

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

NEPR Received: Nov 9, 2021 7:49 PM

IN RE:

THE PERFORMANCE OF THE PUERTO
RICO ELECTRIC POWER
AUTHORITY

CASE NO.: NEPR-MI-2019-0007

**SUBJECT: Submission of Information
Requested During Technical Conference of
November 4, 2021.**

**MOTION IN COMPLIANCE WITH REQUESTS ISSUED IN TECHNICAL
CONFERENCE OF NOVEMBER 4, 2021**

TO THE PUERTO RICO ENERGY BUREAU:

COME NOW, LUMA ENERGY, LLC as Management Co., and **LUMA ENERGY
SERVCO, LLC** (collectively, **LUMA**), through the undersigned legal counsel and respectfully
state and request the following:

1. On November 4, 2021, this Honorable Puerto Rico Energy Bureau (“Energy
Bureau”) held a Technical Conference to discuss aspects of LUMA’s Quarterly Performance
Metrics Submission of September 20, 2021 (“September 20th PM Submission”), on several
statistics involving both the Transmission and Distribution System and the PREPA Generation
Assets.

2. During the Technical Conference, the Energy Bureau and Energy Bureau
consultants issued verbal bench orders for LUMA to provide additional information on or before
November 9, 2021. As Exhibit 1 to this Motion, LUMA submits its responses to the requests for
information issued by the Energy Bureau.

3. As LUMA outlined in the presentation offered during the November 4th Technical Conference, many of the statistics that were collected by the Puerto Rico Electric Power Authority (“PREPA”), lacked standard data collection practices and used inconsistent methodologies. Further, for many of PREPA’s statistics there was no supporting documentation or stable information technology systems to ensure consistent and accurate data collection and reporting. *See* LUMA November 4th Presentation, slide 3. Overall, PREPA reporting had serious errors and in several cases was misleading.

4. In one instance, during the Technical Conference, PREPA confirmed they had 318 vehicles across Generation, Hydroelectric and Administration; however, the number previously reported to LUMA by PREPA was 9 vehicles. Furthermore, as stated by Mario Hurtado, LUMA is unable to verify PREPA’s values. PREPA reported 3,117 vehicles in February 2021, however upon commencement, LUMA was unable to locate 894 of said vehicles. *Id.* These issues have also been submitted to the Energy Bureau and its consultants in previous comments made by LUMA within this docket, and in some cases the inaccuracy of the data was acknowledged by the Bureau; for example, when ordering PREPA to recalculate SAIDI and SAIFI in May 21, 2021 for the periods of March 2021 through May 2021.

5. Thus, comparisons of PREPA’s reported statistics with LUMA’s are premature and caution should be used in comparing PREPA’s reported numbers.

6. Furthermore, consideration should be given to the fact that LUMA is currently in a transitionary period with significant efforts to improve processes and procedures throughout the organization which may affect statistics with no underlying change in actual performance or customer experience.

4. During the November 4th Technical Conference PREB consultants referred to LUMA's activities as "trends" and requested explanation of the observed "trends" over for the first three months of LUMA's operations. These months included the historic transition of operations from PREPA, an 80-year-old government entity, to a new private entity. Access to many systems and sites were first provided to LUMA on June 1st, 2021 and the onboarding of over 2,000 new employees occurred on June 1st, 2021. Proper statistical trend analyses require a more static operational state and more than three data points to properly imply trends or deduce a cause-and-effect relationship. It is thus inaccurate to depict LUMA's first quarter activity as sufficient data to support a trend analysis.

5. Finally, as LUMA informed in the September 20th PM Submission, it proposes to file the Generation Performance Metrics separately from the Transmission and Distribution Performance Metrics. LUMA hereby informs that, to further coordination with PREPA connection on the submission of the quarterly performance metrics statistics, LUMA shared with PREPA a template for reporting of PREPA's Generation performance metrics. LUMA will continue to work collaboratively with PREPA to meet the Energy Bureau's deadline for submission of Performance Metrics statistics and to submit accurate data on generation for all performance categories.

WHEREFORE, LUMA respectfully requests this Honorable Bureau **take notice of the** aforementioned and **deem** that LUMA complied with the verbal bench orders that were issued during the Technical Conference of November 4, 2021.

RESPECTFULLY SUBMITTED.

In San Juan, Puerto Rico, this 9th day of November 2021.

I hereby certify that I filed this motion using the electronic filing system of this Energy Bureau and that I will send an electronic copy of this motion to the attorneys for PREPA, Joannely Marrero-Cruz, jmarrero@diazvaz.law; and Katuska Bolaños-Lugo, kbolanos@diazvaz.law.



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EXHIBIT 1

The Performance of the Puerto Rico Electric Power Authority – 11/04/21 Technical Conference

Docket ID: NEPR-MI-2019-0007

Response: TC-RFI-LUMA-MI-19-0007-211104-PREB-001

Subject: Absenteeism

Request: In discussing the Absenteeism metric, PREB consultants requested LUMA provide any protocol and detail on how the metric was calculated.

Response:

Using support documentation provided in the last Quarterly Report to PREB, LUMA was able to infer that the absenteeism metric was calculated by the following these steps:

1. Total number of non-exempt employees in each pay period is determined
 - a. *Note: For June – August, the employee count used was employees active as of 08/31/2021. Going forward, the employee count will be updated in accordance with the last date of each pay period.*
2. Total number of non-exempt employees is multiplied by the hours per pay period (40 hours per week) to confirm the total working hours available
3. Total hours of absenteeism is determined using the Kronos database and specifying absenteeism pay codes
4. Absenteeism percentage is calculated by taking the absentee hours divided by the total hours available per pay period multiplied by 100

The Performance of the Puerto Rico Electric Power Authority – 11/04/21 Technical Conference

Docket ID: NEPR-MI-2019-0007

Response: TC-RFI-LUMA-MI-19-0007-211104-PREB-002

Subject: SAIDI & SAIFI

Request: After LUMA's presentation, PREB consultants requested the data set regarding the SAIDI & SAIFI restated figures by System and by Region.

Response:

Industry-Standard:

As discussed in the Technical Conference on November 4th, LUMA has reviewed and recalculated the reliability statistics. LUMA recalculated PREPA's reliability metrics according to IEEE Std. 1366-2012TM methodology based on information available. Comparisons against historical performance are meaningful when the calculations use the same methodology; therefore, LUMA recalculated SAIFI, SAIDI & CAIDI for the periods PREPA had not already recalculated.

Cause-Code Refinement:

- After submitting June-August 2021 data on September 20, 2021 LUMA confirmed that outages due to generation-related load shedding were still being included in the calculations of SAIFI & SAIDI
- LUMA has refined the calculation to remove these generation-related load shedding outages and has updated SAIFI & SAIDI values for this period
- Modifications to LUMA's Outage Management Systems (OMS) are currently underway to more clearly identify outages due to generation problems to efficiently filter those outages from the T&D performance metrics

Please find the restated values for June 2019 – August 2021 attached in a restated Quarterly Report Template: TC-RFI-LUMA-MI-19-0007-211104-PREB-002_Exhibit 1.

The Performance of the Puerto Rico Electric Power Authority – 11/04/21 Technical Conference

Docket ID: NEPR-MI-2019-0007

Response: TC-RFI-LUMA-MI-19-0007-211104-PREB-003

Subject: Accounts Payable

Request: PREB requested the number of backlog invoices inherited by LUMA that contributed to a delay in closing the financial books.

Response:

To the best of LUMA's knowledge, the backlog of AP invoices inherited from prior to June 1, 2021 is 6,080 invoices.

The Performance of the Puerto Rico Electric Power Authority – 11/04/21 Technical Conference

Docket ID: NEPR-MI-2019-0007

Response: TC-RFI-LUMA-MI-19-0007-211104-PREB-004

Subject: Outages Cause Study

Request: PREB consultants had inquired about any studies conducted regarding outage causes. Don Cortez confirmed that outage causes have been analyzed for the summer period. PREB requested the outage causes for June through August.

Response:

A representation of the outage causes has been provided in TC-RFI-LUMA-MI-19-0007-211104-PREB-004_ Exhibit 1 – please note the tables have been formatted to represent outage causes in higher volume in red, lower volume in green.

Distribution System Level Jun (% Contribution)

Outage Category	Clientes	Count of Evento	Duration_Minutes	SAIDI
	2021	2021	2021	2021
115kv Transmission Line	0.1%	0.1%	0.1%	0.3%
38kv Transmission Line	1.7%	0.5%	0.2%	0.8%
Animal	2.2%	5.7%	3.9%	2.9%
Atmospheric Disturbance	0.0%	0.0%	0.0%	0.0%
Bad Weather / Lightning / Wet Ash	6.2%	12.6%	12.8%	8.2%
Breaker Transmission	1.0%	0.1%	0.1%	0.7%
Broken Cable	4.4%	1.2%	0.8%	1.4%
Broken Insulator / Pin	5.8%	2.8%	1.9%	3.6%
Broken Joint Or Termination	0.4%	0.3%	0.3%	0.2%
Broken Or Rotted Hardware	0.3%	0.7%	0.8%	0.4%
Defective Cutout	3.3%	7.5%	7.8%	5.3%
Defective Lightning Arresters	1.8%	1.0%	0.9%	1.3%
Defective Pole	2.2%	2.1%	2.7%	2.8%
Defective Switch	3.4%	1.2%	0.3%	1.3%
Faulty Transformer	0.2%	2.4%	5.3%	1.0%
Fire	0.0%	0.0%	0.0%	0.0%
Human Error	1.2%	0.1%	0.0%	0.0%
Miscoordination	0.2%	0.1%	0.1%	0.6%
No Reported Cause	22.7%	13.7%	12.3%	17.7%
Other Causes	0.4%	0.8%	0.7%	0.1%
Overload	0.0%	0.0%	0.0%	0.0%
Power Transformer Failed	0.0%	0.0%	0.0%	0.0%
Secondary Defective Pole	0.0%	0.4%	0.1%	0.0%
Secondary Vegetation	0.1%	1.1%	1.2%	0.1%
Secondary Wire Down	0.3%	6.1%	7.1%	0.8%
Switching Unit	1.1%	0.6%	0.3%	0.3%
Transmission Substation Outage	0.3%	0.2%	0.1%	0.5%
Vegetation	18.7%	24.9%	26.2%	28.3%
Wire Down	22.0%	13.9%	13.9%	21.2%

Distribution System Level Jul (% Contribution)

Outage Category	Cientes	Count of Evento	Duration_Minutes	SAIDI
	2021	2021	2021	2021
115 kV Transmission Line	1.0%	0.2%	0.0%	0.2%
38 kV Transmission Line	2.5%	0.7%	0.4%	1.1%
Animal	5.5%	6.1%	4.6%	5.1%
Bad Weather	5.7%	11.9%	12.1%	8.9%
Breaker (Transmission)	0.3%	0.1%	0.0%	0.1%
Broken Cable	2.0%	1.2%	2.9%	1.5%
Broken Insulator/ Pin	7.2%	3.2%	2.4%	5.8%
Broken Splice/Terminal	1.8%	0.9%	0.5%	1.1%
Broken/ Rusty Hardware	0.1%	0.3%	0.2%	0.1%
Defective Cutout	2.8%	6.1%	6.2%	4.0%
Defective Pole	1.8%	1.9%	1.7%	2.7%
Defective Switch	5.7%	1.6%	0.8%	6.0%
Faulty Power Transformer	0.0%	0.0%	0.0%	0.0%
Faulty Transformer	0.4%	3.0%	4.8%	1.1%
Fire	0.5%	0.1%	0.0%	0.0%
Lightning Arresters	2.5%	1.0%	1.1%	0.9%
Load Shed (Contingency)	0.0%	0.0%	0.0%	0.0%
Miss Coordination	0.5%	0.1%	0.0%	0.1%
No Cause Reported	10.6%	11.1%	10.9%	8.8%
Other Causes	1.5%	0.7%	0.6%	2.0%
Overload	0.1%	0.1%	0.0%	0.0%
Secondary Defective Pole	0.0%	0.5%	0.5%	0.1%
Secondary Vegetation	0.1%	1.6%	1.9%	0.2%
Secondary Wire Down	0.5%	8.1%	8.3%	1.1%
Switch	0.1%	0.1%	0.2%	0.3%
Transmission Substation Bus Outage	0.0%	0.0%	0.0%	0.0%
Vegetation	20.0%	26.0%	27.8%	27.2%
Wire Down	27.1%	13.6%	12.1%	22.3%



Distribution System Level Aug (% Contribution)

Outage Category	Clientes	Count of Evento	Duration_Minutes	SAIDI
	2021	2021	2021	2021
115 kV Transmission Line	0.3%	2.9%	4.5%	0.8%
38 kV Transmission Line	2.0%	0.7%	0.3%	2.7%
Animal	5.5%	6.7%	5.5%	7.0%
Atmospheric Disturbance	0.0%	0.0%	0.0%	0.0%
Automatic Load Transfer	1.1%	0.3%	0.0%	0.1%
Bad Weather	3.5%	10.8%	11.1%	6.3%
Breaker (Transmission)	1.0%	0.1%	0.0%	0.6%
Broken Cable	1.4%	1.4%	2.1%	1.0%
Broken Insulator/ Pin	10.6%	2.8%	2.2%	7.6%
Broken Splice/Terminal	0.6%	0.4%	1.1%	0.5%
Broken/ Rusty Hardware	0.2%	0.4%	0.4%	0.3%
Defective Cutout	4.6%	6.5%	7.0%	6.6%
Defective Pole	3.2%	2.5%	2.7%	4.3%
Defective Switch	8.5%	1.6%	0.6%	4.5%
Faulty Power Transformer	0.0%	0.0%	0.0%	0.0%
Fire	0.0%	0.0%	0.0%	0.0%
Human Error	0.8%	0.2%	0.0%	0.1%
Lightning Arresters	2.1%	1.1%	0.8%	0.9%
Load Shed (Contingency)	3.1%	0.3%	0.0%	0.7%
Miss Coordination	0.3%	0.1%	0.1%	0.3%
No Cause Reported	11.8%	12.7%	12.9%	8.8%
Other Causes	0.1%	0.7%	1.2%	0.1%
Overload	0.1%	0.1%	0.0%	0.1%
Secondary Defective Pole	0.1%	0.8%	0.8%	0.1%
Secondary Vegetation	0.1%	1.1%	1.1%	0.1%
Secondary Wire Down	1.0%	8.5%	8.8%	3.7%
Switch	0.0%	0.1%	0.1%	0.1%
Transmission Substation Bus Outage	0.0%	0.0%	0.0%	0.0%
Vegetation	18.1%	25.3%	24.3%	22.7%
Wire Down	20.2%	11.8%	12.1%	20.2%

The Performance of the Puerto Rico Electric Power Authority – 11/04/21 Technical Conference

Docket ID: NEPR-MI-2019-0007

Response: TC-RFI-LUMA-MI-19-0007-211104-PREB-005

Subject: Outage Management System

Request: Don Cortez referenced a study on the benefits of upgrading an Outage Management System. PREB consultants requested that study be provided for review.

Response:

Please find the study information requested below. Please note – this is a copyrighted study and a single-use license provides limited use.

Distribution-level electricity reliability: Temporal trends using statistical analysis

Author: Joseph H. Eto, Kristina H. LaCommare, Peter Larsen, Annika Todd, Emily Fisher

Publication: Energy Policy

Publisher: Elsevier

Date: October 2012

Published by Elsevier Ltd.

<https://s100.copyright.com/AppDispatchServlet?publisherName=ELS&contentID=S0301421512005034&orderBeanReset=true>

The Performance of the Puerto Rico Electric Power Authority – 11/04/21 Technical Conference

Docket ID: NEPR-MI-2019-0007

Response: TC-RFI-LUMA-MI-19-0007-211104-PREB-006

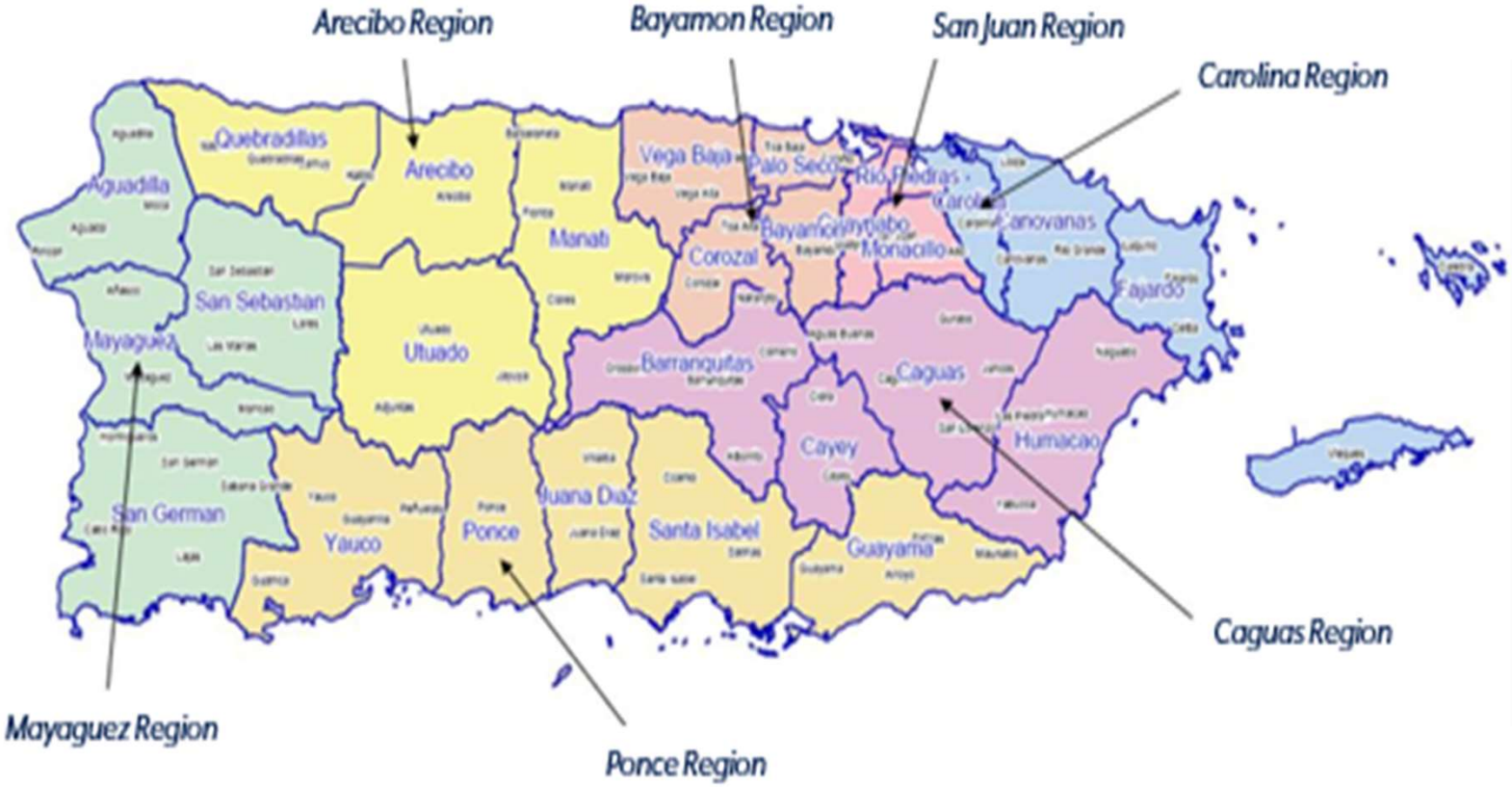
Subject: SAIDI / SAIFI Reporting Areas

Request: PREB's R&O referenced municipals when discussing SAIDI & SAIFI metrics; LUMA clarified that Puerto Rico's municipals don't correspond with the areas used for reporting due to where the circuits are located. PREB consultants requested the map reference to depict the difference.

Response:

Please refer to the map found in TC-RFI-LUMA-MI-19-0007-211104-PREB-006_Exhibit 1.

Areas for SAIDI & SAIFI



Municipal Area for SAIDI & SAIFI



The Performance of the Puerto Rico Electric Power Authority – 11/04/21 Technical Conference

Docket ID: NEPR-MI-2019-0007

Response: TC-RFI-LUMA-MI-19-0007-211104-PREB-007

Subject: Work Order Balance

Request: PREB consultants requested additional information on the increase in the Work Order Balance metric.

Response:

LUMA was able to infer using supporting documentation from previously submitted quarterly reports that the work order balances were extracted from STORMS. For the June through August period, LUMA used the same methodology to report on outstanding work orders. However, upon further analyzation of the STORMS program, LUMA has determined that the work order balance detail is invalid as there are existing programs that automatically create duplicate work orders into the STORMS program daily. Hence, the work order balance in STORMS continues to increase month over month.

Work Order Clarification

- It should be clarified that work orders in STORMS include any open project that does not necessarily indicate an urgent, power, or customer-specific work order.
 - Over 700 work orders exist related to ongoing progress for Improvement Program-related projects.
 - GIS Technicians who are in the field for routine maintenance status have the ability to create additional work orders that are not customer related.

Duplication: There are two main areas that are contributing to duplicate Work Orders.

- MiLUMA – any customer can go in and create their own work order that gets exported into STORMS. Therefore, customers can input the same request several times causing duplication. Certain tools such as validation for the same type of request are built in but specifically for power-issues; this validation does not exist for other types of requests, i.e., tree-trimming, streetlights, etc.
- Customer Call Center: If a customer calls in and does not inform the agent they already have made a request, then the agent may inadvertently create a second work order for the same issue. LUMA is working to remedy this by increasing training for call center agents and requesting work orders related to specific locations or customers be validated prior to inputting a duplicate.

Work-Order Clean-Up

This existing duplication has led to a massive clean-up effort to be able to accurately report on Work Orders using STORMS. This clean up effort led to closing all backlog work orders in order to track outstanding items requiring action. This effort was conducted in three waves, applied on the following dates:

- September 24, 2021
- October 5, 2021
- October 20, 2021

The effort took into account dates from December 2020 backward, work requests from January 2021 onwards were not part of the effort.

Please find an updated count of the Work Order Balance below:

The screenshot shows a 'Work Request Search' window with a table of work orders. The table has columns for Dist, WR#, WRType, Job Address, JobType, Respon., and Status. Below the table, a summary box indicates 'No. of WRs: 119898'. At the bottom, there are search filters for Organiztn, Building, Floor, Address, Calle, Blq/Km, B/U, Town, State, and Zip.

Dist	WR#	WRType	Job Address	JobType	Respon.:	Status
AGUD	5967668	NOND	CAR 457 K6.1, BO CAMASEYESPASI	EMERGENCIA	566	50
AGUD	5967649	NOND	130 C KALBERER, RAMEY PR 0060	EMERGENCIA	566	50
AGUD	5967614	NOND	CAR 125 K5 H9, BO CUBA AGU, MOI	REPALUM	566	50
AGUD	5967591	NOND	CAR 112 K17 H2 DER INT, CAPA SEC	REPALUM	566	50
AGUD	5967585	NOND	7 CARR 413, URB PUERTO BAHIA, I	REPALUM	566	50
AGUD	5967550	NOND	CAR 416 5.2, KM, AGU, BO. LAGUNA	REPALUM	566	50
AGUD	5967536	NOND	CAR 4414 7.1, KM, AGU, BO GUAYA	EMERGENCIA	566	50
AGUD	5967488	DESG	CAR 441 K1 H1 INT AGU, GUINIQUE	REPOTRARU	566	20
AGUD	5967485	NOND	92 URB EL PRADO AGU, AGUADILL	REPALUM	566	50
AGUD	5967476	NOND	CAR 411 INT, 1, KM, AGU, AGUADA,	MANTLINDIS	566	20
AGUD	5967460	NOND	CAL MUOZ AGU, BO GUERRERO, A	REPALUM	566	50
AGUD	5967458	NOND	CAR 2 K120 4 IZQ INT, BO CTAL AL	REMPAPRU	566	20
AGUD	5967451	DESG	CARR 417 3.3, KM, AGU, AGUADA, I	REPOTRARU	566	20

No. of WRs: 119898

Organiztn: Building: Floor:
 Address: Calle: CAR 457 K6.1, BO CAMASEYESPASEO JAI
 Blq/Km: B/U:
 Town: AGUADILLA State: PR Zip: 00605

Pending Work Orders to Date: 119,898

The Performance of the Puerto Rico Electric Power Authority – 11/04/21 Technical Conference

Docket ID: NEPR-MI-2019-0007

Response: TC-RFI-LUMA-MI-19-0007-211104-PREB-008

Subject: Customer Complaints

Request: PREB consultants asked why the *Number of Formal Customer Complaints* had declined when the *Number of Customer Calls* had increased. Requested additional information on these customer complaint-related metrics.

Response:

Number of Formal Customer Complaints

LUMA was able to confirm by analyzing the previous quarter data, that what is defined as “Formal Customer Complaint” in this Quarterly Report is the total Act 57-2014 Claims for that period. Therefore, LUMA continued to report the metric using the same methodology used by PREPA.

The data reflected over the first three months during this transitional period reflects the Act 57-2014 customer claims as of June 1st, 2021, aligning with the transition from PREPA to LUMA. These claims are tracked with individual tracking numbers and each claim is handled according to the date in which it was received.

Number of Customer Calls

As previously stated, LUMA discovered that Customer Call data previously reported by PREPA was not reflective of the valid number of calls that may have been made due to PREPA’s truncated system. This system effectively routed only a specific number of calls to call centers, all others would be dropped and not recorded consequently invalidating the data reported.

The Number of Customer Calls data reflects the significant call volumes experienced in June 2021. In June, LUMA’s transitioned to an open call volume network which allows for all calls to be addressed. Lines which were previously dropped due to the truncated system, are now open, allowing for more customer contact points. Customer Call data is now all tracked in the cloud-based system.

Correlation Between These Metrics

Customer calls are not directly correlated to customer complaints. Customers can choose to file an Act 57-2014 claim or alternatively, call the customer service center. During transitional periods like the transition from LUMA to PREPA, a number of calls are likely related to the transition taking place as opposed to a formal customer complaint. LUMA

has also foundationally changed the way the utility interacts with customers. Call center agents and agents in walk-in offices are trained to review a customer account to address high bill complaints and solve customer problems directly instead of first sending them to Act 57.