

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

**NEPR**

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**IN RE:**

10 YEAR PLAN FEDERALLY FUNDED  
COMPETITIVE PROCESS

**CASE NO.:** NEPR-MI-2022-0005

**SUBJECT:** Motion in Compliance with  
Resolution and Order Dated July 23, 2024, and  
Memorandum of Law in Support of Confidential  
Treatment of Exhibit A to the July 8 Motion

**MOTION IN COMPLIANCE WITH RESOLUTION AND ORDER DATED JULY 23,  
2024, AND MEMORANDUM OF LAW IN SUPPORT OF CONFIDENTIAL  
TREATMENT OF EXHIBIT A TO THE JULY 8 MOTION**

**TO THE HONORABLE PUERTO RICO ENERGY BUREAU:**

**COMES NOW GENERA PR LLC** (“Genera”), as agent of the Puerto Rico Electric Power Authority (“PREPA”),<sup>1</sup> through its counsels of record, and respectfully submits and prays as follows:

**I. Introduction**

1. On January 23, 2023, the Puerto Rico Energy Bureau of the Public Service Regulatory Board (“Energy Bureau”) entered an order with the subject *Determination for the Project Application Package for the Seven (7) Additional Peakers to be used as Generation* (“January 23<sup>rd</sup> Order”). In this order, among other directives, the Energy Bureau provided PREPA the flexibility to consider the best mix of locations for emergency generation. However, the Energy Bureau reminded PREPA that the total MW quantity of emergency generation and black start

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<sup>1</sup> Pursuant to the *Puerto Rico Thermal Generation Facilities Operation and Maintenance Agreement* (“LGA OMA”), dated January 24, 2023, executed by and among PREPA, Genera, and the Puerto Rico Public-Private Partnerships Authority (“P3 Authority”), Genera is the sole operator and administrator of the Legacy Generation Assets (as defined in the LGA OMA) and the sole entity authorized to represent PREPA before PREB with respect to any matter related to the performance of any of the O&M Services provided by Genera under the LGA OMA.

capacity procurement is limited by the conditions included in the December 5, 2022, Resolution and Order (“December 5<sup>th</sup> Order”).

2. On November 8, 2023, the Energy Bureau entered an order with the subject *Motion to Submit Supplement to September 8, 2023, Motion in Compliance with Resolution and Order Dated August 23, 2023 - Genera Competitive Procurement of Black Start and Emergency Generation*. In this Order the Energy Bureau stated that the upper limit of the range of capacity (MW) sizing included in section A.1.2 of exhibit J of the RFP far exceeds the maximum of 200 MW of emergency generation and 81 MW of net plant output for black start services approved by the Energy Bureau in the December 5<sup>th</sup> Order and the January 23<sup>rd</sup> Order.

3. On June 5, 2024, Genera submitted a document titled *Motion to Submit the Grid Support Units Update Evaluation for the Emergency Generation and Black-Start Generation Procurement in compliance with the Resolution and Order dated January 23, 2023* (“June 5<sup>th</sup> Motion”), whereby Genera included, as Exhibit A, an evaluation titled Grid Support Units Project Update (“GSUPU”), submitted under seal of confidentiality, which reviewed competitive bid proposals received and, among other considerations, focused on optimizing the purchasing process by evaluating the benefits of reconfiguring locations and varying the sizes of units.

4. Through the June 5<sup>th</sup> Motion, Genera sought approval from the Energy Bureau to continue with the proposed equipment configuration and purchase of the grid support units as set forth in Exhibit A to the June 5<sup>th</sup> Motion.

5. On June 17, 2024, Genera submitted a document titled *Memorandum of Law in Support of Confidential Treatment of the Grid Support Units Update Evaluation Submitted on June 5, 2024* (“June 17<sup>th</sup> Memorandum of Law”), whereby it requested the Energy Bureau to maintain the confidentiality of the GSUPU submitted as Exhibit A to the June 5<sup>th</sup> Motion.

6. On June 21, 2024, the Energy Bureau issued a Resolution and Order titled *Motion to Submit the Grid Support Units Update Evaluation – Requests for Information (ROI)* (“June 21<sup>st</sup> Resolution”), through which the Energy Bureau informed that they were evaluating the submitted information and had identified the need for further clarification and additional details. Consequently, the Energy Bureau ordered Genera to submit a response to the Second Request for Information, outlined in Attachment A to the June 21<sup>st</sup> Resolution, no later than ten (10) business days after the June 21<sup>st</sup> Resolution, with the deadline being July 8, 2024.

7. On July 8, 2024, Genera submitted a document titled *Motion to Submit Response to Request for Information in Compliance with Resolution and Order dated June 21, 2024* (“July 8<sup>th</sup> Motion”), whereby Genera submitted as Exhibit A therein its responses to the Second Request for Information outlined in Attachment A to the June 21<sup>st</sup> Resolution.

8. On July 9, 2024, Genera filed a document titled *Motion to Submit Supplemental Information to the Motion Submitted on July 8, 2024, and Request for Confidential Treatment* (“July 9<sup>th</sup> Motion”). The July 9<sup>th</sup> Motion included an Exhibit A, filed under a seal of confidentiality, submitted to assist the Energy Bureau in its thorough review of the GSUPU, effectively addressing any potential questions regarding its technical, environmental, and economic implications.

9. On July 23, 2024, the Energy Bureau issued a Resolution and Order titled *Genera Motion to Submit Grid Support Units Update Evaluation and Responses to Energy Bureau Requests for Information* (“June 23<sup>rd</sup> Resolution”). In the June 23<sup>rd</sup> Resolution, the Energy Bureau discussed, among other things, (i) Genera’s requests for confidential treatment of its Exhibit A to the June 5<sup>th</sup> Motion, containing the GSUPU, (ii) the request for confidential treatment of Exhibit A to the July 8<sup>th</sup> Motion, which included responses to the June 21<sup>st</sup> Resolution RFI, and (iii) Genera’s request for confidential treatment of Exhibit A to its July 9<sup>th</sup> Motion, which contains

supplemental information about the detailed cost and performance parameters of resources that responded to the RFPs for emergency generation and black start services.

10. In the July 23<sup>rd</sup> Resolution, the Energy Bureau made several determinations regarding Genera's confidentiality requests. It denied Genera's request for confidential treatment of Exhibit A to the June 5<sup>th</sup> Motion, as it did not contain information warranting confidentiality. Conversely, the Energy Bureau considered that Exhibit A to the July 8<sup>th</sup> Motion might not contain confidential information but could help stakeholders understand Genera's strategies for resource replacement. As a result, the Energy Bureau requested Genera to provide a more detailed Memorandum of Law, specifying which responses in Exhibit A to the July 8<sup>th</sup> Motion are considered confidential, along with the reasoning for this claim, before making a decision on the confidentiality request. Additionally, the Energy Bureau approved Genera's request for confidential treatment of Exhibit A to the July 9<sup>th</sup> Motion, which detailed cost and performance parameters for resources responding to the RFPs for emergency generation and black start services.

13. In accordance with the July 23<sup>rd</sup> Resolution, Genera hereby submits as a Exhibit A to this motion, a redacted version of the Exhibit A submitted with the July 8<sup>th</sup> Motion for public disclosure and respectfully requests the Energy Bureau to maintain under seal of confidentiality the unredacted version of Exhibit A submitted with the July 8<sup>th</sup> Motion. Further, Genera hereby includes a table identifying the confidential information, a summary of the legal basis for the confidential designation, and reasons why each claim or designation conforms to the applicable legal basis for confidentiality and a more detailed Memorandum of Law, outlining and describing the specific responses to the questions answered in Exhibit A to the July 8<sup>th</sup> Motion which Genera deems that they warrant confidential treatment.

## II. Identification of Confidential Information

Document Name and File Date	Pages in which Confidential Information is Found, if applicable	Summary of Legal Basis for Confidential Designation, if applicable	Summary of why each claim or designation conforms to the applicable legal basis for confidentiality
<b>Exhibit A – GPR- PREB- NEPRMI20220005- 20240621</b>	Pages 2-4, Table 1 Summary of Power Plant Reconfigurations	Sensitive commercial information and Trade Secrets under Act 80-2011, <i>infra</i> .	Response GPR-PREB-NEPRMI20220005-20240621-#1 in Exhibit A to the July 8 Motion contains sensitive commercial information regarding Genera’s technical analysis for a site configuration project that has not yet been approved by the Energy Bureau. The technical information of the units and the site location of the temporary and BESS units is still under review. The POI’s identified might also be considered by LUMA for their BESS projects RFP. This information is protected under the provisions of Act No. 80-2011.
<b>Exhibit A – GPR- PREB- NEPRMI20220005- 20240621</b>	Page 16	Sensitive commercial information and Trade Secrets under Act 80-2011, <i>infra</i> .	Response GPR-PREB-NEPRMI20220005-20240621-#2(d) in Exhibit A to the July 8 Motion contains sensitive technical analysis that has not yet been disclosed to the public. Genera’s technical analysis for a site configuration project has not yet been approved by the Energy Bureau. The POI’s identified might also be considered by LUMA for their

	<p>BESS projects RFP. The technical information of the units and the site location of the temporary and BESS units is still under review. This information is protected under the provisions of Act No. 80-2011.</p>
<p><b>Exhibit A – GPR- PREB- NEPRMI20220005- 20240621</b></p> <p>Page 18-19</p>	<p>Sensitive commercial information and Trade Secrets under Act 80-2011, <i>infra</i>.</p> <p>Response GPR-PREB-NEPRMI20220005-20240621-#3(a) in Exhibit A to the July 8 Motion contains sensitive technical analysis that has not yet been disclosed to the public. Genera’s technical analysis for a site configuration project has not yet been approved by the Energy Bureau. The technical information of the units and the site location of the temporary and BESS units is still under review. The POI’s and sites for installations identified might also be considered by LUMA for their BESS projects RFP. This information is protected under the provisions of Act No. 80-2011.</p>
<p><b>Exhibit A – GPR- PREB- NEPRMI20220005- 20240621</b></p> <p>Page 20</p>	<p>Sensitive commercial information and Trade Secrets under Act 80-2011, <i>infra</i>.</p> <p>Response GPR-PREB-NEPRMI20220005-20240621-#3(b) in Exhibit A to the July 8 Motion contains sensitive technical analysis that has not yet been disclosed to the public. Genera’s technical analysis for a site configuration project has not yet been approved by the Energy Bureau. The technical information of the units and the site location of the</p>

	<p>temporary and BESS units is still under review.</p> <p>This information is protected under the provisions of Act No. 80-2011, and if disclosed, could disadvantage Genera’s competitiveness.</p>
<p><b>Exhibit A – GPR- PREB- NEPRMI20220005- 20240621</b></p> <p>Page 37 – Peakers Project Timeline</p> <p>Sensitive commercial information and Trade Secrets under Act 80- 2011, <i>infra</i>.</p>	<p>The Peakers Project Timeline and BESS Project Timeline included in response GPR- PREB-NEPRMI20220005- 20240621-#10 in Exhibit A to the July 8 Motion are subject to PREB’s approval. Identified tasks will be subject to competitive processes. Premature disclosure of this information would not serve to the benefit of public interests if the information were to change.</p>

### III. Memorandum of Law in Support of Confidential Treatment

#### A. Applicable Law

14. The governing statute for the management of classified information submitted to the Energy Bureau is Section 6.15 of Act No. 57 of May 27, 2014, as amended, also known as the *Puerto Rico Energy Transformation and RELIEF Act*, 22 L.P.R.A § 1051 et seq (“Act No. 57-2014”). This section stipulates that “[i]f any person who is required to submit information to the Energy [Bureau] believes that the information to be submitted carries a confidentiality privilege, such person may request the [Bureau] to treat such information as confidential...” 22 L.P.R.A. § 1054n. If, after conducting appropriate evaluation, the Energy Bureau determines that the information warrants protection, it is required to "grant such protection in a manner that minimally affects the public interest, transparency, and the rights of the parties involved in the administrative

procedure in which the allegedly confidential document is submitted." *Id.* at Section 6.15(a). Consequently, such information must be withheld from the public domain by the Energy Bureau and "must be duly safeguarded and provided exclusively to the personnel of the Energy [Bureau] who need to know such information under nondisclosure agreements." *Id.* at Section 6.15(c). Therefore, "[t]he Energy [Bureau] must swiftly act on any privilege and confidentiality claim made by a person under its jurisdiction through a resolution for such purposes before any potentially confidential information is disclosed." *Id.* at Section 6.15(d).

15. Furthermore, the Energy Bureau's Policy on Management of Confidential Information details the procedures a party should follow to request confidential treatment for a document or a portion of it. The Energy Bureau's Policy on Management of Confidential Information requires 1) identifying confidential information and 2) filing a memorandum of law explaining the legal basis and support for a request to file information confidentially. *See* Section A of the Energy Bureau's Policy on Management of Confidential Information. The memorandum should also include a table that identifies the confidential information, a summary of the legal basis for the confidential designation, and an explanation of why each claim or designation conforms to the applicable legal basis for confidentiality. *Id.* The party seeking confidential treatment of information filed with the Energy Bureau must also file both a "redacted" (or "public") version and an "unredacted" (or "confidential") version of the document that contains the confidential information. *Id.*

16. In addition to the aforementioned, it is worth noting that under Act. No. 80 of June 3, 2011, also known as *the Industrial and Trade Secret Protection Act of Puerto Rico*, 10 L.P.R.A. § 4131 *et seq.* ("Act No. 80-2011"), certain information may be granted protection as a trade secret.



Specifically, Act No. 80-2011 provides that industrial or trade secrets are deemed to be any information:

- (a) That has a present or potential independent financial value or that provides a business advantage, insofar as such information is not common knowledge or readily accessible through proper means by persons who could make a monetary profit from the use or disclosure of such information, and
- (b) For which reasonable security measures have been taken, as circumstances dictate, to maintain its confidentiality.

*See* Act No. 80-2011, 10 L.P.R.A. § 4132

17. Furthermore, in the context of Act No. 80-2011, information refers to knowledge that amplifies or clarifies existing understanding, including but not limited to formulas, compilations, methods, techniques, processes, recipes, designs, treatments, models, or patterns. *See* Article 2(a) of Act No. 80-2011. In addition, Puerto Rico's Supreme Court has delineated a trade secret as any process of manufacturing, treating, or preserving materials, a formula or recipe, a blueprint or pattern for the development of machinery, or even a list of specialized customers that constitute a distinct market, thereby bestowing a competitive advantage upon its owner. *See Ponce Adv. Med. v. Santiago González*, 197 DPR 891, 903-904 (2007).

#### **B. Grounds for Confidentiality**

18. The proprietary information contained in Exhibit A – GPR-PREB-NEPRMI20220005-20240621 is critical to Genera's operational and competitive strategy. The technical specifications disclosed in the responses are tailored to enhance efficiency and adaptability to varying energy demands and grid requirements. This includes specific capacity limits for emergency generation and black start services, as well as detailed plant reconfiguration plans specifying the capacity and precise locations of new installations, including BESS.. This information, detailed in responses GPR-PREB-NEPRMI20220005-#1, GPR-PREB-

NEPRMI20220005-#2(d), GPR-PREB-NEPRMI20220005-#3(a), and GPR-PREB-NEPRMI20220005-#3(b), is still pending approval by the Energy Bureau and has not been publicly disclosed.

19. Disclosing these specifics before formal approval could severely undermine Genera's position. If the details of Genera's proposed strategies and plant configurations were made public, third parties could gain invaluable insights into Genera's operational approaches and strategic deployments. This premature exposure could allow third parties to preemptively counteract Genera's strategies, leading to a diminished competitive edge. Furthermore, it could cause stakeholders to mistakenly presume these plans to be final, leading to poorly informed decision-making based on incomplete or potentially inaccurate information. For instance, the premature disclosure of the Peakers Project Timeline and BESS Project Timeline, as described in response GPR-PREB-NEPRMI20220005-#10 and still subject to PREB's approval, could lead to misinformed stakeholder actions and strategic decisions based on incomplete information, which could negatively impact both Genera's operations and the broader market dynamics.

20. Moreover, revealing the sensitive details of Genera's proposed site configurations and technological deployments would erode the proprietary nature of its strategies, providing third parties with an undue advantage. Third parties could leverage this information to anticipate Genera's initiatives and counteract them with adjustments unfavorable to Genera. Protecting this information under the provisions of Act No. 80-2011 is therefore crucial to maintaining Genera's competitive integrity and ensuring that its innovative strategies remain confidential until they are fully approved and ready for implementation. This confidentiality is essential to preserving the integrity of the strategic and operational planning processes, particularly when issuing requests for proposals.

**WHEREFORE**, Genera respectfully requests that the Energy Bureau **take notice** of the above and **approves** the request for confidential treatment of Exhibit A to the July 8<sup>th</sup> Motion and keep the same under seal of confidentiality.

**RESPECTFULLY SUBMITTED.**

In San Juan, Puerto Rico, this 2<sup>nd</sup> day of August 2024.

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TSPR 22,996

## CERTIFICATE OF SERVICE

We hereby certify that a true and accurate copy of this motion was filed with the Office of the Clerk of the Energy Bureau using its Electronic Filing System and that we will send an electronic copy of this motion to PREPA through its counsels of record, Alexis G. Rivera Medina, at [arivera@gmlex.net](mailto:arivera@gmlex.net), and Mirelis Valle Cancel at [mvalle@gmlex.net](mailto:mvalle@gmlex.net).

In San Juan, Puerto Rico, this 2<sup>nd</sup> day of August 2024.

/s/ Alejandro López-Rodríguez  
Alejandro López-Rodríguez

**Exhibit A**

Docket Number: NEPR-MI-2022-0005

In Re: 10 Year Plan Federally Funded Competitive Process

Re: Grid Support Units Project Update

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**GPR-PREB-NEPRMI20220005-20240621-#1**

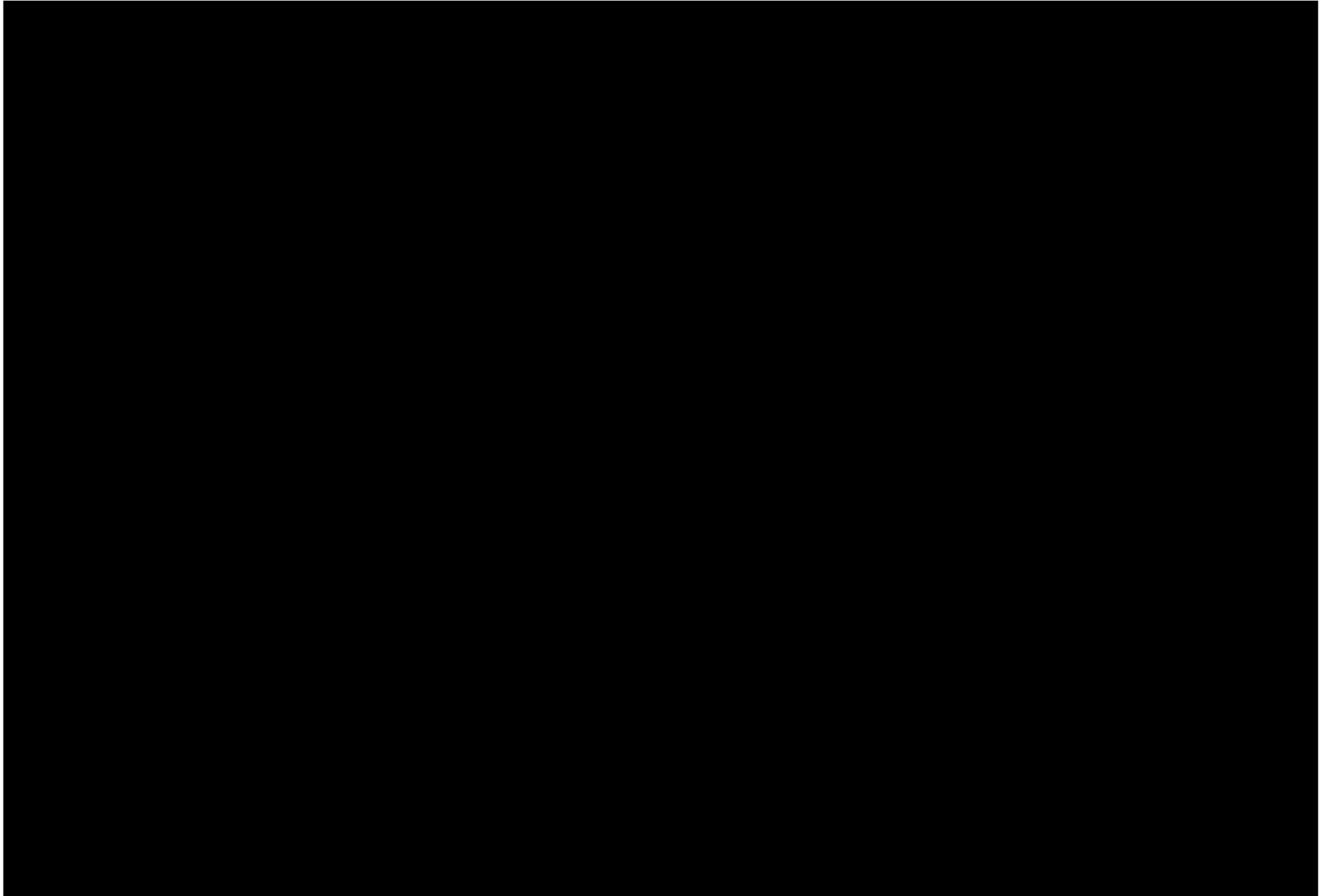
1. Exhibit A to Genera's June 5 Motion contains a Grid Support Units Project Update.

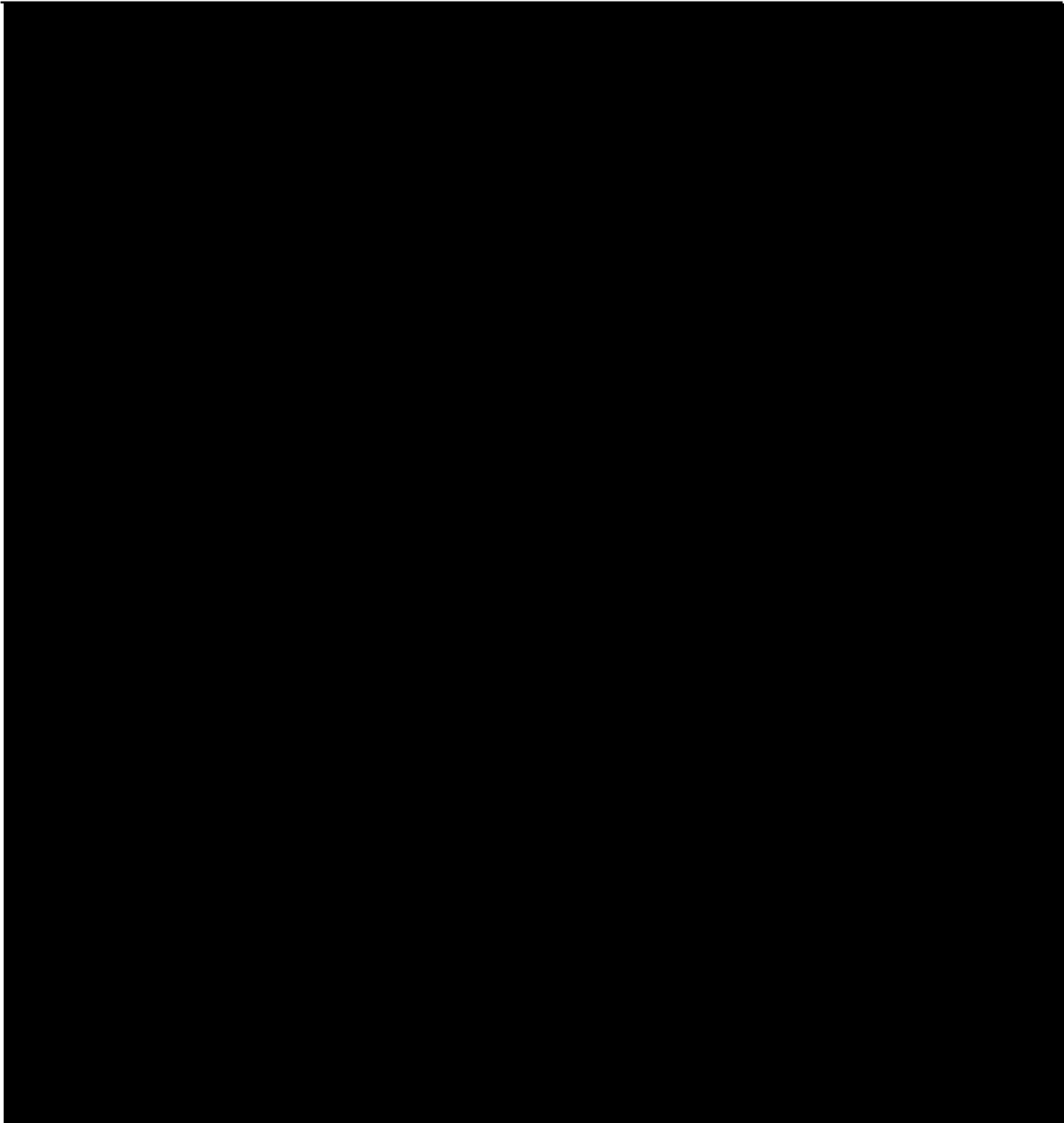
a) Provide all analyses, workpapers, quantitative evaluation support and related information that underlies the results of the evaluation - that is, the total number, size, and technology type of proposed units for procurement - as presented in the Table "Summary of Grid Support Units Site Configurations".

**Response:**

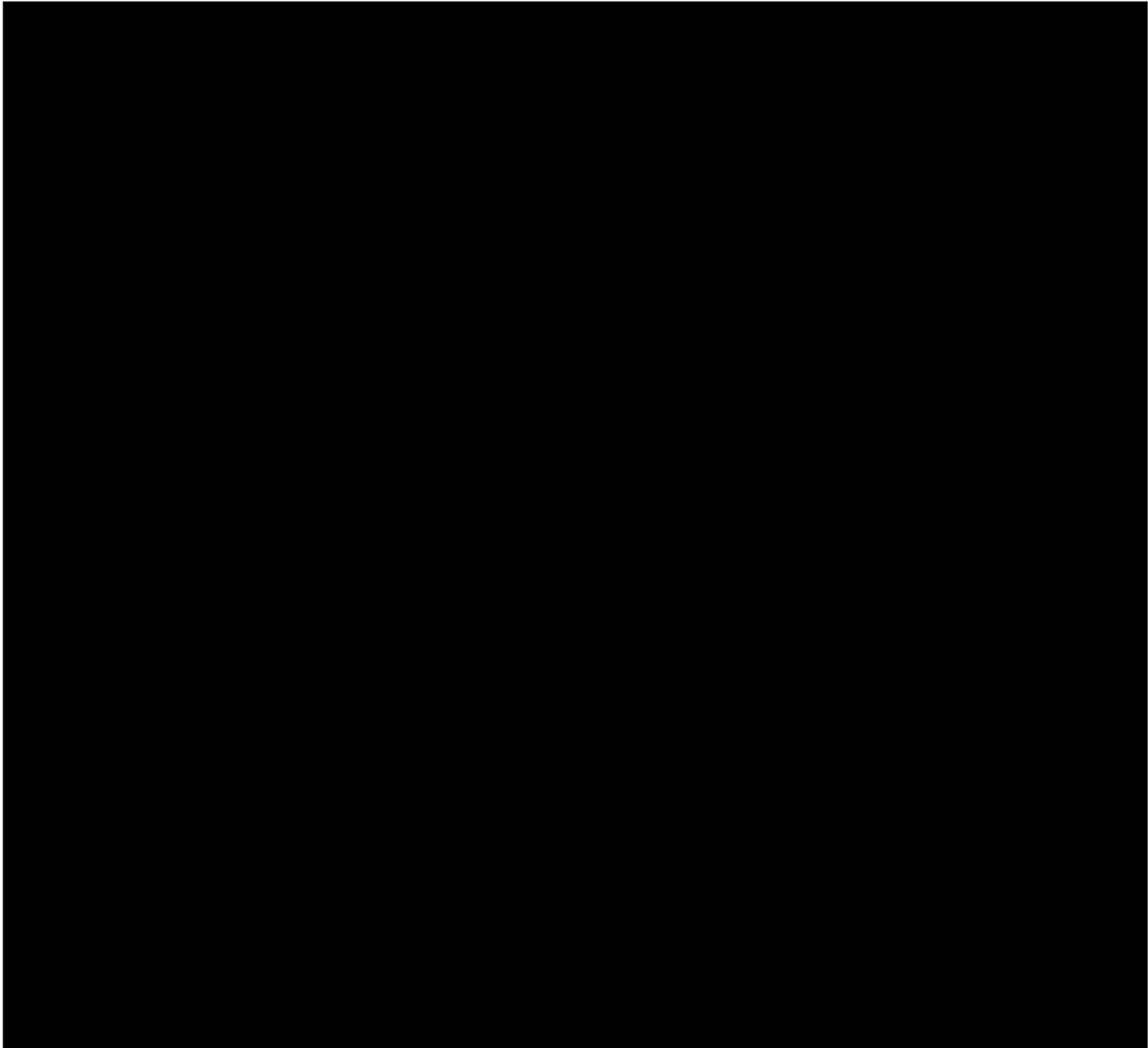
The analysis performed consists of two parts: (i) a strategic power plant design assessment, and (ii) an analytical weighted matrix evaluation. The strategic design assessment takes into account existing site infrastructure, demolition and remediation, layout and space availability, and future expansion opportunities. The analytical weighted matrix is a quantitative approach that takes into account six (6) criteria: levelized cost of electricity by configuration, site reconfiguration and future expansion, bulk fuel accessibility, integration of renewable generation and energy storage, critical infrastructure geographic distribution and resiliency, and restoration of black start capabilities. Based on this dual approach, the results of the evaluation led to the reconfiguration shown in Table 1. Note that the MW values shown here are nominal compared to the summary table shared in the Grid Support Units Update.

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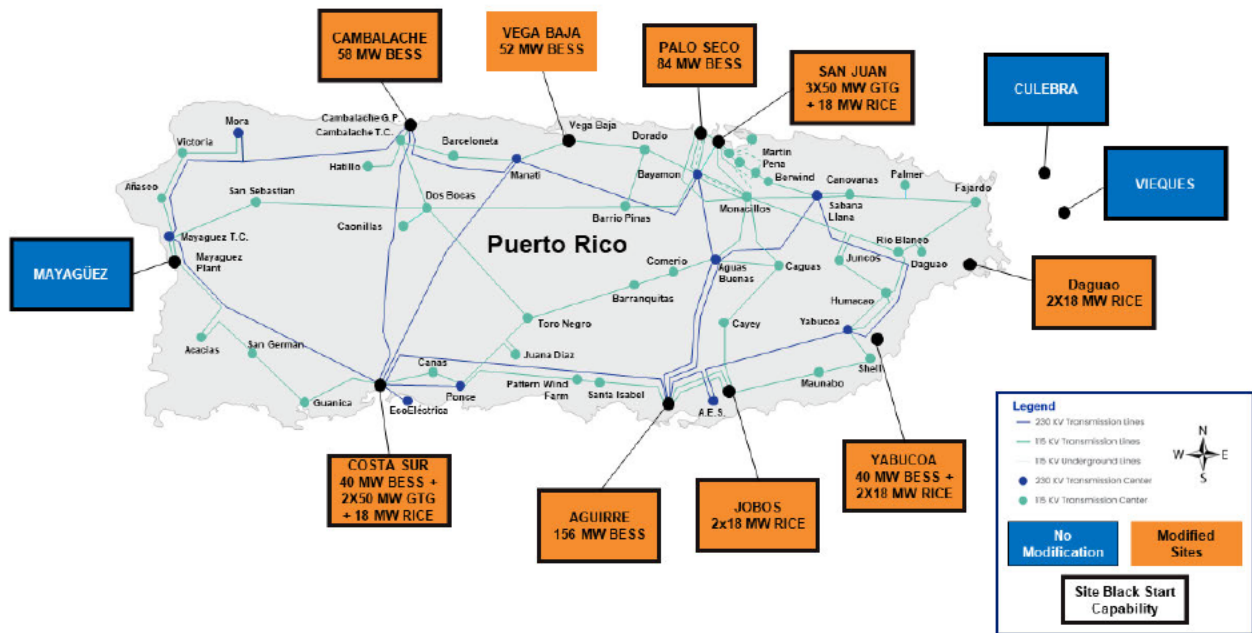
**Table 1 Summary of Power Plant Reconfigurations**







**Figure 1 Overview of New Site Arrangements**



**GPR-PREB-NEPRMI20220005-20240621-#2(a)**

2. In addition to providing all analyses, workpapers, quantitative evaluation support, and related information in response to ROI No. 1, please also address the following in connection with the assertions included in Exhibit A to the June 5 Motion:

a) Identify and describe the specific units associated with the "fleet" considered as part of Genera's "fleet replacement strategy"?

**Response:**

Specific, existing units, collectively referred to as the "fleet," will be reconfigured as summarized in

**Table 1** and illustrated in **Figure 1**.

**GPR-PREB- NEPRMI20220005-20240621-#2(b)**

b) Explain in detail on what basis did Genera develop a "fleet replacement strategy"?

**Response:**

The fleet replacement strategy takes as a basis the specific use of FEMA funds for hazard mitigation with the focus on executing new power generation and energy storage projects that best serve the present and future needs of the island, including grid support services to manage the anticipated large influx of inverted-based renewable generation projects. More specifically, the assessment considers the following key aspects:

- a) Hazard mitigation, to reduce the impact and long-term effects of a natural disaster.
- b) Critical services, or areas of the island that are most susceptible to losses during a natural disaster.
- c) Restoration of the island's degraded, power generation black start systems
- d) Availability of the necessary fuel supplies.
- e) Existing infrastructure, land, and utilities currently owned by PREPA.
- f) Condition and/or status of existing generation assets, including impairments, planned generation retirements, and reliability.
- g) Integration of future renewable generation and energy storage projects.

**Table 2 Fleet Replacement Summary**

Key Aspect Parameters	Requirement	Solution
a) Hazard Mitigation	Generation technology must provide power generation capability 24 hours per day / 7 days per week / 365 days per year.	With appropriate fuel storage, gas turbines and reciprocating engines have traditionally served emergency generation needs throughout the world. Battery energy storage systems may be used for limited hours but are more suitable for temporary interruptions, rather than extended periods following storm or hurricane damage. The fleet replacement strategy will address all hazard mitigation requirements, as defined and funded by FEMA, <u>which is the source of funding for Genera's fleet replacement plan</u> . It will also utilize battery energy storage systems as a supplementary service.
b) Critical Services	Areas of the island that are most susceptible to losses during a natural disaster.	The existing peaking and legacy sites have provided critical services since the early 1970s. In recent years, many of the peaking units are no longer operable, placing these areas at risk. Genera's fleet replacement plan is to reconfigure existing peaking sites to provide restoration of these services for critical areas.
c) Black Start	Restoration of the island's degraded, power	The current black start capability of the island is severely degraded and requires immediate attention. Black start

Key Aspect Parameters	Requirement	Solution
	generation black start systems	capability was recently addressed by the Energy Bureau in the Resolution and Order with the subject: Determination of the FY25 Annual Budgets for the electric utility; In Re: LUMA Initial Budgets and Related Terms of Service, docket no. NEPR-MI-2021-0004 and associated Technical Conference (June 21, 2024). Some improvements have been made since the 2017 hurricanes, yet black start services are still unavailable at many of the peaker sites. Genera intends to fully restore black start capability to all peaking and legacy generation sites with the fleet replacement strategy. This is an essential need and currently many areas of the island are at risk until this is addressed.
d) Fuel	Fuel is a critical element of new generation planning and production costs.	Improvements to the existing peaker site configuration are planned. RICE generators are used in lieu of gas turbine generators at the peaking sites because fuel must be trucked to these sites. The current thermal efficiency of the Frame 5 gas turbine generators is approximately 22% while the planned thermal efficiency of the reciprocating engines is approximately 45%, offering a tremendous improvement over the current fuel usage. RICE generators will be able to operate twice the amount of time with the fixed fuel capacity stored at each site. In the event trucked fuel deliveries to peaker sites are interrupted

Key Aspect Parameters	Requirement	Solution
		<p>following a storm event, Genera’s fleet replacement strategy will provide a distinct advantage in continuity of generation services. For sites that have access to bulk fuel delivery, Genera’s fleet replacement strategy employs mid-size gas turbine generation technology. The gas turbines selected for these services are roughly double the current size of the existing peaker units.<sup>1</sup> The fleet replacement strategy proposed by Genera minimizes the use of fuel and will provide benefits in the event of hazard mitigation services, and for normal generation duties.</p>
e) Existing Infrastructure	Infrastructure, land, and utilities currently owned by PREPA	<p>Genera’s fleet replacement strategy utilizes existing infrastructure, utilities and land that has been in place since the early 1970s. By avoiding greenfield projects, Genera is able to minimize these project costs by avoiding land purchases, new network interconnections, and discussions with external entities which all carry risk for the execution of each new project.</p>

<sup>1</sup> Due to the availability of bulk natural gas, Genera intends to reserve area within the equipment arrangements at San Juan and Costa Sur to provide for a further increase in thermal efficiency. Both of these sites may be converted to combined-cycle arrangements, improving the efficiency from the mid-30% range up to 55%. The fuel consumption per MW decreases dramatically and approximately 50% more power may be produced from the same amount of fuel. This future initiative requires PREB approval.



Key Aspect Parameters	Requirement	Solution
f) Condition of Generation Assets	Existing asset impairments, retirements, and reliability	The existing peaking generation assets have provided service for over 50 years. Since their initial commercial operation date, tremendous improvements have been made across virtually every aspect of machine design, communication and control systems, and combustion technology. Genera’s fleet replacement strategy will provide a leap forward across each of these areas of interest and many more. The reliability of the generation fleet will see immediate gains in reliability and operating costs when older, unreliable and more polluting units are removed from service.
g) Integration of Renewables	Support for the integration of renewable generation and energy storage projects.	Genera’s planned fleet replacement strategy prepares the island for the future integration of renewable generation and energy storage projects. RICE and gas turbine generators provide their distinct advantages as further described in the reply to Part III Question 1. The integration of BESS also provides advantages as further described in the reply to Part III Question 1.

**GPR-PREB- NEPRMI20220005-20240621-#2(c)**

c) Provide all quantitative analyses that underlies Genera's "engineering analyses to support the optimal use of FEMA funding for these projects". In particular, describe exactly how such optimization was conducted.

**Response:**

All of the project configurations meet the requirements for hazard mitigation and all of the projects, to avoid greenfield development, utilized existing generation sites and interconnection points. This strategy provides a faster execution plan, minimizes network upgrades, and eliminates purchasing and permitting delays associated with the acquisition of new property. An analytical weighted matrix was then used to optimize the configurations for the fleet replacement strategy, using the following criteria:

The Site Reconfigurations and Potential for Future Expansions at each site were further analyzed according to the following physical and design constraints:

- Site Area and Layout Limitations – BESS, RICE, and GT General Arrangements
- Point of Interconnection – Maximum Supported Capacity
- Existing Site Infrastructure – Utilities, Demineralized Water
- Emissions Limitations – Air Permits, Title V, EPA Noise Considerations – Standards and OSHA Limitations

**GPR-PREB-NEPRMI20220005-20240621-#2(d)**

d) Did the "evaluation of the electrical point of interconnection" include an assessment of the alternative uses of electrical point of interconnection capacity, such as for interconnection of battery energy storage options at any or all of the sites considered. If so, provide that assessment. If not, explain why such an assessment was not conducted.

**Response:**

Yes, Genera's Grid Support Units strategy includes both thermal generation (376 MW nominal) and battery energy storage systems (BESS) (430 MW nominal) as shown in

**Table 1.** The point of interconnection (POI) at each site was optimized to include a mixture of thermal and BESS (see

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[REDACTED]

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[REDACTED]

**GPR-PREB-NEPRMI20220005-20240621-#2(e)**

e) What aspects of the Grid Support Unit Study were "revisited" based on the proposals received, how did the information in the "proposals received" inform the revisitation of the Study?

**Response:**

The study was updated to reflect accurate properties of the technologies considered including nominal equipment sizes, auxiliary equipment space requirements, confirmation of equipment performance, confirmation of equipment emissions characteristics, and verification of POI constraints. Adjustments were made to the planned RICE configuration at Dagua and across several BESS sites, Refer to Table 1.

**GPR-PREB-NEPRMI20220005-20240621-#3(a)**

3. Genera, with the support and approval of both the Energy Bureau and FEMA, is proposing the installation of up to 430 MW of battery energy storage system (BESS) capacity at various sites, including Costa Sur, Aguirre, Cambalache, and Yabucoa.

a) In what specific ways did Genera analyze, as part of the Grid Support Unit Study, the potential operational interaction between the RICE and GT units considered in the June 5 Motion and the battery storage projects indicated in the October 27, 2023, Genera Motion and approved by the Energy Bureau on the Resolution and Order dated April 23, 2024, in case: NEPR-MI-2021-0002.

**Response:**

[REDACTED]

- [REDACTED]
- [REDACTED]

- [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]



**GPR-PREB-NEPRMI20220005-20240621-#3(b)**

b) In what specific ways did Genera evaluate or analyze the "optimum" use of existing interconnection capacity - for new or replacement generation or battery storage - at the San Juan, Dagua, Jobos, Yabucoa and Costa Sur sites?

**Response:**

[Redacted]

[Redacted]

- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]

**GPR-PREB-NEPRMI20220005-20240621-#4(a)**

4. New emergency generation (from FEMA-funded stabilization following Hurricane Fiona) of 150 MW at Palo Seco, including black start capability, and 200 MW at San Juan is now in place.

a) In what way did Genera analyze the effect of this new generation when revisiting the Grid Support Unit procurement process after receiving proposals in response to the RFP?

**Response:**

The new emergency generation, including its temporary setup and installation, is not located within the existing Palo Seco and San Juan facility boundaries. Refer to the response to Item 2 below that explains the future operating limitations of the new emergency generation, with an operating permit expiring in December 2025.

**GPR-PREB-NEPRMI20220005-20240621-#4(b)**

b) Why is Genera continuing to support additional emergency generation at San Juan now, given the presence of the FEMA - funded "stabilization firm generation there that is equal to the maximum amount of emergency generation originally authorized for procurement through the RFP process.

**Response:**

The supplied, FEMA-funded stabilization generation equipment is in place and has an operating permit until December 2025. The following aspects of these units, for long term generation, are unknown at this time:

- The current FEMA-funded stabilization design was put in place as temporary, short-term generation.
- The planned permanent installation would have more rigorous design and installation requirements to meet 30-year design life, with due consideration given to site design conditions, wind loading, etc.
- The current FEMA-funded stabilization equipment does not include emission control equipment.
- Black start capability is a critical service necessary for the San Juan metropolitan area.

These units for installed to supplement the shortfall of generation of the existing thermal units and provide the following improvements over the FEMA-funded stabilization equipment:

**Reserve Margin:** Even with this FEMA-funded "stabilization" firm generation, daily needs continue to leave the power system with a generation reserve

shortfall. Shortfalls are primarily due to reliability issues with older equipment, and outages for planned maintenance work are not easily scheduled.

**Efficiency:** While the island continues to rely heavily on inefficient thermal boiler units and simple-cycle units, including the most recent FEMA-funded stabilization generation, Genera's recommendations provide tremendous improvements in equipment efficiency and thus lower fuel usage, translating to a lower cost of electricity. A new facility, with larger gas turbine generators with a planned, future combined-cycle conversion, would be a long-term solution with a combined-cycle efficiency of approximately 55% for the planned equipment vs. a simple-cycle efficiency of approximately 36% for the FEMA-funded stabilization firm generation. This translates to significant fuel savings.

**Emissions:** Due to the unknowns with the limitations within the FEMA-funded stabilization firm generation operating permit (installed under an emergency order), and the anticipated, future requirements for selective catalytic reduction (NO<sub>x</sub> reduction) and/or carbon oxide catalysts (CO reduction), the generators' capacity factors may be limited. The planned generation for San Juan will be fully compliant with the requirements established by the facilities Title V Operating Permit

**GPR-PREB-NEPRMI20220005-20240621-#5(a)**

5. New battery energy storage is planned by Genera at Daguao, Yabucoa and Jobos.

a) In what way did Genera analyze the potential for a combination of new small fossil generation at Daguao, Yabucoa and Jobos with the planned battery energy storage installations at those sites?

**Response:**

Refer to the response for Part 2, Question No. 2 above for the logic used in developing the reconfiguration plan for each generation site. At Yabucoa, new BESS is proposed. Daguao and Jobos no longer include BESS equipment. The Yabucoa site, with a combination of thermal and BESS, was optimized to maximize space utilization with due consideration given to POI constraints.

The advantage of combining BESS with RICE technology is described in the response to Part 3, Question No. 1.

**GPR-PREB-NEPRMI20220005-20240621-#5(b)**

b) Provide all such analysis if conducted. If no such analysis was conducted, why not?

**Response:**

Refer to reply immediately above including Part 3, Question No. 1. Refer to the Genera Grid Support Units Study will be submitted separately, when it has been updated to provide full responses to the questions presented herein and reflect the final configurations for BESS, RICE, and GTG units.

**GPR-PREB-NEPRMI20220005-20240621-#6**

6. Provide any additional information available to Genera regarding the comparative benefits of using smaller-sized RICE units versus larger-sized GT units, and whether it might be preferable to standardize one or both technology types (RICE and GT) for new small fossil generation moving forward. Additionally, explain the reasons behind this preference.

**Response:**

[Redacted response content]

**GPR-PREB-NEPRMI20220005-20240621-#7**

7. In connection with the assertions included in Exhibit A to the June 5 Motion<sup>2</sup>, please provide the following documents along with all analyses and workpapers used in their preparation: (i) the project feasibility evaluation report, (ii) the fleet replacement strategy report, (iii) the report on the optimization of equipment configuration for each project site, and (iv) all engineering analyses supporting the optimal use of FEMA funding for the proposed projects.

**Response:**

Refer to the Genera Grid Support Units Study will be submitted separately, when it has been updated to provide full responses to the questions presented herein and reflect the final configurations for BESS, RICE, and GTG units.



**GPR-PREB-NEPRMI20220005-20240621-#8**

8. Please confirm if the proposed gas turbines (GTs) at San Juan and Costa Sur are dual- fuel. If they are not, explain why they are not and how the proposed new single-fuel generation units comply with the requirements of Act 17-2019.

**Response:**

The proposed gas turbines in San Juan and Costa Sur are dual fuel capable of firing Fuel Oil and Natural Gas.

**GPR-PREB-NEPRMI20220005-20240621-#9(a)**

9. In the June 5 motion, Genera states that if the nameplate capacity proposed in the Summary of Grid Support Units Site Configuration exceeds the capacity approved by the Energy Bureau, they propose to continue with the purchase of the units based on the nameplate capacity proposed in the Grid Support Units Site Configuration. However, they request an order to limit the dispatch of the units to the capacity established by PREB.

a. Explain how Genera's proposal aligns with the Approved IRP and other orders issued by the Energy Bureau concerning the installation and/or replacement of peaking generation units. If it does not, describe the mechanism proposed for the justification and approval of any excess peaking generation capacity based on applicable law and prevailing circumstances.

**Response:**

The limitation suggested by the Grid Support Units Project Update is made in reference to the inherently low capacity factor of peaking units. In the near term, due to the lack of available generation these units may be used more frequently, however in the future, there will be a large influx of renewable generation and it is expected that these units will shift to peaking and support operations. The dispatch of the units is limited by the dispatch operator, to provide peaking power for few critical hours during the day and emergent need for power due to unit outages or emergencies. The proposed fleet allows the dispatch operator flexibility and finer control to optimally dispatch power for critical services.

**GPR-PREB-NEPRMI20220005-20240621-#9(b)**

b) For each type of unit and proposed capacity, if the dispatch of the units is limited as proposed by Genera, explain how the efficiency and performance of the units will be affected when operated at lower capacities.

**Response:**

[See response 9(a) general response above]

**GPR-PREB-NEPRMI20220005-20240621-#9(c)**

c) Considering that peaking units are designed to operate most efficiently at or near their maximum capacity, explain how operating them at lower capacities would not result in decreased fuel efficiency, leading to higher fuel consumption per unit of electricity generated.

**Response:**

[See response 9(a) general response above]

The current Frame 5 GTG's are approximately 22% efficient. The fleet replacement strategy provides substantial savings in fuel cost with these simple replacements, even when operating off of the best efficiency point.

**GPR-PREB-NEPRMI20220005-20240621-#9(d)**

d) Considering that peaking units are designed to operate most efficiently at or near their maximum capacity, explain how operating them at lower capacities would not result in an increase in operating costs. If the operating costs are indeed higher due to Genera's proposed dispatch limitation, provide a detailed explanation of the potential increase in operating costs for each unit. This explanation should include, but not be limited to, the magnitude of the potential increase in operating costs for each unit.

**Response:**

For reasons inferred by the questions above, operating the equipment at an off-design condition is not ideal. A dispatch strategy using MW, or MW-hrs which permits operation near the best efficiency point is better suited if it is considered across an average operating year. Emphasis must be made that RICE technology and gas turbine technology have both been selected to closely meet the previously approved PREB capacities using standard OEM equipment frame sizes. The selections were made to ensure RICE machines at each location were identical in design so that spare parts and staff training are simplified. The same logic was applied to gas turbines.

**GPR-PREB-NEPRMI20220005-20240621-#9(e)**

e) Considering that peaking units are designed to operate most efficiently at or near their maximum capacity, explain how operating them at lower capacities would not result in an increase in maintenance costs. If the maintenance costs are indeed higher due to Genera's proposed dispatch limitation, provide a detailed explanation of the potential increase in maintenance costs for each unit. This explanation should include, but not be limited to, the magnitude of the potential increase in maintenance costs for each unit.

**Response:**

See reply above with respect to OEM standard frame sizes and Genera's interest in utilizing common fleet parts. Here also, it should duly noted that RICE units are being suggested for the previously installed Frame 5 gas turbine units. RICE units are specifically designed for frequent starts, fast starts, and intermittent duties. There will be a large advantage in switching technologies at the remote peaker sites, not only due to the inherent design features of RICE units, but also due to the use of natural gas fuel. Gas turbine maintenance cycles are largely dependent upon number of starts, hot shutdowns, fuel quality and ramp rates, and other OEM specific parameters. These parameters are used to develop "factored fired hours" which are used to establish maintenance intervals for gas turbines. RICE equipment maintenance intervals are primarily dependent upon operating hours.

**GPR-PREB-NEPRMI20220005-20240621-#9(f)**

f) Explain the cost-benefit analysis (cost-effectiveness) performed by Genera (if any) for proposing the purchase of higher-capacity units, which typically involve higher capital and potential maintenance and operating costs, when these units will be operated at limited dispatch.

**Response:**

See response 9(a) general response above. Consideration is given to an in-kind MW service that maximizes the use of the interconnection point. RICE machines are near the existing gas turbine peaker capacity but can operate at a higher efficiency. The strategy provides hazard mitigation services for the replaced machines with nearly the same power output and better service in emergencies due to their lower fuel usage.

**GPR-PREB-NEPRMI20220005-20240621-#9(g)**

g) For each unit, provide a proposed dispatch limitation that aligns with the Approved IRP, and explain (i) how this limitation would not result in higher emissions per unit of electricity generated, and (ii) whether it complies with the applicable environmental standards.

**Response:**

See response 9(a) general response above. There is no intent to run these units at a reduced load. Furthermore, operation of the units will be emission compliant.



**GPR-PREB-NEPRMI20220005-20240621-#10**

10. For each unit described in the Summary of Grid Support Units Site Configuration, provide a proposed timeline of key development milestones necessary for the implementation of the project. This should include a detailed schedule for the following activities: (i) request for proposals process, (ii) engineering design, (iii) permitting, (iv) construction/installation start and expected completion dates, (v) expected operational dates, and (vi) identification of any significant challenges or risks that may be encountered during the project development, along with the strategies to address them.

**Response:**

See below for project timeline for the grid support units (GT, RICE, Figure 2, and BESS, Figure 3). The timeline below is conditional on PREB approval.

**Figure 2 Peaker's Project Timeline**

