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

IN RE: REVIEW OF THE PUERTO RICO ELECTRIC POWER AUTHORITY 10 YEARS INFRASTRUCTURE PLAN-DECEMBER 2020	**CASE NO.:** NEPR-MI-2021-0002 **SUBJECT:** Motion Requesting Leave to Submit for Approval to COR3 and FEMA the SOW to Convert Palo Seco Units 3 & 4 to Operate with Natural Gas as Primary Fuel

MOTION REQUESTING LEAVE TO SUBMIT FOR APPROVAL TO COR3 AND FEMA THE SOW TO CONVERT PALO SECO UNITS 3 & 4 TO OPERATE WITH NATURAL GAS AS PRIMARY FUEL

TO THE HONORABLE PUERTO RICO ENERGY BUREAU:

COMES NOW GENERA PR LLC ("Genera"), as agent of the Puerto Rico Electric Power Authority ("PREPA"),[1] through its counsels of record, and respectfully submits and prays as follows:

I. INTRODUCTION

1. On February 21, 2024, Genera filed a document titled *Motion Submitting Revision to the Fuel Optimization Plan in Compliance with Resolution and Order Dated January 10, 2024* ("February 21st Motion") through which Genera included a revised FOP ("Revised FOP") as Exhibit A in Case No. NEPR-MI-2023-0004, *In Re: Genera PR LLC Fuel Optimization Plan*. The Revised FOP outlines the Fuel Cost Savings initiatives and expected methods for achieving estimated fuel savings.

2. The Puerto Rico's Public Energy Policy, as established in several interlocking statutes, established a long-term goal of eliminating fossil fuels and reaching a 100% renewable energy portfolio which was extended to year 2050. The latter, after further evaluating that the

immediate retirement of the entire fossil-fueled fleet is not feasible without compromising the reliability, stability and continuity of the electric service. Therefore, subject to approval from the Energy Bureau, Genera proposes projects designed to significantly reduce fuel costs through no material costs to ratepayers. These transitional initiatives aim to sustain fuel cost savings until the Legacy Generation Assets units can be adequately retired or systematically replaced.

3. Furthermore, the PREPA Certified Fiscal Plan approved in February 2025 ("2025 PREPA Fiscal Plan") incorporates initiatives to be undertaken by Genera to meet demand and avoid generation shortfall.[2] The fuel swap to natural gas of Palo Seco Units 3 & 4 will provide a higher degree of reliability to supply peak demand and will allow for the decommissioning of units to be replaced by BESS and Peakers. As recognized in the Fiscal Plan, the transitioning to natural gas aligns with the Puerto Rico energy public policy and paves the road for the use of hydrogen as fuel in the future. Also, the 2025 PREPA Fiscal Plan's Consolidated List of Largest Projects for Fiscal Year 2025[3] sets forth the projects to improve fuel efficiency. Although this project was not considered at the time of the approval of the plan, it meets the Impact on System Reliability by reducing fuel consumption of a generation asset.

4. In alignment with Puerto Rico's Public Energy Policy, Genera has identified the Palo Seco Units 3 & 4 conversion project as a key initiative that can significantly reduce fuel costs without requiring capital investment from the ratepayers. This submission requests the Energy Bureau's authorization to submit to COR3 and FEMA a federal fund request under the FEMA Section 428 program for the conversion of the aforementioned Palo Seco units, enabling these

[2] See *2025 PREPA Fiscal Plan*, available at https://drive.google.com/file/d/1WksRhtfmoLvaZFb-5pUNkFXGEiT3t6vp/view

[3] See *Appendix D of the 2025 PREPA Fiscal Plan*.

units to operate with dual fuels, with natural gas as the primary fuel and Fuel Oil 6 (FO6) as the backup fuel.

5. Genera intends to submit to COR3 and FEMA a request for funds under the 428 program to undertake the works to convert the units to burn natural gas with the corresponding regasification infrastructure.

6. The Multisite LNG supply contract approved by the FOMB on December 4, 2025, will provide natural gas to the Palo Seco facility as described in the contract.

II. COMPLIANCE WITH THE ENERGY BUREAU'S CONDITIONS

7. Furthermore, in light of this request's relationship with docket No. NEPR-MI-2024-0004, case titled *In Re: Request to Operate Palo Seco MP and Mayaguez CT with Natural Gas as Primary Fuel*, Genera hereby submits how it has addressed and satisfied the five (5) conditions required by this Energy Bureau[4] in order to carry out the fuel swap conversion at the Palo Seco MPs.

8. **Condition (i):**

> *The P3 Authority, 3PPO or PREPA, as applicable,* ***SHALL*** *execute a competitive procurement process, which may include either an RFP or any other legally permitted process (not necessarily an RFP). This process must ensure, to the extent feasible, the participation of multiple natural gas suppliers, fostering a transparent and competitive selection that secures the most favorable economic and technical conditions for PREPA. Any selected approach must guarantee long term cost-effectiveness, operational reliability, and financial benefits for ratepayers. The execution of this process will be a prerequisite to proceeding with the conversion, ensuring that the supply arrangements promote market competition and do not create undue entry barriers for alternative suppliers. The scope of the project* ***SHALL*** *include the conversion of the Palo Seco MPs to operate on dual-fuel—natural gas and diesel—requiring the supply and installation of the necessary conversion components, including, but not limited to, modifications to combustion systems, fuel handling equipment, and control systems. Additionally, the project will involve the installation of regasification units and associated infrastructure to facilitate the processing*

[4] Per Resolution and Order of January 31, 2025, regarding Palo Seco MPs, in Case No. NEPR-MI-2024-0004, available at https://energia.pr.gov/wp-content/uploads/sites/7/2025/01/20250131-MI20240004-Resolution-and-Order-Palo-Seco-1.pdf

and delivery of natural gas to the converted units. This includes, but is not limited to, ambient air vaporizers, LNG storage facilities, interconnection pipelines, pressure regulation systems, and safety and monitoring equipment to ensure reliable and efficient operations.

Regarding the above cited first condition (i), Genera informs that on April 11, 2025, the Third-Party Procurement Office ("3PPO") issued the Request for Proposal 3PPO-RFP-1125-17-MSIN ("RFP") to seek competitive proposals for Natural Gas Supply for Multiple Generation Sites. This process was completely out of Genera's control and was handled entirely by 3PPO.

As a result of the above-mentioned RFP, Crowley was awarded the natural gas supply contract for the Mayaguez generation facility and NFEnergia, LLC was awarded a multi-site generation agreement. After multiple contract negotiations among 3PPO, P3A and NF Energia, LLC, the contract was approved by the Fiscal Oversight and Management Bureau ("FOMB") on December 4, 2025.

Additional regasification infrastructure will be needed to be able to supply natural gas demand for Palo Seco Units 3 & 4, considering these units are baseload units. This new regasification infrastructure will be paid for using FEMA funding and will be totally owned by PREPA. The Scope of Work ("SOW") the additional regasification infrastructure for Palo Seco Units 3 & 4 is included in the **Attachment A** to this Motion.

9. **Condition (ii):**

The structure selected for the development and execution of the project, as well as the completion of the applicable contract documents, shall ensure that the construction and implementation of the required improvements under item (i) comply with all conditions necessary to maintain eligibility for Federal Emergency Management Agency ("FEMA") funding and do not jeopardize access to such funds.

With respect to the above cited condition (ii), Genera submits that the new regasification infrastructure will be paid for using FEMA funding and will be totally owned by PREPA. The SOW for the additional regasification infrastructure for Palo Seco Units 3 & 4 is included in

Attachment A to this Motion and can be used for the Palo Seco Units 3 & 4 without any need for additional investment from PREPA or the ratepayers. It shall be noted that FEMA will only pay once for repairs or projects. Notwithstanding, if these assets are damaged in the future due to a natural event, PREPA's insurance policies shall cover the repair costs.

Regarding the detailed SOW for Palo Seco Units 3 & 4 improvements to convert the units to operate primarily with natural gas, it is included as **Attachment A** to this Motion. The SOW provides a full technical overview of the activities required to complete the conversion of Palo Seco Units 3 & 4 to dual-fuel operation using natural gas as the primary fuel. It shall be noted that FEMA will only pay once for repairs or projects. However, once again, if these assets are damaged in the future due to a natural event, PREPA's insurance policies shall cover the repair costs.

10. **Condition (iii):**

Upon completing the necessary improvements at PREPA's facilities for the fuel swap implementation at the Palo Seco Units 3 & 4, the parties shall execute all requisite agreements and documents to formally confirm PREPA's exclusive ownership of these improvements.

With respect to condition (iii), all improvements included SOW for Palo Seco Units 3 & 4 to convert the units to operate primarily with natural gas, and the regasification infrastructure included as **Attachment A** to this Motion will be paid with FEMA funding and, therefore, these will be completely owned by PREPA.

11. **Condition (iv):**

If the selected structure under item (i) does not designate PREPA as the owner of the regasification units at the end of the natural gas supply term or any extension thereof, the parties' agreements shall outline the process for the removal of the regasification facilities within a reasonable timeframe. This process should allow other fuel suppliers to install their own regasification facilities without imposing onerous conditions on the new supplier or restricting the use of the generation units served by such facilities.

Regarding condition (iv), Genera informs that it was not part of the RFP process and had no control over the contract negotiations or agreement terms. Notwithstanding, the regasification infrastructure included as **Attachment A** to this Motion will be paid with FEMA funding and therefore will be completely owned by PREPA.

III. COST SAVINGS FOR RATE PAYERS

12. Regarding FO6, on average for next years, this type of fuel is forecasted to cost $13.62/MMBtu, while LNG in Palo Seco Units 3 & 4 is forecasted to cost $7.95 + [HH (115%)]/MMBtu. The differential between FO6 and LNG in this exercise results in approximately $2.55/MMBtu in savings.

13. Further, the cost savings that the fuel swap will generate is not the only benefit that this project will yield. Swapping fuels from FO6 as primary fuel to natural gas as primary fuel and FO6 as backup fuel also generates significant environmental benefits, thus making this project a step forward in creating a more sustainable energy future for Puerto Rico. Natural gas is a cleaner burning fuel that emits fewer greenhouse gases and particulate matter.

14. Regarding the impact on rates, the Palo Seco Units 3 & 4 conversion and installation of regasification infrastructure will not have an impact if this works are performed using FEMA funding. Genera's proposal will pursue the use of federal funds to perform all necessary work to make these units ready for natural gas operation. Thus, the fuel swaps proposed herein will not affect base rates or riders and will be completed at no cost to customers. Further, it is expected that these projects will also have additional savings, like O&M costs given that natural gas yields more operational fire hours for service than in FO6 operation.

15. Additionally, the FOMB formally approved the parties involved in the Multisite LNG supply contract to proceed with the execution of the contract, which was executed on December 4, 2025.

16. The financial impact on Genera's budget and ratepayers' bill would be avoided with the use of federal funds. Thus, Genera hereby requests the approval by the Energy Bureau of the conversion and fuel swap for Palo Seco units 3 & 4 to achieve financial savings benefiting rate payers and help reduce load sheds in Puerto Rico.

17. A comprehensive detailed SOW is included as **Attachment A** to this Motion, which provides a full technical overview of the activities required to complete the conversion of Palo Seco Units 3 & 4 to dual-fuel operation using natural gas as the primary fuel, as well as for the installation of additional regasification infrastructure to be owned by PREPA.

18. As detailed above, Genera has (i) pursued a competitive and transparent natural gas supply framework through the Multisite LNG supply contract, which was approved by the FOMB and executed on December 4, 2025; (ii) ensured that the proposed conversion will generate verifiable fuel cost savings through the displacement of FO6 with natural gas as primary fuel, with an estimated savings of approximately $2.55/MMBtu on a conservative basis; (iii) structured the project to avoid any use of Genera's Operational Budgets, Necessary Maintenance Expenses, spare parts inventory, or ratepayer funded capital expenditures; and (iv) confirmed that all conversion activities will be potentially funded through federal assistance under FEMA's Section 428 program, thereby preserving future eligibility for federal reimbursement and avoiding any financial impact on ratepayers.

19. Based on the operations of Palo Seco Unit 3 over the past 30 months, which utilized FO6 fuel, Genera estimates that, when this unit operates in the future using natural gas, it could

yield an average monthly savings of approximately $1,692,408.22. This potential savings represents a significant total of $50,772,246.56 for ratepayers during that 30-month timeframe (as shown in **Attachment B**), based on historical consumption for Palo Seco Unit 3.

20. Now, with the return of Palo Seco Unit 4 to service, Genera projects that these fuel savings could potentially double. Therefore, if both units operate on natural gas, the estimated combined savings would reach approximately **$3,384,816.44** per month and an impressive **$40,617,797.25** annually (as detailed in **Attachment B**).

21. This projection not only demonstrates the potential efficiency of Genera's operations but also emphasizes the substantial financial benefits that could be realized for ratepayers in the near future.

IV. ENVIRONMENTAL BENEFITS

22. Moreover, beyond the associated cost savings stemming from fuel swapping, Genera submits that swapping fuels from FO6 to natural gas as primary fuel and FO6 as backup fuel also generates significant environmental benefits, making this project a step forward towards a more sustainable energy future for Puerto Rico.

23. The Palo Seco Power Plant is located in an area currently designated as a Non-Attainment Zone under the National Ambient Air Quality Standards (NAAQS) established by the U.S. Environmental Protection Agency (EPA). Currently, this designation does not meet the federal air quality requirements for sulfur dioxide (SO_2), a pollutant linked to respiratory problems, environmental degradation, and constraints on regional economic development. As a result, facilities in Non-Attainment Zones are subject to a State Implementation Plan (SIP) designed to reduce emissions and achieve compliance.

24. Hence, transitioning to natural gas directly supports the objectives of the SIP. This is so, because natural gas is a cleaner-burning fuel that emits fewer greenhouse gases and significantly lower levels of sulfur dioxide, nitrogen oxides, and particulate matter. According to the EPA, natural gas combustion emits 50% less carbon dioxide than coal and 27% less carbon dioxide than oil, while also reducing other harmful pollutants that contribute to smog, acid rain, and non-compliance with federal air standards.

25. Specifically, when comparing natural gas to FO6, the environmental benefits are even more pronounced. Natural gas generates substantially fewer greenhouse gases and produces lower levels of nitrogen oxides, sulfur dioxide, and particulate matter.

26. By lowering SO_2 and other emissions associated with FO6 combustion, the use of natural gas at Palo Seco can meaningfully contribute to bringing the area closer to Attainment Zone status under EPA standards. Consequently, achieving Attainment Zone status provides far reaching benefits: it reduces regular burdens, improves community health outcomes, and enhances the region's economic attractiveness. In short, cleaner air quality encourages investment, supports the expansion of existing businesses, and removes certain federal constraints that can limit industrial development in Non-Attainment areas.

27. Moreover, by using natural gas instead of FO6, the risk of oil spills and subsequent potential contamination of waterways and land is avoided. Additionally, the infrastructure for natural gas allows for more efficient energy distribution and utilization, leading to enhanced energy security and a decrease in reliance on more environmentally hazardous fossil fuel alternatives.

28. Based on the foregoing, Genera respectfully submits that the proposed conversion and fuel swap for Palo Seco Units 3 & 4 and installation of additional regasification infrastructure

fully complies with the Energy Bureau's requirements and satisfies each of the relevant conditions established for fuel swap conversion.

WHEREFORE, Genera respectfully requests that the Energy Bureau **take notice** of the above for all purposes and **approve** Genera's request for leave to submit for approval to COR3 and FEMA the SOW accompanied as Attachment A to this Motion, to convert Palo Seco Units 3 & 4 to operate with natural gas as primary fuel and to install additional regasification infrastructure.

RESPECTFULLY SUBMITTED.

In San Juan, Puerto Rico, this 9th day of January of 2026.

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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 alexis.rivera@prepa.pr.gov; mvalle@gmlex.net; margarita.mercado@us.dlapiper.com; yahaira.delarosa@us.dlapiper.com; nzayas@@gmlex.net; rcruzfranqui@gmlex.net; emmanuel.porrogonzalez@us.dlapiper.com; jfr@sbgblaw.com; jdiaz@sbgblaw.com; regulatory@genera-pr.com; and legal@genera-pr.com.

In San Juan, Puerto Rico, this 9th day of January of 2026.

/s/ Jorge Fernández-Reboredo
Jorge Fernández-Reboredo

/s/ Stephen David Romero Valle
Stephen David Romero Valle

/s/ José Javier Díaz Alonso
José Javier Díaz Alonso

Attachment A

Palo Seco Power Plant Gasification Project ISOW

I. Overview

Project Name: Initial SOW Palo Seco Gasification Project
Project Type: 428.Detailed SOW
Project Location: Palo Seco, 3 & 4
Longitude/Latitude: 18.455569, -66.148590
Version: 0

II. Introduction

On September 6, 2017, Puerto Rico's northern coastline was struck by Hurricane Irma, a Category 4 storm. Two weeks later, on September 17, Hurricane Maria tore through the island of Puerto Rico as a Category 5 storm. Subjected to 150+ mph winds and more than 25 inches of rain, 3.4 million residents lost power and a great deal of infrastructure, including critical facilities, was damaged. In particular, the electrical infrastructure suffered catastrophic impacts. In the aftermath, diligent recovery and reconstruction have been going on, not only to restore the electrical infrastructure to pre-storm function and capacity, but to take this opportunity to bring it in line with current standards and technology. This "transformative moment in the history of Puerto Rico", as Governor Ricardo Rossello called it, is an opportunity to not just to rebuild the system but to transform it into a smarter, more resilient, and cleaner one. Puerto Rico's generation system must meet customer demand and have adequate additional capacity to comply with the reserve required by the standard operating procedures of the T&D system operator (LUMA). In terms of service continuity, the system must be reliable so that service interruptions are within the margins established in the electrical industry.

Unfortunately, the generation system presents critical performance metrics with a deficiency in capacity to meet the energy demand and the minimum reserve requirements. The forced outage percentage of the units is increasing while the generation capacity decreases. This combination of factors puts the continuity of the service at high risk, adversely affecting the quality of life of those who live in PR.

Genera is responsible for operating and maintaining PREPA's legacy asset generation fleet pursuant to the Generation O&M Agreement between Puerto Rico Electric Power Authority ("PREPA"), the Puerto Rico Public-Private Partnerships Authority ("P3A") and Genera PR. The current fleet condition presents poor performance due to the impact of hurricanes María and Fiona. Generation capacity has been reduced to 46% of installed capacity. In addition, of the generation units in operation, about 32% or 640 MW, are disconnected monthly, causing thousands of customers to suffer interruptions in their service.

To improve the system's reliability, Genera proposes to submit for approval the Detailed Scope of Work (SOW) to COR3 and FEMA for Project 663383 under DR-4339-PR Public Assistance. The document provides a description of the project including scope, schedule, and cost estimates as well as Environmental & Historical Preservation ("EHP") requirements and proposed 406 hazard mitigation work.

The Puerto Rico Electric Power Authority ("PREPA") is a public corporation of the Government of Puerto Rico created pursuant to Act No. 83 of May 2, 1941, as amended. PREPA owns and operates electric generation, transmission and distribution facilities serving all of Puerto Rico. As the sole electric utility in Puerto Rico, PREPA provides electricity to approximately 1.5 million customers. Since 2017, PREPA has performed damage assessments, studies, and evaluations to identify areas of repair and improvements. These include transmission and distribution lines, electrical substations, generation plants, mitigation, and other improvements. On January 2023, PREPA and the Puerto Rico Public-Private Partnership Authority ("P3 Authority") selected Genera PR, LLC ("Genera") to operate, maintain and modernize the Generation system of PREPA for ten years through a public-private partnership.

Following Presidential Disaster Declarations 4337DR-PR (Hurricane Irma) and 4339DR-PR (Hurricane Maria), the Federal Emergency Management Agency (FEMA) has been working with PREPA to assist in recovery and repair efforts. In October 2020, FEMA approved Project #136271 Puerto Rico Electrical Power Authority Island Wide FEMA Accelerated Award Strategy ("FAASt") in the amount of $10.7 billion for PREPA to repair and restore the to restore the PR electric power infrastructure to industry standards without regard to pre-disaster condition and to restore components not damaged by the disaster when necessary to fully effectuate restoration of the disaster-damaged components to restore the function of the facility or system to industry standards, as authorized by Section 20601 of the Bipartisan Budget Act of 2018 and described in FEMA Recovery Policy FP-104-009-5 Version 2 (Implementing Section 20601 of the 2018 Bipartisan Budget Act through the Public Assistance Program, September 11, 2019). The facilities provide a critical service as defined in Stafford Act Section 406.[1]. The list of projects using funds from 136271 – Puerto Rico Electrical Power Authority Island Wide FAASt project is still under development.

III. Project Description

Genera PR proposes the change in combustibles on Palo Seco Power Plant to a Dual Fuel and incorporates Natural Gas as another fuel. The conversion will support the development of a reliable fuel source for PREPA's generation fleet in Palo Seco 3 & 4 and reduce the high cost of diesel that will result in direct economy to the electrical bill to Puerto Rico citizens.

The proposed work will increase fuel supply reliability, enhance energy resilience, and reduce environmental emissions by integrating natural gas as an alternate fuel source and support the development of a reliable fuel source for PREPA's generation fleet in Palo Seco, ensuring continued operation during natural disasters and emergencies that may disrupt fuel supply chains.

This project involves replacement and installation of critical mechanical, electrical, and control components necessary to restore the dual-fuel operational capability of Palo Seco 3 & 4 Power Plant in Puerto Rico. The work will bring these units back to OEM design conditions, enabling operation on both natural gas and fuel oil num. 6, and ensuring compliance with FEMA, OSHA, EPA, and NFPA safety and operational standards.

Work will ensure fuel flexibility, reliability, and compliance with OEM, FEMA, OSHA, and NFPA standards.

- Certified design submittals and fabrication drawings.
- Factory test certificates for valves, blowers, and liners.
- Updated as-built mechanical and electrical drawings.

- Calibration and inspection reports with traceability.

When the facility is restored, the original design will support dual-fuel power generation operations for the Palo Seco Power Plant and related energy infrastructure. The project includes civil, structural, mechanical, and electrical components, designed to meet the requirements of the Puerto Rico Building Code (PRBC 2018), NFPA 59A, NEC, and applicable PREPA/LUMA standards. The purpose of the project is to increase fuel supply reliability, enhance energy resilience, and reduce environmental emissions by integrating natural gas as an alternate fuel source.

IV. Codes and Standards

The following will be referenced when applying specific codes, specifications, and standards to the project design:

- Consensus-based codes, per FEMA (*Public Assistance Alternative Procedures (Section 428) Guide for Permanent Work FEMA-4339-DR-PR*, February 2020).
- Industry standards per FEMA Recovery Policy FP-104-009-5, Version 2, *Implementing Section 20601 of the 2018 Bipartisan Budget Act through the Public Assistance Program*.
- FEMA Recovery Interim Policy FP-104-009-11 Version 2.1, *Consensus-Based Codes, Specifications, and Standards for Public Assistance*.
- Rus 1730B - The referenced standards, as defined and as per their requirements, state every system is required to have an Emergency Restoration Plan (ERP) in the event of a major failure or storm event.
- GE Alstom GT11N1 OEM specifications
- ASME B31.1 Power Piping Code
- ASME B31.8 Gas Transmission and Distribution Piping
- NFPA 37 and NFPA 85 (Combustion Safety)
- NFPA 59A
- NFPA 54 (National Fuel Gas Code)
- NFPA 70 (NEC) Electrical Code
- OSHA 29 CFR 1910 & 1926
- EPA and Puerto Rico EQB environmental regulations
- FEMA Public Assistance Guidelines (2 CFR 200)

V. Palo Seco Power Plant Conversion

A. Site Description

Palo Seco is located on the northern coast of Puerto Rico in the Toa Baja municipality near San Juan and a location with approx. 36 acres lot, and project is approx. 2.5 acres lot (131,912 ft²). The Plant consists of four thermal steam units, four Hitachi-GE gas turbines (GTs), and three Pratt & Whitney Power Systems (PWPS) FT8 MOBILEPAC GTs with a total nameplate capacity of 809 MW. Palo Seco has been a major generator in the PREPA fleet and continues to serve on a limited basis as current power distribution challenges face the island.

Palo Seco Steam Plant Units 1 and 2 are tangentially fired Combustion Engineering ("CE," now GE Power), heavy fuel oil-fired (HFO-fired) boilers with reheat and a nameplate capacity of 85 MW each. The units are rated 1450 psi, 1000°F, and the boilers are 857.7 MMBtu/h. Unit 1 began commercial operation in 1960, and Unit 2 began commercial operation in 1961.

Palo Seco Steam Plant Units 3 and 4 are tangentially fired CE HFO-fired boilers with a nameplate capacity of 216 MW each. The steam turbines are rated 1800 psi, and the boilers are 1971 MMB-tu/h. Additional details about the boilers and turbines were not provided for review. The units began commercial operation between 1967 and 1968.

There are also three blocks of diesel-fueled gas turbine generators that began commercial operation in 1972 and 1973. Each block is composed of two 21-MW (nominal) Hitachi-GE (PB5341) GT generators. In total, the three blocks have a nameplate capacity of 126 MW.

Each steam turbine generator is connected to the 115-kV switchyard through a dedicated trans-former. The gas units are connected in pairs, where each pair shares a step-up transformer connecting them to the 115-kV switchyard.

Three mobile GT units were added to the facility in 2019. The units are trailer-mounted 27-MW (nominal, approximate) PWPS FT8 MOBILEPAC GTs. The units were installed adjacent to the main road and the gas-insulated switchyard (GIS) building and tied into the primary side of the Unit 2 main power transformer. In total, the three mobile GT units have a nameplate capacity of 69 MW.

Also, four GE TM-2500 were installed in 2023 to be used as peaking units. These units are dual fuel capable, using natural gas a primary fuel, and ULSD and secondary. Two of the TM2500 are 20MW nameplate capacity each, and the other two have a capacity of 25MW each.

Figure 1. *Palo Seco Power Plant*

B. Scope of work

Provide all engineering, procurement, installation, and testing (EPI&T) services required to restore dual-fuel capability. All work will be conducted under the supervision of a licensed professional engineer and in accordance with OEM and FEMA construction standards, ASME codes, and NFPA safety regulations.

Gasification project will be implemented on Palo Seco Power Plant Unit 3 & 4.

Conversion Palo Seco to Dual Fuel

1. Accessory Compartment Systems
   - Supply and install skid with new electric fuel pump clutches to enable decoupling during dual-fuel transitions.
   - Materials: A36 carbon steel, SS304 internal liners, and mineral wool insulation per NFPA 850.

2. Off-Base Kiln Nozzles Compartment Systems
   - Replace two (2) ventilation damper sets per units with explosion-proof, backdraft, and CO_2 isolation types.
   - Replace aged combustion liners and install dual-fuel nozzles.
   - Inspect and replace solenoids, drain valves, filters, regulators, and tubing.

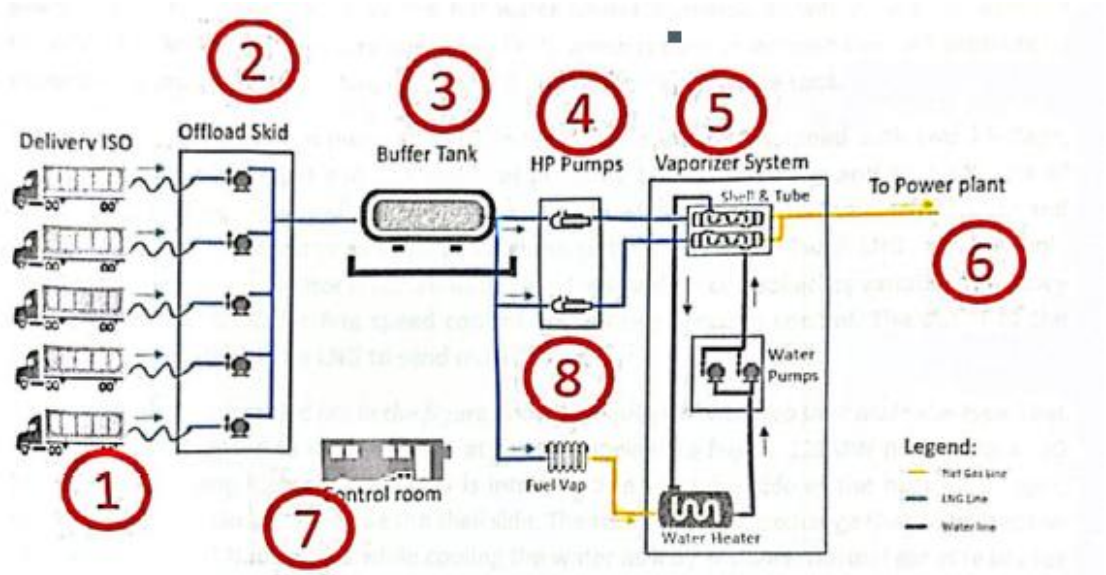
3. Gas Fuel Module Restoration
   - Remove, inspect, test, and reinstall Stop & Ratio Valves (SRV) and Gas Control Valves (GCV) through certified testing facilities.
   - Replace exhaust blowers per module.
   - Inspect, calibrate, and verify gas strainers, pressure transducers, servo valves, and gauges.
   - Repair and recoat module exterior for corrosion protection.

4. Fire suppression system for gas system
   - Supply and installation of Fire Suppression System

5. Natural Gas Infrastructure
   - Procure, install, test and certify system
   - Gas receiving and isolation system
   - Custody transfer metering skid
   - Gas conditioning/Regulating skid

Installation of infrastructure and systems associated with the Liquefied Natural Gas (LNG) Facility

General description diagram



Legend:

1- LNG ISO Containers will arrive loaded being transported over the road to the site
2- Offload skid with 5-bay offload stations. This skid transfers LNG from the ISO containers to the buffer tank
3- Buffer tank, a 90,000-gal vessel to condition LNG for ideal pump requirements
4- High Pressure sends out LNG pump skid, which increases the LNG pressure to meet power plant requirements
5- Vaporizer system, using a shell and tube water loop to increase/vaporize LNG into Natural gas
6- Pipeline to power plant
7- Control room
8- Vaporizer for water heater

1. Site and Civil Works:
   - Conduct site preparation, excavation, grading, and backfilling.
   - Install stormwater management and sanitary sewer systems.
   - Implement erosion and sediment control measures in compliance with NPDES requirements.
2. Structural Works:
   - Construct reinforced concrete foundations for LNG vaporizers, tanks, and control units.
   - Install steel structures and supports per AISC and AWS D1.1.
   - Perform field inspections and testing per ACI 301 and IBC Chapter 17 requirements.
3. Mechanical and LNG Systems:

Note: All skids come with all accessories (valves, steam traps, regulators, gauges, check valves, motors, instrumentation), the skid needs to be connected mechanically with pipes and electrical connections.

- Provide and install new 10-inch and 6-inch cryogenic LNG piping systems, vaporizers, and control panels.
- Provide and install offload skid.
- Provide and install LNG facility control Skid.
- Provide and install water pump skid.
- Provide and install gas fired water heater.
- Provide and install 90,000 gallons of LNG storage tank
- Provide and install ISO container.
- Ensure compliance with NFPA 59A, ASME B31.3, and manufacturer installation requirements.
- Pipes to install:
    - Carbon Steel pipes above the ground-Natural Gas.
    - Stainless Steel pipes – Liquified Natural Gas.
    - Copper pipes – compressed air.

4. Electrical and Control Systems:
    - Provide and install electrical equipment related to LGN Systems.
    - Provide and install all the wiring devices including conduits, fittings, boxes and Wiring.
    - Provide and install one (1) MW backup diesel generator.
    - Provide and install one (1) MW pad mounted transformer 15kV/480V.
    - Provide and install 480V switchboards and feeders.
    - Provide and install 15kV switchgear, switchboards, and protective relays per NEC and NESC.
    - Implement site grounding and bonding per E8-01 details using 4/0 copper conductors.
    - Install instrumentation and control systems integrated with the LNG facility's operations.
    - Coordinate metering and interconnections with LUMA Energy per PREPA standards.

VI. Cost Estimate

Item	Topic	Estimated Costs
0.1	**A&E**	**$2,800,000.00**
1	Palo Seco Unit 3 & 4 Conversion	$22,675,000.00
1.1	Permitting	$1,500,000.00
1.2	Gasification Equipment	$30,000,000.00
INSTALLATION DIRECT COSTS		
2	Construction	17,500,000.00
3	CONSTRUCTION MANAGEMENT SUPPORT	4,750,000.00
4	START-UP/COMMISSIONING	$1,125,000.00
	TOTAL	**$80,350,000.00**

VII. Environmental & Historical Preservation ("EHP") Requirement

Other than design, planning, and non-destructive due diligence studies, no construction work will commence prior to the issuance of specific expressed written FEMA approval for the specific scope of work. FEMA's required EHP compliance review will precede the execution of each proposed scope of work submitted by PREPA through its agent Genera to FEMA. PREPA, through its agent Genera, is aware of its responsibility for coordinating, notifying, obtaining permits, and complying with applicable federal, state, and local laws, regulations, and executive orders and understands that failure to comply with EHP requirements will jeopardize FEMA funding.

Attachment B

Estimated Average Monthly Savings
(*Native file submitted via email.)*