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

IN RE: REVIEW OF THE PUERTO RICO ELECTRIC POWER AUTHORITY'S 10-YEAR INFRASTRUCTURE PLAN – DECEMBER 2020	**CASE NO.:** NEPR-MI-2021-0002 **SUBJECT**: Resolution and Order regarding *Motion to Inform Reallocation of FEMA 404 HMGP Funds and Request for Approval of Generation Projects*, filed by the Puerto Rico Electric Power Authority.

RESOLUTION AND ORDER

I. Introduction

On March 15, 2018, the Energy Bureau ordered the Puerto Rico Electric Power Authority ("PREPA") to file an updated IRP[1] before the mandatory review established in Act 57-2014[2] to determine the impacts of Hurricanes Irma and María on the Puerto Rico Electric System.[3] On June 7, 2019, PREPA submitted to the Energy Bureau of the Puerto Rico Public Service Regulatory Board ("Energy Bureau") its proposed IRP.[4] The filing was deemed complete by the Energy Bureau on July 3, 2019.[5] PREPA's Proposed IRP was evaluated by the Energy Bureau in a comprehensive adjudicative proceeding under *In re: Review of the Puerto Rico Electric Power Authority Integrated Resource Plan,* Case No.: CEPR-AP-2018-0001. Evidentiary hearings were held on February 2020. On August 24, 2020, the Energy Bureau issued a Final Resolution and Order, approving in part the Proposed IRP ("Approved IRP"). The Approved IRP included a Modified Preferred Resource Plan ("Action Plan") considering, among others, specific planning parameters for the power generation capacity additions[6] and retirements.[7]

Through its January 25, 2021 Resolution and Order, after reviewing the 10-Year Plan submitted by PREPA, the Energy Bureau ordered PREPA to immediately abstain from using studies and plans as collateral attacks to the Approved IRP and Modified Action Plan. The Energy Bureau also ordered PREPA to revise the 10-Year Plan to correct its noncompliance with the Approved IRP and Modified Action Plan, which revision should be filed on or before February 15, 2021.[8]

On February 16, 2021, PREPA filed a document titled *Response to Resolution and Order Entered on January 25, 2021, and Request for Approval of Revised 10-Year Infrastructure Plan*

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[1] Integrated Resource Plan ("IRP").

[2] Known as the *Puerto Rico Energy Transformation and RELIEF Act*, as amended ("Act 57-2014").

[3] *See In Re: Review of the Puerto Rico Electric Power Authority Integrated Resource Plan,* Case No. CEPR-AP-2018-0001, Resolution and Order, March 15, 2018.

[4] *See*, In re: *Review of the Puerto Rico Electric Power Authority Integrated Resource Plan,* Case No.: CEPR-AP-2018-0001. *PREPA's Motion to Leave File IRP Main Report "ERRATA" Version*, filed on June 19, 2019, which included a corrected version of the Main IRP Report submitted on June 7,2019, and is titled *Integrated Resource Plan 2018- 2019, Draft for the Review of the Puerto Rico Energy Bureau, Prepared for the Puerto Rico Electric Power Authority, June 7,2019 (Rev. 2.1)* ("Proposed IRP").

[5] *See In re: Review of the Puerto Rico Electric Power Authority Integrated Resource Plan,* Case No.: CEPR-AP-2018-0001, Resolution and Order July 3, 2019, regarding the completeness determination of PREPA's IRP filing and procedural calendar.

[6] *See In Re: Review of the Puerto Rico Electric Power Authority Integrated Resource Plan,* Case No. CEPR-AP-2018-0001, Final Resolution and Order August 21, 2020 ("IRP Final Resolution"), ¶¶847-867, pp. 263-269.

[7] *Id.*, ¶¶869-873, pp. 270-271.

[8] *See, In Re: Review of the Puerto Rico Electric Power Authority's 10-Year Infrastructure Plan – December 2020,* Case No. NEPR-MI-2021-0002, Resolution and Order, January 25, 2021 ("January 25 Resolution").

("February 16 Motion"), which included a Revised 10-Year Plan ("Revised 10-Year Plan") as Exhibit A. Through the February 16 Motion, PREPA stated it agreed with the Energy Bureau that certain aspects of the 10-Year Plan may seem incompatible with the Approved IRP and Modified Action Plan. However, PREPA argued that the Revised 10-Year Plan was aligned with the Approved IRP and Modified Action Plan and requested: (i) the Energy Bureau to determine the compliance of the Revised 10-Year Plan with the Approved IRP and Modified Action Plan; and (ii) authorization to move forward with the plans in the Revised 10-Year Plan and to make capital investments to complete the projects, including requesting federal funds.

On March 2, 2021, the Local Environmental Organizations ("LEO")[9] filed before the Energy Bureau a document *titled Opposition to PREPA 's Motion Seeking PREB Approval of 10- Year Infrastructure Plan*. LEO stated that PREPA chose not to seek reconsideration or appeal of any provisions of the approved IRP and instead created a secret new plan to submit to FEMA, with many points at odds with the approved IRP and the Puerto Rico law. Also, LEO argued that, when PREPA submitted before the Energy Bureau the 10-Year Infrastructure Plan in December 2020, it was a collateral attack on the portions of the approved IRP that PREPA's fossil fuel-biased consultants did not like, and that the cosmetic changes in the "Revised 10-Year Plan" did not change the fundamental nature of the plan.[10]

On March 19, 2021, PREPA filed a document titled *Motion Submitting March 2021 Revised 10-Year Infrastructure Plan* ("March 19 Motion"). In the March 19 Motion, PREPA stated that "in furtherance of the January 25 Order and for the purpose of submitting additional amendments of the 10-Year Plan for the Energy Bureau's approval" it was presenting a new updated version of the plan.

On March 26, 2021, the Energy Bureau issued a Resolution and Order[11] in which it, among other things:

i. ordered PREPA to **include in the Palo Seco Combined Cycle feasibility study the location of renewable energy and BESS resources at Palo Seco**[12];

ii. determined that, due to the fact that the final determination on the construction of new thermal generation at Palo Seco depends on several variables currently uncertain, **to be fully aligned with the Approved IRP and the Modified Action Plan** any project defined by PREPA in the mid-term related to generation in the San Juan area **shall include BESS and renewable energy sources**;[13]

iii. determined that, upon evaluation of the new mobile emergency generation in the 10-Year Plan, under the Approved IRP and Modified Action Plan, **PREPA can replace up to 81 MW of existing peaking capacity with new gas fired peakers**. The Energy Bureau indicated that at this moment, the information to determine the type and amount of generation needed to support the Minigrid construct in a manner consistent with a least cost analysis is not available. The Energy Bureau cannot

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[9] Comité Diálogo Ambiental, Inc., El Puente de Williamsburg Inc.-Enlace Latino de Acción Climática, Comité Yabucoeño Pro-Calidad de Vida, Inc., Alianza Comunitaria Ambientalista del Sureste, Inc., Sierra Club and its Puerto Rico Chapter, Mayagüezanos por la Salud y el Ambiente, Inc., Coalición de Organizaciones Anti-Incineración, Inc., Amigos del Río Guaynabo, Inc., Campamento Contra las Cenizas en Peñuelas, and CAMBIO Puerto Rico, Inc.

[10] *See Opposition to PREPA's Motion Seeking PREB Approval of 10-Year Infrastructure Plan*, on March 3, 2021, pp. 1-23. *See* also *Response to the Local Environmental Organizations Opposition to PREPA's Motion Seeking PREB Approval of 10-Year Infrastructure Plan*, submitted by PREPA on March 9, 2021, pp. 1-16 and *Reply to PREPA's Response to LEO'S Opposition Re: Approval of the 10-year Infrastructure Plan*, submitted by LEOs, March 18, 2021, pp. 1-11.

[11] *See, In Re: Review of the Puerto Rico Electric Power Authority's 10-Year Infrastructure Plan – December 2020*, Case No. NEPR-MI-2021-0002, Resolution and Order, March 26, 2021 ("March 26 Resolution").

[12] *Id.*, p. 9.

[13] *Id.*, p. 9-10.

conclude this project is aligned with the Approved IRP and the Modified Action Plan. **In the alternative, to the extent feasible under the Approved IRP and the Modified Action Plan, PREPA can explore the acquisition of the foregoing 330 MW of capacity in a combination of Renewable Generation and BESS technology**. Consistent with the foregoing, the Energy Bureau ordered PREPA to modify the Revised 10-Year Plan accordingly[14]; and

iv. determined that the two Black Start projects proposed by PREPA could be aligned with the Approved IRP and Modified Action Plan only if PREPA acquires the units as part of the approved 81 MW of gas fired peakers that form part of the Approved IRP and Modified Action Plan. The Energy Bureau also determined that to the extent feasible, under operational and FEMA requirements, PREPA should explore the acquisition of a fraction of the foregoing sic [81] MW of capacity in BESS technology to be used as compliment to the gas fired Black Start systems for these two power plants (*i.e.*, besides the above mentioned 81MW). If PREPA pursues this option, the generation capacity will be discounted from the 81 MW described in Part III.A.3 of this Resolution and Order.[15]

The Energy Bureau noted that according to the administrative record in the instant case, FEMA programs 404, 406, and 428 do not prevent or avert PREPA from requesting funds for renewable energy or battery energy storage projects. Consistent with the foregoing, the Energy Bureau ordered PREPA to submit on or before December 31, 2021, a list of the projects it will submit to FEMA to support the integration of renewable energy projects.[16]

Finally the Energy Bureau stated that the Revised 10-Year Plan was a document put together by PREPA to delineate and/or coordinate its infrastructure investment strategy for the next ten (10) years regardless of its funding source and that as the independent regulator charged with the implementation and enforcement of energy public policy pursuant to Act 57-2014 and Act 17-2019,[17] the Energy Bureau had the unequivocable duty to ensure that the Revised 10-Year Plan is fully aligned with the Approved IRP and Modified Action Plan to discharge its mandates under Act 57- 2014 and Act 17-2019.[18]

On August 2, 2022, PREPA filed before the Energy Bureau a document titled *Motion to Inform Reallocation of FEMA 404 HMGP Funds and Request for Approval of Generation Projects* ("August 2 Motion"). Through the August 2 Motion, PREPA notified the Energy Bureau its determination to allocate the $853.2 million[19] in 404 Hazard Mitigation Grant Program Funds ("404 HMGP Funds") assigned for generation projects as follows: $490 million for Emergency Generation Peaking Units ("Peakers"); $190 million for Costa Sur and Yabucoa Black-Start Units; $138.5 million for fuel conversion of San Juan Units 7 through 10; and $34.7 million towards small-scale residential PV with storage.[20]

[14] *Id.*, p. 11.

[15] *Id.*, p. 13.

[16] *Id.*, p. 13.

[17] Known as the *Puerto Rico Energy Public Policy Act* ("Act 17-2019").

[18] March 26 Resolution, p. 6.

[19] According to PREPA, the breakdown of this sum is "$280.82 million for emergency generation (SC combustion turbines); $5 million for engineering studies of a combined-cycle ("CC") power plant in the north; and $567.38 million for the CC project.", August 2 Motion, p.4. It is important to note that PREPA presented these projects before the Federal Emergency Management Administration ("FEMA") without prior approval of the Energy Bureau and prior to the completion of the Approved IRP. Furthermore, PREPA was fully aware and acknowledged that Approved IRP may require modifications to these projects to make them compliant with the same.

[20] August 2 Motion, p. 4.

II. PREPA'S August 2 Motion

In the August 2 Motion, PREPA stressed that a new combined-cycle ("New CC") with a capacity from 300 MW to 400 MW, burning natural gas at either Palo Seco or San Juan Power Plant, would increase the resiliency and reliability of the power system.[21] Moreover, PREPA stated that a New CC would replace **much older and less efficient generating units, providing dependable generation capacity, lower production costs, and much fewer emissions, complying with environmental regulations**.[22] Furthermore, PREPA maintained that the smaller steam and combustion turbines of a New CC were **more suitable to manage low load operations and the variability of renewables than larger steam units and would also contribute to lower operational reserve margins and, therefore, lower production costs**.[23]

Notwithstanding the above, PREPA allegedly identified two main limitations or constraints in the development of the New CC project: (i) the project's development time; and (ii) the estimated cost.[24] According to PREPA, the initial estimated cost (in 2020 dollars) and the funds approved by FEMA were $572.38 million.[25] However, as part of the document included as Annex A of the August Motion titled *New Palo Seco Combined Cycle Power Generation Scoping and Feasibility* prepared by Sargent and Lundy Puerto Rico, LLC ("Sargent & Lundy") and dated July 15, 2022 ("New CC Feasibility Study"), said estimate was updated to reflect 2023 dollars and inflation, resulting in $723.6 million; meaning there is a deficiency of $151.22 million to develop the New CC project.[26] PREPA presented no documentation showing efforts to request approval of such increment to FEMA or the Puerto Rico Central Office for Recovery Reconstruction and Resilience ("COR3").

Regarding the time horizon, PREPA estimated the New CC project would take about ten (10) years to develop.[27] PREPA maintained that given its current power generation struggles and that the development of the New CC project is a long-term effort, short and medium-term measures to improve the existing thermal generation assets should be considered and executed.[28] PREPA proposed the New CC project **be delayed until enough funds would be available**, and that its assigned funds would be distributed as follows: $490 million for emergency generation peaker units; $190 million for Costa Sur and Yabucoa Black-Start Units; $138.5 million for fuel conversion of San Juan Units 7 through 10; and $34.7 million towards small-scale residential PV with storage.[29]

Pertaining to the Peakers, PREPA stated that in 2020, FEMA approved approximately $280.82 million to acquire eleven (11) generators, **approval which based on information provided by PREPA and COR3 representatives preceded the completion of the IRP's adjudicative procedure before the Energy Bureau**. With the August 2 Motion PREPA submitted a document titled *PREPA Emergency Generation Feasibility Report* prepared by Sargent & Lundy and dated July 14, 2022 ("Peakers Feasibility Report") supporting the acquisition of the mentioned 11 peaking units.[30] Although by its content the Feasibility Report appears to be a departure to PREPA's 10 year Plan approved by the Energy Bureau

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[21] *Id.*, p .5.

[22] *Id.*, pp. 5 – 6.

[23] *Id.*, p. 6.

[24] *Id.*

[25] *Id.*

[26] *Id.*

[27] *Id.*

[28] *Id.*

[29] *Id.*, pp. 7- 8.

[30] *Id.*, p. 9; Annex B, *PREPA Emergency Generation Feasibility Report ("Peakers Feasibility Report").*

on the March 26 Resolution, PREPA did not inform the Energy Bureau about neither the intent to reallocate funds nor the development of the Peakers Feasibility Report before the August 2 Motion. Through the August 2 Motion PREPA requests that the Energy Bureau grant leave to proceed with Phase I engineering work for hazard mitigation funding of new simple cycle emergency generation facilities and equipment.[31] Nevertheless, the Peaker Feasibility Report states that the Phase I engineering and feasibility work **is currently underway and will be submitted to FEMA and the Energy Bureau, for approval, once completed**.[32] PREPA indicated this project was essential for restoring power service after significant events, including restating the system following blackouts and supporting renewable energy's reliable and safe integration.[33] PREPA stated that the emergency capacity that this project provides would replace the existing old, fragile, and inefficient peaking generators.[34]

According to PREPA, the referenced new emergency generation equipment is expected to provide between 190 and 318 MW of power to be distributed across Puerto Rico (*i.e.*, Aguirre, Daguao, Jobos, Palo Seco and Vega Baja).[35] Additionally, according to PREPA, these new generation projects will replace existing, outdated, unreliable, and inefficient diesel-fired electrical generation units dating from the early era of gas-turbine power projects in the 1970's with advanced technology designed for efficient and reliable power generation to serve the hazard mitigation objectives defined by FEMA.[36] These projects focus in reducing risk and loss of life and property in future natural disasters.[37] PREPA estimated that the new power emergency generation units **could be in operation between 2024 and 2026**.[38]

As part of the August 2 Motion, PREPA requested the Energy Bureau's approval of the conversion of San Juan Units 7 through 10 to burn natural gas, **conversions not contemplated in the Approved IRP**.[39]

Also, PREPA gave the Energy Bureau notice of a **significant** (*i.e.*, more than double) price increase in the costs to acquire Costa Sur and Yabucoa Black Start Units, **which acquisition the Energy Bureau had approved on June 8, 2021, with a cost estimate of $90.4 million**. PREPA reassessed the cost and estimated that the current cost to acquire both units would **now** be **around $190 million**.[40] According to PREPA, the substantive price increase was due to the recent disruption in the supply chain and inflation.[41] PREPA requested the Energy Bureau to approve the revised cost estimate of the projects.[42] PREPA neither included any detailed supporting documentation and/or information validating the alleged price increase nor stated why the acquisitions had not taken place for two important projects already approved and which degree of complexity seems lower than others for which PREPA has already moved in an expedited manner.

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[31] August 2 Motion, p. 9.

[32] Peaker Feasibility Report, p. 8.

[33] August 2 Motion, p. 9.

[34] *Id.*

[35] Peaker Feasibility Report, p. 10.

[36] August 2 Motion, p. 9.

[37] *Id.*

[38] *Id.*, p. 15.

[39] *Id.*, pp. 16 – 17.

[40] *Id.*, p. 18.

[41] *Id.*

[42] *Id.*, p. 19.

Finally, PREPA informed that it determined to develop a project to install small-scale rooftop solar coupled with storage in residential homes in inaccessible sectors of Puerto Rico.[43] PREPA stressed this project would enhance and improve the electrical power system, support long-term recovery and mitigation of risk from natural disasters, and support our energy public policy to integrate renewable energy resources and develop plans that address long-term risks and promote resilience.[44] PREPA allocated $34.7 million for this project, which will be available to low and medium-income customers in sectors mainly in the municipalities of Utuado, Lares, and Adjuntas.[45] PREPA stated that said cost may be revised based on the competitive procurement process to acquire equipment and materials and the associated supporting infrastructure and install them.[46] Consequently, PREPA requested that the Energy Bureau approve this project, including the formulation of the same under 404 HMGP Funds with an estimated cost of $34.7 million.[47]

PREPA requested the Energy Bureau to (i) take notice of the New CC Feasibility Report; (ii) grant PREPA a Technical Conference to discuss the August 2 Motion; (iii) grant PREPA leave to proceed with Phase I of the Simple Cycle Gas Turbines project; (iv) grant PREPA leave to initiate Phase I of the fuel conversion of San Juan Units 7 to 10; (v) grant PREPA leave to amend the Costa Sur and Yabucoa black start costs to $190 million; and (iv) note that PREPA is formulating a project for small-scale residential PV with storage.[48]

A. Emergency Generation Peaking Units

In the August 2 Motion, PREPA requested the Energy Bureau's approval to proceed with Phase I engineering work for hazard mitigation funding of 11 new single cycle emergency generation facilities and equipment. The Peakers Feasibility Report has essentially ignored the Energy Bureau's orders in the March 26 Resolution as it excludes a real consideration of the role that new battery energy storage and solar PV facilities could play when considering the need and operation of generation supplies during emergencies under a longer-term hazard mitigation approach. As this request excludes any consideration of integration of renewable energy and battery energy storage (combined, at utility scale) as an alternative or complement to simple cycle GT emergency generation, before completing the evaluation of the August 2 Motion, the Energy Bureau **ORDERS** PREPA to provide responses to questions below:

a. Does PREPA believe that battery energy storage resources at utility or distributed scale (standalone or as a complement to emergency peaker generators) can provide hazard mitigation? Explain fully.
b. Does PREPA believe that battery energy storage resources at utility or distributed scale are reasonable resources for which hazard mitigation grant funding reallocation could be sought? Explain fully.
c. Explain why PREPA has not sought FEMA hazard mitigation grant funding for utility scale battery energy storage at any MW level in the August 2 Motion, yet requests approval for battery energy storage funding when coupled with solar PV at the residential level.
d. Re: Figures 2-1, 2-2, and 2-3, Annex B "PREPA Emergency Generation Feasibility Report – Existing Peaking Facilities". Provide data of the equivalent forced outage rate for each of the units seen in the three figures for 2021.

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[43] *Id.*

[44] *Id.*

[45] *Id.*, p. 20.

[46] *Id.*

[47] *Id.*

[48] *Id.*, p. 21.

e. Re: Figures 2-1, 2-2, and 2-3, Annex B "PREPA Emergency Generation Feasibility Report – Existing Peaking Facilities". Provide data of the equivalent forced outage rate for each of the units seen in the three figures for the first half of 2022.
f. Re: Figures 2-1, 2-2, and 2-3, Annex B "PREPA Emergency Generation Feasibility Report – Existing Peaking Facilities". Provide estimates of the expected equivalent forced outage rate for each of the units seen in the three figures for each of 2022 (in total), 2023, and 2024, inclusive of anticipated effects of current and planned expenditures on maintenance and repair of the units.
g. Explain why Annex B excludes any role that new battery energy storage systems can play in "Grid Stability and Support" (Section 2.3).
h. Explain why the use of battery storage resources should not be included in requests to FEMA for black start and ancillary service support, because their response times indicated by PREPA are "immediate", compared to 3-10 minutes for the SC and RICE units, as noted in the Feasibility Report.

The Energy Bureau **ORDERS** PREPA to **immediately cease all work** regarding the Phase I engineering of the Emergency Peaker project and provide the above referenced information **on or before twenty (20) days** from the notification of this Resolution and Order.

B. Conversion of San Juan Units 7 through 10 to Burn Natural Gas

The request for the conversion of San Juan Units 7 through 10 to burn natural gas was denied by the Energy Bureau's Resolution and Order issued August 3, 2022 in the instant proceeding.

In the Proposed IRP only two (2) out of the four (4) San Juan Steam Units were considered as available generation units.[49] The San Juan Steam Units 7 and 8 were included in the Proposed IRP.[50] However, since the San Juan Units 7, 8, 9, and 10 are substantially identical, they were modeled as interchangeable for purposes of the Proposed IRP.[51] Nevertheless, only two (2) of the four (4) units were included in the Approved IRP as available generation resources, and both are expected to be retired by 2025.[52]

The San Juan Steam Units are designated as "limited-use" units because they did not comply with MATS requirements. Such designation means that each unit's capacity factor when burning oil shall not exceed eight percent (8%) of its maximum or nameplate heat input, whichever is greater, averaged over a 24-month block contiguous.[53] PREPA further recognized in the Proposed IRP that the San Juan Steam Units are not in acceptable operational conditions and would require a non-economically viable capital investment to reach MATS compliance and acceptable operational conditions.[54]

[49] Proposed IRP, Exhibit 4-5, p. 4-3, p. 4-19, p. 4-23, and p. 4-26.

[50] *Id.*

[51] *Id.*

[52] Approved IRP, ¶870, p. 270 and Proposed IRP, Exhibit 4-6, p. 4-4.

[53] *See* Proposed IRP, p. 4-26 and PREPA's filing under cover *Moción* para presentar Documento: Reporte Detallado del Estatus Actual de la Flota de Generación de la Autoridad, dated October 23, 2021, *In Re: Puerto Rico Electric Power Authority's Permanent Rate*, Case No.: NEPR-MI-2020-0001.

[54] Proposed IRP, Exhibit 4-2, p. 4-1 and Exhibit 4-6, p. 4-4.

Several of the units, particularly San Juan Steam Unit 10,[55] have been out of service and without proper maintenance for many years.[56] For example, the last major maintenance of the San Juan Steam Units 7, 8, and 10 was between 2008-2010.[57] According to PREPA, the San Juan Steam Units require substantial capital investment to be operational and in compliance with the applicable environmental regulations.[58]

PREPA also acknowledged in the Proposed IRP that there were no capital projects to address compliance with MATS for units affected by the applicable standard, including the San Juan Steam Units.[59] Further, the Proposed IRP assumed that the existing MATS affected units would be retired by 2025, therefore, PREPA assumed no associated consequences for MATS noncompliance through penalties or enforcement actions.[60] The portfolios evaluated in the Proposed IRP only included limited-use and retirement options to comply with MATS. PREPA did not propose investing in emission controls as a compliance option and, therefore, this was not considered in the Proposed IRP analysis.[61]

In the Approved 2016 IRP, the Energy Bureau authorized the retirement of San Juan Power Plants units 7 and 8.[62] It also authorized limited use of the San Juan Power Plant units 9 and 10.[63] Such determination was supported by the following facts: (a) the units were reaching the end of their useful life, (b) the units do not comply with MATS, (c) the units are operationally inflexible due to their high minimum load run rates, slow ramp rates and high forced outages. These characteristics, it was concluded, reduced the reliability of the units, and introduced barriers to integrating renewables.[64] In addition, it was considered that the high fuel consumption of these units did not justify their continued use.[65]

Through the August 2 Motion, PREPA requested once again the Energy Bureau's approval for the conversion of San Juan Units 7 thru 10 to burn natural gas. This issue was raised by PREPA as part of the *Petition for Leave to Conduct Works in PREPA'S Steam Units to Achieve Environmental Regulatory Compliance* filed by PREPA on February 11, 2022 ("February 11 Petition"). Specifically, through the February 11 Petition, PREPA requested the Energy Bureau to grant permission to begin works aimed at converting the existing steam units of the San Juan Power Plant to dual-fuel units, so they can also use natural gas as fuel.[66] This,

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[55] The San Juan Steam Unit 10 has been out of service since 2015. *See* Proposed IRP, p. 4-26 and *Motion to Complete Generation Projects SOWs Submittal and Partial Response to RFI and Request for Extension of Time to Submit Additional Responses to RFI, In Re: Review of the Puerto Rico Electric Power Authority's 10-Year Infrastructure Plan -December 2020*, Case No. NEPR-MI- 2021-0002, February 14, 2022, Attachment C, Response ROI no. 5,

[56] *See Moción para presentar Documento: Reporte Detallado del Estatus Actual de la Flota de Generación de la Autoridad, In Re: Puerto Rico Electric Power Authority's Permanent Rate*, Case No.: NEPR-MI-2020-0001, filed by PREPA on October 23, 2021.

[57] *Id.*

[58] *Id.*

[59] Proposed IRP, p. 4-27.

[60] Approved IRP, ¶298, p. 77.

[61] Proposed IRP, p. 4 - 26.

[62] Final Resolution and Order, *In Re: Integrated Resource Plan for the Puerto Rico Electric Power Authority*, Case No. CEPR-AP-2015-0002, September 23, 2016 ("Approved 2016 IRP"), ¶270-¶273, pp. 80 - 81.

[63] *Id.*

[64] *Id.*

[65] *Id.*

[66] February 11 Petition, pp. 20, 24. Notably, PREPA requests authorization to execute works conducive to the conversion for dual fuel use in the following steam units: San Juan 7, San Juan 8, San Juan 9, and San Juan 10 (collectively, the "San Juan Steam Units").

allegedly, to comply with the S02 National Ambient Air Quality Standard ("NAAQS").[67] PREPA argued that its request had the ultimate goal of submitting to the United States Environmental Protection Agency ("EPA") a plan to: (i) reach the emissions official standards on or before June 3, 2022; (ii) avoid the imposition of sanctions and fines; (iii) avoid the risk of disallowance of federal funds; and (iv) avoid generation restrictions.[68]

On August 3, 2022, the Energy Bureau issued a Resolution and Order denying the February 11 Petition filed by PREPA and determined that the San Juan Steam Units conversions to dual fuel use was **inconsistent with the Approved IRP** ("August 3 Resolution").

The Energy Bureau reiterates[69] that according to the Approved IRP, the older oil-fired steam units shall be retired in order of the declining cost to operate when they are no longer necessary for the electrical system reliability. Nevertheless, **that does not imply an authorization to convert such units to dual fuel to further extend their useful life**. Using natural gas and fuel oil was extensively considered in the evaluation of the Proposed IRP, yet, PREPA did not proffer, the scenarios proposed by PREPA through the February 11 Petition.

The retirement of the San Juan Steam Units is linked to the safe and reliable integration of renewable resources. However, the reliability of the San Juan Steam Units was not evaluated in the IRP process based on its conversion to dual fuel use. **That was not a consideration during the IRP process**. PREPA's proposal to convert the San Juan Plant Units to dual fuel aims to extend the useful life of these old-fossil fuel fired units **far beyond year 2025 which is the retirement date considered in the Approved IRP**. In some cases, the conversions are expected to be achieved after year 2030. Thus, the retirement of such fossil-fuel fired units is even more uncertain and conflicting with the integration of renewable generation resources established in the Approved IRP.

The Energy Bureau **REAFFIRMS** its August 3 Resolution and **DENIES** PREPA's request for the conversion of San Juan Units 7 thru 10 because the petition is inconsistent with the Approved IRP.

C. New Black Start Units for Costa Sur and Yabucoa

On March 26, 2021, the Energy Bureau issued a Resolution and Order through which it determined these two projects could be aligned with the Approved IRP and Modified Action Plan **only to the extent that PREPA acquired the Black Start Units for Aguirre and Costa Sur power plants as part of the remaining 81 MW of gas fired peakers that form part of the Approved IRP and Modified Action Plan** ("March 26 Resolution"). The Energy Bureau determined that, to the extent feasible, under operational and FEMA requirements, PREPA should explore the acquisition of a fraction of the 81 MW of capacity in BESS technology to be used as complement to the gas fired Black Start systems for these two power plants (i.e., besides the above mentioned 81MW). The Energy Bureau warned PREPA that if the black start option is developed, said generation capacity would be discounted from the 81 MW.

On April 28, 2021, PREPA filed before the Energy Bureau a document titled *Motion in Compliance with the Resolution and Order entered on April 22, 2021* ("April 28 Motion"). Through the April 28 Motion, PREPA submitted forty-six (46) Project Scopes of Work and Cost Estimates, which contemplates sixty-seven (67) projects. The New Black Start Systems at Costa Sur and Aguirre were amongst these projects. On June 8, 2021, the Energy Bureau issued a resolution approving a series of projects, including the new Black Start Systems at Costa Sur and Aguirre **with a cost of $45.20 million each, for $90.4 million for both**

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[67] *Id.*, p. 24.

[68] *Id.*, p. 3.

[69] *See* August 3 Resolution, p. 14.

projects.[70] Note that on September 28, 2021, the Energy Bureau issued a Resolution and Order through which it approved PREPA's request that two (2) new simple cycle gas turbine generation units of approximately 20 MW each at Yabucoa shall replace the New Black Start System at Aguirre project approved on June 8, 2021. The Class 5 Cost Estimate for the project was $45.20 million; **therefore, the original cost estimate of $90.4 million for both projects remained unaltered**.

Through the August 2 Motion, PREPA stated that the current cost to acquire both units would be **around $190 million** and attributed the substantive **$100 million price increase** to disruption in the supply chain and inflation.

While FEMA will provide funding for both units and therefore costs will not be passed on to the ratepayers, the importance of making the **most prudent and adequate use** and the need to maximize FEMA funds should be emphasized. Therefore, before finalizing the Energy Bureau's evaluation for approving additional funding, the Energy Bureau **ORDERS** PREPA to submit a detailed report describing (i) the work performed and diligences set forth by PREPA upon the approval to acquire both Black Start Units close to a year ago; (ii) the result of its efforts and/or current status of both projects; and (iii) concrete data substantiating the request of additional funds ("Report").

The Energy Bureau **ORDERS** PREPA to file the Report providing the referenced information **on or before twenty (20) days** from the notification of this Resolution and Order.

D. Small-Scale Residential PV with Storage

Regarding PREPA's request for $34.7 million for small scale residential PV with storage in "inaccessible sectors of Puerto Rico", the Energy Bureau **FINDS** that additional information is needed to evaluate the request for approval of the project. The Energy Bureau **ORDERS** PREPA to provide the following:

a. Provide all PREPA-internal workpapers, analyses, presentations and key communications associated with the allocation of $34.7 million for the PV plus storage project described.
b. Provide a detailed summary of the number of sites, the quantities of solar PV and battery energy storage (MW and MWh), the locations, and the type and size of load to be served by the proposed solar PV and storage project.
c. Explain PREPA's plans for implementation, including timing.
d. Explain how the sites would be chosen and how the energy produced during normal steady state operation will be allocated (*i.e.*, net metering or other compensation mechanism).
e. Does PREPA plan on reserving the right to access battery capacity to use it for grid support functions during normal operation.
f. Confirm that the allocation of $34.7 million for solar PV and storage resources is for the residential sector only and explain in detail why non-residential sector critical load in the "inaccessible sectors of Puerto Rico"[71] is not also considered for this aspect of reallocation of FEMA HMGP funds.
g. Explain how the MW (PV) and MWh (storage) quantity levels proposed for FEMA HGMP funds reallocation were determined, as opposed to a much higher level of potential solar PV plus battery storage for residential sector load that could become "inaccessible" after a storm and would benefit from on-site resilience provided by the PV and battery storage.
h. Provide the draft COR3 initial scope of work (SOW) for this project.

[70] June 8 Resolution, Attachment A, p. 9.

[71] August 2 Motion, p. 19.

While it is encouraging that PREPA is finally exploring the use of 404 funds for behind the meter renewable generation and battery storage, the project is presented as a very general statement which requires additional information for the evaluation by the Energy Bureau.

The Energy Bureau **ORDERS** PREPA to file the before referenced information **on or before twenty (20) days** from the notification of this Resolution and Order.

III. CONCLUSION

The August 2 Motion is clearly inconsistent with the March 26 Resolution that ordered PREPA to abstain from using studies and plans as collateral attacks to the Approved IRP and Modified Action Plan. Furthermore, the reallocations proposed in the August 2 Motion undoubtedly ignore the Energy Bureau's orders in the March 26 Resolution regarding the consideration of renewables and batteries as alternatives for the use of the 404 Section Funds and consequently the Approved IRP which is the result of an adjudicative procedure with ample public participation. This approach is also inconsistent with the federal public policy strongly supporting renewable energy.

The Energy Bureau **ORDERS** PREPA to file the responses to Parts II.A and II.D and the Report required under Part II.C **on or before twenty (20) days of the notification of this Resolution and Order**. The Energy Bureau **REAFFIRMS** its August 3 Resolution and **DENIES** PREPA's request for the conversion of San Juan Units 7-10 to burn natural gas because the petition is inconsistent with the Approved IRP. Given the foregoing determination, the Energy Bureau **DETERMINES** there is no need to conduct a Technical Conference. Therefore, PREPA's request for a Technical Conference is also **DENIED**.

The Energy Bureau **WARNS** PREPA that, noncompliance with any of the provisions of this Resolution and Order, may result in the imposition of fines pursuant to Article 6.36 of Act 57-2014.

Be it notified and published.

Edison Avilés Deliz
Chairman

Lillian Mateo Santos
Associate Commissioner

Ferdinand A. Ramos Soegaard
Associate Commissioner

Sylvia B. Ugarte Araujo
Associate Commissioner

CERTIFICATION

I hereby certify that the majority of the members of the Puerto Rico Energy Bureau has so agreed on August 18, 2022. I also certify that on August 18, 2022 a copy of this Resolution was notified by electronic mail to the following: Yahaira.delarosa@us.dlapiper.com; margarita.mercado@us.dlapiper.com, laura.rozas@us.dlapiper.com, kbolanos@diazvaz.law; mvazquez@diazvaz.law, jmarrero@diazvaz.law. I also certify that today, August 18, 2022, I have proceeded with the filing of the Resolution issued by the Puerto Rico Energy Bureau.

For the record, I sign this in San Juan, Puerto Rico, today August 18, 2022.

Sonia Seda Gaztambide
Clerk

NEGOCIADO DE ENERGÍA DE PUERTO RICO
NEPR
JUNTA REGLAMENTADORA DE SERVICIO PÚBLICO