

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

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**IN RE:**

PERFORMANCE TARGETS FOR LUMA  
ENERGY SERVCO, LLC

**CASE NO.:** NEPR-MI-2020-0025

**SUBJECT:**

Submittal and request for approval of Revised Annex IX to the Puerto Rico Transmission and Distribution System Operation and Maintenance Agreement (OMA).

**LUMA'S SUBMITTAL AND REQUEST FOR APPROVAL OF REVISED ANNEX IX  
TO THE OMA**

**TO THE HONORABLE PUERTO RICO ENERGY BUREAU:**

**COME NOW LUMA Energy, LLC** ("ManagementCo"), and **LUMA Energy ServCo, LLC** ("ServCo"), (jointly referred to as the "Operator" or "LUMA"), and respectfully submit this Petition to the honorable Puerto Rico Energy Bureau (the "PREB", "Energy Bureau" or "Bureau"), requesting that the Energy Bureau approve the revised Annex IX to the OMA as required under Section 4.2 (f) of the Puerto Rico Transmission and Distribution System Operation and Maintenance Agreement dated June 22, 2020, by and among the Puerto Rico Electric Power Authority ("PREPA" or "Owner"), the Puerto Rico Public-Private Partnerships Authority ("P3 Authority") and LUMA (the "OMA") and in accordance with the requirements of this honorable Bureau in its Resolution and Order of December 23, 2020 in the referenced case, NEPR-AP-2020-0025 (the "Performance Targets Order"), through the undersigned legal counsel and respectfully submit the following:

**I. Introduction**

PREPA and the P3 Authority entered into the OMA with LUMA to (i) provide management, operation, maintenance, repair, restoration and replacement, and other related

services for the transmission and distribution system (“T&D System”), in each case that are customary and appropriate for a utility transmission and distribution system service provider, and (ii) establish policies, programs and procedures with respect thereto ((i) and (ii), collectively, the “O&M Services”). *See* OMA Section 5.1.<sup>1</sup> The O&M Services are to be provided in accordance with the “Contract Standards,”<sup>2</sup> requiring compliance with Applicable Law<sup>3</sup>, Prudent Utility Practice<sup>4</sup>, and other standards, terms, conditions and requirements specified in the OMA (for purposes of this Petition, “Contract and Policy Standards”). Contract and Policy Standards necessarily require acting consistently with policy mandates and directives in Act 57-2014, as amended, known as the “Puerto Rico Energy Transformation and RELIEF Act” (“Act 57-2014”), Act 120-2018, as amended, known as the Electric Power System Transformation Act (“Act 120-

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<sup>1</sup> The OMA further provides that, except for those rights and responsibilities reserved for PREPA and the P3 Authority or otherwise expressly provided in the OMA, LUMA “shall (A) be entitled to exercise all of the rights and perform the responsibilities of [PREPA] in providing the O&M Services, and (B) have the autonomy and responsibility to operate and maintain the T&D System and establish the related plans, policies, procedures and programs with respect thereto as provided in [the OMA].” *Id.* Moreover, the OMA provides that LUMA shall function as agent of [PREPA] and PREPA “irrevocably authorizes [LUMA] to (i) represent [PREPA] before PREB with respect to any matter related to the performance of any O&M Services provided by [LUMA] under [the OMA]” and “(ii) prepare all related filings and other submissions before PREB” among other functions. OMA, Section 5.6.

<sup>2</sup> The OMA specifically defines “Contract Standards” as “the terms, conditions, methods, techniques, practices and standards imposed or required by: (i) Applicable Law; (ii) Prudent Utility Practice; (iii) applicable equipment manufacturer’s specifications and reasonable recommendations; (iv) applicable insurance requirements under any insurance procured pursuant to this Agreement; (v) the Procurement Manuals, as applicable, and (vi) any other standard, term, condition or requirement specifically contracted in this Agreement to be observed by [LUMA].” *Id.* Section 1.1 at page 9.

<sup>3</sup> This term includes “any foreign, national, federal, state, Commonwealth, municipal or local law, constitution, treaty, convention, statute, ordinance, code, rule, regulation, common law, case law or other similar requirement enacted, adopted, promulgated or applied by any [governmental body][...]” in each case applicable to the parties to the OMA. *Id.*, Section 1.1 at page 3.

<sup>4</sup> “Prudent Utility Practice” is defined, in pertinent part, as “...at any particular time, the practices, methods, techniques, conduct and acts that, at the time they are employed, are generally recognized and accepted by companies operating in the United States electric transmission and distribution business as such practices, methods, techniques, conduct and acts appropriate to the operation, maintenance, repair and replacement of assets, facilities and properties of the type covered by the [OMA] . . . .” *Id.* at page 26.

2018”) and Act 17-2019, known as the “Puerto Rico Energy Public Policy Act” (“Act 17-2019”), among others.

The O&M Services are to commence on a date referred to as the “Service Commencement Date,” or the “Interim Period Service Commencement Date” if PREPA remains in Title III bankruptcy proceeding, and certain conditions precedent specified under the OMA are satisfied or waived (collectively, for purposes of this Petition, the “Commencement Date”).<sup>5</sup> *See Id.*, Sections 4.5 and 4.7(b). Beginning on the Effective Date (that is, June 22, 2020) and until Commencement Date<sup>6</sup> (this period, the “Front-End Transition Period”), LUMA<sup>7</sup> is required to provide “Front-End Transition Services”<sup>8</sup> which are “intended to ensure an orderly transition of the responsibility for the management, operation, maintenance, repairs, restoration and replacement of the T&D System

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<sup>5</sup>LUMA is assuming that PREPA will not exit the Title III Bankruptcy proceeding before June 1, 2021. Consistent with statements from the Executive Director of Financial Oversight and Management Board (FOMB) and PREPA Certified Fiscal Plan for FY2021, certified on June 29, 2020, the Initial Budgets assume that PREPA will exit Title III at December 31, 2021. *See e.g.*, “Natalie Jaresko: “we are going to emerge from bankruptcy in 2021”, PR Headline News, <https://www.puertoricoheadlinenews.com/natalie-jaresko-we-are-going-to-emerge-from-bankruptcy-in-2021/> (last visited February 22, 2021). Consequently, LUMA anticipates providing the O&M Services during the Interim Period pursuant to the Supplemental Terms Agreement agreed between the OMA parties precisely for this contingency. If PREPA exits the Title III bankruptcy proceeding contemporaneously with all other conditions precedent to Service Commencement Date, then LUMA will begin providing O&M Services without the need for an “interim period.” Mentions in this document (and in all other OMA required submittals to PREB), to “beginning of O&M Services,” “start of operations,” “start of operations and maintenance services,” and other allusions of similar import, shall be understood to refer to the end of the Front-End Transition Period and LUMA’s commencement of O&M Services regardless of whether it is in under an “interim period” or after full “Service Commencement Date.”

<sup>6</sup> *See Id.*

<sup>7</sup> ManagementCo in particular.

<sup>8</sup> The Front-End Transition Services are defined in the OMA as services to “complete the transition and handover to [LUMA] of the operation, management and other rights and responsibilities with respect to the T&D System pursuant to [the OMA], including the services contemplated by the Front-End Transition Plan; provided that the Front-End Transition Services shall not be O&M Services.” <sup>8</sup> OMA Section 1.1 (Emphasis ours).

to [LUMA] by the . . . [Commencement Date], without disruption of customer service and business continuity [...]” *Id.*, Sections 1.1 at page 15 and 4.1(a).<sup>9</sup>

Among other actions, during the Front-End Transition Period, LUMA is required to establish a planning team with PREPA and the P3 Authority to prepare, with the input of said planning team, “a revised Annex IX (Performance Metrics), including (i) proposed baseline, target and minimum performance levels for certain Performance Metrics, (ii) Key Performance Metrics<sup>10</sup> and (iii) Major Outage Event Performance Metrics,<sup>11</sup> together with an explanation of the basis for each of the foregoing.” (together, for purposes of this Petition, “Performance Metrics<sup>12</sup>”). OMA Section 4.2(f). LUMA shall submit the proposed revised Performance Metrics for the P3 Authority’s review and comments. *Id.* After such review or comment process, LUMA shall submit the Performance Metrics to PREB. *Id.* Upon review of the Performance Metrics, PREB may then “approve, deny or propose modifications to such [Performance Metrics] in accordance with Applicable Law.” *Id.* The approval of the Performance Metrics is a condition precedent to Commencement Date. OMA Section 4.5(h).

The mechanism of Performance Metrics, targets and incentives, and its conceptualization in the OMA, was part of the competitive procurement process. The evaluation of proposals

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<sup>9</sup> Although both ManagementCo and ServCo constitute the Operator under the OMA, after the Commencement Date, ServCo will provide the vast majority of the O&M Services while ManagementCo’s role will be mainly providing oversight and management of ServCo.

<sup>10</sup> “Key Performance Metrics” means the “Key Performance Metrics” to be agreed upon during the Front-End Transition Period and set forth in Annex IX (Performance Metrics). *Id.* at page 19.

<sup>11</sup> “Major Outage Event Performance Metrics” means the “Major Outage Event Performance Metrics” to be agreed upon during the Front-End Transition Period and set forth in Annex IX (Performance Metrics). *Id.* at page 20.

<sup>12</sup> For avoidance of doubt, the term “Performance Metrics” employed in this Petition, Per the OMA, LUMA’s refers to metrics by which performance may be measured and to incentives are granted if targets are achieved.



included the comments received by proponents to customer service, technical, and operational and financial performance metrics to improve the T&D System. LUMA's approach was considered by the Partnership Committee as more favorable and aligned with Puerto Rico's goals. As indicated in the Partnership Committee Report, "LUMA essentially accepted the Government's approach to the Performance Metrics included in the RFP...for the benefit of its customers and the people of Puerto Rico."<sup>13</sup>

As discussed below, in a Resolution and Order issued in Case No. NEPR-MI-2019-0007 ("the Baseline Proceeding"), and in a further Technical Conference, the Bureau instructed LUMA that the Baseline Proceeding would be used to select the metrics and establish baselines and that this case, NEPR-AP-2020-0025, would be used to establish the targets for said performance metrics that will form the basis for the incentive mechanism detailed in OMA Section 7.1. As required under the OMA, and after having concluded an iterative review process with the P3 Authority's advisors during the months of December 2020 and January 2021, LUMA submitted the Performance Metrics to the P3 Authority on February 5, 2021 for the P3 Authority's final review and comments. The comments and suggestions of the P3 Authority's advisors and the P3 Authority were discussed and addressed and the outcome of that iterative process, which concluded on February 20, 2021, resulted in the Performance Metrics Targets filing submitted herein to the Energy Bureau, that includes a revised Annex IX as Section 2.0 ("Performance Metrics Targets"). *See* Exhibit 1. Exhibit 2 to this Petition illustrates the revisions that were made to Annex IX upon conclusion of the iterative process with the P3 Authority. While the P3A's

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<sup>13</sup> Partnership Committee Report, Puerto Rico Public-Private Partnership for the Electric Power Transmission and Distribution System, at page 7.

review process was ongoing and in accordance with the Bureau's instructions, LUMA submitted comments in the Baseline Proceeding on LUMA's assessment of the data, processes, and calculation of certain data relating to PREPA's performance, and the appropriate baselines resulting from such work, as well as commentary on benchmarks. *See* filings of February 5, 2021 and February 19, 2021, Case No. NEPR-MI-2019-0007. LUMA received consent from P3 Authority for submittal of this information, considering that it was originally intended to form one part of this Performance Metrics filing before the Bureau instructed LUMA that it would address Performance Metrics in two dockets.

Accordingly, this Performance Metrics Targets filing builds on the submissions made by LUMA on February 5, 2021 and February 19, 2021 in the Baseline Proceeding. This Performance Metrics Targets filing focuses on the Performance Metrics targets to be set in Case No. NEPR-AP-2020-0025. The targets submitted herein as part of the Performance Metrics will be used to, among other things, measure LUMA's performance in accordance with Regulation 9137, Regulation for Performance Incentive Mechanisms ("Regulation 9137"), and the OMA, and will be the basis for determination of the Incentive Fee for each Contract Year as defined in the OMA. *See* OMA Section 7.1 as set forth in Annex VIII (Service Fee) of the OMA and calculated as set forth in Annex X (*Calculation of Incentive Fee*) of the OMA. *See* OMA, Section 7.1, Annexes VIII and X and Annex IX, Section I.

Setting Performance Metrics and targets is an essential component of LUMA's Front-End Transition Period work and, more importantly, the targets proposed by LUMA are consistent with and based on execution of LUMA's remedial and improvement programs. *See* Initial Budgets filed

in Case No. NEPR-TEMP-2380, and System Remediation Plan filed in Case No. NEPR-MI-2020-0019.

## **II. Energy Bureau's Authority**

As the main entity in charge of ensuring compliance with energy public policy and carrying out energy policy mandates, this honorable Bureau has authority to review this Petition pursuant to Act 57-2014 and Act 17-2019. Specifically, Act 57-2014 gives the Energy Bureau authority and regulatory oversight over electric services and electric service companies, such as PREPA and LUMA. *See* Act 57-2014, Sections 6.3 and 6.4. Among other powers, the Energy Bureau may establish public policy standards with respect to electric service companies, establish rates, regulate any transaction, action or omission in connection with the electric power grid and the electric power infrastructure, and exercise jurisdiction over certified electric power companies, persons connected to the grid or receiving energy services and persons that exercise control over the provision of electric power services. *See Id.*

The Bureau's authority over this Petition also arises under Section 6.25B of Act 57-2014 (added by Section 5.21 of Act 17-2019), pursuant to which the Bureau shall prescribe regulations on performance-based incentive and penalty mechanisms. Per Act 17-2019, performance incentives mechanisms are designed to "encourage energy companies to invest in a cost-effective manner, in infrastructure, technology, the incorporation of distributed generation, renewable energy sources, and services that inure to the benefit of the electrical system and consumers." *See* Act 57-214, Section 6.25B. The Bureau has authority to approve regulations on "incentive and penalty mechanisms that take into account electric power companies' performance and compliance with the performance metrics set forth in the energy public policy." *Id.*

PREB's Regulation No. 9137, defines "metric" as "a quantifiable indicator which can be used and tracked over time to evaluate an entity's performance." Regulation 9137, Section 1.7(B)(10). A "target" is "the goal that may be associated with a Metric and against which, if it is so associated, a Company's<sup>14</sup> performance may be evaluated." Regulation 9137, Section 1.7(B)(21). A "financial incentive" is "the financial reward or penalty that may be attached to a Target and which, if it is attached, is applied to a given Electric Power Service Company, for meeting or failing to meet such target." *Id.*, Section 1.7(B)(8). Finally, a "Performance Incentive Mechanism" refers to "any Metric, Target or Financial Incentive established to induce Companies to improve their performance." *Id.*, Section 1.7(B)(12).

### **III. PREB's Resolutions and Orders on Proceedings to Set Performance Baselines, Performance Metrics and Performance Targets**

Pursuant to a Resolution and Order issued on May 14, 2019, the Energy Bureau collected data on PREPA's performance in the Baseline Proceeding, Case No. NEPR-MI-2019-0007. On December 23, 2020, the Bureau issued an order to set performance baselines for Puerto Rico's electric system. *See* Resolution and Order dated December 23, 2020, Case No. NEPR-MI-2019-0007. As established by the Bureau, those performance baselines and benchmarks will be used to "develop the corresponding targets to be applied to certified electric service companies such as LUMA." *Id.* at page 5. This separate proceeding was initiated under the caption, *In re Performance*

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<sup>14</sup> This term and the term "Electric Power Service Company," as used in Regulation 9137, both refer to any natural, juridical, or legal person "engaged in the rendering of electric power generation, transmission, and distribution services, billing, wheeling, grid services, energy storage, the resale of electric power, and any other electric power service as defined by the Energy Bureau in Regulation 8701." *Id.* Articles 7.1(B)(6) and (15) (footnote omitted). Under Regulation 9137, "PREPA and the Transmission Distribution Provider/System Operator shall be deemed to be Electric Power Service Companies." *Id.*, Article 7.1(B)(6).

*Targets for LUMA Energy ServCo, LLC*, NEPR-AP-2020-0025, to establish Performance Incentive Mechanisms (“PIMs”) applicable to LUMA.

In Case No. NEPR-MI-2019-0007, LUMA submitted three filings whereby it addressed the Bureau’s data on PREPA’s baselines, presented proposed performance baselines and metrics and provided an initial assessment on compliance benchmarks. *See* LUMA’s Motions and Exhibits filed on January 29, 2021 and February 5, 2021, Case No. NEPR-MI-2019-0007. On January 29, 2021 and February 5, 2021, PREPA, as well as three stakeholders, the Independent Office of Consumer Protection (OIPC by its Spanish acronym), the Solar and Energy Storage Association of Puerto Rico (SESA), and the Rocky Mountains Institute (RMI), also filed comments on PREPA’s baseline performance and on performance metrics in Case No. NEPR-MI-2019-0007.

Per the procedural calendar that the Bureau set in the Baseline Proceeding, on February 19, 2021, LUMA filed a reply to the comments that were filed for the record on performance baselines and compliance benchmarks (“LUMA’s February 19<sup>th</sup> Reply”). *See* Exhibit 1 to LUMA’s February 19<sup>th</sup> Reply. LUMA also filed proposed Major Outage Events Performance Metrics. *See* Exhibit 1 Appendix C to LUMA’s Reply. A Technical Conference was held on February 22, 2021 to discuss the comments and replies that had been filed. LUMA and PREPA each presented summaries of their comments and answered questions from the Commissioners.

In the December 23, 2020 Performance Targets Order, the Bureau discussed the legal framework for the establishment of performance based incentives and penalties for electric service companies in Puerto Rico, particularly, and among other things, (1) the provisions of Act 17-2019, known as the Energy Public Policy Act (“Act 17-2019”) establishing: (a) the criteria for the development of PIMs, (b) the mechanisms to implement these, and (c) PREB’s authority to

establish regulations on the subject; and (2) Regulation Number 9137. *See* Performance Targets Order at 1-3.

In the Performance Targets Order the Bureau also advised that the instant proceeding was initiated pursuant to the provisions of the Resolution and Order issued on December 23, 2020 in the Baseline Proceeding, Case No. NEPR-2019-0007. *See Id.* at 5. The Bureau explained that the Baseline Proceeding was initiated “to establish the baseline (i.e., PREPA’s current performance) and the targets or minimum compliance benchmarks with which [...] Puerto Rico’s electric system should comply.” *Id.* at 3. Furthermore, the Bureau stated the performance baseline and compliance benchmarks to be determined in the Baseline Proceeding would be “subsequently used . . . to establish the *corresponding targets* to be applicable to certified electric service companies –such as LUMA” and that PREB would “open a separate proceeding to establish [PIMs] for other specific certified electric service companies. *Id.* (emphasis added).

Finally, the Bureau’s Performance Targets Order included the principles that should guide LUMA in its preparation for a request to establish PIMs under Section 4.2(f) of the OMA. Specifically, the Bureau indicated that LUMA’s filing under Section 4.2(f) of the OMA “must be aligned with principles beneficial to the public interest,” including but not limited to:

- (1) **Go above and beyond:** targets or levels for which an incentive may be proposed shall be subject to and dependent on performance above and beyond the minimum required compliance level;
- (2) **Further the earlier compliance with public policy:** targets or levels for which an incentive may be proposed shall encompass the accelerated implementation of public policy such as the renewable energy portfolio, demand response, energy efficiency and other similar mandated;
- (3) **Further efficiencies and savings:** targets or levels for which an incentive may be proposed shall pursue the highest level of efficiencies and savings;

- (4) **Impact areas with significant performance issues:** targets or levels +for which an incentive may be proposed shall positively impact or address areas of unsatisfactory performance with a direct impact to the electric service user;
- (5) **Benefits for the Public Interest:** targets or levels for which an incentive may be proposed shall result in a clear benefit for the public interest and rate payers; and
- (6) **Incentives Reward Difficult Tasks:** targets or levels for which an incentive may be proposed shall be tied to difficult tasks, and not to easy to fix areas.

*Id.* at 5-6. These principles are listed in Part IV of the Performance Targets Order (the “Part IV Principles”).

Based on the above, the Bureau ordered LUMA to ensure that LUMA’s filing pursuant to Section 4.2(f) of the OMA (i) “takes into consideration the outcomes of the proceeding under Case NEPR-MI-2019-0007” (i.e., the Baseline Proceeding); and (ii) “at a minimum, align[s]” with the Part IV Principles, listed above. *Id.*

Finally, in the Performance Targets Order, PREB also ordered LUMA and PREPA to attend a Pre-Filing Technical Conference to be held remotely on January 14, 2021 at 10:00 a.m. during which PREPA and LUMA would be able to clarify questions regarding the filing. Such Pre-Filing Technical Conference was in fact held via video conference on the date and time specified in the Performance Targets Order, and LUMA and PREPA attended as required.

During the Pre-Filing Technical Conference, LUMA presented an overview of the Front-End Transition work on Performance Metrics and its approach to revise Annex IX to the OMA. During said conference, PREB Commissioners provided additional guidance on the expected components of LUMA’s filing under Section 4.2(f) of the OMA, and answered questions posed

by LUMA's representatives. LUMA filed a copy of its presentation with PREB on January 14, 2021 as per the verbal request from PREB during the Pre-Filing Technical Conference.<sup>15</sup>

#### **IV. Comprehensive Strategic Framework for Recovery and Transformation of the T&D System**

LUMA used what has been denominated and referenced in all of the Deliverables under Sections 4.1 and 4.2 of the OMA (for the purposes of this Petition, the "FET Deliverables"), as the "Recovery and Transformation Framework," to prioritize and sequence improvement programs that are detailed in the Initial Budgets filed in Case No. NEPR-TEMP-2380, and the System Remediation Plan ("SRP") filed in Case No. NEPR-MI-2020-0019. LUMA deliberately designed the strategic goals of the framework to provide enhanced electric service to customers, as the utility service provider in Puerto Rico after Commencement Date and consistent with the public interest. LUMA developed a set of improvement programs designed to deliver value to customers in accordance with Contract and Policy Standards and within annual budget constraints. These programs are organized in seven portfolios that cover key performance areas: Customer Service, Transmission, Distribution, Substations, Control Center and Buildings, Enabling, and Support Services ("Improvement Portfolios"). The specific programs go hand-in-hand with the Performance Metrics that are being submitted for approval by the Bureau. More specifically, LUMA has specific plans in place to effectuate the reforms and actions that are intended to result in reaching specific milestones in the programs and to achieve specific performance targets. *See* Exhibit 1, Section 4.

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<sup>15</sup> *See* LUMA's "Motion in Compliance with Order Submitting LUMA's Presentation Given on January 14, 2021, at the Pre-Filing Technical Conference," filed on January 14, 2021 in this case.



LUMA's achievement of the targets set in the Performance Metrics Targets are based on the activities and improvement programs planned and proposed in the Initial Budgets and the SRP that were submitted to the Bureau separately for approval, and are guided by the Recovery and Transformation goals: prioritize safety, improve customer satisfaction, system rebuild and resiliency, operational excellence, and sustainable energy transformation. *See* Exhibit 1 to LUMA's February 19<sup>th</sup> Reply. *See* Initial Budgets filed in case No. NEPR-TEMP-2380, the System Remediation Plan filed in Case No. NEPR-MI-2020-0019, and the System Operation Principles filed in Case No. NEPR-MI-2021-0011. The Performance Metrics Targets are an important method for LUMA to demonstrate quantifiable performance related to these goals and are aligned with the public interest.

## **V. LUMA's Performance Metrics**

### **A. Summary of the Performance Metrics Targets Submission**

LUMA's Performance Metrics discussed in Exhibit 1 to this Petition, are metrics by which performance may be measured and incentives are granted if targets are achieved. The Performance Metrics Targets are the product of LUMA's efforts as part of the Front-End Transition Services, in compliance with Section 4.2(f) of the OMA, to review PREPA's processes, data, and baseline performance on certain performance metrics. The process included active participation by LUMA's subject matter experts, as well as discussions with stakeholders who provided feedback on process and regulatory requirements, among others. *See* Exhibit 1, Section 1.0. The work performed by the LUMA teams required continuous interaction with the working groups at PREPA for information gathering on current processes and available data. *Id.*

The Performance Metrics Targets are aligned with the Baseline Proceeding, Case No. NEPR-MI-2019-0007. Particularly, they are aligned with LUMA's filings made in the Baseline Proceeding on February 5, 2021 and with LUMA's February 19<sup>th</sup> Reply, including: (a) LUMA's comments to data published by the Bureau and its consultants on PREPA's baseline performance; (b) LUMA's proposed performance baselines; and (c) LUMA's proposed metrics for Major Outage Events. *See* Case No. NEPR-MI-2019-0007. The Performance Metrics will be revised and updated to reflect the outcome of the Baseline Proceeding.

As LUMA explained in its submission of February 5, 2021 and in LUMA's February 19<sup>th</sup> Reply in the Baseline Proceeding, PREPA's performance is well below industry standards. That scenario is critical in setting applicable targets and implementing performance incentive mechanisms that will apply to LUMA as the new Operator of the T&D System who will undertake significant remediation efforts as part of a complex recovery and transformation effort that is designed to comply with energy public policy within the current rate structure. *See* Exhibit 1, Section 1.0.

In its assessment, LUMA also found significant gaps in processes and data that pose challenges in establishing a baseline performance to set realistic targets for the proposed metrics. *See Id.* This is mainly due to nonexistent or inadequate data. In a few instances, industry practices suggest doubtful results even if sufficient data were available. Furthermore, there are significant gaps between PREPA's processes for data collection and calculation of metrics when compared with applicable industry standards.

LUMA's Performance Metrics present minimum performance levels and target threshold. Incentives are paid only when performance exceeds minimum performance levels. The

Performance Metrics include objectives, descriptions, calculations, and corresponding baselines and targets for those metrics as to which there is enough data to set baseline performance. *See* Exhibit 1, Section 1.2.2 and Table 1-1. The Performance Metrics also include plans to achieve targeted performance on behaviors that are consistent with statutory and regulatory criteria on key performance areas that will be under LUMA’s control as Operator of the T&D System and to the benefit of services to consumers. Those key performance areas include grid inspections and maintenance, safety, and financial performance to control electric power costs.

LUMA’s Performance Metrics, included in the revised Annex IX, *see* Exhibit 1, Section 2.0, track the requirements of the OMA, Section 4.2(f), and thus include: (1) proposed baselines, target and minimum performance levels; (2) the designation of a subset of the performance metrics as “Key Performance Metrics”; and (3) Major Outage Events Performance Metrics. The Performance Metrics are grouped in three major categories tracking Annex IX to the OMA and that are consistent with the criteria on performance mechanisms of Act 17-2019 and Regulation No. 9137: **Customer Services, Technical, Safety and Regulatory, and Financial Performance.**<sup>16</sup> *See* Exhibit 1, Sections 2.4 and 2.5.

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<sup>16</sup> The Performance Metrics include: (i) Customer Satisfaction; (ii) Average Speed of Answer; (iii) Customer Complaint Rate; (iv) First Call Resolution; (v) Abandonment Rate; (vi) OSHA Recordable Incident Rate; (vii) OSHA Fatalities; (viii) OSHA Severity Rate; (ix) OSHA DART Rate; (x) System Average Interruption Frequency Index (SAIFI); (xi) Customers Experiencing Multiple Interruptions; (xii) System Average Interruption Duration Index (SAIDI); (xiii) Momentary Average Interruption Frequency Index; (xiv) Distribution Line Inspections & Targeted Corrections; (xv) Transmission Lines Inspections & Targeted Corrections (xvi) T&D Inspections & Targeted Corrections; (xvii) Operating Budget; (xviii) Capital Budget – Federally Funded; and (xix) Capital Budget – Non-Federally Funded; (xx) Days Sales outstanding, bifurcating general customers and government customers; (xxi) Reduction in Network Line Losses; and (xxii) Overtime. *See* Sections Table 1-1 and Section 2 of Exhibit 1. These performance metrics apply during normal operations of the T&D System.

Section 2.0 of Exhibit 1 (revised Annex IX) provides the details on the calculations for incentives according to targets and performance levels. It also includes performance objectives, descriptions and details on the calculations of each of the performance metrics. Levels of performance and achievement of results will be adjusted proportionately during the initial Contract Year<sup>17</sup> beginning on Commencement Date. *See* Exhibit 1, Section 2.3.

For all of the Performance Metrics except for the Binary Performance Metrics on OSHA Fatalities, Operating Budget, and Capital Budget, a baseline performance level has been proposed prior to the beginning of the first Contract Year (the “Baseline Performance Level”), as indicated in LUMA’s filing in the Baseline Proceeding, Case No. NEPR-MI-2019-007, of February 5, 2021 and in Exhibit 1 to the February 19<sup>th</sup> Reply. The proposed Baseline Performance Level is based on either historical and operating data confirmed during the Front-End Transition Period, performance during the Front-End Transition Period, or through independent analysis. *See Id.* The Baseline Performance Level will set the starting point for each metric relative to the target performance level to be achieved in the third Contract Year (the “Target Performance Level”). *See Id.* The proposed targets correspond to the baselines and will be adjusted depending on the baselines approved by the Bureau in the Baseline Proceeding.

Each Performance Metric has an assigned point weighting (“Base Points”). *See* Exhibit 1, Section 2.3 at page 9. Performance ranges for determination of Base Points earned shall be based on achieving performance improvement from the Baseline Performance Level to the Target Performance Level and beyond the Target Performance Level. *See Id.* The annual target

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<sup>17</sup> “[T]he initial Contract year shall commence on the Service Commencement Date. . . .” *See* Exhibit 1, Section 2.3; *See also* note 5 *supra* on O&M Services during the Interim Period.

performance level for each Performance Metric over the initial three-year period is determined by consideration of data and process information that was gathered from PREPA about past performance. *See Id.*

In Section 4.0 of Exhibit 1, LUMA outlines the plans to achieve Performance Metrics targets, with clarifications on areas where poor availability of data affects program designs and estimated impacts.

## **B. Compliance with Performance Targets Order**

The Performance Metrics are consistent with Act 17-2019's directive that these metrics must measure and ensure the reliability of services, including electric power services, customer service, management of electric power costs, and infrastructure maintenance. *See* Exhibit 1, Section 1.2.2 and Table 1-1. They track key performance areas identified in Section 7.3 of Regulation No. 9137, such as customer service, financial performance, employee safety, compliance with regulatory requirements on safety, reliability and resilience and key components of system performance. They also include quantifiable indicators of performance on key areas under LUMA's control as Operator.

The customer service Performance Metrics are designed and structured to achieve a high-level of customer satisfaction across all customer classes, baselined according to third party measures on customer satisfaction. They include key aspects of customer satisfaction, average speed of answer, abandonment rate by customer callers, and customer complaint rates. These Performance Metrics comply with the policies and requirements of Act 17-2019 that stress the importance of improving services to customers. *See* Act 17-2019, Section 6.25(B)(c); *see also* Regulation 9137, Art. 7.1(E). The customer service metrics also comply with the guiding

principles set forth in the Performance Targets Order to **target areas with significant performance issues** and to set performance metrics and levels that **benefit the public interest**.

As LUMA discussed in Exhibit 2 to LUMA's submission of February 5, 2021 and in the February 19<sup>th</sup> Reply filed in the Baseline Proceeding, there are significant gaps in current processes to collect data on customer satisfaction, including evaluation of customer complaints. Thus, customer service metrics were selected and designed **to address areas that have performance issues**. LUMA will undertake efforts such as improvement of data gathering on customer satisfaction and migrating the contact center to a cloud-based Contact Center platform. These efforts are designed to incentivize LUMA to **go above and beyond** minimum performance levels **on an area that currently has significant performance issues that also involves complex and difficult tasks, especially given existing gaps in data**. The programs and measures to be implemented with regards to these metrics are designed to produce **efficiencies** as services to customers are improved.

The technical Performance Metrics are designed to measure and achieve a safe and reliable operation of the electric grid, through improvements in safety in operations and in processes related to system interruptions, and by conducting inspections of distribution and transmission lines, and T&D substations. These Performance Metrics address **difficult tasks on areas where improvements are key to achieve efficiencies in providing electric services and to the benefit of the public interest as they are meant to reduce incidents and service interruptions** and are tied to efforts and restoration programs that will document and improve the health of the grid's assets.

To reach target levels on technical metrics, LUMA will undertake technical tasks and data gathering efforts on critical components of the grid's structure and operations. LUMA's plan to achieve target performance levels on these technical performance categories, **impact areas with significant performance issues where PREPA is currently lacking proper data and processes to assess and restore the health of the system and the physical integrity of the assets, which are key to provide services in accordance with public policy and industry practices.**

The Performance Metrics will also further compliance with applicable regulations such as employee safety regulations by the Occupational Safety and Health Administration (OSHA). These regulations involve key areas in the public interest to ensure and incentivize employee safety. *See* Regulation 9137, Section 7.1(A).

In measuring financial performance, the Performance Metrics are designed to comply with the Initial Budgets that, as shown in the separate filing on Initial Budgets in Case No. NEPR-TEMP 2380, were compiled within the current rate structure and will not require a rate increase. Thus, financial performance has been designed to comply with principles of **early compliance with public policy to provide** efficient, reliable, cost-effective services to rate payers. These Performance Metrics also follow the PREB's determination in PREPA's rate case CEPR-AP-2015-0001.

The Performance Metrics on Capital Budget – Federally Funded- involve a key complex area of performance that is tied to LUMA's overall recovery and transformation efforts as explained in the System Remediation Plan that has been filed separately in Case No. No. NEPR-MI-2020-0019. To reach and exceed performance targets in this area, LUMA will leverage its expertise on receipt and management of federal funds and has considered PREPA's 10-Year Plan

filed before the Federal Emergency Management Agency. The Performance Metric related to non-federally funded capital budget is also a key component of recovery and transformation efforts. These Performance Metrics directly involve **efficiency goals**, as well as **difficult tasks** that require technical and multi-faceted works to ensure that LUMA operates and implements its recovery and transformation plan within the budget to the **benefit of customers**.

Finally, the days sales outstanding metric is designed to reach targets on effective collection efforts that are key to upkeep **efficient services within the current rate structure**. Relatedly, the overtime metric is designed to achieve **efficiencies in payroll expenses**.

## **VI. Iterative and Interactive Process**

The revised Annex IX being filed today, aligns with the current status of the Baseline Proceeding, Case No. NEPR-MI-2019-0007, including the comments filed by PREPA and stakeholders, and LUMA's February 19<sup>th</sup> Reply, Exhibit 1. *See* Exhibit 1, Section 2.0, LUMA will continue to review the Performance Metrics, to conform to the results of said Baseline Proceeding. The Performance Metrics are an initial proposal that will be subject to revision.

As LUMA explained in its February 19<sup>th</sup> Reply filed in the Baseline Case, collecting, analyzing and acting on data is essential to accurately set quantifiable indicators to evaluate performance as required by Regulation 9137. *See* Exhibit 2 to the February 19<sup>th</sup> Reply, Section 2.3. Useful data indicators to set and review Performance Metrics should: (1) utilize recorded information that indicates performance; (2) be subject to improvement through actions under the control of the utility; and (3) align with public policy objectives. *See id.* Strong metrics should be based on clear, unambiguous and objective quantification and on an accurate baseline that is sufficiently precise to measure performance over time. *See id.*; *see also* Regulation 9137, Section



1.7(10) (defining metric) and Section 7.1 (Principles for Establishing Performance Incentive Mechanisms).

As discussed in Section V(A) *supra*, there are existing gaps in PREPA's data collection, record keeping and processes that work against setting accurate baselines and metrics. *See* Exhibit 2 to the February 19<sup>th</sup> Reply, Section 2.3. As PREPA has confirmed in its comments in the Baseline Proceeding, filed on February 5 and 19, 2021, Case No. NEPR-MI-2019-0007, there are a number of areas where there is currently uncertainty about the quality of data collection and quality control practices across the T&D System and PREPA. *Id.* LUMA's detailed research and evaluation of PREPA's data resulted in evidence that supports the need to focus Performance Metrics on areas where there is adequate data to set an accurate baseline against which performance may be measured. Given these circumstances, LUMA is proposing that certain Performance Metrics be replaced or deferred. *See e.g.*, Exhibit 1, Section 1, Table 1-1, Performance Metrics Summary (for further details on deferral of Performance Metrics). Additionally, LUMA respectfully submits that the initial months after the Commencement Date will be critical to evaluate the effectiveness and appropriateness of the Performance Metrics and to calibrate and readjust them as needed.

LUMA proposes that the Performance Metrics and targets be calibrated after an initial six-month period. This update will present an opportunity to adjust baselines and corresponding targets based on actual data collected and other information learned during LUMA's first six months of operations. LUMA's proposal is consistent with Section 7.1(d) of the OMA (on Amendments to Performance Metrics) and with Regulation 9137 that provides for periodic reviews of performance. *See* Regulation 9137, Article 4. This review process will allow Performance Metrics and targets to evolve as public policy evolves, as data collection capabilities improve across the T&D System

and as the condition of the T&D System improves. LUMA proposes that Performance Metrics moving forward will be reviewed concurrent with the end of a Budget Year, in accordance with the OMA.

**WHEREFORE,** LUMA respectfully requests that the Bureau accept and approve the revised Annex IX to the OMA; set the Performance Metrics and targets to apply for an initial period of three years of operations; and allow a review of the performance baselines, metrics and targets after six months of LUMA's operations.

In San Juan, Puerto Rico, this 25<sup>th</sup> day of February 2021.

I hereby certify that I filed this Petition using the electronic filing system of the Puerto Rico Bureau and that on this date, I will send an electronic copy of this Petition via electronic mail to the attorneys of record for the Puerto Rico Electric Power Authority, Maraliz Vázquez-Marrero, mvazquez@diazvaz.law; Joannely Marrero-Cruz, jmarrero@diazvaz.law; and Katiuska Bolaños-Lugo, kbolanos@diazvaz.law.

/s/ MARGARITA MERCADO ECHEGARAY  
Margarita Mercado Echegaray  
DLA Piper (Puerto Rico) LLC  
PR Bar No. 16,266  
Suite 401  
500 Calle de la Tanca  
San Juan, PR 00901-1969  
787-945-9101  
[margarita.mercado@us.dlapiper.com](mailto:margarita.mercado@us.dlapiper.com)

## Exhibit 1

### Performance Metrics Targets

A nighttime photograph of a city skyline, likely Bogotá, Colombia, featuring illuminated buildings and a street with traffic. The image is partially covered by a large green geometric overlay on the left and bottom right, which includes a radial pattern of white lines meeting at a point in the bottom right corner.

# Prefacio radicación regulatoria LUMA Energy

Febrero 2021

## ¿Quiénes somos?

Los puertorriqueños dependen de la electricidad. Un sistema eléctrico robusto y resiliente es la columna vertebral del desarrollo económico.

En LUMA, nuestro compromiso es proveer a los puertorriqueños un sistema eléctrico en el que puedan confiar. Nuestro norte es transformar la red eléctrica en una centrada en el servicio al cliente, confiable, resiliente y segura para todos los puertorriqueños, tal y como ellos merecen. Queremos mejorar la calidad de vida y el crecimiento económico del país proveyendo el sistema eléctrico para ellos.

La gente, nuestros empleados, nuestros clientes y las comunidades en las que vivimos y trabajamos son prioridad para LUMA.

- Motivamos e inspiramos a nuestra gente a aprovechar todas las oportunidades que reciben, mientras trabajan para construir un mejor sistema eléctrico para Puerto Rico.
- Nuestra meta es proveer un servicio al cliente excepcional e implementar políticas públicas a través de una operación de excelencia.

Creados para  
Comprometidos con  
Escuchando a **Puerto Rico**





# Nuestra misión para Puerto Rico

Reconstruir y transformar el sistema eléctrico para proveer un servicio sostenible, centrado en el cliente, confiable, resiliente, seguro y a precios razonables para todos los puertorriqueños.

OBJETIVOS CLAVE



## LA SEGURIDAD ES PRIORIDAD

Reformar los estilos de trabajo, enfocados en una cultura de seguridad para nuestros empleados y la gente de Puerto Rico



## MEJORAR LA SATISFACCIÓN DEL CLIENTE

Transformar las operaciones para ofrecer un excelente servicio al cliente y electricidad confiable a precios razonables



## RECONSTRUCCIÓN DEL SISTEMA Y RESILIENCIA

Utilización efectiva de fondos federales para restaurar la red eléctrica y mejorar la resistencia de la infraestructura, que actualmente está muy vulnerable



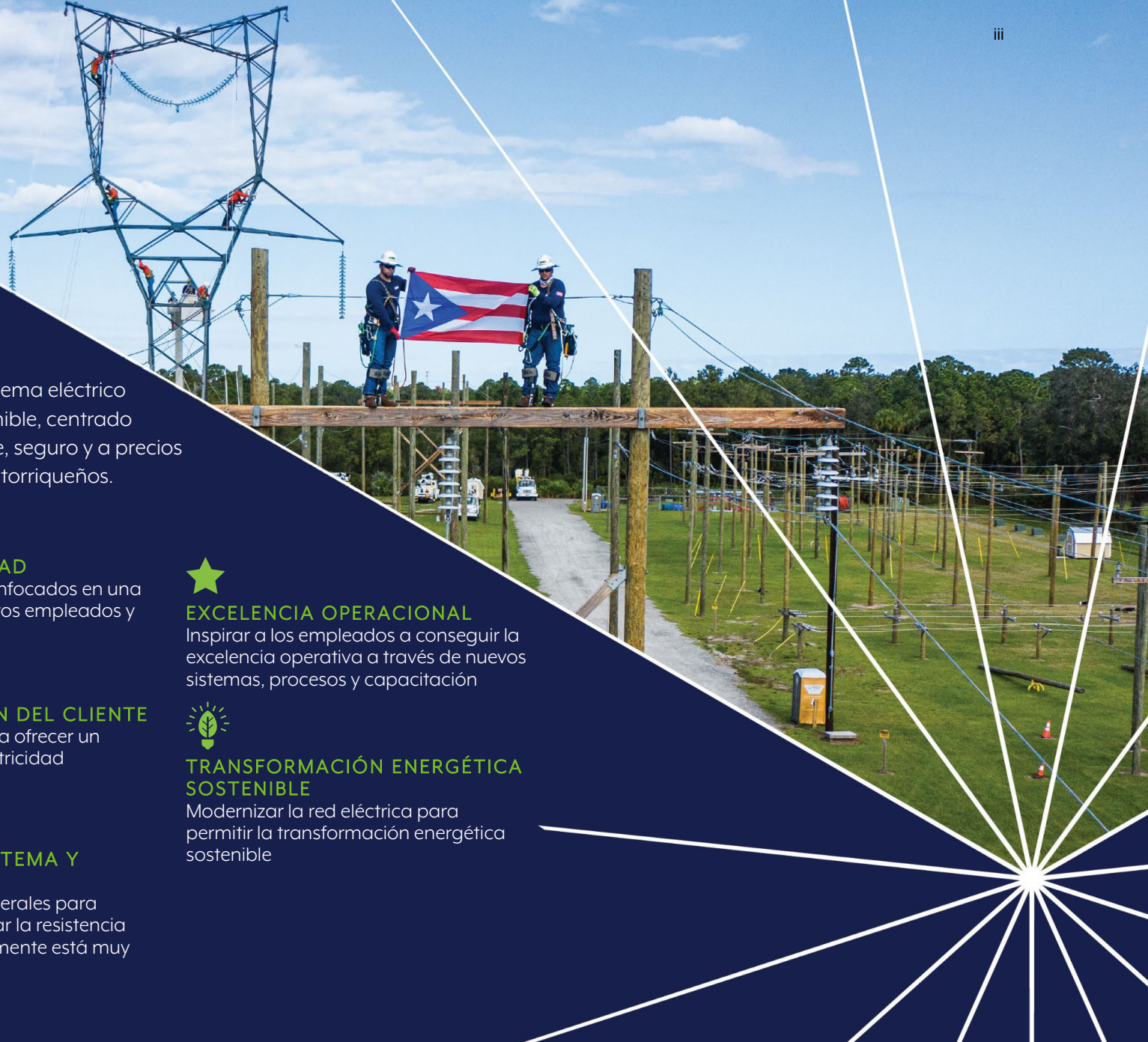
## EXCELENCIA OPERACIONAL

Inspirar a los empleados a conseguir la excelencia operativa a través de nuevos sistemas, procesos y capacitación



## TRANSFORMACIÓN ENERGÉTICA SOSTENIBLE

Modernizar la red eléctrica para permitir la transformación energética sostenible



## ¿Cómo llegamos aquí?

El sistema eléctrico de Puerto Rico está en un punto de inflexión crucial. Puerto Rico aprobó reformas legales fundamentales que establecieron un regulador independiente; la necesidad de nuevos operadores para el sistema de distribución y transmisión y separadamente para el de generación de la Autoridad de Energía Eléctrica (AEE) y así allanó el camino para una red eléctrica más limpia y resistente.

La AEE está en bancarrota. Puerto Rico necesita un operador profesional para manejar y administrar los fondos federales que son tan necesarios para poner en marcha la operación de recuperación y transformación.

Luego de un riguroso proceso competitivo que duró 18 meses, se seleccionó y adjudicó a LUMA un contrato para operar y mantener el sistema de transmisión y distribución eléctrica. Esto luego de evaluaciones y aprobaciones de la Junta de Directores de la Autoridad de Alianzas Público-Privadas, la Junta de Gobierno de la Autoridad de la AEE, la Junta de Supervisión Fiscal, el Negociado de Energía de Puerto Rico y el Gobernador de Puerto Rico.

LUMA fue escogida de manera unánime por el Comité de Alianza por:

- Nuestra experiencia líder en la industria
- Historial de cumplir con nuestros compromisos y
- El enfoque en soluciones diseñadas para cumplir con los objetivos del gobierno de transformar el sistema de transmisión y distribución.



### ALIANZA PÚBLICO PRIVADA Y ACUERDO DE OPERACIÓN Y MANTENIMIENTO



**Dueño de  
activos**



**Administrador**



**Operador**



**PROMESA y asuntos del  
Título III**

**COR**



**FEMA**  
and other agencies

**Fondos federales de  
recuperación**

## Lo que hemos hecho desde junio 2020

Desde junio de 2020, LUMA ha estado revisando información y visitando las instalaciones de la Autoridad de Energía Eléctrica (AEE), como parte de un proceso de evaluación detallada de las condiciones actuales de la red y los servicios que se ofrecen. Los problemas encontrados no se limitaron a daños causados por los huracanes. Las evaluaciones resaltaron un desempeño por debajo de los estándares de la industria eléctrica y condiciones precarias en la mayoría de las instalaciones.

Hemos diseñado programas para la recuperación de la infraestructura, lograr mejoras operacionales y aumentar la satisfacción de los clientes. Nuestro enfoque entrelaza políticas públicas claves con planes factibles. Dimos prioridad y se establecieron planes de acción para cumplir con nuestros clientes, y al mismo tiempo satisfacemos los requisitos de política pública y contractuales.

Desarrollamos planes, presupuestos, métricas de desempeño y principios de operación para el sistema que estamos presentando al Negociado de Energía de Puerto Rico. Todos estos informes serán revisados y deberán ser aprobados por el Negociado de Energía antes de que LUMA asuma la operación del sistema de transmisión y distribución, calendarizada para junio de 2021.





## Lo que estamos presentando para la aprobación del Negociado de Energía

### Plan de remediación

#### Nuestros planes

El plan de remediación del sistema se enfoca en atender las áreas que están por debajo del estándar de la industria y plantean los mayores riesgos para los puertorriqueños, incluyendo a nuestros empleados.

### Presupuestos iniciales

#### Cómo llegaremos allí

Los presupuestos iniciales no proponen un aumento de la tarifa básica. Cubren todos los planes durante los primeros tres años de operación, abarcan los gastos de operación y mantenimiento, y las inversiones (incluyendo aquellas subvencionadas por el gobierno federal).

### Métricas de desempeño

#### Cómo seremos responsables

Las métricas de desempeño son indicadores numéricos para medir el buen desempeño de LUMA, alineados con las políticas públicas y la creación de mejoras tangibles para Puerto Rico.

### Principios del sistema de operación

#### Cómo operaremos la red eléctrica

Los principios del sistema de operación definen cómo funcionará el despacho y control para garantizar el suministro y entrega de energía eficiente y confiable.

Nuestra gente primero.  
Seguridad siempre.

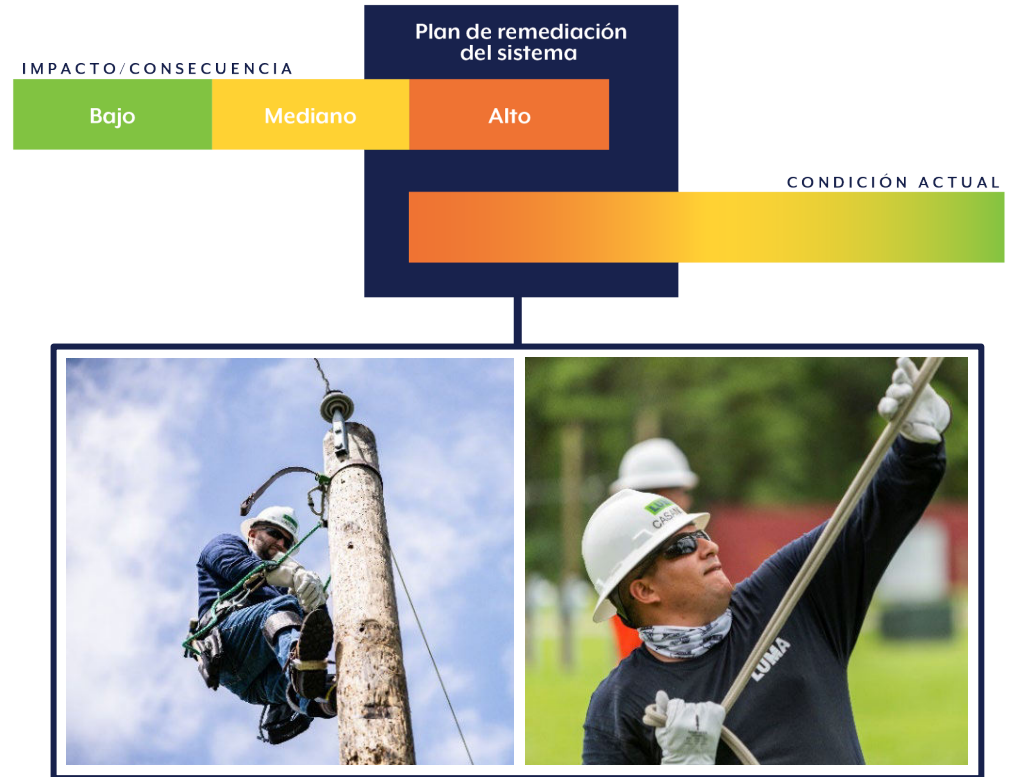
# Nuestro plan

## Plan de remediación del sistema

El plan de remediación de LUMA establece la estrategia para remediar, reparar, reemplazar y estabilizar el sistema, las prácticas y los servicios, así como los equipos del sistema de transmisión y distribución. Las iniciativas de este plan son fundamentales para la recuperación y transformación y abordan los aspectos más peligrosos y frágiles del sistema eléctrico de Puerto Rico. Estas estrategias le permitirán a LUMA operar y mantener el sistema eléctrico de la isla en cumplimiento con los estándares de la industria, los requisitos contractuales y las leyes aplicables.

El plan de remediación es la culminación de las evaluaciones que LUMA realizó durante el período de transición inicial. LUMA ha planeado la inversión de aproximadamente \$4 mil millones de dólares en iniciativas y proyectos como parte del plan de remediación y más de \$10 mil millones de dólares totales en todos los programas de mejora.

El plan de remediación trabajará las áreas que están por debajo del estándar en la industria y que representan el mayor riesgo para los puertorriqueños, incluidos los empleados y el propio sistema eléctrico. Es una parte crítica de un conjunto más grande de medidas para mejorar y reconstruir la red eléctrica.

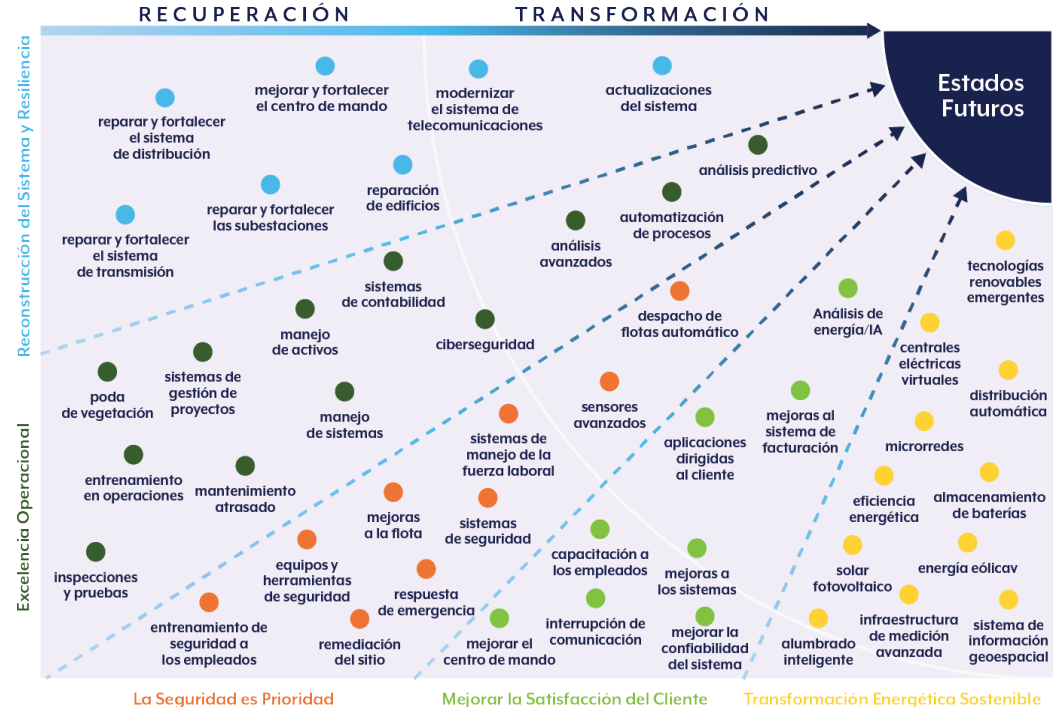


# Hacia dónde vamos

La estrategia general de LUMA para implementar el cambio de acuerdo a las políticas públicas se compone de dos fases: Recuperación y Transformación.

La **FASE DE RECUPERACIÓN** conlleva restaurar la infraestructura y los procesos de la utilidad a un estado de funcionamiento correcto, reparar la red a corto plazo y aprovechar la experiencia de los empleados actuales de la Autoridad de Energía Eléctrica (AEE) que se unirán a LUMA. Simultáneamente, se implementarán nuevos procesos, sistemas y capacitación para gestionar de manera más eficaz la operación de los servicios fundamentales.

Mientras se recupera el nivel del servicio eléctrico, LUMA acelerará el paso de la **TRANSFORMACIÓN**, en concordancia con las metas del gobierno y las políticas públicas adoptadas, rediseñando el sistema eléctrico para que esté a la altura de las necesidades del pueblo de Puerto Rico durante las próximas décadas. La transformación estará enfocada en energías renovables y más opciones para los clientes a través de sistemas y tecnologías avanzadas. Muchos de los programas de transformación se llevarán a cabo concurrentes con los programas de recuperación.



## Cómo lo alcanzaremos

### Presupuestos iniciales

Los presupuestos iniciales cubren todas las gestiones de LUMA durante los primeros tres años de operación e incluyen los programas asociados con el plan de remediación del sistema y las métricas de desempeño. Hemos identificado 69 áreas de reparación y mejoras para encaminar a la utilidad hacia la recuperación y transformación mediante la implementación de políticas públicas, mejoras de desempeño y el uso de fondos federales. Comenzaremos la mayoría de estos programas durante nuestro primer año de operación.

### LO QUE INCLUYE

Nuestros presupuestos iniciales comprenden partidas para costos operacionales y de capital (incluyendo aquellos sufragados por subvenciones federales) para el sistema de transmisión y distribución.

Propuesta de  
presupuesto  
de LUMA

# Sin aumento en la tarifa base

\* LUMA no está solicitando aumento en la tarifa base. LUMA no posee autoridad legal para determinar las tarifas de servicio eléctrico. El Negociado de Energía, como regulador independiente y especializado y como monitor del cumplimiento con la política pública energética en Puerto Rico, es el organismo autorizado en ley para evaluar y fijar las tarifas.

# Cómo seremos responsables

## Métricas de desempeño

LUMA evaluó el desempeño de la Autoridad de Energía Eléctrica (AEE) utilizando métodos estándar de la industria. Analizamos los procesos existentes en la AEE, los sistemas y los datos sobre sus operaciones e identificamos áreas a mejorar al compararlas con las prácticas en la industria. Los hallazgos (incluidos los de un tercero independiente) muestran que el desempeño de la AEE se posiciona por debajo de otras compañías de energía en América del Norte.

### SERVICIO AL CLIENTE

(J.D. Power)

**Más Bajo** de 144  
compañías de energía en  
América del Norte

47% más bajo que el de peor porcentaje

### INCIDENTES DE SEGURIDAD

(OSHA, 2019)

**5** veces mayor  
al estándar de  
la industria

200% más que la empresa de peor porcentaje

### INTERRUPCIONES DE SERVICIO

(IEEE)

**9** veces más  
largos y frecuentes  
que la media

## LUMA SERÁ RESPONSABLE

Los puertorriqueños merecen responsabilidad de su proveedor de servicios de electricidad.

Las métricas de rendimiento de LUMA son indicadores numéricos que indicarán cómo va el desempeño de LUMA. Diseñadas para la industria de la energía eléctrica y compartidas con el público para garantizar la transparencia, utilizamos métricas estándar para medir nuestro desempeño y mostrar cuán bien adelantamos los compromisos contractuales y de política pública contraídos. Cada indicador mide el desempeño de LUMA en funciones clave como: servicio al cliente, seguridad, trabajo técnico y gestión financiera.

## Métricas de desempeño propuestas por LUMA

### SATISFACIÓN DEL CLIENTE

- J.D. Power-Encuesta de satisfacción al cliente: Clientes residenciales y comerciales
- Rapidez media de respuesta
- Tasa de quejas
- Tasa de abandono

### SEGURIDAD

- Tasa de incidentes registrables de OSHA
- Fatalidades OSHA
- Tasa de gravedad OSHA
- Tasa OSHA DART

### TÉCNICO

- Índice de frecuencia de Interrupción media del sistema (SAIFI)
- Índice de duración de Interrupción media del sistema (SAIDI)
- Inspecciones (Líneas de distribución y transmisión, subestaciones)

### FINANCIERA

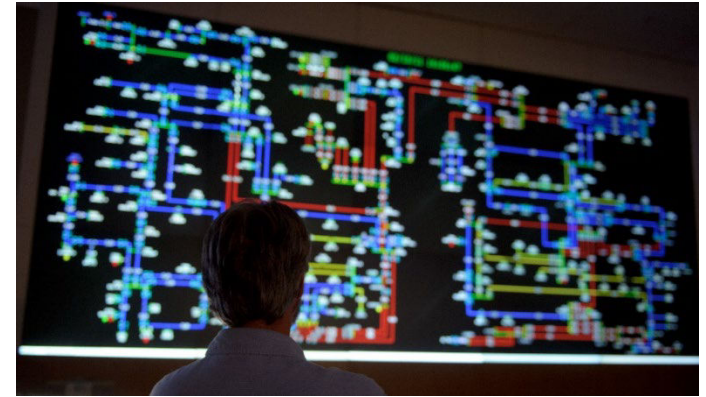
- Presupuesto operativo
- Presupuesto de capital: Financiado por el gobierno federal y el cobro de tarifas
- Días Ventas Pendientes: Clientes Generales y Gubernamentales
- Horas extras

### MÉTRICAS DE RESPUESTA DE EMERGENCIA

# Cómo operaremos la red eléctrica

## Principios de operación del sistema

Estos principios definen cómo funcionará el sistema de despacho y control de la red. Habrá reglas para lograr un suministro de energía eficiente, entrega de energía confiable y toma de decisiones transparentes. El despacho de recursos en tiempo real, la planificación del sistema y los procedimientos de emergencia se enfocarán en conseguir resultados positivos para el sistema en general y nuestros clientes. Esto será cada vez más importante, a medida que se mejore el sistema de transmisión y distribución y las energías renovables se conviertan en la mayor fuente y opción energética para el País.



## Lo que esto significa

- LUMA entregará energía lo más económicamente posible, mientras se mantiene la confiabilidad del sistema para **reducir los costos del combustible y las emisiones**
- Con reglas definidas y mejoras al sistema seremos capaces de “ver” las interrupciones del servicio antes de que ocurran para **evitar desconexión de carga**, acelerar los tiempos de respuesta y **minimizar las interrupciones del servicio a los clientes**
- Observarán **mejoras en la respuesta a emergencias** como huracanes y terremotos
- El Sistema operativo sentará las bases para que los inversionistas y el público tengan un mejor entendimiento de los aspectos técnicos y las limitaciones de la red eléctrica, permitiendo propuestas más competitivas y focalizadas en proyectos de **energía renovable y soluciones de mayor valor para Puerto Rico**

principios definidos  
de operación  
del sistema

Mejor  
Confiabilidad



## Qué esperar

A la expectativa de la aprobación de nuestros informes regulatorios, continuamos trabajando para asumir la operación del sistema de transmisión y distribución en junio 2021.

### Una vez arranquemos, verán:

- Mejoras en la capacidad de respuesta a los clientes
- Desganche de vegetación
- Inspecciones de áreas que reportan un gran número o significativas interrupciones del servicio
- Mejoras en la seguridad pública, incluyendo el alumbrado de las calles

### Queremos ser una compañía de la que los puertorriqueños se sientan orgullosos y en la que quieran trabajar. Para conseguirlo vamos a:

- Priorizar la seguridad
- Mejorar la satisfacción del cliente
- Reconstruir y mejorar la resiliencia del sistema
- Enfocarnos en la excelencia operacional
- Asegurar una transformación energética sostenible

Queremos que tengas la energía segura y confiable que te mereces.

# LUMA Energy's Regulatory Filings

February 2021



## Who We Are

Puerto Ricans rely on electricity. A robust and resilient energy system is the backbone for economic development.

At LUMA, our job is to provide electricity that Puerto Ricans can depend on. Our commitment is to transform the electric system by implementing public policy to achieve the customer-centric, reliable, resilient, safe energy that Puerto Ricans deserve — energy that will support economic growth and quality of life.

- We put people first, our employees, our customers and the Puerto Rican communities where we live and work
- We encourage and inspire our people to embrace opportunities as they work to build a better electric system for Puerto Rico
- Our goal is to provide exceptional customer service and implement public policy through operational excellence

Built for  
Invested in  
Listening to **Puerto  
Rico**



# Our mission for Puerto Rico

To recover and transform the utility to deliver customer-centric, reliable, resilient, safe and sustainable electricity at reasonable prices.

## KEY GOALS



### PRIORITIZE SAFETY

Reform utility activities to support a strong safety culture focused on employee safety and the safety of the people of Puerto Rico



### IMPROVE CUSTOMER SATISFACTION

Transform utility operations to deliver a positive customer experience and reliable electricity at reasonable prices



### SYSTEM REBUILD & RESILIENCY

Effectively deploy federal funding to restore the grid and improve the resilience of vulnerable infrastructure



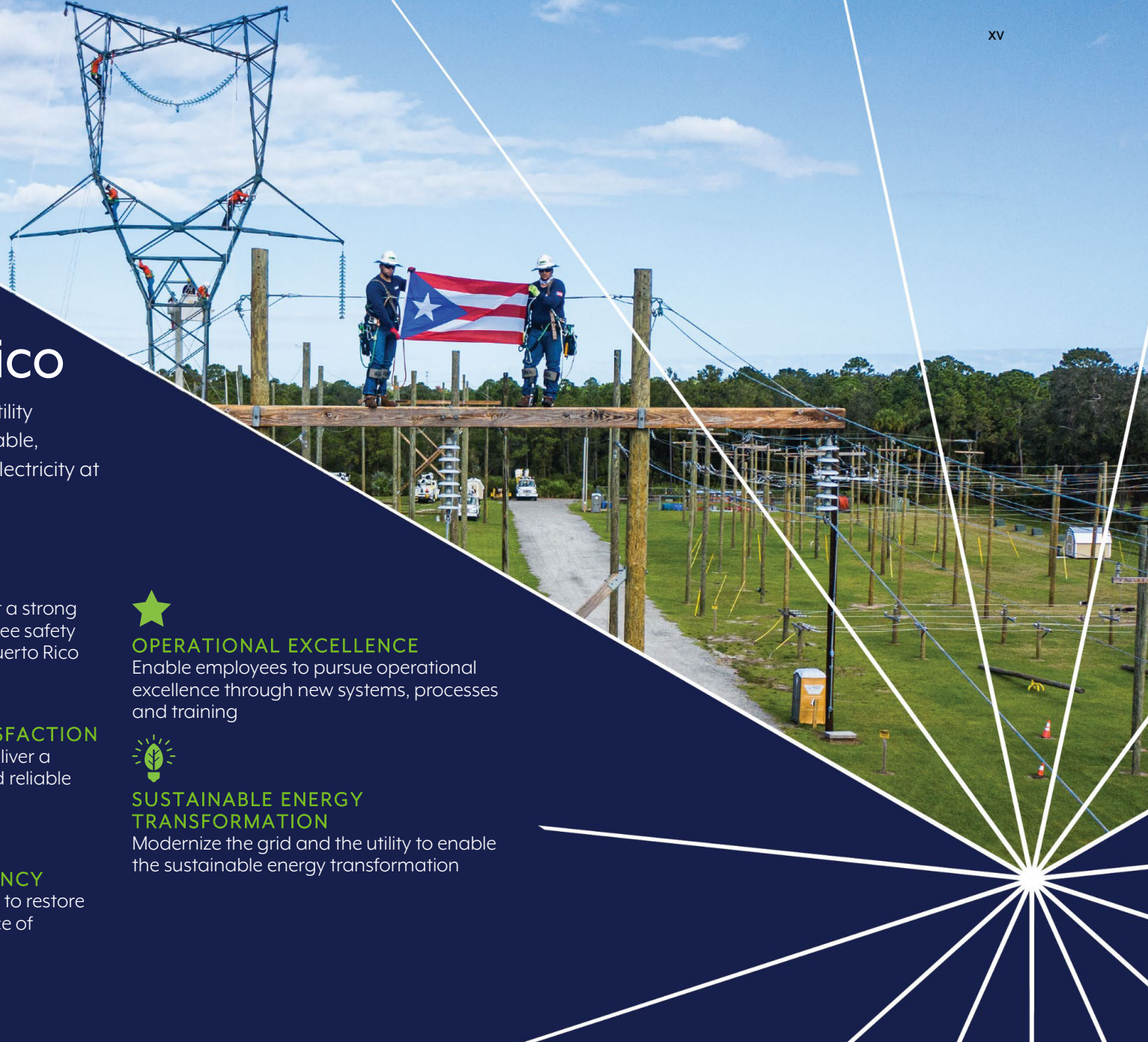
### OPERATIONAL EXCELLENCE

Enable employees to pursue operational excellence through new systems, processes and training



### SUSTAINABLE ENERGY TRANSFORMATION

Modernize the grid and the utility to enable the sustainable energy transformation



## How we got here

Puerto Rico's electricity system is at a crucial inflection point. Puerto Rico introduced fundamental legal reforms that established an independent regulator; required new operators for PREPA's distribution, transmission and generation assets; and paved the way for a cleaner, more resilient grid.

With PREPA in bankruptcy, Puerto Rico needs a professional operator to manage and administer the critical federal funds required for this recovery and transformation.

After a rigorous 18-month selection process, LUMA was awarded a partnership contract to operate and maintain the electric transmission and distribution system following evaluations and approvals from the Public-Private Partnership Committee, Board of Directors of the Public-Private Partnership Authority, PREPA Governing Board, Financial Oversight Board, Puerto Rico Energy Bureau and Governor of Puerto Rico.

LUMA was unanimously chosen by the Public-Private Partnership Authority Board because of:

- Our industry-leading expertise
- History of delivering on our commitments and
- Our focus on solutions designed to meet the government's goals for transforming the transmission and distribution system.



### PUBLIC-PRIVATE PARTNERSHIP: O&M AGREEMENT



**Asset Owner**



**Administrator**



**Operator**



**PROMESA & Title III**



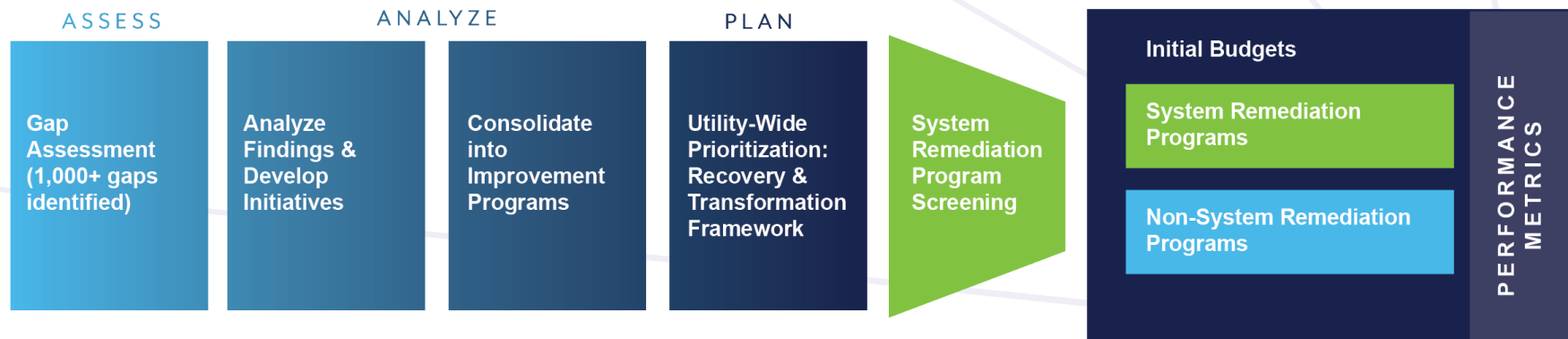
**Federal Recovery Funds**

## What we've been doing since June 2020

Since June 2020, LUMA has been reviewing PREPA's data and sites, conducting a detailed assessment of the current conditions of the grid and utility service. The issues were not limited to hurricane damage. The assessments highlighted performance below industry standards and consistently poor health across most assets.

We then designed programs to carry out infrastructure recovery and achieve operational and customer satisfaction improvements. Our coordinated approach links key public policy to actionable plans. We prioritized and sequenced activities to deliver value to our customers and meet public policy and contractual requirements.

We developed plans, budgets, performance metrics and system operation principles and are now submitting our work to the PREB. These submissions will be reviewed and approved by PREB before LUMA begins operations, currently targeted for June 2021.



## What we're submitting for PREB approval

### System Remediation Plan

#### What we have planned

The System Remediation Plan (SRP) addresses areas that are below standard and pose the highest risk to Puerto Ricans, including our employees, and the system.

### Initial Budgets

#### How we'll get there

Initial budgets do not propose a base rate increase. They cover all activities during the first 3 years of operations and include O&M, non-federally funded capital and federally funded capital.

### Performance Metrics

#### How we'll be accountable

Performance metrics are numeric indicators to measure how well LUMA is performing in alignment with public policy and making tangible improvements for Puerto Rico.

### System Operation Principles

#### How we'll operate the grid

System Operation Principles (SOP) define how the bulk power system will operate to ensure efficient energy generation and reliable energy delivery.

People First.  
Safety Always.



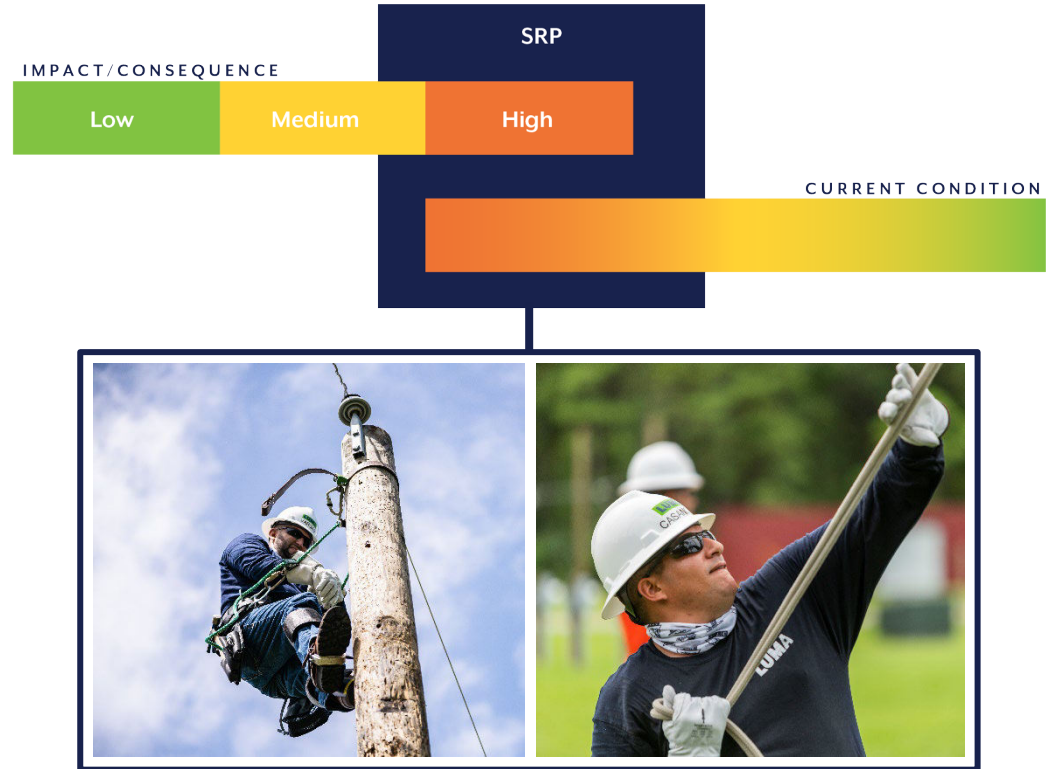
# What we have planned

## System Remediation Plan

LUMA's SRP establishes our strategy to remediate, repair, replace and stabilize transmission and distribution system equipment, systems, practices and services. The initiatives are foundational to recovery and transformation and address the most dangerous and fragile aspects of Puerto Rico's electricity system. They will enable LUMA to operate and maintain Puerto Rico's electricity system in compliance with industry standards, contractual requirements and applicable laws.

The SRP is a culmination of the assessments LUMA performed during the front-end transition period. LUMA has planned for approximately \$4 billion in initiatives as part of the SRP and over \$10 billion in total improvement programs.

The SRP is our plan to address areas that are below standard and pose the highest risk to Puerto Ricans, including employees, and the system. It's a critical part of a larger set of improvement activities to recover and transform the grid.

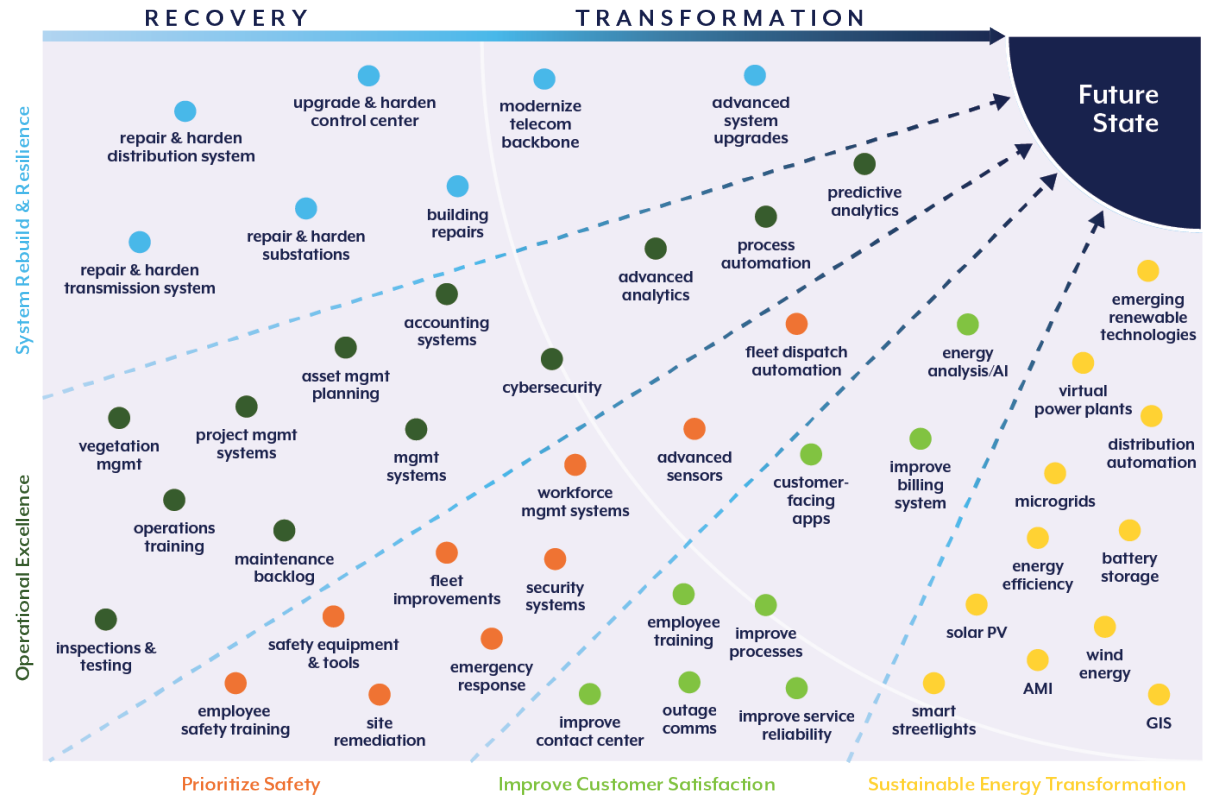


# Where we're going

LUMA's overall strategy to implement the change mandated in public policy is composed of two phases: Recovery and Transformation.

The **RECOVERY PHASE** will involve restoring the utility's infrastructure and processes to a well-functioning state, repairing the grid in the near term and leveraging the experience of current PREPA employees who will be joining LUMA — while implementing new processes, systems and training to more effectively manage fundamental utility operations.

As the utility recovers, LUMA will accelerate the pace of **TRANSFORMATION**, in accordance with the government's goals and policy, by redesigning the utility to meet Puerto Rico's energy needs for the coming decades, with a focus on renewable generation and distributed energy resources made possible through advanced operational systems and technologies. Many of these Transformation programs will begin alongside Recovery programs.



## How we'll get there

### Initial Budgets

The initial budgets cover all LUMA activities during the first three years of operations and include activities associated with the system remediation plan and performance metrics. We've identified 69 remediation and improvement activities to start the utility on the path to recovery and transformation by implementing public policy, improving performance and strategically deploying federal funds. We'll start most these programs during our first year of operations.

### WHAT'S INCLUDED

Our initial budgets comprise operating and capital (federally funded and ratepayer funded) budgets for transmission and distribution.

LUMA  
budget  
proposal

No  
Increase  
in Base Rate

\* LUMA is not applying for a base rate increase. LUMA does not have legal authority to determine electric rates. PREB, the independent and specialized body to regulate, monitor and enforce energy public policy of the Government of Puerto Rico, is authorized by Puerto Rico laws to evaluate and approve rates.



# How we'll be accountable

## Performance Metrics

LUMA assessed PREPA's performance using industry-standard methods. We analyzed PREPA's existing processes, systems and data, identifying gaps as compared to electric utility industry practices. Results (including through independent third-party sources) show that PREPA consistently ranks at the bottom of all North American utilities.

### CUSTOMER SERVICE

(J.D. Power)

**Lowest** of 144  
North American utilities

47% lower than the next lowest

### SAFETY INCIDENTS

(OSHA, 2019 stats)

**5 times**  
the industry average  
for workplace incidents

200% more than the next-worst utility

### POWER OUTAGES

(IEEE)

**9 times**  
longer & more frequent  
than median performers

## LUMA WILL BE ACCOUNTABLE.

Puerto Ricans deserve accountability from their electricity service provider.

LUMA's performance metrics are numeric indicators and scorecards of how well we're doing. Tailored to the electric utility business and shared with the public to ensure transparency, they use industry standards to measure performance and show how well we advance public policy. Each indicator measures LUMA's performance in key functional areas such as customer service, safety, reliability and financial management.

## LUMA's Proposed Performance Metrics

### CUSTOMER SATISFACTION

- J.D. Power Customer Satisfaction Survey: Residential & Business Customers
- Average Speed of Answer
- Customer Complaint Rate
- Abandonment Rate

### SAFETY

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

### TECHNICAL

- System Average Interruption Frequency Index (SAIFI)
- System Average Interruption Duration Index (SAIDI)
- Inspections (Distribution & Transmission Lines, Substations)

### FINANCIAL

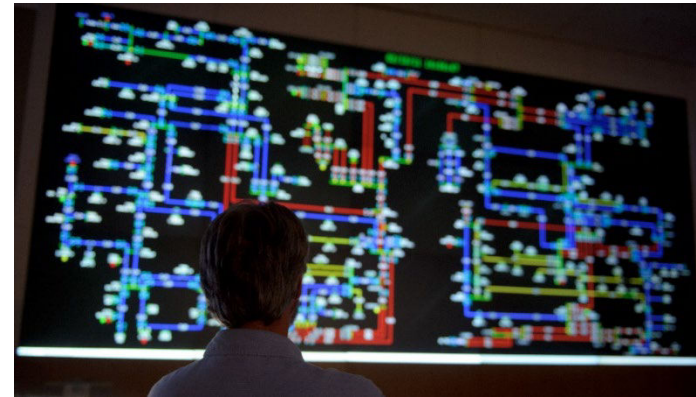
- Operating Budget
- Capital Budget: Federally Funded & Ratepayer Funded
- Days Sales Outstanding: General & Government Customers
- Overtime

### EMERGENCY RESPONSE METRICS

# How we'll operate the grid

## System Operation Principles

The SOP defines how the bulk power system will operate. There will be effective rules for efficient energy generation, reliable energy delivery and transparent decision-making on how the grid is managed. Real-time dispatch, resource and system planning and emergency procedures will be focused on achieving outcomes for the overall system and customers. This will become increasingly important as the transmission and distribution system is improved and renewables become a larger source of energy.



## What this means

- LUMA will dispatch energy as economically as possible while maintaining reliability to **reduce fuel costs and emissions**
- With defined rules and system improvements, we'll be able to "see" outages before they happen to **avoid load-shedding**, expedite response times and **shorten most customer outages**
- You'll see **improved response to emergencies** such as major hurricanes and earthquakes
- The SOP will create the basis for developers and stakeholders to better understand grid issues and constraints, allowing for more competitive, tailored proposals for **new renewables and value-added solutions for Puerto Rico**

defined  
operation  
principles

# Improved Reliability

## What to expect

Pending the required approvals of our regulatory filings, we will commence operations in June 2021.

### Following commencement, you'll see:

- Improvement in contact center responsiveness
- Clearing of vegetation from utility rights of way
- Walkdowns and inspections of areas experiencing a significant number or size of outages
- Improved public safety, including streetlights

### We want to be a company that Puerto Rico is proud of and that Puerto Ricans want to work for. To get there, we'll

- Prioritize safety
- Improve customer satisfaction
- Rebuild the system and improve system resiliency
- Focus on operational excellence
- Ensure a sustainable energy transformation

We want you to have the safe, reliable energy you deserve.



# LUMA's Performance Metrics Targets

February 24, 2021



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## 1.0 Introduction & Overview

### 1.1 Introduction

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 (OMA) under which LUMA will operate and manage PREPA's transmission and distribution system (T&D System).

Before 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 these 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. LUMA filed this analysis and recommended additional Performance Metrics for consideration as part of NEPR-MI-2019-0007 on January 29, 2021, (LUMA's Comments on Performance Metrics Baselines, resubmitted February 5, 2021) to establish metrics and performance baselines. As stated in that filing:

The current performance of PREPA is well below industry standards. Establishing a robust set of Performance Metrics will begin to enable transparency, reverse negative performance trends and will further align LUMA with public policy – critical upon LUMA's commencement of T&D Services. This will advance LUMA's key goals: Prioritize Safety; Improve Customer Satisfaction; System Rebuild and Resiliency; Operational Excellence; and Sustainable Energy Transformation. The Puerto Rico Energy Bureau ("PREB") has also promulgated regulation concerning Performance Metrics, including NEPR-MI-2019-0014 and NEPR-MI-2019-0007. In the latter docket, PREB, through its order issued December 23, 2020, ordered that LUMA take part in the proceedings.

This submission presents the Performance Metrics' minimum performance levels and targets and complies with LUMA's obligations under Section 4.2(f) of the OMA. A revised Annex IX of the OMA (hereafter referred to as Annex IX) is also presented. This work forms part of the Front-End Transition Services being delivered by LUMA under the OMA.

LUMA's major work in developing Performance Metrics took place before December 2020 and included dedicated teams focused on this specific effort and the active participation of experts from each functional department in the organization. The process also included discussions with key stakeholders, who provided feedback on process, regulations and other context that informed this proposal. Please refer to Case No. NEPR-MI-2019-0007, LUMA's Comments on Performance Baselines and Metrics, dated February 5, 2021, and in particular Exhibit 2, LUMA's Comments on Performance Metrics Baselines, for additional details. LUMA's February 5, 2021, filing in NEPR-MI-2019-0007 is provided for reference as Appendix A.

As discussed in Exhibit 2 of that filing, LUMA found significant gaps in both PREPA's processes and data. This makes determining baseline performance to enable the setting of realistic performance targets for the proposed Performance Metrics a challenge. Consequently, LUMA proposes that reporting of certain metrics and their use in Annex IX be deferred until such time as LUMA is able to provide reliable data for those metrics. In order to provide a full set of metrics, LUMA also proposes the addition of some Performance Metrics in Annex IX.

The proposed Performance Metrics are presented in this submission with details related to each, including objectives, descriptions, calculations, performance baselines and targets. A timeframe is also presented for each Performance Metric.

LUMA respectfully requests that the Puerto Rico Energy Bureau approve the revised Annex IX as presented in Section 2 of this document.

Lastly, plans for achieving proposed targeted performance are presented with specified time frames. It must be noted that the design of LUMA's plans is affected in several cases by the lack of quality data. Implementation plans were developed based on the expertise of various subject matter experts, professional judgement, and knowledge of industry standards. Post Commencement, LUMA will revise and update these plans to reflect additional information and improvements in data collection and the calculation of relevant metrics. LUMA's plans for improvement in the proposed Performance Metrics is reflected in our prioritization of programs and projects, and ultimately in our Initial Budgets. Unforeseen events outside of LUMA's control may affect LUMA's ability to meet the proposed Performance Metrics.

## 1.2 Performance Metrics Overview

### 1.2.1 Purpose & Requirements of the OMA

Pursuant to Section 4.2(f) of the OMA, LUMA proposes a set of metrics, defined in this document, for measuring and reporting LUMA's performance as the Operator of the T&D System and for determining the incentive fee that LUMA is eligible to receive each applicable Contract Year as specified in Section 7.1(c) of the OMA. LUMA will be entitled to earn the incentive fee (set forth in Annex VIII of the OMA and calculated as set forth in Annex X of the OMA) for any given Contract Year if it achieves or exceeds these Performance Metrics.

According to Section 4.2(f) of the OMA, the Performance Metrics must include (i) the proposed baseline, target and minimum performance levels for certain Performance Metrics; (ii) Key Performance Metrics; (iii) Major Outage Event Performance Metrics; and (iv) an explanation of the basis for each of the foregoing, all as defined in Annex IX.

As described in Section 3 of LUMA's Reply to Comments on PREPA's performance baselines, performance metrics and compliance benchmarks in Case No. NEPR-MI-2019-0007, dated February 19, 2021, "the process for the establishment of Performance Metrics allows for an annual review of the Performance Metrics and revisions to the metrics if required." Due to the significant gaps identified in data collection, data quality, record-keeping and processes as currently applied, LUMA proposes that this set of Performance Metrics apply for an initial period of three years of operation. On an annual basis, LUMA and the PREB will evaluate the effectiveness and appropriateness of each metric for measuring the desired performance (including the remote possibility of outperforming a benchmark) and will propose resetting targets, minimum performance levels and metric timelines to be applied to subsequent Contract Years. LUMA may also propose replacing one or more metrics.

### 1.2.2 Summary of Performance Metrics

As stated in Section 2.1 of LUMA's Reply to Comments on PREPA's performance baselines, performance metrics, as well as compliance benchmarks in Case No. NEPR-MI-2019-0007, dated February 19, 2021:

As part of our planning work and based on Puerto Rico energy public policy, LUMA established a mission and goals to help guide improvement programs and prioritize activities. LUMA used the mission and goals as part of its strategic



planning framework to ensure alignment with Puerto Rico's broader public policy objectives and customer needs. As part of this alignment, LUMA recognizes that Performance Metrics associated with the mission and goals will further earlier compliance with public policy and drive benefits for the people of Puerto Rico.

The proposed performance metrics are listed in Table 1-1. These are grouped into three major performance categories in accordance with Annex IX: Customer Service; Technical, Safety & Regulatory; and Financial Performance. The second column, "OMA Description," has the text used in Annex IX of the OMA at its Effective Date. The third column indicates, in summary form, LUMA's description including any clarification, addition or deferral to Annex IX.

**Table 1-1. Performance Metrics Summary**

Performance Metric	OMA Description	LUMA Description
<b>Customer Service</b>		
J.D. Power Customer Satisfaction Survey (Residential Customers)	3rd party measure of customer satisfaction	3rd party measure of customer satisfaction
J.D. Power Customer Satisfaction Survey (Business Customers)	3rd party measure of customer satisfaction	3rd party measure of customer satisfaction
Average Speed of Answer (minutes) <sup>1</sup>	Time it takes on phone to reach an agent	The average wait time from the moment the customer enters the Automated Call Distribution (ACD) queue to the time the call is answered by an agent
Customer Complaint Rate	Total monthly complaints registered with PREB	Total annual complaints registered with PREB divided by the total number of customers and then multiplied by 100,000
First Call Resolution (FCR) <sup>1</sup> (deferred)	% of calls with issues that are escalated	The percentage of calls where the customer was able to resolve their issue/need on the first attempt  PREPA does not have the ability to track and report FCR. LUMA proposes deferring the calculation and reporting of this metric until a new cloud-based Contact Center platform is implemented and FCR performance tracking can be established. This is currently targeted for Year 2.
Abandonment Rate <sup>1</sup>	# of abandoned calls per calls received	The percentage of callers who hang up (abandon) while the call is still in the Automated Call Distribution (ACD) queue.
<b>Technical, Safety &amp; Regulatory</b>		
Occupational Safety and Health (OSHA) Recordable Incident Rate	# of work-related OSHA recordable injury cases	Total number of OSHA recordable incidents as a result of work-related injury
OSHA Fatalities <sup>1</sup>	# of work-related fatalities	All work-related fatalities
OSHA Severity Rate <sup>1</sup>	OSHA Severe Injuries # of total work-related injury cases with severity days	Total number of restricted and lost-time days incurred as a result of a work-related injury
OSHA Days Away Restricted or Transferred (DART) Rate	# of work-related injury	Total number of OSHA recordable cases with lost-time days (away, restricted or transferred)
System Average Interruption Frequency Index (SAIFI) <sup>1</sup>	Measures avg. outage frequency	Indicates how often the average customer experiences a sustained interruption over a predefined period of time <sup>2</sup>
System Average Interruption Duration Index (SAIDI) <sup>1</sup>	Measures avg. restoration time	Indicates the total duration of interruption for the average customer during a predefined period of time <sup>2</sup>

# LUMA's Performance Metrics Targets

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Performance Metric	OMA Description	LUMA Description
Customer Average Interruption Duration Index (CAIDI) <sup>1</sup> (eliminated)	Measures avg. outage duration	Represents the average time required to restore service <sup>2</sup>  Based on growing industry concerns that CAIDI is very limited as a performance metric, LUMA proposes eliminating CAIDI. Since CAIDI is the ratio between SAIDI and SAIFI, CAIDI can be misleading because it can remain the same even when the SAIDI and SAIFI values decrease.
Customers Experiencing Multiple Interruptions (CEMI <sub>N</sub> ) (deferred)	Measures multiple outages in a given period	Indicates the ratio of individual customers experiencing N or more sustained interruptions to the total number of customers served. <sup>2</sup>  Due to data quality issues, including lack of accurate customer information and lack of customer connectivity in the Outage Management System, LUMA proposes deferring CEMI <sub>N</sub> until after the information can be corrected and a baseline determined, currently expected to be Year 4.
Momentary Average Interruption Frequency Index (MAIFI) (deferred)	Measures avg. # of momentary interruptions	Indicates the average frequency of momentary interruptions.  Due to data availability and quality issues, LUMA recommends deferring the MAIFI metric until it can be accurately measured. This requires replacing the Energy Manage System which is currently targeted for year 4 to 5.
<b>Additional Performance Metrics</b>		
Distribution Line Inspections & Targeted Corrections <sup>1</sup>	N/A	The number of distribution line inspections completed, with data recorded in a database for analysis. Category 0 and Category 1 findings shall be incorporated in a plan to be addressed within 60 days of identification.
Transmission Line Inspections & Targeted Corrections	N/A	The number of transmission line inspections completed, with data recorded in a database for analysis. Category 0 and Category 1 findings shall be incorporated in a plan to be addressed within 60 days of identification.
T&D Substation Inspections & Targeted Corrections	N/A	The number of distribution and transmission substation inspections completed with data recorded in a database for analysis. Category 0 and Category 1 findings shall be incorporated in a plan to be addressed within 60 days of identification.
<b>Financial Performance</b>		
Operating Budget <sup>1</sup>	Measures ability to stay within budget	Measures ability to stay within budget
Capital Budget: Federally Funded <sup>1</sup>	Measures ability to stay within budget	Measures ability to stay within budget
Capital Budget: Non-Federally Funded <sup>1</sup>	Measures ability to stay within budget	Measures ability to stay within budget

Performance Metric	OMA Description	LUMA Description
Days Sales Outstanding (DSO) (bifurcated)	Measures ability to collect bills	Measures ability to collect customer bills  LUMA recommends calculating separate DSO metrics for General Customers (Residential, Commercial, & Wholesale), and Government Accounts to improve the transparency of collections efforts and improvements. See below for new DSO metrics.
Reduction in Network Line Losses (deferred)	Measures ability to reduce electric losses	Measures ability to reduce electric losses  PREPA does not currently allocate losses to the components of the system. Such allocation requires the development of an appropriate model, as well as additional metering and other measures. This is currently targeted for Year 2.
Overtime	Measures ability to manage salary expense	Measures ability to manage overtime costs under normal operations (excluding emergency events)
Additional Performance Metrics		
Days Sales Outstanding – General Customers	N/A	Measures ability to collect bills from general customers
Days Sales Outstanding – Government Customers	N/A	Measures ability to collect bills from government customers

<sup>1</sup> These Performance Metrics are also Key Performance Metrics as defined in Annex IX of the OMA.

<sup>2</sup> These descriptions are from the Institute of Electrical and Electronics Engineers ("IEEE") Guide for Electric Power Distribution Reliability Indices IEEE Std. 1366™-2012.

## 1.2.3 Summary of Major Outage Event Performance Metrics

The OMA outlines technical metrics to establish targets for acceptable performance in providing reliable electric service during normal conditions. These metrics expressly characterize major outage events as abnormal and exclude utility performance during these major outage events. As such, they are not intended to, cannot and do not provide any quantitative measurement of utility performance during a major outage event. Finally, technical metrics measure the utility's overall reliability on an annual basis. In contrast, the Major Outage Event Scorecard (MOE Scorecard) will be used as a tool to specifically measure utility performance (including preparation and communication activities) after each major outage event.

## 1.2.4 Application of Performance Metrics

The Performance Metrics outlined in Section 2.4 and 2.5 of this submission apply during normal operations of the T&D System (i.e., when Major Outage Event Performance Metrics do not apply). For the purposes of this proposal, including Section 2, Revised Annex IX — Performance Metrics, Major Outage Event Performance Metrics apply during Major Outage Events defined as:

an event as a result of which (i) at least two hundred and five thousand (205,000) T&D Customers are interrupted for more than 15 minutes or (ii) at any point in time during the event, there are one thousand five hundred or more ( $\geq 1,500$ ) active outage events for the T&D System, which are tracked in the Outage Management System (OMS). The major outage event is deemed ongoing so long as the interruptions/outages continue to remain above the stated cumulative amounts, in each case for a period of twenty-four hours or longer ( $\geq 24$ ) and are caused by an act of God. If such an act of God is a storm, the storm must be

designated as a named storm by the U.S. National Weather Service or a State of Emergency declared by the Government of Puerto Rico. The major outage event shall be deemed to have ended when the cumulative number of T&D customers remaining interrupted falls below ten thousand (10,000) for a continuous period of eight (8) hours.

This definition was altered from that in the OMA to further define expectations and measurable targets. The MOE Scorecard is a tool to specifically track utility performance (including preparation and communication activities) after each Major Outage Event. The use of the MOE Scorecard is consistent with the OMA's intent to provide transparency on the utility's performance during emergencies and to assist in learning from emergency events and improving emergency response.

## 2.0 Revised Annex IX — Performance Metrics

This section provides a revised Annex IX of the OMA for PREB's consideration and approval.

### 2.1 General

For each Contract Year, LUMA shall be eligible to receive financial incentive compensation (Incentive Fee) based on the LUMA's performance during the Contract Year. LUMA's performance will be measured against the performance goals set forth by the Performance Metrics as described in this revised Annex IX (Performance Metrics). The Incentive Fee calculation is described in Annex X (Calculation of Incentive Fee) with a maximum amount that can be earned (the Incentive Compensation Pool). Section 3 of this document provides an updated view of the illustrative table provided in the OMA.

### 2.2 Performance Categories

The proposed Performance Metrics are listed in Table 2-1. These are grouped in three major Performance Categories in accordance with Annex IX of the OMA: customer service; technical, safety & regulatory; and financial performance. Likewise, the Incentive Compensation Pool will be allocated across the Performance Categories to align LUMA's incentive compensation with the performance goals.

**Table 2-1. Summary of Performance Categories**

Performance Category	Performance Goal	Allocation of Incentive Compensation Period
<b>1. Customer Satisfaction</b>	Achieve a high-level of customer satisfaction across all customer classes.	25%
<b>2. Technical, Safety &amp; Regulatory</b>	Operate a safe, reliable electric grid while remaining compliant with applicable safety, environmental and other regulations.	50%
<b>3. Financial Performance</b>	Meet the approved Operating Budget, Capital Budget: Federally Funded and Capital Budget: Non-Federally Funded.	25%

## 2.3 In Compliance with Docket NEPR-MI-2019-0014<sup>1</sup>

- A. For each Contract Year, the level of performance in each Performance Category shall be measured based on actual results achieved for the Contract Year. Levels of performance and achievement of results will be adjusted proportionately during the initial Contract Year beginning on the Service Commencement Date and ending on the following June 30. For this purpose, one or more Performance Metrics shall be associated with each Performance Category.
- B. For all Performance Categories LUMA's performance shall be determined by the level of achievement of the Performance Objective for each Performance Metric under a Performance Category as described in Section 2.5 of this document. Such level of achievement will determine the portion of the allocated Incentive Compensation Pool earned by LUMA as described in Annex X (Calculation of Incentive Fee).
- C. Each Performance Metric has an assigned point weighting (Base Points). For all Performance Metrics except for the Binary Metrics as described in Section D below, a baseline performance level has been established prior to the beginning of the first Contract Year (the Baseline Performance Level). The proposed Baseline Performance Level is based on either historical operating data confirmed during the Front-End Transition Period, performance during the Front- End Transition Period or through independent analysis. The initial baseline levels are proposed by LUMA then reviewed, modified and/or approved by PREB in the manner set forth in the main body of the OMA. The Baseline Performance Level sets the starting point for each metric relative to the target performance level to be achieved in the third Contract Year (the "Target Performance Level"). The annual target performance level for each performance metric over the initial three-year period is determined by consideration of data and process information gathered from PREPA about past performance, consideration of effort and practical resources required (including human capital, processes and IT systems) to achieve improvements in performance and consideration of available budgets. The annual Minimum Performance Level set for each Performance Metric establishes the value that must be exceeded to qualify for Base Points and is established as one level lower performance than the 25% level in the Performance Metric Schedule. In Contract Years where the Minimum Performance Level is exceeded, LUMA has the ability of earning 25%, 50%, 100%, 125% or 150% (the Base Point Multipliers) of the Base Points depending on the metric result relative to the established baseline for the Contract Year. That is, for a result between the Minimum Performance Level and the 25% tier, LUMA would receive points equal to 25% of the Base Points and, for a result between the 25% threshold and the 50% threshold, LUMA would receive points equal to 50% of the Base Points, etc.

Performance ranges for determination of Base Points earned shall be based on achieving performance improvement from the Baseline Performance Level to the Target Performance Level over the initial three-year period. They shall be aligned with principles beneficial to the public interest including going above and beyond the minimum required compliance level; positively impacting or addressing areas of unsatisfactory performance with a direct impact to the electric service user; and tied to difficult tasks rather than easy to fix areas.

- D. Several Performance Metrics will be evaluated differently than the mechanism outlined above because the baseline is independent year to year (the Binary Metric). For the Occupational Safety

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<sup>1</sup> PREB Regulation for Performance Incentive Mechanisms, Regulation 9137, approved on December 2, 2019 in matter number NEPR – MI – 2019 – 0014.

and Health Administration (OSHA) Fatalities metrics, a value of zero results in full Base Points and a value other than zero results in no points. For the three approved budget-related metrics, Operating Budget, Capital Budget: Federally Funded and Capital Budget: Non-Federally Funded, exceeding 102% of the applicable budget results in no points while spending less than or equal to 100% of the applicable budget results in awarding full Base Points. The Operator can earn full Base Points by spending up to 100% of the Budget, pending Administrator approval. As defined in Section 7.3(b) of the OMA, the Budgets include 2% Excess Expenditures. Budget amendments, as defined in (i) through (iv) in Section 7.4 and 14.5(e) of the OMA, shall be deemed to be included in the initially approved Budgets (denominator) for purposes of this calculation. Further, any funds drawn from the Outage Event Reserve Account and the Contingency Reserve Account, as they have specific requirements, do not contribute to this metric.

## 2.4 Summary of Performance Metrics

The Performance Metrics that will form the basis for the Incentive Compensation Pool and their descriptions, baseline derivations, base points, and effective weights are summarized in Table 2-2.

**Table 2-2. Summary of Performance Metrics**

Performance Metric	Description	Baseline Performance Level Derivation	Base Points	Effective Weight
<b>A. Customer Service</b>				
1. J.D. Power Customer Satisfaction Survey (Residential Customers)	3rd party measure of customer satisfaction	Initial survey to be completed and baseline set prior to Service Commencement Date, with reporting beginning in year 1	7.0	5.83%
2. J.D. Power Customer Satisfaction Survey (Business Customers)	3rd party measure of customer satisfaction	Initial survey to be completed and baseline set prior to Service Commencement Date, with reporting beginning in year 1	7.0	5.83%
3. Average Speed of Answer (minutes) <sup>1</sup>	The average wait time from the moment the customer enters the Automated Call Distribution (ACD) queue to the time the call is answered by an agent	Based on past PREPA performance and LUMA experience	7.0	5.83%
4. Customer Complaint Rate	Total annual complaints registered with PREB (NEPR-QR) per 100,000 customers	Based on the total number of complaints received by the PREB (NEPR-QR) from May 2019 to February 2020, annualized, as the baseline as it is the most normal period of operations for PREPA in the last 4 years	2.0	1.67%
5. Abandonment Rate <sup>1</sup>	The percentage of callers who hang up (abandon) while the call is still in the ACD queue	Based on past PREPA performance and LUMA experience	7.0	5.83%
<b>A. Customer Service<sup>2</sup></b>			<b>30.0</b>	<b>25.0%</b>
<b>B. Technical, Safety &amp; Regulatory</b>				
1. OSHA Recordable Incident Rate	Total number of OSHA recordable incidents as a result of work-related injury	Evaluation of PREPA historical data	5.0	5.56%
2. OSHA Fatalities <sup>1</sup>	All work-related fatalities	Evaluation of PREPA historical data	5.0	5.56%



# LUMA's Performance Metrics Targets

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Performance Metric	Description	Baseline Performance Level Derivation	Base Points	Effective Weight
3. OSHA Severity Rate <sup>1,4</sup>	Total number of restricted and lost-time days incurred as a result of a work-related injury	Evaluation of PREPA historical data	5.0	5.56%
4. OSHA DART Rate	Total number of OSHA recordable cases with lost-time days (away, restricted or transferred)	Evaluation of PREPA historical data	5.0	5.56%
5. System Average Interruption Frequency Index (SAIFI) <sup>1</sup>	Indicates how often the average customer experiences a sustained interruption over a predefined period of time. <sup>3</sup>	Calculated from PREPA historical data during the Front-End Transition Period	5.0	5.56%
6. System Average Interruption Duration Index (SAIDI) <sup>1</sup>	Indicates the total duration of interruption for the average customer during a predefined period of time <sup>3</sup>	Calculated from PREPA historical data during the Front-End Transition Period	5.0	5.56%
7. Distribution Line Inspections & Targeted Corrections <sup>1</sup>	The number of distribution line inspections completed, with data recorded in a database for analysis. Inspections of all 13.2 kV, 8.3 kV and 4.16 kV mainline, 3 phase, overhead circuits to assess the physical integrity of the poles, structures, components and equipment to be completed. LUMA will identify serious safety issues to either the public or workers, which will result in immediate priorities for the remediation process. Category 0 and Category 1 findings shall be incorporated in a plan to address within 60 days of identification.	Not applicable. PREPA has not been performing routine inspections.	5.0	5.56%
8. Transmission Line Inspections & Targeted Corrections	The number of transmission line inspections completed, with data recorded in a database for analysis. Inspections of all 230 kV, 115 kV and 38 kV transmission circuits to assess the physical integrity of the poles, structures, components and equipment to be completed. LUMA will identify serious safety issues to either the public or workers, which will result in immediate priorities for the remediation process. Category 0 and Category 1 findings shall be incorporated in a plan to address within 60 days of identification.	Not applicable. PREPA has not been performing routine inspections.	5.0	5.56%
9. T&D Substation Inspections & Targeted Corrections	The number of distribution and transmission substation inspections completed with data recorded in a database for analysis. Inspections of all distribution and transmission substations to assess the physical integrity of the substation structures, components and equipment to be completed. LUMA will identify serious safety issues to either the public or workers, which will result in immediate priorities for the remediation process. Category 0 and Category 1 findings shall be incorporated in a plan to address within 60 days of identification.	Not applicable. PREPA has not been performing routine inspections.	5.0	5.56%

Performance Metric	Description	Baseline Performance Level Derivation	Base Points	Effective Weight
<b>B. Technical, Safety &amp; Regulatory</b>			<b>45.0</b>	<b>50.0%</b>
<b>C. Financial Performance</b>				
1. Operating Budget <sup>1</sup>	Measures ability to stay within budget	Budget approved by PREB	7.5	5.68%
2. Capital Budget: Federally Funded <sup>1</sup>	Measures ability to stay within budget	Budget approved by PREB	7.5	5.68%
3. Capital Budget: Non-Federally Funded <sup>1</sup>	Measures ability to stay within budget	Budget approved by PREB	7.5	5.68%
4a) Days Sales Outstanding: General Customers	Measures ability to collect bills from general customers	Based on analysis of data over the last 36 months and consideration of impact of external factors such as Hurricane Maria and the COVID cut-off moratorium, the timeframe of May 2019 – February 2020 represents the most current stable and unimpaired period of collections activity for general customers	4.0	3.03%
4b) Days Sales Outstanding: Government Customers	Measures ability to collect bills from government customers	PREPA historical data from the timeframe of January – July 2020 is the most appropriate period for establishing a Government DSO baseline	1.5	1.14%
5. Overtime	Measures ability to manage overtime costs	23% of Total Base Compensation for Non-Exempt Employees based on PREPA historical data	5	3.79%
<b>C. Financial Performance<sup>5</sup></b>			<b>33.0</b>	<b>25.0%</b>

<sup>1</sup> These Performance Metrics are also Key Performance Metrics (as defined in Section 2.6 LUMA Event of Default and in the OMA Section 14.1 (k)).

<sup>2</sup> Note that the Base Points for the individual Customer Service Performance Metrics vary from those in OMA Annex IX. The base points for Customer Complaint Rate were reduced and the ones for the other Customer Service metrics were increased. This modification recognizes the uncertainty of the data for historical customer complaints registered with PREB. PREPA does not currently review complaints with PREB and consequently there is no information on what portion of total complaints are justifiable. The total Customer Service Base Points shown remains the same as in the OMA Annex IX.

<sup>3</sup> These descriptions are from the IEEE Guide for Electric Power Distribution Reliability Indices, IEEE Std. 1366™-2012.

<sup>4</sup> As part of this revision to OMA Annex IX, use of the term Severe Injuries, which is not an OSHA metric, has been replaced, as appropriate, with the consistent use of the term Severity Rate herein, which is an OSHA metric.

<sup>5</sup> Note that the Base Points for the individual Financial Performance Metrics vary from those in OMA Annex IX. The Days Sales Outstanding Performance Metric has been bifurcated and the Reduction in Network Line Losses Performance Metric has been deferred. The total Financial Performance base points shown is 33 instead of the 38 in the OMA Annex IX and as a result the effective weightings are slightly higher for each of the individual finance metrics. The total effective weight for the sum of the Financial Performance Metrics remains the same as in the OMA Annex IX.

## 2.5 Performance Metrics

Table 2-3 below summarizes baseline performance levels and annual targets for the Performance Metrics, with related details following the table.



**Table 2-3. Summary of Performance Metrics Baselines and Annual Targets**

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
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## A. Customer Service

### 1. J.D. Power Customer Satisfaction Survey (Residential Customers)

Baseline	Results of recent J. D. Power Customer Satisfaction Survey are being analyzed to propose baseline and targets prior to Commencement Date.
Year 1	
Year 2	
Year 3	

### 2. J.D. Power Customer Satisfaction Survey (Business Customers)

Baseline	Results of recent J. D. Power Customer Satisfaction Survey are being analyzed to propose baseline and targets prior to Commencement Date.
Year 1	
Year 2	
Year 3	

### 3. Average Speed of Answer (minutes)<sup>1</sup>

Baseline	10.0						
Year 1	9.0	9.7	4.5	6.8	9.0	9.3	9.6
Year 2	6.4	7.1	3.2	4.8	6.4	6.7	7.0
Year 3	5.8	6.4	2.9	4.4	5.8	6.1	6.3

### 4. Customer Complaint Rate

Baseline	11.10%						
Year 1	10.80%	11.55%	10.30%	10.55%	10.80%	11.05%	11.30%
Year 2	10.60%	11.35%	10.1%	10.35%	10.60%	10.85%	11.10%
Year 3	10.10%	10.85%	9.60%	9.85%	10.10%	10.35%	10.60%

### 5. Abandonment Rate<sup>1</sup>

Baseline	50.0%						
Year 1	40.0%	45.0%	20.0%	30.0%	40.0%	41.0%	42.0%
Year 2	32.0%	35.0%	16.0%	24.0%	32.0%	33.0%	34.0%
Year 3	29.0%	34.0%	14.5%	22.0%	29.0%	31.0%	33.0%

## B. Technical, Safety & Regulatory

### 1. OSHA Recordable Incident Rate

Baseline	8.76						
Year 1	6.57	7.88	5.69	6.13	6.57	7.01	7.45
Year 2	5.26	7.25	3.99	4.60	5.26	5.96	6.70
Year 3	4.20	6.67	2.79	3.45	4.20	5.06	6.03

# LUMA's Performance Metrics Targets

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	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
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## 2. OSHA Fatalities<sup>1</sup>

Baseline	0						
Year 1	0	0	N/A	N/A	0	N/A	N/A
Year 2	0	0	N/A	N/A	0	N/A	N/A
Year 3	0	0	N/A	N/A	0	N/A	N/A

## 3. OSHA Severity Rate<sup>1</sup>

Baseline	50.84						
Year 1	43.21	46.77	38.13	40.67	43.21	43.21	45.76
Year 2	36.73	43.03	28.60	32.54	36.73	36.73	41.18
Year 3	31.22	39.59	21.45	26.03	31.22	31.22	37.06

## 4. OSHA DART Rate

Baseline	5.95						
Year 1	4.46	5.36	3.87	4.17	4.46	4.76	5.06
Year 2	3.57	4.93	2.71	3.12	3.57	4.05	4.55
Year 3	2.86	4.53	1.90	2.34	2.86	3.44	4.10

## 5. System Average Interruption Frequency Index (SAIFI)<sup>1,2</sup>

Baseline	9.8	9.8	N/A	N/A	9.8	N/A	N/A
Year 1	9.1	9.6	7.6	8.2	9.1	9.2	9.4
Year 2	7.8	9.3	6.3	7.0	7.8	8.3	8.8
Year 3	6.9	9.0	5.4	6.1	6.9	7.6	8.3

## 6. System Average Interruption Duration Index (SAIDI)<sup>1,2</sup>

Baseline	1,307						
Year 1	1,176	1,275	915	1,046	1,176	1,209	1,242
Year 2	980	1,215	719	850	980	1,059	1,137
Year 3	784	1,177	523	654	784	915	1,046

## 7. Distribution Line Inspections & Targeted Corrections<sup>1</sup>

Baseline	N/A						
Year 1	106	16	159	133	106	53	27
Year 2	370	56	555	463	370	185	93
Year 3	687	103	1,030	859	687	344	172

## 8. Transmission Line Inspections & Targeted Corrections

Baseline	N/A						
Year 1	26	4	39	33	26	13	7
Year 2	91	14	137	114	91	46	23
Year 3	169	25	253	211	169	85	43

# LUMA's Performance Metrics Targets

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	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
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## 9. T&D Substation Inspections & Targeted Corrections

Baseline	N/A						
Year 1	39	6	59	49	39	20	10
Year 2	137	21	206	171	137	69	34
Year 3	255	38	383	319	255	128	64

## C. Financial Performance

### 1. Operating Budget<sup>1</sup>

Baseline	100% of Operating Budget						
Year 1	100% of T&D Approved Operating Budget	100% of T&D Approved Operating Budget	N/A	N/A	Less than or Equal to 100%	N/A	N/A
Year 2	100% of T&D Approved Operating Budget	100% of T&D Approved Operating Budget	N/A	N/A	Less than or Equal to 100%	N/A	N/A
Year 3	100% of T&D Approved Operating Budget	100% of T&D Approved Operating Budget	N/A	N/A	Less than or Equal to 100%	N/A	N/A

### 2. Capital Budget: Federally Funded<sup>1</sup>

Baseline	100% of Capital Budget: Federally Funded, Approved for Fiscal 2022						
Year 1	100% of FY22 Approved Capital Spend	100% of FY22 Approved Capital Spend	N/A	N/A	Less than or Equal to 100%	N/A	N/A
Year 2	100% of FY23 Approved Capital Spend	100% of FY23 Approved Capital Spend	N/A	N/A	Less than or Equal to 100%	N/A	N/A
Year 3	100% of FY24 Approved Capital Spend	100% of FY24 Approved Capital Spend	N/A	N/A	Less than or Equal to 100%	N/A	N/A

### 3. Capital Budget: Non-Federally Funded<sup>1</sup>

Baseline	100% of Capital Budget: Non-Federally Funded Approved for Fiscal 2022						
Year 1	<100% of FY22 Approved Capital Spend	100% of FY22 Approved Capital Spend	N/A	N/A	Less than or Equal to 100%	N/A	N/A
Year 2	<100% of FY23 Approved Capital Spend	100% of FY23 Approved Capital Spend	N/A	N/A	Less than or Equal to 100%	N/A	N/A
Year 3	<100% of FY24 Approved Capital Spend	100% of FY24 Approved Capital Spend	N/A	N/A	Less than or Equal to 100%	N/A	N/A

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
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## 4a) Days Sales Outstanding: General Customers

Baseline	131						
Year 1	128	148	119	122	128	135	138
Year 2	126	145	116	120	126	132	135
Year 3	123	142	114	117	123	129	132

## 4b) Days Sales Outstanding: Government Customers

Baseline	754						
Year 1	739	850	684	702	739	776	794
Year 2	724	833	670	688	724	760	778
Year 3	709	815	656	674	709	745	762

## 5. Overtime

Baseline	23% of Total Base Compensation for Non-Exempt Employees						
Year 1	20% of Total Non-Exempt Base Compensation	23% of Total Non-Exempt Base Compensation	Less than or Equal to 18%	19%	20%	21%	22%
Year 2	19% of Total Non-Exempt Base Compensation <sup>3</sup>	22% of Total Non-Exempt Base Compensation	Less than or Equal to 17%	18%	19%	20%	21%
Year 3	18% of Total Non-Exempt Base Compensation	21% of Total Non-Exempt Base Compensation	Less than or Equal to 16%	17%	18%	19%	20%

<sup>1</sup> These Performance Metrics are also Key Performance Metrics (as defined in the Revised Annex IX Performance Metrics Section 4.6 LUMA Event of Default and in the OMA Section 14.1 (k).

<sup>2</sup> These metrics are based on the IEEE Guide for Electric Power Distribution Reliability Indices, IEEE Std. 1366-2012 and baselined by annualizing the 2020 performance through August 2020 (dataset provided covered the period of January 2020 through August 2020) to account for 2020 degraded performance over 2019.

<sup>3</sup> A 1% Metric Improvement Target can equate to a 22% Cost Improvement. See Sample Overtime Savings Calculation below.

## 2.5.1 Customer Satisfaction

### 1. J.D. POWER CUSTOMER SATISFACTION SURVEY (RESIDENTIAL CUSTOMERS)

Performance Objective: To incentivize sufficient customer service.

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 for residential, and in two phases per year for commercial. Initial survey to be completed and baseline set prior to commencement with reporting beginning in year 1.

**Table 2-4. J.D. Power Customer Satisfaction Survey (Residential Customers)**

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
Baseline	Results of recent J. D. Power Customer Satisfaction Survey are being analyzed to propose baseline and targets prior to Commencement Date.						
Year 1							
Year 2							
Year 3							

## 2. J.D. POWER CUSTOMER SATISFACTION SURVEY (BUSINESS CUSTOMERS)

Performance Objective: To incentivize sufficient customer service.

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 for residential, and in two phases per year for commercial. Initial survey to be completed and baseline set prior to commencement with reporting beginning in year 1.

**Table 2-5. J.D. Power Customer Satisfaction Survey (Business Customers)**

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
Baseline	Results of recent J. D. Power Customer Satisfaction Survey are being analyzed to propose baseline and targets prior to Commencement Date.						
Year 1							
Year 2							
Year 3							

## 3. AVERAGE SPEED OF ANSWER (MINUTES)

Performance Objective: To incentivize efficient call center service.

Description: The Average Speed of Answer (ASA) metric measures the average wait time from the moment the customer enters the queue to the time the call is answered by an agent.

Calculation: Total Automatic Call Distributor (ACD) wait seconds / total answered calls.

An ACD is a telephony system that automatically distributes incoming phone calls to available agents, based on data entered by the caller into an Interactive Voice Response (IVR) and skills-based routing, using skills associated with agents.

**Table 2-6. Average Speed of Answer (minutes)**

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
<b>Baseline</b>	10.0						
<b>Year 1</b>	9.0	9.7	4.5	6.8	9.0	9.3	9.6
<b>Year 2</b>	6.4	7.1	3.2	4.8	6.4	6.7	7.0
<b>Year 3</b>	5.8	6.4	2.9	4.4	5.8	6.1	6.3

## 4. CUSTOMER PREB COMPLAINT RATE

Performance Objective: To incentivize effective customer service.

Description: This metric measures the total number of initial customer complaints registered with PREB under an NEPR-QR docket following PREB. The Baseline Performance Level will be set based on PREPA historical data subject to confirmation during the Front-End Transition Period.

Calculation: The annual value is calculated by taking the total number of initial complaints divided by the total utility customer population and then multiplying by 100,000.

**Table 2-7. Customer PREB Complaint Rate**

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
<b>Baseline</b>	11.10%						
<b>Year 1</b>	10.08%	11.55%	10.30%	10.55%	10.80%	11.05%	11.30%
<b>Year 2</b>	10.06%	11.35%	10.10%	10.35%	10.60%	10.85%	11.10%
<b>Year 3</b>	10.01%	10.85%	9.60%	9.85%	10.10%	10.35%	10.60%

Note that the Minimum Performance Level in the early years are worse than the baseline to account for the possible scenario of a temporary increase in customer complaints due to the strong possibility of bill consumption actually increasing as metering, meter data, and billing accuracy improves (meters typically under register when not working properly).

## 5. ABANDONMENT RATE

Performance Objective: To incentivize efficient call center service.

Description: The Abandonment Rate (ABD) metric measures the percentage of callers who hang up (abandon) while the call is still in the Automated Call Distribution (ACD) queue.

Calculation: Total calls that abandoned in queue / total calls offered to the queue.

**Table 2-8. Abandonment Rate**

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
<b>Baseline</b>	50.0%						
<b>Year 1</b>	40.0%	45.0%	20.0%	30.0%	40.0%	41.0%	42.0%
<b>Year 2</b>	32.0%	35.0%	16.0%	24.0%	32.0%	33.0%	34.0%
<b>Year 3</b>	29.0%	34.0%	14.5%	22.0%	29.0%	31.0%	33.0%

## 2.5.2 Technical, Safety & Regulatory

The System Reliability Technical Performance Metrics will be measured and calculated in accordance with IEEE 1366-2012, including the terms as defined therein. The calculation of Technical Performance Metrics excludes (i) interruptions associated with Outage Event days using the IEEE 2.5 Beta Method, (ii) planned interruptions and (iii) interruptions caused by generation events.

### 1. OSHA RECORDABLE INCIDENT RATE (OSHA IR)<sup>2</sup>

Performance Objective: To incentivize employee safety.

Description: OSHA requires Recordable Incident Rate be reported to OSHA on a yearly basis. An OSHA recordable incident is a work-related injury or illness that results in one of more of the following: death, days away from work, restricted work or transfer to another job, medical treatment beyond first aid, loss of consciousness or a significant injury or illness diagnosed by a physician or other licensed health care professional. The baseline performance level has been set using PREPA historical data.

Calculation: The metric is calculated as the total number of recordable incident cases over a set time period multiplied by the OSHA scaling factor<sup>3</sup> and divided by the total number of labor hours the company recorded during that time period.

Table 2-9. OSHA Recordable Incident Rate

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
Baseline	8.76						
Year 1	6.57	7.88	5.69	6.13	6.57	7.01	7.45
Year 2	5.26	7.25	3.99	4.60	5.26	5.96	6.70
Year 3	4.20	6.67	2.79	3.45	4.20	5.06	6.03

### 2. OSHA FATALITIES<sup>4</sup>

Performance Objective: To incentivize employee safety.

Description: OSHA requires all work-related fatalities be reported to OSHA within eight (8) hours. The industry standard target is 0 fatalities, which has determined the Baseline and Target Performance Levels.

Calculation: This metric measures the number of OSHA-reportable fatalities (i.e., employee fatalities that occur on the job within OSHA jurisdictions).

<sup>2</sup> As defined by OSHA.

<sup>3</sup> The OSHA scaling factor is 200,000 and equates to equates to one hundred (100) employees working forty (40) hours per week, fifty (50) weeks of the year).

<sup>4</sup> As defined by OSHA.



**Table 2-10. OSHA Fatalities**

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
<b>Baseline</b>	0						
<b>Year 1</b>	0	0	N/A	N/A	0	N/A	N/A
<b>Year 2</b>	0	0	N/A	N/A	0	N/A	N/A
<b>Year 3</b>	0	0	N/A	N/A	0	N/A	N/A

## 3. OSHA SEVERITY RATE<sup>5</sup>

Performance Objective: To incentivize employee safety

Description: Used as a metric to measure the severity of workplace injuries, the OSHA Severity Rate is commonly used to measure safety performance across the utility industry. The OSHA Severity Rate takes into account the total number of restricted and lost-time days incurred as a result of a work-related injury.

Calculation: This metric is calculated by dividing the product of the total number of severity days (both restricted and lost-time days) and the OSHA scaling factor<sup>6</sup> by the total number of work hours.

**Table 2-11. OSHA Severity Rate**

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
<b>Baseline</b>	50.84						
<b>Year 1</b>	43.21	46.77	38.13	40.67	43.21	43.21	45.76
<b>Year 2</b>	36.73	43.03	28.60	32.54	36.73	36.73	41.18
<b>Year 3</b>	31.22	39.59	21.45	26.03	31.22	31.22	37.06

## 4. OSHA DAYS AWAY, RESTRICTED, AND TRANSFER RATE (DART)<sup>7</sup>

Performance Objective: To incentivize employee safety.

Description: Used as a metric to measure the severity of workplace injuries, the OSHA DART Rate is commonly used to measure safety performance across the utility industry. The OSHA DART Rate takes into account the total number of injury cases that resulted in either lost time, restricted time or a transfer from the employee's regular job.

Calculation: This metric is calculated by dividing the product of the total number of DART Cases (OSHA injury cases with either lost time days, restricted days or results in a job transfer) and the OSHA scaling factor<sup>8</sup> by the total number of work hours.

<sup>5</sup> As defined by OSHA.

<sup>6</sup> The OSHA scaling factor is 200,000 and equates to equates to one hundred (100) employees working forty (40) hours per week, fifty (50) weeks of the year.

<sup>7</sup> As defined by OSHA.

<sup>8</sup> The OSHA scaling factor is 200,000 and equates to equates to one hundred (100) employees working forty (40) hours per week, fifty (50) weeks of the year.

**Table 2-12. OSHA DART Rate**

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
<b>Baseline</b>	5.95						
<b>Year 1</b>	4.46	5.36	3.87	4.17	4.46	4.76	5.06
<b>Year 2</b>	3.57	4.93	2.71	3.12	3.57	4.05	4.55
<b>Year 3</b>	2.86	4.53	1.90	2.34	2.86	3.44	4.10

## 5. SYSTEM AVERAGE INTERRUPTION FREQUENCY INDEX (SAIFI)<sup>9</sup>

Performance Objective: To incentivize system reliability.

Description: This metric indicates how often the average customer experiences a sustained interruption<sup>10</sup> over a predefined period of time.

Calculation: This metric is calculated by dividing the total number of customers interrupted by the total number of customers served. Each sustained interruption<sup>11</sup> experienced by a specific customer counts towards the total in the numerator.

**Table 2-13. System Average Interruption Frequency Index (SAIFI)**

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
<b>Baseline</b>	9.8						
<b>Year 1</b>	9.1	9.6	7.6	8.2	9.1	9.2	9.4
<b>Year 2</b>	7.8	9.3	6.3	7.0	7.8	8.3	8.8
<b>Year 3</b>	6.9	9.0	5.4	6.1	6.9	7.6	8.3

## 6. SYSTEM AVERAGE INTERRUPTION DURATION INDEX (SAIDI)<sup>12</sup>

Performance Objective: To incentivize system reliability

Description: This metric indicates the total duration of interruption for the average customer during a predefined period of time.

Calculation: This metric is calculated by summing the product of the length of each interruption and the number of customers affected by that interruption for all sustained interruptions<sup>13</sup> during the measurement period then dividing by the total number of customers served.

<sup>9</sup> The Institute of Electrical and Electronics Engineers, Inc., IEEE Guide for Electric Power Distribution Reliability Indices IEEE Std. 1366™-2012, May 2012, page 5.

<sup>10</sup> "Any interruption not classified as a part of a momentary event. That is, any interruption that lasts more than five minutes." Ibid., page 4.

<sup>11</sup> Ibid.

<sup>12</sup> The Institute of Electrical and Electronics Engineers, Inc., IEEE Guide for Electric Power Distribution Reliability Indices IEEE Std. 1366™-2012, May 2012, page 5.

<sup>13</sup> "Any interruption not classified as a part of a momentary event. That is, any interruption that lasts more than five minutes." Ibid., page 4.

**Table 2-14. System Average Interruption Duration Index (SAIDI)**

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
<b>Baseline</b>	1,307						
<b>Year 1</b>	1,176	1,275	915	1,046	1,176	1,209	1,242
<b>Year 2</b>	980	1,215	719	850	980	1,059	1,137
<b>Year 3</b>	784	1,177	523	654	784	915	1,046

## 7. DISTRIBUTION LINE INSPECTIONS & TARGETED CORRECTIONS

**Performance Objective:** To incentivize system safety and provide data to make decisions on effective reliability improvements, predictive maintenance, circuit hosting capacity and resiliency upgrades.

**Description:** The Distribution Line Inspections and Targeted Corrections metric will assess the physical integrity of the poles, structures, components and equipment, providing data to develop an overall health rating to identify serious safety issues to either the public or worker that will result in high-priority attention by LUMA.

**Calculation:** Number of distribution lines (circuits) inspected with results recorded in a database and Category 0 and Category 1 findings shall be incorporated in a plan within 60 days of identification to address. That plan shall take into account a coordinated approach to remediation based on severity and risk according to the objectives defined in LUMA's Recovery Transformation Framework.

**Table 2-15. Distribution Line Inspections & Targeted Corrections<sup>1</sup>**

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
<b>Baseline</b>	N/A						
<b>Year 1</b>	106	16	159	133	106	53	27
<b>Year 2</b>	370	56	555	463	370	185	93
<b>Year 3</b>	687	103	1,030	859	687	344	172

<sup>1</sup> The numbers shown are cumulative from year to year. There are currently a total of 1,057 distribution circuits.

## 8. TRANSMISSION LINE INSPECTIONS & TARGETED CORRECTIONS

**Performance Objective:** To incentivize system safety and provide data to make decisions on effective reliability improvements, predictive maintenance, circuit hosting capacity and resiliency upgrades.

**Description:** The Transmission Line Inspections and Targeted Corrections metric will assess the physical integrity of the poles, structures, components and equipment, providing data to develop an overall health rating to identify serious safety issues to either the public or worker that will result in high-priority attention by LUMA.

**Calculation:** Number of transmission lines inspected with results recorded in a database and Category 0 and Category 1 findings shall be incorporated in a plan within 60 days of identification to address. That plan shall take into account a coordinated approach to remediation based on severity and risk according to the objectives defined in LUMA's Recovery Transformation Framework.

**Table 2-16. Transmission Line Inspections & Targeted Corrections<sup>1</sup>**

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
<b>Baseline</b>	N/A						
<b>Year 1</b>	26	4	39	33	26	13	7
<b>Year 2</b>	91	14	137	114	91	46	23
<b>Year 3</b>	169	25	253	211	169	85	43

<sup>1</sup> The numbers shown are cumulative from year to year. There are currently a total of 260 transmission circuits.

## 9. T&D SUBSTATION INSPECTIONS & TARGETED CORRECTIONS

**Performance Objective:** To incentivize system safety and provide data to make decisions on effective reliability improvements, predictive maintenance, circuit hosting capacity and resiliency upgrades.

**Description:** The T&D Substation Inspections and Targeted Corrections metric will assess the physical integrity of the structures, components and equipment, providing data to develop an overall health rating to identify serious safety issues to either the public or worker that will result in high-priority attention by LUMA.

**Calculation:** Number of T&D substations inspected with results recorded in a database and Category 0 and Category 1 findings shall be incorporated in a plan within 60 days of identification to address. That plan shall take into account a coordinated approach to remediation based on severity and risk according to the objectives defined in LUMA's Recovery Transformation Framework.

**Table 2-17. T&D Substation Inspections & Targeted Corrections<sup>1</sup>**

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
<b>Baseline</b>	N/A						
<b>Year 1</b>	39	6	59	49	39	20	10
<b>Year 2</b>	137	21	206	171	137	69	34
<b>Year 3</b>	255	38	383	319	255	128	64

<sup>1</sup> The numbers shown are cumulative from year to year. There are currently a total of 392 substations.

## 2.5.3 Financial Performance

### 1. OPERATING BUDGET

Performance Objective: To incentivize effective cost management.

Description: Measures ability to stay within budget.

Calculation: This metric will be evaluated as actual operating expenses for a given Fiscal Year divided by the approved T&D operating budget for the same Fiscal Year as incurred. As defined in Section 7.3(b) of the OMA the Budgets include 2% Excess Expenditures. Budget amendments, as defined in (i) through (iv) in Section 7.4 and 14.5(e) of the OMA, shall be deemed to be included in the initially approved Budgets (denominator) for purposes of this calculation. Further, any funds drawn from the Outage Event Reserve Account and the Contingency Reserve Account, as they have specific requirements, do not contribute to this metric. LUMA proposes that any approved budget amendment for items outside LUMA's control also adjusts the budget metric denominator by the same amount. It is also proposed that any financial adjustments or corrections made to PREPA's pre-fiscal year 2022 historical books and records be excluded from the calculation.

**Table 2-18. Operating Budget<sup>1</sup>**

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
<b>Baseline</b>	100% of Operating Budget						
<b>Year 1</b>	100% of T&D Approved Operating Budget	100% of T&D Approved Operating Budget	N/A	N/A	Less than or Equal to 100%	N/A	N/A
<b>Year 2</b>	100% of T&D Approved Operating Budget	100% of T&D Approved Operating Budget	N/A	N/A	Less than or Equal to 100%	N/A	N/A
<b>Year 3</b>	100% of T&D Approved Operating Budget	100% of T&D Approved Operating Budget	N/A	N/A	Less than or Equal to 100%	N/A	N/A

<sup>1</sup> In accordance with OMA Section 7.3(b), each Budget includes Excess Expenditures, defined as expenditures for undefined costs in an amount equal to up to two percent (2%) of the total amount of the Budget. Excess Expenditures must otherwise comply with the applicable Rate Order. Any Excess Expenditures incurred by LUMA are treated as T&D Pass-Through Expenditures and as if initially budgeted. Each reference in the OMA to a Budget or Default Budget includes Excess Expenditures to the extent these are incurred.

### 2. CAPITAL BUDGET: FEDERALLY FUNDED

Performance Objective: To incentivize effective cost management of federally funded projects.

Description: Measures ability to stay within budget.

Calculation: This metric will be evaluated as actual Federally Funded Capital expenses for a Fiscal Year, as incurred, divided by approved Capital Budget: Federally Funded for the same Fiscal Year. As defined in Section 7.3(b) of the OMA the Budgets include 2% Excess Expenditures. Budget amendments, as defined in (i) through (iv) in Section 7.4 and 14.5(e) of the OMA, shall be deemed to be included in the initially approved Budgets (denominator) for purposes of this calculation. Further, any funds drawn from the Outage Event Reserve Account and the Contingency Reserve Account, as they have specific requirements, do not contribute to this metric.

**Table 2-19. Capital Budget: Federally Funded<sup>1</sup>**

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
<b>Baseline</b>	100% of Capital Budget: Federally Funded Approved for Fiscal 2022						
<b>Year 1</b>	100% of FY22 Approved Capital Spend	100% of FY22 Approved Capital Spend	N/A	N/A	Less than or Equal to 100%	N/A	N/A
<b>Year 2</b>	100% of FY23 Approved Capital Spend	100% of FY23 Approved Capital Spend	N/A	N/A	Less than or Equal to 100%	N/A	N/A
<b>Year 3</b>	100% of FY24 Approved Capital Spend	100% of FY24 Approved Capital Spend	N/A	N/A	Less than or Equal to 100%	N/A	N/A

<sup>1</sup> In accordance with OMA Section 7.3(b), each Budget includes Excess Expenditures, defined as expenditures for undefined costs in an amount equal to up to two percent (2%) of the total amount of the Budget. Excess Expenditures must otherwise comply with the applicable Rate Order. Any Excess Expenditures incurred by LUMA are treated as T&D Pass-Through Expenditures and as if initially budgeted. Each reference in the OMA to a Budget or Default Budget includes Excess Expenditures to the extent these are incurred.

## 3. CAPITAL BUDGET: NON-FEDERALLY FUNDED

**Performance Objective:** To incentivize effective cost management of Non-Federally Funded Capital.

**Description:** Measures ability to stay within budget.

**Calculation:** This metric will be evaluated as actual Federally Non-Funded Capital expenses for a Fiscal Year, as incurred, divided by approved Capital Budget: Non-Federally Funded for the same Fiscal Year. As defined in Section 7.3(b) of the OMA the Budgets include 2% Excess Expenditures. Budget amendments, as defined in (i) through (iv) in Section 7.4 and 14.5(e) of the OMA, shall be deemed to be included in the initially approved Budgets (denominator) for purposes of this calculation. Further, any funds drawn from the Outage Event Reserve Account and the Contingency Reserve Account, as they have specific requirements, do not contribute to this metric.

**Table 2-20. Capital Budget: Non-Federally Funded<sup>1</sup>**

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
<b>Baseline</b>	100% of Capital Budget: Non-Federally Funded Approved for Fiscal 2022						
<b>Year 1</b>	<100% of FY22 Approved Capital Spend	100% of FY22 Approved Capital Spend	N/A	N/A	Less than or Equal to 100%	N/A	N/A
<b>Year 2</b>	<100% of FY23 Approved Capital Spend	100% of FY23 Approved Capital Spend	N/A	N/A	Less than or Equal to 100%	N/A	N/A
<b>Year 3</b>	<100% of FY24 Approved Capital Spend	100% of FY24 Approved Capital Spend	N/A	N/A	Less than or Equal to 100%	N/A	N/A

<sup>1</sup> In accordance with OMA Section 7.3(b), each Budget includes Excess Expenditures, defined as expenditures for undefined costs in an amount equal to up to two percent (2%) of the total amount of the Budget. Excess Expenditures must otherwise comply with the applicable Rate Order. Any Excess Expenditures incurred by LUMA are treated as T&D Pass-Through Expenditures and as if initially budgeted. Each reference in the OMA to a Budget or Default Budget includes Excess Expenditures to the extent these are incurred.

## 4A. DAYS SALES OUTSTANDING: GENERAL CUSTOMERS

Performance Objective: To incentivize effective credit and collections efforts.

Description: This metric is a measure of the ability to collect payment for general clients' customer billings.

Calculation: General Customers' DSO is calculated by dividing the year-end amount of general customers' receivables by the total year-end value of general customers' credit sales and multiplying the result by the number of days in that year. "Un-collectibles reserve," which is currently included in the DSO calculation in the PREPA Finance monthly report (MOR) of financial statements to the governing board, will not be included in the LUMA DSO calculations. General customers segment represents all non-government accounts including residential, commercial and wholesale accounts.

Table 2-21. Days Sales Outstanding: General Customers

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
Baseline	131						
Year 1	128	148	119	122	128	135	138
Year 2	126	145	116	120	126	132	135
Year 3	123	142	114	117	123	129	132

## 4B. DAYS SALES OUTSTANDING: GOVERNMENT CUSTOMERS

Performance Objective: To incentivize effective credit and collections efforts.

Description: This metric is a measure of the ability to collect government bills.

Calculation: Government DSO is calculated by dividing the year-end amount of Government accounts receivable by the total year-end value of government credit sales and multiplying the result by the number of days in that year. "Un-collectibles reserve," which is currently included in the DSO calculation in the PREPA Finance monthly report (MOR) of financial statements to the governing board, will not be included in the LUMA DSO calculations. This metric will reflect the impact of government collections, including critical service installations as defined in the Puerto Rico Energy Transformation and RELIEF Act, Act 57-2014, as amended by the Puerto Rico Energy Public Policy Act, Act 17-2019, and Contribution in Lieu of Taxes (CILT).

Table 2-22. Days Sales Outstanding: Government Customers

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
Baseline	754						
Year 1	739	850	684	702	739	776	794
Year 2	724	833	670	688	724	760	778
Year 3	709	815	656	674	709	745	762

## 5. OVERTIME

Performance Objective: To incentivize efficient payroll expense.

Description: This metric measures the utility's ability to manage labor expenses.



Calculation: The amount of overtime expenses divided by the amount of total non-exempt base compensation expenses, expressed as a percentage.

**Table 2-23. Overtime**

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
<b>Baseline</b>	23% of Total Non-Exempt Base Compensation						
<b>Year 1</b>	20% of Total Non-Exempt Base Compensation	23% of Total Non-Exempt Base Compensation	Less than or Equal to 18%	19%	20%	21%	22%
<b>Year 2</b>	19% of Total Non-Exempt Base Compensation	22% of Total Non-Exempt Base Compensation	Less than or Equal to 17%	18%	19%	20%	21%
<b>Year 3</b>	18% of Total Non-Exempt Base Compensation	21% of Total Non-Exempt Base Compensation	Less than or Equal to 16%	17%	18%	19%	20%

## 2.6 LUMA Event of Default

Section 14.1(k) (Events of Default by LUMA — Failure to Meet Minimum Performance Threshold) of the OMA provides for an Operator Event of Default if, during three (3) or more consecutive Contract Years, LUMA fails to meet the Minimum Performance Level for any three (3) Key Performance Metrics and no such failure has been excused by a Force Majeure Event, Outage Event or Owner Fault. The Key Performance Metrics are the following, based on the OMA Annex IX as revised in this document as per the OMA:

- (i) Average Speed of Answer; (ii) Abandonment Rate; (iii) OSHA Fatalities; (iv) OSHA Severity Rate; (v) System Average Interruption Frequency Index (SAIFI); (vi) System Average Interruption Duration Index (SAIDI); (vii) Distribution Line Inspections & Targeted Corrections; (viii) Operating Budget; (ix) Capital Budget: Federally Funded; and (x) Capital Budget: Non-Federally Funded (each a Key Performance Metric and together the Key Performance Metrics).

OMA Section 7.1(c)(vii) (Service Fee — Incentive Fee) provides that if any Force Majeure Event (other than a Force Majeure Event that is a Major Outage Event) prevents LUMA from achieving one or more of the Performance Metrics, LUMA shall be entitled to earn the Incentive Fee for the period that such Force Majeure Event continues as long as, and to the extent that, LUMA achieves the Key Performance Metrics during such period of time.

## 2.7 Operating Budget Overrun Default

OMA Section 14.5(e) (Additional Termination Rights — Operating Budget Overrun) of the OMA provides Owner with an additional termination right in the event of an Operating Budget Overrun Default.

## 2.8 Major Outage Events (MOE) Performance Metrics

The MOE Scorecard assigns metrics and points into three categories: Preparation (Item 1 targeted at 250 points), Operational Response (Items 2 – 11 targeted at 450 points) and Communications (Items 12 – 16

targeted at 300 points). The three categories are intended to capture the key activities associated with a Major Outage Event. The Preparation metrics focus on utility activities in anticipation of a significant outage event. The second category, Operational Response, evaluates the utility's performance as a significant outage event is occurring and during the recovery period after the event until normal service is restored. The third category, Communications, assesses the utility's ability to receive and to disseminate information about the outage event and about the recovery process. The specific metrics and point assignments under each category are set forth in the MOE Scorecard in Table 2-24.

Major Outage Event is defined as follows:

"Major Outage Event" means an event as a result of which (i) at least two hundred and five thousand (205,000) T&D Customers are interrupted for more than 15 minutes or (ii) at any point in time during the event, there are one thousand five hundred or more ( $\geq 1,500$ ) active outage events for the T&D System, which are tracked in the Outage Management System (OMS). The major outage event is deemed ongoing so long as the interruptions/outages continue to remain above the stated cumulative amounts, in each case for a period of twenty-four hours or longer ( $\geq 24$ ) and are caused by an act of God. If such an act of God is a storm, the storm must be designated as a named storm by the U.S. National Weather Service or a State of Emergency declared by the Government of Puerto Rico. The major outage event shall be deemed to have ended when the cumulative number of T&D customers remaining interrupted falls below ten thousand (10,000) for a continuous period of eight (8) hours.

The Major Outage Event should be categorized on the following:

Event categories: Events are categorized based on forecasted impact and revised post-event based on actual impact, to be measured from the start of the operational response (after the event has passed and when it is physically safe to dispatch crews) to when less than ten thousand ( $< 10,000$ ) T&D Customers remain interrupted for more than 8 hours as follows:

- 3 to 5 days
- 5 to 10 days
- Greater than 10 days

OMA Section 7.1(c)(vi) (Service Fee – Incentive Fee) of the Agreement provides that if any Major Outage Event (including, for the avoidance of doubt, a Major Outage Event that is a Force Majeure Event) prevents Operator from achieving one or more of the Performance Metrics, Operator shall be entitled to earn the Incentive Fee for the period that such Major Outage Event continues as long as, and to the extent that, Operator achieves the Major Outage Performance Metrics during such period of time.

LUMA proposes the Major Outage Event Performance Metrics, with the descriptions, base points and effective weight set forth in Table 2-24 below.

**Table 2-24. Summary of Major Outage Event Performance Metrics**

Description	Metrics	Base Points	Effective Weight	Comments										
1. Preparation Phase														
Completion of steps to provide timely and accurate emergency event preparation following an alert from U.S. National Weather Service or the company's private weather service, or the government of Puerto Rico has declared a state of emergency or when an event is known to be imminent or has occurred, in accordance with the Emergency Response Plan, for an event expected to affect the company's service territory.	Completion of each step counts separately:													
	1.1 Event-level categorization based on weather forecasts, system resiliency assessment and available resources.	40	4.0%											
	1.2 Press releases issued/text messages/emails sent.	15	1.5%											
	1.3 Municipal conference calls held.	20	2.0%											
	1.4 Critical & essential customers alerted — based on established list with current information. <sup>14</sup>	40	4.0%											
	1.5 Point of contact for critical facilities alerted — based on established list with current information.	15	1.5%											
	1.6 Company compliance with training program as specified in the Emergency Response Plan.	40	4.0%											
	1.7 Participation in all pre-event mutual assistance group calls.	40	4.0%											
	1.8 Verify materials/stockpiles level based on forecast. If materials are not on hand, corrective steps taken in shortest reasonable time to correct the situation.	40	4.0%											
Total		250	25.0%											
2. Downed Wires														
Response to downed wires reported by municipal public officials.	Once the joint reporting and response process is established, LUMA will respond to all reported downed wires and take appropriate action within a reasonable time (per the event categorization) working in conjunction with local authorities after a Major Outage Event. Reported means that the situation is tracked in the Customer Information System (CIS) by the official contacting LUMA call centers or reported through the Municipal Emergency Operations Center (EOC) through LUMA's Municipal Emergency Operations Center (MEOC) Liaison.  <table><tr><td><b>Reasonable Time</b></td><td></td></tr><tr><td><b>Event Categorization</b></td><td><b>Response Time</b></td></tr><tr><td>3 to 5 days</td><td>18 hours</td></tr><tr><td>5 to 10 days</td><td>36 hours</td></tr><tr><td>&gt; 10 days</td><td>60 hours</td></tr></table>	<b>Reasonable Time</b>		<b>Event Categorization</b>	<b>Response Time</b>	3 to 5 days	18 hours	5 to 10 days	36 hours	> 10 days	60 hours	40	4.0%	A reporting and response process on how these are managed needs to be put in place jointly with municipal public officials.  Fire and Police training on how to handle downed wires will be provided as requested.
<b>Reasonable Time</b>														
<b>Event Categorization</b>	<b>Response Time</b>													
3 to 5 days	18 hours													
5 to 10 days	36 hours													
> 10 days	60 hours													

<sup>14</sup> This includes critical care customers.

# LUMA's Performance Metrics Targets

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Description	Metrics	Base Points	Effective Weight	Comments
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## 3. Damage Assessment

	<p>After the beginning of the Major Outage Event and when it is safe to do so LUMA will begin a preliminary damage assessment of the affected area(s) or T&amp;D facilities.</p> <p>The preliminary damage assessment will be completed within a "reasonable time" at the beginning of the Operation Response phase. The preliminary damage assessment will be done primarily with helicopter patrol and very limited specific land patrol to address helicopter assessment questions.</p> <p>Concurrent with the start of the preliminary helicopter assessment, LUMA will begin a more thorough damage assessment.</p> <p><b><u>Reasonable Time</u></b></p> <table><tr><td><b>Event Categorization</b></td><td><b>Response Time</b></td></tr><tr><td>3 to 5 days</td><td>36 hours</td></tr><tr><td>5 to 10 days</td><td>72 hours</td></tr><tr><td>&gt; 10 days</td><td>120 hours</td></tr></table>	<b>Event Categorization</b>	<b>Response Time</b>	3 to 5 days	36 hours	5 to 10 days	72 hours	> 10 days	120 hours	50	5.0%	
<b>Event Categorization</b>	<b>Response Time</b>											
3 to 5 days	36 hours											
5 to 10 days	72 hours											
> 10 days	120 hours											

## 4. Crewing

50% of the forecast crewing [from mutual assistance] committed to the utility.	<p>50% of the forecast crewing [from mutual assistance] committed to the utility.</p> <p>Three (3) days prior to a forecasted event occurring (when the event allows that much warning time), LUMA will complete a "damage prediction" to determine crew requirements. Based on this damage prediction, the number of mutual assistance crews will be determined.</p> <p>LUMA will stage materials, equipment and personnel at the required location prior to the weather event striking the area.</p> <p>Within 24 hours of the damage prediction, 50% of indicated internal crews and qualified contract crews will be deployed.</p> <p>Within 48 hours of the damage prediction, 80% of the indicated internal crews and qualified contract crews will be mobilized on island.</p>	30	3.0%	
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# LUMA's Performance Metrics Targets

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Description	Metrics	Base Points	Effective Weight	Comments
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## 5. Estimated Time of Restoration (ETR) for 90% of Service Outages

Estimated Time of Restoration for 90% of service outages (made available by utility on web, IVR, to Customer Service Representatives (CSRs), etc.)	Publication of regional ETRs in accordance with guidelines.	20	2.0%	
	Publication of municipal ETRs in accordance with guidelines.	20	2.0%	
	A preliminary ETR for 90% service restoration will be made available on the Internet 24 hours after the preliminary damage assessment in pdf format.	20	2.0%	
	ETRs on 90% service restoration to be made available on IVR and to CSRs by municipality or region.	20	2.0%	
	All ETRs to be updated every 24 hours.	20	2.0%	

## 6. ETR Accuracy for 90% Service Restoration

Regional ETR accuracy Municipal ETR accuracy	Accuracy for 90% of service outage restoration and published in accordance with ETR requirement time.  The ETRs used for this metric will be the ETRs posted after the thorough damage assessment is completed and not based on the preliminary damage assessment.	80	8.0%	
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## 7. Municipality Coordination

Coordination with municipalities regarding road clearing, down wires, critical customers, etc.	Through the Municipal EOC the LUMA local Incident Command Center (ICC) Municipal Liaison will attend all scheduled Situation Report (SITREP) meetings. The Liaison will be the conduit for ICC information and requests. To track, the Municipal EOC must be activated so that all requests flow through it.  LUMA's ICC Municipal Liaison will attend all scheduled SITREP meetings.	20	2.0%	
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## 8. Municipal EOC Coordination Puerto Rico Commonwealth/Federal EOC Coordination

Coordination with municipal Puerto Rico Commonwealth and Federal EOCs.	Through the Commonwealth and Federal EOCs the LUMA Liaisons will attend all scheduled meetings. The Liaison will be the conduit for ICC information and requests.  To track activity, the State and Federal EOCs must be activated and not a request from elected officials.	10	1.0%	
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## 9. Utility Coordination

Coordination with other utilities (communications, water, etc.)	Establish contact points between utilities.	20	2.0%	
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# LUMA's Performance Metrics Targets

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Description	Metrics	Base Points	Effective Weight	Comments
<b>10. Safety</b>				
Measure of any employee or contractor injured doing hazard work during storm/outage and restoration.	Record safety incidents and include in safety report per LUMA Health Safety Environment & Quality (HSE&Q) standard.	80	8.0%	
<b>11. Mutual Assistance</b>				
Crew requests made through all sources of mutual assistance or other pre negotiated contracts with utility service providers.	<p>Three (3) days prior to a forecasted event occurring (when the event allows that much warning time), LUMA will complete a damage prediction to determine the requirements for on and off island mutual aid/pre-negotiated contracts with other utility service providers. LUMA will activate the required resources and place them on standby until the damage assessment is completed.</p> <p>After the initial damage assessment is completed, the requests for mutual assistance or other utility service provider crews will be made as follows:</p> <ul style="list-style-type: none"> <li>▪ Within 70 hours, 40% of crews</li> <li>▪ After 120 hours, 80% of committed mutual aid and other utility service provider crews will be requested.</li> </ul>	20	2.0%	
<b>Total</b>		<b>450</b>	<b>45.0%</b>	
<b>12. Call Answer Rates</b>				
Customer calls answered by properly staffed call centers (use of IVR and other technology is an acceptable solution).		—	—	TBD depending on size of major event.
<b>13. Web Availability</b>				
Company's website, specifically the section pertaining to outage impact and restoration, must be available around the clock during a major storm event and information must be updated hourly until final restoration. In the event that no new information is available, the website must display the last time and date that information was updated. The website and/or section pertaining to outage impact and restoration may be taken offline for a short period during off-peak hours to perform system maintenance.		75	7.5%	

Description	Metrics	Base Points	Effective Weight	Comments
<b>14. PREB and Administrator (P3A) Reporting</b>				
Provide storm event information to PREB and Administrator in accordance with LUMA's Electric Outage Management System (OMS) guideline requirements to be established in the ERP for LUMA.	Information to be updated every 24 hrs.	75	7.5%	
<b>15. Customer Communications</b>				
Availability of press releases, text messaging, email and social media.		100	10.0%	
<b>16. Outgoing message on telephone line</b>				
Recorded message providing callers with outage information is updated within two hours of communication of press releases.		50	5.0%	Available at Service Commencement Date. IVR will be managed in house.
<b>Total</b>		<b>300</b>	<b>30.0%</b>	
<b>Maximum Available Points</b>		<b>1,000</b>	<b>100.0%</b>	

**Table 2-25. Major Outage Event Performance Metrics Schedule**

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
Baseline	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Target	675	250	1000	840	675	515	350

The MOE Scorecard has been divided into three categories summarized in Table 2-26 below.

**Table 2-26. Major Outage Event Performance Metrics Scorecard**

Category	Points	Metrics Descriptions
1. Preparation	250	1. Preparation Phase
2. Operational Response	450	2. Downed Wires 3. Damage Assessment 4. Crewing 5. Estimated Time of Restoration (ETR) for 90% of Service Outages 6. ETR Accuracy for 90% Service Restoration 7. Municipality Coordination 8. Municipal EOC Coordination Puerto Rico Commonwealth / Federal EOC Coordination 9. Utility Coordination 10. Safety 11. Mutual Assistance



Category	Points	Metrics Descriptions
3. Communication	300	12. Call Answer Rates 13. Web Availability 14. PREB and Administrator (P3A) Reporting 15. Customer Communications 16. Outgoing message on telephone line
Maximum Available Points	1,000	

## 2.9 Monitoring

The set of Performance Metrics and the Target Performance Levels for the fourth Contract Year will be evaluated during the third Contract Year collectively by LUMA and the Administrator to determine reasonability for subsequent years. Beginning in the fourth Contract Year, Performance Metrics and the Target Performance Levels will be reevaluated on an annual basis. At this time, it will be determined whether additional metrics should be included, base points reallocated and Target Performance Levels modified. LUMA and PREB may also consider whether adjustments to the Performance Metrics are appropriate prior to the fourth Contract Year based on business, operational or other considerations. Any adjustments will be dealt with in accordance with OMA Section 7.1(d) (Service Fee — Amendments to Performance Metrics). Any revisions to the Performance Metrics are subject to PREB's review, modification and approval.

## 3.0 Annex X — Updated View of Illustrative Table Provided in OMA

The table below provides an update of the illustrative example shown in Table 2 of Section IV (A) of Annex X of the OMA as to how the incentive compensation mechanism works, using the revised Performance Metrics in this document. The metrics, base points and weightings are consistent with Annex IX (Performance Metrics), but the dollar values included in the table below are for example only and do not represent an actual magnitude of payments or LUMA scoring for any Contract Year.

Note: The example below assumes an illustrative total Incentive Compensation Pool of US \$10 million.

**Table 3-1. Updated View of the Illustrative Table Provided in Section IV (A) of Annex X of the OMA (Table 2)**

(\$ million)		Scenario 1: Top Performance		Scenario 2: Selective Performance		Scenario 3: Under Performance	
Performance Category	Base Points	% Achieved	Points Awarded	% Achieved	Points Awarded	% Achieved	Points Awarded
<b>Customer Satisfaction</b>							
J.D. Power Customer Satisfaction Survey (Residential Customers)	7.00	150%	10.50	100%	7.00	50%	3.50
J.D. Power Customer Satisfaction Survey (Business Customers)	7.00	150%	10.50	75%	5.25	50%	3.50
Average Speed of Answer (minutes)	7.00	150%	10.50	50%	3.50	50%	3.50
Customer Complaint Rate	2.00	150%	3.00	100%	2.00	50%	1.00
Abandonment Rate	7.00	150%	10.50	0%	0.00	50%	3.50
<b>Customer Satisfaction Points Available</b>	<b>30.0</b>	<b>150%</b>	<b>45.0</b>	<b>59%</b>	<b>17.75</b>	<b>50%</b>	<b>15.0</b>

**Technical, Safety & Regulatory**

# LUMA's Performance Metrics Targets

35

(\$ million)		Scenario 1: Top Performance		Scenario 2: Selective Performance		Scenario 3: Under Performance	
OSHA Recordable Incident Rate	5.00	150%	7.50	150%	7.50	50%	2.50
OSHA Fatalities	5.00	100%	5.00	100%	5.00	0%	0.00
OSHA Severity Rate	5.00	150%	7.50	150%	7.50	50%	2.50
OSHA DART Rate	5.00	150%	7.50	100%	5.00	50%	2.50
System Average Interruption Frequency	5.00	150%	7.50	150%	7.50	50%	2.50
System Average Interruption Duration	5.00	150%	7.50	75%	3.75	50%	2.50
Distribution Line Inspections & Targeted Corrections	5.00	150%	7.50	150%	7.50	50%	2.50
Transmission Line Inspections & Targeted Corrections	5.00	150%	7.50	50%	2.50	50%	2.50
T&D Substation Inspections & Targeted Corrections	5.00	150%	7.50	0%	0.00	50%	2.50
<b>Technical, Safety &amp; Regulatory Subtotal</b>	<b>45.0</b>	<b>144%</b>	<b>65.0</b>	<b>103%</b>	<b>46.25</b>	<b>44%</b>	<b>20.0</b>

## Financial Performance

Operating Budget	7.5	100%	7.5	0%	0	0%	0
Capital Budget: Federally Funded	7.5	100%	7.5	100%	7.5	0%	0
Capital Budget: Non-Federally Funded	7.5	100%	7.5	100%	7.5	50%	3.75
Days Sales Outstanding: General Clients	4	150%	6	100%	4	50%	2
Days Sales Outstanding: Government	1.5	150%	2.25	100%	1.5	50%	0.75
Overtime	5	150%	7.5	110%	5.5	50%	2.5
<b>Financial Performance Subtotal</b>	<b>33.0</b>	<b>116%</b>	<b>38.3</b>	<b>79%</b>	<b>26.0</b>	<b>27%</b>	<b>9.0</b>
<b>TOTAL</b>	<b>108</b>		<b>148.3</b>		<b>90</b>		<b>44</b>

(\$ million)			Scenario 1: Top Performance		Scenario 2: Selective Performance		Scenario 3: Under Performance	
Performance Category	Available Incentive Compensation	Base Points	Points Awarded	Incentive Compensation Awarded	Points Awarded	Incentive Compensation Awarded	Points Awarded	Incentive Compensation Awarded
Customer Satisfaction	\$2.50	30.0	45.0	\$2.50	17.75	\$1.48	15.0	\$1.25
Technical, Safety & Regulatory	\$5.00	45.0	62.5	\$5.00	46.25	\$5.00	20.0	\$2.22
Financial Performance	\$2.50	33.0	38.3	\$2.50	26.0	\$1.97	9.0	\$0.68
<b>Illustrative Total Incentive Compensation - Sample Year</b>				<b>\$10.00</b>		<b>\$8.45</b>		<b>\$4.15</b>

## 4.0 High-Level Plan to Achieve Performance Metrics Targets

This section presents the actual plans proposed by each team to achieve the proposed performance metric improvements. It must be noted that in general the poor availability and quality of data affects the programs' design and estimated impacts.

### 4.1 Customer Service

#### 1. J.D. POWER CUSTOMER SATISFACTION SURVEY (RESIDENTIAL & BUSINESS)

Requirements to achieve performance targets:

- **People:** The new LUMA Voice of the Customer (VOC) team will be responsible for coordinating the survey waves with J.D. Power, as well as assessing and presenting the results to leadership.
- **Process:** The new CSAT survey will be coordinated with J.D. Power in four phases per year for residential customers and in two phases per year for business customers by the new VOC team in the Customer Service organization.
- **Technology:** The technology responsible for contacting customers is provided by J.D. Power based on customer data provided to them, including email addresses. All customer information will be provided by the LUMA VOC team to J.D. Power.

#### 2. AVERAGE SPEED OF ANSWER

Requirements to achieve performance targets:

- **People:** Using more accurate data provided by the new Contact Center platform, a new Workforce Management team will ensure the right staffing levels, scheduling the right people at the right times to answer calls, leading to a reduction in ASA. Customer Service agents in the Contact Center will be needed to answer calls based on call forecasting requirements.
- **Process:** The new Contact Center platform will provide consistent data that can be reported on across all queues and calls offered. The Workforce Management team will follow standard industry practices to forecast call volumes and schedule associates accordingly to reduce ASA.
- **Technology:** Implementation of a new Contact Center platform at Service Commencement Date will better capture call details across all segments, allowing for improved reporting of performance and improved staffing levels to ensure that calls are answered.

#### 3. CUSTOMER COMPLAINT RATE

Requirements to achieve performance targets:

- **People:** The new VOC team within the LUMA Customer Service organization will be responsible for managing the process, assessing results and presenting key findings to leadership. This process will be supported by billing analysts and Customer Service agents within the Customer Service department to investigate, follow up and respond to customers and the PREB.
- **Process:** The VOC team will track each complaint received by LUMA from PREB, including receipt and response dates, as well as other associated metrics and data. The VOC team will manage the process of investigation and follow up on the customer complaint.

- **Technology:** The Customer Complaint Rate will initially be tracked and reported manually but will be replaced by a software-based case management system that includes assignments, escalations, management and reporting capabilities. The Oracle Customer Care & Billing software will be the source record of truth for customer and account investigation. The Contact Center platform will also be leveraged to review call recordings and/or social media and email responses when needed.

## 4. FIRST CALL RESOLUTION

Requirements to achieve performance targets:

- **People:** All Customer Service associates will be trained to capture data on whether or not customers have contacted LUMA previously about the same issue. Customer Service agents in the Contact Center will be needed to answer calls based on call forecasting requirements.
- **Process:** Each caller will be asked by the answering agent if this is their first attempt to contact LUMA for this issue/need. This yes/no answer will be tracked with the call detail, providing reporting data on First Call Resolution.
- **Technology:** Implementation of a new Contact Center platform at Service Commencement Date will allow for the capture and reporting of whether this call is the customer's first attempt to contact LUMA for the given issue/need.

## 5. ABANDONMENT RATE

Requirements to achieve performance targets:

- **People:** A new Workforce Management team within the Contact Center team will use a workforce management system within the Contact Center platform to ensure that staffing levels are at the levels to reduce abandoned calls. Customer Service agents in the Contact Center will be needed to answer calls based on call forecasting requirements.
- **Process:** The new Contact Center platform will provide consistent data that can be reported on across all queues and calls offered. The Workforce Management team will follow standard industry practices to forecast call volumes and schedule employees accordingly, scheduling the right people at the right times to reduce abandoned calls.
- **Technology:** Implementation of a new Contact Center platform at Service Commencement Date will better capture abandoned calls across all segments, allowing for improved reporting of performance and improved staffing levels to ensure that calls are answered. The platform will also enable improved call forecasting and workforce management scheduling to meet call volume demands.

## 4.2 Technical, Safety & Regulatory

### SAFETY

At LUMA, safety is a core value and we believe it is our job to complete every task without incident or injury. We believe that our most valuable assets are our employees, and there is nothing more important than our employees coming home safely. LUMA is committed to the safety and health of employees, customers, contractors and the communities in which we work, and it is our mission to provide and maintain a safe work environment. In order to ensure that we establish a best-in-class safety and health organization and meet the safety performance metrics established in the OMA, we will use proven industry practices to create a NO harm culture.

Based on results of the assessments and baseline gap analysis activities conducted during the Front-End Transition Period, we are prioritizing objectives to ensure that we address those that will increase the level of safety for employees immediately. These objectives will include items such as those described below.

- Establish and implement an incident management process that includes notification procedures, injury management protocol and incident investigation training and requirements. Establish formalized reporting and incident investigation procedures. This will include a mechanism to share investigation results and lessons learned across the system, as well as establishing an incident tracking and trending process.
- In accordance with the results of the initial HSE&Q gap analysis, update and implement a Safety and Health Policies and Procedures manual in accordance with regulatory requirements.
- Implement a formalized process for evaluating and managing high-hazard risks during the job planning process.
- Increase frontline employee engagement through various safety committees, task teams and other leadership-sponsored safety initiatives.
- Establish safety and health performance metrics and leadership accountability via manager performance plan and activity-based goals for supervisors.
- Create an HSE&Q integrated management system. Implement a DOT driver's compliance program that includes items such as a drug and alcohol testing policy, medical requirements, hours of service, etc.
- Establish/refine an industrial hygiene program.
- Implement a contractor safety program that includes the qualification and oversight of all contractors.
- Implement a comprehensive jobsite observation program (such as a near-miss program). Implement a system-wide safe driving campaign.
- Enhance HSE&Q training programs for employees and roll out no-harm culture training.

These initiatives are supported by our initial budget for establishing a software system for incident management, no-harm culture training and enhanced HSE&Q training programs (including DOT, lockout/tagout, electrical safety, etc.). The metrics will also be supported by operational federally funded System Remediation Plan (SRP) items.

## TECHNICAL

The roadmap to achieve the Technical Performance Metrics targets includes a series of programs focused initially on the worst-performing main components of the system (distribution feeders, transmission lines, substations), which were selected after careful analysis of the current reality of PREPA's infrastructure and study of the root causes behind the frequent system failures. Current plans are based on best-available data and reasonable assumptions. The programs will be adapted and modified as LUMA acquires better data on system health.

The selected projects for implementation in each asset class are listed below. As LUMA engineers determine specific reliability improvement plans, they will incorporate these types of projects (Tables 4-1 and 4-2) as needed to optimize the improvement. LUMA engineers will also follow the Principles Applicable to the Planning of the Distribution System as laid out in the PREB resolution NEPR-MI-2019-0011. The cost of programs for improvement affecting the technical performance metrics are included in the Initial Budgets.

**Table 4-1. Selected Reliability Improvement Projects for Distribution**

Undergrounding	Tree Wiring	Pole Replacement	Animal Guards	Vegetation Management	Cable Replacement	Reclosers & FCIs
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**Table 4-2. Selected Projects for Improvement in Each Asset Class**

Breaker Replacement	Transmission Lines Rebuild 38 kV	Transmission Pole Replacement 38 kV	Transmission Line Material Replacements 38 kV	Transmission Pole Replacement 115 kV	Transmission Line Material Replacements 115 kV
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The selected programs are briefly described as follows.

## 1. TARGETED UNDERGROUNDING & TREE-WIRING

The objective of this program is to underground or install tree-wire on selected overhead sections of the worst-performing feeders, especially those that serve critical customers. The worst-performing feeders have been identified and prioritized based on total contribution to Customer Minutes Interrupted (CMI). These results show that, for instance, the worst 10% performing feeders (106 feeders) contribute to approximately 40% of total CMI. Therefore, targeting investments to these feeders is expected to yield the greatest benefit-cost ratio — i.e., be most cost-effective. Undergrounding and tree-wiring have been targeted to selected worst-performing feeders. Since undergrounding is a more expensive solution, it has been reserved for feeders within this group that have the highest CMI contribution and the most critical customers (e.g., hospitals), while tree-wiring has been targeted to the remaining feeders of this group.

## 2. POLE REPLACEMENT

The objective of this program is replacing poles and structures (crossarms, insulation, hardware, etc.) identified as being at risk during inspection and testing. This program is intended to reduce failure rates by addressing multiple root-causes besides defective poles. Other causes include wire down (which is the main contributor [about 16%] to total CMI), broken insulators and others. This program has also been targeted to the worst-performing feeders.

## 3. ANIMAL GUARDS

Results from the historical reliability analysis show that the animal root cause contributes to about 4.3% of total distribution CMI. Therefore, the objective of this program is to help reduce respective fault rates by installing animal guards to prevent potential faults due to wildlife. This is the least expensive and one of the most cost-effective programs of the plan and is also targeted to the worst-performing feeders.

## 4. VEGETATION MANAGEMENT

Vegetation is the second-largest contributor to total CMI on the distribution system; it represents about 14% of total distribution CMI. The objective of this program is to implement tree trimming and other vegetation management strategies (e.g., pruning, application of herbicide, etc.) on overhead lines of the worst-performing feeders to reduce associated fault rates.

## 5. UNDERGROUND CABLE REPLACEMENT

This program is intended to replace selected underground cable sections in voltages of 4.16 kV up to 8.32 kV for the worst-performing feeders. This program is expected to help reduce respective fault rates

by addressing root causes affecting underground assets, specifically broken cable and broken splices and terminals.

## 6. MID-CIRCUIT RECLOSERS

This program is intended to address a variety of root causes, such as wire down, vegetation, weather, etc., and improve reliability (reduce CMI, Customer Interruptions [CI], SAIDI and SAIFI) by limiting the number of customers affected by faults, as well as by allowing temporary faults to self-extinguish via reclosing operations. This program consists of installing one or two mid-circuit smart reclosers (with microprocessor-based controllers and remote monitoring and control capabilities) on selected worst performing feeders.

## 7. FAULT CIRCUIT INDICATORS (FCI)

The objective of this program is to install remotely monitored FCI in strategic locations of the worst-performing feeders to improve the outage management and restoration process, specifically by decreasing the time required to detect and locate faults. The overall effect of FCI deployment is reducing CMI and SAIDI by improving response time. FCIs do not impact CI. Therefore, they do not improve SAIFI.

## 8. DISTRIBUTION & TRANSMISSION BREAKER REPLACEMENT

This program is intended to replace circuit breakers in distribution feeders as well as oil circuit breakers in transmission substations. This is done to ensure reliable operation of these devices, since breakers are responsible for 1.6% of SAIDI and 1.3% of SAIFI of the system (based on the available performance metrics).

## 9. 38 KV TRANSMISSION LINE PROGRAMS

38 kV transmission lines are the second-largest contributors to system CMI and SAIDI on the transmission system. This program's intent is to improve their performance by rebuilding 38 kV lines, reconductoring, replacing poles and conducting other material replacements. Expected progress at three years into the 10-year plan is 40%.

## 10. 115 KV TRANSMISSION LINE PROGRAMS

115 kV transmission lines are responsible for 1.9% of SAIDI and 4.8% of SAIFI affect 115 kV transmission lines. The objective of this program is to replace poles and reconductor the worst-performing 115 kV transmission lines. The program intends to complete 24% over the first three years.

## 4.3 Financial Performance

Annex IX Performance Metrics detail performance incentive mechanisms that will align LUMA with PREPA's strategic imperatives to improve utility performance in specific areas where historical performance has been unsatisfactory.

LUMA's Finance Organization is an enabling department to support initiatives that will help LUMA to achieve its strategic objectives and meet or exceed performance targets. The Finance team's programs will help support accountability while creating a utility culture that prioritizes good stewardship of public assets and innovative approaches to best practices.



## OPERATING BUDGET, CAPITAL BUDGET: FEDERALLY FUNDED, CAPITAL BUDGET: NON-FEDERALLY FUNDED, OVERTIME

Based on the results of the assessments and baseline gap analysis activities conducted during the Front-End Transition Period, LUMA is prioritizing objectives to ensure that we have a standardized process to enable each of the departments with the right tools to plan and implement remediation initiatives in a fiscally responsible manner. These objectives will include items such as:

- Establishing a firm and unbiased capital and operational program process that prioritizes initiatives based on the strategic priorities set out by the Government of Puerto Rico, PREB and LUMA
- Providing teams with tools to forecast and profile operating and capital expenditures for FY22–24
- Managing and reducing unnecessary overtime hours by recognizing their root causes and improving labor planning, setting performance expectations and implementing a new timekeeping technology for real-time visibility for work progress.

**Table 4-3. Sample Overtime Savings**

	FY2022 Budget	Baseline	FY222	FY23	FY24
Overtime %		23%	20%	19%	18%
Estimated Wages \$	81,007,861				
Estimated Overtime \$		18,631,808	16,201,572	15,391,494	14,581,415
<b>Estimated Overtime Savings</b>			<b>2,430,236</b>	<b>3,240,314</b>	<b>4,050,393</b>

Notes:

<sup>1</sup> \$81M is equal to FY22 Budgeted Wages (non-exempt employees only)

<sup>2</sup> 23% Baseline was calculated using PREPA's FY2021 Certified Budget

<sup>3</sup> FY2022 Budget used as a basis for this analysis in order to accurately compare the dollar savings for various overtime percentages.

Most of these initiatives are supported by our FY22 operating initial budget and included in our labor and wage expectations for various departments. Additionally, a timekeeping system and its implementation is included in the Initial Budgets beginning in FY2022. This project will enable LUMA to improve overtime management and reporting. Implementation of this timekeeping system will also facilitate the capture of more timely and accurate labor data by project, which will greatly facilitate project tracking and accounting.

## GENERAL CUSTOMER & GOVERNMENT DAYS SALES OUTSTANDING (DSO)

### Requirements to achieve performance targets

Achieving Days Sales Outstanding performance targets for both government and general customers will require a comprehensive approach to lower accounts receivables across all customer segments leveraging updated credit policies, enhanced customer data, expanding dunning processes and other key program elements.

- People: A new Revenue Protection team will enable the execution of a fulsome dunning process. Business analysts in the Billing Services team will analyze and generate the DSO report.
- Process: The following processes will be implemented to improve payment collections:
  - Fulsome dunning process from outbound contacts to customer disconnections and customer risk calculations
  - Customer data profiling

- Analysis of accounts receivables
- Technology: Oracle Customer Care & Billing will be leveraged to execute the dunning process and data extractions required to report on the DSO metric. A data analytics platform will be required to assist in producing accurate analysis and reporting of the A/R and the DSO metric. The cloud-based Contact Center platform will enable outbound collections calls.

### Appendix A: NEPR-MI-2019-0007 LUMA's Comments on Performance Baselines & Metrics filed February 5, 2021

Intentionally left blank, please refer to attachment

## Exhibit 2

### Illustration of Revisions to Annex IX

## ~~Annex IX~~ Annex IX

### Performance Metrics

#### I. General

For each Contract Year, ~~the Operator~~ LUMA shall be eligible to receive financial incentive compensation (“Incentive Fee”) based on the ~~Operator’s~~ LUMA’s performance during the Contract Year ~~as~~ LUMA’s performance will be measured against the performance goals set forth by the Performance Metrics as described in this revised Annex IX (Performance Metrics). The Incentive Fee calculation is described in Annex X (Calculation of Incentive Fee) with a maximum amount that can be earned (the “Incentive Compensation Pool”). Section 3 of this document provides an updated view of the illustrative table provided in the OMA.

#### II. Performance Categories

~~To ensure that all~~ The proposed Performance ~~goals are met, the Operator will be~~ evaluated Metrics are listed in Table 2-1. These are grouped in three major Performance Categories: ~~(i) in accordance with Annex IX of the OMA: customer Satisfaction, (ii) service; technical, safety and regulatory; and (iii) financial performance.~~ Likewise, the Incentive Compensation Pool will be allocated across the Performance Categories ~~in such a way as~~ to align ~~the Operator’s~~ LUMA’s incentive compensation with the performance goals.

**Table ~~1~~ Error! No text of specified style in document.-1. Summary of Performance Categories**

Performance Category	Performance Goal	Allocation of Incentive Compensation <del>Pool</del> <u>Period</u>
<del>1.1.</del> <u>1. Customer Satisfaction</u>	Achieve a high-level of customer satisfaction across all customer classes.	25%
<del>2.2.</del> <u>2. Technical, Safety and Regulatory</u>	Operate a safe, reliable electric grid while remaining <del>complaint</del> <u>compliant</u> with applicable safety, environmental and other regulations.	50%
<del>3.3.</del> <u>3. Financial Performance</u>	Meet the approved Operating Budget, Capital Budget <del>—</del> <u>Federally Funded and Capital Budget—</u> <u>Non-Federally Funded.</u>	25%

III. In Compliance with Docket ~~NEPR – MI – NEPR-MI-2019-0014~~<sup>1</sup>

~~A.~~ A. For each Contract Year, the level of performance in each Performance Category

shall be measured based on actual results achieved for the Contract Year. Levels of performance and achievement of results will be adjusted proportionately during the initial Contract Year ~~commencing~~ beginning on the Service Commencement Date and ending on the following June 30. For this purpose, one or more Performance Metrics shall be associated with each Performance Category.

~~B.~~ B. For all Performance Categories ~~the Operator~~ LUMA's performance shall be determined by the level of achievement of the Performance Objective for each Performance Metric under a Performance Category as described in Section ~~V~~ 2.5 of this document. Such level of achievement will determine the portion of the allocated Incentive Compensation Pool earned by ~~the Operator~~ LUMA as described in Annex X (Calculation of Incentive Fee).

~~C.~~ C. Each Performance Metric ~~will have~~ has an assigned point weighting (“Base Points”). For all Performance Metrics except for the Binary Metrics as described in Section ~~III(D)~~ below, a baseline performance level ~~will be~~ has been established prior to the beginning of the first Contract Year (the “Baseline Performance Level”). The proposed Baseline Performance Level ~~will be~~ is based on either historical operating data confirmed during the Front-End Transition Period, performance during the ~~Front-End~~ Front- End Transition Period, or through independent analysis. The initial baseline levels ~~will be agreed upon by the Operator and are proposed by LUMA then reviewed, modified and/or approved by~~ PREB in the manner set forth in the main body of the ~~Agreement~~ OMA. The Baseline Performance Level sets the starting point for each metric relative to the target performance level to be achieved in the ~~fifth~~ third Contract Year (the “Target Performance Level”). The ~~baseline target annual target performance level for each performance metric over the initial five-year~~ three-year period is determined by ~~a straight line between the Baseline Performance Level and the Target Performance Level. The consideration of data and process information gathered from PREPA about past performance, consideration of effort and practical resources required (including human capital, processes and IT systems) to achieve improvements in performance and consideration of available budgets. The annual~~ Minimum Performance Level set for each Performance Metric establishes the value that must be exceeded to qualify for Base Points and is established as the straight line between the Baseline ~~one level lower performance Level and achieving the Target Performance~~ than the 25% level in the ~~tenth Contract Year~~ Performance Metric Schedule. In Contract Years where the Minimum Performance Level is exceeded, ~~the Operator~~ LUMA has the ability of earning 25%, 50%, 100%, 125% or 150% (the “Base Point Multipliers”) of the Base Points depending on the metric result relative to the established baseline for the Contract Year. That is, for a result between the Minimum Performance Level and the 25% tier, ~~the Operator~~ LUMA would receive points equal to 25% of the Base Points and, for a result between the 25% threshold and the 50% threshold, ~~the Operator~~ LUMA would receive points equal to 50% of the Base Points, etc.

D. Performance ranges for determination of Base Points earned shall be based on achieving performance improvement from the Baseline Performance Level to the Target Performance Level over the initial ~~five-year period~~ three-year period. They shall be aligned with principles beneficial to the public interest including going

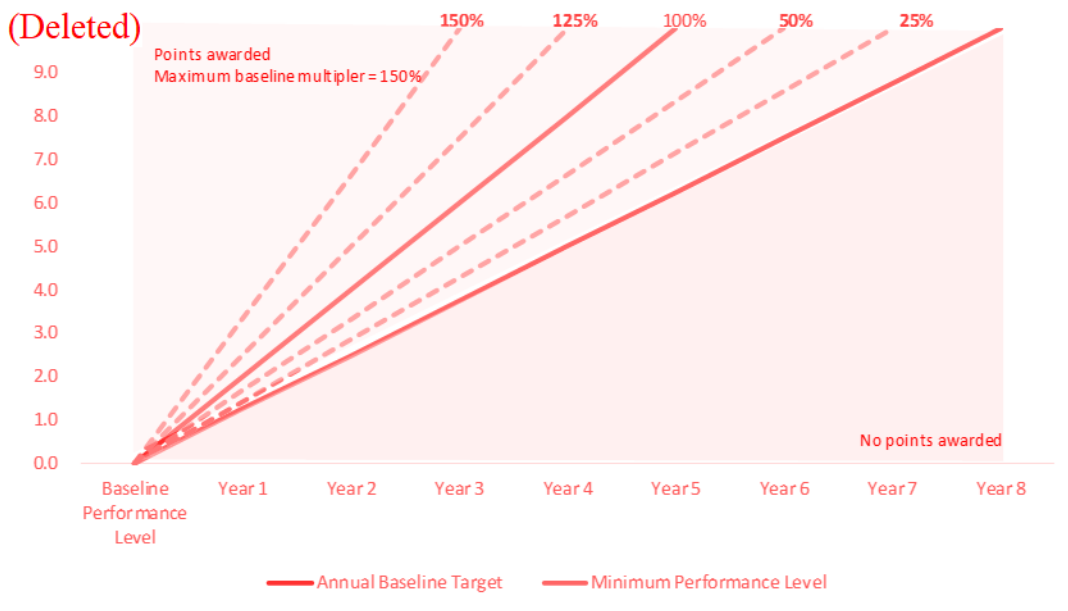
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<sup>1</sup> PREB Regulation for Performance Incentive Mechanisms, Regulation 9137, approved on December 2, 2019 in matter number NEPR – MI – 2019 – 0014.

above and beyond the minimum required compliance level; positively impacting or addressing areas of unsatisfactory performance with a direct impact to the electric service user; and tied to difficult tasks rather than easy to fix areas.



**Chart 1. Example of Performance Metric Mechanism**



~~D. E.~~ Several Performance Metrics ~~are~~ will be evaluated differently than the mechanism outlined above ~~either because there is a binary nature to the result or~~ because the baseline is independent year to year (the “Binary ~~Metrics~~” Metric). For the Occupational Safety and Health Administration (“OSHA”) Fatalities ~~and OSHA Severe Injuries~~ metrics, a value of zero results in full Base Points and a value other than zero results in no points. For the three approved budget-related metrics, Operating Budget, Capital Budget—; Federally Funded and Capital Budget—; Non-Federally Funded, exceeding 102% of the applicable budget results in no points while spending less than or equal to 100% of the applicable budget results in awarding full Base Points. The Operator can earn full Base Points by spending up to ~~102~~ 100% of the Budget, pending Administrator approval. As defined in Section 7.3(b) of the OMA, the Budgets include 2% Excess Expenditures. Budget amendments, as defined in (i) through (iv) in Section 7.4 and 14.5(e) of the OMA, shall be deemed to be included in the initially approved Budgets (denominator) for purposes of this calculation. Further, any funds drawn from the Outage Event Reserve Account and the Contingency Reserve Account, as they have specific requirements, do not contribute to this metric.

#### ~~IV. IV.~~ Summary of Performance Metrics

The Performance Metrics that will form the basis for the Incentive Compensation Pool and their descriptions, baseline derivations, base points, and effective weights are summarized in ~~Table 2. Details of these Performance Metrics are described in the text following Table 2.~~ Table 22-2.

**Table 2** ~~Error! No text of specified style in document.-2.~~ **Summary of Performance Metrics**

*Note: Any Baseline Performance Level set using PREPA historical data will be subject to confirmation during the Front-End Transition Period.*

Performance Metric	Description	Baseline Performance Level Derivation	Base Points	Effective Weight
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Performance Metric	Description	Baseline Performance Level Derivation	Base Points	Effective Weight
<b>A. Customer Satisfaction Service</b>				
1. J.D. Power Customer Satisfaction Survey (Residential Customers)	3rd party measure of customer satisfaction	<del>Set during Front-End Transition Period</del> Initial survey to be completed and baseline set prior to Service Commencement Date, with reporting beginning in year 1	<del>5.0</del> 7.0	<del>45.83</del> %
2. J.D. Power Customer Satisfaction Survey (Business Customers)	3rd party measure of customer satisfaction	<del>Set during Front-End Transition Period</del> Initial survey to be completed and baseline set prior to Service Commencement Date, with reporting beginning in year 1	<del>5.0</del> 7.0	<del>45.83</del> %
3. Average Speed of Answer (minutes)*1	The average wait time it takes on-phone to reach an agent from the moment the customer enters the Automated Call Distribution (ACD) queue to the time the call is answered by an agent	Based on past PREPA historical data verified during Front-End Transition Period performance and LUMA experience	<del>5.0</del> 7.0	<del>45.83</del> %
4. Customer Complaint Rate	Total monthly annual complaints registered with PREB (NEPR-QR) per 100,000 customers	PREPA historical data verified during Front-End Transition PeriodBased on the total number of complaints received by the PREB (NEPR-QR) from May 2019 to February 2020, annualized, as the baseline as it is the most normal period of operations for PREPA in the last 4 years	<del>5.0</del> 2.0	<del>41.67</del> %
5. First Call Resolution*Abandonment Rate1	% of calls with issues that are escalatedThe percentage of callers who hang up (abandon) while the call is still in the ACD queue	Set during Front-End Transition PeriodBased on past PREPA performance and LUMA experience	<del>5.0</del> 7.0	<del>45.83</del> %
<del>6. Abandonment RateA. Customer Service2</del>	<del># of abandoned calls per calls received</del>	<del>PREPA historical data verified during Front-End Transition Period</del>	<del>5.0</del> 30.0	<del>425.0</del> %
<b>B. Technical, Safety &amp; Regulatory</b>				
1. OSHA Recordable Incidence Incident Rate	#Total number of work-related OSHA recordable incidents as a result of work-related injury cases	Evaluation of PREPA historical data verified during Front-End Transition Period	5.0	<del>6</del> 5.56%
2. OSHA Fatalities*1	# ofAll work-related fatalities	Industry standard specified hereinEvaluation of PREPA historical data	5.0	<del>6</del> 5.56%
3. OSHA Severe Injuries*Severity Rate1,4	# ofTotal number of restricted and lost-time days incurred as a result of a work-related injury cases with severity days	Set during the Front-End Transition PeriodEvaluation of PREPA historical data	5.0	<del>6</del> 5.56%

Performance Metric	Description	Baseline Performance Level Derivation	Base Points	Effective Weight
4. OSHA DART Rate	<del># of work-related injury cases incidents resulting in 1 or more lost days</del> Total number of OSHA recordable cases with lost-time days (away, restricted or transferred)	Set during Front-End Transition Period <a href="#">Evaluation of PREPA historical data</a>	5.0	<del>65.56</del> %
5. System Average Interruption Frequency Index (SAIFI)* <sup>1</sup>	<del>Measures avg. outage frequency</del> <a href="#">Indicates how often the average customer experiences a sustained interruption over a predefined period of time.</a> <sup>3</sup>	<a href="#">Calculated from</a> PREPA historical data <del>verified</del> during <a href="#">the</a> Front-End Transition Period	5.0	<del>65.56</del> %
6. <del>Customer</del> System Average Interruption Duration Index (CAIDI)* (SAIDI) <sup>1</sup>	<del>Measures avg. restoration</del> <a href="#">Indicates the total duration of interruption for the average customer during a predefined period of time</a> <sup>3</sup>	<a href="#">Calculated from</a> PREPA historical data <del>verified</del> during <a href="#">the</a> Front-End Transition Period	5.0	<del>65.56</del> %
7. <del>System Average Interruption Duration Index (SAIDI)*</del> <a href="#">Distribution Line Inspections &amp; Targeted Corrections</a> <sup>1</sup>	<del>Measures avg. outage duration</del> <a href="#">The number of distribution line inspections completed, with data recorded in a database for analysis. Inspections of all 13.2 kV, 8.3 kV and 4.16 kV mainline, 3 phase, overhead circuits to assess the physical integrity of the poles, structures, components and equipment to be completed. LUMA will identify serious safety issues to either the public or workers, which will result in immediate priorities for the remediation process. Category 0 and Category 1 findings shall be incorporated in a plan to address within 60 days of identification.</a>	<del>PREPA historical data verified during Front-End Transition Period</del> <a href="#">Not applicable. PREPA has not been performing routine inspections.</a>	5.0	<del>65.56</del> %
8. <del>Customers Experiencing Multiple Interruptions (CEMI)</del> <a href="#">Transmission Line Inspections &amp; Targeted Corrections</a>	<del>Measures multiple outages in a given period</del> <a href="#">The number of transmission line inspections completed, with data recorded in a database for analysis. Inspections of all 230 kV, 115 kV and 38 kV transmission circuits to assess the physical integrity of the poles, structures, components and equipment to be completed. LUMA will identify serious safety issues to either the public or workers, which will result in immediate priorities for the remediation process. Category 0 and Category 1 findings shall be incorporated in a plan to address within 60 days of identification.</a>	<del>Set during Front-End Transition Period</del> <a href="#">Not applicable. PREPA has not been performing routine inspections.</a>	5.0	<del>65.56</del> %

Performance Metric	Description	Baseline Performance Level Derivation	Base Points	Effective Weight
9. <del>Momentary Average Interruption Frequency Index (MAIFI)</del> T&D Substation Inspections & Targeted Corrections	Measures avg. # of <del>momentary interruptions</del> The number of distribution and transmission substation inspections completed with data recorded in a database for analysis. Inspections of all distribution and transmission substations to assess the physical integrity of the substation structures, components and equipment to be completed. LUMA will identify serious safety issues to either the public or workers, which will result in immediate priorities for the remediation process. Category 0 and Category 1 findings shall be incorporated in a plan to address within 60 days of identification.	PREPA historical data verified during Front-End Transition Period Not applicable. PREPA has not been performing routine inspections.	5.0	<del>6</del> 5.56%
<b>B. Technical, Safety &amp; Regulatory</b>			<b>45.0</b>	<b>50.0%</b>
<b>C. Financial Performance</b>				
1. Operating Budget*1	Measures ability to stay within budget	Budget <del>agreed</del> approved by PREB, P3A and Operator	7.5	<del>5</del> 5.68%
2. Capital Budget—; Federally Funded*1	Measures ability to stay within budget	Budget <del>agreed</del> approved by PREB, P3A and Operator	7.5	<del>5</del> 5.68%
3. Capital Budget—Non-Federally; Non-Federally Funded*1	Measures ability to stay within budget	Budget <del>agreed</del> approved by PREB, P3A and Operator	7.5	<del>5</del> 5.68%
4. a) Days Sales Outstanding: General Customers	Measures ability to collect bills from general customers	PREPA historical data verified during Front-End Transition Period Based on analysis of data over the last 36 months and consideration of impact of external factors such as Hurricane Maria and the COVID cut-off moratorium, the timeframe of May 2019 – February 2020 represents the most current stable and unimpaired period of collections activity for general customers	<del>5.5</del> 4.0	<del>4</del> 3.03%
5. Reduction in Network Line Losses 4b) Days Sales Outstanding: Government Customers	Measures ability to <del>reduce electric losses</del> collect bills from government customers	Set during Front-End Transition Period PREPA historical data from the timeframe of January – July 2020 is the most appropriate period for establishing a Government DSO baseline	<del>5.0</del> 1.5	<del>3</del> 1.14%
6. Overtime	Measures ability to manage <del>salary expense</del> overtime costs	Set during Front-End Transition Period 23% of Total Base Compensation for Non-Exempt Employees based on PREPA historical data	<del>5.0</del> 5	<del>3</del> 3.79%

Performance Metric	Description	Baseline Performance Level Derivation	Base Points	Effective Weight
<b>C. Financial Performance<sup>5</sup></b>			<b>33.0</b>	<b>25.0%</b>

<sup>\*1</sup> These Performance Metrics are also Key Performance Metrics (as defined *below* in Section 2.6 LUMA Event of Default and in the OMA Section 14.1 (k)).

<sup>2</sup> Note that the Base Points for the individual Customer Service Performance Metrics vary from those in OMA Annex IX. The base points for Customer Complaint Rate were reduced and the ones for the other Customer Service metrics were increased. This modification recognizes the uncertainty of the data for historical customer complaints registered with PREB. PREPA does not currently review complaints with PREB and consequently there is no information on what portion of total complaints are justifiable. The total Customer Service Base Points shown remains the same as in the OMA Annex IX.

<sup>3</sup> These descriptions are from the [IEEE Guide for Electric Power Distribution Reliability Indices, IEEE Std. 1366™-2012](#).

<sup>4</sup> As part of this revision to OMA Annex IX, use of the term Severe Injuries, which is not an OSHA metric, has been replaced, as appropriate, with the consistent use of the term Severity Rate herein, which is an OSHA metric.

<sup>5</sup> Note that the Base Points for the individual Financial Performance Metrics vary from those in OMA Annex IX. The Days Sales Outstanding Performance Metric has been bifurcated and the [Reduction in Network Line Losses](#) Performance Metric has been deferred. The total Financial Performance base points shown is 33 instead of the 38 in the OMA Annex IX and as a result the effective weightings are slightly higher for each of the individual finance metrics. The total effective weight for the sum of the Financial Performance Metrics remains the same as in the OMA Annex IX.

#### V. Performance Metrics

Table 2-3 below summarizes baseline performance levels and annual targets for the Performance Metrics, with related details following the table.

~~V. Table Error! No text of specified style in document.-3. Summary of Performance Metrics: Baselines and Annual Targets~~

~~Customer~~

~~†~~

~~A. Satisfaction~~

~~1. J.D. Power Customer Satisfaction Survey (Residential)~~

~~Performance Objective: To incentivize sufficient customer service.~~

~~Description: The metric measures customer satisfaction through a third-party survey that examines six (6) factors (power quality and reliability, price, billing and payment, corporate citizenship, communications and customer service). The Baseline Performance Level will be set during the Front-End Transition Period. The Target Performance Level has been set as the “South Large Utility” average, as defined by J.D. Power.~~

~~Points Assigned: 5~~

~~Baseline Performance Level: TBD.~~

~~Target Performance Level: J.D. Power Residential Score of 714.~~

~~Minimum Performance Level: Set as a straight line calculation using the Baseline Performance Level in Year 0 and assuming the Target Performance Level is met in Year 10 instead of Year 5.~~

~~Calculation: Third party survey that examines six (6) factors (power quality and reliability, price, billing and payment, corporate citizenship, communications and customer service).~~

~~Metric Schedule:~~

-	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
Baseline	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Year 1	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Year 2	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Year 3	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Year 4	TBD	TBD	TBD	TBD	TBD	TBD	TBD

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~~† A customer is a metered electrical service point for which an active bill account is established at a specific location, per IEEE 1366-2012.~~

-	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
<del>Year 5</del>	<del>714</del> Target Threshold	<del>TBD</del> Minimum Performance Level	<del>TBD</del> 150%	<del>TBD</del> 125%	<del>714</del> 100%	<del>TBD</del> 50%	<del>TBD</del> 25%

## **A. Customer Service**

### **1. J.D. Power Customer Satisfaction Survey (Residential Customers)**

<u>Baseline</u>	Results of recent J. D. Power Customer Satisfaction Survey are being analyzed to propose baseline and targets prior to Commencement Date.
<u>Year 1</u>	
<u>Year 2</u>	
<u>Year 3</u>	

### **2. J.D. Power Customer Satisfaction Survey (Business Customers)**

<u>Baseline</u>	Results of recent J. D. Power Customer Satisfaction Survey are being analyzed to propose baseline and targets prior to Commencement Date.
<u>Year 1</u>	
<u>Year 2</u>	
<u>Year 3</u>	

### **3. Average Speed of Answer (minutes)<sup>1</sup>**

<u>Baseline</u>	<u>10.0</u>						
<u>Year 1</u>	<u>9.0</u>	<u>9.7</u>	<u>4.5</u>	<u>6.8</u>	<u>9.0</u>	<u>9.3</u>	<u>9.6</u>
<u>Year 2</u>	<u>6.4</u>	<u>7.1</u>	<u>3.2</u>	<u>4.8</u>	<u>6.4</u>	<u>6.7</u>	<u>7.0</u>
<u>Year 3</u>	<u>5.8</u>	<u>6.4</u>	<u>2.9</u>	<u>4.4</u>	<u>5.8</u>	<u>6.1</u>	<u>6.3</u>

### **4. Customer Complaint Rate**

<u>Baseline</u>	<u>11.10%</u>						
<u>Year 1</u>	<u>10.80%</u>	<u>11.55%</u>	<u>10.30%</u>	<u>10.55%</u>	<u>10.80%</u>	<u>11.05%</u>	<u>11.30%</u>
<u>Year 2</u>	<u>10.60%</u>	<u>11.35%</u>	<u>10.1%</u>	<u>10.35%</u>	<u>10.60%</u>	<u>10.85%</u>	<u>11.10%</u>
<u>Year 3</u>	<u>10.10%</u>	<u>10.85%</u>	<u>9.60%</u>	<u>9.85%</u>	<u>10.10%</u>	<u>10.35%</u>	<u>10.60%</u>

### **5. Abandonment Rate<sup>1</sup>**

<u>Baseline</u>	<u>50.0%</u>						
<u>Year 1</u>	<u>40.0%</u>	<u>45.0%</u>	<u>20.0%</u>	<u>30.0%</u>	<u>40.0%</u>	<u>41.0%</u>	<u>42.0%</u>
<u>Year 2</u>	<u>32.0%</u>	<u>35.0%</u>	<u>16.0%</u>	<u>24.0%</u>	<u>32.0%</u>	<u>33.0%</u>	<u>34.0%</u>
<u>Year 3</u>	<u>29.0%</u>	<u>34.0%</u>	<u>14.5%</u>	<u>22.0%</u>	<u>29.0%</u>	<u>31.0%</u>	<u>33.0%</u>

## **B. Technical, Safety & Regulatory**

### **1. OSHA Recordable Incident Rate**

<u>Baseline</u>	<u>8.76</u>						
<u>Year 1</u>	<u>6.57</u>	<u>7.88</u>	<u>5.69</u>	<u>6.13</u>	<u>6.57</u>	<u>7.01</u>	<u>7.45</u>
<u>Year 2</u>	<u>5.26</u>	<u>7.25</u>	<u>3.99</u>	<u>4.60</u>	<u>5.26</u>	<u>5.96</u>	<u>6.70</u>
<u>Year 3</u>	<u>4.20</u>	<u>6.67</u>	<u>2.79</u>	<u>3.45</u>	<u>4.20</u>	<u>5.06</u>	<u>6.03</u>



-	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
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## 2. OSHA Fatalities<sup>1</sup>

Baseline	0						
Year 1	0	0	N/A	N/A	0	N/A	N/A
Year 2	0	0	N/A	N/A	0	N/A	N/A
Year 3	0	0	N/A	N/A	0	N/A	N/A

## 3. OSHA Severity Rate<sup>1</sup>

Baseline	50.84						
Year 1	43.21	46.77	38.13	40.67	43.21	43.21	45.76
Year 2	36.73	43.03	28.60	32.54	36.73	36.73	41.18
Year 3	31.22	39.59	21.45	26.03	31.22	31.22	37.06

## 4. OSHA DART Rate

Baseline	5.95						
Year 1	4.46	5.36	3.87	4.17	4.46	4.76	5.06
Year 2	3.57	4.93	2.71	3.12	3.57	4.05	4.55
Year 3	2.86	4.53	1.90	2.34	2.86	3.44	4.10

## 5. System Average Interruption Frequency Index (SAIFI)<sup>1,2</sup>

Baseline	9.8	9.8	N/A	N/A	9.8	N/A	N/A
Year 1	9.1	9.6	7.6	8.2	9.1	9.2	9.4
Year 2	7.8	9.3	6.3	7.0	7.8	8.3	8.8
Year 3	6.9	9.0	5.4	6.1	6.9	7.6	8.3

## 6. System Average Interruption Duration Index (SAIDI)<sup>1,2</sup>

Baseline	1,307						
Year 1	1,176	1,275	915	1,046	1,176	1,209	1,242
Year 2	980	1,215	719	850	980	1,059	1,137
Year 3	784	1,177	523	654	784	915	1,046

## 7. Distribution Line Inspections & Targeted Corrections<sup>1</sup>

Baseline	N/A						
Year 1	106	16	159	133	106	53	27
Year 2	370	56	555	463	370	185	93
Year 3	687	103	1,030	859	687	344	172

## 8. Transmission Line Inspections & Targeted Corrections

Baseline	N/A						
Year 1	26	4	39	33	26	13	7
Year 2	91	14	137	114	91	46	23
Year 3	169	25	253	211	169	85	43

-	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
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#### 9. T&D Substation Inspections & Targeted Corrections

<u>Baseline</u>	<u>N/A</u>						
<u>Year 1</u>	<u>39</u>	<u>6</u>	<u>59</u>	<u>49</u>	<u>39</u>	<u>20</u>	<u>10</u>
<u>Year 2</u>	<u>137</u>	<u>21</u>	<u>206</u>	<u>171</u>	<u>137</u>	<u>69</u>	<u>34</u>
<u>Year 3</u>	<u>255</u>	<u>38</u>	<u>383</u>	<u>319</u>	<u>255</u>	<u>128</u>	<u>64</u>

#### C. Financial Performance

##### 1. Operating Budget<sup>1</sup>

<u>Baseline</u>	<u>100% of Operating Budget</u>						
<u>Year 1</u>	<u>100% of T&amp;D Approved Operating Budget</u>	<u>100% of T&amp;D Approved Operating Budget</u>	<u>N/A</u>	<u>N/A</u>	<u>Less than or Equal to 100%</u>	<u>N/A</u>	<u>N/A</u>
<u>Year 2</u>	<u>100% of T&amp;D Approved Operating Budget</u>	<u>100% of T&amp;D Approved Operating Budget</u>	<u>N/A</u>	<u>N/A</u>	<u>Less than or Equal to 100%</u>	<u>N/A</u>	<u>N/A</u>
<u>Year 3</u>	<u>100% of T&amp;D Approved Operating Budget</u>	<u>100% of T&amp;D Approved Operating Budget</u>	<u>N/A</u>	<u>N/A</u>	<u>Less than or Equal to 100%</u>	<u>N/A</u>	<u>N/A</u>

##### 2. Capital Budget: Federally Funded<sup>1</sup>

<u>Baseline</u>	<u>100% of Capital Budget: Federally Funded, Approved for Fiscal 2022</u>						
<u>Year 1</u>	<u>100% of FY22 Approved Capital Spend</u>	<u>100% of FY22 Approved Capital Spend</u>	<u>N/A</u>	<u>N/A</u>	<u>Less than or Equal to 100%</u>	<u>N/A</u>	<u>N/A</u>
<u>Year 2</u>	<u>100% of FY23 Approved Capital Spend</u>	<u>100% of FY23 Approved Capital Spend</u>	<u>N/A</u>	<u>N/A</u>	<u>Less than or Equal to 100%</u>	<u>N/A</u>	<u>N/A</u>
<u>Year 3</u>	<u>100% of FY24 Approved Capital Spend</u>	<u>100% of FY24 Approved Capital Spend</u>	<u>N/A</u>	<u>N/A</u>	<u>Less than or Equal to 100%</u>	<u>N/A</u>	<u>N/A</u>

##### 3. Capital Budget: Non-Federally Funded<sup>1</sup>

<u>Baseline</u>	<u>100% of Capital Budget: Non-Federally Funded Approved for Fiscal 2022</u>						
<u>Year 1</u>	<u>&lt;100% of FY22 Approved Capital Spend</u>	<u>100% of FY22 Approved Capital Spend</u>	<u>N/A</u>	<u>N/A</u>	<u>Less than or Equal to 100%</u>	<u>N/A</u>	<u>N/A</u>
<u>Year 2</u>	<u>&lt;100% of FY23 Approved Capital Spend</u>	<u>100% of FY23 Approved Capital Spend</u>	<u>N/A</u>	<u>N/A</u>	<u>Less than or Equal to 100%</u>	<u>N/A</u>	<u>N/A</u>
<u>Year 3</u>	<u>&lt;100% of FY24 Approved Capital Spend</u>	<u>100% of FY24 Approved Capital Spend</u>	<u>N/A</u>	<u>N/A</u>	<u>Less than or Equal to 100%</u>	<u>N/A</u>	<u>N/A</u>

##### 4a) Days Sales Outstanding: General Customers

<u>Baseline</u>	<u>131</u>
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-	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
Year 1	128	148	119	122	128	135	138
Year 2	126	145	116	120	126	132	135
Year 3	123	142	114	117	123	129	132
<b>4b) Days Sales Outstanding: Government Customers</b>							
Baseline	754						
Year 1	739	850	684	702	739	776	794
Year 2	724	833	670	688	724	760	778
Year 3	709	815	656	674	709	745	762
<b>5. Overtime</b>							
Baseline	23% of Total Base Compensation for Non-Exempt Employees						
Year 1	20% of Total Non-Exempt Base Compensation	23% of Total Non-Exempt Base Compensation	Less than or Equal to 18%	19%	20%	21%	22%
Year 2	19% of Total Non-Exempt Base Compensation <sup>3</sup>	22% of Total Non-Exempt Base Compensation	Less than or Equal to 17%	18%	19%	20%	21%
Year 3	18% of Total Non-Exempt Base Compensation	21% of Total Non-Exempt Base Compensation	Less than or Equal to 16%	17%	18%	19%	20%

<sup>1</sup> These Performance Metrics are also Key Performance Metrics (as defined in the Revised Annex IX Performance Metrics Section 4.6 LUMA Event of Default and in the OMA Section 14.1 (k)).

<sup>2</sup> These metrics are based on the [IEEE Guide for Electric Power Distribution Reliability Indices, IEEE Std. 1366-2012](#) and baselined by annualizing the 2020 performance through August 2020 (dataset provided covered the period of January 2020 through August 2020) to account for 2020 degraded performance over 2019.

<sup>3</sup> A 1% Metric Improvement Target can equate to a 22% Cost Improvement. See Sample Overtime Savings Calculation below.

#### A. Customer Satisfaction

#### 2-1. J.D. Power Customer Satisfaction Survey (BusinessResidential Customers)

Performance Objective: To incentivize sufficient customer service.

Description: Third-party customer survey.

~~Description: The metric measures customer satisfaction through third party survey that examines six (6) factors (power quality and reliability, price, billing and payment, corporate citizenship, communications and customer service). The Baseline Performance Level will be set during the Front End Transition Period. The Target Performance Level has been set as the “South Large Utility” average.~~

~~Points Assigned: 5~~

~~Baseline Performance Level: TBD.~~

~~Target Performance Level: J.D. Power Business Score of 760.~~

~~Minimum Performance Level: Set as a straight line calculation using the Baseline Performance Level in Year 0 and assuming the Target Performance Level is met in Year 10 instead of Year 5.~~

Calculation: ~~Third party survey that~~[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 for residential, and in two phases per year for commercial. Initial survey to be completed and baseline set prior to commencement with reporting beginning in year 1.](#)

**Table Error! No text of specified style in document.-4. J.D. Power Customer Satisfaction Survey (Residential Customers)**

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
Baseline	Results of recent J. D. Power Customer Satisfaction Survey are being analyzed to propose baseline and targets prior to Commencement Date.						
Year 1							
Year 2							
Year 3							

## 2. J.D. Power Customer Satisfaction Survey (Business Customers)

Performance Objective: To incentivize sufficient customer service.

Description: Third party customer survey.

### Metric Schedule:

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 for residential, and in two phases per year for commercial. Initial survey to be completed and baseline set prior to commencement with reporting beginning in year 1.

**Table Error! No text of specified style in document.-5. J.D. Power Customer Satisfaction Survey (Business Customers)**

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
Baseline	TBD	TBD Results of recent J. D. Power Customer Satisfaction Survey are being analyzed to propose baseline and targets prior to Commencement Date.	TBD	TBD	TBD	TBD	TBD
Year 1		TBD	TBD	TBD	TBD	TBD	TBD
Year 2		TBD	TBD	TBD	TBD	TBD	TBD
Year 3		TBD	TBD	TBD	TBD	TBD	TBD
Year 4	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Year 5	760	TBD	TBD	TBD	760	TBD	TBD

## 3.3. Average Speed of Answer (minutes)

Performance Objective: To incentivize efficient call center service.

Description: The Average Speed of Answer ~~is measured as a combination of those customers who have their question or issue resolved via the automated Integrated Voice Response system (“IVR”) and those customers who opt out of the IVR and wait to speak with a customer. The Baseline Performance Level has been set using PREPA historical data subject to confirmation during the Front-End Transition Period.~~ (ASA) metric measures the average wait time from the moment the customer enters the queue to the time the call is answered by an agent.

~~Points Assigned: 5~~

Calculation: Total Automatic Call Distributor (ACD) wait seconds / total answered calls.

An ACD is a telephony system that automatically distributes incoming phone calls to available agents, based on data entered by the caller into an Interactive Voice Response (IVR) and skills-based routing, using skills associated with agents.

~~Baseline Performance Level:~~ Table Error! No text of specified style in document.-6. ~~Average of~~  
~~10.0~~ Speed of Answer (minutes.)

~~Target Performance Level: Average of 1.0 minutes.~~

~~Minimum Performance Level: Set as a straight line calculation using the Baseline Performance Level in Year 0 and assuming the Target Performance Level is met in Year 10 instead of Year 5.~~

~~Calculation: Average number of minutes from when the customer goes through the integrated voice response system until reaching an agent.~~

### Metric Schedule:

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
Baseline	10.0	10.0	N/A	N/A	10.0	N/A	N/A
Year 1	10.0 <sub>9.0</sub>	10.0 <sub>9.7</sub>	N/A <sub>4.5</sub>	N/A <sub>6.8</sub>	10.0 <sub>9.0</sub>	N/A <sub>9.3</sub>	N/A <sub>9.6</sub>
Year 2	8.5 <sub>6.4</sub>	9.1 <sub>7.1</sub>	4.0 <sub>3.2</sub>	6.3 <sub>4.8</sub>	8.5 <sub>6.4</sub>	8.8 <sub>6.7</sub>	9.0 <sub>7.0</sub>
Year 3	7.5 <sub>5.8</sub>	8.2 <sub>6.4</sub>	2.5 <sub>2.9</sub>	5.0 <sub>4.4</sub>	7.5 <sub>5.8</sub>	7.8 <sub>6.1</sub>	8.0 <sub>6.3</sub>
Year 4	5.0	7.3	1.0	3.0	5.0	6.0	7.0
Year 5	2.5	6.4	0.5	1.5	2.5	4.3	6.0

#### 4.4. Customer [PREB](#) Complaint Rate

Performance Objective: To incentivize ~~enough~~[effective](#) customer service.

Description: This metric measures the total number of initial customer complaints registered with ~~the Puerto Rico Energy Bureau (“PREB”)~~ [under an NEPR-QR docket following PREB](#). The Baseline Performance Level will be set based on PREPA historical data subject to confirmation during the Front-End Transition Period.

~~Points Assigned: 5~~

~~Baseline Performance Level: 11.3% complaint rate.~~

~~Target Performance Level: 2.5% complaint rate.~~

~~Minimum Performance Level: Set as a straight line calculation using the Baseline Performance Level in Year 0 and assuming the Target Performance Level is met in Year 10 instead of Year 5.~~

Calculation: The ~~monthly~~[annual](#) value is calculated by taking the total number of initial complaints divided by the total utility customer population and then multiplying by 100,000.



Table Error! No text of specified style in document.-7. Customer PREB Complaint Rate

~~Metric Schedule:~~

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
Baseline	11.3%	11.311.10%	N/A	N/A	11.3%	N/A	N/A
Year 1	11.310.08%	11.311.55%	N/A10.30%	N/A10.55%	11.310.80%	N/A11.05%	N/A11.30%
Year 2	10.710.06%	10.411.35%	5.010.10%	7.810.35%	10.710.60%	10.310.85%	10.011.10%
Year 3	10.010.01%	9.510.85%	4.09.60%	7.09.85%	10.010.10%	9.510.35%	9.010.60%
Year 4	7.5%	8.7%	3.0%	5.3%	7.5%	7.8%	8.0%
Year 5	5.0%	7.8%	2.0%	3.5%	5.0%	6.0%	7.0%

Note that the Minimum Performance Level in the early years are worse than the baseline to account for the possible scenario of a temporary increase in customer complaints due to the strong possibility of bill consumption actually increasing as metering, meter data, and billing accuracy improves (meters typically under register when not working properly).

## 5. First Call Resolution

~~Performance Objective: To incentivize efficient call center service.~~

~~Description: This metric is a measure of efficiency of the call center. It also impacts customer satisfaction because the customer will notice a difference in how they are treated while on the call and the company's willingness to address their questions/concerns quickly and without escalation. The Baseline Performance Level will be set during the Front-End Transition Period.~~

~~Points Assigned: 5~~

~~Baseline Performance Level: To be determined ("TBD").~~

~~Target Performance Level: 15% first calls resolved.~~

~~Minimum Performance Level: Set as a straight-line calculation using the Baseline Performance Level in Year 0 and assuming the Target Performance Level is met in Year 10 instead of Year 5.~~

~~Calculation: The metric is calculated as the percentage of calls with issues that are escalated.~~

~~Metric Schedule:~~

-	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
Baseline	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Year 1	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Year 2	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Year 3	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Year 4	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Year 5	15.0%	TBD	TBD	TBD	15.0%	TBD	TBD

## 6.5. ABANDONMENT RATE

Performance Objective: To incentivize efficient call center service.

Description: The Abandonment Rate (ABD) metric measures the percentage of callers who hang up (abandon) while the call is still in the Automated Call Distribution (ACD) queue.

~~Description: Abandoned calls occur when customers waiting for service on the phone, after opting to speak with a person, hang up before receiving service. The Baseline Performance~~

Level has been set using PREPA historical data and the S&L report. The Target Performance Level has been set using the S&L report recommendations.

Points Assigned: 5

Baseline Performance Level: 50% calls abandoned.

Target Performance Level: 25% calls abandoned.

Minimum Performance Level: Set as a straight line calculation using the Baseline Performance Level in Year 0 and assuming the Target Performance Level is met in Year 10 instead of Year 5.

Calculation: ~~The metric is calculated as abandoned calls divided by calls received~~ Total calls that abandoned in queue / total calls offered to the queue.

~~Metric Schedule:~~

Table Error! No text of specified style in document.-8. Abandonment Rate

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
Baseline	50.0%	50.0%	N/A	N/A	50.0%	N/A	N/A
Year 1	50.0%	50.0%	N/A	N/A	50.0%	N/A	N/A
Year 2	45.0%	47.5%	25.0%	35.0%	45.0%	46.0%	47.0%
Year 3 <sup>1</sup>	40.0%	45.0%	20.0%	30.0%	40.0%	42.0 <sup>41.0</sup> %	44.0 <sup>42.0</sup> %
Year 4 <sup>2</sup>	35.0 <sup>32.0</sup> %	42.5 <sup>35.0</sup> %	15.0 <sup>16.0</sup> %	25.0 <sup>24.0</sup> %	35.0 <sup>32.0</sup> %	37.5 <sup>33.0</sup> %	40.0 <sup>34.0</sup> %
Year 5 <sup>3</sup>	30.0 <sup>29.0</sup> %	40.0 <sup>34.0</sup> %	12.5 <sup>14.5</sup> %	21.3 <sup>22.0</sup> %	30.0 <sup>29.0</sup> %	33.8 <sup>31.0</sup> %	37.5 <sup>33.0</sup> %

## ~~B.~~ B. Technical, Safety & Regulatory

The System Reliability Technical Performance Metrics will be measured and calculated in accordance with IEEE 1366-2012, including the terms as defined therein. The calculation of Technical Performance Metrics excludes (i) interruptions associated with Outage Event days using the IEEE 2.5 Beta Method, (ii) planned interruptions and (iii) interruptions caused by generation events.

### ~~1.1.~~ 1. OSHA Recordable Incident Rate (“OSHA IR”)<sup>2</sup>

Performance Objective: To incentivize employee safety.

<sup>2</sup> As defined by OSHA.

Description: OSHA requires Recordable Incident Rate be reported to OSHA on a yearly basis. An OSHA recordable incident is a work-related injury or illness that results in one of more of the following: death, days away from work, restricted work or transfer to another job, medical treatment beyond first aid, loss of consciousness; or a significant injury or illness diagnosed by a physician or other licensed health care professional. The baseline performance level has been set using PREPA historical data ~~subject to confirmation during the Front-End Transition Period.~~

~~Points Assigned: 5~~

~~Baseline Performance Level: OSHA IR of 11.3.~~

~~Target Performance Level: OSHA IR of 6.28.~~

~~Minimum Performance Level: Set as a straight line calculation using the Baseline Performance Level in Year 0 and assuming the Target Performance Level is met in Year 10 instead of Year 5.~~

Calculation: The metric is calculated as the total number of recordable incident cases over a set time period multiplied by the OSHA scaling factor<sup>3</sup> and divided by the total number of labor hours the company recorded during that time period ~~(OSHA uses 200,00 as a scaling factor, which equates to one hundred (100) employees working forty (40) hours per week, fifty (50) weeks of the year).~~

~~Metric Schedule:~~

**Table Error! No text of specified style in document.-9. OSHA Recordable Incident Rate**

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
Baseline	11.30	11.30 <sup>8.76</sup>	N/A	N/A	11.30	N/A	N/A
Year 1	10.68 <sup>6.57</sup>	10.80 <sup>7.88</sup>	7.00 <sup>5.69</sup>	8.84 <sup>6.13</sup>	10.68 <sup>6.57</sup>	10.59 <sup>7.01</sup>	10.50 <sup>7.45</sup>
Year 2	10.05 <sup>5.26</sup>	10.30 <sup>7.25</sup>	6.00 <sup>3.99</sup>	8.03 <sup>4.60</sup>	10.05 <sup>5.26</sup>	10.03 <sup>5.96</sup>	10.00 <sup>6.70</sup>
Year 3	8.79 <sup>4.20</sup>	9.79 <sup>6.67</sup>	5.00 <sup>2.79</sup>	6.90 <sup>3.45</sup>	8.79 <sup>4.20</sup>	9.15 <sup>5.06</sup>	9.50 <sup>6.03</sup>
Year 4	7.34	9.29	4.00	5.67	7.34	8.04	8.75
Year 5	6.28	8.79	3.00	4.64	6.28	7.14	8.00

## ~~2.2.~~ OSHA Fatalities<sup>34</sup>

Performance Objective: To incentivize employee safety.

<sup>3</sup> The OSHA scaling factor is 200,000 and equates to equates to one hundred (100) employees working forty (40) hours per week, fifty (50) weeks of the year).

<sup>34</sup> As defined by OSHA.

Description: OSHA requires all work-related fatalities be reported to OSHA within eight (8) hours. The industry standard target is 0 fatalities, which has determined the Baseline and Target Performance Levels.

~~Points Assigned: 5~~

~~Baseline Performance Level: 0 fatalities.~~

~~Target Performance Level: 0 fatalities.~~

~~Minimum Performance Level: 0 fatalities.~~

Calculation: This metric measures the number of OSHA-reportable fatalities (i.e., employee fatalities that occur on the job within OSHA jurisdictions).

**Table Error! No text of specified style in document.-10. OSHA Fatalities**

~~Metric Schedule:~~

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
Baseline	0	0	N/A	N/A	0	N/A	N/A
Year 1	0	0	N/A	N/A	0	N/A	N/A
Year 2	0	0	N/A	N/A	0	N/A	N/A
Year 3	0	0	N/A	N/A	0	N/A	N/A
Year 4	0	0	N/A	N/A	0	N/A	N/A
Year 5	0	0	N/A	N/A	0	N/A	N/A

### ~~3.3.~~ OSHA Severity Rate<sup>45</sup>

Performance Objective: To incentivize employee safety

Description: ~~Utilized~~Used as a metric to measure the severity of workplace injuries, the OSHA Severity Rate is commonly used to measure safety performance across the utility industry. The OSHA Severity Rate takes into account the total number of restricted and ~~lost time~~lost-time days incurred as a result of a work-related injury. ~~The Baseline and Target Performance Levels will be set during the Front-End Transition Period.~~

~~Points Assigned: 5~~

~~Baseline Performance Level: TBD~~

~~Target Performance Level: TBD~~

~~Minimum Performance Level: TBD~~

Calculation: This metric is calculated by dividing the product of the total number of severity days (both restricted and ~~lost time~~lost-time days) and ~~200,000 (the~~ OSHA scaling factor)<sup>46</sup> by the total number of work hours.

~~Metric Schedule:~~

**Table Error! No text of specified style in document.-11. OSHA Severity Rate**

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
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<sup>45</sup> As defined by OSHA.

<sup>46</sup> The OSHA scaling factor is 200,000 and equates to equates to one hundred (100) employees working forty (40) hours per week, fifty (50) weeks of the year.

Baseline	TBD	TBD <sup>50.84</sup>	TBD	TBD	TBD	TBD	TBD
Year 1	TBD <sup>43.21</sup>	TBD <sup>46.77</sup>	TBD <sup>38.1</sup> <sub>3</sub>	TBD <sup>40.6</sup> <sub>7</sub>	TBD <sup>43.2</sup> <sub>1</sub>	TBD <sup>43.2</sup> <sub>1</sub>	TBD <sup>45.7</sup> <sub>6</sub>
Year 2	TBD <sup>36.73</sup>	TBD <sup>43.03</sup>	TBD <sup>28.6</sup> <sub>0</sub>	TBD <sup>32.5</sup> <sub>4</sub>	TBD <sup>36.7</sup> <sub>3</sub>	TBD <sup>36.7</sup> <sub>3</sub>	TBD <sup>41.1</sup> <sub>8</sub>
Year 3	TBD <sup>31.22</sup>	TBD <sup>39.59</sup>	TBD <sup>21.4</sup> <sub>5</sub>	TBD <sup>26.0</sup> <sub>3</sub>	TBD <sup>31.2</sup> <sub>2</sub>	TBD <sup>31.2</sup> <sub>2</sub>	TBD <sup>37.0</sup> <sub>6</sub>
Year 4	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Year 5	TBD	TBD	TBD	TBD	TBD	TBD	TBD

#### 4.4. OSHA Days Away, Restricted, and Transfer Rate (Severity) (“DART”)<sup>57</sup>

Performance Objective: To incentivize employee safety.

Description: ~~Utilized~~Used as a metric to measure the severity of workplace injuries, the OSHA DART Rate is commonly used to measure safety performance across the utility industry. The OSHA DART Rate takes into account the total number of injury cases that resulted in either lost time, restricted time,<sup>5</sup> or a transfer from the employee’s regular job. ~~The Baseline Performance Level will be set during the Front-End Transition Period.~~

~~Points Assigned: 5~~

~~Baseline Performance Level: TBD~~

~~Target Performance Level: DART of 4.0.~~

~~Minimum Performance Level: Set as a straight-line calculation using the Baseline Performance Level in Year 0 and assuming the Target Performance Level is met in Year 10 instead of Year 5.~~

Calculation: This metric is calculated by dividing the product of the total number of DART Cases (OSHA injury cases with either lost time days, restricted days,<sup>5</sup> or results in a job transfer) and ~~200,000~~ (the OSHA scaling factor)~~and<sup>8</sup> by~~ the total number of work hours.

~~Metric Schedule:~~

<sup>57</sup> As defined by OSHA.

<sup>8</sup> The OSHA scaling factor is 200,000 and equates to equates to one hundred (100) employees working forty (40) hours per week, fifty (50) weeks of the year.



**Table Error! No text of specified style in document.-12. OSHA DART Rate**

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
Baseline	TBD	TBD <sup>5.95</sup>	TBD	TBD	TBD	TBD	TBD
Year 1	TBD <sup>4.46</sup>	TBD <sup>5.36</sup>	TBD <sup>3.87</sup>	TBD <sup>4.17</sup>	TBD <sup>4.46</sup>	TBD <sup>4.76</sup>	TBD <sup>5.06</sup>
Year 2	TBD <sup>3.57</sup>	TBD <sup>4.93</sup>	TBD <sup>2.71</sup>	TBD <sup>3.12</sup>	TBD <sup>3.57</sup>	TBD <sup>4.05</sup>	TBD <sup>4.55</sup>
Year 3	TBD <sup>2.86</sup>	TBD <sup>4.53</sup>	TBD <sup>1.90</sup>	TBD <sup>2.34</sup>	TBD <sup>2.86</sup>	TBD <sup>3.44</sup>	TBD <sup>4.10</sup>
Year 4	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Year 5	4.0	TBD	TBD	TBD	4.0	TBD	TBD

### ~~5.5.~~ System Average Interruption Frequency Index (“SAIFI”)<sup>69</sup>

Performance Objective: To incentivize system reliability.

Description: This metric indicates how often the average customer experiences a sustained interruption<sup>10</sup> over a predefined period of time. ~~The baseline target level has been set using PREPA historical data subject to confirmation during the Front-End Transition Period.~~

~~Points Assigned: 5~~

~~Baseline Performance Level: 4.6 outages per year.~~

~~Target Performance Level: 1.89 outages per year.~~

~~Minimum Performance Level: Set as a straight line calculation using the Baseline Performance Level in Year 0 and assuming the Target Performance Level is met in Year 10 instead of Year 5.~~

Calculation: This metric is calculated by dividing the total number of customers interrupted by the total number of customers served. Each sustained interruption<sup>11</sup> experienced by a specific customer counts towards the total in the numerator. ~~A sustained interruption is defined as “Any interruption not classified as a part of a momentary event. That is, any interruption that lasts more than five minutes.”~~

~~Metric Schedule:~~

**Table Error! No text of specified style in document.-13. System Average Interruption Frequency Index (SAIFI)**

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
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<sup>6.</sup> ~~As defined in~~<sup>9</sup> The Institute of Electrical and Electronics Engineers, Inc., IEEE Guide for Electric Power Distribution Reliability Indices, IEEE ~~P~~Std. 1366<sup>TM</sup>-2012, May 2012, page 5.

<sup>10.</sup> “Any interruption not classified as a part of a momentary event. That is, any interruption that lasts more than five minutes.” Ibid., page 4.

<sup>11.</sup> Ibid.

Baseline	4.60	4.60 <sub>9.8</sub>	N/A	N/A	4.60	N/A	N/A
Year 1	4.19 <sub>9.1</sub>	4.33 <sub>9.6</sub>	2.00 <sub>7.6</sub>	3.09 <sub>8.2</sub>	4.19 <sub>9.1</sub>	4.24 <sub>9.2</sub>	4.30 <sub>9.4</sub>
Year 2	3.77 <sub>7.8</sub>	4.06 <sub>9.3</sub>	1.75 <sub>6.3</sub>	2.76 <sub>7.0</sub>	3.77 <sub>7.8</sub>	3.89 <sub>8.3</sub>	4.00 <sub>8.8</sub>
Year 3	2.94 <sub>6.9</sub>	3.79 <sub>9.0</sub>	1.50 <sub>5.4</sub>	2.22 <sub>6.1</sub>	2.94 <sub>6.9</sub>	3.32 <sub>7.6</sub>	3.70 <sub>8.3</sub>
Year 4	2.42	3.52	1.25	1.84	2.42	2.84	3.25
Year 5	1.89	3.25	1.00	1.45	1.89	2.45	3.00

## 6. Customer System Average Interruption Duration Index (“CAIDI”SAIDI)<sup>7,12</sup>

Performance Objective: To incentivize system reliability.

Description: This metric ~~measures the average restoration time a customer may experience. The Baseline Performance Level has been set using PREPA historical data subject to confirmation during the Front-End Transition Period.~~ indicates the total duration of interruption for the average customer during a predefined period of time.

~~Points Assigned: 5~~

~~Baseline Performance Level: 147 minutes.~~

~~Target Performance Level: 147 minutes.~~

~~Minimum Performance Level: Set as a straight line calculation using the Baseline Performance Level in Year 0 and assuming the Target Performance Level is met in Year 10 instead of Year 5.~~

Calculation: This metric is calculated by summing the product of the length of each interruption and the number of customers ~~impacted~~ affected by that interruption for all sustained interruptions<sup>13</sup> during the measurement period then dividing by the total number of customers ~~interrupted. Note that each interruption experienced by a specific customer counts towards the total in the denominator.~~ served.

### Table Error! No text of specified style in document.-14. System Average Interruption Duration Index (SAIDI)

~~This is a sustained interruption index. A sustained interruption is defined as “Any interruption not classified as a part of a momentary event. That is, any interruption that lasts more than five minutes.” It also represents SAIDI divided by SAIFI.~~

~~Metric Schedule:~~

<sup>7</sup> ~~As defined in~~<sup>12</sup> The Institute of Electrical and Electronics Engineers, Inc., IEEE Guide for Electric Power Distribution Reliability Indices, IEEE Std. 1366™-2012, May 2012, page 5.

<sup>13</sup> “Any interruption not classified as a part of a momentary event. That is, any interruption that lasts more than five minutes.” Ibid., page 4.

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
Baseline	147	147 <sub>1,307</sub>	N/A	N/A	147	N/A	N/A
Year 1	147 <sub>1,176</sub>	147 <sub>1,275</sub>	120 <sub>915</sub>	134 <sub>1,046</sub>	147 <sub>1,176</sub>	N/A <sub>1,209</sub>	N/A <sub>1,242</sub>
Year 2	147 <sub>980</sub>	147 <sub>1,215</sub>	115 <sub>719</sub>	131 <sub>850</sub>	147 <sub>980</sub>	N/A <sub>1,059</sub>	N/A <sub>1,137</sub>
Year 3	147 <sub>784</sub>	147 <sub>1,177</sub>	110 <sub>523</sub>	129 <sub>654</sub>	147 <sub>784</sub>	N/A <sub>915</sub>	N/A <sub>1,046</sub>
Year 4	147	147	105	126	147	N/A	N/A
Year 5	147	147	100	124	147	N/A	N/A

## 7. Distribution Line Inspections & Targeted Corrections

### 7. System Average Interruption Duration Index (“SAIDI”)<sup>8</sup>

Performance Objective: To incentivize system safety and provide data to make decisions on effective reliability improvements, predictive maintenance, circuit hosting capacity and resiliency upgrades.

Description: The Distribution Line Inspections and Targeted Corrections metric will assess the physical integrity of the poles, structures, components and equipment, providing data to develop an overall health rating to identify serious safety issues to either the public or worker that will result in high-priority attention by LUMA.

Calculation: Number of distribution lines (circuits) inspected with results recorded in a database and Category 0 and Category 1 findings shall be incorporated in a plan within 60 days of identification to address. That plan shall take into account a coordinated approach to remediation based on severity and risk according to the objectives defined in LUMA’s Recovery Transformation Framework.

#### Table Error! No text of specified style in document.-15. Distribution Line Inspections & Targeted Corrections<sup>1</sup>

~~Description: This metric indicates the total duration of interruption for the average customer. The Baseline Performance Level has been set using PREPA historical data.~~

~~Points Assigned: 5~~

~~Baseline Performance Level: 675 minutes.~~

~~Target Performance Level: 277 minutes.~~

~~Minimum Performance Level: Set as a straight line calculation using the Baseline Performance Level in Year 0 and assuming the Target Performance Level is met in Year 10 instead of Year 5.~~

~~Calculation: This metric is calculated by summing of the of each interruption and the number of customers impacted by that interruption divided by the total number of customers served. Each interruption experienced by a specific customer counts towards the total in the denominator. This is a sustained interruption index. A sustained interruption is defined as any~~

<sup>8</sup> ~~As defined in IEEE Guide for Electric Power Distribution Reliability Indices, IEEE P1366-2012.~~

interruption not classified as a part of a momentary event. That is any interruption that lasts more than five minutes.

~~Metric Schedule:~~

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
Baseline	675	675	N/A	N/A	675	N/A	N/A
Year 1	615 <sub>106</sub>	635 <sub>16</sub>	550 <sub>159</sub>	582 <sub>133</sub>	615 <sub>106</sub>	622 <sub>53</sub>	630 <sub>27</sub>
Year 2	554 <sub>370</sub>	595 <sub>56</sub>	450 <sub>555</sub>	502 <sub>463</sub>	554 <sub>370</sub>	570 <sub>185</sub>	585 <sub>93</sub>
Year 3	432 <sub>687</sub>	556 <sub>103</sub>	375 <sub>1,030</sub>	404 <sub>859</sub>	432 <sub>687</sub>	466 <sub>344</sub>	500 <sub>172</sub>
Year 4	355	516	250	303	355	403	450
Year 5	277	476	150	214	277	339	400

<sup>1</sup> The numbers shown are cumulative from year to year. There are currently a total of 1,057 distribution circuits.

#### 8. Transmission Line Inspections & Targeted Corrections

#### 8. Customers Experiencing Multiple Interruptions (“CEMI”)<sup>9</sup>

Performance Objective: To incentivize system [safety and provide data to make decisions on effective](#) reliability improvements, predictive maintenance, circuit hosting capacity and resiliency upgrades.

Description: The Transmission Line Inspections and Targeted Corrections metric will assess the [physical integrity of the poles, structures, components and equipment, providing data to develop an overall health rating to identify serious safety issues to either the public or worker that will result in high-priority attention by LUMA.](#)

Calculation: Number of transmission lines inspected with results recorded in a database and Category 0 and Category 1 findings shall be incorporated in a plan within 60 days of identification to address. That plan shall take into account a coordinated approach to remediation based on severity and risk according to the objectives defined in [LUMA’s Recovery Transformation Framework.](#)

#### **Table Error! No text of specified style in document.-16. Transmission Line Inspections & Targeted Corrections<sup>1</sup>**

~~Description: This metric indicated the ratio of individual customers experiencing one or more sustained interruptions to the total number of customers served. The Baseline Performance Level will be set during Year 3. It is anticipated that the number of interruptions to be tracked are three (3), five (5) and eight (8) interruptions (i.e., CEMI-3, CEMI-5 and CEMI-8).~~

~~Points Assigned: 6~~

~~Baseline Performance Level: TBD.~~

~~Target Performance Level: TBD~~

<sup>9</sup> ~~As defined in IEEE Guide for Electric Power Distribution Reliability Indices, IEEE P1366-2012.~~

~~Minimum Performance Level: Set as a straight line calculation using the Baseline Performance Level in Year 0 and assuming the Target Performance Level is met in Year 10 instead of Year 5.~~

~~Calculation: This metric is calculated by dividing the total number of customers that have experienced some number of outages more sustained interruptions by the total number of customers served. This is sustained interruption index. A sustained interruption is defined as any interruption not classified as a part of a momentary event. That is, any interruption that lasts more than five minutes.~~

~~Metric Schedule:~~

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
Baseline	TBD	TBD <sub>N/A</sub>	TBD	TBD	TBD	TBD	TBD
Year 1	TBD <sub>26</sub>	TBD <sub>4</sub>	TBD <sub>39</sub>	TBD <sub>33</sub>	TBD <sub>26</sub>	TBD <sub>13</sub>	TBD <sub>7</sub>
Year 2	TBD <sub>91</sub>	TBD <sub>14</sub>	TBD <sub>137</sub>	TBD <sub>114</sub>	TBD <sub>91</sub>	TBD <sub>46</sub>	TBD <sub>23</sub>
Year 3	TBD <sub>169</sub>	TBD <sub>25</sub>	TBD <sub>253</sub>	TBD <sub>211</sub>	TBD <sub>169</sub>	TBD <sub>85</sub>	TBD <sub>43</sub>
Year 4	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Year 5	TBD	TBD	TBD	TBD	TBD	TBD	TBD

<sup>1</sup> The numbers shown are cumulative from year to year. There are currently a total of 260 transmission circuits.

## 9. T&D Substation Inspections & Targeted Corrections

### 9. Momentary Average Interruption Frequency Index (“MAIFI”)<sup>10</sup>

Performance Objective: To incentivize system [safety and provide data to make decisions on effective reliability improvements, predictive maintenance, circuit hosting capacity and resiliency upgrades.](#)

Description: The T&D Substation Inspections and Targeted Corrections metric will assess the physical integrity of the structures, components and equipment, providing data to develop an overall health rating to identify serious safety issues to either the public or worker that will result in high-priority attention by LUMA.

Calculation: Number of T&D substations inspected with results recorded in a database and Category 0 and Category 1 findings shall be incorporated in a plan within 60 days of identification to address. That plan shall take into account a coordinated approach to remediation based on severity and risk according to the objectives defined in LUMA’s Recovery Transformation Framework.

#### **Table Error! No text of specified style in document.-17. T&D Substation Inspections & Targeted Corrections<sup>1</sup>**

~~Description: This metric indicates the average frequency of momentary interruptions experienced by the average customer. It is calculated from customer level data but it is not a customer specific index—it is a system level index. MAIFI is typically caused by natural~~

<sup>10</sup> ~~As defined in IEEE Guide for Electric Power Distribution Reliability Indices, IEEE P1366-2012.~~

~~causes such as animal contacts, lightning strikes, or vegetation temporarily contacting a power line. The Minimum Performance Level and Target Performance Level will be set in Year 3.~~

~~Points Assigned: 5~~

~~Baseline Performance Level: 6 events per year.~~

~~Target Performance Level: 2 events per year.~~

~~Minimum Performance Level: Set as a straight line calculation using the Baseline Performance Level in Year 0 and assuming the Target Performance Level is met in Year 10 instead of Year 5.~~

~~Calculation: This metric is calculated by dividing the total number of customer interruptions, which last less than a set amount of time, by the total number of customers served. This is momentary interruption index. A momentary interruption is an interruption of duration limited to the period required to restore service by an interrupting device. Such switching operations must be completed within a specified time of five minutes or less. This definition includes all reclosing operations that occur within five minutes of the first interruption. If a recloser or circuit breaker operates two, three, or four times and then holds (within five minutes of the first operation), those momentary interruptions shall be considered one momentary interruption event.~~

~~Metric Schedule:~~

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
Baseline	6.00	6.00	N/A	N/A	6.00	N/A	N/A
Year 1	5.50 <sup>39</sup>	5.60 <sup>6</sup>	4.50 <sup>59</sup>	5.00 <sup>49</sup>	5.50 <sup>39</sup>	5.53 <sup>20</sup>	5.55 <sup>10</sup>
Year 2	5.00 <sup>137</sup>	5.20 <sup>21</sup>	4.00 <sup>206</sup>	4.50 <sup>171</sup>	5.00 <sup>137</sup>	5.08 <sup>69</sup>	5.15 <sup>34</sup>
Year 3	4.00 <sup>255</sup>	4.80 <sup>38</sup>	3.00 <sup>383</sup>	3.50 <sup>319</sup>	4.00 <sup>255</sup>	4.25 <sup>128</sup>	4.50 <sup>64</sup>
Year 4	3.00	4.40	2.00	2.50	3.00	3.50	4.00
Year 5	2.00	4.00	1.00	1.50	2.00	2.75	3.50

<sup>1</sup> [The numbers shown are cumulative from year to year. There are currently a total of 392 substations.](#)

## ~~C. C.~~ Financial Performance

### ~~1.1.~~ Operating Budget

Performance Objective: To incentivize ~~accurate~~effective cost management.

Description: ~~This metric~~ Measures ~~the utility's~~ ability to stay within ~~its Operating Budget initially approved at the start of the Contract Year. The Baseline and Target Performance Levels have been set at 100% of the approved Operating~~ budget.

~~Points Assigned: 7.5~~

~~Calculation: This metric will be evaluated as actual operating expenses for a given Fiscal Year divided by the approved T&D operating budget for the same Fiscal Year as incurred. As defined in Section 7.3(b) of the OMA the Budgets include 2% Excess Expenditures. Budget amendments, as defined in (i) through (iv) in Section 7.4 and 14.5(e) of the OMA, shall be deemed to be included in the initially approved Budgets (denominator) for purposes of this calculation. Further, any funds drawn from the Outage Event Reserve Account and the Contingency Reserve Account, as they have specific requirements, do not contribute to this metric. LUMA proposes that any approved budget amendment for items outside LUMA's control also adjusts the budget metric denominator by the same amount. It is also proposed that any financial adjustments or corrections made to PREPA's pre-fiscal year 2022 historical books and records be excluded from the calculation.~~

~~Baseline Performance Level: 100% of~~ Table Error! No text of specified style in document.-18. ~~Operating Budget.<sup>1</sup>~~

~~Target Performance Level: 100% of Operating Budget.~~

~~Minimum Performance Level: 100% of Operating Budget.~~  
~~††~~

~~Calculation: This metric will be evaluated as actual operating spend divided by Operating Budget.~~

~~Metric Schedule:~~

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
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~~††The Operator can earn 100% of Base Points by spending up to 102% of the Operating Budget pending Administrator approval.~~



Baseline	100%	100% of Operating Budget	N/A	N/A	100%	N/A	N/A
Year 1	100% of T&D Approved Operating Budget	100% of T&D Approved Operating Budget	N/A	N/A	Less than or Equal to 100%	N/A	N/A
Year 2	100% of T&D Approved Operating Budget	100% of T&D Approved Operating Budget	N/A	N/A	Less than or Equal to 100%	N/A	N/A
Year 3	100% of T&D Approved Operating Budget	100% of T&D Approved Operating Budget	N/A	N/A	Less than or Equal to 100%	N/A	N/A
Year 4	100%	100%	N/A	N/A	100%	N/A	N/A
Year 5	100%	100%	N/A	N/A	100%	N/A	N/A

<sup>1</sup> In accordance with OMA Section 7.3(b), each Budget includes Excess Expenditures, defined as expenditures for undefined costs in an amount equal to up to two percent (2%) of the total amount of the Budget. Excess Expenditures must otherwise comply with the applicable Rate Order. Any Excess Expenditures incurred by LUMA are treated as T&D Pass-Through Expenditures and as if initially budgeted. Each reference in the OMA to a Budget or Default Budget includes Excess Expenditures to the extent these are incurred.

## 2.2. Capital Budget— Federally Funded

Performance Objective: To incentivize ~~accurate~~effective cost management ~~of federally funded projects~~.

Description: ~~This metric~~ Measures ~~the utility's~~ ability to stay within ~~its Capital~~ budget—.

Calculation: ~~This metric will be evaluated as actual~~ Federally Funded ~~initially approved at the start of the Contract Year. The Baseline and Target Performance Levels have been set at 100% of the Capital expenses for a Fiscal Year, as incurred, divided by approved Capital Budget— Federally Funded— for the same Fiscal Year. As defined in Section 7.3(b) of the OMA the Budgets include 2% Excess Expenditures. Budget amendments, as defined in (i) through (iv) in Section 7.4 and 14.5(e) of the OMA, shall be deemed to be included in the initially approved Budgets (denominator) for purposes of this calculation. Further, any funds drawn from the Outage Event Reserve Account and the Contingency Reserve Account, as they have specific requirements, do not contribute to this metric.~~

Points Assigned: 7.5

Baseline Performance Level: ~~100% of~~ ~~Table Error! No text of specified style in document.-19. Capital Budget— Federally Funded-1~~

Target Performance Level: 100% of Capital Budget— Federally Funded.

Minimum Performance Level: 100% of Capital Budget— Federally Funded.

<sup>12</sup>

Calculation: ~~This metric will be evaluated as actual operating spend divided by Capital Budget— Federally Funded.~~

<sup>12</sup> ~~The Operator can earn 100% of Base Points by spending up to 102% of the Capital Budget— Federally Funded pending Administrator approval.~~

### Metric Schedule:

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
Baseline	100%	100% of Capital Budget: Federally Funded Approved for Fiscal 2022	N/A	N/A	100%	N/A	N/A
Year 1	100% of FY22 Approved Capital Spend	100% of FY22 Approved Capital Spend	N/A	N/A	Less than or Equal to 100%	N/A	N/A
Year 2	100% of FY23 Approved Capital Spend	100% of FY23 Approved Capital Spend	N/A	N/A	Less than or Equal to 100%	N/A	N/A
Year 3	100% of FY24 Approved Capital Spend	100% of FY24 Approved Capital Spend	N/A	N/A	Less than or Equal to 100%	N/A	N/A
Year 4	100%	100%	N/A	N/A	100%	N/A	N/A
Year 5	100%	100%	N/A	N/A	100%	N/A	N/A

<sup>1</sup> In accordance with OMA Section 7.3(b), each Budget includes Excess Expenditures, defined as expenditures for undefined costs in an amount equal to up to two percent (2%) of the total amount of the Budget. Excess Expenditures must otherwise comply with the applicable Rate Order. Any Excess Expenditures incurred by LUMA are treated as T&D Pass-Through Expenditures and as if initially budgeted. Each reference in the OMA to a Budget or Default Budget includes Excess Expenditures to the extent these are incurred.

### 3.3 Capital Budget— Non-Federally Funded

Performance Objective: To incentivize accurate effective cost management of Non-Federally Funded Capital.

Description: ~~This metric~~ Measures the utility's ability to stay within its Capital Budget—Non-Federally Funded initially approved at the start of the Contract Year. The Baseline and Target Performance Levels have been set at 100% of the Capital Budget—Non-Federally Funded budget.

Points Assigned: 7.5

Calculation: This metric will be evaluated as actual Federally Non-Funded Capital expenses for a Fiscal Year, as incurred, divided by approved Capital Budget: Non-Federally Funded for the same Fiscal Year. As defined in Section 7.3(b) of the OMA the Budgets include 2% Excess Expenditures. Budget amendments, as defined in (i) through (iv) in Section 7.4 and 14.5(e) of the OMA, shall be deemed to be included in the initially approved Budgets (denominator) for purposes of this calculation. Further, any funds drawn from the Outage Event Reserve Account and the Contingency Reserve Account, as they have specific requirements, do not contribute to this metric.

~~Baseline Performance Level: 100% of~~ **Table Error! No text of specified style in document.-20. Capital Budget— Non-Federally Funded.<sup>1</sup>**

~~Target Performance Level: 100% of Capital Budget—Non-Federally Funded.~~

~~Minimum Performance Level: 102% of Capital Budget—Non-Federally Funded.~~

~~Calculation: This metric will be evaluated as actual operating spend divided by Capital Budget—Non-Federally Funded.~~

~~Metric Schedule:~~

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
Baseline	<del>100%</del>	100% <a href="#">of Capital Budget: Non-Federally Funded Approved for Fiscal 2022</a>	N/A	N/A	100%	N/A	N/A
Year 1	<a href="#">≤100% of FY22 Approved Capital Spend</a>	100% <a href="#">of FY22 Approved Capital Spend</a>	N/A	N/A	<a href="#">Less than or Equal to 100%</a>	N/A	N/A
Year 2	<a href="#">≤100% of FY23 Approved Capital Spend</a>	100% <a href="#">of FY23 Approved Capital Spend</a>	N/A	N/A	<a href="#">Less than or Equal to 100%</a>	N/A	N/A
Year 3	<a href="#">≤100% of FY24 Approved Capital Spend</a>	100% <a href="#">of FY24 Approved Capital Spend</a>	N/A	N/A	<a href="#">Less than or Equal to 100%</a>	N/A	N/A
Year 4	100%	100%	N/A	N/A	100%	N/A	N/A
Year 5	100%	100%	N/A	N/A	100%	N/A	N/A

<sup>1</sup> [In accordance with OMA Section 7.3\(b\), each Budget includes Excess Expenditures, defined as expenditures for undefined costs in an amount equal to up to two percent \(2%\) of the total amount of the Budget. Excess Expenditures must otherwise comply with the applicable Rate Order. Any Excess Expenditures incurred by LUMA are treated as T&D Pass-Through Expenditures and as if initially budgeted. Each reference in the OMA to a Budget or Default Budget includes Excess Expenditures to the extent these are incurred.](#)

#### ~~4.4a. Days Sales Outstanding~~<sup>14</sup>: [General Customers](#)

Performance Objective: To incentivize ~~accurate cash management~~[effective credit and collections efforts](#).

Description: This metric is a measure of the ~~average number of days that it takes a company~~[ability](#) to collect payment ~~after a sale has been made. It is a measure of cash management. The Baseline Performance Level has been set using PREPA historical data subject to confirmation during the Front-End Transition Period. The Target Performance Level has been set at an appropriate level for adequate cash management.~~[for general clients' customer billings](#).

<sup>13</sup> ~~The Operator can earn 100% of Base Points by spending up to 102% of the Capital Budget—Non-Federally Funded pending Administrator approval.~~

<sup>14</sup> ~~This metric will reflect the impact of government collections, including critical service installations as defined in Law 57-2014, as amended by Law 17-2019, and CILT organizations.~~

Points Assigned: 5.5

Baseline Performance Level: 150 days

Target Performance Level: 50 days

Minimum Performance Level: Set as a straight line calculation using the Baseline Performance Level in Year 0 and assuming the Target Performance Level is met in Year 10 instead of Year 5.

Calculation: ~~This metric~~ General Customers' DSO is calculated ~~as average annual Accounts Receivable divided by average annual Total Credit Sales, multiplied by 365.~~ by dividing the year-end amount of general customers' receivables by the total year-end value of general customers' credit sales and multiplying the result by the number of days in that year. "Un-collectibles reserve," which is currently included in the DSO calculation in the PREPA Finance monthly report (MOR) of financial statements to the governing board, will not be included in the LUMA DSO calculations. General customers segment represents all non-government accounts including residential, commercial and wholesale accounts.

~~Metric Schedule:~~

**Table Error! No text of specified style in document.-21. Days Sales Outstanding: General Customers**

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
Baseline	150.00	150.00 <sup>131</sup>	N/A	N/A	150.00	N/A	N/A
Year 1	137.50 <sup>128</sup>	140.00 <sup>148</sup>	125.00 <sup>19</sup>	131.25 <sup>22</sup>	137.50 <sup>28</sup>	138.25 <sup>35</sup>	139.00 <sup>38</sup>
Year 2	125.00 <sup>126</sup>	130.00 <sup>145</sup>	100.00 <sup>16</sup>	112.50 <sup>20</sup>	125.00 <sup>26</sup>	125.38 <sup>32</sup>	125.75 <sup>35</sup>
Year 3	100.00 <sup>123</sup>	120.00 <sup>142</sup>	75.00 <sup>114</sup>	87.50 <sup>117</sup>	100.00 <sup>23</sup>	107.50 <sup>29</sup>	115.00 <sup>32</sup>
Year 4	75.00	110.00	65.00	70.00	75.00	87.50	100.00
Year 5	50.00	100.00	50.00	50.00	50.00	62.50	75.00

4b. Days Sales Outstanding: Government customers

## 5. Reduction in Network Line Losses

Performance Objective: To incentivize ~~efficient line usage~~ effective credit and collections efforts.

Description: This metric is a measure of the ability to collect government bills.

Calculation: Government DSO is calculated by dividing the year-end amount of Government accounts receivable by the total year-end value of government credit sales and multiplying the result by the number of days in that year. "Un-collectibles reserve," which is currently included in the DSO calculation in the PREPA Finance monthly report (MOR) of financial statements to the governing board, will not be included in the LUMA DSO calculations. This metric will reflect the impact of government collections, including critical service installations as defined in the

Puerto Rico Energy Transformation and RELIEF Act, Act 57-2014, as amended by the Puerto Rico Energy Public Policy Act, Act 17-2019, and Contribution in Lieu of Taxes (CILT).

~~Description: This metric measures the utility's ability to reduce line losses, which occur due to resistance along the electrical lines. The baseline and target performance metrics will be set during the Front-End Transition Period.~~

~~Points Assigned: 5~~

~~Baseline Performance Level: TBD.~~

~~Target Performance Level: TBD.~~

~~Minimum Performance Level: TBD.~~

~~Calculation: Set as a straight-line calculation using the Baseline Performance Level in Year 0 and assuming the Target Performance Level is met in Year 10 instead of Year 5.~~

Table Error! No text of specified style in document.-22. Days Sales Outstanding: Government Customers

~~Metric Schedule:~~

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
Baseline	TBD	TBD <sup>754</sup>	TBD	TBD	TBD	TBD	TBD
Year 1	TBD <sup>739</sup>	TBD <sup>850</sup>	TBD <sup>684</sup>	TBD <sup>702</sup>	TBD <sup>739</sup>	TBD <sup>776</sup>	TBD <sup>794</sup>
Year 2	TBD <sup>724</sup>	TBD <sup>833</sup>	TBD <sup>670</sup>	TBD <sup>688</sup>	TBD <sup>724</sup>	TBD <sup>760</sup>	TBD <sup>778</sup>
Year 3	TBD <sup>709</sup>	TBD <sup>815</sup>	TBD <sup>656</sup>	TBD <sup>674</sup>	TBD <sup>709</sup>	TBD <sup>745</sup>	TBD <sup>762</sup>
Year 4	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Year 5	TBD	TBD	TBD	TBD	TBD	TBD	TBD

## ~~6.5. Overtime~~

Performance Objective: To incentivize efficient payroll expense.

~~Description: This metric measures the utility's ability to manage salary expense. The Baseline and Target Performance Levels will be set during the Front-End Transition Period.~~labor expenses.

~~Points Assigned: 5~~

~~Baseline Performance Level: TBD.~~

~~Target Performance Level: TBD.~~

### Minimum Performance Level: TBD.

Calculation: The ~~sum of all hours worked beyond scheduled hours in a given period~~ amount of overtime expenses divided by the amount of total non-exempt base compensation expenses, expressed as a percentage.

### Metric Schedule:

**Table Error! No text of specified style in document.-23. Overtime**

	Target Threshold	Minimum Performance Level	150%	125%	100%	50%	25%
Baseline	TBD	<del>TBD</del> 23% of Total Non-Exempt Base Compensation	TBD	TBD	TBD	TBD	TBD
Year 1	<del>TBD</del> 20% of Total Non-Exempt Base Compensation	<del>TBD</del> 23% of Total Non-Exempt Base Compensation	<del>TBD</del> Less than or Equal to 18%	<del>TBD</del> 19%	<del>TBD</del> 20%	<del>TBD</del> 21%	<del>TBD</del> 22%
Year 2	<del>TBD</del> 19% of Total Non-Exempt Base Compensation	<del>TBD</del> 22% of Total Non-Exempt Base Compensation	<del>TBD</del> Less than or Equal to 17%	<del>TBD</del> 18%	<del>TBD</del> 19%	<del>TBD</del> 20%	<del>TBD</del> 21%
Year 3	<del>TBD</del> 18% of Total Non-Exempt Base Compensation	<del>TBD</del> 21% of Total Non-Exempt Base Compensation	<del>TBD</del> Less than or Equal to 16%	<del>TBD</del> 17%	<del>TBD</del> 18%	<del>TBD</del> 19%	<del>TBD</del> 20%
Year 4	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Year 5	TBD	TBD	TBD	TBD	TBD	TBD	TBD

### ~~VI. Operator~~VI. LUMA Event of Default:

Section 14.1(k) (Events of Default by ~~Operator~~LUMA — Failure to Meet Minimum Performance Threshold) of the ~~Agreement~~OMA provides for an Operator Event of Default if, during three (3) or more consecutive Contract Years, ~~Operator~~LUMA fails to meet the Minimum Performance Level for any three (3) ~~of the following~~Key Performance Metrics and no such failure has been excused by a Force Majeure Event, Outage Event or Owner Fault. ~~The Key Performance Metrics are the following, based on the OMA Annex IX as revised in this document as per the OMA:~~

(i) Average Speed of Answer; (ii) ~~First Call Resolution~~Abandonment Rate; (iii) OSHA Fatalities; (iv) OSHA ~~Severe Injuries~~Severity Rate; (v) System Average Interruption Frequency Index (SAIFI); (vi) System Average Interruption Duration Index (SAIDI); (vii) ~~Customer Average Interruption Duration Index (CAIDI)~~Distribution Line Inspections & Targeted Corrections; (viii) Operating Budget; (ix) Capital Budget—; Federally Funded; and (x) Capital Budget—; Non-Federally Funded (each a “Key Performance Metric” and together the “Key Performance Metrics”).

OMA Section 7.1(c)(vii) (Service Fee ~~—~~ Incentive Fee) provides that if any Force Majeure Event (other than a Force Majeure Event that is a Major Outage Event) prevents ~~Operator~~LUMA from achieving one or more of the Performance Metrics, ~~Operator~~LUMA shall be entitled to earn the Incentive Fee for the period that such Force Majeure Event continues as long as, and to the extent that, ~~Operator~~LUMA achieves the Key Performance Metrics during such period of time.

~~VII.~~VII. Operating Budget Overrun Default:

OMA Section 14.5(e) (Additional Termination Rights ~~—~~ Operating Budget Overrun) of the ~~Agreement~~OMA provides Owner with an additional termination right in the event of an Operating Budget Overrun Default.

~~VIII.~~VIII. Major Outage ~~Event~~Events (MOE) Performance Metrics

The MOE Scorecard assigns metrics and points into three categories: Preparation (Item 1 targeted at 250 points), Operational Response (Items 2 – 11 targeted at 450 points) and Communications (Items 12 – 16 targeted at 300 points). The three categories are intended to capture the key activities associated with a Major Outage Event. The Preparation metrics focus on utility activities in anticipation of a significant outage event. The second category, Operational Response, evaluates the utility’s performance as a significant outage event is occurring and during the recovery period after the event until normal service is restored. The third category, Communications, assesses the utility’s ability to receive and to disseminate information about the outage event and about the recovery process. The specific metrics and point assignments under each category are set forth in the MOE Scorecard in Table 2-24.

Major Outage Event is defined as follows:

“Major Outage Event” means an event as a result of which (i) at least two hundred and five thousand (205,000) T&D Customers are interrupted for more than 15 minutes or (ii) ~~at least~~any point in time during the event, there are one thousand five hundred or more ( $\geq 1,500$ ) active outage ~~job~~events for the T&D System ~~are logged, which are tracked in the Outage Management System (OMS). The major outage event is deemed ongoing so long as the interruptions/outages continue to remain above the stated cumulative amounts, in each case within a~~for a period of twenty-four hours or longer ( $\geq 24$ ) ~~hour period~~and due to are caused by an act of God ~~or, in case. If such an act of God is a storm, a~~the storm that is must be designated as ~~such~~a named storm by the U.S. National Weather Service, ~~and shall end when a state in which fewer than~~ or a State of Emergency declared by the Government of Puerto Rico. The major outage event shall be deemed to have ended when the cumulative number of T&D customers remaining interrupted falls below ten thousand (10,000) ~~T&D Customers remain interrupted for a continuous period of eight (8) hours following a Major Outage Event is achieved.~~

The Major Outage Event should be categorized on the following:

Event categories: Events are categorized based on forecasted impact and revised post-event based on actual impact, to be measured from the start of the operational response (after the event has passed and when it is physically safe to dispatch crews) to when less than ten thousand (<10,000) T&D Customers remain interrupted for more than 8 hours as follows:

- 3 to 5 days
- 5 to 10 days
- Greater than 10 days

OMA Section 7.1(c)(vi) (Service Fee – Incentive Fee) of the Agreement provides that if any Major Outage Event (including, for the avoidance of doubt, a Major Outage Event that is a Force Majeure Event) prevents Operator from achieving one or more of the Performance Metrics, Operator shall be entitled to earn the Incentive Fee for the period that such Major Outage Event continues as long as, and to the extent that, Operator achieves ~~certain~~the Major Outage Performance Metrics ~~to be agreed upon during the Front-End Transition Period and set forth below (the “Major Outage Event Performance Metrics”)~~ during such period of time.

LUMA proposes the Major Outage Event Performance Metrics ~~that form the basis for the Incentive Compensation Pool in such circumstances are summarized~~, with the descriptions, base points and effective weight set forth in Table 32-24 below.



Table 3 ~~Error! No text of specified style in document.~~-24. Summary of Major Outage Event Performance Metrics

*Note: The Major Outage Event Performance Metrics will be subject to confirmation during the Front-End Transition Period and review and approval by PREB.*

Major Outage Event Performance Metric	Description	Base Points	Base Points	Effective Weight	Comments
<b>1. Preparation Phase</b>					
1. Event Application	Completion of steps to provide timely and accurate emergency event preparation following an alert from U.S. National Weather Service or the company's private weather service, <u>or the government of Puerto Rico has declared a state of emergency or when an event is known to be imminent or has occurred,</u> in accordance with the Emergency Response Plan, for an event expected to <del>impact</del> <u>affect</u> the company's service territory.	TBD		TBD	<u>Completion of each step counts separately:</u>
		<u>1.1 Event-level categorization based on weather forecasts, system resiliency assessment and available resources.</u>	<u>40</u>	<u>4.0%</u>	
		<u>1.2 Press releases issued/text messages/emails sent.</u>	<u>15</u>	<u>1.5%</u>	
		<u>1.3 Municipal conference calls held.</u>	<u>20</u>	<u>2.0%</u>	
		<u>1.4 Critical &amp; essential customers alerted — based on established list with current information.<sup>14</sup></u>	<u>40</u>	<u>4.0%</u>	
		<u>1.5 Point of contact for critical facilities alerted — based on established list with current information.</u>	<u>15</u>	<u>1.5%</u>	
		<u>1.6 Company compliance with training program as specified in the Emergency Response Plan.</u>	<u>40</u>	<u>4.0%</u>	

<sup>14</sup> This includes critical care customers.

Major Outage Event Performance Metric	Description	Base Points Metrics	Base Points	Effective Weight	Comments						
		1.7 Participation in all pre-event mutual assistance group calls.	40	4.0%							
		1.8 Verify materials/stockpiles level based on forecast. If materials are not on hand, corrective steps taken in shortest reasonable time to correct the situation.	40	4.0%							
Total			250	25.0%							
2. Downed Wires											
2. Down Wires	Response to downed wires reported by municipal public officials.	<div>TBDOnce the joint reporting and response process is established, LUMA will respond to all reported downed wires and take appropriate action within a reasonable time (per the event categorization) working in conjunction with local authorities after a Major Outage Event. Reported means that the situation is tracked in the Customer Information System (CIS) by the official contacting LUMA call centers or reported through the Municipal Emergency Operations Center (EOC) through LUMA's Municipal Emergency Operations Center (MEOC) Liaison.</div> <div>Reasonable Time Event Response Categorization Time</div> <table><tr><td>3 to 5 days</td><td>18 hours</td></tr><tr><td>5 to 10 days</td><td>36 hours</td></tr><tr><td>&gt; 10 days</td><td>60 hours</td></tr></table>	3 to 5 days	18 hours	5 to 10 days	36 hours	> 10 days	60 hours	40	TBD4.0%	<div>A reporting and response process on how these are managed needs to be put in place jointly with municipal public officials.</div> <div>Fire and Police training on how to handle downed wires will be provided as requested.</div>
3 to 5 days	18 hours										
5 to 10 days	36 hours										
> 10 days	60 hours										

Major Outage Event Performance Metric	Description	Base Points	Base Points	Effective Weight	Comments												
3. Damage Assessment																	
3. Preliminary Damage Assessment	Completion of preliminary damage assessment.	<p>TBD After the beginning of the Major Outage Event and when it is safe to do so LUMA will begin a preliminary damage assessment of the affected area(s) or T&amp;D facilities.</p> <p>The preliminary damage assessment will be completed within a "reasonable time" at the beginning of the Operation Response phase. The preliminary damage assessment will be done primarily with helicopter patrol and very limited specific land patrol to address helicopter assessment questions.</p> <p>Concurrent with the start of the preliminary helicopter assessment, LUMA will begin a more thorough damage assessment.</p> <p><b>Reasonable Time Event Response Categorization Time</b></p> <table><tr><td>3 to 5 days</td><td>36</td></tr><tr><td>hours</td><td></td></tr><tr><td>5 to 10 days</td><td>72</td></tr><tr><td>hours</td><td></td></tr><tr><td>&gt; 10 days</td><td>120</td></tr><tr><td>hours</td><td></td></tr></table>	3 to 5 days	36	hours		5 to 10 days	72	hours		> 10 days	120	hours		50	TBD 5.0 %	
3 to 5 days	36																
hours																	
5 to 10 days	72																
hours																	
> 10 days	120																
hours																	

Major Outage Event Performance Metric	Description	Base Points Metrics	Base Points	Effective Weight	Comments
<b>4. Crewing</b>					
4. Crewing	80% of the forecast crewing [from mutual assistance] committed to the utility.	<p>TBD 50% of the forecast crewing [from mutual assistance] committed to the utility.</p> <p>Three (3) days prior to a forecasted event occurring (when the event allows that much warning time), LUMA will complete a "damage prediction" to determine crew requirements. Based on this damage prediction, the number of mutual assistance crews will be determined.</p> <p>LUMA will stage materials, equipment and personnel at the required location prior to the weather event striking the area. Within 24 hours of the damage prediction, 50% of indicated internal crews and qualified contract crews will be deployed. Within 48 hours of the damage prediction, 80% of the indicated internal crews and qualified contract crews will be mobilized on island.</p>	30	TBD 3.0 %	
<b>5. Estimated Time of Restoration (ETR) for 90% of Service Outages</b>					
5. Estimated Time of Restoration for 90% of service outages (made available by utility on web, IVR, to CSR's Customer Service Representatives (CSRs), etc.)	Publication of regional ETRs in accordance with guidelines.		20	TBD 2.0 %	
	Publication of municipal ETRs in accordance with guidelines.		TBD 20	2.0%	
	A preliminary ETR for 90% service restoration will be made available on the Internet 24 hours after the preliminary damage assessment in pdf format.		20	2.0%	
	ETRs on 90% service restoration to be made available on IVR and to CSRs by municipality or region.		20	2.0%	

Major Outage Event Performance Metric	Description	Base Points Metrics	Base Points	Effective Weight	Comments
		All ETRs to be updated every 24 hours.	20	2.0%	

#### 6. ETR Accuracy for 90% Service Restoration

6. ETR Accuracy	Regional ETR accuracy as published in accordance with ETR requirement time. Municipal ETR accuracy as published in accordance with ETR requirement time. Municipal ETR accuracy	TBD Accuracy for 90% of service outage restoration and published in accordance with ETR requirement time.  The ETRs used for this metric will be the ETRs posted after the thorough damage assessment is completed and not based on the preliminary damage assessment.	80	TBD 8.0 %	
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#### 7. Municipality Coordination

Coordination with municipalities regarding road clearing, down wires, critical customers, etc.	TBD Through the Municipal EOC the LUMA local Incident Command Center (ICC) Municipal Liaison will attend all scheduled Situation Report (SITREP) meetings. The Liaison will be the conduit for ICC information and requests. To track, the Municipal EOC must be activated so that all requests flow through it.  LUMA's ICC Municipal Liaison will attend all scheduled SITREP meetings.	TBD 20	2.0%	
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#### 8. Municipal EOC Coordination Puerto Rico Commonwealth/Federal EOC Coordination

Coordination with municipal Puerto Rico Commonwealth and Federal EOCs.	TBD Through the Commonwealth and Federal EOCs the LUMA Liaisons will attend all scheduled meetings. The Liaison will be the conduit for ICC information and requests.  To track activity, the State and Federal EOCs must be activated and not a request from elected officials.	TBD 10	1.0%	
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Major Outage Event Performance Metric	Description	Base Points Metrics	Base Points	Effective Weight	Comments
<b>9. Utility Coordination</b>					
9. Utility Coordination	Coordination with other utilities (communications, water, etc.):	TBD Establish contact points between utilities.	20	TBD 2.0 %	
<b>10. Safety</b>					
	Measure of any employee or contractor injured doing hazard work during storm/outage and restoration.	TBD Record safety incidents and include in safety report per LUMA Health Safety Environment & Quality (HSE&Q) standard.	TBD 80	8.0%	
<b>11. Mutual Assistance</b>					
11. Mutual Assistance	Crew requests made through all sources of mutual assistance <u>or other pre negotiated contracts with utility service providers.</u>	<p>TBD Three (3) days prior to a forecasted event occurring (when the event allows that much warning time), LUMA will complete a damage prediction to determine the requirements for on and off island mutual aid/pre-negotiated contracts with other utility service providers. LUMA will activate the required resources and place them on standby until the damage assessment is completed.</p> <p>After the initial damage assessment is completed, the requests for mutual assistance or other utility service provider crews will be made as follows:</p> <ul style="list-style-type: none"> <li>▪ Within 70 hours, 40% of crews</li> <li>▪ After 120 hours, 80% of committed mutual aid and other utility service provider crews will be requested.</li> </ul>	20	TBD 2.0 %	
<b>Total</b>			<b>450</b>	<b>45.0%</b>	
<b>12. Call Answer Rates</b>					
	Customer calls answered by properly <del>staffing</del> <u>staffed</u> call centers (use of IVR and other technology is an acceptable <del>answer</del> <u>solution</u> ).	TBD	TBD =	=	TBD depending on size of major event.

Major Outage Event Performance Metric	Description	Base Points	Base Points	Effective Weight	Comments
13. Municipal Calls	Municipal call must be properly managed and provide, at minimum, baseline information (outages, ETRs, contact information, etc.), road clearing activities, and allow for Q&A.	TBD		TBD	
14. Web Availability	Company's <del>web site</del> website, specifically the section pertaining to outage impact and restoration, must be available around the clock during a major storm event and information must be updated hourly until final restoration. In the event <del>that</del> no new information is available, the <del>web site</del> website must display the last time and date that information was updated. The <del>web site</del> website and/or section pertaining to outage impact and restoration may be taken offline for a short period during <del>off peak</del> off-peak hours to perform system maintenance.	TBD	75	TBD 7.5 %	
<b>14. PREB and Administrator (P3A) Reporting</b>					
15. PREB and Administrator Reporting	Provide storm event information to PREB and Administrator in accordance with LUMA's Electric Outage <del>Reporting</del> Management System ( <del>EORS</del> OMS) guideline requirements <del>to be established in the ERP for LUMA</del> .	TBD	Information to be updated every 24 hrs.	75	TBD 7.5 %
<b>15. Customer Communications</b>					
16. Customer Communications	<del>Availability of</del> press releases, text messaging, email and social media.	TBD	100	TBD 10.0 %	
<b>17. Outgoing message on telephone line</b>					
	Recorded message providing callers with outage information is updated within two hours of communication of press releases.	TBD	TBD 50	5.0 %	Available at Service Commence ment Date. IVR will be managed in house.
18. PREB and Administrator Complaints	<del>Number of storm/outage related PREB and Administrator complaints received.</del> Total		TBD 300	TBD 30.0 %	
<b>Maximum Available Points</b>			1,000	100.0 %	

**Table Error! No text of specified style in document.-25. Major Outage Event Performance Metrics Schedule**

	<u>Target Threshold</u>	<u>Minimum Performance Level</u>	<u>150%</u>	<u>125%</u>	<u>100%</u>	<u>50%</u>	<u>25%</u>
<u>Baseline</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>Target</u>	<u>675</u>	<u>250</u>	<u>1000</u>	<u>840</u>	<u>675</u>	<u>515</u>	<u>350</u>

The MOE Scorecard has been divided into three categories summarized in Table 2-26 below.

**Table Error! No text of specified style in document.-26. Major Outage Event Performance Metrics Scorecard**

<u>Category</u>	<u>Points</u>	<u>Metrics Descriptions</u>
<u>1. Preparation</u>	<u>250</u>	<u>1. Preparation Phase</u>
<u>2. Operational Response</u>	<u>450</u>	<u>2. Downed Wires</u> <u>3. Damage Assessment</u> <u>4. Crewing</u> <u>5. Estimated Time of Restoration (ETR) for 90% of Service Outages</u> <u>6. ETR Accuracy for 90% Service Restoration</u> <u>7. Municipality Coordination</u> <u>8. Municipal EOC Coordination Puerto Rico Commonwealth / Federal EOC Coordination</u> <u>9. Utility Coordination</u> <u>10. Safety</u> <u>11. Mutual Assistance</u>
<u>3. Communication</u>	<u>300</u>	<u>12. Call Answer Rates</u> <u>13. Web Availability</u> <u>14. PREB and Administrator (P3A) Reporting</u> <u>15. Customer Communications</u> <u>16. Outgoing message on telephone line</u>
<u>Maximum Available Points</u>	<u>1,000</u>	

## ~~IX.~~ IX. Monitoring-

The set of Performance Metrics and the Target Performance Levels for the ~~sixth~~<sup>fourth</sup> Contract Year will be evaluated during the ~~fifth~~<sup>third</sup> Contract Year collectively by ~~the Operator and~~ LUMA and the Administrator to determine reasonability for subsequent years. Beginning in the ~~sixth~~<sup>fourth</sup> Contract Year, Performance Metrics and the Target Performance Levels will be reevaluated on an annual basis. At this time, it will be determined whether additional metrics should be included, base points reallocated, and Target Performance Levels modified. ~~The Operator~~ LUMA and PREB may also consider whether adjustments to the Performance Metrics are appropriate prior to the ~~fifth~~<sup>fourth</sup> Contract Year based on business, operational or other considerations. Any adjustments will be dealt with in accordance with OMA Section 7.1(e)(vi) (Service Fee — Amendments to Performance Metrics). Any revisions to the Performance Metrics are subject to PREB's review, modification and approval.





<b>Summary report:</b> <b>Litera® Change-Pro for Word 10.8.2.11 Document comparison done on</b> <b>2/24/2021 5:07:29 PM</b>	
<b>Style name:</b> Default Style	
<b>Intelligent Table Comparison:</b> Active	
<b>Original filename:</b> TD OM Agreement - Annex IX - Performance Metrics (1).docx	
<b>Modified filename:</b> Annex IX Revised.docx	
<b>Changes:</b>	
<u>Add</u>	969
<del>Delete</del>	903
<del>Move From</del>	19
<u>Move To</u>	19
<u>Table Insert</u>	162
<del>Table Delete</del>	195
<u>Table moves to</u>	0
<del>Table moves from</del>	0
Embedded Graphics (Visio, ChemDraw, Images etc.)	1
Embedded Excel	0
Format changes	0
<b>Total Changes:</b>	2268

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

**NEPR**

**Received:**

**Feb 5, 2021**

**7:54 PM**

**IN RE:**

THE PERFORMANCE OF THE PUERTO  
RICO ELECTRIC POWER  
AUTHORITY

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

**SUBJECT:**

Motion resubmitting LUMA's comments and proposals regarding PREPA's performance baselines and metrics, in compliance with Resolution and Order of December 23, 2020, and based on data published by the Energy Bureau and presented during technical conference held on January 19<sup>th</sup>, 2020.

**MOTION RESUBMITTING LUMA'S COMMENTS ON PERFORMANCE BASELINES  
AND METRICS BASED ON DATA PRESENTED ON JANUARY 19<sup>TH</sup>, 2020 BY THE  
ENERGY BUREAU, AND RESUBMITTING PROPOSED PERFORMANCE METRICS  
AND BASELINES**

**TO THE PUERTO RICO ENERGY BUREAU:**

**COME NOW, LUMA ENERGY, LLC** as Management Co., per its responsibilities under the Puerto Rico Transmission and Distribution System Operation and Maintenance Agreement (OMA) and **LUMA ENERGY SERVCO, LLC** (collectively, **LUMA**), through the undersigned legal counsel and respectfully state and request the following:

**I. Introduction**

On January 29, 2021, LUMA filed before this honorable Puerto Rico Energy Bureau (Energy Bureau or Bureau) a motion submitting three documents in compliance with the Energy Bureau's Resolution and Order of December 23, 2020, that requested comments by said date on the data published by the Energy Bureau on the Puerto Rico Electric Power Authority's (PREPA) current performance. (LUMA's January 29th motion). To wit, on January 29, 2021, LUMA filed (1) comments on the data published by the Energy Bureau, including the presentation offered by Bureau advisors on January 19, 2021, **Exhibit 1**; (2) proposed performance metrics and

performance baselines, **Exhibit 2**; and (3) an initial assessment and proposal of benchmarks on reliability performance, customer satisfaction and employee safety, **Exhibit 3**.

On February 1, 2021, the Energy Bureau issued a Resolution and Order that amended the procedural calendar in this proceeding and, among others, extended the period to file comments up to and including Friday, February 5, 2021. In a Resolution and Order dated February 4, 2021, the Energy Bureau invited LUMA –and PREPA– to amend or modify the initial comments within the extended February 5th deadline. In compliance with the Energy Bureau’s Resolutions and Orders of December 23, 2020 and February 1<sup>st</sup> and 4<sup>th</sup>, 2021, LUMA hereby re-submits comments to the data published by the Energy Bureau and addresses the Energy Bureau’s requests made during the prefiling conference held on January 19, 2021, for feedback and information on PREPA’s reported performance metrics. **Exhibit 1**.

LUMA is submitting its feedback based on the process it has undertaken during the Front-End Transition period pursuant to the OMA. This entailed an initial information gathering exercise and analysis of PREPA data, processes and tools, for each metric included in the OMA. During this process, LUMA identified where there is lack of information collected or incomplete data available to determine PREPA’s baseline performance. LUMA also identified gaps where current PREPA practices do not meet applicable industry standards in measuring performance.

LUMA is also filing herein, a revised document with recommendations on additional metrics based on applicable industry standards and practices. **Exhibit 2**.<sup>1</sup> LUMA’s proposed

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<sup>1</sup> This filing includes two revisions to Exhibit 2 on LUMA’s proposed performance metrics and baselines. First, at page 12 of Exhibit 2, Section 2.3., LUMA edited its comments on OSHA Recordable Incident Rate, OSHA Dart Rate and OSHA Facilities and consolidated the information in one sub-section. Secondly, at page 24, a revision is included on the OSHA Recordable Incident Rate Baseline.

performance metrics on customer satisfaction, safety, and financial performance (Section 2.0, **Exhibit 2**) aim to improve PREPA's performance in these key areas, recognizing the current state of the utility and in accordance with public policy, the OMA, and applicable statutory requirements for the transformation of PREPA. The proposed metrics include key findings by LUMA, descriptions and calculations.

With this motion, LUMA is also filing an initial assessment regarding the use of benchmarks on reliability performance, customer satisfaction and employee safety that considers PREPA's current situation and characteristics. See **Exhibit 3**.

## **II. Background**

In a Resolution and Order issued in this proceeding dated December 23, 2020, the Energy Bureau informed that it was proceeding in this case to set performance baselines and performance compliance benchmarks for Puerto Rico's electric system. Prior to commencing said process, as part of this case, the Energy Bureau conducted a data gathering phase during which PREPA filed quarterly reports on relevant performance data pursuant to Attachment 1 to the Resolution and Order issued by the Energy Bureau on May 14, 2019.

Upon gathering data submitted by PREPA that covered the period from June 2019 through May 2020, the Energy Bureau published several charts and graphs illustrating the compilation of the data submitted quarterly by PREPA. (Appendices A to N, Attachments 1-11 and I-V to Resolution and Order of December 23, 2020).<sup>2</sup> On January 19, 2021, the Energy Bureau held a technical conference where its advisors presented and explained their compilation of such raw data

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<sup>2</sup> LUMA understands that the Energy Bureau took PREPA's raw data on its current performance without adjustments. LUMA does not have at its disposal any additional assumptions made by the Energy Bureau in preparing the graphs and charts on PREPA's current performance.

presented by PREPA. The Energy Bureau also took oral questions from the attendees and its advisors responded orally. The Energy Bureau further requested that attendees submit information that they possess with regards to the PREPA data, and requested written comments to be filed by January 29, 2021, as per the Resolution and Order of December 23, 2020. As stated in the introduction to this motion, on January 29, 2021, LUMA complied with the Energy Bureau's Resolution and Order of December 23, 2020. Today, LUMA is re-filing its comments and submissions pursuant to the orders issued by the Energy Bureau on February 1<sup>st</sup> and 4<sup>th</sup>, with some revisions to **Exhibit 2** to the January 29<sup>th</sup> submission.<sup>3</sup>

### **III. Comments**

#### *A. Metrics and Baselines.*

The graphs and charts that were published by the Energy Bureau as appendices to its Resolution and Order of December 23, 2020 (Attachments 1-11 and I-V), and those presented during the technical conference of January 19, 2021, do not reference all of the metrics identified in Appendix 1 to the Energy Bureau's Resolution and Order of May 14, 2019. The data, graphs, and charts on PREPA's current performance published by the Energy Bureau serve as reference points to establish baselines on PREPA's performance on several metrics. These also include data on industry standards and Hawaii's Electrical Company's historical performance for some metrics, but do not provide said information for all of the performance metrics.

The January 19<sup>th</sup> presentation by the Energy Bureau references these comparisons to electric utility companies, but with the caveat that they serve illustrative purposes, as explained by the Energy Bureau's consultants during the technical conference. LUMA agrees with this approach

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<sup>3</sup> See Note 1 *supra*.

and explanation by the Energy Bureau consultants and further understands that these comparisons are meant to provide information on PREPA's performance relative to that of other utilities. That is, the benchmarks can add context to PREPA's current performance and the meaning of the data presented. LUMA understands that these comparisons do not set performance baselines or benchmarks.

As explained in Section 2 of **Exhibit 2**, as part of its Front-End Transition activities under the OMA, LUMA found that some performance metrics cannot be properly baselined. This is mainly due to nonexistent or inadequate data, and in a few instances, industry practices suggest doubtful results even if sufficient data were available. Furthermore, there are significant gaps between PREPA's processes for data collection and calculation of metrics when compared with applicable industry standards.

Taking into consideration these clarifications, LUMA is hereby filing an initial assessment and recommendations with reference to the performance metrics that the Energy Bureau presented in the Technical Conference of January 19, 2021. **Exhibit 1**. LUMA has also identified additional performance metrics and is providing comments on those metrics to ensure alignment on public policy and to deliver customer-centric, safe, reliable, resilient, sustainable electricity. **Exhibits 1 and 2**. This additional list of proposed performance metrics as well as proposed baselines are presented with reference to applicable industry standards that are based on LUMA's assessment in the Front-End Transition and on the performance metrics set on the OMA.

LUMA requests that the Energy Bureau accept LUMA's comments, the additional proposed performance metrics, and set PREPA's baseline performance accordingly.

B. “*Benchmarks*”

Section 1. 7 of Regulation No. 9137 of December 13, 2019, *Regulation for Performance Incentive Mechanisms*, defines “metrics” and “targets”, *see* subsections (10) and (21), but does not include a definition of the term “benchmarks.” Relatedly, the Energy Bureau’s Resolution and Order of December 23, 2020, does not identify benchmarks. LUMA recognizes the complexity of fixing a definition of “benchmark” in the abstract without consideration of the particulars of the utility and its conditions at any given time. In order to be responsive to the Energy Bureau’s request, however, LUMA is providing data on selected key benchmarks as further explained in **Exhibit 3**.

As shown in this filing, PREPA’s current performance is well below industry standards and continues to deteriorate with respect to several performance metrics. Thus, at this time benchmarks should be considered for illustrative purposes and reference points only.

**WHEREFORE**, LUMA respectfully requests that the Energy Bureau take notice of the aforementioned and review and accept LUMA’s comments and proposed performance metrics and baselines included in **Exhibits 1, 2 and 3** to this motion.

**RESPECTFULLY SUBMITTED.**

In San Juan, Puerto Rico, this 5<sup>th</sup> day of February 2021.

I hereby certify that I filed this motion using the electronic filing system of the Puerto Rico Energy Bureau and that on this date, I will send an electronic copy of this motion to via electronic mail to the attorneys of record for the Puerto Rico Electric Power Authority, Joannely Marrero-Cruz, [jmarrero@diazvaz.law](mailto:jmarrero@diazvaz.law); and Katuska Bolaños-Lugo, [kbolanos@diazvaz.law](mailto:kbolanos@diazvaz.law).



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## Exhibit 1 - Summary of LUMA Comments on PREB Performance Metrics

The following table summarizes LUMA's comments to the metrics and baselines presented by the Puerto Rico Energy Bureau (PREB) during the technical conference held by PREB on January 19, 2021 in the case NEPR-MI-2019-0007, as well as comments on benchmarking related to these metrics. LUMA's comments are based on Front-End Transition activities to comply with its responsibilities pursuant to the Puerto Rico Transmission and Distribution System Operation and Maintenance Agreement (OMA).

Metrics Presented during January 19, 2021 Technical Conference	Comments on Metric and Baseline Data	Comments on Benchmarks
<b>Metrics with Comparable Industry Standard</b>		
OSHA Incident Rate / Safety Recordable Rate	Safety is a top priority for LUMA. LUMA performed a detailed review of PREPA data as part of the Front-End Transition activities, including baseline analyses, for four OSHA metrics related to activities under the OMA mainly related to transmission and distribution: OSHA Recordable Incident Rate, OSHA Fatalities, OSHA Severity Rate, and OSHA DART rate. As part of LUMA's review, current data collection processes were assessed and compared against applicable industry standards and practices for metrics. LUMA noted significant discrepancies in PREPA's 2020 data and recommends that only data from 2019 be considered in developing a baseline. LUMA has presented the results in Exhibit 2 of this submission.	LUMA recommends using OSHA data presented by Edison Electric Institute (EEI) in developing benchmarks as EEI segments comparable utility companies between Transmission and Distribution and Generation. As noted in LUMA's baseline comments, LUMA proposes comparing 2019 benchmark data to PREPA's 2019 data. PREPA's 2020 data has several issues. The 2019 data is free of these discrepancies and is more comparable to EEI's OSHA data. Please see Exhibit 3 for LUMA's discussion of OSHA benchmarks.
SAIDI	LUMA performed a detailed review of PREPA's data as part of the Front-End Transition activities. As part of LUMA's review current data collection processes were assessed and analyzed when compared against applicable industry standards and practices for metrics. LUMA has presented the results in Exhibit 2.	Please see Exhibit 3 for LUMA's discussion of Reliability Benchmarks.
Monthly SAIDI	LUMA has evaluated annual SAIDI data but has not evaluated the data on a monthly time frame. Given the nature of SAIDI data LUMA recommends reporting on an annual basis as a monthly basis can be misleading due to the natural	IEEE does not provide monthly benchmarking analyses for SAIDI and comparing to annual benchmarks would be misleading due to the natural variability of reliability throughout the year.

## Exhibit 1 - Summary of LUMA Comments on PREB Performance Metrics

Metrics Presented during January 19, 2021 Technical Conference	Comments on Metric and Baseline Data	Comments on Benchmarks
	variability of reliability throughout the year due to weather, earthquakes, etc. Monthly data is also not typically compared to annual reliability metrics which is what is presented in IEEE. LUMA has presented its analysis of annual SAIDI in Exhibit 2.	
SAIFI	LUMA performed a detailed review of PREPA's data as part of the Front-End Transition activities. As part of LUMA's review current data collection processes were assessed and analyzed when compared against applicable industry standards and practices for metrics. LUMA has presented the results in Exhibit 2.	Please see Exhibit 3 for LUMA's discussion of Reliability Benchmarks.
Monthly SAIFI	LUMA has evaluated annual SAIFI data but has not evaluated the data on a monthly time frame. Given the nature of SAIFI data LUMA recommends reporting on an annual basis as a monthly basis can be misleading due to the natural variability of reliability throughout the year due to weather, earthquakes, etc. Monthly data is also not typically compared to annual reliability metrics which is what is presented in IEEE. LUMA has presented its analysis of annual SAIDI data in Exhibit 2.	IEEE does not provide monthly benchmarking analyses for SAIDI and comparing to annual benchmarks would be misleading due to the natural variability of reliability throughout the year.
CAIDI	Based on growing industry concerns that CAIDI is very limited as a performance metric and can be misleading with respect to customer experience. LUMA has presented discussion in Exhibit 2.	CAIDI is the ratio between SAIDI and SAIFI, its performance is captured through those individual metrics. LUMA proposes eliminating CAIDI.
Average Speed to Answer (ASA)	LUMA performed a detailed review of PREPA's data as part of the Front-End Transition activities and has found that the data currently available and lack of visibility into call routing systems does not support a reliable baseline calculation. PREPA has three different systems for its call centers and data	LUMA has evaluated industry data from the American Productivity and Quality Center (APQC) for benchmarking purposes.

## Exhibit 1 - Summary of LUMA Comments on PREB Performance Metrics

Metrics Presented during January 19, 2021 Technical Conference	Comments on Metric and Baseline Data	Comments on Benchmarks
	from these systems are not combined to provide overall results. Based on the analysis LUMA has proposed a baseline and has presented the results in Exhibit 2.	
Number of Customer Complaints per 10,000 Customers	LUMA recommends replacing this metric with Customer Complaints to PREB due to inefficiencies in procedure and recording of Customer Complaints across multiple alternative submission platforms, as explained in Exhibit 2. LUMA performed a detailed review of the data for Customer Complaints to PREB as part of our Front-End Transition activities including current data collection processes and analyses when compared against applicable industry standards and practices for metrics. LUMA has presented the results in Exhibit 2.	Upon preliminary review, LUMA is unable to determine a comparable benchmark.
System-Level Plant Availability	This metric relates to Generation. LUMA has not completed an analysis on the metric and baselines as we do not anticipate reporting on this metric.	LUMA has not completed an analysis on Benchmarks for this metric as it relates to Generation.
System-Level Force Outage Rate	This metric relates to Generation. LUMA has not completed an analysis on the metric and baselines as we do not anticipate reporting on this metric.	LUMA has not completed an analysis on Benchmarks for this metric as it relates to Generation.
Percent of Bills Estimated vs Read	LUMA has not evaluated data, processes or analyses for this item for use as a performance metric.	LUMA has not performed a thorough analysis of benchmarks for this metric at this time.
Generation from RPS-Eligible PPOAs	Given that this process includes multiple party's performance, this metric is not the sole responsibility of LUMA. LUMA has not performed a thorough analysis of benchmarks for this metric at this time.	LUMA has not performed a thorough analysis of benchmarks for this metric at this time.
<b>Additional Selected Metrics Identified by PREB</b>		
Operational Expenses vs Budget	LUMA has presented its results in Exhibit 2.	Not applicable, no benchmark presented during January 19, 2021 Technical Conference

## Exhibit 1 - Summary of LUMA Comments on PREB Performance Metrics

Metrics Presented during January 19, 2021 Technical Conference	Comments on Metric and Baseline Data	Comments on Benchmarks
Capital Expenses vs Budget	LUMA has presented its results in Exhibit 2.	Not applicable, no benchmark presented during January 19, 2021 Technical Conference
SAIDI by month and municipality	LUMA has not investigated PREPA data by month and municipality. Monthly data is discussed above. Segmenting SAIDI data by municipality may be challenging as outages occur across municipal boundaries and could lead to double counting. LUMA recommends reporting annual aggregate SAIDI.	Not applicable, no benchmark presented during January 19, 2021 Technical Conference
Average System Heat Rate	This metric relates to Generation. LUMA has not completed an analysis on the metric and baselines as we do not anticipate reporting on this metric.	Not applicable, no benchmark presented during January 19, 2021 Technical Conference.
Monthly Generation by Plan – Thermal Generation	This metric relates to Generation. LUMA has not completed an analysis on the metric and baselines as we do not anticipate reporting on this metric.	Not applicable, no benchmark presented during January 19, 2021 Technical Conference.
Number of Calls Answered	This metric measures the total number of customer calls answered by PREPA's call centers. LUMA believes this metric is duplicative of other customer service metrics and provides limited analytical value. LUMA therefore has not performed analysis on PREPA's data related to this metric.	Not applicable, no benchmark presented during January 19, 2021 Technical Conference.
Number of Disconnections by Area	LUMA has not evaluated data, processes or analyses for this item for use as a performance metric. At this time LUMA does not recommend this as a performance metric.	Not applicable, no benchmark presented during January 19, 2021 Technical Conference.
Customers on Extended Payment Plans	LUMA has not evaluated data, processes or analyses for this item for use as a performance metric. At this time LUMA does not recommend this as a performance metric.	Not applicable, no benchmark presented during January 19, 2021 Technical Conference.
Customers Defaulting on Extended Payment Plans	LUMA has not evaluated data, processes or analyses for this item for use as a performance metric. At this time LUMA does not recommend this as a	Not applicable, no benchmark presented during January 19, 2021 Technical Conference.

## Exhibit 1 - Summary of LUMA Comments on PREB Performance Metrics

Metrics Presented during January 19, 2021 Technical Conference	Comments on Metric and Baseline Data	Comments on Benchmarks
	performance metric.	
Customers Completing Extended Payment Plans	LUMA has not evaluated data, processes or analyses for this item for use as a performance metric. At this time LUMA does not recommend this as a performance metric.	Not applicable, no benchmark presented during January 19, 2021 Technical Conference.
Days Sales Outstanding	LUMA performed a detailed review of PREPA's data as part of our Front-End Transition activities. As part of LUMA's review, we also assessed current data collection processes and analyses when compared against applicable industry standards and practices for metrics. LUMA has presented the results in Exhibit 2 of this filing. LUMA proposes reporting this metric for two groups of customers: General Customers and Government Customers.	Not applicable, no benchmark presented during January 19, 2021 Technical Conference.
Monthly Generation from PRS Eligible PPOAs	LUMA has not evaluated data, processes or analyses for this item for use as a performance metric.	Not applicable, no benchmark presented during January 19, 2021 Technical Conference.
PRS-Eligible Capacity	LUMA has not evaluated data, processes or analyses for this item for use as a performance metric.	Not applicable, no benchmark presented during January 19, 2021 Technical Conference.
Annual Energy Efficiency Savings	LUMA has not evaluated data, processes or analyses for this item for use as a performance metric.	Not applicable, no benchmark presented during January 19, 2021 Technical Conference.

As part of LUMA's Front-End Transition activities, LUMA has evaluated and proposed additional Metrics to ensure alignment with public policy and to deliver customer-centric, safe, reliable, resilient, sustainable electricity.

## Exhibit 1 - Summary of LUMA Comments on PREB Performance Metrics

Additional Proposed Metrics Identified by LUMA		
LUMA Identified Metric	Description	Comments on Metrics
J.D. Power Customer Satisfaction Survey	Industry standard customer satisfaction survey. LUMA has presented this methodology in Exhibit 2.	LUMA has executed a contract with JD Power. The first round of customer CSAT survey has been completed, and the second round is in market. The CSAT baseline will be established using this statistically significant sample by service commencement date. Results from the first round of customer CSAT JD Power survey and discussion around benchmarks is presented in Exhibit 3.
First Call Resolution (FCR)	Metric that measures the percentage of calls where the customer was able to resolve their issue/need on the first attempt. LUMA has presented the results in Exhibit 2.	LUMA proposes migrating the Contact Center to the new cloud-based Contact Center platform as of Service Commencement Date to enable accurate, cohesive reporting.
Abandonment Rate (ADB)	Metric that measures the percentage of callers who hand up (abandon) while the call is still awaiting distribution. LUMA has presented the results in Exhibit 2.	LUMA proposes migrating the Contact Center to the new cloud-based Contact Center platform as of Service Commencement Date to enable accurate, cohesive reporting.
Customers Experiencing Multiple Interruptions (CEMI <sub>N</sub> )	OMS metric used to identify customers who have experienced multiple outage events. LUMA has presented the results in Exhibit 2.	LUMA proposes deferring CEMI <sub>N</sub> until after the information can be corrected and a baseline determined, currently expected to be Year 4.
LUMA Identified Metric	Description	Comments on Metrics
Momentary Average Interruption Frequency Index (MAIFI)	Refers to interruptions that result from momentary outages of service. LUMA has presented its analysis in Exhibit 2.	LUMA recommends deferring this metric to a later date due to a lack of accurate customer information data. Accurate measurement of this metric requires advanced data acquisition methods and systems that are not in place at this time.
Distribution Line Inspections & Targeted Corrections	Refers to indicators that measure the number of distributions line inspection completed. LUMA has discussed this metric in Exhibit 2.	LUMA is proposing to incorporate this metric to categorize assets according to their condition and criticality to the safe and reliable functioning of the T&D System.
Transmission Line Inspections & Targeted Corrections	Refers to indicators that measure the number of transmission line inspection completed. LUMA has discussed this metric in Exhibit 2.	LUMA is proposing to incorporate this metric to categorize assets according to their condition and criticality to the safe and reliable functioning of the T&D System.
T&D Substation	Refers to indicators that measure the	LUMA is proposing to incorporate this

## Exhibit 1 - Summary of LUMA Comments on PREB Performance Metrics

Additional Proposed Metrics Identified by LUMA		
LUMA Identified Metric	Description	Comments on Metrics
Inspections & Targeted Corrections	number of substation inspection completed. LUMA has discussed this metric in Exhibit 2.	metric to categorize assets according to their condition and criticality to the safe and reliable functioning of the T&D System.





# Exhibit 2 - LUMA's Comments on Performance Metrics Baselines

NEPR-MI-2019-0007

February 5, 2021

## Exhibit 2 - LUMA's Comments on Performance Metrics Baselines

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## Exhibit 2 - LUMA's Comments on Performance Metrics Baselines

# 1.0 Introduction & Overview

## 1.1 Introduction

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.

LUMA presents this analysis and Performance Metrics for consideration as part of NEPR-MI-2019-0007 to establish metrics and performance baselines.

The current performance of PREPA is well below industry standards. Establishing a robust set of Performance Metrics will begin to enable transparency, reverse negative performance trends and will further align LUMA with public policy – critical upon LUMA's commencement of T&S Services. This will advance LUMA's key goals: Prioritize Safety; Improve Customer Satisfaction; System Rebuild and Resiliency; Operational Excellence; and Sustainable Energy Transformation. The Puerto Rico Energy Board ("PREB") has also promulgated regulation concerning Performance Metrics, including NEPR-MI-2019-0014 and NEPR-MI-2019-0007. In the latter docket, PREB, through its order issued December 23, 2020, ordered that LUMA take part in the proceedings.

This submission describes the process followed by LUMA to study and evaluate PREPA's baseline performance for selected Performance Metrics. This work forms part of the Front-End Transition Services being delivered by LUMA under the OMA. LUMA has been reporting its progress during the Front-End Transition in monthly reports provided to P3A and PREB.

LUMA's review took place before December 2020 and included dedicated teams focused on this specific effort and the active participation of experts from each functional department in the organization. The process also included discussion with key stakeholders, who provided feedback on process, regulations and other context that informed this proposal. Please refer to Sections 1.2.3 Summary of Planning Team Activity and Section 2.0 Review of Processes & Data of this document for additional details.

The work performed by the LUMA teams required continuous interaction with the corresponding groups at PREPA for information gathering on current processes and available data. As part of the assessment of current practices, LUMA has determined that there are multiple gaps between PREPA's current processes and supporting data when compared against applicable industry standards and practices for the metrics listed in Annex IX of the OMA (hereafter referred to as "Annex IX"). In this submission, LUMA compares PREPA's current practices with industry standards and practices.

Because LUMA found significant gaps in both processes and data as explained in detail herein, LUMA proposes that reporting of certain metrics and their use in Annex IX be deferred until such time as LUMA

## Exhibit 2 - LUMA's Comments on Performance Metrics Baselines

is able to provide reliable data for those metrics. In order to provide a full set of metrics, LUMA proposes the addition of some Performance Metrics in Annex IX. Determining baseline performance to enable the setting of realistic performance targets for the proposed Performance Metrics was also a challenge due to current process and data gaps as explained in detail herein.

The proposed Performance Metrics are presented with details related to each, including descriptions, calculations, and performance baselines.

It must be noted that the design of LUMA's plans will be affected in several cases by the absence and lack of quality data. LUMA's plans for improvement in the proposed Performance Metrics is reflected in our prioritization of programs and projects, and ultimately in our Initial Budgets to be submitted to PREB under a separate filing as part of LUMA's Front-End Transition Services obligations.

## 1.2 Performance Metrics Overview

### 1.2.1 Summary of Performance Metrics

The proposed Performance Metrics are listed in Table 1.1.1. These are grouped in three major Performance Categories in accordance with Annex IX of the OMA: Customer Service; Technical, Safety & Regulatory; and Financial Performance. The description has the text used in Annex IX at Effective Date, and the below indicates in summary form the clarification, addition or deferral that LUMA is proposing.

**Table 1.1.1. Performance Metrics Summary**

Performance Metric	OMA Description / Comments	LUMA Description
<b>Customer Service</b>		
J.D. Power Customer Satisfaction Survey (Residential Customers)	3rd party measure of customer satisfaction	3rd party measure of customer satisfaction
J.D. Power Customer Satisfaction Survey (Business Customers)	3rd party measure of customer satisfaction	3rd party measure of customer satisfaction
Average Speed of Answer (minutes)*	Time it takes on phone to reach an agent	The average wait time from the moment the customer enters the Automated Call Distribution (ACD) queue to the time the call is answered by an agent.
Customer Complaint Rate	Total monthly complaints registered with PREB per 10,000 customers	Total monthly complaints registered with PREB divided by the total number of customers and then multiplied by 10,000.

## Exhibit 2 - LUMA's Comments on Performance Metrics Baselines

First Call Resolution* ("FCR") (deferred)	% of calls with issues that are escalated	The percentage of calls where the customer was able to resolve their issue/need on the first attempt.  PREPA does not have the ability to track and report FCR.  LUMA proposes deferring the calculation and reporting of this metric until a new cloud-based Contact Center platform is implemented and FCR performance tracking can be established.
Abandonment Rate*	# of abandoned calls per calls received	The percentage of callers who hang up (abandon) while the call is still in the Automated Call Distribution (ACD) queue.
<b>Technical, Safety &amp; Regulatory</b>		
OSHA Recordable Incident Rate	# of work-related OSHA recordable injury cases	Total number of OSHA recordable incidents as a result of work-related injury
OSHA Fatalities*	# of work-related fatalities	All work-related fatalities
OSHA Severity Rate*	OSHA Severe Injuries # of total work-related injury cases with severity days	Total number of restricted and lost time days incurred as a result of a work-related injury
OSHA DART Rate	# of work-related injury	Total number of OSHA recordable cases with lost time days (away, restricted or transferred)
System Average Interruption Frequency Index (SAIFI)*	Measures avg. outage frequency	Indicates how often the average customer experiences a sustained interruption over a predefined period of time.†
System Average Interruption Duration Index (SAIDI)*	Measures avg. restoration time	Indicates the total duration of interruption for the average customer during a predefined period of time.†
Customer Average Interruption Duration Index (CAIDI)* (eliminated)	Measures avg. outage duration	Represents the average time required to restore service.†  Based on growing industry concerns that CAIDI is very limited as a performance metric, LUMA proposes eliminating CAIDI. Since CAIDI is the ratio between SAIDI and SAIFI, CAIDI can be misleading because it can remain the same even when the SAIDI and SAIFI values decrease.

## Exhibit 2 - LUMA's Comments on Performance Metrics Baselines

Customers Experiencing Multiple Interruptions (CEMI <sub>N</sub> ) (deferred)	Measures multiple outages in a given period	Indicates the ratio of individual customers experiencing N or more sustained interruptions to the total number of customers served.†  Due to data quality issues including lack of accurate customer information and lack of customer connectivity in the Outage Management System, LUMA proposes deferring CEMI <sub>N</sub> until after the information can be corrected and a baseline determined, currently expected to be Year 4.
Momentary Average Interruption Frequency Index (MAIFI) (deferred)	Measures avg. # of momentary interruptions	Indicates the average frequency of momentary interruptions.  Due to data availability and quality issues, LUMA recommends deferring the MAIFI metric until it can be accurately measured.
<b>Additional Performance Metrics</b>		
Distribution Line Inspections & Targeted Corrections*	N/A	The number of distribution line inspections completed, with data recorded in a database for analysis. Category 0 and Category 1 findings shall be incorporated in a plan to be addressed within 60 days of identification.
Transmission Line Inspections & Targeted Corrections	N/A	The number of transmission line inspections completed, with data recorded in a database for analysis. Category 0 and Category 1 findings shall be incorporated in a plan to be addressed within 60 days of identification.
T&D Substation Inspections & Targeted Corrections	N/A	The number of distribution and transmission substation inspections completed with data recorded in a database for analysis. Category 0 and Category 1 findings shall be incorporated in a plan to be addressed within 60 days of identification.
<b>Financial Performance</b>		
Operating Budget*	Measures ability to stay within budget	Measures ability to stay within budget.
Capital Budget – Federally Funded*	Measures ability to stay within budget	Measures ability to stay within budget.
Capital Budget – Non-Federally Funded*	Measures ability to stay within budget	Measures ability to stay within budget.

## Exhibit 2 - LUMA's Comments on Performance Metrics Baselines

Days Sales Outstanding (bifurcated)	Measures ability to collect bills	Measures ability to collect customer bills.  LUMA recommends calculating separate DSO metrics for General Customers (Residential, Commercial, & Wholesale), and Government Accounts to improve the transparency of collections efforts and improvements.
Reduction in Network Line Losses (deferred)	Measures ability to reduce electric losses	Measures ability to reduce electric losses.  PREPA does not currently allocate losses to the components of the system. Such allocation requires the development of an appropriate model, as well as additional metering and other measures.
Overtime	Measures ability to manage salary expense	Measures ability to manage overtime costs under normal operations (excluding emergency events).
<b>Additional Performance Metrics</b>		
Days Sales Outstanding – General Customers	N/A	Measures ability to collect bills from general customers.
Days Sales Outstanding – Government Customers	N/A	Measures ability to collect bills from government customers.

\*These Performance Metrics are also Key Performance Metrics as defined in Annex IX of the OMA.

†These descriptions are from the IEEE Guide for Electric Power Distribution Reliability Indices IEEE Std. 1366™-2012.

### 1.2.2 Application of Performance Metrics

The Performance Metrics summarized in Table 1.1.1 are meant for establishing targets for acceptable performance in providing electric service during normal conditions. Not included in this submission are Major Outage Event Performance Metrics that expressly characterize outage events affecting a high number of customers, having an unusually long duration and/or the result of an Act of God such as a tropical storm as abnormal and exclude utility performance during these events. As such, the Major Outage Event Performance Metrics are not intended to, cannot and do not provide any quantitative measurement of utility performance during a major event.

The Performance Metrics summarized in Table 1.1.1 of this submission apply during normal operations of the T&D System (i.e., when Major Outage Event Performance Metrics do not apply). For the purposes of this submission, Major Outage Event Performance Metrics apply during major events defined as:

“Major outage event” means an event as a result of which (i) at least two hundred and five thousand (205,000) T&D Customers are interrupted for more than 15 minutes or (ii) at any point in time during the event, there are one thousand five hundred or more ( $\geq 1,500$ ) active outage events for the T&D System, which are tracked in the Outage Management System (OMS). The major outage event is

## Exhibit 2 - LUMA's Comments on Performance Metrics Baselines

deemed ongoing so long as the interruptions/outages continue to remain above the stated cumulative amounts, in each case for a period of twenty-four hours or longer ( $\geq 24$ ) and are caused by an act of God. If such an act of God is a storm, the storm must be designated as a named storm by the U.S. National Weather Service or a State of Emergency declared by the Government of Puerto Rico. The major outage event shall be deemed to have ended when the cumulative number of T&D customers remaining interrupted falls below ten thousand (10,000) for a continuous period of eight (8) hours.

This definition was altered from that in the OMA to further define expectations and measurable targets. LUMA plans to propose that, in accordance with the OMA, the Major Outage Event Scorecard will be used as a tool to specifically measure utility performance (including preparation and communication activities) after each major outage event.

### 1.2.3 Summary of Planning Team Activity

Pursuant to Section 4.2 (f) (Performance Metrics) of the OMA, a Performance Metrics Planning Team was established. An initial kickoff meeting for this planning team was held on August 13, 2020. The members of the team included representatives from LUMA, P3A, and PREPA. The team met regularly to review key aspects of the proposed Annex IX revision and provide input. LUMA considered all contributions from the planning team in the development of the proposed Performance Metrics.

## 2.0 Review of Processes & Data

### 2.1 LUMA Performance Metrics Team

LUMA began work on the revision of Annex IX Performance Metrics by assigning a Performance Metrics functional lead responsible for:

- Assembling a team of subject-matter experts (SMEs)
- Developing processes and timelines
- Facilitating team meetings
- Coordinating communications and work performed by the team
- Coordinating with LUMA leadership
- Attending initial PREPA workshops
- Developing working relationships with PREPA SMEs
- Developing materials for and attending meetings with the Performance Metrics Planning Team
- Responding to requests from the Performance Metrics Planning Team to draft a comprehensive document to file with PREB

### TEAM OF PERFORMANCE METRICS SUBJECT MATTER EXPERTS

The LUMA team consisted of one or more experts in each functional area covered by the Performance Metrics. These experts coordinated the work required for their corresponding area and liaised with the team. The functional areas include:

- Customer Service
- Health, Safety, Environmental and Quality



## Exhibit 2 - LUMA's Comments on Performance Metrics Baselines

- Asset Management
- Financial Management

These functional areas consist of several subfunctions, each with SMEs. For example, Customer Service subfunctions include Contact Center, Customer Communications, Billing, Collections, etc.

The work performed by each functional area included:

- Participating in team meetings
- Attending initial PREPA Workshops
- Developing working relationships with PREPA SMEs
- Working with PREPA personnel in assessing PREPA's existing processes, IT Systems, and data related to the Performance Metrics specified in the OMA
- Developing Requests for Information (RFIs) and submitting to PREPA as necessary to access data and processes
- Identifying gaps as compared to industry practices
- Proposing near term actions to mitigate those gaps
- Proposing revised, additional and deferred metrics, along with revised descriptions, calculations and baseline performance for Performance Metrics
- Developing supporting materials for meetings with the Performance Metrics Planning Team and other stakeholders
- Responding to requests from the Performance Metrics Planning Team and PREB advisors
- Supporting development of a comprehensive draft document for submission

The team worked for several months under COVID restrictions and risks to gather data, meet with PREPA personnel, investigate IT system functionality and capability, assess data quality and processes, identify gaps against industry practices, design practical mitigation of gaps and improvements and develop available budgets. The observations and conclusions for each of the metrics corresponding to specific functional areas are summarized below.

## 2.2 Customer Service

The key findings and proposals for these metrics are presented below.

### J.D. POWER CUSTOMER SATISFACTION SURVEY (CSAT) (RESIDENTIAL AND BUSINESS CUSTOMERS)

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. PREPA has not used J.D. Power Customer Satisfaction surveys so there is nothing to baseline prior to this submission.

LUMA recommends establishing a baseline for both metrics during the Front-End Transition Period. LUMA has engaged J.D. Power and begun the initial surveys for both residential and commercial customers to ensure a baseline will be available at the Service Commencement Date. The J.D. Power Electric Utility Residential and Commercial surveys have been sent to a statistically valid sample of PREPA customers to establish a baseline.

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

## Exhibit 2 - LUMA's Comments on Performance Metrics Baselines

measured by following up with surveys in four phases per year for residential customers, and in two phases per year for commercial customers.

J.D. Power has been capturing and analyzing the Voice of the Customer across more than a dozen industries globally for 51 years. They work largely with North American utility surveys and are in their 22nd year of conducting the Electric Utility Residential and Electric Utility Business Studies. All utilities that report having more than 100,000 residential customers are included in the study. The industry is divided into nine segments by type, geography, and size. Cooperatives include brands that serve cooperative residential customers. Other brands are 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).

### CONTACT CENTER METRICS

As a preamble to Contact Center Metrics, the following information is intended to enable a clear understanding of the proposed Performance Metrics. As of the service commencement, LUMA intends to have an operational in-house contact center working from a newly implemented cloud-based Contact Center platform that will provide the following benefits:

- Agents will be able to reliably take calls using a cloud-based Contact Center platform in support of emergency and ongoing operations
- Consistent reporting to support our OMA commitments for average speed of answer and abandon rate
- A quality assurance (QA) program to review agent interactions and provide coaching and feedback on a regular basis
- First Contact Resolution monitoring and management
- Post-interaction customer surveys following phone/chat interactions
- New digital channels (e.g., chat, social media)

### AVERAGE SPEED OF ANSWER (ASA)

The currently available PREPA data and IT Systems do not support a reliable measure of this metric. Lack of visibility into three separate call routing systems and overflow rules prevent accurately calculating ASA. LUMA observed significant differences in reported ASA data from month to month and when comparing data from PREPA's call-center with data from call-center vendors (e.g., 10:53 PREPA/December 2019 vs. 0:14 for vendor<sup>1</sup>/April 2020). We suspect that these differences may be due to operations disruptions from COVID and to the different data collection methods of PREPA and vendors.

ASA is currently measured and reported independently by PREPA and its vendors<sup>2</sup> based on separate IT systems: Avaya, Approach and Connect, respectively. ASA should follow industry practices.

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<sup>1</sup> Third party contact center vendors.

<sup>2</sup> Ibid.

## Exhibit 2 - LUMA's Comments on Performance Metrics Baselines

Table 2.1. APQC (American Productivity &amp; Quality Center) Benchmark

Metric ID	Measure	Category	PCF	25th	Median	75th	N	KPI
100321	Average speed of answer in seconds for agent queue calls.	Cycle Time	Cross Industry 7.2.1	12.00	15.00	30.00	28	Yes

Data from different platforms do not always match. In May 2020, the PREPA Avaya platform shows 154,683 calls transferred to third party vendors, but the vendor reports only total 151,947 calls for that period. PREPA directs overflow calls to their vendors for certain call queues after calls have waited in the PREPA queue for 5-10 minutes. ASA reported by the vendors does not include this initial wait time. The table below shows the calls routed to third parties in May 2020, but LUMA does not have enough information from the Avaya platform to know how long these calls waited in PREPA's Avaya platform before transferring to the vendors.

Table 2.2. Calls Routed to Third Parties in May 2020

VDN Name	Inbound Calls	PREPA Calls in Queue	Abandoned in PREPA Queue	Disconnects	To Vendors
CCPagosRepresentante	57,424	27	3,965	-	53,432
CCSinServicio	49,025	33	942	-	48,050
CCFromlvr	44,306	12,698	18,106	588	12,914
CCOrdenServicioSP	31,663	4,954	8,998	243	17,468
CCEmergenciaSP	12,400	9	279	-	12,112
CCMantenimientoSP	9,703	4	212	-	9,487
to 1888E.U.	1,241	-	25	1	1,215
CClvrFailure	36	6	24	1	5
					154,683

- LUMA has requested additional information about the volume of overflow calls but has received limited information in response. Further, routing rules have changed over the six-month period adding complexity to any analysis. According to PREPA management, prior to August, calls waited in the PREPA queue for 10 minutes before being routed to the 3rd party vendors. When this was highlighted against the 2 minute ASA that was being reported, a change was made to the routing to reduce the wait time from 10 minutes to 5 minutes. During this timeline, PREPA has also routed an increasing percentage of calls to the 3rd parties. This change in policy renders the data for calls routed to vendors not comparable with the other data.

As a result, LUMA plans to migrate the Contact Center to the new cloud-based Contact Center platform as of Service Commencement Date to enable accurate, reporting consistent with industry practices.

## CUSTOMER COMPLAINT RATE

The Customer Complaint Rate is a measure of the total number of customer complaints registered with the Puerto Rico Energy Bureau (PREB) per 10,000 customers. PREPA currently tracks the total number of open customer dockets sent from the PREB.

## Exhibit 2 - LUMA's Comments on Performance Metrics Baselines

- PREPA does not currently review complaints with PREB to determine if they are justified
- Complaints are simply counted based on the number of complaints received by PREB and forwarded to PREPA

### FIRST CALL RESOLUTION (FCR)

The FCR metric measures the percentage of calls where the customer was able to resolve their issue/need on the first attempt. PREPA does not have the ability to track and report FCR. PREPA today tracks the percentage of calls that are escalated to a supervisor, not the percentage of calls resolved on first contact. FCR can be calculated by asking callers if this is the first time they have called about this issue, but the ability to report on this information requires the functionality of a new cloud-based Contact Center platform that can report on additional data that is captured with the call. LUMA proposes deferring the calculation and reporting of this metric until a new cloud-based Contact Center platform is implemented and FCR performance tracking can be established.

### ABANDONMENT RATE (ABD)

The Abandonment Rate (ABD) metric measures the percentage of callers who hang up (abandon) while the call is still in the Automated Call Distribution (ACD) queue. The source of the data is the Contact Center platform, and the calculation is the total number of calls that are abandoned in queue divided by the total number of calls offered to the queue. The available data does not support reliable and accurate calculations and analysis for this metric based on the following.

- During this period, PREPA was going through significant transition establishing two new vendors and experiencing call volume shifts due to COVID and the closure of regional commercial offices
- The reported ABD for each month changes significantly from month to month and between PREPA and the outsource vendors (e.g., 57.8% PREPA/May to 1.9% Vendor/April).
- ABD is currently measured and reported independently by PREPA and its vendors based on separate IT systems: Avaya, Approach and Connect. Without further testing, LUMA cannot confirm that PREPA's ASA calculations follow or are consistent with the industry practice.

Migrating the Contact Center to the new cloud-based Contact Center platform as of service commencement will enable accurate, cohesive reporting. LUMA will leverage the current PREPA contact center data to set the baseline.

**Table 2.3. APQC Benchmark**

Metric ID	Measure	Category	PCF	25th	Median	75th	N	KPI
102104	Calls abandoned in the agent queue as a percentage of total inbound calls.	Process Efficiency	Cross Industry 7.2.1	3.00%	4.00%	5.00%	28	No

## 2.3 Technical, Safety and Regulatory

The key findings and proposals for these metrics are presented below.

### SAFETY

Safety Performance Metrics were established taking into consideration the PREPA Occupational Safety and Health Administration (OSHA) 300 logs (Injury & Illness Recordkeeping Forms) and the PREPA Injury

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and Illness Data reports. The OSHA 300 logs are the forms that are legally required to be used to record all reportable injuries and illnesses that occur in the workplace.

The data that PREPA provided includes records from Generation, Administration and T&D. The first step in LUMA's analysis was to segregate the data to reflect T&D and Administration only. The segregated data was evaluated, cases were reviewed, and reports were validated. During this analysis, the following evidence was found:

- PREPA created their own category called *Casi Casi* in a new incident log for 2020. A large number of incidents and near misses were included on the *Casi Casi* log but were not, in LUMA's opinion, properly reported. This resulted in reports of recordable incidents inconsistent with industry standards, and therefore a significant number of recordable incidents were not included in the calculation of recordable incidents.
- Error in severity rate formula resulting in wrong calculations
- Discrepancies between OSHA log and detailed incident reports/data

LUMA will follow industry practice and OSHA regulations to track and report Safety Performance Metrics.

### OSHA RECORDABLE INCIDENT RATE, OSHA SEVERITY RATE, OSHA DART RATE AND OSHA FATALITIES

Based on the findings, the OSHA Recordable Incident Rate, Severity Rate and Dart Rate will not reflect factual numbers if PREPA's 2020 records are used to calculate the baseline. However, LUMA did not find the same discrepancies in the corresponding 2019 data. We propose using the existing 2019 data to determine the baseline and target for the OSHA Recordable Incident Rate, OSHA Severity Rate and OSHA DART Rate metrics.

The data provided by PREPA indicates no OSHA Fatalities in 2019 and 2020. LUMA's evaluation did not find any issues with this data.

### SAFETY METRICS INTERPRETATIONS

The OSHA published regulations and standards will be used to interpret matters related to safety Performance Metrics.

### TECHNICAL

In accordance with the OMA and common industry practice, there are certain event exclusions permitted in the calculation and reporting of reliability Performance Metrics. The following defines and describes those exclusions and LUMA's findings.

Annex IX of OMA states that the calculation of technical Performance Metrics (SAIFI and SAIDI) excludes:

- Interruptions associated with outage event days using the IEEE 2.5 Beta Method (defined in IEEE Std 1366™-2012)
- Planned interruptions
- Interruptions caused by generation events

Detailed descriptions of the stated exclusions are of special importance:

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### THE IEEE 2.5 BETA METHOD

As defined in IEEE Std 1366™-2012<sup>3</sup>, the Beta Method “is used to identify Major Event Days (MED), provided that the natural log transformation of the data results closely resembles a Gaussian (normal) distribution.”<sup>4</sup> Its purpose is to allow major events to be studied separately from daily operation, and in the process, to better reveal trends in daily operation that would be hidden by the large statistical effect of major events.”

- “An MED is a day in which the daily system SAIDI exceeds a threshold value,  $T_{MED}$ ”
- “The MED identification  $T_{MED}$  value is calculated at the end of each reporting period (typically one year) for use during the next reporting period”
- $T_{MED} = e^{\alpha + 2.5\beta}$   
where  $\alpha$  is the log-average of each daily SAIDI in the data set and  $\beta$  is the log-standard deviation of the data set
- “Five years of historical data is preferable for this method.”

### PLANNED INTERRUPTIONS

As defined in IEEE Std 1366™-2012, “The loss of electric power to one or more customers that results from a planned outage.”<sup>5</sup> The key test to determine if an interruption should be classified as a planned or unplanned interruption is as follows: if it is possible to defer the interruption, then the interruption is a planned interruption; otherwise, the interruption is an unplanned interruption.”

### INTERRUPTIONS CAUSED BY GENERATION EVENTS

An examination of the PREPA data and conversations with PREPA Operations and Reliability Reporting SMEs revealed that the existing process for identification of interruptions caused by generation events is highly likely to produce unreliable data.

- Rather than selecting from a predefined drop-down list to indicate the component level of where an interruption originated, the system operators manually input this information in an inconsistent manner into a free form field which leads to errors and difficulty searching and filtering thousands of records to identify those interruptions caused by generation events.
- Because of the free form nature of this field and the many ways that individual operators describe what occurred, it is impossible to confirm that all generation events have been excluded.

After examination of many data entries, LUMA made the following assumptions:

- Where generation is mentioned without a related transmission line(s), the event is assumed to be a generation event
- Where generation is mentioned with a related transmission line(s), the event is assumed to be a transmission event

<sup>3</sup> The Institute of Electrical and Electronics Engineers, Inc., IEEE Guide for Electric Power Distribution Reliability Indices IEEE Std 1366TM-2012

<sup>4</sup> Ibid

<sup>5</sup> Ibid

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Note that LUMA plans to add a field in the OMS with a drop-down selection of the system component level in which the interruption occurred (G, T, or D) for operators to directly record the necessary information.

### IDENTIFIED GAPS AFFECTING PREPA'S REPORTED RELIABILITY PERFORMANCE METRICS

The Major Event Day Threshold ( $T_{MED}$ ) has not been calculated since 2017 and that calculation was based on 4 years of data. The current value used is derived from assumed data that is not supported by recent operational history.

The process of restoring customer service may include restoring service to small sections of the system (typically a distribution feeder) until service has been restored to all customers.<sup>6</sup> According to IEEE, which sets the industry standard for collection of this performance data, each of these individual steps should be tracked to collect the start time, end time and the number of customers interrupted for each step.<sup>7,8</sup>

No procedure or functionality exists in the PREPA Outage Management System (OMS) to explicitly capture and track data related to Step Restoration (i.e., Partial Restoration). 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.

Under the current PREPA process, many interruption events are excluded from calculations based on cause code. PREPA excludes events from their calculations that are associated with 28 of PREPA's predefined 43 cause codes. Based on industry practice, events with 25 of the 28 excluded cause codes should be included in calculations. LUMA could not identify valid reasons for excluding these 25 cause codes. Please refer to Tables 2.1 and 2.2 for information regarding PREPA's cause codes.

**Table 2.4. PREPA's Interruption Cause Codes**

	PREPA	Industry Practice
Include	15	40
Exclude	28	3
<b>Total</b>	<b>43</b>	<b>43</b>

<sup>6</sup> The Institute of Electrical and Electronics Engineers, Inc., IEEE Guide for Electric Power Distribution Reliability Indices IEEE Std 1366™-2012 Section 4.3.2

<sup>7</sup> The Institute of Electrical and Electronics Engineers, Inc., IEEE Guide for Electric Power Distribution Reliability Indices IEEE Std. 1366™-2012, May 2012, pages 2-3, 17-18.

<sup>8</sup> The Institute of Electrical and Electronics Engineers, Inc., IEEE Guide for Collecting, Categorizing, and Utilizing Information Related to Electric Power Distribution Interruption Events IEEE Std. 1782™-2014, March 2014, pages 10 and 19.



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Table 2.5. PREPA's Interruptions with Cause Code Included or Excluded from Metric Calculation

ID	CODIGO_C (Español)	CODE _C (English)	PREPA	Best Practice
13	REMOCION DE ASBESTO O CAJAS DE ACEITE	ASBESTOS OR OIL BOX REMOVAL	exclude	include
15	SECUNDARIA/CONDUCTOR ROTO, ABIERTO O CRU	SECONDARY / DRIVER BROKEN, OPEN OR CRU	exclude	include
16	SECUNDARIA/ESTRUCTURA AVERIADA	SECONDARY / FAILED STRUCTURE	exclude	include
17	SECUNDARIA/DESGANCHE	SECONDARY / RELEASE	exclude	include
18	POWER TRANSFORMER AVERIADO	POWER TRANSFORMER FAILED	exclude	include
19	LINEA DE TRANSMISION/MAL TIEMPO/WET ASH	TRANSMISSION LINE / BAD WEATHER / WET ASH	exclude	include
20	LINEA DE TRANSMISION/ANIMAL U OBJETO EXT	TRANSMISSION LINE / ANIMAL OR EXT OBJECT	exclude	include
21	RELEVO DE CARGA POR CONTINGENCIA	CONTINGENCY LOAD RELAY	exclude	include
22	RELEVO DE CARGA PROGRAMADO	PROGRAMMED LOAD RELAY	exclude	include
23	MAL TIEMPO/RAYOS/WET ASH	BAD WEATHER / LIGHTNING / WET ASH	include	include
24	SUBIR/BAJAR TAP	UP / DOWN TAP	exclude	include
25	DISPARO DE BARRA DE TRANSMISION	TRANSMISSION BAR TRIP	exclude	include
38	LINEA DE TRANSMISION 38KV	38KV TRANSMISSION LINE	exclude	include
39	LINEA DE TRANSMISION 115KV	115KV TRANSMISSION LINE	exclude	include
48	TRANSFORMADOR AVERIADO	FAULTY TRANSFORMER	exclude	include
51	ESTRUCTURA AVERIADA	FAILED STRUCTURE	include	include
52	CONDUCTOR ROTO, ABIERTO O CRUZADO	BROKEN, OPEN OR CROSSED CONDUCTOR	include	include
53	DESGANCHE	RELEASE	include	include
54	PARARRAYOS DEFECTUOSO	DEFECTIVE LIGHTNING ROD	include	include
56	AISLADOR ROTO, PARTIDO O SAFADO	DAMAGED OR BROKEN LOOSE INSULATOR	include	include
58	EMPALME O TERMINACION SOTERRADA AVERIADA	UNDERGROUND JOINT OR TERMINATION BROKEN DOWN OR MALFUNCTIONING	include	include
59	CABLE SOTERRADO AVERIADO	UNDERGROUND CABLE BROKEN	include	include
63	DESCONECTIVO DEFECTUOSO	DEFECTIVE DISCONNECT	include	include
65	HERRAJE ROTO O PODRIDO	BROKEN OR ROTTED HARDWARE	include	include
66	CAJA PRIMARIA DEFECTUOSA O QUEMADA	DEFECTIVE OR BURNT PRIMARY CASE	include	include
67	UNIDAD SECCIONADORA (SWITCHING UNIT)	SWITCHING UNIT	include	include
69	OTRAS CAUSAS(CERTIFICAR)	OTHER CAUSES (CERTIFY)	exclude	include
83	FUEGO	FIRE	exclude	include
85	ERROR HUMANO	HUMAN ERROR	exclude	include
86	ANIMAL U OBJETO EXTRAÑO	ANIMAL OR STRANGE OBJECT	exclude	include
87	SOBRECARGA	OVERLOAD	include	include



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88	DISTURBIO ATMOSFERICO	ATMOSPHERIC DISTURBANCE	exclude	include
89	EQUIPO DE CONTROL DEFECTUOSO	DEFECTIVE CONTROL EQUIPMENT	include	include
90	VIA LIBRE PROGRAMADA - DISTRIBUCION	FREE SCHEDULED ROUTE - DISTRIBUTION	exclude	exclude**
91	RELEVO DE CARGA AUTOMATICO	AUTOMATIC LOAD RELAY	exclude	include
92	VIA LIBRE A SOLICITUD DEL CLIENTE	FREE ROUTE AT THE CLIENT'S REQUEST	exclude	exclude**
93	LINEA DE TRANSMISION	TRANSMISSION LINE	exclude	include
94	BREAKER DEFECTUOSO O NO OPERA	BREAKER DEFECTIVE OR NOT OPERATING	exclude	include
95	VIA LIBRE PROGRAMADA - TRANSMISION	PROGRAMMED FREE ROUTE - TRANSMISSION	exclude	exclude**
96	VIA LIBRE DE EMERGENCIA - DISTRIBUCION	EMERGENCY FREE ROUTE - DISTRIBUTION	exclude	include
97	VIA LIBRE DE EMERGENCIA - TRANSMISION	EMERGENCY FREE ROUTE - TRANSMISSION	exclude	include
98	PROTECCION DEFECTUOSA	DEFECTIVE PROTECTION	exclude	include
99	NO SE REPORTO CAUSA	NO REPORTED CAUSE	include	include

\*\* Events with these cause codes are excluded from LUMA's Performance Metrics calculations in accordance with the OMA.

In addition to the above, transmission and substation events are excluded from PREPA's calculations. LUMA included these types of events in calculations per industry practices.

The valid data available spans the period May 2018 to August 2020 – data prior to May 2018 is either known to be faulty or not relevant to the configuration and state of today's T&D system due to destruction and emergency reconstruction after Hurricanes Irma and Maria.

### ACTIONS TAKEN

Based on our assessment, PREPA has little documentation relating to why certain assumptions are made in the collection of data and calculation of reliability metrics.

As a result of this, LUMA built an interruption data analysis workbook, tested PREPA's assumptions and results, applied PREPA's practices and industry practices under various scenarios of historical data and compared the results.

The LUMA workbook was tested using sample data and results included in IEEE Std. 1366™-2012. PREPA's cause code exclusion list and system component level analyzed for reporting was also used to test the LUMA workbook. Initial results did not match and required many discussions with PREPA personnel, along with trial-and-error analyses. Based on these analyses, LUMA concluded that the current PREPA process excludes interruptions with three additional cause codes relative to what was indicated in PREPA's original list of exclusions (these have been included in Table 2.5). These are failed power transformer, animal or strange object, and defective protection. After excluding these cause codes, the LUMA workbook results matched PREPA's results within reason.

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LUMA used the interruption data set from the period May 2018 through Dec 2019 to determine the Major Event Day (MED) Threshold ( $T_{MED}$ ) as specified in the IEEE Guide for Electric Power Distribution Reliability Indices, IEEE P1366-2012. The  $T_{MED}$  calculation procedure in IEEE Std. 1366™-2012 specifies analyzing data up through the end of the year prior to that being currently analyzed and only excluding interruptions from the  $T_{MED}$  analysis identified as Planned Interruptions and interruptions caused by generation events. The standard also specifies only excluding interruptions from the metrics analysis identified as a Planned Interruptions, Interruptions Caused by Generation Events, and Interruptions associated with Major Event Days. These exclusions are currently the predominant practice in the US<sup>9</sup> and only ones stated as exclusions in Annex IX of the OMA.<sup>10</sup>

### SYSTEM AVERAGE INTERRUPTION FREQUENCY INDEX (SAIFI) AND SYSTEM AVERAGE INTERRUPTION DURATION INDEX (SAIDI)

IEEE Std. 1366™-2012 recommends using five years of historical data in the calculation of  $T_{MED}$ . However, five years of credible relative data does not exist. Only 20 months of historical data is available for use in the IEEE Std. 1366™-2012  $T_{MED}$  calculation procedure. The impact that using this limited period of historical data has on the resulting reliability Performance Metrics is unknown and is impractical or impossible to determine. Therefore, LUMA plans to carefully determine and evaluate  $T_{MED}$  against the previous  $T_{MED}$ s as each additional year of historical data becomes available. While proposing baselines, LUMA will monitor the data for significant changes in  $T_{MED}$  during the initial 3-year period and identify any related changes to the proposed reliability Performance Metrics that require revisiting.

### CUSTOMER AVERAGE INTERRUPTION DURATION INDEX (CAIDI)

Based on growing industry concerns that CAIDI is a limited value performance metric,<sup>11</sup> LUMA proposes eliminating CAIDI. Since CAIDI is the ratio between SAIDI and SAIFI, CAIDI can be misleading because it can remain the same even when the SAIDI and SAIFI values decrease. In this case, while the customer experience improves, the CAIDI metrics can remain the same, indicating that there was no improvement. Also, valuable improvements to the T&D system such as adding automation will tend to improve SAIDI and SAIFI but could also cause CAIDI to increase because automation tends to reduce less complicated interruptions to less than five minutes (IEEE definition of a sustained outage). The more complicated and time-consuming interruptions are left for field personnel to repair and restore.

### CUSTOMERS EXPERIENCING MULTIPLE INTERRUPTIONS (CEMI<sub>N</sub>)

Setting a meaningful CEMI<sub>N</sub> metric is highly dependent on accurate customer information and sufficient customer connectivity in the Outage Management System. Due to data quality issues including a lack of accurate customer information and a lack of customer connectivity in the Outage Management System, LUMA proposes deferring CEMI<sub>N</sub>. LUMA plans to perform field inspections to increase customer connectivity in the OMS which will be reflected in the GIS. A new process to update the connectivity model will be put in place to capture the new and future updates. These field inspections will be started in year one. The new process for data connectivity will also be implemented in year one. Updates on the

<sup>9</sup> Based on discussions with industry SMEs. Also see Evaluation of Data Submitted in APPA's 2018 Distribution System Reliability & Operations Survey [https://www.publicpower.org/system/files/documents/2018%20DSRO%20Report\\_0.pdf](https://www.publicpower.org/system/files/documents/2018%20DSRO%20Report_0.pdf) and CPUC Electric System Reliability Annual Reports <https://www.cpuc.ca.gov/General.aspx?id=4529>.

<sup>10</sup> While OMA Annex IX uses some non-standard terminology, LUMA uses terminology under IEEE Std. 1366™-2012 as cited in the OMA.

<sup>11</sup> Richard Brown, *Electric Power Distribution Reliability 2<sup>nd</sup> Edition*, (Boca Raton, FL: CRC Press, 2009), 58-59.

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connectivity accuracy will be provided on an annual basis to allow for implementation of the CEMIN metric.

### MOMENTARY AVERAGE INTERRUPTION FREQUENCY INDEX (MAIFI)

Due to data availability and quality issues, LUMA recommends deferring the MAIFI metric until it can be accurately measured. Determining a meaningful MAIFI metric is highly dependent on extensive high-quality monitoring infrastructure (e.g., Supervisory Control and Data Acquisition (SCADA), Advanced Metering Infrastructure (AMI)) and information systems due to the short duration of a momentary interruption. Given that the extensive high-quality monitoring infrastructure (e.g., SCADA, AMI) and information systems necessary are not in place, meaningful values for this metric cannot be determined. Even utilities with extensive monitoring in place find this metric problematic to track consistently. Updates on the monitoring infrastructure to enable implementation of the MAIFI metric will be provided on an annual basis.

### ADDITIONAL PERFORMANCE METRICS

#### DISTRIBUTION LINE INSPECTIONS & TARGETED CORRECTIONS

The Distribution Line Inspections & Targeted Corrections indicator measures the number of distribution line inspections completed, with data recorded in a database for analysis. 100% of the 1,057 three-phase, main line distribution feeders will be inspected over a four-year period, ramping up the number of inspections each year. The inspections will prioritize the worst performing feeders (based on Customer Interruptions and Customer Minutes Interrupted) and critical customers as defined by FEMA (e.g., hospitals, police stations, water treatment plants etc.). These inspections will assess the physical integrity of the poles/structure (and components such as hardware and insulators), line/conductor, guy/anchor system and grounding. The assessment will be used to provide an overall health rating which will identify issues that affect safety and reliability. Serious safety issues to either the public or workers will result in immediate attention by the utility.

PREPA does not have a documented health condition assessment of the grid assets. In recent years, PREPA has not conducted programed inspections of its assets. Inspections were conducted of a sample of the system but the condition of a majority of the grid assets is basically unknown and not documented. It is apparent to experienced LUMA utility engineers from visual observations, site visits and an asset condition sampling that the grid has widespread deficiencies. As a result, LUMA has incorporated field inspections to categorize assets according to their health condition, based on estimates of condition (likelihood of failure) and criticality (consequence of failure). The overall health asset score will be based on 0 being the worse to 4 being the best.

Asset scores of 0 and 1 will be the highest risk assets and will be given the highest priority to repair and / or replace. These will be assets (Asset Score of 0 and 1) that exhibit the following:

- High risk of failure, or already failed and likely to cause:
  - A safety impact to LUMA employees and contractors and members of the public
  - A violation of regulatory or legal requirements, including Act 17 which includes requirements related to safe (based on applicable safety standards) and prudent utility practices, or
  - An outage that will be widespread, long duration and could affect critical customers.

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All deficient assets will go into a work planning process to schedule repair or replacement in order to achieve objectives.

### TRANSMISSION LINE INSPECTIONS & TARGETED CORRECTIONS

The Transmission Line Inspections metric measures the number of transmission line inspections completed, with data recorded in a database for analysis. 100% of the 260 transmission 230kV, 115kV, and 38kV circuits will be inspected over a four-year period, ramping up the number of inspections each year. The 230kV and 115kV lines will take priority for inspections. These inspections will assess the physical integrity of the structure (and components such as hardware and insulators), line/conductor, guy/anchor system, foundation and grounding. The assessment will be used to provide an overall health rating which will identify issues that affect safety and reliability. Serious safety issues to either the public or workers will result in immediate attention by LUMA.

PREPA does not have a documented health condition assessment of the grid assets. In recent years, PREPA has not conducted programmed inspections of its assets. Inspections were conducted of a sample of the system but the condition of most of the grid assets is basically unknown and not documented. It is apparent to experienced LUMA utility engineers from visual observations, site visits and an asset condition sampling that the grid has widespread deficiencies. As a result, LUMA has incorporated field inspections to categorize assets according to their health condition, based on estimates of condition (likelihood of failure) and criticality (consequence of failure). The overall health asset score will be based on 0 being the worse to 4 being the best.

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  - A safety impact to LUMA employees and contractors and members of the public
  - A violation of regulatory or legal requirements, including Act 17 which includes requirements related to safe (based on applicable safety standards) and prudent utility practices, or
  - An outage that will be widespread, affecting critical customers, and long duration.

All deficient assets will go into a work planning process to schedule repair or replacement in order to achieve the objectives.

### T&D SUBSTATION INSPECTIONS & TARGETED CORRECTIONS

The Distribution and Transmission Substation Inspections metric measures the number of distribution and transmission substation inspections completed with data recorded in a database for analysis. 100% of the 392 distribution and transmission substations will be inspected over a four-year period, ramping up the number of inspections each year. Substations with critical customers and/or greatest number of customers served will take priority. These inspections will assess the physical integrity of the substation components and equipment including site/fencing/grounding, structures/foundations, high voltage equipment (breakers, power transformers, switches etc.), control building, protection control and SCADA systems, AC/DC systems and telecommunications systems. The assessments will be used to provide an overall health rating which will identify issues that affect safety and reliability. Serious safety issues to either the public or employees, resulting in immediate attention from the utility.

## Exhibit 2 - LUMA's Comments on Performance Metrics Baselines

PREPA does not have a documented health condition assessment of the grid assets. In recent years, PREPA has not conducted programmed inspections of its assets. Inspections were conducted of a sample of the system but the condition of most of the grid assets is basically unknown and not documented. It is apparent to experienced LUMA utility engineers from visual observations, site visits and an asset condition sampling that the grid has widespread deficiencies. As a result, LUMA has incorporated field inspections to categorize assets according to their health condition, based on estimates of condition (likelihood of failure) and criticality (consequence of failure). The overall health asset score will be based on 0 being the worse to 4 being the best.

Asset scores of 0 and 1 will be the highest risk assets and will be given the highest priority to repair and / or replace. These will be assets (Asset Score of 0 and 1) that exhibit the following:

- High risk of failure, or already failed and likely to cause:
  - A safety impact to LUMA employees and contractors and members of the public
  - A violation of regulatory or legal requirements, including Act 17 which includes requirements related to safe (based on applicable safety standards) and prudent utility practices, or
  - An outage that will be widespread, affecting critical customers, and long duration.

All deficient assets will go into a work planning process to schedule repair or replacement in order to achieve the objectives.

### IMPACT OF FUTURE PROCESS AND IT SYSTEM IMPROVEMENTS - SAIDI & SAIFI

As described in section 4.4.1 of IEEE Guide Std 1782™-2014, entitled "Evaluating the Impact of Outage Management Process Changes":

"Upon implementation of an automated outage management system, indexes are likely to change reflective of the differences in measuring outage events. Thus, while index levels may indicate deterioration, this is generally the result of collecting data which was not previously collected or may reflect more accuracy in the collection process. A variety of methods have been implemented to try to measure the effect of the process change."

While the above addresses moving from a manual process to an automated process, the same phenomena can occur when making any significant improvements in the outage management process or related IT systems and should be considered when comparing reliability Performance Metrics over time. Guidance from IEEE Std 1782 and IEEE Std 1366 will be considered whenever changes to the outage management process or related IT systems are contemplated and the end to end (the utility becoming aware of an interruption through its ultimate inclusion in the analysis and reporting of reliability Performance Metrics) impact evaluated and considered in the design and implementation of those changes.

### TECHNICAL INTERPRETATIONS

The Institute of Electrical and Electronics Engineers, Inc. (IEEE) published standards will be used to interpret matters related to technical Performance Metrics. Where published standards do not address specific matters, IEEE standards in development and published papers and reports from IEEE committees and working groups will be used for guidance.

## Exhibit 2 - LUMA's Comments on Performance Metrics Baselines

### 2.4 Financial Performance

The key findings and proposals for these metrics are presented below.

#### OPERATING BUDGET

A total LUMA operating budget target will be determined based on the rates set by PREB in CEPR-AP-2015-0001 (the "Rate Case") and PREPA's FY21 budget as presented in the 2020 Fiscal Plan for PREPA, certified by FOMB on June 29, 2020. All LUMA departments were provided with FY21 PREPA Budget General Ledger detail and a budget template which was utilized to profile labor and other expenditures by month, and allocate expenses, where appropriate, to the capital budget based on the amount of internal labor that would be used for capital project initiatives. Based on projections, observations made during the Front-End Transition process and historical references, the departments input their expenses taking annual expectations and remediation efforts into consideration.

The budget will form the foundation for LUMA's financial management process. Each month analyses will be performed on budget variances, along with management meetings to discuss trends and develop plans to keep the budget within the required parameters. This effort will be coupled with a monthly forecasting process which will be used to predict future levels of spend and make business decisions to keep spend levels within the required parameters.

#### CAPITAL BUDGET – FEDERALLY FUNDED

LUMA developed the Capital Budget-Federally Funded Programs based on key initiatives determined through LUMA's transformation prioritization process. LUMA teams received input from IEM, LUMA's subject matter experts on federal funding, to determine which initiatives would likely meet federal funding requirements. Further refinement was done based on sequencing and an estimate of feasibility for implementation during the first three fiscal years and a review of the PREPA 10 Year Infrastructure Plan submitted to FEMA in December 2020, the Damage Description and Dimensions report to FEMA for DR-4339 Hurricane Maria, and supporting documentation.

LUMA intends to adopt best practices and utilize its extensive expertise and knowledge of T&D utility construction and operations in order to manage capital projects through implementation of appropriate work breakdown structures, job costing processes and procedures and project management expertise. IEM will augment these processes to ensure compliance with federal funding requirements for all federally funded projects.

#### CAPITAL BUDGET – NON-FEDERALLY FUNDED

LUMA used PREPA's 2020 Fiscal Plan schedule of Necessary Maintenance Expenses ("NME") as a baseline target for NME / capital work that would not be federally funded. PREPA did not provide to LUMA data on actual spending compared to the NME budget for 2020. LUMA departments submitted budgets for NME Projects which were then reviewed and subjected to a similar prioritization process as that for the federally funded projects described above. Consideration was also given to the need for NME / capital projects to be prerequisites for planned federally funded projects or to otherwise be performed in conjunction with the planned federally funded projects. Timelines and sequencing of projects were matched to the anticipated funding available and the prioritization of all NME projects taken as a whole.



## Exhibit 2 - LUMA's Comments on Performance Metrics Baselines

### DAYS SALES OUTSTANDING (DSO)

After a thorough evaluation of the available PREPA data and employed processes, LUMA focused on leveraging existing PREPA data and processes used in the preparation of the PREPA Monthly Report to the Governing Board (MOR) to calculate a disaggregated DSO performance metric. Accounts receivable and sales data can be sourced from the M-8 report which is produced monthly by PREPA Finance during the process of creating page 12 of the MOR. This metric can be calculated by dividing the year-end amount of accounts receivables by the total year-end value of customer credit sales and multiplying the result by the number of days in that year.

Due to the very high amount and aging of government receivables a combined, total DSO is not a useful metric. Calculating separate DSO metrics for general customers (residential, commercial, & wholesale) and government accounts will improve the transparency of collections efforts and improvements.

### REDUCTION IN NETWORK LINE LOSSES

Reduction in Network Line Losses measures the progress in reducing electric losses. PREPA does not currently allocate losses to the components of the system, making this metric highly limited in accuracy and usefulness. An adequate loss study will be conducted in Year 1, require at least eight months after LUMA takes control of the assets and is highly dependent on the ability to accurately update the PREPA distribution system model.

### OVERTIME

Analysis of the overtime data that was provided was conducted on a per labor dollar basis. PREPA did not provide detailed information on the current timesheet system process to authorize and approve overtime.

## 3.0 Baseline Performance

As introduced in Section 2, "Review of Processes and Data", LUMA relied on its subject matter experts in each of its functional teams to establish and validate performance metric baselines. These teams worked judiciously with the corresponding PREPA departments in a detailed analysis of the processes, tools and data available for each performance metric. The task included initial information gathering, followed by industry benchmarking for industry practices and a gap assessment. The teams then proceeded to calculate baselines using the available acceptable data and, when technically justifiable, used corrections or projections to seek more reasonable and consistent results.

As described in Section 2, in the evaluation process LUMA found that some of the established Performance Metrics cannot be properly baselined (mainly due to nonexistent or inadequate data) and in a few instances found doubtful results even with sufficient data. This supports the deferment of such Performance Metrics or the addition of others, at least until LUMA is able to establish the proper practices for data collection and calculation. The following describes the baseline calculations (and proposed changes) for the Performance Metrics that LUMA proposes to measure and report.

### 3.1 Customer Service

#### 3.1.1 J.D. Power Customer Satisfaction Survey (Residential Customers)

Description: Third party customer survey.

## Exhibit 2 - LUMA's Comments on Performance Metrics Baselines

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 for residential, and in two phases per year for commercial.

Data Source: J.D. Power Survey Results.

Metric baseline: PREPA has not used J.D. Power Customer Satisfaction surveys so there is nothing to baseline prior to this submission. Initial survey to be completed and baseline set prior to commencement with reporting beginning in year 1.

### 3.1.2 J.D. Power Customer Satisfaction Survey (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 four phases per year for residential, and in two phases per year for commercial.

Data Source: J.D. Power Survey Results.

Metric baseline: PREPA has not used J.D. Power Customer Satisfaction surveys so there is nothing to baseline prior to this submission. Initial survey to be completed and baseline set prior to Service Commencement Date.

### 3.1.3 Average Speed of Answer (ASA)

Description: The Average Speed of Answer (ASA) metric measures the average wait time from the moment the customer enters the queue to the time the call is answered by an agent.

Calculation: Total ACD wait seconds / Total answered calls.

Data Source: PREPA's Contact Center Platform.

Metric baseline: LUMA found that the data currently available does not support a reliable baseline calculation. Current data is only available for a period of six months and the reported ASA varies significantly from month to month due to COVID and onboarding new outsource vendors. The lack of visibility into three separate call routing systems and overflow rules prevents accurately calculating baseline ASA. As a result, based on past PREPA performance and experience from industry subject matter experts, the initial baseline should be set at 10 minutes.

### 3.1.4 Customer PREB Complaint Rate

Description: This metric measures the total number of initial customer complaints registered with PREB. The Baseline Performance Level will be set based on PREPA historical data subject to confirmation during the Front-End Transition Period.

Calculation: The monthly value is calculated by taking the total number of initial complaints divided by the total utility customer population and then multiplying by 100,000.



## Exhibit 2 - LUMA's Comments on Performance Metrics Baselines

Data Source: Customer complaints sent by PREB to LUMA.

Metric Baseline: LUMA used the total number of complaints received by the PREB from May 2019 to March 2020 as the baseline as it is the most normal period of operations for PREPA in the last 4 years, resulting in a baseline of 5.25%.

### 3.1.5 Abandonment Rate (ABD)

Description: The Abandonment Rate (ABD) metric measures the percentage of callers who hang up (abandon) while the call is still in the Automated Call Distribution (ACD) queue.

Calculation: Total calls that abandoned in queue / Total calls offered to the queue.

Data Source: PREPA's Contact center platform.

Metric baseline calculation: The data currently available from the PREPA Contact Center platform does not support a reliable baseline. Current data is only available for a period of six months and the reported ABD varies significantly from month to month due to COVID and onboarding new outsource vendors. Lack of visibility into three separate call routing systems and overflow rules prevents accurately calculating baseline ABD. As a result, based on past PREPA performance and industry subject matter expert experience, initial baseline should be set at 50% abandonment rate.

## 3.2 Technical, Safety and Regulatory

### 3.2.1 OSHA Recordable Incident Rate, OSHA Fatalities, OSHA Severity Rate, OSHA DART Rate

Description:

- OSHA Recordable Incident Rate: Total number of OSHA recordable incidents
- OSHA Fatalities: All work-related fatalities
- OSHA Severity Rate: Total number of restricted and lost time days incurred as a result of a work-related injury
- OSHA DART Rate: Total number of OSHA recordable cases with lost time days (away, restricted or transferred)

Calculation: per OSHA guidelines

Data Source: PREPA OSHA 300 logs and the PREPA injury and illness data reports (see details in Section 2.3)

OSHA Recordable Incident Rate Baseline: 8.76

OSHA Fatalities Baseline: 0

OSHA Severity Rate Baseline: 50.84

OSHA DART Rate Baseline: 5.95

## Exhibit 2 - LUMA's Comments on Performance Metrics Baselines

### 3.2.2 SAIFI, SAIDI

Description:

- System Average Interruption Frequency Index (SAIFI)
- System Average Interruption Duration Index (SAIDI)

Calculation: per IEEE Std 1366™-2012

Data Source: PREPA historical data (when available)

Metric baseline calculation: In the process of investigating and validating PREPA's reliability metrics, LUMA built an interruption data analysis workbook based on IEEE Std. 1366-2012 for metric validation, tested PREPA's assumptions and results, and applied industry practices using historical data. The effort included analysis and comparisons of several years of PREPA customer interruption data and reliability metrics calculations and the findings of this investigation are:

- PREPA is a worse performer when compared to other utilities in the IEEE Reliability Benchmarking Study
- Degrading Performance seen in 2020 vs 2019
- Interruption data prior to May 2018 is not valid for current use
- PREPA has not updated the Major Event Days (MED) Threshold ( $T_{MED}$ ) since 2017
- PREPA uses a beginning period customer count
- PREPA does not include transmission or substation outages that result in customer interruptions
- PREPA does not include interruptions having certain cause codes (28 of 43 are excluded)
- Many reports of no lights/no power from customer telephone calls are not transferred to the Outage Management System (OMS)
- The electrical model in the GIS system that feeds into the OMS system is not accurate or up to date
- Crew findings, actions, time stamps and estimates of customers restored are predominately based on crew knowledge and experience and entered manually
- Dispatch processes are inconsistent between the different regions/districts and dispatch records are manual and handwritten
- As data and processes are improved, metrics will change even if there is no change in customer experience – these changes could appear to cause improved or degraded performance
- The significant increase in construction as LUMA takes control will increase the number of human element (HE) outages due to the necessary large number of construction/commissioning activities (currently excluded)

LUMA established the following parameters for determining reliability Performance Metrics:

- Using the interruption data set from the period May 2018 through Dec 2019 for determining the Major Event Day (MED) Threshold ( $T_{MED}$ )
- The  $T_{MED}$  calculation procedure in IEEE Std. 1366™-2012 specifies analyzing data up through the end of the year prior to that being currently analyzed
- Data for 2020 is skewed by an extremely high daily SAIFI for Jan 7, 2020 due to a magnitude 6.4 earthquake
- Only excluding interruptions from the  $T_{MED}$  and metrics analysis identified as planned interruptions or caused by generation events

## Exhibit 2 - LUMA's Comments on Performance Metrics Baselines

- Interruptions associated with Outage Event days using the IEEE 2.5 Beta Method (defined in IEEE Std 1366™-2012)

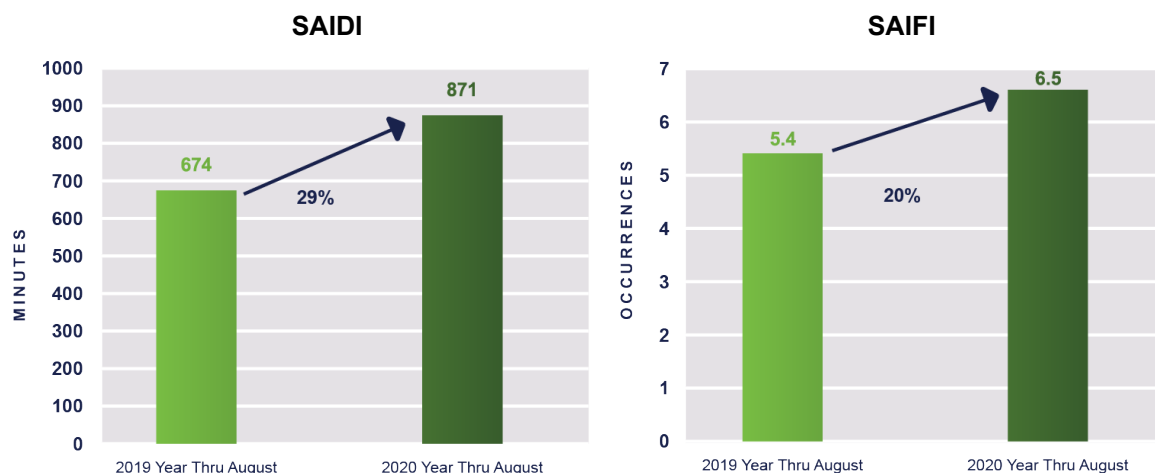
Note that the exclusions stated in the previous two bullets are stated in Annex IX of the OMA as the only exclusions from the calculation of this Technical Performance Metric. This is also currently the predominant practice in the US based on discussions with industry SMEs (see also Evaluation of Data Submitted in APPA's 2018 Distribution System Reliability & Operations Survey<sup>12</sup>).

Based on this analysis LUMA proceeded with specific calculations for Performance Metrics baseline as follows:

### SYSTEM AVERAGE INTERRUPTION FREQUENCY INDEX (SAIFI) AND SYSTEM AVERAGE INTERRUPTION DURATION INDEX (SAIDI)

To develop a baseline for SAIDI & SAIFI, LUMA applied the definitions of IEEE Std. 1366-2012 and industry practices, calculating 2019 year-end results, 2019 through end-of-August results, and 2020 through end-of-August results (the latest data available at the time the calculations were made). Results through end-of-August results for both years were compared.

Figure 3.1. SAIDI and SAIFI Degradation Year-over-Year



As the charts indicate, the 2020 performance, based on LUMA calculations using industry standards, is significantly degraded from the 2019 performance over the first 8 months of the year, demonstrating that 2019 year-end results would not reflect an appropriate baseline. Therefore, LUMA annualized the 2020 through end-of-August results for SAIDI & SAIFI as follows:

SAIDI Baseline (minutes) = 871 minutes x (12 months ÷ 8 months) = 1,307 minutes

SAIFI Baseline (occurrences) = 6.5 occurrences x (12 months ÷ 8 months) = 9.8 occurrences

<sup>12</sup> [https://www.publicpower.org/system/files/documents/2018%20DSRO%20Report\\_0.pdf](https://www.publicpower.org/system/files/documents/2018%20DSRO%20Report_0.pdf) and CPUC Electric System Reliability Annual Reports <https://www.cpuc.ca.gov/General.aspx?id=4529>

## Exhibit 2 - LUMA's Comments on Performance Metrics Baselines

Note that applying the degradation factors shown in the charts would have resulted in baselines slightly higher than with the method chosen to estimate an appropriate baseline.

### **3.2.3 Distribution Line Inspections and Targeted Corrections, Transmission Line Inspections and Targeted Corrections, T&D Substation Inspections and Targeted Corrections**

Infrastructure integrity and public/employee safety is paramount. LUMA will embark on the critical task of detailed inspection of PREPA's infrastructure and that effort is certainly a good target for measuring the performance of LUMA in the important period of reconstruction and upgrades. The Distribution Line Inspections and Targeted Corrections, Transmission Line Inspections and Targeted Corrections, and T&D Substation Inspections and Targeted Corrections metrics will assess the physical integrity of the poles, structures, components and equipment, providing data to develop an overall health rating from zero to four. With this information, LUMA will identify serious safety issues to either the public or workers, which will result in immediate priorities for the remediation process. Category 0 and Category 1 findings shall be incorporated in a plan to address within 60 days of identification.

LUMA proposes the use of the inspection effort in the mentioned categories as additional metrics.

Baselines: N/A (cannot be calculated since such tasks are not routinely performed by PREPA)

## **3.3 Financial Performance**

### **3.3.1 Operating Budget**

Description: Measures ability to stay within budget

Baseline Calculation: 100% of Operating Budget for Fiscal 2022

Data Source: LUMA received the T&D General Ledger Budget and Actual detail for seven years as well as PREPA's historical Rate Case base calculation and 2020 Fiscal Plan

Baseline: 100% of T&D Approved Operating Budget

### **3.3.2 Capital Budget – Federally Funded**

Description: Measures ability to stay within budget.

Baseline Calculation: 100% of Federally approved Budget for Fiscal 2022.

Data Source: PREPA is currently working to begin engineering for the rebuild of damaged infrastructure following the hurricanes of 2017. After a 21-day site visit to audit PREPA's federal funding process used in connection with previously received federal funds, the COR3 deemed several of PREPA's controls and processes unfit and required a corrective action plan. Accordingly, LUMA has worked in conjunction with its federal-funding SMEs to build the federally funded capital budget utilizing the existing data that could be obtained from the PREPA DFMO group and our gained knowledge of what items were damaged that would meet the criteria for federal funding. LUMA plans to have controls in place at service commencement to manage compliance with all federal requirements and to stay within budget.

Baseline: 100% of FY22 Federally Approved Capital Spend

## Exhibit 2 - LUMA's Comments on Performance Metrics Baselines

### 3.3.3 Capital Budget – Non-Federally Funded

Description: Measures ability to stay within budget.

Baseline Calculation: 100% of NME / Non-Federal Funded Capital Budget for Fiscal 2022.

Data Source: PREPA was unable to provide Budget to Actual NME detail for previous years; a schedule of planned projects was provided but LUMA was unable to confirm related spending.

LUMA built the Fiscal 2022 NME / Non-federal funded budget from the ground up based on LUMA's gained knowledge of critical project requirements.

Baseline: 100% of NME / Non-Federal Funded Capital Budget for Fiscal 2022

### 3.3.4 Days Sales Outstanding (DSO)

Description: This metric is a measure of the ability to collect timely payment from general client billings.

Metric baseline calculation: In determining the baseline for the Days Sales Outstanding (DSO) metric, the LUMA Customer Service team leveraged existing PREPA data and processes, with the focus being the MOR (Monthly Operating Report) that PREPA Finance creates. This process contains the data elements required to develop the proposed modified DSO calculations (accounts receivable and sales data).

During the process and data assessment LUMA found that the DSO measurements for general clients and government are vastly different. Over the last 36 months Government sales have ranged between 16% and 22% of total revenue, with an average of 18%. Using a weighted value performance metric reflects actual revenue performance data.

LUMA proposes to set DSO Baselines based on analysis of historical data. It proposes to disaggregate the calculation into separate DSO metrics for general clients (residential, commercial, & wholesale), and government accounts, to improve the transparency of collections efforts/improvements. In this calculation the following parameters are used:

- General Customers DSO Baseline at the average DSO of 131 days
- Government DSO Baseline at the average DSO of 754 days
- Weighting assignment of the performance metric calculation: 80% for General Customers DSO and 20% for Government DSO as this closely reflects gross revenues by customer segment.
- Calculation: Both General Customer and Government DSO will be calculated by dividing their respective year-end amount of accounts receivable by the total year-end value of credit sales and multiplying the result by the number of days in that year.
- "Un-collectibles reserve" which is currently included in MOR report DSO calculation will not be included in the LUMA DSO calculations.

Utilizing PREPA data for DSO is temporary as implementation of new analytics will improve timeliness and transparency of DSO metrics. Customer Service proposes transitioning DSO OMA performance metric tracking to new analytics capabilities when implemented (PREPA has initiated this project with Accenture).

## Exhibit 2 - LUMA's Comments on Performance Metrics Baselines

### 3.3.5 Reduction in Network Line Losses

Description: This metric measures the utility's ability to reduce line losses, which occur due to resistance along the electrical lines.

PREPA does not currently allocate losses to the components of the system, making this metric highly limited in accuracy and usefulness. Industry practice includes:

- Analysis by customer category using appropriate load profiles
- Modeling of the T&D system with correct data
- Analysis of power and service transformer losses
- Analysis of secondary losses

An adequate loss study will require at least eight months after LUMA takes control of the assets and is highly dependent on the ability to accurately update the PREPA distribution model.

LUMA proposes deferment of this metric. The RNLL metric can be reconsidered on an annual basis per common agreement once adequate data sources become available.

Baseline: N/A

### 3.3.6 Overtime

Description: These metric measures management's ability to effectively manage overtime costs.

Baseline Calculation: Overtime labor dollars as a percentage of Total labor dollars

Data Source: The overtime data that was provided was on a per labor dollar basis. Using the information that was provided, LUMA's metric was based on an overtime dollar per total labor dollar spent basis.

Baseline: +23% of Average Labor Dollars

## 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

## Exhibit 3 - Benchmarks

transmission and distribution utilities. The U.S. Bureau of Labor Statistics for Electric Utilities (NAICS 2211) benchmark presented by PREB on January 19<sup>th</sup>, 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.

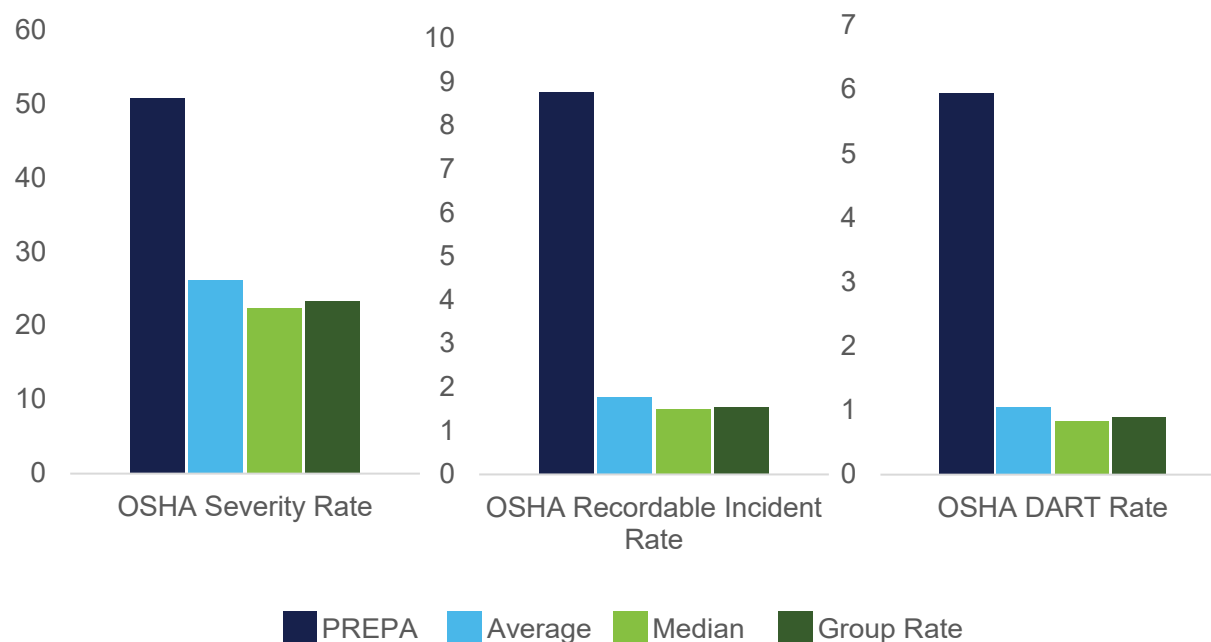


Figure 1. 2019 PREPA OSHA data Comparison with EEI T&D group data.

## 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.



## Exhibit 3 - Benchmarks

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
<b>Overall</b>	<b>395</b>	<b>751</b>



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

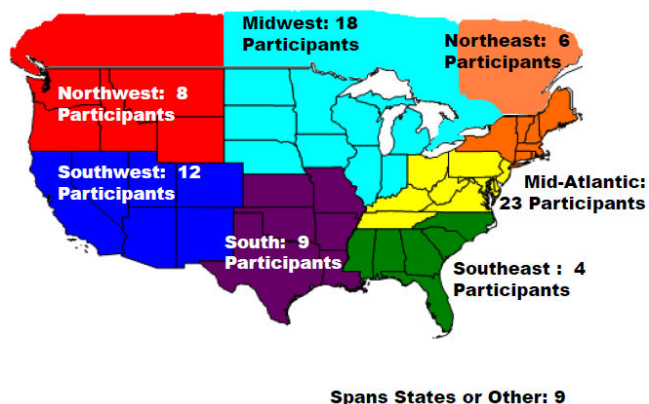
## Exhibit 3 - Benchmarks

### 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.

## Exhibit 3 - Benchmarks

### 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 Data<sup>1</sup> 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 group<sup>2</sup>. As shown in Figure 3 and Figure 4 below, PREPA's 2019 SAIDI is 1,097 minutes and SAIFI is 9.8 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.

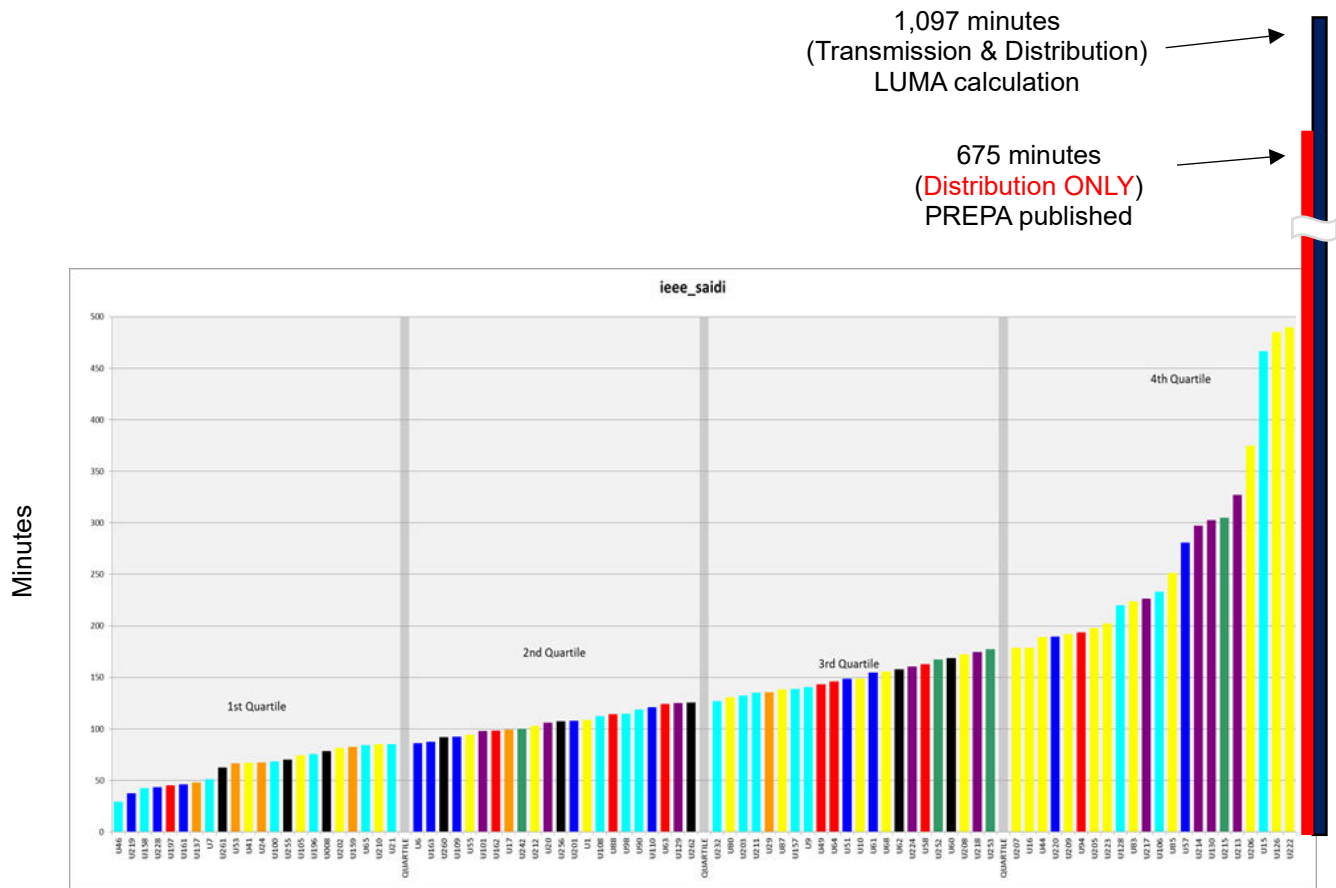
*Reference: IEEE Guide for Electric Power Distribution Reliability Indices IEEE Std. 1366™-2012.*

<sup>1</sup> IEEE Benchmark Year 2020 Results for 2019 Data, 2020 Distribution Reliability Working Group

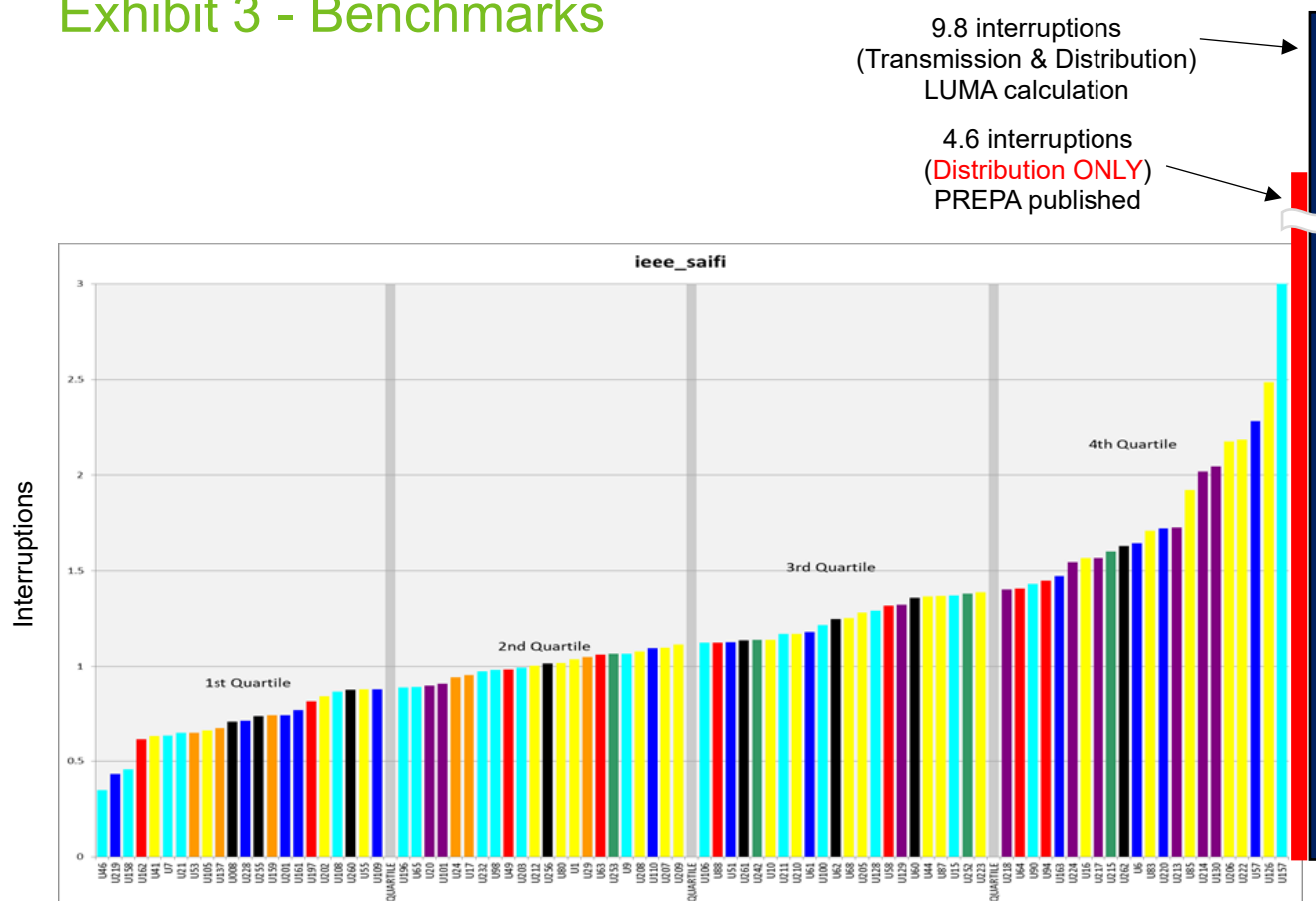
Virtual Meeting, <https://cmte.ieee.org/pes-drwg/wp-content/uploads/sites/61/2020-IEEE-DRWG-Benchmarking-Results.pdf>

<sup>2</sup> Ibid.

## Exhibit 3 - Benchmarks

Figure 3. IEEE 2020 SAIDI Benchmark Report – PREPA Comparison<sup>3</sup><sup>3</sup> Ibid.

## Exhibit 3 - Benchmarks



**Figure 4. IEEE 2020 SAIFI Benchmark Report – PREPA Comparison<sup>4</sup>**

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.

In Puerto Rico, the lack of maintenance and poor practices were exasperated and further exposed during recent major hurricanes. A recent report by Sargent & Lundy<sup>5</sup> reveals that multiple components of the system are in disrepair. For context, PREPA's SAIDI and SAIFI metrics, as calculated by LUMA, are more

<sup>4</sup> Ibid.

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

## Exhibit 3 - Benchmarks

than double (~1,000 vs ~500) and triple (~10 vs ~3) the worst performance in SAIDI 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.

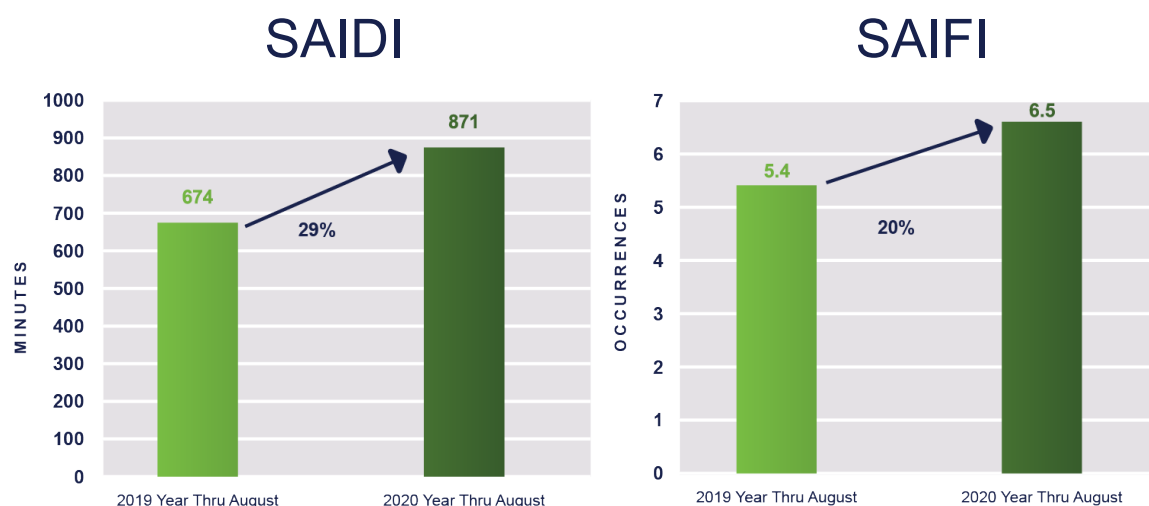


Figure 5. 2020 to 2019 SAIDI Comparison (left) and 2020 to 2019 SAIFI Comparison (right) based on LUMA calculations using industry standards