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

IN RE: THE IMPLEMENTATION OF THE PUERTO RICO ELECTRIC POWER AUTHORITY INTEGRATED RESOURCE PLAN AND MODIFIED ACTION PLAN	**CASE NO**.: NEPR-MI-2020-0012 **SUBJECT:** Motion Submitting 733 MW of PV Renewable Energy Draft Power Purchase and Operating Agreements Offered in Tranche 1 of PREPA's Renewable Generation and Energy Storage Resources RFP for Energy Bureau Evaluation and Approval

MOTION SUBMITTING 733 MW OF PV RENEWABLE ENERGY DRAFT POWER PURCHASE AND OPERATING AGREEMENTS OFFERED IN TRANCHE 1 OF PREPA'S RENEWABLE GENERATION AND ENERGY STORAGE RESOURCES RFP FOR ENERGY BUREAU EVALUATION AND APPROVAL

TO THE HONORABLE PUERTO RICO ENERGY BUREAU:

COMES NOW the Puerto Rico Electric Power Authority, through its counsel of record, and respectfully submits and prays as follows:

The Puerto Rico Electric Power Authority ("PREPA") has successfully finalized Phase III of the Tranche 1 Renewable Energy RFP with an offer to fifteen (15) proposals for Solar PV projects that comprise a capacity of 732.72 MW. Likewise, it has effectively sought contracts for energy storage resources that encompass a capacity of 220 MW. In compliance with Joint Regulation 8815[1] PREPA hereby submits for the evaluation approval of the Energy Bureau of the Puerto Rico Public Service Regulatory Board ("Energy Bureau" or "PREB") the relevant Template Contracts.

[1] Energy Bureau and PREPA, *Joint Regulation for the Procurement, Evaluation, Selection, Negotiation, and Award of Contracts for the Purchase of Energy and for the Procurement, Evaluation, Selection, Negotiation, and Award Process for the Modernization of the Generation Fleet*, No. 8815 (November 9, 2016) ("Joint Regulation 8815").

I. Introduction and Procedural Background

The Puerto Rico Energy Public Policy Act[2] ("Act 17") built upon the foundation created for integrated resource planning in Act 57-2014[3] and sharpened the focus on accelerated renewable energy integration, energy conservation and efficiency. In so doing, Act 17 increased the renewable energy portfolio to a minimum of twenty percent (20%) by 2022, forty percent (40%) by 2025, sixty percent (60%) by 2040 and one hundred percent (100%) by 2050 and created an energy efficiency target of thirty percent (30%) by 2040. Further, Act 17 reinforced the authority of Energy Bureau to conduct Integrated Resource Plan ("IRP") proceedings. This legislative mandate represents one of the highest-capacity, shortest-timeframe transitions to renewable energy attempted to date in any electricity market in the world.

In furtherance of the requirements of Act 17, on August 24, 2020, the Energy Bureau issued the Final Resolution and Order on the Puerto Rico Electric Power Authority's Integrated Resource Plan ("IRP Order") under Case No. CEPR-AP-2018-0001.[4] Through the IRP Order, the Energy Bureau approved in part and rejected in part the IRP the Puerto Rico Electric Power Authority ("PREPA") had proposed. In place of PREPA's preferred plan, the Energy Bureau ordered the adoption and implementation of the Modified Action Plan as set forth in the IRP Order. The IRP Order places significant renewable energy production requirements on PREPA, including a requirement that, by 2025, PREPA source at least 40% of the energy production connected to PREPA's transmission and distribution system (the "T&D System") from renewable energy

[2] *Puerto Rico Energy Public Policy Act*, Act No. 17 of April 11, 2019, 22 L.P.R.A. §§ 1141-1141f ("Act 17")
[3] *Puerto Rico Energy Transformation and RELIEF Act,* Act no. 57 of May 27, 2014, 22 L.P.R.A. §§ 1051-1056 ("Act 57").
[4] *In Re: Review of the Puerto Rico Electric Power Authority Integrated Resource Plan,* Case No.: CEPR-AP-2018- 0001.

generation.

As part of the Modified Action Plan, the Energy Bureau ordered PREPA to develop a competitive solicitation process for the procurement of new renewable generation and energy storage resources in support of, among other things, achievement of Act 17 targets for renewable energy installations. *Id.,* p. 266, ¶ 859.[5] The Energy Bureau established a schedule for the acquisition of minimum quantities of renewable resources and energy storage resources through Request for Proposals ("RFP") processes. Specifically, the Energy Bureau required PREPA to seek to procure at least 1,000 MW of solar PV (or energy-equivalent renewable resource) and at least 500 MW (2,000 MWh or equivalent) battery energy storage in the first RFP tranche ("Tranche 1"). *Id.,* p. 268, ¶ 860.[6] For Tranche 2, the Energy Bureau required PREPA to procure at least 500 MW of solar PV resources (or energy-equivalent renewable resources) and at least 250 MW (1,000 MWh or equivalent) in energy storage resources ("Tranche 2"). *Id.* Tranche 1 and Tranche 2 represent two of six tranches of procurement of renewable energy and storage resources as ordered by the IRP Order and outlined in the Modified Preferred Resource Plan.

In compliance with the above, on October 23, 2020, PREPA submitted the first version of the draft procurement plan, which PREPA subsequently amended in compliance with the Energy Bureau's directives. After the review[7] of the procurement plan by the Energy Bureau and other procedural incidents, on January 26, 2021, the Energy Bureau issued a Resolution and Order ("January 26 Resolution") through which, among other things, it ordered PREPA to issue the RFP for Tranche 1 as soon as possible.[8] In compliance with the above, on February 22, 2021, PREPA

[5] IRP Final Resolution and Order, p. 266, ¶ 859.
[6] *Id.*
[7] *See* Resolution and Order, *In Re: The Implementation of the Puerto Rico Electric Power Authority Integrated Resource Plan and Modified Action Plan,* Case No. NEPR-MI-2020-0012, December 8, 2020. *See, also,* Resolution and Order, *In Re: The Implementation of the Puerto Rico Electric Power Authority Integrated Resource Plan and Modified Action Plan,* Case No. NEPR-Ml-2020-0012, January 5, 2021.
[8] *See* Resolution and Order, *In Re: The Implementation of the Puerto Rico Electric Power Authority Integrated*

issued Request for Proposal 112648 for Renewable Energy Generation and Energy Storage Resources Tranche 1 of 6 ("Tranche 1 RFP") soliciting proposals for renewable energy, energy storage and virtual power plant resources.

Thereafter, and after various procedural incidents and the finalization of various Tranche 1 RFP related milestones, on November 8, 2021, the Energy Bureau issued a Resolution and Order ("November 8 Order") directing PREPA to (i) on or before November 12, 2021, submit the results of its selection of proposals for consideration in Phase III with the pricing evaluation per technology group required by the Energy Bureau together with copies of any communications to proponents selected to proceed to Phase III; and (ii) on or before December 1, 2021, complete Phase III and submit to the Energy Bureau for its evaluation and approval the corresponding draft Power Purchase and Operating Agreements. November 8 Order at pp. 5-6, Sec. II(i)(ii).

In compliance with the above, on November 9, 2021, PREPA submitted a report, prepared by Sargent & Lundy ("S&L") and titled *Renewable Energy Generation and Energy Storage RFP Tranche 1, Phase III Qualitative and Pricing Evaluation* ("S&L Report"). The S&L Report included the pricing per technology group as requested by the Energy Bureau. Thereafter, on November 18, 2021, PREPA requested an extension, until December 8, 2021, to complete Phase III and submit to the Energy Bureau, for its evaluation and approval, the corresponding draft Power Purchase and Operating Agreements.

Notwithstanding, and as a result of the Energy Bureau's evaluation of the S&L Report, on December 3, 2021, the Energy Bureau issued a Resolution and Order in the captioned case ("December 3 Order") in which it established certain deadlines for the finalization of the Tranche 1 RFP process. Likewise, the Energy Bureau ordered PREPA to revise the formulations it uses to

Resource Plan and Modified Action Plan, Case No. NEPR-MI-2020-0012, January 26, 2021, pp. 2-3.

report on Tranche 1 respondent resource costs to align with the cost parameterization methods used in the IRP which include the U.S. National Renewable Energy Laboratory ("NREL") approach to computing a levelized cost of energy ("LCOE") for solar PV resources, and simpler formulations of battery energy storage costs. Further, the Energy Bureau stated that "[t]he S&L Report provided by PREPA did not explain why it used a formulation that discounted the energy term in the denominator of the LCOE formula and in the denominator of the levelized cost of storage ("LCOS") formula. The NREL approach does not discount the energy term in the denominator of the formula for levelized cost of energy." December 3 order at pp. 1-2.

As a result of the above, the Energy Bureau ordered PREPA to submit updated price proposal information containing the LCOE and battery cost metrics described in the December 3 Order on or before December 8, 2021. It also extended the December 1, 2021, deadline required by the November 8 Order, and ordered PREPA to complete Phase III and submit to the Energy Bureau, for its evaluation and approval, the corresponding draft Power Purchase and Operation Agreements on or before December 17, 2021 by 1:00 p.m.

On December 8, 2021 PREPA submitted to the Energy Bureau by informative motion updated price proposal information containing recalculated LCOE and LCOS values (the "December 8 Motion"). In the December 8 Motion PREPA provided additional information intended to provide the Energy Bureau a point of reference regarding the process carried out by PREPA's consultant, S&L, for the calculation of updated LCOE and LCOS values.

The December 8 Motion included calculations of the applicable LCOE and LCOS using the IEA Methodology for calculating LCOE and LCOS, the IRP Methodology for calculating Simplified LCOE (sLCOE) and LCOS (sLCOS), the NREL Methodology for calculating Simplified LCOE (sLCOE) and LCOS (sLCOS) and the PREB Order Methodology for calculating

LCOE and LCOS. The weighted averages for LCOEs and LCOSs resulting from application of each formula were:

LCOE Weighted Average (November BFO) $/MWh			
IEA	**IRP**	**NREL**	**PREB Order**
118.50	123.81	117.82	51.87

LCOS Weighted Average (November BFO) $/MWh			
IEA	**IRP**	**NREL**	**PREB Order**
227.84	255.76	246.21	97.61

Thereafter, on December 9, 2021, the Evaluation Committee and its consultants met with the Energy Bureau Commissioners and their consultants and received feedback from the Energy Bureau regarding the appropriate formula for calculating, and the calculation of, the LCOE. With such guidance, the RFP Evaluation Committee continued its analysis of proposals and proceeded with the finalization of Phase III.

II. Regulation 8815

The IRP Order addressed the Procurement Process by referencing Joint Regulation 8815 which was promulgated and developed by PREPA and the Energy Bureau in 2016. That Joint Regulation addresses the formation of a Project Committee[9], Process to Issue RFQs/RFPs, Evaluation and Selection Process, Selection of Proponents, Contract Award, and Reconsideration and Review. The IRP Order indicated that "*PREPA or the T&D Operator, with oversight by the Energy Bureau under the processes of Regulation 8815, shall run all competitive auctions in accordance with this Modified Action Plan*."

III. RFP Process

Joint Regulation 8815 establishes a three-phase selection process: 1) quality control

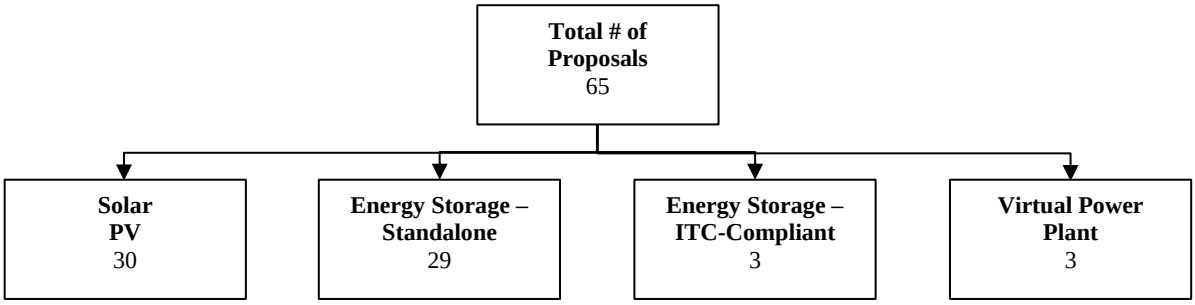
[9] Tranche 1 RFP Evaluation Committee.

review, 2) project committee review and recommendation, and 3) negotiation. Also, Joint Regulation 8815 contemplates that subject to PREPA's right to reject any or all proposals, PREPA shall select the proposal(s) considered most advantageous to PREPA, PREPA's customers, and Puerto Rico. By most advantageous, PREPA was required to choose those proposals that met the minimum requirements and demonstrate economic benefits, reliability, and resiliency.

As previously stated, PREPA issued the Tranche 1 RFP on February 22, 2021, soliciting proposals for renewable energy, energy storage and virtual power plant resources on the following basic terms:

Renewable Energy Resources	Battery Energy Storage Systems	Virtual Power Plant
▪ Any resource constituting renewable energy under Puerto Rico law ▪ Power Purchase & Operating Agreement (PPOA) ▪ Payments based on energy / deemed energy	▪ Standalone systems ▪ Preference for 4-hour durations but will consider 2-hour and 6-hour ▪ Energy Storage Services Agreement (ESSA) ▪ Payments based on capacity	▪ Aggregation of ≥5 MW of resources, each below 38 kV ▪ Energy generation, storage and/or demand response ▪ Resources that, on 13 kV, each do not exceed 1 MW ▪ Payment for capacity

PREPA received initial proposals in June 2021, representing over 1,440 MW of renewable generation resources, 1,150 MW of energy storage resources and 182 MW of virtual power plant ("VPP") resources. The proposals fell into the following categories:



Throughout Tranche 1, the committee established by PREPA to administer the Tranche 1 RFP and evaluate proposals submitted in response to such RFP (the "Tranche 1 RFP Evaluation Committee" or "Committee"), coordinated extensively with its stakeholders and made significant

adjustments in response to stakeholder feedback. This included: (i) review and assessment of input from Proponents and the Department of Energy, relating to commercial, bankability and technical issues, (ii) the revision of earlier versions of the Template Contracts to address many of the issues stakeholders had identified, (iii) submission of detailed responses to over 300 requests from Proponents for information or clarification, and (iv) multiple meetings / conference calls with every Phase III proponent to address individual proponent concerns.

The Tranche 1 RFP Evaluation Committee also solicited and received authorization from the Puerto Rico Public-Private Partnerships Authority ("P3A") to conduct the Tranche 1 RFP and coordinated with the Financial Oversight & Management Board for Puerto Rico ("FOMB"). This coordination involved PREPA's solicitation of pricing guidance, familiarizing the FOMB with evolving versions of the Template Contracts, disclosing weighted average pricing and implementing the FOMB's recommendation to build into the RFP process the publication of benchmark pricing per technology group to support price negotiations.

Lastly, the Tranche 1 RFP Evaluation Committee interacted extensively with LUMA Energy, LLC ("LUMA") once LUMA assumed responsibility for operating and maintaining the T&D System midway through the Tranche 1 RFP process. The Committee solicited from LUMA and sought to incorporate LUMA's feedback on technical and operational issues (*e.g.*, minimum technical requirements ("MTRs"), operating procedures, testing protocols, the performance of required interconnection studies and collection of fees for these studies).

Accordingly, the Tranche 1 RFP Evaluation Committee has carefully considered reasonable concerns raised by Proponents and PREPA's stakeholders under the circumstances and selected those utility-scale renewable energy resource and energy storage proposals that comply with the requirements established in the Tranche 1 RFP. PREPA's evaluation of VPP resource proposals

remains ongoing. During the quality control review phase of the Tranche 1 RFP process ("Phase I"), the Committee (i) determined which proposals satisfied the minimum requirements outlined in the Tranche 1 RFP, and (ii) notified each Proponent whether such Proponent's proposal(s) passed such quality control review and would advance to the second evaluation phase under the Tranche 1 RFP ("Phase II"). During Phase I and Phase II, the Committee evaluated each proposal selected for Phase II evaluation against the following criteria:

Phase	Start Date	Evaluation Criteria
I	June 18, 2021	a. Verification of Minimum Qualification Requirements b. Rejection of Non-compliant Proposals

Phase	Start Date	Evaluation Criteria
II	July 15, 2021	a. Feasibility Study and Independent Model of Interconnection and System Upgrade Costs b. Verification of Proposal Completeness Checklist c. Organization of proposals by technology group d. Review of Proposal Data Forms e. Qualitative Evaluation Based on: 1. Technical Viability 2. Development and Schedule Risk 3. Permitting Risk 4. Environmental Impacts 5. Experience 6. Debt Financing Plan and Qualifications 7. T&D System Integration 8. Site Control 9. Community Impacts and Acceptance 10. Operation and Maintenance Plan 11. Additional Benefit of VPPs f. Pricing Evaluations: 1. Contract Charges 2. Cost for Required Transmission Reinforcements 3. Cost for Required Distribution Reinforcements 4. System Impact 5. LCOE / LCOS g. Scoring: 1. LCOE/ LCOS – 450 points 2. Technical Viability – 130 points 3. Development Status – 180 points 4. Proponent's Experience – 130 points 5. Financing Plan and Qualifications – 110 points h. Disqualification of Non-Compliant Proposals and Non-selection of Non-feasible Proposals

At the conclusion of Phase II, PREPA selected 41 proposals submitted by 19 Proponents (the "Phase III Proposals") for evaluation during the third and final phase of the Tranche 1 RFP process ("Phase III").

The evaluation of the Phase III Proposals remains ongoing. It includes two primary work streams proceeding in parallel. As part of one workstream, PREPA (i) determines the LCOE and LCOS of each of the Phase III Proposals, (ii) sets a threshold LCOE (the "Threshold LCOE") and

threshold LCOS (the "Threshold LCOS") to be applied in the selection of renewable energy resource and energy storage resource respectively proposals which will advance to the contract finalization stage (collectively with VPP resource proposals, the "Contract Finalization Proposals"), and (iii) finalizes a resource-specific contract with the Proponent of each of the Contract Finalization Proposals (each, a "Bespoke Contract"), based on the terms and conditions set forth in template versions of a Power Purchase and Operating Agreement ("PPOA"), an Energy Storage Services Agreement for Standalone Energy Storage Resources ("ESSA (Standalone Version)"), an Energy Storage Services Agreement for ITC-Compliant Energy Storage Resources ("ESSA (ITC Compliant Version)", or a Grid Services Agreement ("GSA") for VPP resource proposals (collectively, the "Template Contracts").

The Bespoke Contracts for solar resources and energy storage resources contain price provisions that permit a Resource Provider to recover the cost of interconnecting a proposed resource to the T&D System. They also include estimates of interconnection costs which LUMA developed through feasibility studies conducted during Phase II (the "Estimated Interconnection Costs"). In the second Phase II workstream, LUMA performs a system impact study and facility study of each of the Contract Finalization Proposals (collectively, the "Integration Studies") to determine the cost of interconnecting the proposed resource (the "Final Interconnection Costs") with the T&D System. LUMA estimates that it will complete the Integration Studies for each of the Contract Finalization Proposals in March of 2022. The Tranche 1 RFP contemplates that PREPA will agree to an adjustment of the prices tentatively established in the Bespoke Contracts to reflect any difference between the Final Interconnection Costs and the Estimated Interconnections Costs.

IV. LCOE and LCOS Calculation

S&L prepared, and the Tranche 1 Evaluation Committee adopted, the LCOE analysis using the International Energy Agency ("IEA") methodology for calculating LCOE. The IEA methodology discounts both the sum of costs over the lifetime of the project and the sum of electrical energy produced over lifetime of the project. This methodology considers the future value of cash flows by discounting the numerator as well as degradation of energy production capability over the life of the project by discounting the denominator. The IEA methodology represents an industry accepted method used in the electric power industry.

Figure 1-1Figure 1-1presents the calculation formula.

Figure 1-1 IEA LCOE Calculation

$$LCOE = \frac{\sum_{t=1}^{n} \frac{I_t + M_t + F_t}{(1+r)^t}}{\sum_{t=1}^{n} \frac{E_t}{(1+r)^t}}$$

- **I_t.** investment expenditures in the year t
- **M_t.** Operations and maintenance expenditures in the year t
- **F_t.** Fuel expenditures in the year t
- **E_t.** electrical energy generated in the year t
- **r.** discount rate
- **n.** expected lifetime of system or power station

Operation and Maintenance costs are included in the PPOA price, and no fuel expenditures are included in these type of projects; hence the formula for PREPA Tranche 1 proposals is as follows:

$$LCOE = \frac{\sum_{t=1}^{n} \frac{PPOA_t}{(1+r)^t}}{\sum_{t=1}^{n} \frac{Energy\ Produced\ in\ First\ Year\ (P50) * Degradation_t}{(1+r)^t}}$$

Where,

$PPOA_t$ – PPOA payment in year t based on P50 generation
E_t – Electrical energy generated in year 1 (P50) * degradation in year t

As presented in Figure 1-1, the Committee has adapted the IEA methodology to account for the type of energy resource required by the Tranche 1 RFP. The PPOA payment price includes operations and maintenance expenditures, but excludes a factor representing the cost of fuel, since solar projects do not require fuel expenditures. The investment expenditures in year t are the total expected payments to be made in year t based on the P50 generation forecast submitted by the Proponents as to each project proposal.

The National Renewable Energy Laboratory ("**NREL**") derives a simplified LCOE ("**sLCOE**") formula from the aforementioned IEA methodology. PREPA's approved IRP uses the sLCOE NREL derived formula by making simplifying assumptions on yearly costs and degradation. The sLCOE methodology assumes no change in the yearly project cost and no degradation throughout the life of the project. Figure 1-2 presents the sLCOE calculation.

Figure 1-2 NREL sLCOE Calculation

$$sLCOE = \frac{Overnight\ Capital\ Cost * Capital\ Recovery\ Factor + Fixed\ O\&M}{Energy\ Produced\ in\ First\ Year}$$

Where the formula for PREPA Tranche 1 proposals results:

$$sLCOE = \frac{PPOA * Capital\ Recovery\ Factor}{Energy\ Produced\ in\ First\ Year\ (P50)}$$

PPOA. PPOA payment in year 1 based on P50 generation
Capital Recovery Factor. ratio of a constant annuity to the present value of receiving that annuity for a given length of time
E_t. electrical energy generated in year 1 (P50)

As presented in Figure 1-2, the NREL methodology must be adapted to be applicable to the PREPA RFP like the IEA methodology. The PPOA payment price includes Fixed O&M and

Variable O&M expenditures. The PPOA price in year 1 replaces the overnight cost, and the denominator is replaced with the energy produced in the first year of year of operation based on the P50 generation forecast submitted by the Proponents.

On December 3, 2021, the Energy Bureau issued a Resolution and Order NEPR-MI-2020-0012, which ordered PREPA to perform the LCOE analysis without discounting the energy term used in the denominator of the IEA LCOE equation. Sargent & Lundy prepared a third pricing analysis using the methodology described in the PREB order. Figure 1-3 shows the LCOE calculation as ordered by PREB.

Figure 1-3 PREB Order LCOE Calculation

$$LCOE = \frac{\sum_{t=1}^{n} \frac{I_t + M_t + F_t}{(1+r)^t}}{\sum_{t=1}^{n} E_t}$$

- **I_t.** investment expenditures in the year t
- **M_t.** Operations and maintenance expenditures in the year t
- **F_t.** Fuel expenditures in the year t
- **E_t.** electrical energy generated in the year t
- **r.** discount rate
- **n.** expected lifetime of system or power station

This formula for PREPA's Tranche 1 is as follows:

$$LCOE = \frac{\sum_{t=1}^{n} \frac{PPOA_t}{(1+r)^t}}{\sum_{t=1}^{n} Energy\ Produced\ in\ First\ Year\ (P50) * Degradation_t}$$

Where,

$PPOA_t$ – PPOA payment in year t based on P50 generation
E_t – Electrical energy generated in year 1 (P50) * degradation in year t

The December 3 Order methodology, like the IEA methodology, must be adapted to be applicable to the PREPA RFP, with the key difference being the Energy Bureau Order mandated that the denominator not be discounted.

While the LCOE results obtained from using the IEA and IRP methodologies are similar, the December 3 Order methodology underestimates LCOE as calculated under the IEA and IRP methodologies by more than a factor of two and yields results that are approximately half of the first year PPOA prices. In general, the first year PPOA price is the lowest price to be paid throughout the term of a contract except in the rare case of Proponents who offered higher first year prices with negative escalation rates. Accordingly, it was the PREPA Tranche 1 Evaluation Committee's opinion, as validated by the energy consultant used by PREPA to develop the IRP, that the December 3 Order methodology deviates from industry accepted practice for calculating LCOEs and does not accurately represent the true cost that PREPA will be paying for these electricity generation resources. Therefore, if PREPA were to use the December 3 Order LCOE methodology, PREPA would be providing misleading pricing information, and would be masking the average net present cost of these solar generation resources when comparing them with other competing resources.

Similarly, the LCOS calculation uses the same equations as the LCOE calculation with the PPOA price replaced by the ESSA price submitted by the Proponents. Accordingly, S&L calculated the LCOS using the IEA methodology, the IRP sLCOE methodology, and the December 3 Order methodology for comparison. The IRP did not calculate LCOS; therefore, the IRP sLCOE methodology was used by S&L and adopted by the Tranche 1 Evaluation Committee to calculate the LCOS.

Table 1-4 Comparison of LCOE methodologies

Proposal Tag	LCOE IEA Method ($/MWh)	LCOE IRP (sLCOE) Method ($/MWh)	PREB Order LCOE Method ($/MWh)	First Year PPOA Price ($/MWh)
AD-1-P	102.88	107.74	45.03	88.20

Table 1-5 Comparison of LCOS methodologies

Proposal Tag	LCOS IEA ($/MWh)	LCOS IRP (sLCOS Method) ($/MWh)	PREB Order LCOS Method ($/MWh)	First Year ESSA Price ($/MWh)
H-2-E	222.12	241.90	95.17	275.40

To calculate the LCOE and LCOS for each of the proposals received by PREPA, S&L assumed a discount rate of 9% throughout the term of the proposed contracts. Considering a LCOE price threshold of $105 per MWh as per IEA methodology (equivalent to $46 per MWh price threshold using PREB's methodology) established by the PREPA Evaluation Committee and the LCOE results obtained from using the IEA methodology, fifteen (15) proposals for Solar PV projects are at or below the threshold established. These proposals comprise a capacity of 732.72 MW. LCOE prices may vary approximately +/- $5 per MWh after the required integration studies are concluded and the final interconnection cost estimates are determined by LUMA.

Similarly, considering a LCOS price threshold of $120 per MWh (equivalent to $52 per MWh price threshold using PREB's methodology) as established by the PREPA Evaluation Committee, and the LCOS results obtained from using the IEA methodology, a total of three (3) proposals for energy storage resources are at or below the threshold established. These proposals comprise a capacity of 220 MW of energy storage resources.

V. Bespoke Contracts Submitted for Evaluation and Approval by the Energy Bureau

As applicable to the Tranche 1 process, Article 7 of Joint Regulation 8815 requires that, upon the finalization of a Bespoke Contract with a Proponent, the Tranche 1 Evaluation Committee prepare a report which shall include the reasons for entering into such contract, the reasons for selecting such Proponent, a description of the procedures followed and other information pertinent to the procedures followed and the evaluations conducted. Following its completion, the Committee is to forward such report to the Executive Director and the Governing Board for approval. The Tranche 1 Evaluation Committee completed this process and rendered the required report. See, **Attachment A**. The PREPA Governing Board proceeded to evaluate the report and approved the Bespoke Contract versions of the recommended Template Contracts other than the GSAs for further approval by the Energy Bureau and FOMB.

Notwithstanding the above, each Bespoke Contract is subject to the finalization of the Integration Studies and shall only be effective and enter into full force and effect upon final approval from PREPA's Executive Director, PREPA's Governing Board, the Energy Bureau and the FOMB.

Accordingly, and in compliance with the December 3 Order, PREPA hereby submits for the evaluation and approval of the Energy Bureau Bespoke Contracts for renewable energy resource proposals (each, a "Bespoke PPOA") recommended by the Tranche 1 Evaluation Committee and approved by PREPA's Governing Board. See, **Attachment B**. PREPA will endeavor to (i) submit the remaining Bespoke PPOAs and three Bespoke Contracts for energy storage resources (each, a "Bespoke ESSA") to the Energy Bureau for approval on or before December 23, 2021, and (ii) submit Bespoke Contracts for VPP resources to the Energy Bureau for approval on or before January 30, 2022, at or below the prices proposed in the Bespoke PPOAs or as PREPA may adjust

any such price upward or downward to reflect the Final Interconnection Costs LUMA identifies through the completion of the Integration Studies,

In general, the projects recommended for approval have the following features:

	Common Feature in Subject Transactions
All-In Pricing	Pricing that includes (1) all energy or capacity or service provided under the respective agreement, as applicable, (2) all renewable energy credits or other environmental attributes derived from the project under current or future law, (3) any ancillary services capable of being provided under the approved design of the project.
MTRs	Compliance with MTRs prepared by PREPA and approved by LUMA.
Interconnection Facilities	Responsibility and cost of interconnection facilities allocated to the Proponent affiliate, which signs the bespoke Contract (the "**Resource Provider**"). For utility-scale projects, LUMA carries out works within PREPA's active system pursuant to a construction contract with Resource Provider.
Take-or-Pay Liability	Payment by PREPA for energy, which Resource Provider makes available, but PREPA cannot take as a result of: 1. Force Majeure affecting PREPA in excess of 360 hours per year; 2. to the extent not due to a Force Majeure, curtailments or disconnections by PREPA in excess of 80 hours per year; or 3. breach by PREPA or LUMA (acting as PREPA's agent) under a Contract.
Milestones, Delay LDs and Term	1. Deadlines for Resource Provider to (i) obtain financing and permits and give full notice to proceed to its construction contractors (8 months); and (ii) achieve commercial operation date ("**COD**") (24 months). 25-year term runs from COD.
	2. Payment by Resource Provider of liquidated damages for delay due to its failure to achieve COD by the Guaranteed Commercial Operations Date ("**GCOD**"). 3. Payment by PREPA of liquidated damages for delay where Resource Provider fails to achieve COD by GCOD due to delays caused by PREPA or LUMA (e.g., through the testing & commissioning process or other breach of Contract).

	Common Feature in Subject Transactions
Performance Guarantees	(i) Guarantee by Resource Provider of key performance requirements of Energy Resource, and (ii) payment of liquidated damages by Resource Provider for Energy Resource's failure to meet such requirements.
Performance Security	Delivery and maintenance by Resource Provider of a Performance Security issued (i) in the form of an on-demand standby letter of credit by a financial institution that satisfies minimum credit rating requirements, and (ii) in the face amount equal to: 1. prior to COD, $50 per kW *multiplied by* the nameplate capacity of the Energy Resource; and 2. from COD, $70 per kW *multiplied by* the nameplate capacity of the Energy Resource, which secures Resource Provider's performance obligations under a Contract.
Parent Company Guarantee	For a Resource Provider with an unrestricted net worth of less than $75,000,000, delivery and maintenance by Resource Provider of a Parent Guarantee by its parent company or other permitted guarantor, which satisfies the foregoing net worth requirement.
Equity Transfer	Restrictions on the ability of the project sponsor to transfer equity to third parties without PREPA's consent, subject to exceptions for tax equity, affiliate transfers, financing considerations and minority share transfers.
Dispute Resolution & Governing Law	Disputes resolved in arbitration before PREB, an untested process which represents some risk to both sides. Contract governed by the laws of the Commonwealth of Puerto Rico.

The Template Contracts allocate risk between PREPA and each Resource Provider as shown in the following table:

Event	Party Taking Risk Under Contract		Risk & Mitigation Comments
	Resource Provider	PREPA	
Permits and Authorizations	✔		Resource Provider has the obligation to obtain permits. Permit delays (with no fault of the counterparty) constitute Force Majeure granting extra time capped at a max 18-month extension, after which a party may terminate.
Financing	✔		Resource Provider must either secure debt financing or equity financing for its project. PREPA credit risk remains a major issue for debt financing.
Land Acquisition	✔		Resource Provider must acquire all land rights for its project and interconnection line.
Facility Design / Construction	✔		Resource Provider has responsibility for the design and construction of interconnection and project. PREPA reviews the design and can reject if not in accordance with the contract. Resource Provider bears risk of deficient design and construction through payment of liquidated damages and revenue reduction.
Changes to Technical Requirements	✔ (up to cost limit)	✔	PREPA has right to change certain technical requirements (*e.g.*, MTRs) and Resource Provider bears the cost of such changes up to a limit of 1% of project costs. PREPA must compensate Resource Provider for the cost of complying with such changes above such limit.
Construction of PREPA Interconnection Facilities & Network Upgrades	✔ (funding only)	✔	Resource Provider funds construction of Interconnection Facilities and Network Upgrades. As LUMA will take responsibility for the construction of these assets, PREPA bears the risk of delays caused by a deficient design and construction delays. We recommend that PREPA enter into a Direct Agreement with LUMA under which LUMA agrees to indemnify PREPA for such delays.

Event	Party Taking Risk Under Contract		Risk & Mitigation Comments
	Resource Provider	PREPA	
Maintenance and Repair of PREPA Interconnection Facilities		✔	PREPA bears the cost and responsibility for PREPA Interconnection Facility O&M through its relationship with LUMA.
PREPA Delays		✔	If PREPA delays COD beyond the Guaranteed Commercial Operation Date, PREPA must pay delay liquidated damages to Resource Provider as if COD occurred.
Resource Provider Delays	✔		If the COD does not occur by GCOD for any reason other than PREPA delay (see row above), Resource Provider must pay delay liquidated damages, and PREPA will hold security to cover this amount.
Offtake Risk – FM affecting PREPA	✔	✔	Resource Provider takes risk for first 360 operating hours, after which PREPA makes deemed energy or capacity payments.
Offtake Risk – other curtailment, dispatch instruction, emergencies, maintenance, grid constraints, new generation or lack of demand	✔	✔	Resource Provider takes risk for first 80 operating hours, after which PREPA makes deemed energy or capacity payments.
Offtake Risk – breach		✔	PREPA makes payments for any unexcused failure to take available energy and/or make use of available capacity.
Force Majeure Affecting Resource Provider	✔		Resource Provider receives no payment FM renders an Energy Resource unavailable.
Generation Risk (PPOA) – lack of solar irradiation	✔		Resource Provider receives no payment to the extent output reduced due to lack of irradiation.
Generation Risk (PPOA) – degradation	✔		Resource Provider receives reduced payment, and may be subject to liquidated damages, to the extent output reduced due to higher than expected degradation.

Event	Party Taking Risk Under Contract		Risk & Mitigation Comments
	Resource Provider	PREPA	
Puerto Rico Political Risk – Changes of Law and Project Condemnation / Eminent Domain		✔	PREPA must reimburse Resource Provider for additional costs resulting from Changes of Law in Puerto Rico.
Other Change in Law	✔	✔	Parties share risk of changes to non-Puerto Rico Taxes and Environmental Costs 50/50. PREPA initially pays 50% of increases in these costs, but recovers this during the final years of the contract.
PREPA Default		✔	PREPA faces general damages for breach. Such damages may include Resource Provider's lost profit.
Resource Provider Default	✔		Resource Provider faces general damages for breach leading to termination. Resource has cap on maximum liability arising out of a Contract.

VI. Confidentiality of Tranche 1 Evaluation Committee Report and Template Contracts

Pursuant to Article 10.2 of Joint Regulation 8815 related to the confidentiality of the documents submitted to the Energy Bureau as part of the renewable energy procurement process, the Tranche 1 Evaluation Committee report shall be public once the Template Contracts have been executed. Article 10.2 states in part as follows:

> [o]nce the Contract has been executed, the Authority shall make public the report of the Project Committee which shall contain the information related to the procurement, evaluation, scoring, selection and negotiation process, and the information contained in the Proposal as required by law, except trade secrets, proprietary or privileged information of the Proponent clearly identified as such by the Proponent, or information that must otherwise be protected from publication according to law, unless otherwise ordered by a court order, in each case, if the Authority determines that the protection of such information is appropriate.

Further, the documents in possession of a corporation like PREPA are presumed public. However, access to public information is not absolute and there are various exemptions for access to public information. *Bhatia Gautier v. Gobernador*, 199 D.P.R. 59, 82 (2017) (emphasis added).

These exceptions are:

> (1) **a law so declares**; (2) the communication is protected by one of the evidentiary privileges that the citizens may invoke; (3) revealing the information may injure the fundamental rights of third parties; (4) it deals with the identity of a confidante and (5) it is 'official information" pursuant to Rule 514 of Evidence, 2009, 32 LPRA Ap. VI (formerly Rule 31 of Evidence 32 LPRA for. Ap. IV). *Colon Cabrera v. Caribbean Petroleum,* supra.

Id. at 83.

Article 6.15 of the *Puerto Rico Energy Transformation and RELIEF Act*, provides that "any person who is required to submit information to the Energy [Bureau] believes that the information to be submitted has any confidentiality privilege, such person may request the [Bureau] to treat such information as such[.]" Act 57 at Art. 6.15. "If the Energy [Bureau], after the appropriate evaluation, believes such information should be protected, it shall grant such protection in a manner that least affects the public interest, transparency, and the rights of the parties involved in the administrative procedure in which the allegedly confidential document is submitted." *Id.* at Art. 6.15 (a). If the Energy Bureau determines that the information is confidential, "the information shall be duly safeguarded and delivered exclusively to the personnel of the Energy [Bureau] who needs to know such information under nondisclosure agreements." *Id.* at Art. 6.15 (c). "The Energy [Bureau] shall swiftly act on any privilege and confidentiality claim made by a person subject to its jurisdiction by means of a resolution to such purposes before any allegedly confidential information is disclosed." *Id.* at Art. 6.15 (d).

In the exercise of its powers the Energy Bureau and PREPA approved Regulation 8815 which

has force of law. *Id.* at Art. 6.3 (b)[10] Pursuant to Section 4.2 of Regulation 8815, communications between the Energy Bureau and PREPA shall be maintained confidential while the administrative competitive procurement process is ongoing.

Lastly, PREPA adopted the *Regulation for the Program to Administer Documents of the Puerto Rico Electric Power Authority*.[11] Pursuant to Regulation 6285, documents including information related to the evaluation of offers or requests for bids are confidential while the evaluation, adjudication and award processes are still ongoing. *Id.* at Sec. V, ¶ 13.

As applicable to the submittal of the Tranche 1 Evaluation Committee Report and Template Contracts (Attachments A and B), the same are confidential given that the contracts have yet to be executed and could still be subject to additional changes depending on the result of the Interconnection Studies and the evaluation and approval process of both the Energy Bureau and the FOMB.

Pursuant to the above, PREPA respectfully requests confidential treatment of both the Tranche 1 Evaluation Committee Report and Template Contracts (Attachments A and B) as these are part of a still ongoing deliberative process which is yet to result in executed contracts.

VII. Conclusion

PREPA is committed to the successful accomplishment of a renewable energy and energy storage resource procurement process in compliance with the requirements of Act 17, Act 57 and the directives of the Energy Bureau and thus with the integration of renewable energy resources into the Puerto Rico grid. Conducting the Tranche 1 process has been no small feat; however,

[10] *See also Puerto Rico Electric Power Authority Act,* Act No. 83 of May 12, 1941, as amended, 22 L.P.R.A §§ 191-240 ("Act 83") at Sec. 5 ("The regulations so adopted shall have the force of law once the provisions of Act No. 38-2017, the *Government of Puerto Rico Uniform Administrative Procedure Act*, are complied with.")
[11] PREPA, *Regulation for the Program to Administer Documents of the Puerto Rico Electric Power Authority*, No. 6285 (Jan. 10, 2001) ("Regulation 6285").

PREPA is confident that the results of this first tranche have set the stage for what is to come and has sent a strong message to the market that renewable energy must not only be the path to a more reliable and resilient energy system but also must and will be affordable to the ratepayers.

WHEREFORE, the Puerto Rico Electric Power Authority respectfully requests that, pursuant to the requirements of Joint Regulation 8815, the Energy Bureau evaluate and approve the Template Contracts submitted as part of **Attachment B**.

RESPECTFULLY SUBMITTED.

In San Juan, Puerto Rico, this 16th day of December 2021.

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CERTIFICATE OF SERVICE

It is hereby certified that, on this same date, I have filed the above motion with the Office of the Clerk of the Energy Bureau using its Electronic Filing System at https://radicacion.energia.pr.gov/login, and a courtesy copy of the filling was sent to LUMA through its legal representatives at margarita.mercado@us.dlapiper.com and laura.rozas@us.dlapiper.com.

In San Juan, Puerto Rico, this 16th day of December 2021.

s/ Katiuska Bolaños-Lugo
Katiuska Bolaños-Lugo

Attachment A

Attachment B