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

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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<br><br>**SUBJECT:** Renewable Energy Generation and Energy Storage Resource Procurement Plan Cancellation of Tranche 3 Solicitation. |

## RESOLUTION AND ORDER

### I. Relevant Background

In accordance with the Approved IRP[1] and the December 8 Resolution[2] issued in this case, and to fulfill the requirements of the Renewable Energy Portfolio under Act 82-2010, as amended by Act 17-2019, a total of 3,750 MW of renewable energy resources and 1,500 MW of energy storage resources must be procured over a three-year period for integration into Puerto Rico Electric Power Authority's ("PREPA") electric system. The acquisition is planned to take place in six (6) tranches through a series of requests for proposals ("RFPs").[3] PREPA conducted the request for proposals for the first tranche ("Tranche 1 RFP"), resulting in the execution of several contracts for renewable energy and storage resources. As outlined below, the Tranche 1 RFP contracts have undergone several amendments.

On October 29, 2021, the Energy Bureau of the Puerto Rico Public Service Regulatory Board ("Energy Bureau") issued a Resolution and Order ("October 29 Resolution") through which it was determined that the Energy Bureau would execute the second tranche request for proposals ("Tranche 2 RFP") through an independent coordinator ("PREB-Independent Coordinator" or "PREB-IC").[4] The PREB-IC and a Selection Committee designated by the Energy Bureau will evaluate the proponents' proposals. However, the final recommendation for approval, before the Energy Bureau and the Financial Oversight and Management Board ("FOMB") make their final determination, will be issued by the Selection Committee. On June 9, 2022, the Energy Bureau issued a Resolution and Order ("June 9 Resolution") in which it constituted a Selection Committee for the evaluation and selection of proposals for all subsequent RFP tranches.[5]

On February 1, 2023, the Energy Bureau determined that the PREB-IC will also conduct the third of six requests for proposals for new renewable energy and energy storage resources. Accordingly, request for proposals No. NEPR-0002 ("Tranche 3 RFP") was issued on July 18, 2023, and proposals were due and received on September 1, 2023.

On March 7, 2024, Accion Group submitted a confidential memorandum to the Energy Bureau detailing the initial prices per technology received for the Tranche 3 RFP ("Pricing Report"). On April 5, 2024, the Selection Committee submitted a confidential report to the Energy Bureau regarding its ongoing review of the Tranche 3 RFP proposals ("Selection Committee Report"). In the report, the Selection Committee informed the Energy Bureau that

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[1] *See* Final Resolution and Order on PREPA's Integrated Resource Plan, dated on August 24, 2020, as modified by the Resolution and Order on Reconsiderations, dated December 2, 2020, both issued by the Energy Bureau in case *In Re: Review of the Puerto Rico Electric Power Authority Integrated Resource Plan*, Case No. CEPR-AP-2018-0001 ("Approved IRP").

[2] *See* Resolution and Order issued by the Energy Bureau PREB in case *In re: The Implementation of the Puerto Rico Electric Power Authority Integrated Resource Plan and Modified Action Plan*, Case No. NEPR-MI-2020-0012, dated December 8, 2020 ("December 8 Resolution").

[3] *Id.*

[4] October 29 Resolution, p. 14.

[5] June 9 Resolution, p. 4.

the initial pricing observed for solar photovoltaic ("Solar PV") projects in the Tranche 3 RFP, excluding interconnection costs[6], exceeded the base price levels considered reasonable during their evaluation of the Tranche 2 RFP, and that the Tranche 3 RFP was unlikely to result in acceptable pricing. They advised that the time and resources required to proceed with the interconnection studies may not be justified. Essentially, they suggested that the Tranche 3 RFP should not proceed further and, therefore, requested guidance from the Energy Bureau.

On August 26, 2024, the Energy Bureau issued a Resolution and Order approving the contracts recommended by the Selection Committee for Tranche 2 RFP. The prices of these contracts were the same as those considered by the Selection Committee when it made its recommendation regarding the Tranche 3 RFP.

## II. Pertinent Legal Framework

The Energy Bureau is the regulatory authority responsible for overseeing and ensuring the proper execution and implementation of public policy related to the electricity service in Puerto Rico.[7] It holds the authority to implement regulatory measures necessary to ensure the reasonableness of tariffs within the Puerto Rico electrical system and to establish guidelines, standards, practices, and procedures for PREPA's procurement of energy from other electric service providers. Under Act No. 57-2014[8], the Energy Bureau is empowered, among other duties, to ensure that the costs per kilowatt-hour (kWh) in power purchase agreements, based on the type of generation technology, are reasonable.[9]

In evaluating tariffs or charges paid to independent power producers through power purchase agreements, the Energy Bureau must determine, among other factors, whether the proposed fee structure is fair, reasonable, and protective of the public interest and treasury.[10] To ensure these agreements are priced properly and reasonably, the parameters established by the Energy Bureau should align with industry norms and any other methods used to regulate revenues from power purchase agreements.[11]

## III. Discussion and Findings

In this matter, the Energy Bureau is not undertaking a comprehensive evaluation of contracts under Section 6.32 of Act 57-2014. Rather, it is performing an early-stage assessment of the reasonableness of the prices obtained during the initial phase of the Tranche 3 RFP process. Considering these circumstances, the Energy Bureau finds it appropriate to apply the principles of fairness and reasonableness in pricing, as outlined in Section 6.32, to the matter under evaluation. In making this assessment, the Energy Bureau will partially rely on the advice provided by the expert team responsible for evaluating the Tranche 3 RFP proposed prices.

The Energy Bureau's analysis first turns to the Pricing Report, which includes the initial prices offered by the proponents of Tranche 3 RFP, excluding interconnection costs. Note that once the costs of interconnection are determined by LUMA in a later phase of the process, proponents will submit their best and final offers (BAFOs) to account for those costs. This will likely result in higher energy prices[12] once the estimated interconnection costs are

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[6] These costs are determined after the completion of LUMA's Interconnection Studies.

[7] *See* Article 6.3(d) of Act 57-2014, known as the *Puerto Rico Energy Transformation and RELIEF Act,* as amended ("Act 57-2014") and Article1.5(3) of Act 17-2019, Known as Puerto Rico Energy Public Policy Act ("Act 17-2019").

[8] *See* Act 57-2014.

[9] *See* Article 6.32 of Act 57-2014.

[10] *See*, in general, Article 6.32 of Act 57-2014 and Article 1.11 of Act 17-2019.

[11] *Id.*

[12] Calculated as the Levelized Cost of Energy ("LCOE") or Levelized Cost of Storage ("LCOS"), as applicable.

added. The portfolio-weighted average LCOE for the proposed solar photovoltaic (PV) projects in the Tranche 3 RFP is significantly higher than the portfolio-weighted average LCOE deemed reasonable by the Energy Bureau and the FOMB for the Tranche 1 RFP projects, after the price-increase amendments. Notably, the portfolio-weighted average price in the Tranche 3 RFP exceeds even the highest price paid for any Tranche 1 RFP project, again without accounting for the interconnection costs associated with the Tranche 3 RFP projects. A similar trend is observed with the storage resources in the Tranche 3 RFP, where most prices, excluding interconnection costs, are higher than the portfolio-weighted average for Tranche 1 RFP projects, which included interconnection costs. While some energy storage prices are within the same order of magnitude as the Tranche 1 RFP portfolio-weighted average, this comparison does not account for the interconnection costs that are not considered in the Tranche 3 RFP proposals. This evaluation demonstrates a significant upward trend in LCOEs and LCOSs in the prices received for the Tranche 3 RFP.

The Energy Bureau now reviews the Selection Committee Report, which indicates that the initial pricing observed for Solar PV projects in the Tranche 3 RFP, excluding interconnection costs, exceeded the base price levels deemed reasonable for the Tranche 2 RFP. Notably, the pricing used for comparison in the Tranche 2 RFP included interconnection costs. The Selection Committee evaluated the average price increase observed in the Tranche 2 RFP's BAFOs, which were submitted after the proponents received the results of LUMA's Interconnection Studies, including the estimated interconnection costs. The Selection Committee further determined that if a similar price increase were factored into the expected BAFOs for Tranche 3 RFP proposals, the final pricing would exceed the levels deemed reasonable for the Tranche 2 RFP. It is important to note that the prices selected in the Tranche 2 RFP were based on the highest prices approved in the Tranche 1 RFP. These prices exceeded the portfolio-weighted averages for the Tranche 1 RFP for both renewable energy and storage resources. This context is critical when evaluating the pricing in subsequent tranches, as it highlights the upward trend in price expectations and the benchmark used for approving projects in Tranche 2 RFP. As a result of this evaluation, the Selection Committee concluded that the Tranche 3 RFP was unlikely to produce acceptable pricing and suggested that the time and resources required to proceed with the interconnection studies may not be justified. As stated before, they essentially suggested that the Tranche 3 RFP should not proceed further.

As this case docket shows, several contracts under the Tranche 1 RFP have been amended to address the impact of market conditions, particularly those resulting from the COVID-19 pandemic and other economic factors. These circumstances have significantly increased the cost of project development, posing risks to the successful completion of the approved projects. The amendments were made to ensure that the projects remain viable and can proceed despite the challenges presented by rising development costs.

In the course of amending the contracts under the Tranche 1 RFP, the prices increased by an average of 34% over the original contract prices. Furthermore, some prices exceeded the higher end of the price ranges shown in industry-standard financial analysis reports on energy pricing.[13] Due to the evaluation of these contracts as part of a portfolio, certain higher prices were accepted, as the use of the portfolio weighted average concept allowed for the inclusion of these higher prices while maintaining a portfolio weighted average deemed reasonable by the Energy Bureau.

For the Tranche 2 RFP, only a limited number of contracts were approved, using as a benchmark the higher prices accepted for Tranche 1 RFP projects, despite the fact that those prices were not within the Tranche 1 RFP portfolio weighted-average LCOE and LCOS. As stated by the Selection Committee, it is anticipated that the prices submitted under the Tranche 3 RFP will exceed those accepted under the Tranche 2 RFP. Additionally, the Energy Bureau has noted that the interconnection costs associated with the Tranche 2 RFP continue to be elevated and given that the same type of technological resources are involved, these

[13] *See*, for example, Lazard LCOE+, April 2023, as well as subsequent versions.

interconnection costs are expected to have a substantial impact on the final project costs (and the BAFOs) for the Tranche 3 RFP.

As part of the Tranche 3 RFP process, a proposal for a Virtual Power Plant (VPP) was received. The Energy Bureau recognizes that VPPs and battery storage systems have similar roles in supporting grid reliability, flexibility, and energy management. Both technologies provide key services such as demand response, peak load management, and energy dispatch to the grid. Like battery storage systems, a VPP aggregates and optimizes distributed energy resources to offer energy services traditionally provided by centralized storage solutions. In sum, while VPPs use software and spread-out resources instead of physical batteries, they perform similar functions to battery storage systems, like helping to stabilize the grid, manage energy use, and provide capacity when needed. Therefore, it is appropriate to compare their costs within the context of providing these comparable services. Given that VPPs typically avoid the high capital costs associated with physical infrastructure like batteries, their pricing should reflect this economic advantage. If VPP pricing exceeds that of battery storage, which involves significant capital investment in hardware, it raises concerns about the reasonableness of the cost, thereby justifying the comparison.

The Energy Bureau acknowledges that interconnection studies and associated interconnection costs do not apply to VPPs. Therefore, no further price increases are expected. Nevertheless, the initial price offered for the VPP proposal is significantly higher than expected when compared to prices for energy storage technologies. When measured against the energy storage services, the Tranche 3 RFP proposed price is substantially above the portfolio-weighted average of accepted prices in Tranche 1 and Tranche 2 RFPs. This excessive pricing is unjustified.

The Energy Bureau is ultimately responsible for determining whether pricing of the selected proposals is just and reasonable, and thus, if it complies with the current energy public policy.[14] After a thorough review of the contracts approved in the Tranche 1 RFP and Tranche 2 RFP, along with the Pricing Report and the Selection Committee's projected costs for the Tranche 3 RFP, the Energy Bureau **FINDS** that the pricing received in the Tranche 3 RFP is unsustainable for Puerto Rico's ratepayers.

The prices received for renewable energy and storage resources in Puerto Rico through the first three RFP Tranches have been, and continue to be, significantly higher than industry-wide prices elsewhere in the United States. While acknowledging that the cost of developing resources in Puerto Rico may be higher than in the United States, the Energy Bureau deems it cannot allow the upward pressure on the price of energy by accepting even higher prices. The Energy Bureau is compelled to ensure that pricing remains reasonable. Accordingly, the Energy Bureau concurs with the recommendation of the Selection Committee not to proceed further with the Tranche 3 RFP.

## IV. Conclusion

The Energy Bureau is committed to ensuring that electricity prices remain just and reasonable for ratepayers. Based on the prices for renewable energy and energy storage resources received in the early stages of the Tranche 3 RFP, it is clear that the final costs- particularly when accounting for interconnection expenses- will be too high to provide ratepayers with fair and affordable electricity. While interconnection studies may demonstrate that injecting energy into the electric grid can be done safely and reliably, they are also likely to reveal that the high interconnection costs would significantly increase the LCOE and LCOS to unacceptable levels. It is important to recognize that the costs of interconnection are recovered by service providers through tariff charges to PREPA, ultimately placing this financial burden on ratepayers. Given these factors, the Energy Bureau concludes that it is not in the public interest to invest further time, money, and resources into conducting studies for projects that will lead to unreasonably high costs. Therefore, in the best interest of ratepayers, the Energy Bureau **RECOMMENDS** rejecting all proposals and terminating the Tranche 3 RFP. The Selection Committee shall take the necessary actions to

[14] *See* Resolution and Order, August 26, 2021 ("August 26 Resolution"), p. 2.

formally reject all proposals in accordance with the procedures established in the Tranche 3 RFP.

The Energy Bureau **AUTHORIZES** PREB-IC to conduct the fourth of six requests for proposals for new renewable energy and energy storage resources. In doing so, the PREB-IC shall implement new strategies within the RFP process to ensure a more expedited timeline, facilitating the fastest possible implementation of approved projects. Additionally, the PREB-IC will prioritize obtaining just and reasonable prices to promote both cost efficiency and the swift advancement of Puerto Rico's renewable energy goals.

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

Antonio Torres Miranda
Associate Commissioner

**CERTIFICATION**

I certify that the majority of the members of the Puerto Rico Energy Bureau agreed on October 23, 2024. Also certify that on October 23, 2024, I have proceeded with the filing of this Resolution and Order and was notified by email to arivera@gmlex.net; mvalle@gmlex.net; laura.rozas@us.dlapiper.com; margarita.mercado@us.dlapiper.com; Yahaira.delarosa@us.dlapiper.com; jfr@sbgblaw.com; alopez@sbgblaw.com.

I sign in San Juan, Puerto Rico, today, October 23, 2024.

Sonia Seda Gaztambide
Clerk

NEGOCIADO DE ENERGÍA DE PUERTO RICO
JUNTA REGLAMENTADORA DE SERVICIO PÚBLICO