2023 (Fourteenth Update); June 15, 2023 (Fifteenth Update); July 3rd, 2023 (Sixteenth Update); July 17th, 2023 (Seventeenth Update); August 1st, 2023 (Eighteenth Update); August 15th, 2023 (Nineteenth Update); September 1st, 2023 (Twentieth Update), September 15, 2023 (Twenty-First Update), October 2nd, 2023 (Twenty-Second Update), October 16, 2023 (Twenty-Third Update) and November 1, 2023 (Twenty-Fourth Update).

8. As informed in its Seventh Update, FEMA reduced the target emergency generation capacity of the Stabilization Plan from 750MW to 350MW. According to LUMA's resource adequate analysis, the new target emergency generation capacity would still significantly reduce the Loss of Load Expectation ("LOLE"). *See*, Seventh Update dated February 15th, 2023.

9. As per the Twenty-Third Update on the Stabilization Plan ("Twenty-Third Update"), the emergency generation resources installed at the San Juan and Palo Seco sites reached the Commercial Operation Date with a total combined baseload capacity of 350 MW. Specifically, the seven gensets installed at the Palo Seco Site reached the Commercial Operation Date on June 7, 2023. The 10 gensets installed at the San Juan site reached the Commercial Operation Date on September 27, 2023.

10. In light of the completion of the construction activities and the achievement of the Commercial Operation Date at both sites, through the Twenty-Third Update, LUMA informed that it would continue to monitor the operation of the installed emergency generation equipment for an additional 15-day cycle, at the conclusion of which LUMA would request that the Energy Bureau deem that it had fully complied with the October 12th Order and to release it from the requirement to file further updates to the Stabilization Plan.

11. Consistent with the foregoing, on November 1, 2023, LUMA submitted its Twenty-Fourth and final update to the Generation Stabilization Plan. As informed in that submission, the emergency generation resources installed at the San Juan and Palo Seco sites maintained a regular operation and averaged a total combined baseload capacity of 355 MW during the period of 15 days following the Twenty-Third Update.

12. Consequently, LUMA requested that the Energy Bureau release it from the requirement to file bi-weekly updates on the Generation Stabilization Report.

13. On November 14th, 2023, the Energy Bureau entered a Resolution and Order that, in its pertinent part, releases LUMA from filing additional bi-weekly reports to the Stabilization Plan. The Energy Bureau nonetheless required LUMA to inform of "any work conducing to the decommission of the 350MW emergency generation resources which shall trigger LUMA to resume the Bi-Weekly reporting requirement." *See* November 14th Order on page 1.

14. On December 15, 2023, LUMA submitted the First Demobilization Report. *See, Motion Submitting First Decommissioning Report in Compliance with Resolution and Order Dated November 14, 2023, and Request for Extension to File Update to the Report.* LUMA also requested that this Energy Bureau release it from the requirement of filing the Demobilization Report on January 2, 2024, and allow LUMA to file the same by January 15, 2024. *Id.*

15. On December 20, 2023, this Honorable Energy Bureau entered a Resolution and Order granting LUMA leave to file the update on the Demobilization Request on or before January 15, 2024.[2]

[2] Pursuant Section 1.09 of the *Regulation on Adjudicative, Notice of Noncompliance, Rate Review and Investigation Proceedings*, Regulation 8543, if a period ends on a legal holiday, said period shall be extended until the next day. Given that on January 15th, the Martin Luther King legal holiday was observed, the time to file the Second Demobilization Plan moved to January 16, 2024.

16. On January 16, 2024, LUMA submitted its Second Report on Demobilization of FEMA Generations ("Second Demobilization Report"), which included a summary of the FEMA Demobilization Plan as well as the impact of said Plan.

17. On January 14, 2024, REPA filed a document titled *Urgent Motion Submitting for Review and Approval the Scope of Work for the Transfer/Ownership to PREPA of the Temporary Generation Unit* ("January 14th PREPA Motion") before this Energy Bureau in Case No. NEPR-MI-2021-0002. Through the January 14th PREPA Motion, PREPA informed that on January 5, 2024, the Federal Emergency Management Agency ("FEMA") sent a letter to the Puerto Rico Central Office for Recovery, Reconstruction, and Resiliency ("COR3") approving negotiations for the acquisition of the temporary generation units installed in the Palo Seco Steam Plant and the San Juan Plant (hereby, "Temporary Units"). PREPA also indicated that FEMA would provide funding for the acquisition of the Temporary Units.

18. In the January 14th PREPA Motion, PREPA requested the Energy Bureau's approval of the initial Scope of Work for the acquisition and ownership by PREPA of the Temporary Units. Particularly, PREPA requested that the Energy Bureau (1) evaluate and grant leave to conduct all tasks necessary to transfer ownership of the Temporary Units to PREPA; (2) grant leave to continue working with all of the associated permitting activities to continue dispatching the Temporary Units until the Integrated Resource Plan revision process makes a different determination; and (3) grant leave to continue supporting COR3 with the federal processes available to have the cost of the Temporary Units reimbursed with federal funds.

19. On January 19, 2024, this Honorable Energy Bureau entered a Resolution and Order in Case No. NEPR-MI-2021-0002 ("January 19th Order"), whereby it ordered LUMA to submit, within five (5) business days, an updated version of the Second Demobilization Report,

addressing the potential transfer and ownership of the Temporary Units in the San Juan and Palo Seco Power Plants to PREPA.

20. In compliance with the January 19th Order, LUMA hereby submits as *Exhibit 1*, its Updated Version of the Second Report on Demobilization.

WHEREFORE, LUMA respectfully requests that this Energy Bureau **take notice** of the aforementioned, **accept** the Updated Version of the Second Demobilization Report submitted as *Exhibit 1* to this Motion **deem** that LUMA complied with that portion of the January 19th Order that required LUMA to file an updated version of the Second Demobilization Report, addressing the potential transfer and ownership of the Temporary Units to PREPA.

RESPECTFULLY SUBMITTED.

In San Juan, Puerto Rico, this 26th day of January 2024

We hereby certify that this motion was filed using the electronic filing system of this Energy Bureau. We also certify that a copy of this motion will be notified to the Puerto Rico Electric Power Authority, through attorneys Lionel Santa, Lionel.santa@prepa.pr.gov and Alexis G. Rivera Medina, arivera@gmlex.net.

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Exhibit 1
Second Demobilization Report

LUMAPR.COM

Generation Stabilization Plan: Updated Demobilization of FEMA Generation Discussion

January 26, 2024

Agenda:

I. FEMA Generation Demobilization Planning – Summary

II. Current Situation

III. Impact of FEMA Generation Demobilization

FEMA Demobilization Planning - Summary

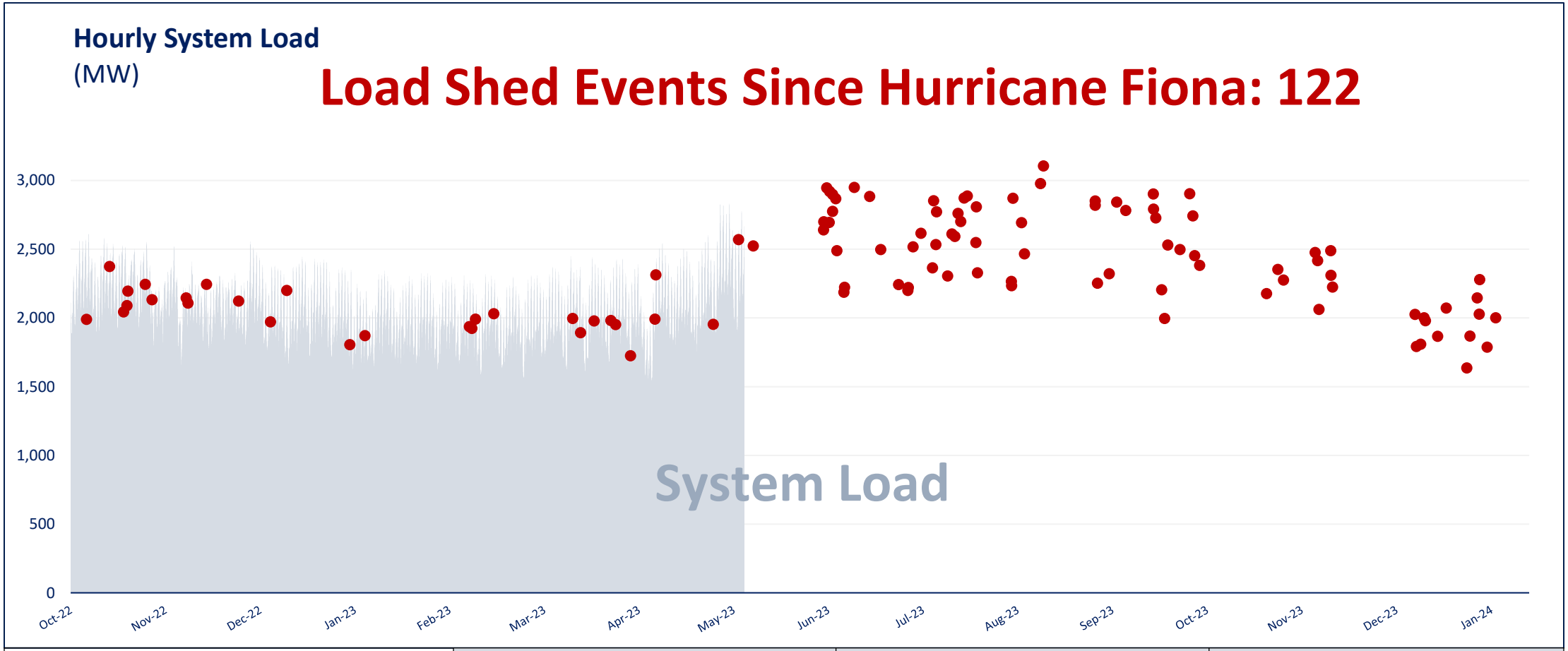
This report is submitted in response to PREB's January 19 Order. Only ten days have elapsed since LUMA submitted the second edition report on January 16. In addition, there was one FEMA Demobilization Task Force meeting scheduled during this period (for January 23,2024) and that meeting was adjourned early due to illness of the main presenter. Consequently, there has been limited time and information provided since the previous GSP Demobilization report.

With this context, LUMA offers the following update:

- FEMA remains focused on the two wrap-up administrative tasks and a demobilization date of March 15, 2024.
- As detailed in this report, the power system is still at very high risk of insufficient generation supply and currently relies heavily on the 350 MW FEMA generation.
    - Even with support from the FEMA generation, the Puerto Rico bulk power system falls short on Reserve Capacity and operates at a higher risk of insufficient generation leading to Load Shed events. Please note that since Hurricane Fiona, there have been 122 Load Shed events. This high risk is likely to increase as temperatures increase and Puerto Rico enters a higher demand season.
    - Average Daily Power Plant Availability has been trending down in recent months. This indicates the legacy generation is not improving as quickly as desired.
- This GSP Demobilization report presents updated information regarding power system performance and the negative impact of disconnecting FEMA Generation from the power grid. LUMA has regularly performs Resource Adequacy analyses in accordance with industry standards. The studies consistently indicate that **there will be significantly greater risk of power outages if the FEMA generation were demobilized**.

Current Situation – 122 Load Shed Events

As of: 1/21/2023

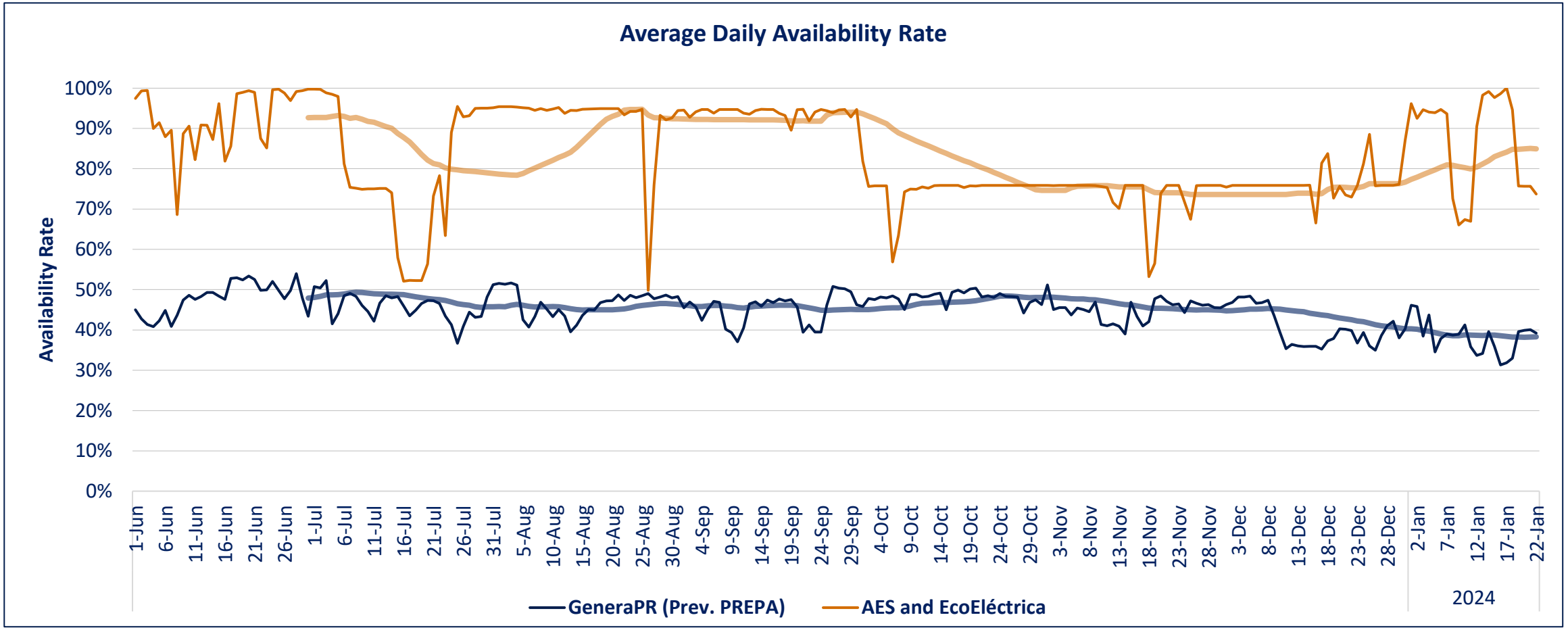


Load Shed Events	Total Events	Average Clients Affected	Average Duration (min)
October 1, 2022 - December 31, 2022	16	122,547	110
January 1, 2023 - December 31, 2023	99	91,442	50
January 1, 2024 - January 21, 2024	7	96,846	15

Current Situation – Average Daily Availability

30-Day Moving Average Trendline

Updated until 01/21/2024

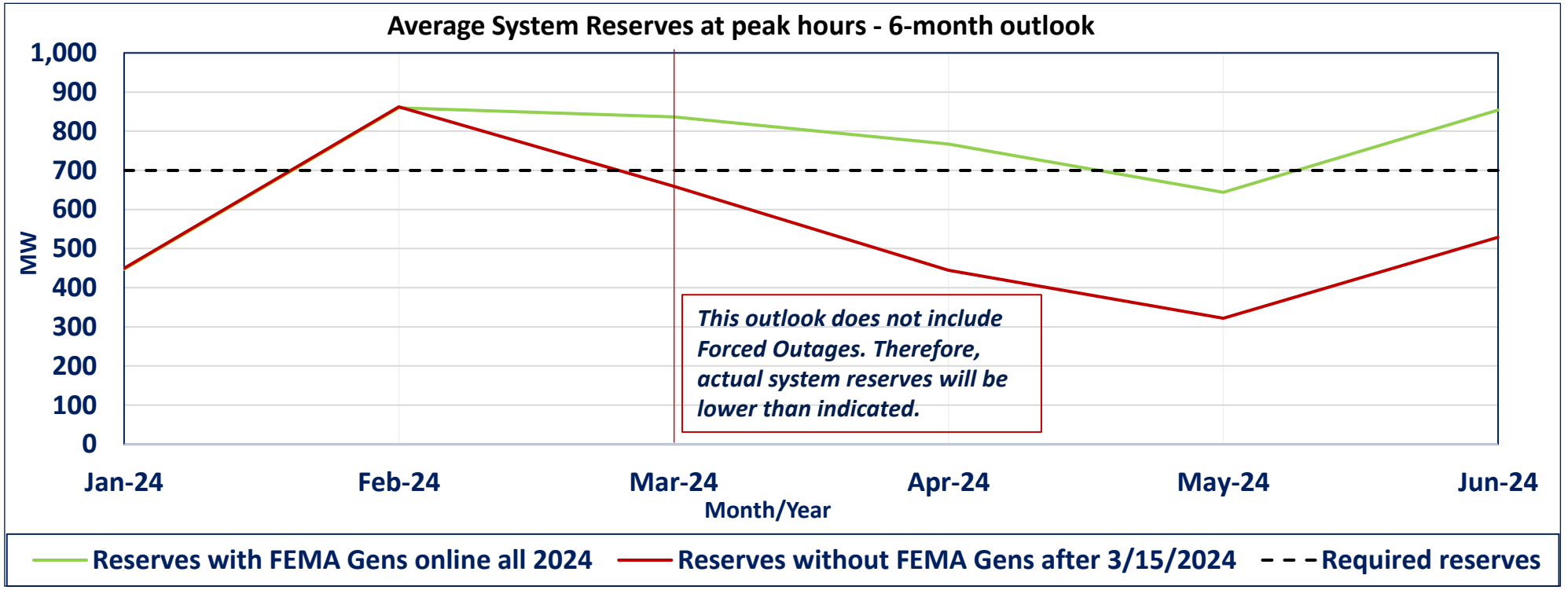


- **Availability shows a decreasing trend in the past months due to both scheduled outages and forced outages.**
- **Genera PR shows a drop in Availability in the last month while AES & Eco show an up-tick**

Impact of FEMA Generation Demobilization

Average system reserve levels during peak hours decrease upon the disconnection of the FEMA Emergency Generation Units

Analysis as of 1/24/2024

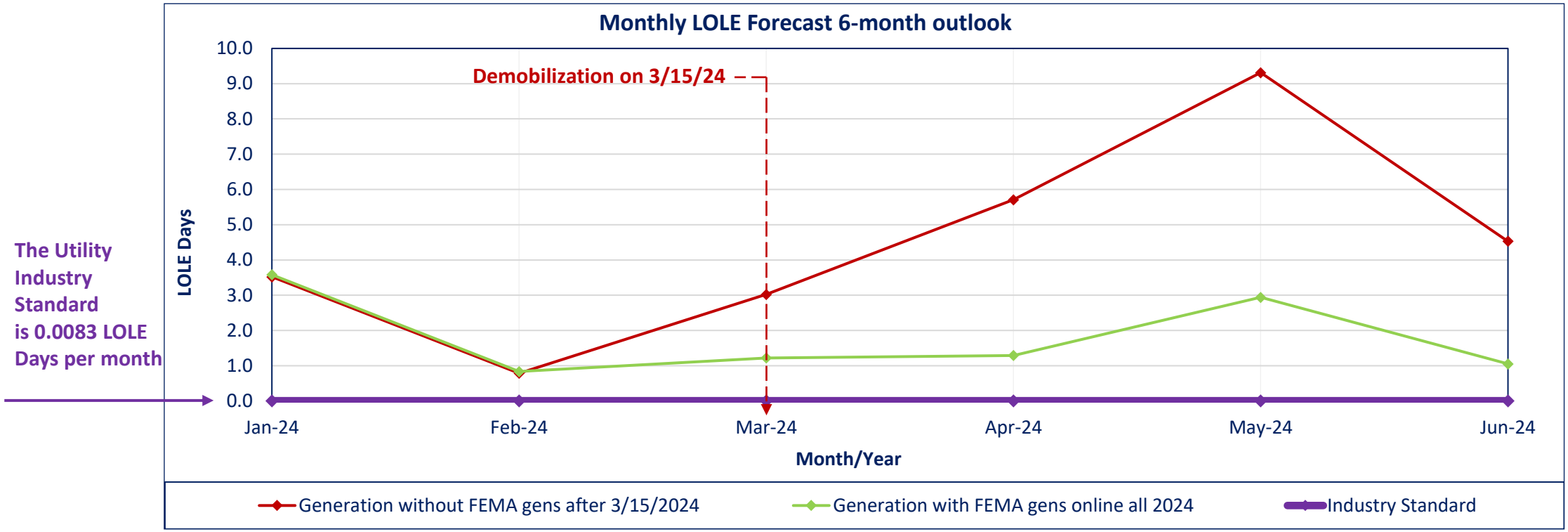


Peak Hours: 6pm – 10pm

- Assuming a disconnection of the FEMA Units on March 15, 2024, the Average System Reserves decrease at or below the required reserve levels through June 2024.
- The estimated reserve levels are based on the Scheduled Outage Program. This estimate does not consider the rate of load sheds that may be experienced during this period, as was the case during December 2023 and January 2024.

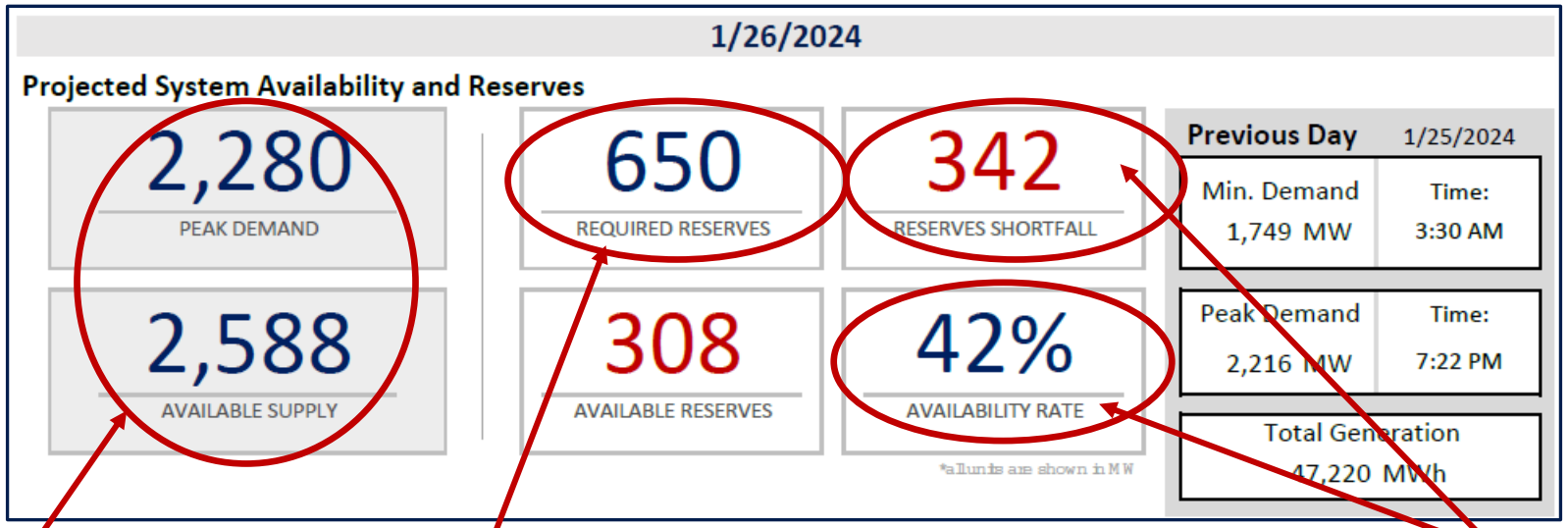
Impact of FEMA Generation Demobilization -
Loss of Load Expectation (LOLE) increases without FEMA Generation

Analysis as of 1/24/2024



- This graph provides a 6-month outlook of the LOLE assuming the 350 MW FEMA Generation will be disconnected on the targeted demobilization date of 3/15/24
- As presented by the graph, the expectation of monthly load sheds significantly increases after the demobilization, i.e., more than doubles without the FEMA generation

Current Situation – DAILY GENERATION AVAILABILITY REPORT for 1/26/24



The Available Supply is only 308 MW greater than the projected Peak Demand for the day, which is considered as the Available Reserve capacity to cover a higher Peak Demand or if the Available Supply has an outage .

The Required Reserves for this day is 650 MW, which is 342 MW more than what is currently in the Available Reserves for the day (308 MW).

The above analysis already includes the FEMA generation of ~350 MW, but there is still an a shortfall in reserves of 342 MW. This clearly indicates the need to have the FEMA generation (350 MW) in place to meet Peak Demand now while other generation plants are under maintenance.

Current Situation – DAILY GENERATION AVAILABILITY REPORT for 1/26/24

Installed Capacity, Available Supply and Percent Available for 4 generation groups (MW on this day)

	Renewables				FEMA		Peakers				Baseload					
	Landfill	Wind	Hydro (PREPA)	Solar	FEMA Palo Seco	FEMA San Juan	Mayaguez (Genera)	Cambalache (Genera)	Other Peakers (Genera)	Aguirre CC (Genera)	AES	EcoElectrica	Palo Seco (Genera)	Costa Sur (Genera)	San Juan (Genera)	Aguirre (Genera)
Available Supply	5	75	22	147	133	200	190	156	117	150	205	550	0	0	515	350
Limitations	0	0	6	0	17	0	30	9	19	0	49	0	0	0	125	100
Planned Outages	0	0	4	0	0	0	0	0	0	50	0	0	0	0	0	450
Maintenance Outages	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Forced Outages	0	0	8	0	0	0	0	0	125	0	254	0	432	820	0	0
Out-of-Service	0	27	61	0	0	0	0	83	210	392	0	0	170	0	200	0
Installed Capacity	5	102	100	147	150	200	220	248	471	592	508	550	602	820	840	900

MW

Installed Capacity: 354
Available Supply: 249
% of Available: 70%

Installed Capacity: 350
Available Supply: 333
% of Available: 95%

Installed Capacity: 1,531
Available Supply: 613
% of Available: 40 %

Installed Capacity: 4,220
Available Supply: 1,620
% of Available: 38%

Total based on the above table:

Installed Capacity: 6,455
Available Supply: 2,815
% of Available: 43.6%


LUMA
Thank you!