

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

**IN RE:** THE PERFORMANCE OF THE  
PUERTO RICO ELECTRIC POWER  
AUTHORITY

**CASE NO.:** NEPR-MI-2019-0007

**SUBJECT:** Resolution and Order regarding  
underlying data for metrics filed by LUMA,  
and PREPA.

**RESOLUTION AND ORDER**

**I. Introduction**

On August 18, 2022, the Energy Bureau of the Puerto Rico Public Service Regulatory Board ("Energy Bureau") issued a Resolution and Order ("August 18 Resolution") that summarized and presented the first twelve (12) months of LUMA's<sup>1</sup> operation of the Puerto Rico transmission and distribution system ("T&D System"). The August 18 Resolution solely focused on metrics provided by LUMA and PREPA<sup>2</sup> for the period starting June 1, 2021 and ending May 31, 2022. The August 18 Resolution also summarized LUMA's performance relative to the Energy Bureau's established benchmarks and baselines developed in this proceeding.

On August 24, 2022, the Energy Bureau issued a Resolution and Order ("August 24 Resolution") through which it expanded the August 18 Resolution analysis to include PREPA's performance since June 2019 for comparison purposes of reliability trends over a 36-month period. The Energy Bureau directed PREPA to file on or before September 1, 2022, a motion explaining the causes of its non-positive or negative performance for the period from June 2019 to May 31, 2022.

On September 16, 2022, LUMA filed a document titled *Urgent Request for Additional Extension of Time to Comply with Resolution and Order of August 18, 2022 Due to Change in Circumstances* ("September 16 Motion"). Through the September 16 Motion, LUMA expressed that, as a result of the imminent passage of Hurricane Fiona through Puerto Rico, it had activated its Emergency Operations Center ("LEOC"), in compliance with the Emergency Response Plan.<sup>3</sup> LUMA further stated its personnel working on the responses to the August 18 Resolution had been asked to delay those tasks and participate in LEOC activities.<sup>4</sup> LUMA requested until September 30, 2022, to comply with the August 18 Resolution.<sup>5</sup>

On September 17, 2022, PREPA filed a document titled *Urgent Request for Extension of Time to Submit the Performance Metrics Report* ("September 17 Motion"). Through the September 17 Motion, PREPA stated that current events, including appearances before the Energy Bureau and the United States Congress, as well as emergency preparedness efforts in light of the imminent strike of Hurricane Fiona had forced PREPA to pause the efforts undertaken to prepare the metrics report and submit a final version on or before the September 20, 2022 deadline.<sup>6</sup> Consequently, PREPA requested a ten-day extension, until September 30, 2022, to comply with the August 18 Resolution and August 24 Resolution.<sup>7</sup>

<sup>1</sup> LUMA Energy, LLC ("Management Co") and LUMA Energy ServCo, LLC (jointly, "LUMA").

<sup>2</sup> Puerto Rico Electric Power Authority ("PREPA").

<sup>3</sup> September 16 Motion, p. 3, ¶10.

<sup>4</sup> *Id.*, p.4, ¶10.

<sup>5</sup> *Id.*, ¶12.

<sup>6</sup> September 17 Motion, p. 3, ¶8.

<sup>7</sup> *Id.*



On September 21, 2022, PREPA filed a document titled *Second Urgent Request for an Extension of Time to Submit the Performance Metrics Report* ("September 21 Motion"). Through the September 21 Motion, PREPA informed that, due to the damages caused by Hurricane Fiona, its employees from the Generation Directorate had been working to restore the electric power supply to energize the Island.<sup>8</sup> PREPA further stated that power restoration efforts take priority over administrative and reporting efforts and thus requested an extension until October 14, 2022, to comply with the August 18 and 24 Resolutions.<sup>9</sup>

On September 23, 2022, the Energy Bureau issued a Resolution and Order ("September 23 Resolution") through which it extended the August 18 Resolution analysis upon review of the September 16 Motion, September 17 Motion, and the September 21 Motion, that allowed LUMA and PREPA to comply with the August 18 Resolution and August 24 Resolution on or before October 14, 2022.<sup>10</sup>

On October 12, 2022, PREPA filed a document titled *Third Urgent Request for Extension of Time to Submit the Performance Metrics Report* ("October 12 Motion"). In the October 12 Motion, PREPA requested additional time to comply with the Energy Bureau's August 18 and August 24 Resolutions.<sup>11</sup>

On October 15, 2022, LUMA filed a document titled *Submission in Response to Resolution and Order of August 18, 2022, on LUMA's Performance, LUMA's Objections and Requests for Corrections or Clarifications* ("October 15 Motion"). In the October 15 Motion, LUMA identified requests to correct data from Appendix A and Attachment A of the August 18 Resolution.<sup>12</sup> LUMA also disagreed or objected to the Energy Bureau's determination on Non-Performance for Specified Performance Metrics.<sup>13</sup>

On October 19, 2022, the Energy Bureau issued a Resolution and Order ("October 19 Resolution") through which it extended the August 18 Resolution analysis upon review of PREPA's October 12 Motion, to allow LUMA and PREPA to comply with the August 18 and 24 Resolutions on or before November 7, 2022.

On October 20, 2022, LUMA filed a document titled *Submission of Performance Metrics Report for July through September 2022* ("October 20 Motion"). In the October 20 Motion, LUMA submitted the LUMA and PREPA Performance Metrics for the period between July and September 2022. In the October 20 Motion, LUMA requested that the Energy Bureau grant a request to defer the reporting of reliability data for the month of September to allow LUMA to address the impacts of Hurricane Fiona.<sup>14</sup>

On November 7, 2022, PREPA filed a document titled *Fifth Request for Extension of Time to Submit the Performance Metrics Report* ("November 7 Motion"). In the November 7 Motion, PREPA requested additional time to comply the Energy Bureau's August 18 and August 24, and October 19 Resolutions.<sup>15</sup>

On November 10, 2022, PREPA filed a document titled *Motion to Submit Performance Metrics Report and in Compliance with the October 19 Order* ("November 10 Motion"). The November

<sup>8</sup> September 21 Motion, p. 3, ¶10.

<sup>9</sup> *Id.*, p.4, ¶11.

<sup>10</sup> September 23 Resolution, p. 3.

<sup>11</sup> PREPA requested until October 21, 2022, to produce the Performance Metric Report. October 12 Motion, p. 4, ¶12.

<sup>12</sup> October 15 Motion, p. 5, Part III.

<sup>13</sup> *Id.*, Part IV.

<sup>14</sup> October 20 Motion, p. 14.

<sup>15</sup> PREPA requested three (3) workdays, until November 10, 2022. November 7 Motion, p. 4.




10 Motion contains PREPA’s performance metrics report in Annex A, and PREPA’s vehicle and workforce metrics report in compliance with the Energy Bureau’s October 19 Resolution in Annex B.

**II. Discussion and Directives**

- A. The Energy Bureau **TAKES NOTICE** of the **October 15 Motion** and provides the following analysis and directives:

Exhibit 1, Submission of Explanations and Corrective Actions

- 
1. **Percent of bills estimated vs. read.** LUMA commented that during the first 90 days of operation, LUMA worked to bring 50 substations back online that were either out of service or whose metering communication devices were not communicating.<sup>16</sup> LUMA also noted it had inherited systems that are “extremely fragile and mismanaged programs and processes.”<sup>17</sup> LUMA noted it has undertaken several initiatives to improve meter reading efficiency and upgrade meter reading infrastructure. The Energy Bureau notes that LUMA did not commit to a timeline for when the percentage of bills estimated would drop. The Energy Bureau **ORDERS** LUMA to provide an update to RFI-LUMA-MI-[2019-0007]-220818-PREB-1 in the April 2023 quarterly filing to assess the impact of LUMA’s efforts.
  2. **Cash recovered on theft.** LUMA commented that the operations team responsible for addressing irregularities and diverted meters also had to handle over 200,000 service orders inherited by LUMA at commencement.<sup>18</sup> LUMA noted it is developing a strategy to focus on unbilled and underbilled issues that address non-technical losses.<sup>19</sup> LUMA noted the procedural process to finalize the strategy would be completed at the end of December 2022. The Energy Bureau **ORDERS** LUMA to provide an update to RFI-LUMA-MI-[2019-0007]-220818-PREB-2 in the April 2023 quarterly filing to assess the impact of LUMA’s efforts to reduce non-technical losses.
  3. **Percent of customers on AMI.** LUMA commented that it does not have Advanced Metering Infrastructure (“AMI”). However, the Energy Bureau notes that LUMA has been reporting a non-zero number of customers on AMI in its quarterly reports. The Energy Bureau **ORDERS** LUMA, in the April 2023 quarterly filing, to explain this discrepancy and reconcile the AMI numbers provided in quarterly reporting with its claim that it does not have AMI.
  4. **Timely submission of Monthly Reports.** LUMA commented that its delays in submitting Monthly Operating Reports in Fiscal Year 2022 were largely due to gaps in the PREPA financial system, data quality issues, and a lack of established policies and procedures.<sup>20</sup> LUMA noted it is implementing an improvement process and developed new procedures with PREPA to improve end-of-month reporting. The Energy Bureau notes that LUMA did not commit to when the monthly reporting would improve. Accordingly, the Energy Bureau **ORDERS**

<sup>16</sup> October 15 Motion. RFI-LUMA-MI-2021-0007-220818-PREB-1.

<sup>17</sup> *Id.*

<sup>18</sup> October 15 Motion. RFI-LUMA-MI-2021-0007-220818-PREB-2.

<sup>19</sup> *Id.*

<sup>20</sup> October 15 Motion. RFI-LUMA-MI-[2019-0007]-220818-PREB-4.



LUMA to provide an update to RFI-LUMA-MI-[2019-0007]-220818-PREB-4 in the April 2023 quarterly filing to assess the impact of LUMA's efforts.

5. **Total available vehicles in service.** LUMA commented that, during the transition period, LUMA was only able to visually confirm less than half of the vehicle fleet and that only after the Service Commencement Date<sup>21</sup> was LUMA able to evaluate the entire vehicle fleet.<sup>22</sup> LUMA noted it has implemented strategies to certify the inventory of available vehicles and that, as of May 2022, the vehicle fleet has increased to 1,722.<sup>23,24</sup> LUMA also indicated it is training 40 mechanics to help speed the repair process. Accordingly, the Energy Bureau **ORDERS** LUMA to provide an update to RFI-LUMA-MI-[2019-0007]-220818-PREB-5 in the April 2023 quarterly filing to assess the impact of LUMA's efforts to improve the availability of its vehicle fleet.
6. **SAIDI.**<sup>25</sup> LUMA commented that several factors contributed to worsen SAIDI following LUMA's Service Commencement Date.<sup>26</sup> These factors included the introduction of operational procedures that included new safety improvements that temporarily slowed response times, poor condition of critical equipment, new work method improvements, and ancillary factors related to the transition away from PREPA.<sup>27</sup> LUMA noted it is also implementing several infrastructure improvement programs, some of which would occur in Fiscal Year 2023.<sup>28</sup> Reliability remains a paramount issue and the Energy Bureau requires to oversee LUMA's actions to implement its improvement procedures and program. The Energy Bureau **ORDERS** LUMA to provide an update to RFI-LUMA-MI-[2019-0007]-220818-PREB-6 in the April 2023 quarterly filing to assess the impact of LUMA's efforts to reduce outages.
7. **SAIFI.**<sup>29</sup> LUMA commented that it has improved SAIFI by 30% compared to PREPA's baseline.<sup>30</sup> LUMA indicated that its efforts focus on repair and/or replace key grid assets, effect permanent repairs when responding to unplanned outages, targeted vegetation management.<sup>31</sup> Reliability remains a paramount issue and the Energy Bureau requires to oversee LUMA's actions to implement the improvement procedures and programs to continue the observed trend in SAIFI improvements. The Energy Bureau **ORDERS** LUMA to provide an update to RFI-LUMA-MI-[2019-0007]-220818-PREB-8 in the April 2023 quarterly filing to assess the impact of LUMA's efforts to reduce outages.

<sup>21</sup> On June 22, 2020, the Puerto Rico Electric Power of Puerto Rico ("PREPA"), the Puerto Rico Public-Private Partnerships Authority ("P3A") and LUMA entered into an Operation and Maintenance Agreement ("OMA") under which LUMA will manage PREPA's transmission and distribution system ("T&D System"). June 1, 2021 is the Service Commencement Date as defined in Section 1.1 of the OMA.

<sup>22</sup> October 15 Motion. RFI-LUMA-MI-[2019-0007]-220818-PREB-5.

<sup>23</sup> *Id.*

<sup>24</sup> The Energy Bureau notes that the number of vehicles has now increased to 2,018 for September 2022.

<sup>25</sup> System Average Interruption Duration Index.

<sup>26</sup> October 15 Motion. RFI-LUMA-MI-2021-0007-220818-PREB-6.

<sup>27</sup> *Id.*

<sup>28</sup> *Id.*

<sup>29</sup> System Average Interruption Frequency Index.

<sup>30</sup> October 15 Motion. RFI-LUMA-MI-2021-0007-220818-PREB-8.

<sup>31</sup> *Id.*



8. **CAIDI.**<sup>32</sup> LUMA commented that CAIDI has deteriorated since SAIFI has improved and that CAIDI is calculated as SAIDI divided by SAIFI.<sup>33</sup> LUMA notes it has initiated other improvement programs such as distribution automation, work crew allocation, and vegetation management strategies.<sup>34</sup> As noted previously, reliability remains a paramount issue and the Energy Bureau requires to oversee LUMA's actions to implements its improvement procedures and programs to impact CAIDI. The Energy Bureau **ORDERS** LUMA to provide an update to RFI-LUMA-MI-[2019-0007]-220818-PREB-9 in the April 2023 quarterly filing to assess the impact of LUMA's efforts to reduce outages.

Exhibit 2, On Metrics with Requested Corrections

9. **Number of Customer Complaints Closed by Class (Act 57-2014<sup>35</sup> Claims).** LUMA commented that the data presented for March 2022 through May 2022 was different than that filed by LUMA on July 29, 2022.<sup>36</sup> The August 18 Resolution stated that the Energy Bureau acknowledged but would not analyze information submitted in the July 29 Motion since the motion contained data after May 30, 2022, or restated data. LUMA's updated data will be reflected in future analyses conducted by the Energy Bureau.
10. **Average speed to answer.** LUMA commented that the data did not match the information it reported previously. This resulted from converting the data from the time and date format provided by LUMA in Excel to a number. The Energy Bureau **ORDERS** LUMA to provide prospectively this metric in the same number format as presented in the October 15 Motion, Exhibit 2 page 3.
11. **LUMA Employee Headcount.** LUMA commented that it was unable to determine the data used to create Figure 12 of the August 18 Resolution. The employee headcount data presented in the August 18 Resolution was submitted by PREPA, not LUMA. The Energy Bureau acknowledges that this headcount data was not submitted by LUMA. Regardless, the Energy Bureau **ORDERS** LUMA to continue to provide explanations to distinguish LUMA's contract and regular employees.
12. **Percent of Customer Calls Answered.** LUMA commented that it calculated the percent of customer calls answered over the 12- month period from June 2021 through May 2022 and found a different value than the Energy Bureau's calculations. LUMA's methodology calculates this metric for each month and then averages the monthly percentage values from June 2021 to May 2022. The Energy Bureau calculated its percentage value by dividing the number of calls answered for the year by the number of calls received for the year. The Energy Bureau **ORDERS** LUMA to prospectively utilize the Energy Bureau method of calculation for this metric.

<sup>32</sup> Customer Average Interruption Duration Index.

<sup>33</sup> October 15 Motion. RFI-LUMA-MI-2021-0007-220818-PREB-9.

<sup>34</sup> *Id.*

<sup>35</sup> Known as *Transformation and Energy RELIEF Act*, as amended ("Act 17-2014").

<sup>36</sup> *Request for Modification of Schedule for Filing System Data and Submission of Performance Metrics Report for June 2022, In re: The Performance of the Puerto Rico Electric Power Authority*, case no. NEPR-MI-2019-0007, filed by LUMA on July 29, 2022 ("July 29 Motion").



Exhibit 3, On LUMA's disagreements with or objections to the Energy Bureau's Determination on Non-Performance for Specified Performance Metrics.<sup>37</sup>

a. These metrics include the following:

- Total installed distributed generation capacity—wind Santa Isabel
- Incremental installed distributed generation capacity per month—photovoltaic, San Juan
- Incremental installed distributed generation capacity per month—wind total
- Monthly system sales by customer class—public lighting
- Monthly system sales by customer class—others
- Monthly sales per municipalities
- Monthly system peak—total
- Average revenue per kilowatt-hour sold
- Inventory Turns (annualized percent of value) —warehouse T&D
- Percent of automatically generated NTL leads found to be occurrences of theft
- Average capacity factor of RPS-eligible capacity
- Generation from RPS-eligible PPOA's (by unit)
- Fuel Expenditure vs Forecast—#6
- Inventory control—#6
- MMBTU consumed vs. forecast—Diesel #2, #6, natural gas

The Energy Bureau does not necessarily disagree with LUMA's comments regarding the determination on non-performance for the metrics identified. Regardless, these metrics have been identified by the Energy Bureau to be important to assess the state of the Puerto Rico electric grid. The Energy Bureau **ORDERS** LUMA to continue to report the information.

B. The Energy Bureau **TAKES NOTICE** of the **October 20 Motion** and provides the following analysis and directives:

1. LUMA stopped providing monthly values for OSHA metrics, including OSHA Dart Rate, OSHA Severity Rate, OSHA Fatality Rate, and OSHA Recordable rate. Instead, LUMA provided the metrics as a 12-month rolling average. The Energy Bureau **DENIES** LUMA's request to report these on a cumulative basis and **ORDERS** LUMA, in the April 2023 quarterly filing, to report the monthly values for July 2022 through September 2022. The Energy Bureau **ORDERS** LUMA to continue to report the 12-month rolling average values in addition to the monthly values.
2. LUMA begun reporting data on total budgeted and actual head counts by employee type starting on July 2022 and will continue to report on these metrics on an ongoing basis. The Energy Bureau **ORDERS** that LUMA, in the April 2023 quarterly filing, provide this information for the months of June 2021 through June 2022 to the extent that data is available.
3. The October 20 Motion included Excel file titled *10.20.2022 Resumen Metricas* ("Resumen Metricas"). The Resumen Metricas file included a tab titled *Generation* that presents a value as "DIV/O!", which is an error indication in cells AP26 and AQ26. The Energy Bureau **ORDERS** LUMA and PREPA to correct and resubmit this data on or before ten (10) business days from the notification of this Resolution and Order. The Bureau further **ORDERS** LUMA and PREPA, in the April 2023 quarterly filing, to provide the calculations used to derive the numbers presented for the operational expenses vs. budget and capital expenses vs. budget metrics dating back to June 2021.

<sup>37</sup> October 15 Motion, Exhibit 3.



4. The data for Average Speed to Answer and Wait Times in Customer Service Centers is being presented in Excel in time and date format, which is not conducive to a proper analysis. The Energy Bureau **ORDERS** LUMA to prospectively report its data in minutes in decimal format. For example, LUMA submitted a value of 12:07:52 AM for September 2022, which does not make sense. If LUMA intended the entry to represent 7 minutes and 52 seconds, LUMA should have submitted a value of 7.87.
5. The Energy Bureau **GRANTS** LUMA's request to defer the reporting of reliability data for the month of September 2022 until the next quarterly report due January 20, 2023. The Energy Bureau **REMINDS** LUMA that the availability of prompt and accurate reliability data is critical to understanding how LUMA operates the Puerto Rico electric grid. The Energy Bureau **ORDERS** LUMA and PREPA, in the April 2023 quarterly filing, to provide an explanation how the two entities are improving the availability of reliability data and how they may share information with the Energy Bureau more transparently.
6. PREPA continues to report that 63 percent of its vehicle fleet was out of service as of September 2022. The Energy Bureau **ORDERS** PREPA, on or before ten (10) business from the notification of this Resolution and Order, to explain why over half of the fleet is out of service and to provide the number of vehicles PREPA needs to maintain to adequately serve its generation fleet.
7. In previous metrics filings, PREPA reported "In Progress" for emissions and carbon intensity metrics for the past 16 months. The Energy Bureau **ORDERS** PREPA to provide an update on the status of the collection and analysis of emissions data. This explanation will be included in the next quarterly report. The Energy Bureau reserves the right to call a technical conference to discuss the status of these metrics.
8. LUMA has reported 226.9 MW of Operational RPS-Eligible Capacity for each month since June 2021. Prior to June 2021, PREPA had reported a value of 272.9 MW for each month since June 2019. The Energy Bureau **ORDERS** LUMA to provide an update on the LUMA-Pattern team working to resolve the 20 MW of pending additional capacity at Pattern Santa Isabel,<sup>38</sup> how the procurement proceeding has impacted this metric, and how LUMA and PREPA plan to improve on this metric going forward. This explanation shall be included in the next quarterly report.
- C. The Energy Bureau **TAKES NOTICE** of the **November 10 Motion** and provides the following analysis and directives:
1. PREPA's forced outage rates for Mayaguez Gas and Aguirre Combined Cycle units indicate long maintenance periods of one to one-and-a-half years to return the two units into service. The Energy Bureau **ORDERS** PREPA, in the April 2023 quarterly filing, to confirm whether the Mayaguez Gas and Aguirre Combined Cycle units returned to service in November and December 2022 as PREPA stated in Annex A<sup>39</sup>. The Energy Bureau **ORDERS** PREPA, in the April 2023 quarterly filing, to provide a summary of the work undertaken at the Mayaguez Gas and Aguirre Combined Cycle plants.
  2. The Energy Bureau **ACCEPTS** PREPA's November 10 Motion and **FINDS** PREPA's Metrics Report to be sufficient and in compliance with the October 19 Resolution.

<sup>38</sup> LUMA. July 29, 2022. *Request for Modification of Schedule for Filing System Data and Submission of Performance Metrics Report for June 2022*. p. 13.

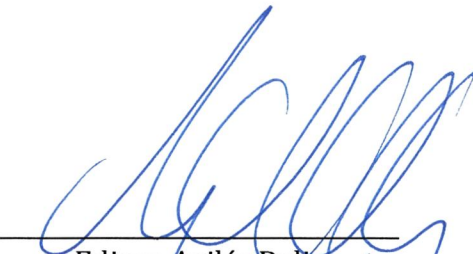

<sup>39</sup> November 10 Motion, Annex A.



The Energy Bureau further **ORDERS** PREPA to provide updates on the maintenance issues and corrective measures identified in its Metrics Report along with its Quarterly Performance Metrics Report going forward.

The Energy Bureau **WARNS** PREPA and LUMA that, noncompliance with the provisions of this Resolution and Order, may result in the imposition of fines pursuant to Article 6.36 of Act 57-2014.<sup>40</sup>

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 hereby certify that the majority of the members of the Puerto Rico Energy Bureau has so agreed on January 12, 2023. I also certify that on January 12, 2023, a copy of this Resolution and Order was notified by electronic mail to margarita.mercado@us.dlapiper.com, jmarrero@diazvaz.law, kbolanos@diazvaz.law, hriviera@jrsp.pr.gov. I also certify that today, January 12, 2023, 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 January 12, 2023.

  
Sonia Seda Gaztambide  
Clerk



<sup>40</sup> Puerto Rico Energy Transformation and RELIEF Act, as amended, (Act 57-2014”).