

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

NEPR Received: Apr 28, 2021 10:35 PM

IN RE:

THE PERFORMANCE OF THE PUERTO
RICO ELECTRIC POWER
AUTHORITY

CASE NO.: NEPR-MI-2019-0007

SUBJECT:

Request for Partial Reconsideration, Submitting Information on Results of J.D. Power Surveys, and Requests for Clarifications.

**MOTION FOR PARTIAL RECONSIDERATION OF RESOLUTION AND ORDER OF
APRIL 8, 2021, MOTION SUBMITTING INFORMATION IN SUPPORT THEREOF,
AND REQUESTS FOR CLARIFICATIONS**

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:

I. Introduction

LUMA hereby respectfully requests partial reconsideration of that portion of the Resolution and Order issued by this honorable Puerto Rico Energy Bureau (“Energy Bureau”) on April 8, 2021 (“April 8th Resolution and Order”), that declined to set at this juncture, baselines for LUMA’s proposed customer service metrics based on the J.D. Power Customer Satisfaction Surveys (“J.D. Power Surveys”). In support of this Motion for Partial Reconsideration, LUMA is submitting as Exhibit 1, an update on the J.D. Power Surveys as well as proposed performance baselines that were set using the results of the J.D. Power Surveys. LUMA also requests reconsideration or clarification, as explained below, with respect to baseline periods.

Finally, LUMA respectfully submits two clarifications. First, as is explained below, LUMA requests clarification of the Energy Bureau’s statement at page 8 of the April 8th Resolution and Order, that in its initial comments, LUMA indicated that PREPA does not have “the process or capability to track partial restoration to the number of customers and the duration of outage events.” *See* April 23rd Resolution and Order at page 8. Secondly, as Exhibit 2 to this Motion, LUMA is filing a revised Exhibit 3 to LUMA’s Comments on Performance Metrics and Baselines, filed on February 5, 2021 (“LUMA’s Comments on Performance Metrics and Baselines) on the value of its calculation on interruptions occurrences (SAIFI).

II. Procedural Background

This honorable Energy Bureau initiated proceedings in this case to set performance baselines and compliance benchmarks for Puerto Rico’s electric system. *See* Resolution and Order dated December 23, 2020. As established by the Energy Bureau, those performance baselines and benchmarks would be used to “develop the corresponding targets to be applied to certified electric service companies such as LUMA.” *Id.* at page 5.

A separate proceeding was initiated under the caption, *In re Performance Targets for LUMA Energy Servo, LLC*, NEPR-AP-2020-0025, to establish Performance Incentive Mechanisms (“PIMs”) applicable to LUMA. The Bureau issued a Resolution and Order that outlines the principles that should guide LUMA’s request to set PIMs’. *See id.* at pages 5-6. On February 25, 2021, LUMA filed its submission in case NEPR-AP-2020-0025 requesting that the Energy Bureau approve a revised Annex IX to the Puerto Rico Transmission and Distribution System Operation and Maintenance Agreement dated June 22, 2020 (“OMA”). On April 8, 2021,

this honorable Energy Bureau issued a procedural calendar in case NEPR-AP-2020-0025 to consider LUMA's Request for approval of a revised Annex IX to the OMA.

In this proceeding on PREPA's performance baselines, the Energy Bureau held an initial pre-filing technical conference, followed by the filing of written comments and replies to comments, a subsequent technical conference to discuss the comments and replies, and a final opportunity to file written comments on the information presented at the technical conference. *See* Resolution and Order of December 23, 2020, and Resolutions and Orders amending the calendar, dated February 1st and 11th, 2021, Case No. NEPR-MI-2019-007.

Pursuant to the procedural calendar originally set by the Bureau in its Resolution and Order of December 23, 2020, LUMA submitted three filings whereby it addressed the Bureau's data on PREPA's baselines and presented proposed performance baselines and metrics, and an initial assessment on compliance benchmarks. *See* LUMA's Motion filed on January 29, 2020 and Exhibits 1 through 3). On January 29, 2021, the Puerto Rico Electric Power Authority ("PREPA") filed a document styled "Comments of the Puerto Rico Electric Power Authority on the Establishment of Performance Baseline and Compliance Benchmarks for Electric Service Companies" ("PREPA's Comments"). PREPA later requested leave from the Bureau to re-file the January 29th comments. The Independent Office of Consumer Protection (OPIC by its Spanish acronym), the Solar and Energy Storage Association of Puerto Rico (SESA), and the Rocky Mountains Institute (RMI) also filed comments for consideration.

Per a Resolution and Order issued by this Energy Bureau on February 1, 2021 that extended the deadline to file comments, on February 5, 2021, LUMA re-submitted its comments, as well as its proposed performance baselines and metrics. *See* LUMA's Comments on Performance Metrics

and Baselines of February 5th, 2021 and Exhibits 1 through 3 to same. On even date, PREPA submitted supplemental comments.

On February 8, 2021, LUMA filed a motion requesting leave to file an amended Exhibit 2 to its February 5th comments. On February 19, 2021, and in compliance with the Bureau's directives, LUMA filed a Reply to the comments that were filed for the record on performance baselines and compliance benchmarks. On even date, PREPA filed a document styled "Reply Comments of the Puerto Rico Electric Power Authority Regarding the Establishment of Performance Baseline and Compliance Benchmarks for Electric Service Companies." A Technical Conference was held via videoconference on February 22, 2021, to discuss the comments and replies that were filed on PREPA's baseline performance and performance metrics ("February 22nd Technical Conference").

On March 1, 2021, LUMA filed a Sur-Reply to the comments that were filed for the record on performance baselines and performance metrics and including comments on the information that was presented during the February 22nd Technical Conference. On even date, PREPA filed a motion to withdraw the comments that it had filed on January 29, 2021 and February 19 and 22, 2021 ("PREPA's Motion to Withdraw Comments").

On April 8, 2021, this honorable Energy Bureau denied PREPA's Motion to Withdraw Comments because they would not be considered in an adjudicative proceeding. The Bureau furthered explained that it would consider the probative value of PREPA's Motion to Withdraw Comments. *See* April 8th Resolution and Order at page 1.

On April 8, 2021, this Energy Bureau issued a Resolution and Order with its determination on PREPA's performance baselines, addressing LUMA's submissions as well as those filed by

stakeholders. At pages 15 through 18 of the April 8th Resolution and Order, this Bureau included “Analysis, Discussions and Findings.” Then, at pages 18 through 20 of the April 8th Resolution and Order, in a Section entitled “Conclusion,” this Energy Bureau issued a series of orders: (1) establishing PREPA’s performance baseline; and (2) setting the prospective metrics to be reported by PREPA.

III. Applicable Standard to a Motion for Reconsideration

Under Section 8.0 of Bureau Regulation 9137, *Regulation for Performance Incentive Mechanisms*: “Any Person not satisfied with a decision made by the Energy Bureau under this Regulation may file, within the term of twenty (20) days from the date copy of the notice of such decision is filed by the Energy Bureau's Clerk, a request for reconsideration before the Energy Bureau wherein the petitioner sets forth in detail the grounds that support the request and the decisions that, in the opinion of the petitioner, the Energy Bureau should reconsider.” *See also* Section 11.01 of Bureau Regulation 8543, *Regulation on Adjudicative, Notice of Noncompliance, Rate Review and Investigation Proceedings* (providing that “Any party dissatisfied with the Commission’s final decision may file a motion for reconsideration before the Commission, which shall state in detail the grounds supporting the petition and the remedy that, according to petitioner, the Commission should have granted,” and adding that this request shall be filed and served in accordance with the terms and provisions of the Puerto Rico Uniform Administrative Procedure Act, Act 170 of August 12, 1988, which was repealed and substituted by Act 38-2017. Act 38-2017, on Section 3.15, 3 P.R. Laws Ann. § 9655, and allows a party adversely affected by a partial or final resolution or order to request reconsideration within 20 days of the notification of the resolution or order.)

Pursuant to the aforementioned Section 8.0, LUMA is timely filing this request for partial reconsideration within twenty days of issuance by this Energy Bureau of the April 8th Resolution and Order.

IV. Discussion in Support of Request for Partial Reconsideration

A. J.D. Power Customer Satisfaction Metrics

In its submissions of January 29th and February 5th, as amended on February 8, 2021, LUMA proposed that this Energy Bureau consider including two performance baselines for PREPA based on a third-party measure of customer satisfaction: J.D. Power Customer Satisfaction Survey (Residential Customers) and J.D. Power Customer Satisfaction Survey (Business Customers). *See* Exhibit 2, LUMA’s Comments on Performance Metrics and Baselines, as filed on February 8, 2021, at Sections 1.2.1, at page 3, and Section 2.2 at pages 8-9 and Exhibit 3 to LUMA’s Comments on Performance Metrics and Baselines at pages 2-3. Specifically, LUMA recommended “establishing a baseline for both metrics – Residential and Business Customers” – during the Front-End Transition Period. LUMA explained that J.D. Power had begun the initial surveys for both residential and commercial customers to ensure a baseline will be available at the Service Commencement Date . . . [and that] the J.D. Power Electric Utility Residential and Commercial surveys ha[d] been sent to a statistically valid sample of PREPA customers to establish a baseline.” *Id.* Section 2.2 at page 8.

At page 3 of Exhibit 3 to LUMA’s Comments on Performance Metrics and Baselines, LUMA stated that it had received the results from the first J.D. Power Survey that provided indicative measures. LUMA explained, however, that the results of the second J.D. Power Survey were needed to set baselines for the proposed J.D. Power customer service metrics. As explained

in Exhibit 1 to this Motion for Partial Reconsideration, LUMA received the results of the J.D. Power Surveys. J.D. Power determined that the results are substantial enough to create a statistically significant sample enabling the baseline to be set for Service Commencement at 398 for residential customers and at 345 for business customers. *See* Exhibit 1 to this Motion for Partial Reconsideration.

At page 17 of the April 8th Resolution and Order, thus Energy Bureau indicated that:

Regarding customer service, the Energy Bureau recognizes the importance of customer service for customers across the Commonwealth of Puerto Rico. The Energy Bureau is concerned with data in this area as well. The Energy Bureau is particularly concerned that PREPA's average speed to answer may not adequately capture all calls being made to PREPA's call centers.

The Energy Bureau appreciates LUMA's proposed participation in the JD Power Customer Satisfaction surveys. However, there are still many questions about the process and outcome of the survey that remain. Therefore, the Energy Bureau will not consider this matter at this time in the process of establishing the baseline for PREPA's.

LUMA respectfully requests reconsideration of the afore-cited determination of this honorable Energy Bureau that declined to consider at this time the J.D. Power Survey to establish a baseline for customer satisfaction metrics. The importance of including these Customer Satisfaction Performance Metrics in LUMA's set of Performance Metrics at this time cannot be overstated. These are the only measures with input directly from customers and the only proposed Customer Service Performance Metrics not impacted by uncertain and questionable historical data.

The J.D. Power Survey measured six key factors on customer satisfaction: power quality and reliability, price, billing and payment, corporate citizenship, communications and customer service. *See* Exhibit 1 to this Motion for Partial Reconsideration at page 2; *see also* Exhibit 2,

LUMA's Comments on Performance Metrics Baselines, filed on February 8, 2021, Section 2.2 at page 9. The results of the first and second J.D. Power Surveys conducted with PREPA customers provide reliable and detailed information for benchmarking purposes on key measurable aspects of customer satisfaction. The Surveys' detailed quantitative data and qualitative customer responses provide key insights into LUMA performance and the customer experience in furtherance of earlier compliance with the following public policy mandates : "[t]o guarantee every consumer's right to receive a reliable, stable, and excellent electric power service at a cost that is accessible, just, and reasonable, . . . and a fast service response, Act 17-2019, Art. 1.5(10)(a); and [t]o promote transparency and citizen participation in every process related to electric power service in Puerto Rico," *id*, Art. 1.5(10)(c).

LUMA will continue to engage J.D. Power for subsequent surveys to track performance on the six factors that the J.D. Power Customer Satisfaction metric examines. Customer Satisfaction will be measured by regularly following up with surveys. *See* Exhibit 1 to this Motion for Partial Reconsideration at page 3.

It is respectfully submitted that it is in the public interest to consider LUMA's proposed baselines on customer satisfaction and to allow LUMA to track customer satisfaction upon Service Commencement using the baselines set with the benefit of having the results of the J.D. Power Survey. The results that are now available from the J.D. Power Surveys that were conducted by a third party and reliably measured customer satisfaction considering six factors, provide significant and timely grounds for this honorable Bureau to reconsider or amend its April 8th Resolution and Order and accept LUMA's proposed baselines as explained in Exhibit 1 to this Motion for Partial Reconsideration.

It bears noting that stakeholders in this proceeding did not object to LUMA's proposed customer survey metrics nor were concerns raised with the use of the J.D. Power Survey to set baselines on customer satisfaction. As Explained in Exhibit 1 to this Motion for Partial Reconsideration, many North American utilities and regulators utilize independent surveys of their customers carried out by J.D. Power to measure customer satisfaction and overall customer service. The J.D. Power Survey provides objective measures, at par with industry standards among North American utilities to analyze and benchmark a utility's performance.

Reconsideration of the April 8th Resolution and Order is timely. It is also proper and furthers interests of efficiency, maximization of resources and avoidance of duplication, given that LUMA invested in a well-respected and reliable customer satisfaction survey whose results are relevant, intelligent and useful to this Bureau's task of setting performance baselines for PREPA on metrics that are aligned with energy public policy set forth in Acts 57-2014 and 17-2019. It is respectfully submitted that the ground of uncertainty and unavailability of the survey results stated by this Energy Bureau in the April 8th Resolution and Order to decline consideration of the J.D. Power Customer Satisfaction metrics to set baselines, is no longer present. LUMA respectfully submits that with Exhibit 1 to this Motion for Partial Reconsideration, the Energy Bureau has at its behest the relevant information to set performance baselines for PREPA on customer satisfaction.

LUMA requests that, on reconsideration, this honorable Energy Bureau accept LUMA's proposed baselines on customer satisfaction and set PREPA's performance baseline accordingly.

B. Use of Fiscal Year Ending June 2020 as Baseline Period

At page 19, paragraph 4 of the April 8th Resolution and Order, this Bureau adopted the most recent Fiscal Year ending June 30, 2020, as the baseline period for metrics. LUMA agrees with the Energy Bureau's determination that a 12-month period is generally more reasonable to determine baselines. As well, given that analyses with respect to performance data were performed in the fall of 2020, LUMA understands this Bureau's selection of Fiscal Year ending June 30, 2020 for this initial proceeding. However, LUMA respectfully requests reconsideration or clarification with respect to timing for future baseline-setting proceedings. Using data from the previous fiscal year to set targets for the next fiscal year results in baselines that are two years out of date from the period for which the baselines apply and for which targets will be set. LUMA recommends the Energy Bureau consider more recent data, such as up to the most recent quarter, in future baseline-setting proceedings.

V. Clarifications

A. Statement on LUMA's Comments on PREPA functionality to track Step Restoration Data

In Section III C, page 8 of the April 8th Resolution and Order, on reliability metrics, this honorable Bureau referenced that in its initial filings, –LUMA's Comments on Performance Metrics and Baselines, Exhibit 2 to as filed on February 8, 2021, at page 14, – LUMA indicated that PREPA does not have “the process or capability to track partial restoration to the number of customers and the duration of outage events.” It is respectfully clarified that the Bureau's statement does not accurately or fully portray LUMA's comments and assessments at page 14 of Exhibit 2 to LUMA's Comments on Performance Metrics and Baselines.

LUMA's explanation on PREPA's capabilities to track Step Restoration Data was that the PREPA Outage Management System (OMS) does not currently have procedures or functionalities in use "to explicitly capture and track data related to Step Restoration (i.e., Partial Restoration)." See LUMA's Comments on Performance Metrics and Baselines, Exhibit 2 as filed on February 8, 2021, at page 14. Importantly, LUMA also explained, among others, that, currently, data tracking processes are done manually that current processes are prone to errors:

Currently at PREPA, the operator keeps a daily log of events manually and updates events in the interruptions database manually with his notes about which events were restored in steps. This entails manually creating events for each restoration step related to the main event, then changing the time stamps, events numbers, and cause codes to mimic what occurred in the field. The number of customers involved in each step is based on the knowledge of the operators and crews since PREPA's OMS model functionality, and process does not support capturing this information in the OMS. PREPA's current process is prone to errors and creates a difficult challenge in accurately calculating the number of customers and duration impacted for the event.

Id.

LUMA respectfully requests that this Bureau consider and incorporate in the April 8th Resolution and Order the aforementioned clarification to accurately portray the nature and scope of LUMA's comments on PREPA's current processes to capture data on Step Restoration. As LUMA explained in Exhibit 2 to its Comments on Performance Metrics and Baselines, PREPA has processes available, but with limitations and vulnerabilities.

B. Submission of Correction to 2019 SAIFI in Exhibit 3 to LUMA's Comments on Performance Metrics and Baselines.

LUMA respectfully informs that at page 3 and in figure 4 of Exhibit 3 to LUMA's Comments on Performance Metrics Baselines (Benchmarks), LUMA erroneously stated that the

PREPA 2019 SAIFI value was 9.8. The correct value of occurrences for 2019 is 8.8. LUMA requests that the Bureau consider this clarification and accept a revised Exhibit 3 to LUMA's Comments on Performance Metrics and Baselines, that corrects the aforementioned error in the 2019 SAIFI calculation.

WHEREFORE, LUMA respectfully requests this Honorable Bureau to **partially reconsider** its April 8th Resolution and Order as requested in this Motion; **grant** LUMA's request to include in the April 8th Resolution and Order the proposed baselines that were set according to the results of the J.D. Power Surveys; **accept** LUMA's request for reconsideration or clarification on the period for setting future baselines; and **accept** the clarifications included in this motion on LUMA's comments on PREPA's functionality to track Step Restoration Data and 2019 interruption occurrences (SAIFI).

RESPECTFULLY SUBMITTED.

In San Juan, Puerto Rico, this 28th day of April 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.

Electronic notice of this Motion will also be sent to the Office of the Independent Consumer Protection Office, Lcda. Hannia Rivera Diaz, hrivera@jrsp.pr.gov. The public record does not include contact information for the Rocky Mountain Institute (RMI), Solar and the Energy Storage Association of Puerto Rico (SESA), to serve them a copy of this motion via electronic mail. LUMA understands that this motion will be part of the public docket and requests that the clerk's office sends RMI and SESA a copy of this filing.

Notice of this Motion will also be sent to the following stakeholders that are identified in the Bureau's April 8th Resolution and Order:

cfl@mcvpr.com; ivc@mcvpr.com; notices@sonnedix.com; leslie@sonnedix.com; victorluisgonzalez@yahoo.com; tax@sunnova.com; jcmendez@reichardescalera.com; r.martinez@fonroche.fr; gonzalo.rodriguez@gestampren.com; kevin.devlin@patternenergy.com; fortiz@reichardescalera.com; jeff.lewis@terraform.com; mperez@prrenewables.com; coter@landfillpr.com; geoff.biddick@radiangen.com; hjcruz@urielrenewables.com; carlos.reyes@ecoelectrica.com; brent.miller@longroadenergy.com; tracy.deguise@everstreamcapital.com; agraitfe@agraitlawpr.com; h.bobea@fonrochepr.com; ramonluisnieves@rInlegal.com; hriviera@oipc.pr.gov; info@sesapr.org; yan.oquendo@ddec.pr.gov; acarbo@edf.org; pjcleanenergy@gmail.com; Jmadej@veic.org; nicolas@dexgrid.io; javrua@gmail.com; JavRua@sesapr.org; Imartinez@nrdc.org; thomas.quasius@aptim.com; rtorbert@rmi.o; dortiz@elpuente.us; wilma.lopez@ddec.pr.gov; gary.holtzer@weil.com; ingridmvila@gmail.com; rstgo2@gmail.com; agc@agcpr.com; presidentcpsmith@unidosporutuado.org; jmenen6666@gmail.com; cpares@maximosolar.com; ingridmvila@gmail.com; rstgo2@gmail.com; CESA@cleanegroup.org; acasepr@gmail.com; secretario@ddec.pr.gov; julia.mignuccisanchez@gmail.com; professoraviles@gmail.com; gmch24@gmail.com; ausubopr88@gmail.com; carlos.rodriguez@valairlines.com; amaneser2020@gmail.com; acasellas@amgprlaw.com; presidente@camarapr.net; jmarvel@marvelarchitects.com; amassol@gmail.com; jmartin@arcainc.com; melitza.lopez@aep.pr.gov; eduardo.rivera@afi.pr.gov; leonardo.torres@afi.pr.gov; carsantini@gmail.com; directoralcaldes@gmail.com; imolina@fedalcaldes.com; crivera@fedalcaldes.com; LCSchwartz@lbl.gov; thomas@fundacionborincana.org; cathykunkel@gmail.com; joseph.paladino@hq.doe.gov; adam.hasz@ee.doe.gov; Sergio.Gonsales@patternenergy.com; energiaverdepr@gmail.com; hriviera@jrsp.pr.gov; Arnaldo.serrano@aes.com; gustavo.giraldo@aes.com; accounting@everstreamcapital.com; mgrpcorp@gmail.com; jczayas@landfillpr.com; auriarte@newenergypr.com; Jeanna.steele@sunrun.com; mildred@liga.coop; rodrigomasses@gmail.com; presidencia-secretarias@seguros multiples.com. agc@agcpr.com.

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Exhibit 1



LUMA's J.D. Power Customer Satisfaction Performance Metrics Baselines

NEPR-MI-2019-0007

April 28, 2021

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1.0 Introduction & Overview

On June 22, 2020, LUMA Energy, LLC as ManagementCo, LUMA Energy ServCo, LLC as ServCo (collectively, "LUMA"), the Puerto Rico Electric Power Authority ("PREPA") and the Puerto Rico Public-Private Partnerships Authority ("P3A"), entered into an Operation and Maintenance Agreement ("the OMA") under which LUMA will operate and manage PREPA's transmission and distribution system ("T&D System").

Prior to assuming management of the T&D System, LUMA is undertaking transition and planning activities as part of the Front-End Transition Services. As part of this Front-End Transition Services, and in compliance with LUMA's obligations under Section 4.2(f) of the OMA, LUMA reviewed PREPA's processes, data, and baseline performance with respect to certain Performance Metrics. In the area of Customer Satisfaction, PREPA has no processes in place or data to measure and baseline Customer Satisfaction Performance Metrics. This submission describes the process followed by LUMA to study and evaluate baseline performance for Customer Satisfaction Performance Metrics. LUMA has been reporting its progress during the Front-End Transition in monthly reports provided to P3A and PREB.

The importance of including these Customer Satisfaction Performance Metrics in LUMA's set of Performance Metrics at this time cannot be overstated. These are the only measures with input directly from customers and the only proposed Customer Service Performance Metrics not impacted by uncertain and questionable historical data.

Many North American utilities and regulators utilize independent surveys of their customers carried out by J.D. Power to measure customer satisfaction and overall customer service. LUMA initiated the J.D. Power survey during the Front-End Transition Period. J.D. Power indicated that its initial survey response was substantial enough to create a statistically significant sample enabling the baseline to be set for commencement.

J.D. Power uses survey panels to match online respondents to the target audience of a company's survey. A "survey panel" is a group of people that have been assembled, filled out a profile, and are willing to share their opinions. Many market research surveys use survey panels to target the exact respondents they need to reach. None of the panel companies that J.D. Power uses has statistically significant samples on their panels from Puerto Rico. Therefore, the LUMA survey is a proprietary survey and not part of the study with other utilities. J.D. Power used the same survey format as the study with other utilities but conducted the survey work directly with customers via email rather than through panels. While LUMA is not a part of the 144¹-utility study, the results of the study can be used for benchmarking. J.D. Power will continue to monitor their panel companies to determine if and when they have statistically significant samples on their panels from Puerto Rico.

The J.D. Power Customer Satisfaction metric examines six factors: power quality and reliability, price, billing and payment, corporate citizenship, communications and customer service. Customer Satisfaction

¹ The number of utilities included in the study can vary year to year, but typically is between 100-150 utilities. Utilities with over 100,000 customers qualify to join the study, but due to mergers, acquisitions, and divestitures in the industry, the total number varies year to year. In 2020, 143 utilities were included in the study.

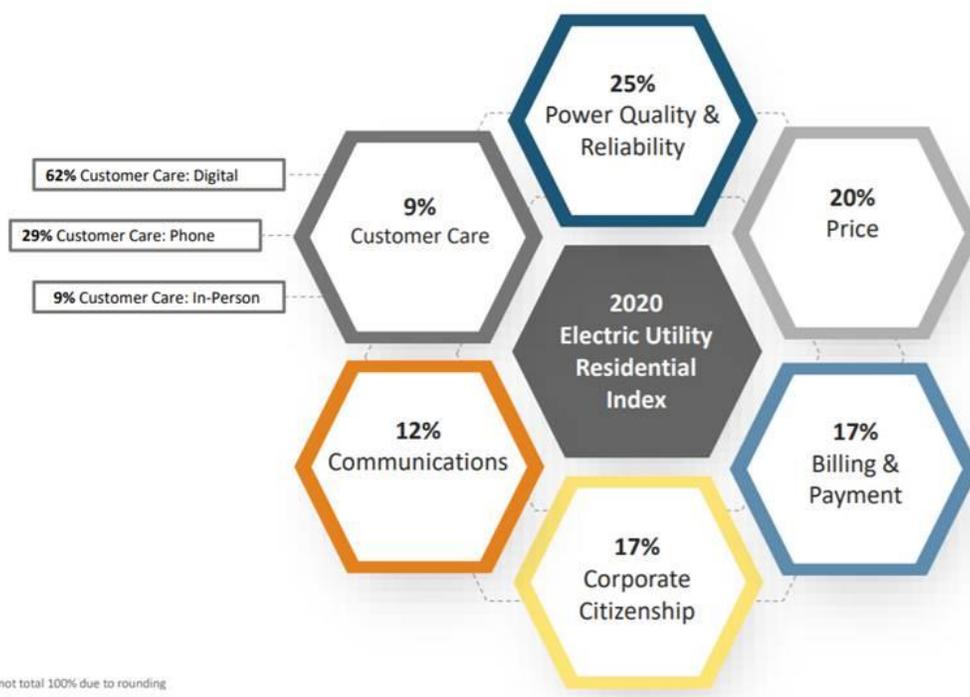
LUMA's J.D. Power Customer Satisfaction Performance Metrics Baselines

will be measured by following up with surveys in four phases per year for residential customers, and in two phases per year for commercial^{2,3} customers.

J.D. Power Customer Satisfaction Index Model

An overall customer satisfaction index (CSI), which ranges in score from 100 to 1000, is constructed to provide a single objective measure by which electric utilities can analyze and benchmark their performance relative to the competition. A total of 41 attributes (for Residential) are used to calculate six factors and the overall index for electric service. The grouping of these attributes into six factors is confirmed using factor analysis. The relative importance associated with each attribute and factor is determined using regression analysis. Together they represent a balanced synthesis of the overall residential customer experience. Residential Factors shown below; Business Factors are similar with Business segment-related differences.

2020 Electric Utility Residential Customer Satisfaction Study Index Model



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² Industrial customers were included in the commercial customers sample, but it cannot be assured that any specific customer responded.

³ The terms commercial customer and business customer are used interchangeably in this document.

LUMA's J.D. Power Customer Satisfaction Performance Metrics Baselines

LUMA Voice of Customer – J.D. Power

Along with providing benchmarking data on performance, the J.D. Power survey results are a key input into the LUMA Voice of Customer (VOC) program. The survey's detailed quantitative data and qualitative customer verbatims provide key insights into LUMA performance and the customer experience. These survey results, along with many other VOC inputs, will be used to design, prioritize and implement improvement initiatives to drive continuous improvement in the customer experience.

J.D. Power has been capturing and analyzing the Voice of the Customer data across more than a dozen industries globally for 51 years. They work largely with North American utilities and are in their 22nd year of conducting Electric Utility Residential and Electric Utility Business studies. All utilities that report with more than 100,000 residential customers are included in the study. The industry is divided into nine segments by type, geography, and size. Geography is split into four regions: East, Midwest, South, and West, then further split by size: Large and Midsize. Large utilities include those with 500,000+ customers; Midsize utilities include those with 100,000 – 499,999 customers. The main comparator group for PREPA is termed South Large and - it is the large utilities in the Southern US (e.g., Florida).

The proposed J.D Power Customer Satisfaction Performance Metrics are presented herein (with details related to each, including descriptions, calculation, and performance baselines) for consideration as part of NEPR-MI-2019-0007 to establish metrics and performance baselines.

2.0 J.D. Power Customer Satisfaction Survey Baseline Performance

2.1 Residential Customers

Description: Third party customer survey.

Calculation: The J.D. Power Customer Satisfaction metric examines six factors: power quality and reliability, price, billing and payment, corporate citizenship, communications, and customer service. Customer Satisfaction will be measured by following up with surveys in four phases per year (i.e., one per quarter for residential customers).

Data Source: J.D. Power Survey Results.

Metric baseline: LUMA Initiated the J.D. Power survey during front end transition. The initial survey response was substantial enough to enable the baseline to be set for commencement at 398.

2.2 Business Customers

Description: Third party customer survey.

Calculation: The J.D. Power Customer Satisfaction metric examines six factors: power quality and reliability, price, billing and payment, corporate citizenship, communications, and customer service. Customer Satisfaction will be measured by following up with surveys in two phases per year for commercial customers (i.e., two semi-annual surveys for commercial customers).

LUMA's J.D. Power Customer Satisfaction Performance Metrics Baselines

Data Source: J.D. Power Survey Results.

Metric baseline: LUMA Initiated the J.D. Power survey during front end transition. The initial survey response was substantial enough to enable the baseline to be set for commencement at 345.

Exhibit 2

Revised Exhibit 3 - Benchmarks

Benchmarking

1.0 Introduction

Statistical benchmarking can be used in utility regulation to provide information on performance. Use of competitive benchmarking or competitive standards is a tool to measure performance against both the typical or average utility and/or other utilities with similar characteristics and circumstances.

Benchmarking is not a quick or simple process tool, but it provides a clear indication of what aspects of performance most need to be examined. It is important however to have a thorough understanding of the factors that drive the performance both within the utility and of comparable entities.

PREPA's current performance is well below industry benchmarks in almost all the metrics measured. Further, PREPA is subject to different characteristics and circumstances than many US utilities, including geography, recent storm and earthquake damage and years of deferred maintenance. LUMA believes benchmarking is a relevant exercise and can yield useful insights. A studied approach to methods employed must be taken to ensure a robust analysis, particularly when benchmarking is used for setting rates and/or economic incentives to ensure that benchmarking results in benefits to customers. As such, similar to comments made by PREB consultants during the January 19th Technical Conference, at this time benchmarks are for illustrative purposes only. Given this, LUMA presents an initial assessment of illustrative benchmarks for the following key performance categories:

- Safety
- Customer Experience
- Reliability

2.0 Safety

The Occupational Safety and Health Administration (OSHA) was created through the Occupational Safety and Health Act of 1970 to ensure safe and healthful working conditions for working men and women by setting and enforcing standards and providing training, outreach, education and assistance. As part of their work, OSHA put in place regulations that require establishments to submit information to OSHA relating to the Safety and Health of their employees. These regulations define specific metrics and the standards for measurement and records. These OSHA standards and metrics have become the industry norm and are those that LUMA will follow when collecting health and safety data for submission to OSHA.

As part of LUMA's Front-End Transition activities, LUMA reviewed PREPA's OSHA data for the following four metrics:

- OSHA Fatalities
- OSHA Severity Rate
- OSHA Recordable Incident Rate
- OSHA DART Rate

LUMA has only evaluated PREPA's data on transmission and distribution operations and recommends that any benchmarks for PREPA's transmission and distribution data be based on comparable

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transmission and distribution utilities. The U.S. Bureau of Labor Statistics for Electric Utilities (NAICS 2211) benchmark presented by PREB on January 19th, 2021 includes power generation, transmission and distribution and is potentially a comparable benchmark for PREPA as an integrated utility. The Edison Electric Institute (EEI) provides comparable benchmarks specific to transmission and distribution operations in the United States.

PREPA's 2019 data versus the average, median and group rate EEI OSHA data is shown in the figure below for three of LUMA's four proposed metrics. OSHA Fatalities is zero for both PREPA and the average of comparable transmission and distribution establishments. PREPA's Recordable Incident Rate for 2019 is 8.76 and the EEI T&D average rate is 1.78, with the worst performing T&D comparable at a rate of 4.32. PREPA's Severity Rate for 2019 is 50.84 while the EEI T&D average rate is 26.12, with the worst performing T&D comparable of 89.22. PREPA's Dart Rate for 2019 is 5.95 and the EEI T&D average rate is 1.05, with the worst performing T&D comparable of 3.0.

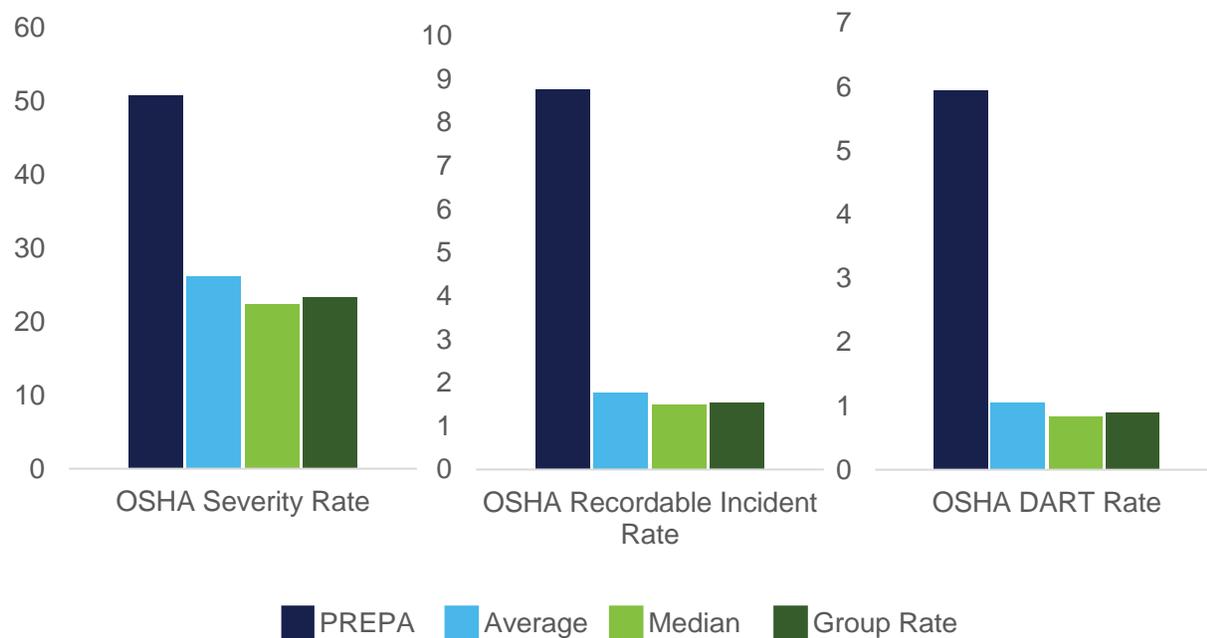


Figure 1. 2019 PREPA OSHA data Comparison with EEI T&D group data.

3.0 Customer Experience

For over 50 years, J.D. Power has been an industry leading data and insights company that amplifies the voice of the customer through research and insights that enable utilities to use customer satisfaction data as a tool to prioritize improvements. J.D. Power recently conducted the first wave of the Electric Utility Residential Customer Satisfaction Study for PREPA residential customers to determine a baseline (Note: Business customer results are in progress). Approximately 2,000 customers were surveyed across six attributes: price, corporate citizenship, quality and reliability, communication, customer care, and billing & payments. The survey measures overall customer satisfaction across critical experience factors in a systematic method that is consistent across all companies who participate in the survey. J.D. Power's consistent method and data reporting provides utilities with the ability to benchmark. Current J.D. Power analyses have provided benchmarking data consisting of 144 U.S. electric utilities.

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LUMA has received the results from the first survey providing indicative measures; however, the baseline will be set once the second survey results are completed. The results presented below are from the first survey and are directionally relevant from a baselining perspective.

The Customer Satisfaction Score (CSAT) for PREPA, as reported by J.D. Power, is 395. J.D. Power CSAT scores are reported on a scale of zero to 1000. The next lowest score from the sample of electric utilities is over 300 points higher.

The CSAT is a composite of six weighted attributes. Attribute scores for PREPA are presented below:

Table 1 J.D. Power Electric Utility Residential Customer Satisfaction Study Results

Attribute	PREPA Index	2020 Electric Utility Residential Customer Satisfaction Study 2020 Index
Price	276	699
Corporate Citizenship	279	708
Power Quality & Reliability	323	783
Communication	330	720
Customer Care	600	812
Billing & Payment	652	805
Overall	395	751



Figure 2. 2020 J.D. Power Electric Utility Residential Customer Satisfaction Study - Overall Customer Satisfaction Index

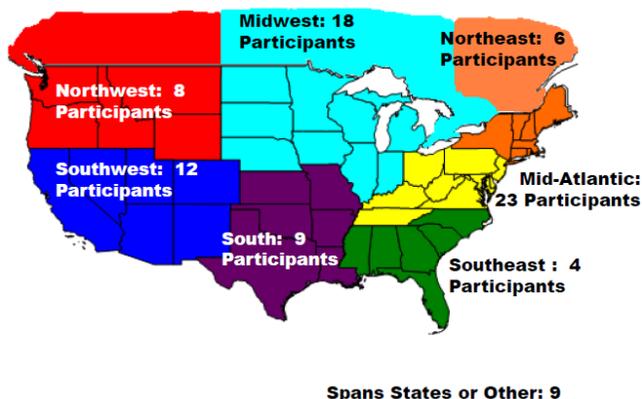
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4.0 Reliability

BENCHMARKS

The Institute of Electrical and Electronics Engineers (IEEE) has a longstanding reputation as being the world's largest technical professional organization. As part of its many activities, IEEE develops and publishes standards related to the collection, measurement and calculation of key electrical reliability indices including System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI). In order to benchmark a utility's performance in SAIDI and SAIFI against that of other utilities, IEEE provides rules on how data can be collected, measured and calculated according to the same standards.

The annual IEEE Benchmark study was initiated by the IEEE Power, Energy and Society (PES) Distribution Reliability Working Group in 2003 following a major update to the IEEE Guide for Electric Power Distribution Reliability Indices IEEE Std 1366™. The intent is to provide information for users to assess their performance relative to peers. Participation is limited to North American electric utilities and is done at no cost. Results are publicly available, but participants are anonymous, assigned a key identifier to retain anonymity, and the participation list is not revealed to anyone. Each participant can share their results if they choose to do so. Participants provide their outage data following a set of instructions and a member of the working group performs the calculations and prepares the report to ensure as much consistency as possible. The most recent study, released in 2020 using 2019 data, included entries from 89 utilities.



The IEEE Benchmark study is used throughout the electric utility industry to compare reliability data. Given the anonymous nature of the IEEE Benchmark study, it is not possible to segment SAIDI and SAIFI metrics for utilities with similar characteristics and circumstances as PREPA. Therefore, LUMA recommends looking at the data as a whole when benchmarking and focusing on the nearest quartile medians when discussing benchmarks.

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CURRENT STATE OF THE PREPA GRID

In its current state, PREPA's electric power grid significantly underperforms the industry in terms of reliability. The most tracked and reported reliability metrics are SAIFI and SAIDI; they represent a standard method to measure grid performance of electric utilities. They can vary greatly among utilities depending on climate (commonality of snow, ice and/or windstorms), terrain (mountainous, desert or coastal), load density (urban or rural) and system design (radial, looped or 3-wire). The median performance for all utilities reporting in the IEEE Benchmark Year 2020 Results for 2019 Data¹ is a SAIFI of 1.12 interruptions per year and a SAIDI of 126 minutes per year.

PREPA's reliability indices are much worse than the worst performing utility benchmarked by the IEEE PES

Distribution Reliability working group². As shown in Figure 3 and Figure 4 below, PREPA's 2019 SAIDI is 1,097 minutes and SAIFI is 8.8 occurrences: as calculated by LUMA using PREPA data and industry best practices. For consistency with industry practices, transmission and substation related outages were included in the calculation of SAIDI and SAIFI. PREPA currently does not include transmission or substation related outages or outages due to many of the causes listed in their Cause Code list for published reliability metrics. The numbers that PREPA publishes are also calculated using an outdated Major Event Day (MED) threshold; a more recent MED threshold is higher, driving SAIDI and SAIFI metrics even higher (worse). The MED threshold is used to identify days in the most recent year of outage data when stress on the electric system exceeded that experienced under normal operating conditions and is the result of a statistical analysis (defined by the IEEE) of historical outage data. Abnormal stress can be caused by extreme weather, earthquakes, etc. With transmission, substation and distribution outages and all but generation and planned outages included, reliability metrics are literally off the chart. These results are consistent with the physical deterioration of the electric grid over a long period and the limited effectiveness of service restoration after interruptions.

SAIFI

System Average Interruption Frequency Index

How often the average customer experiences a sustained interruption over a predefined period of time.

SAIDI

System Average Interruption Duration Index

The total duration of interruption for the average customer during a predefined period of time.

Reference: IEEE Guide for Electric Power Distribution Reliability Indices IEEE Std. 1366™-2012.

¹ IEEE Benchmark Year 2020 Results for 2019 Data, 2020 Distribution Reliability Working Group

Virtual Meeting, <https://cmte.ieee.org/pes-drwg/wp-content/uploads/sites/61/2020-IEEE-DRWG-Benchmarking-Results.pdf>

² Ibid.

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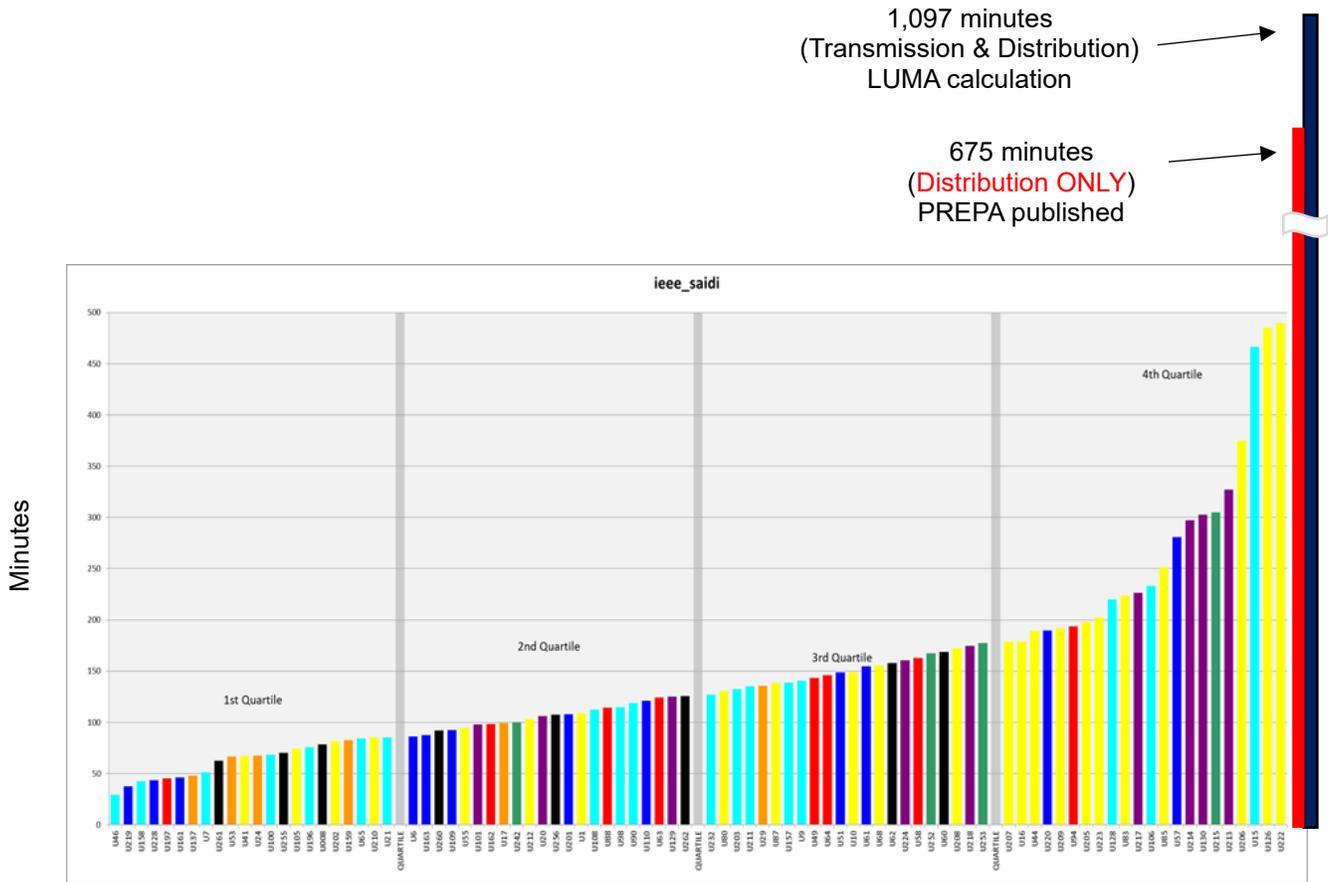


Figure 3. IEEE 2020 SAIDI Benchmark Report – PREPA Comparison³

³ Ibid.

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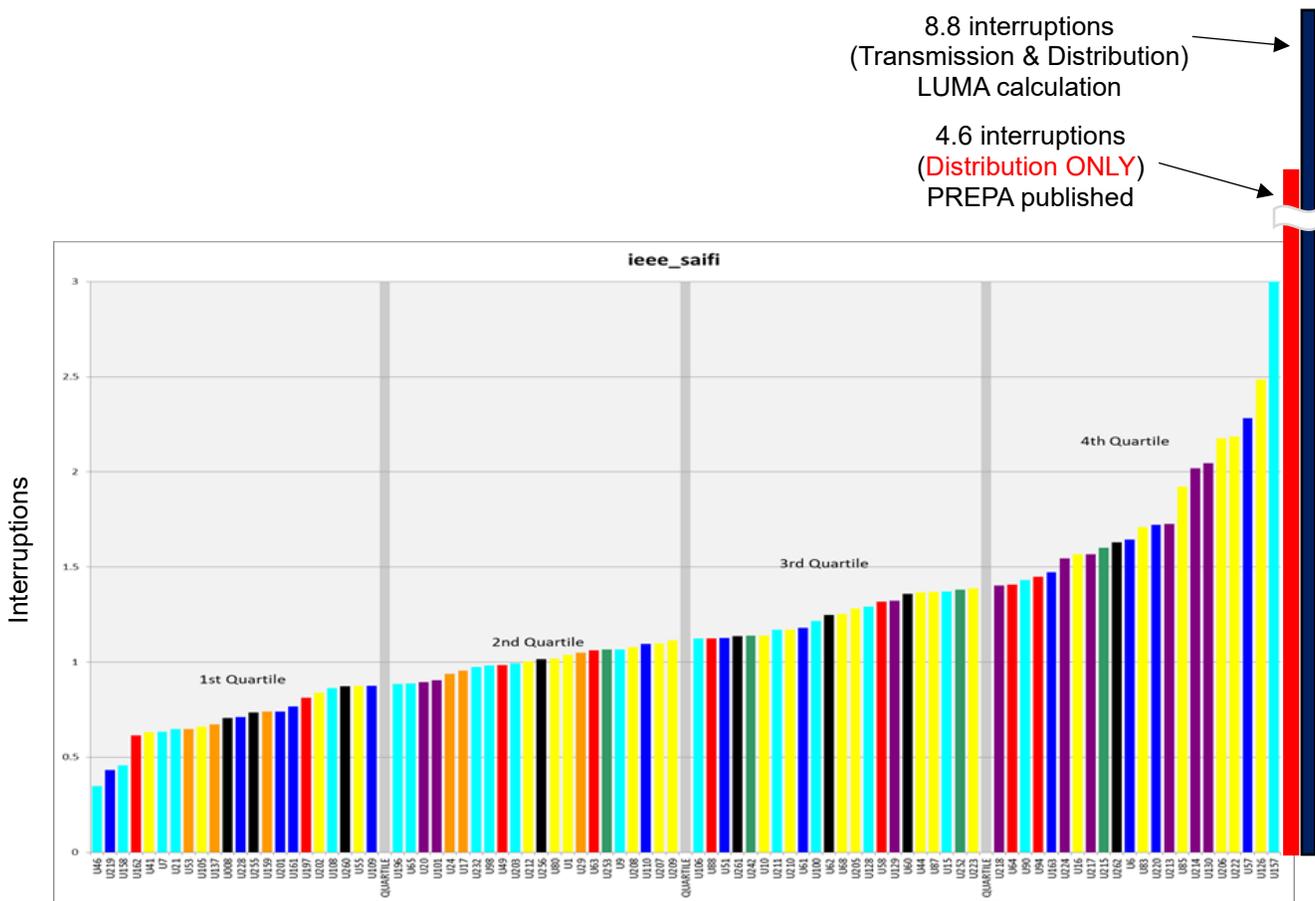


Figure 4. IEEE 2020 SAIFI Benchmark Report – PREPA Comparison⁴

Reliability indices are an indicator of the health of grid assets. The performance of an electric grid is a function of many things that can affect reliability, not the least of which is equipment maintenance. Over time physical components of the electric system age and deteriorate due to exposure to the elements. As the degree of physical wear and tear increases, the probability of failure or mis-operation increases. Therefore, many of the contributors to poor system reliability are connected to the operational health of its primary assets. A well designed and maintained grid should have less outages than a poorly maintained grid.

Therefore, grid operators monitor and track outages and associated reliability indices to gauge the health and safety of their grid. If SAIFI and SAIDI are trending down or staying at acceptable levels, one would conclude the grid is healthy and operating as designed. If yearly reliability trends worsen (trending up), it is an indicator that the system is deteriorating and requires attention and remediation. And, if unattended, the problems increase and often accelerate.

⁴ Ibid.

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In Puerto Rico, the lack of maintenance and poor practices were exasperated and further exposed during recent major hurricanes. A recent report by Sargent & Lundy⁵ reveals that multiple components of the system are in disrepair. For context, PREPA's SAIDI and SAIFI metrics, as calculated by LUMA, are more than double (~1,000 vs ~500) and triple (~10 vs ~3) the worst performance in SAID and SAIFI, respectively. This means PREPA falls significantly below the lowest performers in the industry.

FUTURE TREND OF RELIABILITY

The future trend of PREPA's reliability, measured via SAIDI and SAIFI metrics, was worsening (trending upward) before and after the hurricane event in 2017. There is no indication that the performance trend will change unless strategic investments and operational efficiencies are put in place. The deteriorating trend will likely continue until substantial and significant investments are made for a period of years; only then will the trends reverse and improve. Without proper maintenance practices, the frequency of failure can increase faster than normal repairs are made.

LUMA analyzed results from Year to Date (YTD) to the end of August 2019 and YTD to the end of August 2020 (the latest data available at the time of the calculations) to compare reliability performance. Comparing the results of SAIDI and SAIFI indicate that SAIDI degraded by 29% and SAIFI by 20%, respectively - as shown in Figure 5. While this substantial change in SAIDI and SAIFI is not by itself a statistical long term trendline, the evidence does indicate that the Puerto Rico electric grid continues to deteriorate. These concerning performance metrics call for timely, substantial, and targeted investments in the electric grid and improved maintenance practices. As system performance continues to worsen over time, not only will the reliability of the system will be impacted, but the risks to employee and public safety will increase, potentially impacting not only employees but customers and residents on the island.

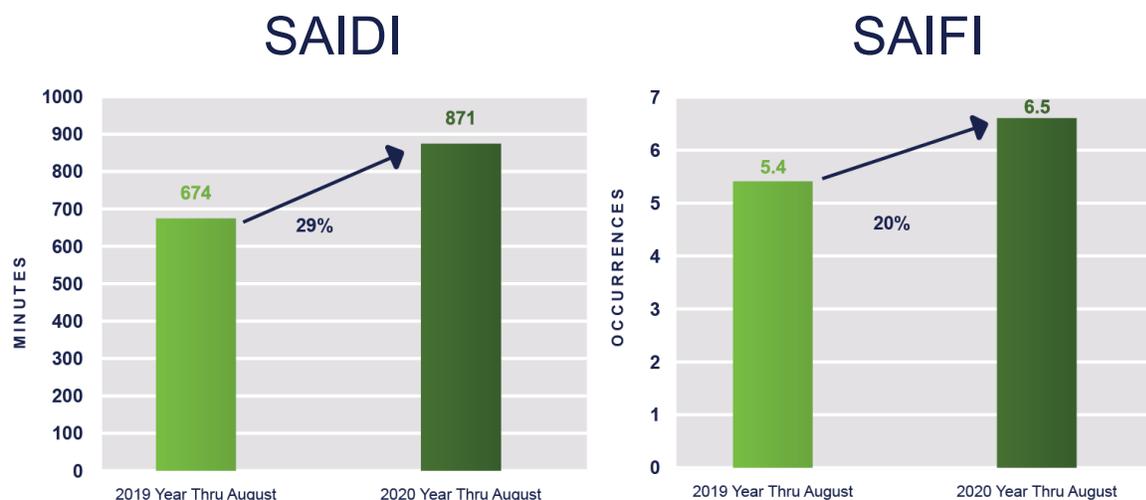


Figure 5. 2020 to 2019 SAIDI Comparison (left) and 2020 to 2019 SAIFI Comparison (right) based on LUMA calculations using industry standards

⁵ T&D Condition Assessment Report, Sargent & Lundy SL-014468.TD, May 15, 2019.