

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

**NEPR**

**Received:**

**Feb 1, 2023**

**10:13 PM**

IN RE:  
LUMA'S RESPONSE TO HURRICANE  
FIONA

**CASE NO. NEPR-MI-2022-0003**

**SUBJECT: Motion Submitting Sixth Update on  
Stabilization Plan**

**MOTION SUBMITTING SIXTH UPDATE ON STABILIZATION PLAN FOR  
TEMPORARY EMERGENCY GENERATION CAPACITY**

**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 7<sup>th</sup> 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. Per the October 7<sup>th</sup> Order, the topics to be discussed at the Technical Conference were "Dispatch Status of the available Baseload Generation post Hurricane Fiona and (ii) the identified temporary emergency mitigation measures thought to address the generation deficiencies arising from Hurricane Fiona."<sup>1</sup>

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

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<sup>1</sup> 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.

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 12<sup>th</sup> Order”).

3. Per the October 12<sup>th</sup> Order, LUMA was directed to submit the 1<sup>st</sup> and the 15<sup>th</sup> 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 27<sup>th</sup>, 2022, the Energy Bureau issued a Resolution and Order whereby it set a technical conference for November 1, 2022 (“October 27<sup>th</sup> Order”) in connection with the first update on the Stabilization Plan. The Energy Bureau stated that it is particularly interested in “learning about the (1) U.S. Army Corps of Engineers (“USACE”) Generation Assessment underway, (2) Emergency Temporary Generation under a potential FEMA Public Assistance Emergency assignment that can expeditiously mitigate the impact of Hurricane Fiona, and (3) Replacement of Emergency Temporary Generation that seeks to phase out the temporary generation with permanent capacity, noting that this permanent capacity is consistent with the approved Integrated Resource Plan (“IRP”).” *See* October 27<sup>th</sup> Order at page 1.

5. As per the October 27<sup>th</sup> Order, the Technical Conference was held as scheduled on November 1<sup>st</sup>. LUMA representatives appeared to discuss the Stabilization Plan and answered questions by this Energy Bureau.

6. On October 31<sup>st</sup>, 2022, LUMA submitted the First Update on the Stabilization Plan.

7. 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 15<sup>th</sup>, 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

8. On December 1<sup>st</sup>, 2022, LUMA submitted the Third Update on the Stabilization Plan.

9. On December 15<sup>th</sup>, 2022, LUMA submitted the Fourth Update on the Stabilization Plan. In addition, LUMA requested a release from the requirement to file an Update to the Stabilization Report on January 2, 2023, in consideration of the upcoming Christmas and New Year’s holidays observed in Puerto Rico.

10. On December 21, 2022, the Energy Bureau granted LUMA’s request to be released from the requirement to file an Update to the Stabilization Report on January 2<sup>nd</sup> and directed that LUMA shall file the Fifth Update on the Stabilization Plan by January 15, 2023.

11. Since January 15<sup>th</sup> was a Sunday and the 16<sup>th</sup> a legal holiday, LUMA filed the Fifth Update on the Stabilization Plan on January 17<sup>th</sup>, 2023.

12. In further compliance with the October 12<sup>th</sup> Order, LUMA hereby submits as *Exhibit 1* its Sixth Update on the Stabilization Plan. The Sixth Update includes, among others, a summary of the status of Stabilization Plan with reference to the tasks performed in the past month in coordination with FEMA and PREPA, as well as a summary of LUMA’s internal efforts. Furthermore, the Sixth Update identifies current operational issues and concerns and provides an update on LUMA’s risk analyses.

**WHEREFORE**, LUMA respectfully requests that this Energy Bureau **take notice** of the aforementioned, **accept** the Sixth Update submitted as **Exhibit 1** to this Motion, **deem** that LUMA complied with that portion of the October 12th Order that requires submission of bi-monthly updated reports on the Stabilization Plan.

**RESPECTFULLY SUBMITTED.**

In San Juan, Puerto Rico, this 1<sup>st</sup> day of February, 2023

I hereby certify that this motion was filed using the electronic filing system of this Energy Bureau. I also certify that copy of this motion will be notified to the Puerto Rico Electric Power Authority, through its attorneys of record: [jmarrero@diazvaz.law](mailto:jmarrero@diazvaz.law) and [kbolanos@diazvaz.law](mailto:kbolanos@diazvaz.law).



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*Attorneys for LUMA*

*Exhibit 1*  
*Sixth Update on Stabilization Report*



# Generation Stabilization Plan Discussion

February 1, 2022

# Agenda

- I. Executive Summary
- II. Past Two Weeks Area of Focus and Updates
- III. Team Organization
- IV. Generation Operational Issues and Concerns as of Report Date
- V. Risk Analysis Update



# Executive Summary

- **Momentum continues as the scope and scale of the Emergency Generation effort becomes more defined**
  - Site visits now occurring on a weekly basis to validate and confirm plant-specific suitability to host new generators
  - Task Force operational meetings occurring on a weekly basis to discuss issues, exchange documentation, and conduct detailed site assessments
- **Current planning assumptions are that land-based, trailer-mounted generators should be available in early July**
  - Land based generators are judged by FEMA to be available sooner than barges
  - Barge-generation is still being maintained as an option, but very few barges were readily available, and barges have greater interconnection complexity, and some concerns about possible environmental permitting challenges
- **Sites on north side of island are still most attractive, with several other sites being assessed as secondary options**
  - San Juan and Palo Seco are the current targeted primary sites to host generators
  - Other sites at Cambalache, Yabucoa, Aguirre and Jobos also being evaluated
- **More detailed feasibility studies are being implemented**
  - FEMA to provide walk-down plan for interconnection for additional generation at main sites
  - LUMA is preparing check list of feasibility needs (ampacity test, short circuit test etc.) and is coordinating with PREPA





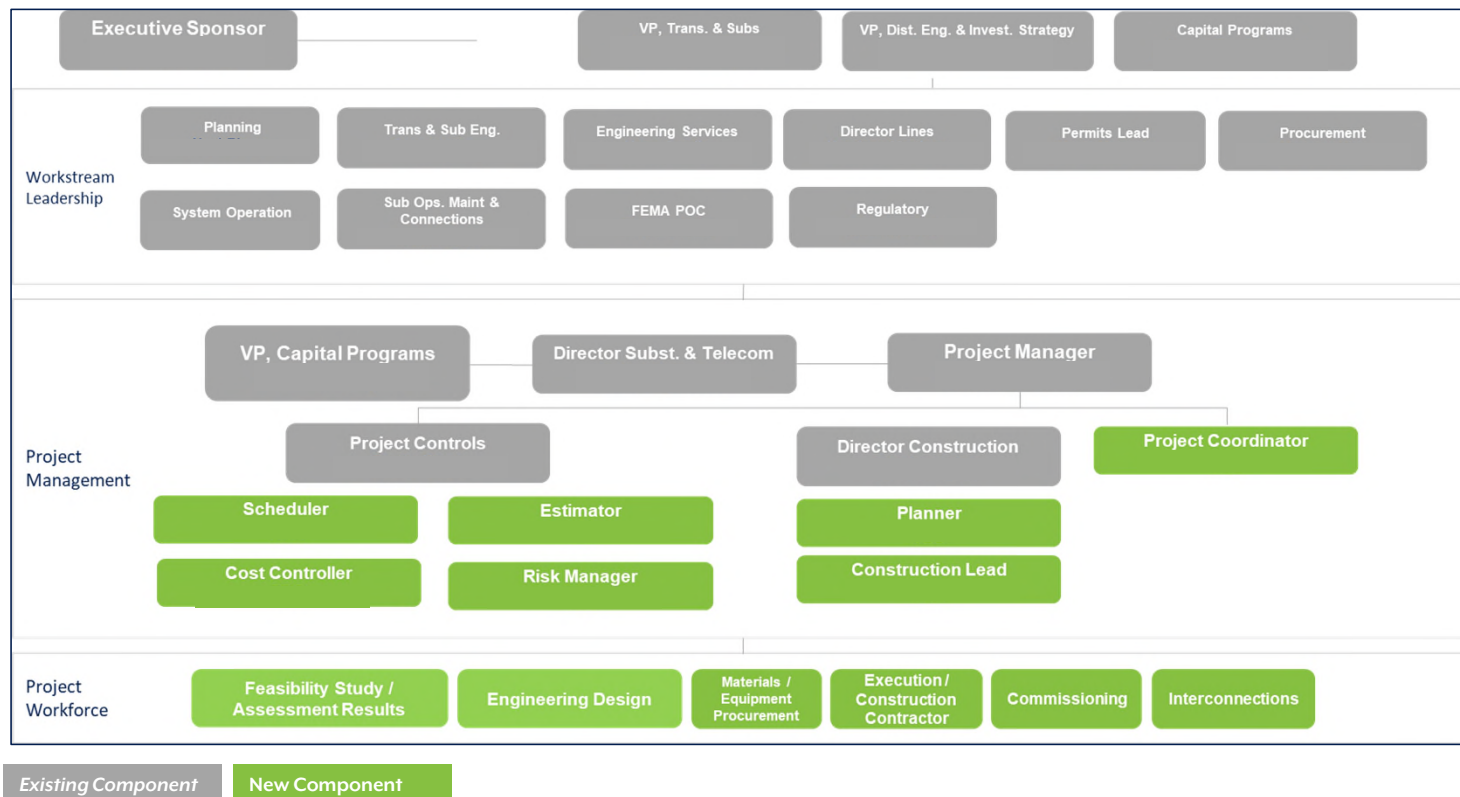
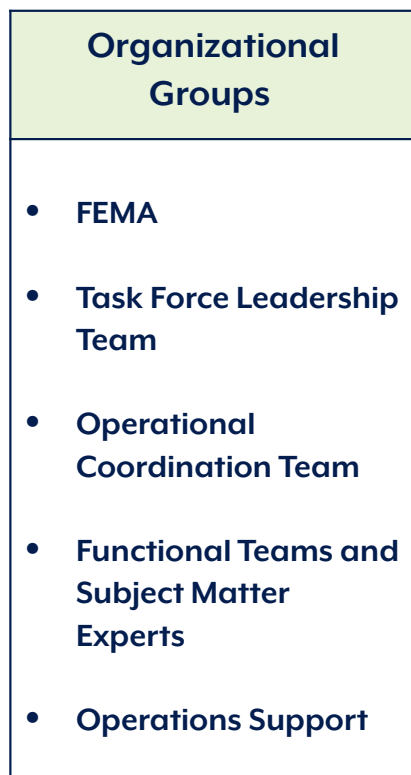
# Area of Focus Past Two Weeks

- **Current working plan for sites at San Juan and Palo Seco**
  - Generators will be natural gas fueled, which offers easier permitting advantages; likely to receive a 2-year waiver on emissions
  - Logistical challenges with delivering fuel via truck in ISO-tanks currently being assessed
  - Additional back-up site options also being assessed
  - High degree of competition for emergency generators due to global disasters
- **Multiple site assessments have been performed by field teams**
  - Site visits with FEMA, USACE, and PREPA completed on Costa Sur and Aguirre (January 10<sup>th</sup>), Yabucoa and Cambalache (January 11<sup>th</sup>) and Jobos (January 19<sup>th</sup>)
  - Task Force working meetings with LUMA/PREPA/COR3 on January 18<sup>th</sup>
  - Joint Progress Review for Puerto Rico and Federal agencies January 20<sup>th</sup>
  - Detailed RFI responses submitted from LUMA to FEMA on January 20<sup>th</sup> and January 25<sup>th</sup>
- **LUMA is proceeding with feasibility analysis for priority sites**
  - Contractor firms being hired, review of other related work scope being assessed
  - Still awaiting more detailed generator delivery schedule;



# Team Organization now defined for specific work streams

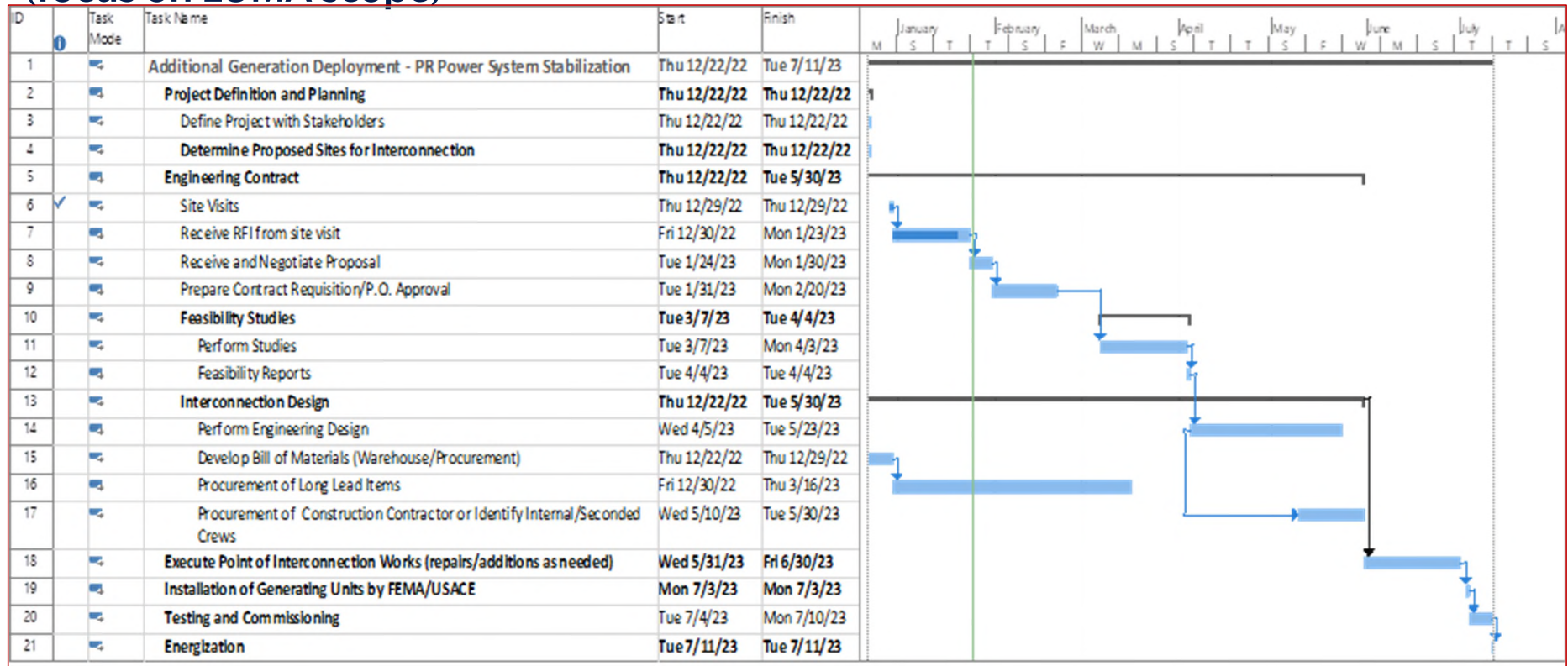
LUMA Team Organization



- Continuing to establish project execution components and resource assignments to staff
- LUMA work includes teams from Planning, Engineering, and Line/Substation Operations working with Capital Programs/PMO to develop and define the project scope

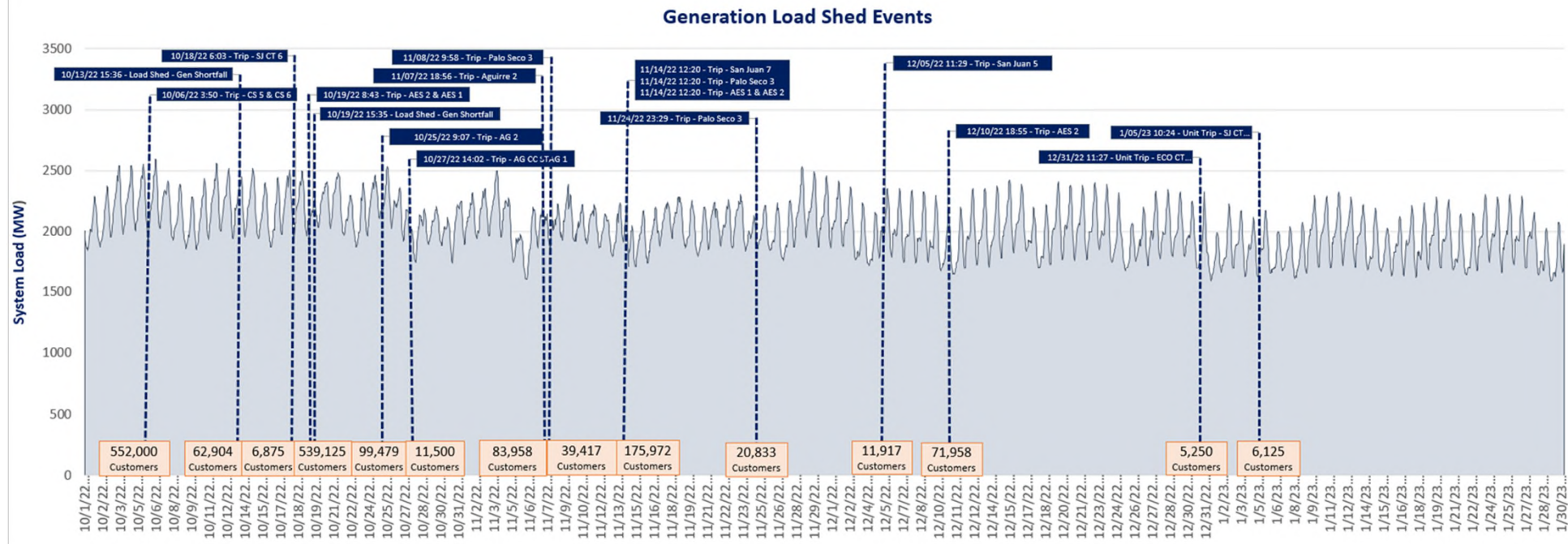


# High-Level Project Timeline (focus on LUMA scope)



- Current schedule indicates a mid-July energization date

# Fifteen Load Shed Events Have Occurred Since October 1, 2022



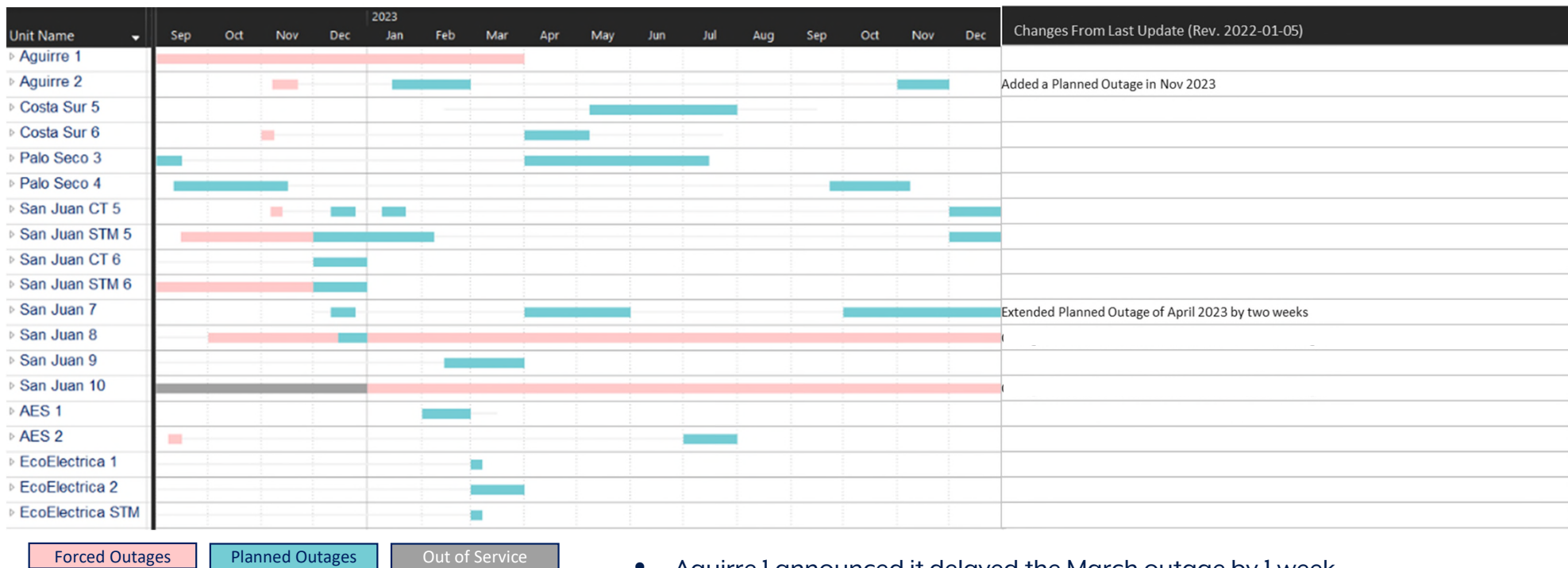
- There were zero Load Sheds in the last two weeks

Updated until 1/30/2023



# Generation Planned Outages as of January 17, 2023

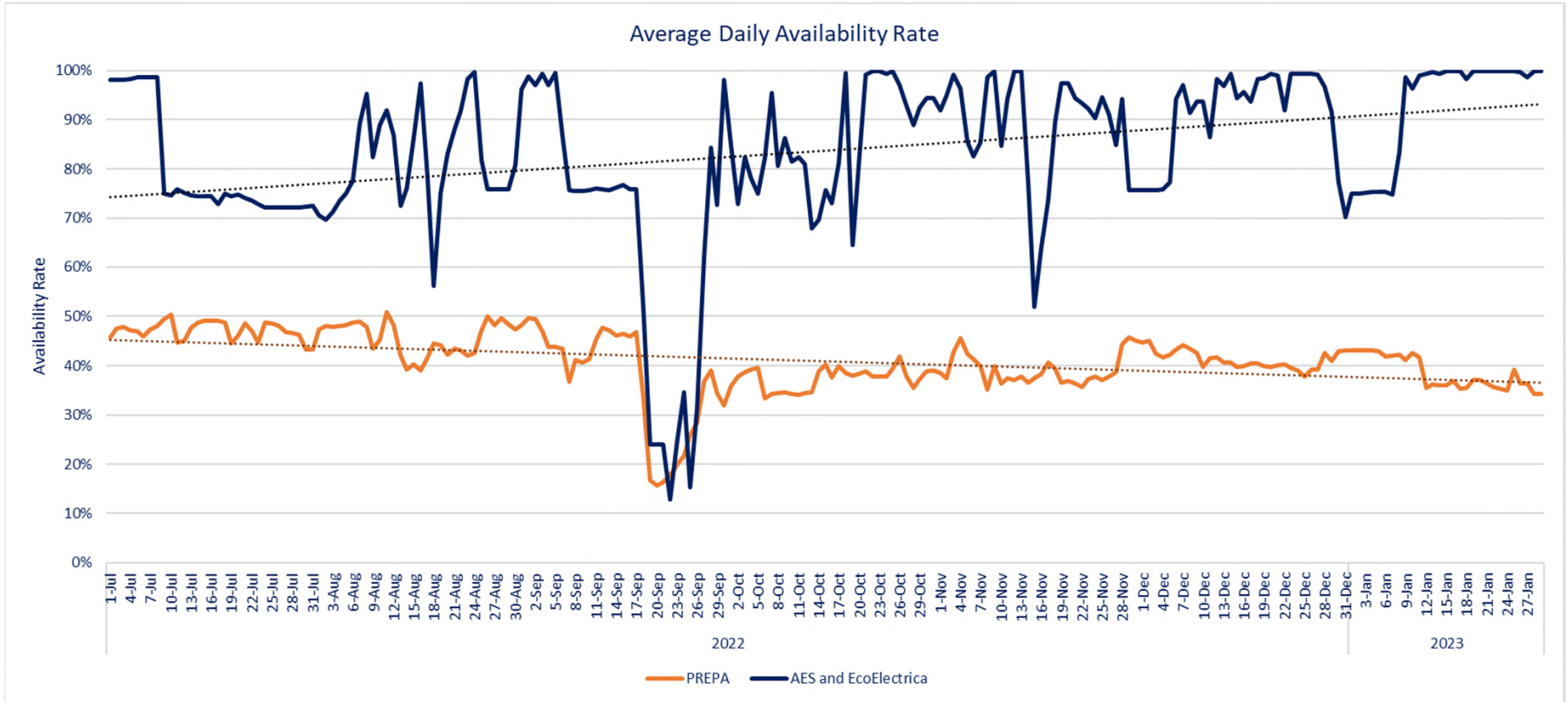
- PREPA's ability to accomplish required planned outages on schedule remains the largest single risk factor.
- Plant availability during March and April continues to represent a high risk with multiple units in outage.
- It appears that AES will be able to defer its July outage until after October which will alleviate several risk concerns; Details still being finalized so outage still shows July schedule



- Aguirre 1 announced it delayed the March outage by 1 week



# Average Daily Availability Rate Since July 1, 2022



As of 1/29/2023

- Availability Rates continue on trend with PREPA fleet decreasing and AES & Ecoelétrica increasing



## Risk Analysis – Observations to date

Risk	Observation
Resource Adequacy	<ul style="list-style-type: none"><li>Resource adequacy concerns and risks of load shed expressed in LUMA letter to PREB on October 6<sup>th</sup> continue to remain an ongoing operational concern</li></ul>
PREPA Operations	<ul style="list-style-type: none"><li>PREPA performance on Planned Outage schedules remains a concern, several recent adjustments to outage schedules create questions about whether adequate pre-outage planning has occurred</li><li>PREPA unit Forced Outage rates are increasing since Fiona due to damages incurred</li></ul>
March and April Outage Performance	<ul style="list-style-type: none"><li>Outage performance will affect generation availability and directly impact whether all identified outage work scope will be completed before summer hurricane season</li></ul>
Procuring Emergency Generation	<ul style="list-style-type: none"><li>Timing of FEMA emergency generation continues to evolve as information is assessed. Current planning and schedule assumption is new capacity will be available in July which will alleviate with summer reserve shortfall, but does not help support spring outage schedules which present short term risk to adequacy</li></ul>

