

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

**IN RE: PUERTO RICO TEST FOR DEMAND
RESPONSE AND ENERGY EFFICIENCY**

CASE NO: NEPR-MI-2021-0009

**SUBJECT: Avoided Cost Study November 18,
2021 Technical Conference Conclusions and
Next Steps.**

RESOLUTION AND ORDER

On August 13, 2021, the Energy Bureau of the Puerto Rico Public Service Regulatory Board ("Energy Bureau") issued a Resolution and Order ("August 13 Resolution") ordering LUMA Energy ServCo, LLC ("LUMA") and the Puerto Rico Electric Power Authority ("PREPA"), as applicable, to provide on or before August 18, 2021, responses to the requests for information included as Attachment A to the August 13 Resolution ("Data Requests"). These Data Requests are intended to provide information for the Energy Bureau to conduct an avoided cost study ("Avoided Cost Study") to develop values that can be applied to the cost-effectiveness screening framework ("Puerto Rico Test") under development in this proceeding. The Energy Bureau identified these data requests for LUMA and PREPA based on its review of available data and assessment of the data needed to conduct the Avoided Cost Study.

On August 17, 2021, LUMA filed a document titled *Motion Requesting Energy Bureau to Stay Resolution and Order of August 13, 2021 and Schedule a Technical Workshop* ("August 17 Request"). In its August 17 Request, LUMA requested the Energy Bureau to stay the August 13 Resolution and schedule a technical workshop to resolve issues and questions related to the development of avoided cost estimates for benefit-cost analysis of energy efficiency programs. LUMA noted that its understanding of the scope of this proceeding is that it includes formulation of a cost-effectiveness testing framework but may not include production of the needed cost and benefit inputs to implement the framework. LUMA also noted a concern about duplication of work between marginal cost values developed by LUMA's consultant Guidehouse under the Unbundling Proceeding¹ and avoided cost values developed by the Energy Bureau in this proceeding. LUMA suggested leveraging the marginal cost values in the development of avoided costs.

On November 18, 2021, the Energy Bureau held a technical conference ("November 18 Technical Conference") to address these and other questions on avoided energy efficiency costs and to clarify the scope, process, and schedule for this work effort. The purpose of the technical conference was to: (1) discuss the need for the Avoided Cost Study in the PR Test Proceeding, (2) discuss LUMA's suggestion to utilize aspects of its Marginal Cost of Service Study ("MCOS") to inform the avoided costs, and (3) clarify the Energy Bureau's data requests to LUMA and PREPA regarding input data to the avoided cost modeling.

After the review and discussion of the purpose, scope, and timing of the Avoided Cost Study at the November 18 Technical Conference, the Energy Bureau **DETERMINES** that the Avoided Cost Study continues to have merit and should proceed on the originally planned timeframe. The Energy Bureau further reiterates its intention to share the methods and initial results of the Avoided Cost Study and schedules a Technical Conference for that purpose. The goal of this Technical Conference is to present the draft results and seek feedback from interested stakeholders using a similar process used for the Puerto Rico Test framework development. The Energy Bureau intends to complete the Avoided Cost Study in spring 2022. Since LUMA's energy efficiency programs during the two-year Transition Program Plan period are not required to be cost-effective using the Puerto Rico Test. Therefore, it is unnecessary for the Avoided Cost Study to be complete before LUMA files its Transition Program Plan in March 2022.

¹ See, *In Re: The Unbundling of the Assets of the Puerto Rico Electric Power Authority*, Case No. NEPR-AR-2018-0004 ("Unbundling Proceeding").



Regarding the coordination of the Avoided Cost Study conducted by the Energy Bureau and the MCOS Study conducted by LUMA, the Energy Bureau **AGREES** there is a benefit to sharing data sources and input assumptions such as fuel costs, load shapes, and dispatch operations between various studies. To date, the Avoided Cost Study has used numerous data and assumptions from the Approved IRP.² The revised questions to LUMA in Appendix A to this Resolution and Order reflect the Energy Bureau's interest in obtaining the data used in the MCOS, along with LUMA's opinions regarding the accuracy, relevance, and usefulness of that data. LUMA's responses will help the Energy Bureau and its consultants evaluate how to best align data sources and input assumptions.

Based on the November 18 Technical Conference, the Energy Bureau understands that LUMA has additional readily available information responsive to the data requests, provides needed inputs into the Avoided Cost Study, and enables consistency with key inputs from the MCOS Study where reasonable.

During the November 18 Technical Conference, a LUMA representative stated that some information requested is solely in the possession of PREPA and specified which information only PREPA can provide.

The data requests in Appendices A and B are updated to reflect the discussion at the November 18 Technical Conference. Also, this Resolution and Order adds a more general data request to LUMA for any additional information, insights, or data sources that LUMA recommends the Energy Bureau review in development of the Avoided Cost Study inputs and methodology. Responses to all data requests are required by Wednesday, January 5, 2022.

The Energy Bureau **ORDERS** LUMA to submit, **on or before January 5, 2022**, the responses to the data requests in **Appendix A** of this Resolution and Order. The Energy Bureau **ORDERS** PREPA to submit, **on or before January 5, 2022**, the responses to the data requests in Appendix B of this Resolution and Order.

The Energy Bureau **ORDERS** LUMA and PREPA relevant representatives to attend a Virtual³ Technical Conference on **February 8, 2022, at 10:00 a.m.** to discuss the initial results of the Avoided Cost Study.

The Energy Bureau **INVITES** stakeholders to attend and participate in the **February 8, 2022**, Technical Conference.

To prevent the spread of COVID-19, the Technical Conference will be held remotely via the *Microsoft Teams* platform and livestreamed via the Energy Bureau's Youtube Channel. All persons interested in participating in the Technical Conference scheduled above, must request access, **on or before February 7, 2022 at 2:00 pm**, by (i) sending an email to secretaria@jrsp.pr.gov; or (ii) contacting the Energy Bureau's Clerk at (787) 523-6262.

Be it hereby notified and published.

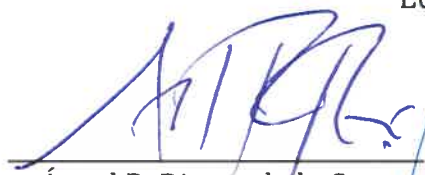


² See Final Resolution and Order, *In Re*. Review of the Puerto Rico Electric Power Authority Integrated Resource Plan, Case No. CEPR-AP-2018-0001, August 24, 2020 ("Approved IRP").

³ The Energy Bureau will hold the Technical Conference via the *Microsoft Teams* platform. The login information will be timely provided through a separate communication.



Edison Avilés Deliz
Chairman



Ángel R. Rivera de la Cruz
Associate Commissioner



Lillian Mateo Santos
Associate Commissioner



Ferdinand A. Ramos Soegaard
Associate Commissioner

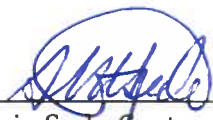


Sylvia Ugarte Araujo
Associate Commissioner

CERTIFICATION

I hereby certify that the majority of the members of the Puerto Rico Energy Bureau has so agreed on December 14, 2021. I also certify that on December 14, 2021 a copy of this Resolution and Order was notified by electronic mail to the following: margarita.mercado@us.dlapiper.com and laura.rozas@us.dlapiper.com. I also certify that today, December 14, 2021, I have proceeded with the filing of the Resolution and Order issued by the Puerto Rico Energy Bureau.

For the record, I sign this in San Juan, Puerto Rico, today December 14, 2021.



Sonia Seda Gaztambide
Clerk



APPENDIX A: DATA REQUESTS FOR LUMA

Instructions: Please provide all data in electronic, machine-readable format (preferably Excel). Please provide all spreadsheets and workpapers with formulae intact. Regarding each piece of requested data, responses can:

- provide the data or response in full;
 - state that the data is available but time-consuming to provide and suggest an alternate date by which the data can be provided;
 - state that the data requested is not available now, point to the best alternative data source, and, if LUMA cannot provide the alternative data source, identify the party who can provide it;
 - state that the data is not available now but will be in the future and provide information on when it will be available and through what channels it will be available; or
 - state that the data is not available now and there is no current or future alternative data source of which LUMA is aware.
1. Please provide the following hourly data and discuss the extent to which each could be useful for the Avoided Cost Study. This request includes, but is not limited to, any files that LUMA has in its possession equivalent to those provided by PREPA at the time of its filing of the 2019 Integrated Resource Plan and which reflect the terms of Section VII.C of the September 23rd Final Order in Case No. CEPR-AP-2015-0002 (the first IRP case). For example, the Energy Bureau is aware of the existence of a set of “Hourly Generation Reports” filed in PDF format but apparently generated from Excel files that resided at locations similar to “M:\AREA_OPERACIONES\CCE\IGD2019\201906.xls” (with different file names based on the date of the files). The Energy Bureau has also seen a file named “Comportamiento-generacion-3.xlsx” containing hourly generation profiles from July 2020 through September 2021 associated with Case No. NEPR-MI-2020-0001 and available at https://energia.pr.gov/wp-content/uploads/sites/7/2021/09/Comportamiento-generacion_values-NEPR-MI-2020-0001.xlsx.
 - a. Hourly load shape data used as inputs into the MCOS Study.
 - b. Hourly generation data used as inputs into the MCOS Study.
 - c. Any other sources of hourly load or generation data for the period from 2017 to the present.
 2. Referring to the confidential workpapers named “PREPA Fuel Forecast 06032019_FINAL_with formulas.xlsx” provided by PREPA in Case no. CEPR-AP-2018-0001, please provide the most updated fuel price forecasts for the AES coal plant between 2021–2038. Please indicate the units for the fuel price forecasts. If the entire period is not available, please provide data for the years that are available.
 3. Referring to the confidential workpapers named “PREPA Fuel Forecast 06032019_FINAL_with formulas.xlsx” provided by PREPA in Case no. CEPR-AP-2018-0001, please answer the following questions regarding current plant operations:
 - a. Excluding the New Fortress Energy contract that pertains to the San Juan plants and the renewed Gas Sales and Purchase Agreement (GSPA) that pertains to Costa Sur and EcoEléctrica, please confirm that the forecasting methodology and adders used for delivered fuel prices at all plants are still applicable. If there are any differences, please provide the most recent update to this referenced spreadsheet to reflect the new adders and forecasting methodologies.
 - b. On tab “No.6 Regression” of this spreadsheet, please provide the data source for NY Spot No. 6 0.5% (dollars per gallon). The current data source on this tab links to the NY Harbor Ultra-Low Sulfur No 2 Diesel Spot Price and does not match the values provided in Column E of this tab.
 - c. Please also indicate if the adders in the referenced fuel forecast workpaper are consistent with the current contractual agreement for No. 6 residual fuel oil.



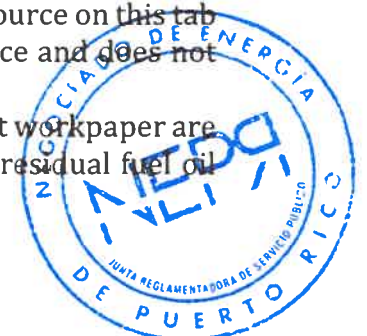
- purchases: namely, the extended Fuel Oil Purchase Contract with Freepoint, and any other applicable contracts with other suppliers. If not, please provide any updated adders to reflect recent contractual agreements for No.6 fuel oil.
- d. Please also indicate if the adders in the referenced fuel forecast workpaper are consistent with the current contractual agreement for diesel: namely, the Puma Energy Caribe LLC, and/or any other applicable contracts with other suppliers. If not, please provide any updated adders to reflect recent contractual agreements for diesel.
4. Please provide the following ancillary service information:
- a. Historical regulation up/down requirements for the Puerto Rico electric system for any period or periods in 2020 or 2021 for which data are available.
 - b. Forecasted regulation up/down requirements for the Puerto Rico electric system for years 2021–2038. If data does not exist for the entire period, please provide data for the period for which it is available.
 - c. Please describe how the regulation up/down requirements are derived/established. If these values are derived formulaically, provide any worksheets with formulae intact.
 - d. Referring to regulation up/down, please provide variation in requirements due to seasonality or other expected differences in the pattern of regulation up/down requirements across the year.
 - e. A description of which facilities operate with automatic generation control (AGC), as opposed to manual generation control (such as by phone calls).
5. Please provide the following operating reserve information:
- a. Historical operating reserve (including spinning and non-spinning reserve) for the Puerto Rico electric system for any period or periods in 2020 or 2021 for which data are available.
 - b. Forecasted operating reserve requirements for the Puerto Rico electric system for years 2021–2038. If data does not exist for the entire period, please provide data for the period for which it is available.
 - c. Please describe how the operating reserve requirements are derived/established. If these values are derived formulaically, provide any worksheets with formulae intact. If the values are derived based on operator experience, rules of thumb, or other non-formulaic approaches, please summarize the approach(es) used.
 - d. Referring to operating reserves, please provide or summarize the variation in requirements due to seasonality or other expected differences in the pattern of operating reserve across the year.
6. Please provide any additional relevant data, analysis, or information available to LUMA which LUMA believes could be useful in the development of avoided costs for energy efficiency and demand response.



APPENDIX B: DATA REQUESTS FOR PREPA

Instructions: Please provide all data in electronic, machine-readable format (preferably Excel). Please provide all spreadsheets and workpapers with formulae intact. Regarding each piece of requested data, responses can:

- provide the data or response in full;
 - state that the data is available but time-consuming to provide and suggest an alternate date by which the data can be provided;
 - state that the data requested is not available now, point to the best alternative data source, and, if PREPA cannot provide the alternative data source, identify the party who can provide it;
 - state that the data is not available now but will be in the future and provide information on when it will be available and through what channels it will be available; or
 - state that the data is not available now and there is no current or future alternative data source of which PREPA is aware.
1. Please provide the following hourly data and discuss the extent to which each could be useful for the Avoided Cost Study. This request includes, but is not limited to, any files that PREPA has in its possession equivalent to those provided by PREPA at the time of its filing of the 2019 Integrated Resource Plan and which reflect the terms of Section VII.C of the September 23rd Final Order in Case No. CEPR-AP-2015-0002 (the first IRP case). For example, the Energy Bureau is aware of the existence of a set of “Hourly Generation Reports” filed in PDF format but apparently generated from Excel files that resided at locations similar to “M:\AREA_OPERACIONES\CCE\IGD2019\201906.xls” (with different file names based on the date of the files). The Energy Bureau has also seen a file named “Comportamiento-generacion-3.xlsx” containing hourly generation profiles from July 2020 through September 2021 associated with Case No. NEPR-MI-2020-0001 and available at https://energia.pr.gov/wp-content/uploads/sites/7/2021/09/Comportamiento-generacion_values-NEPR-MI-2020-0001.xlsx.
 - a. Hourly load shape data for any period from 2017 to the present.
 - b. Hourly generation data for any period from 2017 to the present.
 2. Referring to the confidential workpapers named “PREPA Fuel Forecast 06032019_FINAL_with formulas.xlsx” provided by PREPA in Case no. CEPR-AP-2018-0001, please provide the most updated fuel price forecasts for the AES coal plant between 2021–2038. Please indicate the units for the fuel price forecasts. If the entire period is not available, please provide data for the years that are available.
 3. Referring to the confidential workpapers named “PREPA Fuel Forecast 06032019_FINAL_with formulas.xlsx” provided by PREPA in Case no. CEPR-AP-2018-0001, please provide the following information regarding fuel prices and fuel price projections:
 - a. Excluding the New Fortress Energy contract that pertains to the San Juan plants and the renewed Gas Sales and Purchase Agreement (GSPA) that pertains to Costa Sur and EcoEléctrica, please confirm that the forecasting methodology and adders used for delivered fuel prices at all plants are still applicable. If there are any differences, please provide the most recent update to delivered fuel prices, forecasts of delivered fuel prices, and methodologies for developing forecasts of delivered fuel prices.
 - b. On tab “No.6 Regression” of this spreadsheet, please provide the data source for NY Spot No. 6 0.5% (dollars per gallon). The current data source on this tab links to the NY Harbor Ultra-Low Sulfur No 2 Diesel Spot Price and does not match the values provided in Column E of this tab.
 - c. Please also indicate if the adders in the referenced fuel forecast workpaper are consistent with the current contractual agreement for No. 6 residual fuel oil



- purchases, namely, the extended Fuel Oil Purchase Contract with Freeport, and any other applicable contracts with other suppliers. If not, please provide any updated adders to reflect recent contractual agreements for No.6 fuel oil.
- d. Please also indicate if the adders in the referenced fuel forecast workpaper are consistent with the current contractual agreement for diesel: namely, the Puma Energy Caribe LLC, and/or any other applicable contracts with other suppliers. If not, please provide any updated adders to reflect recent contractual agreements for diesel.

