

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

NEPR

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IN RE: IMPLEMENTATION OF THE
PUERTO RICO ELECTRIC POWER
AUTHORITY INTEGRATED RESOURCE
PLAN AND MODIFIED ACTION PLAN

CASE NO.: NEPR-MI-2020-0012

SUBJECT: RESPONSE TO
PREPA'S SECOND MOTION ON
GAS CONVERSIONS FOR
AGUIRRE, SAN JUAN, PALO
SECO POWER PLANTS

**RESPONSE TO PREPA'S SECOND MOTION ON GAS CONVERSIONS FOR
AGUIRRE, SAN JUAN, PALO SECO POWER PLANTS**

TO THE PUERTO RICO ENERGY BUREAU:

COME NOW, Comité Diálogo Ambiental, Inc., El Puente de Williamsburg, Inc.
- Enlace Latino de Acción Climática, Inc., Alianza Comunitaria Ambientalista del Sureste, Inc., Coalición de Organizaciones Anti-Incineración, Inc., Amigos del Río Guaynabo, Inc., CAMBIO, and Sierra Club and its Puerto Rico chapter, and Unión de Trabajadores de la Industria Eléctrica y Riego (collectively, "LECO"), to request that PREB deny PREPA's request for approval of the proposed work on the Aguirre, San Juan, and Palo Seco Power Plants. If PREB schedules a technical conference on the air quality issues that PREPA has raised, we request that EPA, the public, and stakeholders be invited, and that **all** options to address those issues be on the table. In support of that request, LECO respectfully states the following:

Introduction

As the Puerto Rico Electric Power Authority (“PREPA”) states, emissions from PREPA’s Aguirre, San Juan, and Palo Seco Power Plants are a major reason for exceedances of the National Ambient Air Quality Standard (“NAAQS”) set for sulfur dioxide in the air of Guayama-Salinas and San Juan.¹

Units	Age (in years)	% of SO2 emissions in nonattainment area	Capacity (MW)	2018 Capacity Factor
Aguirre Steam Units 1 & 2	47	33%	900 MW	37%
San Juan Units 7-10	57-61	15%	400 MW	16%
Palo Seco Steam Units 1-4	52-62	22%	602 MW	18%

PREPA Proposed Integrated Resource Plan, June 7, 2019, Exhibit 4-1; Table 1, DNER Proposed State Implementation Plan

PREPA sets forth one option that the Authority believes could be part of a State Implementation Plan (PREPA refers to this as the NAA-SIP) to reduce emissions to an acceptable level: prolonging the lives of these three plants, and converting them to burn gas instead of diesel and bunker C fuel.² PREPA is wrong: those conversions would not achieve either of the “dual priorities of providing

¹ PREPA, *Petition for Leave to Conduct Works in PREPA’s Steam Units to Achieve Environmental Regulatory Compliance* at pp. 1-2, In Re: Review of the Puerto Rico Electric Power Authority’s 10 Year Infrastructure Plan-December 2020, Dkt. No. NEPR-MI-2021-0002 (Feb. 11, 2022) [Hereinafter, *PREPA’s Petition*].

² *Id.*

reliable electricity to the residents of Puerto Rico while meeting the NAAQS requirements for the benefit, health, and welfare of the People of Puerto Rico.”³

As detailed below in Section I, the conversions could not be part of a State Implementation Plan acceptable to EPA, for three reasons. First, the conversions will take years to complete, long past EPA’s required attainment date of April 2023. Second, EPA would reject any emissions limitation based on burning gas, because this would not be an “enforceable limit” as EPA defines that term. Third, PREPA cannot guarantee a steady, reliable supply of gas – if PREPA is forced to burn diesel or bunker C fuel at these plants for any significant length of time, that will violate emission limitations and the 1-hour National Ambient Air Quality Standard set for SO₂.

As detailed below in Section II, the conversions also could not provide affordable, reliable, resilient electricity to the Puerto Rico grid. PREPA is attempting to exploit the State Implementation Plan issue to launch its seventh collateral attack on the Energy Bureau’s August 2020 approved Integrated Resource Plan.⁴ In that August 2020 Order, the Energy Bureau rejected PREPA’s proposal to gasify the island’s grid, and ordered aging powerplants to be retired by 2025, to be replaced with synchronous condensers, renewables, and storage. PREPA has provided no reason to deviate from that approved plan.

³ *Id.* at 6.

⁴ See LECO, *Response to PREPA’s Petition for Leave to Conduct Works in PREPA’s Steam Units to Achieve Environmental Regulatory Compliance* at pp. 5-6, In Re: Review of the Puerto Rico Electric Power Authority’s 10 Year Infrastructure Plan-December 2020, Dkt. No. NEPR-MI-2021-0002 (March 9, 2022) for list with the previous six attempts. (<https://energia.pr.gov/wp-content/uploads/sites/7/2022/03/Response-to-PREPAS-Petition-for-Leave-to-Conduct-Works-in-PREPAS-Steam-Units-to-Archive-Environmental-Regulatory-Compliance-NEPR-MI-2021-0002.pdf>)

In Section III below, we explain how the Energy Bureau could pair scheduled retirements with integration of rooftop solar + storage units, to achieve the dual priorities: clean air and reliable, resilient, affordable energy.

As PREPA acknowledges, the Energy Bureau has authority to approve or deny whichever option is “included as part of the compliance strategy proposed in the NAA-SIP...”⁵ PREPA proposes a technical conference - if PREB holds that conference, we request that the EPA, the public and stakeholders also be invited, and that all options be on the table, not just PREPA's proposed conversions.

I. Gas conversions to prolong the lives of the Aguirre, San Juan, and Palo Seco Power Plants would not satisfy Clean Air Act requirements.

PREPA’s justification for these proposed conversions does not hold up to scrutiny. These conversions could not be part of an acceptable State Implementation Plan (SIP), for three reasons.

First, EPA’s December 2021 letter to PREPA states that the attainment date is April 9, 2023. EPA designated the San Juan and Guayama-Salinas sulfur dioxide nonattainment areas effective April 8, 2018,⁶ and the Clean Air Act requires the implementation plan to provide for attainment of the sulfur dioxide standards “as expeditiously as practicable, but not later than 5 years from the effective date.”⁷ DNER’s draft State Implementation Plan acknowledges that PREPA cannot

⁵ PREPA’s Petition at 2-3.

⁶ 83 Fed. Reg. 1098 (Jan. 9, 2018).

⁷ *Id.* at 1100; *see also* 42 U.S.C. § 7502(a)(2)(A).

possibly complete conversions of three different gas plants by the deadline of April 2023 – as an example, the conversions of San Juan Units 5 & 6 took years to complete. Thus, EPA cannot approve the proposed SIP, because it does not provide for attainment by the April 9, 2023 attainment date.⁸

Second, as detailed in Section II below, PREPA faces numerous obstacles (PREB approval, for one) to even begin conversion of these units. Therefore PREPA, and DNER, cannot provide EPA with assurance that gas, and only gas, will be burned at these units at any date, let alone by April 2023.⁹ EPA would therefore not consider an emission limitation based on an assumption of burning gas to be “enforceable.” A limitation for an electrical generating unit that can only be met through a complete shutdown when gas is unavailable is not enforceable in practice. A SIP must include enforceable limits for all reductions relied upon to achieve the National Ambient Air Quality Standard.¹⁰ In addition, the emission limitation would not represent “reasonably available control technology” (RACT), a required element of attainment plans, 42 U.S.C. § 7502(c)(1), because without PREB approval switching to gas is not an “available” control technology.

⁸ See 42 U.S.C. § 7502(c)(6) (plan must contain enforceable emission limitations and other measures “as necessary or appropriate to provide for attainment of [the] standard ... by the applicable attainment date.”).

⁹ DNER’s proposed State Implementation Plan acknowledges this problem: “PRDNER recognize that using the third option of the plan (conversion to natural gas) will extend the dates of compliance beyond April 9, 2023...” GOV’T OF PR, Puerto Rico 1-Hour SO₂ Non-Attainment Area State Implementation Plan - 2019-2030 PROJECTED EMISSION INVENTORY-THIRD OPTION LNG at 8 (March 2022) <https://www.drna.pr.gov/wp-content/uploads/2022/03/SO2-NAA-SIP-Document-Appendix-2-Inventory.pdf> [Hereinafter, “*Proposed State Implementation*”].

¹⁰ 42 USC 7410(a)(2)(A); *Ass’n of Irrigated Residents v. USEPA*, 10 F.4th 937, 941 (9th Cir. 2021) (“A state plan must ‘include enforceable emission limitations’ to attain the relevant air quality standard”) (citing 42 USC 7410(a)(2)(A)).

Finally, PREPA cannot ensure a steady, reliable supply of gas. New Fortress Energy’s LNG terminal in the San Juan area has suffered technical problems from the beginning of its operation – facing outages that sometimes stretch months.¹¹ Even when New Fortress’ facility is operational, New Fortress often “optimizes” its profits by choosing to sell its LNG on the international spot market, forcing PREPA to turn back to diesel or oil.¹² If PREPA is forced to burn diesel or oil at these plants, that would not only violate the emission limitations, but it would also cause violations of the 1-hour sulfur dioxide NAAQS. DNER acknowledges the possibility that PREPA may not be able to obtain gas – and further acknowledges the lack of gas could violate EPA requirements – in the draft State Implementation Plan.¹³ Thus, the proposed SIP not only fails to provide for attainment of the sulfur dioxide NAAQS by the attainment date, it also fails to provide for attainment afterwards and on an ongoing basis.¹⁴

¹¹ Negociado de Energía en vivo, *NEPR-MI-2020-0001 Conferencia Técnica Virtual* at 33:24 YouTube (Dec. 22, 2021) <https://www.youtube.com/watch?t=2004&v=jGCwhX0bKdM&feature=youtu.be>

¹² <https://www.sec.gov/ix?doc=/Archives/edgar/data/0001749723/000174972322000010/nfe-20220331.htm>

¹³ GOV'T OF PUERTO RICO, Dept. of Natural and Env'l Resources, *Puerto Rico Non-Attainment State Implementation Plan Sulfur Dioxide (SO₂) National Ambient Air Quality Standard* at 15 <https://www.drna.pr.gov/wp-content/uploads/2022/03/PR-SO2-NAA-SIP.pdf> “If required to meet its generation power commitments, PREPA would request a waiver to utilize an alternate fuel whenever there is a natural disaster or emergency or other extraordinary event under which the natural gas primary fuel is not available for an extended period. This will be done through the request of an Emergency Waiver before the DNER. a. The emergency waiver must be approved by PRDNER and EPA. PRDNER will submit the waiver request to USEPA OECA. The waiver must provide (1) evidence and justification for the emergency, (2) how long the waiver is needed, (3) projection for when the natural gas supply will be restored, (4) interim measures to reduce excess emissions. If EPA determines the waiver request is warranted, EPA will approve the temporary emergency waiver. If EPA does not approve the waiver, EPA and PRDNER may use their discretion to determine noncompliance and/or issue a finding of failure to implement the SIP.”

¹⁴ See 42 U.S.C. § 7502(c)(1), (c)(6) (plan must “provide for attainment” of the standard).

PREPA claims to have a DNER study that supports the proposed gas conversions, but PREPA has not actually provided the study or any part of the study.¹⁵ One wonders whether that study accounted for the problems detailed above. Obviously, the study would have to be made available for inspection by PREB, the public, and all stakeholders to determine what it actually says, and whether its findings are valid, before PREB relied on the study (or PREPA's representations of the study). PREPA has no legitimate reason to withhold the study, especially because DNER must put the State Implementation Plan through notice and comment,¹⁶ which includes making available to the public all studies that are relied on by the SIP.

PREPA's motion explains that PREPA, DNER, and EPA, held several meetings to discuss "an environmental compliance strategy".¹⁷ PREPA's motion acknowledges, tacitly, that PREPA and DNER were unable to convince EPA that the proposed gas conversions are the best option.¹⁸ We respectfully request that PREB consult directly with EPA, and examine all viable options to provide Puerto Ricans with clean air and reliable energy.

¹⁵ PREPA's Petition at 2: "The Puerto Rico Department of Natural and Environmental Resources (DNER), in representation of the Commonwealth, has made several analyses using data and information requested to PREPA and, after careful consideration, determined that burning natural gas in the existing steam units of Aguirre, San Juan, and Palo Seco power plants would achieve "attainment" in the designated districts."

¹⁶ 42 U.S.C. § 7510(a)(2); 40 C.F.R. § 51.102.

¹⁷ PREPA's Petition at 6.

¹⁸ *Id.*

II. The proposed conversions would violate the approved Integrated Resource Plan and would not provide affordable, reliable, resilient electricity.

In the August 2020 Order setting forth the approved Integrated Resource Plan, the Energy Bureau required PREPA to retire all older, oil-fired assets no later than 2025, and convert them to synchronous condensers that would facilitate integration of renewables.¹⁹ PREPA’s proposed gas conversions are obviously inconsistent with that requirement. This is not a grey area - The Financial Oversight & Management Board reviewed PREPA’s proposed gas conversions and reached the same exact conclusion: “All references to any proposed gas conversions in the Proposed Plan must include language that reflects their conditional nature, which requires receipt of PREB leave, waiver, or approval of them or in the alternative an amendment to the IRP to allow for such gas conversions.”²⁰

In a June 4th Order in Docket **NEPR-MI-2021-0002**, the Energy Bureau rejected PREPA’s proposals to extend the lives of the Aguirre, San Juan, and Palo Seco Power Plants past 2025, one reason being that the proposals violated the approved Integrated Resource Plan:

¹⁹ PREB, *Final Resolution and Order on the Puerto Rico Electric Power Authority’s Integrated Resource Plan* at ¶630, p. 193 In Re: Review of the Puerto Rico Electric Power Authority Integrated Resource Plan, Dkt. No. CEPR-AP-2018-0001 (Aug. 24, 2020). *See also* PREB, Resolution and Order at 5, In Re: Review of the Puerto Rico Electric Power Authority’s 10 Year Infrastructure Plan- December 2020, Dkt. No. NEPR-MI-2021-0002 (June 4, 2022) [Hereinafter, “*PREB June 4th Order*”] “Consistent with the foregoing, the Approved IRP determined that PREPA should retire its older, oil-fired steam and certain combined cycle turbines assets in order of the declining cost to operate when they are no longer necessary for system reliability during the period of 2021 and 2025.”

²⁰ Letter from Financial Oversight & Management Board to the Governor (May 25th, 2022) at 9. <https://drive.google.com/file/d/1NY5Duzwzf19yks-COrzNW2SO7fGAPE0pS/view> [Hereinafter, “*FOMB Letter*”].

The San Juan Plant Deferred Projects aims to extend the useful life of the San Juan Power Plant steam units between five (5) to seven (7) years, (i) in all cases beyond 2025 and, (ii) in certain cases until 2029. Plainly, the San Juan Power Plant Deferred Projects are not supported by the Approved IRP. Some of the San Juan Power Plant steam units in which major repair, rebuilding, rehabilitation and/or replacement works are proposed were not even considered as available resources for the purposes of the Approved IRP while others are within the retirement schedule for years 2021-2025.

...

The projects under SOWs No. 2029 and 4070 [for Aguirre Unit 1 and Palo Seco Unit 3] also [aim] to extend the useful life of the concerned generation until 2028 and 2029, that is, way beyond the 2025 retirement date contemplated in the Approved [IRP]. Again, this is not supported by the Approved IRP.²¹

The PREB Order succinctly explained that "...a major expense in a generation resource not considered as part of the Proposed IRP is inconsistent with the Approved IRP."²² The proposed gas conversions are clearly major expenses, not considered in PREPA's 2019 proposed IRP, that would extend the lives of these units – and therefore must be rejected.

III. PREPA's position ignores the opportunity to replace aging fossil fuel power plants with rooftop solar + storage.

PREPA's argument on renewables, pp. 8-9, is too narrowly focused on utility-scale renewable projects and ignores the momentum forming behind rooftop solar + storage. The Financial Oversight & Management Board, noting that momentum, has urged PREPA to consider replacing fossil fuel power plants with distributed

²¹ PREB June 4th Order at 6.

²² *Id.*

generation.²³ Without any public funding and despite numerous obstacles imposed by PREPA and LUMA, more affluent Puerto Rican electricity customers with the means to do so have privately invested in this technology. DNER's proposed State Implementation Plan claims that we should expect "200 MW of distribute[d] energy at residential and commercial level by 2026."²⁴ DNER has badly underestimated this figure: conservative estimates in recent articles show that Puerto Ricans have **already** installed at least 40,000 rooftop solar installations, and at least 60,000 battery storage units, providing 315 MW of electricity generation and 300 MW of electricity storage, respectively.²⁵ Public funding to extend rooftop solar + storage units to low- and middle-income customers would vastly increase the reach and capability of rooftop solar + storage, microgrids, and virtual power plants to replace fossil fuel units. Equipping every home in Puerto Rico with a solar + storage system would unlock 2,700 MW of generation – more than enough to replace the Aguirre, San Juan, and Palo Seco units that PREPA seeks to keep online.²⁶ CAMBIO and IEEFA have set forth a robust expert study that demonstrates that a grid powered

²³ FOMB Letter "...the Proposed Plan should consider in the above outlined sensitivity analyses, whether DG may be a potential replacement source [when EcoElectrica retires in 2032]."

²⁴ Proposed State Implementation Plan at 5.

²⁵ Jacqueline Glattard, Gerson Beauchamp, and Arturo Massol Deyá, *The Energy Insurrection: Analysis of Net Metering in Puerto Rico (2014-2022)* at 4-5 2022 (<https://casapueblo.org/wp-content/uploads/2022/05/scientific-technical-report.pdf>);

Jim Wyss, *Why Tiny Solar Projects Play an Outsized Role in Powering Puerto Rico*, BLOOMBERG, May 31, 2022 (<https://www.bloomberg.com/news/articles/2022-05-31/how-home-solar-power-protects-puerto-rico-from-blackouts>).

²⁶ Ingrid M. Vila Biaggi, Cathy Kunkel, & Agustín A. Irizarry Rivera, *We Want Sun and We Want More* at 2 CAMBIO & IEEFA (March 2021) https://ieefa.org/wp-content/uploads/2021/03/We-Want-Sun-and-We-Want-More_March-2021.pdf

primarily by rooftop solar + storage would be more affordable, reliable, and resilient than what PREPA and LUMA currently have planned.²⁷

Conclusion

We agree with PREPA on the dual priorities of providing reliable electricity and eliminating pollution from fossil fuel powerplants. We strongly disagree with PREPA that the method to do that would be to extend the lives of the Aguirre, San Juan, and Palo Seco Power Plants, and urge PREB to reject that proposal. If PREB decides to hold a technical conference as PREPA suggests, we ask that EPA, the public, and stakeholders be invited – and that ALL options to achieve clean air and reliable electricity be on the table.

Respectfully submitted. In San Juan Puerto Rico, July 5, 2022.

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²⁷ IEEFA: Puerto Rico can provide resiliency to 100% of homes through solar expansion, March 10, 2021 (<https://ieefa.org/articles/ieefa-puerto-rico-can-provide-resiliency-100-homes-through-solar-expansion>)

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CERTIFICATE OF SERVICE

I hereby certify that on July 5, 2022, I served this response to the following parties:

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